

Charting the Imperial Will

Colonial Administration & the General Survey of British North America 1764-1775

by

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ABSTRACT

CHARTING THE IMPERIAL WILL

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This dissertation explores how colonial administrators on each side of the Atlantic used the British Survey of North America to serve their governments' as well as their personal objectives. Specifically, it connects the execution and oversight of the General Survey in the northern and southern theatres, along with the intelligence it provided, with the actions of key decision-makers and influencers, including the Presidents of the Board of Trade (latterly, the Secretaries of the American Department) and key provincial governors.

Having abandoned their posture of 'Salutary Neglect' towards colonial affairs in favour of one that proactively and more centrally sought ways to develop and exploit their North American assets following the Seven Years' War, the British needed better geographic information to guide their decision making. Thus, the General Survey of British North America, under the umbrella of the Board of Trade, was conceived. Officially sponsored from 1764-1775, the programme aimed to survey and analyse the attributes and economic potential of Britain's newly acquired regions in North America, leading to an accurate general map of their North American empire when joined to other regional mapping programmes.

The onset of the American Revolution brought an inevitable end to the General Survey before a connected map could be completed. Under the excellent leadership of Samuel Holland, the surveyor general of the Northern District, however, the British administration received surveys and reports that were of great relevance to high-level administration. In the Southern District, Holland's counterpart, the mercurial William Gerard De Brahm, while producing reports of high quality, was less able to juggle the often conflicting priorities of provincial and London-based stakeholders. Consequently, results were less successful. De Brahm was recalled in 1771, leaving others to complete the work.

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Fig. 126: J.F.W. DES BARRES, *Chart of Cape Breton and St. John's Islands &c.* (c. 1780).

List of Abbreviations

AGI: Archivo General de Indias (Seville, Spain).

APC: *Acts of the Privy Council of England: Colonial Series*, eds. J. Munro and A.W. Fitzroy. London, 1911-2. (vols. IV-VI).

BL: British Library (London).

Canseaux Logs: *Henry Mowat: Voyage of the Canseaux 1764-1776* [ship's log], ed. A.J. Wahll. Bowie, Md., 2003.

DAR: *Documents of the American Revolution 1770-1783*, ed. K.G. Davies (21 vols.). Shannon, 1972-81.

Dartmouth Mss.: [Legge, William, 2nd Earl of Dartmouth]. Historical Manuscripts Commission (Great Britain). *Fourteenth Report, Appendix, Part X. The Manuscripts of the Earl of Dartmouth*. London, 1895. (vol. II, American Papers).

DCB: *Dictionary of Canadian Biography*, ed. F. G. Halpenny. Toronto, 1974-87. (vols. III-VI)

DNB: *Oxford Dictionary of National Biography*; eds. H.C.G. Matthews and B. Harrison. (60 vols.) Oxford, 2004.

Knox Mss.: [Knox, William]. 'The Manuscripts of Captain H.V. Knox: Correspondence of William Knox, Chiefly in Relation to American Affairs, 1757-1808', in Historical Manuscripts Commission (Great Britain). *Report on Manuscripts in Various Collections*. Dublin, 1909. (vol. VI), pp.81-296.

FHQ: Florida Historical Quarterly (journal).

Gage Correspondence: *The Correspondence of Thomas Gage with the Secretaries of State, and with the War Office and the Treasury, 1763-1775*, ed. C.E. Carter (2 vols.) New Haven, 1931-3.

JCTP: *Journal of the Commissioners for Trade and Plantations*, ed. K.H. Ledward (14 vols.) London, 1920-38.

LAC: Library & Archives of Canada (Ottawa).

LOC: Library of Congress (Washington, D.C.).

MODHD: Ministry of Defense (U.K.), Hydrographic Library (Taunton).

NA: National Archives U.K. (London).

ADM: Admiralty Papers.

AO: Audit Office Papers.

CO: Colonial Office Papers.

PC: Privy Council Papers.

T: Treasury Board Papers.

WO: War Office Papers.

NAS: National Archives of Scotland (Edinburgh)

NDAR: *Naval Documents of the American Revolution*, ed. W.B. Clark. Washington, 1964-8. (vols. I-III).

NMM: National Maritime Museum (Greenwich).

NYCD: *Documents Relative to the Colonial History of New York*, eds. J. R. Brodhead and E.B. O'Callaghan. Albany, N.Y., 1858. (vol. VIII).

NJCD: *Documents relating to the Colonial History of the State of New Jersey*, eds. F.W. Ricord and W. Nelson. Newark, N.J., 1886. (vol. X).

SRO: Staffordshire Record Office (Stafford, U.K.).

WLC: William L. Clemens Library (University of Michigan, Ann Arbor).

WMQ: *William and Mary Quarterly* (journal).

Chapter I: Introduction

In 1763, following the conclusion of the Seven Years' War, Great Britain became the imperial master of all of eastern North America. Adding to her established colonies along the Atlantic Seaboard, she acquired, from France, Canada, the remainder of Acadia and the vast interior regions which lay between the Appalachians and the Mississippi River, and, from Spain, Florida in the south. A series of factors, largely motivated by financial imperatives, caused Whitehall to abandon its long-held posture of 'Salutary Neglect' towards colonial affairs in favour of developing policies and processes that would guide appropriate development of the land and infrastructure, the wise exploitation of natural resources, rational demarcation of inter-colonial boundaries, and strategic deployment of military forces and related fortifications. Neither the administrators in London nor in the colonies, however, possessed the geographic intelligence to formulate these policies. As a solution, inspired by the success of the various official regional surveys that were conducted in certain American colonies, the Board of Trade made the momentous decision to sponsor and direct the General Survey of British North America. The priority was both to survey and to analyse the natural attributes and economic potential of the newly acquired regions along the peripheries, and, it was hoped, provide an accurate general map of the entirety of Britain's North American empire when combined with other previous and concurrent scientific mapping programmes.

The General Survey of British North America (1764-1775) ranks as one of the most impressive technical achievements and epistemological advances of the Enlightenment period, transforming Great Britain into the undisputed global leader in

cartography by the late eighteenth century. Dwarfing any other British mapping programmes hitherto, it revolutionised the geographic conception of vast and diverse sections of the North American continent revealing their true, modern form for the first time. Its two autonomous programmes which operated in the North and South spanned nine separate colonies and, in aggregate, mapped over 15,000 miles of coastline, in addition to thousands of square miles of the interior. Its general maps, predicated on exacting triangulated surveys, which precisely delineated the courses of shorelines, rivers, mountain ranges and the locations of manmade features such as roads, estates and towns, along with the accompanying reports that gave a comprehensive picture of the nature of the terrain and its potential for economic development, provided decision-makers with vital intelligence.

The focus of this thesis is on understanding the objectives of the General Survey, how it was thus directed and conducted, maps and reports collected, and information received and employed. In the process, the General Survey will be set within the broader cartographic and administrative context. In this regard, the General Survey operated in an environment where the British crown had no centralised institutions for administering surveys. Consequently, there were no formal and standardized processes for archiving, printing or disseminating maps and geographic intelligence within official circles, let alone to the public at large. During this time, the Board of Trade, the navy, the army, as well as various provincial governors all operated their own mapping programmes, and while these endeavours served as models for the future establishment of centralised cartographic institutions, during this transitional period, vital information was not always shared or made available to administrators when required.

Transcending all technical considerations, this is also very much a story of human endeavour. Surveyors, motivated by the most intense intellectual curiosity, braved dangerous physical conditions and great obstacles to explore and painstakingly map vast and often mysterious territories. During one of the most dramatic and tumultuous political times in colonial history, governors, military commanders and other crown officers sought to reconcile their official duties of implementing crown policy with their own personal visions and ambitions. Across the Atlantic, officials at the Board of Trade, the American Department, and in cabinet, entirely relied on the stream of intelligence from their surveyors and officials in the colonial theatre to formulate policies which often had ramifications far beyond their comprehension. Often the actions and decisions of the actors rested not only on how they processed this information, but on how they managed their relationships with their colleagues and sources. While many of the questions they grappled with were specific to their time, the human element speaks to all periods throughout history up to the present day.

Within the human theatre, some figures play a dominant role. This includes in key periods the Presidents of the Board of Trade and, latterly, Secretaries of the American Department, notably the Earls of Hillsborough and Dartmouth. Certain governors of the provinces also feature in events, including John Wentworth and James Grant. Throughout most of the period, John Pownall and William Knox, leading administrators at the Board of Trade and the American Department, play critical supporting roles. Above all else, the ability of the General Survey to serve Britain rested largely on the capacity of the Surveyor-Generals of the Northern and Southern Districts of the General Survey, Samuel Holland and William Gerard De Brahm respectively, to,

on the one hand, gain the collaboration of contributing parties to complete the work, and, on the other hand, successfully address and manage what were often the conflicting needs of their masters in London and the governors in the colonies.

Operating in seven separate northeastern colonial jurisdictions, Holland's Northern General Survey was, by any measure, enormously successful, both in its technical accomplishments, in creating accurate general maps of large expanses of northeastern North America, but also ensuring that its products were of great relevance to high-level administration. Holland's success was, in no small measure, predicated on his professional credibility, brinkmanship, and ability to lead. He was a firm, but benevolent, leader, ensuring loyalty and exacting commitment from his subordinates. Built on a lengthy record of distinguished service to the crown, he actively cultivated the patronage of numerous important officials in London, ensuring not only that his endeavours enjoyed great support, but also that the maps and intelligence he sent to Whitehall were inherently imbued with profound credibility. Holland was also keenly aware that maintaining excellent relationships with the senior crown officers who exercised royal authority in the colonial theatre was of a primary importance. The level-headed and dutiful Dutchman actively cultivated a series of relationships with governors and military commanders, which served to augment dramatically the good reputation of the Northern Survey among senior officials. He consequently received from administrations, the military and admiralty in the colonies a level of support that far transcended the level of assistance officially mandated by the Board of Trade. The accord he developed with these figures also resulted in a number of important spin-offs, or by-products, that ensured his labours garnered broader administrative significance.

By contrast, the Southern survey under the leadership of the brilliant, but mercurial, De Brahm was not as successful due, in large part, to De Brahm's own administrative and personal failings. While the sophistication of the cartography and the scientific observations De Brahm produced under the aegis of the Southern Survey stands out as among the finest technical accomplishments of surveying in the Enlightenment era, De Brahm's headstrong and 'artistic' temperament clashed with Governor Grant as well as others important to operations in East Florida. From the outset, Grant sought to marginalise the Surveyor-General, going so far as to second a military engineer to provide him with much of the geographic intelligence he should rightly have attained from De Brahm. De Brahm's poor relations with other crown officials also ensured that vital geographic intelligence was often not shared, resulting in great inefficiencies and duplication of operations. De Brahm, struggling with financial shortfalls and a lack of skilled manpower, continued to alienate both provincial and London stakeholders as he consistently failed to juggle conflicting priorities. When De Brahm was recalled to London in 1771, the work of the Southern Survey was unofficially carried out by others who eventually completed both the mapping of the coastline of East Florida and the neighbouring province of West Florida.

Maps, Knowledge & Power in the Age of the Enlightenment

The late J. Brian Harley illuminated the intimate relationship between knowledge and power when he explored how various rulers and administrators employed cartography to advance their agendas throughout history. Maps have long served the practical prerogatives of government, such as assessing land for the purposes of taxation, demarcating cadastral boundaries, selecting locations for infrastructure development, and

the exploitation of natural resources. Cartography also played a vital role in military planning and operations, aiding maritime navigation, informing diplomacy, as well as serving as rhetorical devices.¹ In so many ways, maps provided rulers and their officials with intelligence that critically assisted them in maintaining and extending their control, and in this sense, the act of mapping a territory was, in and of itself, an exercise in ‘juridical power’.²

The General Survey of British North America was one of the greatest products of the cartography of the European Enlightenment, an era which began to flower in the late seventeenth century. During this period, government officials came to realise that in order “to govern a territory, one must know it”.³ Consequently, administrators increasingly demanded more precise and up-to-date geographic intelligence, whether it concern the lands immediately surrounding their own capital cities, or disputed overseas colonies. Both in response, and in line with the era’s broader ethic of empiricism, leading mapmakers sought to predicate their work on primary sources, and preferably those based on scientific surveys that had, as an objective, the accurate dimensionation of the landscape.

The greatest achievements of Enlightenment cartography were the general surveys of coherent regions and entire nations. These projects, which aimed to systematically map large areas to a uniformly high scientific standard, were extremely expensive. They required the use of sophisticated equipment and the employment of highly-skilled labour,

¹ J.B. Harley, ‘Maps, Knowledge, and Power’, in J.B. Harley, ed. by P. Laxton, *The New Nature of Maps* (Baltimore, 2001), pp.52-81

² J.B. Harley, ‘Power and Legitimation’, in J.B. Harley, ed. by P. Laxton, *The New Nature of Maps* (Baltimore, 2001), pp.111-7.

³ M.H. Edney, *Mapping an Empire: The Geographical Construction of British India* (Chicago, 1997), p.1.

engaged intensively, often for a period lasting several years.⁴ However, only such surveys could provide administrators with a “coherent archive of knowledge” recording the territory they governed.⁵ General surveys were also, by necessity, the creatures of government, as it was the only entity in society that could provide the high-level of consistent funding, let alone the organisational resources, to sustain such endeavours. Within the government system, it was often considered beneficial for large-scale mapping programmes to be overseen by specific organizations which could provide the projects with coherent direction, an advocate within the greater bureaucracy, as well as premises where completed maps could be properly analysed and archived. Consequently, in spite of the employment of empirical scientific methods, it must be noted that the maps produced by official surveying programmes must be seen as “value laden”, as their content and scope reflect the particular priorities of the sponsoring governmental agency.⁶

The highly-centralised regime of Louis XIV’s France led the way, sponsoring a systematic general survey of the entire nation, employing the most advanced available techniques and equipment, with the objective of producing maps done to a large scale. Under the organizational umbrella of the *Académie des Sciences* (founded 1666), the programme, led by Jean-Dominique Cassini, commenced its operations in 1681. While the so-called ‘Cassini Project’ is rightly considered to have been an epic scientific achievement, due to the inconsistent nature of government funding, surveying operations were not completed until 1744, while the last of the resulting maps were not published

⁴ Edney, *Mapping an Empire*, pp.26-7.

⁵ Edney, *Mapping an Empire*, p.18.

⁶ J.B. Harley, ‘Maps, Knowledge, and Power’, pp.53-7.

until 1815!⁷ The Cassini programme's troubles were illustrative of the great challenges involved in mounting such an endeavour. During the first half of the eighteenth century other continental European governments followed suit, funding surveys and chartering institutions to direct them. For example, the Kingdom of Savoy founded the *Ufficio degli Ingegneri Topografi* in 1738, to manage cartographic intelligence following the completion of the "Carte Générale de Savoie" (1737).⁸ Even Russia, traditionally on the periphery of European scientific development, founded the *Akademiya Nauk*, in 1726, which was responsible for conducting sophisticated surveys of the regions surrounding St. Petersburg.⁹ Indeed, by the 1750s, the culture of Enlightenment science had been taken up by mapmakers, both civilian and military, throughout most of continental Europe.¹⁰

A notable laggard in the realm of official sponsorship of cartography during the early Enlightenment era was Great Britain. This had much to do with the fact that Britain, compared to most continental countries, was a highly-decentralized state, and where the public purse was controlled by Parliament, a notoriously parsimonious institution. The Crown was generally unwilling to finance any large-scale surveying programmes, leaving the initiative to the private sector.¹¹ Beginning in the 1740s, and

⁷ J.J. Konvitz, *Cartography in France 1660-1848* (Chicago, 1987), pp.1-31; M. Pelletier, *Les cartes des Cassini* (Paris, 2002).

⁸ J. Pallière, 'La Carte Générale de Savoie', in M. Pastoureau (ed.), *La carte de Savoie: Histoire de la représentation d'un territoire* (Chambery, France, 1988), pp.76-85.

⁹ The *Akademiya Nauk* translates as the Imperial Academy of Sciences, L. Bagrow, *A History of Russian Cartography up to 1800* (Wolfe Island, Ont., 1975), vol.2, 'The Early Years of the Akademiya Nauk', pp.177-200.

¹⁰ D.N. Livingstone and C.W.J. Withers, 'Introduction' and 'Reconsidering Enlightenment Geography and Map Making: Reconnaissance, Mapping and Archives', in D.N. Livingstone and C.W.J. Withers (eds.), *Geography and the Enlightenment* (Chicago, 2003), pp.1-28 and 167-70.

¹¹ C. Delano Smith and R.J.P. Kain, *English Maps: A History* (Toronto, 1999), pp.76-77. It has also been suggested that the large land owners who dominated Parliament did not want the countryside to be mapped to a large scale lest it reveal information that might lead to increases in land taxation, R.J.P. Kain and E. Baigent, *The Cadastral Map in the Service of the State* (Chicago, 1992), p.257.

continuing for the remainder of the century, private individuals, motivated by profit, began to sponsor large-scale (one mile to one inch) general surveys of specific English counties.¹² However, the quality was variable and the coverage was inconsistent, such that, cumulatively, these endeavours were far from being anything like a systematic national survey in the manner of the Cassini project. Moreover, funding county surveys often proved to be a poor, if not ruinous, business decision, as demonstrated by the 1768 bankruptcy of Thomas Jefferys, then considered to be Britain's preeminent mapmaker.¹³ This underscored the fact that only the direct financial and organizational commitment of the Crown would allow Britain to move forward into the leadership role in surveying and cartography that was befitting of her status as one of the great global powers.

Scientific Surveying as Practiced by the General Survey of British North America

Holland, his deputies, and De Brahm generally conducted their operations by employing advanced techniques of systematic, triangulated surveying, regulated by the methods of geodetic control. The fact that they were able to maintain these high standards, with great uniformity, while mapping thousands of miles of coastline, usually under extremely difficult frontier conditions, is a testament to both their exceptional skill and their dedication. While the individual surveyors may have employed slightly different methods at different times, overall, the processes employed were similar. Essentially, the surveys were predicated on executing accurate terrestrial measurements and then relating them to precise astronomical observations. It is important to consider

¹² Examples of English county surveys on a one mile to one inch scale include: Isaac Taylor, *Hampshire* (1759), John Roque, *Berkshire* (1761), Benjamin Donn, *Devon* (1765) and Peter Burdett, *Derbyshire* (1767); see Delano Smith and Kain, *English Maps*, pp.81-97; J.B. Harley, 'The Re-Mapping of England,' *Imago Mundi*, vol.19 (1965), pp.56-67.

¹³ J.B. Harley, 'The Bankruptcy of Thomas Jefferys: An Episode in the History of the Economic History of eighteenth century Mapmaking', *Imago Mundi*, vol. 20 (1966), pp. 27-48.

that, apart from some notable expeditions into the interior, the operations in both departments of the General Survey limited their scope to what could be termed coastal topographical mapping, as the geographical coverage seldom extended more than two miles into the interior beyond the coastlines or the banks of major rivers.

Upon commencing a systematic triangulated survey, the first step was to carefully measure a straight ‘base line’, usually employing a 100-foot chain. Once that was accomplished, one would select a “remarkable object” as the first ‘control point’, being perhaps a cape, an offshore island, a hill or even a tree, that lay somewhere in the distance to the side of the base line.¹⁴ Next, from the terminal points of the base line, one would measure the angles to which the control point was situated with respect to the terminal points, thus forming the initial triangle of the survey. The angles would then be measured, and re-measured, from each of the vertices of the triangle to ensure that all three angles added up to 180 degrees. The lengths of the two sides other than the base line could then be deduced through trigonometric calculations. Following this, one would, once again, select another control point that lay somewhere off to one of the sides of the initial triangle, and repeating the same process, one would construct another triangle.¹⁵ This systematic process would be repeated, with the benefit that measuring one triangle would serve as a check on the accuracy of the measurements of the surrounding triangles, and this process could be continued for many miles until a large expanse of territory was measured.¹⁶ Once the precise spatial relationship of the control points was established, it would be relatively easy to make an accurate sketch, or to

¹⁴ Andrews, *Maps in Those Days: Cartographic Methods before 1800* (Dublin, 2009), p.109.

¹⁵ Andrews, *Maps in Those Days*, pp.136-8.

¹⁶ Edney, *Mapping an Empire*, pp.19-21.

conduct additional measurements, of the contours of the shoreline or nature of the topography that lay in the spaces in between.

However, both Holland and De Brahm's men would have employed, on various occasions, one of two very different methods of achieving the same kinds of measurements.¹⁷ One technique entailed measuring the angles within the triangles with the use of a theodolite, an azimuthal device that allowed one to measure horizontally between two stations that were not at the same vertical level.¹⁸ Both Holland and De Brahm possessed theodolites, and in terms of accuracy and precision, it was the ideal instrument to employ.¹⁹ However, theodolites were heavy, fragile and extremely expensive, and were often ill-suited for use under the less-than-ideal physical conditions in which the surveyors operated. Moreover, each department of the General Survey would have, at most, access to only one or two theodolites at any one time, such that they were not available for use by multiple field teams.

The alternative method was the use of the plane table, which would allow the surveyor to measure the angles within the triangles by simulating them.²⁰ The instrument was comprised of a table mounted to turn upon a tripod, to which was affixed a pair of alidades which were placed to rotate upon a graduated circle. Upon measuring the angles by peering through the alidades, the observations could then be directly plotted by the surveyor onto a piece of paper which was affixed to the table top. This way, surveying and mapping could be combined into one process. While these measurements were not as precise as measurements properly taken by a theodolite, the plane table process was

¹⁷ Hornsby, *Surveyors of Empire*, pp.105 and 110-2.

¹⁸ Andrews, *Maps in Those Days*, pp.99-101.

¹⁹ L. De Vorse Jr., 'Hydrography: A Note on the Equipage of Enlightenment Coastal Surveying Vessels', *Marriner's Mirror*, vol.58 (May 1972), pp.173-177.

²⁰ Andrews, *Maps in Those Days*, pp.105-106.

much simpler and thus less prone to human error. The plane table was what was generally used by Holland's deputies when they led teams out into the field.²¹

An accurate mensuration of the landscape was only part of the process, for concurrently, these spatial observations had to be placed within their accurate geodetic framework, or, rather, set accurately within the graticule of latitude and longitude. At select control points, perhaps at the location of a town or an especially prominent geographical feature, the surveyor would discern precise coordinates of latitude and longitude at that position by conducting astronomical observations. Determining latitude was relatively straightforward, and it involved using a quadrant to fix the declination (angular distance) of the sun at noon, which would then indicate the position's distance from the equator.²² Determining longitude, even on land, was somewhat more complicated, and relied on Jovian observations.²³ Jupiter had two bright moons that were reliably eclipsed by the mother planet. Using a telescope with an achromatic lens, the surveyor would be able to record the immersion and emersions of these moons, using a pendulum clock to note the precise time of these occurrences, and then entering this data into an ephemeris table. One would then require an ephemeris table that recorded similar Jovian observations which were taken on the same calendar dates from another point on the earth's surface of a known longitude (usually using the ephemeris tables from the Greenwich Observatory in London). By comparing these two sets of data one could calculate the longitude of the fixed point in the field. Once the geodetic coordinates of

²¹ Holland noted that given the challenging physical conditions in which the survey operated, he "found the great expedition and convenience of the plan[e] table in the survey of harbours and rivers preferable to the theodolite", Holland to Pownall, 4 March 1765, CO 323/18, ff. 116-7.

²² Andrews, *Maps in Those Days*, pp.111-7; C.H. Cotter, *A History of Nautical Astronomy* (London, 1968), pp.130-137.

²³ Andrews, *Maps in Those Days*, pp.121-2; Cotter, pp.184-9; A. van Helden, 'Longitude and the Satellites of Jupiter', in W. J.H. Andrewes (ed.), *The Quest of Longitude* (Cambridge, Mass., 1996), pp.86-100.

multiple control points that were strategically chosen throughout the triangulated surveying framework were ascertained, one could precisely calculate the distances between these points, thus acting as a further check on the accuracy of the triangulated surveys. Once this correct geodetic framework was established, the surveyors could seamlessly integrate their various field sketch maps into an accurate general map.

Literature Review

Several academic publications, some of great merit, have dealt with various aspects of the General Survey of British North America. That being said, 'Charting the Imperial Will' is the first and only study of the programme that embraces its operations in both its Northern and Southern theatres. Importantly, it is also unique in providing a comprehensive analysis that connects the objectives and products of the General Survey to the political, economic and personal initiatives of various colonial administrators on both sides of the Atlantic. The present work also provides entirely original insight into British geographical conceptions of the relevant regions as they existed before the inception of the General Survey, and how they evolved as the programme progressed. It also includes detailed investigations of the various mapping projects which operated concurrent to the General Survey, and that had a profound impact upon the progress and results of the programme proper. An exhaustive investigation of written archival sources has been matched by a rigorous analysis of the vast corpus of surviving manuscript maps, with the understanding that they must be treated as seminal texts which contain vital information not otherwise available.

Stephen J. Hornby's beautifully-produced *Surveyors of Empire: Samuel Holland, J.F.W. Des Barres, and the Making of the Atlantic Neptune* (2011) provides the reader

with a fine overview of the Northern General Survey and its relationship to the mapping programmes of peninsular Nova Scotia carried out by J.F.W. Des Barres.²⁴ It is particularly strong in its presentation of biographical information relating to Holland and illuminates many fascinating details of the operations of the survey itself, and the process that led to many of Holland's surveys being adapted for publication in Des Barres' magnificent sea-atlas, *The Atlantic Neptune*. Critically, however, Hornby's mandate did not seem to include a comprehensive treatment of how the Northern Survey's operations and products accorded to the needs of high-level colonial administration. For example, a discussion of how the Northern Survey's maps and intelligence served to identify and shape designs to exploit natural resources such as timber and fisheries is largely absent. One might also have wished that Hornsby gave greater prominence to the valuable information contained on the original manuscript maps that do not appear on their printed derivatives.

Several works have been published focusing on various aspects of the Northern General Survey. The first on the subject, Willis Chipman's 'Life and Times of Major Samuel Holland' (1924), patched together various anecdotes and excerpts of archival sources, and, while informative in some respects, its scholarly value is diminished by its disjointed presentation and its lack of a central narrative.²⁵ More focused is D.C. Harvey's *Holland's Description of Cape Breton Island* (1935), which, in addition to publishing many of the key archival documents relating the survey's operations on the island, includes an introduction that nicely outlines many operational aspects, as well as

²⁴ S.J. Hornsby, *Surveyors of Empire: Samuel Holland, J.F.W. Des Barres, and the Making of the Atlantic Neptune* (Montreal, 2011).

²⁵ W. Chipman, 'The Life and Times of Major Samuel Holland, Surveyor General, 1764-1801', *Ontario Historical Papers and Records*, vol. 21 (1924), pp.11-90.

describes many of the political questions of local importance.²⁶ However, Harvey's commentary was hampered by the fact that, by his own admission, he had never laid eyes on any of the manuscript maps relating to the Cape Breton survey. A generation later, this oversight was compensated for in an article by Nathaniel Shipton, which lent pride of place to the manuscript maps.²⁷ More recently, Fred Thorpe wrote a very fine biographical essay on Samuel Holland for the *Dictionary of Canadian Biography*,²⁸ while Grace Machemer's article, 'Headquartered at Piscataqua' (2005), provides an interesting introduction to the Northern Survey's operations in New England.²⁹

By far the most important publication relating to the Southern General Survey remains Louis De Vorsey Jr.'s first-ever publication of the manuscript report De Brahm presented to George III, in 1772 and 1773, which summarized his accomplishments over the preceding two decades in Georgia, South Carolina and East Florida.³⁰ While De Vorsey's introduction and copious endnotes represent a masterly accomplishment that does much to both contextualize and enrich the original text, its scope was naturally guided by the selective material De Brahm chose to cover. Thus, given the surveyor-general's difficult relationship with authorities, it is perhaps not surprising that it delves only very briefly into how his activities related to matters of colonial administration.

Moreover, only certain aspects of De Brahm's operations are discussed, while important

²⁶ D.C. Harvey (ed.), *Holland's Description of Cape Breton Island & Other Documents*. (Halifax, N.S., 1935, for his commentary, see 'Introduction', pp.1-36.

²⁷ N.N. Shipton, 'Samuel Holland's Plan of Cape Breton', *The Canadian Cartographer*, vol. 5, no.2 (1968), pp. 81-9,

²⁸ J. Thorpe, 'Holland, Samuel Johannes', *Dictionary of Canadian Biography*, vol.V (Toronto, 1983), pp.1425-9.

²⁹ G.S. Machemer, 'Headquartered at Piscataqua: Samuel Holland's Coastal and Inland Surveys, 1770-1774', *Historical New Hampshire*, vol. 57, nos. 1 &2 (Spring/Summer 2002), pp.4-25.

³⁰ L. De Vorsey Jr., *De Brahm's Report of the General Survey in the Southern District of North America* (Columbia, S.C., 1971). De Vorsey's subsequent chapter in a book by Ralph Ehrenberg is largely a reiteration of material he had already presented in *De Brahm's Report*, L. De Vorsey Jr., 'La Florida Revealed: The De Brahm Surveys of British East Florida, 1765-1771', in R. E. Ehrenberg (ed.), *Pattern and Process: Research in Historical Geography* (Washington, 1975), pp.87-102.

figures such as Bernard Romans and James Moncrief are barely mentioned. De Vorse's edited reprint of De Brahm's *Atlantic Pilot* (1772) also represents a great accomplishment, yet, by its nature, only focuses only on a very specific aspect of De Brahm's career.³¹

De Brahm's principal deputy, Bernard Romans, was the focus of Philip Phillip's 1924 work, which outlined many aspects of the subject's activities, supported by excerpts from archival documents.³² In 1999, it was superseded by Kathryn Holland Braund's analytical introduction and notes accompanying her reprint of Bernard Romans' *A Concise Natural History of East and West Florida* (1775), which grants the reader a fascinating picture of the extraordinary experiences of this brilliant, yet mercurial, explorer.³³ Notably, however, while Romans' surveying activities are discussed, his observations on subjects such as anthropology and natural history are granted far greater prominence. Outside of these publications, not much has been written about the Southern General Survey, save De Brahm's cameo appearance in Bernard Bailyn's Pulitzer Prize-winning *Voyagers to the West*,³⁴ as well as an entertaining article by Charles Mowat, the late specialist in the history of East Florida, 'That Odd Being De Brahm', which highlights the Surveyor-General's feud with Governor James Grant.³⁵

Mary Pedley's *Commerce of Cartography* (2005) is a highly insightful and engagingly written study of how manuscript maps were brought into print in eighteenth century France and Britain. Of particular interest is the chapter 'Multiplying Maps'

³¹ W.G. De Brahm, ed. by L. De Vorse Jr., *The Atlantic Pilot* (Gainesville, Fla., 1974).

³² P.L. Phillips, *Notes on the Life and Works of Bernard Romans* (Deland, Florida, 1924).

³³ B. Romans, ed. and with an Introduction by K.E.H. Braund, *A Concise Natural History of East and West Florida* (Tuscaloosa, Ala.:University of Alabama Press, 1999, Romans' *Concise Natural History* was originally published in New York, 1775).

³⁴ 'Failure in Xanadu', in B. Bailyn, *Voyagers to the West: A Passage in the Peopling of America on the Eve of the Revolution* (New York, 1986), pp.447-451.

³⁵ C.L. Mowat, 'That Odd Being De Brahm', *FHQ*, vol. 20 (1942), pp.323-345.

which, as a case study meant to illustrate broader trends, focuses on the process by which the Northern General Survey's manuscript maps of Narragansett Bay, Rhode Island were widely copied and printed, and subsequently how these derivatives were employed by military leaders on both sides of the American Revolutionary conflict.³⁶

A work which has lately received considerable notice is Paul Mapp's *The Elusive West and the Contest for Empire, 1713-1763* (2011).³⁷ While it does not in any way address the General Survey, as its scope chronologically ends at 1763, it carefully analyses how the English, Spanish and the French all employed maps as diplomatic, rhetorical and strategic devices during their lengthy contests for control of the frontier regions of the trans-Mississippi west. Mapp's work therefore informs the present study in that it both illuminates the ways in which maps were used by officials, and in some respects, serves as a fine precursor to the analysis of the mapping programmes associated with the Southern General Survey which operated in the newly-created frontier province of West Florida in the late 1760s and early 1770s.³⁸

Organisation of the Thesis

This study is divided into five sections. The first elaborates on the events and antecedents that led to the decision to create the General Survey. The following three sections are defined by the distinct phases under which the survey operated.

³⁶ Chapter 5: 'Multiplying Maps: The Survey and Printed Charts of Narragansett Bay, Rhode Island', in M.S. Pedley, *Commerce of Cartography* (Chicago, 2005), pp.119-55.

³⁷ P. Mapp, *The Elusive West and the Contest for Empire* (Chapel Hill, N.C., 2011).

³⁸ Chapter 15 in Mapp's Book, 'Old Visions and new Opportunities: Britain and the Spanish Empire at the end of the Seven Years' War' helps to set the scene which followed Britain's acquisition of the Floridas, whereby officials in London realised that they required accurate geographic intelligence regarding the region, an imperative that led to the creation of the Southern General Survey, P.Mapp, *The Elusive West*, pp.413-27.

‘Genesis’ covers the development of state-sponsored mapping programs, both civilian and military, in the American colonies and the emerging activism of the Board of Trade in the cartographic arena. Holland and De Brahm are introduced as they each held prominent roles in the vital developments which set the preconditions without which the General Survey would never have been possible. Also explored are the geographic conceptions of Britain’s newly-acquired North American territories as held by administrators and the intelligentsia at the time in which the General Survey was conceived. Finally, the chapter describes the actual foundation of the General Survey itself, and details the specific instructions that the Board of Trade articulated to both Holland and De Brahm.

‘Mapping Infant Colonies’, the first phase of the General Survey, explores the first three operational years of the General Survey in both the Northern and Southern departments. Holland and De Brahm each set out with considerable determination to fulfill their initial set of priorities as outlined by the Board of Trade. Holland’s highly-professional teams managed both to scientifically map and to produce highly-elaborate and precise cadastral and development plans for Nova Scotia’s Island of St. John’s (Prince Edward Island) and Cape Breton Island. They also mapped the Magdalen Islands and Anticosti Island, then under the jurisdiction of Newfoundland, as well as vast areas of the province of Québec that had not yet been scientifically surveyed. Holland’s maps and highly detailed written reports provided officials in London with a comprehensive overview of the economic potential of these regions, identifying numerous natural resources, such as coal as well as cod and walrus fisheries. The intelligence proved very useful when considering by what measures these lands should be settled and developed.

In this vein, Holland's cadastral plan of the Island of St. John's was precisely followed by the Board of Trade as the authoritative basis for settling the island.

Meanwhile, De Brahm conducted a masterly reconnaissance survey of the entire east coast of the Floridian peninsula from St. Augustine to Cape Florida, and produced a detailed analysis of the choicest locations for future settlement, most notably Mosquito Inlet. De Brahm also commenced his project to map scientifically the St. John's River system and to discover the location of the long-reputed trans-peninsular navigable passage. While De Brahm's excellent maps gained favourable notice in London, he was progressively marginalised in East Florida, as tensions with Grant approached the boiling point.

During a time of great political turmoil and a 'revolving' door of different ministries, the Board of Trade found itself marginalised from many of the great debates on colonial policy. Nevertheless, the Board generally managed to shield the operations of the General Survey, in something of a technocratic bubble, from interference from powerful political and mercantile interests.

'Closing the Net', presenting the second phase, explores the General Survey as it operated under the Earl of Hillsborough, who, as part of a broader administrative realignment, rose to the newly-created office of American Secretary, through which he simultaneously held the presidency of the Board of Trade. Far from being shielded from partisan politics, the General Survey became subject to Hillsborough's distinctly conservative agenda which was continually reinforced through his hands-on style.

In the north, Holland completed the mapping of the allocated coastal areas of Canada, and the intelligence provided by Holland supported Hillsborough's decision to

transfer the Magdalens, Anticosti Island, and Labrador from Newfoundland's jurisdiction to that of Québec. More controversially, it also motivated Hillsborough to freeze all settlement and mining activity on Cape Breton Island, an unintended consequence for Holland who saw his masterly cadastral plan for the island mothballed. As the Northern Survey moved into the core colonial region of New England, the effect of Holland's geographic intelligence shifted from being used to formulate new policies into being an agent for enforcing existing initiatives. Holland forged a close relationship with John Wentworth, who was simultaneously the Governor of New Hampshire and the crown officer in charge of enforcing forestry policy. Holland worked towards creating an accurate general map of New Hampshire that could be used as a vital tool to Wentworth's programme for developing transportation and military infrastructure, precisely demarcating the limits of private land titles and the province's boundaries. Consistent with Hillsborough's design to tighten the juridical vice on the colonies, the Northern Survey's highly precise maps of coastal Maine acted as blueprints for Wentworth and his subordinates to locate and preserve mast timber for the use of the Royal Navy, an utmost priority for Whitehall.

In the south, De Brahm completed both his mapping of the St. John's River and the Atlantic Coast of East Florida, before moving on to chart the Florida Keys. A large plantation development was founded at Mosquito Inlet, the area he had assessed for such a settlement, although this enterprise, like many others, quickly encountered difficulties. Unable to manage his provincial portfolio, De Brahm's relationship with Grant deteriorated to the point where the governor petitioned Whitehall for De Brahm's recall, a request Hillsborough obliged. While De Brahm formulated a brilliant treatise on the Gulf

Stream, his recall created a cartographic vacuum in the Floridas. Stepping into this void was his estranged principal deputy, Bernard Romans, who hoping for future emolument from the crown, continued where De Brahm left off by mapping the entire Gulf Coast of East Florida before moving into West Florida. In the latter province, Romans synthesized his own surveys with those created by other official mapping projects in order to create a composite general map of coastal West Florida. With the blessing of Hillsborough, this endeavour was further taken up by Elias Durnford, the provincial surveyor-general, who worked towards completing what would have been one of the ultimate objectives of the Southern General Survey, the creation of an accurate general map of all of West Florida.

‘A New Spring to our Future Endeavours’, relaying the third and final phase, explores the General Survey during the tempestuous period in which the Earl of Dartmouth was American Secretary. In sharp contrast to Hillsborough, Dartmouth had a very laissez-faire style, and while he had a politically liberal disposition, he played a much more limited role in colonial affairs.

The Northern Survey continued to complete its objective of creating an accurate general map of New Hampshire, as well as its masterly cartographic rendering of coastal Maine. It then continued to map the entire coastlines of metropolitan Massachusetts and Rhode Island, which included the key harbours of Boston and Newport.

Dartmouth’s assumption of office had relatively little effect on Holland’s operations. In contrast, it produced a major turnaround for De Brahm. Dartmouth befriended De Brahm and intervened to ensure that his official status was restored, and he was fitted out for his return to Florida to formally resume the Southern Survey. Dartmouth, who shared many of De Brahm’s intellectual interests, arranged for the

surveyor to have a private audience with the king, and entrusted him with orchestrating an ultimately unsuccessful design to develop his large Floridian estate. Dartmouth also recognized and compensated Romans for his efforts to continue the Southern Survey, while Durnford progressed closer towards creating an accurate general map of West Florida.

By 1775, both the operations of the Northern Survey as well as De Brahm's ambitions to resume his activities were caught up in the vortex that was the American Revolution. All civilian surveying activities ceased, as crown resources were redirected to suppress the budding rebellion. While the operations of the General Survey ceased, the spectacularly accurate and detailed maps it had produced became the basis for the printed cartography, cementing the General Survey's leading role of scientific cartography in the continent. Beyond that, many of the Northern Survey's maps and their printed derivatives became important strategic and operational aids to British military commanders.

While the General Survey never progressed to map all of the territory as was originally intended, what had been accomplished represented one of the most profoundly transformational revolutions in the history of cartography. Not only were thousands of miles of territory given a precise and accurate shape, but geographic intelligence provided administrators with a comprehensive and scientific analysis of the natural attributes and economic potential of vast territories. The cartography of the General Survey left a legacy of base maps on which all subsequent mapping of the regions were produced for many decades. The surveys would continue to be used by officials in both the new republic of the United States and Britain's remaining colonies in Canada, while the

qualities of the maps and the techniques used to produce them would influence the mapping of other regions well into the next century.

Chapter II: The Antecedents and Genesis of the General Survey

A. Introduction

The General Survey, remarkable for its ambition, breadth, influence, and central sponsorship, was shaped by a number of factors, including the economic realities ushered in by the end of the Seven Years' War, a change in Britain's orientation to colonial development, the advance of surveying technology, a cadre of surveyor talent with New World experience, and a core group of Board of Trade administrators who came to appreciate the value of cartographic information. Informed by a useful and growing body of surveys and documents, policy-makers came to see that there were information gaps that needed to be filled, all of which became the priorities for the General Survey.

At the conclusion of the Seven Years War in 1763, Britain had added significant territory to her North American empire. From France, she had acquired the expanses of Canada and the trans-Appalachian west, and, from Spain, Florida. To manage this embarrassment of riches, a fiscally-challenged Whitehall forged a new colonial policy, thereby ending the long-established practice of 'salutary neglect'. In this new era, the Board of Trade was charged with making new settlements economically viable, ideally with a return to the Crown. While the Board and its affiliates in the colonies ultimately had access to an array of maps and surveys completed by previous regimes or locally-sponsored initiatives, the geographical information was not sufficient or often detailed enough to satisfy new imperatives.

B. The Civilian and Military Antecedents of the General Survey

The birth of the General Survey evolved from two distinct, but inter-related, cartographic movements that took place under both civilian and military direction in the British American colonies over the previous decades. Driven by a parsimonious bent and the fact that scientific surveys were expensive to support, Whitehall and colonial governments and proprietors in the New World, apart from a brief flowering in the late seventeenth century, were slow to recognise the administrative utility of general surveys. Starting with the imperative to sponsor inter-colonial boundary surveys, colonial governments, at the urging of the Board of Trade, gradually came to finance the creation of high-quality general provincial maps based on composites of surveys. During this time, the Board not only acquired a greater and more sophisticated appreciation of the administrative uses of cartography, it played a role in bringing these surveys to publication, greatly increasing their impact. In a separate development, the need for geographic intelligence during the Seven Years' War motivated the British military to allocate significant resources for the creation of topographical regional military maps predicated on scientific survey principles. With the official sponsorship of surveys at the regional level, the colonies developed a cadre of skilled manpower trained in scientific surveying techniques of both a civilian and military nature. Without these predecessor programmes, the General Survey of British North America would not have been possible.

Developments in English Colonial Cartography During the Late Seventeenth Century

(refer to Fig. 1)

During the seventeenth century, England began to establish permanent colonies in the West Indies and along the eastern seaboard of North America. Throughout this period, the Crown delegated the responsibility of settling and developing the colonies by granting royal charters to either private individuals or syndicates of adventurers. These arrangements spared the Treasury from the onerous expenditures incumbent in developing these new societies, while serving to reward loyal courtiers with potentially lucrative sources of revenue.

The Lords of Trade, the committee of inquiry which advised the English government on colonial affairs from 1675 to 1696, were not known to have commissioned surveys, although they avidly collected maps and would consult them during their deliberations. The Lords' secretary, William Blathwayt, is thought to have secreted away a large collection. The surviving 'Blathwayt Atlas', a magnificent atlas facsimile, containing 48 maps (35 printed and 13 manuscripts), provides a fascinating insight into the Lords' varied cartographic interests.³⁹ A highlight of the collection is Richard Forde's *Barbadoes* (c.1676), widely considered to be the first economic map of any English colony.⁴⁰

In the late seventeenth century, colonial proprietors of Carolina, Pennsylvania and Maryland, who held the mantle of local governance, came to recognize that maps of their

³⁹ J.D. Black, *The Blathwayt Atlas*, vol. I (Commentary), pp.3-14.

⁴⁰ Richard Forde, *A New Map of the Island of Barbadoes* (London, c.1676). J. Black, *Blathwayt Atlas*, vol. I, map no. 32; Pritchard and Taliaferro, no.75. This highly sophisticated work depicted 844 named plantations and details the locations of the various crops that comprise what then one of the world's most valuable agrarian economies.

incipient colonies not only served as practical tools for developing infrastructure and demarcating cadastral divisions, but, once printed in London, acted as propagandist devices supporting their campaigns to attract colonists.⁴¹ Some of the important maps sponsored in this way included Augustine Hermann's *Virginia and Maryland* (1673)⁴² and Maurice Matthews and Joel Gascoyne's *South Carolina* (c.1695).⁴³ Both of these surveys provided geographically progressive renderings of the coastal areas, even if their coverage of interior regions was vague. On a larger scale, Thomas Holme's *A Map of ye improved Parts of Pensilvania* (c. 1687) provided a brilliant cadastral plan for the newly-founded province (**Fig. 2**).⁴⁴

⁴¹ These early maps done at the behest of colonial proprietors facilitated a basic template for settlement planning, and perhaps, more importantly, they were seen to be vital promotional tools once they were printed in London and disseminated for public consumption. With this aim, all three maps depict their respective regions as highly inviting to prospective settlers, with pleasant landscapes traversed by broad rivers. Exceptional for both its pioneering role in colonial cartography and its technical élan, was Richard Norwood's 1616-7 systematic survey of Bermuda carried out on behalf of the colony's patentees. While these islands were admittedly very small in area, the highly impressive accuracy by which Norwood delineated its irregular shorelines and his precise demarcation of cadastral divisions, ensured the resulting map would occupy an iconic place in colonial cartography; refer to R. Norwood, ed. by W. Craven and W. B. Hayward, *Journal of Richard Norwood, Surveyor of Bermuda* (New York, 1945).

⁴² Augustine Hermann, *Virginia and Maryland* (London, 1673), Pritchard and Taliaferro, fig. 12, p.13 and cf. no.16. At the behest of the Lord Calvert, the proprietor of Maryland, the Bohemian surveyor Augustine Hermann produced a highly-advanced geographical depiction of intricate shoreline of Chesapeake Bay, fed by the numerous great river estuaries lined by plantations. The first of many printed versions appeared in 1673.

⁴³ [Maurice Mathews & Joel Gascoyne], *New Map of the Chief Rivers, Bays, Creeks, Harbours, and Settlements, in South Carolina* (London: John Thornton & Robert Morden, c.1695), Cumming, *Southeast in Early Maps*, no.101; Pritchard and Taliaferro, *Degrees of Latitude*, no.15. The Lords Proprietors charged Maurice Matthews, the surveyor-general of Carolina with mapping the coastal and settled southern regions of the province centred on the provincial capital of Charles Town. Depicting 250 plantations and homesteads, Matthews' survey was drafted into manuscript by Joel Gascoyne around 1685, which formed the basis of a printed version which was published the following decade.

⁴⁴ Thomas Holme, *Map of ye Improved Part of Pensilvania in America, Divided into Countyes Townships and Lotts* (London, c.1687), Pritchard and Taliaferro, no.71. The map was commissioned by the province's proprietor, William Penn, and includes an inset depicting the perfectly symmetrical street plan of Philadelphia, the colony's capital.

Governance of Colonial Affairs in British North America

Until 1768, the Secretary of State for the Southern Department was the cabinet minister directly responsible for overseeing colonial affairs, not only in the Americas, but also in Africa and Asia. This far-reaching portfolio included oversight over certain matters of domestic affairs in southern England, Wales, Ireland, and foreign relations with the Catholic and Muslim nations of the Mediterranean world.⁴⁵ Within this broad mandate, there was much to divert focus and attention from the affairs of Britain.

In 1696, the Lords of Trade were reconstituted into the Lords Commissioners of Trade and Plantations, commonly known as the Board of Trade.⁴⁶ Consisting of eight members, including the First Lord, or President, the Board's membership tended to be drawn from former and current MPs and minor courtiers. It was served by a small cadre of professional civil servants, led by the secretary, who fulfilled a role akin to being the organisation's chief operating officer.

Like its predecessor, the Board's role was to review the large volume of intelligence emanating from the colonies and to submit reports to cabinet, reporting directly to the Southern Secretary. Intended only as a body of inquiry and advice, the Board, as first conceived, had few direct powers. For instance, all official colonial correspondence conveying the Crown's decisions were handled by the Southern Secretary, who also had control over colonial patronage.

Throughout the first half of the eighteenth century, Whitehall generally maintained a laissez-faire attitude towards colonial affairs. Indeed, the lengthy period in

⁴⁵ M.A. Thomson, *Secretaries of State: 1681-1782* (Oxford, 1932), pp.20-5.

⁴⁶ "his Majesty's Commission for promoting the Trade of this Kingdom and for inspecting and improving His Plantations in America and elsewhere", dated 15 May 1696, printed in full, *NYCD*, vol.IV, pp.145-8; A.H. Basye, *The Lords Commissioners of Trade and Plantations, 1748-1782* (New Haven, 1925), p.3; O. M. Dickerson, *American Colonial Government, 1696-1765* (New York, 1962), pp.17-22.

which colonial affairs were under the aegis of the Duke of Newcastle has been characterised as the era of ‘Salutary Neglect’.⁴⁷ Whitehall was very hesitant to spend money on colonial affairs, with the consequence that, in many respects, the individual colonies were left to their own devices. This ethic of lethargy extended to the Board of Trade which showed a remarkable lack of initiative. Indeed, for years many of its members saw their roles as mere sinecures, bring little ambition or drive to their mandate.

At the colonial level, the system of government could be highly fractious and inefficient. While, in theory, the governor, assisted by his appointed executive, exercised many executive prerogatives and had the power to make decrees and propose bills, his practical authority was limited by the legislative assemblies, which had control over the provincial purse. Colonial legislatures were notoriously parsimonious, as the colonists who elected them generally desired a limited role of government and were adverse to high levels of taxation. Governors also frequently sparred with army and naval commanders over the control, deployment and the provisioning of forces⁴⁸. Facilitated by the ambiguous wording of commissions and instructions from London, colonial officials often sparred with each other to get attention and credit from the powers in London.

Without sustained and committed leadership in Britain or in the colonies, the early 1700s marked a low point in the development of colonial cartography. While the Board of Trade habitually inserted clauses in gubernatorial commissions commanding appointees to send home maps of their colonies, these almost invariably fell on deaf ears. The enthusiasm evinced by the founding proprietors had long worn off, and provincial

⁴⁷ J. Henretta, *Salutary Neglect* (Princeton, 1972).

⁴⁸ J.W.Shy, *Toward Lexington: the role of the British Army in the coming of the American Revolution* (Princeton, 1965).

legislatures were unwilling to sponsor the surveys necessary for new map creation. As no funding came from Whitehall, little progress was made. The handful of new maps which were dispatched to London tended to address issues of an episodic importance, such as the location of a fort or wharf, as opposed to being general maps that had broader and more enduring administrative utility. Beyond the lack of official support, map creation was hindered by the scarcity of competent surveyors resident in the colonies.⁴⁹ The glowing exception to these dismal circumstances was William Mayo's magnificent 1722 map of the Barbados, based on surveys sponsored by that island's legislature.⁵⁰

Signs of Progress

Beginning in the late 1720s, various colonial governments began to finance inter-provincial boundary surveys. The seventeenth century charters, which had originally defined the limits of the North America colonies, were often predicated on inaccurate geographical information. With growing populations in the provinces, the number of over-lapping land claims grew, along with the specter of expensive and protracted legal battles. In response some colonies jointly formed royal commissions, responsible for demarcating the locations of the inter-provincial boundaries by arbitration, while overseeing surveys of the agreed-upon lines. Once completed, detailed reports along with maps were submitted to the Board of Trade, who would make a recommendation for the Privy Council decision.⁵¹

⁴⁹ R.J.P. Kain and E. Baigent, *The Cadastral Map in the Service of the State*. (Chicago, 1992), pp.220-5

⁵⁰ William Mayo, *A New & Exact Map of the Island of Barbadoes in America* (London, 1722), Pritchard and Taliaferro, no.22.

⁵¹ O. M. Dickerson, *American Colonial Government, 1696-1765* (Cleveland, Ohio, 1912), pp. 287-96.

The first such survey, conducted in 1728, demarcated the North Carolina-Virginia line from the Currituck Inlet on the coast directly inland to the south branch of the Roanoke River.⁵² In the decade following, a commission was formed to survey the various boundary proposals between New Hampshire and Massachusetts.⁵³ In Virginia, two separate teams of surveyors were formed in 1736 and 1737 with the objective of demarcating the boundary between land under the auspices of the crown and proprietary Fairfax grant in the ‘Northern Neck’ of the province, resulting in a pair of dueling maps (**Fig. 3**).⁵⁴

The boundary surveys set a precedent for colonial governments to be direct sponsors of surveys. They also demonstrated that local talent could competently survey large swathes of often rugged virgin territory at a reasonable cost. Boundary surveys continued to be a major preoccupation of colonial administration until the very eve of the Revolution.

The success of the boundary surveys spurred legislatures to sponsor the creation of general provincial maps. The North Carolina Legislature assumed a pioneering role

⁵² Boundary Commissioners: C. Gale, T. Lovick, E. Moseley, W. Little (Carolina) & W. Byrd, R. Fitzwilliams, W. Danbridge (Virginia), [Map of] “...a due West Line to be run from the North shore of Currituck Inlet...to a Chestnut Oak on the Southside of the Southern Branch of the Roanoke River...”, Mss., 1728, CO 700/Virginia 3, Cumming, *Southeast in Early Maps*, no.197.

⁵³ George Mitchell, “A Plan of the Rivers and Boundary Lines referred to in the Proceedings and Judgment to which this is annexed.”, noted as: (Received December 20th 1737, with a letter from the Commissioners for Settling the Boundary Lines between the provinces of Massachusetts Bay and New Hampshire), Mss., 1737, CO 700/New Hampshire 14; the map was subsequently printed as George Mitchell, *A Plan of the Rivers and Boundary Lines refer'd to in the Proceedings and Judgment of the Commissioners for adjusting the Bounds between the Massachusetts Bay and New Hampshire*. (London: W.H. Toms, 1739), CO 700/New Hampshire 15; D.E. Van Deventer, *The Emergence of Provincial New Hampshire, 1623-1741* (Baltimore, 1976), p.73. This dispute would be resolved largely in new Hampshire’s favour in 1741, yet these boundaries would not be precisely surveyed until 1773 when they were included as part of Samuel Holland’s mandate.

⁵⁴ William Mayo, *A Map of the Northern Neck in Virginia* (London, 1737). Mayo’s map was viewed by Fairfax as being unfavourable to his claims. Fairfax commissioned a rival survey which was printed as *A Survey of the Northern Neck of Virginia, being the Lands belonging to the Rt. Honourable Thomas Lord Fairfax Baron Cameron* (London, 1745), both maps Pritchard and Taliaferro, no.27.

when it charged Edward Moseley, the province's surveyor-general, and one of the veterans of the 1728 boundary survey, to consolidate his own surveys with those of others. The resulting *New and Correct Map of the Province of North Carolina* (1733) has been described as "the first detailed and accurate cartographical survey of the North Carolina coastal area"⁵⁵ (**Fig. 4**).⁵⁶

In an unrelated development, Henry Popple published Clement Lempriere's monumental twenty-sheet *A Map of the British Empire in America* (1733).⁵⁷ While the geographical rendering is not progressive, the map enjoyed great popularity. Importantly, Popple billed the maps as being produced "with the Approbation" of the Board of Trade, based on "Authentick Records & Actual Surveys" from its collections.⁵⁸ While, in actuality, the Board gave no such sanction, Popple's claim helped to establish the Board's 'brand' as an authority on cartography.

Lord Halifax Becomes President of the Board of Trade

A golden age of official cartography dawned in 1748 when George Montague-Dunk, 2nd Earl of Halifax, became president of the Board of Trade.⁵⁹ In sharp contrast to his predecessors, Halifax, who was young, energetic and highly ambitious, sought to expand the Board's power and influence over colonial affairs. In 1752, Halifax

⁵⁵ Cumming, *Southeast in Early Maps*, p.235.

⁵⁶ Edward Moseley, *A New and Correct Map of the Province of North Carolina*, (London, 1733), Cumming, *Southeast in Early Maps*, no.218.

⁵⁷ Henry Popple, *A Map of the British Empire in America with the French and Spanish Settlements adjacent thereto* (London, 1733). M. Babinski, *Popple's 1733 Map* (Garwood, N.J., 1994); Pritchard and Taliaferro, no.24.

⁵⁸ A notation on the map reads: "Mr. Popple undertook this map with the Approbation of the Lords Commissioners of Trade and Plantations..."

⁵⁹ George Montague-Dunk, 2nd Earl of Halifax (1716-71), W.A. Speck, 'Dunk, George Montague', *DNB*, vol.17, pp.303-5.

significantly augmented his authority, acquiring the power to reward colonial patronage and the control of official correspondence. From 1757, he was permitted to attend cabinet whenever colonial affairs were on the agenda. His success was bolstered by the competence and industry of John Pownall, the Board's secretary, and the brother of Thomas Pownall, the governor of Massachusetts and a recognised intellectual authority on colonial affairs.⁶⁰ Having an informed appreciation of cartography, the Board, under his leadership, became a leading patron of and repository for cartography.

In the summer of 1750, Halifax issued a circular to the colonial governors which included the familiar request for “an exact an account as you can of the limits and Boundaries of the Territory [of your colony], together with a Chart or Map thereof”.⁶¹ In response, the governor of Virginia assured the Board that “I have employed the most able Persons” to compile a map of the province.⁶² Joshua Fry and Peter Jefferson, the latter being the father of the future U.S. president, were veterans of the Northern Neck surveys. The House of Burgesses awarded them £300 for compiling a number of the most recent surveys into an impressive general map, which accurately depicted the tidewater regions of Britain's most populous American colony (**Fig. 5**).⁶³ Halifax, recognising the high quality and importance of the map, was almost certainly instrumental in having it published by Thomas Jefferys, the cartographer to the Prince of Wales. Other general

⁶⁰ F.B. Wickwire, ‘John Pownall and British Colonial Policy’, *WMQ*, vol.20, no.4 (Oct., 1963), pp.544-6; J.A. Schulz, *Thomas Pownall* (Glendale, Cal., 1951).

⁶¹ Circular to Colonial Governor, 19 July 1750, CO 324/13, pp.251-52, cited in M. Edney, ‘John Mitchell's map of North America: A Study of the Use and Publication of Official Maps in Eighteenth-Century Britain,’ *Imago Mundi*, vol.60, no.1 (2008), pp.71-2.

⁶² C. Verner, ‘The Fry and Jefferson Map’, *Imago Mundi*, vol.21 (1973), p.73.

⁶³ Joshua Fry & Peter Jefferson, *A Map of the most Inhabited part of Virginia* (London, c.1753), Cumming, ed. De Vorsey, no.; Pritchard & Taliaferro, no.30. Gov. Burwell sent Fry-Jefferson manuscript to London, where it was considered by the Board at a meeting on 11 March 1752, Verner, p.74.

maps funded by colonial governments followed, including those of South Carolina & Georgia, Pennsylvania, and Jamaica.⁶⁴

Halifax was the driving force behind what would become perhaps the most famous and influential map in the history of colonial America.⁶⁵ In the early 1750s, as tensions rose between the French and Britain over the possession of vast expanses of territory in North America, Halifax, a prominent hawk, urged Whitehall to press British claims. He engaged a Virginian doctor, John Mitchell, to produce the most geographically advanced map of eastern North America to date (**Fig. 6**).⁶⁶ Importantly, it showed British territorial claims as extending deep into the interior, overrunning territory then occupied by the French. Printed in 1755, on the eve of the Seven Years' War, the map's bellicose rhetoric was considered so effective that a leading member of the anti-war faction tried in vain to prevent it from being printed.⁶⁷ The map was an immediate success, becoming the most influential general map of the colonies for many years to come.⁶⁸ This map can be viewed as an epistemological beginning for what would become the Northern General Survey.

⁶⁴ Nicholas Scull, *...Map of the improved Part of the Province of Pennsylvania* (Philadelphia, 1759), Pritchard and Taliaferro, no.38; Thomas Craskell & James Simpson, *Map of the Island of Jamaica, laid down from the papers of Henry Moore, Esq., H.M.'s Lieut.-Governor of that Island, in the years 1756-61, and from a great number of actual surveys. By Thos. Craskell, Engineer, and Jas. Simpson, Surveyor* (London, 1763), "Henry Moore Esq., Lieutenant Governor of Jamaica, for the trouble he hath been in making a survey of said island.", BL: Add. Mss. 74237 EE, [n.d., but c. 1761], cited in Pedley, *Commerce of Cartography*, p.233; Lewis Evans, *A General Map of the Middle British Colonies, in America* (Philadelphia, 1755), Pritchard and Taliaferro, no.34.

⁶⁵ Edney, 'John Mitchell's Map', pp.68-73.

⁶⁶ John Mitchell, *A Map of the British and French Dominions in North America with the Roads, Distances, Limits and Extent of the Settlements* (London, 1755), Pritchard and Taliaferro, no.33.

⁶⁷ Edney, 'John Mitchell's Map', pp.75-6.

⁶⁸ A later state would even be used in 1783 to demarcate the boundary between the newly independent United States and what remained of British North America.

Introducing William Gerard De Brahm

Despite being a difficult personality, one of the most important figures of colonial cartography was William Gerard De Brahm, described as “a man whose versatility of genius went beyond even that of the typical eighteenth century dilettante: a surveyor, engineer, botanist, astronomer, meteorologist, student of ocean currents, alchemist, sociologist, historian and mystical philosopher,”⁶⁹ Other than being born in 1718 in Coblenz, Germany to a family of minor courtiers to the Elector of Trier, little is known of his early life. However, his strong grounding in mathematics, classics and literature suggests that he received a very fine formal education. Elevating his social and financial status by marrying the daughter of a Bavarian baron, De Brahm claimed an impressive military resume, having “served in eleven campaigns” against the “Turks and France under Prince Eugene, Counts Walls and Seckendorf”.⁷⁰ He received advanced training in military engineering and surveying, obtaining the rank of “Captain Engineer” in the Bavarian army.⁷¹

A deeply spiritual man, who became persona non grata in staunchly-Catholic Bavaria when he converted to Protestantism, he was recruited by the Archbishop of Augsburg in 1751 to lead a small group of German Protestants to settle in Georgia. Upon his arrival in the fledgling colony, he set about to survey the various small towns and plats around the main German settlement of Ebenezer, presenting the province’s Board of

⁶⁹ C.L. Mowat, “‘That Odd Being’, De Brahm”, *FHQ*, vol. 20 (Apr., 1942), p.323.

⁷⁰ De Vorsey (ed.), *De Brahm’s Report*, Introduction, p.8.

⁷¹ On the cartouche of his 1757 map of South Carolina and Georgia, De Brahm claimed that he was “late Captain Engineer under his Imperial Majesty Charles VII”, which refers to Charles VII Albert (1697-1745), Wittelsbach, Prince-Elector of Bavaria (1726-45) and Holy Roman Emperor (1742-5), the only non-Habsburg prince to become Emperor since the 15th century. De Brahm also claimed to have served directly under Friedrich Heinrich Reichsgraf von Seckendorff (1673-1763), commander of the Bavarian army (1742-5), De Vorsey (ed.), *De Brahm’s Report*, Introduction, pp.8-12.

Trustees with a map of the region.⁷² Clearly impressed, the Trustees' secretary said of De Brahm, "He has been at a great deal of Pains to view the country... and has taken plans of all the Places he has visited, and I look upon him to be one of the most intelligent men I ever met with, and will I doubt not make a very useful colonist".⁷³

In 1754, De Brahm was named, along with Henry Yonge, as the co-surveyor-general of Georgia. In 1755, he was appointed the surveyor-general of South Carolina, where the assembly finally agreed to pay for De Brahm to design the capital's new fortifications, albeit at a cost of around 2% of an original scheme he had presented earlier.⁷⁴ In 1756, he ventured deep into Cherokee country in order to build Fort Loudon, a frontier outpost. De Brahm made frequent trips to Georgia where, in anticipation of a possible Spanish invasion, he designed several forts which would dot the province's coastline. Notably, he also drafted the initial plans for what would become the elaborate system of defenses encircling Savannah.

De Brahm took full advantage of his dual role of being the surveyor-general of two provinces. At the apex of these endeavours is one of the greatest masterpieces of colonial cartography, *A Map of South Carolina and a Part of Georgia* (1757) (**Fig. 7**).⁷⁵ The culmination of five years of effort, this extraordinary map delineates the entire coastlines of both provinces, in addition to many of the major rivers and their tributaries

⁷² De Vorsey (ed.), *De Brahm's Report*, Introduction, p.10.

⁷³ *Ibid.*

⁷⁴ William Gerard De Brahm, "Plan of a Project to Fortifie Charlestown. Done by desire of his Excellency the Gouverneur in Council", Mss., 1755, CO 700/Carolina 14, report CO 5/374. James Glen, the highly-industrious governor of South Carolina, who had become alarmed by the dilapidated state of Charles Town's defensive works, tried to convince his own legislative assembly to provide De Brahm with the finances to devise new fortifications. Initially, the assembly balked, citing that they did not trust a "foreigner" with such a sensitive task. Glen's case was not helped by the outrageously grandiose nature of De Brahm's initial proposal that would see Charles Town enveloped by defensive works that would rival virtually any city in Europe – but at an estimated cost of £294,140!

⁷⁵ William Gerard De Brahm, *A Map of South Carolina and a Part of Georgia* (London, 1757), Pritchard and Taliaferro, no.37.

with remarkable precision. While predicated on a composite of surveys, De Brahm carefully scrutinised the very best available maps, only accepting the most reliable information.⁷⁶ This intelligence was integrated with his own numerous and exacting triangulated surveys. In the spirit of Enlightenment empiricism, he left blank areas where he did not possess reliable intelligence. The map is considered to be the first topographical map of an expansive region of the southern colonies predicated on scientific surveys.

Depicted on the map are dozens of plantations, whose owners are identified on the tables in the lower portion of the map.⁷⁷ While not the originator of the concept, the naming of plantations on tables corresponding to a lettered cross-reference system on the map was an unusually progressive attribute. The map also features an ‘Explanation’, depicting symbols for ‘Towns’, ‘Forts’, ‘Churches & Chapels’, ‘Houses’, and ‘Roads’, as well as various qualities of the landscape, including ‘Swamp Lands’, ‘Marsh Lands’, ‘Oak Lands’, and ‘Pine Lands’. The nature of the land is vividly described on a scientific pictorial cross-section entitled, ‘The Nature of the Land in this Course was discovered by a N.W. Line run 40 Miles from the Mouth of Little River’, that marks the lower portion of the South and North Carolina boundary (**Fig. 8**). It could be deemed the closest thing approaching a soil map to be produced in America for many years to come. Dedicated to

⁷⁶ A notation on the map claimed that it was “Composed From Surveys taken by The Hon. William Bull, Esq. Lieutenant Governor, Captain Gascoign, Hugh Bryan, Esq; And the Author William De Brahm, Surveyor General to the Province of South Carolina, one of the Surveyors of Georgia...”

⁷⁷ In preparation for the map, De Brahm placed an article saying that he “gives notice to all Gentlemen, who desire to have their Plats inserted therein, that he will send copies of their respective Plats for that Purpose”, *South Carolina Gazette*, 30 October 1752.

Halifax and the Board of Trade, this impressive work served as De Brahm's calling card in London.⁷⁸

The Development of Military Cartography in British North America

The second institutional antecedent of the General Survey was the development of a skilled corps of British military cartographers operating in North America during the Seven Years' War. Prior to this conflict, there were very few army or navy personnel engaged in mapping operations in North America. The modest amount of military maps that were produced varied widely in quality and tended to address subjects of only an episodic importance.

Developments in Britain established the preconditions for an upsurge in military surveying in North America. The Board of Ordnance, an institution which was governed separately from the army and navy, was responsible for supplying the armed forces with munitions and technical expertise. Following the Treaty of Utrecht (1713), it enacted a series of reforms.⁷⁹ In 1716, the Board of Ordnance created a Corps of Engineers, charged with assisting the army to construct fortifications, roads, and conduct surveys.⁸⁰ The following year, the Board of Ordnance restructured the Drawing Room in the Tower of London to be not only a repository for military plans but a workshop where military

⁷⁸ The map was dedicated to "the right Honourable George Dunk, Earl of Halifax First lord Commissioner of, and the rest of the Right honourable lords Commissioners, of Trade and Plantations. It is indeed likely that Halifax facilitated its publication with Thomas Jefferys.

⁷⁹ D.W. Marshall, 'Military Maps of the eighteenth-century in the Tower of London Drawing Room', *Imago Mundi*, vol.32 (1980), pp.22-44.

⁸⁰ J.B. Harley, 'The Spread of Cartographical Ideas between the Revolutionary Armies', in Harley et al. (eds.), *American Revolutionary War*, pp.67-70.

plans could be copied employing continental conventions.⁸¹ Starting with only three fulltime draughtsmen in 1717, the roster would grow to fifteen in 1752 and twenty-nine by 1759. The Drawing Room served as a vital apprenticeship for numerous draughtsmen and surveyors who would later operate in open theatres.

Another great advance came with the foundation of the Military Academy at Woolwich in 1741, where cadets were schooled in the techniques and conventions of military engineering in the best continental traditions of Vauban and Coehoorn. Leading experts from the continent were recruited to the faculty, most notably the German-born John Muller, the academy's long-time instructor of fortification and artillery, who was described as "the scholastic father of all the great engineers in this country [Britain] employed for forty years".⁸²

This training was successfully tested when many alumni of the Tower and Woolwich joined the project to create a general military map of Scotland under the direction of William Roy from 1747 to 1755, following the Jacobite Rebellion.⁸³ While never completed, it was the first large-scale topographical survey ever initiated in the British Isles.

In 1742, the Royal Navy also made a bold step in direction of sponsoring scientific surveys when the Admiralty Board commissioned Murdoch Mackenzie to chart

⁸¹ Harley, 'The Spread of Cartographical Ideas between the Revolutionary Armies', Harley et al. (eds.), *Mapping the American Revolutionary War*, pp.55-7.

⁸² Muller authored several important treatises, most notably the *Elemental Part of Fortification* (1746), which were instrumental in grounding a whole generation of cadets with an understanding of practical mathematics, as well as the "Arts of Surveying and Levelling" and the "Rudiments of Military Architecture, particularly the Method of making Plans, Elevations, and Sections", cited in Harley, 'The Spread of Cartographical Ideas between the Revolutionary Armies', Harley et al. (eds.), *American Revolutionary War*, pp.54 and 56 .

⁸³ R.A. Skelton, 'The Military Survey of Scotland 1747-1755', *Scottish Geographical Magazine*, vol.83, no.1 (1967), pp.1-12.

the waters around his native Orkney Islands in Scotland.⁸⁴ The resulting charts, published in a sea atlas, *Orcades* (1750), were so impressive that the navy employed Mackenzie for the next generation mapping the coastlines of Great Britain and Ireland.⁸⁵

When the Seven Years' War hostilities began in North America in the spring of 1755, the British command had a very poor understanding of the geography of the terrain that they intended to traverse when they left Fort Cumberland, Maryland for Fort Duquesne (modern Pittsburgh): the available maps and local intelligence left much to be desired.⁸⁶ As depicted on a map of their itinerary, made after the campaign, the expedition experienced a grueling slog as they cut a rough road through a mysterious wilderness.⁸⁷ The force was completely routed by the French and their native allies at the Battle of Monongahela.

To enhance Britain's military surveying capability, the Duke of Cumberland created the Royal American Regiment (the 62nd, later the 60th Regiment of foot) in January 1756.⁸⁸ Given license to recruit continental European Protestant officers and troops, the regiment included several figures who had both significant formal training and field experience in military engineering and surveying. Royal Americans who would be responsible for major achievements in cartography included Samuel Holland, J.F.W. Des Barres, Charles Blaskowitz, Peter Frederick Haldimand, Bernard Ratzer, Lewis Fuzier

⁸⁴ J. Blake, *The Sea Chart: The Illustrated History of Nautical Maps and Navigational Charts* (London, 2004), p.39.

⁸⁵ Murdoch Mackenzie, *Orcades, or a Geographic and Hydrographic Survey of the Orkney and Lewis Islands* (London, 1750); Mackenzie's subsequent work was published as Murdoch Mackenzie, *A Maritime Survey of Ireland and the West Coast of Great Britain* (London, 1776).

⁸⁶ Braddock to Robert Napier, 8 June 1755, S.M. Pargellis (ed.), *Military Affairs in North America, 1748-1765* (New York, 1936), pp.84-92.

⁸⁷ [probably Harry Gordon], "A Sketch of General Braddock's March from Fort Cumberland...", Mss., 1755, Duke of Cumberland Collection, Windsor Castle, pictured in Pargellis, *Military Affairs*, following p.94.

⁸⁸ D.W. Marshall, 'The British Military Engineers, 1741-1783', [PhD. Diss., Michigan, 1976], p.26-30.

and Dieterich Brehm, as well as the American-born Thomas Hutchins. The Board of Ordnance also dispatched an unprecedented number of the Corps of Engineers to America, who were to assist the army's cartographic needs, sometimes working in tandem with the regimental surveyors. In all, thirty-eight members of the Corps served in America during the Seven Years' War, some of the most prominent names being John Montresor, William Brassier, Harry Gordon and Elias Durnford.⁸⁹ Throughout the war, these skilled personnel made countless plans of fortified sites, including ichnographic and orthographic perspectives, and topographical renderings of the surrounding country.⁹⁰

Introducing Samuel Holland

Samuel Johannes Holland, perhaps more than any other figure, came to personify the direct link between the best practices of scientific military cartography as practiced in Europe and the British army's new surveying projects in North America. Born in Deventer, Netherlands in 1729, Holland joined the Dutch artillery in 1745, when the Netherlands Republic was a major theatre in the War of Austrian Succession. Being promoted to lieutenant following the siege of Bergen-op-Zoom in 1747, he received excellent training in military engineering and surveying, as shown by a fine map of the environs of Nijmegen of which he was a co-author.⁹¹ During the conflict he was introduced to the young Charles Lenox, the 3rd Duke of Richmond and his tutor, Guy

⁸⁹ D.W. Marshall, 'The British Engineers in America, 1755-83,' *Journal for the Society of Army Historical Research*, vol. 51 (1973), Addendum II: Corps of Engineers in America, pp.162-3.

⁹⁰ A fine example showing topographic, orthographic and ichnographic perspectives of fortifications, all on one map is Thomas Sowers, drafted by William Brassier, "Plan of Fort Ontario and its Environs" [modern Oswego, New York], Mss., 1760, BL: K.Top.121.84. Some of the plans were later printed in J. Rocque, *A Set of Plans and Forts in America: reduced from Actual Surveys* (London, 1765).

⁹¹ J.H. van Suchtelen & Samuel Holland, [Map of Nijmegen, Gelderland, Netherlands] "Caart van het Schependom der Stadt Nymegen", Mss. 1748, Nijmegen: Collectie Marcel Degen.

Carleton.⁹² Holland made a powerful impression, for the young nobleman henceforth acted as his patron, successfully encouraging him to migrate to Britain in 1754.

Commissioned as a lieutenant in the Royal Americans in March 1756 as it sailed to New York, he forged what would become a close friendship with Lt. Colonel Frederick Haldimand, the brilliant Swiss officer who would eventually rise to the highest levels of the British military.⁹³

In 1757, General Loudoun charged Holland with compiling a general map of the eastern regions of New York, including the vital Hudson-corridor, the most commodious inland route to Québec. While Holland did not have the luxury of making his own surveys, he was able to devise a surprisingly good map based on material given to him by “the Gentlemen of the Province, as well as proprietors & surveyors”.⁹⁴ After mapping the region around Fort Carillon near the southern end of Lake Champlain, Holland was selected to act as an assistant engineer on the high-profile British expedition to take the French fortress of Louisbourg on Cape Breton Island. Holland’s reconnaissance of the coastline near the bastion was highly useful to the British commanders as they planned where to land their force. After a short siege, Louisbourg surrendered on 27 July 1758.

Holland clearly distinguished himself, for the British commander, General James Wolfe wrote to Richmond, that “Holland the Dutch engineer has been with me the whole siege, and a brave active fellow he is, as ever I met with; he should have been killed a

⁹² Charles Lennox, 3rd Duke of Richmond (1738-1805), was briefly Southern Secretary in 1766, on his patronage of and friendship with Holland, see Hornsby, *Surveyors of Empire*, pp.13-4 and 39; and Chipman, ‘Major Samuel Holland’, p.14.

⁹³ General Sir Frederick Haldimand (1718-91), Swiss-born soldier in British service, rose to become the Acting Commander-in-Chief of the British Army in North America, 1773-4, and served as Governor of Québec, 1778-84, see S.R.J. Sutherland, P. Tousignant and M.D. Tousignant, ‘Haldimand, Sir Frederick’, *DCB*, vol.V, pp.887-904. Haldimand was god-father to Holland’s son and the two men remained close friends as clearly shown by their correspondence in the Haldimand Papers (British Library).

⁹⁴ Holland to Sir Henry Moore, 9 October 1768, BL: Haldimand Papers, Add. Mss.22679, ff.50-1.

hundred times, his escape is a miracle”.⁹⁵ Wolfe forwarded a “plan of the attack” drafted by Holland, writing that “I do believe it will amaze you!” While that copy does not survive, an existing version of Holland’s map of Louisbourg shows that Wolfe’s praise was justified.⁹⁶

On the day immediately following Louisbourg’s surrender, Holland was surveying nearby Kennington Cove, when he chanced to meet the man who would later be recognised as one of history’s greatest explorers and cartographers. James Cook was then the sailing master of the *Pembroke*. Holland tutored Cook in draughtsmanship and the use of the plane table, and it has been suggested that they both worked together to create charts during the following winter.⁹⁷

Cook was evidently a virtuoso, as the following spring he was chosen to oversee what would be considered to be one of the most consequential surveys in military history. The British had the objective of sailing up the St. Lawrence River to besiege Québec City. However, the river presented natural barriers to the invasion, as just before the Ile d’Orleans ships had to switch course in order to follow ‘Grand Traverse’, lest they run aground on a series of deadly shoals. Obtaining accurate charts of the river was a necessity, and a British advance party was dispatched to gain hydrographic intelligence. Capturing a number of French pilots, they proceeded to sound the river. It is thought that Cook and Holland worked together to draft the charts that were used to safely guide the British fleet to the basin below Québec.⁹⁸

⁹⁵ Wolfe to Richmond, 28 July 1758, Goodwood Mss., cited in Hornsby, *Surveyors of Empire*, p.17.

⁹⁶ Samuel Holland, “A Plan of Louisbourg”, Mss., 1758, Royal Ontario Museum (Toronto): 949.39.23.

⁹⁷ Hornsby, *Surveyors of Empire*, pp.17-19.

⁹⁸ James Cook, “A Plan of the Traverse from Cape Torment into the South Channel of Orleans”, Mss., 1759, BL: Add. 31360, f.14 and James Cook, “A Chart of the River St. Lawrence from Green Island to Cape Carrouge”, Mss., 1759, MODHD: L9980/1; Cook’s charts of the St. Lawrence River were quickly brought into print by Thomas Jefferys, [James Cook], *A New Chart of the River St. Lawrence: from the*

A critical development came when the British military engineers progressed from making surveys of fortifications to making general topographical surveys, similar in spirit to Roy's survey of Scotland. The apogee of this transition came with the military survey of the 200 mile long Montréal-Québec City corridor of the St. Lawrence River valley. Following the British conquest of the region, General James Murray, the military governor of Québec, recalled that "no chart or map whatever [fell] into our hands at the capture of Québec".⁹⁹ With a more ambitious design in mind, that autumn, Murray summoned a team of surveyors that included John Montresor, from the Corps of Engineers, and Samuel Holland, Lewis Fusier, Philip Pittman, Thomas Peach and Peter Frederick Haldimand from regimental service.

Dividing this enormous region among them, they finished their field work in November 1761, and commenced drafting formal presentation copies. The result was a monumental masterpiece of cartography, representing the first scientific and systematic large-scale survey ever conducted in North America. A gargantuan construction, done to the awesome scale of 2000ft to an inch, with insets at 800ft to an inch, it measured 45 by

Island of Anticosti to the Falls of Richelieu : with all the islands, rocks, shoals, and soundings, also particular directions for navigating the river with safety ; taken by the order of Charles Saunders, Esqr. Vice-Admiral of the Blue, and Commander in Chief of His Majesty's ships in the expedition against Quebec in 1759 (London: Thomas Jefferys, 1760).

⁹⁹ "General Murray's Report", 5 June 1762, printed in full, A. Shortt A.G. Dougherty, *Documents Relating to the Constitutional History of Canada, 1759-1791* (Ottawa, 1907), vol. I, p.80. Urgently in need of comprehensive geographic intelligence, in the dead of winter of 1760, Murray dispatched John Montresor to undertake a perilous trek over the Appalachians from Québec to coastal Maine in order to assess the feasibility of an overland military route. John Montresor, 'Plan of a rout undertaken in winter, Jany. 26th, from Quebec, the capital of Canada, to the frontier settlements of the Township of Topsham near Brunswick Fort on the River Ammerascaegun in the Province of New Hampshire [actually Maine], Feby. 20th 1760', Mss., [1760], LOC: G3734.T65A1 1760 .M6 Vault, (Peter Force map collection, no.39), Sellers and Van Ee, no.808. John Montresor, 'A map of the sources of the Chaudière, Penobscot, and Kennebec rivers', Mss., [c.1761], LOC: G3730 1761 .M6 Vault. (Peter Force Collection, no.37), Sellers and Van Ee, no.838

36 feet when its numerous sheets are combined (**Fig. 9**).¹⁰⁰ Orwellian in its content, it depicted all of the individual homesteads, along with a census of men of fighting age in each parish, forming a blueprint for military domination.

Holland, as he would almost invariably experience throughout his career, gained nothing but praise for his work.¹⁰¹ General Murray wrote the Southern Secretary describing Holland as “an industrious brave officer, and an intelligent engineer, in which capacity he would be desirous, and deservedly merits to be advanced”.¹⁰² Armed with this recommendation and copies of the Murray Map, Holland sailed for London where he would be destined to play a greater role in the mapping of the northern colonies.

The mapping of the St. Lawrence was not the only major achievement of military surveying in the North American theatre during the war. Thomas Hutchins and Dietrich Brehm’s mapping expeditions in the Great Lakes, conducted from 1760 to 1763, were instrumental in expanding Britain’s presence deep into the interior.¹⁰³ A map which deserves special mention, not only for its technical élan, but its future relevance to the Northern General Survey is William Brassier’s “A Survey of Lake Champlain” (1762), resulting from the first scientific survey linking critical military corridor between New York and Canada (**Fig. 10**).¹⁰⁴

¹⁰⁰ Samuel Holland, John Montresor & Associates, [The ‘Murray Map’] “A Plan of the Part of Canada and the River St. Lawrence”, Mss. 1762, WCL: Gage Collection, Atlas N-1-C.

¹⁰¹ As copies of the ‘Murray Map’ would be reviewed at the highest levels in London, the desire of individual surveyors to gain special notice and preferment got the better of some of them. John Montresor who resented the “foreign Protestants”, for example, was caught trying to erase Holland’s name from a set of maps. Montresor ultimately incurred Murray’s disfavor, S.L. Hornsby, *Surveyors of Empire*, pp.28-30.

¹⁰² ‘Governor Murray’s Report on the Government of Quebec’, 5 June 1762, Shortt and Dougherty, *Constitutional Documents*, vol.1, pp.47-80.

¹⁰³ K.R. Widder, ‘The Cartography of Dietrich Brehm and Thomas Hutchins and the Establishment of British Authority on the Western Great Lakes Region, 1760 1763’, *Cartographica*, vol.36, no.1 (Spring 1999), pp.1-23.

¹⁰⁴ William Brassier [and Dietrich Brehm], “A survey of Lake Champlain, from Crown Point to Windmill Point, and from thence to St. Johns. Survey’d by order of His Excellency Major Genl. Amherst, Commander in Chief of His Majesty’s forces in North America, anno 1762.”, Mss., 1762, LOC: G3802.C45

C. The Genesis of the General Survey

The Role & Status of the Board of Trade, 1761-1764

The ascension of George III to the throne in 1760 ushered in a period of political change which had great ramifications for the Board of Trade. Lord Halifax resigned as President of the Board of Trade on 21 March 1761. On the heels of his departure, the Order in Council of 15 May 1761 largely rescinded the sweeping powers accorded to the Board and its President which had been won by Halifax in 1752 and 1757. The President would no longer have a seat in cabinet, and the Board was to lose its control of colonial patronage. The Board would be under the aegis of the Southern Secretary, who henceforth would be copied on all high level colonial correspondence, and who had the prerogative to dictate Whitehall's response.¹⁰⁵ Horace Walpole remarked that the Board's powers were once again "on the ancient footing" and that the body was "reduced to its old insignificance."¹⁰⁶

To add to the diminishment, the energetic Halifax was replaced by the elderly, "innocuous and unobjectionable", the 1st Baron Sandys¹⁰⁷. He would be the first of six presidents who would occupy the post from 1761 to January 1768, ensuring that no one

1762 .B7 Faden 20a, Sellers and Van Ee, no.1072. This map remained in manuscript form until it was first printed as: *A Survey of Lake Champlain, including Lake George, Crown Point, and St. John* (Augt. 5th 1776), as part of the Robert Sayer and Jonathan Bennett's *American Military Pocket Atlas* (London: R. Sayer & J. Bennett, 1776).

¹⁰⁵ A.H. Basye, *The Lords Commissioners of Trade and Plantations, 1748-1782* (New Haven, 1925), pp. 105-10.

¹⁰⁶ Basye, *Trade and Plantations*, p.106.

¹⁰⁷ H. Walpole, ed. G.F. Russell Barker, *Memoirs of the Reign of King George the Third* (London, 1894), vol. I, p.13.

president was in office long enough to emboss his personal stamp on the organization.¹⁰⁸

As such, the practical administration of the Board fell squarely on its permanent staff, most notably its secretary, John Pownall, who was the *de facto* C.E.O. of the Board, while the President now merely acted as the Chairman.¹⁰⁹

In spite of these developments, the cabinet and Privy Council continued to rely heavily on the Board as a body of deliberation and report and, more often than not, followed its recommendations.¹¹⁰ The fact that John Pownall was entrusted to draft the Proclamation of 7 October 1763 is indicative of the esteem by which he and his staff were regarded.¹¹¹ The Board also continued to be the principal clearing house for petitions and civilian intelligence sent to London from America. Considering this, the Board continued to hold significant influence, even if it held little direct power.

¹⁰⁸ Sandys was replaced on 2 March 1763 as President by the soon-to-be-infamous Charles Townshend, then still an adherent of Grenville. He was himself shuffled out the following 20 April, when Bute demanded positions for his young acolytes, L. Namier & J. Brooke, *Charles Townshend* (London, 1964), pp.90-107. William, the 2nd Earl of Shelburne (later the 1st Marquess of Lansdowne), who was then allied to Bute, became President, upon which he embarked on an unsuccessful attempt to carve out a power base distinct from Egremont. While the young lord was known to be brilliant and conscientious, he had a secretive and ambitious nature, which made him untrustworthy in the eyes of his colleagues. His designs were rendered completely futile upon the sudden death of Egremont on 21 August 1763, when the politically potent Lord Halifax returned from Ireland to assume the office of Southern Secretary. A frustrated Shelburne resigned in September 1763, giving way to Wills Hill, the 2nd Earl of Hillsborough, who was much liked by Grenville, Basye, *Trade and Plantations*, pp.122-36; L. Fitzmaurice, *The Life of William Earl of Shelburne* (London, 1912), vol.I, pp.178-97; R. A. Humphreys, 'Lord Shelburne and the Proclamation of 1763', in R. Michinton (ed.), *Essays in Eighteenth-Century History* (London, 1966), pp.72-95.

¹⁰⁹ F.B. Wickwire, 'Thomas Pownall and British Colonial Policy', pp.543-54.

¹¹⁰ "The Board was subordinate to the Secretaries [of State] but the Secretaries were dependent upon the Board for effective action," R.B. Pugh, *The Records of the Colonial and Dominion Offices* (London, 1964).

¹¹¹ Outlines of 8 June, 1763 originated with the "Hints" and as Sosin surmised "reflected *ad hoc* measures the military commanders and the Indian superintendants had instituted in America some time before," J. Sosin, *Whitehall and the Wilderness* (Lincoln, Neb., 1961), p.53. Nevertheless, Pownall had the responsibility for drafting the original Proclamation and his advice and amendments were included. Most notably he was responsible for setting the precise location of the Proclamation Line, which he like Shelburne, considered to be a temporary boundary, to be moved progressively westward in the future, Wickwire, 'Thomas Pownall', pp.545-7.

The Grenville Ministry & the New Colonial Policy

In April 1763, the king appointed George Grenville, who sought nothing less than to redefine Whitehall's fiscal and commercial relationship with her American Colonies. As a result of the war, the Treasury faced an immense national debt, along with new unfunded liabilities in the colonies. In May 1763, an alliance of native tribes in the Great Lakes and Ohio basin broke into open rebellion. The bloody and expensive 'Pontiac's War' ensured that a standing army of 10,000 men had to be maintained in America.¹¹² In the 1763-4 budgetary year, the American military establishment cost over £400,000, almost double the estimates of £225,000.¹¹³ Moreover, London would have to pay undetermined amounts for the civil establishments of the new provinces in Canada and Florida.

These colonial obligations could not have come at a worse time, as the Treasury was in a state of fiscal crisis, for its debt had reached an astounding £122.6 million at the beginning of 1763. To place this in context, in the year following, the government was to receive only £9.8 million in revenue against £14.2 million in expenditure.¹¹⁴ As part of a solution to the fiscal crisis, Grenville swiftly embarked upon a programme to extract greater revenues from America.¹¹⁵

¹¹² L.H. Gipson, *The British Empire before the American Revolution*, vol. IX, pp.88-126.

¹¹³ P.D.G. Thomas, 'The Grenville Program, 1763-1765', in J.P. Greene & J.R. Pole (eds.), *The Companion to the American Revolution* (London, 2004), p.118; also Shy, *Toward Lexington*, pp.45-84.

¹¹⁴ Calloway, *Scratch of a Pen*, p.12.

¹¹⁵ To this end, Grenville enacted the Sugar Act, which halved the duty on imported molasses to make smuggling less attractive, yet also promised to raise an estimated £78,000 per annum from legitimate duties, The Sugar Act of 1764 (4 Geo. III c. 15); First, he resolved to enforce existing statutes, most notably, the Molasses Act of 1733 which placed a prohibitive 6d per gallon duty on foreign imports. J.L. Bullion, *A Great and Necessary Measure* (Columbia, Mo., 1982), pp.62-98; P. Lawson, *George Grenville: Political Life* (Oxford, 1984); P.D.G. Thomas, *The Stamp Act Crisis* (Oxford, 1975); P.D.G. Thomas, 'The Grenville Program,' in J.R. Greene & J.R. Pole (eds.), *A Companion to the American Revolution* (Oxford, 2000), pp.118-22. He also moved to reform the notoriously corrupt and ineffective customs bureaucracy, and the Royal Navy was ordered to patrol the coasts for smugglers, thus placing it in an adversarial stance with the colonists. For the last thirty years, customs officials took bribes in return for turning a blind eye to

The Important New Policy Questions of the Day

Whitehall was challenged to formulate an administrative framework by which the new provinces could be successfully and quickly settled, while limiting the Exchequer's expenditures and avoiding further conflict with the Native Americans. On 5 May 1763, Egremont, after deliberating with the conservative political theorists Henry Ellis and William Knox, posed a series of carefully-framed questions to the Board of Trade.¹¹⁶

With reference to the lands newly conquered, Egremont asked "By what Regulations, the most extensive Commercial Advantages may be derived from these Cessions, and How those Advantages may be rendered most permanent & secure to His Majesty's Subjects." He continued, asking "What New Governments should be established & what Form should be adopted for such new Governments? And where the Capital, or Residence of each Governor should be fixed?" Secondly, "What Military Establishment will be sufficient? What new Forts should be erected? And which, if any, may be expedient to demolish?" Thirdly, "In what Mode least Burthensome and most palatable to the colonies can they contribute towards the support of the Additional Expence, which must attend their civil & military Establishment, upon the Arrangement which Your Lordships shall propose?"

Elaborating on the first question, he asked in light of "His Majesty's New Subjects...how far it is expedient to retain, or depart from the Form of Government" exercised by the previous regime? This matter mainly concerned how best to govern the approximately 70,000 French Canadians resident in Québec.

profligate smuggling, such that a measure that was supposed to raised £200,000 annually only generated £700.; Thomas, 'The Grenville Program', p.119. These measures were only a prelude to the more controversial policies Grenville would enact later in his term.

¹¹⁶ Egremont to the Board of Trade, 5 May 1763, CO 5.65, ff.43-51, letter printed in full, Shortt and Dougherty, *Constitutional Documents*, vol.1, pp.127-31, *passim*.

With reference to the military establishment, Egremont identified two imperatives, namely “the security of the whole against any European power” and “the Preservation of Peace and Internal Tranquility of the Country against any Indian disturbances”. The latter was seen as the greater concern, so the Board was asked to assess the “Possessions, Rights and Privileges” that the Native Americans had traditionally enjoyed so as to find the best way to “most cautiously guard against any Invasion or Occupation of their Hunting Lands.” This concern was motivated by the fact that thousands of colonists had illegally moved into Appalachia, placing them in direct conflict with Native American communities. This was one of the main causes of Pontiac’s Rising.

Turning to the economy of Atlantic Canada, Egremont asserted that the “first and most important Object is the Fishery.” As the French had maintained their limited rights to fish in Newfoundland along with possession of St. Pierre & Miquelon, Egremont wanted to know, “Whether the French had made any Incroachments with regard to the Fishery, contrary to what is stipulated” and whether the French presence would lead to “a Contraband trade with Our Colonies.” The Board was to suggest means that would “most effectually obviate all Disputes between the Subjects of both Crowns.”

With respect to Florida, Egremont asked, “Can Your Lordships furnish any Lights with regard to the Climate or Soil of the Inland Parts of Florida, which tho' hitherto neglected and useless, are said to be extremely fertile? Is there any Reason to believe that the Mouth of the Catahocke River is, or might be easily made Commodious for Shipping, or, that a Harbour may be found in the Southern Parts of the Peninsula of Florida?”¹¹⁷

¹¹⁷ Such a harbor at the southern tip of the peninsula would be strategically valuable, as it would threaten Spain’s main trading route to its American empire.

What particular Advantages might arise from such a Harbour, or from that of Pensacola or Mobile, or from any other, on that part of the Coast of North America lately ceded to His Majesty, which bounds the Gulph of Mexico to the North.” While these were legitimate questions, they betrayed Whitehall’s almost complete ignorance of Florida’s geography. For example, the “Catahocke River,” (Chattahoochee River), a tributary of the Apalachicola River, does not itself even reach to sea.

The Southern Secretary then brought up a matter that should have been better considered by Britain’s treaty negotiators. Knowing that secure access to the Illinois country was by no means assured, he asked “whether any immediate Advantages may be derived from the free Navigation of the Mississippi, and how they are to be improved & extended?”

The Board of Trade formally responded to Egremont’s questions in a letter dated 8 June, 1763.¹¹⁸ It was accompanied by a large printed map of North America by the prominent London cartographer Emmanuel Bowen, which generally depicts the extent and nature of the Board of Trade’s geographical knowledge of the continent at that time (**Fig. 11**).¹¹⁹ The letter conceded that the established colonies were “overstock’d with inhabitants” and that high land prices had forced settlers “to immigrate to the other Side

¹¹⁸ Board of Trade to Egremont, 8 June 1763, CO 5/65, part 1, ff.57-78, letter printed in full, Shortt and Dougherty, *Constitutional Documents*, vol. 1, pp.131-47, *passim*. The inspiration for the Board of Trade’s response appears to have been an anonymous document entitled “Hints respecting the Settlement of our North American Provinces,” dated 25 February, 1763, BL: Add. Mss. 38335, ff.14-33, another Mss. copy, WCL: Shelburne Mss., vol. 68; printed in full, T.C. Barrow, ‘Hints respecting the Settlement of our North American Provinces,’ *WMQ*, vol.24, no.1 (January 1767) , pp.108-26. It was most likely written by William Knox, a brilliant ultra-imperialist political theorist to whom Whitehall ascribed much credibility on American affairs due to his experience as a resident plantation owner and executive council member in Georgia from 1757 to 1762; also L.J. Bellot, *William Knox* (Austin, Tx., 1977), pp.17-41; also J. Shy, *Toward Lexington*, pp.64-5; J. Sosin, *Whitehall in the Wilderness* (Lincoln, Neb., 1971), pp.52-78.

¹¹⁹ Emmanuel Bowen, *An Accurate Map of North America Describing and distinguishing the British, Spanish and French Dominions on this Great Continent According to the Definitive Treaty Concluded at Paris 10th Feby. 1763* (London, 1763). The Board of Trade’s copy: NA: MR 1/26, extracted from Board of Trade to Egremont, 8 June 1763, CO 5/65, part 1, f. 78.

of the Mountains.” However, the Board believed that European settlement should be banned, in the interior, which should be reserved for the hunting grounds of the Native Americans. Moreover, certain lands in the northeast (presumably eastern Maine) should be designated as timber preserves, an imperative made especially urgent by the decrease in availability of timber from the Baltic region, the principal traditional source.¹²⁰

Indicative of the Board of Trade’s tendency to avoid general fiscal questions, the letter also stated that they were unable or unwilling to deal with the incendiary issue of colonial taxation, as “it is entirely out of our Power to form an Opinion.”

In accordance with its general message, the Board suggested that all new settlement should be directed to the newly-acquired coastal colonies, as “Canada, Florida and the new acquired Islands in the West Indies appear to Us to be the Places where Planting, perpetual Settlement and Cultivation ought to be encouraged and consequently where regular Forms of Government must immediately be established.” Due to their coastal locations, and thus their accessibility to the Royal Navy, these colonies would be comparatively easy to control in sharp contrast to potential inland empires. However, it was seen necessary that in each of the new provinces “a large military Force [should] be kept up ‘till the number of British Inhabitants and new Settlers be very considerably increased.” It recommended the “immediate Establishment of regular Governments, in all such places, where planning and Settlement, as well as Trade and Commerce are the Immediate Objects.” As these colonies would require exceptionally attentive

¹²⁰ R.G. Albion, *Forests and Seapower* (Cambridge, Mass., 1926).

administration, the governors of these new provinces should be “obliged to constant Residence.”¹²¹

The Board claimed that due to the extensive experiences of British officials during the late war, it had a relatively fine understanding of the commercial potential of Canada, and as the Bowen map indicates, a decent overall conception of its geography. It noted that “The Produce of Canada, with its Trade, the Navigation of the River S^t Lawrence, with its Communication to the great Lakes of North America, are, from authentick Information, in many particulars tolerably well understood.”

While the extreme majority of settlement was concentrated in the St. Lawrence valley, the boundaries of Canada (Québec) had traditionally extended southwestwards to the Ohio River to include almost the entire Great Lakes Basin and northeastwards to embrace all of Labrador. As shown on the Bowen map, the Board recommended that Québec’s limits be greatly reduced on both ends. Seeking to assert British dominance of the northern fishery, the Board recommended “the Annexation of the Labrador Coast to the Government of Newfoundland.” The governor of that province would then be charged with restricting French fishing to the narrowest interpretation of their treaty rights. Secondly, fearing the growth of potentially troublesome interior settlements of French Catholics, the Board recommend that Québec’s southwestern boundary be truncated to a line just beyond the Ottawa River, so as to succeed in “preventing by proper and natural Boundaries, as well the Ancient French Inhabitants as others from removing & settling in

¹²¹ It is worth noting that during this period many governors considered their appointments to be sinecures. They continued to reside in Britain and left all administrative duties to their lieutenant-governors. This arrangement was openly accepted at Whitehall. For example, General Sir Jeffrey Amherst served as Governor of Virginia (1764-8) even though he never stepped foot in the province, although, unlike most of his fellow appointees, he at least had extensive experience of North America, see L.W. Labaree, *Royal Government in America* (New Haven, 1930), pp.38-9.

remote Places, where they neither could be so conveniently made amenable to the Jurisdiction of any Colony nor made subservient to the Interest of the Trade & Commerce of this Kingdom by an easy Communication with & Vicinity to the great River S^t Lawrence.”

Concerning Florida, the Board hoped that “Indigo, Silk, cotton, and many of the Commodities now found in the West Indies only, may be raised in these Climates.” Indeed, the value of the agricultural products produced on the plantations of Jamaica, St. Christopher and Barbados was so immense that even if Florida could support a small number of similarly successful plantations it would easily become self sustaining.¹²²

While recommending Florida as a potential agricultural bonanza for the Crown, the Board freely admitted that it possessed no useful information on the general geography and agricultural potential of either Florida or the interior regions which lay between the Appalachians and the Mississippi. Consequently, it signaled that the establishment of surveys would be an urgent priority for the new colonial administrations. They noted “we are sorry it is not in our power, either from any materials in our Office, or from any other to be depended upon, to give Your Majesty that certain Information we could wish either with regard to the Coast, Harbours and Rivers of Florida, or as to the Variety of Produce which there is the greatest probability may be raised in that extended Country. We shall therefore content ourselves with suggesting at present, that whenever a Government is established in this Country, Instructions should be given for surveying with all possible Accuracy, as well the Sea Coast and places fit for Harbours as the

¹²² Jamaica exported approximately £1 million worth of goods per annum to England during this period, while North and South Carolina combined exported approximately £400,000 worth of goods per annum, ‘English Exports & Imports’, C.L. Mowat, *East Florida as a British Province* (Berkeley, Cal., 1943), p.153.

internal Country and Rivers, particularly of that part which lies between the great Mountains and the Mississippi, of which there are not extant any Charts or Accounts on which we can depend, for which purpose it will be necessary that a proper number of able and skilful Surveyors be appointed.”

At first, the Board also recommended extending Georgia’s boundaries from the Altamaha River southwards to the mouth of the St. John’s River.¹²³ This alarmed Colonel James Grant, who was slated to be appointed governor of East Florida. He noted that “the most Valuable part of Florida” would be stripped away, and that the province would “remain that barren, Broken, Sand Bank which it has been erroneously deem’d by the uninformed Publick.” Moreover, such a boundary running west from the mouth of the St. John’s would be difficult to survey in such a flat, swampy environment, therefore occasioning future inter-provincial disputes.¹²⁴ Persuaded by Grant’s argument, the Board of Trade then changed its stance and recommended that the new boundary be moved northwards to run along the St. Mary’s River.¹²⁵

The Proclamation of 7 October 1763

The culmination of months of deliberations, the Board of Trade drafted one of the most important documents in both the history of North America and the British Empire, the Proclamation of 7 October 1763.¹²⁶ The edict’s numerous geographical dimensions

¹²³ This boundary between Georgia and Florida was consistent with a claim made by James Oglethorpe, governor of Georgia in 1738. This line is show on a map, Thomas Jefferys, *The West Indies Exhibiting English, French, Spanish, Dutch & Danish Settlements* (London, 1760), which inaccurately shows the Altamaha River flowing into the St. John’s River near where it meets the sea.

¹²⁴ “The Memorial of Colonel James Grant,” Grant to Halifax, 19 September 1763, CO 5/548, f.19.

¹²⁵ Board of Trade to Halifax, 28 September 1763, CO 5/548, f.25.

¹²⁶ “By the King. A Proclamation”, 7 October 1763, CO 5/65, part 2, ff.31-41, printed in full, Shortt and Dougherty, *Constitutional; Documents*, pp.163-8; see also *APC*, vol. IV, pp.569-79, *passim*.

are illustrated on John Gibson's widely-viewed map made especially for the occasion.¹²⁷ Notably, the "Proclamation Line" which was to run along the crest of the Appalachians, from New York to Georgia, would divide the settled colonies from the "hunting-grounds" of the Native American nations, past which no permanent European settlement was to be permitted. It stated that "the several nations or tribes of Indians...should not be molested or disturbed in the possession of such parts of our dominions and territories as, not having been ceded to or purchased by us." All colonists who had already moved westward of the line were "forthwith to remove themselves from such settlements." Moreover, private individuals were no longer permitted to purchase lands from the Native Americans, and henceforth such transactions would only be conducted by agents of the crown. Moreover, as Britain did not recognize Spanish claims to the interior of the Floridian peninsula and the inland areas to the north of the Gulf of Mexico, these lands remained the property of the appropriate Native American nations.

Importantly, the Proclamation officially gave birth to four new "distinct and separate governments;" the provinces of Québec, East Florida, West Florida and lastly Grenada in the West Indies.¹²⁸ The provinces' boundaries were also demarcated, whereupon Québec assumed its aforementioned truncated form hugging the St. Lawrence valley, with the Labrador, the Magdalen Islands and the Island of Anticosti being ceded to Newfoundland.¹²⁹ East Florida was to comprise the entire Floridian Peninsula and

¹²⁷ John Gibson, *The British Governments in Nth. America Laid Down Agreeable to the Proclamation of Octr. 7. 1763* (London, 1763), in *Gentleman's Magazine*, vol.33 (Nov., 1763), p.576, McCorkle, *New England in Early Printed Maps*, no. 763.3, Sellers and Van Ee, no.110.

¹²⁸ Description of the boundaries of Grenada in the Proclamation: "comprehending the island of that name, together with the Grenadines, and the islands of Dominico St. Vincent and Tobago."

¹²⁹ Description of the boundaries of Québec in the Proclamation: "bounded on the Labrador Coast by the River St. John, and from thence by a line drawn from the head of that river, though the lake St. John, to the south end of the Lake Nipissim; from whence the said line, crossing the River St. Lawrence, and the Lake Champlain in forty-five degrees of north latitude, passes along the high lands which divide the rivers that

featured a northern boundary which ran westwards from the head of the St. Mary's River to the confluence of the Flint and Chattahoochee Rivers, and from thence southwards along the Appalache River to the Gulf, the latter marking its boundary with West Florida.¹³⁰ West Florida's northern boundary ran along the 31st parallel from the Appalache westward to the Mississippi River, and then down said river to the River Iberville and along it through Lakes Maurepas and Ponchartrain, and then on towards the Gulf of Mexico.¹³¹

The boundaries of Nova Scotia were extended so as "to annex the islands of St. John's [Prince Edward Island] and Cape Breton, or Isle Royale." This was in part to compensate Nova Scotia for the provisional loss of the Sagadahock Territory, which lay between the rivers St. Croix and Penobscot. However, the jurisdiction of this territory would be a cause of debate for the next two decades.¹³²

The Proclamation initiated a system by which land could be granted in the new colonies, as it was hoped that large numbers of settlers could be attracted by the promise of free real estate. As a mark of royal "approbation of the conduct and bravery" of the

empty themselves into the said River St. Lawrence, from those which fall into the sea; and also along the north coast of the Baye des Chaleurs, and the coast of the Gulph of St. Lawrence by the west end of the Island of Anticosti, terminates at the aforesaid River St. John."

¹³⁰ Description of the boundaries of East Florida in the Proclamation: "bounded to the westward by the Gulph of Mexico and the Apalachicola River; to the northward, by a line drawn from the part of the said river where the Chatahouchee and Flint Rivers meet, to the source of the St. Mary's River, and by the course of the said river to the Atlantic Ocean; and to the eastward and southward by the Atlantic Ocean and the Gulph of Florida, including all islands within six leagues of the sea coast."

¹³¹ Description of the boundaries of West Florida in the Proclamation: "bounded to the southward by the Gulph of Mexico, including all islands within six leagues of the of the coast from the River Apalachicola to Lake Pontchartrain; to the westward, by the said lake, the Lake Maurepas, and the River Mississippi; to the northward, by a line drawn due east from that part of the River Mississippi which lies in thirty-one degrees north latitude, to the River Apalachicola, or Chatahouchee; and to the eastward by the said river."

¹³² A Note on the boundaries of Acadia: A 1732 legal opinion asserted that land between Penobscot and St. Croix (Sagadahock) belonged to Massachusetts. The Privy Council provisionally decided to follow such an opinion, although "There are many material circumstances in favour of Your Majesty's Right to the Country as far Westward as the River Penobscot which were not stated in the Case laid before the Attorney and Solicitor General in 1732," Privy Council to the Board of Trade, 6 October 1763, Shortt and Dougherty (eds.), *Constitutional Documents*, vol. I, p.161.

veterans of the Seven Years' War, they were eligible for land grants, ranging from 50 to 5,000 acres, depending on their rank, and would not be required to pay quitrents for ten years.

Samuel Holland's Timely Proposal for the General Survey

The Board of Trade's original surveying plan, conceived during the summer of 1763, was for the governors of the newly-acquired regions, such as in East Florida and Nova Scotia, to direct their provincial surveyors-general to conduct general surveys of these territories.¹³³ This was a less than ideal solution as the Board of Trade and other administrators required cartography drafted to a uniform standard, predicated on the systemic application of advanced scientific methods. The skills of surveyors in hinterland provinces, overseen by neophyte governors, would likely produce maps of highly variable accuracy.

At this most opportune time, Samuel Holland proposed the creation of the General Survey of British North America. Since 1762, Holland had been in London. With the 'Murray Map' as his calling card and several well-placed connections, including his former patron, the Duke of Richmond, many doors were opened to him. This granted him a comprehensive understanding of Whitehall's new colonial agenda, and its acute need for accurate general maps. In December 1763, he submitted a Memorial and proposal to the Board of Trade which advocated "that a Survey should in time be made of all America".¹³⁴ Naming the enterprise the "General Survey of the American Colonies,"

¹³³ Board of Trade to Montague Wilmot (Governor of Nova Scotia), 22 November 1763, CO 218/6, ff.125-7, *passim*.

¹³⁴ Samuel Holland, a "Memorial," enclosing a "Proposal for carrying on the General Survey of the American Colonies" [n.d., but December 1763], CO 323/17, p.123, read at the Board of Trade, *JCTP*, 16 December 1763 (vol.11, pp.421-2), *passim*.

he promised that “in five years at furthest, the Survey of the Coast, Rivers & Bays and as such parts of the land as can be settled for many years will be finished.”

Holland recommended that British North America be bisected into the Northern and the Southern surveying districts. While he knew that he would imminently be appointed as Surveyor-General of Québec, he envisaged for himself a much larger role. Given his experience, Holland requested that he be appointed as Surveyor-General for the Northern District, and that such an appointment be comprised within his provincial commission.

From the outset, Holland pledged that the work would produce “an accurate and just Survey with the Longitude & Latitude ascertain’d by Astronomical Observation [which] may in the Course of a few years be obtained of the material and principal parts of His Majesty’s Dominions, upon such a general scale and uniform Plan.” He proposed the consistent use of a one-mile-to-one-inch scale. This large scale was the same as that employed in the contemporary surveys of certain English counties. Furthermore, he proposed that special maps for places of note like “Channels and harbours” would use an even larger scale of four inches to one mile. Moreover, in every chart, “The soundings of all harbours and channels shall be taken, with a natural and Historical Description of the Countries, rivers and Lakes and whatever other Remarks shall be thought necessary. The Latitudes and Longitudes of all Capes, Head-Lands & c. shall be determined by astronomical Observations.”

Holland provided a very detailed, itemized list estimating the annual expenses for the General Survey’s operations in the Northern District. First, he proposed that he would receive no emolument in addition to his salary of £365 for his provincial duties,

but suggested that £100 should be allocated to the General Survey budget for the salary of a surveyor who would act as his proxy in Québec. He then proposed that £254,10s be allocated for the salaries of two assistant surveyors and £91,5s for a draughtsman. A further £155,2s would be required for “one Sergeant, one Corporal, and twelve men to serve as Camp, Colour and Chain men & to make signals along shore & on the tops of a mountain.” He also requested the services of an “Additional” sergeant at £27,7s, another corporal at £18,5s, and twelve more privates at £109,10s. “Extraordinary Expenses for Horses Guides” were budgeted to come out to £100 per annum. The total annual operating budget for personnel was proposed to total £700,17s.

Holland also included a list of the most advanced portable instruments available for conducting triangulated surveys which the Board of Trade was to supply on a one-time basis, as they were intended to “serve for the whole survey.” These requirements totaled £201,7s,6d, the highlights of which included “An astronomical Quadrant” for £21, “A Theodolite with Vertical arch & Telescope divides to every minute” for £30, “Mr. Short’s reflecting telescope 24 inches focal length Rockworth Stand” for £36,15s, and “Skelton’s Clock or time piece for Astronomical Observations” for £40.¹³⁵

Not included in his estimates was by far the most costly aspect of his proposed operations. He requested “An armed Cutter or other small armed vessel...with two Whale boats, and one large long-boat, which will also serve to transport the party over Bays and Arms of the Sea.” Such a vessel would have to be supplied by the Royal Navy, along with sailors seconded to operate her. Holland, well aware of Grenville’s colonial fiscal programme, suggested that the cutter could simultaneously be “used in the River St.

¹³⁵ Holland, “Memorial”, December 1763, *passim*.

Lawrence against Smuggling and to prevent the French from Trading on the Continent.” Holland would later come to regret the divided mandate of his vessel and its crew.

Holland envisaged that the surveyors of the Northern Department would commence with mapping the newly acquired regions in Canada, before continuing southwards to New England. Simultaneously, the surveyors of the Southern District would commence with the Atlantic coast of East Florida, before progressing along the coast of the Gulf of Mexico towards West Florida.

Eventually it was hoped that these surveys could be integrated with other advanced colonial surveys to form an accurate general map of the entire coast of British North America. With this in mind, Holland noted that, “It will be necessary to have Orders for all, the Provincial Surveyors in the department to give their assistance and also Copies of the Surveys already made, which are in their Possession.”

What Holland proposed was nothing short of revolutionary. Ambitiously, two relatively small field teams aimed to systematically survey thousands of miles of dangerous coastlines and untamed wilderness to the highest scientific standards of precision. As it was envisaged, the General Survey would far exceed any mapping project hitherto undertaken within the British Empire in terms of its scope, speed, systematic nature and standards of accuracy. It would dwarf all the individual colonial surveys, and the several triangulated surveys then being carried out of individual English counties. Unlike James Rennell’s contemporary mapping of Bengal (1764-76), which was predicated on a composite of surveys, this enterprise would be systematic in nature.¹³⁶

¹³⁶ M.H. Edney, *Mapping an Empire: The Cartographical Construction of British India* (Chicago, 1997), pp.1-18.

The Board of Trade was impressed by Holland's plan, and on 20 December 1763 it wrote to the Privy Council that, "We find ourselves under the greatest difficulties arising from the want of exact Surveys of those Countries, many parts of which have never been surveyed at all, and others so imperfectly that the Charts and Maps thereof are not to be depended upon."¹³⁷ They lamented that, until they received accurate general maps, "we are reduced to the necessity of making Representations to Your Majesty, founded upon little or no information, or of delaying the Important Service of settling those parts." The Board commended Holland "who has great knowledge of the northern parts of America, and who has not only distinguished himself as a brave and active Officer and able Engineer...but also is a skillful Surveyor in the accurate map he has made of the settled parts of Your Majesty's Colony of Quebec."¹³⁸ They affixed Holland's proposal to the letter, and concurred with every element of his proposal, with the exception "that two Sets of the Instruments mentioned in his Estate, should be allowed, lest the work should be interrupted by any accident happening to any of them." The expenses for the first operational year for the General Survey in the Northern District would then be budgeted as £1,117, 12s.¹³⁹

The Plan for the Survey is Defined

The Privy Council replied to the Board's recommendation on 10 February 1764, concurring with all details of the plan, and ordering that it "should be carried into

¹³⁷ Approval of Holland's Appointment: Board of Trade to the King, 20 December 1763, CO 324/17, pp.317-21, printed in full, *APC*, vol. IV, pp.619-23.

¹³⁸ This is a reference to the 'Murray Map'.

¹³⁹ Holland's Estimates, [n.d, but early February 1764], CO 324/17, pp.342-3; also "An Estimate of the Expenses Attending General Surveys of His Majesty's Dominions in North America for the Year 1764," printed in Chipman, 'Samuel Holland,' p.23

execution as soon as conveniently may be.”¹⁴⁰ It also pledged to issue directions relating to “the appointments of soldiers, and furnishing an armed vessel and boats for the aforementioned service” to “the Lords Commissioners of the Admiralty and the Secretary at War” as appropriate. Holland’s commissions for each of his new posts were issued in March 1764.¹⁴¹

On 17 April 1764, The Board of Trade issued Holland with a detailed series of instructions, asking that he “consider this letter a rude sketch,” as the details of his mission will be refined over time.¹⁴² They suggested that Holland was to sail as soon as possible for Québec City, so as to ensure “The Speedy Execution of the Service.” His first priority would be “an accurate survey of the coast of the Gulph of St. Lawrence, and of the valuable islands lying within that Gulph [of St. Lawrence]... in order to accelerate the different Establishments which have been proposed to be made, with a View to carrying on the advantageous Fishery.” The Board even specified the order in which he should map the islands, with the Island of St. John’s being first, followed by the Magdalen Islands and then Cape Breton Island.

The Board noted that, “As the Surveys are to be the Guides by which his Majesty and his Servants are to form their Judgments upon the different proposals that shall be offered for making Settlements in these Islands and upon those Coasts, the greatest precision and Exactness will be required; The Latitudes and Longitudes of the most important places must be settled by Astronomical Observations; the depths of the Water,

¹⁴⁰ Phillip Sharpe (on behalf of the Privy Council) to Board of Trade, 10 February 1764, AO 3/140, n.p., printed in Chipman, pp.23-4.

¹⁴¹ Holland’s Commission: 23 March 1764, CO 323/17, p.281, also see Holland’s Quebec Warrant of Appointment: CO 324/52, pp.15 (for Québec) and 17 (for the Northern District).

¹⁴² Board of Trade’s Instructions to Holland, Pownall to Holland, 17 April 1764, CO 324/17, pp.391-8, *passim*; enclosing Board of Trade to King, Extra Instructions to Holland, 23 March 1764, CO 324/17, pp.398-400, extract printed in *APC*, vol. IV, pp.654-58, esp. p.655.

and Soundings, as well upon the Coast, as within the Harbours, must be taken with the greatest Care, and every Remark made which can tend to the security & Information of such of His Majesty's Subjects as may navigate those Seas; and these Observations and remarks, as well as every other which can tend to convey a clear and precise Knowledge of the actual State of the Country contained in the Survey, its Limits, Extent, Quantity of Acres, principal Rivers and Harbours, the nature of its Soil, and produce, and in what points capable of Improvement, must not only be noted in each Map, but fully expressed with proper observations in a Report, descriptive of such Map, which is to be annexed to, and transmitted with it."

Focusing on the Islands of St. John and Cape Breton, the Board ventured "that the dividing of them into Counties, Parishes, and Townships, would most effectually contribute to their regular and permanent settlement; and their Lordships cannot judge, with precision, what the Extent of each of the Divisions should be, which depends greatly upon the State of the Islands, in respect to their Mountains, Rivers, and other natural Limits; yet it seems to them in general, that each County might with propriety contain about five hundred thousand Acres; each Parish about one hundred thousand Acres; and each Township about Twenty thousand Acres. Their Lordships therefore expect, that, in making the Survey of these Islands, you do keep this Plan of Division as much as possible in view; Marking in your Map and expressing in your Report, the several divisions you propose, with the exact quantity of acres contained in each; as also which you judge the most convenient Spots for the capital towns of the two islands, and for every lesser Town in the several divisions, with the number of acres necessary for each."

Recognising the heavily indented coastlines and varied topography of the two islands, they recommended that “in forming these Divisions, you do take especial Care so as to lay them out, that each may, as far as natural Boundaries will admit, have a due Share and proposition of what ever advantages the Islands afford, either Sea-Coast, Navigable Rivers, or otherwise; observing that they be not laid out lengthways along the Coast, or banks of Rivers, but as nearly as possible in form of Oblong Squares, extending from the Sea-Coast up into the Country.” The same prescription was to be followed when laying out counties, parishes and townships. These concepts were derived from Halifax’s “A Plan for Settling Nova Scotia” of 1749 and the Board was simultaneously sending precisely the same instructions to the governors of Nova Scotia and East Florida.¹⁴³ Eager to see the crown exploit the islands’ natural resources, the Board requested that Holland “give especial attention to Mines, Coaleries, Sea Cow, and Seal Fisheries, and the particular sorts of Timber that are the produce of these Countries.”

The Instructions then proceeded to consider the Magdalen Islands, which owing to their fisheries had been recently transferred from the jurisdiction of Québec to that of Newfoundland. They ordered, “With regard to the Madelaine Islands, their Lordships expect a very particular and accurate Survey; and as the Fisheries, for which these Islands are remarkable, as supposed to be very valuable, you are to give exact Information to their Lordships concerning them; particularly of the number of Echouries¹⁴⁴ for the Sea

¹⁴³ Halifax specifies that surveyors must “take care, however, that the said lands do not extend in length along the sea coast, but only a necessary part therefore do abut upon the sea,” George Montagu Dunk, “A Plan for Settling Nova Scotia,” 1749; Board of Trade to Montague Wilmot (Nova Scotia governor), 23 March 1764, CO 217/20, cited in J. Lennox, ‘An Empire on Paper: The Founding of Halifax and Conceptions of Imperial Space, 1744-55,’ *The Canadian Historical Review*, vol.88, no.3 (September, 2007), p.385; J.D. Wood, ‘Grand Design on the Fringes of Empire: New Towns for British North America,’ *Canadian Geographer*, vol.26, no.3 (1982), p.243-55.

¹⁴⁴ *Echouries*: places along the shoreline where seals habitually beach themselves, making them easy prey for hunters.

Cow [Walrus] Fishery; whether more than one; and how many Companies may be accommodated in carrying on that Fishery; and which of the Echouries are the most or least valuable. And, if the lands in said islands shall appear to be fitted for inhabitancy and cultivation, you are to recommend such plan of division as may be best calculated for the settlement of them, having always for your principal object, the carrying on of the Fisheries.” Finally, the Board warned Holland not to exceed his budget as “no Draught or Demand beyond these sums will or can be allowed.”

To lead the survey in the Southern District, the Board of Trade suggested William Gerard De Brahm, then serving as the Surveyor-General of Georgia, who had gained great acclaim at the Board for his masterpiece, *A Map of South Carolina & a Part of Georgia* (1757). Moreover, his nomination would have been supported by two highly influential political operatives: William Knox and Henry Ellis, with whom he had become favourably acquainted in Savannah.¹⁴⁵ In August, De Brahm was issued commissions to be both Surveyor-General of East Florida and of the Southern District, which bore language nearly identical to that which had been issued to Holland.¹⁴⁶

On 15 August 1764, the Board issued instructions to De Brahm, which asserted that his first priority should be to perform “an accurate survey” of the eastern or Atlantic coast of East Florida as it extends from “St. Augustine, as far as the Cape of Florida.”¹⁴⁷ The Board of Trade likewise allocated £700, 17s. to De Brahm in order to pay for basic

¹⁴⁵ Knox would most certainly have known De Brahm as they both served in the high level administrative roles in the Georgia colonial government during the same time (1757-62). Their familiarity is acknowledged by the fact that De Brahm appointed Knox to be his Agent in London in 1764. In 1757, Henry Ellis (then serving as Governor of Georgia) commissioned De Brahm to design the defenses of Savannah, described as “a well pallisadoed Intrenchment to envelope the City,” De Brahm, in De Vorsey (ed.), *De Brahm’s Report*, p.154.

¹⁴⁶ De Brahm’s Commissions: [June-August 1764], CO 324/52, pp.37 (for East Florida) and 39 (for the Southern District).

¹⁴⁷ Pownall to De Brahm, 15 August 1764, CO 324/17, pp.424-8.

provisions and the salaries of his surveying team. Of that sum, £100 was to be allocated to a provincial deputy to conduct cadastral surveys in De Brahm's absence. De Brahm's emolument was to consist of his £120 provincial base salary augmented by surveying fees. De Brahm, unlike Holland, was not provided with a vessel, the charge of military personnel, nor extra funds for surveying equipment. He was therefore expected to somehow finance all of these requirements from his fixed annuity, a predicament which was to be the cause of major problems.

As would later become plainly apparent, the Board's designs of limiting expenditures by dividing the surveyor-generals' mandates between their provincial and Whitehall responsibilities, and in the case of Holland, causing him to rely on two separate branches of the armed forces, created conflicts of interest and issues for the General Survey.

Linking Surveys, Envisioned as Additions to Complete the General Survey

In addition to the General Survey, the Board of Trade sponsored and directed another large-scale mapping program in North America.¹⁴⁸ Since 1759, the American colonies had been divided along the Pennsylvania-Maryland border into Northern and Southern Indian superintendencies. In 1764, in the wake of the Proclamation, the powers and importance of the Indian superintendents, John Stuart (Southern) and Sir William Johnson (Northern), were greatly augmented. They respectively had the heavy responsibilities of maintaining good relations between the crown and the numerous Native American nations. This included preventing colonists from encroaching on their hunting grounds as well as conducting negotiations to purchase land from the Native nations.¹⁴⁹ While the location of the Proclamation Line in the northern regions was relatively straightforward, its location in the south remained undefined in a largely mountainous wilderness. John Stuart and his associates were charged with making a precise survey to demarcate the line, a task made more difficult by the fact that the location of the line was occasionally altered in places following land purchases.¹⁵⁰

Stuart's rather crude initial conception of his district was captured in a map he submitted

¹⁴⁸ The Board of Trade charged James Simpson, and from 1770, John Byres, to map the 'Ceded Islands' of the West Indies, D. L. Niddrie, 'Eighteenth-Century Settlement in the British Caribbean,' *Transactions of the Institute of British Geographers*, No. 40 (Dec., 1966), pp. 67-80.

¹⁴⁹ Board of Trade, "Plan for the Future Management of Indian Affairs," 1764, CO, 5/65, p.67. At the Augusta Congress of 5 November, Stuart met with chiefs of the Chickasaw, Catawba, Creek and Cherokee nations, L. De Vorsey, Jr., *The Indian Boundary in the Southern Colonies* (Chapel Hill, N.C., 1966), pp.27-47; J.R. Alden, *John Stuart and the Southern Colonial Frontier* (New York, 1966), pp.139-55, see also Anon., *Journal of the Congress of the Four Southern Governor, and the Superintendent of that District, with the Five Nations of Indian, at Augusta, 1763* (Charleston, 1764).

¹⁵⁰ The Board of Trade ordered "That proper measures be taken with the consent...of the Indians to ascertain and define the precise and exact boundary and limits of the lands which it may be proper to reserve to them and where no settlement whatever shall be allowed." Moreover, "all tracts so purchased shall be regularly surveyed by a sworn surveyor, in the presence and with the assistance of a person deputed by the Indians to attend each survey; and that said surveyors shall make an accurate map." Board of Trade, "Plan for the Future Management of Indian Affairs," 1764, CO 5/65, p.67, see De Vorsey, *Indian Boundary*, pp.41-2.

to the Board in 1764, and indicates that he had a Herculean task ahead of him.¹⁵¹ There would be a consequential cross-over between the Southern Indian Boundary Survey and the Southern General Survey, as De Brahm would survey a critical portion of the line in East Florida.

Likely spurred by the example set by the Board of Trade, the Privy Council informed the Admiralty that “accurate surveys should be made of His [Majesty’s] Dominions upon the Continent of North America, and that Surveyors and other proper Officers should be appointed for that purpose.”¹⁵² Consequently, the Lords of the Admiralty sponsored extensive mapping programmes along North America’s coasts which became intimately linked to the General Survey in both districts. It was envisaged that the navy’s hydrographic surveys could one day be merged with the mapping done by the General Survey in order to create an accurate general map of all of British North America’s coastlines. In this respect, the Admiralty and the Board’s programmes became mutually reliant, although there was, at times, a lack of coordination and cooperation between the various administrative bodies. Moreover, while the naval commander-in-chief had ordered all officers to cooperate fully with any and all civilian surveyors employed by the crown, this assistance was not always forthcoming.¹⁵³

¹⁵¹ John Stuart, “A Map of the Southern Indian District”, Mss., 1764, BL: Add Mss, 14036D.

¹⁵² Privy Council to the Lords of the Admiralty, 10 February 1764, ADM 1/5166; on the Admiralty’s independent surveying activities, see Admiralty Minute Book, 1763-4, ADM 3/71, cited in Ware, *George Gauld*, p.14.

¹⁵³ “The Lords Commissioners of Trade & Plantations having instructed the Governours of both provinces of Florida to explore and investigate, with great Care and attention, the hitherto unknown Coast of that extensive Country, and to procure accurate Charts and Surveys of said Coast, and the principal Rivers and Harbours fit for Navigation, you are to cooperate and assist the Persons employed by the said Governours therein, as far as may be consistent with the other services you are employed on.” Alexander Lord Colville (Commander-in-Chief, Royal Navy North American Squadron) to Captains under his Command, 15 October 1763, ADM 1/482, cited in Ware, *George Gauld*, Introduction, p.xx.

In 1763, James Cook was commissioned to map the coasts of Newfoundland and parts of Labrador, an opportunity partly due to a recommendation from the Board of Trade.¹⁵⁴ Cook's highly accurate surveys would later be linked up to surveys of the southern Labrador coast made under Holland's auspices.

In 1764, J.F.W. Des Barres, a Swiss-Huguenot surveyor who had previously worked with Holland in Québec, made an unsuccessful bid to be appointed to Holland's post.¹⁵⁵ From the Admiralty, he received something of a consolation prize, being appointed to chart the coastlines of peninsular Nova Scotia, an assignment of high importance owing to Halifax's role as Britain's largest colonial naval base.¹⁵⁶

Also in 1764, the Admiralty commissioned George Gauld, an immensely competent Scottish surveyor, to chart the coasts of the Gulf of Mexico from the Mississippi Delta to the Florida Keys.¹⁵⁷ A mild-mannered and unpretentious man, Gauld was content share his discoveries with all interested parties. While he had no contact with De Brahm, his *de facto* successor, Bernard Romans, relied heavily on Gauld's charts to compose his general maps of East and West Florida.

The military continued to employ several engineers to make surveys. Although technically under the administrative umbrella of the Board of Ordnance, these

¹⁵⁴ The Board recommended that Cook be appointed to survey Newfoundland based on a recommendation from Samuel Graves, the governor of Newfoundland, Board of Trade to the King, 29 March, 1763, CO 195/9, p.163; Graves, cited in W.H. Whiteley, 'James Cook and British policy in the Newfoundland fisheries, 1763-7,' *Canadian Historical Review*, vol. 54 (1973), p.248.

¹⁵⁵ D.W. Marshall, 'The British Military Engineers, 1741-1783: A Study of Organization, Social Origin, and Cartography' (PhD., Michigan, 1976), p.208.

¹⁵⁶ Unfortunately, the jealous and mercurial Des Barres was disinclined to cooperate with Holland, much to the detriment of the latter, G.N.D. Evans, *J.F.W. Des Barres*, p.15.

¹⁵⁷ Gauld's Commission, ADM 2/724, Ware, *George Gauld*, p.15.

cartographers were often seconded to serve specific field officers and provincial governors.¹⁵⁸

D. The Pre-Existing Information Influencing The General Survey

The directions Whitehall gave to their general surveyors were, in many crucial ways, dictated by the information they already had about the new world from earlier, albeit less accurate or comprehensive, surveys and reconnaissance reports. In the Northern District, these pre-existing artifacts led them to believe that the Islands of St. John and Cape Breton, for example, were cash cows, so rich in resources that more complete knowledge of their geographies was a priority. In the Southern District, where information was scarce owing, in part, to the secrecy of the previous Spanish landlords, the documents that were available erroneously convinced Britain that Florida was more of an agricultural prize than it was, and that there were rich opportunities for improving trade channels with the rest of the America by charting the supposed trans-peninsular waterway from the Gulf of Mexico to the Atlantic. Thus, despite the fact the pre-existing geographical artifacts were known to lack detail or accuracy, these documents had a powerful influence on Britain's priorities in the New World, and, consequently, on the charted course for the General Survey.

¹⁵⁸ D.W. Marshall, 'The British Military Engineers' (PhD., Michigan, 1976) and D.W. Marshall, 'Military Maps of the Eighteenth century and the Tower of London Drawing Room.' *Imago Mundi* 32 (1980): 21-44; D.W. Marshall, 'The British Engineers in America: 1755-1783,' *Journal of the Society for Army Historical Research*, vol. 51 (1973), pp.153-65.

Pre-Existing Maps of the Northern District

In comparison to Florida, the Board of Trade's conception of the geography of its new northern dominions was "tolerably well understood." Whitehall already had access to the superlative 'Murray Map', in addition to the reports of British officers stationed in Canada. Thomas Jefferys' *A New Map of Nova Scotia* (1755) (**Fig. 12**)¹⁵⁹ was markedly more accurate in places than the depiction shown on the highly-popular maps of Jacques Nicolas Bellin, the French royal hydrographer, which first appeared in 1744 (**Fig. 13**).¹⁶⁰ However, neither the Jefferys map nor all of the other maps that the Board possessed of the coastal regions along the Gulf of St. Lawrence were of sufficient accuracy or scale to select the locations for new towns, set cadastral boundaries or plan infrastructure needs. Moreover, the existing written accounts were unable to provide a reliable understanding of the riches of the fisheries, forests or potential for agricultural development. Owing to the reputed fertility of the Island of St. John and the strategic value of Cape Breton Island and its great fishery, the Board charged Holland to make these islands his first priority.

The Maps of L'Acadie versus Nova Scotia

With the French settlement of Acadia upon the foundation of Port Royal in 1603, Samuel Champlain became the first cartographer to chart Atlantic Canada, resulting in his

¹⁵⁹ Thomas Jefferys, *A New Map of Nova Scotia and Cape Britain, with the adjacent parts of New England and Canada* (London, 1755), McCorkle, *New England*, no.755.20. Jefferys noted on the map that it was "composed from a great number of actual surveys; and other materials regulated by new astronomical observations of the longitude as well as latitude." *N.B.*: Thomas Jefferys, the "Geographer to the King" had a very close and long-standing relationship with the Board of Trade which will be discussed in the previous chapter (yet to be written), see J.B. Harley, 'The Bankruptcy of Jefferys,' *Imago Mundi*, vol. 20 (1966), p.35; R.A. Skelton, *James Cook, surveyor of Newfoundland* (San Francisco, 1965), Introduction, p.7.

¹⁶⁰ Jacques Nicolas Bellin, *Carte de l'Acadie et Pais Voisins* (Paris, 1757), M. Trudel, *Atlas Historique du Canada Français* (Laval, Qué., 1961), p.42; this map was first published in P.-F.-X. de Charlevoix, *Description de la Nouvelle France* (Paris, 1744).

famous printed map of 1632.¹⁶¹ During the French occupation, proprietors like Nicolas Denys who was granted stewardship over the Islands of St. John's and Cape Breton also brought together information. For example, Denys' *Description géographique* (1672) included very favourable descriptions of Cape Breton's immense wealth in fisheries and its abundant sources of coal.¹⁶²

As a permanent British presence in the region began to materialize following the Treaty of Utrecht (1713), development of cartographic information became important to demarcate boundaries between the French and English and to understand how to defend or expand territory. The maps made of Louisbourg and its environs after a British expeditionary force seized the fort from the French in 1745, such as the aforementioned example by Samuel Holland, proved to be indispensable to the British when they once again besieged the fortified town in 1758.¹⁶³

In 1746 the British authorities dispatched Charles Morris Sr., an industrious Boston lawyer and military surveyor, to various locations of particular interest in peninsular Nova Scotia.¹⁶⁴ During a time of great transition and civil tension, Morris' maps, along with his detailed reports, served as blueprints for deciding how and where British and foreign Protestant colonists should settle and where the military should build forts to guard strategic transport corridors. By carefully depicting the settlements of the

¹⁶¹ Samuel de Champlain, *Carte de la Nouvelle France* (Paris, 1632).

¹⁶² Nicolas Denys, *Description géographique et historique des costes de l'Amérique septentrionale: avec l'histoire naturelle du país* (Paris, 1672).

¹⁶³ Following the 1745 campaign the Admiralty was provided with several excellent maps of Louisbourg and vicinity based on coastal surveys conducted by British military engineers and sailors. Of special note is Peter Durrell & Henry Bastide's "A Plan of the Harbour and Fortifications of Louisbourg," Mss., 1745, Admiralty Library (Portsmouth): Mss. Coll. 368/42, which the British commander, Admiral Boscawen, was thought to have consulted during his preparations for the 1758 mission, see J. Blake, *The Sea Chart* (London, 2004), p.118. The best-known printed plan of Louisbourg and surroundings based on the 1745 maps is Thomas Jefferys, *A Plan of the City and Harbour of Louisbourg... shewing Part of Gabarus Bay... 1745* (London, 1755).

¹⁶⁴ Charles Morris Sr. (1711-81), see P.R. Blakeley, 'Morris, Charles', *DCB*, vol.IV; E. Crathorne, "The Morris family— surveyors-general," *Nova Scotia Historical Quarterly*, vol. 6 (1976), 207–16

Acadians and the indigenous Mi'kmaq peoples, they also enabled the British to form plans by which they could control and subjugate these potential internal threats.¹⁶⁵ However, Morris's maps had their limitations: they were not generally predicated on scientific surveys, and their planimetric accuracy was impaired by inaccurate readings of geodetic coordinates. For example, on his map of Annapolis Royal and environs, the town was geodetically misplaced by around 20 miles.¹⁶⁶ Moreover, while he often included numerous depth soundings, he seldom gave much detail with respect to the topography of the land, such as points of elevation.

In 1749, the Earl of Halifax, in part due to Morris's advice, employed his considerable political capital to commit Whitehall to finance a dramatic scheme to develop Nova Scotia as a province, and most importantly to transform Chebucto Harbour (later renamed Halifax), one of the world's greatest natural havens, into the North American headquarters for the Royal Navy.¹⁶⁷ Halifax appointed Morris "Chief Surveyor of Lands within this Province," and in conjunction with John Brewse, designed the city plan for Halifax, the most important of the several towns he was to lay out in the province.¹⁶⁸ Foreshadowing the later work of Holland, Morris employed cartography in

¹⁶⁵ J. Lennox, 'An Empire on Paper: The Founding of Halifax and Conceptions of Imperial Space', *The Canadian Historical Review*, vol.88, no.3 (September 2007), pp.381-7; Morris elaborated on his proposals for settling the province in his report, Charles Morris, "A Brief Survey of Nova Scotia", 1748, LAC: RGI, vol.44. Important examples of Morris' cartography from this period include: Charles Morris, "A Survey of the Bay of Fundy," Mss., 1748, LAC: H3/205/[1745-1752](ca.1900), NMC 724; Charles Morris, "Draught of the Northern English Colonies", Mss., 1749, Dalhousie University (Halifax, N.S.), Special Collections.

¹⁶⁶ G.N.D. Evans, *Uncommon Obdurate: The Several Public Careers of J.F.W. Des Barres* (Salem, Mass., 1769), p.16; the map in question is Charles Morris, "Propos'd Settlements on the Bason & River of Annapolis Royal," Mss., 1755, LAC: H3/250/Annapolis/1755.NMC 4877.

¹⁶⁷ Earl of Halifax, "A Plan for Settling Nova Scotia," Mss., 1749, cited in Lennox, 'An Empire on Paper', p.385.

¹⁶⁸ John Brewse, "Prospect for Fortifying the Town of Halifax in Nova Scotia," Mss., 1749, LAC: H3/240/Halifax/1749,NMC 4676., Lennox, p.388; Morris also planned and surveyed other towns: Lunenburg, Windsor, Liverpool, Truro and Yarmouth.

order to anticipate future colonial expansion, as opposed merely to mapping what was already there.¹⁶⁹

Meanwhile, the British and the French were disputing the boundaries of Nova Scotia. The British claimed that the province extended to include all of modern-day New Brunswick, while the French countered that it was limited to a portion of the peninsula of Nova Scotia. In 1750 they convened a bipartite commission to resolve the boundary, and all available maps of the region were gathered to be entered as key evidence supporting the respective sides. Bellin and Jefferys each printed special, dueling maps representing the claims of their respective nations.¹⁷⁰ However, the commissioners found, in the words of Mary Pedley, “The maps were so contradictory in scale, size, and purpose that neither side could draw meaningful conclusions” such that one would be “struck by the absence any surveys actually made in the region.”¹⁷¹ Not long after, the Board of Trade wrote to Nova Scotia’s governor, Charles Lawrence, complaining that “at this distance and without a more perfect knowledge of the geography of the country” it would be impossible to develop a comprehensive defense strategy for the province.¹⁷² While this caused Lawrence to commission further maps from Morris, the general predicament

¹⁶⁹ Lennox, ‘An Empire on Paper’, p.375.

¹⁷⁰ Jacques Nicolas Bellin, *Carte d’un parie de l’Amérique Septentrionale pour servir à l’intelligence du mémoire sur les prétentions des Anglois au sujet des limites à régler avec la France dans cette partie du monde* (Paris, 1755), McCorkle, no.755.11; Thomas Jefferys, *A map, exhibiting a view of the English rights, relative to the ancient limits of Acadia; as supported by express & incontestable authorities* (London, 1755), Mc.Corkle, *Maps of New England*, no.755.18, Sellers and Van Ee, no.122. Morris also made a map which maximized Britain’s claims in the region, and was likely consulted by the Board of Trade, as it remained in its collections, Charles Morris, “A Draught of the Northern English Colonies,” Mss., 1749. Lord Cornwallis, who oversaw the building of Halifax, wrote that “You will see by the map carried home by Governor Shirley the most accurate I have seen,” Cornwallis to the Board of Trade, 7 December 1749, Lennox, ‘An Empire on Paper’, p.384.

¹⁷¹ M.S. Pedley, ‘Map Wars: The Role of Maps in the Nova Scotia/Acadia Boundary Dispute of 1750,’ *Imago Mundi*, vol. 50 (1998), pop.96-104, esp. p.98.

¹⁷² Board of Trade to Lawrence, 4 March 1754, cited in Lennox, ‘An Empire on Paper’, p.374.

signaled that the acquisition of maps predicated on scientific surveys was an administrative imperative.¹⁷³

In 1755, following the start of open hostilities between the British and French forces in the Ohio Valley, the British decided upon a programme to expel the province's Acadian residents. While presumably a measure to remove enemy foreign nationals from their territory, the British also had economic motives in mind, as the Acadians had long occupied much of the province's most fertile land.¹⁷⁴ Morris' maps which carefully labeled the locations of Acadian homesteads would certainly have been very useful to the British authorities as they proceeded to round up and deport approximately ninety-percent of the province's estimated 10,000 Acadians.¹⁷⁵

Depiction of the Island of St. John up to 1764

After the British seized possession of the island in August 1758 from the French, reports to Whitehall greatly overstated the island's agricultural production. For example, Admiral Boscawen wrote to Pitt, claiming that the island's inhabitants possessed 10,000 head of cattle, while many farmers produced at least 1,200 bushels of grain annually,

¹⁷³ Charles Morris, "A Chart of the Peninsula of Nova Scotia done by order of His Excellency Charles Lawrence," Mss., 1755, BL: K.Top.119.57. On Morris's maps, the Board of Trade wrote, "We have attentively read and considered your observations...have also carefully examined the charts you have transmitted" Board of Trade to Lawrence, 29 October 1754, cited in Lennox, 'An Empire on Paper', p.398.

¹⁷⁴ For accounts of the expulsion of the Acadians, see J.M. Faragher, *A Great and Noble Scheme: The Tragic Story of the Expulsion of the French Acadians from their American Homeland* (New York, 2005); G. Plank, *An Unsettled Conquest: The British Campaign against the People of Acadia* (Philadelphia, 2001), pp.140-57.

¹⁷⁵ Lennox, 'An Empire on Paper', p.397. While many of Morris' most relevant maps were made prior to the British authorities' decision to expel the Acadians, it was likely that Morris had carried out his work with such a policy in mind, for he was well known to be an early and staunch advocate of the expulsion, see Charles Morris, 'Judge Morris' Account of the Acadians, Drawn Up in 1753, with Causes of the Failure of the British Settlement in Nova Scotia, 1749', *Collections of the Nova Scotia Historical Society*, no.2 (Halifax, 1881).

such that St. John had long been a major exporter of produce to Québec.¹⁷⁶ In reality, the island had always maintained a trade deficit in agricultural goods.¹⁷⁷ The hyperbole was, in part, fuelled by the publication in London of a book by Thomas Pichon, formerly the secretary to the Governor of Louisbourg.¹⁷⁸ Billing himself as “an impartial Frenchman,” he recounted a voyage he made to the island in 1752 “in company with the persons whom the commandant had directed to make an exact survey of the coast.” While their mission actually was more a reconnaissance than a precise mapping expedition, they circumnavigated the island, recounting bucolic visions such as “a plain well cultivated & abounding with all sorts of grain,” with waters teeming with codfish “larger than in Cape Breton.”¹⁷⁹ Impressed by the potential value of the island, the British proceeded to expel virtually the entire population of 3,500 of the Acadians, along with several hundred Mi’kmaq.¹⁸⁰ The island became a *tabula rasa*, subject to Whitehall’s agenda.

A fascinating document, accompanied by an original map, describes what was likely the first British reconnaissance mission around the island conducted from 6 July to 27 August 1762.¹⁸¹ While the author is anonymous, a more refined copy of precisely the same map was drafted by a Henry Cotes, who may indeed have been the author of the original description and map (**Fig. 14**).¹⁸² Found in the Hardwicke Papers, along with

¹⁷⁶ Boscawen to Pitt, 13 September 1758, CO 412/3.

¹⁷⁷ J.M. Bumsted, *Land, Settlement, and Politics on Eighteenth-Century Prince Edward Island* (Montreal, 1987), p.11.

¹⁷⁸ T. Pichon, *Genuine Letters and Memoirs relating to the Natural, Civil and Commercial History of the Islands of Cape Breton, Saint John* (London, 1760); originally published in French as T. Pichon, *Lettres et mémoires pour servir à l’histoire Naturelle, Civile et Politique du Cap Breton* (The Hague, 1760).

¹⁷⁹ Pichon, *Cape Breton*, p.77.

¹⁸⁰ Bumsted, *Prince Edward Island*, p.11.

¹⁸¹ Anon., “Remarks relative to the Sketch of the Island of St. John’s in North America...,” BL: Hardwicke Papers, Add. Mss. 35914, ff.95-9, including a map, “A Sketch of the Island of St. Johns in the Gulf of St. Laurence,” Mss., [1762], *passim*.

¹⁸² Henry Cotes, “A Sketch of the Island of St. Johns in the Gulf of St. Laurence”, Mss., 1764, CO 700/Prince Edward Island 2, Penfold no. 1628; presentation copy of the map found in BL: Hardwicke Papers, Add. Mss. 35914, ff.99.

several documents relating to the 2nd Earl of Egmont, it seems the description may have been conveyed to several people who would play a key role in shaping the island's future. The author recounted "I was employ'd by order of the General¹⁸³ to run over that Island, its Harbours, & Interiour parts, that he might be in some measure informed of its value, and the Situation of the several towns, with the Quantities of Cultivated lands, which environ'd each, that thereby he might be enabled to make an Estimation of the number of Families each Township."

The map depicts an island with large expanses of land cleared and ready for the planting of crops, intersected by numerous bays and rivers promising good routes of communication. It shows that the island's former pattern of settlement was entirely unplanned, its geography dictating the locations of villages and farms. The author noted that "The Settlements were form'd into 4 large parishes & the churches were at the villages of St. Peters, Hillsborough, Point Prim & Malpaick [Malpeque]. The whole French inhabitants on the island at the delivering it up were computed at 4070 who surrendered & 1000 who stood out and escaped." While the author encountered small groups of Acadians, the land was largely free for British exploitation. He related that "the Soil is light but used to bear very good crops of every kind of Grain, Indian corn" and everywhere are "fine meadows." The fishing is described as excellent, as the locals recounted that French merchants had long paid the crown large fees for fishing licenses. In several locations one encountered "good ship timber," and "Scarce a village but has a sawmill in it as well as grist mills." The author may have been responsible for a major geographical misperception that would persist in Whitehall until Holland's survey, as he

¹⁸³ The "General" was Andrew, 5th Lord Rollo, the British military commander of the Island of St. John's.

claimed that the island was “nearly 4,329 sq miles or 2,770,560 acres” in area, almost twice its actual size.¹⁸⁴

Depiction of Cape Breton Island up to 1764

In sharp contrast to the reports of St. John’s, Cape Breton Island was seldom described as a pleasant or fertile place, but was considered valuable due to its strategic location guarding the mouth of the Gulf of St. Lawrence and its immense riches in coal and fisheries.¹⁸⁵ Pichon recounted that the “winter is very severe at Louisbourg” and “the surface of almost the whole country is extremely disagreeable being nothing else “but a light kind of moss and water.”¹⁸⁶ Moreover, the land produced “no grain” and there was little in the way of usable timber.¹⁸⁷

The British were well aware of the island’s collieries, as in 1751 alone, 150 ships from New England had travelled to Louisbourg to trade goods for coal.¹⁸⁸ While Denys was the first commentator to mention the island’s coal veins, it was not until 1720 that the French actually exploited the resource.¹⁸⁹ In 1744, in his famous work, Père Charlevoix described the ease by which the deposits could be mined, as the “island abounds in coal pits, which were in the mountains; consequently, the trouble and expense of digging deep and making drains to carry off the water were greatly saved.”¹⁹⁰ From 1758, the British

¹⁸⁴ Prince Edward Island’s area is actually 1,404,525 acres, or 2,194.57 sq mi (5,683.91 km²). Lord Egmont, amongst others, would for some time be under the impression that the island exceeded 2 million acres in area.

¹⁸⁵ Ever since the British first captured Louisbourg, favourable descriptions of Cape Breton’s coal and fisheries were printed in London, see John Brindley, *The Great Importance of Cape Breton* (London, 1746).

¹⁸⁶ Pichon, *Cape Breton*, pp.6-7.

¹⁸⁷ Pichon, *Cape Breton*, pp.14-5.

¹⁸⁸ Harvey, *Cape Breton*, p.50.

¹⁸⁹ R. Brown, *The Coal Fields and Coal Trade of the Island of Cape Breton*, (London, 1871), pp.45-6.

¹⁹⁰ P.-F.-X. de Charlevoix, *Description de la Nouvelle France* (Paris, 1744), vol. I, pp.331-46.

immediately began using the coal for military purposes, to the amount of 3,000 tons annually for the garrisons at Halifax and Louisbourg.¹⁹¹

It is difficult to estimate the population of Cape Breton and the size of its cod fishery at the end of the French regime. In 1752, the civilian population of the island was estimated at 4,124 and the military garrison at Louisbourg numbered approximately 5,000-6,000 troops.¹⁹² In 1740, the size of the Cod fishery was estimated to be quite significant, employing 2,445 fishermen, utilising 48 schooners and 383 shallops, providing an annual yield of 117,050 quintals.¹⁹³ Other reports of the size of the fishery from as late as 1758 are likely greatly inflated, and it is probable that an annual yield of 300,000 quintals was never exceeded.¹⁹⁴ The majority of the island's French inhabitants were deported to France, and in 1760 Pitt ordered the walls of Louisbourg to be razed so that the fortress would never again pose a threat to British shipping.¹⁹⁵

In 1672, Denys published a rather elementary sketch map of the island that remained influential for some decades.¹⁹⁶ Indicative of the general state of ignorance about Cape Breton's geography, in the early 1760s, the Board of Trade was still receiving

¹⁹¹ Harvey, *Cape Breton*, p.51.

¹⁹² Brown, *History of Cape Breton*, p.271. At the fall of Louisbourg in 1758 the British took 5,638 prisoners of war, Brown, *History of Cape Breton*, p.323.

¹⁹³ "Report of Captain Smith of the *H.M.S. Eltham* to the Board of Trade," 1740, Brown, *History of Cape Breton*, p.175;

¹⁹⁴ An anonymous contemporary British document estimated that in 1758 the Cape Breton fishery employed 15,138 men, 726 decked vessels and 1,555 shallops, providing a yield of 974,000 quintals. These estimates are wildly exaggerated, as they show an eight-fold increase from the 1740 level, Brown, *Cape Breton*, p.340.

¹⁹⁵ Destruction of Louisbourg's fortifications, Harvey, p.7; deportation of French settlers, Brown, *History of Cape Breton*, p.323.

¹⁹⁶ The Denys map of 1672 was widely copied for the next few decades, and example from the Board of Trade's collection is Anon., "Plan on Carte de Lisle Royale. Lisle Royale cy devant du cap Breton, sistue a Lembouchere du Golfe de St. Laurent," Mss., 1714, CO 700/Nova Scotia 2, Penfold no. 1138.

crude sketch maps in its official correspondence, even though they were less accurate than the long-published Jefferys map.¹⁹⁷

Prefiguring the mandate of the General Survey, on 22 November 1763, Pownall wrote to Montague Wilmot, the Governor of Nova Scotia, underscoring that “the Islands of St. John and Cape Breton” should be “pressing objects of your particular care and attention; their advantageous situation in respect to the Fishery renders them of the greatest importance to this Country.”¹⁹⁸ They directed that “you will forthwith cause an actual Survey to be made of these Islands” in order to obtain “information” regarding “their Extent, the nature of the Soil, the Rivers and Harbours in each of them, and their particular productions and advantages.” Wilmot was then to make recommendations to the Board concerning “what plan of settlement will be most eligible and advantageous” to enact on the islands. Importantly, the Board of Trade wanted to prevent the reoccurrence of the “carnival land grabbing” that had occurred in peninsular Nova Scotia, where from 1755 to 1765 over 3.5 million acres of land was granted, while only a very small percentage of these lands were ever improved.¹⁹⁹ Consequently, the Board stipulated that, until further notice, “you are upon no account to make grants in these Islands to any particular persons whatever.” This edict was especially significant, as both the Board and

¹⁹⁷ Anon. (but possibly by Charles Morris), “[Sketch of Cape Breton Island and part of the Coast of Nova Scotia, showing forts, ships at sea],” Mss. c.1760, CO 700/Nova Scotia 32, Penfold, no.1139; see also, [John Gregg], “A Plan of the Island of Cape-Breton,” Mss., 1763, MPG 1/289, Penfold no. 1140. Gregg’s memorial, CO 217/20, The Board of Trade “Read a memorial of Mr. Gregg, praying for a grant of certain lands in the Islands of St. John and Cape Breton, as marked out in the map annexed thereto. Mr. Gregg attending, their lordships had some conversation with him upon the subject matter of his memorial, and he being withdrawn, it was agreed that such part of the memorial, as prays a grant of lands in Cape Breton, should lye by for further consideration at another opportunity; and that the draught of a representation to his Majesty, proposing that the memorialist may have a grant of twenty thousand acres of land in St. John’s, should”, *JCTP*, 16 December 1763 (vol.11, pp.422-3), Brown, *History of Cape Breton*, pp.352-3.

¹⁹⁸ Board of Trade to Wilmot, 22 November 1763, CO 218/6, ff.125-7.

¹⁹⁹ In response to innumerable petitions, between 1755 and 1765 over 3.5 million acres of land was granted away in Nova Scotia. As only a very small percentage of these lands were developed the “carnival of land grabbing” came to be seen as an administrative mistake; B. Bailyn, *Voyagers to the West* (London, 1986), p.364.

the governor were then being deluged with numerous petitions for land grants. So officially began the settlement freeze on both islands, and, in the case of Cape Breton, it would be a moratorium whose longevity nobody could have predicted.

Consistent with the above directive, in the spring of 1764, Wilmot dispatched Morris to survey the two islands. Inclement weather ensured that he was only able to reconnoitre the southeastern extremities of Cape Breton and was prevented from reaching St. John altogether.²⁰⁰ An appraisal of Morris's consequent maps of the Gut of Canso-d'Arichat region of Cape Breton shows them to be sea charts, and apart from depicting roads, they provide no detail with respect to the topographical features or the economic virtues of the land itself, and were thus of very limited utility to the governor.²⁰¹

Pre-existing Maps for the Southern District

In 1764, the Floridian peninsula remained a geographical enigma. The British had scant access to first-hand intelligence, and what they had was almost entirely from Spanish sources. The scant Spanish accounts of the area were ultimately the source of enduring cartographic misconceptions.

Spanish Florida, 1565-1763

²⁰⁰ The Board of Trade received Morris' "Report of a survey of the eastern country of Nova Scotia and the western parts of Cape Breton Island, [dated] November 1764", *JCTP*, 29 October 1765 (vol.12, p.218); also Harvey, *Cape Breton*, Introduction, p.8.

²⁰¹ Charles Morris, "Map of St. Mary's and Petit d'Grat Harbour, Cape Breton Island," Mss. [n.d., but 1764], LOC: G3422.A7 176-.M6 Vault (Force 391); the other surviving map showing a part of Cape Breton from Morris's 1764 expedition, Charles Morris, "Northern part of the Gut of Canso, part of the island of Cape Bocton," Mss., 1764, LOC: G3422.C24 1764.M6 Vault (Force 394), the fact that the map was really a sea chart is indicated by the fact that it fell into the possession of Alexander, Lord Colville, the commander-in-chief of the Royal Navy's North American squadron, as the map is annotated: "purchased out of Lord Calvil's Coll."; Morris also mapped Canso Harbour on peninsular Nova Scotia in 1764 and the resulting map is of the same style as the two previous, and shows the proposed site for 'Wilmot Town,' Charles Morris, "A draught of the harbour of Canso," Mss., 1764, LOC: G3422.C25 1764.M6 Vault (Force 389), Sellers and Van Ee, nos. (respectively), 363, 376 and 376.

While the province of La Florida occupied a peripheral status in Spanish America, it enjoyed a brief ‘Golden Age’ between 1674 and 1702. As depicted on Alfonso de Solana’s 1683 map,²⁰² during this time, Franciscan missions and cattle ranches extended deep into the interior, while harmonious relations were maintained with the relatively peaceful indigenous peoples.²⁰³ By 1686 the Spanish had also managed to construct a trans-peninsular road, the *Camino Real*, from St. Augustine to the mouth of the Apalache River on the Gulf coast.²⁰⁴

The Golden Age came to an end when James Moore, the Governor of Carolina, and his Lower Creek allies attacked Florida in 1702. By the Seven Years’ War the province essentially consisted of only three presidios, St. Augustine, San Marcos de Apalache (founded 1718), and Pensacola (founded 1696), whose sole purpose was to act as a bulwark against British expansion into the Gulf of Mexico.

Spanish Conceptions of Florida during their First Colonial Period

Since Columbus, the *Casa de la Contratación*, Spain’s agency that managed all aspects of colonial commerce and navigation, kept tight control over the dissemination of cartographic information. The *Casa*, like the Board of Trade, was the primary custodian of colonial maps commissioned for civilian purposes.²⁰⁵ While official British

²⁰² Alfonso de Solana, “Mapa de la Ysla de la Florida,” Mss., 1683, W. Cumming, *The Southeast in Early Maps* (Chapel Hill, 1987), no.94.

²⁰³ P.E. Hoffman, *Florida’s Frontiers* (Indianapolis, 2002), pp.148-73; C.W. Arnade, ‘Cattle Raising in Spanish Florida, 1513-1763,’ *Agricultural History*, vol.35, no.3 (Jul., 1961), pp.116-24.

²⁰⁴ M.R. Boyd, ‘The First America Road in Florida,’ *FHQ*, vol. 14, no. 2 (Oct., 1935), p.75.

²⁰⁵ *Casa de la Contratación* (translation, the House of Trade) was founded in 1503, based in Seville until 1717 when it was moved to Cadiz, it was dissolved in 1790: E.L. Stevenson, ‘The Geographical Activities of the Casa de la Contratación,’ *Annals of the Association of American Geographers*, no.17 (1927), pp.39-59; also J.H. Parry, *The Spanish Seaborne Empire* (London, 1966), pp.54-58; A. Barrerra-Osorio, *Experiencing Nature: The Spanish American Empire and the Early Scientific Revolution* (Austin, Tx., 2006), pp.28-55.

cartographers were usually free to have their maps privately printed and openly disseminated, Spain, like Portugal, specifically forbade its cartographic manuscripts from circulating beyond official circles. Moreover, as was the case in Britain, there was no effective system for the *Casa* and other official mapping agents, such as the engineers of the *Ejercito Real* and the pilots of the *Armada Real*, to share geographical intelligence. Consequently, many fine maps and surveys attained only episodic exposure, before languishing inconsequentially for decades in some archive.

An analysis of the Spanish maps of Florida that are known to exist reveals that, even as late as 1764, the Spaniards had an incomplete and often wildly inaccurate understanding of the peninsula they had claimed possession of for two centuries. While select areas, notably the immediate environs of presidios, had been skillfully mapped, the cartography of almost all of the interior and of the Gulf coast of the peninsula bore very little verisimilitude to reality. The Spaniards had made no attempt to map its coasts in a systematic fashion.

Charting Florida was undoubtedly technically challenging and dangerous. In the words of a British commentator, “The navigation upon the extreme parts of Florida is remarkably dangerous, not only because it is within the course of the tradewinds, but because the whole shore upon which the current for the most parts sets is particularly low, flat, broken ground; and full nine leagues into the sea in many places quite shallow, excepting some winding deep channels, very rarely, if ever, gets clear of it; because, being deceived by the deep soundings, and having unwarily entered so far within the

banks, that there is no returning by the same way, the vessel must inevitably be lost”.²⁰⁶

In addition, not only were the warriors of the Lower Creek nations and the Seminoles hostile to the Spaniards, but the innumerable bays and inlets were frequented by French and English corsairs. Malaria and yellow fever stalked the coastal swamps. A Spanish mariner would have concurred with Thomas Hutchins’s assertion that the peninsula “ought to be known only to be avoided”.²⁰⁷ These factors would endure to challenge De Brahm and his deputies.

While not all Spanish maps depicted the southern third of Florida as being comprised of innumerable islands and channels, or as a peninsula marked by channels, by the 1750s, the maps which followed these models had managed to gain the greatest currency amongst both Spanish and English officials. For example, in 1742, when Antonio de Arredondo defended Spanish claims that their sovereignty in the region extended northwards up to 32°30’ N, he directly copied much of the geography from Guillaume De l’Isle’s 1718 map of the greater region. He showed Florida’s southern portion as consisting of numerous islands and channels (**Fig. 14**).²⁰⁸ In doing so, the

²⁰⁶ This passage, while specifically referring to navigation around the Florida Keys, nevertheless describes dangers present when sailing almost anywhere around the coasts of East Florida, W. Roberts, *An Account of the First Discovery and Natural History of Florida* (London, 1763), p.19.

²⁰⁷ T. Hutchins, *An Historical Narrative and Topographical Description of Louisiana, and West-Florida* (Philadelphia, 1784), pp.46-7, cited in R.S. Weddle, *Changing Tides: Twilight and Dawn in the Spanish Sea, 1763-1803* (College Station, Tx., 1995), p.51

²⁰⁸ Antonio de Arredondo, “Descripción Geographica de la parte que los Españoles poseen actualmente en le continente de la Florida,” Mss. 1742, with Arredondo’s treatise, “Demonstración Historiographica,” AGI (Seville): Est. 86 Caj. 5 Leg. 24., Cumming, *Southeast in Early Maps*, no.253, plate 56; note the map Arredondo copied, Guillaume De L’Isle, *Carte de la Louisiane et du Cours du Mississippi* (Paris, 1718), Cumming, no.170. Arredondo’s map itself copied twice in the 1760s: Fernando Martinez-Arredondo, Mss. (1765), BL: Bauzà Collection, Add. Mss. 17649B, Cumming, No.345; Elixio de la Puente-Arredondo Mss. (1765), Division de Hydrographia (Madrid), 9a. 4a. 82, Cumming, no.346; see H.E. Bolton, *Arredondo’s Historical Proof of Spain’s Title to Georgia* (Berkeley, 1925). Arredondo was dispatched to Florida by the Governor of Havana in 1737 and made a series of regional maps before drafting the “Descripción.” Another Spanish map from this era to depict the Floridian peninsula in a similar fashion was a chart of the West Indies and Gulf of Mexico: Antonio Abreu y Manos, “Descripcion hidrographico o carta reducida o de grados hecho en la Nueva Vera Cruz”, Mss, 1734, AGI: MP-SD,177.

highly respected engineer lent critical legitimacy to geographical myths within official Spanish circles.

In the 1750s, Spanish pilots produced manuscript charts that seemed to suggest the possibility of trans-peninsular channels. For instance, Juan Francisco Badaraco's visually attractive chart seems to show the Rio de Mosquitos to be the mouth of a massive, mysterious estuary.²⁰⁹ Balentin Cierito's map gives Florida an enigmatic blank interior surrounded by a coastline permeated by numerous inlets (perhaps being the termini of trans-peninsular channels), and with the Rio de Mosquitos connected to a waterway which re-enters the Atlantic south of Cape Canaveral.²¹⁰

In 1755, Tomás López de Machuca, regarded as one of the greatest figures of the *Ilustración Borbón* and the premier Spanish cartographer of the era, produced his *Mapa Maritima* with its striking depiction of Florida (**Fig. 16**),²¹¹ In 1758, he followed this up with the first general map of Florida ever published in Spain, included as part of the first printed Spanish atlas of the Americas.²¹² Showing the same depiction as in his earlier map, it lends legitimacy to the misperception that the southern reaches of the Floridian

²⁰⁹ Juan Linares & Joseph Francisco Badaraco, "Plano I Descripción de la Costa, desde el Cava de Cañaveral," Mss., 1756, LOC: G3872.C6 1756.L5 Vault, Sellers and Van Ee, no.1382, a visually attractive chart which shows the Rio de Mosquitos to be the mouth of a massive, mysterious estuary.

²¹⁰ Balentin Cierito, "Descripción de la costa de Tierra Firme desde el Rio de la Empalizada hasta Cavo de Clara. Por las latitudes y longitudes de Dn. Bartolome de Rosa. Echo por Balentin Cierito primer Piloto de la Real Armada, año de 1757", Mss., 1757, LOC: G3321.P5 1757.C5 (Howe 1), Sellers and Van Ee, no.763.

²¹¹ Tomás López de Vargas Machuca & Juan de la Cruz, *Mapa Maritimo del Golfo de México e Islas de la America* (Madrid, 1755), A. López Gómez & C. Manso Porto, *Tomás López en la Real Academia de la Historia* (Madrid, 2006), no.164, p.409 ; Evidence suggests that López closely based his *Mapa Maritima* on an anonymous Spanish chart, Anon., "Carta Geográfica del Seno Mexicano I sus ilas realtivo a los asumptos conteniendos en el Librito de Conversación presentado al Exmo. Señor Duque de Alva," Mss., [n.d., but likely c.1750], Real Academia de la Historia (Madrid): R.857. Sign. C/Atlas, A,6, Gómez & Porto, no.163. This manuscript chart in turn may have derived its depiction of the southern extremities of Florida from J.B.B. d'Anville's *Carte des Isles de l'Amérique et Plusieurs Pays de Terre Firme* (Paris, 1731), J.H. Fitzgerald, *Changing Perceptions: Mapping the Shape of Florida, 1502-1982* (Miami, 1984), p.24 and no.59; Anon., "Maps del Nuevo Mexico y Presidios, con las Costas del Seno Mexicano, Honduras y Mar del Sur," Mss., 1725, *Cartographia de Ultramar*, carpeta II, núm. 119.

²¹² Tomás López de Vargas Machuca, *La Florida*, from *Atlas Geografico de la America Septentrional y Meridional* (Madrid, 1758), C. Liter Mayayo, *La Obra de Tomas López* (Madrid, 2002), no.153.

peninsula are made up of islands and that an inland trans-peninsular water route, presumably navigable, runs through the peninsula, connecting the Bahia del Espiritu Santo to the Rio San Juan. These maps were freely available and accessible to British officials.

As for regional maps, the War of Jenkins' Ear (1739-48) motivated the Spaniards to conduct some progressive, yet unscientific, surveys of areas like the Florida Keys and the maritime approaches to St. Augustine.²¹³ However, it is Francisco Maria Celi's highly decorative "Plan de la Gran Bahia de Tampa" (1757) that stands out as an extraordinary masterpiece of Spanish cartography.²¹⁴ Celi was sent in the spring of 1757 to survey the bay and to appraise the value of the timber along its shores for potential use by the Havana shipyards. Celi managed to capture the general shape of the bay and the nature of its islands and its three entrances with an impressive degree of accuracy. The Spanish authorities did not pursue the matter further, and unfortunately this excellent map was relegated to the recesses of some archive, never to see any practical use. This opportunity cost is clearly illustrated, as there is no evidence to suggest that José de Evia, who was sent by the Spaniards to survey Tampa Bay in 1783, had any direct knowledge of Celi's map.²¹⁵

²¹³ Juan de Liguera Atayo, "Plano de los Cayos de la Florida," Mss., 1742, Biblioteca Nacional de España (Madrid); Pedro Ruiz de Olano, "Plano del Fuerte de Sn. Agustín dela Florida y Plano del Sitio dela Florida," Archivo General de Indias (Seville).

²¹⁴ Francisco Maria Celi, "Plano de la Gran Bahia de Tampa y Nuevamente San Fernando," Mss., 1757, Museo Naval (Madrid), 9a-2a, 43, *Cartographia de Ultramar*, carpeta II, núm. 82; C.W. Arnade, 'Three Early Tampa Bay Maps,' *Tequesta*, no. 25 (1965), pp.86-8; C.W. Arnade, 'Celi's Expedition to Tampa Bay: A Historical Analysis,' *FHQ*, vol. 47, no.1 (July 1968), pp.1-7; J.D. Ware (ed.), 'A View of Celi's Journal of Surveys and Chart of 1757,' *FHQ*, vol.47. no.1 (July 1968), pp.8-24; J.D. Ware (ed.), 'Tampa Bay in 1757: Francisco Maria Celi's Journal and Logbook, Part 1,' *FHQ*, vol.50, no.2 (Oct., 1971), pp.158-79; J.D. Ware (ed.), 'Tampa Bay in 1757: Francisco Maria Celi's Journal and Logbook, Part 1,' *FHQ*, vol.50, no.3 (Jan., 1972), pp. 262-77.

²¹⁵ José de Evia, "Plano de la Bahia de Tampa," Mss., 1783, Museo Naval (Madrid), J.D.L. Holmes, 'Two Spanish Expeditions to Southwest Florida, 1783-1793,' *Tequesta*, vol.25 (1965), pp.97-107.

British Sources of Geographical Information of Florida up to 1763

The various sources to which Whitehall had access provided positive accounts of the peninsula's fertility and climate and also confirmed that Florida's Atlantic coast seemed not to possess a single harbour fit for capital ships. Importantly, they also fuelled the erroneous belief that at least one, if not several, natural and navigable water routes ran across the peninsula, linking its Atlantic and Gulf Coasts.

Outside of Spanish sources, the British were often limited to whatever intelligence they could acquire from the Native Americans, privateers and backwoods traders, most of this information, conveyed orally, being notoriously inconsistent and unreliable.²¹⁶ Prior to the 1760s, it would seem that there were no British general maps embracing Florida predicated on any original intelligence. In the first half of the eighteenth century, British mapmakers intended their depictions of Florida to serve as propaganda, advancing their country's expansive land claims while geographical verisimilitude was secondary.

Thomas Nairn and Herman Moll, for example, used crude outlines to depict the promontory, while showing British sovereignty as extending southwards to the 29th parallel (south of St. Augustine).²¹⁷ While British operations in Florida during the War of Jenkins's Ear (1739-1748) produced some fine maps from original surveys by Justly Watson and his assistants, they were limited to the province's northeastern coastal regions.²¹⁸

²¹⁶ Bailyn, *Voyagers to the West*, p.430.

²¹⁷ Thomas Nairn, *A Map of South Carolina shewing the English, French, & Indian Nations*, an inset to Edward Crisp, *A Compleat Description of the Province of Carolina* (London, 1711), Cumming, *Southeast*, no.151. Herman Moll, *A Chart of ye West Indies or the Islands of America* (London, 1715), which features the notation: "The Southward Boundary of Carolina as granted by the Charter of Charles 2nd which reaches about 12 Leagues Southward of St. Augustin.," Fitzgerald, *Mapping the Shape of Florida*, p.36.

²¹⁸ [Justly Watson & c.], "A Survey of the Coast from Fort William near St. Juans River to Mosquito River. A.D. 1743." Mss., 1743, BL: K.Top. 122.82; A.B. Hulbert, *The Crown Collection of Photographs of*

Prior to 1763, British authorities also had only limited access to Spanish cartography of the region, this access consisting of the few maps printed in Madrid, and Spanish manuscripts acquired as “war prizes.” While the current location of the vast majority of these maps is unknown, evidence clearly shows that it emphatically shaped Britain’s preconceptions of Florida.

We do not have records of all of the Spanish maps that the British may have acquired. Consequently, we must base our analysis on the few recorded examples, as well a consideration of what Spanish geographical intelligence the British may plausibly have had access to. By considering these maps within the context of the general Spanish conceptions of Florida, and comparing them to the maps made by the British shortly before and during 1763, one can gain some insight into the likely content of the maps which are now lost.

Most importantly, it is safe to assume that the Board of Trade and other official bodies were influenced by the geographical conceptions depicted on the López maps, as Thomas Jefferys copied López’s rendering of Florida, and indeed of the entire region in on his map published in 1760 (**Fig. 17**).²¹⁹ As for manuscripts, while the evidence is circumstantial, the Cierro chart at some point had fallen into the hands of Admiral Richard Lord Howe, who participated in the successful siege of Havana (1762) and may

American Maps (Cleveland, Oh., 1907), series 1, vol.5, no.38, W. Lowery, *Descriptive List of Maps of Spanish Possessions in the United States, 1502-1820* (Washington, 1912), pp.288-9; Some related maps include: Anon. “Map of Florida from Talbot island...to the mouth of Musquitta” LOC: Faden Collection; [St. Augustin-Matanzas to Mosquito], Mss. (c. 1743) BL: K.Top. 122. 83b, Hulbert, series 2, vol.1, nos.29 & 29a. (p.287); also a printed map: *A Plan of the Castle, Town, and Harbour of St. Augustine (and the adjacent Coast of Florida)*, 1742, in James Killpatrick, *An Impartial account of the Late Expedition Against St. Augustine under General Oglethorpe* (London: J. Huggonson, 1742).

²¹⁹ Thomas Jefferys, *The West Indies Exhibiting English, French, Spanish, Dutch & Danish Settlements* (London, 1760).

have acquired it on that occasion.²²⁰ Arredondo's documents directly rebutted British maps which advanced very disparate claims, and it is thought that he did show the propagandist map to British officials when he visited Georgia on a peace mission in 1742.²²¹ There are also a handful of less prominent surviving Spanish manuscript maps in British naval archives, depicting a good part of the Floridian peninsula as islands and channels.²²²

Spanish "war prize" maps often received a mixed response from British officials. Governor Grant, for example, recalled that before he left London for his new post he had the opportunity to examine a collection of Spanish maps taken from Havana in 1762 under the auspices of General George Keppel, the 3rd Earl of Albemarle. He wrote, "I thought that I got a prize, when I found some of them of this Province amongst the Plans & Charts brought from the Havannah by Lord Albemarle, but they are not worth a farthing."²²³ On the other hand, Thomas Jefferys placed much credence in the war prizes he received.

The earliest British map of a Floridian subject is Battista Boazio's rendering of Sir Francis Drake's successful 1585 raid on St. Augustine, also distinguished as the earliest printed depiction of any town in the modern United States. While a resplendent work of artistry and propaganda, is it far too stylized to be of much practical use.²²⁴

²²⁰ The Balentin Cierro map is part of the map collection of Admiral Howe purchased by the Library of Congress, it is listed as Howe Collection No.1.; cf. D. Syrett (ed.), *The Siege and Capture of Havana 1762* (London, 1970), pp.54 and 129.

²²¹ Bolton, *Arredondo's Proof*, p.76.

²²² An example of a "war prize" map depicting Florida in Admiralty collections is catalogued as "Spanish Ms. Chart embracing the West Indies from Florida to the Isthmus of Panama," included in charts described as "Above old charts taken out of Spanish prizes and sent to us [the Admiralty] by the Lords of the Treasury from the Spanish Commissariat", MODHD: 306 Ag3 d=1.3.

²²³ Grant to Brigadier General Henry Bouquet, 11 August 1765, Grant Papers, 495/1/1, frame 178.

²²⁴ Battista Boazio, *S. Avgvstini pars est terrae Florida* (London, 1589), part of Boazio's series of five maps celebrating Drakes expedition to the West Indies in 1585-6.

The only other British subject who notably charted aspects of Florida's shores during the late first Spanish period was the Savannah-based privateer, David Cutler Braddock, who visited the Keys and parts of the Gulf coast as early as 1744 or 1745, and whose detailed, yet unscientific, map of the former survives to this day (**Fig. 18**).²²⁵ As his maps only remain in manuscript form, it is hard to discern to what extent his works were disseminated in colonial circles, although notably, in 1775, Bernard Romans, who had himself surveyed Tampa Bay in 1771, and, like De Brahm, was a resident of Savannah in the early 1760s, recalled viewing Cutler's now-lost chart of Tampa Bay, describing it as a "fairly exact map."²²⁶

As compelling evidence that British mapmakers believed in the island and trans-peninsular channel myth, the charts of the region contained in the most recent editions of *The English Pilot*, then by far the most commonly used sea atlas by British mariners, clearly supported the misperception.²²⁷

A fascinating manuscript map drafted by Thomas Wright depicted Georgia with relative accuracy, notably being the earliest map to delineate the parishes which were established in the province in 1758. In sharp contrast, his depiction of Florida is almost exactly copied from the Jefferys map of 1760 (**Fig. 19**).²²⁸ It also shows the route of the old *Camino Real*, which by that time had long become overgrown, as well as a large lake in the place of the Okefenokee Swamp, which was an outdated sixteenth century

²²⁵ David Cutler Braddock, "The coast of Florida from the Dry Tortugas to the old Cape," Mss., 1756, LOC: G3932.C6 1756 .B7 Vault, Sellers and Van Ee, no.1624.

²²⁶ David Cutler Braddock visited Tampa Bay in 1744 or 1745, and his map of the area dates from that occasion; R.S. Weddle, *Changing Tides: Twilight and Dawn in the Spanish Sea, 1763-1803*. (College Station, Tx., 1995), p.204; B. Romans, ed. by K.E. Holland Braund, *A Concise History of East and West Florida* (Tuscaloosa, Ala., 1999), pp.336-8.

²²⁷ William Mount & Thomas Page, *A New and Correct Chart of the Trading Part of the West Indies* from *The English Pilot, Fourth Book* (London, c.1758), Fitzgerald, *Shape of Florida*, p.28.

²²⁸ Thomas Wright, "A Map of Georgia and Florida. Taken from the latest & most Accurate Surveys," Mss., 1763, CO 700/Georgia13, Penfold, no.2370, Cumming, *Southeast in Early Maps*, no.333.

geographical misperception. Wright represented a personal link between the northern and southern mapping theatres, as he worked, from 1758 to 1763, as a surveyor in Georgia (where he would most certainly have been acquainted with De Brahm), before joining the Northern General Survey in 1764.

William Roberts's *An Account of the First Discovery and Natural History of Florida* (1763) was the most detailed and widely read early British publication on the region.²²⁹ Based on a motley collection of sources, it, overall, presented a highly favourable impression of the province's economic potential, noting its fertile soil and its suitability for numerous crops, in addition to its abundance of timber. Importantly, it included six maps by Thomas Jefferys, who specifically intended that they would be employed in "the navigation of that coast," and to "assist those gentlemen who may be employed by the government" for the "purpose" of "settling that country."²³⁰ He claimed that the maps would show the region "to a much nearer degree of accuracy than any yet extant" and that they were based on "a considerable number of original *Spanish* and *French* charts, found on board several different vessels (which were made prizes) belonging to those nations." The high esteem in which Jefferys was held would have lent them great authority at the Board of Trade. As they were printed, widely disseminated, and often copied, they would quickly have become the first images of Florida to be commonly recognizable to the British intelligentsia.²³¹ Here we clearly see that the Spanish war prizes had led Jefferys wildly astray.

²²⁹ W. Roberts, *An Account of the First Discovery and Natural History of Florida* (London, 1763).

²³⁰ T. Jefferys, "The Publisher's Preface," Roberts, p.iii.

²³¹ Jefferys's map was also copied abroad by Bellin in France and Antonio Zatta in Venice.

Jefferys's general map, *Florida from the Latest Authorities* (**Fig. 20**),²³² marked a complete *redux* of his rendering of the peninsula from only three years before. In essence, it went in a cartographically regressive direction, which must have led to a great deal of confusion amongst those familiar with his previous map (refer back to Fig. 17). Progressively, he shows the overall shape of Florida to assume a more bulbous form than the elongated shape of the López model. However, he takes a radically incorrect tack in showing the peninsula not to be a promontory at all, but really a tightly packed cluster of islands, creating innumerable trans-peninsular channels, which as Roberts noted, if they “should prove navigable for small vessels, it will be of great utility to the British trade, by making the navigation to Pensacola some months shorter than the course which otherwise must be taken round by the west end of Cuba.”²³³

A reduced version of the same map, engraved by John Gibson, was published in the *Gentleman's Magazine* later in 1763, ensuring its dissemination to an even wider public.²³⁴ It was therefore no surprise that George Johnstone disdainfully described East Florida to Bute as “the Peninsula of Islands.”²³⁵ Johnstone was then highly displeased by the rumour that he was to be appointed Governor of East Florida, as he preferred that of West Florida (a position he soon acquired).

²³² Thomas Jefferys, *Florida from the Latest Authorities*, in William Roberts, *An Account of the First Discovery and Natural History of Florida* (London, 1763), fronting the title.

²³³ The main termini of the channels are, on the Atlantic coast, *Rio Santa Lucia*, *Rio de Mosquitos* and the *Rio de San Juan*, while on the west coast they are the *Rio Amasuro* and the *Bahia del Espiritu Santo*, which itself connects to a large mythical eponymous lake.

²³⁴ John Gibson, *Map of the New Governments of East and West Florida*, in *Gentleman's Magazine*, vol. 33, November 1763, p. 552.

²³⁵ Johnstone to Bute, 16 June 1763, Jenkinson Papers, BL: Add. Mss. 38,200, ff.361-2, letter printed in full, N.S. Jucker (ed.), *The Jenkinson Papers, 1760-1766* (London, 1949), pp.157-9. For the Johnstone family, E. Rothschild, *The Inner Life of Empires: An Eighteenth-century History* (Princeton, 2011).

Jefferys's map of the Bahia del Espiritu Santo (Tampa Bay) bears no resemblance to Celi's accurate geography (**Fig. 21**).²³⁶ It is nevertheless a fascinating example of a highly detailed, yet almost entirely fictitious conception. The bay is shown as a sound amongst islands, connected to a large eponymous lagoon, which itself likely emanated from exaggerated rumours as to the size and location of the actual Lake Okeechobee (then referred to as Lake Mayacco). Amusingly, the misshaped basin even features numerous depth soundings. Roberts ebulliently described it as "a very large and noble bay... capable of receiving the largest fleet that ever was collected in this part of the world."

Also included by Roberts is a much emulated map of St. Augustine (**Fig. 22**),²³⁷ which Jefferys had first published in 1762. While the outline of the town's walls are not realistic and the overall details somewhat stylised, it provides, in general, planimetric accuracy with respect to salient details such as the locations of fortifications, the contours of the harbour's shorelines, and the notoriously treacherous breakers that guard its entrance. Jefferys based this map on the surveys conducted by Watson and his associates two decades earlier.²³⁸ The fact that Jefferys had access to these maps which were first in British government archives and then in the personal topographical collection of George III is further evidence of Jefferys's privileged access to official maps. Roberts also included a detailed description of the Florida Keys, a notorious shipping hazard due to its

²³⁶ Thomas Jefferys, *A Plan of Bahia del Espiritu Santo, on the West side of Florida*. (London, 1763), in Roberts, p.17.

²³⁷ Thomas Jefferys, *Plan of the Town and Harbour of St. Augustine* (London, 1762), first published in T. Jefferys, *A Description of the Spanish Islands and Settlements on the Coast of the West Indies* (London, 1762), also in Roberts, p.24.

²³⁸ Jefferys based his map on a composite of details from two maps: [Justly Watson & Assoc.], "A Survey of the Coast from Fort William near St. Juans River to Mosquito River. A.D. 1743." Mss., 1743, BL: K.Top. 122.82; Hulbert, series 1, vol.5, no.38, W. Lowery, pp.288-9; and [Justly Watson & Assoc.], "[A Plan of St. Augustine and the Country Adjacent]," Mss. (c. 1743), BL: K.Top. 122. 83b, Lowery, *Descriptive List*, p.287.

low horizontal profile and surrounding coral reefs, such that, “A perfect knowledge of these islands and rocks would be of great consequence in navigating the gulf of Florida with safety.”²³⁹

Due to the skillful observations of French explorers, West Florida was far better mapped than its eastern neighbour. Indeed it appears that Jefferys’s French sources were far more reliable than those of Spanish origin, as indicated by the fine map of the Harbour of Pensacola copied from Père Charlevoix (**Fig. 23**).²⁴⁰ As for a general map of the region embracing the entire province, the British would have relied on J.B.B. d’Anville’s widely-available *Carte de la Louisiane* of 1732 (but first published in 1752), which although of a small scale, was nonetheless a highly impressive rendering of the region (**Fig. 24**).²⁴¹ The enduring influence of this map is supported by the fact that Roberts mentions that he consulted d’Anville’s map to discern “the western limits of Florida”.²⁴²

On 20 July 1763, the first British troops arrived at St. Augustine to take possession of East Florida for the British Crown from the Spanish governor, Melchior Feliú. Within days, Major Francis Ogilvie arrived and would, until Grant’s arrival a year later, act as the *de facto* British governor. The entire province would not be in British hands until they took charge of the isolated outpost of San Marcos de Apalache on 20

²³⁹ Roberts, *Florida*, p.20

²⁴⁰ Thomas Jefferys, *Plan of the Harbour and Settlement of Pensacola* (1763), in Roberts, p.9. copied from J.N. Bellin, *Plan de la Baye de Pansacola* (1744), in P.-F.-X. de Charlevoix, *Description de la Nouvelle France* (Paris, 1744), vol. III, opposite p.480, which itself is based on a manuscript map by Charlevoix, c.1720. In Roberts, Jefferys also presented a *Plan of the Bay of St. Joseph, in the Gulph of Mexico*, in the eastern region of West Florida, likely based on French sources, Roberts, *Florida*, p.12.

²⁴¹ J.J.B. d’Anville, *Carte de la Louisiane* (Paris, 1752, but based on a manuscript drafted in 1732).

²⁴² Roberts, *Florida*, p.8; cf. For a discussion on how maps of the Louisiana region, such as those by d’Anville, were considered to be definitive documents by French officials from 1748 to 1762, see P. Mapp, *The Elusive West*, pp.363-83.

February, 1764. Similarly, West Florida had been transferred to British rule on 3 July, 1763 at a ceremony in Pensacola.²⁴³

Maps & Geographical Information acquired by the British in 1764

We have very little information on what archives or maps the British may have inherited from the Spaniards when they arrived in St. Augustine. In Grant's personal papers, two unlabelled fortification plans, possibly Spanish, relating to the Castillo at St. Augustine and another regarding the fort at San Marcos de Apalache survive.²⁴⁴ Useful to incoming British military engineers, they would have been of little utility to Grant. Indeed, he continued to lament the lack of geographical knowledge initially available to him, noting that "the Spanish Drafts are exceedingly erroneous" and "the Spaniards knew very little of the interior parts of the Country, the accounts of American woods-men you know are but little to be depended upon."²⁴⁵

After the Spaniards evacuated Florida between 12 April 1763 and 21 January 1764, the consortium led by Charleston merchant John Gordon, who claimed to have purchased the majority of the best real estate in the province from the departing Spaniards,²⁴⁶ hoped to legitimize his land claims by cartographically illustrating their

²⁴³ R.L. Gold, *Borderland Empires in Transition* (London, 1969), pp.100-6.

²⁴⁴ Two untitled, undated manuscript fort plans of the Castillo of St. Augustine, NAS: Grant Papers, GR494/1/4, frame 66 and GR494/1/4, frame 67 (fragment), and a fort plan of San Marcos de Apalache "el Fuerte de San Marcos de Apalache, el la Provincia de la Florida en proyecio para su total reparation defense," Mss., [n.d., but likely mid-18th-century], NAS: GR494/1/19, frame 298.

²⁴⁵ Grant to Brigadier General Henry Bouquet, 11 August 1765, NAS: Grant Papers, GR494/1/1, frame 178.

²⁴⁶ "Schedule of Sundry Estates and Tracts of Land purchased of Spanish subjects in East Florida by John Gordon and Jesse Fish for themselves and others by virtue of the 20th Article of the Definitive Treaty," included within "Memorial of William Thompson, William Greenwood and William Higginson, Merchants of London on Behalf of John Gordon of South Carolina, esq.," an enclosure to Robert Walpole (Privy Council) to the Board of Trade, 8 October 1764, CO 5/540, ff.110-4. The "Schedule" describes 22 named estates, 21 of which are located in northeastern East Florida, while the one large property surrounds Tampa

extent and composition. The trio of ‘Gordon Maps’ cover two discontinuous regions. The main part is comprised of two large adjoining manuscripts, which together depict the coastal regions and the St. John’s River valley from its mouth all the way south to a point just past Mosquito Inlet, and then inland about eighty miles to an area approximating the modern day location of Gainesville (**Fig. 25**).²⁴⁷ The maps present a large cadastral plan, showing the boundaries of the numerous Spanish estates, the names of their former owners. They are notably the only known Spanish maps (from their first colonial administration) to depict actual details of the interior, such as the lakes and rivers of the Alachua country. While by no means predicated on a scientific survey, they maintain a rough planimetric accuracy and add a human dimension to what must have seemed an otherwise eerily vacant and mysterious land.

The third ‘Gordon Map’ shows Tampa Bay as a largely enclosed basin, as opposed to its mythical depiction as the entrance to a string of trans-peninsular channels (**Fig. 26**).²⁴⁸ While the contours of its shorelines do not bear relation to reality, it does correctly identify the bay’s three entrances, punctuated by islands. The presence of lines of soundings also suggests that the map may have been based on an actual reconnaissance visit, as opposed to oral reports. With dimensions of approximately twenty-four by thirty-two miles and depths ranging from eighteen to thirty feet, it would have appeared to have been a far more promising harbour than any on the Atlantic Coast of East Florida.

Bay. In total the properties encompass 1068 Spanish Leagues (4,474.92 sq km or 2,796.825 sq m or 1,901,841 acres), of which 443 Spanish Leagues is comprised by the Tampa Bay property alone.

²⁴⁷ [Gordon Map no.1] Anon. [Map of the Atlantic Coast of East Florida from St. John’s River to Mosquito Inlet], Mss., [n.d., but before 1763], CO 700/Florida57, Penfold, no.2313; [Gordon Map no.2] Anon., [Map of Interior Regions of East Florida, between the Alachua Country and St. John’s River], Mss., [n.d., but before 1763], CO 700/Florida58, Penfold, no.2314, see C.W. Arnade, ‘Cattle Raising in Spanish Florida, 1513-1763,’ *Agricultural History*, vol. 35, no.3 (July 1961), pp.116-24.

²⁴⁸ [Gordon Map no.3] Anon., “Bahia de Tampa”, Mss. [n.d., but before 1763], CO 700/Florida 59, not in Penfold, but discussed and photographed in C.W. Arnade, ‘Three Early Tampa Bay Maps,’ *Tequesta*, no.25 (1965), pp.90-2.

How and where Gordon obtained the maps is not known,²⁴⁹ and dating them is extremely difficult, although the extensive nature of the Spanish land holdings is consistent with the ‘Golden Age’ of the late seventeenth century, when the Spaniards maintained a series of cattle ranches in the interior, and a chain of plantations running down the coast past Mosquito Inlet. It is, however, possible that the map was made many years later, while depicting the cadastral lines of long dormant estates. There are two known surviving copies of the Gordon Spanish maps, one having been retained by Grant (but lacking the Tampa Bay map), and the other having reached the Board of Trade, after following a complicated chain of custody.²⁵⁰

Lt. Colonel James Robertson,²⁵¹ the first British officer to tour all of the major posts in East and West Florida, in the late summer and autumn of 1763, was another important source of geographical information.²⁵² His lengthy description of his travels found its way to Grant, Halifax and the Board of Trade.²⁵³ Meant to accompany his report, Robertson commissioned eight maps depicting the presidios and harbours of St. Augustine, Pensacola and Mobile, some of which were reportedly based on original surveys and careful scientific measurements of geodetic coordinates. While these maps

²⁴⁹ While it is not entirely clear, it seems that copies of the original Spanish “Gordon Maps” may have been dispatched to London, Grant to the Board of Trade, 22 November 1764, CO 5/540, ff.115-8, although this letter may have alternatively, or in addition, been accompanied by a special presentation copy of the Gordon maps drafted by James Moncrief .

²⁵⁰ NAS: Grant Papers, GD494/1/19, frames 296 and 297

²⁵¹ Robertson later served as the last Royal Governor of New York, 1780-2.

²⁵² General Jeffrey Amherst commanded Robertson to go on his tour of the Floridas giving explicit instructions, Amherst to Robertson, 29 August 1763, CO 323/17, f.24; for a general account of Robertson’s tour, R.R. Rea, ‘Lieutenant Colonel James Robertson’s Mission to the Floridas, 1763’, *FHQ*, vol.53, no.1 (July 1974), pp.33-48.

²⁵³ Lt. Col. James Robertson, report entitled “Of Florida” and “Description of the Bays Tampa & Charles translated from the Spanish,” [n.d., but late 1763], CO 5/548, ff.36-51. The report was originally submitted to General Gage, who in turn forwarded it to Lord Halifax, who, in turn, forwarded it to the Board of Trade; Governor Grant also received a copy of the report, NAS: Grant Papers, GD/494/1/19, frames 232-46.

have not been found, at the time, they would have served as the first British surveys of the most important centres of the Floridas.²⁵⁴

Robertson commenced his tour in West Florida, calculating Pensacola's geodetic coordinates at 30°20', 87°14' W and praising its magnificent natural harbour which "Can contain 50 gun ships." He next visited Mobile before proceeding to the Mississippi River where he oversaw the preparations for the first British attempt at a mapping expedition up the Mississippi to the Illinois Country, conducted by the 22nd Regiment, which notably features the highly skilled military cartographer Philip Pittman "to take plans," and assisted by a French Pilot and French "reduced Engineer."²⁵⁵ However, the party had to turn back, well short of their objective, upon encountering a number of unwelcoming Tunicas native warriors at a point on the Mississippi between Pointe Coupée and Natchez. This location is marked on John Ross's *Course of the River Mississippi* (1775), which bears the inscription "Where the 22nd Reg was drove back by the Tunicas."²⁵⁶ Given the difficulties in ascending the river even to that point, it was notable that Robertson stated that it would be difficult to find a navigable connection between the river and the sea within British territory as the "Ibberville" River was "so stopped up as to be impassable for canoes."

²⁵⁴ Gage had apparently received Robertson's maps, however, he told Halifax that "the Plans, and some papers referred to in the Report, cannot be got necessary to go with these dispatches, but will be transmitted to Your Lordship as soon as possible", excerpt from Gage to Halifax, 10 March 1764, CO 5/540, ff.34-5, an enclosure to Halifax to Board of Trade, 20 April 1764, CO 5/548, f.32. It is not known if Halifax ever received the maps and they are not included in the Gage Papers at the William Clements Library.

²⁵⁵ Robertson, "Of Florida", CO 5/548, ff.36-51.

²⁵⁶ Lt. John Ross, *Course of the River Mississippi, from the Balise to Fort Chartes; Taken on an Expedition to the Illinois, in the latter end of the Year 1765* (1775), printed as part of *The American Atlas* (London: R. Sayer & J. Bennett, 1776), Sellers and Van Ee, no.781. This map was the product of the successful expedition that Ross led up the river to the Illinois Country the year following the 22nd Regiment's aborted endeavor.

Bypassing most of the Gulf coast of East Florida, Robertson based his account of these areas entirely on Spanish sources.²⁵⁷ From these he related that “the Bay of Tampa” is a natural “Roadstead for large ships.” He elaborated that “The Said bay runs more than Six Leagues within Land, & is something more than two leagues wide,” a description roughly consistent with the view depicted on the ‘Gordon map.’ He conceded, however, that the peripheries of the bay were so shallow that large ships would have to remain anchored in “the Middle of the Bay.” He was less complimentary of Carlos Bay (Charlotte Harbour), which lay to the south, “It is large and affords a fine prospect, but wants depth of water.”

Turning to the Atlantic coast, Robertson observed that the region promised to match the “Luxuriancy of all the West Indies.” The climate was “wholesome” and that “All sorts of Grain & fruit may be raised with little labour.” He predicted that two crops of Indigo could be raised each year, instead of the single annual yield produced in South Carolina. He also commented on the numerous waterways he encountered, as “Rivers runs through the country [that] make the expense of removing crops small.” However, he was aware that local sources of information were unreliable, claiming that as “The Spaniards having none or imperfect Maps of the Country I have taken the... account of the Rivers from Indian Traders; their concurring accounts may be credited with regards to those mentioned, many others of which they spoke, but which they disagreed are omitted.” Foreshadowing the concerns of Grant and De Brahm, Robertson recognized that the potential of St. Augustine as a harbour was severely limited by “the badness of

²⁵⁷ “Description of the Bay of Tampa [translated from the Spanish]”, CO 5/540, ff.52-3, an enclosure to Halifax to Board of Trade, 20 April 1764, CO 5/548, f.32.

the bar & the want of pilots.”²⁵⁸ He accordingly assured Gage that “The Map I give you of St. Augustine & its environs, contains a draught of the bar Entrance, which may be useful to navigators.”

²⁵⁸ Robertson, “Of Florida”, CO 5/548, ff.36-51, an enclosure to Halifax to Board of Trade, 20 April 1764, CO 5/548, f.32.

Chapter III: Mapping ‘Infant Colonies’ 1764-1767

A. Introduction

In spite of formidable challenges, the General Survey saw impressive progress in both the Northern and Southern departments during its first three operational seasons. In the North, Holland and his teams charted four distinct regions under the auspices of three different colonies, Nova Scotia, Newfoundland and Québec. Vaguely known regions were now delineated with exacting precision on finely drafted manuscript maps. Highly detailed cadastral plans were devised; important scientific observations were made, along with comprehensive and pioneering analysis of the natural attributes and economic potential of the regions concerned. In the Southern district, De Brahm was able to make a reconnaissance survey of the Atlantic coast of the Floridian peninsula from St. Augustine to Cape Florida, creating the first empirically-based charts of this lengthy littoral. He made exacting maps of the Mosquito Inlet region, drafting a lengthy report analysing the merits of what was widely considered to be the most economically promising area of the coastline. As 1767 drew to a close he was engaged in mapping the St. John’s River, considered to be a prime region for plantations and thought to be part of a long-rumoured trans-peninsular waterway. As speculators laid claim to vast tracts, De Brahm’s regional maps formed a reliable template for cadastral surveys.

The progress made in both districts testified to the training and survey experience brought to the initiatives by both Holland and De Brahm. During this period, Holland also demonstrated, once again, that he was a capable leader and communicator, able to

organize, develop and delegate to his men, manage the budget, and address the needs of provincial governors and Whitehall. In contrast, De Brahm, harried by financial anxieties and falling victim to his own mercurial and argumentative personality, failed to manage his provincial mandate, bringing him into conflict with the imperious Governor Grant.

The political environment at Whitehall continued to be very fractious with three separate ministries governing Britain in as many years. In sharp contrast to the central role it played in policy formation during 1763 and 1764, the Board of Trade was largely excluded from the debate regarding the fiscal and military policies that would dramatically shake colonial affairs. In 1766, the Board was stripped of one of few powers it still maintained: the right to handle official correspondence from the colonial governors.²⁵⁹ Consequently, the Board's activities were circumscribed to issues such as Indian affairs, land policy, industrial development, as well as the oversight of civilian mapping programmes, such as the General Survey.

In spite of the political maelstrom surrounding it, the Board generally tried to conduct its business in a fashion largely free of sharply partisan undertones. The membership of the Board generally consisted of political moderates. As the presidency changed hands three times from 1765 to 1767, no First Lord stayed long enough to put their personal stamp on the organisation. During this period, Pownall, for all intents and purposes, guided the activities of the Board. In this context, he managed to protect the operations of the Northern Survey from undue political interference.

²⁵⁹ Order in Council, 5 August 1766, *APC*, vol.V, pp.3-4.

B: The Northern District

The three jurisdictions that Holland was charged with surveying, Nova Scotia, Québec, and Newfoundland, each brought with them special challenges and unique histories. On peninsular Nova Scotia, land grants had been freely given creating a situation that proved to be extremely expensive to the Crown; development greatly lagged behind expectations. Stung by this reality, the Board sought to develop bespoke policies for both the Island of St. John and Cape Breton Island that diverged greatly from the system already established in the rest of the province. In Quebec, the ancient French land system needed to be preserved in the regions that were already settled, while new designs had to be applied elsewhere. Meanwhile, in the Magdalen Islands and Anticosti Island which fell under the jurisdiction of Newfoundland, the established regime aimed to restrict permanent settlement altogether in favour of allowing those from metropolitan Britain to exploit the fishery. Thus, General Survey would be responsible for developing the very blueprints by which the nearly virgin lands in these territories would be settled and economically developed.

With such a large mandate, spread over a significant geography, Holland needed to be able to rely upon his ability to obtain the right equipment and a core of skilled individuals. All this entailed not only cooperation from Whitehall and provincial administrations, which were providing significant funding directly, but also support from the army and navy.

The Canseaux with Holland Arrives to Begin The Survey

The *Canseaux*, the Royal Navy vessel formerly the *William*, a merchant ship, was specifically refitted to serve the survey at the Deptford naval yards in February 1764.²⁶⁰ At 200 tons, and with a length of eighty-one feet, and a width of twenty-three feet, it was smaller than a frigate. This “armed ship” also had a shallower draft to give it greater speed. This made it ideal for chancing shallower waters, important qualities when venturing on mysterious shores. While it could bear sixteen six-pound guns, it was armed with only eight. The *Canseaux* was planned as a roving base for a modest fleet of smaller boats, although, at times, it did actively participate in surveying operations. During the early years in particular, the small schooners, the *Jupiter* and the *Venus*, proved indispensable.

Lieutenant Henry Mowat, the commander of the *Canseaux*, would play a critical role in the progress of the survey, and although his relationship with Holland began inauspiciously, he eventually proved to be the ideal man to head the naval component of the project.²⁶¹ Born in Scotland in 1734, he was the son of Captain Patrick Mowat of the *Dolphin*. He entered the Navy in 1752, and rose to become lieutenant of the *Baltimore* in 1758. Appointed in 1764 to skipper the *Canseaux*, he would hold the post for the next twelve years. The *Canseaux* was initially to have compliment of thirty. Holland successfully lobbied the Admiralty to add a further ten men who would be expected to participate in sounding and surveying duties.²⁶²

²⁶⁰ *Canseaux Logs*, Introduction, pp.x-xi.

²⁶¹ Henry Mowat, R.N. (1734-98), A.J. Wahll, *Canseaux Logs*, Introduction, pp.viii-ix.

²⁶² Holland hoped for one large Boat and two Small Boats manned with seamen from the *Canseaux* to assist in surveying and soundings for which the Admiralty made an addition of 10 men to the *Canseaux*, Holland to Pownall, 20 November 1764, CO 323/18, f.86-7.

In late May, the *Canseaux* left Deptford for Québec City, carrying Holland and his instruments. Their crossing of the Atlantic proved uneventful until they approached Cape Breton Island, where the situation proved “almost fatal to us”.²⁶³ In foggy conditions and not certain of their position, the ship was nearly smashed on the breakers off Scaterie Island. For all aboard, it was a dramatic lesson in the need for accurate charts of the very coast they would shortly be surveying!

On 16 July, the *Canseaux* entered the St. Lawrence estuary where they were met with ferocious and relentless “westerly winds” which brought the *Canseaux* almost to a halt. Impatient to make Québec, Holland left the ship and embarked on what can only be called a Laurentian Odyssey. Holland, accompanied by a small party, started up along the south shore in an “open row boat”, an enterprise which helpfully afforded them the opportunity to become closely acquainted with this coastline. Upon reaching the main road to the capital, they switched to horseback before boarding a calèche, arriving at Québec on 2 August 1764. They were greeted by a relieved Governor Murray, who admitted that he had “thought them lost”. The *Canseaux* followed, arriving on 11 August.²⁶⁴

Holland Assembles his Team

Holland had a keen eye for talent. In an era where servants of the Crown often jockeyed for attention and preference in acrimonious rivalry, Holland maintained the highest levels of loyalty and camaraderie amongst his principals, always ready to ensure that his deputies received ample credit for their individual contributions.

²⁶³ Holland to Pownall, 20 August 1764, CO 323/18, ff.35-7.

²⁶⁴ *Canseaux Logs*, 11 August 1764, p.27.

Holland's assistant surveyors were at the core of his formidable team.²⁶⁵ Although he was initially permitted to hire only two assistant surveyors, by lobbying for increases in his annuity and clever budgeting, he was usually joined, at any one time, by four individuals who fulfilled these roles, either formally or in practice. These were ambitious young military men, many of whom already had either formal training or relevant practical experience. Able to work to a uniformly high standard, Holland could confidently delegate authority to his deputies, thereby ensuring rapid completion of surveys in any area through the simultaneous operation of several autonomous teams.

Thomas Wright, who would become Holland's principal deputy in the autumn of 1765, was an intrepid, intellectually curious young man.²⁶⁶ Thought to have been born in London around 1740, he received a first class education in his teens, studying drawing and mathematics at Christ's Hospital in London. In 1758, Wright travelled to Georgia where he gained important experience in frontier surveying as one of De Brahm's assistants. Returning home in 1763, he was recruited by Holland. Wright would prove indispensable to the survey, being particularly adept at conducting astronomical observations and fulfilling missions under especially severe physical conditions.

Charles Blaskowitz would, accounting for short interruptions, serve with Holland in the field for almost two decades, and would go on to be responsible for some of the most important maps of both the General Survey and the American Revolutionary War.

²⁶⁷ He also came to be considered to be one of the finest draughtsmen in British service, and would, throughout his career, be called upon to make finished copies of important

²⁶⁵ From the initial draft of enlisted men only 3 lasted out full survey to 1775, N.N. Shipton, 'Samuel Holland's Plan of Cape Breton', *The Canadian Cartographer*, vol. 5, no.2 (1968), pp. 87.

²⁶⁶ Thomas Wright (c. 1740-1812), H.T. Holman, 'Wright, Thomas', *DCB*, vol.V, pp.873-4.

²⁶⁷ Charles Blaskowitz (c.1743-1823); for the finest biographical sketch of Blaskowitz, Pedley, *Commerce of Cartography*, pp.123-7.

surveys done by others. Born in Prussia about 1743, he was recruited to the British army at a very young age, and was selected for an apprenticeship in the Tower Drawing Room. He joined the Royal Americans and gained invaluable experience as a member of Holland's team conducting surveys for the Murray Map. In 1764, at the behest of Admiral Robert Melville, Blaskowitz conducted a survey of Narragansett Bay, Rhode Island in order to assess Newport's potential as a base for the Royal Navy. Melville, highly impressed with the resulting map (now lost), wrote to the Admiralty Board that "Mr. Blaskerwich, though young, is an able surveyor."²⁶⁸ Holland would have been delighted to find that upon his return to Québec, Blaskowitz was available to join the General Survey.

Peter Frederick Haldimand was born in Switzerland in 1741 or 1742, and was the nephew of Holland's close friend, General Frederick Haldimand.²⁶⁹ As a commissioned ensign in the Royal Americans, he followed his uncle to America in 1756. Promoted to lieutenant, his language skills proved vital in acquiring information from the residents of the region of Trois Rivières, an area he helped to survey for the Murray Map project. Although his service on the Northern General Survey would be brief, his life being cut short by a tragic accident, he would fulfill a vital role as Holland's primary assistant in astronomical observations during the endeavour's trying first year.

Other figures who deserve mention are Lieutenant Arthur Robinson who, after being recruited by Holland in London, travelled with him on his odyssey to Québec. For the first year he served competently as Holland's principal deputy, before returning to England, citing pressing family concerns. Also of note was Lieutenant John Pringle, who

²⁶⁸ Pedley, *Commerce of Cartography*, p.124.

²⁶⁹ Peter Frederick Haldimand (c.1741/2-1765), A.T. Milne, 'Haldimand, Peter Frederick', *DCB*, vol.III, pp.506-8; J. N. McLlraith, *Sir Frederick Haldimand* (Toronto 1906), p.294.

made important contributions in the first three seasons, before returning to Britain. Ensign George Goldfrap, the son of Québec's Deputy Commissary General, trained at the Woolwich Academy, was a highly talented cartographer whose father regrettably withdrew him from the survey in 1767 in order for him to seek preferment in England.²⁷⁰ At the outset, Holland also hired Sergeant Daniel Hamilton to be his draughtsman, and Corporal Charles McDonald to be his clerk, although both would be later replaced.

Holland Manages the Inherent Operational Issues

In spite of the impressive team and the fine equipage that Holland was able to marshal, the Northern Survey was plagued with some ongoing operational issues that frequently threatened to derail its progress. Like many projects sponsored by the British Crown during the period, it had to rely on the support of numerous public institutions for both its manpower and funding. Problems of slow communication, unclear instructions, and the fact that these stakeholders were invariably hard-pressed for resources caused many misunderstandings and delays.

At the very heart of the matter, Holland was reliant on the grace of the army for most of his manpower, including the service of most of his deputies. Both the enlisted and commissioned men on his team were available only by virtue of temporary releases from their regiments, understandings which had to be renewed on a regular basis. Fortunately, General Gage was an enthusiast of cartography and held the Northern Survey in high regard, telling Murray "The business of Cap. Holland is employed in, is a

²⁷⁰ James Goldfrap, aged 16, was an ambitious young officer eager for preferment and was attending Woolwich when chosen by Holland, George Goldfrap to Gage, 10 May 1765, WCL: Gage Papers, American Series, vol.50, Shipton, 'Cape Breton', p.82.

very Necessary one, & I could wish he had more assistants”.²⁷¹ As depicted on a 1766 map drafted for the army, Gage would find his force of 7,500 severely stretched owing to both Indian rebellions in the interior and unrest in the Thirteen Colonies.²⁷² Holland always had to remain vigilant that his men would not be recalled.

Equally severe, and at times more vexing, was the fact that Holland was entirely reliant on the Royal Navy for his transportation, and his manpower for sounding and conducting nautical observations, for want of which his coastal maps would be grievously incomplete. Not only was he dependent on Mowat’s skilful cooperation, he had to contend with the fact that the Navy’s North American squadron was itself increasingly over-burdened. In the wake of the late war, the squadron’s roster had been greatly reduced to, at some occasions, as few as seventeen ships. This coincided with the added responsibilities of ferrying Gage’s troops to quell new disturbances and to responding to Whitehall’s call to enforce the Navigation Acts.²⁷³ Fortunately, the successive commanders of the squadron were generally well-disposed to the survey, usually honouring Holland’s requests for additional vessels and allowing the *Canseaux* to be seconded even though its cost to the navy annually approximated an amount equal to twice Holland’s budget.²⁷⁴

It was Holland’s good relations with those in high authority that ensured the cooperation of Mowat and use of the *Canseaux*. At the beginning of the survey, when

²⁷¹ Gage to Murray, 26 October 1764, WCL: Gage Papers, American Series, vol. 46.

²⁷² Daniel Paterson, “Cantonment of His Majesty’s forces in N. America according to the disposition now made & to be completed as soon as practicable taken from the general distribution dated at New York 29th. March 1766”, Mss., 1766, LOC: G3301.R2 1767 .P3 Vault; Sellers and Van Ee, no.118. The map features the notation: ‘With the alterations to summer 1767 done in yellow. By Dan Paterson, ass[istan]t. q[uar]te[r]. m[aste]r. gen[era]l.’

²⁷³ The *Canseaux* made a notable departure from the survey in late October 1767 in order to seize and condemn the *Charming Peggy*, a merchant ship that was attempting to smuggle a cargo of wine from Guernsey, Mowat to the Commissioners of Customs, 15 November 1767, ADM 1/483, ff.113-6.

²⁷⁴ Holland to Pownall, 2 October 1767, CO 323/24, ff.351-7.

working in the Island of St. John, Holland had asked Mowat if he could use naval channels to acquire one large boat and two small boats and to man them with sailors from his crew to participate in surveying operations. In response, Mowat curtly told Holland “that his orders were to carry me, with the Ship where I desired, but that he had orders from the Admiralty to make Observations, and to survey himself, and that he could give me neither Boats or Men for my assistance of which I thought very odd, as I imagined that the Ship was fitted out on purpose to assist me.”²⁷⁵ Holland implored Pownall to “lay this Point, in particular” before the Board of Trade such that they “will procure me the Proper orders” for the three boats, manned by six sailors each. He also acquainted Colvill of “my distress, and beg’d him assistance as soon as possible.”²⁷⁶ Colvill, an enthusiastic supporter of the survey, told Mowat, in unequivocal terms, that his naval orders were to obey and accommodate the Surveyor-General. Holland recounted to Pownall that “A Letter from Lord Colvill which I have received gives me great Satisfaction, as I am thereby assured of his Lordship’s Inclination to forward the business, by providing me with Boats, and every other necessity in his power”.²⁷⁷ By all accounts, Mowat got the message,²⁷⁸ noting also the Mowat “and the gentlemen under his command gave all the assistance in their power and were moreover assiduous in their branch of the business”.²⁷⁹ In time, Mowat and Holland forged an effective partnership

²⁷⁵ Holland to Pownall, 20 November, 1764, CO 323/18, ff.86-7.

²⁷⁶ Holland to Pownall, 20 November 1764, CO 323/18, ff.86-7; Pownall to Stephens, 21 February 1765, CO 324/17, f.449; Stephens to Pownall, 11 April 1765, CO 323/18, f.241.

²⁷⁷ Holland to Pownall, 4 March 1765, CO 323/18, ff.111-2; also Pownall to Stephens, 21 February 1765, CO 324/17, f.449. Colvill provided Holland with funds to purchase a small boat for the use of the survey, as Mowat noted in his daily log, “The surveyor-general purchased a sloop for the use of the survey”, *Canseaux Logs*, 26 August 1765, p.53.

²⁷⁸ Holland to Pownall, 4 March 1765, CO 323/18, ff.111-2.

²⁷⁹ Holland to Pownall, 4 March 1765, CO 323/18, ff.111-2.

which was to last for a decade, an accord greatly responsible for the ensuing success of the Northern Survey.

Holland's excellent relationship with Pownall, and other key figures at Whitehall also ensured that he generally received adequate operational funding, which throughout 1764-67 amounted to between £800,17s to £983,7s annually.²⁸⁰ As Holland was a skilful and disciplined manager of his finances, no mean feat while overseeing a large-scale project of indefinite scope conducted in frontier conditions, his requests for additional funding were invariably granted, although delays in communication occasionally caused misunderstandings that temporarily left him short. At such times, he reached into his own pocket to pay his men's wages and expenses until refunds could arrive.

The Survey in Nova Scotia Begins

Surveying the islands of St. John and Cape Breton, which were newly annexed to the province of Nova Scotia, would occupy the majority of the Northern Survey's efforts during its first three years. On 22 November 1763, barely six weeks after St. John and Cape Breton were annexed to Nova Scotia, the Board of Trade wrote to the province's governor, Montagu Wilmot, instituting a freeze on any plans to permanently develop either of the islands.²⁸¹ The letter read: "the Islands of St. John and Cape Breton are now becoming pressing objects of your particular care and attention. Their advantageous situation in respect to the fishery renders them of the greatest importance to this country". The Board asserted, "until you have received particular orders from home, you are upon no account to make grants in these Islands to any particular persons whatever, but as

²⁸⁰ Holland's Annuities from the Board of Trade were as follows: 1764: £1117, 12s; 1765: £800, 17s; 1766: £983, 7s; 1767: £800, 17s, "An Estimate of the Expenses" of the General Survey of British North America", CO 5/7, ff.248-52.

²⁸¹ Board of Trade to Wilmot, 22 November 1763, CO 218/6, ff.125-7. Wilmot did not receive this letter until 18 March 1764.

much as possible to encourage and protect all temporary Establishments for carrying on the Fishery” and to “discourage every attempt, that may, in its nature and consequence, operate as a monopoly, or as a means of establishing any undue preference whatever.”

In spite of the Board’s directive, Whitehall would be subject to a series of lobbying campaigns mounted by, in many cases, highly powerful individuals and syndicates, who sought to convince the authorities to release the islands and their natural resources to settlers and speculators alike. The pro-development lobby included the successive governors and lieutenant-governors of Nova Scotia, including Wilmot, Michael Francklin and Sir William Campbell, who consistently, and at times brazenly, supported any means to open the islands to development.²⁸² Powerful forces in England were also lobbying to be given a stake. For the Island of St. John, this notably included John Percival, the Second Earl of Egmont. In December 1763, Egmont had printed, at considerable expense, his first *Memorial*, which proposed that he, as head of a syndicate, be granted the entire island as one province, on which he would settle colonists, under military and feudal tenure.²⁸³

With their own development needs in mind, the governors were supportive of Holland’s efforts, as expediting his surveys naturally brought forward the promise that the Board would rescind the freeze. Meanwhile, the regional army commander, Colonel Tulleken of Louisbourg, noted that his office was receiving “frequent applications [military permits] for grants of land and fisheries on Islands of Cape Breton and St.

²⁸² Lt. Gov. Michael Francklin was a protagonist in the ‘carnival’, Bailyn, *Voyagers to the West*, pp.373-87; see also L.R. Fisher, “Francklin, Michael” in Frances G. Halpenny (ed.) *The Dictionary of Canadian Biography*, vol. IV (Toronto, 1979), pp.272-5.

²⁸³ J. Percival, *To the King’s most excellent Majesty, the Memorial of John Earl of Egmont* [London, December 1763], Halifax to the Board of Trade, 18 January 1764, transmitting Memorial of Egmont, read by the Board, *JCTP*, 20 January 1764 (vol.12, pp.6-7).

John's".²⁸⁴ Indeed, for the time being, the British residents of these islands would be relegated to living on the land under highly tenuous legal circumstances.

The Survey of the Island of St. John

With speed being of essence, Holland set in place an operational model for his survey of the Island of St. John that would be replicated in subsequent areas. Dividing his men into autonomous teams, he was able to survey the monumental expanse of the island in the space of less than a year. The result was a highly sophisticated and precise cadastral plan superimposed onto what was, in effect, a complete wilderness whose physical contours were delineated with unprecedented accuracy.²⁸⁵

Holland recalled that Captain Dean of the *Mermaid*, whom he had met in Québec, advised him to "take all sorts of material and provisions with him, as there was nothing left on the island but a detachment posted at Fort Amherst, who were indifferently provided, and could not furnish himself and his staff with lodgings."²⁸⁶ Holland stocked many items necessary to endure many months without relief in a wild frontier, including building and carpentry supplies, not normally taken on a surveying expedition. Meanwhile, from Halifax, Governor Wilmot penned a letter to Captain Hill, the garrison commander of Fort Amherst, ordering him to furnish Holland "with troops as they may be wanted" and also "with every convenience and advantage which the situation of himself or his garrison can possibly admit".²⁸⁷

²⁸⁴ Tulleken to Halifax, 25 October 1763, read at the Board of Trade, *JCTP*, 23 January 1764 (vol.12, p7).

²⁸⁵ Bumsted, *Prince Edward Island*, p.12.

²⁸⁶ Campbell, *Prince Edward Island*, p.4.

²⁸⁷ Wilmot to Captain Hill, cited in Chipman, 'Samuel Holland' p.26.

Holland's party departed Québec City for the Island of St. John on 20 September 1764, sighting the most north-westerly tip of the island on 5 October. The following day, Holland landed a party of seven men under the leadership of Haldimand near Cape North to survey the island's south shore from that point to Fort Amherst.²⁸⁸ After considerable hardship, they managed to survey approximately 50 miles of coastline.²⁸⁹

Meanwhile the *Canseaux* arrived at Fort Amherst on the morning of 8 October,²⁹⁰ to find Fort Amherst "a poor stockaded redoubt, with barracks scarcely sufficient to lodge the garrison and the houses that were near it were all pulled down to get material to build it".²⁹¹ Christening it Observation Cove (later to be renamed Holland Cove), Holland set up quarters where there was a clear line of vision to the sky and the southern horizon, so as to be "properly situated for making astronomical observations".²⁹² He regretted that it occupied "much of our Attention" for the season, with the house not being completed until 8 December.²⁹³

That autumn brought personnel challenges. Lieutenant Carleton, who had previously served with Holland on the surveys of the St. Lawrence Valley, died suddenly.²⁹⁴ While promptly replaced by Pringle, Holland worried that the surveys budget relegated both Haldimand and Pringle to receiving half-pay, with sums of five and three shilling per diem, respectively. He felt that these salaries were "too little to subsist them", and, instead, asked that these two deputies be given "the same indulgence as those that are in the East India Company's services, or to be placed upon the whole pay in some

²⁸⁸ *Canseaux Logs*, 6 October 1764, p.35.

²⁸⁹ Holland to Pownall, 20 November 1764, CO 323/18, ff.86-7.

²⁹⁰ Holland's arrival Port la Joye, *Canseaux Logs*, 8 October 1764, p.35.

²⁹¹ Holland to Pownall, 20 November 1764, CO 323/18, ff.86-7.

²⁹² *Ibid.*

²⁹³ Holland to Pownall, 4 March 1765, CO 323/18, ff.111-2.

²⁹⁴ Holland to Pownall, 20 November 1764, CO 323/18, ff.86-7.

of the Regiments in America.”²⁹⁵ He assessed the manpower then directly under his command as numbering thirty-one, including the soldiers for “carrying the chain, camp, colors, etc.”, amounting to fifteen men, while Holland and the “assistant surveyors, gentlemen, volunteers and servants” amounted to a further sixteen.²⁹⁶

As winter set in, Holland “hope[d] this winter to be able to survey upon the Ice, as I am assured that there is fine, but cold days, during that Season”.²⁹⁷ However, the weather proved to be ferocious, with Holland, a veteran of Québec’s notoriously severe winters, remarking that “The cold here had been as intense as in any part of America, I have seen”.²⁹⁸ Given a slow start, Holland’s men were not able to set out from Port la Joye until 15 February 1765.

Holland established four parties of five men, each headed by one of the deputy surveyors, and including two soldiers, one seaman from the *Canseaux* and one Acadian guide. Each of these teams were furnished with a “travelling equipage” consisting of “a sledge of a foot in breadth, by six feet in length” which would carry “our beaver skin coats, a buffalo or bear skin, a blanket, canteens and about eight day’s provisions, each drawn by a single dog.” The Acadian guides were intended to assist the chainmen with carrying their gear in addition to providing intelligence on the lay of the land.

Robinson’s team surveyed the “North East”, or Hillsborough River “with all its Branches”, while Holland surveyed the “Carrying place” from its head to Savage Bay, and then St. Peter’s Bay on the island’s north shore. Robinson’s party then travelled eastward to Fortune Bay and then headed south along the coast to “Three Rivers”, or

²⁹⁵ Holland to Pownall, 20 November 1764, CO 323/18, ff.86-7.

²⁹⁶ Holland to Pownall, 4 March 1765, CO 323/18, ff.111-2.

²⁹⁷ Holland to Pownall 20 November, 1764, CO 323/18, ff.86-7.

²⁹⁸ Holland to Pownall, 4 March 1765, CO 323/18, ff.111-2, *passim*.

Cardigan Bay. Holland would later relate that Robinson's party endured a harrowing trip back to Fort Amherst, travelling sixty miles along the shore line which "the greatest part of the way covered with ice."

Meanwhile, a team under Wright surveyed the territory surrounding Hillsborough Bay, including St. Peter's and Governor's Islands. He later surveyed the "West River" (Eliot River) "from whence he proceeded through the Woods" to Malpeque, or Richmond Bay, and upon mapping its eastern portion crossed over the "Carrying place" to survey the eastern side of Bedec, or Halifax Bay. At some point, he was forced to return to Fort Amherst owing to inclement weather.

Teams under Holland and Pringle finished surveying Little Racico, Tracadie and the "Carrying place" from that inlet across to the Hillsborough River. They planned to continue up the Yorke River and across to Malpeque, but "the Rainey weather beginning rendered the ice unsafe to depend upon" and "should the Rivers break suddenly" they were afraid of being marooned, cut off from a viable route back to base. They returned to Fort Amherst on 17 March 1765. An attempt to survey the same objective by a team under Haldimand was also thwarted by the severity of natural conditions.

In April, Holland was able to report that sometime that spring he hoped to have completed surveying "the greatest part of the Island, exclusive of the soundings, which must be taken in summer." However, even though his winter operations yielded significant results, he remarked that more progress might have been made if there had been a "Distribution of my Deputys to different parts, where each might have been not any great distance from his respective Habitation". This would be a lesson employed later on during the Northern Survey.

Throughout the spring and summer of 1765, Holland's teams set out to complete triangulated surveys along the coast, as well as to sound the numerous tidal estuaries and bays. In the latter task, they were actively assisted by Mowat and his crew.²⁹⁹ In the months following, the *Canseaux* generally sounded Hillsborough Bay and its three large tidal rivers, while small parties in cutters and whale boats headed for more distant and treacherous areas of the coastline.³⁰⁰

As the summer drew to a close, Holland and his associates created a series of regional maps based on the various surveying expeditions. While only four examples can be currently located, it is likely that they were all sent by Mowat directly to the Admiralty. They were of particular use for the navy given the profuse nautical details provided by William Brown. Each map focuses on a one of the island's four major inlet or harbours: Hillsborough Bay, Richmond Bay, Egmont Bay, and Three Rivers.³⁰¹ These maps, along with others featuring the regions in between, would have been precisely joined to give a complete impression of the island based on systematic surveys.

[Holland's General Map & Account of the Island of St. John](#)

One of the very finest examples of British colonial cartography, the culmination of Holland's survey of the island was his large map of the island, a gargantuan masterpiece of surveying and draftsmanship, that at a scale of 4000 feet to an inch,

²⁹⁹ The season began in dramatic fashion on 9 April, when aboard the *Canseaux*, Mowat noticed the ice in the bay cracking. Suddenly the ship was caught trapped in the middle of a gigantic plate of ice, about two miles long and one mile wide, which began to float away, carrying the *Canseaux* six miles out into the bay. As the ice-flow could easily have reduced the ship to splinters, Mowat was very lucky to be able to free the ship, *Canseaux Logs*, 9 April 1765, p.40.

³⁰⁰ *Canseaux Logs*, 7 May 1765, p.42.

³⁰¹ For example: Samuel Holland and Arthur Robinson, "The Three Rivers", Mss., [1765], MODHD: B5301.

measured 13 feet, 2 inches by 9 feet, 2.2 inches.³⁰² Dispatched to London in October 1765, the map was accompanied by a detailed account of the island's climate, agricultural potential, natural resources, transport routes and its ability to support anchor settlements. As Holland described, with "the greatest Exactness" he depicted every significant geographical feature of the island, plus any signs of development, with all cleared land, roads, and homesteads precisely demarcated. Comprehensively, "all the rivers and Creeks, are surveyed as far as a Boat or Canoe would go, or the Chainmen Penetrate but some time we were obliged to stop, by impassable Woods and Swamps."³⁰³

The coastline and tidal estuaries were everywhere adorned with copious nautical information, proving that the Mowat and Brown had been very diligent in their sounding duties. While Holland conceded that, "There may be small brooks in the center of the Island not Expressed in the Plan", with the exception of the Murray Map, the level of detail and accuracy shown went far beyond that featured in any general regional map hitherto made in British North America. Indeed this far flung appendage of the empire was now better mapped than most of England! While Holland at one point envisaged making the map to an even larger scale, he noted that he was "obliged to alter to 4000 Feet per Inch, as we found that Sufficiently Large and Expansive but should any part be required to a still Larger scale it shall be done when ever ordered."³⁰⁴ Interestingly, the sharp accuracy of the Northern Survey's map of St. John is brilliantly illustrated by Montresor's 1768 *Map of Nova Scotia*, which incorporated Holland's survey onto a

³⁰² Samuel Holland, "A Plan of the Island of St. John in the Province of Nova Scotia As surveyed Agreeable to the Order...", Mss., 1765, CO 700/Prince Edward Island 3, Penfold, no.1629.

³⁰³ Holland, "Account of the Island of St. John, 5 October 1765, an enclosure to Holland to Pownall, 6 October, 1765, CO 323/18, f.195.

³⁰⁴ Holland, "Account of the Island of St. John, 5 October 1765.

comparatively crude conception of the province as it stood before Holland and Des Barres's projects were completed (**Fig. 27**).³⁰⁵

On what would soon be considered to be the definitive document for the apportionment of St. John, and consistent with his original instructions, Holland divided the island into three counties, which were further divided into parishes and townships. Taking up the eastern third of the island, King's County was calculated to contain 406,000 acres, including four parishes and twenty townships. In the centre was Queen's County, which at 458,420 acres contained five parishes and twenty townships. Occupying the Western third of the island, Prince County contained 467,000 acres, with five parishes and twenty townships. Each of the counties included one of the island's three prime harbours, for Holland noted that "Port Joy, Cardigan [Three Rivers] and Richmond Bays are without Dispute the only places where Ships of Burthen can Safely Enter, and consequently most proper for to Erect the Principal Towns and Settlements"³⁰⁶ Each of the counties also included a lot reserved for the "county town", while Queen's county included a small reserve containing Fort Amherst.³⁰⁷

Importantly, Holland calculated the entire island to contain 1,331,420 acres, or 2,080 square miles, meaning that it was about a third smaller than was commonly thought to be the case in London.³⁰⁸ This obviously meant that whichever authority was to

³⁰⁵ John Montresor, *Map of Nova Scotia, or Acadia; with the islands of Cape Breton and St. John's, from actual surveys* (London: A. Drury, 1768), this is likely the "New Chart of the Province of Nova Scotia" that the Board of Trade received on 6 November 1766. *JCTP*, vol.12, p.340.

³⁰⁶ Holland, "Account of the Island of St. John", 5 October 1765, an enclosure to Holland to Pownall, 6 October 1765, CO 323/18, f.195.

³⁰⁷ "There is 520 ac presumed for the fort Lott having 1000 Yards to the North, South and West from the center of Fort Amherst and the East as far as the Waterside", Holland, "Explanation of Townships", 6 October 1765, an enclosure to Holland to Pownall, 6 October 1765, CO 323/18, f.195.

³⁰⁸ The actual area of the Island of St. John's is 2,194.57 square miles.

distribute the townships was to have significantly less patronage to dole out than previously thought.

Holland's survey represents an exacting system of Enlightenment geometrical order, being superimposed onto an, albeit precise, rendering of wild and largely uninhabited land. This juxtaposition represents an extreme form of inductive settlement planning. Designing, let alone surveying, such a precise pattern of administrative and cadastral divisions, in order to assure that virtually all of the sixty-three townships each corresponded to the waterway rule and were of approximately equal size (20,000 acres), was a monumental task. The inter-locking divisions, placed on a template created by systematic surveys had to be done to the "the Greatest Exactitude Imaginable",³⁰⁹ tolerating very little margin for error. If the lines on one area were imprecisely demarcated, a ripple effect of error could undermine the accuracy of surrounding divisions. Holland explained his methodology in dividing the island, "the Division of the County's Parishes and Townships Bounded by the Magnetic North and South, or East and West Lines being the most easy way of Running the Lines, for the Surveys that will be Employed on this service, the Natural Situation of the Island having favoured this Method, it is not possible to divide the Countys or Parishes into more Equal Parts as the Lines, others would have been too much Compounded and Confused, it has also been observed, in Dividing the Townships to give them a share of what Natural Advantages the Island afforded".³¹⁰

³⁰⁹ Holland to Pownall, 24 November 1765, CO 323/18, pp.537, letter printed in full, Harvey, 'Holland's Description' pp.38-9.

³¹⁰ Holland noted that "the Two Inland Lotts that could not be brought to any Township are left Undetermined", "Account of the Island of St. John", 5 October 1765, an enclosure to Holland to Pownall, 6 October 1765, CO 323/18, f.195.

On his epic map, Holland replaced most of the original French and Micmac place names with British nomenclature, usually in honour of members of the British royal family or Crown officials. For example, Port la Joye was renamed Charlotte Town and Malpeque Bay became Richmond Bay. While such nomenclature was common practice for British explorers and mapmakers discovering new places, in this case, it was an act of toponymic imperialism, in which the newly-established British hegemony was not only physically, but to also figuratively, replacing its predecessors. Just as St. John's' Acadian residents had been expelled, or had seen their property rights invalidated, the renaming of their former lands sought to erase any sign that they had ever possessed the island.

In addition to his monumental plan of the island, Holland drafted two further maps of the island to a reduced scale of two miles to an inch.³¹¹ Of a far more practical scale, this fine map retains the detailed nautical information supplied by Mowat and his crew (**Fig. 28**).³¹²

Robinson, who owing to "family affairs" was due to return to England on a Spence & Co. ship in mid-October, personally couriered the large map and related reports. Holland also intended for Robinson to act as his personal ambassador to the Board of Trade, in the hopes that the Lords Commissioners' enthusiasm for the endeavour would be increased by contact with one of its key participants.³¹³ The smaller map and duplicates of his report were sent to London by other means, just in case the

³¹¹ "List of Plans sent to the Government, from the Govert Survey of the Northern District of North America", 14 February 1776, AO 3/140, f.6.

³¹² Samuel Holland & Henry Mowat, "A Plan of the Island of St. John in the Province of Nova Scotia Surveyed in the Year 1765.", Mss., 1765, ADM 352/143, formerly MODHD: 276 Ah2.

³¹³ Holland, "Account of the Island of St. John", 5 October 1765, an enclosure to Holland to Pownall, 6 October 1765, CO 323/18, f.195.

principal package was to miscarry, as too often happened with colonial trans-Atlantic correspondence.

Holland's offerings included a detailed chart, being an "Explanation" of the island's townships and county towns.³¹⁴ It represented one of the most thorough, and perhaps the very most systematic analysis of the precise location and natural attributes of each and every proposed cadastral lot of any British American colony. Each township was identified by a number, which corresponded to its place on Holland's maps of the island, a method which curiously echoed Egmont's recommended directions for drafting the survey. On the explanatory chart, the ledger for each numerated township included its area, the surveyed lines of its boundaries (on all four compass directions), an assessment of the commercial quality or potential of the lot, and the presence of cleared land and houses, along with a space for additional remarks.³¹⁵

On his chart detailing of each township, Holland gave very careful assessments of their overall quality, and their respective natural attributes which would determine their economic potential. Some townships would be much more valuable than others. For example, Township no.1, located at Cape North, was surrounded by cliffs with the "The Lands as well as the Woods bad", however the "Cod Fishery" was described as "exceedingly good". On the other hand, another township was described as "very good, as having a fine Harbour the Advantage of good Fishing, Woods and Lands and finely watered". Suggesting that the expulsion of the Acadians had severely degraded the

³¹⁴ Holland, "Explanation of Townships", 6 October 1765, an enclosure to Holland to Pownall, 6 October 1765, CO 323/18, f.195.

³¹⁵ "Explanation of Townships", 6 October 1765.

island's infrastructure, Holland noted that "very few Houses mentioned in the explanation of Townships are Good for anything".³¹⁶

Holland next moved on the critical task of naming, selecting the location and discussing the potential merits of the island's three proposed "County Towns". Charlotte Town, the island's proposed capital, and the seat of Queen's County, was to be situated on a 7,300 acre lot upon the point where the Yorke and Hillsborough Rivers meet Port la Joye, and was described as "the most advantageously situated of any Place on this Side of the Island".³¹⁷ The almost perfectly central location, along with access to the three river estuaries, provides excellent communication with the interior and other regions of the island. The fine harbour ensures that small vessels can dock directly at the town, while large ships can "ride near the Town in Good Ground". The town could be rendered easily defensible, as the rivers limit any landward enemy advances, while "A battery of two some distance advanced will entirely command the harbour" and greatly protect the town from naval assault.³¹⁸ Holland noticed that the shallow Northumberland Strait, which the harbour faces, could not foster a viable fishery industry, so its attributes would best be focused on "particular privileges" of civil and judicial administration, while it would also dominate "a good part of the commercial business" of the island.

George Town, the seat of King's County, was to be located on a 4,000 acre site on the tip of Cardigan Point at Three Rivers, and in Holland's estimation, "In Respect to Trade and shipping no place can be more Convenient".³¹⁹ "Largest Ships to Enter and the Ride with Great Safety, in Albion Bay in Montague River, and in the Bay formed by

³¹⁶ "Account of the Island of St. John", 5 October 1765.

³¹⁷ "Explanation of Townships", 6 October 1765.

³¹⁸ "Account of the Island of St. John", 5 October 1765.

³¹⁹ "Explanation of Townships", 6 October 1765.

the Sandy Hook in Cardigan river” such that “the bay for anchoring will close by the town immediately on entering the river and going around Goose Neck...may be a pier, where goods may be shipped with great convenience and facility.”³²⁰ The rivers provide excellent access to the interior, especially as a ten mile portage from the head of the Montague River reaches the Orwell River, and thus provides a “safe and short communication both in winter and summer” to Charlotte Town. Surrounded on three sides by water, “the Entrance into the rivers may be Effectively secured by good Batterys in Each side of the Town”³²¹

Prince Town, the proposed seat of the eponymous county, located on a 4,000 acre lot, “for the Fish Trade is superior to any other place upon the Island...the fish being in great plenty most of the year, and close to the harbour.”³²² Near the mouth of Richmond Bay, it was to be located on “on a peninsula, having Darnley Basin on the northeast, which is a convenient harbour for small vessels, and where they may lie all winter. The town will have convenient ground for drying fish, and ships of burden can anchor near it in the bay. It can be fortified at little expense; some batteries and small works erected along the shore would entirely secure it.”³²³

Holland’s Account of the Natural Attributes of the Island of St. John’s

Holland was optimistic about the agricultural potential of the island, with some caveats. He said of the land that in many areas “with proper care it produces most kinds of Grain, Wheat, Barley, Oates, Pease, Beans & c.” Potatoes were also “very Good in Great Abundance”, a particularly adroit observation, as the island would one-day become

³²⁰ “Account of the Island of St. John”, 5 October 1765.

³²¹ “Explanation of Townships”, 6 October 1765.

³²² *Ibid.*; “Account of the Island of St. John, 5 October 1765.

³²³ “Account of the Island of St. John”, 5 October 1765.

famous for that product. The southwest coastline, around Egmont and Bedec Bays, as well as most inland areas were considered to be very fertile. However, winter conditions, at least by English standards, were very harsh, with daytime temperatures running between minus 16 and plus 3 degrees Celsius.³²⁴ Consequently, Holland implied that new colonists needed the Crown's "Utmost Encouragement" during the early days, supposedly in the form of provisions or perhaps subsidies of some kind.³²⁵

As for indigenous flora, the island was home, in season, to large patches of strawberries and cranberries, which were "in great abundance, and very good". Interestingly, Holland observed the production of what would become a famous Canadian specialty, Maple Syrup, as from the tree the Acadians "Extracted a Liquor which they boil into a sort of Sugar, pretty Good and Medicinal". The local inhabitants also made a kind of tea out of the common Maidenhair shrub. As for timber, the island offered limited potential, as "spruce of any kind is the Universal produce of the Whole Island".³²⁶

Holland made it clear that while abundant wildfowl and land mammals provided ample game, the island was not particularly well positioned for the hunting of sea mammals. He remarked that there was an abundance of "Bears, Otters, Martins, foxes, Lynxes, Musk Rats" and "Extremely Good" hares. Game birds were also very common much of the year, however, "in the Winter there is Scarce a Bird to be seen".

Unfortunately, Holland's attempt to fulfill the Duke of Richmond's request for a "moose-

³²⁴ Holland, "Weather and Remarks" [observed at Port la Joye, 16 January 1764 to 3 February 1765], Daytime temperatures ranged from +3°F (-16°C) to +41°F (+5°C); also "Journal of the Weather from the 8th of October 1764 to the 20th Decemr. Before the Barometer was set up", both enclosures to Holland to Pownall, 4 March 1765, CO 323/18, ff.111-2.

³²⁵ "Account of the Island of St. John", 5 October 1765.

³²⁶ *Ibid.*

deer” proved futile, so his grace had to suffice with the “foetus of a sea calf [walrus]” which was “looked upon even in this part of the world as a great curiosity.”³²⁷

He reported many types of fish, including Turbot, Halibut, Sturgeon, flounders and Mackerel were in “Great Abundance and extremely Good”. The inland water teemed with trout and eels, although Salmon was rare. Shellfish “extremely Good and in Great Plenty” could be found all along the shore, especially the inlets, and included what would later become known as the Malpeque Oyster. In sum, Holland exclaimed that “No Place can wish to be more plentifully stocked, Tho’ the Chase of them is attended with Difficulty and Trouble and requires much Patience”.

Holland’s Survey Received

The Board of Trade, having finally received Holland’s great map and report on the Island of St. John, considered it at a meeting on 8 May 1766.³²⁸ Shortly afterwards, Pownall wrote to Holland signaling the Board’s “Entire approbation” of his survey and assessment of the island, that they were “now before His Majesty”.³²⁹ Alluding to the maelstrom of political manoeuvring that surrounded the island’s fate, Pownall continued

³²⁷ Holland to Richmond, cited in Chipman, ‘Samuel Holland’, p.30; there are no written records of Moose ever having been encountered on Prince Edward Island.

³²⁸ According to the Journal of the Board of Trade: “The Secretary laid before the Board a plan (on actual survey) of the Island of St. John’s received from Captain Holland, Surveyor General of the Northern District of America, together with the following papers explanatory thereof, vizt., Letter from Samuel Holland, esquire, to the Secretary, dated October the 6th, 1765 relative to the progress he has made in the service entrusted to him; and transmitting, A description of the islands of Magdalen and St. John’s. Captain Holland’s account of the Island of St. John’s. Explanation referring to the townships, as marked in the plan. Letter from Letter from Samuel Holland, esquire, to the Secretary, dated October the 7th, 1765, relative to the survey of the Islands of St. John and Magdalen. Expense of the house building at Observation Cove, Island of St. John’s [at a cost of £60]. Letter from Samuel Holland, esquire, Surveyor General of the Northern District of America, to the Secretary, dated 24th of November, 1765, relative to the progress he has made in the survey of Cape Breton. Their lordships, upon consideration of what has been ordered and determined by his Majesty, in respect to the settlement of the Island of St. John, agreed that it would be expedient to lay the abovementioned plan and such of the papers as relate thereto, before his Majesty, and a representation thereupon was accordingly prepared, approved and signed”, *JCTP* (vol. 12, pp.277-8), 8 May 1766.

³²⁹ Pownall to Holland, 19 May 1766, AO 3/140.

that “to the end that His Majesty may decide upon the Plan proper to be adopted for the future settlement of the Island; and if anything shou’d arise out of the consideration of this matter, that should make it necessary to vary the Instructions you have already received, timely notice thereof will be given to you”.

Indicative of the credibility accorded Holland’s submission, the Board commissioned John Lewis, their highly talented clerk and draftsman to create a magnificent large-scale presentation copy of the original (**Fig. 29**).³³⁰ While Holland’s original would have been preferred for in depth study and analysis, Lewis’ copy, with its resplendent colouring and clean lines, would have been the ideal way to showcase the survey to stakeholders in a clear and aesthetically-pleasing fashion.

The survey had also generated great interest in army circles. James Sampson, working at the Ordnance Board’s Tower Drawing Room, went to great trouble to draft an exquisite copy of the Holland survey, showing topographical details which would have been of the greatest importance in planning defensive strategies for the island.³³¹ Both branches of the military service would likewise have taken heed of Holland’s advice for the fortification of the three county towns. .

Seemingly yet unaware of the favour his work was generating, Holland meanwhile wrote with evident dismay that the long delays in deciding a land-granting system had ensured that “many of those, who came to St. John’s Island, to become Settlers, had left that Place, & that the Rest talked of soon following them, unless something speedy was done”. Holland also wrote that Egmont, whose plans were not

³³⁰ John Lewis *after* Samuel Holland, “A Plan of the Island of St. John in the Province of Nova Scotia...1765”, Mss., 1765, MR 1/1785, Penfold, no.1630.

³³¹ James Sampson, *after* Samuel Holland, “A Plan of the Island St. John”, Mss., [c.1767], MR 1/1881, extracted from WO 78/2674, Penfold, no.1631. James Sampson was listed as being employed at the Tower Drawing Room, 1764-7, Marshall, ‘Tower Drawing Room’, p.38.

supported by Holland, “is displeased with me, as I have never before mentioned for not acting towards his Desires which would be incompatible, with my Duty to their Lordships & as no Notice has been given me otherwise, I fear, I shall be a Loser.”³³²

The Decision About St. John

In April 1767, the Privy Council resolutely dismissed the Saunders-Keppel, or pseudo-Egmont, petition, noting that they “found no reason to deviate from the system of making grants founded upon the experience of former times and confirmed by the Order of 9 May 1764.”³³³ It represented a major victory for the Board of Trade and the Northern General Survey over an extremely powerful and determined bid to derail its influence and authority. The Board had by this point decided that they would grant the townships individually, as demarcated on Holland’s survey, through some form of lottery. Public notice “of certain days for hearing the proponents in support of their applications” was to be advertised in the *London Gazette*.³³⁴ Prospective applicants were soon informed that they would have to present their petitions in person to the Board on 17 or 24 June, or 1 July 1767.³³⁵ As a consolation prize, the Board offered Egmont title to an entire parish of his choice, but having decided to go for all, or nothing at all, the earl declined, saying that “he could not do credit to himself or service to the public by any undertaking there”.³³⁶

While Egmont’s bid had failed, his petition had greatly influenced the manner in which the Board of Trade was to grant the island. Unconventionally, the entire island

³³² Holland to Pownall, November 10 1766, CO 323/24 pp.231 ff.

³³³ An Order-in-Council dated 23 May 1767 approved the St. John’s land disposal plan as approved by the Privy Council report of 9 May 1764, *APC*, vol.V, 5 June 1767, p.56.

³³⁴ *APC*, vol.V, 13 April 1767, p.56.

³³⁵ *APC*, vol.V, 5 June 1767, p.56.

³³⁶ Egmont to Board of Trade, 6 June 1767, CO 217/22, f.57.

was to be granted at once (although not to any one syndicate), in sharp contrast to the system in peninsular Nova Scotia and the Floridas where grants were made in a piecemeal fashion. Egmont's insistence that the island must be financially self-sufficient appealed to the Treasury's ethic of fiscal conservatism, a concept supported by a high rate of quit rents and an emphasis on the financial responsibilities of the individual grantees. Finally, the idea of holding a lottery originated in Egmont's original *Memorial*.³³⁷ On 8 July 1767, after taking into consideration "the merits and pretensions of such of the proponents for Lands in the Island of St. John", the Board finalised the procedure for holding the lottery.³³⁸

There were also to be rules regarding the design of the county towns as "delineated upon the survey" submitted by Holland. At the centre of each town there was to be a "Scite of a Church, town house, Markett, and other necessary publick Buildings". While not specified, the plan seems to assume that the town streets would correspond to some form of grid pattern, as the dimensions of the proposed urban cadastral lots were very precise, for House lots were not to exceed sixty feet in front, one-hundred feet in length, nor were these dimensions ever to be smaller than twenty by thirty feet. There was also to be a town common, and pasture lots sufficient to correspond to one acre for every ten feet of the town's frontage. A quitrent of 1d per foot of frontage was to be assessed on house lots, while a rate of 3d per acre would be charged for pasture lots. No one person would be permitted to own more than one house and one pasture lot.³³⁹

³³⁷ Bumsted, *Prince Edward Island*, p.21.

³³⁸ The Board of Trade approved the list and final procedure for the draw, as well as the regulations for quitrent, etc., *JCTP*, 8 July 1767 (vol.12, pp.400-6); *APC*, vol.V, p.56.

³³⁹ *APC*, vol.V, p.56.

On 23 July 1767, the Board of Trade held the lottery by which means the townships were randomly distributed. Indicative of the fact that this, like almost every other procedure at Whitehall, was an inside job, the new grantees counted many familiar names amongst their number, including three colonial governors, Admirals Saunders and Keppel, Philip Stevens, John Pownall and the master surveyor himself, Samuel Holland, who received township number 28, at Cape Traverse in Prince County.³⁴⁰ Many of Egmont's followers were rewarded for their persistence, as 40 of the 98 signatories to his first Memorial either became exclusive or part owners of twenty-seven of the townships.³⁴¹

While Holland originally intended to design the plans for each of the county towns himself, the task was carried out in 1768 by Charles Morris.³⁴² The resulting plans were both consistent with the designs employed by Morris throughout Nova Scotia over the preceding two decades and were a natural continuation of the rational enlightenment order Holland employed in demarcating the island's townships.

Morris's plan for Charlotte Town lays the town out on a neatly symmetrical grid with blocks of town lots of equal size (**Fig. 30**).³⁴³ The grid is interrupted in the centre by a square featuring public buildings and lots, while the shoreline features space for

³⁴⁰ *JCTP*, 23 July 1767 (vol.12, pp.413-5); Notable recipients of lots were (with lot number): Philip Stevens (1); Admiral Augustus Keppel (4); James Murray (9); John Pownall (13); Sir Guy Carleton (15); Lauchlin Maclean (21); Samuel Holland (28); Admiral Charles Saunders (29); George Townshend (56); Hugh Palliser (63).

³⁴¹ Bumsted, *Prince Edward Island*, p.25.

³⁴² Holland wrote "The Projects for Laying out the City Towns will be sent by the first opportunity from Louisbourg", Holland, "Explanation of Townships", 6 October 1765, an enclosure to Holland to Pownall, 6 October 1765, CO 323/18, f.195.

³⁴³ Charles Morris, "A Plan of Charlotte Town on the Island of St. John", Mss., 1768, NA: MR 1/31, Penfold, no.1646. Other such maps included Charles Morris, "A Plan of Charlotte Town on the Island of St. John", Mss., 1768, CO 700/Prince Edward Island 4, Penfold, no.1647; Charles Morris, "A Plan of George Town", Mss., 1768, MPG 1/126, Penfold, no.1652; Charles Morris, "A Plan of George Town on the Island of St. John" Mss., 1768, CO 700/Prince Edward Island 5, Penfold, no.1653; Charles Morris, "A Plan of Prince Town in the Island of St. John", Mss, 1768, CO 700/Prince Edward Island 6, Penfold, no.1659.

commercial purposes like storehouses and lumberyards. Indicative of the Enlightenment ethic of man dominating nature, the townscape would be built over such inherent obstacles as swamps (which would presumably have to be drained). It is not clear to what point Morris consulted with Holland when devising these plans, but it has been pointed out that they all featured what has been described as Holland's preference for "a gently sloping interfluve" and southerly exposure, while maintaining an emphasis on considerations of coastal defense and an easy access to the interior.³⁴⁴

Holland's general map of the island was printed, running into several states, over the coming years (**Fig. 31**).³⁴⁵ The Island of St. John would turn out to be of peripheral importance to the empire, but, the map would be considered to be one of the finest and most iconic pieces of colonial cartography. With the solitary exception of location of the seat of Prince County, Holland's administrative and cadastral divisions remain in place to this very day.

The Survey of Cape Breton Island

The survey of Cape Breton Island was perhaps the most arduous of the Northern Survey. Larger and far more rugged than St. John, the project took over two years to complete, severely testing the physical endurance of Holland and his men. Lacking the agrarian potential of St. John, Cape Breton was already well known for its cod fisheries and rich coal deposits. While the method by which the land was to be distributed was never articulated, Holland was charged to devise a similar cadastral plan for the island, and to provide a detailed assessment of its physical features and natural resources,

³⁴⁴ J. D. Wood, 'Grand Design on the Fringes of Empire: New Towns for British North America', *The Canadian Geographer*, vol. 26, no. 3 (September 1982), pp. 243-55, esp. p.251.

³⁴⁵ Samuel Holland, *A Map of the Island of St. John* (London, 1774).

township by township. It was only long after the project's completion that Whitehall would have dramatically different designs.

From 1766 to 1768, Holland sent the Board two interim and one final version of what would be the magnificent map that would justify the trials and tribulations endured by his team.³⁴⁶ Along with his ground-breaking written accounts of the island, Holland's intelligence would be responsible for shaping Whitehall's conception of the island, and in ways that were perhaps unexpected.

Whitehall's 'Temporary' Settlement Freeze in Cape Breton

In 1764, Pownall indicated to Governor Wilmot that the island of Cape Breton would eventually be made available to settlers by public sale, although he declined to specify how or when this would transpire. On several occasions, the Board had indicated that they would shortly authorise the permanent settlement of the island only to later refuse approval of any specific development scheme. As was the case with the Island of St. John, they held out that no resolution could be met until Holland's survey of Cape Breton was completed, although they were admittedly less explicit in emphasising that point. The ambiguity of Whitehall's policy towards the island encouraged a number of credible petitioners to test the waters. Whitehall, however, was concerned that they might create powerful private commercial monopolies.³⁴⁷

³⁴⁶ In total, Holland is recorded to have made and submitted sent eight copies, consisting of three versions in two scales of the "Plan of Cape Britain" to various officials: in 1766 he sent one copy by the large-scale (4000 ft. to an inch) and two copies by the smaller-scale (2 miles to an inch) to the Board of Trade; in 1767 he sent three copies, all in that smaller scale, one each, to the Board of Trade, General Gage, and Shelburne; and in 1768 he sent one copy by the large scale and 1 copy by the smaller scale to the Board of Trade. Today only three copies are known to have survived, being two of the 1767 smaller-scale version, and the one example of the 1768 smaller-scale version.

³⁴⁷ Likely for this reason, while the Board of Trade wished to encourage the fishery, it gave no credence to John Gregg's aforementioned application for a 40,000 acre grant and developing a large fishing enterprise. While Whitehall indulged Gratian D'Arrignand's request that the Crown honour his 1751 French royal

Aware of the vast coal deposits, for example, on 19 March 1764, a syndicate of esteemed veterans of the late war, headed by Colonel William Howe, the future Commander-in-Chief of the Army in North America, announced that they were “desirous of becoming adventurers” hoping “to establish a Colliery on the island of Cape Breton for the better supplying the several Colonies and garrisons, on the Continent with Fuel.”³⁴⁸ Indicative of the administrative importance of accurate maps, and the limited state of geographical knowledge of the island, the estimated size severely underestimated the length of the coastline requested, as in reality, the tract specified actually amounted to 100,000 acres!³⁴⁹ Several competing proposals were submitted in the wake of Howe’s proposal.³⁵⁰ One, submitted by Halifax merchant Joseph Gerrish, included a map that showed he had a better conception of the region’s geography than most, as he estimated his grant to be a roughly accurate 100,000 acres.³⁵¹ While the Board held that opening the Cape Breton mines to the American market “will be of very great benefit” to both the colonies and Britain,³⁵² it failed to pursue the matter further.³⁵³

grant on the island by promising him possession of the 20,000 acre lot near Louisbourg that he had already improved, they never actually gave him the title, Brown, *History of Cape Breton*, p.353.

³⁴⁸ The description of Colonel Howe’s proposed concession was as follows: “a Tract of Land on the East shore of the aforesaid Island extending from the Point on the North side of Mire Bay to the South East side of the entrance into the Labrador and Seven Miles Inland to be computed from the point and entrance aforementioned and supposed to contain about fifty five thousand Acres”, *APC*, vol.IV, p.659.

³⁴⁹ *APC*, vol.IV, p.659; Brown, *History of Cape Breton*, p.354.

³⁵⁰ Brown, *History of Cape Breton*, p.354

³⁵¹ [Map of Joseph Gerrish’s proposed concession on Cape Breton Island], printed in *APC*, vol.VI, Appendix.

³⁵² The Board of Trade reasoned that “The high price of coals in almost every part of the kingdom, and especially in this metropolis is a cruel burthen upon a poor and a very great drawback upon every manufacture carried on by your Majesty’s subjects...the great exportation of this commodity cannot but very much enhance the price upon the consumer at home. The exportation does and just increase every year to your Majesty’s American colonies, to the proportion to the wood which is their general fuel decreases and is cleared away near their great towns, and therefore the supplying these colonies with coals from Cape Breton will be of very great benefit” to both colonies and Home, [Board of Trade, Report on Cape Breton Coal], 10 July 1764, *APC*, vol.VI, p.363.

³⁵³ *APC*, vol. V, p.661.

In this period, the handful of settlers on the island had to content themselves by living with no title on temporary licences, discouraged from making any improvements to the land, lest it be suddenly taken away from them. This greatly frustrated Wilmot, and even more so his successor, Francklin, who not only sympathised with the settlers, but believed that the freeze on exploiting the island's resources came at an enormous opportunity cost to Nova Scotia.³⁵⁴ He accordingly forwarded and backed a petition from the beleaguered residents of Louisbourg, who asked for redress and who mentioned that Holland and the local garrison commanders "were well acquainted with the just grounds of their application".³⁵⁵

Surveying Operations in Cape Breton Island, 1765 & 1766

As the summer of 1765 was drawing to a close, Holland began to redirect his operational efforts to surveying Cape Breton Island. At the beginning of September, an advance party headed by Wright and Pringle, departed Port la Joye aboard the small sloop *Venus*,³⁵⁶ supplied with ten weeks provisions for eleven men.³⁵⁷ The party began to chart the west coast from Isle aux Loups Marine (today's Margaree Island) southwards down towards the Gut of Canso, the narrow channel that separated the island from peninsular

³⁵⁴ Harvey, *Holland's Description*, Introduction, p.16.

³⁵⁵ The authors of the Louisbourg petition noted that Holland, and Colonels Tulliken and Pringle [the successive Louisbourg garrison commanders] "were well acquainted with the just grounds of their application", quoted in Harvey, *Holland's Description*, p.14. Lt. Gov. Francklin wrote that "The inhabitants of Louisbourg have made several representations and complaints that they have suffered many inconveniences for the suspense and uncertainty they are under in their improvements and Trade for want of property in their lands; which is not in the power of this Government to Grant with which they were acquainted. Many of them have made considerable Improvements by the permission they had while they were under Military Gov't and since continued by the late Governor [Wilmot]", Francklin to Board of Trade, 2 September 1766, CO 217/21, ff.296-308.

³⁵⁶ Holland mentioned that "The Venus is a Small Sloop, which Captain Mowat (who had used his Utmost Endeavours in forwarding this Business) and I, were obliged to Purchase as Mr. Haldimand was not returned from the Magdalens with the Jupiter Schooner", Holland to Pownall, 24 November 1764, CO 323/18, ff.86-7.

³⁵⁷ Wright, Pringle and Brown left St. John's for Cape Breton Island aboard the *Venus* on 31 August 1765 "with provisions for 11 men for 10 weeks", *Canseaux Logs*, 1 September 1765, p.54.

Nova Scotia. It was during this time that they made a careful survey of the strait, which Wright would shortly use to draft one of the survey's few surviving regional maps of the island.³⁵⁸

Brown, the skipper of the *Venus*, was responsible for the numerous soundings depicted on the map; Wright and Pringle conducted trigonometric surveys along the shoreline, always on the lookout for natural resources and locations ideal for development. Marked on the map is Plaster Cove, the site of a quarry where the French had loaded gypsum directly onto ships. As Holland would later recount, "In Plaster Cove is a large Cliff, with a Cavern that goes for some Distance under Ground, from which the French transported great Quantities of Plaster to Louisbourg, for sundry Uses; it is of a good Quality as appeared to me upon Tryal."³⁵⁹ After surveying Rivière aux Habitants, at some point in mid-October, the *Venus* ceased its surveying operations on the increasingly rough Atlantic coast of the island, and headed directly for Louisbourg.³⁶⁰

Holland and the rest of the surveying party departed Port la Joye for Louisbourg on 14 October 1765, arriving at their destination on the 26th of that month, the same day that the *Venus* entered the harbour.³⁶¹ Holland was pleased to report that they were better set-up than they had been in St. John. However, already his party had experienced "many Surprising escapes", for example he reported that "one of the Whale Boats my lord

³⁵⁸ Thomas Wright, "A Survey of the Gut of Canso and the River of Inhabitants", Mss., 1766, CO 700/Nova Scotia 42, Penfold, no.1135.

³⁵⁹ Holland, "Description of Cape Breton", an enclosure to Holland to Hillsborough, 10 November 1768, CO 5/70.

³⁶⁰ Holland noted that Wright and Pringle "have surveyed from Isle aux Laus [Loups] Marine (on the West side) [Margaree Island] Southward through the Gut of Canso to the river Aux Habitants on the Southeast of the Island", Holland to Pownall, 24 November 1765, CO 323/18 pp.537 ff.

³⁶¹ The *Canseaux* left Port la Joye for Cape Breton on 13 October, *Canseaux Logs*, 13/14 October 1765, p.58, the *Canseaux* arrived at Louisbourg on 26 October, the same day Wright and Pringle arrived in the *Venus* sloop, *Canseaux Logs*, 26 October 1765, p.61, see also Holland to Pownall, 24 November 1765, CO 323/18 pp.537 ff.

Colvill sent me is lost by stress of weather”, however, they had “the good fortune of not losing any Lives”.³⁶²

On 17 December 1765, the Northern Survey suffered a terrible personal and operational tragedy. Frederick Haldimand was killed when he fell through the ice while surveying on a frozen lake.³⁶³ Haldimand was, more than anyone else, Holland’s protégé. Only twenty-four years of age, he had already proven himself to be a virtuoso surveyor with a refined expertise for the taking of astronomical observations. Holland now had the unenviable tasks of informing General Haldimand of the death of his beloved nephew, and of finding a replacement for someone who was viewed as indispensable.

Attempts to expedite the survey during the winter of 1765 to 1766 proved to be difficult. Haldimand’s absence was keenly felt, and the weather proved to be severe and highly volatile. Heavy storms made surveying the great expanses of Bras d’Or all but impossible, and the ubiquitous fogs prevented astronomical observations.³⁶⁴ The survey of the interior would have to wait for next winter. Consuming considerable quantities of what must have been a dreadful concoction called “Spruce Beer”, by the spring thaw, Holland wrote to Gage that he longed to be done with “this Uncomfortable Country”.³⁶⁵

That autumn, Holland met George Sproule, a promising young man, serving as an ensign of the 59th regiment, then stationed at Louisburg. Sproule, who was about twenty-two years of age at the time, had been born into a military family in Athlone, Ireland, and had received some formal schooling in Dublin, before joining the military in 1762.³⁶⁶

While posted to Canada, he had received training in mathematics, engineering and

³⁶² Holland to Pownall, 24 November 1765, CO 323/18 pp.537 ff .

³⁶³ *Canseaux Logs*, 17 December 1765, p.64; Chipman, ‘Samuel Holland’, p.22.

³⁶⁴ Shipton, ‘Cape Breton,’ p.83.

³⁶⁵ Holland to Gage, 19 April 1766, WCL: Gage Papers, American Series, vol. 50.

³⁶⁶ George Sproule (c.1743-1817), R. Fellows, ‘Sproule, George’, *DCB*, vol.V, pp.773-4.

surveying, such that Holland noticed that he was already “very fit in Knowledge and Constitution for this Business”. With Pringle’s blessing, Sproule had offered to join the survey as a volunteer, but Holland, who always had a fine eye for talent, envisaged for him a larger role, writing to Pownall that “I beg you will recommend this Gentlemen to their Lordships”.³⁶⁷

Despite the setbacks, significant progress was made during the summer surveying season. Holland’s general opinion of the island experienced a sea change as he enthusiastically noted that Cape Breton should prove to be “a greater Acquisition to the British Empire in America than was Expected”.³⁶⁸ Moreover, he had also received word from Pownall that the Board very much approved of “the preparatory Steps you have taken for the survey of the Island of Cape Breton.” Crucially, the required amount of £182, 10 would be added to the survey’s annual estimates in order to “made a provision for an additional Deputy Surveyor and six Assistants”.³⁶⁹ With these additional funds, Wright would be placed on full-pay, and Sproule would become a full Deputy in the place of the late Haldimand.

Four teams, led by Sproule, Wright, Pringle and Holland set out to chart different areas of the coastline. During this same period, Mowat took the *Canseaux* to sound bays and harbours, while the small, nimble vessels were used to gather nautical information along the rough and craggy shoreline. Holland’s team, often using the *Canseaux* as a base, stayed closest to Louisbourg, surveying the coast from Gabarus Bay to Cape Fumée to the northeast. Meanwhile, Pringle’s team commenced in the south of the island, at the eastern mouth of the gut of Canso, surveying northwards, including Isle Madam, until he

³⁶⁷ Holland to Pownall, 24 November 1765, CO 323/18 pp.537 ff .

³⁶⁸ Holland to Board of Trade, 29 July 1766, CO 323/24.

³⁶⁹ Pownall to Holland, 19 May 1766, AO 3/140.

joined up with Holland's surveys at Gabarus Bay. Wright had the challenging task of surveying the rugged western coast of the island, northwards from Margaree Island, around Cape North and along the north-eastern coast to connect to Holland's surveys at Cape Fumée. While he charted the notorious shipping hazard of St. Paul's Island, Wright skipped some of the more treacherous off shore hazards, which were left to a team headed by Sproule, who was greatly preoccupied surveying Scatry Island, the same deadly rocky outcropping that had nearly sunk the *Canseaux* in 1764.³⁷⁰

On 29 July 1766, Holland was pleased to report that almost all of the island's outer shoreline had been carefully charted, as "we have now finished the Surveys of this Island, Part of Grand La Bras D'Or Lake and Scatry Island excepted where Mr. Sproule is at work with Three Boats".³⁷¹ With respect to completing the mapping of Lake Bras d'Or, Holland claimed, "I can do in a few Clear days but the Fogs are so Frequent, that I have been twice Obligated to Return without performing it."³⁷² Sproule would not conclude his careful exploration of this nightmarish hazard for some further weeks. Regardless, Holland felt sufficiently informed of all aspects of the island that he began to draft his interim report on the island for the Board of Trade.

By mid-August, with operations on Cape Breton going well, Holland dispatched Wright to survey Anticosti Island and Pringle to map the area around Grand-Pabos at the

³⁷⁰ Holland wrote that "Mr. Wright has surveyed from the West side of the Island Round Cape North and Saint Pauls Joined My survey near Cape Fumee", and that "Mr. Pringle who has surveyed the Island of Madame and the Coast from the Gut of Canso, joined my survey in Gabarus Bay", Holland to Board of Trade, 29 July 1766, CO 323/24.

³⁷¹ Holland to Board of Trade, 29 July 1766, CO 323/24.

³⁷² Holland to Pownall, 16 August 1766, CO 323/24, pp.91 ff.

Bay of Chaleurs.³⁷³ As their existing naval resources had already been stretched thin, provisions were made for the purchase of another schooner.³⁷⁴

During this time, other changes were also made to the survey team. Holland had dismissed his clerk, Corporal Charles McDonald, for “being given to Drunkenness, & other Debaucheries”.³⁷⁵ To replace him, Holland found George Derbage “who is a Gentleman of a good Education, well acquainted with Trade & has several Civil Employments in this Province; with him, I have been able to get the Description, & c. of this Island in Order”. Technically only a clerk, Derbage turned out to be much more. Working for five shillings per diem, he was a competent draughtsman of maps and enthusiastically participated in surveying operations whenever called upon. He would remain with Holland for the duration of the Northern Survey.

[Holland's First Interim Report and General Map of Cape Breton, 1766](#)

Holland's first interim report, “A Description of the Island of Cape Breton and its Dependencies”, dated 10 November 1766, was glowing, despite his winter hardships. Holland claimed that “Nature has blessed few Countries with so many advantages as this Island” including fine harbours, fertile soils, excellent timber, ample game, rich veins of coal, but most of all seas “abounding with fish”. In sum, he portrayed the island as a potential economic bonanza where “the most avaricious would be satisfied and the most diffident embolden'd”.³⁷⁶

³⁷³ *Ibid.*

³⁷⁴ Holland to Board of Trade, 29 July 1766, CO 323/24.

³⁷⁵ Holland to Pownall, 10 November 1766, CO 323/24, pp.231 ff.

³⁷⁶ “A Description of the Island of Cape Breton...,” an enclosure to Holland to Pownall, 10 November 1766, CO 323/24, pp.231 ff.

Holland was careful not to unduly interfere in the political discourse. However, Nova Scotia's governors used his optimism to justify why Whitehall should approve a comprehensive development plan for the island. Francklin, when petitioning the Board of Trade to give current residents permanent title, claimed that both garrison commanders of Louisbourg as well as Holland "were well acquainted with the just grounds of their application".³⁷⁷ On 1 June 1767, while on a fact-finding and promotional tour of the islands of Cape Breton and St John aboard the vessel of his close friend Captain William Owen, Campbell made a point of dining with Holland.³⁷⁸

Accompanying Holland's interim report was the first of three versions of his masterly map of Cape Breton. Holland wrote that "I have since laboured very hard to compleat the Plan of the Island, which I have now the Pleasure of transmitting to you with the Description, & Remarks for the Hon Board".³⁷⁹ One monumental copy was drafted to a scale of 4000 feet to an inch, in addition to two more copies done to a scale of two miles to an inch. The large-scale copy was intended for the use of the Board of Trade, while the two smaller copies acted as insurance "should the large survey miscarry". The large plan would be hand delivered to Whitehall by John Howard who was later to be paid £70 from Nova Scotia's contingency fund for his travel expenses.³⁸⁰

Providing the Board safely received all three copies, Holland asked that, if "their

³⁷⁷ Of the coal deposits on Cape Breton, Francklin informed the Board of Trade that between 1 November 1761 and 30 June 1764 the military commander at Louisbourg garrison had authorised his men to extract 4167 chaldrons for the use of the garrison. Francklin noted that the operation cost £800, 5s per chaldron to mine, and as it could be sold for 12s 6d per chaldron, a 7s 6d profit per chaldron could be realized, Francklin to Board of Trade, 30 September 1766, CO 217/21, ff.357-8.

³⁷⁸ V.H. Paltsits (ed.), *The Narrative of Captain William Owen, R.N.* (New York, 1942), p.41.

³⁷⁹ Holland to Pownall, 10 November 1766, CO 323/24, pp.231 ff.

³⁸⁰ Holland wrote that "it gives me Satisfaction, that as Mr. Howard a Midshipman of the Canso, intends on going to England, I can entrust him with the Care & Delivery of the Plan", Holland to Pownall, 10 November 10 1766, CO 323/24 pp.231 ff.; see also 'Memorial from John Howard for expenses in coming from Canada with map', read at the Board of Trade, *JCTP*, 16 April 1767 (vol.12, pp.381-2). The Board agreed to reimburse Howard £70 for his expenses.

Lordship's have no Objection to it", one copy go to the Board of the Admiralty "for the Public Service" and the other copy to "my Benefactor the Duke of Richmond."³⁸¹

Holland wisely wished to pay his respects to the former Southern Secretary who had shown such a great interest in the island.³⁸² While we know the maps did safely arrive at the Board of Trade, no copies are known to have survived.

Based on Holland's description, his interim map delineated the island's outer coastlines with great surety, but lacked details of the interior, notably around the unfinished shorelines of Bras d'Or.³⁸³ Indicative of the growing esteem for which Holland held for Sproule, the latter was given the honour of drafting the large copy of the map. Holland cleverly used the map in an effort to convince the Board to secure Sproule a letter of official leave from his regiment, noting that "since being with the Party [Sproule has] much forwarded the Survey, & is greatly improved in that Business, as will appear by the Plan."³⁸⁴ Major Robert Milward, who had a chance to inspect the map in Louisbourg, described it a "One of the finest Pieces of Performance of the kind, I ever saw".³⁸⁵ A possible explanation for why no copy of map was preserved might be due to the fact that it was considered to be geographically obsolete upon the arrival of the updated versions.

Referring to the written report, Holland guided his readers on a tour around the island, assessing the merits of the three counties he designated (but which did not yet have fully defined boundaries): Louisa, Chester, York, along with the inhospitable

³⁸¹ Holland to Pownall, 10 November 1766, CO 323/24, pp.231 ff.

³⁸² Shipton, 'Cape Breton', p.83.

³⁸³ Holland wrote "I, shall during the Winter, endeavour to survey some small rivers & Lakes, which with the Soundings of Part of the Western coast, shall be inserted in my next plan, the Weather and other Difficulties have Obligated me to omit them in this", Holland to Pownall, 16 August 1766, CO 323/24 pp.91 ff.

³⁸⁴ Holland to Pownall, 16 August 1766, CO 323/24 pp.91 ff.

³⁸⁵ Milward to Gage, 16 August 1766, WCL: Gage Papers, American Series, vol. 59.

“Savage Country” which was made up of what was known as the Cape Breton Highlands, in the northwest of the island.

Holland’s report confirmed what many already knew about the island’s vast coal deposits: “The Coal veins are very numerous, and rich extending in all probability thro’ the whole Island.” Betraying his strong pro-development bias, Holland suggested that the Crown should allow the deposits to be exploited so as to produce a “Fund” which would “circulate so much business, as would soon alter the present condition of the country and give Encouragement to the Fishery.”³⁸⁶ Especially promising were the veins located near the north-eastern coastline of the island, which directly abutted the sea, and so would require very light manpower to extract and transport. One of the inlets located near the largest coal vein, Dartmouth Harbour (the location of modern Sydney) offered great promise for development, as Holland had already declared it to be “one of the best harbours in North America”.³⁸⁷ This echoed Francklin’s estimation that the Dartmouth coal vein was twelve feet thick and half a mile wide and could employ twenty men daily, while vessels 80-100 tons could berth in the harbour during summer months.³⁸⁸

Remarkably, Holland also made claims regarding the potential of Cape Breton’s Cod fishery that could best be described as optimistic, and, at worst, wildly fanciful. In his 1766 interim report, he noted that the total non-Mik’maq population of the island was

³⁸⁶ “A Description of the Island of Cape Breton...., an enclosure to Holland to Pownall, 10 November 1766, CO 323/24 pp.231 ff.

³⁸⁷ Holland to Pownall, 16 August 1766, CO 323/24 pp.91 ff. In this letter Holland also wrote that “The Coast from Morienne or Cow Bay, to the Grand Bras d’Or abounds in Coals, Freestone and plaster, of the first Article it may supply the Whole Continent of North America, if they were destitute of any Other fewel, and many parts are fit for Improvements for farming as St. John’s Island.” Also, “Dartmouth Harbour, by the French Bay des Espagnols, where Our Ship anchored during the survey of Adjacent Parts, is one of the best Harbours in America, the lands level the soil and woods Good and furnishes all sorts of materials for Naval and other Building.”

³⁸⁸ Francklin to Board of Trade, 30 September 1766, CO 217/21, ff.354-9.

only 707 persons,³⁸⁹ and that the island's entire fishing fleet consisted of only 15 schooners and 54 small boats, producing a very paltry annual catch of only 9,700 quintals.³⁹⁰ He compared this to the catch of the French fleet which he claimed employed "upwards" of 1459 shallops and 300 decked boats, employing 11,154 men.³⁹¹ From this, he estimated that they caught an astounding 647,000 quintals per annum, which at 10 shillings per quintal would be worth £323,850! As previously discussed, this amount was at least double the yield of French fishery at its height. Holland went on to estimate that this fleet annually consumed £55,770 in manufactured goods imported from France.³⁹²

Holland conceded that while "The present state of the Fishery is very low", its potential was limited only to the number of vessels that could be employed, "regulated only by the quantity of beach" available to harbour the vessels, the fish stocks being practically infinite. Accordingly, due to his survey of the shoreline, he declared that the British fishery could potentially deploy 820 decked vessels and 2250 shallops to Cape Breton. Beyond the Codfish, there were also "Fish proper for Barreling, such as Salmon,

³⁸⁹ Holland conducted a census of Cape Breton Island as part of the general Nova Scotia census ordered by the provincial legislature. Holland's data provides a fascinating picture of the demographics of the island. The total of 707 persons consisted of 270 White men, 141 White boys, 2 Black men, 1 Black boy, 120 White women, 161 White girls, 2 Black women, and 7 Black girls. In terms of religious affiliation, there were 287 Protestants and 420 Roman Catholics. In terms of the origin of the settlers, there were 70 English, 6 Scottish, 169 Irish, 170 Americans, 21 Germans and other foreigners, and 271 Acadian. The indigenous Mik'maq population was difficult to quantify, but was probably not more than 300 persons, "A Description of the Island of Cape Breton...", an enclosure, Holland to Pownall, 10 November 1766, CO 323/24, pp.231 ff.

³⁹⁰ Harvey, *Holland's Description*, Introduction, p.10.

³⁹¹ Holland's estimate of the annual value of the fishery at the end of the French regime, as presented in both his 1766 and 1768 reports on Cape Breton, was significantly higher than other estimates which for the year 1763 give the total French catch at 386,274 quintals, Brown, *History of Cape Breton*, p.349.

³⁹² Holland explained his calculations, accounting for 1459 decked shallops and 300 decked vessels, he noted that each shallop will take 6 men and each decked vessel will take 8 men, so the fleet in total would employ 11,154 men. Holland further estimated that the annual demand for manufactured goods from France could not be less than £5 per man, so the total would be £55,770. As for the catch Holland wrote that each shallop takes in 300 quintals of fish and each decked vessel takes in 700 quintals, so the total annual yield would be 647,000, valued at £323,850; thus the total annual financial advantage to France would have been £379,620, "A Description of the Island of Cape Breton...", an enclosure, Holland to Pownall, 10 November 1766, CO 323/24, pp.231 ff.

Mackeral, Herring, & c. with which these Coasts, Bays & c. abound”. In addition, Holland lauded the potential of whaling, to which he asserted “this Island is better situated than any other part of North America”.³⁹³

The Cape Breton Survey Continues

In November 1766, Holland was intent on completing his winter survey, “I, shall during the Winter, endeavour to survey some small rivers & Lakes, which with the Soundings of Part of the Western coast”.³⁹⁴ Once again, the severity of the weather limited the progress of his teams on Lake Bras d’Or; most of their time being spent inside the Intendant’s House “in tracing & describing the Courses of several inland Lakes & Rivers”, as opposed to making new discoveries.³⁹⁵

The difficult conditions were a source of concern. Many of the supplies provided by Murray a few years before had either been worn or lost and Holland had to purchase new supplies, sending receipts to Cumberland of £9, 10s. Looking towards the spring of 1767, Holland also feared that he would not have enough small boats to finish the stubborn western coastline. He informed Pownall that “As I have but one decked Boat, which is at present with Mr. Wright... & as it is impossible to keep my Provisions dry... without a Boat having that Conveniency, in my Part of the survey, I have applied to Commodore Dean at Halifax, for another of that Kind, which I hope he will procure me”.³⁹⁶

³⁹³ “A Description of the Island of Cape Breton...,” an enclosure to Holland to Pownall, 10 November 1766, CO 323/24 pp.231 ff.

³⁹⁴ Holland to Pownall, 10 November 1766, CO 323/24, pp.231 ff.

³⁹⁵ Holland to Pownall, 2 October 1767, CO 323/24, ff.351-7.

³⁹⁶ Holland to Pownall, 10 November 1766, CO 323/24, pp.231ff.

Holland Quietly Supports Nova Scotian Activism

Hoping to expand Nova Scotia's population and economy, the provincial government actively lobbied Whitehall to approve a comprehensive development plan for the island.³⁹⁷ Although careful not to unduly interfere in the political discourse Holland felt development should go ahead. Francklin, when petitioning the Board of Trade to give current residents permanent title, claimed that both garrison commanders of Louisbourg as well as Holland "were well acquainted with the just grounds of their application".³⁹⁸

In December 1766, Campbell sold a limited licence for a one-time payment of £500, to extract and sell 3,000 London Chaldrons from the Dartmouth Harbour mines, to a consortium headed by Halifax merchant Benjamin Gerrish.³⁹⁹ With remarkable audacity, Campbell elected to inform Shelburne of the arrangement only when it became a *fait accompli*.⁴⁰⁰ In the spring and summer of 1767, Campbell undertook a fact-finding and promotional tour of the islands of Cape Breton and St John aboard the vessel of his close friend Captain William Owen. On 1 June, in Louisbourg, he dined with Holland. The occasion was surely consequential to both men given the common cause they shared.⁴⁰¹

³⁹⁷ Francklin to Board of Trade, 2 September 1766, CO 217/21, ff.296-308.

³⁹⁸ Francklin informed the Board of Trade that between 1 November 1761 and 30 June 1764 the military commander at Louisbourg garrison had authorised his men to extract 4167 chaldrons for the use of the garrison. The cost of extraction came to 5s per chaldron, totaling £800 in total. The coal could be sold for 12s. 6d per chaldron, thus a 7s 6d profit per chaldron could be realized, Francklin to Board of Trade, 30 September 1766, CO 217/21, ff.354-9.

³⁹⁹ Campbell issued Benjamin Gerrish license to mine 3,000 chaldrons of coal over the period from 13 April to 13 December 1767, for which Gerrish was to pay £500, Brown, *History of Cape Breton*, p.365.

⁴⁰⁰ Campbell to Shelburne, 27 February 1767 and Campbell to Shelburne, 21 May 1767, cited in Harvey, *Holland's Description*, Introduction, p.24.

⁴⁰¹ V.H. Paltsists (ed.), *The Narrative of Captain William Owen, R.N.*, p.41.

Holland's Second General Map of Cape Breton Island

By the spring of 1767, Holland was getting closer to finishing a more complete general map of Cape Breton Island. As the weather improved, he managed to dispatch teams to finish the interior lakes and streams. Sounding the island's exceptionally treacherous west coast, however, proved to be difficult. Pownall would not receive the second version of his Cape Breton map until the following October.

Holland's revised map provides exacting delineation of an unimaginably complicated and rugged coastline, including the vast intricacies of the inland lakes (**Fig. 32**).⁴⁰² In terms of technical mastery in a difficult frontier environment, the map ranks as one of the great achievements of Enlightenment surveying. However, its completion was "at great Trouble & Expense in procuring French & Acadian Pilots, for conducting them, in these parts, few of the English being acquainted therewith; I have for those reasons reduced the Plans at a small Scale for four Miles to an Inch to the smaller scale of 2 miles to an inch, which brings each of them to a single sheet."⁴⁰³

Once again, Sproule was given the honour of being the draughtsman. His rendering is so meticulous that it is hard to imagine that additional details could have been included in any larger scale version. The smaller scale also had the advantage of allowing one to visually capture the entire island at once, a point recognized by Holland, who told Shelburne that "I imagined it would be more convenient for your Lordship's eye".⁴⁰⁴

⁴⁰² Samuel Holland, "A Plan of the Island of Cape Britain", Mss., 1767, BL: R.U.S.I. Map Collection, Add. Mss. 55701, map 7, an enclosure to Holland to Pownall, 2 October 1767, CO 323/24, ff.351-72.

⁴⁰³ Holland to Pownall, 15 April 1767, CO 323/24, pp.305 ff.

⁴⁰⁴ Holland to Shelburne, 14 September 1767, WCL: Shelburne Papers, 77/1.

The map provides a complete rendering of the coastal regions and all of the economically viable aspects of the island. It includes comprehensive hydrographic coverage, except for the especially treacherous south-western coast, extending from Gabarus Bay to Rivière aux Habitants. As the *Canseaux* could not be exposed to the dangers of these waters, William Brown was dispatched in a “small schooner” to complete the task: he would not return to Louisbourg until well into the autumn.⁴⁰⁵

On this great plan, Holland was able to finalise his elaborate cadastral plan of the Island, which bore great similarity to that already devised for the Island of St. John. He assessed the area of the entire island as being 2,208,000 acres, an underestimation by 339,000 acres, or around 13%.⁴⁰⁶ This rate of inaccuracy, which was atypical for Holland, was likely due to the fact that he did not make a comprehensive geographic measurement of the Cape Breton Highlands which were viewed to have little value.

Holland divided the island into three counties: Louisa county (408, 400 acres, 5 parishes, 24 lots), Chester (479,200, 5 parishes, 24 lots) and York counties (492,900, 5 parishes, 21 lots), with the remainder of the island, amounting to 808,000 acres, being designated as “The Savage Country”, the barren highlands, considered unfit for permanent settlement, but suited for “Hunting”. Each of the 70 township lots were measured to be close to 20,000 acres, and, including the lots allocated to the county towns and the garrison lot, the usable division of the island amounted to 74 lots. As with his map of St. John, Holland included a detailed legend, or schedule, which matched each of these cadastral divisions, identified by numbers on the map, to its quantitative specifications.

⁴⁰⁵ Holland to Pownall, 2 October 1767, CO 323/24, ff.351-7.

⁴⁰⁶ The actual area of Cape Breton Island is 10,311km² (3,981 sq mi), Shipton, ‘Cape Breton’, pp.84-5.

In addition to the second map, Holland send to Pownall a highly-detailed chart some months in advance. The chart gave an account of the natural attributes and economic potential of each of the townships. Some townships featured the annotation “Lands are indifferent”; others were more blessed with access to good harbours, fine timber, fertile land or valuable mineral deposits.⁴⁰⁷ All of his maps and reports regarding the island were vehicles of toponymic imperialism as almost every feature was rechristened with a British name, usually in honour of some Whitehall grandee, although the former French names were often included alongside the new nomenclature.

Holland also designated the locations of the island’s three county towns. However, with the exception of Sproule’s two plans of Louisbourg (to follow), none of maps specifically focussing on these towns have survived. We also know that Holland’s team drafted “Plans of the principal Harbours” of the island, sending them to the Admiralty Board, but none have come to light.⁴⁰⁸

As the only existing town of the island, Holland, despite his dislike of the town⁴⁰⁹, envisioned Louisbourg, which was assigned a 5,800 acre lot, as the county seat of Louisa County. Perhaps the finest pictorial impression of the town is Wright’s beautiful watercolour, painted in 1766, which ended up in the collection of George III.⁴¹⁰ Holland would later recommend that Louisbourg be designated the island’s capital, where it could be supported by the affairs of civil administration owing to its lack of other virtues.⁴¹¹

⁴⁰⁷ “Explanation referring to the several townships in the Island of Cape Britain”, an enclosure to Holland to Pownall, 15 April 1767, CO 323/24.

⁴⁰⁸ Holland to Pownall, 15 April 1767, CO 323/24, pp.305 ff.

⁴⁰⁹ “Explanation referring to the several townships in the Island of Cape Britain”, an enclosure to Holland to Pownall, 15 April 1767, CO 323/24.

⁴¹⁰ Thomas Wright, “A North West View of the Town of Louisbourg on the Island of Cape Breton taken in April by 1766 by Thomas Wright”, Mss., 1766, BL: K.Top.119.95.d.

⁴¹¹ Holland to Shelburne, 14 September 1767, WCL: Shelburne Papers, 77/1.

In contrast to Louisbourg, Holland reported that Edward Town, the seat of York County, was to be located on 10,000 acre lot at Dartmouth Harbour, as “no place can be better suited for building a Town than at Edward Point; having the Advantages of the two Branches of this fine Harbour, besides having Materials for all sorts of Building near at hand.”⁴¹² He also noted that by merely constructing works across the isthmus from “one Branch of the Harbour to the other, [along] with some Batteries along the Water side” one could secure the town “against any Enemy.” Holland’s choice of location proved to be very prescient, as in 1784, just across the same harbour, the town of Sydney would thrive as the island’s capital.

The seat of Chester County in the south, Frederick Town, to be located on a 8,320 acre lot (at the site of the modern town of St. Peter’s) was seen as the ideal base for conducting the fishery, and indeed the area was already very popular with Channel Islanders in search of Cod. Holland enthusiastically wrote that “No place can be better situated for a trading Town than the Neck of Land, or carrying place, between Port Augustus and St. Peter’s Bay; and can be fortified without much expense. The easy communication by the Inland Lakes, Richmond Channel, and the Gut of Canso, makes it of great Value; besides the advantage of good soil and Woods, there is about 300 acres of cleared Lands, since overgrown with Brush. Vessels of about 130 or 150 Tons can enter it”.⁴¹³

⁴¹² “Explanation referring to the several townships in the Island of Cape Britain”, an enclosure to Holland to Pownall, 15 April 1767, CO 323/24.

⁴¹³ “Explanation referring to the several townships in the Island of Cape Britain”, an enclosure to Holland to Pownall, 15 April 1767, CO 323/24.

Importantly, in July 1767, Holland sent General Gage a copy of his general map of Cape Breton, as well as two special regional maps of the island.⁴¹⁴ While under no technical obligation to supply the military commander with the proceeds of his survey, Holland was aware that Gage's continued patronage was integral to the continued success of the survey. It was important to remind Gage that the General Survey provided knowledge critical not only to civilian administration, but also military planning.

Three regional maps were drafted at the behest of Gage. Regarding the defenses of Louisbourg, Gage had written to Major Milward, noting that "It is Necessary I should trouble you about Your present Situation at Louisbourg, to know if any part of the Fortifications remain, and what they are, and would be glad to have a rough sketch of them, I understand the Island at the Entrance of the Harbour remains fortified".⁴¹⁵

Milward duly passed this request on to Holland in recognition of the surveyor-general's unique knowledge of Louisbourg's current and former state. The following month, Gage wrote Holland directly, "As what You mention respecting the present situation of the Coal Mines Seems of Consequence. I should be glad to have Your thoughts more fully upon this Subject, which you will be pleased to accompany with the Plans you mention".⁴¹⁶ Holland charged Sproule with drafting two accurate and up-to-date maps of Louisbourg, each from a different perspective, to assuage Gage's curiosity regarding the town where he had garrisoned an entire regiment. One of the maps focused closely in on the town, cleverly employing a folding over-set flap to depict the state of the town's

⁴¹⁴ Samuel Holland, "A Plan of the Island of Cape Britain", WCL: Gage Collection. Maps 3-C-13, an enclosure to Holland to Gage, 2 July 1767, WCL: Gage Papers, American Series, vol. 66.

⁴¹⁵ Gage to Milward, 18 September 1766, WCL: Gage Papers, American Series, vol.57.

⁴¹⁶ Gage to Holland, 20 October, 1766, WCL: Gage Papers, American Series, vol.58.

citadel before and after its razing on the orders of Pitt,⁴¹⁷ while the map showed the overall situation of the town, guarded by the “Island Battery” (**Fig. 33**).⁴¹⁸ Holland noted that while virtually “nothing remains” of the town’s defense works, he outlined a plan by which “with little Expense” Louisbourg could be protected from both landward and maritime assault.⁴¹⁹ To defend the town from attacks by “the Indians, or any other irregular Enemy by Land”, he proposed erecting “two Blockhouses... on the Flanks of the Citadel Bastion” while “a stockade BreastWork” should be constructed “round the Whole with a few small Cannons or Swivels to flank them.” In order “to preserve the town from being insulted by Privateers or other Adventurers by Sea” all that needed to be done was to place “a dozen of 24 or 32 pounders” on the surviving “Island Battery”.

As for the third map, Holland entrusted the young James Goldfrap to make a fine chart of the north-eastern coast of the island, carefully labeling all of the major coal deposits (**Fig. 34**).⁴²⁰ Gage would likely have been surprised to learn that vast amounts of coal could so easily be transferred onto seagoing vessels. Holland drew Gage’s attention to the main mine at Dartmouth Harbour, which was a far more commodious location for this enterprise than the more treacherous anchorage of Granby Bay, traditionally the site where the army had extracted coal.⁴²¹ He held out the promise that “If this mine [alone]

⁴¹⁷ George Sproule, “A Plan of Louisbourg”, Mss., 1767, WCL: Gage Collection, Maps 4-C-20, Brun, no.28.

⁴¹⁸ George Sproule, “A Plan of the Harbour of Louisbourg”, Mss., 1767, WCL: Gage Collection, Small Maps 1767, Brun, no.34, both Louisbourg maps were enclosures to Holland to Gage, 2 July 1767, WCL: Gage Papers, American Series, vol. 66.

⁴¹⁹ Holland to Gage, 2 July 1767, WCL: Gage Papers, American Series, vol. 66.

⁴²⁰ George Goldfrap, “A Plan of the Sea Coast from Gage Point to Cumberland Cape including Dartmouth and Granby Bays With the Coal Mines in that extent”, Mss., 1767, WCL: Gage Collection, Maps C-3-10, Brun no.36, an enclosure to Holland to Gage, 2 July, 1767; another copy, BL: Royal United Services Institution (R.U.S.I.) Collection, Add. Mss. 57701, map 8.

⁴²¹ In his 1768 final report on Cape Breton, Holland noted that at “Baye des Espagnoles, or Dartmouth Harbor...there is a convenient coal vein, which goes thro’ the Cape. This Place I have recommended to General Gage, to be worked for the use of the Garrison of Louisbourg, as that in Granby Bay, which is worked at present is dangerous for Shipping”, Holland to Hillsborough, 10 November 1768.

was preserved for the King's Use, not only this Garrison, but those of Quebec, Halifax, & New York could be supplied with little expense".⁴²²

Holland also sent to Shelburne a copy (now lost) of the second version of his general map of the island along with a report detailing the Northern Survey's activities and accomplishments.⁴²³ In his report, Holland clearly articulated his view that the settlement freeze negatively affected the island and its future value to Britain. Holland wrote, "There seems to be little Hopes that this place will ever be able to retrieve his former prosperity, or indeed any part of it, unless some methods more vigorous and Salutory than what has hither to appeared be speedily taken." He cautioned that "without some extraordinary encouragement" from the government and "without any person of Substances to support any public Improvement, without any Trade to the Mother Country" the town, and indeed the entire island will become virtually worthless to the mother country."

Holland's Astronomical Observations

During this time, Holland consolidated the various data from the astronomical observations that he and his team had made on both the Island of St. John and Cape Breton over the preceding two years,⁴²⁴ using advanced equipment and the ephemeris tables of Jérôme de La Lande in making his calculations.⁴²⁵ Holland recorded that, at

⁴²² Holland to Gage, 2 July 1767, WCL: Gage Papers, American Series, vol. 66.

⁴²³ Holland, "Description of the Island of St. John", 14 September 1767, WCL: Shelburne Papers, 77/1.

⁴²⁴ Samuel Holland, "Observations made on the Islands of St. John & Cape Britain, to ascertain the Longitude & Latitude of those Places; agreeable to the Orders & Instructions of the right Honourable The Lords Commissioners for Trade & Plantations", 20 April 1767, an enclosure to Holland to Pownall, 15 April, 1767, CO 323/24, pp.309-15.

⁴²⁵ Equipment included an astronomical clock by George Graham, an astronomical quadrant of a two-foot radius by Jonathan Sisson, improved with a horizontal circle & stand by Heath & Wing, a two-foot reflecting telescope by Short, and a ten foot refracting telescope by Dolland; see also Jérôme de La Lande, *Tables de Logarithmes* (Paris, 1805).

Observations Cove on St. John, he and Haldimand made seven jovian observations, that is, the emersions of Jupiter's satellites, over a period from 20 January to 29 April 1765.⁴²⁶

In sending this report to Pownall, he requested that it "be presented to my lord Macclesfield, the President of the Royal Society, in order, by comparing them with corresponding Observations made by Members of that body; the Longitudes of these Parts may be ascertained."⁴²⁷ The Royal Society was impressed by this contribution to astronomy: Holland's paper was promptly published in the *Philosophical Transactions*, the Society's prestigious journal.⁴²⁸

Whitehall Continues the Settlement Freeze

Reporting on a decision made by the Privy Council, on 2 December 1766, Shelburne told Francklin "that His Majesty would not at present authorise or permit any coal mines to be opened or worked in the island of Cape Breton, and ordering that all

⁴²⁶ Holland returned to Louisbourg on 4 August 1766 and on 5 August noted "I had a Complete Observation of the Solar Eclipse, which with the repeated Observations of the Eclipses of Jupiter's Satellites will determine the Exact Longitude of this Place and the Whole Island"; Shipton, 'Cape Breton', p.83: They were accordingly able to fix the latitude of their makeshift observatory as being 46° 2' 30" North. At various points around Cape Breton Island, from 10 March to 25 April 1766, Holland and Wright together made three separate observations, and between 18 February and 14 April 1767 Holland alone made seven observations. They were able to fix the longitude of various points such as 45° 54' for the "Island Battery" at Louisbourg; 47° 2' for cape north; 46° 13' for Dartmouth Harbour. Holland was also delighted to be able to witness a solar eclipse on 5 August 1766, Holland to Pownall, 10 November, 1766, CO 323/24, pp.231 ff.

⁴²⁷ Holland noted that "to determine with Exactness the Longitudes hitherto taken; it will be necessary to deliver a Copy of this Paper to some members of the Royal Society, that they may be compared with corresponding Observations made in England", "Observations made on the Islands of St. John and Cape Breton", dated 20 April 1767, an enclosure to Holland to Pownall, 15 April, 1767, CO 323/24, pp. 305 ff.

⁴²⁸ Samuel Holland, 'Observations made on the Islands of Saint John and Cape Briton, to ascertain the Longitude and Latitude of those Places...', *Philosophical Transactions of the Royal Society*, vol. 58 (1768), pp.46-53.

petitions and proposals for that purpose should be dismissed”.⁴²⁹ In Nova Scotia, the decision was not popular.⁴³⁰

Not everyone at Whitehall was supportive of the development freeze. In the summer of 1767, after having received copies of Holland’s maps of Cape Breton, various luminaries at the Admiralty Board, most notably Sir Edward Hawke and Philip Stevens, applied to obtain specific choice lots on the island. This was once again indicative of the power of Holland’s maps to inspire administrators, even if, in this case, it was for their own personal, rather than public, gain.⁴³¹

The Survey Begins in Québec

Despite the fact the Proclamation of 1763 greatly circumscribed Québec’s boundaries, the province still occupied an area vastly larger than any of the Thirteen Colonies. The largely uncharted areas included the interior on both sides of the Québec-Montréal corridor, and the lengthy shorelines of lower St. Lawrence, the world’s largest river estuary. In the north the province extended to include the Saguenay River and Lac St. Jean, and in the south the substantial Gaspé Peninsula.

⁴²⁹ Francklin was sent a blanket order “prohibiting, for the present, the opening and working of coal mines in the Island of Cape Breton”, Order in Council, dated 3 December 1766, an enclosure to Shelburne to Francklin, 2 December 1766, CO 217/44, ff.64-70; see *APC*, vol.V, pp.18-20.

⁴³⁰ Advancing the desire of both the Nova Scotian government and Halifax’s merchants to unlock Cape Breton’s economic potential, Campbell granted Gerrish the mining concession the following year despite the fact to flaunted imperial policy. Upon learning of the mining concession, Shelburne’s response was unequivocally disapproving, yet surprisingly mild in tone. He wrote that “his Majesty cannot consent” that the coal mines be granted “for the purposes” Campbell had arranged. He further continued that nobody in Halifax should be affronted by the restrictions as “The Province of Nova Scotia from its first establishment has shared in a very ample proportion of His Majesty’s paternal care and bounty on all occasions; a proper industry on the part of the Province and a cheerful desire to contribute according to their abilities towards the improvement of the Fisheries and cultivations of the lands joined to the Bounty and aid of Parliament cannot fail to render the colony very flourishing”, Shelburne to Campbell, 26 May 1767, cited in Harvey, *Holland’s Description*, p.25.

⁴³¹ After having received a copy of Holland’s map of the island, on 26 August 1767 prominent figures at the Admiralty such as Sir Edward Hawke and Philip Stevens applied for specific lots on Cape Breton, Brown, *History of Cape Breton*, p.364-5.

From the perspective of land management, two very distinct cadastral systems were to be mandated simultaneously in different regions of Québec. The established French seigneurial system was to remain in place throughout the settled regions of the province, centred along the Québec-Montréal corridor.⁴³² While most of these estates were to remain the possession of their traditional seigneurs, it was still considered necessary to re-survey many of these cadastres, owing to the variable quality of the existing French maps. Moreover, new maps would be needed for certain seigneuries whose titles had reverted the Crown.

A very different cadastral system was envisaged for the vast regions of province which remained largely uninhabited by Europeans, including areas of the interior, the lower St. Lawrence, and the Gaspé Peninsula. This system was to conform to the ‘New England’ method of surveying roughly square or rectilinear townships in advance of the arrival of settlers.⁴³³ Located within these townships, the cadastral lots were to be granted to British applicants under the terms conventionally employed in the northern Thirteen Colonies.⁴³⁴

Given the scale of his Québec mandate, Holland, upon his arrival in Québec in August 1764, needed to appoint a competent and loyal deputy to oversee the surveyor-general’s office of Québec during the many times he would be absent doing other general survey business. While he initially considered J.F.W. Des Barres for his Québec deputy,

⁴³² Québec: ‘Titles of French Inhabitants’, policy in effect 1765-75, Labaree, *Royal Instructions*, vol. II, no.745; Québec: ‘French system of Lands Grants restored in Québec’, policy placed in effect from 2 July 1771, Labaree, *Royal Instructions*, vol. II, no.835; see R.C. Harris, *The Seigneurial System in Early Canada* (Montreal, 1984).

⁴³³ Québec: ‘Establishing Townships in new Provinces’, policy in effect 1763-71, Labaree, *Royal Instructions*, vol. II, no.766.

⁴³⁴ Québec: ‘Procedure for Granting Lands’, policy in effect 1763-71, Labaree, *Royal Instructions*, vol. II, no.760; Québec: ‘Terms for Granting Lands in New Colonies’, policy in effect 1763-71, Labaree, *Royal Instructions*, vol. II, no.759.

on 8 September 1764, he appointed John Collins who “has been employed for many years as a deputy surveyor in the Southern Colonys, and was recommended to me by Governor Murray and several other Gentlemen.”⁴³⁵ Little is known of Collins’ background, although he likely had worked as a surveyor in Virginia before moving to Québec to become a merchant.⁴³⁶

Relations between Major-General James Murray, Québec’s hard working, but controversial, governor and Collins became so acrimonious that they threatened to derail the General Survey. While Collins was to be paid a £100 base salary by Parliament, most of his income was to come from his 50% share of the various fees that were due to surveyor-general’s office. However, Murray, like some other governors, often chose to hire his own surveyors for public infrastructure projects or to accept the often substandard efforts of private surveyors for cadastral work. In 1766, Murray ordered Collins to prepare a survey and report on the King’s Wharf at Québec, preparatory, in Murray’s view, of selling the Wharf to private investors. Collins subsequent report and activism against Murray and his designs brought their dispute to a head.⁴³⁷ Fortunately for Holland, Murray, as an ardent ‘King’s Friend’ was out of favour with the Rockingham administration, and was recalled, leaving the province for good on 28 June 1766.

Murray was replaced by General Sir Guy Carleton, later known as the 1st Baron Dorchester, a comparatively mild-mannered and cautious Anglo-Irish soldier, who incidentally had received training as a military engineer. Carleton and Holland, while

⁴³⁵ Holland would have been relieved that he went with Collins instead of his original choice for his provincial deputy, J.F.W. Des Barres, as he noted that “Mr. Des Barres who I had proposed to be my Deputy surveyor in the Province of Quebec, is employed by my Lord Colvill at 20 shillings per day” surveying between Halifax and Canso, Nova Scotia, Holland to Pownall, 20 November 1764, CO 323/18, ff.86-7.

⁴³⁶ John Collins (c.1730-1795) R.J. Hayward, ‘Collins, John’, *DCB*, vol. IV, pp.161-2.

⁴³⁷ Murray to Collins, 29 March 1766, CO 42/5, f.246; John Collins, “A Plan of His Majesty’s Wharf, with a warrant for Surveying the Same”, CO 42/5, f.249.

never very close, were on favourable terms. They had served together during the late war, and had become acquainted in England in 1753 when Carleton served as the tutor to their mutual patron, the Duke of Richmond.⁴³⁸ With Carleton, there would be no more friction between the governor and the provincial surveyor general's office. Carleton proved to be a reliable and effective supporter of the General Survey, at one point even lending his own nephew to the service. Holland would also benefit from Carleton's excellent political relations. Uniquely, he was not only a favourite of George III, but also maintained close ties to both the Rockingham and Chatham administrations.

Holland's Own 'Murray Map'

Despite leaving Québec for the Island of St. John in September 1764, Holland was nevertheless intent on drafting his own version of the 'Murray Map' for the Board. In his first letter from Port la Joye he wrote that "I have brought all the original plans from Canada with me" and that he and his men would work on drafting a fine copy over the winter.⁴³⁹ It will be recalled that while the Board was aware of Holland's leading role in that epic project, the Board had not in fact been given a copy of their own. Sending the Board a new colossal map of Québec not only served to add to the esteem he enjoyed at the Board, but also helped to contextualise his future surveys in the province.

On 4 March 1765, with the drafting of the map well under way, Holland wrote to Pownall that I "propose to send a set of Plans of the Survey of Canada by a scale of Two Thousand Feet to an Inch with an Index by a small scale it will contain Sixty Two Sheets".⁴⁴⁰ While not to a scale quite as large as that of the original copies of the 'Murray

⁴³⁸ Hornsby, *Surveyors of Empire*, p.13.

⁴³⁹ Holland to Pownall, 20 November 1764, CO 323/18, ff.86-7.

⁴⁴⁰ Holland to Pownall, 4 March 1765, CO 323/18, ff.111-2.

Map', it would have been a monumental cartographic creation, occupying hundreds of man-hours. Although Holland mentions that he sent the finished map to London under the care of Robinson in October 1765,⁴⁴¹ and the map is later recorded as being in the Board's possession, Pownall never makes any mention of it, and, while a map of this description was recorded in both the Board's 1776 and 1780 inventories, this gargantuan map has since disappeared without a trace.⁴⁴² Fortunately, what appears to be Holland's original index map survives. It provides one of the most magnificent and detailed contemporary renderings of the Québec-Montréal corridor that can be viewed in its entirety at any one time (**Fig. 35**).⁴⁴³

Mapping the Gaspésie

The mapping of the Gaspé Peninsula and Chaleur Bay in the far eastern reaches of the province, a region known today as the Gaspésie, was a joint collaboration between John Collins and the General Survey. The waters surrounding the peninsula, which lay at the southern mouth of the St. Lawrence estuary, were well-renowned for their excellent fisheries, but the land was not considered to be suitable for agriculture on any meaningful scale. Part of the region had long been granted as seigneuries, dating back as far as the 1690s, improvements had not been made, thus the estates had reverted to the Crown.

⁴⁴¹ Holland wrote of "the Survey of the Settled Parts of Canada, Whereof I had the Honour to Transmitt Copies to your Lordships by Mr. Robinson", Holland to Pownall, 29 July 1766, CO 323/24.

⁴⁴² The 1776 inventory of the plans of the Northern General Survey received by the Board includes an entry "Canada, settled parts with Lt. Haldimand's Survey of the Lower Parts" drawn to a scale of 200ft to an inch, and marked as being present "in the Office", "List of Plans sent to the Government...", 14 February 1776, AO 3/140, f.6; The 1780 Board of Trade map inventory records "Holland Ms. – 2 plans of the Inhabited Parts of Canada", Francis Aegidus Assiotti, "List of map, plans & c: belonging to the right honble: the Lords Commissioners of Trade and Plantations", 1780, CO 326/15, portfolio 6, maps 8 & 9.

⁴⁴³ Samuel Holland, [Index Map for 'Canada'], Mss., [1765], CO 700/Canada 18. It is also worth noting that in 1767 that Holland drafted a reduced copy of the 'Murray Map' which was acquired by General Gage, Samuel Holland, "A Plan of the Settled Part of Canada reduced from the large survey Made in the Years 1760 & 1761 by Order of General Murray Governour of the Province", Mss., 1767, WCL: Gage Collection, Maps C-3-12; Brun, no.133.

In 1765, the entire Gaspésie region was estimated to have only 411 permanent European residents, although a large number of transient fisherman set up camp along its shores during the fishing season.⁴⁴⁴ Of the permanent residents, most were Acadians: expelled from Nova Scotia, they had been allowed to remain after swearing oaths of allegiance to George III.⁴⁴⁵ Permitted to participate in the fishery and to occupy small lots, authorities did not intend to grant Acadians any large land tracts. Yet, the region was of immense interest to merchants from several towns ranging from Boston to the Channel Islands. The Québec government was under pressure to devise a plan for developing an inshore fishery in the region, supported by permanent residents.

Collins recalled that in the spring of 1765, he “was immediately ordered by the Governor to take a Survey of all the Fishing Posts in the bays of Gaspey and Chalieuere within this Province in Order to have the same Established and Carry on the British Fishery”.⁴⁴⁶ Collins hired a sloop and pilot and headed down the river poste haste, commencing his field operations at the beginning of July. In what he called his “Tour” to the “Extreem part” of Québec,⁴⁴⁷ his primary objectives were to survey and assess the five most promising fishing ports on the western and southern shores of the peninsula: the Bay of Gaspé, Port Daniel, Bonaventure, Paspebiac, and Grand River.

Collins’ endeavours, even though he was acting at the behest of Murray, were of importance to the Board of Trade and the General Survey. In early August, Holland dispatched a surveying team under Pringle, assisted by Thomas Hanson, to create a general map of the Bay of Chaleurs. Collins’ larger scale surveys of individual harbours

⁴⁴⁴ R.C. Harris, *Historical Atlas of Canada* (Toronto, 1987), vol. 1, plate 54.

⁴⁴⁵ Murray commented that the “Fugitive Acadians”, now residing at Boneventure, should be “placed more immediately under the Eye of Government”, Murray to Board of Trade, 15 July 1765, CO 42/3, ff.2-4.

⁴⁴⁶ Collins to the Board of Trade, 17 March 1766, CO 42/5, f.253.

⁴⁴⁷ “Memorial of John Collins” to Murray, [n.d., but Spring or Summer 1766], CO 42/5, ff.244-5.

filled in a crucial part of the Northern Survey's charting of the shores of the Gulf of St. Lawrence, as well as serving Holland's episodic requirements with respect to the placement of the settlements themselves.⁴⁴⁸ Pringle also commenced trigonometric surveys of the shores of the bay, in close communication with Collins. As the winter was setting in at the beginning of November, Collins had completed over 124 uninterrupted days in the days in the field at a considerable operational cost exceeding £400!⁴⁴⁹

The result was a magnificent series of five maps, each of which included detailed plans for cadastral division and thoughtful analysis of the merits of each port.⁴⁵⁰ Owing to the spirit of cooperation between the Québec and General Survey teams, Collins rough

⁴⁴⁸ Holland was involved in a land speculation scheme headed by his friend General Haldimand, a syndicate which also included Des Barres. Haldimand had acquired the former seigneurie of Grand-Pabos, located on the shore of Chaleur Bay, between Port Daniel and Grand River. Holland was charged by Haldimand with assessing the merits of the property, and making whatever efforts he could to attract rent-paying settlers. Pringle inspected the property and submitted "A Description of Pabos" accompanied by a map drafted by Thomas Hanson, neither of which is thought to have survived. Unfortunately, Holland reported to Haldimand that Pringle's "Description was not all I wished for". While such arrangements were not uncommon in amongst colonial officials, Holland would have wanted to keep Pringle's activities at Grand-Pabos *sub rosa*, as he was technically allocating government resources to a private commercial endeavor, Holland to Haldimand, 20 January 1768, BL: Haldimand Papers, Add. Mss. 21728, f.210.

⁴⁴⁹ The Quebec Executive council approved Collins' expense relating to the surveys as follows: "The Committee having Considered the accounts presented by Mr. Collins Deputy Surveyor General, Are of the Opinion that he ought to be paid immediately the following articles Viz.; A Set of Plans for the use of the Council – £32-10; Ditto, to be Returned to the Board of Trade – £32-10; To 2 Chain Carriers & 2 Hatchet men employed during the time of the Survey 61 days at 3s. – £36-12; "To Admeasuring, surveying & Setting out the Lands of the Bays & Harbours of Gaspie & Chaleurs, from the 1st of July to the 1st of November [1765] both days included, is 124 days at 24s – £148-16.; To my Assistant in the survey from 15th July to 1st Novemr. 1765, both days included, is 110 days at 15s – £82-10, Excerpt of the Journal of the Executive Council of Québec, 23 April 1766, CO 42/5, ff.209-10; Other approved expenses included: 19 December 1765: "To a Warrt. To Mr. Smith for the Hire of a Sloop & Pilotage to carry the Deputy Surveyor Genl. to the Bays of Gaspee and Chaleur - £218, 11s Currency: £139-16-6"; "24 May 1766: A Warrant to John Collins Esqr. Depy. Surveyor General for £186, 8s, 8d Currency...being the amount of certain Articles of His Accot. Agt. The Government, Total: £163-18-8", Québec, "Abstract of the Government Accounts from Octr. The 7th 1765 to the 26th May 1766", CO 42/5, ff.204-6.

⁴⁵⁰ The maps are as follows: John Collins, "A Plan of Grand River in the Bay of Chaleur in the Province of Quebec...Surveyed 20th Aug., 1765", CO 700/Canada 21; John Collins, "A Plan of Port Daniel in the Bay of Chaleur in the Province of Quebec...Surveyed Septr. 2nd, 1765" CO 700/Canada 22; John Collins, "A Plan of Paspebiac in the Bay of Chaleurs in the Province of Quebec. As surveyed... Septr. 2nd, 1765." CO 700/Canada 23; John Collins, "A Plan of Bonaventur in the Bay of Chaleurs in the Province of Quebec, as Surveyed agreeable to Order and Instructions of the Hon. James Murray," CO 700/Canada24; John Collins, "A Plan of the Bay and Harbour of Gaspey in the Province of Quebec, including the Rivers York and Dartmouth", CO 700/Canada20; Copies of theses maps along with a "Map of Lake Champlain from Crown Point to St. John's Fall" sent to London, Holland to Pownall, 16 August 1766, CO 323/24 pp.91 ff., received by Board, 6 November 1766, *JCTP*.

copies were each rendered into beautifully-drafted final copies by Charles Blaskowitz during the proceeding winter.⁴⁵¹

As with each of the other harbours, Collins' "A Plan of the Bay and Harbour of Gaspé" lines the shore with cadastral lots of fifty acres each with 742 feet of water frontage, and extending 2,935 ½ feet into the interior (**Fig. 36**).⁴⁵² Despite looking like diminutive seigneuries, each lot was intended to be serve as homesteads for individual fishing families, giving them both direct access to the sea and sufficient land to dry and cure their catch. Each township is numbered, and its quantitative specifications tabulated on a chart. Lining the sand-spit that extends from the shore is a chain of tiny lots, which were meant only for the careening of vessels. In the centre of this band of fisherman's lots is the symmetrical plan for a town, perfectly in line with the Enlightenment models which had been laid out by surveyors such as Charles Morris in neighbouring Nova Scotia. Intended to serve as a service centre for the rural lots, the town provided a base for merchants to inspect the fish and sell supplies to the area's residents. This distinctly British colonial design of land management held that these communities would form the basis of New England-style townships to be incorporated in the coming years.

Pringle's excellent "Plan of Chaleur or Sterling Bay" places this archipelago of isolated harbours into meaningful context. It encompasses both the Québec and Nova

⁴⁵¹ Two sets of Collins' Gaspé map series were made, one for the provincial government and the other for the Board of Trade, with each set being valued by Collins at £32, 10s each, Excerpt of the Journal of the Executive Council of Québec, 23 April 1766, CO 42/5, ff.209-10.

⁴⁵² John Collins, "A Plan of the Bay and Harbour of Gaspé in the Province of Quebec, including the Rivers York and Dartmouth", Mss., 1765, CO 700/Canada 20. Also refer to: John Collins, "A Plan of Paspébiac in the Bay of Chaleurs in the Province of Quebec. As surveyed... Sepr. 2nd, 1765", CO 700/Canada 23, C. Boudreau & M. Gaumond, *Le Québec: Sous l'Oeil de l'Arpenteur-Géomètre* (Québec, 2007), pl.102, pp.88-9.

Scotia shores of this large inlet.⁴⁵³ Such an overall plan would be absolutely necessary for officials at the Board of Trade to consult when considering the merits of land and fishing license applications for the region. While work was commenced in September 1765, it would be interrupted on several occasions. It was not until the autumn of 1767 that Holland was able to report that that “Chaleur [Bay]” is now “completely Sounded”.⁴⁵⁴ He also noted that “Sproule and Watts are to winter this year at Gaspé, where with a pendular Clock & Telescope, they will determine the Longitude of that place, to compare with my observations, which I shall make here at the same time; besides this they will finish & compleat what may be wanting in the Survey of those parts”.

As one of these interruptions, Collins was dispatched by Murray in the spring of 1765 to survey, in conjunction with a representative from New York, the precise location of the 45th parallel, marking the province’s southern boundary from the St. Lawrence River to Lake Champlain.⁴⁵⁵ Collins made valuable observations, including the presence of stands of oak and pine fit for naval construction.⁴⁵⁶ The resulting map, which included the expanse of the entire lake, was subsequently drafted by Blaskowitz and dispatched to

⁴⁵³ John Pringle, “A Plan of Chaleur or Sterling Bay, with the entrance of the River Rustigusche, Shipegán and Miscou Islands”, Mss. [n.d., but 1768], CO 700/Canada 25. Holland wrote that this Winter “my travelling Academy, shall draw the Plans of Chaleur Bay, & c., that no time may be spent, but in employment for the public Good”, Holland to Pownall, 2 October 1767, CO 323/24, ff.351-7.

⁴⁵⁴ Holland to Pownall, 2 October 1767, CO 323/24, ff.351-7.

⁴⁵⁵ Collins to the Board of Trade, 17 March 1766, CO 42/5, f.253, read at the Board, *JCTP*, 6 November 1766 (vol.12, p.339).

⁴⁵⁶ In his report to Murray, Collins noted that the New York-Québec border region was Report on fixing New York- Québec Boundary from St.Francis. to Lake Champlain by order of Murray and by edict of Proclamation. Areas “well adapted to the production of Hemp and Flax, a great part of the Woods on Lake Champlain and the upper part of Lake St. Francis and on the river St. Lawrence and Chateaugue between those Lakes abounds with good Large Oak Trees fit for Naval Construction, and some very good Pineries which afford Pines fit for Masting...”, Collins to Murray, 21 May 1766, CO 42/5, f.255. Writing to the Board of Trade, Collins recommended that we must “prevent any further waste being made of such timber and which indeed had been very great the Year Past and if not Timely prevent will in a few years be wholly destroyed”, Collins to the Board of Trade, 17 March 1766, CO 42/5, f.253.

London along with the Gaspésie surveys (**Fig. 37**).⁴⁵⁷ Information gleaned from this endeavour would later serve to inform Holland's own activities in the region on behalf of the General Survey a few years hence.

With respect to the Gaspésie, apart from the small number of Acadians who remained there, fishermen were reluctant to winter in such an inhospitable climate and maintain a boat fishery. By 1777, the European population had barely grown, being estimated at between only 500 and 600 permanent residents.⁴⁵⁸ In the end, Collins' development model was a poor fit for the region.

Charting Lower St. Lawrence

During the 1767 surveying season, Pringle and Sproule led separate teams, occasionally supervised by Holland, to map the southern shore of the world's largest river estuary.⁴⁵⁹ The sparsely-populated Lower St. Lawrence region was defined by a vast and treacherous coastline. The parties, however, made rapid progress, working up the estuary from the Gaspésie. By the end of the season, Holland was delighted to report that they had completed the south shore all the way up to Ile du Biq, which was "only 30 leagues", or 90 miles below the point of the shoreline included in the Murray map.⁴⁶⁰ He would

⁴⁵⁷ John Collins, "A Survey of Lake Champlain including Crown Point and St. John's on which is fixed the line of forty five degrees north lattit. terminating the boundarys betwe[e]n the provinces of Québec and New York agre[e]able to his Majesty's proclamation done by order and instruction of the Honourable James Murray, esqr...May 21th 1765.", Mss. 1765, LOC: G3802.C45 1765.C6 Vault, Sellers and Van Ee, no.1074, an enclosure to Holland to Pownall, 16 August 1766, CO 323/24 pp.91 ff., read at the Board, *JCTP*, 6 November 1766 (vol.12, p.338).

⁴⁵⁸ Harris, *Historical Atlas of Canada*, vol.1, pl.54.

⁴⁵⁹ Holland wrote that "I hope Early in the Spring to Join them [my teams in Gaspé] and to Proceed on the survey of the St. Lawrence River, and to Join the Survey of the Settled Parts of Canada", Holland to Board of Trade, 29 July 1766, CO 323/24.

⁴⁶⁰ A fine example of the Lower St. Lawrence maps is: Samuel Holland, "Plan of the Province of Quebec from Little Fox River on South Side of River St. Lawrence to beyond Little Pabos", Mss., [1767], MODHD: z100/1.

soon be able to add the mapping that they had done of the outer parts of the province “to the settled parts of Canada which are already performed.”⁴⁶¹

Surveying Newfoundland's Dependencies

The way Crown policy and trade had developed in Newfoundland had a profound impact on developments in the Magdalens and Anticosti, and, as will later be made apparent, on Whitehall's attitude towards Labrador and Cape Breton Island. The Newfoundland fishery was immensely valuable. From 1764-1768 the average annual export value of the British catch was £453,000, approximately 25% of the total for all British North American commodity exports.⁴⁶² Nonetheless, in 1764, of the estimated 902,380 quintals of fish caught in Newfoundland, only 13% were captured by the English ship fishery: 49% was caught by resident Newfoundlanders and other British colonials, and 38% was caught by the French.⁴⁶³ In 1764, about 1,500 English migrant fisherman also decided not to return to England, 'defecting' to Newfoundland or the other colonies, thereby eroding the valuable “nursery” of potential recruits for the Royal Navy.

In 1764, Commodore Sir Hugh Palliser, a friend and patron of James Cook who surveyed Newfoundland from 1763 to 1767, was appointed governor of Newfoundland, determined to restore the 'ship' fishery to a position of dominance. Cook's reports and charts helped Palliser to gain control of the fishery as they were used to determine which fishing areas were most promising, and where he should focus his resources to combat illegal settlement and “clandestine trade”.⁴⁶⁴

⁴⁶¹ Holland to Pownall, 2 October 1767, CO 323/24, ff.351-7.

⁴⁶² S.J Hornsby, *British Atlantic, American Frontier* (Hanover, N.H., 2005), p.27.

⁴⁶³ W.H. Whiteley, 'Governor Hugh Palliser', pp.160-1.

⁴⁶⁴ J. Bannister, *Rule of the Admirals: Law, Custom, and Naval Government in Newfoundland, 1699-1823* (Toronto, 2003), p.163; W.H. Whiteley, 'James Cook and British Policy in the Newfoundland Fisheries 1763-7', *Canadian Historical Review*, vol.53, no.3 (1973), pp.247 and 252-3.

Stunning in their scientific accuracy and attention to detail, the surveys that Cook and Michael Lane, his deputy and successor,⁴⁶⁵ conducted of the coasts of Newfoundland and south-eastern Labrador are rightly considered to be amongst the most impressive instances of hydrographic mapping of any era (**Fig. 38**).⁴⁶⁶ They far transcended the traditional remit of this genre, and were accompanied by detailed reports of the economic potential of the best harbours and adjacent seas. There is thus a direct link between Cook's endeavours and those conducted by the deputies working for Holland, Cook's former tutor.

While stylistically different, and usually featuring less nautical detail than Cook's charts, the Northern Survey's maps of Anticosti Island, the Magdalens, and Mingan and Sept-Iles regions of Labrador impart similarly exhaustive analysis of the subject's natural attributes and economic potential, in addition to a comparable commitment in the scientific rigour of methodology. In this sense, the output of the Northern Survey can be seen as a natural extension of Cook and Lane's surveys.

Following the Proclamation of 7 October 1763, the Magdalen Islands and Anticosti Island, both of which lay within the Gulf of St. Lawrence, were placed under the jurisdiction of Newfoundland and its unique policies with regards to the restriction of settlement and the prosecution of the fisheries.⁴⁶⁷ Pursuant to his instructions, in 1765,

⁴⁶⁵ Cook was appointed by Governor Graves on the recommendation of the Board of Trade, 29 March 1763, CO 195/9, f.163; Whiteley, 'James Cook', p.248. The final result of Cook's work, which was continued after 1767 by his assistant Lt. Michael Lane, was the one of the finest masterpieces of eighteenth-century surveying, James Cook & Michael Lane, *A General Chart of the Island of Newfoundland* (London: Sayer & Bennett, 1775), refer to R.A. Skelton, *James Cook: Surveyor of Newfoundland* (San Francisco, 1965).

⁴⁶⁶ James Cook, "A Plan of York-Harbour", Mss., 1763, MODHD: B188, Drawer 1 (soon to be transferred to the National Archives U.K., ADM 352 Series).

⁴⁶⁷ A Royal Commission of 25 April 1763 placed these additional territories under "the care and inspection" of the governor of Newfoundland, and was pursuant to a letter for the Board of Trade to the Privy Council, "A Representation of the Lords Commissioners for Trade and Plantations upon the

Holland dispatched Haldimand to survey the Magdalens: late the following year, Wright travelled to Anticosti to map that mysterious island.

Wright, assisted by Thomas Watts, had instructions to map the island and its surrounding waters, and in addition, to make a comprehensive assessment of Anticosti's natural virtues. Well-aware of the island's reputation, Holland wrote that "Messr's Wright and Watts ...are gone upon the survey of the Island of Anticosti with full Instructions to make a Complete discovery of that Island, which is little known but by Unhappy Ship wrecked People, by which means however I understand that rich minerals are found there."⁴⁶⁸ They set out in a schooner with two whale boats, prepared to spend the winter on the island.⁴⁶⁹ On 24 May, Haldimand, assisted by William Hogg, the midshipman of the *Canseaux*, and a small team, set out from Port la Joye aboard the schooner *Jupiter*.⁴⁷⁰

The Magdalen Islands

When Haldimand arrived, he found the islands left much to be desired, described as "in General Barren and Mountainous" containing virtually no mineral wealth worth mentioning. Ominously, Haldimand assessed that "It does not seem Capable of

alteration s and additions expedient to be made in the government of Newfoundland, Instructions in Consequence of the Treaty of Peace," 15 March, 1763, CO 194/16, ff.69-71. All of Labrador, the Magdalens and Anticosti Island were officially placed under Newfoundland's administration by the Proclamation of 7 October, 1763, G.O. Rothney, 'The Case of Bayne and Brymer,' *Canadian Historical Review*, vol. XV (1934), p.267. *JCTP*, 4 March 1766 (vol.12, p.259); see "Regulations for the fishery on Labrador, Anticosti, Magdalens and whale fishery in the Gulf of St. Lawrence", 8 April 1765, CO 194/16, pp.175-6.

⁴⁶⁸ Holland to Pownall, 16 August 1766, CO 323/24, pp.91ff.

⁴⁶⁹ Holland informed the Board that Wright "is now preparing to set out for the Island of Anticosti with a Schooner Boat, and Two Whale Boats, Where he is to Winter and Forward the Survey during that season, make Astronomical Observations for the Ascertaining of both longitude and Latitude to Keep a Meteorological Journal – and Several People which have been Shipwrecked on this island have given me hopes of finding Minerals there", Holland to Board of Trade, 29 July 1766, CO 323/24.

⁴⁷⁰ Haldimand and Hogg set out for the Magdalens on 24 May 1765, *Canseaux Logs*, p.43, and returned on 3 October 1765, *Canseaux Logs*, p.57.

producing sustenance for the people which are or may be Employ'd on it".⁴⁷¹ On the positive side, the surrounding waters were teeming with fish, but, more importantly, the Magdalens were identified as being "Infinitely superior to any Place in North America, for the Convenience of taking the sea Cows", or what is properly known as the Atlantic Walrus, an industry currently only conducted by one business.⁴⁷²

Haldimand produced a magnificent map of the island, charting the contours of the island's treacherous shores and numerous sandy inlets in great detail (**Fig. 39**).⁴⁷³ He anchored his triangulated surveys with geodetic base-points realised by astronomical observations.⁴⁷⁴ Also apparent on the map are the copious nautical observations sounded by Hogg, who also monitored the tides and ocean currents.

In 1766, Palliser, who was acting on similar information as contained in Haldimand's report, and indeed may have been directly apprised of its contents, recommended to the Board that "The Magdalene Islands are to be used only for [the walrus] oil fishery, which must be exclusive in some one person; they may be granted in fees simple or leased for a term of years".⁴⁷⁵ Curiously, the Governor was advising the

⁴⁷¹ Peter Frederick Haldimand, "A Description of Magdalens Islands & c.", Mss., 1765, CO700/Canada 27, an enclosure to Holland to Pownall, 6 October 1765, CO 323/18. A copy on a smaller scale was prepared for General Gage, Peter Frederick Haldimand, "A plan of the Magdelain, Brion, Bird and Entry islands reduced from the large survey made agreeable to the orders and instructions of the right honourable, the Lords Commissioners for Trade and Plantations", Mss. [1766], WCL: Gage Collection, Maps 4-C-18.

⁴⁷² The Atlantic Walrus, *Odobenus rosmarus rosmarus*, Haldimand described them as "The most unwieldy, ugly creatures imaginable", however, in 1765 they produced 290 tons of oil, Haldimand, "A Description of Magdalens Islands & c.", an enclosure to Holland to Pownall, 6 October 1765, CO 323/18, see Shipton, 'Cape Breton', p.84.

⁴⁷³ Peter Frederick Haldimand, "A Plan of the Magdalen, Brion, Bird, Entry, and Deadmans Islands in the Gulph of St. Lawrence", Mss., 1766, CO 700/Canada 27.

⁴⁷⁴ Haldimand noted that the islands lay between 47° 14' and 47° 41' North in latitude and between 61° and 61° 38' West longitude, with a compass variation of 17° 30' West (as observed at Entry Island), Haldimand, "A Description of Magdalens Islands & c.", an enclosure to Holland to Pownall, 6 October 1765, CO 323/18.

⁴⁷⁵ Palliser echoed Haldimand's opinion of the Walrus fishery on the Magdalens, "Last year 630 cows, producing 42 tons of oil, were killed by Mr. Grindley and his four sons, who carry on the fishery with 17 Acadians and 5 Canadians", "Report on the Sea-Cow Fishery at the Magdalene Islands", an enclosure to Palliser to Pownall, 19 March 1766, CO 194/16, pp.252-3.

creation of a monopoly, which was diametrically opposite to the instructions given to the governors of Nova Scotia, and reflective of how economic and political realities varied across the provinces.

Anticosti Island

With the survey of Cape Breton well under way, Holland decided to simultaneously devote resources to another priority, Anticosti Island. Comprising a massive area of 3,047 square miles, Anticosti Island divided the mouth of the lower St. Lawrence into two great channels. In spite of its forbidding nature, it was also thought to be endowed with vast natural resources, a prospect which urgently required investigation.⁴⁷⁶

Wright's Anticosti expedition produced an exceedingly fine chart of the island, in addition to a highly detailed analytical report, which in the early months of 1768, was published as *A Description of the Island of Anticosti* in both *The Gentleman's Magazine* and *The London Magazine*⁴⁷⁷, a considerable accolade for the surveyor as both publications were amongst the most widely circulated and highly respected English periodicals of the era. Wright's chart provided an accurate delineation of the island's

⁴⁷⁶ In 1680, the French crown awarded the island to the explorer Louis Jolliet (1645-1700), partially in recognition of his discoveries made in the Mississippi river valley. Thus, Anticosti became the largest island in history ever to be entirely owned by one private estate at 3,047 sq. miles (7,893 km²). While the fort Jolliet built on the island was abandoned shortly after his death, the island remained in the possession of Jolliet's descendants until their title was annulled in 1763. That year, Anticosti was transferred to the jurisdiction of Newfoundland, and as of 1766, it had no permanent residents. Consistent with the policies of that colony, and its own lack of accurate information, the Board of Trade refused to make any grants of the island to individuals, at least until they were in receipt of the results of the survey, *JCTP*, 27 November 1764 (vol.12, pp.113-6), note "Regulations for the fishery on Labrador, Anticosti, Magdalens and whale fishery in the Gulf of St. Lawrence", 8 April 1765.

⁴⁷⁷ Thomas Wright, 'A Description of the Island of Anticosti', published in both *The Gentleman's Magazine*, vol.38 (February 1768), pp.63-5 and *The London Magazine*, vol.37 (March 1768), pp.133-5.

coastline, with references to its main features as well as featured comprehensive hydrographic data (**Fig. 40**).⁴⁷⁸

Wright and Watts built a crude winter quarter at “Jupiter’s River” from where they made detailed jivial observations.⁴⁷⁹ These empirical data, combined with the plotting of the island within its accurate geodetic context, were intended to dramatically lessen the danger that the island would pose to mariners. Wright noted that “A great number of vessels have formerly been wrecked on the eastern part of the island, which may now be easily accounted for, as by the best draughts, hitherto made, it appears on the present actual survey, to be 12 leagues short of its real length and considerably out of its situation, both in latitude and longitude”.⁴⁸⁰

Correcting the record, Wright noted that “The Island of Anticosti is situated at the entrance of the river St. Lawrence, between the parallels of 49° 4’ and 49° 52’ 15” N. latitude and the meridians of 61° 58’ and 64° 35’ West longitude from London determined by ten observations on the eclipses of Jupiter’s first Satellite. Its circumference is 282 statute miles, its length 129 miles, & its breadth from 32 to 12 miles. The island contains 1,699,840 acres of very indifferent land”. Moreover, not only was the island surrounded by hidden reefs and shoals and buffeted by high seas and strong currents, but that “Ellis Bay [today’s Port-Menier] affords the only shelter for vessels”, and a “very indifferent one” at that.

⁴⁷⁸ Thomas Wright, “Plan of the Island of Anticosti”, Mss., 1767, MODHD: 266 Ah1, an enclosure to Holland to Pownall, 2 October 1767, CO 323/24, pp.351-7, read by Board, *JCTP*, 15 December 1767 (vol.12, p.434).

⁴⁷⁹ Holland noted that “Messrs’ Wright and Watts have wrote me from the Island of Anticosti, acquainting me of their safe arrival there, & that they have begun, preparing their Winter Quarters, at a small Harbour, where they can lay up their schooner-boat conveniently for the season”, Holland to Pownall, 10 November 1766, CO 323/24, pp.231 ff.

⁴⁸⁰ Wright, ‘Description...of Anticosti’, p.65.

Wright painted a very mixed picture of the economic potential of Anticosti. On the positive side, he observed, in reference to the mouth of the “Observation river” (later renamed the Jupiter River), “I am of the opinion that the seal fishery might be carried on here with some success in the spring of the year; these creatures, at the time of high water, enter the river in great bodies, and are very careful to be out again before the tide quits them, which might be easily prevented by a net properly placed at the entrance of the river”. He also noted the potential of another lucrative industry, recounting that “Whales...are sometimes cast on shore on the south side of the island”, such that “Indians from the mainland, crossing over in the summer to hunt, frequently find them”.

On the other hand, agriculture was rendered impossible, not only due to the rocky nature of the soil, but the extreme length and severity of winter conditions, noting that the season’s first incidence of frost came as early as 15 September, with the last occurrence being 21 June! More importantly, he asserted that the waters surrounding Anticosti would not support a cod fishery, as unlike the seas around the Magdalens, “Fish are very scarce along the coast of the island”. He also, he dashed any hopes that the island might be a source of timber for the Navy’s shipyards: while the island was densely forested with “Birch, Spruce, and Pine”, the trees tended to be “of a middling size”. Although Wright recounted “a report which prevails among the French” that the island was once home to a silver mine, he did not find any evidence of mineral wealth in the island.

Wright’s noted that “The Bears, who are the principal inhabitants of this island, are so numerous, that in the space of six weeks, we killed fifty three, and might have destroyed twice that number if we had thought fit.” Despite this carnage, Wright showed

himself to be an exceptionally perceptive observer of animal behaviour, accurately describing the bears' diet and their hibernation patterns.

At the end of the 1767, Wright was given leave to return to London, where he hand delivered his Anticosti map and related his analysis of the island to the Board of Trade.⁴⁸¹ Recounting the trying conditions of his mission, he requested and received £70 compensation for making the trip.⁴⁸² Officials in London were evidently impressed with his work, and Wright eventually had the honour of seeing his paper regarding the astronomical observations he made on the island published in the *Philosophical Transactions of the Royal Society*.⁴⁸³

Conclusions

By any metric, the first phase of the Northern Survey was an unqualified success. Through brilliant management of his resources and an insistence on technical rigour, Holland produced maps of the highest standard of geodetic accuracy and draughtsmanship. The detailed analysis of the natural attributes of the regions explored provided Whitehall with comprehensive intelligence regarding its new northern domains. In sum, Holland had masterfully tamed a wild frontier using the most sophisticated methods of Enlightenment empiricism.

As the Board of Trade received Holland's surveys and detailed reports, Whitehall was in the process of developing bespoke policies with regard to the surveyed regions.

The Island of St. John's had been definitively parcelled out to various proprietors

⁴⁸¹ Holland to Pownall, 2 October 1767, CO 323/24, pp.351-7.

⁴⁸² "The Memorial of Thomas Wright, Deputy Surveyor of the Northern Dist. of America" to the Board of Trade, [n.d., but read by the Board, 19 January 1768], CO 323/24, p.623.

⁴⁸³ Sir Nevil Maskelyne, 'Immersion and Emersion of Jupiter's first Satellite, observed at Jupiter's Inlet, on the Island of Anticosti, North America, by Mr. Thomas Wright, deputy surveyor-general of lands for the Northern District of America ...', *Philosophical Transactions of the Royal Society*, vol.64 (1774), pp. 190–3.

following Holland's detailed cadastral plan; the fate of the other regions was yet to be decided.

As 1767 drew to a close, in spite of Holland's achievements, the survey was beset with nagging uncertainties. Although he had made appeals to Lauchlin MacLeane, Shelburne's powerful personal secretary, Holland was still short the £182, 10s he needed to pay his deputies.⁴⁸⁴ Moreover, he would be, for an indefinite period, without some of his most important principals. Sproule had been temporarily seconded back to his Regiment, Goldfrap and Pringle had permanently left the survey in order to pursue preferment in England, and Wright was in London indefinitely.⁴⁸⁵

The new year of 1768 would bring profound institutional changes to the administration of colonial affairs at Whitehall. The Board of Trade would be merged into a new department, and become subject to the distinctly conservative agenda of a new Secretary of State with augmented powers. The changes would signal an end to the relative technocratic autonomy of the Board of Trade. As the Northern Survey moved closer to the Thirteen Colonies, its operational autonomy would be increasingly subject to the vagaries in both Whitehall's agenda and the momentous events which were to transform the socio-political landscape in the colonies themselves.

C. The Southern District

⁴⁸⁴ Holland to Lauchlin Macleane, 7 July 1767, CO 5/226, ff.41-2.; also, Holland to Maclane, 31 July 1767, WCL: Shelburne Papers, 51/451.

⁴⁸⁵ Shipton, 'Cape Breton', p.85.

Introduction

When De Brahm arrived in St. Augustine, at the beginning of 1765, he had the dual task of charting the province's Atlantic coast and completing well-defined cadastral surveys before any real settlement could be established outside of the immediate vicinity of St. Augustine, which was itself a run-down village. Geographically, most of the province was also a *tabula rasa* and the knowledge that did exist was often misleading. He faced many resource challenges. The annual budget of £700,17s provided by the Board of Trade was modest; there was a very limited pool of skilled surveyors to draw upon in the 'Infant Colony'; and he enjoyed no official support from the Army or Navy. De Brahm's mercurial and argumentative personality also limited his ability to resolve problems. Technically gifted, he lacked the political and leadership sensibilities to gain the support and cooperation of others, notably the governor of the province.

Frustrated with what he perceived to be De Brahm's inability to fulfill all of the survey needs of the province, Governor Grant acted almost from the beginning to marginalize De Brahm, even though he was the surveyor-general appointed by the Board of Trade. Specifically, he subcontracted to other surveyors both general survey and cadastral mapping tasks. While he willingly shared these work products with the Board of Trade, De Brahm was kept largely uninformed about these mapping developments. Thus, the policy developed by the Southern Survey was informed by maps commissioned both directly by the Board of Trade and those made under the auspices of other official sponsors.

In spite of encountering head winds, De Brahm, in two separate reconnaissance expeditions, accurately delineated the entire Atlantic coast from St. Augustine down to

Cape Florida. His series of inter-locking maps included copious annotations, geodetic readings, nautical observations and detailed analysis of the natural history and resources of the region. His detailed survey of the promising Mosquito Inlet region was a masterpiece of surveying in difficult frontier conditions. As he turned his attention to mapping the St. John's River valley, he produced a series of inter-connecting maps that, when joined with his coastal surveys, formed a systematic survey of the north-eastern regions of the province, embracing virtually all of the intended areas of settlement. While still far from proven, De Brahm also sought to locate one of the reputed trans-peninsular waterways which, if realised, would represent a major boon to navigation and commerce.

Whitehall's High Hopes

In theory, East Florida represented Whitehall's ideal model of governance for a financially successful colony, as, save for Newfoundland and Quebec, it would be the only North American colony without an elected legislature. The very large military presence, combined with the fact that a great majority of the free residents owed their employment directly to the Crown's largesse, inherently discouraged rebellious sentiments.⁴⁸⁶ During the height of the Stamp Act Crisis, Lord Adam Gordon, a prominent visitor to the province, remarked to Grant that "yours is the only province in America, I have visited where grievances do not grow!"⁴⁸⁷ Whitehall hoped that building a colonial polity dominated by a landed gentry, having been afforded large land grants by the King, would quickly develop East Florida as a colony of flourishing plantations

⁴⁸⁶ East and West Florida were home to two regiments of the British army throughout this period, stationed in both St. Augustine and Pensacola. General Frederick Haldimand held the Southern Command from 1767-1773, R.R. Rea, 'Brigadier Frederick Haldimand: The Florida Years, 1767-1773', *FHQ*, vol. 54, no.4 (April 1976), pp.512-31.

⁴⁸⁷ Gordon to Grant, 5 October 1765, NAS: Grant Papers, GD494/1/ 9, frame 132.

focused profitably on supplying high-value, semi-tropical crops. It was initially envisaged that the province would be settled by white Protestant immigrants, acting as both resident landowners and indentured labourers, the latter being assisted by imported Black slaves.⁴⁸⁸

Investing in East Florida generated intense interest within the very highest circles of London society. The highly favourable accounts of the province dating from the end of the Spanish period caused many British luminaries to think of the colony in terms of a “New Canaan” or a “Paradise”. Serving to both legitimize and promote these Utopian visions, the Board of Trade sponsored advertisements in several leading newspapers including, *The Gentleman’s Magazine*, *The Scots Magazine* and *The Edinburgh Advertiser*.⁴⁸⁹ They would have been inspired by the outrageous wealth generated by Britain’s colony of Jamaica, where less than 2,000 landowners generated over £1 million in annual revenues from agricultural goods, principally sugar:⁴⁹⁰ in only a generation, production had doubled, while sugar prices had risen 85%.⁴⁹¹ Enthusiasm was further spurred by advertisements in popular periodicals sponsored by the Board of Trade, and most notably an *Account of East-Florida* (1766), a pamphlet published by Dr. William Stork, a German-born physician and botanist who had recently returned from a trip to the

⁴⁸⁸ “French Protestants to be Transported at the Expense of Government,” Grant to Pownall, CO 5/540, f.3; Privy Council to Board of Trade, 14 November 1763, CO 5/540, f.14.

⁴⁸⁹ Hancock, *Citizens of the World*, pp.154-5.

⁴⁹⁰ In the 1765 fiscal year alone, Jamaica exported £1.023 million worth of agricultural goods to England, D. Mac Pherson, *Annals of Commerce*, vol.III (London, 1805), p.435; see R.B. Sheridan, ‘The Wealth of Jamaica in the Eighteenth-Century’, *English Historical Review*, vol. 18, no. 2 (1965), pp. 292-311; cf. M. Parker, *Barons of Surgar: A New History of the Rise and Fall of the British West Indian Empire* (New York, 2011).

⁴⁹¹ Sheridan, pp.303.

province.⁴⁹² Indeed, one key speculator exclaimed that Stork's work "has sett us all Florida Mad".⁴⁹³

It must be noted that what Whitehall very much wanted to avoid a sequel to their experience with the establishment of Georgia. From the time that it was founded as a proprietary colony in 1733 to the time it became a royal province in 1752, Georgia consumed £135,000 in subsidies from Whitehall. In 1763 it was still receiving a £4,000 annuity from the crown.⁴⁹⁴ While it had served as an important buffer against the Spanish and had attracted some very well-organised settlers, by the early 1760s, it had barely 10,000 inhabitants (excluding Native Americans) and maintained a sizeable trade deficit.⁴⁹⁵ The Board of Trade, for with good reason, dreaded the prospect of East Florida becoming another such dear and dependent burden.

In both East and West Florida, authorities followed the "Virginia Method" of allocating land grants, a method that relied fundamentally on the completion of accurate cadastral surveys in order to go forward. This held that in the first instance, the grantee was to identify a desired location on available grown land.⁴⁹⁶ The governor would then issue a warrant of survey, which would empower the provincial surveyor-general or his designate to define the limits of the grant around the chosen location. In order to ensure an equitable distribution of land, grants of an equal size were to have a comparable proportion of "profitable" and "unprofitable" acres. In order to provide as many grantees

⁴⁹² W. Stork, *Account of East-Florida, with a journal, kept by John Bartram of Philadelphia, botanist to His Majesty for the Floridas, upon a journey from St. Augustine up the river St. John's* (London, 1766); also note Board of Trade's advertisements: *Scots Magazine*, Annual Register, vol.6, no.III (1763); Bailyn, *Voyagers to the West*, pp.433-4.

⁴⁹³ Bailyn, *Voyagers to the West*, p.434; G.C. Rogers, 'The East Florida Society of London, 1766-1767', *FHQ*, vol. 54, no.4 (April 1976), p.482.

⁴⁹⁴ K. Coleman, *Colonial Georgia: A History* (New York, 1976).

⁴⁹⁵ Figures from the 1765-66 fiscal year show that Georgia exported £84,829 to £136,079 in imports, Coleman, p.221, Mowat, *East Florida*, p.34.

⁴⁹⁶ Kain and Baigent, *The Cadastral Map*, p.231.

as possible with direct access to the sea or navigable rivers the length of the land grant must not run along the waterfront but must extend inland, and the breadth of the grant must be no more than one-third of its length.⁴⁹⁷ With respect to the resulting plats, or cadastral maps, those respecting the smaller grants were to be registered with the provincial surveyor, while copies of those pertaining to the large mandamus grants were to be forwarded to both the Treasury Board and the Board of Trade.

James Grant Becomes East Florida's First Governor

In June 1763, Colonel James Grant learned that he was to be appointed East Florida's first governor.⁴⁹⁸ Born in 1720, he hailed from a landed family in the Scottish Highlands, and read law at Edinburgh, before eschewing a comfortable legal career to seek fame and fortune in George II's army. He served with distinction in various posts on the Continent and during Jacobite Rebellion before deploying to America. He gained great acclaim throughout South Carolina and Georgia after leading the British to victory in the Cherokee War (1761). The following year he participated in the siege of Havana, and after its surrender, briefly served as its lieutenant-governor. Possessing many connections in Bute's circle, and conservative by conviction, he was the archetypal Scottish 'King's Friend'.⁴⁹⁹

⁴⁹⁷ "Equitable Distribution of Lands," Labaree, *Royal Instructions*, vol. II, no. 761.

⁴⁹⁸ James Grant (1720-1806) did not officially receive his gubernatorial commission until 21 November 1763; for biographies of Grant: A.M. Grant, *James Grant of Balindalloch* (London, 1930); P.D. Nelson, *General James Grant* (Gainesville, 1993); L. Namier and J. Brooke, *The Commons, 1754-1790*, vol. II (London, 1964), pp.529-31; J. Oliphant, 'Grant, James', *DNB*, vol.23, pp.312-3.

⁴⁹⁹ The Earl of Bute's appointment to head a ministry proved to be immensely providential to the fortunes of numerous Scottish officials. Bute ensured that an unprecedented number of his countrymen received important government posts, were elevated in military rank, or were ennobled, and his influence over patronage lasted for about three years after he left office. It was therefore no coincidence that the first governors appointed to lead all four of the new colonies created in America in 1763 were Scottish: James Murray (Québec), George Johnstone (West Florida), James Grant (East Florida) and Robert Melville (the Ceded Islands). All four men built their careers in the armed forces, Murray and Grant having served in the army, while Johnstone and Melville were naval officers. Their appointments can each also be specifically

When Grant arrived in St. Augustine on 29 August 1764 he immediately realized that his mission would be even more challenging than expected. While the stone citadel of St. Mark's was quite impressive, the town itself was almost completely deserted and the buildings were falling into an unfortunate state of repair; the surrounding country 'estates' were overgrown with weeds. In total, the town was inhabited by only 200 soldiers, and only a score of civilians.

Possessing a sophisticated appreciation of the role of cartography in the development of a colony, Grant's cartographic imperatives centered upon locating good natural harbours, mapping prospective locations for infrastructure, and, very importantly, demarcating the cadastral lines of land grants. Immediately following his appointment, he declared that "The Discovery of harbours in the Peninsula of Florida being the greatest Consequence to Gov't, Your Lordships no doubt will think it expedient that an exact Survey should be made of the East and West Coasts, as soon as possible."⁵⁰⁰

In November 1764, Grant complained that "The land surveyor is not yet arrived which puts me under some difficulty, as I cannot issue warrants to a number of people who have come into the province and made application."⁵⁰¹ Grant thus stepped into this vacuum, and endeavoured to personally take charge, and at times, micro-manage the mapping activities in his province.

linked to their connections to Scottish friends of Bute. Regarding the three governors who appear in our story, Murray's eldest brother, Lord Elibank was a particular favourite of Bute, while Johnstone benefitted not only from being recommended by Elibank, but also managed to befriend Bute's personal secretary, John Hume. Grant's candidacy was likely aided by recommendations from Sir Henry Erskine and General James St. Clair and General George Keppel, 3rd Earl of Albemarle, MPs who were close allies of Bute; R.F.A. Fabel, 'Governor George Johnstone of British West Florida,' *FHQ*, vol. 54, no. 4 (April, 1976), pp.501-2; Namier and Brooke, *House of Commons*, vol.II, pp.530; Nelson, *James Grant*, p.44.

⁵⁰⁰ Grant to Hillsborough, 28 November 1763, CO 5/540, f.16.

⁵⁰¹ Grant to Board of Trade, 22 November 1764, CO 5/540, ff.115-8.

Grant seemed to show very little enthusiasm for the prospect of working with De Brahm even before the latter arrived in St. Augustine. Grant's preferred candidate was Captain Elias Durnford, a skilled military engineer with who he had become acquainted in Havana.⁵⁰² In November 1764, he remarked that "I am disappointed in not having Durnford as our residing Surveyor,"⁵⁰³ and less than a week later he regretfully noted that "I have received a letter from Capt. Durnford, acquainting me that he was appointed Surveyor General of West Florida, so I suppose Mr. De Brahm's Commission still takes place for this province but I have heard nothing of him."⁵⁰⁴ It is quite likely that Grant had long been well acquainted with De Brahm by reputation, and indeed, there is a good chance that they may have previously met in person.⁵⁰⁵

Shortly after De Brahm's arrival in St. Augustine, Grant handed his surveyor-general his own series of detailed "Instructions" that specified how the latter was to fulfill his provincial mandate.⁵⁰⁶ The majority of these directives were consistent with both the best customs practiced in other provinces, and indeed De Brahm's own conceptions of his role. However, there was one major exception. Grant unconventionally insisted that all provincial deputy surveyors would be required to take an oath of office before the governor. Although surveyors-general in other provinces routinely followed broad

⁵⁰² Durnford was responsible for one of the most important maps of the siege, Elias Durnford, *A Plan of Havana, and its Environs* (London: Thomas Kitchin, 1762) and a view, Elias Durnford, *A View of the City of the Havana, taken from the Road near Colonel Howe's Battery*. (engraving by Edward Rooker after drawing by Elias Durnford and etching by Paul Sandby, London: Thomas Jefferys, 1765), published in *Scenographia Americana: or a Collection of Views in North America and the West Indies*. (London, 1768).

⁵⁰³ Grant to Knox, 15 November 1764, Grant Papers, NAS: GR/494/1/1, frame 105.

⁵⁰⁴ Grant to Pownall, 21 November 1764, NAS: Grant Papers, GR/494/1/1, frame 104.

⁵⁰⁵ In 1756, during the construction of Fort Loudon in the backwoods of South Carolina, De Brahm had an extremely acrimonious and well publicized feud with army captains Raymond Demere and John Stuart (the future Southern Indian Superintendent), which permanently impaired his relations with both the military community and the Indian Department. While De Brahm was largely based in Savannah during Grant's military tenure in South Carolina, they had numerous mutual acquaintances in Charleston, De Vorsey (ed.), *De Brahm's Report*, Introduction, pp.19-24.

⁵⁰⁶ Grant's Instructions to De Brahm, 1 February 1765, an enclosure to Grant to Board of Trade, 1 March 1765, CO 5/540, ff.177-81.

directives from the governor, it was generally accepted that such a senior Crown officer had the authority to unilaterally select and supervise his own subordinates. Grant admitted that this provision “had not been the practice in other provinces”, but that his oversight was necessary as in other colonies he “found that great abuses were committed by the chain-carriers.”⁵⁰⁷ This point would prove to be a constant source of friction between Grant and De Brahm, especially during the frequent instances when deputy surveyors failed to execute their jobs effectively, either through incompetence or fraud.

De Brahm Sets Out

In sharp contrast to Holland, De Brahm had to acquire all of his own equipment, including a vessel and surveying instruments without the support of the military. Consistent with a proposal De Brahm printed on 6 December 1764 in the *Georgia Gazette*,⁵⁰⁸ on 17 December 1764, De Brahm signed an agreement with Francis Goffe, a Savannah skipper, to supply a schooner and to repair and refit the vessel for a voyage lasting 3 months. The ship would have to have “double sets of sails Anchors and cables, a jury mast, two dozen poles, two flags, and two Jacks of different colours for signals, that a cabin shall have 3 bed rooms, four sash windows, and a Table sufficient for Three Persons to write and draw Plans and do other business upon; that the Quarter deck shall have a table a seat and an Awning for three persons upon occasion and the store rooms of

⁵⁰⁷ Grant to Board of Trade, 1 March 1765, CO 5/540, ff.177-80.

⁵⁰⁸ The proposal reads: “The subscriber [De Brahm] being appointed surveyor-general of the southern district of His Majesty’s dominions in North-America, gives notice, that he will in a very short time set out to make general surveys both of coast and main, will engage in said employ by the month, at least for a quarter of a year, a good convenient schooner, with one four rowing and two smaller boats, properly fitter out and manned with ten sailors, under command of a master and mate, all well experienced mariners; also two sailors well-versed in trigonometry. Such as may be willing to enter said service are desired to be expeditious in sending their proposals to Joseph Ottolenghe, Esq. in Savannah, or to the surveyor-general’s office in St. Augustine”, *Georgia Gazette*, 6 December 1764, cited in De Vorsey (ed.), *De Brahm’s Report*, pp.35-6.

the said vessel shall be in sufficient condition to keep & secure the provision to be supplied for the passage in good order.”⁵⁰⁹ Critically, Goffe’s vessel, the *Augustine Packet*, was built “without a keel” and “calculated for the shore, & in land passages”, so while it would be ill-suited to long traverses in open water, it would be ideal for inshore surveying.⁵¹⁰

The schooner was to accommodate five persons in the cabin, and eleven in steerage. It must also be accompanied by its own skiff, and “2 rowing boats with mast & sail & compass”. Necessary equipage must include “a set of ½ minute and ¼ minute glasses, 2 six lb leads, 2 4lb leads, 2 3lb leads, 4 2lb leads; 6 lines of 50 fathoms each, 4 lines of 30 fathom, 3 of 20, 4 of 12 fathoms”.⁵¹¹ The vessel was to be supplied with twenty-nine listed items of victuals, including 1000 lbs of beef, 1000 lbs of common biscuit, 224 lbs of black eyed peas, 50 live fowls, 1 she goat, along with quantities of cheese, chocolate, coffee, rum, wine and beer.⁵¹²

Francis Goffe was to man the *Augustine Packet* with a crew of thirteen, including a mate, ten able sailors and a cabin boy, and the ship had to be ready to sail within fifteen days of the signing of the agreement. Goffe was furthermore to place himself under De Brahm’s command, and was to agree to “follow all orders as he shall receive”. In return,

⁵⁰⁹ De Brahm-Goffe Charter, 17 December 1764, CO 323/18, f.101, an enclosure to De Brahm to Board of Trade, 20 December 1764, CO 323/18, ff.96-9.

⁵¹⁰ De Brahm to Board of Trade, 24 March 1765, CO 323/18, ff.136-40.

⁵¹¹ De Brahm-Goffe Charter, 17 December 1764, CO 323/18, f.101, an enclosure to De Brahm to Board of Trade, 20 December 1764, CO 323/18, ff.96-9.

⁵¹² “A Particular of the Provisions agreed upon to be put on Board the Schooner *Augustine Packet* Francis Goffe Master for the Voyage mentioned in the annexed Charter party.”, CO 323/18, f. 100, an enclosure to De Brahm to Board of Trade, 20 December 1764, CO 323/18, ff.96-9.

De Brahm promised him a fee of £300, paying £120 up front, and pledging the balance within ten days of the conclusion of voyage.⁵¹³

De Brahm went to considerable difficulty in acquiring necessary “mathematical apparatus” in Savannah, most notably “three quadrants of uncommon sizes, two of equal dimensions viz. of 57 1/3 Inches Diameter for the use of the boats & one 114 2/3 Inches Diameter to be worked by small pulleys for the Altitude observations on the Sea Coast, by whose means I will be able to observe the meridian Altitude to the very seconds”.⁵¹⁴

De Brahm’s professional staff for the General Survey was to consist of “five Geometers”, supposedly trained surveyors, one of whom was Henry Yonge, Jr., who had been trained by his father, Georgia’s highly-competent new Surveyor-General. His professional team was to be assisted by a handful of less skilled surveying attendants, such as chain men, who were to be recruited in St. Augustine. In one of his innumerable complaints to the Board about the inadequacy of his annual budget, De Brahm cautioned that the wages for his staff alone would amount to £500, 17s per annum, leaving only £200 in his budget for all other purposes.⁵¹⁵ The miniscule European population of East Florida would ensure that the Surveyor-General would always experience severe problems recruiting skilled labour.

The *Augustine Packet* arrived off the bar of St. Augustine on 25 January 1765, but due to inclement weather, De Brahm was not able to land in the town itself until 29 January.⁵¹⁶

⁵¹³ De Brahm-Goffe Charter, 17 December 1764, CO 323/18, f.101, an enclosure to De Brahm to Board of Trade, 20 December 1764, CO 323/18, ff.96-9.

⁵¹⁴ De Brahm to Board of Trade, 20 December 1764, CO 323/18, ff.96-9.

⁵¹⁵ De Brahm to Board of Trade, 20 December 1764, CO 323/18, ff.96-9.

⁵¹⁶ De Brahm to Board of Trade, 6 February 1765, CO 323/18, f.135.

De Brahm's Reconnaissance Mapping of the Atlantic Coast, 1765-1766

(Refer to Figs. 41 and 42)⁵¹⁷

De Brahm's first priority upon arriving in East Florida was to conduct a reconnaissance survey of the province's Atlantic coastline, southwards from St. Augustine to Cape Florida (near present-day Miami) to accomplish three main objectives: to identify any good harbours or anchorages that would be suitable locations for towns, to assess the area's soil and climate to identify good locations for plantations, and, to chart inland waterways that could be used to transport produce and potentially provide a navigable trans-peninsular route to the Gulf of Mexico. This enterprise was conducted with some speed through two separate expeditions from the winter to the summer of 1765.

This approximately 300 miles of coastline was dangerously and ubiquitously lined by low sandbanks, occasionally broken by mouths of small inlets, while unknown shoals and rocks lay as much as several miles off the shore. The low-lying topography required De Brahm's party to closely hug the coast into order to be able to discover any inlets (or navigational hazards). Even at this early date, De Brahm was aware of the Gulf Stream, the extremely powerful ocean current, and had formed a credible theory as to its effect on the benthos. He asserted that "The Breakers", which guarded the mouths of many of the inlets, rendering them difficult for shipping, were formed as "the gulf stream [was] being

⁵¹⁷ William Gerard De Brahm [Northern section - Atlantic coast of East Florida] "Map of the General Survey of East Florida, performed from the year, 1766 to 1770", Mss., 1773, BL: King's Mss. 211, f.178; William Gerard De Brahm [Southern section - Atlantic coast of East Florida] "Map of the General Survey of East Florida, performed anno 1770", Mss., 1773, BL: King's Mss. 211, f.221.

pressed and bent nearer the coast."⁵¹⁸ De Brahm later recalled that "The many wrecks I met with along the shore proves the unhappy navigation on this coast".⁵¹⁹

With the exception of his exhaustive documentation of the vicinities of St. Augustine and Mosquito Inlet, De Brahm did not endeavour to measure the contours of the shoreline through triangulated measurements, nor did he try to precisely identify every geographic feature. His goal was "to continue to the Cape without stopping at the Inlets, which I propose to enter & to make regular surveys of them on my return", a goal which, at the time, largely accorded with that of Grant and the Board of Trade.⁵²⁰ As it would turn out, it was sometimes several years before De Brahm was able to scientifically map certain inlets or locations on this coast. This is apparent upon a comparison of his reconnaissance maps with those he drafted following the conclusion of his surveys in 1771.

While the reconnaissance surveys were less precise than De Brahm's other works, they were beautifully drafted and contained a wealth of information surpassing that previous known by British sources. De Brahm divided the Atlantic coastline from 29°40'N latitude (just north of St. Augustine) southwards to 25°20'N (just south of Cape Florida) into thirteen separate maps, or "Sections", each embracing 20 minutes of latitude. This way a linear 177 mile-long stretch of the Atlantic Coast was systematically charted through interlinked surveys. In addition, De Brahm made a couple of larger-scale "special charts" focussing on locations of specific interest, as well as two smaller-scale general maps of the Atlantic coastline, which were intended as keys, placing the sectional charts within their broader geographic context.

⁵¹⁸ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵¹⁹ De Brahm to Board of Trade, 24 March 1765, CO 5/548, ff.136-40.

⁵²⁰ De Brahm to Board of Trade, 20 December 1764, CO 323/18, ff.96-9.

Unfortunately, of De Brahm's original fifteen reconnaissance maps, only eight survive to this day, all residing at the Library of Congress, having previously been in the collection of Peter Force, who acquired them sometime during the mid-nineteenth-century. The extant maps consist of the six southern charts, sections 8 to 13, representing the coastline from 27°20' southwards to 25°20' (**Refer to Figs. 43, 44, 45, 46, 47 and 48**),⁵²¹ along with the "special charts" representing Cape Florida and Mosquito Inlet in greater detail. The first seven sections, comprising the coastline from 29°40' southwards to 27°20', along with the two general maps can only be surmised through later renderings of the region drafted by De Brahm or by the Board of Trade's draughtsman.⁵²²

From the outset, De Brahm had ambitious plans for his manuscripts, noting that "the Surveys I performed I lay down in charts of 20 minutes in Latitude for the conveniency of having them bound in a handy atlas, or to join them in one, in case they are published for the benefit of His Majesty's Service & publick interest."⁵²³

"On each chart I placed in margin the natural History of Soil, produce, quantity of land, soundings, as well as the river within, than the Sea with out, also the distances, current & countercurrent of the Florida Stream & the several variations of the

⁵²¹ William Gerard De Brahm, "VIII Section...Chart of the sea coast from latitude 27°00' 00" to 27°20' 00", with Little Inlet & River into Hillsborough River," Mss., 1765; "IX Section...Chart of the sea coast from latitude 26°40' 00" to [27°]00' 00", the Leech Shoal & Hillsborough River," Mss., 1765; "10th Section...Chart of the sea coast lattde. 26°20' 00" to 26° & 40' 00" with the head of Sharkshead River," Mss., 1765, sent to London, 16 October, 1765, referred to in De Brahm to the Board of Trade, 25 January 1766. William Gerard De Brahm, "11th Section...Chart of New Inlet," Mss., 1765; William Gerard De Brahm, "12th Section...Chart of Middle Inlet," Mss., 1765; "13th Section...Chart of Cape Florida, according to the surveys made May 13 & 29, 1765," Mss., 1765, sent De Brahm to the Board of Trade, 3 July 1765, CO 323/18. All maps catalogued as LOC: G3932.C6 svar.d4 Vault (Peter Force Collection no.43-46, 52), Sellers and Van Ee, no.1625.

⁵²² De Brahm's two apocryphal key maps were: William Gerard De Brahm, "A map of the Eastern coast of the Province of East Florida from the inlet of St. Augustine's Bay to the beginning of the Marteers," and William Gerard De Brahm, "St. Augustine to Moskito Inlet", both maps likely sent to London, De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-153, received by the Board, *JCTP*, 10 October 1765 (vol. 12, p. 212).

⁵²³ De Brahm to Board of Trade, 25 January 1766, CO 323/24, f.33.

compass.”⁵²⁴ “I have laid down what I surveyed with all possible care, notwithstanding the disagreeable seasons I am not conscious to have omitted the least material object both in respect to the land it soil & to profitableness, than to the sea & its navigation. I show all sounding, bottoms, tides, landmarks, shoals & inlets; I give the directions necessary for masters of vessels; I also observe the soundings of the inland rivers, so carefully taken, than those on the coast; I lay out the quantity of land in general, & of its distinguished soil in particular with all probable advantages, & possible improvements; I present with out favour & with out depredation but impartially the existing quality of the country.”⁵²⁵

The surviving reconnaissance maps clearly show De Brahm’s consistent rendering of nautical information. Despite having no formal contact with the Navy, virtually all of the Southern Survey’s coastal maps feature copious soundings and notes on navigational hazards and the nature of the benthos. On 10 October 1765, the Board dispatched several of De Brahm’s reconnaissance manuscripts to the Admiralty Board. Referring to the, now lost, general chart, “A map of the Eastern coast of the Province of East Florida from the inlet of St. Augustine’s Bay to the beginning of the Marteers,” the minutes of the Board’s meeting on that day read that it is “Ordered that said plan, together with such other plans of the coast of Florida, as have been lately received, be transmitted to the Admiralty Office, to the end that the Lords of that Board may order copies to be made of such as they shall think of any use to that branch of His Majesty’s service under their direction.”⁵²⁶ While evidence otherwise proves that the Board had digested the salient information contained in these maps, it is curious that they elected to surrender at least

⁵²⁴ De Brahm to Board of Trade, 25 January 1766, CO 323/24, f.33.

⁵²⁵ De Brahm to Board of Trade, 20 August 1766, CO 323/24, f.39.

⁵²⁶ *JCTP*, 10 October 1765 (vol. 12, p.213).

five of the originals. Indicative of the administrative disorganisation and the informational disconnect between the government departments of Whitehall bureaucracy, it seems that the Admiralty took little interest in these maps, as they disappeared from recorded history for almost a century. Curiously, of the eight surviving maps from De Brahm's reconnaissance mission, four can be identified as being from the five charts that were sent to the Admiralty.

De Brahm's First Mission

De Brahm's first map focused on the vicinity of St. Augustine. While the geography of the area surrounding the provincial capital was by then relatively well-understood, De Brahm took the time to conduct scientific surveys of the town and its harbour. Unfortunately, his original survey does not survive, but, his masterly 1773 rendering of the region is likely faithful to the original in all important respects. (**Fig. 49**).⁵²⁷

Shortly after his arrival in East Florida, De Brahm noted that "I commenced operations on 30 January 1765 when I took latitude of St. Augustine," a reading which he recorded as being 29°37' N.⁵²⁸ He was later compelled to revise this reading 50 minutes to the northward, after an "alarm was inconsiderably raised" upon discovering that several mariners had sent to the Board readings that were "all several minutes to the north" of De Brahm's. De Brahm blamed the inaccuracy of his initial reading on the out-

⁵²⁷ William Gerard De Brahm, "Plan of St. Augustin Inlet and Town, with its Environs. Surveyed in the Years 1765 & 1766," Mss., 1773 [but after an original map of 1766], BL: King's Mss. 211, f.225.

⁵²⁸ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53; also De Brahm to Board of Trade, 24 March 1765, ff.136-40.

dated “mahogany quadrant” he was relegated to using, complaining that he did not have access to “those new invented instruments imported Dayly from London”.⁵²⁹

Of the town itself, in sharp contrast to the less favourable views of most of the early British arrivals, De Brahm painted an impression of quaint, pretty village in the midst of verdant natural landscape. He remarked on its “healthy climate” and the ever-present “fruit trees” including “Fig, pomegranate, citron, lime, orange.” While he conceded that “The Soil is chiefly sandy and marshy”, these limitations were mitigated by the fact that “the sandy land near and in town has been manured by the Spaniards with Shells.” He went on to note that St. Augustine has four churches, two within and two without its walls all “ornamentally built with stones,” while the houses featured “piazzas shaded with Tuscan pillars” of which the “Governor’s house” was the “most eminent.”⁵³⁰

Over the next several days, he and his party carefully surveyed the environs of the town, including the shores of upper Matanza Inlet and Anastasia Island and the hinterland behind St. Sebastian’s Creek. De Brahm noticed that “The town gives a pleasant prospect to the Entrance of the Bay” dominated by great fort which was built in the style of “Vauban.”⁵³¹

The detailed mapping of the vicinity of the provincial capital portrays in sharp perspective the navigational and logistical challenges which inherently plagued St. Augustine. Clearly evident is the infamous sand bar, which on the map seems as if it was almost purposely designed to bar ships from safe entry into the harbour. As for the town

⁵²⁹ De Brahm to Board of Trade, 20 August 1766, CO 323/24, f.39; It is not clear as to which instruments De Brahm is making reference, however, they may include the new quadrant by John Bird (which marked an improvement over Hadley’s Quadrant) and the astronomical clock by John Shelton, both of which Holland is thought to have received sometime between 1765 and 1767, see Hornsby, *Surveyors of Empire*, pp.111-2.

⁵³⁰ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵³¹ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

itself, it is shown to be virtually marooned on a *presqu'île*, surrounded on three sides by the harbour and St. Sebastian's Creek, while maintaining only the most tenuous connection to the mainland by way of a swampy isthmus to the north. This map would help to justify any requests for public expenditure to alleviate the town's isolation.

As part of the general style which he employed to chart all of his surveys in East Florida, De Brahm employed a series of standardized drafting techniques to distinguish between the different types of land, including the use of visually contrasting zones, the opposing juxtaposition of finely drafted hactures, symbols and negative space. The natural land features depicted included sand dunes (usually coastal), salt water marsh, fresh water marsh, cypress swamp; pine forest, while highland savannah or pine barrens were usually expressed as negative space. Although De Brahm had long employed similar methods in his various maps of South Carolina and Georgia, as he mapped the territory under his new charge, these techniques would become progressively refined, creating both regional and cadastral maps which featured a level and precision of topographical and geological detail unprecedented for their time in colonial mapping.

From 11 February to 29 March 1765, De Brahm performed his first expedition, exploring all the littoral from 29°37' N southward to 26°40' N (St. Augustine to just south of modern Jupiter Beach), a distance he recorded as being about 177 miles. On 11 February, De Brahm's party, divided on both the *Augustine Packet* and a barge, left St. Augustine and took soundings as much as 16 miles off of the coast, showing the local water to be very shallow, as depths ranged between 54 and 72 feet. Charles Young, in command of the barge, was sent to sound the sea floor along the dangerous breakers only a quarter of mile off the shore. Without entering the bay itself, they recorded that the

breakers at the mouth of Matanzas Inlet provided a clearance of four feet at low tide, and eight feet at high water.⁵³² As they continued southward, De Brahm noted visual markers such as “orange groves” that would assist navigation and break the monotony of the sandy coastline. On a reconnaissance map which is now lost and De Brahm referred to as “St. Augustine to Moskito Inlet”, De Brahm it would “fully display the matters hereto related”.⁵³³

De Brahm’s Survey of Mosquito Inlet

By far the most consequential single aspect of De Brahm’s reconnaissance expeditions was his highly detailed exploration and mapping of Mosquito Inlet (modern Ponce de Leon Inlet), an endeavour to which he dedicated almost three weeks. De Brahm’s observations would subsequently be dispatched to the Board of Trade in a voluminous report, followed by the highly precise “Special Chart of Moskito Inlet” (**Fig. 50**),⁵³⁴ later incorporated into a monumental cartographic rendering of his work drafted by the Board of Trade in 1769.⁵³⁵

On 13 February 1765, De Brahm’s party surveyed the mouth of Mosquito Inlet, which, coulisssed by two “high hills”, he carefully measured to be 1914 feet wide from point to point. The entrance was “barred with a row of breakers” which admitted a single channel for vessels “about sixty feet broad, & 300 feet wide, & at $\frac{3}{4}$ flood 9 feet of

⁵³² De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵³³ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵³⁴ William Gerard De Brahm, “Special Chart of Muskito Inlet,” Mss., 1765, LOC: G3932.C6 svar.d4 Vault (Peter Force Collection), Sellers and Van Ee, no.1625, map 8; this map was an enclosure to De Brahm to Pownall, 1 October, 1766, CO 323/24, f.101.

⁵³⁵ John & Samuel Lewis, *after* W.G. De Brahm, “A Plan of part of the Coast of East Florida, including St. John's River, from an actual survey by Wm. Gerard de Brahm, Esq.r Surveyor General of the Southern District of North America 1769: done by I. and S. Lewis”, Mss., 1769, BL: Maps K.Top 122 81.

water”,⁵³⁶ although he cautioned that this “depth [was] greatly augmented by Easterly Winds”.⁵³⁷ Thus, De Brahm asserted that “the Bar itself is at such Times deep enough for any Vessels”, an assessment which would be the font of considerable controversy. De Brahm scientifically measured the latitude of the entrance to be 28°47' 34"N. Regarding the defence of the inlet from seaborne invasion, he suggested “that by erecting of forts upon, & Batteries at the feet of them, on both sides, the entrance might be made precarious, almost, to any Force that could come against it.”⁵³⁸

Once inside the harbour, De Brahm noted that depths ranged from twelve to thirty-six feet, and that ships anchored there were well protected from whatever elements existed in the open seas. As clearly depicted on his map, the inlet was actually an estuary formed by the confluence of two large tidal rivers, the one running directly from the north he named the “Halifax river”, after the Earl of Halifax, and the river flowing directly from the south, he christened the “Hillsborough river”, known to the Spanish as the Rio Ais (the modern Indian River), after the incumbent president of the Board of Trade. In addition, the “West River” (later the Mosquito Creek), a “short Salt wake river” entered the harbour roughly from the west.

On 14 February, De Brahm divided his party into three autonomous units. Yonge and Sparks were each to lead teams of three men in a small rowed boat, with the prior being charged with exploring the Halifax River, and the latter was to map the Hillsborough River. Both parties were to return to the harbour within four days unless they made a dramatic discovery such as “a communication with the St. John's River” or a navigable trans-peninsular passage, in which case they were encouraged to explore for

⁵³⁶ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵³⁷ De Brahm to Board of Trade, 24 March 1765, CO 323/18, ff.136-40.

⁵³⁸ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

some days further. In the meantime, De Brahm and the remaining men conducted a scientific survey of the harbour proper and the modest “West River”.⁵³⁹

On 17 February, Yonge dutifully reported that he had proceeded 21 miles up the ‘brackish’ Halifax River, which terminated in an impassable “muddy and shallow lake”. On a positive note, it maintained a depth of ten feet for its lower 11 miles. At about 29°N, the Halifax was joined by the freshwater “Tomawka” (Tomoka) River, which itself terminated in a great swamp, from which they hypothesised, incorrectly, ran a communication to Matanzas Inlet.⁵⁴⁰

Sparks reported that the Hillsborough River was in fact a tidal basin, as it was “throughout salt”. While it maintained a depth of ten feet for only the first five miles, at 28°34’34”, “it widens immediately and takes its course towards the Cape of Florida”.⁵⁴¹ Indeed, what was identified would later become a key aspect of today’s Intercoastal Waterway, the river being separated from the sea by narrow sand ridges, averaging only an eighth of a mile in width, protecting it “from the sea, as if it were a Dam”. It was noticed that at 28°20’ this barrier was “broken through in several places, by great Hurricanes”.⁵⁴² This same phenomenon would be observed at numerous locations, and was in fact responsible for the formation of virtually all of the inlets along the Atlantic coast. At 28°30’ the Hillsborough River was joined from the west by the freshwater “Greenville river”, supposedly named (though misspelled) after George Grenville.⁵⁴³ De Brahm described that beyond the banks of the Hillsborough River, the surveyors noticed

⁵³⁹ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵⁴⁰ De Brahm to Board of Trade, 24 March 1765, CO 323/18, ff.136-40; De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵⁴¹ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵⁴² De Brahm to Board of Trade, 24 March 1765, CO 323/18, ff.136-40.

⁵⁴³ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

several mounds, capped with a “5 foot stratum of shell” and “observing a great Quantity of Indian potshards, I judged theses hills to have been inhabited in former times by Indians”. What they had encountered were a series of ‘Indian Mounds’, which were originally formed long ago by the indigenous peoples as refuse depositories, but which were later imbued with ceremonial significance.

While De Brahm continued to refine his surveys around the harbour itself, on 23 February, he dispatched Yonge to return to the Tomoka River, which was thought to be an especially promising area for development. Three days later, Yonge “returned with a compleat survey of it”, up to a point where the marshes prevented further progress, such that it was concluded that “The Further discovery will only be practicable when lands become private properties in that place”.⁵⁴⁴

De Brahm made bold assumptions about the curious Hillsborough-Halifax fluvial system based on the well-established myth of a trans-peninsular waterway. Yonge had remarked upon “a great pressure of water lying on both ends” of the Tomoka River. While the pressure emanating from the direction of the ocean was obviously tidal, De Brahm asserted that “the pressure from the Continent must be occasioned by one of the lakes of St. John’s, Superior in Water, & of course in weight” to the much smaller Tomoka.⁵⁴⁵ Turning towards the Hillsborough River, De Brahm asserted that it “appears to me to be the St. John’s River by Strength of what solid information I gathered”. On a (now lost) map of the greater region, he exercised some caution laying down this proposed connection by means of “prickt lines on this Map”.⁵⁴⁶

⁵⁴⁴ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵⁴⁵ *Ibid.*

⁵⁴⁶ This map was likely the apocryphal William Gerard De Brahm, “A map of the Eastern coast of the Province of East Florida from the inlet of St. Augustine’s Bay to the beginning of the Martears”.

In his lengthy report on the Mosquito region, dated 4 April 1765, which he dispatched to the Board of Trade, De Brahm provided an enthusiastic assessment of the natural amenities: “as fruitful and pleasant a country as either South Carolina, or Georgia.”⁵⁴⁷ De Brahm noted that the soil of the “high land is of three different kinds,” including an agriculturally promising band of a “very rich clay foundation”, some areas that were “less rich with [a] sandy foundation”, and finally land of limited utility, being “thorough Sand.” As depicted on his map, the lowland areas were also of three kinds also: one being “Cypress swamp”, another “salt water marsh”, and originally “fresh water marsh”, the latter being promising for crops such as rice, or which could be drained to host other crops.⁵⁴⁸

Considering the combined total of the banks of both rivers, De Brahm estimated that they represented “215,040 Acres good Plantable land” extending in a line 56 miles long, of which the banks of the Tomoka were the choicest, being “rather preferable in goodness to that of the Hillsborough river.” The soils there were “composed of a variety of fresh water marsh, Cypress, & Tupelow Swamp, of rich high timber Land, with Clay foundations of black mould mixed with fine sand.” This held the promise that a “half industrious Man” could profitably plant any variety of fine crops including “Rice, Indigo, Cotton, Corn, peas, potatoes, or European grains.” Moreover, he asserted that “Even the very Sandy, & Barren Sea Beach” is home to the *Opuntia* Cactus, from which one could raise the Cochineal insect, the source of an extremely valuable carmine dye.⁵⁴⁹ He also

⁵⁴⁷ De Brahm’s ‘Mosquito Inlet Report’ consisted of thirteen manuscript pages, De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53.

⁵⁴⁸ De Brahm to Board of Trade, 24 March 1765, CO 5/548, ff.136-40, *passim*.

⁵⁴⁹ Cochineal, a brilliant red dye comes from a small insect, *Dactylopius coccus* that resides on the *Opuntia* genus of Cacti. There are 200 species of *Opuntia* cacti, and while it is possible to cultivate cochineal on almost all of them, the best to use is *Opuntia ficus-indica*, refer to A.B. Greenfield, *A Perfect Red: Empire, Espionage, and the Quest for the Color of Desire* (New York, 2006), pp.102-42.

noted that the cultivation of mulberry trees and “the raising of Silk Worms is more natural to this, than His Majesty’s more northerly provinces”, a notion that would have been of interest to contemporary speculators like Benjamin Franklin who were seeking to introduce silk production to America. De Brahm also remarked on the presence of “Black Amber”, today commonly known as jet, which had “wash’d over the Banks at the time of Hurricanes”. While jet was a semi-precious stone, future settlers would not find it in sufficient quantity to make its commercial exploitation worthwhile.

At the head of the Mosquito Creek, De Brahm claimed that there was a grove of barilla, extending “6000 acres into interior”, guaranteeing that new settlers could “make A Crop of Barilla whenever they please”: an important discovery as barilla could be refined into a type of potash, a fertiliser especially useful in a region in which domestic animals were in short supply. He also noted that the forested areas featured timber suitable for “building vessels, Houses, Furniture & Wharfs”, including “pine Cypress, live oak, cedar, red bay, mangrove, hickory, orange, tupelow, cabbage trees.” Moreover, he noted, many plants had medicinal uses. This “great store of good providence” was further enhanced by the abundance of “Oysters, Turtles, and Fish, such as Trouts and Mulletts” that inhabited the waters. The climate of the region was “very temperate”, as De Brahm recalled that he “had as agreeable weather as in the month of May anywhere in Europe”.

Later experience would show that De Brahm’s assessment of the soil was overly optimistic. In reality, what people would later describe as “grey sand” would yield successful crops only after very sophisticated and expensive improvements. Moreover, some of the crops he recommended were unsuitable for the location. For example, the

climate and soil was too florid and damp to support mulberry trees. Raising cochineal from the insects on the *Opuntia* cactus had long proven to be one of the most challenging tasks in contemporary agriculture, and the genus of cactus indigenous to the region was ill-suited to such production.⁵⁵⁰ In any event, raising any of these crops required not only precise physical conditions, but the stewardship of specially trained and highly competent technicians, individuals who would forever be in short supply in East Florida. In short, despite its agrarian potential, Mosquito Inlet was far from being the Utopia that De Brahm had described.

Following their exhaustive survey of Mosquito Inlet and environs, De Brahm and his party weighed anchor and headed south along the coast on 4 March 1765. All along the sandy, low-lying coast, De Brahm carefully recorded the numerous nautical hazards which loomed underneath the breakers. He observed that “the shore is very bold, & breaks all along without and Sand Banks, save that in Latitude 28°8’ at the Cape of Canaveral of which I have been very particular in making a survey, between this Cape and the last little inlet I was at in Latitude 27°12’ 37” are five Rocks laid down [known as Leach Shoal], in the Maps, close in shore, & visible at low water.”⁵⁵¹

One of the maps De Brahm drafted in 1773, based on observations made during his first coastal reconnaissance mission, provides a fine impression of the nature of the coastline De Brahm encountered (**Fig. 51**).⁵⁵² Hillsborough Inlet would have been represented on the now lost “7th Section” map, and is indicative of the transient nature of

⁵⁵⁰ Greenfield, *The Perfect Red*, pp.37-38. The highlands of southern Mexico were considered the ideal region for raising cochineal.

⁵⁵¹ De Brahm to Pownall, 24 March 1765, CO 5/548, ff.136-140.

⁵⁵² William Gerard De Brahm, “Plan of Hillsborough alias Indian alias Aye’s Inlet & Stream. Situated in Latde. 27°30’ 53’ . Surveyed anno 1765,” Mss., 1773 [but after an original map, 1765], BL: King’s Mss. 211, f.232.

this littoral, as such breach inlets, which are formed when rough weather breaches the sandbar separating the Atlantic ocean from the parallel rivers or tidal basins (such as the South Hillsborough River) can by the force of the sand shifted by ocean currents be sealed. With Hillsborough Inlet, this process has concluded full circle, as the inlet De Brahm surveyed in 1765 no longer exists: today, it is a stretch of sandy shoreline just south of the town of Melbourne Beach.⁵⁵³ One will notice “Palmar Bay,” which De Brahm would most certainly have described in the “complete history” of his original chart as being the site of the wreck of a massive Spanish treasure fleet in 1715. Attempts to salvage the treasure from the wreck became a fixation of both British officials and pirates alike for some years after.⁵⁵⁴

De Brahm continued southwards along the coast until 13 March, when at a point just south of Grenville Inlet (now Jupiter Inlet) at about 26°40', his entire party was caught up in the outer bands of a tropical storm. They were violently “cast off the coast” and the *Augustine Packet* lost sight of the surveying barge as the Gulf Stream forced them northwards. De Brahm’s men endured sixteen days of “distress” buffeted by what De Brahm described as “a great Hurricane”, a circumstance made worse by the fact that the *Augustine Packet* was “without a keel & not so fit for the sea.”⁵⁵⁵ Finally, on 29 March “the Divine Hand” brought them safely into St. Augustine Harbour.⁵⁵⁶

Fortunately, De Brahm was greeted by his men who were stranded on the barge, and “who happened to arrive a few hours before me” having been forced to abandon their vessel after it was washed ashore south of the capital, whereupon they “came by land,

⁵⁵³ De Vorsey (ed.), *De Brahm’s Report*, p.297.

⁵⁵⁴ C. Woodward, *Republic of Pirates* (New York, 2008), pp.104-43.

⁵⁵⁵ De Brahm to Board of Trade, 24 March 1765, CO 5/548, ff.136-40.

⁵⁵⁶ De Brahm to Board of Trade, 4 April 1765, CO 323/18, ff.141-53; De Brahm to Board of Trade, 3 July 1765, CO 323/18, ff.153-4.

suffering... all miseries next to that of perishing.” Shortly, thereafter, De Brahm wrote to the Board of Trade, sending “general Map & an abstract of the history” of the region, while apologizing that “The time is too short to send the whole of my journal and plans, as far as Latitude 26°40’ .⁵⁵⁷

The Second Coastal Reconnaissance Mission, Spring of 1765

Later that spring, De Brahm set out on his second coastal reconnaissance mission, this time successfully completing the entire length of the Atlantic littoral from St. Augustine to just south of Cape Florida. Shortly after his return, on 3 July 1765, De Brahm wrote to the Board of Trade, that he would “beginning from the southwards” progressively send “Sections of my Map as fast as I am able to accomplish them & meet with opportunities.” On that occasion, he dispatched the 13th, 12th and 11th Sections, including his charts of “New Inlet”, “Middle Inlet”, as well as two maps of Cape Florida.⁵⁵⁸ He likewise sent “a small general map” featuring the coastline explored on his first reconnaissance mission, from which one “may be easily acquainted with that part of Navigation through the Bahama Channel to Cape Florida”.⁵⁵⁹ This chart was one of the two, now lost, general maps of his reconnaissance missions.

⁵⁵⁷ *Ibid.*

⁵⁵⁸ William Gerard De Brahm, “The 11th Section...Chart of New Inlet,” Mss., 1765; “The 12th Section...Chart of Middle Inlet,” Mss., 1765; “The 13th Section...Chart of Cape Florida, according to the surveys made May 13 & 29, 1765,” Mss., 1765, “Special Chart of Cape Florida belonging to the 13th Section,” Mss., 1765 maps catalogued as LOC: G3932.C6 svar.d4 Vault (Peter Force Collection no.43-46, 52), Sellers & Van Ee, no.1625, maps 4,5,6,7, all maps sent as enclosure to De Brahm to Board of Trade, 3 July 1765, CO 323/18, ff.153-4, maps received by the Board, *JCTP* 10 October 1765 (vol. 12, p.212).

⁵⁵⁹ W.G. De Brahm, “A map of the Eastern coast of the Province of East Florida from the inlet of St. Augustine’s Bay to the beginning of the Marteurs.”

De Brahm's "Special Chart of Cape Florida" is a magnificent example of the reconnaissance genre (**Fig. 52**).⁵⁶⁰ Highlighting what is now the location of Miami Harbor, this chart covers approximately seven minutes of latitude, being a larger-scale portion of the region depicted in his map of the 13th section. Cape Florida, which had long been the peninsula's most prominent landmark for mariners, guarded the entrance to the Straits of Florida and was the point where the Gulf Stream sharply shifts towards a northerly direction. It shows numerous depth soundings, including the important anchorage which lay in the lee of Key Biscayne. De Brahm also included other nautical remarks regarding the nature of the benthos, such as "Soft Muddy Bottom", "Fine White Sand", "Coral Rock", and the nature of the currents, alluding to "White Water" and "The Eddy of the Florida [or Gulf] Stream". He includes, in the upper right corner, a feature common to many nautical charts of the period: "The Profile of the Cape presenting to a Vessel landing N.E. & N.: opposite the Gorge", while the elegant compass rose below features the magnetic variation of 3°42'.

The contours of the shorelines shown on the map are clearly predicated on De Brahm's visual observations, as opposed to being the product of exacting trigonometric surveys. This becomes especially apparent when one compares this map with De Brahm's 1773 of the same subject, where the land takes on a noticeably different, and more accurate, form. Nevertheless, De Brahm carefully delineated the locations of "Mangrove Swamps" on Key Biscayne and the island that is now home to Miami Beach, across "the Gorge" to the north. On the mainland, De Brahm notes "Cotton & Indigo Land", in the same area that would later become the estate of the Earl of Dartmouth.

⁵⁶⁰ William Gerard De Brahm, "Special Chart of Cape Florida belonging to the 13th Section," Mss., 1765, LOC: G3932.C6 svar.d4 Vault (Peter Force Collection no.43-46, 52), Sellers & Van Ee, no.1625, map 7, sent with De Brahm to the Board of Trade, 3 July 1765, CO 323/18.

With reference to the “13th Section” map (refer back to Fig.48), it was on this occasion that De Brahm noted the location of “a Large Salt Water River departing from the NorthWestward & tranching towards the South Shore of ye promontory”.⁵⁶¹ This was actually a very astute observation regarding what we know today as the Everglades, an extraordinary natural phenomenon by which the waters of Lake Okeechobee gradually flow through a great plain of grasses, becoming brackish, before reaching the Florida Bay.

While many of De Brahm’s maps were lost, a map presented by William Stork on 1 September 1766 to the Board of Trade clearly shows how De Brahm’s work was gaining influence. Stork’s *A New Map of East Florida*, which he had arranged to have privately printed, and which he likely intended to accompany his petition for land, was dedicated to Hillsborough (**Fig. 53**).⁵⁶² It is today known in only a single copy. This extraordinarily fascinating map provides an unrivalled insight into the Board of Trade’s epistemological conception of East Florida at the time. The geographically-advanced definition of the map shows that Stork had clearly been given access to some of De Brahm’s 1765 reconnaissance surveys.

[Mapping the St. John’s River & the Search for a Trans-Peninsular Navigable Passage](#)

⁵⁶¹ This feature is located within the inset of William Gerard De Brahm, “13th Section...Chart of Cape Florida, according to the surveys made May 13 & 29, 1765,” Mss., 1765.

⁵⁶² William Stork, *A New Map of East Florida* [London, 1766], NA: CO 700/Florida 34, Penfold, no. 2302. The map was engraved by P. Andrews, (“*P. Andrews Sculp*”) who also engraved the maps included in De Brahm’s *Atlantic Pilot* (London, 1772), the map was presented to the Board, *JCTP*, 1 September 1766 (vol.12, p.334). The third edition of Stork’s promotional, William Stork, *A Description of East Florida* (London: Thomas Jefferys, 1769), included a map, Thomas Jefferys, *East Florida, from surveys made since the last peace, adapted to Dr. Stork’s History of that country*, however its geographic depiction of East Florida is markedly different from the present map. Stork applied to the Board for support to lead a colony of “Industrious Germans” to settle in East Florida, “The Petition of William Stork”, [n.d., but 1766 or early 1767], CO 5/548, f.152. Stork’s map may have accompanied his petition.

De Brahm's next priority was the survey of the St. John's River, from Fort Picolata (which was roughly on the same latitude as St. Augustine) southwards towards its head in the interior west of Cape Canaveral. Not only was the river considered to be one of the most promising locations for plantations, but, in an assessment echoed by Moncrief, De Brahm asserted that "I have no room for doubt that this river will afford an inland Communication from the Cape of Florida to the Mouth of St. John's River" and furthermore "a communication out of this River to Tampa Bay".⁵⁶³ It will be recalled that such assumptions are clearly illustrated on William Stork's map, which itself is partly predicated on information provided by De Brahm.

In the event that this navigable trans-peninsular waterway could be found, De Brahm recommended the founding of "three towns to receive the country's produce, one settled at the Cape [near present day Miami], one in Tampa Bay, & a third at the mouth of St. John's North River [near modern Jacksonville]". Such centres "would make East Florida one of the most flourishing provinces, & would accomplish trade, & Navigation from Jamaica round the Bay of Mexico, & the whole North American shore."⁵⁶⁴

On 28 April 1766, De Brahm wrote that "Yesterday one of my deputies set out by water upon St. John's River in the latitude of this place, & is to Survey that River with its creeks, branches, lakes & lagoons as far as latitude as far as Latitude 28°."⁵⁶⁵ At that point, De Brahm remarked that the river "loses itself in an unpassable sand ocean whose great extent cuts off the sight of any land or land mark all around the survey of the countries & its situation between that river and Cape Canaberal."⁵⁶⁶

⁵⁶³ Grant to Laurens, 3 April 1765, NAS: Grant Papers, GD494/1/1, frame 137.

⁵⁶⁴ De Brahm to Board of Trade, 24 March 1765, CO 323/18, ff.136-40.

⁵⁶⁵ De Brahm to Board of Trade, 28 April, 1766, CO 323/24, f.35.

⁵⁶⁶ De Brahm to Board of Trade, 22 July, 1766, CO 323/24, ff.37-8.

The survey was to be conducted from the latitude of 29°40' N southwards to 28°00' N, consistent with the format De Brahm employed for his coastal surveys, such that five maps of equal size would be produced, each embracing 20 minutes of latitude. These interior maps could thus be directly linked to his coastal charts, producing a systematic survey of the inhabited regions, or north-eastern portion, of the province. De Brahm also specified that each map would feature a “compleat history” of the respective section in its margins.

Unfortunately, while De Brahm’s original charts are recorded as having been received by the Board of Trade, none of the originals are thought to have survived. As with the corresponding coastal maps, all were used to draft a grant presentation copy map prepared by the Board of Trade in 1769. It is possible that upon the completion of this map, De Brahm’s originals were simply discarded. This would have represented a considerable loss, as, although De Brahm’s cartographic details survive in his “compleat history”, passages have been lost.

In July 1766, De Brahm wrote that his “much fatigued...men & horses” had “returned from near a Two months expedition after they finished two fifths Part of that Survey,” covering the territory between 29°00' N and 29°40' N.⁵⁶⁷ It seems that the local Creeks had not yet fully enacted the provisions of the Picolata Congress, as De Brahm complained that “the Indians” owing to their “jealousies” had impeded the work of De Brahm’s “chain men” working on the western bank of the river.⁵⁶⁸ He appealed to the Board of Trade to order Grant to negotiate with the Creeks for a safe passage accord. De

⁵⁶⁷ De Brahm to Board of Trade, 22 July 1766, CO 323/24, ff.37-8; Map: “St. John’s – Section 1” [29°40' to 29°20'] sent to London, De Brahm to Board of Trade, 20 August 1766, CO 323/24, f.39 (p.77), De Brahm to Pownall, 20 August, 1766; Map: “St. John’s – Section 2” [29°00' to 29° 20'], sent to London, De Brahm to Board of Trade, 1 October 1766, CO 323/24, f.101.

⁵⁶⁸ De Brahm to Board of Trade, 28 April 1766, CO 323/24, f.35.

Brahm completed the third map, regarding the section of the river between 28°40' and 29°00' in January 1767, and at that point he noted that, in aggregate, he would shortly conclude “the whole” inhabited region of the East Florida, which totalled “3750 square common English miles” including “the land ceded to His Majesty by the Creek Indians at the Congress held at Picolata”.⁵⁶⁹

Cadastral Surveys

As Surveyor General of East Florida, De Brahm and his associates played a critical role in the settlement of the province. As already seen, De Brahm’s broader observations made during his reconnaissance of the Atlantic seaboard were highly influential in directing prospective landowners as to where to found their plantations, and, what should be grown. Consistent with both his former practices in Georgia and South Carolina, and his “Instructions” from Grant, De Brahm issued his “Instructions to a Deputy Surveyor of East Florida.”⁵⁷⁰ In this document, he carefully outlined a series of nine specifications, that if followed would ensure an orderly and virtuous survey process, resulting in a clear and accurate cadastral maps.

Firstly, De Brahm told his deputies to, “inform adjacent owners of your survey” so that “you can use marks on their plots as a guide where it borders yours”. Next, one must “Survey all around” the property in question, unless one encounters “swamps as may endanger your health”. One must regularly make “Stations” by blazing trees, thrice around corners” and to ensure veracity, one must not record any details or marks that he did not personally witness. Details such as “roads, tarr kilns, runs of water, paths” must always be recorded as “durable markers”. One must also discern the ratio between land

⁵⁶⁹ De Brahm to Board of Trade, 20 January 1767, CO 323/24, f.6.

⁵⁷⁰ William De Brahm, “Instructions to a Deputy Surveyor of East Florida,” [n.d., but likely 1765], NAS: Grant Papers, GR494/1/19, frame 222.

that is “Barren” versus fit for “Cultivation”, noting “unprofitable” versus “Unprofitable” acres. One must also respect the “Waterway rule” ensuring that not more than one-third of the grant borders the ocean or a navigable river. Throughout, the deputy must also note “parts appropriate for forts, public wharfs, naval yards” but also lands suitable for growing vital naval stores such as “hemp and flax”. Deputies were also ordered to return each year to inspect the properties they had surveyed in order to ensure that the statutory development requirements of the grant had been met. Moreover, no surveys, except those ordered by De Brahm, were to be conducted. Once a survey was completed, the deputy was to submit two copies of the appropriate cadastral map to De Brahm, one of which was to be certified by the deputy, the other copy certified by surveyor-general himself. De Brahm would then make a return to the provincial secretary. All surveys submitted must be “just and true” with all “boundaries, stations, marks, corners” and “distance of lines, laid out by a proper scale”. The maps must also feature a “Compass [rose] in [the] Margins” and the “names of bounding lands”, as well as the date of the survey.

The cadastral map drafted by De Brahm for the 20,000 acre grant of Sir William Duncan at Mosquito Inlet is a perfect example of survey that meets his exacting requirements. Once the survey was submitted, the Governor in Council would issue a printed land title with the details of the particular grant written in. While small grants could be resolutely ratified by the governor-in-council, large grants were only provisionally approved until final ratification by the Privy Council within an eighteen-month period.

One of the most important cadastral maps made for the province concerned the large-scale settlement plan for what was to be called the settlement of New Smyrna at Mosquito Inlet, a scheme put forward under the leadership of Andrew Turnbull, the vainglorious Scottish-born London physician and aspiring colonial promoter, who came highly recommended to Grant by mutual friends. By the spring of 1767, the Privy Council had approved Turnbull's consortium for massive grants totaling 101,400 acres at Mosquito Inlet, which were duly surveyed by a Mr. Funk, one of De Brahm's deputies.⁵⁷¹ The map reflects the highest standards articulated by De Brahm's 'Instructions', very precisely depicting the different qualities of the land, and accurately delineating the bounds of the combined estates. Such maps would have supplemented the surveys personally overseen by De Brahm's and critically would have been incorporated into the surveyor general's subsequent general maps of the province.

Another fine example of cadastral mapping completed under De Brahm concerns the plans for prospective community to be called 'New Bermuda'. It was an ambitious, albeit never realized, project sponsored by John Savage, a wealthy Bermudian philanthropist, based in Charlestown, to encourage a sizable community of his native islanders to settle an entire township in the new province. Grant dispatched De Brahm to personally survey and lay out the new town. De Brahm's map of "New Bermuda in East Florida" was a masterly plan which closely followed the best practices of Enlightenment urban design (**Fig. 54**).⁵⁷² The town would be laid out on a perfectly symmetrical grid of

⁵⁷¹ William Gerard De Brahm, "A Plan of Sir William Duncan Bart & Andrew Turnbull Esqr's [Grants]," Mss., January 15th, 1767; Survey Warrants for Turn and Duncan approved, 18 June, 1766, CO 5/548, f.186; Original survey warrant, lots surveyed by Mr. Funk, deputy surveyor, 17 January 1767, NAS: Grant Papers, GD494/1/1, frame 22.

⁵⁷² William Gerard De Brahm, "New Bermudas in East Florida," Mss., 1766, MPG 1/187(2), an enclosure to Grant to the Southern Secretary [Conway or Richmond], 21 August, 1766, CO 5/548, f.118.

even streets, focused on two public squares. De Brahm designated 128 numbered private lots, while the lots surrounding the squares would be “reserved for the Crown.” Along the bank of the St. Mary’s would be eight sections of “wharf Lotts”, ideal for a community focused on boat-building. Very similar to Samuel Holland’s plans for the county towns of St. John’s Island, this was nothing short of carving the most regimented designs of human order out of a complete wilderness. The fact that De Brahm envisaged that the town would superimpose itself, at its lower corners, over marshland (which would have to be drained) is indicative of this ethic of rational order conquering nature.

While consistent with the aforementioned trends of urban planning throughout the empire, the direct genesis for De Brahm’s “New Bermuda” were the early settlements of Georgia, such as its capital, Savannah, and New Ebenezer. While not the originator of their layouts, De Brahm had mapped both towns, and as shown by George Jones’s 1733 bird’s eye view of the founding of Savannah, the founders of both settlements sought to create perfect urban order out of the virgin forest (**Fig. 55**).⁵⁷³

Unfortunately, this most refined of De Brahm’s site-specific surveys was performed to no avail. As Grant lamented to Shelburne, in November 1766, the Bermudians “have been prevented from carrying out their projected plan into Execution by a very great sickness among their people”.⁵⁷⁴

Gathering Storm

Three main, and mutually reinforcing, factors determined the success or failure of a plantation project, including, first, a comprehensive knowledge of the quality of the soil

⁵⁷³ George Jones, “His Majestys Colony of Georgia in America,” Mss., [1733], Georgia Historical Society (Atlanta); see also De Brahm, “Plan of the City of Savannah and Fortification,” Mss., 1772; De Brahm, “Plan of the Town of Ebenezer & its Fortification,” Mss., 1772.

⁵⁷⁴ Grant to Shelburne, 27 November 1766, CO 5/548, f.135.

and climate and its ability to support certain crops; second, sufficient investment in infrastructure, technology and slaves; and third, the recruitment of competent and dedicated management to oversee operations. Deficiency in any one area could cause the ruin of the whole, as in the words of one proprietor, “if one brick fails, the whole fabrick falls”.⁵⁷⁵ While many ventures in the new province failed for the second and third reasons, Grant was inclined to blame De Brahm disproportionately for the colony’s lack of success, in part, because of his over-exaggeration of the merits of the land as provided by his reconnaissance reports (a fault also of the surveyor, Moncreif, who was employed directly by Grant), and, in other part, because De Brahm did not properly oversee the cadastral surveys.

Indeed, while his management of the General Survey was by any objective metric impressive, De Brahm’s performance related to his provincial commission was problematic. Frequently absent in the field on the General Survey, he needed to delegate the majority of the cadastral mapping to deputies. In contradiction to at least the spirit of his provincial commission, De Brahm, in order to pocket the additional salary of £100, failed to appoint a permanent chief deputy, with the consequence that the cadastral system had no effective oversight. Many of the cadastral surveyors proved to be either incompetent, dishonest, or both. While estate surveyors often behaved unprofessionally in other parts of colonial America, the lack of effective supervision ensured the situation was especially acute given the shortage of skilled labour in East Florida. While many of the province’s cadastral surveyors were not even officially deputised, and had little or nothing to do with De Brahm, Grant seemingly blamed the surveyor-general for all of the

⁵⁷⁵ Sir Alexander Grant to Governor James Grant, 8 February 1770, cited in Hancock, *Citizens of the World*, p.170.

problems which were hindering the accurate and timely mapping of the province's land concessions.

Several instances served to frustrate Grant. As an example, a deputy surveyor, Thomas Woolridge, spent over £500 of Charles Townshend's funds under the pretence of surveying the Chancellor's estate. However, Woolridge, who the governor deemed to be "the most troublesome, shuffling, sneaking changeable creature I ever met with" never actually surveyed the land and simply pocketed the money.⁵⁷⁶ A careless survey by a Mr. Dupont nearly cost Oswald, another prominent investor, dearly. Grant claimed that he "might as well have measured an Estate in London - the Dog gave himself no trouble", as the survey featured "a deficiency of no less than five thousand five hundred acres" such that "the best land upon Mr. Oswald's estate... had Almost fallen into the hands of another grantee."⁵⁷⁷ The "consummate Rogue" Dupont subsequently fled the province, with the governor promising to "have him lodged in Goal" if he returns.⁵⁷⁸ In another scandalous instance, two Scottish proprietors hired William Stork to survey their estates, but he totally fabricated his survey and report, pocketing their money instead.⁵⁷⁹

De Brahm would not have won himself any favour with the Board of Trade with his frequent complaints that he was not being given enough money by Whitehall to execute the General Survey. Moreover, De Brahm also requested permission to move his base of operations to another province in his district, presumably South Carolina where "I may with less perplexity perform the duty of my office & can have aides & necessaries

⁵⁷⁶ Grant to Henry Davidson, 17 July 1767, NAS: Grant Papers, GD494/1/2, frame 50.

⁵⁷⁷ Grant to John Tucker, 19 July 1767, NAS: Grant Papers, GD494/1/2, frame 52.

⁵⁷⁸ Grant to Oswald, 20 July 1767, NAS: Grant Papers, GD494/1/2, frame 53.

⁵⁷⁹ Hancock, *Citizens of the World*, p.164.

for my expeditions which I cannot have here almost at any rate.”⁵⁸⁰ He also unsuccessfully petitioned the Board to nullify Grant’s demand that the governor approve his deputies, claiming Grant’s interference had “hindered” his efforts to fulfill his provincial mandate. De Brahm dismissed all criticisms of his performance as being the product of xenophobia towards “a defenseless and unprotected Forreigner”.⁵⁸¹

De Brahm Excluded

As a result of the growing lack of confidence in and animosity toward De Brahm, Grant increasingly took steps to exclude or go around De Brahm, resulting, at times, in duplication of survey work. As an example of exclusion, in October 1765, Grant and John Stuart convened the Picolata Congress with the Creek chieftains. After protracted negotiations, on 18 November 1765, the Creeks agreed to move the line a generous distance west of the river.⁵⁸² Despite the fact the conference entirely focused on questions of a geographical dimension, De Brahm was deliberately excluded from the event. Stuart, whose sentiments were likely echoed by the governor, simply could not abide the surveyor-general’s presence. De Brahm’s exclusion was largely responsible for the fact that the new Creek-East Florida boundary was never actually surveyed, although De Brahm, in his 1772 general map of the Atlantic coast of the province, would be the

⁵⁸⁰ De Brahm to Board of Trade, 22 July 1766, CO 323/24, f.37-8.

⁵⁸¹ De Brahm to Hillsborough, 22 September 1770, CO 5/71, f.529.

⁵⁸² The treaty ratified at Fort Picolata on 18 November 1765 defined the Creek-East Florida boundary as follows: “that for the future the Boundary Line of his Majestys said province of East Florida shall be all the sea coast as far as the tide flow in the manner settled with the English by the great Tomachiche. With all the country to the eastward of the St, John’s River forming nearly an island from the source to its entrance into the sea. And to the westward of the St. John’s River by a line drawn from the Creek Achlagwaugh into said river above the great lake & near Spaldings upper trading store house, to the forks of Black Creek at Collvills plantation and from thence to that part of the St. Mary’s river which shall be intersected by the continuation of the line to the entrance of turkey Creek into the River Altamaha.”, Grant to Conway, 9 December 1765, CO 5/548, f.59, cited in De Vorse, *Indian Boundary*, p.194 .

first cartographer to demarcate the boundary with a high degree of accuracy on a map (refer back to Fig. 41).

In a similar vein, in 1765, George Gauld, at the request of Admiral Burnaby, surveyed Tampa Bay. The resulting masterpiece of marine cartography was of such exceptional detail and exactness that it would go unrivalled until 1879 (**Fig. 56**).⁵⁸³ It is worth noting that Gauld's mission to Tampa Bay was initially intended to be conducted *sub rosa*, supposedly unbeknownst to both his immediate superior, Captain Sir John Lindsay, and his ultimate employer, the Admiralty Board. Admiral Sir William Burnaby, the commander of the Royal Navy's West Indies Squadron, was deeply resentful that Lindsay had deliberately excluded him from any involvement in the Navy's regional hydrographic programmes. When Burnaby happened to be visiting Lindsay's Pensacola station, while the latter was absent, he seized on the opportunity to order Captain Rowland Cotton, of the frigate *HMS Alarm*, to take a team of surveyors headed by Gauld on a secret mission to chart Tampa Bay in order "to examine if it is fit to receive Capital Ships". In a highly unorthodox move, Burnaby ordered Cotton to ensure that the resulting charts were "to be immediately transmitted to me, and not to be sent to the Secretary of the Admiralty".⁵⁸⁴ Unfortunately for Burnaby secrets were hard to keep in a small frontier outpost, the chart was promptly disseminated not only to Lindsay, but through him to the Earl of Egmont and West Florida's Governor George Johnstone, who in turn sent a copy to Lord Bute.⁵⁸⁵

⁵⁸³ George Gauld, [Tampa Bay] "A Survey of the Bay of Espiritu Santo in East Florida", Mss., 1765, MODHD, x64 Jv.; subsequently printed as *The Bay of Espiritu Santo* (London: Robert Sayer & Thomas Jefferys, 1769).

⁵⁸⁴ Burnaby to Cotton, 17 May 1765, ADM 1/2051, cited in J.D. Ware, revised by R.R. Rea, *George Gauld Surveyor and Cartographer of the Gulf Coast* (Gainesville, 1982), p.43.

⁵⁸⁵ Lindsay to Grant, 22 October 1765, NAS: Grant Papers, GD494/1/9, Frame 143; Ware, *Gauld*, p.57.

De Brahm was well aware of Gauld's general mandate to survey the shores of the Gulf of Mexico telling Pownall in July 1766 that "that Mr. Gall [Gauld] a Surveyor setts out by order of the admiralty in his own sloop accompanied with the *Ferret* man of war to survey the sea coast from Pensacola to...Cape Florida."⁵⁸⁶ In October 1765, Lindsay sent his old friend Grant a copy of Gauld's Tampa Bay Chart.⁵⁸⁷ However, it appears that neither Grant, nor anyone else, made any attempt to share this critical chart with De Brahm. Consequently, the Surveyor-General and his associates would go to great lengths to map the region from scratch, instead of having the benefit of using Gauld's excellent work as a basis for further discovery.

Enter James Moncrief

Grant also played a direct role in exploring the province. Most notably, in 1767, he personally led a party of prospective settlers on an excursion up the St. John's River as far as Lake George, which they mapped and took scientific observations of latitude.⁵⁸⁸ More consequentially, however, the Governor directly also employed other individuals to undertake surveys and create maps to his precise specifications. By far the most important enabler of Grant's cartographic agenda was a promising young Scots military engineer, Captain James Moncrief, who first came to the governor's attention during the Siege of Havana. Born around 1740, Moncrief was a graduate of the Royal Military College at Woolwich and would one day become one of the most highly decorated Royal

⁵⁸⁶ De Brahm to Board of Trade, 22 July 1766, CO 323/24, ff.37-8.

⁵⁸⁷ Captain Lindsay wrote to Grant "I have sent you by this opportunity the Plan of Espirito Santo", Lindsay to Grant, 28 October, 1765, Grant Papers: NAS: GD494/1/9, frame 150; Grant replied that "I am much obliged to you for the plan of Espirito Santo", Grant to Lindsay, 24 December, 1765, Grant Papers: NAS: GR494/1/1, frame 206..

⁵⁸⁸ Grant to Knox, 18 December 1767, NAS: Grant Papers, GD494/1/1/2, frame 88; a map associated with this expedition remains in his papers, Anon., "A Plan of the St. John's River from Lake George to the upper lake...", NAS: Grant Papers, GD494/1/12, frame 121.

Engineers serving in the American theatre.⁵⁸⁹ Transferred to the St. Augustine presidio, Grant took Moncrief under his wing, and he would serve as the governor's personal surveyor until 1767, when he became preoccupied with setting up his own plantation.⁵⁹⁰ While Moncrief did not technically work for the Board of Trade, Grant passed many of the maps created by him on to the Board of Trade, and in this way, Moncrief played a role in the General Survey and the governance of land claims in the province. Importantly, there is no evidence that Moncrief's maps were ever shared with De Brahm, or that they ever co-operated.

Moncrief's first significant assignment for Grant was to draft maps which would form a visual conception of the undue enormity of pre-existing Spanish claims by John Gordon and the merchant Jesse Fish, and their consequent threat to the East Florida's development. Moncrief produced a finely composed and beautifully coloured map, which embraced all three of the rather crudely drawn original Spanish charts which had been given to the Governor by John Gordon (**Fig. 57**).⁵⁹¹ Intended as a presentation copy for the Board of Trade, Grant must have felt that this neater and all-encompassing cartographic view, which included the Anglisisation of some the original nomenclature, would more clearly show the dangerously-expansive extent of Gordon's claimed rural landholdings. Grant also commissioned Moncrief to make a large-scale "Plan of the

⁵⁸⁹ James Moncrief (c. 1740-93), for a biographical sketch, D. L.Schafer, *St. Augustine's British Years 1763-1784*, El Escribano, no.38 (St. Augustine, Fla., 2001).

⁵⁹⁰ James Moncrief, [Map of the Atlantic Coast of East Florida extending from the mouth of the St. John's River to Mosquito Inlet with the Cadastral Lots marked with the Names of Proprietors], Mss. [1764], CO 700/Florida7, Penfold, no.2298, "Drawn from the Originall Plan of John Gordon Esq. given to Governor Grant," likely sent with a set of the original Gordon Plans (refer to previous chapter), Grant to the Board of Trade, 22 November 1764, CO 5/540, ff,115-8.

⁵⁹¹ James Moncrief, [Map of the Atlantic Coast of East Florida extending from the mouth of the St. John's River to Mosquito Inlet with the Cadastral Lots marked with the Names of Proprietors], Mss. [1764], CO 700/Florida7, Penfold, no.2298, "Drawn from the Originall Plan of John Gordon Esq. given to Governor Grant," likely sent with a set of the original Gordon Plans (refer to previous chapter), Grant to the Board of Trade, 22 November 1764, CO 5/540, ff,115-8.

Town of St. Augustine shewing by whom the lots are claimed”.⁵⁹² A masterpiece of draftsmanship, it represents one of the finest and most detailed maps of any American town created prior to the nineteenth century. It depicts that of the total 121 lots within the town’s walls, 47, containing 204 of the town’s 398 buildings, belonged to Fish!⁵⁹³ Thus Grant intended that the map would represent a convincing argument to the Board of Trade that no one person should be permitted to own such a large percentage of the town.

In January 1765, Grant dispatched Moncrief on a mission to explore and survey both Matanzas and Mosquito Inlets. Grant’s commitment is indicated by the fact that he funded the expedition with 30 guineas of his own money.⁵⁹⁴ As Moncrief followed an old Indian path southwards from St. Augustine, he carefully recorded details of the landscape as he went along.⁵⁹⁵ He drafted a sketch map, later submitted to the Board of Trade, which clearly depicts the various rivers, harbours and swamplands he encountered **(Fig. 59)**.⁵⁹⁶

Upon his return to St. Augustine in February, Moncrief submitted a highly favourable report of Mosquito Inlet along with a map **(Fig. 60)**.⁵⁹⁷ Grant recorded that his surveyor “gives a very favourable Account of the Country, harbour & Bar” and notes the presence of “a deep soil, under is strong clay”, and that there was “no sand at

⁵⁹² James Moncrief, “Plan of the Town of St. Augustine and its Environs”, Mss., 1766, CO 700/Florida8, Penfold, no.2357, an enclosure to Grant to the Board of Trade, 1 March 1765, CO 5/540, ff.177-80.

⁵⁹³ Gold, *Borderland Empires*, p.43.

⁵⁹⁴ Mowat, *East Florida*, p.32.

⁵⁹⁵ James Moncrief, “Account of what kind of Land the Path from St. Augustine to the Mosquitos goes through,” [n.d., but 1765] Grant Papers: NAS: GR494/1/9, frame 394.

⁵⁹⁶ James Moncrief, “A Plan of the Harbour of Musquitos distant from St. Augustin 72 Miles,” Mss., 1765, CO 700/Florida11, Penfold, no.2326B, an enclosure to Grant to Conway, 4 June 1766, CO 5/548, f.97.

⁵⁹⁷ James Moncrief, “Sketch of Part of the Coast of East Florida from St. Augustine to the Bay of Musquitos,” Mss., 1765, CO 700/Florida14, Penfold, no.2299, an enclosure to Grant to Conway, 4 June 1766, CO 5/548, f.97.

Tomulka”.⁵⁹⁸ He furthermore related that Moncrief thought that the region “has a good deal the appearance of a West India country” and “the timber [is] very fine consisting of Live Oak, Hickory & Cypress”.⁵⁹⁹

In April 1765, following De Brahm’s return from his survey of the Mosquito Inlet area, Grant had the opportunity to compare the findings of Moncrief with his surveyor general. He noted that both surveyors gave “a favourable account of the southern parts of this province”, providing assurances that “the soil is good and the timber very fine”. However, he wrote that Moncrief “differs very much in his account of that harbour from Mr. De Brahm, they possible may both be in the right, as the difference in the soundings may be owing to the winds being easterly when Mr. Moncrief took his survey, & westerly when Mr. De Brahm made his.”⁶⁰⁰ Tellingly, it seems that Grant trusted the findings of Moncrief over De Brahm, disparagingly noting that the latter delegated the tasks of sounding the harbour to deputies, as Grant noted that “I think I can depend” on the “intelligent” Moncrief who “sounded the bar himself with a pole which the sea people tell me is the surest method.” However, he still held out that “a little time will discover which of them was right”.⁶⁰¹

A cartographic curiosity is a map of the Florida Keys which found its way into the Board of Trade’s possession. Although anonymous, it is clearly drafted in the distinctive style of Moncrief (**Fig. 58**).⁶⁰² On New Year’s Day 1767, Grant sent Moncrief to repair the fortifications of St. Mark’s on the Appalache River, which had been severely

⁵⁹⁸ Grant to Laurens, 6 February 1765, Grant Papers: NAS: GD 494/1/1, frame 119.

⁵⁹⁹ Grant to Board of Trade, 1 March 1765, CO 5/540, ff.177-80.

⁶⁰⁰ Grant to James Wright (Governor of Georgia), 1 April 1765, Grant Papers: NAS: GD494/1/1, frame 135.

⁶⁰¹ Grant to Henry Laurens, 3 April 1765, Grant Papers: NAS: GD494/1/1, frame 137.

⁶⁰² [James Moncrief], “A Sketch of the Harbours near Cape Florida”, Mss., [n.d., but likely 1767], CO 700/Florida 22.

damaged by a hurricane.⁶⁰³ The mission would require Moncrief to travel all the way around the length of the Floridian peninsula aboard the *East Florida*. Moncrief sailed past the Keys in the early months of 1767, and the map is most likely a product of this mission. While not based on meticulous scientific surveys, it would have provided both Grant and officials in London with the most advanced geographical depiction of the Keys available up to that time, and likely would have been used in policy discussions about the importance of establishing a presence in the Keys to counter the remaining claims of Spain. Shelburne categorically rejected any Spanish claims to the Keys, noting that “any pretensions formed by the Governor of the Havana” can be easily refuted by “Reference to the 20th Article of the late Definitive Treaty, by which Florida and in general everything which depended on it is ceded” to Britain.⁶⁰⁴

Conclusions

Considering his limited resources and the challenges of operating in such an undeveloped region, De Brahm made rapid and technically impressive progress on the General Survey. In only three years, he had contributed more to the accurate geographical knowledge of the Floridian Peninsula than the combined efforts of all other cartographers over the previous 250 years. His reconnaissance expeditions in 1765 had accurately delineated the Atlantic seaboard of East Florida from the capital down to Cape Florida for the first time. His highly sophisticated regional maps of important locations like the environs of St. Augustine and Mosquito Inlet formed the blueprints for cadastral surveying and settlement in these regions. Latterly, his surveys of the St. John’s River

⁶⁰³ Diary of James Grant, entry for 1 January 1767, NAS: Grant Papers, GD494/1/1, frame 1; also Grant to Shelburne, 17 January 1767, CO 5/548, ff.139-40.

⁶⁰⁴ Shelburne to Grant, 11 December 1766, CO 5/548, f.125.

would not only yield the prospect of opening up a new corridor of development, but also sought to prove or disprove the existence of the legendary trans-peninsular waterways. By the end of 1767, he had completed most of the surveys that would be necessary to form an accurate general map of the north-eastern regions of East Florida. Simultaneously, in his plan of the town of “New Bermuda”, he had introduced the merits of Enlightenment town planning to the ‘Infant Colony’, despite the lack of success of “New Bermuda” itself. In spite of these accomplishments, De Brahm’s entire operations were gravely threatened by his deteriorating relations with Governor Grant.

Indeed, Grant had problems of his own. Between 1764 and 1770 the Privy Council issued no fewer than 227 large land grants in East Florida, each averaging 12,000 acres, accounting for a total 2.86 million acres of territory. This compares to a total of 2.1 million acres granted during the same period in New York, Nova Scotia, Québec and West Florida combined.⁶⁰⁵ However, despite the fact no other British American colony had generated more interest in property speculation than East Florida, and Grant’s prescient initial recommendation that “no lands ought to be granted but to those who are actually to reside in the country”, the immense wealth and the political influence of many of those who applied to the Privy Council for grants ensured that all doors would be open, even those who had no intention of ever stepping foot in East Florida. There would be no wave of experienced, well-financed planters moving to live in the Infant Colony. While Grant managed to attract the prominent South Carolina planters, the brothers John and

⁶⁰⁵ The peak year for the issuance of land grants was 1767, during which 122 were approved, Mowat, *East Florida*, p.59; Rogers, ‘East Florida Society’, p.479.

James Moultrie, to East Florida, his efforts to encourage other big names to move south, such as South Carolina's Francis Kinloch, generally failed.⁶⁰⁶

Yet, as the new year of 1768 beckoned, De Brahm had ambitious plans to advance the General Survey. His first priority was to complete the mapping of the St. John's River system and with it a general map of the regions of the province southwards from the mouth of that river to its source, along with the precise charting of the adjacent coastline. He then planned to move on to map "the Southern coast of this promontory", by scientifically surveying the littoral he had explored during his reconnaissance expeditions. After finishing the surveys of the northern regions which lay between the mouth of the St. John's and the St. Mary's rivers, he then intended to round Cape Florida to chart the Keys, and beyond that, making the bold break towards the province's "Western Shores" along the Gulf of Mexico.⁶⁰⁷

⁶⁰⁶ In 1765, Grant noted the visit of "Mr. Kinloch" to East Florida, who possessed "100s of slaves and grows 10,000 lbs of indigo a year" in South Carolina, Grant to Board of Trade, 8 August 1765, CO 5/540, f.19; Schafer, *St. Augustine*, p.5.

⁶⁰⁷ De Brahm to Board of Trade, 8 September 1766, CO 323/24, f.41.

Chapter IV: ‘Closing the Net’: HILLSBOROUGH 1768-1772.

A. Introduction

On 21 January 1768, Wills Hill, the Second Earl of Hillsborough received the seals which made him one of “His Majesty’s Principal Secretaries of State” with control over the newly created American Department.⁶⁰⁸ For the first time, the hitherto confused and highly decentralized administration of American affairs would be united under the firm authority of one man.

The American Department owed its inception to political brinksmanship.⁶⁰⁹ When Augustus Henry FitzRoy, the 3rd Duke of Grafton assumed, for all practical purposes, the premiership after the withdrawal of Chatham in the autumn of 1767, he needed to recruit both former Tories and the resolutely anti-American Bedfordite faction into his cabinet with the promise of two senior roles each.⁶¹⁰ In the wake of these developments, the talented but unpopular Southern Secretary, William Petty, the 2nd Earl of Shelburne, a Chathamite, surrendered control of colonial affairs to a newly-created American Department, while maintaining his domestic and European responsibilities.

⁶⁰⁸ Wills Hill, 2nd Earl of Hillsborough (1718-93), known as the 1st Marquess of Downshire from 1789, see P.J. Marshall, ‘Hill, Wills’, *DNB*, vol.27, pp.201-11.

⁶⁰⁹ Lord Halifax had tried twice, in 1751 and 1757, to have the Board of Trade presidency elevated to a full cabinet post, “Secretary of Plantations,” only to see his designs blocked by Bedford and Pitt respectively, M.M. Spector, *The American Department of the British Government* (New York, 1940), pp.13-14. The creation of an American Department was advocated by Thomas Pownall, *Administration of the Colonies* (1764), pp.11-20. Lord Chesterfield warned Dartmouth that “If we have no Secretary of State with full and undisputed powers for America in a few years we may as well have not America”, Chesterfield to Dartmouth, 24 May 1766, *Dartmouth Mss.*; Later in 1766 Dartmouth narrowly missed out in being given such a role, once again due the intervention of Chatham, Spector, *American Department*, pp.17-8.

⁶¹⁰ C.W. Alvord, *The Mississippi Valley in British Politics* (Cleveland, 1917), vol. II, p.17; P.D.G. Thomas, *King and Politicians, 1760-1770* (Manchester, 2002), pp.180-3.

This created a powerful new role, and given his experience, Hillsborough was the obvious choice.⁶¹¹

As one of the ‘King’s Friends’ with a cross-aisle appeal, held as he was in respectful regard by Chatham, Hillsborough enjoyed the support of many.⁶¹² As his power increased, however, so did the determination of his political opponents, notably the Bedfordites who resented his opposition to their personal colonial land speculation schemes.⁶¹³ When he did face opposition, Hillsborough was intransigent, regardless of the consequences,⁶¹⁴ believing that “timidity is treason where the happiness of a nation is concerned”.⁶¹⁵ When it came to Britain’s aspirations for its North American colonies, Hillsborough was inflexibly attached to the notion of mercantilism, the legal objective being to limit colonial trade to intercourse with Britain. He believed that acts like the Navigation Acts were vital to maintaining “the great and solid advantages arising to the commerce and navigation of this kingdom from North America [which] depend principally upon giving proper encouragement to the fishery, to the production of naval

⁶¹¹ Thomas, *King and Politicians*, pp.182-3.

⁶¹² Hillsborough and Gage also shared an infamous linkage. In the 1730s, Hillsborough’s father, the rakish *bon-vivante*, Trevor Hill, had a very scandalous affair with Gage’s mother, Lady Gage, J.R. Alden, *General Gage in America* (Baton Rouge, La., 1948), pp.7-8.

⁶¹³ The 1771 Cabinet shuffle replaced moderates on colonial policy, such as Sir Edward Hawke and General Henry Conway with Bedfordite hard-liners such as John Montague, the 4th Earl of Sandwich and Lord Suffolk, P.D.G. Thomas, *The Townshend Duties Crisis* (Oxford, 1987), p.214.

⁶¹⁴ For example, on 11 February 1768 the Massachusetts General Court dispatched a Circular to the other provincial legislatures decrying “taxation without representation”, ‘Massachusetts Circular Letter to the Colonial Legislatures,’ 11 February 1768, printed in full, M. Jensen, *English Historical Documents* (London, 1955), vol. IX, no.129, pp. 714-6. This Circular, primarily authored by Sam Adams, was preceded and intellectually supported by the anonymous tract of Philadelphia lawyer John Dickinson, *Letters of a Pennsylvania Farmer*, serialized, it first appeared as serial in December, 1767; see also P.J. Marshall, *The Making and Unmaking of Empires*, pp.167-9. As Boston descended into mob rule and New Englanders organized trade boycotts of British goods, Hillsborough ordered Gage to send four regiments to occupy the city. Exports from England to New England in the year 1768 officially totalled £419,797,9s, 4d, but more than halved to £207,993, 14s, 3d in 1769. Exports rebounded to £391,451, 7s,5d in 1770 and soared to a colonial-era record of £1,420,119, 1s,1d in 1771, D. Mac Pherson, *Annals of Commerce...of the British Empire*, vol. III (London, 1805), pp.486, 495, 508 and 518.

⁶¹⁵ S.E. Rees, ‘The Political Career of Wills Hill, Earl of Hillsborough (1718-1793) with Particular Reference to his American Policy’, Ph.D. Dissertation, University of Wales, 1976, p.222.

stores, and to supply the Sugar Islands with lumber and provisions”.⁶¹⁶ For Hillsborough, a mercantilist world view was not simply a political creed, but a way of life: the Earl had inherited one of the greatest estates in Ireland and by the 1760s he was the most important landowner in Ulster.⁶¹⁷

Although history has generally not been kind to him, Hillsborough’s conservatism was tempered by a sense of fairness and integrity. Even Franklin, an arch opponent of Hillsborough, upon first hearing news of his appointment, mused that “I do not think this nobleman in general an enemy to America”.⁶¹⁸ Another wrote, “Lord Hillsborough is esteemed a nobleman of good nature, abilities, and integrity; is a man of business, alert, lively, ready, but too fond of his own opinions and systems and too apt to be inflexibly attached to them...but much more [than Shelburne] to be depended upon, if he once adopts your ideas in any measure”.⁶¹⁹

Over the next year, Hillsborough’s authority over American affairs was to increase significantly. Hillsborough’s office assumed complete personal control over all official civilian communication between America and Whitehall.⁶²⁰ In addition to his control over colonial patronage and the great influence brought about through regulation

⁶¹⁶ Hillsborough to Gage, 31 July 1770, *Gage Correspondence*, vol. II, pp.107-10.

⁶¹⁷ Hillsborough’s Irish estates comprised just shy of 100,000 acres, his seat being at Hillsborough Castle in County Down, but he also owned significant tracts in Antrim and Wicklow. Public Record Office of Northern Ireland, *Introduction: Downshire Papers* (Belfast, 2007), pp. 2-7, Rees, ‘The Political Career of Wills Hill’, pp.1-6; W.A. Maguire, *The Downshire Estate in Ireland: The Management of Irish Landed Estates in the Early Nineteenth Century* (Oxford, 1972), pp.1-10.

⁶¹⁸ Franklin to Joseph Galloway, 9 January 1768, printed in full, W.B. Wilcox et al. (eds.) *The Papers of Benjamin Franklin* (New Haven, 1972), vol.15, pp.15-16.

⁶¹⁹ William Samuel Johnson (agent for Connecticut) to William Pitkin (Governor of Connecticut), 26 December, 1767, D. Trumbull (ed.), *The Trumbull Papers: Correspondence of William Samuel Johnson to the Governors of Connecticut*, Massachusetts Historical Society, 5th Series, vol. IX (Boston, 1885), pp.252-4; Rees, ‘The Political Career of Wills Hill’, p.130.

⁶²⁰ In his first Circular to the American governors, Hillsborough instructed them that from henceforth all “Dispatches be for the future addressed to me,” so granting him complete control over a single fixed channel of communications, Hillsborough’s Circular to the Governors in North America and the West Indies, 23 January 1768, printed in full, *NYCD*, vol. VIII, p.7.

of colonial commerce, Hillsborough was given the power to direct the overall deployment of the Royal Navy and the army in the American theatre, ensuring that his technically civilian office progressively accrued military power.⁶²¹ As the American Department's top-level minister, Hillsborough delved into the job of daily management with an intensity perhaps not seen before or since. Unlike other Secretaries of State before him, Hillsborough was a micro-manager, wanting to be aware of every missive and involved in every action.

By June 1768, the jovial, but totally ineffectual, Lord Clare was unceremoniously replaced as Board president by Hillsborough.⁶²² Pownall became his under-secretary at the American Department, while he still remained the secretary of the Board of Trade⁶²³, and, in those capacities, assisted Hillsborough in ensuring that his authority was imposed on the Board from the outset.

In addition to John Pownall, William Knox joined Hillsborough's office as the second undersecretary in the spring of 1770. Knox was an ultra-imperialist ideologue who had attained great prominence as perhaps George Grenville's most articulate and effective propagandist.⁶²⁴ He also possessed extensive first-hand experience in colonial

⁶²¹ The contents of ADM 1/4127 indicate that all deployment orders to the Royal Navy in the American theatre were issued by Hillsborough. The contents of CO 5/87 indicate that Hillsborough was the only Secretary of State with whom General Gage officially corresponded.

⁶²² Viscount Clare was transferred from the Board of Trade, becoming Treasurer of Ireland on 17 June 1768. Hillsborough took his seat as President of the Board of Trade on 2 July 1768; Benjamin Franklin observed that Clare's removal happened with such speed and stealth that he had no forewarning. Benjamin Franklin to William Franklin, 2 July 1768, printed in full, W.B. Wilcox et al. (eds.), *The Papers of Benjamin Franklin* (New Haven, 1972), vol. 15, p.163.

⁶²³ J.B. Wickwire, 'John Pownall & British Colonial Policy', *WMQ*, vol. LIV, no.4, pp.547-8.

⁶²⁴ William Knox, a close friend and acolyte of Grenville was first employed by the then First Lord of the Treasury to write propagandist pamphlets and books advocating his ministry's hard-line colonial policies. The first major work, *The Claim of the Colonies to an Exemption from Internal Taxes imposed by the Authority of Parliament* (London, 1765), was an articulate defense of the Stamp Act. He later published two works defending the Townshend Duties, *The Present State of the Nation...with respect to its Trade* (London, 1768) and *The Controversy Between Great Britain and her Colonies* (London, 1769); L.J. Bellot,

affairs, having lived in Georgia where he served as a member of the provincial council and purchased a sizable rice plantation. Since his return to London, he had acted as the agent for East Florida.⁶²⁵ His presence added some intellectual heft and daring strategic sense to the administration, albeit from a sharply conservative bias.⁶²⁶

While the Board lost its individual identity, its actual functions were not materially changed and its management of its cartographic programmes continued. It also benefited from the fact that henceforth its reports would be presented directly to the Privy Council by one of its own members. Within six months of his ascendancy, the Board of Trade was entirely subordinated by Hillsborough's new ministry, becoming the American Department's unit of inquiry, research and advice, in addition to maintaining its mandate as the technical overseer of all civil colonial cartography programmes and the custodianship of the consequent maps and geographical information.⁶²⁷

To illustrate the weight that Hillsborough gave to the intelligence produced by the General Survey, the distribution of the manuscript maps produced during his tenure was tightly controlled, in contrast to the *modus operandi* both before and following his administration. Very few copies were made or made available to commercial printers, and other than those dispatched to the Board, only the Admiralty and the highest ranks of the military were given access. The Board did not commission any map engraving on its own accord. Indicative of this disposition, De Brahm's request to Hillsborough to be permitted to publish his General Survey maps, with the profits going to subsidize the

William Knox: The Life & Thought of an Eighteenth-Century Imperialist (Austin, 1977), pp.67, 85-98 and 250.

⁶²⁵ Bellot, *Knox*, pp.55-7.

⁶²⁶ While both later spoke highly of one another, Knox had a complicated relationship with Hillsborough and later claimed that following a private policy disagreement "I was ever after excluded by Lord Hillsborough from all consultations whilst he staid in office", William Knox "Proceedings in relation to the American Colonies," [1774 or 1775], *Knox Mss.*, p.257.

⁶²⁷ Basye, *Trade and Plantations*, pp.176-80.

survey, was not approved.⁶²⁸ While there is no record of an official order of cartographic secrecy, the practical fact remains that during this period the information collected by the survey was the exclusive preserve of high-level official administration.

In his drive to ensure that Britain's interests were held paramount, Hillsborough also more clearly spelled out priorities for the General Survey. Holland's maps and reports were to guide how Britain could best gain economic advantage from the northern colonies. Hillsborough had less interest in cadastral surveys as he saw Cape Breton, parts of eastern Maine, and the northern reaches of New Hampshire and New York as 'commodity colonies' whose resources could be directly harvested by the mother country without any local competition or hindrance. The situation was altogether different in William Gerard De Brahm's southern theatre, as East Florida was viewed an incipient 'plantation colony', desperately needing permanent settlement for its agrarian potential to benefit Britain. Hillsborough and the colony's governor believed that the Southern Survey should continue to fulfill a more conventional role, its main purpose being to discover and analyse the choicest areas for development and to facilitate the consequent demarcation of cadastral maps.

Hillsborough was adamant that the General Survey be completed with the greatest alacrity. Holland and De Brahm were expected to give top priority to the progress of the General Survey and place its interest above all else whether it be personal land speculation schemes, or other legitimately official endeavours like provincial cadastral surveys or the demarcation of inter-colonial boundaries. Providing they adhered to these priorities, Hillsborough was willing to support his surveyors, both financially and politically.

⁶²⁸ De Brahm to Hillsborough, 29 April 1770, CO 5/71, part 2, ff.7-8.

In order to have “general maps” of coherent regions that would be of a greater administrative utility, Hillsborough also very much wanted his surveyors to aggregate their various local plans, and to reduce them to smaller standard scales. Indicative of both his innumerable requests for such maps, and his direct familiarity with the maps, Hillsborough notably scolded De Brahm, ordering him to create a “general map” with “the drawing to be made with the greatest care and exactness and not copied upon such thin slight paper as those you have already sent, which being in detached pieces and upon different scales cannot be made use of without great difficulty and inconvenience”.⁶²⁹ Despite Hillsborough’s exhortations, however, Holland and De Brahm failed to deliver. While both promised to finish general maps, and even claimed that they were in the process of drafting them, there is no evidence that they produced any such general maps during the Hillsborough administration.

In part, their failure to provide general maps was likely driven by Hillsborough’s first priority which was to proceed as swiftly as possible into surveying previously uncharted areas. In this regard, time was of the essence, particularly in the north, where the weather, in large part, dictated schedules and windows of opportunity. The creation of general maps was also greatly impeded by the lack of coordination and cooperation between the American Department, including the Board of Trade, and the Admiralty, which provided human resources and ships critical to the surveying programs. In all events, one gains the impression that as soon as the surveyors finished surveying a region they simply moved on to the next without allocating time for creating a general regional map.

⁶²⁹ Hillsborough to De Brahm, 9 December 1769, CO 5/70, f.333.

Hillsborough's unparalleled ability to alienate and antagonize colonial figures not only undermined the implementation of his policies, but also narrowed his channel of advice on colonial affairs. His misreading of colonial psychology ultimately led to his demise as head of the American Department as he failed to grasp the intensity of the aspirations, motivations, customs and needs of those entrenched in the colonies.

B. The Northern District

All considered, this four-year period under Hillsborough tenure was a time of progress for the survey. A large amount of territory was mapped, and the survey achieved a mature and refined form with respect to content, scientific accuracy and quality of draftsmanship. Hillsborough also ensured that the Northern Survey received sufficient and consistent funding, approving an annual operating budget allocation of £984, 17s throughout his tenure.⁶³⁰ Nonetheless, the Northern Survey had to contend with several very serious challenges.

Holland's operations were materially caught up in the rivaling priorities and bureaucratic clumsiness that existed among the offices of Hillsborough, the Admiralty Board, and the military establishment. While Holland technically reported only to Hillsborough and Pownall, he relied on the Admiralty for transportation, victualing, hydrographic observations. With these stakeholders, Hillsborough offered little support to Holland. He was left, often unsuccessfully, to try to sort it out for himself.

⁶³⁰ The Northern District was allocated an operating budget of £984, 17s. for each year that Hillsborough had approved the fiscal estimates, from 1769-1772, "An Estimate Attending the General Surveys of His Majesty's Dominions in North America for the Year...[1769, 1770, 1771 and 1772]," CO 5/7, ff.253-256.

Another difficulty was the matter of Holland's access to surveys conducted under the Admiralty's auspices, namely those done of peninsular Nova Scotia by J.F.W. Des Barres. On 12 August 1770, while en route from Québec to New Hampshire, Holland met with Des Barres over a bottle of wine in Liverpool, Nova Scotia.⁶³¹ It was their first face to face encounter in some eight years, and Des Barres recounted that they mutually agreed that in the future they would share their respective maps and charts "for extending the public benefit".⁶³² Holland pledged to furnish Des Barres "with his astronomic observations and materials" so that he could "protract proper sea charts", and reciprocally, Des Barres was to send Holland reduced versions of his charts so that Holland could integrate them into his "geographic map", or rather, his envisioned accurate general map of the entire Northern District. While they also agreed to give credit to one another for their respective contributions to any composite work, Des Barres already relished the prospect of being the first to author "a general Mercator chart, comprehending the River and Gulph of St. Lawrence the Islands of Anticoty, St. John, Cape Breton the Isle of Sable and this continent on the Bay of Fundy, &c, considering how very much such a chart is wanted at present; those hitherto published being so full of errors and dangerous omissions". Des Barres had already conceived of the idea of the *Atlantic Neptune*, but unfortunately for Holland, he would prove not to uphold his end of their gentleman's agreement.⁶³³

Expected to fulfill the broader duties of all vessels on the active service roster, Holland complained to London on numerous occasions that his maps were often

⁶³¹ The Meeting occurred at the home of merchant Simeon Perkins. An entry in Perkins' Diary reads: "Sunday Aug 12th, [1770] – The officers of the Canso [*Canseaux*] call to see me, with Capt. Holland and Des Barres, and took a glass of wine", H. Innes (ed.), *The Diary of Simeon Perkins 1766-1780*, pp.40-1.

⁶³² Des Barres to Hood, 13 August 1770, LAC: Des Barres Papers, Series V, pp.56-69.

⁶³³ Hornsby, *Surveyors of Empire*, pp.69-70.

conspicuously bereft of hydrographic detail as Mowat and his crew were diverted elsewhere.⁶³⁴ To Holland's chagrin, changes that he recommended directly to the Admiralty were never made.⁶³⁵

Holland was consistently irritated by Des Barres's repeated failure to share his charts, thereby greatly retarding the production of a general map of the septentrional regions of the Northern District. In the spring of 1772, he wrote to Pownall in frustration, "The General Map... is at a stand, for want of copies of Mr. Desbarres' Nova Scotia surveys, as I know this Gentleman has little desire to send me copies, I would be glad to have his plans sent me, to be returned as soon as I had obtained this reasonable request".⁶³⁶ It was to be the beginning of an increasingly heated debate over the control of geographical information, and presumably official favour, between the two men. For whatever reason, and in spite of Holland's innumerable pleas to do so, there is no indication that Hillsborough or Pownall ever intervened on Holland's behalf.

In addition to his reliance on the navy, Holland depended on the army for twelve of his permanent staff, including several of his most skilled surveyors. He was alarmed upon hearing that the 60th Regiment had made an application to General Gage for their members who had been seconded to the Northern Survey with pay to be taken off the

⁶³⁴ Holland to Hillsborough, 24 December 1769, CO 5/71, 133 ff.

⁶³⁵ In the autumn of 1768, Holland took the unusual step of writing the Admiralty directly suggesting that, instead of the "present Establishment", the *Canseaux* should be replaced with two schooners of 50-tons each, which he estimated to cost between £500 and £600, along with a small boat for each schooner and two large surveying boats, bringing the total first cost to between £570 and £670. In all, he proposed a total naval compliment of twenty hands, with five allocated to each schooner and boat. This amount would be less than half the crew already manning the *Canseaux*, and the cost of these vessels would be far less, resulting in a great improvement "in Utility and Expense", Holland to Phillip Stephens (Secretary to the Lords of the Admiralty), 14 October 1768, CO 5/70, f.15.

⁶³⁶ Holland to Pownall, 15 June 1772, CO 323/27, pp.249-252.

books. Following the regiment's transfer to the West Indies on 25 December 1771,⁶³⁷ the quarterly installments for the daily subsistence of 6d for each of the twelve troops had been severely delayed.⁶³⁸ Included on this list were Holland's indispensable deputies, Charles Blaskowitz, Thomas Wright and James Grant.⁶³⁹ This had placed a severe financial strain on Holland, as the amount was equal to an annualized overdraft of £109,10s, almost 6% of the northern survey's entire budget.⁶⁴⁰ In January 1772, Holland had made a special trip to New York to have an audience with Gage on this issue, but the general not only declined to guarantee these arrears, but he refused to offer any assurance that the men would "be kept on the books".⁶⁴¹ Only intervention at the highest level could save the survey from this debilitating loss of manpower. Yet, Holland had to make do with waiting an uncomfortably long time before London would respond.

In addition to his resource challenges, Holland, weary of his personal money trials and marital problems, was frustrated by Hillsborough's disregard of his personal situation.⁶⁴² In a very revealing letter to his close friend, General Frederick Haldimand, written early in 1768, Holland expressed that "I begin to grow tired of surveying" due to

⁶³⁷ The 60th Regiment was redeployed to Jamaica and Antigua, see Gage to Dartmouth, 5 May 1773, *Gage Correspondence*, vol. I, p.352.

⁶³⁸ Holland to Pownall, 15 June 1772, CO 323/27, pp.249-52.

⁶³⁹ To Holland's chagrin, early in 1768, Hillsborough detained Thomas Wright, who was then visiting London, to work at the Board of Trade's offices reducing and consolidating surveys already received into a "uniform scale" and for making copies of these maps for other departments of government.⁶³⁹ Upon Wright's return to Canada in the spring of 1769, this role was filled by Samuel Lewis, a clerk and evidently a highly skilled draftsman. Thomas Wright left London for Canada in March, 1769, Holland to Hillsborough, 1 March 1769, CO 5/70, ff.105-8. Samuel Lewis remains a highly-mysterious figure, even though the quality of his draftsmanship indicates that he was an unusual talent. In 1769 Lewis collaborated with a John Lewis on creating a presentation copy of De Brahm's map of the St. John's River. John Lewis, perhaps father or uncle to Samuel, had made a copy of Samuel Holland P.E.I. map, John Lewis *after* Samuel Holland, "A Plan of the Island of St. John in the Province of Nova Scotia," Mss., 1765, NA: MR 1/1785. He was subsequently dismissed from the Board of Trade in June, 1769 for carrying "on a correspondence with persons in America of a very unwarrantable tendency," *JCTP*, 22 June and 29 June 1769 (vol.13, pp.123-4 and 133).

⁶⁴⁰ Northern General Survey was allocated £1,885, 4s for each of the fiscal years 1771, 1772 and 1773, "An [Annual] Estimate of the Expenses", CO 5/7, pp.463-5.

⁶⁴¹ Holland to Pownall, 15 June 1772, CO 323/27, pp.249-52.

⁶⁴² Holland to Haldimand, 20 January 1768, Haldimand Papers, BL: Add. Mss. 21728, f.252.

a belief that his efforts were not sufficiently appreciated, as “London does not care enough”. When Holland lobbied Hillsborough for an absence of leave to sit on the commission formed to address the boundary dispute between New York and New Jersey,⁶⁴³ Hillsborough, underscoring the importance he placed on the General Survey, replied, “I would recommend to you that the General Survey take precedence, and that you furthermore not engage yourself in the boundary matter in so far as it may interfere with that priority.”⁶⁴⁴ Regardless, Holland was determined to go to New York, correctly assuming that his deputies could ably fulfill the objectives set for the General Survey in his absence. In November 1768, Holland was able to report that in only six years his survey had charted over 2,000 miles of coastline, all measured by triangulation, and that by time all of the Canadian surveys were completed this number would grow to 5,000 miles.⁶⁴⁵

Cape Breton Island

As Hillsborough awaited the receipt of Holland’s final Cape Breton report,

⁶⁴³ Royal Commission for the New York-New Jersey Boundary Survey, dated 7 October, 1767, CO 5/1101, 71 ff., W.A. Whitehead, *The Circumstances leading to the Establishment, in 1769, of the Northern Boundary Line between New Jersey and New York: A Paper delivered to the New Jersey Historical Society, May 19, 1859* (New York, 1859), p.17; also P.J. Schwarz, *The Jarring Interests: New York’s Boundary Makers, 1664-1776* (Albany, 1979), pp.177-80. The New York-New Jersey boundary was the subject of several contemporary maps, including: Anon., [Map of New Jersey showing the "Partition line ordered by the commissioners in 1769"], Mss., [c.1769], LOC: G3811.F7 1769 .C6 Vault, Sellers & Van Ee, no.1243; there is also a very interesting map, Anon., [Northern New Jersey, showing five different proposed boundary lines between New Jersey and New York], Mss., [c.1768-9], LOC: G3811.F7 1769 .T5 Faden 2, Sellers & Van Ee, no.1245. The most celebrated printed map of New Jersey from the period, Bernard Ratzer, *The Province of New Jersey, divided into East and West, commonly called the Jerseys* (London, William Faden, 1777) labels the “Boundary as Settled by the Commissioners in 1769” between the two provinces.

⁶⁴⁴ Hillsborough to Holland, 1 March 1769, CO 5/70, ff.105-8, printed in full, Harvey (ed.), *Holland’s Description*, pp.129-30.

⁶⁴⁵ Holland to Hillsborough, 10 November 1768, CO 5/70, 19ff.

he was very adamant that the development freeze be maintained,⁶⁴⁶ telling Campbell that “making any separate or particular grant, which may not correspond with such general plan, may be inconvenient”.⁶⁴⁷ Meanwhile, Holland’s final report was delayed by the need to wait for the midshipman William Brown to conduct a nautical survey of the southeastern coast, a task too treacherous for the *Canseaux*.

In his final report of 10 November 1768, Holland declared that, “No part of North America can boast of a more advantageous Situation for Commerce and Fishing, than the Island of Cape Breton”, now estimating that the fisheries of Cape Breton could employ a total of 820 decked vessels and 2250 shallops, crewed by 20,060 men.⁶⁴⁸ He further estimated that this fleet would yield 1,249,000 quintals of fish annually, which would be valued at an astounding £660,176! Approximating the annual costs of maintaining such a grand industry to be £534,070, the industry would still yield an annual profit of £126,106. According to his appraisal, Cape Breton Island could provide Britain with a fishery 10% greater than that of Newfoundland!⁶⁴⁹ Beyond that, it could provide the Navy with an enormous pool of experienced mariners, for the fisheries would employ “a Body of 20,000 Men always ready for the Sea Service”.

⁶⁴⁶ Hillsborough did not take kindly to Campbell’s scheme to grant coal mining concessions, and he reprimanded the governor, calling his actions “irregular” and ordering that they not be repeated, Hillsborough to Francklin [*en lieu* of an absent Governor Campbell], 26 February 1768, CO 217/45, ff.180-3. While Campbell agreed to comply, he amazingly had the temerity to ask Hillsborough if the syndicate could be given more time to extract the agreed allotment! Campbell to Hillsborough, 18 November 1768, CO 217/25, ff.95-7.

⁶⁴⁷ Hillsborough to Campbell, 12 October 1768, CO 217/45, ff.227-8.

⁶⁴⁸ Holland, “A Description of the Island of Cape Breton,” 10 November 1768, CO 5/70, f.1.

⁶⁴⁹ The Newfoundland fishery was valued at around £600,000 in 1768, W.H. Whiteley, ‘Governor Hugh Palliser and the Newfoundland Labrador Fishery, 1764-1768,’ *Canadian Historical Review*, vol. 50, no. 2 (June 1969), p.163.

Accompanying his report was his final version of his large-scale map, which now considered lost, is only known today by a single copy of his reduced plan (**Fig. 61**).⁶⁵⁰ It depicts the same details as his 1767 version, with the only difference being the addition of the hydrographical information that Brown had taken along the island's southeastern coastline.

In the year following the receipt of Holland's final report, forty-two petitions for land grants were filed, in total, accounting for 800,000 acres or about two-thirds of the area fit for habitation.⁶⁵¹ The Board replied to none of these petitions, and no permanent land grants were made on the island until 1784. Curiously, there is no explanation in the official records from 1769 onwards about the Board's reasoning for making the temporary ban of settlement on Cape Breton indefinite. One explanation may be that Hillsborough and his successors may have genuinely considered the coal deposits to be the personal property of His Majesty, likely to be reserved for the exclusive use of the navy.⁶⁵² This theory is supported the fact that in 1788 the King granted the ownership of various mineral rights in Nova Scotia to Frederick, the Duke of York. The Duke would not exercise his rights until 1825, when, in exchange for a debt, he transferred his title to the coal deposits of Cape Breton to the jewellery firm of Rundell, Bridge and Rundell.⁶⁵³

⁶⁵⁰ Samuel Holland & Deputies, "Plan of the Island of Cape Britain", Mss., 1768, ADM 352/156, sent with the "Description", 10 November 1768, CO 5/70, f.1.

⁶⁵¹ Forty-two memorials for permanent land grants were submitted to Whitehall in 1769, in aggregate applying for 800,000 acres of land, or almost two-thirds of island. These tiles were collectively submitted the Board of Trade on 24 December 1769. None elicited a response, Brown, *History of Cape Breton*, pp.372-3.

⁶⁵² Brown, *History of Cape Breton*, p.380; Harvey, *Holland's Description*, Introduction, p.26.

⁶⁵³ M. Gerriets, 'The Impact of the General Mining Association on the Nova Scotia Coal Industry, 1826-1850', *Acadiensis*, vol.21, no.1 (Autumn 1991), pp.59-60; B. Murdoch, *A History of Nova-Scotia, or Acadie* (Halifax, 1867), vol.III, pp.582-3. It is important to note that Cape Breton Island was made a province separate from Nova Scotia in 1784, but was re-joined to the province in 1820. Thus in 1788, the Duke of York had not been given title to mineral rights on the island until 1820. In 1826, Rundell, Bridge & Rundell formed the General Mining Association (GMA) to manage the coal mines.

There was also a concern that a flood of Cape Breton coal on the market could depress prices realized by the Newcastle trade, or that an emphasis on coal would discourage the clearing of land as coal would replace wood as the standard fuel in the colonies.⁶⁵⁴

Beyond these considerations, one must also account for Hillsborough's consistent and active support for Palliser's policy for a 'ship' fishery in Newfoundland.⁶⁵⁵ If the waters surrounding Cape Breton could yield a similarly enormous annual catch of cod, as suggested by Holland, it would only be natural that Hillsborough would wish to implement a similar policy regime there. In all events, Hillsborough, who was not obliged to respond to any petitions, found silence and delay to be useful political tools, as it was easier to say nothing than to say 'no'.

In the years to follow, Hillsborough and Palliser's policies in both Newfoundland and Cape Breton would not produce the desired results. In Newfoundland, Palliser temporarily succeeded in limiting the French fishery, while growing both the size of the British fishery, and specifically the ship fishery's percentage of that catch.⁶⁵⁶ However, despite Palliser's best efforts in Parliament, Newfoundland's resident population continued to grow, sending him the message that Newfoundland "has been settled behind your back".⁶⁵⁷ The Revolution inhibited shipping to England, and an unprecedented glut

⁶⁵⁴ Harvey, 'Holland's Description', Introduction, p.26.

⁶⁵⁵ Whiteley, 'Palliser', p.153.

⁶⁵⁶ Whiteley, 'Palliser', pp.160-1.

⁶⁵⁷ Sir Hugh Palliser, as an Tory MP, continued to be involved in constructing measures to benefit the Newfoundland ship fishery at the expense of the sedentary fishery, notably authoring "Sir Hugh Palliser's Act of 1775," *An Act for the Encouragement of the Fishery carried on from great Britain, Ireland, and the British Dominions in Europe* (15 Geo. III, c.31), J. Bannister, *Rule of the Admirals* (Toronto, 2003), pp.148-62.

of cod in 1788 caused the international price to collapse. This factor, combined with the advent of the Napoleonic Wars, signaled the terminal decline of the ship fishery.⁶⁵⁸

The 1774 census showed that the island's European population had grown to only 1,011 and produced an annual cod fishery of 26,020 quintals, worth only £20,000.⁶⁵⁹ As early as 1770, due to an almost complete absence of either settlement and any martial or civil authority, the Cape Breton coal fields became the province of smugglers, which the navy needed to remove.⁶⁶⁰ The Crown would not exercise in any significant way its prerogative to the coals until the advent of the American Revolution.

Labrador

Sproule's magnificent series of charts of Labrador's Gulf of St. Lawrence coast provide a detailed appraisal of the flora, fauna, fishery, and the terrain of every harbour and estuary, as well as an intensity of hydrographic information and geodetic measurements (**Fig. 62**).⁶⁶¹ Indicative of his numerous remarks which asserted that Labrador was far more a 'sealing' than a 'Cod fishing zone', Sproule, on his map of the Mingan Islands and the adjacent coastline, noted, "Of late years the Cod fish have altogether abandoned this coast...some people impute the scarcity of fish to an abundance of seals which have of late infested these parts".⁶⁶²

⁶⁵⁸ In 1788 the Newfoundland cod catch topped 950,000 quintals, but by 1804 had returned to traditional levels with an annual catch of 609,684 quintals. Moreover, the ship fishery was disappearing, such that in 1804 the resident population stood at 20,380, dwarfing the number of migrant fisherman, which stood at 4,000. By 1810 over 90% of Newfoundland fisherman were permanent residents, C. Pedley, *The History of Newfoundland* (London, 1863), pp.233-4.

⁶⁵⁹ Brown, *History of Cape Breton*, pp.376-7.

⁶⁶⁰ Brown, *History of Cape Breton*, p.371; Harvey, *Holland's Description*, Introduction, p.28.

⁶⁶¹ George Sproule, "A Survey of part of the North Shore of the River St. Lawrence, done in the year of 1768", Mss., 1768. CO 700/Canada 28.

⁶⁶² George Sproule, "A Survey of the Mingan Islands with the adjacent coast of Labrador", Mss., 1769, CO 700/Canada 30. The Sproule and Blaskowitz series of maps of the north shore of the St. Lawrence were personally carried from Québec to London by Governor Carleton in the summer of 1770, Holland to

The maps convinced Hillsborough and the Board that a healthy sealing industry would be best served by the return of Labrador and the islands to Québec's jurisdiction, as such a change would foster permanent settlement. They noted that the sealing industry, which they then estimated to be worth £10,000, could be greatly increased if "brought to a degree of perfection" by a sedentary fishery. In June 1772, the Board submitted a report to the Privy Council with this recommendation, which was duly approved the following year. Consequently, all of Labrador in addition to Anticosti and the Magdalen Islands were re-annexed to Québec under the terms of the Québec Act of 1774.⁶⁶³

Québec

While we sadly have no account of what would have been an especially fascinating survey, at the beginning of the 1768 season, Blaskowitz's party, having already surveyed Lac St. Jean on the ice, continued their progress down the Saguenay to where that river meets the St. Lawrence at the mouth of a great fjord. Meanwhile, two parties, one initially led by Holland himself, proceeded up the South Shore, although he felt sufficiently confident to leave the project midway in order to return to Québec City to oversee engineering works on the King's Wharf.⁶⁶⁴ That July, the young Carleton, who

Hillsborough, 6 June 1770, CO 5/71, f.309-11; the maps were received by Hillsborough no later than November 1770, Hillsborough to Holland, 15 November 1770, CO 5/71, part 2, ff.89-90.

⁶⁶³ Board of Trade, Report on Labrador, 24 June 1772, printed in full, Privy Council (Judicial Committee), *In the Matter of the Boundary between the Dominion of Canada and the Colony of Newfoundland in the Labrador Peninsula*, (London, 1927), *Joint Appendix*, vol. III, part VII no. 266; this resulted in "Order in Council for the Preparation of an Instrument for the Re-Annexing to the Government of Québec...Labrador", Privy Council Minutes, 22 April, 1773, printed in full, *Labrador, Joint Appendix*, vol. III, part VII, no. 292; *APC*, vol. V, pp.348-51. These boundary changes were officially ratified as part of the Québec Act of 1774 (14 Geo. III, c.83). Labrador was subsequently returned to Newfoundland in 1809 (49 Geo. III, c.27), and in 1825 (6 Geo. IV, c.59) the Gulf coast of Labrador was permanently re-annexed by Québec, N.L. Nicholson, *The Boundaries of Canada, Its Provinces and Territories* (Ottawa, 1964), pp.48-51.

⁶⁶⁴ Holland to Hillsborough, 20 June 1768, CO 323/28, f.143.

was a volunteer and nephew of General Carleton,⁶⁶⁵ set out to survey the St. Lawrence River above Montréal towards Lake Ontario. He was only able to proceed as far as Oswegatchie, New York, having been stopped by a party of Mississauga First Nations who presciently “were jealous of the operations he was carrying on, imagining it a Preliminary to taking their lands”.⁶⁶⁶ It was not uncommon during this period for the indigenous peoples in North America to either halt or misdirect European surveyors and explorers in their lands. Similar incidents were experienced by De Brahm, the forestry surveyor Thomas Scammell in Maine, and the British 22nd Regiment’s expedition up the Mississippi River in 1764.⁶⁶⁷

Meanwhile, Sproule was deployed to the North Shore to conduct separate surveys of the Mingan Isles, Labrador and Sept-Iles, Québec, although he was prevented from making further progress by the absence of the *Jupiter* schooner, which was still engaged at Cape Breton.

The plan for the following 1769 season was for Blaskowitz to winter at the Rivière St. Jean, which marked the Québec-Newfoundland boundary, and that spring to survey westwards to Sept-Iles before doubling back to Rivière St. Jean, and then to

⁶⁶⁵ Holland stated that “His [Governor Carleton’s] Nephew Lieutenant Carleton hath for some time acted in my Party as a Volunteer,” Holland to Hillsborough, 10 November 1768, CO 5/70, ff.19-26.

⁶⁶⁶ Lt. Carleton, “Cascades Id. To Jones Creek including Lake St. Francis”, Mss. [1768], MODHD: B3507, an enclosure to Holland to Hillsborough, 10 November 1768, CO 5/70, ff.19-26.

⁶⁶⁷ In 1768 De Brahm blamed his failure to travel across the Floridian Peninsula overland to the refusal of his Creek native guide to take him into the interior, the guide claimed that such an act would ensure that the local “Indian Headmen would forever resent it against him,” De Brahm to William Knox, 17 May 1768, CO 323/28, f.1. Wentworth mentioned in reference to the 1772 mission of his forestry inspector in Maine, Thomas Scammell, that he had encountered “Indians... who Boast of misleading his [Scammell’s] People & deceiving him; as they did not penetrate more than four Miles into the interior,” Wentworth to Phillip Stevens (Admiralty Board), 13 January 1773, ADM 1/3820, pp.266-7.

survey eastwards towards Mingan.⁶⁶⁸ These surveys would then merge with those already conducted by Sproule, who by that time would be engaged sounding the fearsome Manicouagan Shoals.⁶⁶⁹ This latter project took much longer than anticipated as the *Jupiter* schooner was otherwise engaged sounding Chaleur Bay.⁶⁷⁰

Holland spent the winter of 1768 to 1769 drafting his general map of the St. Lawrence valley. Before commencing this work, he reported to Hillsborough that “During this winter I shall bring these surveys to the general scale and lay down all the tracts granted during the French time with a description of the same, & an account of the claims, for which purpose Governor Carleton has ordered an abstract to be made out of the Provincial Archives, which will greatly illustrate the survey of this Province and render it compleat.”⁶⁷¹

Once again combining his new surveys with the advanced mapping previously done in the province, Holland completed a series of plans embracing “the four most material parts of this province”.⁶⁷² It took the form of two long connecting maps showing the entire St. Lawrence valley from a point above Montréal to points in the river’s estuary approximately 200 miles below Québec City.

For the 1770 season, the Canadian surveys that remained included the east coast of New Brunswick, a task completed by Wright and Blaskowitz down to Baie-Verte, the point where Des Barres’s surveys were to terminate, filling a geographical gap, without

⁶⁶⁸ Holland to Hillsborough, 15 October 1768, CO 5/70, ff.7-14.

⁶⁶⁹ George Sproule, “Map of the Coasts of Manicouagan Bay,” Mss. [1770], NA: CO 700/Canada 31, Penfold, no.1848.

⁶⁷⁰ Holland to Hillsborough, 10 November 1768, CO 5/70, ff.19-26.

⁶⁷¹ Holland to Hillsborough, 10 November 1768, CO 5/70, ff.19-26.

⁶⁷² Holland to Hillsborough, 10 June 1769, CO 5/70, ff.105-8, also Holland to Pownall, 10 June 1769, CO 5/227, ff.142-5.

which the Northern Survey would be “very imperfect”.⁶⁷³ Thinly populated by Acadians, the region was not considered to be a priority for development, although the surveyors identified the “Salmon Fishery” of the Mirimichi River, which has since become well-known, as one of the best in North America.⁶⁷⁴

Holland left Québec for New York in June 1769, and in his absence Wright was employed to reduce the scale of the original gargantuan surveys “in order for completing the General map, which shall give an idea of the whole”. Wright, who had recently returned from London, was left with no party to take into the field. To accommodate Wright’s need, Holland requested and received an addition to his 1770 estimates of 3 shillings per diem, sufficient to pay the wages of six soldiers.⁶⁷⁵ It took the remainder of the season for Sproule to finish the coast from Manicouagan to Tadoussac. The complete North Shore series was carried to London by Governor Carleton, and personally presented by him to the Board of Trade during a meeting held on 30 January, 1771.⁶⁷⁶

Even though all of the constituent surveys were complete in a comparable scale, there is no mention, however, of a general provincial map being completed or being sent on to London, and no work bearing that description appears in the 1776 or 1780 Board of Trade map inventories. This may explain why, a few years later, the Board saw fit to have Samuel Lewis draft a magnificent presentation copy of something close to a general map of Québec, embracing the majority of the original survey maps.⁶⁷⁷

⁶⁷³ Hillsborough to Holland, 15 November 1770, CO 5/71, part 2, ff.89-90.

⁶⁷⁴ Thomas Wright and Charles Blaskowitz, ‘A Plan of Miramichi Bay’, Mss., [1770], CO 700/New Brunswick 5.

⁶⁷⁵ Holland to Hillsborough, 10 June 1769, CO 5/70, ff.105-8.

⁶⁷⁶ *JCTP*, 30 January, 1771 (vol.13, p.258).

⁶⁷⁷ Samuel Lewis, *after* Samuel Holland et al., “A Map of the River St. Lawrence, reduced from the Actual Surveys of Samuel Holland” Mss., dated “Aug. 1773”, Mss., BL: K.Top.119.23.

New England

The surveys in Canada, the hinterland areas of eastern Maine, or the interior of New Hampshire tended to focus on largely unsettled, vacant territory. As the survey moved to cover coastal regions from Cape Ann to Penobscot Bay, there was a need to record existing colonial settlement and their economic activities in greater detail. As the survey entered the northern reaches of metropolitan Massachusetts, the nucleus of revolutionary fervour, the maps also began to transcend their civilian mandate to serve a potential military utility.

The New England surveys represent the Northern Survey at perhaps its most technically proficient and operationally efficient. Holland and his deputies raised the standards for the scientific topographical map by adding extensive observations on the manmade features of the landscape, thereby producing the most detailed and accurate economic maps made during the colonial era. This highly sophisticated cartography not only assisted traditional purposes, such as demarcating boundaries and facilitating navigation, but also provided administrators in both London and America with a most comprehensive source of intelligence for making policy decisions related to infrastructure, taxation and resource management.

While the New England colonies were among the first to be planted by the mother country, the region was conspicuously poorly mapped. Only Connecticut had ever funded anything like a provincial survey.⁶⁷⁸ The standard terrestrial and hydrographic maps of the region, Braddock Meade's *A Map of the Most Inhabited parts of New England* (1757) and Cyprian Southack's *An Actual Survey of The Sea Coast from*

⁶⁷⁸ Moses Park, *This Plan of the Colony of Connecticut in North-America* (New London, Conn., 1766), Pritchard and Taliaferro, no.41.

New York to the I. Cape Briton (1734), were based on outdated information and unscientific surveys, producing significant planimetric inaccuracies (**Fig. 63**⁶⁷⁹ and **Fig. 64**⁶⁸⁰). General Gage represented the sentiments of many British officials when he complained to Holland “there is no map of the inhabited provinces of any use...even the roads are not marked”.⁶⁸¹ Indeed, Gage’s complaints were prescient: As the survey moved into metropolitan Massachusetts, Gage would have a need to use these ‘civilian’ surveys for another purpose altogether.

Land grants in the region, and indeed most of the northern colonies, followed the ‘New England’ system by which unsettled territory was to be surveyed before the arrival of settlers. Indicative of a Puritan-communitarian ethic, land was divided into townships, commonly 6 square miles, or 9.6 square km, which were either entrusted to a syndicate or local council. The townships were further divided into plots designated for individual heads of households.⁶⁸² Warrants for townships were to be approved by the provincial government, and had to receive royal assent from the Privy Council within a set period of time. If the latter did not transpire, the enclosure of the land was deemed null and void. Importantly, most warrants included some provision obliging the proprietors to improve the land, a point which would later be exploited by Hillsborough and his officials.

The northern New England surveys pursued three distinct tracks, with some overlap, determined by geographic expediency as opposed to any specific political agenda.

⁶⁷⁹ Braddock Mead [alias of John Green], *A Map of the Most Inhabited Part of New England* (London: Thomas Jefferys, 1757); but ran into many editions over the next generation), Pritchard and Taliaferro, no.35.

⁶⁸⁰ Cyprian Southack, *An Actual Survey of The Sea Coast from New York to the I. Cape Briton* (London, 1734) was the standard map embracing all of New England’s coasts, and which appeared in numerous editions of the *The English Pilot: Book IV* produced throughout the century; A. Krieger & D.A. Cobb, *Mapping Boston* (Boston, 2001), p.99.

⁶⁸¹ Gage to Holland, 27 July, 1767, WCL: Gage Papers, American Series, vol. 66.

⁶⁸² Kain and Baigent, *The Cadastral Map*, pp.285-6.

The first survey, which represented a dramatic charge into the interior, aimed to develop a general provincial survey of New Hampshire. The surveys of its coastal areas, including the capital, Portsmouth, were also part of a series of charts of the littoral running from Cape Ann, Massachusetts to the Kennebec River, Maine. Although trans-jurisdictional, this track attempted to represent coherent economic zones, predicated on shipping, fishing and agriculture. The third track represented most of the coast of Maine and extended from Cape Elizabeth to the St. John's River (modern New Brunswick), and included the charting of major river valleys. This zone can be distinguished not only as the exceptional ruggedness of the coast, but also as an economic sphere representing the prime source of mast timber for the Royal Navy.

All of the major New Hampshire surveys were completed during the Hillsborough administration, although the promised general provincial map remained elusive for some time. The southern littoral surveys were also entirely completed and dispatched to London by the spring of 1772. However, the Herculean task of charting the coast of Maine would not be concluded until the end of the 1773 season.

Hillsborough's imperializing vision was advanced by colonial governors, who with varying degrees of effectiveness acted as enablers of policy in theatre. By far the most important figure was John Wentworth.⁶⁸³ Wentworth was the charismatic Harvard-educated heir to a clan which had dominated the province for generations through "an amazing edifice of personally related office holders".⁶⁸⁴ Wentworth's uncle, Benning Wentworth, had been governor since 1741 and ran a regime of such profligate corruption and nepotism that in 1764 the Board of Trade recommended his dismissal noting that his

⁶⁸³ For biographies of Wentworth see L.S. Mayo, *John Wentworth* (Cambridge, Mass., 1921), P. W. Wilderson, *Governor John Wentworth and the American Revolution* (1994).

⁶⁸⁴ J.J. Malone, *Pine Trees and Politics* (Seattle, 1979), p.127.

land grant policies were “totally inconsistent” with his official instructions and seemed to be motivated towards “a view more to private Interest than public advantage,” and furthermore that many of the laws he passed were “absurd incongruous and unjust.”⁶⁸⁵ Hillsborough, who led the Board of Trade in 1764, was to transfer his dislike of Benning Wentworth to his nephew, although both men were able to work cooperatively for common goals.⁶⁸⁶

The environment in Massachusetts, which then also governed Maine, was somewhat more complicated. For the first eighteen months of Hillsborough’s tenure, the area was served by Francis Bernard, a haughty Oxonian who was entirely bereft of the ‘common touch’ so necessary to colonial discourse. While he was a friend and ideological compatriot of the American Secretary, he was also ‘on the take’, receiving ‘favours’ from Boston’s elite, who, in return, expected him to use his good office to advance their schemes, even if they were at odds with Whitehall’s wishes. Ultimately, Bernard was replaced by Thomas Hutchinson. Although the scion of one of Boston’s leading families, the conservative Hutchinson dutifully implemented Whitehall’s agenda, at great cost to his personal standing in the province.

⁶⁸⁵ Board of Trade to the Privy Council, 10 July 1764, CO 5/942, cited in Wilderson, *Wentworth*, p.61.

⁶⁸⁶ Hillsborough and Wentworth cordially disliked each other. In the spring of 1769 the American Secretary was very critical of Wentworth’s unilateral measures to deal with the shortage of specie in the colony. In 1772 they also locked horns on the ‘Livius Affair’, to be covered in the next chapter, see Wilderson, *Wentworth* , pp.165-7 and 205-7

New Hampshire

Holland's party departed Québec for New England in June, 1770, aboard the *Canseaux*.⁶⁸⁷ In August, Holland disembarked at Portsmouth, the capital of New Hampshire, accompanied by fifteen men, including a doctor and a midshipman. The party was left with supplies sufficient for several months and some small boats as Mowatt had received permission to take the *Canseaux* to England for repairs over the winter and Holland did not think her services would be needed in the interim.⁶⁸⁸ Holland rented a house in Kittery, Maine, just across Piscataqua Harbour, and settled in for what he expected would be 'winter office work'. His introduction to John Wentworth ensured that a dramatically different course was in store.

Wentworth in partnership with Holland energized the survey in a way that had profound consequences for the economic and political development of the region. Wentworth was concurrently the governor of New Hampshire and the Surveyor General of His Majesty's Woods in North America. As the holder of the latter office, he was charged with both identifying and preserving stands of timber appropriate for use in naval construction, as well as prosecuting unlicensed logging. This entailed the need for extensive geographic reconnaissance and a determination to press the crown's right to trees over claims of private property. While the office of surveyor-general of woods technically reported to both the Treasury and the Admiralty boards, Wentworth also sent reports to the American Secretary, who on some occasions wished to be spared the

⁶⁸⁷ En route, they stopped in Halifax where Holland availed himself of the opportunity to meet, separately, with both Commodore Hood and J.F.W. Des Barres, both of whom he implored to provide enhanced cooperation with his endeavours.

⁶⁸⁸ Holland to Hillsborough, 25 August 1770, CO 5/71, ff.547-9.

details.⁶⁸⁹ An energetic and competent visionary, Wentworth not only dramatically reasserted the royal prerogative over the forests, but also personally instigated and managed a series of development programs which transformed New Hampshire from a corrupt backwater into a highly promising province.

Upon his arrival in Portsmouth in June, 1767, Wentworth inherited a province in which development was severely hindered by its topography. While traversed by several major rivers, the Connecticut, Merrimac, Saco and Androscoggin, none of them terminated in the province. With few or no roads connecting these valleys, “trade was unnaturally lubricating to the neighboring colonies”. Goods were being exported through Massachusetts ports, rather than through Portsmouth.⁶⁹⁰ The lack of direct trade was exacerbated by New Hampshire’s already severe shortage of specie. It also had a civil toll, as travel from the interior to the judicial and political seat at Portsmouth was a forbidding ordeal.

During a period of great population growth, the “flagrant errors, frauds and uncertainties” on existing maps made settlement claims uncertain, “throwing real property in New Hampshire into Confusion” such that the granting of new townships had to be almost entirely suspended.⁶⁹¹ The latest general map of the province, Joseph Blanchard & Samuel Langdon’s *An Accurate Map of His Majesty’s Province of New Hampshire* (1761), while a marked improvement on its predecessors, was a composite of a vast number of different surveys, few of which were conducted by scientific means.

⁶⁸⁹ In the spring of 1772, a very over-burdened Hillsborough expressed that he would prefer that Wentworth address certain concerns regarding his forestry portfolio to the Treasury or Admiralty and not the American Department, Hillsborough to Wentworth, 6 June 1772, CO 5/937, ff.116-7.

⁶⁹⁰ N. Boulton (ed.), *Provincial Papers...relating to the Province of New Hampshire* (Nashua, N.H., 1878), vol. VII, pp.232 and 274; Mayo, *Wentworth*, p.39.

⁶⁹¹ Wentworth to Pownall, 25 March 1768, CO 5/928, f.121.

This produced a general level of planimetric error that made the demarcation of township boundaries highly imprecise at best.⁶⁹²

Seeking to make New Hampshire “the first provision market in New England”,⁶⁹³ Wentworth articulated four priorities for his administration,⁶⁹⁴ recognizing that cartography had to play a vital role in achieving these objectives. First, he proposed to organise the province into five counties in order to create regional administrative and judicial centres. Second, he proposed the construction of a network of intra-provincial roads, and, during his administration, over 200 miles of roads were built on three main arteries running from the Connecticut Valley to the sea.⁶⁹⁵ Third was the improvement of the province’s fortifications and military preparedness. Fourth, as the means to facilitate the aforementioned endeavours, in addition to the settlement of cadastral boundaries and the management of forestry, Wentworth placed a priority on the creation of a comprehensive general map of the province. While the advent of the Revolution ensured that none of these projects was completed as originally envisioned, critical progress would be achieved in all aspects.

In 1770, Wentworth took action to create “a perfect and complete survey of the province”.⁶⁹⁶ He and Holland devised a plan that would be based on an architecture of separate surveys in the four main regions of development: Portsmouth and environs, Lake Winnipisaukee, the Merrimac and Connecticut valleys. Work on the latter three regions was to be pursued during the winter when coastal surveys were suspended. The

⁶⁹² Joseph Blanchard and Samuel Langdon, *An Accurate Map of His Majesty's Province of New Hampshire* (London: Thomas Jefferys, 1761), McCorkle, *Maps of New England*, no.N.761.1; Sellers and Van Ee, no.870.

⁶⁹³ Wentworth to Hugh Hall Wentworth, 5 April 1768, cited in Mayo, p.42.

⁶⁹⁴ Wentworth to Pownall, 25 March 1768, CO 5/928, ff.106-25.

⁶⁹⁵ Wentworth convinced the assembly to allocate £500 to fund these projects, 1771, CO 5/937, f.38.

⁶⁹⁶ Wentworth to Hillsborough, 23 September 1771, CO 5/937, ff.62-74.

lakes and rivers of the interior would also be frozen over, which would prove to be technically advantageous to the surveying of their banks and shorelines.

Holland offered to carry out this monumental endeavour at cost, which he estimated to be 100 Guineas, or £140. In December 1770, Wentworth tabled a resolution asking the legislative assembly for the desired funds, declaring, “It is not Probable that the Province will ever again have such an opportunity as now results from Capt. Holland’s Respectable offer of his services at an Expense too inconsiderable to compare with the great & lasting advantages to ye Publick which it comprehends”.⁶⁹⁷ Indicative of the tensions over fiscal matters which played out between governors and their parsimonious assemblies throughout the colonies, the resolution, however, was rejected.⁶⁹⁸ Undeterred, Wentworth convinced several individual subscribers to forward Holland sufficient start-up money. Despite this, Holland still had to spend General Survey funds for purchasing snowshoes, sleds, hiring guides and transporting provisions which “much exceeded the allowance granting in the annual estimate for extraordinary expenses”.⁶⁹⁹ The fact that Hillsborough tolerated this expenditure and replenished this contingency fund was indicative of his tacit approval of the enterprise.

Holland duly dispatched two parties, one led by James Grant and one of Wentworth’s most trusted aides, the sheriff of Hillsborough County, Benjamin Whiting, to the Connecticut Valley; and the other headed by Thomas Wheeler, to Lake

⁶⁹⁷ Governor’s Message, Journal of the New Hampshire Assembly, 24 December 1770, Boulton (ed.), *Provincial Papers...relating to the Province of New Hampshire*, vol.VII, p.264.

⁶⁹⁸ Journal of the New Hampshire Assembly, 4 January 1771, Boulton (ed.), *Provincial Papers...relating to the Province of New Hampshire*, vol.VII, p.268.

⁶⁹⁹ Holland to Pownall, 4 January 1772, CO 323/27, pp.261-4.

Winnipisaukee.⁷⁰⁰ This latter survey had great personal significance to Wentworth, as it was home to Wolfeborough,⁷⁰¹ his extremely grand country estate occupying the eastern shore of Lake Smith (later renamed ‘Lake Wentworth’) (**Fig. 65**).⁷⁰² It was also an area earmarked for a wave of new settlement, and was already served by one of Wentworth’s new roads leading to the sea. The season allowed Wheeler’s men to set more accurate base points for triangulation on the ice, than would otherwise be the case.

In February and March, 1771, Grant and Whiting’s party ascended the river from the Massachusetts border up to its supposed source. An area of especially rapid development and great agricultural potential, it was home to the recently-founded Dartmouth College.⁷⁰³ Showing the precise boundaries of townships, major properties and topographical features on both sides of the river, it was the first scientific survey of the valley (**Fig. 66**).⁷⁰⁴ As it transpired, James Grant’s mapping of the upper Connecticut Valley also became one of the most politically controversial products of the Northern Survey as it played a key role in the on-going border dispute with New York, and

⁷⁰⁰ Benjamin Whiting was noted as “Sheriff” of the Province of New Hampshire responsible for Hillsborough County, paid at a rate of £65 per annum, appointed by Governor and elected annually by the Governor’s Council, Wentworth to Dartmouth, 20 April, 1774, CO 5/938, ff.70-82.

⁷⁰¹ Wentworth built “Wolfeborough”, one of the finest homes in the northern colonies on his 3,592 acre estate on Smith Lake, completed in 1772, it burned down in 1820.

⁷⁰² Thomas Wheeler, “A Plan of Winipissiokee or Richmond Lake, including the New Settlements of H.E. Governor Wentworth on Smith’s Lake, and the new Road from thence to Rochester”. Mss., dated “Feb. 20th, 1771”, NA: CO 700/New Hampshire 22, Penfold, no. 2590, an enclosure to Holland to Pownall, 4 January, 1772, CO 323/27, pp.261-4.

⁷⁰³ One of the most enduring legacies of the John Wentworth administration, the future Ivy League university, Dartmouth College, was founded in 1769 on land secured by Wentworth, and with funding provided by the Second Earl of Dartmouth. Holland donated a sundial to the college, F. Chase, *The History of Dartmouth College* (Cambridge, Mass., 1891), p.288.

⁷⁰⁴ James Grant, “A Plan of the River Connecticut from its source to the boundary line which divides the Provinces of New Hampshire and Massachusetts Bay”, Mss. [1771], NA: CO 700/Connecticut 3, Penfold, no.2284. This map set consists of a large key map on a scale of 4 miles/inch, and six large-scale sections at ¾ miles/inch, dispatched to London, Holland to Pownall, 4 January 1772, CO 323/27, pp.261-4.

becomes one significant example of how maps in the colonial era were used as rhetorical weapons by both sides.⁷⁰⁵

The region commencing on the west bank of the river, now known as Vermont, had long been claimed by both New York and New Hampshire, based on interpretations of their respective seventeenth century charters. For decades it remained an inconsequential backwater, but that all changed when, between 1749 and 1764, Benning Wentworth issued warrants for 139 townships in order to claim the region by “right of occupation”.⁷⁰⁶ Unfortunately for him, in 1764 the Privy Council awarded the region to New York, which proceeded to issue its own overlapping land warrants, nullifying the claim of the holders of the ‘Benning Patents’.⁷⁰⁷ This resulted in great tensions between the new and old settlers, which occasionally led to violent altercations. Right up to the Revolution the government of New York aggressively asserted its rights to the region, while New Hampshire, which never accepted the ruling, sought to undermine its rival’s claim in the hopes that the Privy Council would revisit the issue.⁷⁰⁸

Maps were used as rhetorical weapons by both sides, with New York firing the first salvo. In 1766, in an effort to confer visual legitimacy to the Privy Council’s Ruling, Cadwallader Colden, the surveyor-general of New York drafted a map which clearly showed Vermont as an integral part of his province.⁷⁰⁹ This rhetoric was echoed five

⁷⁰⁵ For an overview of the dispute see P.D. Nelson, *William Tryon and the Course of Empire* (Chapel Hill, NC, 1990), pp.101-8.

⁷⁰⁶ Malone, *Pine Trees*, p.127.

⁷⁰⁷ Order in Council, 20 July 1764, Privy Council, stated that the boundary between New Hampshire and New York should run as follows: “The Western Bank of the Connecticut [River], from where it enters the province of Massachusetts Bay as far north as the 45th degree of northern latitude,” *APC*, vol. IV, pp.673-4.

⁷⁰⁸ For an overview of the dispute, Nelson, *William Tryon*, pp.101-8.

⁷⁰⁹ Cadwallader Colden, “Part of the Provinces of New York and New Hampshire, distinguishing therein several Townships formerly granted by the government of New Hampshire and the Lands already granted by this Government...,” Mss., 1766, MPQ 1/1, originally sent as an enclosure to Governor Sir Henry Moore to the Earl of Shelburne, 20 March 1766, CO 5/1098. A note on the map reads that it was transferred

years later when Colden's deputy, Simon Metcalfe, prepared another map which unambiguously asserted New York's claim to the disputed Vermont region, and which amazingly included a certification of authenticity and veracity sworn in front of Daniel Horsmanden, New York's chief justice.⁷¹⁰ This map was promptly dispatched to Hillsborough along with a vast number of legal documents supporting New York's claim.

In this atmosphere, Grant's Connecticut valley map became the epicenter of this inter-colonial row, with New York claiming that the survey was nothing short of a cartographic conspiracy on the part of New Hampshire to reopen the boundary decision. On 18 September 1771, John Kemp, the attorney-general of New York, hastily wrote New York's new governor, William Tryon, alerting him to the fact that the Grant and Whiting map, made at Wentworth's behest, had already been dispatched to Hillsborough as evidence to support New Hampshire's designs. Kemp claimed that it aimed "to shew that the River comes more from the East than has hitherto been imagined, and so much so from the East as not to join the 45th degree of North Latitude".⁷¹¹

This was an explosive assertion, as the Privy Council's decision was predicated on the assumption that the Connecticut River extended beyond the said parallel, such that any proof otherwise could create a legal channel for New Hampshire to appeal the 1764 decision. Kemp enclosed a letter from a local magistrate, Sam Wells, which included a deposition from Nemiah Howe, a valley resident who claimed privileged knowledge of the operations of "the pretended Survey". Howe asserted that "the survey was intended

from the Board of Trade to the Privy Council "on 22nd Jan. 1766," and it was later filed under PC 1/54/62A; another copy, CO 700/New York 32, both catalogued in Penfold, nos. 2875 and 2876 respectively.

⁷¹⁰ Simon Metcalfe, [Vermont, showing the land which lies between the Hudson River, Lakes George and Champlain and the Connecticut River], Mss., 1771, MPG 1/365/1, Penfold, no. 2877, an enclosure to Governor, the Earl of Dunmore (governor of New York) to Hillsborough, 9 March 1771, CO 5/1102, ff.49-123.

⁷¹¹ Kemp to Tryon, 18 September 1771, CO 5/1102, ff.605-6.

to be exact as far as to some Miles distance above Lancaster”, but that after that point Grant and Whiting had intentionally “left the main river” to follow a lesser branch that veers sharply to the east, erroneously designating its source as the main head of the river. Critically, he maintained that this point lay south of 45 degrees, unlike the true head, up the main river.⁷¹²

Tryon acted to unravel what Kemp called “the secrets of this supposed Fraudulent survey”, testily accusing Wentworth of orchestrating a campaign of “persuasion” to trick London into reopening the case. He went on to accuse Wentworth’s agents of telling the “deluded Persons” who held the Benning Grants that the region would soon revert back to New Hampshire’s control. Tryon then claimed that, had he been asked, he would have co-sponsored with Wentworth an impartial survey of the valley. However, instead, he warned that Grant’s map would be viewed by “His Majesty’s Ministers” as “*ex parte*” and bereft of objective evidentiary qualities.⁷¹³

Wentworth responded with incredulity, claiming of Grant that “so skillful an officer under the strictest injunction of care from his principal...could not well be mistaken”. Discounting any notion concerning the 45th parallel, he noted that, even if such a mistake were to have been made, it would have been in the favour of New York as any movement of the border eastwards naturally took territory from New Hampshire.⁷¹⁴

⁷¹² “Nemiah Howe’s Deposition, sworn to Sam Wells”, 18 September 1771, CO 5/1102, ff.609-10, an enclosure to Kemp to Tryon, 18 September 1771, CO 5/1102, ff.605-6.

⁷¹³ Tryon to Wentworth, 2 October 1771, CO 5/1102, ff.613-4, letter printed in full, *DAR*, vol.III, no. CVII, an enclosure to Tryon to Hillsborough, 2 October 1771, CO 5/1102, ff.515-7.

⁷¹⁴ Wentworth to Tryon, 19 October 1771, N. Boulton (ed.), *Provincial and State Papers...relating to the Province of New Hampshire* (Concord, N.H., 1877), vol.X, p.218.

The same day Tryon wrote to Hillsborough describing the survey's "daring insults", enclosing the material he had received from Kemp.⁷¹⁵ It seems, however, that Tryon had jumped the gun, as not only had he himself not seen Grant's map, but contrary to Kemp's assertion, Hillsborough had not yet been sent one either. The colonial secretary wisely refused to be drawn into a debate regarding the accuracy of this incendiary, yet unseen, map, which was in fact made by an officer who was in his employ.⁷¹⁶ Recognizing that Tryon was a powerful man and a friendly acquaintance whom he would be unwise to alienate, Holland ultimately sent Tryon a copy of the map, noting "I thought it of public utility both for his government as well as this, to be well informed of the course of that river."⁷¹⁷

Whether done intentionally or not, the head of the river on Grant's map is not its true head, which lies on a branch flowing from a point even further to the east. The precise locations of the heads of the Connecticut River would remain at the route of boundary disputes for decades, for example, the boundary between Québec and New Hampshire, which was to run along the "northwesternmost head" of the river was not settled until 1842.⁷¹⁸ The distinction for the larger question is rendered irrelevant by the fact that all the branches in question originate north of the 45th parallel. While the row over the map died down, the larger controversy continued to intensify. In May 1772 the New Hampshire House of Representatives voted a motion to ask the Crown to rescind the

⁷¹⁵ Tryon to Hillsborough, 2 October 1771, CO 5/1102, ff.515-7, enclosing Sam Wells' letter and Nemiah Howe's deposition, Tryon and Wells' letters are printed in full, *DAR*, vol.III, nos. C and CVI.

⁷¹⁶ Hillsborough to Tryon, 4 December 1771, CO 5/1102, f.621.

⁷¹⁷ Holland to Pownall, 4 January 1772, CO 323/27, f.127.

⁷¹⁸ F.M. Carroll, *A Good and Wise Measure: The Search for the Canadian-American Boundary, 1783-1842* (Toronto, 2001), pp.70-94; D. Doan, *Indian Stream Republic: Settling a New England Frontier, 1785-1842*. (Lebanon, N.H., 1997).

1764 decision and to re-grant the disputed region to their province.⁷¹⁹ In 1773, Tryon came within a whisker of calling in army regulars to confront violent settlers.⁷²⁰ The dispute eventually got caught up in the Revolution, when Ethan Allen's 'Green Mountain Boys' threw off the authority of both Britain and New York to create the new entity of Vermont.⁷²¹

In January 1772, Wentworth resubmitted his request to the legislature to subsidize Holland's provincial survey. His efforts were greatly assisted by the fact that the province had recently received a parliamentary grant for contingency fees, which Hillsborough would have approved. Wentworth warned that fast action was needed before Holland left the province, urging the assembly to grant the 100 Guineas "to carry into Effect a plan fully comprehensive of great usefulness & which will finally save above ten times the sum to the Province."⁷²² He also noted that their refusal to support the project would risk royal disfavour, as it was mandated by his gubernatorial instructions, which read: "You should take care that a general Plan be made of all our said Province and each County with the several Plantations & Fortifications on it and that an Exact Map or Maps thereof be transmitted to our Commissioners of Trade & Plantations".⁷²³ This time the assembly approved the grant of 100 Guineas, which immediately permitted Holland to hire three or four local surveyors for that winter's season.

⁷¹⁹ Motion presented and passed by the New Hampshire House of Representatives, 22 and 16 May 1772, Boulton (ed.), *Provincial Papers...relating to the Province of New Hampshire*, vol.VII, pp.299-300.

⁷²⁰ Nelson, *William Tryon*, pp.107-8; Bellot, *Knox*, pp.117-8.

⁷²¹ S.H. Holbrook, *Ethan Allen* (New York, 1940), pp.189-92.

⁷²² 'Governor's Message' to the New Hampshire Assembly, 2 January 1772, Boulton (ed.), *Provincial Papers...relating to the Province of New Hampshire*, vol.VII, p.293.

⁷²³ Royal Instructions to Governor John Wentworth, "a draft dated in margin 1766, 30 August," Clause 49, printed in H.H. Metcalfe (ed.), *Laws of New Hampshire* (Bristol, N.H., 1915), vol.III, p.440; also refer "Royal Proclamation read to New Hampshire Assembly," 3 January 1772, Boulton (ed.), *Provincial Papers...relating to the Province of New Hampshire*, vol.VII, p.294.

The Coastal Surveys from Cape Ann to the Kennebec River

The second track of surveys to be commenced, and the first to be concluded, embraced the coast regions from Cape Ann to the Kennebec-Androscoggin estuary.⁷²⁴ While multi-jurisdictional, the region was physically united by the main post road, and the gateway of trade, being the terminus of three of the major river systems that originated in New Hampshire. Save for the Casco Bay region beyond Falmouth, which was also part of Holland's series of maps of Maine's 'timber coast', the coastal area commonly relied on maritime trade, fisheries, and agriculture.

The coastal surveys employed the most advanced scientific methods of geodetic control and astronomical observation. As measured by modern instruments, such as "Bird's Astronomical Quadrant", featuring latitude readings calculated with the ephemeris tables of the Royal Society, the maps show the angle of magnetic deviation on the compass roses and the demarcation of the base points of geodetic coordinates.

The maps in the series provided important details. The survey of the Piscataqua Harbour and the provincial capital of Portsmouth provided a legend identifying important buildings and accurately depicted the province's main bastion, Fort William & Mary, of great importance to Wentworth's plans to improve the province's defenses (**Fig. 67**).⁷²⁵ The map of the nearby Saco Bay region of Maine features the period's most accurate delineation of the post road which ran from Boston to the Kennebec (**Fig. 68**).⁷²⁶ The Map of the Cape Ann region represented the survey's first foray into the revolutionary

⁷²⁴ All of the surveys, connecting in a line from Norman's Woe, Massachusetts to the Kennebec River were dispatched to London in a numbered series, Holland to Hillsborough, 15 June 1772, CO 5/73, ff.232-3.

⁷²⁵ James Grant & Thomas Wheeler, "A Plan of Piscataqua Harbour.", Mss., [1771 or 1772], NA: CO 700/New Hampshire 6, Penfold no.2587, dispatched to London, Holland to Hillsborough, 15 June 1772.

⁷²⁶ James Grant, "A Plan of the Sea Coast from Ogunkett River to Cape Elizabeth, including the Bays of Wells, Saco and Black Point; also Wells and Winter Harbours." Mss., [1771 or 1772], NA: CO/700 Maine 15, Penfold, no.2440, dispatched to London, Holland to Hillsborough, 15 June 1772.

‘hornet’s nest’ of metropolitan Massachusetts (**Fig. 69**).⁷²⁷ This map captures the coastal topography with great subtlety and features Gloucester, New England’s most important fishing port, and the trading centre of Newburyport, at the mouth of the Merrimac River.

In spite of all of the activity expended on the part of the Northern Survey, there is no definitive record that the intended general provincial map of New Hampshire was ever completed during colonial times. Both Wentworth and Holland had originally expected the map to be drafted by the spring of 1772. In January of that year, Holland still appeared to be on target, writing to Pownall, “I hope to finish before the spring the survey of Merrimack, Pemigawasset, Salmon-fall and other rivers and lakes and to fix the provincial boundary lines” by “Astronomical observations”.⁷²⁸ In the same letter, he went on to suggest that his endeavours to create a general map of New Hampshire should be recommended to all provinces in the Northern District, and that they should receive inducements from the Board of Trade accordingly. However in June, Holland remarked that he and Wheeler could only attend to these surveys that summer when they would have the assistance of one Mr. Martin of Portsmouth to lead a third party. Holland also noted that he would also consult various “private surveys” with regard to any areas his parties were not able to attend to themselves. He said that he would not send any more maps of New Hampshire until the final map was complete, noting “I thought it would be more agreeable to send a regular view of the whole together than the detached pieces that were to compose it.”⁷²⁹

⁷²⁷ James Grant & Thomas Wheeler, “A Plan of the Sea Coast from Little Rocks near Hampton to Normans Woe near Cape Ann, including Cape Ann, Ipswich, Newbury and Hampton Harbours.”, Mss., [1771 or 1772], NA: CO 700/Massachusetts Bay 13, Penfold, no.2502, an enclosure to Holland to Hillsborough, 15 June 1772, CO 323/27, pp.269-76.

⁷²⁸ Holland to Pownall, 4 January 1772, CO 323/27, ff.261-4.

⁷²⁹ Holland to Pownall, 15 June 1772, CO 323/27, f.121; Mowat noted that one of the five 1772 summer parties would be engaged in surveying the “Newbury River”. He was likely referring to the Merrimack

The Maine Timberlands

To Whitehall, the economic importance of northern New England lay in its potential to stock the Royal Navy with mast timber, specifically the great stands of Eastern White Pine (*Pinus Strobus*) which inhabited the “forests primeval”.⁷³⁰ The Massachusetts Bay Charter of 1691, which affirmed that colony’s claim to Maine, was the Crown’s first official move to gain control of the pines. The Charter included the ‘Mast-preservation clause’, which ordained that all white pines “of a diameter of twenty-four inches and upwards at twelve inches from the ground” growing on any land “not heretofore granted to any private person” before the date of 7 October 1690 was to be the property of the Crown for the express use of the Royal Navy.⁷³¹ This clause marked the beginning of the ‘Broad Arrow’ policy by which royal agents in the service of the Surveyor-General of His Majesty’s Woods marked reserved trees with a hatchet, signaling the trees could only be harvested by contractors specifically licensed by the navy. A 1729 Act of Parliament extended the crown’s ownership to all such pines throughout the northern colonies “not growing within any Township”.⁷³²

New England pines became the Royal Navy’s most important and highest quality source of masts. Between 1694 and 1775, it is estimated that over 4,500 masts from New England pines were delivered to the Navy.⁷³³ This source became even more critical during the Seven Years’ War when Britain’s demand for mast timber greatly increased as

River, misnamed here due to a mariner’s mistake, supposedly because this river terminates at Newburyport, Mowat to Montague, 3 May, 1772, an enclosure to Montague to Stephens, 26 May 1772, ADM 1/484, ff.203-6.

⁷³⁰ H.W. Longfellow, *Evangeline: A Tale of Arcadie* (poem, 1847), from verse 1.

⁷³¹ The full text of this charter is printed in F.N. Thorpe (ed.), *Federal & State Constitutions* (Washington, 1906), vol. III, p.1875.

⁷³² *An Act for better Preservation of His Majesty’s Woods in North America*, 1729 (2 George II, c.35), refer to Malone, *Pine Trees*, p.168.

⁷³³ C. Davison, “Mast Pines for the Royal Navy”, Haverhill [New Hampshire] Bicentennial Lecture, 1963, p.3.

her domestic supplies became almost entirely depleted and political instability threatened access to the Baltic market.⁷³⁴

Realizing that it was naïve to think one could extensively police or enforce the Black Letter of the law given the extent of the northern forests, John Wentworth redefined the organizational framework for monitoring the woods in June 1767. As Surveyor-General, he divided the northern forestry zone into three districts, each respectively under the charge of an inspector. Instead of seeking out scattered individual pines, the inspectors would stake out Crown reservations containing the best stands.⁷³⁵ Wentworth worked closely with the new regional Inspectors-General of the Woods who were now specifically mandated to identify and demarcate these reserves. These figures were Thomas Scammell, who was in charge of Maine and western Nova Scotia (New Brunswick), Timothy Ruggles, who had responsibilities for New Hampshire and Vermont, and Adolphus Benzell who was mandated to supervise northern New York and southern Québec.⁷³⁶ Wentworth's plan resulted in America's first specialized forestry maps.

In the years between the Seven Years War and the Revolution, Maine's population doubled from 23,000 to 47,000.⁷³⁷ Free from the threat of the French and their Indian allies, New Englanders were able to settle in the interior river valleys and the

⁷³⁴ Albion, *Forests and Sea Power*, pp.1334, 161-4 and 230. Further threatening the Navy's access to the timber were the actions of Benning Wentworth, the man charged to protect the forests. Benning rarely enforced the provisions of the 1729 act, and when he did so it was in an effort to stamp out any competition to the lumber operations he had awarded himself, Malone, *Pine Trees*, p.177, also refer to B. Knollenberg, *Origin of the American Revolution* (Indianapolis, 2002), p.130 for an account of how Benning Wentworth used the legislation against his rival Jared Ingersoll.

⁷³⁵ Malone, *Pine Trees*, p.137.

⁷³⁶ Thomas Scammell, "Master Mastmaker at Woolwich, Commission of appointment as Inspector of His Majesty's Woods in North America," 15 November 1770, ADM 106/1193, f.133; Timothy Ruggles and Adolphus Benzell were appointed in July 1771, Hillsborough to the Earl of Dunmore, 3 July 1771, CO 5/1141, pp.190-1.

⁷³⁷ J.S. Leamon, *Revolution Downeast* (Amherst, Mass., 1995), p.6.

Sagadahoc district east of the Penobscot River.⁷³⁸ Between 1750 and 1775, 120 new townships were settled, compared to only 21 from 1700 to 1750.⁷³⁹ With this growth came a great proliferation in lumber operations, both legitimate and illicit. These developments did not go unnoticed by the Board of Trade, who suspected that some of these were in actuality “paper townships,” created not to accommodate settlers, but merely to frustrate the crown’s mast men. In a move that foreshadowed London’s future policies, it ordered the province to carry out and submit a detailed census of Maine’s demographics and economic activities.⁷⁴⁰

Anticipating development, from the early 1750s onwards the administrations of governors Sir William Shirley (1741-57), Thomas Pownall (1757-61) and Sir Francis Bernard (1761-9) commissioned surveys of the coastal regions and major river systems of Maine.⁷⁴¹ The most important map from the earlier years of this period was Thomas Johnston’s *A Plan of the Kennebeck & Sagadahock Rivers* (1754) (**Fig. 70**).⁷⁴² Sponsored by Shirley, it was largely based on several recent surveys, and although they were not conducted by systematic scientific methods, the map is nevertheless the finest map of the central coast of Maine predating Holland’s surveys.

Whitehall’s quest to ensure that settlement did not infringe on the timber resources placed the Massachusetts governor, Francis Bernard, in a difficult position.⁷⁴³

⁷³⁸ Hornsby, *British Atlantic, American Frontier*, p.136.

⁷³⁹ Leamon, p.6.

⁷⁴⁰ This census was carried out supposedly so that the provincial government in Boston would be better able to assess how responsibility for a £1,000 land tax should be allotted, W.D. Williamson, *History of the State of Maine*, vol. II (Hallowell, Me., 1832), pp.357 and 372-3.

⁷⁴¹ “A Plan of the Kennebeck & Sagadahock Rivers,” NA: CO 700/Maine 12, Penfold, no.2433.

⁷⁴² Thomas Johnston, *A Plan of Kennebeck & Sagadahock Rivers* (Boston, 1754); another edition: Thomas Johnson, *A Plan of Kennebeck & Sagadahock Rivers with adjacent Coasts: taken from actual surveys and dedicated to... William Shirley*,” (London: Andrew Millar, 1755).

⁷⁴³ Massachusetts governor, Francis Bernard found himself caught between the opposing interests of the local population and Whitehall. Granting land in Maine was an affordable and efficient method of

In an attempt to seek approbation in London, provincial administrations and civilians sponsored their own surveys. During the Bernard administration, the legislative assembly elected to fund a series of surveying expeditions to chart the Kennebec and the Penobscot rivers to their headwaters.⁷⁴⁴ Bernard keenly understood the importance of cartography to administration, and assembled a remarkable personal map collection.⁷⁴⁵ Highlights included the maps of the province's rapidly expanding road system drafted the highly competent and industrious Francis Miller, one of the early practitioners of 'thematic cartography' in North America.⁷⁴⁶ Bernard also commissioned maps of the controversial new townships that were set up in the eastern regions of Maine, most notably a plan of the "13 Townships" lying to the east of Penobscot Bay, copies of which were dispatched to the Board of Trade (**Fig. 71**).⁷⁴⁷ Moreover, the land companies such as the Kennebec Proprietors employed their own surveyors resulting in large corpuses of maps.⁷⁴⁸ In spite of this cartographic activism, the quality of these maps, in terms of both

rewarding war veterans. Then, there was the pressure imposed by land speculation syndicates, many controlled by leading merchants. As evidence of the debt Bernard owed to speculators, the Kennebeck Proprietors, the most prominent such society, used their influence to have the legislature grant Bernard Mount Desert Island in 1762 as a reward for his "extraordinary services", Williamson, vol. II, p.362. The quid pro quo was that Bernard would approve the land warrants submitted by speculators. Whitehall's reaction to the warrants approved by Bernard was to ignore them indefinitely, such that without royal assent the settlers would have no legal right to occupy the land, a process that notably embraced the twelve townships proposed east of the Penobscot River in 1762, Leamon, *Revolution Downeast*, p. 34.

⁷⁴⁴ 'Survey of the Country', a motion of the Massachusetts House of Representatives, 11 June 1761, J.P. Baxter (ed.), *Documentary History of the State of Maine*, vol. XIII (Portland, Me., 1909), p.235; Williamson, *History of Maine*, vol. II, p.357.

⁷⁴⁵ Bernard's entire surviving map collection is calendared in Historical Manuscript Commission, National Register of Archives, *Report on the Spencer Bernard MSS. February 1960*; and a partial listing is given in Cumming, *British Maps of Colonial America* (Chicago, 1974), pp.75-8.

⁷⁴⁶ One of Miller's most important road maps is a highlight is Francis Miller, "A Plan of the Road between Boston and Penobscott Bay", Mss, 1765, Bernard Mss. Map MP/7.

⁷⁴⁷ [Joseph Frye, John Jones & c.], "Plan of the Bay and River of Penobscot & the Islands lying therein commonly called the Fox Islands and the seas Coast on the East side so far as [the] 13 Township[s] have been lately laid out," Mss., 1764, CO 700/Maine 19, Penfold, no.2438, also note other important maps commissioned by Bernard dispatched to the Board of Trade, CO 700/Maine 16, CO 700/Maine 17 and CO 700/Maine 18, Penfold, nos. 2435, 2436, 2437 respectively.

⁷⁴⁸ The Kennebec Proprietors Map Collection, Maine Historical Society, Portland is a highly important source of maps and surveying documents relating to Maine's most important land syndicate.

their scientific accuracy and their draftsmanship, was highly variable. Utilising many different scales and styles, they lend surprisingly little to the conception of Maine as a whole, or in large part and were of limited use to administrators deliberating broader questions of policy. In this regard, the maps for the Northern Survey were more pivotal.

In response, Hillsborough's administration intensified efforts to limit new land grants, not only in Maine, but in other areas considered to contain fine timber stands.⁷⁴⁹ Under his watch, royal approval of land petitions was delayed and methods to obstruct settlement in different locations were employed. In one of his first letters to the Governor of New York, Hillsborough forcefully instructed the Governor that no new lands grants were to be made in what is now Vermont until after full reconnaissance for pine trees was complete.⁷⁵⁰ He also encouraged Bernard to oppose the Earl of Stirling if he claimed his family's 1635 land grant in eastern Maine.⁷⁵¹ Moreover, 'pine clauses' were to be inserted into land titles, specifically forbidding the grantees from cutting mast pines on pain of forfeiture of their property.⁷⁵² Hillsborough's strategy was considerably aided by the collaboration of Wentworth, and the acquiescence of other royal governors, although, in 1767, when Wentworth first proposed a temporary moratorium on land grants in

⁷⁴⁹ The regions in question included eastern Maine, Nova Scotia north of the Bay of Fundy (now New Brunswick), northwestern New Hampshire, and what is now known as Vermont (then part of New York)

⁷⁵⁰ Hillsborough to Moore, 25 February 1768, CO 5/1099, f.57, printed in *NYCD*, vol. VIII, pp.10-3. In this letter Hillsborough strongly reminds Moore of an Order in Council of 24 July 1764 which ordered a land grant moratorium in what is now Vermont, but which might otherwise be loosely enforced.

⁷⁵¹ Governor Francis Bernard, "Proclamation of 7 September, 1768," printed in J.P. Baxter (ed.) *Documentary History of Maine, Baxter Manuscripts*, vol. XIV (Portland, Me., 1910), pp.90-91.

⁷⁵² An indicative example of one of these clauses can be found in Samuel Holland's land grant near Plymouth, New Hampshire, 8 March, 1773, which included the phrase "That all white & other Pine Trees fit for Masting Our Royal Navy be carefully preserved for that Use & none are to be cut or felld without our special license for so doing first had & obtained on the Penalty of the forfeiture of the right [of said] Grantee", A.S. Batchellor (ed.), *State of New Hampshire: Town Charters* (Concord, 1895), vol. XXV, p.461. This grant was made to Holland on Wentworth's arrangement in recognition of his services to the province.

important timberlands until surveys were completed, the Privy Council rejected the action as too extreme.

One of the most significant arenas of conflict during Wentworth's tenure concerned the massive land grant held by the Kennebeck Proprietors, a consortium controlled by several of New England's most powerful mercantile figures.⁷⁵³ Controlling over 3,000 square miles on both banks of the lower Kennebec River, the Proprietors, in 1749, acquired the rights to land that was originally bequeathed to the Plymouth Company in 1629. The Kennebec valley was home to the finest quality stands of white pine in Maine, an advantage aided by the fact that the river made transport of logs to sea-going vessels relatively convenient.

Wentworth interpreted the Proprietors' grant as being a reconstituted legal entity separate from the original Plymouth charter. This meant that the rights to the mast pines on Proprietors' land devolved to the crown, as their private land rights postdated the Massachusetts Charter's 1690 cut-off date by almost six decades.

In October 1769, the Proprietors fired the first salvo, sending a letter to Wentworth threatening action against government contractors operating on their grant.⁷⁵⁴ The matter was referred by both sides to the Board of Trade for a legal opinion from its internal counsel, Richard Jackson, M.P., who was seen as impartial, having close personal ties to both sides in the debate. In July 1771, Jackson asserted that the burden of

⁷⁵³ G.E. Kershaw, *The Kennebeck Proprietors, 1749-1775: "gentlemen of large property & judicious men"* (Portland, Me., 1975), pp.xi-xvi and 215.

⁷⁵⁴ Kennebeck Proprietors to Wentworth, 16 October 1769, Maine Historical Society, Portland (Me.H.S.): Kennebeck Proprietors Papers, Letter Book I, pp.26-7. Wentworth, confident in his legal interpretation, replied that he was more than happy to "institute a process on my trespass", Wentworth to Kennebeck Proprietors, 19 October 1769, New Hampshire Archives, Concord (H.H.A.): Wentworth Letter book I, pp.300-2.

proof was on the Proprietors to demonstrate that their land title was directly inherited from the original Plymouth grant in an unbroken chain of private ownership.⁷⁵⁵

Buoyed by this, albeit non-binding, legal victory, through 1772, Wentworth intensified his bid to undermine their Proprietors' access to timber. He first sought to lay a practical claim to the Kennebeck trees by deploying Thomas Scammell to survey lands immediately bordering the Kennebeck tract,⁷⁵⁶ while deploying lumbermen working for crown contractors to locate trees within the track itself. However, matters came to a head in the summer of 1772, when the Proprietors instructed their own surveyor John McKechnie to shadow the Crown lumbermen.⁷⁵⁷ Not content to merely harass the intruders, the Proprietors elected to bring civil "Action of Damages against the Persons that have been employed by the Agent of the Contractor to cut & haul Masts from the Land under License" of the Crown.⁷⁵⁸ Wentworth became further incensed when he learned that, in July 1772, prime mast pines had been "illegally cut." While he was able to seize and have the harvest condemned by the vice-admiralty courts, he realized that the status quo was untenable.⁷⁵⁹

While Hillsborough fully supported Wentworth's ongoing court case with the Proprietors, he decided that it would be wise to pursue another more radical legal tactic by suggesting that some litmus test of occupation or development of land grants should

⁷⁵⁵ He did not venture to resolve that question, claiming that was to be the sole determination of the high courts, but he implied that until such a time as a decision was rendered the crown had the prerogative to continue to harvest the Kennebeck mast pines. "The opinion of Mr. Jackson on the king's right to the white pines-trees growing on the Kennebeck River," 5 July 1771, complete report printed in G. Chalmers, *Opinion of Eminent Lawyers on Various Points of English Jurisprudence* (London, 1814), vol. I, pp.136-8.

⁷⁵⁶ Refer back to Thomas Scammell, [Forestry Map] "The Coast from Casco bay to Penobscot Bay showing... groves of trees," Mss., 1772, CO 700/Maine 20; see Kershaw, *Kennebeck Proprietors*, p.217.

⁷⁵⁷ Kennebec Proprietors to McKechnie, 18 November, 1772, Maine Historical Society: Kennebeck Proprietors Letterbook, no.I, pp.74-5, cited in Kershaw, *Kennebeck Proprietors*, p.218.

⁷⁵⁸ Wentworth to Hillsborough [but received by Dartmouth], 26 September 1772, CO 5/937, 133-4.

⁷⁵⁹ *Massachusetts Gazette*, 16 July 1772.

be imposed in order for title holders to maintain their private property rights. As a legal question, this was an extremely bold assault on one of the most basic tenets of common law, and, if enacted, would severely discourage holding property for the purpose of speculation.⁷⁶⁰ Hillsborough's designs were further aided by the new governor, Thomas Hutchinson, who was far less easily tempted by land speculation than his predecessors. Replacing a policy of intentional delay with a bold declaration, he issued a very sharp "warning" that no petitions for land in Sagadahoc would receive royal ascent, noting that he would seek "to prevent any further intrusions upon Eastern parts of the Province, and to remove such as already have been made".⁷⁶¹

While previous Massachusetts governors commissioned maps to depict the progress of the development of Maine and prove their claims, Hutchinson employed maps to advance the diametrically opposite point of view. Alarmed by the "Intrusions" of settlers without legal title in the region he had his provincial surveyor, Joseph Chadwick, draft a "Plan of Part of the Penobscot River" in order to provide Hillsborough with a clear visual impression of the proliferation of settlement which he saw as so detrimental to the crown's acquisition of mast pines.⁷⁶²

As background to these events was the threat that all or part of Maine could be legally dismembered from Massachusetts, throwing into doubt all current land claims and settlement. Due to ambiguities in the provincial charter and conflicting seventeenth century land grants, the boundary between Maine and Nova Scotia remained

⁷⁶⁰ Leamon, *Revolution Downeast*, p.34.

⁷⁶¹ "Governor Hutchinson's address to the Massachusetts House of Representatives," 19 June 1771, J.P. Baxter (ed.), *Documentary History of the State of Maine*, vol. XIV (Portland, Me., 1910), pp.132-4.

⁷⁶² Joseph Chadwick, "Plan of Part of Penobscot River," Mss., 1771, an enclosure to Hutchinson to Hillsborough, 24 October 1771, CO 5/760, ff.287-307.

ambiguous.⁷⁶³ Moreover, the fact that Maine was not contiguous to Massachusetts and maintained notable demographic and economic distinctions from metropolitan Massachusetts added some practical reasons for a separation. The influx of settlement into Sagadahoc in the 1760s brought this question to the fore. For those inhabiting the region from the Penobscot to the St. Croix Rivers, the confusion was so great that a group of settlers at Machias originally applied to Nova Scotia for a land grant.⁷⁶⁴ Boston, concerned about the matter, published a detailed legal paper.⁷⁶⁵ Little was done to clear up the ambiguity.⁷⁶⁶

⁷⁶³ It will be recalled that the Proclamation of 7 October 1763 designated the St. Croix River as the boundary between Nova Scotia and Massachusetts (Maine), thus granting Sagadahoc to the latter in compensation for the fact that Massachusetts' claim to the southern bank of the St. Lawrence River was abrogated in favour of Québec. However, in making their decision, the Privy Council cited a 1732 Crown Law Officer's opinion which, in spite of the fact that it acknowledged that Acadia or Nova Scotia's "ancient Limit" extended westwards to the Penobscot River, it awarded jurisdiction of Sagadahoc to Massachusetts. However, this same opinion left the door open to the region being placed under some special crown rule, as Crown Law Officers noted that "they do not think it advisable that this Restriction of the Western Bounds of Nova Scotia to the River St. Croix should pass without some reservation of Your Majesty's Right to the Country between that river and Penobscot, being entered upon the Council Books", 'Report on Commissions for Governors', 6 October 1763, printed in Shortt & Dougherty, *Constitutional Documents*, vol. I, pp.159-62. Also note that on the Mitchell Map (1755) the boundary between Nova Scotia and Maine is shown to run along the Penobscot River.

⁷⁶⁴ Leamon, p.8.

⁷⁶⁵ *A Brief State of the Title of the Province of Massachusetts to the Country between the Rivers Kennebeck and St. Croix* [an Appendix to the Votes of the Massachusetts House of Representatives], Boston, 18 January 1763, CO 325/2, document I(b); Governor Bernard also represented similar arguments to the Board of Trade, Bernard to Pownall, 1 December 1762, J.P. Baxter (ed.), *Documentary History of the State of Maine*, vol. XIII (Portland, Me., 1909), pp.296-302.

⁷⁶⁶ Perhaps as part of their intentional strategy to discourage settlement and maintain clear right of way to the stands of pine, Whitehall did nothing to clear up the ambiguity, maintaining a sphinx-like silence. The Board of Trade even mildly scolded Bernard for attempting to settle the matter directly with Nova Scotia authorities in an amicable fashion without royal approbation, Pownall to Bernard, 24 December 1762, cited in Baxter (ed.), *Documentary History of the State of Maine*, vol. XIII, p.312. The security of Maine's status within Massachusetts was further undermined by several open ruminations or proposals, one curiously from Bernard himself who proposed that some form of alteration to the boundaries of all New England provinces should be considered. Sir Francis Bernard made a grand proposal to reorganize all of the provinces in New England, including the creation of a new province extending from the "River Penobscot to the River St. Johns", Bernard to Halifax, 9 November 1764, *Documentary History of the State of Maine*, Baxter Manuscripts, vol. XIII, pp.382-92. Hillsborough's well-known desire to revoke the Massachusetts charter, albeit for unrelated reasons, would also have created uncertainty, as it was the primary legal document that affirmed Massachusetts' title to Maine.

In December 1770, Holland weighed into the controversy, writing to Hillsborough with a bold proposal which he acknowledged was “foreign to my commission”.⁷⁶⁷ We can only speculate as to Holland’s personal motivation for this proposal. Perhaps it was related to a desire to be appointed first governor of “New Ireland”, the name he gave to the province. In any event, he argued that the Crown should make Maine a separate province, acknowledging that “it was hinted to me that something of this kind was on the carpet at home”. Holland maintained that the principal reason why the pines were not now being properly exploited was that the government in Boston was too remote from Maine to give proper direction, and furthermore that several prominent figures in Boston concurred with his suggestion, including Commodore Gambier. Holland proposed for “New Ireland” the “The Happiest Boundaries” by amending Maine’s borders to annex the west bank of the St. John’s River from Nova Scotia, and ceding the southern extremity of Maine below the Saco River to New Hampshire, as “that province having so little sea coast”. He illustrated his plan with an accompanying map (**Fig. 72**).⁷⁶⁸

Hillsborough replied that Holland’s observations regarding naval stores were “very sensible”, although he tactfully avoided entering into a discussion on the jurisdictional status of Maine. He did, however, intimate that “particular persons” were being dispatched with the specific mission of reconnoitering the region for mast timber.⁷⁶⁹ A plan devised by William Knox in 1778 to create a new province in Maine shared some curious similarities to Holland’s proposal.⁷⁷⁰

⁷⁶⁷ Holland to Hillsborough, 19 December 1770, CO 5/72, ff.139-40.

⁷⁶⁸ Samuel Holland, [New Ireland] “A Sketch of the Country Between New Hampshire and Nova Scotia”, Mss. [1770]; NA: MPG 1/346, Penfold, no.2569. Holland named the province “New Ireland”, supposedly to complete the trinity that already included New England and Nova Scotia. It should also be remembered that Hillsborough was Irish.

⁷⁶⁹ Hillsborough to Holland, 1 April 1771, AO 3/140, f.67.

⁷⁷⁰ *Knox Mss.*, pp. 169, 172 and 228; also Bellot, pp.166-7.

Thomas Scammell, importantly, helped to establish the utility of maps in the fight for the crown's timberland. In the summer of 1771 Hillsborough wrote to Hutchinson, who was also the Surveyor-General of His Majesty's Woods, requesting the governor's support of Thomas Scammell who could help monitor the harvesting of mast timber and gather intelligence useful to the broader policy of limiting settlement in eastern Maine.⁷⁷¹ From the very outset, Scammell was keenly aware of the central role cartography would have to play if his mandate was to be effectively executed. Following an extended mission into the Kennebec and Androscoggin valleys, he wrote to Hutchinson reminding him of the instruction he was given by Whitehall to "transmit a Copy of every such Map to our Governor or Governors of the Colonies within your District to the end that proper laws may be enacted for the security of such reservations until more general and effectual regulations can be enacted by Parliament here."⁷⁷² A short time later, he wrote, "I need not point out to you the necessity of having Plans nor the advantages which will result from them. Those who travel in the Woods will experience their great efficacy, and will be of the utmost consequence to me in assigning to each Party their several Districts. To supply them regularly with provisions, is a very real part of my Duty, therefore I presume it becomes me to obtain a knowledge of the Rivers, Branches and Lakes, without which my measures will not be attended with the success I sincerely wish them."⁷⁷³

Scammell was shortly ordered by Wentworth back to the Kennebec region on a special mission that was to have the dual objective of being a reconnaissance expedition for pine stands and an opportunity to fire a warning shot over the bow of the Kennebeck

⁷⁷¹ Hillsborough to Hutchinson, 3 July 1771, CO 5/765, p.211.

⁷⁷² Scammell to Hutchinson, 2 April 1772, an enclosure to Hutchinson to Hillsborough, 9 May 1772, CO 5/761, ff.93-4.

⁷⁷³ Scammell to Hutchinson, 8 June 1772, an enclosure to Hutchinson to Hillsborough, 2 July 1772, CO 5/761, ff.158-9.

Proprietors. It had long been reported that lumberjacks based within the Proprietors' tract had brazenly been poaching timber from adjacent Crown land and bringing it back to their mills for processing. Scammell reported that "on my arrival at Kennebeck, [I] was informed that several people were a considerable way up the Androscoggin River, cutting down his Majesty's white pines for logs to be sawed into boards by their mills."⁷⁷⁴ He proceeded to map carefully the region immediately around the Kennebeck Proprietary lines, marking eligible trees with the King's 'Broad Arrow.' Noticing that "the invaders fled on our approach," this surveying expedition was nothing short of an act of taking possession of these lands, informing the Proprietors that the Crown was now specifically appraised of what mast trees existed there and was also prepared to actively defend the government's right to these resources. Scammell's consequent map, dispatched to the Board of Trade (**Fig. 73**),⁷⁷⁵ represented a milestone in the process of specialization of American cartography, being one of the very first forestry maps ever made in the North American colonies. While not a scientific survey and containing many planimetric inaccuracies, the map succeeded in identifying prime pine stands, and featured careful notes on tree species and timber quality, while providing critical geographic details which could later be applied to a more accurate future cartographic template.

There is evidence that there was a consistent and consequential relationship between the Northern Survey's mapping programmes and Wentworth's forestry management programs. While Wentworth would have had frequent access to Holland's

⁷⁷⁴ Scammell to Pownall, 20 July 1772, CO 323/27, pp.253-6.

⁷⁷⁵ Thomas Scammell, "The coast from Casco Bay to Penobscot Bay showing the Kennebec River to Norridgewock and beyond, and other rivers," Mss., 1772, an enclosure to Scammell to Pownall, 20 July 1772, CO 323/27, pp.253-6; also note Adolphus Benzel, "Plan of Crown Point and Environs by a Scale of 1 Mile to an Inch by Adolphus Benzel", Mss., 1770, an enclosure to Benzel's petition of 17 July, 1770, CO 5/1101, f.145.

maps at various times, with their precise revelations of the location of sawmills, Holland and his deputies were also keenly aware of the imperative to locate mast pines. The first-hand reports from his surveyors would have been an invaluable source of intelligence. There was also considerable operational coordination between the programmes, as Wentworth recounted that in April 1772, one of his unnamed agents, but likely Scammell, was unable to patrol the coast due to his lack of a vessel. At the perfect moment he learned that “Mr. Mowat in the Canseaux...was dispatching a Tender on their service, in which He very readily accommodated my officer, and thereby enabled me to seize about 200 Tons of Timber & 70 feet Deals cut from the King’s Woods”.⁷⁷⁶ Thomas Scammell’s nephew, Alexander Scammell, a future map maker to the American army, worked as a surveying apprentice for both Holland and his uncle, and likely would have served as a useful conduit of information between the two programmes.⁷⁷⁷

Meanwhile, in the Connecticut Valley, which had previously been mapped by James Grant, Timothy Ruggles commissioned the aforementioned Francis Miller not only to define a series of crown reserves, but also to draft an outrageously extravagant plan for a canal with locks, which would permit timber to bypass Walpole Falls, thus facilitating its transport down river (**Fig. 74**).⁷⁷⁸

⁷⁷⁶ Wentworth to Phillip Stephens, 13 January 1773, ADM 1/3820, pp.272-305.

⁷⁷⁷ Alexander Scammell (1747-81) joined the American revolutionaries in 1771, and later became a brigadier-general in the American army. He drafted a map of “New York City and Vicinity”, Mss. [1776] for his commanding officer, General John Sullivan, J.P. Guthorn, *American Mps and Map Makers of the American Revolution* (Monmouth Beach, N.J., 1972), map no. 42/1. From some point in 1771 until August 1772, Alexander Scammell is described as working “under the auspices of a cousin [Thomas Scammell]... in government employ, [and that] he entered upon the business of exploring and surveying lands, and of the royal navy timber”. Afterwards, he was engaged by Holland to chart “the heads of rivers... to be inserted into his maps of America”, *Collections of the Massachusetts Historical Society*, Second Series, vol. IV (Boston, 1816), pp.95-6.

⁷⁷⁸ The plan depicting the proposed canal with specifications, is Francis Miller, “A Plan of that part of the Connecticut River which includes the great Falls at Walpole”, Mss., endorsed in pencil ‘In 24 May, 1772’, NA: MPD 1/56/3, enclosed within T1/492. The canal was to be located at modern Bellows Falls, Vermont, and Miller estimated the cost of the project to be £3,604, 17s, 8 d. Not surprisingly, it was never built. This

Surveying Coastal Maine

The surveying of the coast from Cape Elizabeth to St. John was technically one of the greatest feats of coastal surveying ever undertaken in North America. An unimaginably intricate and rocky shore, often lashed by the full fury of the Atlantic and, in parts, subject to the world's greatest tides, these coasts bedevil sailors to this day.

This track of surveys commenced before the New Hampshire surveys, when Holland dispatched a party led by Sproule to Casco Bay.⁷⁷⁹ Sproule's mandate was to map Cape Elizabeth to the Kennebec River. By the end of the summer of 1771, Sproule's party had completed the endeavour. Their work embraced both the burgeoning port of Falmouth (modern Portland) and the rapidly growing and legally contentious Kennebec and Androscoggin valleys, to a point about 50 miles upriver. While Holland had remarked that the seemingly infinite "multitude of islands", had "retarded the survey", the complexity of the coastline and the speed in which such a painstakingly accurate survey was conducted inspires high praise, and substantiates Holland's faith in Sproule.⁷⁸⁰

In May 1772, Holland was able to organise five parties to fan out independently down the coast. One was directed to double back to survey the Merrimack valley; the other four would operate simultaneously along various points on the Maine-New Brunswick coastline. Sproule's party would survey from the Kennebec towards Sandy Point on the eastern shore of Penobscot Bay, where his surveys would eventually join up to those conducted by James Grant's party who were focused on Penobscot Bay and

map accompanied two maps of crown forestry reserves, NA: MPD 1/56/1 and NA: MPD 1/56/2. Ruggles report and Miller's maps were laid before the Board of Trade, *JCTP*, 29 January 1773 (vol.13, p.336).

⁷⁷⁹ Holland to Hillsborough, 25 August 1770, CO 5/71, part 2, ff.91-2.

⁷⁸⁰ Holland to Pownall, 16 September 1771, CO 332/27, pp.117-20.

River, having progressed westwards from the Mount Desert narrows. From that point Blaskowitz's party would progress eastwards to the western passage of Passamaquoddy Bay, from which point Thomas Wright was charged to survey that bay and the coast all the way to St. John.⁷⁸¹ The 1772 season would show the Northern Survey at its most productive. Mowat's report to Admiral Montague provides a detailed account of how the division of labour worked to enhance efficiency, describing the roles of the forty-five named men employed in the surveying operations.⁷⁸² Heading the roster was Holland who was assisted by his secretary Mr. Derbage and two personal servants. The five Deputy Surveyor-Generals were each accorded one personal servant. Highlights on the named list include Holland's sons, John and Henry, and James Peachey, who would later achieve great acclaim as an artist of North American views. Also featured are the names of several guides and "gentlemen volunteers", supposedly people with some local knowledge of the treacherous coastline. In an appending document, Mowat quantified the manpower of the five parties, which each employed seven men involved in surveying, including the deputy surveyor, his personal servant, two chain bearers, two men for station colours and one man for carrying instruments. Mowat also imparts that while the parties were in the field, the *Canceaux* was manned by a skeletal crew of only ten hands who would be intermittently joined by six named "supernumeraries", engaged to assist with both the survey and the operation of the vessel. In terms of mechanics, the sea-based points of the triangulations would be conducted from small boats, or shallops, that

⁷⁸¹ Holland to Hillsborough, 15 June 1772, CO 5/73, ff.232-3, also Holland to Pownall, 15 June 1772, CO 323/27, pp.249-52; the division of the parties' responsibilities along this coast is noted on the Northern Survey's "A Plan of the Sea Coast from Cape Elizabeth, on the west side of Casco Bay, to St. John's river, in the Bay of Fundy", Mss., 1773, BL: Maps K.Top.120.18.

⁷⁸² Henry Mowat, "[Men] To be Employed from St. John's River in the Bay of Fundy to Casco Bay", an enclosure to Mowat to Montague, 3 May 1772, ADM 1/484, ff.203-8.

would have shallow berth on such perilous shores. At Holland's behest, Mowat managed to convince Admiral Montague to allocate and equip two additional such boats to the survey, so that one would be available to each of the four parties. While the crews would usually overnight on shore, the *Canseaux* would regularly support and provision the two most westerly parties, while the *Jupiter* schooner aided the two easterly parties.⁷⁸³

Hillsborough resigned the seals of office on 15 August 1772 while the surveys of coastal Maine were still in progress. Spoule's 'Casco Bay' was the only one of these maps to be completed during the Hillsborough administration. As it arrived in London only a week before the Earl's resignation, it is unlikely that Hillsborough paid much heed to a masterpiece that so brilliantly served his designs for the region. Nevertheless, the land management policies he fostered persisted until the outbreak of the Revolution. The maps continued as a source of information to administrators throughout that brief, but critically eventful, period.

C. The Southern District

From Hillsborough's point of view, the Southern District consisted of two theatres. In East Florida, with its secure government loyal to the crown and hospitable weather, the aim was to create an elite planter society. In contrast, the more northerly climate of West Florida made the development of large plantations less attractive, hindering the establishment of a loyal elite class. While it was viewed to have great potential for trade, blessed by the transport routes provided by its many large rivers, part

⁷⁸³ Holland to Pownall, 15 June 1772; CO 323/27, pp.249-52.

of what would become known as the ‘Borderland’ region, the territory that comprised the new province had always been considered to be difficult to govern. Across the Mississippi valley, was Louisiana, a possession of Spain; to the north, ran the Indian line, the other side of which lived two powerful warring aboriginal nations. As the British would soon experience, like the French and Spaniards before them, many of the best-laid official designs would be thrown into doubt owing to contested and ill-defined international boundaries. As Paul Mapp demonstrated concerning the period before 1763, cartography had long been and would continue to serve powerful rhetorical weapons in these boundary disputes.⁷⁸⁴

Hillsborough was concerned that the small-time settlers and adventurers, naturally attracted to the West Florida environment, would resist imperial authority. In sharp contrast to the situation in East Florida, the political climate governing the province proved to be extremely tempestuous. West Florida’s tiny capital, Pensacola, was, it seemed, forever stirred up by a bewildering number of acrimonious disputes between royal officials and the men charged to oversee the province’s sizable military establishment.

During Hillsborough’s tenure, De Brahm, as the surveyor-general of the Southern District, continued to evaluate the region’s natural resources for settlement potential, and chart the surrounding waters to assist maritime navigation around the obstacle-ridden Floridian peninsula. Surprisingly, given that the Board of Trade tended to preserve its important maps, virtually none of the original manuscript maps submitted by De Brahm

⁷⁸⁴ P. Mapp, *The Elusive West*, esp. pp.147-65 and 330-98.

to Hillsborough have survived.⁷⁸⁵ In all likelihood, De Brahm personally took possession of his map originals as they were reputed to be of a somewhat motley appearance, being made on different scales on “slight paper.”⁷⁸⁶ Two extremely important maps of West Florida by Bernard Romans, De Brahm’s chief deputy, have also vanished, one relatively recently, leaving us to discern the details of his works through his surviving maps.

Fortunately, the vast majority of Elias Durnford’s maps and George Gauld’s charts, the other primary surveyors who played a role in mapping the Southern District, are today preserved in archives. De Brahm’s extant and more refined presentation copies, made while he was in London between 1772 and 1773, are thought to be reasonably faithful to the originals, although the disappearance of the primary source maps has potentially robbed the modern scholar of the rough notations that De Brahm and Romans quite likely included only on their original versions.

While De Brahm never completed a general map of East Florida in its entirety,⁷⁸⁷ his gargantuan plan of the Atlantic coast of the province, from St. Mary’s River to Cape Florida, represents one of the most impressive accomplishments of surveying of the Enlightenment era.⁷⁸⁸ Consisting of two separate, but connecting maps, totaling

⁷⁸⁵ Notable exceptions, being surviving De Brahm manuscript maps from the period of Hillsborough’s tenure are: William Gerard De Brahm, “A Sketch of the Antient figure of the Southermost part of the Promontory formerly called Tegeste”, Mss., 1771 and William Gerard de Brahm, “Hydrographical map of the southernmost part of the promontory of East Florida”, Mss., 1771, NA: MPG 1/347 (1 and 2, respectively). Both maps were late printed as part of De Brahm’s *Atlantic Pilot* (London, 1772).

⁷⁸⁶ Hillsborough to De Brahm, 9 December 1769, CO 5/70, f.333.

⁷⁸⁷ In the spring of 1770, De Brahm did create “a General map of all surveys done so far”. It was not a complete general map of the province and was done on a very small scale, although it embraced most of his surveys on the west coast and Romans 1769 charting of the southern Gulf Coast. This map has not since come to light, having never been recorded as received in London, nor does it appear in the 1780 Board of Trade map inventory, map referred to, De Brahm to Hillsborough, 30 June 1770, CO 5/71, part 2, ff.43-4.

⁷⁸⁸ William De Brahm, “A Survey of the part of the Eastern Coast of East Florida from St. Mary's Inlet to Mount Halifax”, Mss. [c.1773], CO 700/Florida 53 and William De Brahm, “East Florida, East of the 82nd degree of Longitude from the Meridian of London”, Mss. [c.1773], CO 700/Florida 3, Penfold, nos. 2309 and 2296; here substituted with William De Brahm, “Map of the General Surveys of East Florida [Northern section of Atlantic Coast of East Florida]”, [1773, but based on maps made from 1766 to 1770], BL: King’s

approximately 25 feet in length, this masterpiece embraces all of the surveys he personally conducted, save his operations around the Florida Keys. While not completed until 1773, it contextualizes his numerous local surveys and provides the grander perspective which could prove useful to administrators in the consideration of broader matters of policy.

The lack of communication that Hillsborough's administration had with other key players in the theatre, along with the difficult relationship De Brahm had with some, notably the Governor, negatively impacted the efficiency of the work in the Southern District. The Admiralty paid little attention to De Brahm's excellent hydrographic work, and De Brahm and Hillsborough were ignorant of the extensive mapping of the region's coasts completed by the Admiralty. This, in part, explains why the British Crown unnecessarily paid for the Florida Keys and Tampa Bay to be mapped twice. The lack of coordination also certainly delayed the completion of a general map of Florida. Finally, the consequence of De Brahm's inferior interpersonal skills came to head with his very poor relationship with Governor Grant, who sought to work around De Brahm, causing the Southern Survey to include many "informal" work products given directly to Hillsborough, and not to De Brahm. Ultimately, De Brahm, who did not curry favour with Hillsborough by his continual complaints, was recalled to London in 1771 by the Earl, and the formal operations of the Southern Survey were suspended.

The Trials of William Gerard De Brahm

Mss. 211, f.178 and William De Brahm, "Map of the General Survey of East Florida, performed anno 1770 [Southern section of Atlantic Coast of East Florida].", [1773, but based on maps finished by 1770], BL: King's Mss. 211, f.221, De Vorsey (ed.), *De Brahm's Report*, plates nos. 15 and 20. These reduced versions are true to the above originals, save that they omit some secondary details and notations. They are included here in the place of the large-scale maps, as the latter are over 25 ft. in length when combined.

William Gerard De Brahm's experience with the Hillsborough administration did not begin auspiciously. Similar to his northern counterpart, De Brahm sought to temporarily escape from the General Survey. In November 1768, he made a request to Hillsborough for a twelve month leave of absence in order to attend to "material business" in Regensburg and Neuburg, Bavaria, while he would leave the General Survey to be conducted "through my deputies."⁷⁸⁹ A clearly nonplussed Hillsborough did not directly respond to the request and encouraged De Brahm to complete his work with diligence.⁷⁹⁰

De Brahm's *ennui* is understandable. He was constantly challenged by a lack of funds and skilled labour, aggravated by a series of improvident mishaps, and victim to the inflated costs of materials, services and labour in an infant colony. Although a fabulously talented surveyor, the *coup de grace* accompanying these material challenges was the mercurial German's uncompromising, and resolutely independent nature.

With only one naval base and shipyard in the whole province, there was little chance of receiving aid in the event of a nautical mishap any real distance from St. Augustine. Due to Florida's ubiquitous hidden sandbars, unknown reefs and violent tropical storms, the Southern Survey lost two schooners, along with several smaller boats, while the vessels that returned to port had often sustained significant damage. De Brahm noted that "Repairs in East Florida are very slow and expensive" owing to the highly limited supplies of material and skilled labour in the infant colony.⁷⁹¹ He eventually found it necessary to send his own schooner, the *Augustine Packet*, all the way to

⁷⁸⁹ De Brahm to Hillsborough, 1 November 1768, CO 5/227, ff.67-8.

⁷⁹⁰ Hillsborough to De Brahm, 9 December 1769, CO 5/70, f.333.

⁷⁹¹ De Brahm wrote that a boats with two of his deputies met "a violent storm on 2 May 1769 [and] were thrown on the Breakers", De Brahm to Hillsborough, 24 June 1769, CO 5/70, ff.487-90; B. Romans, ed. by K.E.H. Braund, *A Concise History of East and West Florida* (Tuscaloosa, Ala., 1999), Introduction, pp.4-5.

Charleston for repairs.⁷⁹² By contrast, while Holland's party's also explored much unsettled coastline, they were rarely far from a good shipyard, or were, at the very least, in close proximity to other vessels.

De Brahm's operating budget was invariably less than that of his northern colleague, held static every year at £800,17s.⁷⁹³ He lamented "I must pay for everything – notably vessels – I pay for what my colleague to the North [Samuel Holland] gets gratis...the wages of seamen...in addition to companies of soldiers".⁷⁹⁴ In a passage that is revealing of both his financial challenges, and nature of his operations, De Brahm wrote Pownall that, "I am now over Budget...have two schooners, three boats and one batteau; three deputies (two of which are experienced seamen and the third is my Draughtsman); two mates and eight (sometimes more) sailors." Hillsborough was evidently disinclined to augment his budget, as he told De Brahm that "His Majesty has commanded me to ask the Board of Trade to have some addition made to your Allowance" for your next Estimates, "You must not however, conclude from this step that such request will be granted, on the contrary, I very much fear that the demands on the Public for other services will hardly allow any addition to be made to your establishment."⁷⁹⁵

Towards the conclusion of his operations, De Brahm claimed that he had surveyed 86,866 square miles of territory. Calculating the Treasury's net expenditure on the Southern Survey, from 1764 to 1770 inclusive, to be £4,769, he estimated that he had

⁷⁹² De Brahm to Hillsborough, 29 April 1770, CO 5/71, part 2, ff.7-8.

⁷⁹³ De Brahm's operating budget remained constant at £700,17s during the fiscal years, from 1769 to 1772, in which estimates were authorized by Hillsborough. During the same period Holland was granted an operating budget of £984, 17s for each year, "Estimates," CO 5/7, ff.248-60.

⁷⁹⁴ De Brahm to Hillsborough, 22 September 1770, CO 5/71, part 2, ff.127-30.

⁷⁹⁵ Hillsborough to De Brahm, 9 December 1769, CO 5/70, f.333.

conducted his surveys as a rate of only 13½d. per square mile.⁷⁹⁶ By comparison, Bernard Romans described the standard fees paid to provincial surveyors for cadastral demarcations, which ranged between 14s, 5d for a square mile of cleared land to 28 s, 10d for uncleared land. This did not include the surcharge of 6s, 9d for every twenty miles the surveying party had to travel from the capital, beyond the initial twenty miles.⁷⁹⁷ These rates paled in relation to the £4 per square mile the Duke of Richmond paid surveyors to map his estate in Surrey, England.⁷⁹⁸ On this basis, De Brahm was most certainly being truthful when he claimed that costs “consume all my Annual Subsidy without leaving any money for my emolument”.⁷⁹⁹

De Brahm also lamented the “scarcity of people in my department where I experience no support.”⁸⁰⁰ The abilities of the surveying parties he sent out were not always sufficient to compensate for the surveyor-general’s absence on the General Survey, and many of De Brahm’s provincial deputies were not competent to execute cadastral surveys.

De Brahm records that, from 1765 to 1771, he employed thirty-two named persons, recording their respective roles on the survey.⁸⁰¹ Excluding any anonymous journeymen, it is notable that the survey, at various times, employed over ten percent of

⁷⁹⁶ Towards the end of his operational tenure, De Brahm estimated that the Board of Trade had spent £5,705, 17s gross, and £4,769 on the Southern Survey, De Brahm to Hillsborough, 6 May 1771, CO 5/72, ff.203-5.

⁷⁹⁷ B. Romans, *Concise History of East and West Florida* (New York, 1775), pp.193-6.

⁷⁹⁸ R.A. Skelton, ‘The Origins of the Ordnance Survey of Great Britain’, *Geographical Journal*, no.28 (1962), p.419; see also M.S. Pedley, *The Commerce of Cartography*, Appendix 3, p.231.

⁷⁹⁹ De Brahm to Pownall, 1 September 1769, CO 5/227, ff.106-10.

⁸⁰⁰ De Brahm to Hillsborough, 24 June 1768, CO 5.69, ff.435-8.

⁸⁰¹ “A List of the Inhabitants of East Florida, their Employes, Business and Qualifications in Science from 1763 to 1771”, in “Report,” BL: Kings Mss. 211, ff.113-20, printed in De Vorse, pp.180-6. De Brahm 1771 list of the 288 Protestant Europeans who had lived in East Florida at various times since his arrival included 32 named men “In the General Surveyor’s Employ”. In addition, De Brahm not only listed each man’s outside occupations, but also their role on his survey, including Indian interpreters, draughtsman, mathematicians, mariners, navigators, pilots, and “pack horse men”.

the province's European Protestant male population as listed by De Brahm. This number did include a handful of highly competent individuals like Bernard Romans, the extraordinarily talented Joseph Purcell, and Henry Yonge, Jr., the son of his former partner, as co-surveyor-general of Georgia.⁸⁰² However, compared to the several first rate military surveyors assisting Holland, De Brahm complained to Pownall that out of the thirteen provincial surveyors at his disposal, only two had any real understanding of trigonometry.⁸⁰³

Bernard Romans, a Dutchman, whose background and temperament were stunningly similar to De Brahm's, was an enormously competent surveyor in his own right, and proved that he was able to lead operations without any involvement from De Brahm. Their natural arrogance and over-lapping interests, however, soon ensured that Romans and De Brahm became vicious enemies. Their toxic relationship limited the potential of what they could have otherwise achieved. In 1770, De Brahm took the step of summoning his nephew, Sebastian Ferdinand De Brahm, a skilled military engineer, from Germany. Unfortunately, he did not arrive in America until September, 1775, when he accompanied his uncle on his return voyage from Britain. The younger De Brahm would eventually join the rebel side in the upcoming American Revolution.⁸⁰⁴

In all, De Brahm's quantitative progress on the General Survey was markedly less advanced than Holland's. While the shortage of reliable labour contributed to the slow progress and De Brahm had some legitimate grievance, it was also true that De Brahm's

⁸⁰² Joseph Purcell, 'A Plan of Beauclerk's Bluff Plantation on ye E[as]t side of ye River St. Johns in ye Province of E[as]t Florida', Mss., 1771, MPD 1/2, extracted from T 77/14, Penfold, no.2308.

⁸⁰³ De Brahm to Pownall, 1 September 1769, CO 5/227, ff.106-10.

⁸⁰⁴ De Brahm to Hillsborough, 29 April 1770, CO 5/71, part 2, ff.7-8. Sebastian Ferdinand De Brahm previously served as a military engineer to the Elector of Trier. He eventually became a Lt. Colonel in the Continental Army, and drafted maps of campaigns in New York and Pennsylvania from 1777 to 1779, P.J. Guthorn, *American Maps*, p.9.

dire financial straits compelled him to focus excessive attention to accruing revenue from his provincial portfolio. In 1769, De Brahm began to spend too much time in and around St. Augustine conducting cadastral surveys for additional fees, and not enough time personally overseeing the General Survey where he would be compensated only by his fixed salary. It also followed that he found himself unable to fulfil, personally, the cadastral surveys he had allotted himself, and choosing not to delegate these, he angered numerous stakeholders when the completion of their surveys was severely delayed. De Brahm's performance ultimately drew the negative attention of East Florida's governor, James Grant, and wore on the patience of Hillsborough who came to see De Brahm as more trouble than he was worth. Remarking on De Brahm's ability to alienate just about everyone, Grant declared him to be "at variance with all mankind".⁸⁰⁵

The clash between the ultra-authoritarian Grant and the argumentative De Brahm is perhaps best described by the dispute they had over De Brahm's mandate. De Brahm consistently interpreted his role literally. He asserted that he was obliged to "take orders only from England," while maintaining that his commissions granted him the right to "carry out his duties with Liberty as I choose".⁸⁰⁶ Specifically, he believed that he had the unilateral prerogative to hire whomever he wished as deputies and to assign them whatever duties he saw fit. De Brahm disavowed any notion that Grant and the executive had any authority over him with respect to his provincial office.

A strict 'Black Letter' reading of his commissions would seem to uphold De Brahm's interpretation of his duties. In practice, however, his stance violated the spirit of the governance system in which he operated. As in most other provinces, only the

⁸⁰⁵ De Vorsey (ed.), *De Brahm's Report*, p.271.

⁸⁰⁶ De Brahm to Pownall, 1 September 1769, CO 5/227, ff.106-10.

governor-in-council could issue warrants for land grants and only after these were issued could the surveyor-general authorise precepts to survey the grant. As £100 had annually been included in his General Survey budget to compensate a chief provincial deputy, it was assumed that De Brahm would charge this individual with issuing surveys precepts, it being expected that he would be preoccupied with his general mandate. That was how affairs were conducted in Québec, for example.

De Brahm had recognized that, “Grant was displeased at the first moment by the terms of my commissions.”⁸⁰⁷ Provoked by the surveyor’s exceptionally defiant and stubborn disposition, it was not long before the governor was on the lookout for any excuse to get the upper hand with De Brahm.

The first real flare up between De Brahm and Grant occurred in July, 1767 before Hillsborough assumed his post. De Brahm had appointed Seton Wedderburn Row, a relative of his wife, to survey the land of Thomas Woolridge. Woolridge complained to Grant that Row was untrained and incompetent, and chosen by De Brahm only because he gave kick-backs to the Surveyor-General.⁸⁰⁸ From this time on, the mutual animosity between De Brahm and Grant was obvious and likely doubly challenging as they were next door neighbours. In 1769, they notably came within an inch of fisticuffs in the presence of General Haldimand.⁸⁰⁹

In April 1770, Grant and the executive council accused De Brahm of overcharging William Haven for a cadastral survey conducted by Bernard Romans, with whom De Brahm had recently had his final falling out. In addition, they charged that De Brahm had refused to certify the survey and ordered a new survey, even after having

⁸⁰⁷ De Brahm to Hillsborough, 22 September 1770, CO 5/71, part 2, ff.127-30.

⁸⁰⁸ C.L. Mowat, ‘That “Odd Being,” De Brahm’, *FHQ*, vol.20, no.4 (April 1942), p.332.

⁸⁰⁹ Introduction to De Vorsey (ed.), *De Brahm’s Report*, p.42.

collected Haven's payment, just to spite his estranged deputy. They cited that De Brahm qualified that this repeat survey was to be conducted by "any deputy except Romans".⁸¹⁰ In June 1770, when De Brahm returned to St. Augustine after an absence of some months in the field, Grant, after personally reimbursing Haven for the alleged overcharges, suspended all of De Brahm's payments from provincial revenues, exclaiming that "I cannot certify that you have executed the office of land surveyor."⁸¹¹

De Brahm countered that he had actually undercharged Haven, and he refused to reimburse Grant, only adding to the governor's resolve. De Brahm informed Hillsborough that "Things with Grant were coming to a head" and he made the first of repeated requests for six months leave to come to London to clear his name. The American Secretary denied his requests.⁸¹²

Grant had made numerous complaints about De Brahm's conduct to London, which Hillsborough concisely recounted to De Brahm, followed by a very sharp warning, "Grant claims that you personally attend to the provincial surveys and leave the General Survey to deputies. This surprised me, as the £100 allotted in your budget is meant for a provincial deputy, and that you should rather focus on the General Survey. I want you to focus only on General Survey and to appoint a deputy approved by Grant to carry out provincial surveys. I have authorized the Governor to suspend you if you do not obey."⁸¹³

⁸¹⁰ [Charges against De Brahm], "Minutes of the Executive Council of East Florida", 16 and 17 April 1770, CO 5/551, ff.25-31. De Brahm, who was not in the province when these accusations were made was only informed of them in late June, see Grant to De Brahm, 26 June 1770, excerpted in De Brahm to Hillsborough, 30 June 1770 CO 5/71, part 2, ff.43-4.

⁸¹¹ Grant to De Brahm, 26 June 1770, excerpted in De Brahm to Hillsborough, 30 June 1770, CO 5/71, part 2, ff.43-4.

⁸¹² Hillsborough's denial of De Brahm's request for leave to return to London, Hillsborough to De Brahm, 3 October 1770, CO 5/71, part 2, ff.61-2.

⁸¹³ Hillsborough to De Brahm, 6 July 1770, CO 5/71, part 2, ff.132-3.

On 22 September 1770, De Brahm dispatched a lengthy as well as breathtakingly insolent and impolitic defence of his conduct to Hillsborough, commencing with “I am sorry that this gentleman [Grant] should use the authority and dignity of his employ to take any advantage against a fellow servant even a defenceless and unprotected Foreigner”. In defiance of Hillsborough’s directives, he maintained that his royal commissions ensured that he would never be obliged to take orders from Grant and that only he could decide how best to balance his provincial and general mandates, claiming, “I also comprehend from my commissions that the income from both of my offices is my absolute property, and that they are to be mutually assisting, supporting the burden of each other’s execution.” De Brahm also charged that Grant had appointed deputies to conduct surveys without his knowledge and they had performed “faulty and incomplete work”, had “overcharged the grantees” and that “sorting out these problems interrupts my work”. De Brahm justified his overt pursuit of provincial revenue, asserting that “I could not financially support the General Survey without my provincial income – £700 [per annum] is not enough,” and that Grant’s unjust interference had cost him £841 over the last three years. De Brahm concluded his defence by stating that he had an incumbent chief provincial deputy, George Rolfes, who had actually been sworn into office directly under the governor’s gaze on 6 October 1768.⁸¹⁴

While it was not uncommon for those employed as surveyors to be less than technically qualified,⁸¹⁵ De Brahm’s problem was that George Rolfes, a merchant, had no

⁸¹⁴ De Brahm to Hillsborough, 22 September 1770, CO 5/71, part 2, ff.127-30. Note that the amount of £700, 17s that De Brahm cited as his annual budget referred to the amount which excluded the £100 for the annual salary of a chief provincial deputy.

⁸¹⁵ There are several notable examples of incompetent surveyors working in the colonies during the era. In 1755 North Carolina governor Dobbs described how cadastral surveyors used “imaginary Trees” as markers on which to run their lines such that “You may judge what confusion that has a does create.” Kain and Baigent, p.274. In 1766, Robert Levers, a Pennsylvania surveyor, commented on a colleague’s survey

training as a surveyor and was frequently out of the province. His appointment had every appearance of being part of another scheme for De Brahm to assume a greater portion of provincial surveying revenues. In any event, Rolfes clearly did not qualify as a “deputy approved by the governor”.

The day of reckoning came on 4 October 1770 when Grant and the East Florida Executive formally suspended De Brahm from his provincial office. To add insult to injury, Grant appointed De Brahm’s estranged son-in-law and the purported illegitimate half-brother of the king, Frederick George Mulcaster, to assume his duties on an interim basis “until His Majesty’s pleasure is known”.⁸¹⁶

De Brahm now had no choice but to focus on the General Survey, an endeavour he continued to pursue while he awaited a verdict from London, although his commitment to the General Survey would be a cause of concern to Hillsborough. On 3 July, 1771, Hillsborough, citing that he had received “complaints” regarding his operation of the General Survey, in addition to the ongoing provincial issues, ordered De Brahm to “come to England immediately.”⁸¹⁷

Romans and Durnford Take Over De Brahm’s Duties on the General Survey

The vacuum created by De Brahm’s recall was filled by two operationally autonomous, yet mutually reinforcing, surveying projects. First, from 1770 to 1772,

as being “iniquitous” and “so contrived as to leave out every place that has the least appearance of being bad,” Kain & Baigent, p.288. In 1774 Samuel Holland, then working in New Hampshire, commented on the incompetence of “those who pretend to practice surveying in this Province,” Holland to Dartmouth, 18 April 1774, CO 5/75. ff.103-4.

⁸¹⁶ Grant to De Brahm, 4 October 1770, CO 5/72, f.115; also “Council of East Florida: Suspension of De Brahm,” 4 October 1770, CO 5/72, f.11. Mulcaster was allegedly the illegitimate son of the late Frederick, Prince of Wales.

⁸¹⁷ Hillsborough to De Brahm, 3 July 1771, CO 5/72, f.491.

Bernard Romans completed the survey of the Gulf Coast of East Florida, and commenced to survey the eastern shores of West Florida. He did this entirely on his own accord in the hopeful anticipation of future emolument from the Crown.⁸¹⁸ Second, Hillsborough entered into an unorthodox arrangement with Elias Durnford, the lieutenant-governor and surveyor-general of West Florida, to work towards the creation of a general map of that province, the natural continuation of the southern General Survey. While Durnford's activities were not technically a part of the General Survey programme, the extraordinary nature of his relationship with the American Department and Board of Trade with respect to his mapping activities requires that they must be considered as a *de facto* continuation of the General Survey.

Given the highly informal and chaotic circumstance into which the Southern Survey descended from 1770 onwards, it is truly amazing that by the advent of the Revolution virtually all of coastal East and West Florida had been scientifically mapped, including several major inland river systems. Eventually, Durnford and Romans incorporated information from the masterly hydrographic surveys of George Gauld, who had been engaged by the Admiralty to chart the Gulf Coast from Texas to the Keys. This process greatly improved their maps' perspective and projection.

East Florida, 1768-1771: Growing Pains

At a glance, the statistics reporting land grants were deceiving. From 1764 to 1770, the Privy Council had approved a total of 227 orders in council granting 2.86 million acres of land to applicants. This staggering amount is well in excess of the total

⁸¹⁸ P. L. Phillips, *Notes on the Life and Works of Bernard Romans*, Florida Historical Society, Publication no. 2 (De Land, Fla., 1924), pp. xlvii-xlix and pp.47-8.

of all new land grants made in Québec, Nova Scotia, West Florida and New York combined during the same period.⁸¹⁹ However, in almost half of the cases, the applicants never followed through on claiming their grants from the governor.⁸²⁰

De Brahm's 1771 census of the province's inhabitants (which excluded Native Americans) listed only 288 white Protestant males, around 1,200 Greek, Minorcan and Italian indentured labourers, and 900 African slaves.⁸²¹ Even if these estimates were conservative, East Florida had nowhere near the pool of human resources required to transform an infant colony into a viable province. By 1771 there were only eight plantations that could be considered profitable.⁸²² While East Florida that year produced 23,143 lbs. of indigo, proving that the crop was well suited to East Florida, this quantity was still small in general terms, and the province was still a long way from financial viability.⁸²³

In spite of the noblest efforts of the governor, supported by De Brahm's highly insightful intelligence on where to target resources, the private planters, on whom the success ultimately rested, were not able to succeed. Hillsborough concurred with Grant that indigo "must be the staple here",⁸²⁴ fetching as it did anywhere between 4s, 6d and

⁸¹⁹ From 1764 to 1770, 227 Orders-in-Council were issued for land grants in East Florida totaling 285,600 acres. During the same period in Québec, Nova Scotia, West Florida and New York, the Privy Council made 199 orders granting at total of 2,108,000 acres, Mowat, *East Florida*, p.59.

⁸²⁰ P.D. Nelson, *General James Grant* (Gainesville, 1993), p.60.

⁸²¹ "A List of the Inhabitants of East Florida, their Employs, Business and Qualifications in Science from 1763 to 1771", in "Report," BL: Kings Mss. 211, ff.113-20, printed in De Vorse, pp.180-6. Forbes, writing in 1821 estimated the white civilian population of East Florida in 1770 to be much higher. Writing two generation later, James Grant Forbes estimated that the population of East Florida in 1768 was 6,000, J.G. Forbes, *Sketches, Historical and Topographical of the Floridas* (New York, 1821), p.140. While De Brahm's estimate may have been slightly too conservative, Forbes estimate is thought significantly above the actual population.

⁸²² Nelson, *James Grant*, p.65.

⁸²³ The production of 21,143 lbs. of indigo represented the beginning of a trend of increased annual yields. However, it paled in comparison to South Carolina's annual yield of around 500,000 lbs. and Britain's annual imports of indigo which were in the vicinity of 1.5 million lbs., Mowat, *East Florida*, p.77-78.

⁸²⁴ Hillsborough to Grant, 1 April 1771, CO 5/552, ff.15-6.

7s, 5d per pound in London.⁸²⁵ South Carolina had been successfully cultivating the crop, which bode well in the warmer weather offered by East Florida. On the downside, the cultivation of indigo is labour intensive, requiring not only technical skill, but also expensive equipment.⁸²⁶ Most East Florida planters were not qualified to produce indigo in a commercially-viable way.

The deficiency of skilled European labour which had bedeviled De Brahm also caused problems for the planters. Half of the province's white civilian population of a few hundred souls was already engaged in St. Augustine in the public and merchant sectors. Only around a hundred individuals were locally available for plantation jobs. Wages were extremely high.⁸²⁷ It was difficult and expensive to lure skilled plantation managers from the established colonies. Reliable stewards were hard to find and keep. For example, in 1769, Lord Egmont, who had spent a fortune, £7,000, on his Mount Royal plantation, closed down his operations when his first successful indigo crop was left rotting in the field due to the unauthorised three month absence of his plantation steward. Egmont lamented that he wished he could affect "the dismissal of my white artificers who are very expensive and I find but little useful"⁸²⁸

Arguably, an inadequate supply of African slave labour also hindered the development of a successful plantation economy in East Florida. It is estimated that in order to operate one of the large plantations, in the 10,000 to 20,000 acres range, one

⁸²⁵ Schafer, *St. Augustine*, p.179.

⁸²⁶ For a contemporary explanation of indigo production, see Romans, ed. Braund, *Concise History*, pp.169-72.

⁸²⁷ De Brahm counted 288 white civilians resident in East Florida up to 1771, an estimate which notably excluded the hundreds of Minorcan and Greek labourers in New Smyrna. Romans estimated the population of St. Augustine in 1769 to be around 1,000 whites, a figure which was largely comprised of enlisted men, Romans, ed. Braund, *Concise History*, p.245.

⁸²⁸ Egmont to Grant, 1 September 1768, cited in Schafer, *St. Augustine*, pp.176-7; see also D.L. Schafer, 'Plantation Development in British East Florida: A Case Study of the Earl of Egmont,' *FHQ*, vol.63, no.2 (October 1984), pp.172-83.

required the labour of at least 70 to 200 slaves. The average price of a male slave was £40, and between £60 and £100 for a skilled individual, such that the necessary start-up expenditure was immense.⁸²⁹ Most East Florida proprietors were either unable or unwilling to make the required investment. De Brahm's 1771 estimate that there were only 900 African slaves in the province, a number woefully inadequate to support anything more than a handful of plantations. Even with knowledgeable and skilled foremen, only the imposition of the ignoble institution could ensure the necessary profit margins. Grant had from the outset recognized this, a sentiment echoed by Bernard Romans, who noted that "slavery is the primum Mobile of the welfare of these countries and the wealth of their inhabitants".⁸³⁰

Despite the support Grant received from Hillsborough, the progress of development in East Florida continued to be slow. When the agricultural bounty instated in 1764 was inexplicably dropped from the 1767-8 budget, Hillsborough intervened to reinstate it, telling Grant that the encouragement of bounty crops "is a favourite service of mine".⁸³¹ Echoing De Brahm's overly optimistic assessments, it was hoped that the cochineal, silk and cotton could join indigo as a staple. All efforts proved fruitless.

The planned settlement of "New Smyrna" is perhaps one of the best examples. With a £1,000 bounty from Whitehall awarded in 1767, and later assured by Hillsborough,⁸³² four ships arrived at Mosquito Inlet in early August 1768 carrying 1,255 Mediterranean indentured servants to set up what was to be christened 'New Smyrna,' immediately becoming the largest civilian, and the second largest settlement, in the

⁸²⁹ J.L. Wright Jr., 'Blacks in British East Florida', *FHQ*, vol. 54, no. 4 (April, 1976), p.429.

⁸³⁰ Romans, ed. Braund, *Concise History*, p.140; Mowat, *East Florida*, p.66.

⁸³¹ Hillsborough to Grant, 23 February 1769, CO 5/549.

⁸³² *Ibid.*

province. Shortly after, James Delaire, one of De Brahm's deputies, drafted a map which depicted the principal improvements that had been made to the property.⁸³³

Harried by brutal and incompetent foremen, short of both food and vital supplies, malaria set in, causing riots that had to be quelled by Grant's troops.⁸³⁴ While Hillsborough had approved a £2,000 emergency subsidy for New Smyrna, over 700 of its original residents would be dead by 1771.⁸³⁵ Ironically, that year the plantation began to yield significant crops of indigo,⁸³⁶ In 1777, once their indentured terms had expired, the surviving settlers abandoned the plantation, citing poor treatment and breach of contract.

Exploring the St. John's River

De Brahm's first project for the new year of 1768 was to conduct a land survey of the St. John's River, the province's most important waterway, and home to some of its most prominent, and infamous plantation schemes. He commenced with a land survey from St. Augustine to Fort Picolata, near the site of another ultimately failed settlement called Rollestown, sponsored by Denys Rolle.⁸³⁷

De Brahm began with a careful hydrographic survey of St. John's inlet, the river's estuary, guarded by a forbidding sandbar which at low tide gave only four feet of

⁸³³ James Delaire, 'A Geometrical Plan of Smyrnéa, and the Cultivated Lands in its Environs Consisting of Nine hundred & Seventy Acres', Mss., [c.1768], Farrar-Duncan Archive, Dundee City Archive, Scotland.

⁸³⁴ E. Panagopoulos, *New Smyrna: an Eighteenth Century Greek Odyssey* (Brookline, Mass., 1978), p.59.

⁸³⁵ Hillsborough to Grant, 10 December 1768, CO 5/549.

⁸³⁶ New Smyrna produced 43,283 lbs. of indigo between 1771 and 1777, "Exports of Smyrna, 1768-1777", CO 5/558, f.106.

⁸³⁷ R. Legg, *A Pioneer in Xanadu Deny Rolle: 1725-1797* (London, 1997); Bailyn, 'Failure in Xanadu', *Voyagers to the West*, pp.447-51; D. Rolle, *To the Right Honourable the Lords of His Majesty's Most Honourable Privy Council, the Humble Petition of Denys Rolle, Esq, Setting Forth the Hardships, Inconveniencies, and Grievances, Which Have Attended Him in His Attempts to Make a Settlement in East Florida* [1765] (Gainesville, Fla., 1977).

clearance to vessels.⁸³⁸ In the second part of this mission, he completed his first terrestrial survey into the interior, following the St. John's on horseback to its source. De Brahm's precise route, marked as "The Surveyor's path" is traced on his gargantuan "Survey of the East Coast of East Florida" which eventually placed De Brahm in a "marsh ocean," which he deemed to be the head of the river.⁸³⁹

By October 1768, De Brahm's "Geohydrographical map" had been completed. It charted the entire course of the St. John's River and the sea coast from its mouth to Cape Canaveral, the latter being based on his previous surveys.⁸⁴⁰ While the original manuscript map has not survived, its details are faithfully integrated into his large map of 1772. The most spectacular rendering of the map, which likely copies the precise cartographic details of the original, while adding resplendent colouration, is the presentation copy made by John and Samuel Lewis at the Board of Trade office (**Fig. 75**).⁸⁴¹ This magnificent work was presented to George III, and would have been of great interest to His Majesty, not only for its technical and artistic élan, but also because it depicted properties belonging to several of his most prominent subjects.

[The Search for a Connection to the Gulf of Mexico](#)

Finding a water route that traversed the interior of the peninsula, and connected the Atlantic and Gulf coasts was an imperative of the General Survey as it would allow trading routes that could avoid the treacherous Keys, and access to the excellent harbours

⁸³⁸ William Gerard De Brahm, "Plan of San Juan's Inlet", Mss., 1773, King's Mss. 211, f.190.

⁸³⁹ Notations on William De Brahm, "A Survey of the part of the Eastern Coast of East Florida from St. Mary's Inlet to Mount Halifax", Mss. [c.1773], CO 700/Florida 53.

⁸⁴⁰ The now lost "Geohydrographical Map" of the St. John's River and adjacent coastline was dispatched to London, 12 October 1768, CO 5/69, ff.603-6.

⁸⁴¹ John & Samuel Lewis *after* William De Brahm, "A Plan of part of the Coast of East Florida, including St. John's River, from an Actual Survey by Wm. Gerard de Brahm, Esq., Surveyor-General of the Southern District of North America", Mss., 1769, BL: Maps K.Top.122.81.

thought to exist on the west coast. Relying on second-hand reports from the Creek Indians, as no European had ever surveyed the interior, De Brahm and most other British officials believed such a connection to exist, an assumption clearly evident on the aforementioned Stork map.

While exploring the headwaters of the St. John's River, a vast morass, De Brahm observed that a "carrying place of only five Chains," or 330 feet, existed between the headwaters and the Hillsborough River, an arm of the sea, this portage being marked on his large Florida map.⁸⁴² De Brahm was under the belief that the Caloosahatchee River also had its origins in the same morass, and flowed westwards into Tampa Bay. He assumed that the creation of "A Canal made of two cuts from South Hillsborough River to St. John and then to the Caloosahatchee can perhaps connect Tampa with the Atlantic".⁸⁴³

In late February 1768, De Brahm led a party on horseback which included his interpreter, Joseph Gray, and Sakaykee, a Creek native American guide, on an overland mission to Tampa, hoping to discover the St. John's-Calooahatchee connection. At a place near the portage, marked on De Brahm's large Atlantic coast general map, Sakaykee abruptly refused to proceed any further, claiming that the Creek Grand Chief Cowkeeper, whose camp was only a day's journey beyond, would "forever resent it against him".⁸⁴⁴ This was likely due De Brahm's observation that the "Indians [were] perhaps jealous, as we are surveying lands they have not entreated to us."⁸⁴⁵ De Brahm also feared that the distraught guide "would take off [with] my Rum, and when Drunk, be

⁸⁴² De Brahm to William Knox, 17 May 1768, CO 323/28, f.1.

⁸⁴³ De Brahm to Hillsborough, 8 March 1769, CO 5/70, f.453-6.

⁸⁴⁴ De Brahm to William Knox, 17 May 1768, CO 323/28, f.1.

⁸⁴⁵ De Brahm to Hillsborough, 8 March 1769, CO 5/70, f.453-6.

more insolent and daring or at least drive away all my Horses preventing my preceding and making difficult my return”.⁸⁴⁶ No amount of persuasion would change Sakaykee’s mind and, without his cooperation, De Brahm was forced to abandon the mission.

Tampa Bay: “A Good Harbour for all Occasions”

Meanwhile, in 1768, Hillsborough had penned his first letter to De Brahm, telling him in no uncertain terms that he should proceed to survey the Gulf coast “with all alacrity and attention”. He continued to say, “As your surveys so far have been confined to the Atlantic coast of East Florida, and since that is now completed...I would like you to turn your attention to the Gulf Coast...a perfect knowledge of which cannot but be very useful to the Navigation of those Seas.”⁸⁴⁷ Tampa Bay, or the Bay of Espíritu Santo, was already well regarded to be the most promising prospect for a trading base on the Gulf Coast, with De Brahm optimistically predicting that its rediscovery “Will realise what [William] Knox and I always wanted – a good harbour for all purposes”.⁸⁴⁸

Perhaps Hillsborough would have spared De Brahm and Romans the effort if they had been informed about Gauld’s Tampa Bay survey, completed as early as 1765. While Grant likely had been given a copy, it appears that Hillsborough had not been informed of its existence until 1769.⁸⁴⁹ In a letter to the colonial secretary, Elias Durnford recalled extolling the virtues of “Mr. Gauld’s Plans which I mentioned to your Lordship in England [in 1769]” and informing him that “they may be had at the Admiralty office, and are worth seeing, being surveyed with great accuracy and neatly drawn”.⁸⁵⁰ Sometime

⁸⁴⁶ De Brahm to William Knox, 17 May 1768, CO 323/28, f.1.

⁸⁴⁷ Hillsborough to De Brahm, 24 February 1768, CO 5/69, f.91.

⁸⁴⁸ De Brahm to Hillsborough, 8 March 1769, CO 5/70, f.453-6.

⁸⁴⁹ Romans was never aware of much of the nomenclature on the original Gauld map of Tampa Bay, for example Gauld’s “Castor Key.”

⁸⁵⁰ Durnford to Hillsborough, 25 March 1770, CO 5/587, pp.247-64.

that year, Thomas Jefferys managed to obtain one of Gauld's Tampa manuscripts and printed the map, without attribution.⁸⁵¹

In November 1768, De Brahm acceded to Hillsborough's instructions and set out on an "expedition to the Bay of Tampa or the Keys" whichever the "season will prove most favourable".⁸⁵² Ultimately, he was forced to curtail his operations, "as the weather proved unfavourable", following an incident on 21 December when his boat was run aground on the Keys, rendering it "immovable for seventeen days". He did mention that, being compelled to use their bateau, they "met Creek Indians from Tampa Bay who said that they travelled down the Caloosahatchee River, [which they claimed] flows into this [Tampa] bay from a source near the head of the St. John's River".⁸⁵³

Following his return, De Brahm reported favourably on the potential of Tampa Bay, noting that it was a "Site perfect for a fortified town, good soil and useful timber abound. The Lagoon on the south side can accommodate thirty plantations of one-hundred acres each, sufficient to supply the town's market, and there are lots of fish in the seas. The north side of this point leading up the Caloosahatchee will be great for many eminent plantations. I cannot be reconciled to the backwardness of the Spanish who failed to develop this place by nature so advantageous to man".⁸⁵⁴

It is not clear, however, whether De Brahm or any of his men actually approached the vicinity of Tampa Bay during this mission or whether they relied only on second-hand reports. He did enclose a "Map of Gulf of Mexico Coast from Boca Cavetigo to Bay of Tampa" which has since disappeared, and must have been something of a rough

⁸⁵¹ Thomas Jefferys, *The Bay of Espiritu Santo, in East Florida* (1769) [after Gauld], printed in W. Stork, *A Description of East-Florida* (3rd edition, London: 1769).

⁸⁵² De Brahm to Hillsborough, 1 November 1768, CO 5.227, ff.67-8.

⁸⁵³ De Brahm to Hillsborough, 8 March 1769, CO 5/70, ff.453-6.

⁸⁵⁴ De Brahm to Hillsborough, 8 March 1769, CO 5/70, ff.453-6.

sketch map, as opposed to a formal survey, as time and circumstance clearly would not permit the latter. De Brahm would never personally return to explore the Gulf Coast north of the Keys, leaving the critical assignment to the new addition to the Southern Survey, the extraordinary Bernard Romans.

Enter Bernard Romans

In 1769, De Brahm hired Bernard Romans to be the “Principal Deputy Surveyor for the Southern district, and first commander of vessels on that service”.⁸⁵⁵ A larger than life figure, Roman’s dazzling intellectual curiosity was matched only by the incendiary invective he projected against those he disliked. A native of the Netherlands, he was likely educated in England, before arriving in Georgia in 1757. For the next nine years, he plied the seas from Cartagena to Labrador as a merchant mariner carrying a diverse cargo ranging from lumber to slaves. In 1766, he was hired as the deputy surveyor-general of Georgia by De Brahm’s old partner Henry Yonge, Sr., during which time he made an important map demarcating the Georgia-Creek Indian boundary.⁸⁵⁶ Ever since Romans was nearly shipwrecked on the Dry Tortugas in 1766, he had developed a fascination with mapping the “mazy navigation” of the Florida Keys, and later the entire region. It was probably then that he resolved to someday complete a *magnum opus* on the region and its natural wonders.⁸⁵⁷ While his base salary was only £30, the promise of fees from numerous cadastral surveys would more than compensate.⁸⁵⁸

The General Survey Charts the Gulf Coast

⁸⁵⁵ Phillips, *Romans*, pp.xlvi-xlvii.

⁸⁵⁶ Romans, ed. Braund, p.3; Phillips, *Romans*, p.xlii.

⁸⁵⁷ Romans, ed. Braund, p.3.

⁸⁵⁸ Phillips, *Romans*, p.xlvi.

In March 1769, Hillsborough reminded De Brahm that the Gulf was to be the Southern Survey's absolute priority, and that another sortie should be ventured without delay.⁸⁵⁹ In spite of this, De Brahm was resolved to participate in the New York-New Jersey boundary commission, while noting that he would try to acquire a larger surveying vessel in New York.

On 2 May the schooner *Betsey*, under Romans' command, left St. Augustine with De Brahm's instructions "to finish the survey of Tampa Bay and to make an exact survey of the river that flows into it up to its head near the head of St. John's [River], with orders to bring their performance to me in New York."⁸⁶⁰ In a decision which would prove to have great consequences, De Brahm had now placed the prime endeavour of the Southern Survey entirely under the auspices of Romans, essentially removed himself from any direct involvement.

This mission to the Gulf Coast proved to be highly productive despite two shipwrecks. Romans was to be joined by a second schooner carrying another of De Brahm's teams then employed further down the coast, bringing his party up to twenty-three men.⁸⁶¹ On the day Romans had embarked, this unfortunate party met "a violent storm ...and [were] thrown on the Breakers of the Indian or South Hillsborough Inlet".⁸⁶² The vessel was lost, and the men, shaken, but unharmed, were rescued by Romans who proceeded immediately towards the Gulf.⁸⁶³ The principal product of Romans' surveys

⁸⁵⁹ Hillsborough to De Brahm, 24 March 1769, CO 5/70, f.351.

⁸⁶⁰ De Brahm to Hillsborough, 27 May 1769, CO 5/70, ff.469-72.

⁸⁶¹ Romans, "Attempts towards a Short Description of West Florida, July 1773", 22 July 1773, CO 5/590, pp.299-328, printed in full, *DAR*, vol. VI, pp.186-94 and Phillips, *Romans*, pp.119-28.

⁸⁶² De Brahm to Hillsborough, 24 June 1769 CO 5/70, ff.487-90.

⁸⁶³ De Brahm noted that Romans' party was not able to survey the coast between the Keys and Tampa Bay, "The loss of the other schooner and boats in May 1769 did hinder them from accomplishing any part of the coast from Cape Florida to Ponto Largo [Cape Romano]", De Brahm to Hillsborough, 23 September 1769, CO 5/70, ff.571-4.

during this period was his magnificent manuscript map of the Floridian Peninsula, which features far more detail than his subsequent printed map of the region (**Fig. 76**).⁸⁶⁴

To the south of Tampa Bay, Romans discovered Charlotte Harbour, another potential port and plantation region, hitherto entirely unknown to the British, in addition to being near the true terminus of the Caloosahatchee River. Charlotte Harbour, likely what the Spaniards called ‘Carlos Bay’, was considered, in many respects, to be a finer harbour than Tampa Bay. In describing Romans’ findings De Brahm stated, “[Romans] had the good luck to finish the Survey of a New Bay [Charlotte Harbour]” which had the great dimension of 30.5 miles long and 13 miles wide, and with inlets that “fathom no less than 20 feet at low water and without a Barr is in many ways superior to Tampa Bay”. De Brahm continued that, “Land is plantable and sheltered islands give five openings from North to South”, and located immediately to the south of the bay is the estuary of “the Great Caloosahatchee River from the Caloosa Indians, whose old fields still appear upon its banks.” In spite of this river’s obvious importance, De Brahm maintained that Romans made no attempt to ascend it “on account of my order to [instead] survey the fresh water river in Tampa with a particular care”.⁸⁶⁵

Curiously, Romans’ rendering of Charlotte Harbour is quite accurate, while his mapping of Tampa Bay is a visibly incomplete work (**Fig. 77**),⁸⁶⁶ a point especially evident when one makes a comparison with Gauld’s chart (refer back to Fig.56). While Romans had painstakingly surveyed the bay’s three main entrance channels and its

⁸⁶⁴ Bernard Romans, [Map of East Florida from St. Augustine to Tampa Bay], Mss., 1773, WCL, Gage Collection, Maps 5-C-3.

⁸⁶⁵ De Brahm to Hillsborough, 23 September 1769, CO 5/70, ff.571-4.

⁸⁶⁶ *Detail of Charlotte Harbour and Tampa Bay* from Bernard Romans, [Map of East Florida from St. Augustine to Tampa Bay], Mss., 1773, WCL, Gage Collection, Maps 5-C-3. Romans precisely retained the same rendering of these inlets in his great 1774 printed map of the Floridas (refer to Figs. 85 and 86 forward).

eastern shore up to the head of Hillsborough Bay, his depiction of the northwestern area, centred on Fishermans Pt., shows an almost complete ignorance of the bay's western arm and the Pinellas Peninsula, the site of the modern city of St. Petersburg. As Romans was a highly competent and diligent cartographer, not prone to mishap or sloth, it is likely that he simply was not able to finish the job before his schooner ran aground and had to be abandoned near the mouth of what he called the Manatee River.⁸⁶⁷

Having lost both of their schooners, Romans led his men on a harrowing trek overland from Tampa to St. Augustine. Well aware of the historical significance of the odyssey, he declared that he was “on Fernando de Soto's track,” and his party would complete the first recorded trek by a European deep into the interior of the Floridian peninsula since that made by the Spanish explorer in 1539.⁸⁶⁸ This voyage was extremely dangerous, as the interior was home to marauding bands of Seminoles, who were not renowned for their kindness to European interlopers. After crossing miles of “miserable barren hills”, Romans' party arrived safely in St. Augustine the following month.⁸⁶⁹

Upon Romans' return, De Brahm compiled and dispatched to Hillsborough a “Map of Cape Largo to Tampa Bay” based on Romans' surveys. He noted, “The remarks on the map will show that I observe the climate on the gulf to be extremely gentle, save for the tormenting mosquito and sandflies in the summer, I would say it was one of the most preferable in the universe, however cultivation of land (as the inhabitants of Hillsborough and Halifax Rivers do experience)...Charlotte Haven is a surer harbour

⁸⁶⁷ Romans' “Manatee River” is actually today called the Little Manatee River. A larger river which flows into a sound located to the south of Tampa Bay by the modern city of Bradenton it today called the Manatee River.

⁸⁶⁸ Romans, ed. Braund, *Concise History*, p.148.

⁸⁶⁹ Romans, ed. Braund, *Concise History*, p.258; Unfortunately Romans noted that he lost the detailed journal he had kept on the journey.

than Tampa, is navigable for vessels up to 10 miles and can be fortified in many places, having many inlets.”⁸⁷⁰ He also suggested that the area was “Good for the manufacture of salt” which “could serve the Cuban market, where they buy salt at great expense.” Although an astute commercial observation, perhaps acquired from the Cuban fishermen Romans had met while surveying the Gulf coast, Hillsborough may have been less than delighted that De Brahm was devoting consideration to trading relationships outside of the British Empire. In any event, it seems that Romans did not concur with De Brahm’s preference for Charlotte Harbour, as he considered Tampa Bay to be the “Most proper place, in all America, south of Halifax for the rendezvous of a large fleet of heavy ships”.⁸⁷¹

Importantly, Romans’ surveys disavowed the assumption that the Caloosahatchie and the St. John’s rivers comprised part of a grand inter-peninsular water connection. De Brahm remarked that “the great Caloosahatchee River...which was said to come from the head of the river St. Juan” actually originates “from a large extensive Lake called Lake Majaro. Sadly, I don’t think St. John comes from there, but the next expedition will clear that up.”⁸⁷² The source from which the Caloosahatchee originated is actually Lake Okeechobee, and from that point onwards the search for an inland passage focused on rivers emanating from that vast inland sea.

[The Northernmost Parts of East Florida’s Atlantic Coast](#)

In the summer of 1770, in what must have been a controversial decision, adding fuel to his disputes with Grant, De Brahm relocated his base of operations to Charleston,

⁸⁷⁰ De Brahm to Hillsborough, 1 November 1769, CO 5/71, ff.26-2.

⁸⁷¹ Romans, ed. Braund, *Concise History*, p.258.

⁸⁷² De Brahm to Hillsborough, 1 November 1769, CO 5/71, ff.261-2.

South Carolina from whence he focused the General Survey on the northernmost parts of Florida. Although Hillsborough had previously made it very clear that the priorities of the Southern Survey were to be the Gulf Coast and the Keys, neither having been completed, the Hillsborough reluctantly approved De Brahm's decision to proceed to survey the northernmost parts of the Atlantic coast of East Florida, writing to him "The reason you assign for proceeding to survey the sea coast of Georgia, to the north of the river St. Juan, appears to have some weight & His Majesty is generously pleased to allow you to use your own discretion in respect thereto."⁸⁷³ The Atlantic coast north of St. Augustine had not been scientifically mapped, although De Brahm had earlier made several surveys in the region and Romans had previously made "the most perfect observations on the northern parts of Florida".⁸⁷⁴

In July 1770, De Brahm personally led teams to survey the St. Mary's River, Atlantic East Florida's most northerly estuary, marking the border between that province and Georgia (**Fig. 78**).⁸⁷⁵ He was able to proceed up to a point within 70 miles of the river's head at the "Oekanphenoko [Okeefenokee] Swamp," further progress having been prevented by the "jealously of the Indians" as the land lay within their reserved hunting grounds. He was therefore not able to fulfil one of his objectives: the demarcation of the provincial boundary as it extended into the interior.⁸⁷⁶

At some point in August, De Brahm fell ill and repaired to Charleston, leaving his party to finish the northernmost surveys. The St. Mary's River had long been viewed as

⁸⁷³ Hillsborough to De Brahm, 9 December 1769, CO 5/70, f.333.

⁸⁷⁴ Notice by Romans, *Rivington's New York Gazetteer*, 10 February, Romans, ed. Braund, p.4.

⁸⁷⁵ William De Brahm, "Plan of St. Mary's Inlet...as far west as the intended Town of Bermudas.", Mss. [1773, but copy of map, 1770], BL: King's Mss. 211, f.181.

⁸⁷⁶ De Brahm to Hillsborough, 22 September 1770, CO 5/71, part 2, ff.127-30, similar to map in King's Mss. 210, f.179, De Vorse (ed.), *De Brahm's Report*, p.199.

being one of the most promising areas of settlement, and the entirety of the south bank of the river had already been laid out into cadastral tracts. While the estuary did not feature the best soil, and De Brahm's 1766 plan to settle a town at "Bermudas" was not realised, he asserted that "The Inlet of the St. Mary's is the best on the Atlantic Ocean in this Province". While the Inlet of St. Mary's, like all sixteen of the Atlantic inlets identified by De Brahm, was guarded by a sandbar, it permitted a minimum clearance of 9 ½ feet, which became much greater at high tide, a level that allowed for most commercial vessels.⁸⁷⁷

De Brahm's assessment was not lost on Whitehall, as that year the Treasury made St. Mary's East Florida's second official port of entry with its own customs office. In January 1772, De Brahm's favourable report also encouraged Hillsborough, and Grant's replacement, Lieutenant-Governor John Moultrie, to support the settlement of sixty Scots from the Isle of Skye along the river's banks at Hillsborough Township, under the leadership of John Bethune.⁸⁷⁸

De Brahm's party also made a scientific survey of Amelia, or Egmont Island, the northern tip of which comprised the mouth of St. Mary's Inlet (**Fig. 79**).⁸⁷⁹ In 1768, Romans had executed a private commission from Lord Egmont, to "survey and divide lots" on his 10,000 acre island estate.⁸⁸⁰ Unlike Mount Royal, the Amelia Island plantation was well run and eventually proved profitable. As William Bartram remarked during his 1774 visit, of the plantation's manager, Stephen Egan, "The gentleman is a very

⁸⁷⁷ De Vorsey (ed.), *De Brahm's Report*, pp.199-200.

⁸⁷⁸ In addition to approving lands grants, Hillsborough authorised Moultrie to allocate £40 from the province's to purchase start up supplies of 200 bushels of Indian corn, Mowat, *East Florida*, p.66.

⁸⁷⁹ William De Brahm, "Plan of Amelia now Egmont Isld." Mss. [1773, but copy of map, 1770], BL: King's Mss. 211, f.187.

⁸⁸⁰ Notice by Romans, *Rivington's New York Gazeteer*, 10 February, Romans, ed. Braund, p.4

intelligent and able planter, having already greatly improved the estate, particularly in the cultivation of indigo”.⁸⁸¹ The planned settlement of “Egmont Town”, outlined on the map, never materialised. It is worth mentioning that in 1769, Captain William Fuller also mapped the coastline and waters around Amelia Island, and his manuscript charts were published the following year, possibly at the behest of Lord Egmont.⁸⁸²

De Brahm’s party also surveyed Nassau Inlet, to the south of St. Mary’s (Fig. 80).⁸⁸³ Although admitting only small boats, the inlet was navigable up river for 18 miles. De Brahm claimed that it contained 179,840 acres of “plantable land” making it “one of the most advantageous Countries in this Province for Trade and Navigation”.⁸⁸⁴

De Brahm’s final project in this region was a more detailed survey of the mouth of St. John’s River, which he had previously charted. At the beginning of 1771, De Brahm sent Hillsborough the final product, aggregating these surveys as the “Map of the Northernmost parts of East Florida”, representing “2,560,000 acres of land.”⁸⁸⁵

Towards Miami

⁸⁸¹ Francis Harper (ed.), *The Travels of William Bartram: Naturalist’s Edition* (New Haven, 1958), pp.42-43; In December, 1770, the Amelia Island plantation produced a crop of 2,095 lbs. of indigo, which sold in London for 4s., 6d. per lbs., The indigo export data comes from Excerpts of the Customs Account from the Port of St. Augustine, December 24, 1774, enclosed in Governor Patrick Tonyn to Lord Dartmouth, January 23, 1775, CO 5/555, f.13; also refer to Schafer, *St. Augustine*, pp.179-80.

⁸⁸² William Fuller, ‘Chart and view of the entrance to St Mary’s River, Georgia’, Mss., 1769, MPD 1/173; this map was subsequently printed as part of a sheet containing three maps and one small nautical view: William Fuller, *Plan of Amelia Island in East Florida, north point of Amelia Island lyes in 30:55 north latitude 80:23 w. longitude from London, taken from De Brahm’s Map of South Caroline & Georgia. A chart of the entrance into St. Mary’s River, taken by W. Fuller in November 1769. A c[hart] of the [mouth of] Nassau River with the bar and the soundings on it, taken at low water by W. Fuller. To the Right Honourable John Earl of Egmont &c. this plate is most humbly inscribed by his lordship’s most obedient humble servant, Willm. Fuller* (London: Thomas Jefferys, 1770). Egmont, the dedicatee, may have had a role in ensuring that the map was published in an effort to attract settlers to his estate on Amelia Island.

⁸⁸³ William Gerard De Brahm, “Plan of Nassau Inlet & of the Stream a far N. Was the Cut-Off”, Mss., 1773, BL: King’s Mss. 211, f.184.

⁸⁸⁴ BL: King’s Mss., 211, f.185, printed in De Vorsey (ed.), *De Brahm’s Report*, p.201.

⁸⁸⁵ De Brahm to Hillsborough, 6 January 1771, CO 5/72, ff.308-9.

Following his suspension from his provincial office, De Brahm set out from Charleston on what was to be his final operation in the theatre. His objective was to carry out comprehensive surveys of the southern part of the peninsula and the Florida Keys. On 30 November 1770, De Brahm's party arrived at Grenville Inlet, so named for its proximity to a land grant held by the former prime minister (**Fig. 81**).⁸⁸⁶

At Grenville Inlet, they observed the results of a fascinating natural occurrence as De Brahm recalled that when he had passed by the site in 1765, no such inlet existed. When Romans arrived at the same location on 21 May 1769, he found that “the sea must have broken in” as the high sandy shoreline had been breached creating an estuary where the various branches of the Grenville River meet the sea.⁸⁸⁷ The cause was thought to be a series of unusually strong storms in May, 1768. These observations led De Brahm to correctly theorise the process of dynamic evolution of Florida's Atlantic coastline.

While of limited agricultural potential, Grenville Inlet was of great interest due to Romans' theory regarding the St. Lucie River, which is connected to the Grenville system. Romans had been told by a “Spanish pilot” that the river flowed from Lake Okeechobee, opening the possibility that Grenville Inlet was possibly the eastern terminus of the long hoped-for trans-peninsular water route.⁸⁸⁸

De Brahm's next destination was the area now known as Miami Harbour and environs, which De Brahm named Dartmouth Stream (refer back to Fig. 52).⁸⁸⁹ The Spaniards had tried unsuccessfully to found a missionary at the mouth of the Rio

⁸⁸⁶ William Gerard De Brahm, “Plan of Grenville Inlet...with its Stream, and Four Branches,” 1773, BL: King's Mss. 211, f.235, De Vorse (ed.), *De Brahm's Report*, plate no.24.

⁸⁸⁷ Forbes, *Sketches*, pp.97-9.

⁸⁸⁸ Romans, ed. Braund, *Concise History*, pp.256-7.

⁸⁸⁹ De Brahm, [Miami Harbor] “Plan of Dartmouth Inlet & Steam...Cape Florida...& Sandwich Gulf,” 1773; BL: King's Mss. 211, f.238, De Vorse (ed.), *De Brahm's Report*, plate no.25.

Rattonnes, or Miami River, in 1743. The potential of the area was not lost on De Brahm, who noted decent anchorages in the lee of Key Biscayne. The area was also said to have an exceptionally pleasant climate, moderated by trade winds, “the Heat is made as tolerable in Summer, and in Winter as the Spring Heat is in England”.⁸⁹⁰ Romans had theorised, that the Miami River also emanated from Lake Okeechobee, once again presenting another potential navigational opportunity.⁸⁹¹ These favourable reports were critical to De Brahm’s primary motive for visiting the area: that being the execution of a special survey of a large land grant held by the Earl of Dartmouth, who was soon to become De Brahm’s intellectual collaborator and his saving patron.⁸⁹²

The Florida Keys & the Gulf Stream

De Brahm’s final operation in the theatre was his comprehensive survey of the Florida Keys, where his priority was on improving maritime navigation and scientific inquiry rather than economic or agrarian development. The Keys were observed to have only very minor agricultural potential and, in the words of Romans, “little or none” of the stands of mahogany which had long been exploited by loggers from Cuba remained.⁸⁹³

Appropriately named the “Los Martires”, the Martyrs, by Ponce de Léon, the Keys were true Sirens, a beautiful chain of coral islands which fatally ensnared countless mariners, most famously treasure galleons on the Havana-Seville route. De Brahm lamented that one “cannot help but sympathize with the many unfortunate adventurers who are so deeply and frequently distressed by the calamities which every year befall the

⁸⁹⁰ De Brahm, De Vorsey (ed.), *De Brahm’s Report*, pp.208-9.

⁸⁹¹ Romans, ed. Braund, p.258.

⁸⁹² R.E. Chardon, ‘The Cape Florida Society of 1773’, *Tequesta*, no. 35 (1975), pp.1-36.

⁸⁹³ Romans, ed. Braund, *Concise History*, p.261.

navigation...on the Matriere rocky reefs and sand-banks”.⁸⁹⁴ For the British, the Keys, which sharply divided the Straits of Florida from the Gulf Coast, proved the most severe impediment to exploration and development of the western side of the peninsula, and obstructed communication with the beleaguered outpost of Fort St. Mark’s.

While De Brahm and parties under his employ had visited and surveyed parts of the Keys on three separate occasions from 1765 to 1769, a comprehensive survey was still lacking. Setting out from Charleston in October 1770, De Brahm knew that the completion of the endeavour would be his last chance to restore his honour in the corridors of Whitehall.

In the Keys, De Brahm and his men worked with exceptional speed under very dangerous conditions. Upon his return to Charleston at the beginning of the new year, De Brahm recounted “I had great success in assisting the navigation of an unknown dangerous coast” even though he had been “shipwrecked” on the jagged coral reefs.⁸⁹⁵ His surveys resulted in the first ever comprehensive and accurate map of the island chain **(Fig. 82)**.⁸⁹⁶

De Brahm did not finish his manuscript until shortly after his return to London, and it was published as part of his brief, but brilliant, treatise, the *Atlantic Pilot* in 1772. De Brahm’s chart remained the most accurate conception of the Keys available to the contemporary public and was not superseded in detail until the publication of George Gauld’s connecting pair of manuscript charts, published only in 1790.⁸⁹⁷ While he had provided some basic information on the Keys in his 1771 correspondence with

⁸⁹⁴ Dedication, W.G De Brahm, *The Atlantic Pilot* (London, 1772).

⁸⁹⁵ De Brahm to Hillsborough, 6 January 1771, CO 5/72, ff.308-9.

⁸⁹⁶ William Gerard De Brahm, “Chart of the South-end of East Florida, and Martiers”, Mss. 1773, King’s Mss. 210, f.278; this map was also printed as part of the *Atlantic Pilot* (1772).

⁸⁹⁷ George Gauld, *An Accurate Chart of the Tortugas and Florida Keys* (London: William Faden, 1790).

Hillsborough, the information included in *Atlantic Pilot* was more comprehensive than that which was included in his 1773 report to the King. Dedicated to Hillsborough, the *Atlantic Pilot* had as its stated purpose “the safer conduct of ships in their navigation for the Gulf of Mexico along Cuba and the Martieres, through the New Bahama Channel, to the northern part of His Majesty’s dominions upon the continent of North America, and from thence to Europe”.⁸⁹⁸ The most important and intellectually original products of De Brahm’s work on the Keys were his pioneering scientific observations on the geological origins of the Keys and the nature and workings of the Gulf Stream, one of the world’s most powerful ocean currents, and amongst the most important for sailors.

In March 1771, De Brahm sent Hillsborough a small manuscript map entitled “The Ancient Tegesta,” which the eminent historical geographer Louis De Vorsey rightly hailed as “among the most important cartographic innovations of the late eighteenth century”⁸⁹⁹ (**Fig. 83**).⁹⁰⁰ De Brahm depicted the Keys in what he theorised as having been their ancient geological form shortly after their emergence from the ocean during an era of receding sea levels. It shows that what are now a chain of islands were originally part of two crescentic paleo-peninsulas. De Brahm described how over the millennia these promontories had been constantly eroded by extremely powerful sea currents, most notably the Florida Stream, such that they were “subject to yield its limits foot by foot to the stream”.⁹⁰¹ He based his theory on empirical observations, including the vivid account of his assistants who recalled that “these three years [we] observed

⁸⁹⁸ Dedication, *Atlantic Pilot* (London, 1772).

⁸⁹⁹ De Brahm, ed. L. De Vorsey Jr., *Atlantic Pilot*, Introduction , p.x1.

⁹⁰⁰ William Gerard De Brahm, “The Ancient Tegesta, now Promontory of East Florida”, Mss., 1771, NA: MPG 1/347, Penfold no. 2307, an enclosure to De Brahm to Hillsborough, 15 March 1771, CO 5/72, ff.192-3; this map was also printed as part of the *Atlantic Pilot* (1772)..

⁹⁰¹ De Brahm, *Atlantic Pilot*, p.8.

many places, where fresh encroachments appear to this effect: even the vast quantity of scattered large old trees, washed out with their roots on all shores of the islands, and out in the shallow sea between the islands and the main, testify that they lay on the spot of the former continent and peninsulas.”⁹⁰² In essence, De Brahm’s theories prefigured the understanding held today by geologists.⁹⁰³ Just as De Brahm had theorized, over the millennia the ocean currents further eroded the formations into the shape of today’s Florida Keys.⁹⁰⁴

De Brahm’s theories represent a highly insightful demonstration of scientific curiosity decades ahead of its time, and an extraordinary intellectual remit for a surveyor in the manner of the polymath interests of such figures as Jean-Dominique Cassini in late-seventeenth century France.⁹⁰⁵ Beyond the theoretical, the map also had a practical purpose, which was to highlight the existence of the Hawke Channel, named by De Brahm in 1770 after Sir Edward Hawke, then the First Lord of the Admiralty. Clearly shown on *Fig. 83*, its ancient antecedent is referred to as the “South River” on *Fig. 82*. Currents and obstructions made sailing close to the north or south of the Key’s outer reefs

⁹⁰² De Brahm, *Atlantic Pilot*, p.9.

⁹⁰³ It is now common scientific orthodoxy that during the early Pleistocene Era, approximately two to three million years ago, shifting sands formed massive shoals in the location of the modern Keys. These shoals tended to lie under water less than forty feet deep, a depth which permitted photosynthesis and fostered the growth of coral forests. As old coral died it became fossilized and a sedimentary stratum was formed, now referred to as Key Largo Limestone. While the Key Largo stratum underlies all of the area of the Keys, a geological distinction occurs in that in its northern regions Key Largo limestone forms the surface rock, while in the lower regions it forms a substratum overlaid with an oolitic formation called Miami Limestone. [*Oolitic* limestone: a sedimentary rock formed by agglomerated, egg-shaped formations of calcium carbonate (calcite or aragonite).] Approximately 100,000 to 125,000 years ago the advent of an ice age led the growth of the polar icecaps which absorbed water from the oceans, causing the sea level to fall. Between 20,000 and 10,000 years ago the global climate warmed and the melting ice caps raised the sea level to twenty to thirty feet above modern-day levels. This caused much of peninsulas to come under water, and to be severed by several channels.

⁹⁰⁴ J.E. Hoffmeister & H.G. Multer, ‘Geology and the Origins of the Florida Keys,’ *Geological Society of America Bulletin*, vol.79, no.11 (November, 1968), pp.1487-1502; also E.A. Shinn, ‘The Geology of the Florida Keys,’ *Oceanus*, vol. 31, no. 1 (Spring, 1988), pp.46-53.

⁹⁰⁵ J.J. Konvitz, *Cartography in France*, pp.1-8.

ill-advised. De Brahm identified that the “The river between the two peninsular, now Hawke Channel, affords a very safe communication between the Martier reefs, shoals and islands; as also a safe reception for vessels in distress”.⁹⁰⁶ Noting that it was usually about forty-five feet in depth, with the shallowest parts 14 ½ feet, it would prove a safe and relatively sheltered route for most vessels.

De Brahm was the first person to explain and to comprehensively map the Gulf Stream ocean current, based on his own empirical observations.⁹⁰⁷ Sent to Hillsborough at the same time as the Tegesta map, De Brahm’s original “Hydrographical Map” shows the full extent of the extremely powerful, warm and constant ocean current which originates in the Gulf of Mexico, before travelling through the Florida Straits and then into and across the Atlantic. De Brahm, referring to it as the “Florida Stream” in local waters, vividly describes its nature and progress, “The great weight of the sea inclosed within the vast extent of the Mexican gulf is set in agitation by the trade-winds...whereby the famous Florida Stream is supposed to be effected, and thence called the Gulf Stream...at the place of issue, [it is] anxiously compressed by the islands of Cuba and Bahamas and the promontory on the other, is constrained to curb its current suddenly and

⁹⁰⁶ De Brahm, *Atlantic Pilot*, p.21.

⁹⁰⁷ De Brahm was not the first person to comment on the existence of the Gulf Stream, nor was he the first to map it. Benjamin Franklin published the ‘Franklin-Folger Chart’ in London in 1769 which showed the partial track of the Gulf Stream, running from the Florida Straits into the mid-Atlantic. Franklin derived his theories from observation made by his cousin, the Nantucket whaler, Captain Folger. As deputy postmaster-general for the American colonies, he proposed that mail packets would make faster runs to England if they took the Gulf Stream into account. Importantly, Franklin’s conception was nowhere near as accurate or sophisticated as De Brahm’s, and his map was comparatively crude, engraving the track of the current onto the plate of an outdated Mount & Page sea chart, E.R. Cohn, ‘Benjamin Franklin, Georges-Louis Le Rouge and the Franklin/Folger Chart of the Gulf Stream, *Imago Mundi*, vol.52 (2000), pp.128-32; Konvitz, *Cartography in France*, pp.63-7.

often.”⁹⁰⁸ The Gulf Stream then runs along the edge of the continental shelf to the Grand Banks whereupon it makes a *volta* across the Atlantic to northern Europe.

The later, more refined, version of the map published with the *Atlantic Pilot*, shows how De Brahm painstakingly tracked the progress of the ship *Polly*, in which he was a passenger during its unusually fast forty-four day voyage from Charleston to London, from 25 July to 6 September 1771 (**Fig. 84**).⁹⁰⁹ Notable for the ingenious projection it employed, the map essentially confined the geodetic abstraction of the ship’s track to its outer longitudinal margins. Findings were also supported by a detailed table of weather and loxodromatic observations.

Bernard Romans Continues the Gulf Survey

After De Brahm was recalled to London, Bernard Romans continued to survey the coasts of East Florida, before proceeding into West Florida. While these operations were not responsible to the American Department or Board of Trade, they represented the natural corollary of the General Survey, in both its objectives and the nature of information collected. As Romans elected to submit many of the consequent maps and reports to London in the hope of receiving official emoluments, his work had a measure of legitimacy in official circles. This went a long way towards filling the vacuum left by De Brahm’s departure.

While Romans and De Brahm had initially considered each other with a high degree of mutual respect, the relationship gradually deteriorated before imploding sometime early in 1770. The incredibly stubborn De Brahm and disarmingly outspoken

⁹⁰⁸ De Brahm, *Atlantic Pilot*, p.16.

⁹⁰⁹ William Gerard De Brahm, *Hydrographical Map of the Atlantic Ocean extending from the Southernmost part of North America to Europe*, from the *Atlantic Pilot* (London, 1772), based on, but amended from the original manuscript, W.G. De Brahm, “Hydrographical Map”, NA: MPG 1/347 (2), Penfold, no. 2307.

Romans came to see each other as intellectual and professional rivals, a situation which was not helped by De Brahm's inability or unwillingness to pay Romans his salary in the wake of Grant's freezing of his government account. While De Brahm simply tried to make his deputy *damnatio memoriae*, Romans took every opportunity to assail, usually unjustly, De Brahm's mental health and professional ability, calling him a "bedlamite" and "lunatic writer".⁹¹⁰ In reference to the *Atlantic Pilot*, which he saw as a competitor to his own work, he opined that it "evidently bears the marks of insanity and deserves our pity."⁹¹¹

In September 1770, Romans went his own way, departing St. Augustine for the last time. In charge of his own vessel and party, he headed towards the Gulf. In December, he stopped to survey a 20,000 acre land grant for Samuel Touchett, an MP and perennial speculator.⁹¹² Romans had been given this lucrative precept by Frederick Mulcaster, whom he had conveniently befriended. The disappointment arising from the fact that he was never paid the promised £71, would have been offset by the satisfaction of having shown one more slight to De Brahm.

Following this, Romans revisited the Keys, Charlotte Harbour and Tampa Bay, improving upon his previous observations, such that the maps he would later prepare were likely materially advanced from the versions he had earlier given the De Brahm. Romans then proceeded to chart the hitherto utterly unknown coast of East Florida north of Tampa, before continuing into West Florida.⁹¹³

⁹¹⁰ Romans, ed. Braund, *Concise History*, p.48.

⁹¹¹ *Ibid.*

⁹¹² J.C. Frazier, 'Samuel Touchett's Florida Plantation,' *Tequesta*, no. 35 (1975), pp.75-88.

⁹¹³ Romans, ed. Braund, *Concise History*, p.7.

The majority of the knowledge we have of Romans is presented in his magnum opus, *A Concise Natural History of East and West Florida* (1775). Romans, who, by the time the book was published, had become a partisan of the American revolutionary cause, obviously did not intend this work to benefit the British Crown. However, it remains the most comprehensive source of information regarding both Romans' official contributions to the General Survey and his quasi-official mapping activities of which the Crown was the primary beneficiary.

The *Concise History* follows many of the same prerogatives as the General Survey: its two main objectives being to aid navigators in both sailing to and around the Floridas, and to provide a comprehensive analysis of the region's natural resources and potential to support agricultural development. While his insightful and engaging observations are frequently interrupted by tangents of, albeit entertaining, invective against his innumerable antagonists, his basic mission was to discern the "Truth" in the "the ardent pursuit of geography and Natural philosophy."⁹¹⁴ Romans also possessed skill as a botanist with extensive experience with the aboriginal peoples.

His appendix, which features sailing directions, was meant to accompany his maps and enabled the mariner to negotiate the most hazardous stretches of coastline and the entrances to important harbours. It remained an indispensable source for several decades.⁹¹⁵ The *Concise History* and its sister publication, the grand map which was intended to accompany it and which Romans likened to "an ornamental piece of

⁹¹⁴ Romans, ed. Braund, *Concise History*, p.1.

⁹¹⁵ Romans navigational directions for Floridian ports were considered by both the Royal Navy and London's leading map publishers to be amongst the very best authorities on the subject, forming important portions of William Faden, *The Complete Pilot for the Gulf Passage* (London, 1789) and Laurie & Whittle's *A New Book of Sailing Directions* (London, 1794).

furniture”,⁹¹⁶ remained one of the most impressive and enduring products of the General Survey in either theatre (**Fig. 85 and Fig. 86**).⁹¹⁷ Known today in only one copy of the second state of 1781, it was engraved by Paul Revere. While lacking some of the notations and nautical details present on his manuscripts, it is, nevertheless, the era’s finest printed map of the Floridas, depicting the province’s coastlines and major rivers with excellent planimetric accuracy.

West Florida

While the General Survey never managed to progress into West Florida, the Hillsborough administration made a special arrangement with Elias Durnford, the surveyor-general and lieutenant-governor of West Florida. Durnford, unusually, performed bespoke surveying projects directly for the American Secretary as well as supplied maps that were intended to be part of the first general map of the province.⁹¹⁸ He was a land speculator and proponent of western expansion. Although his political views differed from Hillsborough’s, he could be relied upon to deliver what was expected.

West Florida, a new addition to the empire, occupied a 375 mile long swath of the Gulf Coast from the Apalachicola River in the east to the banks of the Mississippi in the west. Auspiciously, it possessed two fine harbours, one at the site of its fledgling capital,

⁹¹⁶ Romans, ed. Braund, *Concise History*, p.68.

⁹¹⁷ Bernard Romans, [Adjoining Maps of East and West Florida. B. Romans, inv. delin. & in Ære incidit.] (New York, 1781, second state after a now-lost 1774 original).

⁹¹⁸ The extraordinary relationship between Durnford and the office of the American Secretary is alluded to in D. Bosse, ‘Dartmouth on the Mississippi: Speculators and Surveyors in British North America in the Eighteenth Century’, *Imago Mundi*, vol.41 (1989), pp.16-7.

Pensacola, and the other a little to the west at Mobile (**Fig. 87**).⁹¹⁹ These ports, combined with the numerous river valleys, which descended from the interior, granted the province excellent natural access to the Indian trade.

West Florida generally attracted migrants of modest means from the established Thirteen Colonies, a troubling demographic for Hillsborough as they were most prone to challenge the Crown's authority. The region also had leadership who ran counter to Britain's interests. The first governor, George Johnstone, while a charter member of the Scottish 'King's Friends' and the leader of a local "Scotch Party," was a maverick who quarrelled bitterly with the province's military commanders,⁹²⁰ alienating Gage and inflamed tensions with the Cree Indians. Recalled on 19 January 1767,⁹²¹ he was replaced by one of his antagonists, the lieutenant-governor, Montforte Browne, an amazingly avaricious land speculator. Browne was actively opposed by the remaining Scottish Party, and also managed to spark feuds with certain senior military officers. Hillsborough was deluged with numerous complaints about Browne's conduct, in addition to being somewhat affronted by Browne's insolent questioning of his western policies.⁹²² From 1768 to 1769, Browne employed the military engineer John Cambel to

⁹¹⁹ George Gauld, "A Plan of the Harbour of Pensacola in West-Florida. Surveyed in the year 1764 by George Gauld, M.A. The bar by Sir John Lindsay", Mss., 1764, LOC: G3932.P45 1764 .G3 Vault, Sellers and Van Ee, no.1656.

⁹²⁰ R.F.A. Fabel, 'Governor George Johnstone of West Florida', *FHQ*, vol. 54, no.4 (April 1976), pp.497-511.

⁹²¹ Johnson, *West Florida*, p.60.

⁹²² Browne employed rather vitriolic language to express his opposition to the decision to withdraw the garrison from Fort Bute, and to reduce the size of the garrisons at Pensacola and Mobile. In essence, he said that the decision foretold the ruin of the entire province, Browne to Hillsborough, 16 August 1768, CO 5/585, ff.177-9, Johnson, *West Florida*, p.65; for complaints against Browne, Johnson, pp.69 -70.

survey the western regions of the province.⁹²³ Durnford, offended by this challenge to his prerogatives as surveyor-general, decried Cambel's "imaginary maps".⁹²⁴

On a planned sabbatical to London in 1769, Durnford met with Hillsborough. Ultimately, Hillsborough appointed Durnford to replace Browne, and forged a special arrangement whereby Durnford would execute surveying projects directly for the American Secretary.⁹²⁵ As De Brahm was then not in a position to survey West Florida, this mandate devised a way in which activities that would otherwise be fulfilled by the General Survey could be carried out in an expeditious manner.

In the summer of 1771, Durnford attempted to formalize his ambitious designs to create the first general map of the province predicated on scientific surveys. He wrote to Hillsborough that "In order My Lord that a proper knowledge be obtained of this Country, I would humbly propose, if the Surveyor General of the Southern District is too much employed in His Duty in East Florida, or any other part; that £1200 may be allowed for one Year, to three different Persons to furnish themselves with Boats men & c proper for such Service; by which means in one Year a very certain knowledge may be gained of the Province".⁹²⁶ While Durnford's request for funding was not honoured, Durnford continued his activities undaunted.

When Durnford arrived back in Pensacola in the autumn of 1769, he set about to stabilise the political climate as his first priority.⁹²⁷ The region began to attract a significant number of American settlers based on favourable reports of the Mississippi

⁹²³ D. Bosse, 'Dartmouth on the Mississippi: Speculators and Surveyors in British North America in the Eighteenth Century', *Imago Mundi*, vol.41 (1989), pp.9-20.

⁹²⁴ Durnford to John Ellis (agent for West Florida in London), 24 June 1771, T 1/475, p.235.

⁹²⁵ Durnford's Lieutenant-Governor's commission, 31 July 1769, CO 5/586, ff.203-4.

⁹²⁶ Durnford to Hillsborough, 31 August 1771, CO 5/588, f.443.

⁹²⁷ Johnson, *West Florida*, p.72.

valley's agricultural potential.⁹²⁸ The province's first census in 1774 counted 2,500 whites and 600 blacks in the Mississippi region, outstripping the population of Pensacola-Mobile area, which was inhabited by only 1,200 white and 600 black residents.⁹²⁹ Moreover, it was hoped that the development of West Florida's section of the Mississippi would unlock the riches of the Illinois Country, which included the highly-profitable fur trade.

Cautious of the emergence of a new, semi-interior colony populated by independently-minded American colonials, Hillsborough used his authority to ensure that any and all large scale development schemes in West Florida came to naught during his administration. This was a complete reversal of policy from the previous Shelburne administration, which was strongly supportive of western development.⁹³⁰ This support was exemplified in 1765, when at Johnstone's behest, the Board of Trade paid over £5,600 to build Fort Bute, a military garrison on the bank of the Mississippi at the mouth of Bayou Manchac.⁹³¹ Under Hillsborough, as part of a larger plan to reallocate military resources, in the summer of 1768, all garrisons in the region were abandoned, including Fort Bute.

Despite Hillsborough's opposition, powerful interests residing in the area lobbied hard for western development to gain a larger share of the fur trade. Governor Peter Chester, from August, 1770, Durnford's successor as provincial chief executive, was

⁹²⁸ P. Pittman, *The Present State of European Settlements on the Mississippi* (London, 1770), proved to be the most important tract in resurrecting West Florida's reputation.

⁹²⁹ Elias Durnford's Census of West Florida, 1774, an enclosure to Chester to Dartmouth, 22 April 1774, CO 5/592, pp.85-8.

⁹³⁰ D.S. Brown, 'The Iberville Canal Project: Its Relation to Anglo-French Commercial Rivalry in the Mississippi Valley, 1763-1775', *Mississippi Valley Historical Review*, vol. 33, no. 4 (March 1946), p.495.

⁹³¹ Letter informing Gage of the approval of the expenditure, Halifax to Gage, 13 April 1765, Gage Papers: English Series, vol.3.

heavily supportive of any measure to settle the region⁹³². Two very credible consortiums sought large land grants in the valley, presumably as a basis for a new colony to be carved out of West Florida. The first was General Phineas Lyman's Company of Military Adventurers, which in 1770 sought a grant of 150,000 acres to be settled by army veterans.

While the King personally approved of the plan, Hillsborough, though being careful not to be seen as opposing it, ensured that Lyman received only a paltry initial award of 20,000 acres, with a vague promise that the rest would follow.⁹³³ It never did, as Hillsborough arranged for his case to languish in bureaucratic purgatory. He pursued the same tactic with the syndicate headed by the incorrigible Montforte Browne, who in a rare instance of political tact, in 1771, linked up with the Earl of Eglinton, a Scottish King's Friend, and General William Tayler, the former southern commander.⁹³⁴

Hillsborough, as the matter stood at the beginning of his tenure, was well to be suspicious of designs to open up the interior to trade. While the Treaty of Paris guaranteed free passage up the river for all British vessels, Spanish authorities did everything they could to discourage their progress. Effectively, the area had no direct access to the sea from the interior. Consequently, British traders, finding good prices at New Orleans, developed a clandestine trading network to the detriment of the British Crown.⁹³⁵

In the summer of 1770, at Hillsborough's behest, Durnford was charged with investigating whether a channel passage could be cut through the Iberville River to give

⁹³² Johnson, *West Florida*, p.76.

⁹³³ Alvord, *Mississippi Valley*, vol. II, p.92; Johnson, *West Florida*, p.118.

⁹³⁴ Johnson, *West Florida*, p.170, for the receipt of their application, *APC*, vol. V, p.176.

⁹³⁵ Brown, 'Iberville Canal', p.502.

Britain its own access to the interior.⁹³⁶ The Iberville River is a brackish outflow of the Mississippi, but represented a tantalising prospect for a navigable route bypassing the Island of New Orleans. In 1764, General Gage, under immense pressure from Whitehall, had sent the first of several military surveyors to perform a feasibility study. Their verdict was that the passage of a vessel of up to 100 tons might be possible during a period of high water if the river was cleared of the innumerable obstructions of fallen trees.⁹³⁷ However, in 1766, one of Gage's most competent military engineers, Thomas Hutchins, reported that the Iberville was impassable even by a canoe. He proposed a solution that would require the digging a canal or "cut" twenty feet wide and twelve feet deep from a point 100 yards above the Iberville's mouth.⁹³⁸ While Hillsborough was opposed to the canal, believing it not only to be an unnecessary expense, but also, like Gage, a too-easy target for the Spaniards,⁹³⁹ the sudden threat of war with Spain, due to the Falklands Crisis, was a compelling reason for the American Secretary to at least try to appear open to a new transport corridor around the now heavily-militarised Spanish New Orleans.⁹⁴⁰ He was duly hoping that that Durnford would find that any serious plan to open a canal would be too expensive, thereby dissuading all but the Iberville's most ardent proponents.

As Durnford supplied interim reports, the threat of war had died down. It was only in the summer of 1771 that Durnford would complete his detailed reports on the

⁹³⁶ Brown, 'Iberville Canal', p.511.

⁹³⁷ Brown, 'Iberville Canal', p.503.

⁹³⁸ Thomas Hutchins, "Observations on the River Iberville", Mss., [1766], WCL, cited in Brown, 'Iberville Canal', p.503.

⁹³⁹ Gage to Haldimand, 16 May 1770, WCL: Gage Papers, American Series, vol. 80.

⁹⁴⁰ Alvord, *Mississippi Valley*, vol. II, p.156.

“proposed cut,” in the manner proposed by Hutchins.⁹⁴¹ As Durnford later described, the cut would allow “the Mississippi water [to]...enter into the River with a far greater violence, and more than twice the Quantity of water which doth by the present Channel.”⁹⁴²

Critically, Durnford’s plans were submitted within the broader context of local opinion regarding western expansion. While it seems that his ultimate loyalty remained with Hillsborough, Durnford was also responsible to Governor Chester. The governor, while on good terms with Hillsborough, was an ardent supporter of not only the canal, but also the proposal to move the provincial capital to a site near its junction with the Mississippi. Chester commissioned Durnford to design the layout for this proposed new town, named Harwich, after Hillsborough’s English title (**Fig. 88**).⁹⁴³ Chester’s enthusiasm was conveyed in his important letter of 28 September 1771, where he described the site as “universally thought to be very proper for the building of a Town, as it will be a Magazine (if the Mississippi settles) for Supplying the upper country with British Manufacturers, and the Indian Traders with Goods many of whom are now

⁹⁴¹ Elias Durnford, “The communication between the Iberville and the River Mississippe,” Mss., 1770, WCL: Gage Collection, Small Maps 1770, Brun, no.671; for the copy sent to Hillsborough: Elias Durnford, “The Communication Between the Iberville & the River Mississippi”, Mss. (1770), NA: MPG 1/359/1, Penfold, no.2422, an enclosure to Durnford to Hillsborough, 11 June 1770, CO 5/587, ff.331-5; see also Elias Durnford, [Part of the River Mississippi and the River Iberville, showing a proposed Cut], Mss., 1771, NA: CO 700/Florida 46, Penfold, no.2425A, an enclosure to Chester to Hillsborough, 28 September 1771, CO 5/588, pp.499-518.

⁹⁴² Elias Durnford, as quoted in Chester to Hillsborough, 28 September 1771, CO 5/588, pp.499-518, letter printed in full, D. Rowland (ed.), *Peter Chester: Third Governor of British West Florida*, Mississippi Historical Society, Centenary Publications, vol. V (Jackson, Miss., 1925), pp.92-8; Hutchins’ plan was first placed on a map by Elias Durnford, who happened to visiting the site at the time. Hutchins made a copy of Durnford’s original, Thomas Hutchins, “Copy of a Plan of the River Iberville from Lake Maurepas to the Forks, with part of the Comit and Amit – taken from Engineer Durnford’s by Tho. Hutchins,” Mss., [1767], WCL: Gage Collection, Maps 7-L-11, Brun, no.772; Brown, ‘Iberville Canal’, p.504.

⁹⁴³ “Plan of the proposed New Town. also the proposed Cut from the Mississippi to the Iberville”, an inset to Samuel Lewis, *after* Elias Durnford, “Plan of the Rivers Mississippi, Iberville, and Bay of Pensacola; in the Province of West Florida”, Mss., 1772. Mss., BL: Maps K.Top.122.90. Chester first proposed “Harwich” for the new capital, Chester to Hillsborough, 3 July 1771, CO 5/589, ff.135-7, Johnson, *West Florida*, p.138.

supplied from [New] Orleans. The produce of the Country will be exported from hence, and all the Furs and Peltry that comes down the Mississippi (great quantities of which now go down to Orleans).”⁹⁴⁴

The flattery of having a provincial capital named in his honour did not sway Hillsborough, and Durnford’s final report, which estimated the cost of the canal and related redoubts alone at the princely sum of £9,150, delivered the precise news that Hillsborough wanted to hear.⁹⁴⁵ This proposed cost was so great that Chester had to concede that Durnford’s “Estimate of the Expense which will attend it, is much greater than the immediate advantages that can arise to the Province for the Carrying it into execution.”⁹⁴⁶

Alternatively, the Governor fell back on the position that Harwich and the Mississippi valley should be settled before the construction of any Iberville Canal. This argument was unconvincing, as without the canal, even a tiny outpost like Fort Bute had proven to be unviable. Before receiving Chester’s letter containing Durnford’s report, Hillsborough felt sufficiently emboldened to discontinue the Crown’s effective involvement in the Mississippi theatre by ordering the withdrawal of the garrison at Fort Chartres in the Illinois country in December 1771. He would have been reassured that Durnford’s report provided the intellectual backing to kill any notions of western expansion.

The most important consequence of Hillsborough’s special arrangement with Durnford was the programme to create a general map of West Florida. Also transferred

⁹⁴⁴ Chester to Hillsborough, 28 September 1771, CO 5/588, pp.499-518.

⁹⁴⁵ [Elias Durnford] “Estimate of the Expenses which will attend making the proposed Cut from the River Mississippi to the River Iberville, [1771],” an enclosure to Chester to Hillsborough, 28 September 1771, CO 5/588, pp.499-518.

⁹⁴⁶ Chester to Hillsborough, 28 September 1771, CO 5/588, pp.499-518, Rowland, p.95.

with Chester's letter of 28 September 1771 were "three Maps of the different parts of the Province, on which the several Grants, that have passed in the Province are marked."⁹⁴⁷ These critical maps focused on the three main loci of settlement, Pensacola, Mobile and the lower Alabama valley,⁹⁴⁸ and, most interestingly, the entire east bank of the Mississippi River, from the River Iberville to the Yazoo River (**Fig. 89**).⁹⁴⁹ The map depicts the numerous cadastral plats, showing concentrations near the proposed town of Harwich, another opposite the French settlement of Point Coupée and a third, surrounding the trading post of Natchez. It remained the base map for this strategically critical corridor for many decades.

Durnford's maps were not as scientifically exact as those produced by the General Survey, being an agglomeration of over six years of cadastral surveys,⁹⁵⁰ as opposed to being a product of a systematic process. That being said, they were broadly accurate in a planimetric sense, finely drafted, and featured detailed annotations on the qualities of the land. They were entirely befitting for general administrative purposes, such as the deliberations concerning land grant applications and the allocation of military resources.

Once received at the Board of Trade, Hillsborough's master draftsman, Samuel Lewis assembled Durnford's trilogy of regional maps into a magnificent general map of

⁹⁴⁷ Chester to Hillsborough, 28 September 1771, CO 5/588, pp.499-518, Rowland, pp.97-8.

⁹⁴⁸ Elias Durnford, "Field Survey of the River Mobile and part of the Rivers Alabama and Tensa, with the different Settlements and Lands marked thereon. The Old Settlements made by the French are marked with Black, those granted by the English are marked Red.", Mss., [c.1769], CO 700/Florida 40.

⁹⁴⁹ Elias Durnford, "Plan of the River Mississippi from the River Yasous to the River Iberville in West Florida", Mss. [1771], CO 700/Florida 45, Penfold, no.2425, an enclosure to Chester to Hillsborough, 28 September 1771. This map is a reduced version of the much larger scale map, Elias Durnford, "Mississippi River from the Rivers Iberville and Amite north to West Florida's boundary", Mss, [1771], CO 700/Florida 38, Penfold, no.2424.

⁹⁵⁰ Elias Durnford's individual plat surveys and ledgers were collected into two large books, CO 5/603 and 604. They remained in the Durnford family until being presented to the Public Record Office in April, 1900, Andrews, *Guide to Materials for American History to 1783, in the Public Record Office of Great Britain*, vol. 1 (State Papers), p.162.

West Florida.⁹⁵¹ To be clear, this work represented an intermediate stage of a comprehensive general map, albeit an important one, as the highly detailed components were arranged onto a skeleton comprised of the intermediate areas which had not been accurately charted. This beautifully coloured and exquisitely drafted presentation copy was presented to George III.

D. The Downfall of the Earl of Hillsborough

Meanwhile, at Whitehall, events were taking place that would ultimately cost Hillsborough his office. It began in 1770, when a syndicate billing itself as the Grand Ohio Company applied to the Privy Council for grant of 2 million acres on the south bank of the Ohio River in what is now West Virginia. This territory had recently been purchased by the Crown from the Indians for £10,460, 7s, 3d at the Treaty of Fort Stanwix (1768), and the petitioners proposed reimbursing the Treasury for the same sum.⁹⁵²

The Ohio Company assembled several of the most prominent figures in London and the colonies as shareholders, creating by far the most powerful syndicate to ever lobby for a land grant. Its principals included Thomas Walpole, MP, a wealthy London banker and nephew of the late prime minister, Benjamin Franklin, and George Mercer, who represented Virginia planters, including George Washington. Its public face in London was the phenomenally charismatic Samuel Wharton, scion of one of Philadelphia's leading families.

⁹⁵¹ Samuel Lewis, *after* Elias Durnford, "Plan of the Rivers Mississippi, Iberville, Mobile, and Bay of Pensacola, in the province of West Florida; shewing the situation and extent of the lands granted by the English thereon; from the surveys of Elias Durnford, Surveyor General of West Florida", Mss., "Sept. 1772," BL: Maps K.Top.122.90.

⁹⁵² The Ohio Company's Petition to the Privy Council, 4 January 1770, T 1/376, ff. 38-40, APC, vol. V, pp.202-3, accompanied by a map of the requested grant, NA: MPD 1/172.

When the Privy Council referred the petition to the Board of Trade, Hillsborough, who was not in favour of transmontane expansion, pursued his favourite tactic of stonewalling. After the matter had floated in bureaucratic limbo for almost two years, Wharton and Walpole, in response, recruited the Bedfordites, most notably Lords Gower and Rochford, who intensely disliked Hillsborough,⁹⁵³ and hoped by toppling him that Lord North would follow. These Bedfordites, who had a remarkable reputation for graft, were also not adverse to being gifted shares in the Ohio Company.⁹⁵⁴ Wharton and Walpole even managed to gain the support of two of Hillsborough's most senior employees, Sir William Johnson and Richard Jackson, the legal council to the Board of Trade.⁹⁵⁵

Early in 1772, the King, at the behest of Walpole, approached Bamber Gascoyne, Hillsborough's closest ally on the Board, inquiring as to when the Ohio Company's petition would be given an audience.⁹⁵⁶ Surrounded by antagonists, Hillsborough thought to delay further or even squash the project by only approving the Company's petition if they agreed to apply for an amount of land ten times the original size, or 20 million acres, so as to be "enough to make a province,"⁹⁵⁷ He assumed the Treasury would ask for the infeasible payment of ten times as much, but, with Bedfordite support, the Treasury consented to approve the sale of the enlarged grant, fit for the proposed new province of "Vandalia," for the original amount!

⁹⁵³ In the words of Franklin, they "wished for a fair occasion of tripping up his heels", Benjamin Franklin to William Franklin (his son and Governor of New Jersey), 17 August 1772, W.B. Wilcox et al. (eds.) *The Papers of Benjamin Franklin*, vol.19 (New Haven, 1974), p.243.

⁹⁵⁴ Alvord, vol. II, p.156.

⁹⁵⁵ For a list of Ohio Company members, refer to "Annexed to the Representation of the Board of Trade to the King 6 May 1773", CO 5/1336, f.575.

⁹⁵⁶ William Knox, commentary on 'Lord Hillsborough's Resignation', *Knox, Mss.*, p.253.

⁹⁵⁷ William Knox, commentary on 'Lord Hillsborough's Resignation', *Knox Mss.*, p.254.

Enraged, Hillsborough drafted a lengthy report which largely recapitulated the arguments against western expansion articulated in the Board of Trade's report of 7 March, 1768.⁹⁵⁸ On 1 July, 1772, Wharton presented an opposing report to the Privy Council, ghost-written by Benjamin Franklin, providing the intellectual gravitas to what was already a foregone conclusion.⁹⁵⁹ In a unprecedented move, the Privy Council overruled Hillsborough and the Board of Trade's objections by approving the Ohio Company's grant. Hillsborough, "entangled in his own net", resigned on 15 August, 1772.⁹⁶⁰ Lord North reluctantly accepted the resignation of "his best and firmest friend" in cabinet.

⁹⁵⁸ Report of the Board of Trade opposing the Ohio Company grant, 29 April 1772, PC 1/55/69A, *APC*, vol. V, p.512, report is printed in full, J. Sparks (ed.), *The Works of Benjamin Franklin*, vol. IV (Boston, 1837), pp.303-23.

⁹⁵⁹ Benjamin Franklin's report was submitted to the Privy Council on 1 July 1772, report is printed in full, Sparks (ed.), vol. IV, pp.324-80.

⁹⁶⁰ William Knox, "Lord Hillsborough's Resignation. 1772, Aug. 15," *Knox Mss.*, p.253.

Chapter V: ‘A New Spring to Our Future Endeavours’:DARTMOUTH 1772-1775.

A. Introduction

Despite the fact the unrest in the colonies eventually led to the General Survey’s operational demise, significant progress was made during the Dartmouth administration, which lasted from August 1772 to November 1775. From the summer of 1772 until the early months of 1775, a great deal was accomplished in the Northern District with Holland’s teams finishing their survey of the coasts of Maine, as well as the coastlines of metropolitan Massachusetts and Rhode Island. With Dartmouth’s support, Holland and Wentworth also successfully completed their mutual surveying endeavours in New Hampshire. Holland’s maps and astronomical discoveries received favourable attention at the highest levels in London. De Brahm, who was then in professional exile in London, also saw his circumstances change for the better, owing to his established intellectual and business relationship with Dartmouth. While De Brahm was never able to resume his surveying in the field, the Colonial Secretary ensured that De Brahm’s official status was restored and his record vindicated. Concurrently, the General Survey in West Florida progressed “informally”, in part due to the direct patronage of the Board of Trade.

The advent of hostilities in the American colonies ensured that all operations of the General Survey were either halted or prevented from recommencing in both the Northern and Southern departments. Nonetheless, the General Survey continued to have

significant impact as its numerous manuscript maps were diverted to serve military planning.

Lord Dartmouth Becomes Secretary of State for the Colonies

In the summer of 1772, Lord North faced the first existential threat to his premiership when the Bedfordites forced his close friend Hillsborough out of the cabinet. His first and only priority was to draft a replacement in whom he could place his absolute trust. Out of fraternal loyalty, on 14 August, 1772 Dartmouth, who was North's step-brother, very reluctantly agreed to accept the seals as Secretary of State for the Colonies.⁹⁶¹

The new Secretary of State for the Colonies, William Legge, the 2nd Earl of Dartmouth, was the polar opposite of his predecessor in terms of temperament, style, motivations, and, in many respects, political inclination.⁹⁶² His appointment was greeted with almost universal delight, with Benjamin Franklin remarking "Dartmouth, we liked him very well when he was head of the Board formally, and probably should like him again."⁹⁶³ Samuel Holland, in what was perhaps also a mild jibe at the over-formal Hillsborough, described his new boss as "a serene nobleman and not a courtier".⁹⁶⁴

An active member of the Royal Society, Dartmouth possessed a scientific curiosity, a trait that fit well with the aspirations of the General Survey and bolstered his support of it at the Board of Trade.⁹⁶⁵ Dartmouth also had many American friends,⁹⁶⁶

⁹⁶¹ B.D. Bargar, *Lord Dartmouth and the American Revolution* (Columbia, S.C., 1965), p.57, "Oath of Secretary of State," 14 August 1772, *Dartmouth Mss.*, vol. II, p.342.

⁹⁶² William Legge, 2nd Earl of Dartmouth (1731-1801), P.J. Marshall, 'Legge, William', *DNB*, vol.33, pp.198-201.

⁹⁶³ Benjamin Franklin to Governor William Franklin, 19 August 1772, W.B. Wilcox (ed.) *Papers of Benjamin Franklin*, (New Haven, 1976), vol. 19, p.257.

⁹⁶⁴ Holland to Haldimand, 30 June 1773, Haldimand Papers, BL: Add Mss., 21730, f.123.

⁹⁶⁵ De Vorsey (ed.), *De Brahm's Report*, p.48.

with whom he shared an interest in land speculation,⁹⁶⁷ and was a consistent supporter of westward colonial expansion,⁹⁶⁸ although it is surprising that many of those who praised Dartmouth for his pro-colonist stance seemed to have overlooked that he was also a strong supporter of the Declaratory Act, which asserted Parliament's right to legislate over the colonies "in all cases whosoever".⁹⁶⁹

Less salutary was Dartmouth's reluctance to resolve conflict, and, particularly in comparison to Hillsborough, his poor work ethic. He regularly disappeared from Whitehall to his Staffordshire estates, often at the most inappropriate times. An agreeable man who wanted to be liked, Dartmouth was loath to 'go to battle', lacking the drive to advance a point of view if it meant facing strong opposition. During his absences, the vacuum he left was filled not only by his subordinates, but also by other cabinet members, many of whom held a point of view somewhat different from that of Dartmouth.⁹⁷⁰ With the exception of Dartmouth, whom Grafton described as "the only one [in the North cabinet] who had a true desire to see lenient measures adopted toward

⁹⁶⁶ Dartmouth's first significant political position came in the summer of 1765 when the Marquis of Rockingham appointed him to be President of the Board of Trade. Considered a "Friend of America", he worked closely with such figures as Benjamin Franklin and John Wentworth to repeal the Stamp Act, Bargar, pp.24-34. His activities cast him in such a favourable light in some quarters that the normally uncharitable Massachusetts Assembly voted to thank him for his "noble and generous patronage of the British colonies." ["Vote of Thanks of Massachusetts Bay House of Representatives," 20 June 1766, an enclosure to Thomas Cushing to Dartmouth, 21 June 1766, letter calendared in *Dartmouth Mss.*, vol II, p.45.] After leaving the Board of Trade in 1766, Dartmouth became heavily involved in various business and philanthropic schemes. He was an early supporter of Eleazar Wheelock's plan to move his Indian College to New Hampshire, and his friend John Wentworth honoured him by naming the new institution Dartmouth College in 1769, Bargar, *Dartmouth*, pp.13-14.; Wilderson, *John Wentworth*, pp.86 and 131.

⁹⁶⁷ The year he left the Board of Trade, already acquainted with the Board's surveyors due to his stint in the presidency, Dartmouth began a correspondence with William Gerard De Brahm regarding land speculation opportunities in East Florida, leading him to acquire a vast tract near present-day Miami, Bargar, p.69; De Vorsey (ed.), *De Brahm's Report*, p.44-6.

⁹⁶⁸ In marked contrast to Hillsborough, Dartmouth consistently supported western colonial expansion. Not only did he have close personal connections with many of the Ohio Company investors, he also strongly believed that Native Americans needed the formal protection of royal authority, C.W. Alvord, *Mississippi Valley*, vol.II, pp.141 and 149-51; also Dartmouth to John Stuart, 3 March 1773, CO 5/74, f.63.

⁹⁶⁹ Bargar, *Dartmouth*, p.32.

⁹⁷⁰ Bargar, *Dartmouth*, pp.65-8, also L.J. Bellot, *William Knox*, p.119; Thomson, *Secretaries of State*, pp.149-50.

the colonies”,⁹⁷¹ the North government, in fact, was universally comprised of anti-American ministers. Even though the vitriolic figures who had most rankled America in the past, such as Hillsborough, Grenville and Bedford, were no longer present, virtually all of the “Friends of America” had either resigned or been squeezed out of cabinet by the “Stamp Men”.

Power and Influence within the American Department & the Board of Trade

At the beginning of his tenure, Dartmouth received a warning from an anonymous “Londoner” to be “Ever watchful of your two [under] Secretaries, for they carry with them into office, all injurious and illiberal Ideas and Enmity’s, public and personal, of their late Lord [Hillsborough], and will insidiously labor to possess Your Lordship, with their private prejudices and resentments.”⁹⁷² By all accounts, Dartmouth, Pownall and Knox enjoyed cordial and good working relationships,⁹⁷³ although Dartmouth’s *laissez-faire* management style and frequent absences from London ensured that his two under-secretaries, John Pownall and William Knox, had much more power than they previously enjoyed, allowing them to assume key roles for shaping major colonial legislation, something never done before by the undersecretaries.⁹⁷⁴

While the government’s preoccupation with the fortunes of the East India Company and other matters meant the focus and, therefore, work flow through the American Department and the Board of Trade was at a low ebb at the beginning of Dartmouth’s tenure, the work done by Pownall and Knox assumed unprecedented levels

⁹⁷¹ A.H. Fitzroy, Duke of Grafton, *Autobiography and Political Correspondence* (London, 1898), p.267.

⁹⁷² “A Londoner” to [Dartmouth], October 1772, SCRO: Dartmouth Papers, D 1778 II, 448.

⁹⁷³ Spector, *The American Department*, p.101.

⁹⁷⁴ Bellot, *Knox*, pp.116-22; F.B. Wickwire, ‘John Pownall and British Colonial Policy,’ *WMQ*, vol. 20, no. 4 (October 1963), pp.549-53.

of importance by 1774.⁹⁷⁵ Pownall regularly issued orders to governors, even without Dartmouth's prior consent, and Lord North directly followed his advice regarding the recall of Governor Hutchinson.⁹⁷⁶ Most importantly, Pownall was the principal author of the Boston Port Act.⁹⁷⁷ Not to be outdone, Knox was directly charged by North to head up propaganda efforts to gain support, or at least acceptance, of the Intolerable Acts in Britain. He also spearheaded the drafting of the final version of the Quebec Act.⁹⁷⁸

In the summer of 1773, Pownall and Knox remarked that, in his absence, much of Dartmouth's executive power was subject to "unwarrantable encroachments" from the always-avaricious Bedfordite secretaries, Lords Rochford and Suffolk.⁹⁷⁹ Bamber Gascoigne, Hillsborough's acolyte, also continued to control a majority of votes on the Board of Trade, forming something of a fifth column with Gage and Hillsborough behind the scenes. Pownall lamented to Knox that "Our business has hitherto been as light as you could wish, and I think it is likely to continue, for what can Lord Dartmouth do whilst Bamber Gascoigne is minister for America at the Board of Trade and Lord Suffolk at the [Privy] council office?"⁹⁸⁰ In consequence, many of Dartmouth's more conciliatory gestures were not represented to Cabinet or the Board in favour of the more conservative view of his colleagues.

Dartmouth's unwillingness to engage in the political sparring also served to divert a key General Survey ally in the colonies, John Wentworth, Governor of New

⁹⁷⁵ Statistically, the Board met 226 times during Hillsborough's second presidency, which lasted 4 ½ years, while the Board met only 152 times during the 3 years, 3 months of Dartmouth's second term, A.H. Basye, *Trade and Plantations*, p.180, however the quality and importance of the work they did reached unprecedented levels, see Bargar, *Dartmouth*, pp.58-9.

⁹⁷⁶ Wickwire, 'John Pownall,' p.551.

⁹⁷⁷ Bargar, pp.118-99; Bellot, pp.126-7; Knox wrote an influential pamphlet in favour of the act, *A Justice and Policy of the Late Act of Parliament for...the Province of Quebec* (London, 1774).

⁹⁷⁸ Wickwire, 'John Pownall,' pp.552-3.

⁹⁷⁹ Pownall to Knox, 3 October 1772, *Knox Mss.*, p.109.

⁹⁸⁰ Pownall to Knox, 23 July 1773, *Knox Mss.*, p.110.

Hampshire. In the summer of 1772, Wentworth received a letter from the outgoing Hillsborough informing him that charges had been laid with the Board of Trade against his official conduct, and more worrying, that the case had been accepted for consideration.⁹⁸¹ While Wentworth's old friend Dartmouth had become President of the Board of Trade before it was to hear the case, Dartmouth did not attend the deliberations, leaving the matter open to the machinations of Hillsborough's acolyte Bamber Gascoigne. While Wentworth was finally cleared of all charges on 8 October 1773, charges would have been dismissed earlier if Dartmouth had not ceded his authority to others by his strategic absences.⁹⁸²

With respect to the specific impact on the progress of the General Survey, Pownall reassumed a level of control over the Board's cartography programs reminiscent of the period from 1764-1767, before the creation of the American Department. While Hillsborough personally engaged himself in the detailed operational aspects of the General Survey, Dartmouth stepped back, leaving the detail to Pownall. Knox, while not directly responsible for mapping programs, was De Brahm's former agent in London and had known him personally in Georgia.⁹⁸³ He played an important role in De Brahm's official rehabilitation at Whitehall.

The Role of the General Survey in Fulfilling Policy Objectives During Dartmouth's Tenure

⁹⁸¹ Hillsborough to Wentworth, 29 July 1772, CO 5/943, pp.21-3.

⁹⁸² APC, vol. V, pp.371-375; Wilderson, *Wentworth*, pp.210-4.

⁹⁸³ Knox and De Brahm both served on the Executive Council of Georgia at the same time from 1757-62, and were near neighbors in Savannah. Knox then served as the Agent for East Florida in London from 1764-1770, and thus had considerable, and indeed, friendly correspondence with De Brahm.

In the spring of 1773, following a tour of all settled parts of the province, John Moultrie, the lieutenant-governor of East Florida, remarked that “many hundreds of thousands of acres of the best land which had already been granted in England have remained uncultivated.”⁹⁸⁴ In addition, Timothy Ruggles complained that numerous tracts granted to private owners in New Hampshire and New York remained unimproved. Too many of the proprietors of the land grants already tendered were speculators who had no intention of settling or improving the land, waiting only to sell once land values increased. While contractual obligations might have been used to limit land speculation, foreclosure clauses on undeveloped land were often never evoked. In other instances, proprietors often did not fulfill their requisite quit rent obligations. Consequently, thousands of acres of high-quality land went undeveloped, severely retarding the overall development of entire colonies, as land speculators and incompetent landowners crowded out prospective settlers who were prepared to till the land and pay quit rents. In addition, the established system also left too much control and discretion to individual political figures in both London and America, leaving the door open for mass corruption and inappropriate patronage.

On 7 April 1773 Dartmouth sent a circular to the governors of the North American colonies ordering them to temporarily freeze the granting of all new land warrants until the Board of Trade had concluded a full review of the land granting policy.⁹⁸⁵ The “Heads of Enquiry” circular of 5 July 1773, a detailed questionnaire sent to all colonial governors in North America, was launched by Dartmouth and Knox to get detailed

⁹⁸⁴ Moultrie to Dartmouth, 16 May 1773, CO 5/553, ff.22-4.

⁹⁸⁵ Order in Council to the Governors of North American Colonies, 7 April 1773, CO 323/27, pp.365-8, letter printed in full, *DAR*, vol. VI, letter no. XLII, pp.118-9, also *APC*, vol. V, p.360; Labaree, *Royal Instructions*, vol. II, no.764.

answers to twenty-two questions regarding the geographic, demographic, economic, political and legal aspects of each colony.⁹⁸⁶ While some governors responded in great detail and others barely or not at all, the information solicited by the circular underscored how important the information from the General Survey was to the policy concern of the day.

By 5 February 1774, Dartmouth sent another circular to all North American governors, with the explicit exclusion of Quebec, outlining the new land granting system, to be enacted with immediate effect.⁹⁸⁷ It ordered each governor “With the advice and assistance” of his relevant provincial officers⁹⁸⁸ and, significantly, the Surveyor-General of the Northern or Southern District of North America (as relevant) to “cause actual surveys to be made of such parts of said province, not already granted or disposed of, the Settlement and Improvement whereof you shall think will be most advantageous to the public Interest and welfare; taking care that such Districts, so to be surveyed and laid out, as aforesaid, be divided into a number of lots (each lot to contain not less than one hundred and not more than one thousand acres) as Our said Surveyor-General shall judge best adapted to the nature and situation of the district so to be surveyed.” The circular furthermore ordered that the resulting “Map of the District so Surveyed, with the several lots marked and numbered thereon, be hung up in ... [the provincial] Secretary’s office” with copies of the map sent to London “accompanied by a written report”. Importantly,

⁹⁸⁶ Circular, Dartmouth to all Governors in North America, encl “Heads of Enquiry” [with 22 questions: commerce, cultivation, inhabitancy], 5 July 1773, CO 5/74, ff.114-20; see also Bargar, pp.59-60.

⁹⁸⁷ Circular, Dartmouth to Colonial Governors of North America (Except Québec), 5 February 1774, sending additional instructions for disposal of His Majesty’s lands. It contained an enclosure, “Additional Instructions for Surveying, granting and Selling His Majesty’s lands in North America,” 3 February 1774, CO 5/241, pp.511-24; see Tonym to Dartmouth, 4 May 1774, CO 5/554, ff.34-7, acknowledging receipt of the circular of 5 February.

⁹⁸⁸ The named Officers the Province included: Lieutenant Governor, the Surveyor-General of Lands for the [Northern or Southern] District of North America, the provincial Secretary, the provincial Surveyor-General of Lands, and the provincial Receiver-General of Quit Rents.

“the nature and Advantages not only of the whole District in General, but also of each particular Lot” must be carefully described.

The dramatic overhaul in the system came with the order that these lots were to be sold openly at a public auction “to the best,” presumably highest bidder. To prevent the auction from being rigged, each auction had to be publicized no less than four months in advance by a detailed printed advertisement in the main newspapers not only in the province in question, but in neighboring colonies. Moreover, no grant could be sold for an amount less than 6s an acre and an annual quit rent assessment of no less than one-half-penny per acre. Until such surveys and actions could be organized, all governors “Upon Pain of His Majesty’s Highest Displeasure” were forbidden from approving any land grant whatsoever.⁹⁸⁹ In theory, the new system would ensure that land was granted to those who were most financially committed to developing it.

The new system assigned scientific cartography, like that produced by the General Survey, a determinative role and imposed a more formal and rigid ethic of the ‘New England method’ of cadastral grants throughout the colonies. The division of land into such orderly grids of lots was predicated on access to accurate surveys conducted by systematic triangulated means, with base points demarcated by astronomical observations. A lesser standard could create errors that could raise questions about property lines throughout an entire area and further stall development with legal disputes. At that time, in Nova Scotia, East Florida and New England, only maps created by the General Survey were sufficiently accurate for a provincial surveyor-general to confidently use them as templates for cadastral divisions.

⁹⁸⁹ Circular, Dartmouth to the Governors, 5 February 1774, CO 5/241, pp.511-24. Military veterans who were promised land grants by the Proclamation of 7 October 1763 were specifically exempt from the new policy and were to be given land in the established manner, Labaree, *Royal Instructions*, vol. II, p.536.

Upon receiving their orders, some governors were at a loss on how to implement the new system for want of accurate maps. In most colonies, the rapidly deteriorating political situation through 1774 and 1775 also rendered the new land grant policy meaningless, as the British could not survey or grant land in territory that they no longer physically controlled.

The Royal Factor: George III's Interest in the General Survey

Dartmouth's familiar ties to George III's favourite, Lord North, and his curious and amiable nature ensured that he had closer relations with the King than most cabinet members. The King had already for some years been actively collecting drawings, prints and maps that would one day comprise his famous topographical collection. It was not uncommon for him to repossess maps in official collections for his own private use.⁹⁹⁰

While special presentation copies of General Survey maps had been drafted for the King by the Board of Trade since at least 1765, only during Dartmouth's administration did the survey's cartographers and their maps gain such consistent attention at this highest level.⁹⁹¹ In April 1773, Dartmouth arranged for De Brahm to be accorded one of the highest honours that could be bestowed on a surveyor: In a private audience with George III, De Brahm presented the King with a bespoke manuscript of his

⁹⁹⁰ The sole surviving paper relating to the acquisition of the geographical collections dates from September 1762. It is a receipt from Thomas Jefferys, Geographer to His Majesty, for 10s 6d, paid to him by Bute on the King's behalf for a map of New Hampshire by Joseph Blanchard and Samuel Langdon (mentioned earlier) which had been published by Jefferys in the previous year. George's correspondence with Bute in this period strongly suggests that it was acquired so that the young King could inform himself about the North American colonies. They had become of particular interest because of the peace negotiations with France that were to lead to the Treaty of Paris (1763) and the outbreak of the first rumbles of discontent at the Grenville ministry's attempt to tax the colonists, P. Barber, 'George III and his Geographical Collection', in Jonathan Marsden (ed.), *The Wisdom of George the Third* (London, 2005), pp.272.

⁹⁹¹ The earliest recorded transfer of a General Survey map from the Board of Trade to George III is a presentation copy of a 1768 survey by De Brahm, Samuel Lewis, after W.G. De Brahm, "A Plan of Part of the Coast of East Florida, including St. John's River, from an actual Survey by Wm. Gerard De Brahm, Esq.", Mss., 1769, BL: Maps K.Top.122.81.

“Report of the General Survey of the Southern District of North America,” containing special copies of all of his maps.⁹⁹² Perhaps due to this exchange, the King developed a special interest in the General Survey. After his meeting with De Brahm, he actively acquired some of the programme’s most important manuscript maps, including those from the northern survey.

On 12 August 1773, Sir Stanier Porten, the Under-Secretary of the Southern Department, wrote the Board of Trade informing them that “His Majesty will be glad to have the surveys mentioned this morning by Mr. Pownall.” He was referring to none other than three maps of the Maine and continental Nova Scotia (New Brunswick) coasts, namely Thomas Wright’s map of “Passamoquoddy Bay”; Blaskowitz & Grant’s “Pleasant River to Penobscot Bay” and Sproule’s “Kennebeck River to Round Pond”. Also included was “A map of the River St. Lawrence,” a presentation copy of a general map drafted by Samuel Lewis “especially for His Majesty’s use.”⁹⁹³

In February 1774, Dartmouth received the northern survey’s monumental manuscript general map embracing the sea coast of Maine and Nova Scotia from Cape Elizabeth to St. John’s River. One of the most technically impressive accomplishments of British surveying in the eighteenth century, it took in virtually all of the timber lands, and was potentially of great use to both administrative planning and navigation. The Colonial Secretary sent Holland exceptional praise, expressing “This Plan appears to have been drawn with that accuracy which does so much credit to your Survey, and I

⁹⁹² BL: King’s Mss. 210 & 211, 1773.

⁹⁹³ *Endorsed* “Plans sent to King on 13 August [1773]:” Mr. Holland’s plans of E. country of Mass. and draft of St. Lawrence, Sir Stanier Porten Pownall, 12 August 1773, CO 5/138, ff.358-9. The maps included: Passamaquoddy Bay, BL: Maps K Top.119.50; Kennebec, BL: Maps K Top.120.20; Penobscot, BL: Maps K Top.120.21; all three manuscripts were enclosure to Holland to Dartmouth, 2 May 1773, CO 5/74, ff.132-7; also note St. Lawrence River, BL: Maps K Top.119.23.

have the Satisfaction to acquaint you that it has met with His Majesty's Approbation".⁹⁹⁴
It soon found its way into the King's Topographical Collection.

Circumstantial evidence also suggests that De Brahm was given leave to remove from the Board of Trade's archives the usually roughly-drawn original manuscript maps he had dispatched to London. He used these manuscript maps as *maquettes* for the carefully drafted copies that were submitted to the King. Very few, if any, of the maps that De Brahm removed were returned to the Board's collections, as suggested not only by their absence today, but also by the fact that they did not appear in the 1780 Board of Trade map inventory.⁹⁹⁵

The King's interest in the Board of Trade's cartographic activities was symbolically significant. Practically, however, it robbed the Board of some of its most important geographical resources, as some of the manuscripts acquired by the King had no duplicates. While authorities could sometimes borrow their maps back from the King, it can be safely assumed that several important maps were permanently removed from the Board of Trade, severely limiting the role they could have played in official deliberations.

B. The Northern District

During the Dartmouth administration, the northern General Survey completed the mapping of Maine and New Hampshire and continued to chart the entire coastlines of metropolitan Massachusetts and Narragansett Bay, Rhode Island. The maps provided administrators with a comprehensive source of decision-making information concerning

⁹⁹⁴Dartmouth to Holland, 5 February 1774, CO 5/75, ff.25-6, referring to the regional map of Coastal Maine-New Brunswick, BL: Maps K Top.120.18.

⁹⁹⁵ Assiotti, F.A., "List of Maps, Plans, &c. belonging to the Right Honble the Lords Commissioners for Trade and Plantations. Under the care of Francis Aegidius Assiotti, Draughtsman," Mss. London, 1780, CO 326/15.

the mast timber trade in Maine, as well as infrastructure development and settlement issues in New Hampshire. As the political environment continued to deteriorate, interest in the maps further south focused on their potential use for military purposes. Meanwhile, Lord Dartmouth and the undersecretaries were responsible for ensuring that the Survey and its scientific byproducts received an unprecedented reception in London. It was only in 1775 when the demands of the Revolution robbed the northern survey of its naval and human resources, in addition to its civilian *raison d'être*, that it faced operational collapse.

Advances in The Scientific Foundations of the Northern Survey During Dartmouth's Tenure

In May 1773, Holland wrote to Pownall with the request that the latter forward to Sir Nevil Maskeylne, the Astronomer Royal, an enclosed report on his observation of the immersions and emersions of Jupiter's satellites made along the shores of Piscataqua Harbour, in addition to observations he had previously sent the Board of Trade regarding his observations of longitudinal points on St. John's Island, the Gaspé and Québec.⁹⁹⁶ Holland's newest observations were made at Kittery Point, latitude 43°4' 27", where he used Bird's astronomical quadrant and Dolland's twelve foot refracting telescope to observe the phenomenon on several occasions between 11 April and 4 May 1771, noting the compass variation at 7°46' west. At Portsmouth, latitude 43 °4' 15", he employed the same equipment to observe the immersions and emersions of Jupiter's satellites at various occasions between 6 September and 23 November 1772, noting the compass

⁹⁹⁶ Holland to Pownall, 2 May 1773, CO 5/74, ff.132-7.

variation at 7°48'. All observations were made with time kept by Graham's timepiece.⁹⁹⁷ To perfect his intended "General Projection" and the accuracy of the general map of the Northern District, Holland wanted to compare his observations to the emersions and immersions of Jupiter's satellites contained within Maskeylne's authoritative Greenwich Ephemeris.

Dartmouth, a respected member of the Royal Society, used his influence to ensure that Holland's observations gained full notice: they were dispatched from Whitehall to Maskeylne in August 1773.⁹⁹⁸ The following December, Pownall forwarded the Astronomer Royal's reply. While Holland found that his colonial field observations were less precise than Maskeylne's, which were conducted with the most advanced equipment at Greenwich, the comparison was most useful in establishing true longitudes.⁹⁹⁹

Maskeylne held Holland's astronomical expertise in high esteem, so much so that he ensured that Holland's reports were published in the *Philosophical Transactions* of the Royal Society, then the world's premier scientific journal.¹⁰⁰⁰ Maskeylne further requested that Pownall acquire and send Holland a copy of Patrick Murdoch's 'Of the best Form of Geographical Maps' published in the *Philosophical Transactions* in 1758.¹⁰⁰¹

⁹⁹⁷ Astronomical Observations made by Samuel Holland. Esq. His Majesty's Surveyor General of Lands of the Northern District of North America, for ascertaining the Longitude of Sundry places in said district. and enclosure to Holland to Pownall, 2 May 1773, CO 5/74, ff.132-7.

⁹⁹⁸ Dartmouth to Holland, 4 August 1773, CO 5/74, ff.140-1.

⁹⁹⁹ Holland to Pownall, 14 April 1774, CO 5/75, ff.101-2.

¹⁰⁰⁰ Samuel Holland, 'A letter to the Astronomer Royal... containing some eclipses of Jupiter's satellites, observed near Quebec,' Royal Society of London, *Philosophical Transactions*, vol. 64 (London, 1774), pp.171-6 and Samuel Holland, "Astronomical Observations," Royal Society of London, *Philosophical Transactions*, vol. 64 (London, 1774), pp.182-3.

¹⁰⁰¹ Patrick Murdoch, 'Of the best Form of Geographical Maps. By the Rev. Patrick Murdoch, M.A. F.R.S.,' Royal Society of London, *Philosophical Transactions*, vol. 50, Part. II (London, 1758), pp.553-62.

Murdoch was concerned with attempting to correct the problems incumbent in “stereographic projection” or “When a portion of the earth’s surface is projected or transferred to it by whatever method on a plane, or transferred to it by whatever method or description, the real dimensions, and very often the figure and position of countries, are much altered and misrepresented.”¹⁰⁰² He noted that the finest of these representations during the sixteenth century had been employed by Edward Wright and Gerard Mercator. However, their methods contained “two blemishes, the linear distances visibly false, and the intersections of the circles oblique.”¹⁰⁰³ Nevertheless, Murdoch still found the methods employed up to his own time unsatisfactory, causing him to ask the question: “What is the construction of a particular map, that shall exhibit the superficial and linear measures in their truest proportion?”¹⁰⁰⁴ Through a series of mathematical formulae Murdoch suggested a means of stereographic projection that was to be a great improvement to that commonly employed.

Holland, it seemed, was already well aware of Murdoch’s article, perhaps having been given a copy while he was in London between 1762 and 1764. Holland duly informed Pownall that he was “far well advanced” in “Having begun my Projection on the same principles as Mr. Murdoch.”¹⁰⁰⁵ Holland’s maps represent a critical test case by which Murdoch’s theories were actually put into practice.

Organization and Funding of the Northern Survey During Dartmouth’s Tenure

The Northern Survey’s funding remained stable, with an annual overall budget of £1,034 7s, for each of the fiscal years from 1773 to 1775, the precise same amount it had

¹⁰⁰² Murdoch, ‘Of the best Form of Geographical Maps’, p.553

¹⁰⁰³ Murdoch, ‘Of the best Form of Geographical Maps’, pp.553-4.

¹⁰⁰⁴ Murdoch, ‘Of the best Form of Geographical Maps’, p.554.

¹⁰⁰⁵ Holland to Pownall, 14 April 1774, CO 5/75, ff.101-2.

been granted since 1770. Holland sent a report to the Board of Trade comprising an itemized payroll of the survey, at the height of the final full season of surveying, dated 21 August, 1774.¹⁰⁰⁶ This was a busy period in which the entire coastline from Boston to the western side of Narragansett Bay was charted.

The report provides insight into how the survey was staffed, and priorities funded. Holland's chief deputy, Thomas Wright, continued to draw his full salary of 10s per diem even though he had "Left the survey last fall without leave." The second most senior deputy, George Sproule, at 5s per diem, was engaged "making Astronomical observations and surveying Nantucket and Martha's Vineyard." The three other deputies, James Grant, Charles Blaskowitz and Thomas Wheeler, were each paid only 2s 6d per diem, and were employed to survey around Cape Cod towards Rhode Island. Holland's personal secretary and draughtsman, George Derbage garnered 5s per diem, while James Peachey, the junior draughtsman earned 2s 6d per diem.

Also listed were two volunteers, Leonard Hooper who assisted in the drawing room, and John Parker who worked with Sproule on the survey. Volunteers likely considered their unpaid role as an apprenticeship in order to learn surveying skills for gainful employment at a future date. Not included on the list were the thirty or so relatively unskilled enlisted men who were to act in various capacities, most notably as chainmen (bearing the 66ft measuring chain) and holding colours, or flags, for sightings during trigonometric readings.

Holland's Struggle to Retain His Work Force and Key Surveyors

¹⁰⁰⁶ Samuel Holland, "A Return of the Deputy Surveyors, and Assistants, employed on the Survey of the Northern District of North America," dated 21 August 1774, an enclosure to Holland to Pownall, 22 August 1774, CO 323/29, ff.37-42,

While Holland ultimately, until the end, received funding support from Dartmouth, he tussled with both the military and the provinces to keep his manpower complement. As Dartmouth took over the seals, for example, the salary payments for the twelve men from the 60th Regiment in Holland's employ remained unresolved. Following the regiment's transfer to the West Indies¹⁰⁰⁷ on 25 December 1771, the quarterly installments for the daily subsistence of 6d for each of the twelve troops was severely delayed,¹⁰⁰⁸ placing a severe financial strain on Holland.¹⁰⁰⁹ In January 1772, Holland traveled to New York to have a personal audience with Gage on this issue, but the general declined to act.

Although it took some months, Dartmouth directly intervened with Gage in an effort to solve the problem. On 3 February 1773, he wrote the General, directing him to find an equitable resolution to the matter, copying Holland on the relevant excerpt of the letter.¹⁰¹⁰ On 5 May, Gage replied that "Captain Holland has had fourteen men of the Royal American Regiment for seven years on surveys, and objects to exchanging them. They are a burden to the regiment, but might be continued as supernumeraries".¹⁰¹¹ He cont that the battalion to which the soldiers in question belonged suffered from "the hardship of paying and Clothing men they had not seen for several years". He proposed to both Holland and Viscount Barrington that the men should be sent back to their battalion and replaced with "a like Detachment from the Regiments stationed nearest the Places where Captain Holland should be employed." However, he noted that Holland

¹⁰⁰⁷ The 60th Regiment was redeployed from North America to serve in Jamaica and Antigua, Gage to Dartmouth, 5 May 1773, *Gage Correspondence*, vol. I, p.352.

¹⁰⁰⁸ Holland to Pownall, 16 June 1772, CO 323/27, pp.249-52.

¹⁰⁰⁹ The Northern Survey's annual budget amounted to £1,885, 4s for each of the fiscal years 1771, 1772 and 1773, "An [Annual] Estimate of the Expenses", CO 5/7, pp.463-5.

¹⁰¹⁰ Dartmouth to Holland, 3 February 1773, CO 5/74, ff.11-2.

¹⁰¹¹ Gage to Barrington, 4 March 1772, and enclosure to Barrington to Dartmouth, 14 April 1772, CO 5/167, ff.1-4.

had “objected to that Mode, because he would have frequently fresh Men, useless to him till taught their Business.” In other words, Holland had spent years training his charges in surveying, and their skills could not be practicably imparted to their proposed replacements. In the same breathe, Gage, perhaps embarrassed that this controversy had gained notice in London, disingenuously claimed that as he had received “no Instructions [from London], nor knowing that Captain Holland was under any Difficulty I have not hitherto taken any step in the Affair. I shall without Delay settle it with him by one of the Methods your Lordship is pleased to point out, and am surprised he has never made any Application to me.”¹⁰¹²

On 20 May 1773, Holland wrote to Gage reiterating that it was absolutely imperative that he retain the soldiers on his team. He noted that he had received no notice to his enquiries, and that while the regimental pay was made up to 24 March 1773, he had received no funds since then, forcing him to “advance money of my own”, a sum which now added up to £124, 14s, 2d.¹⁰¹³ To both Dartmouth and presumably Holland, Gage replied that “I would humbly propose, either that Captain Holland should continue to draw the Subsistence of those men from the Agent or Pay-Master, and the Battalion be allowed to make a Charge of it, in their Regimental Contingent Account; or that the Commander in Chief may issue their Pay by warrant upon the Contingencies of North-America.” Gage, who was preparing to leave New York for a leave in England, noted

¹⁰¹² Gage to Dartmouth, 5 May 1773; CO 5/90, ff 145-50, *Gage Correspondence*, vol. I, pp.349-50:

¹⁰¹³ Holland to Gage, 20 May 1773, WCL: Gage Papers, American Series, vol.118. With this letter, Holland enclosed a list of the men of the 60th Regiment whom had served on the Northern Survey, “Return of the Detachment of the Second Battalion of the Sixtieth or Royal American Regiment of Foot, employed by Samuel Holland, Esq., on the Survey of the Northern District of North America.”

that he would ensure continuity by bringing it to the attention of his interim successor as commander-in-chief, Holland's old friend, Major General Haldimand.¹⁰¹⁴

Finally, in the autumn of 1773, almost two years after the problem first arose, Holland received assurances that he could keep his trained men and would receive secure funding. On 4 August 1773, Dartmouth directed Haldimand that "If Captain Holland's men have been struck off strength of 60th, you are to pay them out of contingencies" of the overall fund for the Army in North America. On 6 October 1773, Haldimand firmly agreed to enact this arrangement.¹⁰¹⁵

Holland's struggles with provincial governors to retain his highly trained staff were equally prolonged. Impressed by the competence of the General Survey, it was not uncommon for provincial governors to court Holland's deputies as provincial surveyor-generals. In the autumn of 1772, for example, Thomas Wright was informed by Walter Patterson, the governor of the soon to be created separate province of the Island of St. John's, that Lord Hillsborough had approved his appointment to become the provincial surveyor-general. This was technically a major promotion for Wright, who would go from being a junior enlisted man to being a table officer of what was hoped to be a thriving colony. Ultimately, Wright found that on the island he was only to be paid surveying fees. As it was rumoured that settlement there would be slow to materialize, Wright feared that he would earn less than his General Survey wages of 10s per diem, at least in the short-run.

¹⁰¹⁴ Gage to Dartmouth, 2 June 1773, CO 5/90, ff.159-62, *Gage Correspondence*, vol. I, pp.353-4; also BL: Add. Mss. 21665 includes twenty letters from Gage to Haldimand, Gage's interim replacement as commander-in-chief, written on the event of the latter's departure for England in June 1773 and includes references to Holland's personnel issues with the 60th Regiment.

¹⁰¹⁵ Haldimand to Dartmouth, 3 October 1773, CO 5/90, ff.198-207.

Wright implored Dartmouth to grant him a continuance of his General Survey salary until Parliament could vote him a proper provincial base income. He lamented that the “trifling fees” he would otherwise earn would, given the “Infant State of that Country, and the extravagant Price of the necessities of Life,” not be sufficient to make ends meet.¹⁰¹⁶ Dartmouth related that the request was reasonable, but that he was not sure that the measure could be placed in the Parliamentary estimates for the upcoming year.¹⁰¹⁷ Meanwhile, although Holland had told Dartmouth that he would “heartily congratulate” Wright on his new role, noting that “I think his merit on this business conspicuous & deserving of Regard”, he was concerned not only for the loss of his services, but for the loss of his salary money of £182 10s per annum to the survey’s budget. Holland preferred that Dartmouth would consent to maintaining that funding so that it could be used to make “a reasonable augmentation to the pay of my other assistants, none of them having more than 5s, and some as low as 2s 3d per day.”¹⁰¹⁸

Although Governor Patterson officially ratified Wright’s appointment in July 1773, he was still employed by the General Survey throughout that summer whereupon he was “ordered by Capt. Holland to make several necessary observations in the River St. Lawrence, for the more accurate completion of the General Projection.” On his way back to Portsmouth, Wright stopped off at Charlottetown, the capital of the Island of St. John’s, where he found that Patterson “was upset with my delay in [not] doing Surveyor-General’s job for island, as settlers need boundaries of their lands and town sites” surveyed. Patterson curtly told him to return in the autumn or resign. A chastened Wright promised to return. Although Holland offered to give him leave with half pay,

¹⁰¹⁶ Wright to Dartmouth, 16 November 1772, CO 5/228, ff.199-201.

¹⁰¹⁷ Dartmouth to Wright, 3 February 1773, CO 5/74, ff.13-4.

¹⁰¹⁸ Holland to Dartmouth, 2 May 1773, CO 5/74, ff.132-7.

this apparently did not suffice, as he once again asked Dartmouth to uphold his current salary until the matter of his provincial pay could be resolved.¹⁰¹⁹ Wright then left in October 1773, for Charlottetown, although not on terms entirely to Holland's liking. As late as August 1774, Holland was still telling Dartmouth that the situation "adds not a little to their anxiety, and consequently the fatigue, their being obliged to perform the duty of Mr. Wright, who left his duty last fall, without my leave, and as not yet returned, nor have I heard from him since, notwithstanding that his allowance is more than three of those now employed."¹⁰²⁰ The financial situation was not soon resolved, although Holland's annual budget was never reduced to exclude Wright's former salary. Wright on the other hand had to wait until the fiscal year of 1775 to be accorded a Parliamentary salary for his new provincial role, a post he held until his death in 1812.¹⁰²¹

Similarly, in the spring of 1774, Governor Wentworth asked George Sproule to become "Surveyor-General of Lands" for New Hampshire, promising him a base salary of 20 guineas (£21) per annum, plus an unspecified, but much larger return from fees.¹⁰²² Dartmouth replied that the Treasury would recommend that it directly pay Sproule's salary, presumably through Tea Duty proceeds, telling Wentworth that "I have no doubt of your care and attention to the execution of the plan adopted for the disposal in future of the King's Lands and I will not fail to recommend that Mr. Sproule should be established by the Treasury in the office you have appointed him to, & that such direction be given by that Board respecting his Salary, and the defraying Expense of the first Sales, as shall

¹⁰¹⁹ Wright to Dartmouth, 10 October 1773, CO 5/74, ff.169-70.

¹⁰²⁰ Holland to Pownall, 22 August 1774, CO 323/29, ff.37-42.

¹⁰²¹ Memorial of Thomas Wright to Dartmouth, 21 December 1774, CO 5/115, ff.92-3.

¹⁰²² Wentworth to Dartmouth, 20 April 1774, CO 5/938, ff.68-82.

be thought necessary.”¹⁰²³ In the end, the notoriously quarrelsome New Hampshire Assembly refused to approve the appointment. Not having been “properly accommodated on that Establishment”, Holland continued to employ Sproule on the General Survey through the summer of 1774.¹⁰²⁴

The Admiralty & the Elusive General Map of the Northern District

As conflicts in America escalated, the North American Squadron of the Royal Navy found itself progressively overburdened, particularly once it was mandated to form an absolute blockade of the coasts of the Thirteen Colonies. Upon the arrival of Vice-Admiral Graves in June 1774, who was charged with enforcing the Intolerable Acts, the number of ships available was so inadequate that even if the navy attended to nothing else, an effective blockade was futile.¹⁰²⁵ The Navy’s lack of resources had a devastating effect on the General Survey.¹⁰²⁶

While Admiral Graves is otherwise much maligned by historians, he sincerely tried to assist Holland’s survey, even as he was compelled to take resources away from it. In June 1774, for instance, the *Canceaux* was seconded by orders from the highest levels of the Admiralty to join the blockade of Boston Harbour, as it was just the sort of nimble ship that the Navy needed. At the time, Holland remarked that “Admiral Graves seems to be well disposed to give me all the assistance that lies in his power, and has promised to release the ship as soon as possible.”¹⁰²⁷ Unfortunately, the emergencies of war would ensure that the *Canceaux* would never be used for surveying again.

¹⁰²³ Dartmouth to Wentworth, 22 April 1774, CO 5/938, ff.86-9.

¹⁰²⁴ Holland to Pownall, 20 December 1774, CO 323/29, pp.42-50.

¹⁰²⁵ N.A.M. Rodger, *The Insatiable Earl: The Life of John Montagu, Fourth Earl of Sandwich* (London, 1993), p.225

¹⁰²⁶ R. Tracy, *Navies Deterrence, & American Independence* (Vancouver, 1988), p.122.

¹⁰²⁷ Holland to Pownall, 22 August 1774, CO 323/29, ff.37-42.

Later in the season, Sproule's *Jupiter* tender had been lost rounding Cape Cod. In an effort to rescue the survey, Graves purchased the *Sphinx*, a schooner of 46 tons for £220.¹⁰²⁸ Accompanied with the *Surveyor*, one of the two tenders supplied in 1772 by Admiral Montague, the survey was able to make good progress for the rest of the season.

Holland continued to complain that Lieutenant Mowat and his sailors were too preoccupied with general naval duties. In a very candid outburst to Pownall, Holland maintained that the Admiralty surveyors had a much easier go of things due to the consistent level of support they received to make soundings. He seemed to be at a loss as to why he could not have been assisted all along by a skilled hydrographer sailing his own schooner, as Des Barres was assisted by John Knight and the *Diligent*. He wrote "One advantage Mr. Cook's and Mr. Desbarres' surveys will have over mine; that is in soundings and naval remarks. Circumstances which I have repeatedly mentioned & could not obtain from the Naval Department of my Business; but which They, being on the Admiralty Establishment easily got done, Mr. Cook for himself, and Mr. Knight in the *Diligent* Schooner for Mr. Desbarres; & who still continues to act under that Gentlemen's direction being now employed in Nova Scotia: This service I imagine might yet easily be done for me."¹⁰²⁹

On a positive note, Thomas Hurd, the young midshipman who had joined the crew of the *Canseaux* in August 1771 was already showing signs of the immense skills as a hydrographer that would later see him appointed head of the Admiralty's Hydrographic

¹⁰²⁸ Graves to Stephens, 8 January 1775, letter printed in full, *NDAR*, vol. I, p.60.

¹⁰²⁹ Holland to Pownall, 20 December 1774, CO 323/29, pp.43-50.

Office.¹⁰³⁰ Hurd worked closely with Wright's team, and this explains why many of the maps produced by that section of the Northern Survey feature both copious and exacting hydrographic information, as evidenced by Wright's "A Survey of the Grand Bay of Passamaquoddy and the Sea Coast to St. John's River" (1772).¹⁰³¹ Two copies of the map survive, one located within George III's Collection, and the other, which specifically notes Hurd's involvement in its creation, features later additions made by George Sproule, in his capacity as Surveyor-General of New Brunswick in 1785 (**Fig. 90**).¹⁰³² After three very productive years, Hurd left the Northern Survey in July 1774.¹⁰³³

The Recalcitrant J.F.W. Des Barres

In October 1773, Holland reminded Dartmouth that his ultimate ambition was not just to make a simple general map, but an "Atlas of all we have surveyed, so soon as this service is finished. Your Lordship, I hope will be pleased at seeing in One View, so great & valuable an Extent of Country as that now transmitted; that it will receive Approbation, & prove I did not exaggerate in my Last Letter concerning it's Maritime Advantages".¹⁰³⁴ Holland blamed his failure to complete an accurate general map of the entire Northern District on the lack of cooperation provided by Des Barres. It is perhaps because Holland

¹⁰³⁰ Thomas Hurd (1747-1823), served as head of the Admiralty Hydrographic Office (1808-23), see A. David, 'Hurd, Thomas Hannaford', *DNB*, vol.28, pp.951-2. On Hurd's appointment to the *Canseaux*, see *Canseaux Ship's Muster*, 30 August 1771, ADM 36/8516; Hornsby, *Surveyors of Empire*, pp.204-5.

¹⁰³¹ Thomas Wright, "Plan of the Coast from the West Passage of Passamiquodi Bay to the River St. John in the Bay of Fundy," Mss., 1772, BL: Maps K.Top.119.50, an enclosure to Holland to Dartmouth, 2 May 1773, CO 5/74, ff.132-7.

¹⁰³² Thomas Wright & Thomas Hurd, "A Survey of the Grand Bay of Passamaquoddy and the Sea Coast to St. John's River", with additions to 1785...[by George] Sproule," Mss., [1772 - 1785], CO700/New Brunswick 11; Penfold, no.747.; Other Northern Survey maps which were featured Hurd's hydrographic work include: Thomas Wright & Thomas Hurd, "Bay of Fundy, Campobello Island to Beaver Harbour", Mss. [1772], MODHD: 284 1; Thomas Wright & Thomas Hurd, "Bay of Fundy, Mace[']s Bay to St, John", Mss. [1772], MODHD: 284 2; George Sproule & Thomas Hurd, "Coast Westward of Penobscot Bay", Mss., [1772-3], MODHD: 289; James Grant, Charles Blaskowitz, Thomas Wright & Thomas Hurd, "Coast of North America from Penobscot to St. John's", Mss., [1773], MODHD: E468.

¹⁰³³ *Canseaux Ship's Muster*, 6 July 1774, ADM 36/8518.

¹⁰³⁴ Holland to Dartmouth, 28 October 1773, CO 5/75, ff.1-5.

and Des Barres had the same ambition to create a coastal atlas that the Admiralty surveyor, who was famously jealous and competitive, did not willingly extend assistance to Holland.

In the autumn of 1772, Holland had met with Des Barres at Falmouth, Maine, where he had given the Admiralty surveyor copies of his charts. The gesture was not reciprocated. He not only repeatedly requested the favour from Des Barres directly, but also sought to convince the Board of Trade and the Admiralty to intervene. Holland specifically desired Des Barres's general chart of peninsular Nova Scotia and Sable Island, which comprised a critical and hitherto blank portion of what would be Holland's intended General Projection (**Fig. 91**).¹⁰³⁵

In May 1773, Holland received a "copy of the survey of Nova Scotia" from Des Barres, but later stated that said chart was incomplete and of inadequate technical quality, unfit to be integrated with Holland's mapping. He, furthermore, implied that Des Barres, who was from the beginning of 1774 in London, had already completed a much better version of that chart, but instead left him with this inferior version. He asked Pownall to assist him "as there are Defects therein which that he will avoid in that he delivers; I wish to have the most accurate Draft possible."¹⁰³⁶

By 1775, Holland had completed two large regional maps that together comprised the southern half of the general projection, embracing all of the regions that lay to the south and west of where Des Barres's surveys terminated. Holland was left lamenting with "infinite chagrin" that while he knew his chorographic maps were useful for addressing localized matters of administration, only a great general map would allow one

¹⁰³⁵ J.F.W. Des Barres, *A Chart of Nova Scotia*, (London, 1775).

¹⁰³⁶ Holland to Pownall, 14 April 1774, CO 5/75, ff.101-2.

to comprehend broader matters of policy, in addition to assisting trans-Atlantic navigation. He wrote Pownall “none of the plans I have transmitted can be applied for any public use or Advantage, until the General map under a general scale is transmitted [as only it] will undoubtedly give a more comprehensive idea of the surveys than the same could, if separated into several parts tho’ examined successfully” and only that which would it be rendered “as useful to the Mariner as the Geographer.”¹⁰³⁷

When Holland wrote his last letter to Dartmouth in September 1775, Des Barres had still not sent him a revised copy of the Nova Scotia chart. Indeed, as we shall soon see, it would be Des Barres who would acquire Holland’s work to make the accurate general map, and not vice-versa.¹⁰³⁸

Maine & the Timberlands

In 1772, Maine established its dominance in the timber trade, with Falmouth, for the first time, becoming the prime mast exporting port, that year shipping out 382 masts to Portsmouth’s 329, and Nova Scotia’s 189.¹⁰³⁹ While this bounty was very encouraging, it also led to increased friction between the Crown and the region’s residents. Consequently, accurate mapping of the region’s topography and the locations of man-made development related to forestry became a heightened administrative imperative.

The Board of Trade, from Hillsborough to Dartmouth, consistently favoured an aggressive forestry policy, but successful implementation of Britain’s policy had to depend upon the royal officers who were resident in the colonies, notably the Surveyor-

¹⁰³⁷ Holland to Pownall, 20 December 1774, CO 323/29, pp.43-50, letter printed in full, *NJCD*, vol. X., pp.518-21.

¹⁰³⁸ Holland to Dartmouth, 20 September 1775, CO 5/76, ff.148-9, letter printed in full, *NJCD*, vol. X, pp.599-600.

¹⁰³⁹ Albion, *Forests and Sea Power*, pp.275-6.

General of Woods and the relevant provincial governors. The acquisition of masts and the interdiction of illegal loggers relied on breaking intelligence. Additionally, as Wentworth remarked, “My commission as Surveyor-General of Woods requires me to report to the Secretary of State for the Colonies, the Treasury and the Admiralty,” and, in the absence of a clear chain of command to London, it was the local authorities who needed to act decisively.¹⁰⁴⁰ During Dartmouth’s tenure, Governors Wentworth and Hutchinson actively pursued every means they could to tighten imperial control of mast timber in Maine, initiatives forestalled only by the advent of the Revolution.

Wentworth was driven by a need to find a workable forest policy because of his frustrations with the status quo. His primary focus was finding a way to deliver a definitive victory in his showdown with the Kennebeck Proprietors by having the matter referred to the Vice-Admiralty Courts of Boston, which habitually favoured the Crown.¹⁰⁴¹ In reference to the suit, Wentworth promised Dartmouth “I shall take all the Pains in my Power support it properly here. And in Case it should be given against the Crown I shall lodge an Appeal to the High Court of Admiralty in England.”

Wentworth hired the prominent attorney Samuel Fitch and, curiously, the rebel-rouser, James Otis, Jr., who was nevertheless a leading specialist on land law. Not to be outdone, the Proprietors charged the brilliant John Adams, Wentworth’s Harvard classmate and a future U.S. president, to argue their case. While first convened in October 1772, much to the governor’s consternation, Adams employed a series of delaying tactics to ensure that the matter dragged on for several months.¹⁰⁴²

¹⁰⁴⁰ Wentworth to Hillsborough [but received by Dartmouth], 26 September 1772, CO 5/937, ff.133-4.

¹⁰⁴¹ Kershaw, *Kennebeck Proprietors*, pp.217-8.

¹⁰⁴² Kershaw, *Kennebeck Proprietors*, pp.218-9

On 13 May 1773, Wentworth was informed that the Vice-Admiralty Court in Boston had sided decisively with the Kennebeck Proprietors. John Adams had managed to prove that the Kennebeck claim had maintained an unbroken “chain of ownership” extending from the Plymouth Company’s original charter of 1629. Moreover, the Crown was liable for compensation to the Proprietors for the timber it had previously seized.¹⁰⁴³ Wentworth’s promised appeal was pursued, but it came too close to the end of the British regime to have any effect.

While the case was still being decided, Wentworth devised his overarching forestry policy that would both maximize the Crown’s access to timber and minimize conflict with colonial landholders. His policy resurrected the idea, first articulated by Holland, to create a new province, or commodity colony out of Maine, thus neutralizing the powerful forces in Boston opposed to the Crown’s rights. With this new jurisdiction, he advocated the creation of designated forestry reserves in any new townships which were to be formed. In January 1773, he proposed to the Admiralty that “If in every Township of six miles square, One Reservation not exceeding 1500 acres be made in such place the Surveyor-General should direct, and the Inspector to survey said tract & mark it before the Patent passes.” Therefore “by reserving such a lot in each township the crown would of course have the advantage of selecting the best timber.” Instead of maintaining an adversarial relationship with colonists, Wentworth envisaged a symbiotic accord, by which “The country might be settled & consequently their own convenience

¹⁰⁴³ L.K. Wroth and H.B. Zobel (eds.) *Legal Papers of John Adams* (Cambridge, Mass., 1965), vol. II, p.258.

[the settlers] would open roads & the people would be gladly employed in hauling the Timber to the desired Sea Ports.”¹⁰⁴⁴

Like the Board of Trade’s general land grant reform policies, Wentworth’s forestry policy proposals would rely on access to accurate surveys, such as those done by Holland’s teams. Indeed, the long-standing collaboration with Holland provided Wentworth with the information he needed to develop his proposed timber strategies. Wentworth recalled, that he “personally traversed the Woods from Lake Winnipisioket [Winnipisaukee] to white River falls on the Connecticut River, thence up said river to the 45th Degree of Latitude, and thence by another direction through the pathless Wilderness down to the Sea Coast. – discovered great mast trees – told everyone to preserve them.” In June 1773, Holland mentioned to Haldimand that he had recently accompanied Wentworth on such a timber reconnaissance expedition.¹⁰⁴⁵

So that his officers could patrol the Maine coast, Wentworth wrote to the Admiralty requesting that he should be supplied with “a small schooner, from 70 to 90 tons, for casting with 16 men, 3 officers included”. Wentworth praised “the ready & most useful aid I have received from Mr. Mowat, in accommodating me with passages to these places, which was absolutely necessary, & his unwearied assiduity at all times in assisting me, by every means in his power to carry the laws for preserving the pine timber into execution, which, but for this gentleman’s good disposition and zeal, must have been utterly impossible for me to have so well accomplished”¹⁰⁴⁶.

¹⁰⁴⁴ Wentworth to Phillip Stephens (Under-Secretary of the Admiralty), 13 January 1773, ADM 1/3820, pp.272-305; also another copy in New Hampshire Historical Association: Wentworth Letter Book II, pp.41-2, see also Kershaw, *Kennebeck Proprietors*, p.219 and J. Malone, *Pine Trees and Politics*, pp.140-1.

¹⁰⁴⁵ Holland to Haldimand, 30 June 1773, BL: Haldimand Papers, Add. Mss. 21730, f.123.

¹⁰⁴⁶ Wentworth to the Right Honourable Commissioner of his Majesty’s Treasury, 26 November 1773, Wentworth Letter Book, M#204.00, cited in Hornsby, *Surveyors of Empire*, pp.80-1.

In 1773, Scammell went on a mission to survey the now infamous townships which lay to the east of the Penobscot River, resulting in the now lost “The Plan...or Survey of the Thirteen New Townships”.¹⁰⁴⁷ He sought to discern whether the region was actually blessed with the bounty of mast timber as so rumoured. Prior to this mission, Scammell, who had for some time been searching for accurate maps of Maine, noted that “His Excellency Governor Hutchinson furnished me with the Survey of the Sea Coast: and all the Pines, Ponds, Marches, Meadows and Swamps, are planned from the Courses.”¹⁰⁴⁸

The precise identity of the map that the governor gave Scammell is not known. However, the description of the map suggests that it could only have been a highly detailed topographic map, and one which far exceeds the qualities of any known map of Maine from that period. The fine series of maps of eastern Maine commissioned by Governor Bernard in 1764 and 1765, while the most planimetrically-advanced maps predating the General Survey, would not have been of sufficient detail or accuracy.¹⁰⁴⁹ Indeed, they pale in comparison to the maps completed by Holland’s deputies in the early months of 1773, which covered that very same region and showed precisely the details described by Scammell.¹⁰⁵⁰ We know that Holland frequently provided governors with copies of some of his maps, so it is perfectly plausible that Hutchinson had been given

¹⁰⁴⁷The map “The Plan...or Survey of the Thirteen New Townships” is specifically mentioned in Scammell to Pownall, CO 323/29, pp.19-21.

¹⁰⁴⁸ Apparently Scammell was not impressed with the pines stands of eastern Maine, as he recounted that “I found but very few Pine Trees fit for Governments use, and those so widely scattered as not to merit Attention”, Scammell to Pownall, 28 December 1773, CO 323/29, pp.19-21;

¹⁰⁴⁹ Refer to “A Survey of Six Townships on the East Side of the river Penobscot,” Mss, 1764, CO 700/Maine 16 and “A Plan of the Seven Townships laid out on the East side of Mount Desert River,” Mss. 1764, CO 700/Maine 18, Penfold, nos.2435 and 2437.

¹⁰⁵⁰ For examples, Refer to George Sproule, “A Plan of the sea coast from Kennebeck River to Round Pond, on the West side of Muscongus Bay, including the islands, rivers, etc.,” Mss., 1772-73, BL: Maps K.Top.120.20 (Fig. 7 below) and George Sproule & James Grant, “A Plan of the Sea Coast from Pemaquid River to Bens River in Edgemoggin Reach including St. George’s and Penobscot Rivers,” Mss., 1772-73, ADM 352/159 (formerly MODHD: 10 83).

such maps of Maine while Holland's surveyors were visiting Boston in the spring and summer of 1773. In any case, the story is illustrative of the importance that the forestry programme placed on accurate cartography.

Elsewhere, Adolphus Benzell, Wentworth's forestry inspector for northern New York and southern Québec, lamented that "When I last Year was at Quebec, I could find but few unintelligible Sketches of some French Seigneuries, situated between Lake Champlain, Sorel & St. Laurence Rivers – I shall therefore make a Second Application to the Surveyor-General's Office at Quebec, of what Plans & Intelligences I can be supplied with there."¹⁰⁵¹ Evidently, Holland had not left a copy of his 1768-1769 survey of the Richelieu River valley with John Collins, his resident deputy in the Canadian capital.

While Wentworth pursued his proposal, Governor Hutchinson, as related in his 1771 speech, lobbied Whitehall to enact a policy that would freeze settlement in the Sagadahoc Territory (eastern Maine), and ideally evict those colonists that were already established there, with the aim of creating an exclusive Crown forestry zone. Writing to Dartmouth, he declared that "The state of the eastern Country becomes every day more serious & important from the rapid increase of the Inhabitants there."¹⁰⁵² His prime concern dealt with the thirteen townships that lay to the east of the Penobscot River which had been approved by the provincial assembly, but of which twelve had never received royal approval. He noted that 1,000 to 1,500 families had already moved into the region and maintained that they were responsible for illegally cutting vast quantities

¹⁰⁵¹ Adolphus Benzell, Inspector Of "Unappropriated Lands" in Canada & Lake Champlain, "Remarks on Lake Champlain For His Excellency Gov. Wentworth, Surveyor-General of all and Singular His Majesty's Woods in North America", 11 November 1772, ADM 1/3820, pp.217-33.

¹⁰⁵² Hutchinson to Dartmouth, 23 October 1772, CO 5/761, ff.228-9, enclosed a historical treatise written by Hutchinson in 1763, "A State of Claim of the Province of Massachusetts Bay to the Lands between the Kennebec and St. Croix Rivers," which opened the door to the possibility of the Crown seizing claim to the region from Massachusetts.

of mast pines, which were duly “transported to England and the King has paid no inconsiderable sum as a bounty for bringing away his own Timber without his license.” He warned that “As the settlers increase, this mischief increases.”¹⁰⁵³

As a renowned historian and legal scholar, Hutchinson was aware that Massachusetts’s claim to the Sagadahoc territory was on shaky ground.¹⁰⁵⁴ He repeatedly suggested that the matter should be referred to Parliament where “it may deserve consideration whether it would be good policy...if this country should be made a distinct Government” and where by which it could be decided “who would remain.”¹⁰⁵⁵ He eventually asked Dartmouth to secure the issue of a royal instruction to that effect, presumably so that he would not be blamed personally for such an unpopular decision.¹⁰⁵⁶

Indeed, Hutchinson faced considerable resistance from the Massachusetts Assembly, who consistently supported the development of the Sagadahoc: Dartmouth received numerous petitions from settlers and their representatives in this regard.¹⁰⁵⁷ The report of the Assembly maintained that there was “great tranquility and goodness in the 13 townships” and that the settlers only cut down small trees and not the reserved mast pines. Cleverly bringing up a point that sounded quite similar to that advanced by Wentworth, they contended that by the “sweat of [their] brow” their labours had created

¹⁰⁵³ Hutchinson to Dartmouth, 13 November 1772, CO 5/761, ff.254-9.

¹⁰⁵⁴ Hutchinson to Dartmouth, 16 October 1773, CO 5/762, ff.408-13. This letter Hutchinson expands on his arguments articulated in the “State Claim” (above). Hutchinson was also the author of what was then the authoritative history of his province, T. Hutchinson, *The History of Massachusetts: From the First Settlement Thereof in 1628 Until the Year 1750* (London: Vol. I, 1764; vol. II, 1767; vol. III, published posthumously in 1828).

¹⁰⁵⁵ Hutchinson to Dartmouth, 23 October 1772, CO 5/761, ff.228-9.

¹⁰⁵⁶ Hutchinson to Dartmouth, 16 October 1773, CO 5/762, ff.408-13.

¹⁰⁵⁷ [Robert Murray et al.] “Petition of Inhabitants of Boothbay, Lincoln County [just east of the Kennebec River] to the King,” 23 October 1772, CO 5/762, f.175. John Calef, who would figure prominently in Maine’s affairs during the Revolution, was sent to London to advance the petition and other eastern Maine claims. While Calef was otherwise a Tory ally of Hutchinson, the governor later advanced that his mission to Whitehall would have the opposite effect from that intended: “I rather thought this business [Calef’s lobbying] would end in the separation of the Territory from the rest of the province,” Hutchinson to Dartmouth, 30 December 1772, CO 5/762, ff.29-36.

an infrastructure of roads, mills and wharfs that opened up the country, making it cheaper and easier for the royal contractors to acquire masts. They lobbied Dartmouth to have the King approve the townships, while proscribing harsher penalties for illegal logging. Alluding to the hypocrisy of royal policy, they pointed out that former Governor Bernard received the very large grant of Mount Desert Island in 1763, yet today the townships' settlers were considered to be "intruders."¹⁰⁵⁸

In theory, Hutchinson, Wentworth and Dartmouth all concurred that the ultimate solution would be the creation of a new province in eastern Maine where the crown would have unfettered rights to land title and therefore control of mast timber. This idea is reminiscent of the "New Ireland" proposal Samuel Holland advocated in 1770, and one can only speculate as to what connection might exist, as it is at least clear that both Wentworth and the Board of Trade would have been apprised of his proposals. Even while recommending his forestry reserve scheme to the Admiralty, Wentworth wrote that "If it should be judged expedient to Grant the Lands & erect them into a Government, I presume it would effectually secure a resource of Timber."¹⁰⁵⁹ Dartmouth, agreed that ideally "when the remote Situation of a great part of the Country from the Seat of Government is considered, it would be more eligible that it should be erected into a separate Province". However he conceded that "both Opposition from the Assembly and other [legal] difficulties will "render such a Scheme impracticable." He advanced a more moderate suggestion that would allow the settlers to stay if forestry reserves, similar to those advanced by Wentworth, were protected, such that "it might be advisable for the Crown to release to the Province of Massachuset's Bay [*sic*] it's rights of Confirmation of

¹⁰⁵⁸ "Representation of the Massachusetts Bay House of Assembly on Maine," an enclosure, Hutchinson to Hillsborough [but received by Dartmouth], 15 July 1772, CO 5/761, ff.168-81.

¹⁰⁵⁹ Wentworth to Stephens, 13 January 1773, ADM 1/3820, pp.272-305.

Grants of Land in that district upon Condition that the Province on their part released to the Crown such Tracts as upon Survey should appear proper to be preserved as Nurseries for Masts and naval Timber.”¹⁰⁶⁰

Under these circumstances, Holland acted audaciously when he endorsed a petition from his deputies requesting that the Privy Council grant each of them 5,000 acres on Penobscot Bay. In their memorial to Dartmouth, the surveyors noted that they applied directly to the Crown, as “the Legislature of Massachusetts is not well disposed towards us,” presumably because the Assembly had no desire to reward British soldiers seconded to Crown business.¹⁰⁶¹ Holland attested to Dartmouth that “I am a witness of what they assert in regard of the hardships undergone by them in the cheerful discharge of their duty.” As recognition of that he hoped their request would be “favourably answered” so long as “it does not interfere with other views of Government.” Proposing the grants as a remedy to the lawlessness of the Maine coast, he proposed that it would be “a means of giving an air of policy and civility to at least one spot in an immense track of country where every man seems to act as the holders of his lands, by his own pleasure and conveniency.”¹⁰⁶² Likely with the dispiriting Kennebeck judgment in mind, Dartmouth replied that the surveyors request was “not unreasonable” but that “It is at least doubtful whether Crown has any right to soil within the Massachusetts charter.”¹⁰⁶³

¹⁰⁶⁰ Dartmouth to Hutchinson, 4 August 1773, CO 5/762, ff.315-6.

¹⁰⁶¹ “Memorial of Thomas Wright, George Sproule, Charles Blaskowitz; James Grant, Thomas Wheeler & George Derbage,” an enclosure to Holland to Dartmouth, 2 May 1773, CO 5/74, ff.132-4.

¹⁰⁶² Holland to Dartmouth, 2 May 1773, CO 5/74, f.132.

¹⁰⁶³ Dartmouth to Holland, 4 August 1773, CO 5/74, ff.140-1.

The surveyors then proceeded to request grants in New Hampshire, but their application came too close to the Revolution to be approved.¹⁰⁶⁴

With regards to the timber industry, Maine was certainly the starring attraction. Yet, the imperative to preserve and harvest mast pines was also an objective in other colonies. Holland, for example, had previously reported that Nova Scotia's St. John's River valley (now in New Brunswick) and Cape Breton Island possessed many significant timber stands.¹⁰⁶⁵ In the spring of 1774, Nova Scotia's surveyor-general, Charles Morris, proposed to Governor Francis Legge "that lands on the River St. John should be surveyed and granted [exclusively to] the Crown as pine timber reserves." In addition he recommended that "all of the forests on Cape Breton Island should be reserved for the exclusive use of the Crown for ship-building."¹⁰⁶⁶ Legge duly endorsed and forwarded this plan to Dartmouth.¹⁰⁶⁷ While a moratorium on settlement in Cape Breton remained until 1784, the Revolution ensured that the St. John valley's great timber stand would not be properly exploited by the Royal Navy until after the war.

Wentworth claimed that he had reduced the amount of illegal logging to "one hundredth" of the level experienced when he first assumed the Surveyor-Generalship of

¹⁰⁶⁴ "Petition of Thomas Wright, George Sproule, George Derbage, Charles Blaskowitz, James Grant and Wheeler to Rt. Hon. Earl of Dartmouth Praying for Land Grants in New Hampshire," an enclosure, Holland to Dartmouth, 28 October 1773, CO 5/75, ff.1-5.

¹⁰⁶⁵ In 1768 Holland wrote rather ebulliently about the island's potential as a naval forestry reserve: "The Island of Cape Breton is principally forest lands, here grow the greatest quantity of a species of Timber called by us Black Birch, the wood of this tree is firm close grained in colour resembling the Mahogany." He also mentioned the "great quantities of Black Spruce, - This tree affords excellent mast for vessels about one hundred tins and under," Samuel Holland, "A Description of the Island of Cape Britain," an enclosure to Holland to Hillsborough, 10 November 1768, CO 5/70, ff.1-19, Harvey, 'Holland's Description', pp.1-134. In reality, Birch wood is nothing like Mahogany and anyone who actually knows Cape Breton, is well aware that it is, and always was, conspicuously void of large trees due to its thin rocky. His statements in this regard might have been akin to his exaggerated report of the island's potential as a Cod fishery.

¹⁰⁶⁶ Charles Morris to Legge, 21 May 1774, an enclosure to Legge to Dartmouth, 24 May 1774, CO 217/50, ff.85-90.

¹⁰⁶⁷ Legge to Dartmouth, 24 May 1774, CO 217/50, ff.85-90.

Woods.¹⁰⁶⁸ Sadly, it was all for naught, as by the early months of 1775 the Crown had lost any real control over the Kennebec Valley, and indeed all of Maine. Timber exports were severely reduced with the imposition of the Continental Congress's anti-exportation embargo which commenced on 1 December 1774. In May 1775, Wentworth's chief mast contractor in Falmouth, Edward Perry was attacked and almost killed. Indeed, that spring, the very last shipment of New England timber bound for Britain had to be secreted out of Maine, ending the Royal Navy's access to their finest source of masts.¹⁰⁶⁹

Maps Completed on Maine & the Timberlands

While most of the surveying of the coast of Maine and the southeastern coast of what is now New Brunswick had been completed by Holland's four field teams by the end of the 1772 season, certain areas and aspects of the coastlines and the drafting of charts remained to be completed. In November 1772, Holland wrote to Dartmouth that "I am sorry it is not in my power to transmit the plans of the Eastern Country – from Kennebec to St. John's River...on account of the infinite number of Islands and numberless Harbours and Bays, it will require another summer to finish it, it being a most sever and labourious Service. Winter will be [spent] preparing survey of parts already done."¹⁰⁷⁰ In the spring of 1773, Holland thus deployed three parties, under James Grant, Charles Blaskowitz and George Sproule to finish details of the Maine coast.

Completed by the end of the 1773 season, the monumental regional map "A Plan of the sea coast from Cape Elizabeth...to St. John's River" shows the final result of the

¹⁰⁶⁸ Albion, *Forests and Sea Power*, p.263.

¹⁰⁶⁹ W. R. Charlton, "New England's Masts and the King's Navy," *New England Historical Quarterly*, vol. XII (1939), p.11.

¹⁰⁷⁰ Holland to Dartmouth, 10 November 1772, CO 5/74, ff.1-2.

entire survey of the timber coast (**Fig. 92**).¹⁰⁷¹ At over eight feet long, at a scale of 2 miles to an inch, it contextualizes all of the individual larger-scale surveys providing the administrator with a panoptic view of this land, which was then the focus of so much political capital and litigation. On a technical level, it is one of the finest examples of eighteenth century coastal topographic surveying, and represents a key element of Holland's planned "General Projection," having been retracted from the several regional maps drafted by Holland's teams since 1771.

While the large key map could act as an aid for general forestry and settlement policy planning, it was the individual area maps, at a scale of 4000 feet to an inch, which offered officials the information they needed to devise schemes about where to best acquire mast timber, and in doing so, limit that illegally procured by colonists. In May 1773, Holland dispatched to the Board of Trade a series of these large-scale maps that depicted the most important and contentious timber areas covering the coastlines from the mouth of the Kennebec River, through Penobscot Bay, to Pleasant River past Mount Desert Island; in addition to a map of southeastern coastline of mainland Nova Scotia (New Brunswick).¹⁰⁷² Holland was well aware of their potential use, noting "the Labor underwent in their execution, & the importance of their subject; as in so much the extent as that of each plan, there is such a multitude of Harbors and retreats for Shipping, & a country richly calculated for the purposes of navigation, Agriculture & Commerce, if

¹⁰⁷¹ George Sproule, James Grant, Charles Blaskowitz & Thomas Wright, "A Plan of the Sea Coast from Cape Elizabeth, on the west side of Casco Bay, to St. John's river, in the Bay of Fundy, including part of Kennebec and Amorrescogin rivers, with all the islands, bays, harbours, inlets, &c.," Mss., [1773], BL: Maps K.Top.120.18, an enclosure to Holland to Dartmouth, 28 October 1773, CO 5/75, ff.1-5.

¹⁰⁷² Maps of the far eastern regions of Maine, such as Goldsborough Bay and Machias Township were completed later in 1773. For Example, Charles Blaskowitz, "A Plan of the Sea Coast from Goldsborough Harbor to the West Passage of Passamaquody Bay including the Harbours, Bays and Islands in that Extent", Mss. [1773]. MODHD: A9449.

Good Soil, Deep Harbours & secure Havens, with plenty of Ship timber, are any Recommendation.”¹⁰⁷³

One of the most important of these maps, by George Sproule, depicted the lower Kennebec River and adjacent coastlines.¹⁰⁷⁴ This area encompassed the southern reaches of the Kennebeck Proprietors tract, the focus of Wentworth’s high-profile court case. Importantly, this map shows, with the notation of “Jones’s Eddy, Where the Mast Ships Load” the precise widening point near the mouth of the Kennebec where mast pines, both legally and illegally cut, were to be loaded onto ocean-going vessels. Moreover, the map features the locations of all manmade features relevant to the forestry industry, indicated through the use of symbols employed by Sproule and his colleagues throughout the Maine coast.

These symbols were first explained in a reference on the first of the General Survey’s Maine series, Sproule’s “Casco Bay”.¹⁰⁷⁵ This legend included symbols representing the following features: “a Meeting House,” “a Church,” “a Sawmill,” “a Gristmill,” “a Road.” “Garrison House” (**Fig. 93**). The map’s annotations and symbols provided Wentworth, who would most certainly given access to, if not given his own copy of the map, a detailed plan by which he could decide where best to send his inspectors and contractors. Indeed his men could be sent to surprise those at work at sawmills, perhaps caught illegally preparing mast pines or sawing them into large planks. The locations of roads would indicate where timber could be transported. Meetings

¹⁰⁷³ Holland to Dartmouth, 2 May 1773, CO 5/74, ff.132-7.

¹⁰⁷⁴ George Sproule, "A Plan of the sea coast from Kennebeck River to Round Pond, on the West side of Muscongus Bay, including the islands, rivers, etc.," Mss., 1772-73, BL: Maps K.Top.120.20.

¹⁰⁷⁵ George Sproule, "A Plan of the Sea Coast from Cape Elizabeth, to the entrance of Sagadahock, or Kennebeck River, including Casco Bay with all its islands, harbors, &c." Mss., 1772, BL: Maps K.Top.120.19, an enclosure to Holland to Pownall, 15 June 1772.

houses, the centres of community affairs and gossip, would be good places to send spies or to find locals to bribe for information.

Other examples, such as Sproule & Grant's maps of the coastline from St. George's River to Penobscot Bay included curious ethnographic details, such as the location of the "Lutheran Church" and the "German Meeting House", indicative of the Hanoverian settlers who moved to the area in the 1730s (**Fig. 94**).¹⁰⁷⁶ In many places, the names of specific property or mill owners are labeled, perhaps clues as to who might be the prime suspects in any acts of illegal forestry.

The Northern Survey in New Hampshire

Working tirelessly to develop and improve his province, John Wentworth was a governor who valued and used the information provided by the General Survey. Holland was pleased to tell Dartmouth that "Wentworth helps me as much as possible." As the highly important planned land route to Canada was charted and the series of regional maps used to create the general map of the province were completed, Wentworth showed his appreciation to Holland by granting him 3,000 acres of land¹⁰⁷⁷ and by certifying his legally-contested second marriage to the *québécoise* belle Marie Rolette.¹⁰⁷⁸

¹⁰⁷⁶ George Sproule & James Grant, "A Plan of the Sea Coast from Pemaquid River to Bens River in Edgemoggin Reach including St. George's and Penobscot Rivers Deer Island Isle Haute and the Fox and Long Islands with all the other Rivers and Islands also Bays Habours & c.," Mss., [1772-3], ADM 352/159, paired with Charles Blaskowitz and James Grant, "A Plan of the Sea Coast from Pleasant River to Penobscot Bay," Mss., 1772-73, BL: Maps K.Top.120.21. Hutchinson discusses the history of How German Lutheran immigrants settled in the St. George's River area in the 1730s under the patronage of Brig. Gen. Waldo, Hutchinson to Dartmouth, 23 October 1772, CO 5/761, ff.228-9.

¹⁰⁷⁷ In 1773, Wentworth awarded Holland a 3,000 acre land grant near Plymouth, N.H. This land was formerly owned by the Crown, and the transfer was approved by the Assembly on 8 March 1773, A.S. Batchellor (ed.), *State of New Hampshire: Town Charters* (Concord, N.H., 1895), vol. XXV, pp. 460-3. It is not clear who surveyed Holland's land and drafted the plat contained in the provincial records. However, it represented a very elementary task of surveying that would not have required the skills of Holland or his deputies.

¹⁰⁷⁸ Holland married Gerturde Hasse at Nijmegen, Holland in 1749. Holland left his native country without his wife in 1754, but the marriage was not legally terminated, leading to allegations of polygamy after

Wentworth's reply to Dartmouth's "Hears of Enquiry" Circular, which he wrote in April 1774, was undoubtedly the most thoughtful and thorough of all of the governors' responses, especially with regards to his knowledge of the geography of his province.¹⁰⁷⁹

The first five of Dartmouth's twenty-two questions related directly to geography:

Wentworth attributed his answers to "Mr. Holland's Map of this Province" and his scientific observations. Due to "the astronomical observations of Samuel Holland", he was able to fix the precise geodetic coordinates of several of the colony's key towns and landmarks, including Portsmouth, which Holland cited as being at "Latitude 43°4' 15" North, Longitude 70°43' 15".

In response to a request for a description of New Hampshire's boundaries, the governor lamented the loss of Vermont, then moved on to address "the controverted bounds" between his province and Massachusetts Bay. Although the line had been officially surveyed in 1737,¹⁰⁸⁰ Wentworth felt that the demarcations had been to "the wrong of this Province" due to the inaccuracy of the surveyor and his instruments. Critically, Wentworth maintained that Holland's re-surveying of the provincial boundaries had reclaimed much land for New Hampshire including a triangular sliver of 59,872 acres, three miles by fifty miles, running along the southern boundary eastwards from the Connecticut River.

Holland's survey of the New Hampshire-Maine line, which ran north from the head of Salmon Falls River up to 45° north Latitude, showed that "at least Ten townships

Holland married Maire Rollette (b. 1741) in 1762. Hasse continued to contest her marriage rights until 1780, Chipman, 'The Life and Times of Major Samuel Holland,' pp.14 and 80-82.

¹⁰⁷⁹ Wentworth's answers the "Hears of Enquiry," Wentworth to Dartmouth, 20 April 1774, CO 5/938, ff.68-82.

¹⁰⁸⁰ Return back to George Mitchell, "A Copy of the Plan returned by his Majtys Comrs for settling the Boundaries between the Provinces of New Hampshire and the Massachusets Bay, along with the said Comrs Judgment of 2 Sept. 1737," MPG 1/140, extracted from CO 5/882, Penfold, no. 2559.

of Six miles square each” had unjustly come under the jurisdiction of Maine. Wentworth inferred that if his province had regained control over such territory, it would have been developed more aggressively, as he critically noted that “One of these towns only is inhabited and cultivated under purchase from the Massachusetts Bay. I believe one more is granted by that Province, but no material improvement or cultivation yet made upon it, if any at all.” Thus, this ancient error had been, in Wentworth’s view, not only to the detriment of New Hampshire, but to the Crown itself, as it would be “to the diminution of His Majesty’s Right of Sail and revenue of Quit-rents.”

Exceptionally, Holland’s calculations allowed Wentworth to provide Dartmouth with a figure for the province’s land area, quoting 9,296 square miles. Given the disputed boundaries and jagged outline of the province, this proved astoundingly accurate: today, we know that New Hampshire’s land area is 9,350 square miles, a differential of less than 0.6%!¹⁰⁸¹ Wentworth translated this figure into 5,949,440 acres, of which Holland estimated about 100,000 was taken up by surface freshwater, leaving 5, 849,440 acres of land. In spite of these extremely precise calculations, Wentworth conceded that “It is utterly impossible” to determine how much of the overall land area is “cultivated or improved” although he estimated it to be 560,000 acres, or 9.6% of the total.

James Grant’s Connecticut valley map also presented Wentworth with the opportunity to make New Hampshire the transport and trade centre of his aspirations. The crest of the Appalachians between New England and Québec had long acted as an almost impenetrable barrier to transport and trade. Since their conquest of New France, British authorities had realized that the construction of a road linking the St. Lawrence valley with coastal New England would be of the greatest economic and military utility.

¹⁰⁸¹ Wentworth to Dartmouth, 20 April 1774, CO 5/938, ff.68-82.

In 1761, in pursuit of such a route, John Montresor mapped his harrowing winter trek across the Appalachians from Quebec City to Fort Halifax, Maine.¹⁰⁸² Building a road from Maine to Québec had subsequently been the unfulfilled ambition of governors Bernard and Hutchinson.¹⁰⁸³

Making New Hampshire the eastern terminus of such a promising conduit had likewise always been a key objective of Wentworth's designs, and as early as 1768 he proposed such a project to the lieutenant-governor of Québec.¹⁰⁸⁴ In 1773, with Wentworth's active support, Hugh Finlay, the Surveyor-General of Post Roads, took up the project, acknowledging the unacceptable delay of a few months that was often experienced with letters sent from Québec to Boston or New York. The Massachusetts Assembly's eventual refusal to fund any such project placed the ball in New Hampshire's court.¹⁰⁸⁵ In October of that year, Finlay visited Wentworth at Wolfeborough, proposing to lead a party to locate the best situation for the road, and asking for the governor's technical and financial assistance.¹⁰⁸⁶

Wentworth immediately consented to grant Finlay "all the information in my Power, supplied his party with such necessaries as they wanted and furnish'd them with

¹⁰⁸² John Montresor, "Plan of a Rout undertaken in Winter Jany. 26th from Quebec the Capital of Canada to the frontier Settlements of the Township of Topsham near Brunswick Fort on the river Ammerascaegin in the Province of New Hampshire Feby 20th 1760." Mss., LOC: G3721.P2 1760.M6 Vault (Force 39), Sellers & Van Ee, no.808; see also John Montresor, "A map of the sources of the Chaudière, Penobscot, and Kennebec Rivers by Montresore", Mss. [c.1761], LOC: G 3730 1761.M6 Vault, Sellers & Van Ee, no. 838.

¹⁰⁸³ Thomas Hutchinson wrote to Dartmouth that the "Road proposed by Governor Carleton from Chaudiere to Kenenebec would be advantageous to both Quebec and Massachusetts. If there is no intention of taking Maine away from Massachusetts the Assembly might comply" Hutchinson to Dartmouth, 1 October 1773, CO 5/762, ff.392-405.

¹⁰⁸⁴ Wentworth to Hector T. Cramahé (Lt. Gov. of Québec), 5 April 1768, cited in L.S. Mayo, *John Wentworth*, pp.99.

¹⁰⁸⁵ Finlay visited Wentworth on 6 October 1773, H. Finlay, ed. by F.H. Norton, *Journal kept by Hugh Finlay, Surveyor General of Post Roads, on the Continent of North America* (New York, 1867), pp.20-1. Finlay (General Post Office, New York) to Anthony Todd (Post Office, London), 28 November, 1773, an enclosure to Todd to William Knox, 10 January 1774, cover letter in CO 5/134, ff.146-7, the enclosure, CO 5/134, ff.221-2.

¹⁰⁸⁶ Wentworth to Dartmouth, 22 April 1774, CO 5/946, pp.8-15.

an able intelligent and experience'd surveyor and Guide, from my Plantation," who may have been Benjamin Whiting, who had accompanied James Grant to the region in 1771.¹⁰⁸⁷ Wentworth recounted that:

“The Route explored was from Connecticut River near the 45th North Latitude to St. Francis river, Which he found perfectly convenient for a good Road, and will enter the River St. Lawrence, near midway between Quebec and Montreal, and of course benefit both Provinces. This is the only Road which is at present supp'd to be safe for a Post-road; as being the Shortest communication from Canada free for Watercarriage; which is impracticable for some months in ev'ry year, and always uncertain. As Mr. Finlay said He was entirely satisfied that this must be the Road, and that it for his Majesty's service, that it should be early established, I at his request applied my self to making the road thro' this Province passable; which I have accomplis'd and have settlements erected, so that a post-rider will not be one night without a stage to refresh at, and the greater part of the road, a stage within four hours.”¹⁰⁸⁸

Upon his return to Portsmouth, Finlay drafted a map of the proposed route, albeit based on his surveys which were conducted by unscientific means.¹⁰⁸⁹

Holland was well aware of the project and believed that mapping such a corridor would be of great consequence to upholding the systematic nature of the General Survey. The area Finlay mapped commenced in the territory embraced within Grant's Connecticut valley map. A scientific survey connecting Grant's survey with the St. Lawrence surveys of the 'Murray Map' would crucially place the relationship of Québec and New England surveys within their correct geodetic framework

Wentworth supplied Grant with the same guide he had afforded Finlay, and, in January 1774, they set out to remap the route by scientific means. Grant returned to

¹⁰⁸⁷ Benjamin Whiting was then the Sheriff of Hillsborough County, Wentworth to Dartmouth, 22 April 1774, CO 5/946, pp.8-15.

¹⁰⁸⁸ Wentworth to Dartmouth, 22 April 1774, CO 5/946, pp.8-15.

¹⁰⁸⁹ *Ibid.*

Portsmouth in April with detailed surveying notes¹⁰⁹⁰ which confirmed Finley's map to be "exact within fifty Rods, and the distance five miles less than computed".¹⁰⁹¹

Lobbying for Dartmouth's support, Wentworth sent the colonial secretary a second map or "an exact Copy"¹⁰⁹² of the route based on Grant's survey (**Fig. 95**).¹⁰⁹³

The project gained very favourable notice in London, with Dartmouth informing Wentworth that "You are very much to be commended for the Assistance you have given to Mr. Findlay and Capt. Holland in the plan they have adopted for opening a Road of communication between Canada and the New England Colonies by the Rivers Connecticut and St. Francis."¹⁰⁹⁴ A clear link between the proposed road and the General Survey can be found on the Board of Trade's surviving copy of Grant's Connecticut Valley map, which features a manuscript notation for a "New Road proposed to R. St. Francis", circumstantially indicating that a contemporary official in London was reviewing the larger survey with the road project in mind.¹⁰⁹⁵

Unfortunately, the deteriorating political situation through 1774 and 1775 ensured that while Wentworth's road clearing crews had succeeded in "making the road thro' this Province passable" the Québec portion was not completed.¹⁰⁹⁶ As an exercise in counter-

¹⁰⁹⁰ [Description of a survey made by James Grant, one of Capt. Holland's party...], suggested as dating from 1773 or 1774, but likely dated earlier, Mss., printed in full in J. Belknap, *The History of New Hampshire*, vol. III, pp.299-300 (Boston, 1812) and Boulton (ed.), *Provincial Papers...relating to the Province of New Hampshire*, vol.VII, p.711.

¹⁰⁹¹ Wentworth to Dartmouth, 22 April 1774, CO 5/946, pp.8-15.

¹⁰⁹² Wentworth write to Dartmouth: "I have transmitted to Mr. Finlay and Mr. Foxcroft, Deputy Post-Master General of America a Copy of the first survey, and beg leave herewith to lay an exact Copy before your Lordship", Wentworth to Dartmouth, 22 April 1774, CO 5/946, pp.8-15.

¹⁰⁹³ Hugh Finlay, "Plan of a Road from New Hampshire to Canada", Mss. [1774], NA: MPG 1/1012, an enclosure to Wentworth to Dartmouth, 22 April 1774, CO 5/930, f.587, and NA: MPG 1/1013, a duplicate copy can be found at CO 5/938, f.177; Penfold, nos. 2570 and 2571.

¹⁰⁹⁴ Dartmouth to Wentworth, 6 July 1774, CO 5/938, ff.106-8.

¹⁰⁹⁵ Mss. notation in pencil on large-scale section no.6 of James Grant, "A Plan of the River Connecticut", CO 700/Connecticut 3.

¹⁰⁹⁶ Wentworth to Dartmouth, 22 April 1774, CO 5/946, pp.8-15

factualism, it is interesting to speculate what role, given the subsequent military activity in the area, such a corridor would have played in the Revolution.¹⁰⁹⁷

Despite being the only royal governor in the Thirteen Colonies to remain personally popular, Wentworth was unable to avoid the forces of revolutionary turmoil that first engulfed Massachusetts and spread north of the border. Discontent with the British regime had grown to such an extent, that an alarmed Wentworth communicated to Dartmouth in November 1774 that royal government was now “totally prostrated” by “popular tyranny.”¹⁰⁹⁸ At his request, Gage sent the *Scarborough* and Mowat’s *Canceaux* to patrol Portsmouth Harbour. In spite of those reinforcements, in June 1775, his government was replaced by a provincial congress. Wentworth was forced to seek refuge in Fort William & Mary. On 23 August, he left New Hampshire, ending 146 years of royal (British) rule in the province.¹⁰⁹⁹

[The Mystery of the General Map of New Hampshire](#)

Despite innumerable promises, there is no record that Holland ever sent a copy of the promised general map of New Hampshire to the Board of Trade. In the autumn of 1772, Holland once again promised Dartmouth that he would compile the by then long-awaited general map of New Hampshire during the upcoming winter “from Materials in our Hands”.¹¹⁰⁰ The following spring, he maintained that he was unable to send the map, as “I should have been glad to have had it in my power to send now the map of this Province, but I meet with some difficulties to my plan, I did not at first perceive, For as it

¹⁰⁹⁷ For a fascinating overview of events in the Quebec–Maine border region during the American Revolution, see Rodrigue, Barry Hadfield, “An Album in the Attic: The Forgotten Frontier of the Quebec–Maine Borderlands During the Revolutionary War”, *Journal of the Historical Society of Boston University*, vol.3, no.1 (January 2003), pp.45-73.

¹⁰⁹⁸ Holland to Dartmouth, 15 November 1774, CO 5/939, ff.2-13.

¹⁰⁹⁹ Wilderson, *Wentworth*, p.265

¹¹⁰⁰ Holland to Dartmouth, 10 November 1772, CO 5/74, ff.1-2.

is my intention to express the bounds of the several patents and townships, so I find that I cannot entirely depend on the Information of the Patentees, as many of them are jealous that they hold more land than the spirit of their grants will allow; which hath obliged me to have several times surveyed last Winter across the country to discover the true distances & I believe shall be obliged to have more made the ensuing Winter.”¹¹⁰¹

By the spring of 1774, Holland once again failed to send the map, claiming that his efforts had been hindered by the incompetence of “those who pretend to practice surveying in this Province.”¹¹⁰² Indeed, it seems that Holland’s men struggled to maintain their meticulous survey standards as George Sproule was then still engaged in running the province’s southern boundary with Massachusetts.¹¹⁰³ At the end of the year, Holland promised Dartmouth that he would shortly dispatch the map, but there is no record of its existence and it was never mentioned again in official correspondence.¹¹⁰⁴ In spite of Holland’s mysterious failure to send the provincial general map to the Board of Trade, we do know for certain that such a manuscript was completed. Indeed, when Wentworth answered Dartmouth’s “Heads of Enquiry” in 1774, he made ample reference to “Mr. Holland’s Map of this Province”, indicating that it had been completed.¹¹⁰⁵ The answer lies with one of the most fascinating manuscripts ever produced by the Northern Survey, an unfinished plan which came into the possession of General Gage, embracing a large swath of territory, including all of New Hampshire, part of Maine and extending all

¹¹⁰¹ Holland to Dartmouth, 2 May 1773, CO 5/75, ff. 132-7.

¹¹⁰² Holland to Dartmouth, 18 April 1774, CO 5/75, ff.103-4.

¹¹⁰³ “South Boundary of New Hampshire, April 8, 1774,” a manuscript document which describes how Thomas Wright used astronomical observations to fix the New Hampshire-Massachusetts boundary’s junction with the river at 42°, 43, 59” in the lower horizon of the map. This created the basis for George Sproule to demarcate the entire boundary line in 1774, document printed in full, Belknap, *History of new Hampshire*, vol. II, p.219 and I.W. Hammond (ed.), *The State of New Hampshire. Miscellaneous Provincial and State Papers 1725-1800* (Manchester, N.H., 1890), vol.XVIII, pp.655-6.

¹¹⁰⁴ Holland to Dartmouth, 20 December 1774, CO 323/29, pp.42-50.

¹¹⁰⁵ Wentworth to Dartmouth, 20 April 1774, CO 5/938, ff.68-82.

the way north to include the heart of Québec's St. Lawrence valley.¹¹⁰⁶ The map ambitiously, and successfully, endeavours to combine several of the most important surveys of recent years into one accurate geodetic frame, including those done by the Northern General Survey, that resulting from Montresor's 1761 overland expedition as well as the surveys done for the 'Murray Map'. Evident on the lower right section is an extremely detailed general map of New Hampshire, complete with all of its townships delineated and named, and showing the various roads that had recently been cleared to Wentworth's plan (**Fig. 96**).¹¹⁰⁷ Also evident is the route of the proposed New Hampshire-Québec road as surveyed by Finlay and Grant, clearly indicating that this map was made no earlier than the spring of 1774. It is clear that the rendering of New Hampshire as shown on this manuscript served as the basis for *A Topographical Map of the Province of New Hampshire* (1784), printed after the Revolution by William Faden (**Fig. 97**).¹¹⁰⁸ It is also worth noting that Holland's monumental manuscript chart embracing the coast of New England from Falmouth to Rhode Island shows a great

¹¹⁰⁶ [Samuel Holland & Deputies], [Topographical map of the province of New Hampshire, including Montresor's survey of the St. Lawrence and the Kennebec route to Quebec], Mss, [c.1774], WCL: Gage Collection, Maps 3-F-10, Brun, no.169. Unfinished, this map does not include a title or attribution, it however on both content and stylistic grounds it was either personally drafted by Holland or one of his principal deputies, or at the very least is a precise facsimile of their work. It focuses on New Hampshire and includes Grant and Wheeler's major surveys, delineates townships in southern New Hampshire, possibly given to Gage by Holland when they met in person in the summer of 1773.

¹¹⁰⁷ Detail – New Hampshire, southern townships from [Samuel Holland & Deputies], [Topographical map of the province of New Hampshire, including Montresor's survey of the St. Lawrence and the Kennebec route to Quebec], Mss, [c.1774], WCL: Gage Collection, Maps 3-F-10.

¹¹⁰⁸ Samuel Holland, *A Topographical Map of the Province of New Hampshire, surveyed...unto Samuel Holland Esqr...Printed for William Faden, Geographer to the King*. (London: William Faden, 1 March, 1784). The copy of the map in the National Archives (U.K.), WO 78/5748, Penfold, no.2572, has an interesting history, as it is folded, in a case with the label of the Quartermaster General's Department. A manuscript addition shows Captain Henry Mowat's land grant in the eastern part of Cardigan Township.

variety of detail with regards to township and patent boundaries, as well as topographical detail, which is also present on the 1784 printed map.¹¹⁰⁹

We can only speculate that John Wentworth took a copy of the general provincial map to London upon his departure from America in 1776. At some point he transferred the map to the care of his close friend and distant kinsman, Paul Wentworth. Called one of the “cleverest men in England” the enigmatic Barbadian was one of Britain’s most important spies in Paris during the Revolution. Faden’s 1784 printing of the general map is known to have been sponsored by Paul Wentworth.¹¹¹⁰

The Northern Survey in Metropolitan Massachusetts

With 250,000 inhabitants, Massachusetts was the third most populous province of the Thirteen Colonies after Virginia and Pennsylvania.¹¹¹¹ Economically and politically, its influence was far greater. Even though dominated by a mercantile class dependent on trans-Atlantic trade with Britain, the Massachusetts provincial assembly and her citizens, since the Townshend Duty crisis began in 1768, were quick to openly oppose any imperial measure which they felt infringed on their 1691 Charter. By the time the General Survey returned to map metropolitan Massachusetts in the spring of 1773, it was already apparent that the consequent maps would likely be needed for military purposes

¹¹⁰⁹ Samuel Holland & Assoc., “A Plan of the Sea Coast from Falmouth in Casco Bay to the Light House near Newport in Rhode Island. Including the Province of New Hampshire with its several Townships & c. also Nantucket Martha Vineyard and the Elizabeth Islands.”, Mss., [1775], ADM 352/158, an enclosure to Holland to Dartmouth, 27 May 1775, CO 5/76, ff.122-3.

¹¹¹⁰ Wilderson, *Wentworth*, p.308.

¹¹¹¹ This approximation is based on the midway point of two dated estimates, which show the population of Massachusetts (excluding Maine) as being 235,300 in 1770 and 268,600 in 1780, ‘Estimated Population of American Colonies, 1630-1780,’ Bureau of the Census, U.S. Department of Commerce, *World Almanac and Book of Facts* (1998), p.378.

as much as for civilian ends.¹¹¹² In March 1773, for example, antagonists published the private letters of the native-born governor, Thomas Hutchinson, which showed that he placed the interests of Britain over Massachusetts, as sentiment epitomized by his phrase “There must be an abridgement of what are called English liberties”¹¹¹³ Once the most respected citizen of the colony, with a public career spanning over three decades, Hutchinson quickly lost whatever support he may have still have enjoyed with the citizenry. The day Hutchinson departed for exile in London, 1 June 1774, also marked the day the Intolerable Acts come into effect, and with it the death knell of British rule in Massachusetts.

Given the geographical complexity of the coastline, the reduced access to surveying vessels, and the deteriorating political situation, the progress made by the surveyors to finish the entire coastline of metropolitan Massachusetts from Cape Ann to the Rhode Island line was impressive. This achievement is captured by the map, “A Plan of the Sea Coast from Boston Bay to the Light House near Rhode Island”, which embraces all of the programme’s surveys conducted during the 1774 season, reduced from several larger-scale area surveys (**Fig. 98**).¹¹¹⁴

¹¹¹² It will be recalled that the stretch of the province’s coastline from the New Hampshire line to a point south just past Cape Ann had already been surveyed in 1771, refer back to James Grant & Thomas Wheeler, “A Plan of the Sea Coast from Little Rocks near Hampton to Normans Woe near Cape Ann,” Mss., 1771, CO 700/Massachusetts Bay 13, Penfold, no. 2502.

¹¹¹³ The infamous ‘Hutchinson Letters’ were written by the then lieutenant-governor between June 1768 and January 1769 to the late Thomas Whately, a Tory M.P (d. June, 1772). In December 1772 Benjamin Franklin somehow them and sent them to his friends in Boston with the express request that they not be published. However, in May 1773 the radicals in the assembly got hold of them and they were first printed in the *Boston Gazette* in June, 1773 and later in a best-selling book, *The Letters of Governor Hutchinson* (Boston, 1773), see B. Bailyn, *The Ordeal of Thomas Hutchinson* (Cambridge, Mass., 1972), pp.224-45; see also A.S. Walmsley, *Thomas Hutchinson & the Origins of the American Revolution* (New York, 1999), pp.143-5.

¹¹¹⁴ Samuel Holland & Deputies., “A Plan of the Sea Coast from Boston Bay to the Light House near Rhode Island Reduced from the Large Survey to a Scale of four Statute Miles to one Inch.” Mss., 1775, LOC: G3762.C6 1775.P5 Vault (Force 196).

Late in the 1773 season, Holland dispatched a surveying team under Thomas Wheeler to complete the stretch of coastline between Cape Anne and the outer reaches of Boston Harbour.¹¹¹⁵ At the beginning of the following season, Holland remarked that “Two surveying parties are now ready to set out on the Survey; open under the Direction of Mr. Wheeler will finish Boston harbour & towards Cape Cod, the other under Mr. Blaskowitz will survey round that cape towards Rhode Island.”¹¹¹⁶ Around the same time, the General Survey’s activities attracted the notice of the province’s main newspaper:

“We have the pleasure to inform the public, that an Exact Survey of the Sea-Coast from the Bay of Fundy to this Port [Boston] (so much long wanted) is at length happily accomplished under the Direction of Capt. Holland; and that a further Survey, under the same Direction, from Boston to Plymouth, by Mr. Wheeler, and from Plymouth around the Cape to Rhode Island Government, by Mr. Blaskowitz, is intended; which when done will finish the whole east of this province [Massachusetts], and will be of great advantage to the Trade in the safety of Navigation. Mr. Wheeler and Mr. Blaskowitz came to Boston from Portsmouth last Week, and are immediately to proceed on said survey.”¹¹¹⁷

Thomas Wheeler and James Grant completed one of the finest and, certainly, one of the two most militarily important maps of the General Survey. Boston was a city of 15,000 people and until the official implementation of the Boston Port Act on 1 June 1774, the busiest harbour in New England (**Fig. 99**).¹¹¹⁸

Grant and Wheeler drafted both a large-scale and medium-scale versions of their survey. The more detailed of which, drawn at a scale of 4000 feet to an inch, depicts the

¹¹¹⁵ Holland to Dartmouth, 28 October 1773, CO 5/74, ff.177-8.

¹¹¹⁶ Holland to Pownall, 14 April 1774, CO 5/75, ff.101-2.

¹¹¹⁷ *Massachusetts Gazette*, Thursday, 5 May 1774, cited in *The Library of Congress Bibliography of Cartography*, vol.2, p.59.

¹¹¹⁸ Thomas Wheeler & James Grant, “A Plan of the Bay and Harbour of Boston,” Mss., [1775], LOC: G3764.B6P55 1775.W5 Vault (Force 201); Sellers and Van Ee, no.949
Thomas Wheeler and James Grant, “A Plan of Boston Harbour,” [1775] [Smaller Scale: 2 miles to an Inch], MODHD: 395 88, soon to be transferred to ADM 352 Series; also Thomas Wheeler and James Grant, “Boston Bay”, Mss., [1775], Admiralty Library Manuscript Collection (Portsmouth, U.K.): MSS 369/28, J. Blake, *The Sea Chart* (London, 2004), p.112.

outline of the city and its major features in considerable detail. In the surrounding country side, towns, villages, individual houses and farms, roads, churches, names of major land owners, as well as forested areas, salt marshes, creeks and rivers are carefully portrayed. The chart also depicts Harvard College in Cambridge, as well as Montresor's fortifications at Dorchester Neck and the small battlements perched on the heights of land that surround the city. In contrast to the great terrestrial details rendered, there are very few soundings or nautical remarks, and this is explained by a note on the chart asserting that "the scarcity of soundings is due to inadequate naval assistance."

After the survey of Boston, Wheeler continued on to chart Plymouth Harbour, the site of Plymouth Rock, where the Pilgrims founded the first permanent settlement in New England in 1620. Charles Blaskowitz led a team that rounded the treacherous sandy hook of Cape Cod before continuing on to survey of Rhode Island.¹¹¹⁹ George Sproule, unable to take up his role as surveyor-general of New Hampshire, proceeded to map the great whaling island of Martha's Vineyard and Nantucket as well as the "the dangerous shoals" that surround them.¹¹²⁰ It was on Sproule's return to Boston, when rounding Cape Cod, that he lost the *Jupiter* schooner and two of his men on the deadly shifting sands.

Sproule's maps were exceedingly detailed showing individual homesteads, fields and windmills, a typical feature of the islands. Once again, due to the lack of naval assistance, very little hydrographic detail was included, such that the maps were virtually useless for navigation. This was problematic in an area where maritime trade and fishing were the only commercial enterprises.

¹¹¹⁹ Holland to Pownall, 20 December 1774, CO 323/29, pp.43-50.

¹¹²⁰ *Ibid.*

The maps of the 1774 season in Metropolitan Massachusetts were not dispatched to London until May 1775. This was the month after the Revolution had begun in earnest.¹¹²¹

The Northern Survey in Rhode Island

The northern survey's next, and final, destination was the troublesome colony of Rhode Island. Founded by Roger Williams in 1636, a religious dissenter who broke away from the pilgrims of the Plymouth Colony, the small province maintained its independent streak. By the eighteenth century, blessed with Narragansett Bay, one of the finest and largest natural harbours on the Atlantic seaboard, Rhode Island had established itself as a point on the triangle for the trade of slaves, sugar and rum from the Carolinas and the West Indies to Britain.¹¹²²

Rhode Island's mariners had also garnered a well-earned reputation for being the most elusive violators of the Navigation Acts. Their activities were assisted by the colony's unusually liberal charter, which dictated that all of its executive officers had to submit themselves for public election each year. Consequently, Rhode Island elected officials tended to be far more accountable to their electors than to Whitehall.¹¹²³

The province's capital, Newport, which was home to 9,000 of the province's 55,000 inhabitants, was long thought of as an ideal potential base for the Royal Navy, although this possibility had been dampened by the crown's enthusiasm for the obvious alternative, Halifax.¹¹²⁴ The *Gaspee* incident, however, brought Rhode Island, along with its propensity to challenge imperial power, to the forefront of attention from London.

¹¹²¹ Holland to Dartmouth, 27 May 1775, CO 5/76, ff.122-3.

¹¹²² M.S. Pedley, *The Commerce of Cartography*, pp.120-1.

¹¹²³ Thomas, *Townshend Crisis*, pp.229-30.

¹¹²⁴ Pedley, *Commerce of Cartography*, p.121.

The running aground of the navy vessel during the incident heightened the need for the navy to acquire accurate charts of Narragansett Bay.

The Northern Survey's charting of Narragansett Bay has been extensively studied by Mary Pedley, who explored not only the operations of the survey but also the consequent manuscript maps and their printed derivatives.¹¹²⁵ Pedley draws our attention to a little known nineteenth-century article, which includes a report by an anonymous British official that suggests that Blaskowitz had actually first surveyed Rhode Island proper, including the town of Newport, in 1764.¹¹²⁶ The author, an official reporting to the Admiralty, perhaps was responding to then-prime minister George Grenville's concern that a greater naval presence should be established at Rhode Island in an effort to interdict smugglers. Its stated purpose was "to illustrate Newport's potential as a naval base," and it was said to be accompanied by a "large map of this Island and bay with accurate soundings as far as it is navigable for Ships of War of the second class", in addition to "a correct plan of the town of Newport." It would furthermore show "the positions for docks, ship yards, hospitals...and also the points of defense by forts and batteries, against the attack of an enemy – in conformity to my instructions by desire for the Board of Admiralty." The map was said by drafted by "Mr. Blaskerwich, though young is an able surveyor."

While no other record of this survey has yet come to light, it seems that Blaskowitz, who was then employed by his own Royal American Regiment surveying in Québec, was seconded to Rhode Island to fulfill this special assignment. Pedley has

¹¹²⁵ Pedley, 'Chapter Five: Multiplying Maps: The Survey and Printed Charts of Narragansett Bay, Rhode Island,' *Commerce of Cartography*, pp.119-55.

¹¹²⁶ 'A British Navy Yard Contemplated in Newport, R.I. in 1764,' *Rhode Island Historical Magazine*, vol.6, no.1 (1885), pp.42-7, cited in Pedley, *Commerce of Cartography*, p.124.

suggested that a certain chart by Blaskowitz, probably dated after 1770, is closely based on the original map and contains details predating the northern survey's arrival at Newport (**Fig. 100**).¹¹²⁷ It was perhaps drafted by Blaskowitz in anticipation of his return to the area.

A decade later, at the beginning of October 1774, Blaskowitz and Wheeler commenced their survey of Narragansett Bay.¹¹²⁸ Leading a team of eleven men, it is estimated that they spent no more than, and likely less than, two months on the entire endeavour. Pedley, predicated on the 1764 northern survey, estimates an assumed project length of sixty days, calculated that the venture cost between £145 and £150.¹¹²⁹ Pedley, however, assumed that Blaskowitz and Wheeler were both paid a senior first deputy's salary of 7s per diem, when in reality in 1774 these less fortunate souls garnered only 2s 6d per diem.¹¹³⁰ This would reduce the final total to £130-135.

The result of Blaskowitz's and Wheeler's impressive venture is captured by Thomas Wheeler's chart (**Fig. 101**).¹¹³¹ In comparison to the earlier map, it embraces the entirety of the bay, yet lacks the detailed plan of Newport town, although it features far more copious naval soundings than on the previous version. Of no utility to civilian

¹¹²⁷ Charles Blaskowitz, "A Plan of Rhode Island with the Country and Islands adjacent" [with inset] "A Plan of the Town of Newport and its environs etc.," Mss., [1770-5], MODHD: A9456; Pedley suggests this map may have been a copy of the 1764 original made after 1770 due to the appearance of the notation: "G. Fourth Baptist Meeting House [founded] 1770," Pedley, *Commerce of Cartography*, p.125.

¹¹²⁸ "Captain Holland's company of surveyors in now taking a survey of the coasts of this colony," recorded in the *Newport Mercury*, 3 October 1774; Newport resident Ezra Stiles noted on 25 October 1774 that "This day the Kings Surveyors began to take the plan of the Town of Newport", E. Stiles, ed. F. Dexter, *Literary diary of Ezra Stiles* (New York, 1901), vol. I, p.466, cited in Pedley, *Commerce of Cartography*, p.127.

¹¹²⁹ Pedley, *Commerce of Cartography*, p.127

¹¹³⁰ Northern General Survey, "A Return of the Deputy Surveyors...1774", an enclosure to Holland to Pownall, 22 August 1774, CO 323/29, pp.37-42.

¹¹³¹ [Thomas] Wheeler, [Narragansett Bay, Rhode Island], Mss., 1774-5, WCL: Map 3-J-7, Clinton Collection, map no.58, Brun, no.275.

British affairs, as events would later prove, the map would be one of the most strategically important and oft copied maps of the American Revolutionary War.

The Operational End of the Northern General Survey

In 1774, around the same time the *Canceaux* was seconded away by the Navy, Holland remarked that although his parties were surveying the coasts of Massachusetts “without molestation” as “most persons of sense know the utility of our Business,” he was still gripped by a feeling that “the Ignorant populace” would shortly hinder their progress.¹¹³² As access to surveying vessels and rumours of civil unrest unwound the operations of the General Survey, Holland once again became engaged in conducting inter-provincial boundary surveys, as, despite the acrimony, few British officials thought that they would ever lose the colonies. Consequently, disputes over land grants and boundaries continued to be important issues to administrators and thousands of settlers alike.

In December 1774 Holland joined forces for the second time with the Philadelphian mathematical genius David Rittenhouse, in this case to survey the land boundary between the provinces of New York and Pennsylvania. Holland was appointed to represent New York and Rittenhouse Pennsylvania, and their mandate was to “fix the beginning of the 43rd Degree of Latitude [what in modern terms is called 42°N] on the Mohawk or Western Branch of the Delaware River, & to proceed Westward as far as the season would permit.”¹¹³³ They used astronomical observations by Halley’s Quadrant to demarcate the commencement point on the Delaware at 42°00’1.3”N, an amazingly

¹¹³² Holland to Haldimand, 13 June 1774, BL: Haldimand Papers, Add. Mss. 21731, f.220.

¹¹³³ [New York-Pennsylvania Boundary Report by Samuel Holland & David Rittenhouse] signed at Philadelphia, 14 December, 1774, and enclosure to Holland to Pownall, 20 December 1774, CO 323/29, ff.43-50.

accurate reading given the nature of the country, the equipment and the time: their reckoning was only 132 feet to the north of the actual position, later determined by satellite. Their findings were included in a report accompanied by a map ratified in Philadelphia on 14 December, 1774.¹¹³⁴

Dartmouth had also received more than a few letters remarking that the New York-Massachusetts Bay boundary survey had not been completed as ordained by the bi-colonial conference held at Hartford, Connecticut on 18 May 1773.¹¹³⁵ In April 1775, knowing that Holland was unable to do much in the way of coastal surveying, he informed Holland that it was “His Majesty’s Pleasure, that, you do, as soon as conveniently may be, after the receipt of this Letter, proceed to run out & mark the said Line, comfortable to the Agreement above mentioned.”¹¹³⁶ That summer, Holland did commence this survey, but he soon abandoned it to return to Perth Amboy when political conditions made it highly unwise for any British official to wander the countryside.

Before the Revolution interrupted his plans, Holland wrote “I hope to extend it next summer [of 1775] to Hudson’s River, including Long Island.”¹¹³⁷ With no hope of regaining the *Canceaux*, the programme was dealt a near fatal blow when the *Sphinx* was ordered to Boston for general naval service.¹¹³⁸ Very little was accomplished that season, and Holland remarked that during that time he “had received so little assistance from the Navy this Summer that with Difficulty, I equipped One Party.” The only new survey of

¹¹³⁴ Samuel Holland & David Rittenhouse, [New York-Pennsylvania Boundary Survey along the 42nd Parallel], Mss., dated 14 December 1774, attached to Report of 20 December 1774, CO 323/29, f.49, Penfold, no.2667.

¹¹³⁵ [New York-Massachusetts Boundary Conference, Hartford, Conn., 18 July 1773] “Agreement made at Hartford by commissioners on behalf of Massachusetts and New York for running a boundary between the two provinces,” approved by Governors T. Hutchinson and W. Tryon, 18 May 1773, CO 5/1076, f.251.

¹¹³⁶ Dartmouth to Holland, 28 April 1775, CO 5/76, ff.87-8.

¹¹³⁷ Holland to Dartmouth, 20 December 1774, CO 323/29, pp.43-50.

¹¹³⁸ *Canceaux Logs*, 31 May 1775, p.269.

the season was James Grant's map of Perth Amboy, New Jersey, the relatively tranquil area immediately surrounding Holland's new base of operations.¹¹³⁹

By the autumn, the political atmosphere became so hostile that there was no possibility of conducting any scientific surveying in the Thirteen Colonies. The Northern General Survey was effectively suspended. What Holland and many on the British side of the conflict did not appreciate is that the hiatus would be permanent.

The perils of surveying during this time were perfectly illustrated by the experience of Lieutenant John Knight, who in the spring of 1775 was dispatched by the Admiralty to conduct hydrographic surveys along the coasts of the Bay of Fundy and Maine, in an effort to allow Des Barres (then in London) to add this information to the maps made by Holland and his associates which he shortly intended to publish. On 15 July, Knight's vessel, the *Diligent*, was ambushed by rebels while at anchor in Machias, and he and all of his crew were taken prisoner. Knight would not be released on exchange until the end of 1776.¹¹⁴⁰

C. The Southern District

De Brahm in London: A Time of Redemption

When Dartmouth became the Secretary of the American Department & President of the Board of Trade, De Brahm, exiled from East Florida to London by Governor

¹¹³⁹ Grant's original manuscript does not survive, however a faithful copy was made around 1777 by the military Engineer John Hills included in a special manuscript atlas of twenty New Jersey presented to General Sir Henry Clinton. [John Hills] *after* James Grant, "Plan of Perth Amboy from an actual survey." Mss. [c.1777], LOC: G3814.P4 1777.G7 Hills 1-2, Sellers & Van Ee, no.1249, also see P.J. Guthorn, *John Hills, Assistant Engineer* (Brielle, N.J., 1972), map no.1. Grant's survey of Perth Amboy is referred in Holland to Dartmouth, 20 September 1775 CO 5/76, ff.148-9.

¹¹⁴⁰ Knight was permitted by his captors to inform Admiral Graves of his predicament, Knight to Graves, 10 August 1775, NDAR, vol.1, p.1108. For a brief sketch of Knight's experiences in 1775 and 1776, see Hornsby, *Surveyors of Empire*, pp.199-201.

Grant, found the benefactor he needed to begin the process of rehabilitation and redemption. He first became acquainted with Dartmouth in an official capacity during the latter's stint as President of the Board of Trade from 1765 to 1766. As early as 1769, however, they had begun a private correspondence,¹¹⁴¹ about science, metaphysics, land speculation in the American colonies, and religious philosophies, even though their beliefs in the last area certainly varied. As their relationship matured in London, De Brahm enriched the colonial secretary's knowledge in many areas, notably Florida. Dartmouth, in return, provided De Brahm access to his connections in London, giving De Brahm leverage against Grant and Hillsborough.

Calling it "a suspension proving in effect a discharge before I am heard tried and sentenced,"¹¹⁴² De Brahm was incredulous about the manner in which he was recalled and proclaimed himself innocent of the charges Grant brought against him, which included ignoring General Survey duties in favour of the more lucrative provincial cadastral work, and over-charging settlers for surveying fees. In December 1771, De Brahm received the formal documents laying out Grant's accusations, and was instructed to devise a "justification of his conduct." The following April, Hillsborough sent formal depositions to the Treasury Board, the body which was to adjudicate the matter.¹¹⁴³

In December 1772, De Brahm sent Dartmouth a draft of the detailed and compelling defense dossier that he had prepared for presentation to the Treasury Board.¹¹⁴⁴ Soon after, on 20 February 1773, he received the good news that the Treasury

¹¹⁴¹ De Brahm, "A Treatise on Natural Philosophy," dated Savannah, Georgia, 1763, De Brahm to Dartmouth, 1 November 1769, *Dartmouth Mss.*, vol. II, p.68.

¹¹⁴² De Brahm to Pownall, 8 October 1771, CO 5/72, p.245.

¹¹⁴³ Hillsborough to the Commissioners of the Treasury, 17 April 1772, CO 5/145, f.45.

¹¹⁴⁴ "An Abridgement of Governor Grant's Deportment against the Surveyor General William Gerard De Brahm," De Brahm to Dartmouth, 15 December, 1772, SRO: Dartmouth Papers, D1778 II 497.

Board had agreed to grant the full annual budgetary allotment of £700, 17s for his mandate as Surveyor General of the Southern District¹¹⁴⁵, an office from which De Brahm was never officially suspended: his excommunication by Grant impacting only his provincial mandate. While the Treasury Board's ruling did not reinstate him at the provincial level, it was a vote of confidence for his full exoneration.

In conjunction with his efforts to be fully reinstated, De Brahm worked tirelessly to discredit Governor Grant. His letters to Dartmouth and his depositions to the Treasury Board were full of barbs against the innate "injustice" of not only Grant's charges against him, but also the innate nature of the man who "only desires my ruin."¹¹⁴⁶ As part of his crusade, De Brahm convinced his friends back in East Florida to write letters which regaled Dartmouth with vivid accounts of Grant's draconian management style and administrative incompetence. Authors of this poison-pen correspondence included Thomas Woolridge, a member of the provincial council and "a hanger on of Dartmouth,"¹¹⁴⁷ who described himself as being like "De Brahm...his fellow sufferer from Grant's tyranny" and declaring Grant to be "an excellent officer, but...a most tyrannical governor."¹¹⁴⁸ A memorial from unnamed "Inhabitants of East Florida" explained that "Their grievances against Governor Grant are so numerous" they could barely be put into words.¹¹⁴⁹ While this campaign of character assassination may have helped De Brahm's chances of winning his case, Grant, who was then serving as an M.P., showed no interest in the matter.

¹¹⁴⁵ Treasury to De Brahm, 20 February 1773, T 29/43, SRO: Dartmouth Papers, D1778 II 677.

¹¹⁴⁶ De Brahm to Dartmouth, 23 January 1773, *Dartmouth Mss.*, vol. II, p.132, also De Brahm to Dartmouth, 15 March 1773, *Dartmouth Mss.*, vol. II, p.142.

¹¹⁴⁷ C.L. Mowat, *East Florida as a British Province* (Berkeley, 1943), p.20.

¹¹⁴⁸ Thomas Wooldridge to Dartmouth, 8 May 1772, *Dartmouth Mss.*, vol. II, p.83.

¹¹⁴⁹ Memorial of Inhabitants of East Florida, [n.d., but likely 1772], *Dartmouth Mss.*, vol. II, p.122

Overburdened with the affairs of state, the Treasury Board was not able to hear De Brahm's case for another year. In the meantime, De Brahm continued to consult with Dartmouth about his case and remained adamant in his desire to be reinstated so he could return to East Florida to complete his surveys.¹¹⁵⁰ He was finally called before North and the Treasury Board on 28 July 1774.

Well prepared, De Brahm arrived with innumerable documents, ready to commence a lengthy oratory in his defense. To his surprise, Governor Grant, who had also been summoned, was not only absent, but had declined to even submit a written deposition. De Brahm recalled to Dartmouth what transpired next: "The 28th of July I was ordered to answer before a full Board of His Majesty's Treasury upon the Several Complaints of Governor Grant, which I did in the simplest manner offering to produce my two personal Evidences, office books and other original papers, which however was not desired, but North was pleased to declare myself reinstated into provincial office of East Florida; the whole transaction lasted but 15 minutes, an event for which I am indebted to your Lordship's patronage which will continue for ever in gratefull remembrance before me."¹¹⁵¹ De Brahm was fully reinstated without prejudice. As his thanks to Dartmouth suggests, the outcome of the formal hearing had been predetermined: Dartmouth had prevailed upon his step-brother to return his favorite surveyor to the status he felt he so rightly deserved.¹¹⁵² The following year, De Brahm

¹¹⁵⁰ De Brahm to Dartmouth, 16 August 1773, *Dartmouth Mss.*, vol. II, p.166.

¹¹⁵¹ De Brahm to Dartmouth, 4 August 1774, *Dartmouth Mss.*, vol. II, p.220.

¹¹⁵² John Robinson (Treasury) to Pownall, 20 October 1774, CO 5/145, ff.250-1.

was informed that he was to receive his full £150 per annum provincial surveyor-general's salary backdated to the date of the Treasury Board's decision.¹¹⁵³

De Brahm, The Author

As an additional means to restore his reputation, De Brahm started work on a *magnum opus*, which would present not only his work on the General Survey, but all of his achievements in surveying, natural science and military engineering accomplished during his twenty years of British service in North America. This endeavour had two parts, one being the creation of the "Report of the General Survey of the Southern District of North America" and the completion of a large-scale general map of his surveys in East Florida. Dartmouth granted De Brahm an unprecedented level of support, ensuring that his work in London would be funded by the payment of his full salary and that his consequent report would be promoted to the highest level.

Even though there is no written letter of permission granting De Brahm a right to use his own regional maps from the Board of Trade's collection, circumstantially it is clear that the Board of Trade, perhaps due to the influence of William Knox who had known De Brahm personally from his time in Georgia, provided De Brahm complete access to the maps and letters he had sent to the Board since 1765 to complete his large map, starting in late 1771 or early 1772. As such, many of his original maps were permanently removed from the Board's collections, and do not appear in its 1780 map inventory.

In August 1772, De Brahm mentioned to Dartmouth that he had ensured that "my general map, [has been] joined in [its] sections and delivered with my report to Mr.

¹¹⁵³ Pownall to De Brahm, 15 April 1775, CO 5/242, p.81; also Pownall to Robert Knox (East Florida's Agent and brother of William Knox), 24 April 1775, CO 5/250, p.196.

Pownall.”¹¹⁵⁴ He described the “General map of East Florida” as being “25 foot in length.”¹¹⁵⁵ Indeed, this cartographic behemoth, comprised of two joining parts, is one of the greatest legacies of colonial American cartography. It embraces the entire Atlantic coast of the province from the Georgia border in the north down to the Florida Keys, roughly corresponding to the areas depicted on his two general maps included in his “Report”.¹¹⁵⁶

Carefully drafted, the map depicts a wealth of information in large scale, including named cadastral grants, the locations of roads and Indian trails, settlements, forts, marshes, and lakes. The map also features copious hydrographic information, including of the outlines of the treacherous coral reefs of the Keys, and well as a detailed depictions of ocean currents, including the Florida Stream, the origin of the Gulf Stream. De Brahm included fascinating descriptions of his own routes of exploration, and information of historical significance, such as locations of shipwrecks.

Like Holland, De Brahm aimed to create only “an exact representation of what I personally and faithfully examined on the spot of what is surveyed by my deputies and that I shall never attempt to make any return of insertment in General Maps of any other

¹¹⁵⁴ De Brahm to Dartmouth, 12 August 1772, SRO: Dartmouth Papers, D1778 II 380.

¹¹⁵⁵ De Brahm to Dartmouth, SRO: Dartmouth Papers, D1778 II 496.

¹¹⁵⁶ Two massive connecting maps: Northern Section - William Gerard De Brahm, “East Florida, East of the 82nd degree of Longitude from the Meridian of London ...” Mss., 1773, CO 700/Florida 3 and Southern Section - William Gerard De Brahm, “A Survey of the part of the Eastern Coast of East Florida from St. Mary’s Inlet to Mount Halifax,” Mss., 1773, CO 700/Florida 53, Penfold, nos. 2296 & 2309. *N.B.* Due to the enormous size of these maps, it was not possible for these maps to be photographed, however, their geographical coverage is represented (albeit in a much reduced form) in the two regional maps of East Florida contained in De Brahm’s “Report”, namely William Gerard De Brahm, [Northern Section] “Map of the General Surveys of East Florida, performed from the Year, 1766 to 1770,” Mss., 1773, BL: King’s Mss. 211, f.178 and William Gerard De Brahm, [Southern Section] “Map of the General Survey of East Florida, performed anno 1770...consisting in a Land Survey from Row’s Hammock along the Coast, and of its Soundings by Water as far as Cape Florida,” Mss., 1773, BL: King’s Mss. 211, f.221.

characteristic.”¹¹⁵⁷ True to his word, in his grand general map De Brahm left areas blank that were not explored by either him or members of his team. He thus aimed to show only what was known, and then to show it only as it corresponded to the powers of scientific observation. The map successfully contextualizes his regional surveys, and provides the administrator with a panoptic view of the Atlantic coast of East Florida that were either in the process of being developed or in line for imminent settlement.

The second and highest profile aspect of De Brahm’s reprise was the drafting of his “Report”. It was planned to consist of two volumes, or tomes, the first of which detailed his magnificent accomplishments as Surveyor-General of South Carolina (1754-63) and Georgia (1755-63). Symbolically, this was significant, as it represented a clear effort to integrate the advanced scientific provincial surveys done before 1763 with the General Survey, the ultimate objective of the programme being the creation of accurate and complementary general maps of both the Southern and Northern Districts.

In his first volume, De Brahm included detailed descriptions of the natural history, society and geography of both South Carolina and Georgia, along with numerous maps relating to not only his general provincial surveys, but his extensive military engineering works, most notably his plan to fortify Charleston.¹¹⁵⁸ The second tome was to concern his work on the General Survey in East Florida.

Dartmouth arranged for De Brahm to present his report during a personal audience with His Majesty George III. Since Stuart times it had been extremely rare, if not unheard of, for a surveyor to be accorded such an honour. Generally, it was the

¹¹⁵⁷ Referring to De Brahm’s map of the “Northernmost parts” of East Florida, an enclosure to De Brahm to Hillsborough, 6 January 1771, CO 5/72, p.308. This map is now considered lost.

¹¹⁵⁸ William Gerard De Brahm, “Plan of the City and Fortification of Charles Town,” Mss., 1773, BL: King’s Mss. 210, placed between ff.35-6.

important map publishers such as Thomas Jefferys and William Faden who had been given opportunities to meet the King. It was a sign of Dartmouth's esteem for De Brahm as well as the King's respect for his work. On 19 March 1773, De Brahm wrote to Dartmouth enquiring "whether Fryday next is the day convenient for introducing me to his Majesty?"¹¹⁵⁹ On Friday, 2 April 1773, Dartmouth escorted De Brahm to meet the King and to present a special copy of his first volume.¹¹⁶⁰

De Brahm continued to work on his second volume regarding East Florida for the remainder of the next several months. In August, he wrote to Dartmouth, "I am almost ready with the continuation of my report consisting of a hundred pages more, a precise description of my surveys in twenty six Tables and Several Plans, of the different soils and natural productions, manufacturys, possible improvements, and directions for navigating all inlets and the Florida Stream near the Martiers [the Florida Keys], Cape Florida and the Coast, by which I endeavour to prove authentically, that I have really employed all my days in America in His Majesty's Service and am immediately injured by Colonel Grant's Department and accusations."¹¹⁶¹ On 24 September 1773, he finally submitted the second part of his epic work to Dartmouth, who duly forwarded it to the king.¹¹⁶²

While De Brahm's gargantuan maps were never printed in anything close to their large-scale, in 1774 Joseph Smith Speer published a magnificent map embracing Florida and the entire West Indies (**Fig. 102**).¹¹⁶³ As inferred by a letter of approval from Pownall

¹¹⁵⁹ De Brahm to Dartmouth, 19 March 1773, SRO: Dartmouth Papers, D1778 II 579.

¹¹⁶⁰ BL: King's Mss. 210.

¹¹⁶¹ De Brahm to Dartmouth, 13 August, 1773, CO 5/551, p.25.

¹¹⁶² De Brahm to Dartmouth, 24 September 1773, SRO: Dartmouth Papers, D1778 II 709.

¹¹⁶³ Joseph Smith Speer, ...*Chart of the West Indies*... (London, 1774). The map features the annotation: "Plantation Office, Whitehall, January 25 1774. Captain Speer having delivered into this Office a copy of his general Chart of the West Indies, and the right honorable the Lords Commissioners for Trade and

printed on the map, Speer was given special access to De Brahm's regional charts of East Florida. It presented by far the most accurate rendering of the peninsula ever published to date and marks an important development in the Board's decision to allow the public dissemination of the cartographic intelligence gleaned from the Southern Survey.

De Brahm, The Scientist

One of the most significant and richest aspect of the relationship between De Brahm and Dartmouth concerned their mutual interest in science. Dartmouth, an active and respected member of the Royal Society, introduced De Brahm to many of the leading inventors and theorists in London, many of whom were intrigued by the brilliant and wildly creative German eccentric. De Brahm's greatest contribution to science had undoubtedly been his hydrological observations contained in the *Atlantic Pilot* (1772), although he purposefully explored many other questions as well.

In 1774, De Brahm became very interested in Jean André De Luc's "instructions for the construction of height-finding barometers and rules for their accurate use."¹¹⁶⁴ De Luc was developing an early forerunner of the altimeter, employing relative readings of atmospheric pressure at certain geodetic coordinates to determine altitude. His experiments also engaged both Sir Nevil Maskeylene and his friend, the clergyman-astronomer Samuel Horsely, whose work was eagerly followed by Dartmouth.¹¹⁶⁵

Plantations having order'd it to be examined and compared to the late Surveys taken by their direction; I do hereby certify that the said general Chart agrees in all parts with the latest and most accurate Surveys now lodged in this Office. John Pownall Secr." This notation is similar to that which appeared on the 'Mitchell Map' (1755).

¹¹⁶⁴ Jean André De Luc, a *génévois* scientist, was curiously an investor in the Ernst Grant, located immediately to the north of the Dartmouth grant, see Count Brühl to [Dartmouth], 4 March 1774, *Dartmouth Mss.*, vol. II, p.201.

¹¹⁶⁵ De Vorsey (ed.), *De Brahm's Report*, Introduction, p.48.

In July 1774, De Brahm informed Dartmouth that he was working on a way to apply De Luc's experiments to his own work, for "the necessity of preparing for the approaching expedition of my G[enera]l Survey admitted no longer as other wise I should have be obliged to set out unprepared for the new method of leveling Streams Rivers & c. ...De Luc's prescribed formula would increase the fatigue of my Calculation afresh, which I have been obliged by constructing Zonical Tables...[and] Atmospheric Tables."¹¹⁶⁶ He promptly sent Dartmouth his "Treatise" regarding the "Physical System of the Variations in the Mercury in the barometer." As was his pattern, his sponsor then forwarded it to the Royal Society.¹¹⁶⁷ This led De Brahm to publish *The Levelling Balance and Counterbalance* (London, 1774), which explores his theories on how atmospheric pressure can be measured to determine both altitude and longitude.¹¹⁶⁸ Applying his concepts to tropical latitudes, De Brahm published *Zonical Tables, For the Twenty-five Northern and Southern Climates*" (London, 1774).¹¹⁶⁹

In the mode of some of the religious treatises he shared with Dartmouth, De Brahm also maintained an active interest in alchemy. While it is not known whether the Colonial Secretary was a fellow believer, he sent his patron a "Diagram of a new invented copper Athanor dedicated to the Earl of Dartmouth," supposedly a device which under the right conditions could transform base metals into gold.¹¹⁷⁰

¹¹⁶⁶ De Brahm to Dartmouth, 5 July 1774, *Dartmouth Mss.*, vol. II, pp.216-7.

¹¹⁶⁷ De Vorsey (ed.), *De Brahm's Report*, Introduction, p.48.

¹¹⁶⁸ W. G. De Brahm, *The Levelling Balance and Counterbalance* (London, 1774).

¹¹⁶⁹ W. G. De Brahm, *Zonical Tables, For the Twenty-five Northern and Southern Climates* (London, 1774).

¹¹⁷⁰ De Brahm to Dartmouth, 25 May 1773, letter calendared in *Dartmouth Mss.*, vol. II, p.151; for a fascinating analysis of De Brahm's thoughts on alchemy, religion and metaphysics see R.E. Paulett, 'The Bewildering World of William De Brahm: An Eighteenth-Century Map Maker Surveys the End of Time,' *Eighteenth-Century Studies*, vol.42, no.4 (2009), pp.481-99.

During De Brahm's return voyage to America aboard the *Cherokee*, from June to September 1775, he wrote a "Continuation of the Atlantic Pilot," making further observations on the Gulf Stream. He employed "Nairnes Marine Barometer and a thermometer" to find readings supporting his observations of "A current if not a stream...sweeping the coast of France, Spain, Portugal, and Africa" which came by way of the Canary and Cape Verde Islands from its point of origin in the West Indies.¹¹⁷¹ He also claimed to have predicted a "hurricane" or at least a tropical storm which beset the voyage.¹¹⁷² From Charleston, De Brahm dispatched "160 pages in folio containing all my Astronomical and physical observations made between Greenwich and America, laid down in 88 Tables to be submitted to the best Judges" regarding the observations he had made during the voyage, rather humorously addressed from the non-existent "Royal Observatory in Charleston." He also established the precise geodetic coordinates of "Observatory" as being 32 ° 47' N, 79°52' 54''7' ' ' W.¹¹⁷³

Dartmouth and De Brahm in Land Speculation

Dartmouth was known to be interested in land speculation prospects in America. Indeed, ever since his first period as President of the Board of Trade, countless correspondents seeking his favour had offered him opportunities to partake in ventures from Canada to the West Indies. Dartmouth rejected all of these overtures and placed all of his faith in one potentially large project in East Florida. Dartmouth had been aware of De Brahm's surveys in that province since their beginnings, and while it is not precisely

¹¹⁷¹ R.H. Brown, 'The Brahm Charts of the Atlantic Ocean, 1772-1776,' *The Geographical Review*, vol. XXVIII (January 1938), p.129.

¹¹⁷² De Brahm to Dartmouth, 18 September 1775, SRO: Dartmouth Papers, D1778 II 1519.

¹¹⁷³ De Brahm to Dartmouth, 8 December 1775, CO 5/77, ff.16-7; De Brahm to Pownall, 8 December 1775, CO 5/77, ff.115-6.

clear what had motivated him to do so, it was likely at De Brahm's recommendation that in 1770 he and his four sons successfully applied to the Privy Council for a 100,000 acre grant by the shores of the Sandwich Gulf, just south of modern Miami, Florida.¹¹⁷⁴ De Brahm was the foremost authority on the region, having that year surveyed the area that he named "Sandwich Gulf", after the former and future First Lord of the Admiralty (**Fig. 103**).¹¹⁷⁵

The Dartmouth holdings were the largest of three main tracts granted in the immediate area by 1774, with the Earl personally holding 40,000, with the remainder divided between his four sons.¹¹⁷⁶ Dartmouth was well aware that the grant was next to worthless until it could be developed into a semi-tropical plantation. Shortly after coming to office in 1772, Dartmouth charged De Brahm with the task of orchestrating its development.

In October 1772, Jean Daniel Roux of Lausanne wrote De Brahm proposing to lead a group of Swiss Protestants to settle Dartmouth's lands.¹¹⁷⁷ From the start, both Dartmouth and De Brahm looked favourably on the idea. In addition to the promise of plantation riches, granting Christians the opportunity to start a new life in a new land where they could practice their faith without harassment appealed to the Earl's moral

¹¹⁷⁴ On 9 December 1770, the Privy Council approved the application of Dartmouth and his four sons for the grant of 100,000 acres in East Florida, *APC*, vol. V, p.593. For a detailed study of Dartmouth and De Brahm's efforts to develop the grant, see R.E. Chardon, 'The Cape Florida Society of 1773,' *Tequesta*, no. 35 (1975), pp.1-36.

¹¹⁷⁵ William Gerard De Brahm, "Plan of Dartmouth Inlet and Stream, Cape Florida Latd. 25°44' 11" & Sandwich Gulf, surveyed in the Year 1765 & 1770", Mss., 1773, BL: King's Mss. 211, f238..

¹¹⁷⁶ The Dartmouth grant of 100,000 acres was the largest of the three grant in the area the other being the Samuel Touchett (20,000 acres, 1771) and the Augustus Ernst Grant (20,000 acres, 1774), see Charndon, p.4.

¹¹⁷⁷ Roux to De Brahm, October 1772, *Dartmouth Mss.*, vol. II, pp.102-3. Roux had previously applied to the Board of Trade for a grant of 12,000 acres in East Florida but the Board of Trade recommended to the Privy Council that he only receive 6,000 acres. The Privy Council did not proceed with the matter any further, see Petition of Daniel Roux, Burgher of Lausanne, to the Board of Trade for grant of 12,000 acres in East Florida, 4 March 1772, CO 5/545, ff/55-6; also Board of Trade to the King, 12 May 1772, CO 5/563, pp.290-3.

sensitivities. De Brahm, having successfully settled groups of Protestant Germans in Georgia in the early 1750s, seemed like the ideal person to shepherd such a venture. The eventual leader of the group, James (Jacques) Loup, along with Daniel Bercher, his agent in London, christened their syndicate “the Cape Florida Society,” after the promontory which guards the mouth of the Sandwich Gulf.

In February 1773, Bercher wrote De Brahm with a more specific proposal, asking that 6,000 of Dartmouth’s 40,000 acres be set aside for twenty or so families, with the financial terms to be agreed shortly.¹¹⁷⁸ De Brahm was so enthusiastic that he even offered to travel with the group to supervise their set up, albeit for the not insignificant fee of £450.¹¹⁷⁹ After some back and forth, on 25 March, on behalf of Dartmouth, De Brahm agreed to the basics of the arrangement, with the Society paying no quit rents until the eighth year after settlement, when £50 was due, followed by £150 on the ninth year, and finally stabilizing to the permanent rate of £300 from the tenth year onwards.¹¹⁸⁰

In May 1773, De Brahm sent Dartmouth a lengthy and highly technical report on the climate and agrarian potential of the Gulf of Sandwich region, predicated on information supplied in his “Report” to the King, a copy of which he had also given to Dartmouth.¹¹⁸¹ He then, employing his General Survey charts as a guide, drew Dartmouth a map of his grant and the Cape Florida Society’s proposed development.¹¹⁸² It showed the 6,000 acre settlement block making up a rectangle of about 2.6 by 3.1

¹¹⁷⁸ Bercher to De Brahm, 20 February 1773, *Dartmouth Mss.*, vol. II, p.139.

¹¹⁷⁹ De Brahm to Bercher, 22 March 1773, *Dartmouth Mss.*, vol. II, p.143.

¹¹⁸⁰ De Brahm to Bercher, 25 March 1773, *Dartmouth Mss.*, vol. II, p.144.

¹¹⁸¹ De Brahm to Dartmouth, 4 May 1773, *Dartmouth Mss.*, vol. II, p.149.

¹¹⁸² William Gerard De Brahm, [Map of the Proposed Settlement of the Cape Florida Society on Lord Dartmouth’s Land holdings by the Sandwich Gulf], *Mss.*, 1773, an enclosure to De Brahm to Dartmouth, 5 July 1773, SRO: Dartmouth Papers, D1778 II 1684.

miles, wholly encompassed within the larger rectangle of Dartmouth's 40,000 acres, which had about a 6.5 mile water frontage and a depth into the interior shy of ten miles.

On 30 June 1773, Bercher submitted to De Brahm a very specific code of thirty-two rules regarding how land should be distributed and how the colony should be governed, entitled "Pour formé une colonie sociale de bon et habiles Agricultures sur Dommaines d'Amerique de Mylord Dartmouth, situé au Cap Florida sur le Golphe Sandwich."¹¹⁸³ Under this plan the 6,000 acres were to be divided into 120 lots of 50 acres each. Each of the twenty heads of families was to be given two lots, or 100 acres *gratis*. This would make up 2,000 acres in total, and the remainder of the block of 4,000 acres was to be sold to the settlers by subscription to the Society at a price of £25 per lot. Commensurate with De Brahm's advice the settlers intended to grow indigo, cotton and grapes for wine, and raise silk worms "and other Fruits very useful to the happiness of a reasonable Society". As depicted on the map, the Society asked Dartmouth to reserve some land just to the southeast of the settlement block for a town site, in which the Society would not assume the same level of responsibility as it would have in the adjacent agrarian estates. The agreement stated that "each member will be at full liberty to build houses at his own expense On the Land which the Said Lord Dartmouth shall Designate for the placement of a City, and to contract separately the Leases without the Society's being interested nor responsible." The Society's otherwise remarkably communitarian ethic can be summed up in the instruction to be "Assiduous Vigilant to

¹¹⁸³ "Pour formé une colonie sociale de bon et habiles Agricultures sur Dommaines d'Amerique de Mylord Dartmouth, situé au Cap Florida sur le Golphe Sandwich." Or [Translated] "to form a Social Colony of good and Useful Agricultures at Cape Florida, on Sandwich Gulf." Bercher to De Brahm, 30 June 1773, an enclosure to De Brahm to Dartmouth, 5 July 1773, SRO: Dartmouth Papers, D1778 II 1684.

work, each according to his Talents and Capacity...for the common well-being and advantages of the Society”¹¹⁸⁴.

The enthusiasm of the prospective settlers and the smoothness of the planning process seemed to bode well for the success of this settlement, particularly when compared to other insipient Floridian ventures. However, all would unravel quickly. Only two days before he drafted his elaborate plan for how the colony would be founded and governed, Bercher asked De Brahm if the number of families participating could be increased from twenty to twenty-five or even thirty. More galling was his request that Dartmouth add another 2,000 acres to the settlement block.¹¹⁸⁵

De Brahm balked at Bercher’s request, which he considered to be an act of ingratitude towards Dartmouth’s benevolence. Reluctantly forwarding Bercher’s petition, Dartmouth responded to the request precisely as De Brahm thought he would. With his enthusiasm for the scheme dissipated, Dartmouth wrote directly to Bercher, curtly informing him that he had given the Society everything it had asked for and that he was at a loss as to why his generosity was not taken as it was intended.¹¹⁸⁶ He referred the matter to his lawyers, and from that point had no further contact with the Swiss Protestants.

In November 1773, Loup wrote De Brahm angrily blaming him for ensuring that the Cape Florida Society’s dreams had “exhaled themselves away into smoke.”¹¹⁸⁷ He unfairly charged De Brahm with sabotaging their relations with Dartmouth. It has alternatively been suggested that the Society backed out because of a lack of funds, and

¹¹⁸⁴ Bercher to De Brahm, 30 June 1773, an enclosure to De Brahm to Dartmouth, 5 July 1773, SRO: Dartmouth Papers, D1778 II 1684.

¹¹⁸⁵ Bercher to De Brahm, 28 June 1773, SRO: Dartmouth Papers, D1778 II 607.

¹¹⁸⁶ Dartmouth to Bercher, 1 September 1773, *Dartmouth Mss.*, vol. II, p.171.

¹¹⁸⁷ Loup to De Brahm, 11 November 1773, SRO: Dartmouth Papers, D1778 II 742.

the fact that many of the prospective colonists feared the dangerous voyage to an uncertain life in a land so distant from even the smallest outpost of European civilization.¹¹⁸⁸ In light of this failure, it is curious that Dartmouth and his sons continued to pay for new surveying projects on their Floridian lands until 1784.¹¹⁸⁹

De Brahm: The Journey Back

At the beginning of 1773, De Brahm proposed sailing to Florida for eight months, and then returning to London during the Florida hurricane season to draft his maps and reports. Initially, he hoped that the Board of Trade would “grant me only the aides of a vessel and tender, thereby to enable me to be eight months in America expediting the General Surveys and [for] four months...June, July, August, and September in London to make put my Reports and plans.”¹¹⁹⁰ Emboldened by Dartmouth’s long-term patronage, he later asked to be reinstated with the same technical support as provided to Samuel Holland, whose advantages he jealously mentioned.¹¹⁹¹

In March 1774, notably before De Brahm was cleared of Grant’s charges, Dartmouth prevailed upon the Board of Trade to send a message to the Privy Council stating that “W.G. De Brahm has represented, and we recommend, that an armed cutter should attend the persons making surveys in the southern department, as was granted in

¹¹⁸⁸ Chardon, ‘Cape Florida Society’, pp.15-6.

¹¹⁸⁹ Dartmouth was still paying surveying fees for his East Florida property as late as 1784; Benjamin Lord “An account of the Surveyor General of East Florida,” 29 November 1784, SRO: Dartmouth Papers, D1778 II 1351. In 1775 three of Lord Dartmouth’s sons contracted Frederick Mulcaster to survey three 20,000 acres sections of the overall Dartmouth grant. Heneage Dartmouth owed £88, 6s, 7d; Charles owed £87, 9s, 3d; and William (Jr.) owing £87, 6s 7d; “Frederick George Mulcaster, A/c of [Surveying] Fees,” an enclosure to Tonyn to Dartmouth, 29 March 1775, letter calendared in *Dartmouth Mss.*, pp.282-3.

¹¹⁹⁰ De Brahm to Dartmouth, 23 January 1773, SRO: Dartmouth Papers, D1778 II 576.

¹¹⁹¹ De Brahm to Dartmouth, 10 October 1774, *Dartmouth Mss.*, vol. II, p.228.

De Brahm to Dartmouth, 27 October 1772, SRO: Dartmouth Papers, D1778 II 443; also De Brahm to Dartmouth, 4 August, 1774, SRO: Dartmouth Papers, D1778 II 942.

the northern.”¹¹⁹² This would free De Brahm of the enormous costs of the transport and the wages for the crew of a vessel.

In February 1775, he was assigned the *Cherokee* commanded by Lieutenant Ferguson.¹¹⁹³ He also requested, and the Board granted, an increase in his allowance for “astronomical and surveying instruments” from £200 to £500 and for the wages of two skilled assistants.¹¹⁹⁴ Reaching out to his estranged son-in-law, George Frederick Mulcaster, whom Grant had spitefully appointed to be his interim replacement as provincial surveyor-general, De Brahm asked Mulcaster to be “his deputy in provincial office, during the time he will be able to continue the service of the general survey and no longer.”¹¹⁹⁵

On 19 June 1775, De Brahm, his wife, and his nephew, the military engineer, Ferdinand De Brahm, embarked on their trans-Atlantic crossing from Guernsey to Charleston, South Carolina.¹¹⁹⁶ After an extremely lengthy and stormy crossing, they arrived at Charleston on 7 September where De Brahm’s wife died of a “violent fever.”¹¹⁹⁷ He also found South Carolina in a state of emergency, with the governor, Sir William Campbell taking refuge on a navy vessel. Almost as soon as the *Cherokee*’s presence was known, Campbell had it and its crew commandeered from survey duty in

¹¹⁹² Board of Trade to the Privy Council, 10 March 1774, CO 324/18, pp.480-1.

¹¹⁹³ De Brahm to Dartmouth, 30 August 1774, *Dartmouth Mss.*, vol. II, p.223; De Brahm to Dartmouth, 24 February 1775, *Dartmouth Mss.*, vol. II, p.273; also “Masters Journal for the Cherokee from the 17th day of Jany’ 1775 to the 13th of March following,” ADM 52/1639.

¹¹⁹⁴ De Brahm to Dartmouth, 21 December 1774, SRO: Dartmouth Papers, D1778 II 1026.

¹¹⁹⁵ De Brahm to Mulcaster, an enclosure to De Brahm to Dartmouth, 14 October 1774, *Dartmouth Mss.*, vol. II, p.229.

¹¹⁹⁶ De Brahm to Dartmouth, 19 June 1775, SRO: Dartmouth Papers, D1778 II 1519. Ferdinand Joseph Sebastian De Brahm had previously served as a military engineer to the Elector of Trier. Once in America he came to side with the rebels, becoming a Major of Engineers in the Continental Army in 1778. He notably mapped the New York Campaign of 1776, see P.J. Guthorn, *American Maps and Map Makers of the American Revolution* (Monmouth Beach, N.J., 1966), p.9, map nos. 8 (1-3).

¹¹⁹⁷ De Vorsey (ed.), *De Brahm’s Report*, p.51.

favour of general naval service. The resumption of the Southern General Survey was thus over even before it began.

A furious De Brahm complained that “a ship so positively disqualified for military purposes should be detailed for doing what it cannot.”¹¹⁹⁸ One of the naval officers present remarked that “the Cherokee is a great acquisition to us...[but] De Brahm has been plaguing us with his being impeded in carrying out on the service he was order’d but the Governor...has cut him very short. A fine time to talk of his surveys of a country that we are in doubt to who it may belong to...”¹¹⁹⁹ De Brahm, who remained in Charleston for the next two years, seemed to have an almost delusional lack of appreciation for the grander scheme of events, complaining to Dartmouth and Pownall of the Navy’s “preoccupation with War”.¹²⁰⁰

Events in East Florida

From 1772 to 1775, East Florida started to make modest progress. In May 1773, Lieutenant-Governor John Moultrie returned from a tour of the inhabited parts of the province, concurring with De Brahm’s assessment that “the Northern parts are capable of improvement, with good rivers and inlets for navigation.”¹²⁰¹ He was confident that building more roads out of St. Augustine would assist in bringing produce to market and would encourage more immigration. From 1773 to 1776, the province successfully

¹¹⁹⁸ De Brahm to Dartmouth, 18 September 1775, SRO: Dartmouth Papers, D1778 II 1519; also De Brahm to James Oglethorpe, 17 October 1775, CO 5/134, f.247.

¹¹⁹⁹ Alexander Innes to Governor Patrick Tonyn, 15 October 1775, cited in De Vorse (ed.), *De Brahm’s Report*, p.276.

¹²⁰⁰ De Brahm to Dartmouth, 8 December 1775, CO 5/77, ff.16-7; also De Brahm to Pownall, 8 December 1775, CO 5/77, ff.115-6.

¹²⁰¹ Moultrie to Dartmouth, 16 May 1773, CO 5/553, ff.22-4.

completed two major road projects, one linking the capital with Georgia in the north, and the other heading south from St. Augustine past New Smyrna to Elliot's Plantation.¹²⁰²

After recovering from a drought in 1773, the province bounced back the following year to produce an all time high of 22,119 pounds of indigo, up from 6,000 in 1771, although this paled in comparison to the 500,000 pounds annually exported from South Carolina.¹²⁰³ Despite this, East Florida still maintained a large trade deficit: in 1774, there was £22,335 in exports versus £52,149 in imports from Britain.¹²⁰⁴ The province continued to draw an annual Parliamentary subsidy from London of £4,950 throughout the period.¹²⁰⁵

Apart from unrealised threats of American raids from Georgia and a single act of piracy on its coasts, East Florida was never a theatre in the Revolution. Its residents were loyal to the crown, a stance aided by their total economic dependence on Britain. Immigration only reinforced this tendency, as almost all new settlers were avowed loyalists, fleeing the rebels.¹²⁰⁶

The Order in Council of 7 April 1773, which arrived in St. Augustine some months later, placed a temporary damper on development in the colony as it ceased all granting processes until the new method for granting lands was introduced throughout all colonies.¹²⁰⁷ While grant applications already submitted were allowed to proceed under the old system, from 1772 to 1773 there was a major decrease in the number of warrants issued. In 1772, sixty-five warrants were issued totaling 127,000 acres. The following

¹²⁰² Mowat, *East Florida*, p.68.

¹²⁰³ Mowat, *East Florida*, p.77

¹²⁰⁴ Mowat, *East Florida*, p.154

¹²⁰⁵ Mowat, *East Florida*, p.36

¹²⁰⁶ W. H. Siebert, *Loyalists in East Florida, 1774-1785*, 2 vols. (Deland Fla., 1929).

¹²⁰⁷ Order in Council to the Governors of North American Colonies, 7 April, 1773, CO 323/27, pp.365-368, letter printed in full, *DAR*, vol. VI, letter no. XLII, pp.118-9; *APC*, vol.V, p.360; Labaree, *Royal Instructions*, vol. II, no.764.

year, the number of warrants had fallen to only fourteen warrants totaling only 17, 696 acres.¹²⁰⁸ However, from the summer of 1775, when Whitehall ordered that land grant restrictions be suspended in order to accommodate an influx of loyalists, the situation began to improve. That year, 129 new warrants were issued covering 182,000 acres of land.¹²⁰⁹

Governor Patrick Tonyn was first apprised of the new land policy in May 1774.¹²¹⁰ Officials in East Florida were quick to realize that the policy, which required the precise surveyed demarcation of equal-sized lots to be sold by public auction, had to rely on accurate general maps. To the governor's chagrin, none of De Brahm's maps could be found in the provincial archives or Mulcaster's office. Likely due to the acrimonious nature of his departure, the suspended surveyor would not have been inclined to leave any item behind which might aid his nemesis Governor Grant.

The Governor, a normally formidable Irish soldier, was left to report to Dartmouth that, "There is no map or draught of this province, which we are so greatly at a loss for, permit me to request to your Lordship, to lay your commands on Mr. Debrahm, to send out forthwith the Map he drew of this province, that we may have something for our guide in the disposal of the Lands."¹²¹¹ In November, Dartmouth replied to Tonyn, informing him that De Brahm had been reinstated as Surveyor-General of East Florida and that he "is preparing to go over immediately in order to prosecute his Plan of the General Survey, I shall not fail to furnish...the proper Materials for enabling him to lay

¹²⁰⁸ Mowat, *East Florida*, pp.62 and 65.

¹²⁰⁹ *Ibid.*

¹²¹⁰ Tonyn to Dartmouth, 19 May 1774, acknowledging his receipt of Dartmouth's Circular of 5 February CO 5/554, ff.34-7.

¹²¹¹ Tonyn to Dartmouth, 5 August 1774, CO 5/554, ff.48-57.

out such land as may be judged fit for sale pursuant to His Majesty's Instructions."¹²¹²

As De Brahm would never again visit East Florida, the promised maps never arrived.

This story reveals that policies or practice relating to map availability and use varied by colony. While the governors in the provinces mapped by the Northern Survey were regularly furnished with maps by Holland, it would seem that no such understanding existed between De Brahm and the East Florida administration.

An "Accurate General Map" by Joseph Purcell

De Brahm's former draughtsman and long-time antagonist, Joseph Purcell, who had since been employed by John Stuart, the Southern Superintendent of Indian Affairs, seems to have been the only person in East Florida who possessed copies of the Southern General Survey's maps, but he evidently declined to share his cache with Governor Tonyn. Rather, he chose to carry out a grand enterprise for his new employer.

Early in 1769, Hillsborough had told Stuart to "employ a skillful person to lay down upon some accurate general map of America, in order to be transmitted to me, for His Majesty's information, the several [Indian Boundary] Lines agreed upon and marked out."¹²¹³ Stuart eventually charged Purcell to create the masterly "A Map of the Southern Indian District of North America," completed in 1775 (**Fig. 104**).¹²¹⁴

A breathtaking achievement, the map was compiled from the most advanced surveys of the southern colonies acquired from a bewildering number of sources. While its stated purpose was only to depict the Indian Boundary Line in the South as amended since 1763, it proved to be by far the most accurate and comprehensive general map of

¹²¹² Dartmouth to Tonyn, 2 November 1774, CO 5/554, ff.58-61.

¹²¹³ Hillsborough to Stuart, 1 February 1769, CO 5/70, p.177, cited in De Vorse, *Indian Boundary*, p.228.

¹²¹⁴ Joseph Purcell & John Stuart, "A Map of the Southern Indian District of North America," Mss, 1775, CO 700/North America 12, Penfold no.2035; Cumming, *Southeast in Early Maps*, no.438A.

the southern colonies. Embracing De Brahm and Romans's surveys of the Floridian peninsula, it is the first map to fully contextualize the Southern General Survey's accomplishment within a map intended for high-level administration.

One could advance that the Stuart-Purcell map represented a tribute to De Brahm's work, but the moody surveyor-general did not see it that way, considering it akin to an act of carto-piracy. In October 1773, De Brahm angrily wrote to Dartmouth complaining that his former "geometer" Purcell had "secretly taken copies" of his surveys under the orders of Stuart, whom he described as a "special Friend" of his arch-nemesis James Grant.¹²¹⁵

West Florida: Durnford, Romans & the Quest for a General Map

On paper, at the time Dartmouth took office, the future for West Florida looked bright. Efforts to attract both syndicates and individuals from the Thirteen Colonies to settle in the colony were having some effect, as numerous applications for land grants flowed into Pensacola.¹²¹⁶ Governor Chester tended to approve all claims from those who already had royal warrants, without bothering to consult the provincial council.¹²¹⁷ He was confident that Dartmouth would be more supportive than his predecessor of his plans to move the capital to Harwich on the Mississippi River, and, with it, the focus of the colony to its western frontier.

¹²¹⁵ De Brahm to Dartmouth, 23 October 1773, *Dartmouth Mss.*, vol. II, p.178.

¹²¹⁶ While most of the individual colonists wishing to move to the province were not particularly well off, the emergence of syndicates that seemed to be backed by credible people held out the possibility of mass settlement. In March 1773, the Company of Military Adventurers, led by General Phineas Lyman, reserved ten townships, covering 23,000 acres on the Mississippi; and, the following June, a group led by Thomas Hutchins, the esteemed military surveyor, put in a claim for 25,000 acres around Natchez, Johnson, p.141

¹²¹⁷ C. Johnson, *British West Florida 1763-1783* (New Haven, 1943).

Towards the end of 1772, Dartmouth seemed to share Chester's optimism. He opined that West Florida might soon become self-funding due to the land administration fees it charged settlers, thus sparing Parliament from having to send its annual subsidy which amounted to £5,650 that year.¹²¹⁸ This hope was substantiated by the fact that the province charged seventeen different fees to grantees, which amounted to 20 Spanish dollars for a 500 acre grant, a very substantial sum.¹²¹⁹

Montfort Browne, the disgraced former lieutenant-governor, revived his proposal that called for the creation of a new province in the western regions of West Florida to Dartmouth, with whom he had a familial connection.¹²²⁰ Responding in January 1773, the Privy Council, while finding the notion of creating such a new government too radical, agreed that new settlements along the river should be encouraged.¹²²¹ Browne consulted with George Gauld, Thomas Hutchins and his friend John Cambel and commissioned several maps which depicted a new town built on Browne's own land grant of 'White Cliffs'. Taking a page out of Durnford's book, in an effort to appease the Colonial Secretary, one of the maps prominently christened the town as "Dartmouth".¹²²² Although the advent of the Revolution ensured that the plan came to naught, Browne clearly gained Dartmouth's favour, as he was appointed to serve as governor of the Bahamas in 1774.

¹²¹⁸ Dartmouth to Chester, 9 December 1772, CO 5/589, pp.465-8; relevant except of letter printed in Phillips, *Romans*, pp.48. The annual Parliamentary grants to West Florida were as follows: 1772: £5,650; 1774: £4,850; 1776: £4,063, Mowat, *East Florida*, p.36.

¹²¹⁹ Johnson, *West Florida*, p.127.

¹²²⁰ D. Bosse, 'Dartmouth on the Mississippi: Speculators and Surveyors in British North America in the Eighteenth Century', *Imago Mundi*, vol.41 (1989), pp.9-20.

¹²²¹ Report of the Privy Council, 22 January 1773, SRO: Dartmouth Papers, D1778/I/ii/842.

¹²²² John Cambel, [Plan of the proposed town of 'Dartmouth' on the Mississippi River, West Florida], Mss., [1775], WCL: Maps 8-L-17, map was formerly part of the Dartmouth Papers.

As with East Florida, the Order in Council of 7 April 1773, which placed a moratorium on all new land grants, significantly slowed development in the colony. While Chester was still permitted to follow through with applications already submitted, he was deeply concerned with the fate of the hundreds of settlers who were regularly arriving at Pensacola under the assumption that they would be granted land. His solution, in October 1773, was to grant them something akin to squatters' rights, where they would have his permission to occupy undeveloped land tracts with the understanding that they would have a chance to obtain title once the Board of Trade had settled upon its new land grating system.¹²²³ This arrangement was well received by prospective settlers, and, according to Durnford's 1774 census, the province had grown to 4,500 of which the majority, 2,500 European and 600 slaves, now lived in the Mississippi West.¹²²⁴

Unlike Hillsborough, Dartmouth was generally supportive of the notion of building the Iberville Canal, or at the very least ensuring that its viability was fully investigated.¹²²⁵ Under pressure from Dartmouth, Gage reluctantly charged Durnford and Hutchins with conducting another feasibility assessment.¹²²⁶ In 1774, Durnford sent Gage his final report, accompanied by a map by Thomas Hutchins, which showed that the construction of a canal was viable, and urging that work begin immediately.¹²²⁷

Like its sister colony, the citizens of West Florida were highly reliant on the government for employment and trade, and thus the revolutionary tide from the Thirteen Colonies had little effect. It did not become an active battle theatre in the Revolution

¹²²³ West Florida, Minutes of the Council, 16 October 1773, CO 5/630.

¹²²⁴ Elias Durnford, "A Description of West Florida," 15 January 1774, CO 5/591, pp.9-32.

¹²²⁵ Brown, 'Iberville Canal', pp.513-4.

¹²²⁶ Gage to Dartmouth, 3 March 1773, *Gage Correspondence*, vol.I, pp.346-7.

¹²²⁷ Thomas Hutchins, "Horizontal Line from Manchac to the forks of the Iberville distant nine miles", Mss., 1773, WCL:Gage Collection, Maps 8-L-16, Chester to Dartmouth, 13 May 1773, printed in full, Rowland, pp.168-71.

until Spain entered the conflict in 1779. Anticipating that a wave of loyalists would flow to the colonies in royal control, in July 1775 Dartmouth instructed Chester not only to suspend any laws which impeded settlement, but also to grant refugees tracts free of quit rents for ten years, and to financially and materially assist them as much as possible.¹²²⁸

The Use of Maps in West Florida

The ‘informal’ General Survey in West Florida, which filled the vacuum created by the suspension of the Southern General Survey, progressed significantly during the Dartmouth period. Highly exacting regional maps continued to provide administrators in both Pensacola and London with vital visual aids that clearly conveyed the complex interlocking series of cadastral grants.

To confer greater legitimacy to the work in West Florida, the Board of Trade, in 1775, retroactively provided direct financing to the surveyor, Elias Durnford, advancing him £600 to cover expenses he endured from 1765 to 1774.¹²²⁹ Durnford’s surveying had become so well regarded at the Board of Trade that a Clerk mistook him to be “the Surveyor-General of the Southern District.”¹²³⁰

Maps were also at the centre of a curious diplomatic situation submitted to the Board of Trade. A reading of the Treaty of Paris could leave the impression that Britain was entitled to all of the lands in North America east of the Mississippi River, with the solitary exclusion of “the Island of Orleans,” which went to Spanish Louisiana. In 1770, the Admiralty surveyor, George Gauld, suggested that the islands of Balise, located

¹²²⁸ Dartmouth to Chester, 5 July 1775, CO 5/619, pp.129-1.

¹²²⁹ Amount included in the “Civil Establishment of West Florida, 1775” Pownall to Chester, 3 May 1775, CO 5/619, pp.127-8.

¹²³⁰ Durnford wrote a letter while he was in London, and which was received the same day, the it was endorsed when received as being sent from “The Surveyor-General of the Southern District of North America,” Durnford to Pownall, 29 October 1774, CO 323/29, pp.33-6.

strategically at the mouth of the river, were to be rightfully ceded to Britain, as they were east of the main channel of the Mississippi, and not part of the Island of Orleans.¹²³¹ In 1774, Chester became enamored with the idea, and he commissioned Gauld to make Dartmouth a special map depicting the islands in question.¹²³² While the issue was never seriously pursued due to the onset of the Revolution, the story provides a curious glimpse into how administrators used maps to pursue diplomatic advantage.

Importantly, from 1765 to 1771, Gauld produced a series of highly accurate hydrographic surveys encompassing the entirety of the coastline of West Florida and Spanish Louisiana, providing a very clear outline of the littoral regions of the province.¹²³³ His maps were not only used by Durnford and Romans, but remained the authoritative maps of the Gulf of Mexico Coast until A.D. Bache's surveys of the 1850s.

[Bernard Romans Completes the First General Map of West Florida](#)

Based in Pensacola since August 1771, Bernard Romans made his own surveys of various areas of the province. Due also to his unique access to the cartography of others, Romans became the first person to complete a general map of West Florida based on scientific surveys.

Upon his arrival in West Florida, Romans was immediately employed by the Southern Indian Superintendent, John Stuart, to conduct surveys. In that capacity, he worked with David Taitt, managing to acquire access to his surveys of the interior of the

¹²³¹ Gauld to Arthur Forrest, R.N., 7 January 1770, cited in Ware, *George Gauld*, pp.128-9

¹²³² George Gauld, "A Plan of the Mouths of the Mississippi River...For the Right Honourable Earl of Dartmouth," Mss., 1774, MPG 1/530, Penfold, no.2421, an enclosure to Chester to Dartmouth, 7 June 1774, CO 5/591, pp.247-64.

¹²³³ George Gauld, *Chart of the Coast of West Florida and the Coast of Louisiana*, printed by William Faden (London, 1803).

province (**Fig. 105**).¹²³⁴ From May to July 1772, Governor Chester employed Romans to survey lands to the east and north of the capital. This presented Romans with an opportunity to send a calling card to Dartmouth in the form of an impressive map of those hitherto enigmatic regions of the province.¹²³⁵

In August 1772, Chester wrote a letter to Hillsborough, which was received by Dartmouth, in which he stated that he was proud to “herewith transmit to your Lordship a Map of the Eastern Parts of this Province which had not hitherto been explored – This map was executed by Mr Bernardus Romans a Surveyor – in Consequence of my direction who I think very Capable of performing business of this kind...I shall Continue to Employ this Man in services of the like nature which I think will prove of any public Utility.” Chester also transferred “draughts of Flowers...and a specimen of the Jalap of this Country – which has been lately discovered within the province by Mr. Romans.” In light of both his services as a cartographer and a botanist Chester thought him “Worthy of Encouragement” and recommended that Romans be furnished with an annual stipend of “£50 – or £60” to be added to the colonies Parliamentary estimates.¹²³⁶ Sadly this map has since gone missing, and did not appear in the Board of Trade’s 1780 map inventory.

Dartmouth was evidently impressed with Roman’s work as he granted him a £50 annuity, replying to Chester that “Mr Romans appears, by the Examples You have

¹²³⁴ David Taitt, “A Plan of part of the rivers Tombeche, Alabama, Tensa, Perdido, & Scambia in the Province of West Florida”, Mss., 1771, LOC: G3971.P53 1771 .T3 Vault, Sellers and Van Ee, no.1649.

¹²³⁵ Romans, ed. E. Braund, *A Concise History of East and West Florida*, Introduction, pp.6-8.

¹²³⁶ Chester to Hillsborough [but received by Dartmouth], 14 August 1772, CO 5/589, pp.457-60; letter printed in full, Phillips, *Bernard Romans*, pp.47-8.

Transmitted of his Ingenuity to be very well qualified for the useful Business in which you have employed him.”¹²³⁷

While in the employ of Chester, Romans was given access to the provincial archives containing many of Durnford’s surveys. Dr. William Lorimer, a mutual friend of both Romans and Gauld, also supplied him with some of the latter’s coastal surveys. Combining these sources with his own work and the cartography of the Indian Department, Romans was soon able to draft the first general map of West Florida composed from scientific surveys. This was dispatched to Dartmouth on 7 October 1772 by Chester who wrote that I “herewith transmit to your Lordship a Map of the Province of West Florida which I believe to be more perfect and compleat than any hitherto transmitted from hence. Most of the material from which it is Composed are from actual Surveys. The Sea Coast is taken from Surveys of Mr George Gauld...and some parts are taken from Mr Durnford’s Surveys but the Eastern and some of the interior parts of the Province, which are hitherto almost unknown are laid down from Surveys by Mr Romans who has compleated this Map by my Directions.”¹²³⁸ Unfortunately this map, although it was, at one time, present and catalogued by the National Archives of the United Kingdom, has also gone missing. It is known today from a photograph in the Library of Congress.¹²³⁹ Appended to this map was a copy of Romans’s treatise, “An attempt toward a short description of West Florida,” which describes the natural attributes of the province including medicinal plants, fish minerals, navigable rivers and the indigenous

¹²³⁷ Dartmouth to Chester, 9 December 1772, CO 5/589, pp.465-8; the award of Romans’s £50 annual stipend was confirmed in “Estimates of West Florida, 1773,” Knox to Chester, 3 March 1773, CO 5/619, pp.109-10.

¹²³⁸ Chester to Hillsborough [but received by Dartmouth], 7 October 1772, CO 5/590, pp.107-10; letter printed in full, Phillips, *Bernard Romans*, p.48.

¹²³⁹ Bernard Romans, “A General Map of West Florida,” Mss, 1772, catalogued as CO 700/Florida 52, but is recorded as “Missing”, not catalogued in Penfold, but catalogued in Phillips, *Bernard Romans*, pp.74-5. A large photostat of the map can be found at the Library of Congress.

population, all subjects which Romans expands upon in his *A Concise Natural History of East and West Florida* (1774).¹²⁴⁰ Also notable is the map of West Florida Romans personally delivered to General Gage in New York in 1773, which is similar to the map he sent to London, save its inclusion of the Indian Boundaries he was involved in surveying while working for Stuart.¹²⁴¹

The Role Played by Elias Durnford

Elias Durnford, the lieutenant-governor and surveyor-general of West Florida was also intent on creating his own general map of West Florida. He had already drafted several masterly maps of each of the three major areas of settlement in the province: Pensacola, Mobile Bay, and the Mississippi valley. This was in addition to his detailed surveys of the Iberville Canal and proposed town-sites such as Harwich. Durnford continually updated his Mississippi valley maps in an effort to mark all of the new cadastral divisions which were being created.¹²⁴²

During a sabbatical in London in 1774, Durnford requested that the Board of Trade grant him access to all of the maps of West Florida it possessed in its collections. This not only included his own works, but also those of Romans and George Gauld. When he first made his enquiry to Dartmouth in January, he noted that his efforts to create a general map had been severely delayed by the loss of his papers while on the

¹²⁴⁰ Bernard Romans “An attempt toward a short description of West Florida,” appended to missing general map, another copy later sent to London separately, Chester to Dartmouth, 22 July 1773, CO 5/590, pp.299-328. The “attempt” is printed in full in Phillips, *Bernard Romans*, pp.119-28.

¹²⁴¹ Bernard Romans, “A Map of Part of West Florida done under the direction of the Honourable John Stuart esqr: & by Him humbly Inscribed to his Excellency Thomas Gage”, Mss., 1773, WCL: Gage Collection, maps 6-E-12. Gage wrote to Stuart thanking him for this map, noting “Mr. Romans delivered me the Map of West Florida for which I have many Thanks to give you”, WCL: Gage Papers, American Series, vol.118.

¹²⁴² Durnford prepared a revised edition of his 1771 map of the Mississippi valley to London, Chester to Hillsborough, 15 August 1772, CO 5/589, pp.461-4.

voyage to London.¹²⁴³ In any event, Durnford appears to have been working on his map throughout 1774, as in October he told Pownall that “As my plan of the province of West Florida is in great forwardness and there are some Papers at the Trade and Plantation Office which will be of use to me, to render my Plan more Compleat, I shall esteem it a particular favour if you will request their Lordship’s permission, for me time to time to inspect the minutes of the council of West Florida, or to take copies of such parts of the plans lodged as above mentioned as may be necessary.”¹²⁴⁴

There is no record of Durnford’s visit to the Board of Trade, but we can assume that, given his stature, he was welcomed. As with Holland’s manuscript general map of New Hampshire, there is no further mention of a general map of West Florida by Durnford, and no map approximating its description appears in the 1780 Board Census. As Lieutenant-Governor, perhaps Durnford became preoccupied with greater political matters and simply did not have time to complete his project.

Back in West Florida, a great effort was made to ensure that maps were up-dated to reflect the rapid pace of land claims. While Durnford was in London, Chester commissioned William Wilton, the provincial deputy surveyor-general, to make a map of the Mississippi valley (**Fig. 106**).¹²⁴⁵ His fine map draws on Durnford’s earlier works as a basis, but instead of the ninety-nine land claims outlined on the 1771 map, Wilton depicts over 200 claims on the Mississippi alone, plus another hundred scattered long tributaries such as the Iberville.

¹²⁴³ Durnford (London) to Dartmouth, 15 January 1774, CO 5/591, pp.9-32.

¹²⁴⁴ Durnford (London) to Pownall, 29 October 1774, CO 323/29, pp.33-6.

¹²⁴⁵ William Wilton, “Part of the River Mississippi from Manchac to the River Yazous for Governor Chester by Wm. Wilton,” Mss. [1774], Mississippi State Archives, Jackson, G. M. Willis, ‘British Land Grants: The William Wilton. Map of 1774,’ *Journal of Mississippi History*, vol.28 (1966).

D. The Militarization of Civilian Cartography

The Advent of Open Warfare

In the spring and summer of 1775, royal authority in the Thirteen Colonies was replaced by the provisional provincial governments allied under the Continental Congress. While the underlying conflict was a civil war, with large percentages of colonists actively loyal to either side, the official British presence would primarily come in the form of an invading and occupying military force, advancing through different campaigns into the colonies. The first such endeavour was the Boston campaign of 1775 to 1776. With the erosion of British civilian authority, British officials in London and America had an urgent need to reassess all available maps for their utility to tactical and strategic military planning.

Military Mapping in the Pre-War Period

In the time of war, maps, ostensibly made for civilian purposes, were suddenly to be transformed into military aides, in which the economic and cadastral details were to be supplanted by the locations of battlement works, the best routes by which to deploy an armed force and to guard it from attack. In the 1970s, J. Brian Harley defined three categories by which the maps of the American Revolutionary War could be classified: one, fortification and siege cartography; second, battle and theatre maps; and third, and most important to our study, the cartography of military movement.¹²⁴⁶

¹²⁴⁶ J.B. Harley, 'The Contemporary Mapping of the American Revolutionary War', 'The Spread of Cartographic Ideas between the Revolutionary Armies', and 'The Map User in the Revolution', in J.B. Harley, B.B. Petchenik & L.W. Towner (eds.), *Mapping the American Revolutionary War* (Chicago, 1978), pp.1-110, see esp. pp.1-5. Alternative classifications are articulated in W. P. Cumming, *British Maps of Colonial America* (Chicago, 1974), "The Cartography of Conflict," pp.57-74 and P.J. Guthorn, *British Maps of the American Revolution*, pp.5-8. These classifications are not mutually exclusive: some maps

In addition to the redirection of colonial surveys completed for civilian purposes during the inter-bellum period, the British military conducted several highly impressive cartographic projects. In the 1760s, Thomas Hutchins and Philip Pittman mapped the Mississippi and Ohio valleys, accounting for one of the most ambitious and impressive mapping endeavours of the era (**Fig. 107**).¹²⁴⁷ During the Stamp Act Riots of 1765, General Gage ordered John Montresor to create a military survey of lower Manhattan, the progenitor of the Ratzel plan of New York, the finest and most detailed map of any colonial city.¹²⁴⁸ In addition to these highlights, there were innumerable fortification plans and large-scale choreographies drafted by the engineers located throughout North America.

Unfortunately, in spite of this estimable cartographic legacy, the extant military maps were of little use when commanders were searching for maps at the onset of unrest in the Thirteen Colonies. On the eve of the Revolution, evidence indicates that the

played a dual role, exhibiting the criteria for two, or, in very exceptional cases, all three categories. Fortification cartography includes topographical maps of bastions and their immediate surroundings, and detailed ichnographic and orthographic views of battlements and barracks. This genre of mapping reliably adhered to the orthodoxy of European military engineering developed from the 1650s onwards, and evinced universal conventions of style, scale and draftsmanship. Created for the purpose of defensive planning to withstand an artillery barrage or siege, or conversely to plan an attack on such an enemy bastion, they were usually drafted on large scales ranging from 100ft per inch for specific details up to a scale of 800ft per inch to show an entire fortified town and its immediate surroundings, Harley, 'The Contemporary Mapping of the American Revolutionary War', pp.5-19. Battles represented the apex of military activity, and their cartographic depiction was already a well-established genre, placing familiar conventions and symbols onto a topographical rendering. Battle cartography depicts the events of a specific altercation between two or more armies, usually at a large to medium scale 1/16 to 1/4 of a mile per inch. While a small number of such maps were sketched during a battle by participants, most of these maps were made following the events in order to record the occasion for the purposes of study, public information, or for formal commemorative presentation, Harley, 'The Contemporary Mapping of the American Revolutionary War', pp.41-4.

¹²⁴⁷ By far the most accurate and detailed colonial map of the mid-Trans-Appalachian and Ohio Valley regions was Thomas Hutchins, *A New Map of the Western Parts of Virginia* (London, 1778), Pritchard and Talliaferro, *Degrees of Latitude*, pp.229-31, Cumming, *British Maps*, p.36. Philip Pittman published valuable maps, notably *A Draught of the Mississippi River from Balise to Fort Chartres*, in his work, *The Present State of the European Settlements on the Mississippi* (London, 1770).

¹²⁴⁸ John Montresor, *Plan of the City of New York & its Environs* (London, 1766) and Bernard Ratzel, *Plan of the City of New York in North America* (London, 1770), see W. P. Cumming, 'The Montresor-Ratzel-Sauthier Sequence of Maps of New York City, 1766-76,' *Imago Mundi*, vol. 31 (1979), pp.55-65

British high command in America was almost bereft of any accurate maps of the most active military theatres, most worryingly metropolitan Massachusetts,¹²⁴⁹ as the military had never commissioned regional surveys of metropolitan Massachusetts, and, in early 1775, the Northern General Survey's manuscripts of key locations such as the Boston area were not yet available.

While formally responsible to the Board of Ordnance in London, army engineers were usually seconded to serve individual commanders in the field. Budgetary cutbacks had progressively seen the number of military engineers in active service decline from eighteen in 1762 to only six at the beginning of 1775.¹²⁵⁰

An analysis of Gage's surviving map collection¹²⁵¹ shows that, of the eighty-three manuscript maps, only eleven hailed from the General Survey and none depicted any regions south of New Hampshire.¹²⁵² While Gage likely once possessed other maps no longer present in his collection, the lack of maps of Massachusetts is further evidence of Britain's lack of understanding of emerging conditions in America.

General Gage's Cartographic Crisis

By the end of 1774, neither Gage's civil or military authority extended beyond the confines of the small pear-shaped peninsula which made up the city of Boston, where his 4,000 troops were holed up in bunker mentality.¹²⁵³ Based on numerous reports from

¹²⁴⁹ Harley, 'The Map User in the Revolution', in J.B. Harley et al. (eds.), *Mapping the American Revolutionary War*, pp.86-91.

¹²⁵⁰ D.W. Marshall, 'The British Military Engineers in America: 1755-1783,' *Journal of the Society for Army Historical Research*, vol. 51 (1973), pp.155-163.

¹²⁵¹ Gage Collection, William Clements Library (University of Michigan), catalogued in C. Brun, *Guide to the Manuscript Maps in the William L. Clements Library* (Ann Arbor, 1959).

¹²⁵² D.W. Marshall, 'The British Military Engineers, 1741-1783: A Study of Organization, Social Origin, and Cartography,' Ph.D. diss., Michigan, 1976, pp.248 and 253.

¹²⁵³ J.C. Hosmer, *The Narrative of General Gage's Spies: March, 1775* (Boston, 1912), p.5, see also J.R. Alden, *General Gage in America* (Baton Rouge, 1948), pp.218-232.

Loyalist informers, Gage knew the rebels were quickly amassing vast caches of arms and provisions sufficient for over 15,000 irregulars, or “minutemen”, in anticipation of a planned attack on Boston. It was an imperative for him to mount a preemptive strike into the interior,¹²⁵⁴ but he could not do so without reliable geographic information. While unspecified northern General Survey maps had been forwarded to General Haldimand, Gage’s predecessor, in February 1774,¹²⁵⁵ and Holland had personally met with Gage in Salem the following June,¹²⁵⁶ these developments yielded no maps of operational use in the opening days of the war. Grant and Wheeler’s manuscript of greater Boston (refer back to Fig. 99) was still some months from completion.¹²⁵⁷

To obtain the information he needed, he issued a desperate plea to the troops. On 8 January 1775, Lt. Frederick Mackenzie of the Welsh Fusiliers reported Gage’s request for cartographic intelligence, “It has been signified to the Army, that if any Officers of the different Regiments are capable of taking Sketches of a Country, they are to send

¹²⁵⁴ Hosmer, p.5

¹²⁵⁵ The commander of Castle William, the island fortress in Boston Harbour wrote Haldimand, “I forward to your Excellency a packet and a roll of plans from Captain Holland some time ago, by Mr. Phillips formerly an officer in this country”, Lt. Col. Alexander Leslie to Haldimand, 15 February 1774, in G.D. Scull (ed.), *Montresor Journals* (New York, 1881), p.533. Unfortunately it is not known specifically which maps were forwarded to Haldimand, especially since the Haldimand map collection was dispersed in the 19th-century without its contents having ever been listed.

¹²⁵⁶ Holland mentioned that he met with General Gage in Salem, Massachusetts in early June 1774; Holland to Haldimand, 13 June, 1774, BL: Haldimand Papers, Add Mss. 21731, f.176.

¹²⁵⁷ Samuel Holland, [Thomas Wheeler & James Grant], “A Plan of Boston Harbor surveyed by Samuel Holland Esq.,” Mss., [1775], MODHD: 395 88; Guthorn, *British Maps*, no.59/3, map dispatched to London Holland to Dartmouth, 27 May 1775, CO 5/76, ff.122-3, letter printed in full, *NJCD*, vol. X, pp.599-600 and calendared in *DAR*, vol. VII, no.1231. “List of Plans sent to the Government, from the Gouvert Survey of the Northern District of North America”, 14 February 1776, AO 3/140, f.6, records that only plan of “Boston Harbor” at a scale of “4000ft.” per Inch had been dispatched to the Board of Trade office, and that said plan was “in the present care of the Surveyor General [Samuel Holland]” who was then visiting London. This manuscript was the basis for J.F.W. Des Barres, [Boston Bay], London, National Maritime Museum (Greenwich): Henry Newton Stevens Collection, nos.94A-F (seven variants), Catalogue; Nov 13, 1776 to Dec 1, 1781.

their names to the Deputy Adjutant General,” however, he feared, correctly, that “not many officers in this Army will be found qualified for this service”.¹²⁵⁸

Gage’s call was answered by two volunteers: Captain Brown of the 52nd Regiment, and Ensign D’Berniere of the 10th Regiment. While De Berniere had already established himself as a competent artist of topographical views, neither man had any formal training in surveying.¹²⁵⁹ Nevertheless, on 22 February, Gage outlined clear instructions, that, if closely followed, could lead to a useful reconnaissance sketch of the routes through the surrounding countryside.

Gage ordered his volunteers “to go through the counties of Suffolk and Worcester, taking a sketch of the country as you pass,” paying special attention to “mark out the roads and distances from town to town, and also the “rivers” “fords,” and “heights and “passes,” and suggesting the best routes for the army to take. Moreover, they were to identify the best places for “encampments”, the acquisition of provisions and the locations best “made defensible” from enemy attack. In essence, they were charged with making a classic reconnaissance map, showing only details crucial to tactical movement, and were not expected to “make out regular plans and surveys.”¹²⁶⁰

After two extremely dangerous missions, one in late February, the other in late March, in which Brown and De Berniere were continually threatened as colonists rightly suspected them for being British spies, they delivered two maps to Gage.¹²⁶¹ The rather

¹²⁵⁸ French, Allen, ed. *A British Fusilier in Revolutionary Boston: Being the Diary of Lieutenant Frederick Mackenzie, Adjutant of the Royal Welch Fusiliers, January 5 - April 30, 1775*. Cambridge, Mass.: Harvard University Press, 1926, p.1.

¹²⁵⁹ Henry De Berniere, *A View of Fort Erie (1773)*, vignette, National Army Museum, London; McConnell, fig.25, p.149; later went on, Henry De Berniere, *Sketch of the Action on the Heights of Charlestown* (Philadelphia, 1818), see J.Winsor, *Memorial History of Boston* (Boston, 1881), vol. III, p.ii

¹²⁶⁰ Gage to Brown, 22 February 1775, letter printed in full, Hosmer, *Gage’s Spies*, pp.10-11.

¹²⁶¹ Captain Brown & Henry De Berniere, [“Roxbury to Concord. Roads & distances, & c.”], Mss., [March, 1775], LOC: G3764.B6P2 1775.R6 Vault (Force 142), Sellers and Van Ee, no. 893.

crude plans identified the main roads from Boston to the crucial rebel bases of Concord and Worcester, adequately noting the main aids and impediments to military movement. Importantly, mileages between key junctions were labeled, albeit based on the imprecise method of counting distance by pacing, and could only be considered to be vaguely accurate. From intelligence gleaned from local Loyalist informants, they also provided Gage with credible information on the locations and sizes of the rebel's arms caches.¹²⁶²

On 14 April 1775, Gage received orders from Dartmouth to proceed with alacrity into the countryside to seize the rebel arsenals and arrest their leaders.¹²⁶³ Gage duly ordered a force of 700 regulars under Lt. Col. Francis Smith to be marshaled. On the night of 18 April, they set out for Concord.¹²⁶⁴ Ensign De Berniere accompanying his regiment on the expedition, and using the intelligence gained from his second reconnaissance mission, proved to be of great utility in guiding the British operations. Under Brown's guidance the British crossed the Charles River, from where he was ordered by his commander "to show him the road from there" to Concord.¹²⁶⁵

The Siege of Boston

Following the rout at Lexington & Concord, the British were once again confined to the city of Boston. Following a pyrrhic victory in the first full scale battle of the Revolution, the British bunkered down to weather a protracted siege of the city. Sometime that spring, John Montresor climbed to the top of Bunker Hill on the

¹²⁶² Henry De Berniere, "Narrative," in Hosmer, *Gage's Spies*, pp.14-32 and 38.

¹²⁶³ Dartmouth to Gage, 27 January 1775, CO 5/92, ff.54-65, *Gage Correspondence*, vol. II, pp.179-83.

¹²⁶⁴ D.B. Chidsey, *The Siege of Boston* (New York, 1966), pp.25-9.

¹²⁶⁵ Hosmer, *Gage's Spies*, pp.8 and 38, unfortunately for the British, the colonial "minutemen" had received precise advance warning of the expedition. It is even widely held that Gage's American wife, Margaret Kemble Gage, who was well known to be sympathetic to the rebels, betrayed this information, Alden, *Gage in America*, pp.247-50. Meanwhile, Paul Revere, in his famous ride, had gone ahead to warn the rebels that the "redcoats were coming", D.H. Fischer, *Paul Revere's Ride* (New York, 1994), p.87.

Charlestown peninsula, the highest point of land in the area, and drew an amazingly fine *figure à vue* of greater Boston. It sufficed as the closest Gage would have as an accurate general map of the siege theatre (**Fig. 108**).¹²⁶⁶

The British unwisely withdrew their troops from their redoubts atop the Charlestown peninsula in April, making the strategic promontory, located only 1,000 feet from Boston, a no-man's land. In June, the rebel militias under General Israel Putnam effortlessly seized the heights and prepared to bombard Boston.

Gage, whose forces had now been strengthened to 6,000 men, realised that their situation was untenable unless they preempted the rebel cannonade. On 17 June 1775, he ordered a force of 3,000 strong under General Sir William Howe to mount a frontal assault on the enemy positions. The British technically won what became known as the Battle of Bunker Hill when the rebels were driven off the heights. The victory came at a high price, costing the Redcoats over a third of their attacking force. Howe's second in command, General Sir Henry Clinton mirrored Pyrrhus's lament following the Battle of Heraclea when he declared that "one more such victory and the cause is lost."¹²⁶⁷

Bernard Romans, who was then in the vicinity, subsequently published a much admired, yet highly inaccurate, view of the event.¹²⁶⁸

Shortly before the battle, Montresor managed to conduct a scientific survey of the Charlestown peninsula. It was subsequently transformed into one of the finest and best

¹²⁶⁶ John Montresor, "A Draught of the Towns of Boston and Charles Town and the Circumjacent Country shewing the Works thrown up by His Majesty's Troops, and also those by the Rebels, during the Campaign: 1775", Mss., 1775, features the notation: "N.B. The Rebels entrenchment are express'd as they appear from Beacon Hill which are color'd yellow"; LOC: G3764.B6S3 1775.M61 Vault (Force 144); Guthorn, *British Maps*, No.80/2; Sellers and Van Ee, no.906; also D.W. Marshall & H.H. Peckham, *Campaigns of the American Revolution* (Ann Arbor, 1976), pp.6-7.

¹²⁶⁷ H. Clinton, ed. by W.B. Wilcox, *The American Rebellion: Sir Henry Clinton's Narrative of His Campaigns, 1775-1782* (New Haven, 1954), p.19

¹²⁶⁸ Bernard Romans, *An Exact View of the Late Battle at Charlestown, June 17th 1775* (Philadelphia or Connecticut, 1775), see Prichard and Talliaferro, p.246.

known battle maps of the Revolutionary War by Montresor's new assistant engineer, Thomas Hyde Page.¹²⁶⁹ Unfortunately, Page was wounded after only eleven days of service and sent back to England, leaving Montresor once again on his own as the sole trained surveyor and military engineer.¹²⁷⁰

Following the Battle of Bunker Hill the British remained confined to Boston and Charleston, with the Americans besieging them from all landward sides. Both armies planned and conducted sporadic raids across each other lines. For months, there were no definitive events. The lack of progress, and the number of casualties, ensured Gage's recall as commander-in-chief, and he was replaced by General Howe in October 1775.¹²⁷¹

Enter the Maps of the General Survey

At some point during the siege, the British high command in Boston was visited by three of Holland's men, who gave them much needed accurate topographic maps of the area. It is not known precisely when Grant & Wheeler's first manuscript map of Boston Bay was completed, but it was certainly no later than 27 May 1775, when Holland dispatched an example to Dartmouth. In testimony to the Board of Trade early in the following year, he recounted, "That in consequence thereof your Petitioner sent three Gentlemen engaged in said Survey to Boston with such Original Draughts as might prove useful to the Commander in Chief of His Majesty's forces during the present rebellion."¹²⁷²

¹²⁶⁹ John Hyde Page & John Montresor, "A Plan of the Action at Bunkers-Hill, on the 17th of June 1775," Mss. [1775], LOC: G3764.B6S3 1775.P3 Faden 26, Sellers and Van Ee, no.909.

¹²⁷⁰ Montresor in a letter to Lord Townshend complains of want of engineers in Boston, Townshend to Dartmouth, 29 July 1775, *Dartmouth Mss.*, vol. II, p.340.

¹²⁷¹ Official Notice of Gage's recall and replacement by Sir William Howe, Dartmouth to Gage, 2 August 1775, CO 5/92, ff.203-8, *Gage Correspondence*, vol. II, pp.202-4, see Alden, *Gage in America*, p.283.

¹²⁷² Memorial of Samuel Holland to the Board of Trade, [n.d., but 6 February 1776], CO 323/29, ff.199-200.

The date of the mission was likely some time after the Battle of Bunker's Hill, owing to the fact that Montresor and Page were clearly not apprised of the Northern Survey's maps at that time. The identity of Holland's three emissaries is not known, but it would have been both logical and most helpful for Grant or Wheeler to have been among them. The possibility of their presence is enhanced by the use of the term "Gentlemen" which was generally used only to denote individuals of stature, such as Deputies Surveyors, and not common troops or assistants.

Throughout the remainder of the summer and subsequent autumn, the British were engaged in small skirmishes with the American infantry, continually adjusting their artillery defenses on Boston Neck and the Heights of Charlestown. Considerable evidence underscores the likelihood that, during the siege, the geographical information provided by the Northern Survey was available and carefully considered by Montresor and his associates, who would have been directly responsible for the construction of trenches, fortifications and the placement of artillery. Not only would accurate topographical maps been useful for estimating the trajectories of ordnance, but would be highly valuable when planning raids for supplies across the American lines, the calculation of precise distances between points and the exact locations of points of elevation, the optimal placement of artillery and the deployment of military patrols.

The absence of a Boston manuscript in Gage's surviving map collection suggests that he may have intentionally left his copies in Boston upon his departure, given their vital ongoing importance to Howe and his staff. One of the three surviving examples of Grant & Wheeler's manuscript of Boston Bay features detailed field notes post-dating the Battle of Bunker Hill, including the placement of defensive works constructed by both

the British and the Americans, the location of the headquarters of Generals Washington and Charles Lee, as well as the spot on the Charlestown peninsula where the force under Howe landed immediately before the battle. It also features more generic operationally useful information such as the locations of roads, areas suitable for amphibious landing, as well as the location of a “Powder House”, used for storing ordnance, which may have been taken over by the rebels.¹²⁷³

Further evidence of the presence of the Wheeler and Grant map at the British headquarters in Boston comes with reference to a beautifully drafted and coloured manuscript of Boston Bay, attributed to John Hills (**Fig. 109**).¹²⁷⁴ Hills was an especially skilled cartographer who is thought to have joined Montresor’s employ shortly after Bunker Hill, beginning a collaboration that would last three eventful years. A comparison of the geographical details on and the scope of Hills’ map with that of Grant & Wheeler’s manuscript conclusively proves that the latter was the antecedent for the former. While the Hills manuscript is undated, its highly detailed, yet unfinished, appearance suggests that it was made in the theatre for practical use in the summer or autumn of 1775. Another untitled manuscript map of Boston Harbour that acts as both a topographical rendering and a sea chart indicates that the Grant & Wheeler map was also made available to the Royal Navy during the siege.¹²⁷⁵ Showing great fidelity to the geographical depiction rendered on its antecedent, this exceptionally well-drafted work contains much information that would have been of great use to the commanders of

¹²⁷³ Thomas Wheeler & James Grant, “A Plan of the Bay and Harbour of Boston...by Messrs. Wheeler and Grant ...Drawn by Jas. Grant 1775,” Mss., 1775, MODHD: A9453; Guthorn, *British Maps*, no.116/4.

¹²⁷⁴ [John Hills], [Boston Harbour, with surroundings, &c.], Mss., [1775], LOC: G3764.B6P55 177-.H5 Faden 35; Guthorn, *British Maps*, no.57/1; Sellers and Van Ee, no.943; Guthorn, *John Hills: Assistant Engineer*, p.5.

¹²⁷⁵ Anon., [Chart of Boston Harbour], Mss., [n.d., but 1775], LOC: G3764.B6P55 177-.B59 Vault, Sellers and Van Ee, no.942.

British vessels, such as “Lord Colvill’s watering Place”. As the source for the only accurate maps of Boston and its environs available to the besieged British during this critical period, the importance of Grant & Wheeler’s manuscript and its derivatives cannot be underestimated.

The strategic value of Grant & Wheeler’s Boston Bay manuscript was not lost on officials in London. George Viscount Townshend, the Master-General of Ordnance, was a keen enthusiast for cartography, as shown by his spirited sponsorship of the Tower Drawing Room.¹²⁷⁶ He not only oversaw the army corps of engineers, but was responsible for mobilizing munitions and provisions to the war front.

Following the debacle at Bunker Hill, Townshend was considering how to shore up the inadequate defenses of Montréal and Quebec, a concern which would soon be proven prescient. In spite of his besieged position, Townshend was under the incorrect impression that Gage had a surplus of heavy artillery in Boston, and he considered whether some of these resources should be transferred to Canada. Pondering this question, on 11 July 1775, he wrote Dartmouth requesting “the loan of Captain Holland’s plan of the town of Boston and its environs for a few days”.¹²⁷⁷

Dartmouth responded that “If more artillery is wanted at Montreal and Quebec I shall submit to King your opinion that it should be furnished from what General Gage can spare at Boston. No plan of Boston by Captain Holland is in this office.”¹²⁷⁸ Holland’s correspondence, which supposedly included the Grant & Wheeler map, was recorded as having been received by Dartmouth’s office on 7 July, so it seems that someone else,

¹²⁷⁶ Marshall, ‘Tower of London Drawing Room,’ pp.21-44.

¹²⁷⁷ George Townshend to Dartmouth, 11 July 1775, *Dartmouth Mss.*, vol. II, p.329.

¹²⁷⁸ Dartmouth to Townshend, 12 July 1775, CO 5/161, ff.146-7.

unbeknownst to the Colonial Secretary, must have borrowed it.¹²⁷⁹ Expressing his concerns over how the topography would affect the deployment of artillery, Townshend replied that his motive for wishing to see the northern survey's Boston map was "to gratify my curiosity as to the cursed Height above Charles Town, which I was anxious about from ye moment I heard the Rebels seized much artillery."¹²⁸⁰

It is not known when Townshend eventually got a chance to see the map, but his interest in it reveals the extent to which senior officials came to value the Northern General Survey's maps as military aids. Sadly, it is also a perfect illustration that there were severe limitations to their utility, even in high-level administrative circles, as long as they remained in manuscript form.

Some confusion surrounds Des Barres' *A Chart of the Harbour of Boston*, which was first published in early August 1775 (**Fig. 110**).¹²⁸¹ On 9 November following, we know that Admiral Graves, who commanded the British fleet in Boston, took receipt of "a box of fifty impressions of Mr Des Barres chart of the Harbour of Boston, with as many copies of the nautical directions".¹²⁸² While it would have been a useful military aid owing to the fine detail of its nautical information and the good rendering of the topography immediately surrounding the city, it is, as stated on the chart, "composed from different surveys, but principally from that taken in 1769, by Mr George Callender, late Master of His Majesty's ship Romney". A careful comparison of geographic features

¹²⁷⁹ An inventory of the maps of the Northern Survey sent to the Board of Trade made early in 1776 records that a map of "Boston Harbor...[drawn to a scale of] 4000 feet [to an inch]" had to be received by the Board, but was now "in the present care of the Surveyor General", "List of Plans sent to the Government, from the Govert Survey of the Northern District of North America", 14 February 1776, AO 3/140, f.6.

¹²⁸⁰ Townshend to Dartmouth, 29 July 1775, *Dartmouth Mss.*, vol.II, p.340.

¹²⁸¹ J.F.W. Des Barres, *A Chart of the Harbour of Boston*, (eight variants, with the earliest imprint being 'Aug 5 1775.'). NMM (Greenwich): HNS 96A.-H.; Krieger and Cobb, *Mapping Boston*, pp.106-7, plate 19; K. Nebenzahl, *Bibliography of Printed Battle Plans of the American Revolution* (Chicago, 1975), no.3.

¹²⁸² Stephens to Graves, 7 September 1775, *NDAR*, vol.II, p.708.

confirms this, for it is not based on the Grant & Wheeler manuscript, which takes in much larger area of the region, and seems to convey the features of the landscape with greater precision. Des Barres would print a chart of Boston Bay directly based on the Grant & Wheeler manuscript, but this would not be published until November 1776, months after the British had left the Boston area for good (**Fig. 111**).¹²⁸³

The potential strategic value of the General Survey's maps was not lost on the Americans either. At some point in the early 1770s, Holland had befriended a country surveyor, Alexander Shepherd, Jr., and lent him a survey of some part of Maine. Shepherd became a supporter of the rebel cause. In July 1775, he informed the Provincial Congress of Massachusetts that he possessed the map. The Congress ordered him to retain the plan and another which he himself had drafted until their best use to the cause could be deduced.¹²⁸⁴

¹²⁸³ J.F.W. Des Barres, [*Boston Bay*], London, National Maritime Museum (Greenwich): Henry Newton Stevens Collection, nos.94A.-F. (seven variants, with the earliest imprint being 'Nov 13, 1776').

¹²⁸⁴ L. Sabine, *Biographical Sketches of the Loyalists of the American Revolution* (Boston, 1847), vol. I, p.537.

Chapter VI. Conclusion and Legacy

Conclusions

The General Survey of British North America was instrumental in revolutionising the geographic conception of the continent. Accounting for the work done in both the Northern and Southern Districts, over 15,000 miles of coastline and thousands of square miles of the interior, in nine different colonies, had been mapped through exacting systematic surveys. It was by far the most extensive cartographic enterprise ever undertaken to date in the British Empire, and one of the greatest scientific endeavours of the Enlightenment era.

The maps and reports produced by the survey provided high-level British administrators, on both sides of the Atlantic, with the authoritative primary intelligence they relied upon to make decisions in the years between the Seven Years' War and the American Revolution. In the newly-acquired colonies, settlement and economic development plans were devised; in the more established colonies, the information was used to better advance existing objectives. Critical points of consideration included demarcating jurisdictional boundaries, laying out cadastral lots for new settlers, building transport and military infrastructure, the identification and exploitation of natural resources, and selecting the locations for new towns and agrarian developments.

The achievements of the General Survey are all the more remarkable considering the great obstacles, both natural and administrative, that were encountered. As the British crown had no centralized institutions for administering mapping programmes and lacked effective procedures for disseminating maps and geographic intelligence within official circles, it is not surprising that, during the time of the General Survey, which was

responsible to the Board of Trade and, latterly, the American Department, the navy, the army, and various provincial governors also operated their own surveying projects, which frequently had significant consequences to the operations and reception of the General Survey. Moreover, various key policy-makers often held personal interests which did not necessarily accord to the mandate of the survey. Yet, while British officialdom did not always embrace the intelligence they received from the General Survey in that manner in which it was intended, there were numerous occasions where it played a discernable role in advancing the imperial will.

Samuel Holland's Northern General Survey was spectacularly successful, not only in being responsible for creating the first accurate general maps of large expanses of northeastern North America, but also for the credibility with which his maps and intelligence were received by senior officials. Holland consistently proved himself to be both a great leader of men, and a skilled political operator. This maximized the productivity and quality of his survey's operations and the prestige in which it and its products were regarded by its patrons.

The accomplishments of the Northern Survey were immense, by both quantitative and qualitative measures. Holland performed an exacting triangulated survey and created a comprehensive settlement plan for the Island of St. John (Prince Edward Island), which formed the basis for the island's development for decades to come. Battling great physical challenges, Holland and his team completed a similar survey and development plan for Cape Breton Island, although, in an unintended consequence of Holland's intelligence, this design was never realised. The Northern Survey's mapping and assessment of the natural attributes of the Magdalens, Anticosti Island and parts of

Labrador provided Whitehall with crucial intelligence that led to the decision to transfer those regions from Newfoundland to the jurisdiction of Quebec. Holland's teams also mapped vast areas of the lower St. Lawrence, the Gaspé, and the Richelieu valleys, which were instrumental in enabling the expansion of settlement in Quebec. The Northern Survey's masterly charting of coastal Maine provided administrators with a blueprint for the management of vital forestry resources. Their surveys of New Hampshire, under the partial patronage of Governor Wentworth, were responsible for the first accurate general map of the province. In their final two seasons, Holland's men created the first scientific cartography of the coastlines of metropolitan Massachusetts and Rhode Island, most notably charting Boston Harbour and Narragansett Bay. While circumstances beyond his control meant that Holland would not be able to create the first accurate general map of the Northern colonies, his survey's highly sophisticated maps, detailed reports, and scientific observations were profoundly important, not only during its time, and formed a lasting legacy.

William De Brahm's Southern Survey was responsible for some of the most technically impressive feats of surveying of the Enlightenment Era. However, his endeavours fell short of their potential, in large part due to the surveyor general's mercurial personality and his difficulty interacting with others. To be fair, from the outset, Governor Grant sought to marginalize De Brahm, preferring to rely on other sources for his geographic intelligence. Regardless of the cause, personal dissonance would ensure that De Brahm's important geographic intelligence was often not effectively disseminated within official circles, resulting in great inefficiencies and

duplication in mapping operations. The Southern Survey also suffered from a chronic shortage of financing and skilled labour.

In spite of all of these tribulations, in only five years, De Brahm's project succeeded in accurately surveying the entire Atlantic coastline of the Florida, and produced the first scientific assessment of the region's natural attributes and economic potential. The surveyor-general also possessed a highly original and progressive scientific mind. While De Brahm was recalled to London in 1771, the work of the Southern Survey was continued, unofficially, along the shores of the Gulf of Mexico towards West Florida, by Bernard Romans and Elias Durnford.

Even though the General Survey ceased its operations in 1775, it would leave behind a legacy, both cartographic and human. While the maps of the Northern Survey occupied only episodic roles of importance to military planning during the American Revolution, following the war, in the newly independent United States, they became the base maps of the cartography of New England for some time to come, while the scientific methods used to produce the maps set the 'gold standard' to which surveyors would aspire.

In what remained of British North America, later Canada, the Northern Survey's maps would continue to define the geographic conceptions of vast regions for many decades. In addition, the veterans of the survey provided the colonies with highly experienced official surveyors during a period of great growth.

Across the Atlantic, the General Survey proved to be one of the most resplendent manifestations of, and later a sustaining force for, Britain's great leap forward in the realm of cartography and related sciences. By the time the Enlightenment period crested

in the 1770s, the nation, that only a generation before had lagged behind, had become the undisputed global master of cartography, a role Britain would enjoy until at least the advent of World War I. Indeed, as the General Survey drew to a close, Whitehall was the world's largest official sponsor of empirical surveys, and London was home to the globe's most respected navigational instrument-makers, most extensive modern map archives, in addition to the most prolific and skilled publishers of maps and related books.

The 'War Room' & the Map Printing Revolution

In November 1775, the cerebral, yet non-confrontational, Lord Dartmouth was replaced as American Secretary by Lord George Germain, a controversial and ultimately tragic figure who had previously been court-marshaled from the army.¹²⁸⁵ With Pownall's resignation in March 1776, William Knox came into his own as Germain's right-hand man, whose zeal to bring the rebellious colonies to heel was rivaled only by that of his religious evangelicalism.¹²⁸⁶ The entire raison d'être of the American Department, and the increasingly irrelevant Board of Trade, was transformed from being a relatively staid civilian bureaucracy into being something of a 'war room' for plotting military strategy for a theatre that lay three-thousand miles across the Atlantic. Given this circumstance, access to accurate and appropriately useful cartography of the war zone was all the more important.

During the American Revolutionary War an unprecedented, if albeit, not always well-orchestrated, effort was made by the official custodians of Britain's manuscripts maps, notably the Board of Trade, the Admiralty, the Board of Ordnance, as well as certain officials whom had personal collections, to bring these maps into print for the first

¹²⁸⁵ A.C. Valentine, *Lord George Germain* (Oxford, 1962).

¹²⁸⁶ Bellot, *William Knox*, pp.140-61.

time. The American Department and the branches of the military were motivated by the need to duplicate a quantity sufficient to be disseminated to the various commanders and vessels in the theatre as well to be used for reference by strategists at Whitehall. To enable this, officials freely distributed maps to London's commercial publishers, who eagerly printed maps in return for financial profit. Where the crown wished to further expedite or control the publication process significant official funding was directly allocated.

By far the most concerted and extensive effort to publish Crown manuscript maps was Des Barres' operation, which had progressively grown from producing odd sea charts of Nova Scotia into a herculean endeavour to create the *Atlantic Neptune*, the first sea atlas of the North American colonies. While it certainly had its flaws and limitations, overall its essence was best captured by a contemporary French journal, which described *Neptune* as "one of the most remarkable products of human industry that had ever been given the world through the arts of printing and engraving."¹²⁸⁷ Printed progressively over a span of eight years, from 1774 to 1784, at its largest extent it comprised five volumes including 115 maps, 146 views, many of which folded out to a massive size. Even more striking was the utterly unique artistic élan of its design and engraving. Titles were often formed by the most exquisite rococo typography, while many of the charts feature the beautiful medium of aquatint, most unusual in cartography.¹²⁸⁸ Moreover, Des Barres was given unfettered access to all of the maps held in crown collections, ensuring

¹²⁸⁷ *L'Esprit des Journaux* (Paris, 1784), p.3, cited in Harley, 'The Map User in the Revolution', in Harley et al. (eds.), *Mapping the American Revolutionary War*, p.88.

¹²⁸⁸ For an artistically virtuous example of a chart from the *Atlantic Neptune*: J.F.W. Des Barres after John Knight and John Hunter, *A Chart of New York Harbour with the Soundings Views of Land Marks and Nautical directions* (London, 1776).

that, overall, his delineations of North America's coastlines were far more precise and accurate than other printed maps.¹²⁸⁹

Over a ten-year period, the *Atlantic Neptune* received more government financing than any other publishing project. In March 1775, as just an initial capital injection, Parliament approved granting Des Barres £3,711 15s for "the expense of Engraving Charts of the Coast of North America, between the Bay of Chaleurs, in the Gulph of St. Lawrence and the river St. Croix in the Bay of Fundy."¹²⁹⁰ Key to this was not only the active involvement of the Northern Survey's Manuscripts, but Holland himself. Holland recounted that in the autumn of 1775, he and "two other Gentlemen" engaged in his survey, "repaired to England, with the Remaining originals, to complete which, as well as to prepare the Whole Survey for Publication."¹²⁹¹ Immediately upon his arrival he was "employed by Lord George Germaine to copy a number of plans and maps" in preparation for the *Neptune*.¹²⁹² While, as usual, he had the good grace to hold his tongue, Holland surely resented this predicament, as from henceforth Des Barres was given the lion's share of the public recognition for his work of the last twelve years.

It is unclear whether Holland worked directly with Des Barres in London. However, he departed England for America in April 1776, leaving Des Barres with effective editorial control over the production of the *Neptune*.¹²⁹³ Des Barres certainly took the initiative, for while he had already received select manuscripts from Holland, in May 1776, he successfully petitioned the Board of Trade for unfettered access to their

¹²⁸⁹ Hornsby, *Surveyors of Empire*, pp.172-90.

¹²⁹⁰ Great Britain, *House of Commons Journal*, vol. 53 (29 November 1774 to 15 October 1776), p.177, cited in Harley, *American Revolutionary War*, pp.89-90.

¹²⁹¹ Petition of Samuel Holland to the Board of Trade, [n.d., but read 6 February 1776], CO 323/29, f.30.

¹²⁹² Holland to Lord Dorchester (formerly Sir Guy Carleton), 12 January 1795, in Chipman, 'Major Samuel Holland', p.79. A similar claim is made in Holland's Memorial to the Audit Office, 26 April 1789, AO 3/140, f.97.

¹²⁹³ Evans, *Des Barres*, p.22

archive of “surveys and Geographic Observations” in order to render “his work as compleat as possible”.¹²⁹⁴

Reflecting the *Atlantic Neptune*’s vital role in printing the surveys done under their direction, the Board of Trade agreed to be a partner with the Admiralty in funding the project. In January 1777, Des Barres successfully lobbied the Board to grant him £2000 out of the augmented annual estimates for the General Survey, leaving only £995 to serve as something of a pension for Holland and De Brahm.¹²⁹⁵ Des Barres would continue to receive significant subsidies, albeit for lesser amounts, from the Board of Trade for the next few years. Befitting their patronage, in December 1778, Des Barres sent the Board a “specimen of my progress in the work I am engaged upon”, being a set of the 189 charts and views he had already published.¹²⁹⁶

While it would take several years for Des Barres to engrave and print many of the Northern Survey’s maps, they inevitably accounted for over a third of the source material for the *Neptune*’s charts.¹²⁹⁷ These predominantly made up the second volume, described as containing “Charts of the coast and harbours of New England composed, by command of the Government, by various surveys, but principally from those taken by Major Holland under the directions of my Lords of Trade and Plantations”, as well as the fourth volume which embraced the coastlines of the Gulf of St. Lawrence.

¹²⁹⁴ Des Barres, Petition to the Board of Trade, 16 May 1776, CO 323/29, f.47.

¹²⁹⁵ Des Barres’ request for sponsorship was conveyed in James Robinson (Under-Secretary to the Treasury) to Richard Cumberland (Secretary of the Board of Trade), 15 January, 1777; Des Barres’ request was honoured and officially recorded, Des Barres to Board of Trade, Estimates of the General Survey of North America, [n.d., but December 1777], CO 5/78, ff.103-4; see also Des Barres to Board of Trade, 24 February 1780, CO 323/29, f.185.

¹²⁹⁶ Des Barres to Board of Trade, [n.d., but read 22 December 1778], CO 323/29, f.138. Des Barres also promised to send the Board of Trade the charts he was preparing as they were completed, Des Barres to Cumberland, 9 February 1779, CO 323/29, ff.142-44.

¹²⁹⁷ Between 40 and 45 of Des Barres 115 charts were derived from the Northern General Survey.

By 1778, Des Barres managed to achieve one of the principal cumulative objectives of Whitehall's mapping programmes, the creation of an accurate general map of all of northeastern North America, from the southern tip of New Jersey to Labrador (**Fig. 112**).¹²⁹⁸ This not only embraced all of the mapping done by the Northern General Survey, but also Des Barres' surveys in Nova Scotia, Cook and Lane's charting of Newfoundland, as well as the work of various military and provincial surveyors in places such as New Jersey and Pennsylvania. It would, overall, be by far the most accurate cartographic rendering of its subject made for many decades, and it is unfortunate that that it generally did not receive the recognition that it deserved. Subsequent map-makers in both London and in America, while using Des Barres or his antecedents to show certain areas, generally failed to express this entire quarter of the continent with such uniform accuracy. Officials also made this mistake, for example, the British and American delegations negotiating the Treaty of Paris (1782-3) relied on the terribly out-dated 'Red Line' Mitchell Map (1755), whose errors and ambiguities ensured that vast sections of the U.S.-Canadian border would remain in dispute until 1842.¹²⁹⁹ Had they used Des Barres's map, much of this confusion would likely have been avoided.

It is important to note that, perhaps due to their limited availability and the peripheral nature of the Floridas in the Revolution, Des Barres did not engrave a single chart based on either De Brahm or Romans' surveys, although he published a very small quantity based on the manuscripts of Gauld, Moncrief and Durnford.

¹²⁹⁸ J.F.W. Des Barres, *Chart of the Coast of Nova Scotia, New England, New York, Jersey and the Gulph of St. Lawrence* (London, 1778).

¹²⁹⁹ J. Dunbabin, 'Red Lines on Maps': the Impact of Cartographical Errors on the Border between the United States and British North America, 1782-1842', *Imago Mundi*, vol.50 (1998), pp.105-25, and J. Dunbabin, 'Red Lines on Maps' Revisited': The Role of Maps in Negotiating and Defending the 1842 Webster-Ashburton Treaty', *Imago Mundi*, vol.63, no.1 (January 2011), pp.39-60.

The private map publishing industry in London during the Revolutionary War period was dominated by the firm of Robert Sayer & John Bennett, who had purchased the late Thomas Jefferys' stock, and the extremely savvy and youthful William Faden, who had been Jefferys' principal apprentice. In 1776, Sayer & Bennett came out with the 'Holster Atlas' a small work of six general maps folded into a compact leather binding to "suit the pockets of Officers of all ranks".¹³⁰⁰ That same year they published the first of three editions of the *American Atlas*, which has been considered one of the iconic works of cartography of the era. Unfortunately, as shown by J. Brian Harley, the maps in the 'Holster Atlas' were made to far too small a scale to be useful in military operations, while most of the twenty-two maps of the *American Atlas* were either re-issues of long published works, or related to areas of marginal significance to the conflict.¹³⁰¹ Only three of the regional maps are derived from recent crown surveying programmes, namely that of St. John's Island (Holland), Newfoundland (Cook and Lane) and the map of East and West Florida (De Brahm and Gauld), which would remain the most accurate map of that region produced in London for some years.¹³⁰² This was very much evident in the general map of the northern colonies present in both publications, which, while it claimed to be taken "from the maps published by the Admiralty and the Board of Trade: Regulated by the Astronomical Observations of Major Holland", included, in reality, only very limited areas from such authoritative sources (**Fig. 113**).¹³⁰³ The complementary

¹³⁰⁰ R. Sayer & J. Bennett, *The Military Pocket Atlas* (London, 1776).

¹³⁰¹ Harley, 'The Map User in the Revolution', in Harley et al. (eds.), *Mapping the American Revolutionary War*, pp.96-8.

¹³⁰² Thomas Jefferys, *The Coast Of West Florida and Louisiana By Thos. Jefferys Geographer to His Majesty. The Peninsula and Gulf of Florida or Channel of Bahama with the Bahama Islands* (London, 1775).

¹³⁰³ Robert Sayer and John Bennett, *A General Map of the Northern British Colonies in America, which comprehends the Province of Quebec, the Government of Newfoundland, Nova-Scotia, New-England and New-York* (London: R. Sayer & J. Bennett, 1775).

general map of the southern colonies was, in terms of accuracy, much better, but was of too small a scale to be of much operational use (**Fig. 114**).¹³⁰⁴

The Continued Role of the General Survey's Maps during the American Revolution

As the Revolutionary War progressed, the cartography of the Northern General Survey was considered to be very valuable to military commanders in the active theatre and strategists in London. It was well known that the manuscript maps created by Holland and his associates, based on painstaking empirical observations, placed all manner of natural and man-made aids and obstacles to military movement with unparalleled planimetric accuracy. However, there were enormous practical limitations to the utility of both the manuscripts and their printed derivatives in war planning. First, most of the action of the Revolution occurred to the southward, outside of the scope of the Northern Survey. Second, even when Northern Survey manuscripts did cover key regions of military activity, maps were few in number and usually large in size (and so not easily portable). These factors ensured that they were often unavailable to those who wished to consult them. Third, as was the case with Des Barres' chart of Boston, the printed derivatives of the manuscripts were often not printed and disseminated in time to be of optimal use. Fourth, even when the printed derivatives arrived in time to best suit commanders and strategists (ideally before a planned operation), they omitted important details that were present on the manuscripts, or were drafted to a smaller scale less suited to operational planning.

¹³⁰⁴ Robert Sayer and John Bennett, *A General Map of the Southern British Colonies in America, comprehending North and South Carolina, Georgia, East and West Florida, with the neighboring Indian countries, from the modern surveys of Engineer de Brahm, Capt. Collet, Mouzon, & others, and from the large hydrographical survey of the coasts of East and West Florida. By B. Romans* (London: R. Sayer & J. Bennett, 1775). Two year later the northern and southern continental maps were combined in a map by John Pownall's brother, Thomas Pownall, *A New and Correct Map of North America; with the West India Islands* (London: R. Sayer & J. Bennett, 1777), Sellers and Van Ee, no.24.

While Des Barres' *Atlantic Neptune* is rightly considered to be one of the greatest cartographic achievements of its era, the way in which it was produced ensured that many of its individual charts were less useful to military planners than the original manuscripts on which they were based. While the *Neptune*'s often elaborately-decorated early printed charts of Nova Scotia certainly benefitted the Royal Navy as it operated out of its base at Halifax, in late 1775 Des Barres came under great pressure from the Admiralty to produce charts covering the New England theatre. The priority was speed of production and utility for maritime navigation. Consequently, his workshop hurriedly printed and dispatched incomplete proof states, that while depicting an accurate planimetric delineation of the shorelines and headlands, were virtually stripped of the great topographical and manmade details that had been such an important aspect of Holland's original manuscripts. Moreover, as the Northern Survey was always hard-pressed to provide the hydrographical detail to match their rendering of the land, many of the early proof states are lacking in these details as well, thus circumscribing their use to mariners. Furthermore, John Knight's capture at the hands of the Americans certainly would have delayed the receipt of any new hydrographic intelligence. A fine example is Des Barres' earlier variants of his chart of the important stretch of Maine's coastline embracing Penobscot Bay and Mount Desert Island (**Fig. 115**).¹³⁰⁵ While his later states of the New England charts, often those produced in 1778 or later, added many artistic, topographical and hydrographical details, it must be recognised that many of his early charts, although based on Holland's maps, were in fact very different things. An enduring mystery, likely a product of Des Barres' eccentric nature, was that his workshop would rush out

¹³⁰⁵ J.F.W. Des Barres, after George Sproule, James Grant and Charles Blaskowitz, [Chart of Penobscot Bay and Mount Desert Island, Maine], (London, first Imprint: April 24, 1776).

unfinished proofs of charts while, during the very same period, he would dedicate precious manpower to perfecting glorious aquatint views that had little or no practical application!

The naval high-command in the American theatre was well aware of the hydrographical shortcomings of the New England surveys and sought to ameliorate the situation. From 1776 to 1778, as a centre-piece of Admiral Howe's secret instructions to all his captains for "collecting material Intelligence and making useful Discoveries...of the Pilotage and Navigation on the most inaccessible Coasts within the limits of your Station", Knight was charged with surveying the critical stretch of coastline extending from New York Harbour to the Nantucket shoals.¹³⁰⁶ His magnificent chart of the Buzzard's Bay-Martha's Vineyard region precisely employed the Northern Survey's delineation of the coastlines, but added great hydrographical detail (**Fig. 116**).¹³⁰⁷

During the first eighteen months of the war, the British strategy in Maine, and indeed for all of the New England coastline north of Cape Cod, was to maintain a naval blockade, while mounting punitive raids "to chastise" certain particularly rebellious towns.¹³⁰⁸ Henry Mowat, who had since been promoted to captain, would, to his professed chagrin, be placed in charge of the naval operation in Maine from 1775 to 1780, having been described by Admiral Shuldham as "the most useful person perhaps in America for the service we are engaged in by his perfect knowledge of all the harbours

¹³⁰⁶ Howe led by example, charging John Knight and John Hunter from his own flagship, the *Eagle* to conduct surveys, ADM 1/487, p.174; see J.F.W. Des Barres after John Knight and John Hunter, *A Chart of New York Harbour with the Soundings Views of Land Marks and Nautical directions* (London, 1776).

¹³⁰⁷ John Knight, "Nantucket Shoals and Buzzard's Bay", Mss., 1778, LOC: G3762.B8 1778 .K6 Howe 15, Sellers and Van Ee, no.984; also John Knight, "Part of Long Island; and the coast eastward to the shoals of Nantucket", Mss., 1778, LOC: G3722.C6 1778 .K6 Howe 16, Sellers and Van Ee, no.824.

¹³⁰⁸ Graves referred to the strategy as "My Design", Samuel Graves to Henry Mowat, 7 September 1755.

on this coast, which he has been employed in surveying these last twelve years.”¹³⁰⁹ In that role he would gain infamy (at least in American eyes) as the protagonist of Britain’s revenge campaign for burning two-thirds of Falmouth, Maine to the ground on 18 October 1775.¹³¹⁰

Des Barres would not print any charts relating to coasts of New England that lay to the north of Boston until the spring of 1776 (and the first of these would not arrive in America until months later). However, there is evidence that the Royal Navy had some access to certain Northern Survey maps. Cape Ann, owing to its role as major base for American privateers and blockade-runners, was a significant cause of concern for the Royal Navy.¹³¹¹ Sometime early in 1776, a British sailor drafted a bespoke manuscript map of the peninsula, clearly based on a copy of Grant and Wheeler’s original manuscript which also included additional “Soundings ...[and] observations” supplied by Mowat that were not on the original manuscript that had been submitted to the Board of Trade (**Fig. 117**).¹³¹²

General Sir Henry Clinton, who was the commander-in-chief of the army from 1778 to 1782, is widely considered to have been the greatest connoisseur of cartography of any of the commanders of the Revolutionary War, and references to maps occur

¹³⁰⁹ Shuldham to Sandwich, 13 January 1776, printed in G.R. Barnes and J.H. Owen (eds.), *The Private Papers of John, Earl of Sandwich, First Lord of the Admiralty 1771-1782* (London, 1932), vol. I, pp.104-7.

¹³¹⁰ Leamon, *Revolution Downeast*, p.77-9.

¹³¹¹ Battle of Gloucester, 8-9 August 1775, the British also unsuccessfully tried to attack the town on 13 August 1775.

¹³¹² P. d’Auvergne, after James Grant, Thomas Wheeler & Henry Mowat, “A Plan of the Harbour and Peninsula of Cape Ann in North America, drawn from a survey, the Sounding & Naval observations by Lieut. Henry Mowat, commander of his Majts. Armed ship Canseaux”, Mss., 1776, LOC: G3762.C3 1776.H6 Vault, Guthorn, *British Mapmakers*, no.59/2; Sellers and Van Ee, no.973.

frequently throughout his correspondence.¹³¹³ His surviving, and thought to be largely intact, collection of 308 manuscript maps from the war period gives an unprecedented insight into the kinds of primary-source cartography available to the British high command at the time. While Clinton certainly had access to all of the important printed maps, such as those from the *Atlantic Neptune* and the *American Atlas*, he clearly relied heavily on manuscript sources. Unfortunately only a small number of his surviving manuscripts directly relate to the Northern Survey although these examples are revealing.

In September 1778, Clinton was charged by Germain with planning the operation to seize the Sagadahoc region of Maine.¹³¹⁴ As already mentioned, the available Des Barres charts would have presented Clinton with a very fragmentary view of this expansive coastline as they lacked many details useful to his planning. Fortunately, he possessed a large manuscript derivative of the Northern Survey's monumental map of the coastline from "Cape Elizabeth...to St. John". Though seemingly an unfinished presentation copy, it delineates the entire coastline with great fidelity to its antecedent, and in the eastern regions, features far greater hydrographical and topographical details than the comparable Des Barres charts (**Fig. 118**).¹³¹⁵ While untitled and anonymous, it includes much of the hydrographic information that was painstakingly acquired by Thomas Hurd and John Knight from 1772 to 1775, a great deal of which had not yet been absorbed into Des Barres charts. This was most likely the very map Clinton consulted when planning what would become the New Ireland design.

¹³¹³ Clinton's complete map collection is catalogued in R.G. Adams (ed.), *British Headquarters Maps and Sketches used by Sir Henry Clinton while in Command of the British Forces Operating in North America during the War for Independence, 1775-1782* (Ann Arbor, Mich., 1928).

¹³¹⁴ Germain to Clinton, 2 September 1778, CO 5/96, ff.41-4.

¹³¹⁵ [John Knight & Thomas Hurd, *after* the Northern General Survey], [Chart of the Coastline extending from Cape Elizabeth to St. John (Maine and New Brunswick)], Mss., [c.1775], WCL: Maps, Clinton Collection, Maps 3-E-9; map is based on Holland & c., "Sea Coast from Cape Elizabeth...to St. John's river", Mss., 1773, BL: K.Top.120.18.

Amazingly, the Americans who had captured Knight in the summer of 1775 permitted him to keep all his personal possessions, which included “plans of the continent”, an act of courtesy the rebels came to “greatly regret”.¹³¹⁶ It is interesting to speculate as to whether the large chart which fell into Clinton’s hands was one of those plans!

The most comprehensively researched example of map dissemination during the Revolutionary period is the study of how Blaskowitz and Wheeler’s manuscripts of Narragansett Bay, Rhode Island became the basis for several printed versions produced by both sides in the conflict.¹³¹⁷ This was highly consequential, as the strategic harbour of Newport changed hands, being under the control of the British from December 1776 to November 1779, before becoming the French base of operations in America in 1780. Des Barres was the first to publish a derivative of the original manuscript in July 1776,¹³¹⁸ followed a year later by William Faden (**Fig. 119**).¹³¹⁹ In 1778, the year that a French fleet under the Comte d’Estaing unsuccessfully attacked Newport, the work of the garrison’s engineer, Edward Fage, show that he used Blaskowitz and Wheeler’s original for as the basis for much of his own plans for the defense of the town.¹³²⁰ That same year the first printed derivatives of Faden’s version were printed in Paris, maps which would

¹³¹⁶ James Lyon to James Otis, *NDAR*, vol.3, p.854.

¹³¹⁷ Pedley, *Commerce of Cartography*, pp.129-46.

¹³¹⁸ J.F.W. Des Barres, *A Chart of the Harbour of Rhode Island and Narragansett Bay* (London, 1776).

¹³¹⁹ Charles Blaskowitz, *A Topographical Chart of the Bay of Narraganset in the Province of New England, with all the Islands contained therein, by C. Blaskowitz*. (London: William Faden, 1777).

¹³²⁰ Edward Fage, [Narragansett Bay, Rhode Island], WCL: Clinton Collection, Maps 3-J-1; see also Edward Fage, “Plan of Rhode Island, the harbour, the adjacent islands, and coast”, Mss., 1778, BL: K.Top.120.42; Pedley, *Commerce of Cartography*, pp.128-9 and 135-6; Hornby, *Surveyors of Empire*, p.200.

have been useful to the French as they focused their energies on Newport.¹³²¹ In this way, the valuable intelligence acquired by Britain's crown surveys fell into enemy hands.

The project to create a new Loyalist province out the Sagadahoc region became something of an obsession for Knox at the American Department. While establishing a new jurisdiction in this region was by no means a novel concept, it appears that the notion was revived at the beginning of 1778 by John Nutting in the hopes of creating a home for his fellow loyalists, displaced from metropolitan Massachusetts.¹³²² The new citizenry would be given free grants and the province would be financially sustained by revenues from the timber industry.¹³²³

It was under this pretext that in June 1779 Clinton ordered Brigadier General Francis MacLean, supported by a modest naval force commanded by Mowat, to invade the region and to found a permanent fortified base at Castine on Penobscot Bay. This was duly achieved, however in July the British had to weather a large, yet unsuccessful reprise mounted by the Massachusetts General Court.¹³²⁴

The way was now open for Knox to create the new province of 'New Ireland'. Curiously, not only the name but many of the features of the plan had a familiar ring to Holland's 1770 proposal.¹³²⁵ While Knox never cited Holland's map or letter as his inspiration, this surely cannot be a coincidence, as it would be fair to assume that the

¹³²¹ Georges-Louis Le Rouge, *Port de Rhode Island et Narragansett Baye* (Paris, 1778); Dépôt de la Marine, *Plan de la Baie de Narragansett* (Paris, 1780).

¹³²² Nutting to Germain, 17 January 1778, CO 5/155, p.88.

¹³²³ Leamon, *Revolution Downeast*, pp.105-6.

¹³²⁴ A map was made depicting the invasion: Anon., "Penobscot River and Bay, with the operations of the English fleet, under Sir Geo. Colyer, against the Division of Massachusetts troops operating against Fort Castine, August, 1779", Mss., 1779, LOC: G3732.P395S3 1779 .P4 Faden 101, Sellers and Van Ee, no. 840.

¹³²⁵ In 1780, the Crown law officers ruled that even though Massachusetts was in open rebellion its charter was technically still in force and thus the severing of Sagadahoc from its territory was illegal. While New Ireland was not to be, following the war, in 1784, Knox would be instrumental in creating New Brunswick as an ultra-Loyalist colony out of the western section of Nova Scotia.

meticulous Knox would have been well aware of such a relevant plan that had been housed in his office's archives for the past eight years.

In the run-up to and during the creation of New Ireland there is some evidence to suggest that Knox and his associates at Whitehall had only limited access to the Northern Survey's maps of the region. While Knox could undoubtedly reference Des Barres' charts, there is good cause to believe that many of Holland's original manuscripts were not available to him for consultation. This presented something of a problem, as only these maps would have presented the detailed information on forestry resources and land transportation routes that would have been of great use, as it was before the war, to an administrator planning to sustain economic development on the exploitation of mast timber.¹³²⁶ In the preparation of his charts, it seems that Des Barres may have removed so many of the original charts from the Board of Trade's collections that, by 1778, hardly any remained in their offices. The 1776 Board map census records only two of the thirteen maps of coastal New England coast that Holland had sent to the Board were present in the office, and neither of those covered Penobscot Bay to a large, useful scale. The 1780 census of the Board's map collections furthermore shows that none of the maps of Maine had been returned.¹³²⁷ Knox seemed unsure of how he could recover such maps, and in August 1778 Viscount Townshend sent him two unidentified, yet apparently unimpressive, plans of Penobscot Bay and Harbour, telling him that Des Barres had better maps.¹³²⁸

¹³²⁶ "Estimates of Revenue to be Raised from Lumber and Settlement on Land Between St. Croix River and the western boundary of Sagadahoc", an enclosure to Thomas Goldthwaite to Knox, 4 August 1780, CO 5/157, ff.186-8.

¹³²⁷ F.A. Assiotti, "List of Maps, Plans, & c: belonging to the right Honble. the Lords Commissioners for Trade and Plantations", Mss., 1780, CO 326/15.

¹³²⁸ Townshend to Knox, 27 August 1778, CO 5/164, ff.199-200.

'The Guides & Pioneers': The Human Legacy of the Northern Survey During the Revolution

In April 1776, Holland was promoted to Major and returned to America as aide-de-camp to Lt. General Leopold de Heister, the commander of the Hessian troops. However, recognising his unique talents, he soon was charged to head an elite unit called the Guides & Pioneers, where he was joined by Charles Blaskowitz and George Sproule. The Guides were charged with acquiring geographic intelligence, which sometimes involved dangerous espionage missions and making reconnaissance maps in active theatres of conflict. On other occasions they made exacting topographical surveys of cities and their environs that were safely behind British lines. In this sense, many of the skills of military cartography that the Northern Survey 'civilianised' were returned to their original purpose. While Holland returned to Québec in the spring of 1779, Blaskowitz and Sproule continued to make great contributions in theatre. The Guides produced important maps during all of the major campaigns of the conflict, including the invasion of New York (1776), the Philadelphia Campaign (1777-8) and the Siege of Charleston (1780). One of the highlights is Blaskowitz's magnificent map of New York City and environs (**Fig. 120**).¹³²⁹

The Southern District

East and West Florida were very minor theatres in the conflict. While there were the odd skirmishes along the northern borderlands of East Florida in the early years of the

¹³²⁹ Charles Blaskowitz, "A Map of New York [i.e. Manhattan] & Staten Islds and Part of Long Island. Drawn by Charles Blaskowitz, Capt. Guides & P [Pioneers]", Mss. 1782. NA: MR, 1/1137, Penfold, no.2631; also refer to, Charles Blaskowitz, "A Plan of the Siege & Surrender of Charlestown... to His Majesty's Fleet and Army... May 12th. 1780. Surveyed during and after the Siege by Charles Blaskowitz, Capt. Guides & Pioneers", Mss. 1780, MPH 1/666, Penfold, no.2856; George Sproule, *A Sketch of the Environs of Charlestown in South Carolina*, in Des Barres, *Atlantic Neptune* (1st June 1780), Nebenzahl, *Bibliography*, no.79.

war, there is little evidence to show that cartography figured in these actions. Likewise, maps are not thought to have played much of a role in West Florida during the time it was conquered by the Spaniards under Bernardo de Galvez in 1781. The only truly remarkable manuscript of the Floridas relating to the General Survey done during the Revolutionary period was Joseph Purcell's monumental map of the road that ran from St. Augustine to Pensacola, drafted for John Stuart in 1778.¹³³⁰ As a former assistant to De Brahm, Purcell was perhaps the only person in America (other than perhaps De Brahm and Romans) to possess copies of some of the Southern Survey's manuscripts. Purcell's use of De Brahm's surveys of the St. Augustine region, as well as Romans and Durnford's maps of West Florida is clearly evident.

The Civilian Legacy of the General Survey

Base Maps for the New Republic

The cartography of the General Survey enjoyed an estimable legacy in the newly-independent United States of America, with many of its products becoming the base maps for the regions they covered for many decades. This influence was most pronounced with respect to coastal New England, where a new generation of American map publishers used Holland's maps as the authoritative foundation for their own creations. It should be noted that while they almost invariably relied on the printed derivatives, most commonly Des Barres's charts, as the conduit for this transfer of cartographic intelligence, the Northern Survey's unrivalled delineation of the territory

¹³³⁰ Joseph Purcell, "A Map of the Road from Pensacola in W. Florida to St. Augustine in East Florida. From a Survey made by order of the late Hon. Col. John Stuart, Esquire. H.M.'s Superintendent of Indian Affairs, Southern District, in 1778", Mss., 1778, CO 700/Florida 54; Mark F. Boyd, 'A Map of the Road from Pensacola to St. Augustine, 1778', *FHQ*, vol. 17, no. 1 (July 1938), pp. 15-23.

persisted. It is both ironic and logical that these American mapmakers, no longer reliant on London publishers for maps of their own country, were still heavily dependent on cartography sponsored by the government of a discredited former regime.¹³³¹

One of the most important of these productions was William Norman's *American Pilot* (1791), one of the first sea atlases ever published in America.¹³³² While the engraving and overall production style was far more rudimentary than most works produced in London, it ambitiously included nautical charts of the entirety of the new nation's coastline. Norman almost entirely relied on Holland's work for the delineation of the coasts of New England (**Fig. 121**).¹³³³

At the end of the century another Boston cartographer, Osgood Carleton was charged by the commonwealth's government with producing general maps of both Maine (**Fig. 122**)¹³³⁴ and metropolitan Massachusetts.¹³³⁵ While much of the interior detail was new, Carleton used Holland's depiction for the coastal areas. Carleton's magnificent maps remained the authoritative maps of these regions for many years to come.¹³³⁶

¹³³¹ M. Brückner, *The Geographic Revolution in Early America* (Chapel Hill, 2006).

¹³³² William Norman, *The American Pilot* (Boston: William Norman, 1791). Norman's work was actually the second sea atlas to be published in America, the first being Matthew Clark's *A Complete Set of Charts of the Coast of America* (Boston, 1790), see D. Bosse, 'Matthew Clark and the Beginnings of Chart Publishing in the United States', *Imago Mundi*, vol.63, no.1 (January 2011), pp.22-38.

¹³³³ William Norman, *A Chart of the Coast of America from Wood Island to Good Harbour from Holland's Survey* (Boston: William Norman, 1801); for a general depiction of coastal New England: William Norman, after Samuel Holland & Deputies, *A Chart of the Coast of New England from the south shoal to Cape Sable including Georges Bank from Holland's Actual Surveys* (Boston: William Norman, 1798).

¹³³⁴ Osgood Carleton, *Map of the District of Maine* (Boston: B. & J. Loring, 1802), the first version of Carleton's map of Maine was Osgood Carleton, *The District of Main from the Latest Surveys from Jedidiah Morse's The American Universal Geography* (Boston, 1793); see D. Bosse, 'Osgood Carleton, Mathematician Practitioner of Boston', *Proceedings of the Massachusetts Historical Society*, Third Series, vol. 107 (1995), pp.141-64; see also 'Early State Maps: The New England States', in W.W. Ristow, *American Maps and Mapmakers: Commercial Cartography in the Nineteenth Century* (Detroit, 1985), pp.89-92.

¹³³⁵ Osgood Carleton, *Map of Massachusetts Proper Compiled from actual Survey, made by Order of the General Court* (Boston: Joseph Callender and Samuel Hill, 1801);.

¹³³⁶ It is also important to note that Holland's aforementioned, *A Topographical Map of the State of New Hampshire* (1784), which was finally published after the war by William Faden, remained the authoritative base map for the new state for many years.

It is very curious that Massachusetts decided to enact a policy for the disposal of unsettled lands to private ownership on a model that almost precisely mirrored the system mandated by the British crown in 1773. To recall, Whitehall ruled that henceforth unsettled territory was to be divided into precisely surveyed square townships, which were, in turn, to be divided into equal-sized square cadastral lots to be disposed of by public auction. In order to mandate this system, provincial surveyors, with the guidance of Holland, were number these divisions on an official map of record. These lots were then to be disposed of by auction. However, owing the advent of the Revolution, the process was never brought to fruition.

The U.S. government's Land Ordinance of 1785 mandated a similar system for disposing of lands in the Ohio Valley, a process which would later be employed throughout the American West.¹³³⁷ The fact that Thomas Hutchins, a former senior British military surveyor, in his new role as Geographer of the United States was responsible for developing this system is evidence of the overall bridge between British and American land policy.

Fascinatingly, a manuscript map made by an anonymous state surveyor in Maine in the mid to late 1780s actually fulfills this vision, delineating the newly surveyed geometrical townships in Washington County in eastern Maine, all the while superimposed onto a geographical template taken from the Northern Survey (**Fig. 123**).¹³³⁸

¹³³⁷ W.D. Pattison, *Beginnings of the American Rectangular Land Survey 1784-1800* (Chicago, 1957).

¹³³⁸ Anon. [local government surveyor], "Plan of 50 Townships to be sold by lottery between the Penobscot and Schoodic [St. Croix] Rivers," Mss. [n.d., but c.1785], LOC: G3731.G46 17--P5 Vault. This is not a British colonial map, but one made shortly after American independence adopting the very system the British proposed to implement. These same townships are delineated on Carleton's *Map of the District of Maine*.

Both East and West Florida had been returned to Spain following the Revolution. Unfortunately, while the Spaniards sporadically conducted their own surveys, they made relatively little use of the cartographic legacy of De Brahm, Romans, Gauld or Durnford. However, perhaps prefiguring the ethic of ‘manifest destiny’, American mapmakers took note of their work. In 1789, Osgood Carleton published a general map of the West Indies and the Gulf of Mexico which clearly embraced the cartography of the Southern Survey and its associated programmes (**Fig. 124**).¹³³⁹ That same year, Jedidiah Morse published a small-scale version of Purcell’s monumental general map of southeastern North America (**Fig. 125**).¹³⁴⁰ Similar depictions of the Floridian peninsula are evident on later general maps of North America printed in America, most notably John Melish’s *Southern Section of the United States* (1816).¹³⁴¹ Likewise, the surveys of De Brahm and Romans are still very much a part of the early American maps of new Territory of Florida made shortly after the region was ceded to the United States in 1819.¹³⁴²

The mapping of the coastlines of New England, the Floridian peninsula and northern Gulf of Mexico would not be generally improved upon until the advent of the U.S. Coast Survey done under the direction of Alexander Dallas Bache in the 1850s.¹³⁴³

¹³³⁹ Osgood Carleton & William Norman, *A New General Chart of the West Indies* (Boston: W. Norman, 1789); a similar view of southern Florida was depicted on a roughly contemporary British map, Charles Roberts, George Gauld [& W.G. De Brahm], *A Chart of the Gulf of Florida or New Bahama Channel, Commonly called The Gulf Passage* (London: William Faden, 1791).

¹³⁴⁰ Joseph Purcell, *A Map of the States of Virginia, North Carolina, South Carolina and Georgia; Comprehending the Spanish Provinces of East and West Florida* (New Haven, 1788), published as part of Jedidiah Morse’s *American Geography* (Elizabeth town, N.J., 1789); see ‘The Father of American Geography: Jedidiah Morse’, in J.R. Short, *Representing the Republic Mapping the United States, 1600-1900* (London, 2001), pp.107-26.

¹³⁴¹ John Melish, *Southern Section of the United States including Florida & c.* (Philadelphia, 1816).

¹³⁴² Charles Vignoles, *Map of Florida* (Philadelphia: Henry Tanner, 1825).

¹³⁴³ P.J. Guthorn, *United States Coastal Charts, 1783-1861* (Exton, Penn., 1984).

'Loyal She Remains': Mapping Britain's remaining North American Provinces

The Northern Survey had an enduring legacy in the colonies along the northern periphery that remained in British possession following the war. However, as with his charts of Maine, many of Des Barres' maps of these regions were stripped of much of the cadastral and topographical details which were featured on Holland's original manuscripts. This is evident on Des Barres' chart of the Islands of Cape Breton and St. John; while Holland's original townships on St. John's remain, his elaborate divisions on Cape Breton have been completely erased (**Fig. 126**).¹³⁴⁴

In Holland's role as surveyor-general of Québec, he was responsible for laying out new townships and cadastral lots in anticipation of a flood of loyalist refugees settling not only in the interior regions of southern Québec, but along the shores of the upper St. Lawrence and the lower Great Lakes, in what is now Ontario. While Holland was too elderly to survey the territory in person, he proved, as he had on the General Survey, to be an effective leader, who successfully inculcated the rigorous standards of measurement and map draftsmanship in his associates. Published the year after Holland died, his legacy in this project survived him in *A New Map of the Province of Lower Canada* (1802), which shows the masterly delineation of Québec's Eastern Townships.¹³⁴⁵ The topographical rendering of the interior regions of the province would

¹³⁴⁴ J.F.W. Des Barres, *Chart of Cape Breton and St. John's Islands &c. in the Gulph of St. Lawrence* (London, nd., but c.1780).

¹³⁴⁵ Samuel Holland, *A New Map of the Province of Lower Canada* (London: William Faden, 1802). Joseph Bouchette, *Lower Canada* 1815.

not be greatly improved upon until the completion of the great map by Joseph Bouchette, Holland's son-in-law, who succeeded to the office of provincial surveyor-general.¹³⁴⁶

While Holland had officially relinquished his jurisdiction over the new province of Upper Canada in 1791, this region was progressively surveyed into orderly townships and concessions to Holland's high standards by his former associates William Chewett and David William Smyth.¹³⁴⁷ Sproule, who became surveyor-general of New Brunswick after the war, and Thomas Wright, who had served in that position on the Island of St. John's since 1773, likewise played a critical role in conducting surveys which were instrumental in accommodating the influx of loyalists.

The Northern Survey's rendering of coastal areas in Canada was not significantly improved until Captain Henry Bayfield, at the behest of the Admiralty, surveyed the Gulf and River of St. Lawrence, Nova Scotia and the Bay of Fundy between 1827 and 1853.¹³⁴⁸ Unlike his American counterparts, Bayfield was given direct access to Holland's original manuscript charts. As evidence of this, the labeled outlines of his charts of Lake Bras d'Or were inscribed upon the only surviving example of the 1768 version of Holland's manuscript map of the island.¹³⁴⁹

¹³⁴⁶ Joseph Bouchette, *Topographical Map of the Province of Lower Canada* (London: William Faden, 1815).

¹³⁴⁷ William Chewett and David William Smyth, *A Map of the Province of Upper Canada* (London: William Faden, 1800), J. Winearls, *Mapping Upper Canada 1780-1867*, no.30.

¹³⁴⁸ After surveying the Canadian side of the Great Lakes, in 1827, Bayfield and his associated began his monumental project to survey the River and Gulf of St. Lawrence River and Gulf, followed by peninsular Nova Scotia and the Bay of Fundy, not concluding his work until 1853. His charts were progressively published by the Admiralty separately, but also in sets, as H. Bayfield, *Sailing directions for the Gulf and River of St. Lawrence*, 3 vols. (London: 1837, 1847, and 1857). His complete series of charts was finally published in one work as H. Bayfield, *The St. Lawrence Pilot* (London, 1860).

¹³⁴⁹ Bayfield surveyed Cape Breton Island in 1847, R. McKenzie (ed.). *The St. Lawrence Survey Journals of Captain Henry Wolsey Bayfield* (Toronto, 1986), vol. II, pp.332-57.

New Horizons

The success of the General Survey in scientifically mapping such a vast expanse of territory at a reasonable cost to the crown ensured that it was an important influence on the British government's decision to create official centralized mapping institutions. Building on the foundation of privately-sponsored trigonometric county surveys, the army founded the Ordnance Survey in 1791, whose mandate it was to systematically map the entirety of Great Britain to a large scale of one mile to an inch. Similarly, the Admiralty chartered the Hydrographic Office in 1795, such that the global reach of the Royal Navy ensured that the British would be the first to chart the coastlines of much of Asia, Africa and Oceania. As the first British mapping programme with a continental scope, the General Survey had set a high standard for British authorities in the nineteenth-century, who would sponsor various mapping agencies in their colonies, the most remarkable being the Great Trigonometric Survey of India.

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