

# Temporality, cultural biography and seasonality: rethinking time in wetland archaeology

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## INTRODUCTION

Wetland archaeology is uniquely well placed to investigate questions of chronology, temporality, life-cycles and seasonality. Beyond the usual archaeological approaches to time (eg seriation, typology and stratigraphy), most wetland archaeological investigations have access to a ready supply of samples (ie wood, peat and organic deposits) for absolute scientific dating, particularly radiocarbon and dendrochronology. Indeed, the success of dendrochronology in revealing dynamic sequences of site and regional occupation, use and abandonment are well known. Investigating wetland archaeological sites, environmental archaeologists have used the evidence of insects, plant remains, seeds and even testate amoeba to establish the season, or months, of a site's occupation. Soil micromorphologists have carried out innovative studies of settlement deposits to reconstruct the chronological sequences of processes and events leading to their formation. In brief, wetland archaeology has become adept at calibrating past times.

However, while wetland archaeologists have traditionally made full use of scientific methods in the investigation of chronology, they have been more reluctant to rummage through the toolkits provided by theoretical archaeology, anthropology, ethnography and sociology when they think about temporal rhythms in the past. We might argue that wetland archaeologists have shown little interest in how past peoples experienced and understood time, and how this influenced the ways in which they dwelled in wetlands, or deposited objects in them. This is a pity, as wetland archaeologists often deal with the lives and works of peoples involved in landscapes that are uniquely dominated by distinctive temporal rhythms. We might imagine how a medieval fishing community attended to, and monitored, seasonal and monthly changes in ebb and flood tides, ducks, waders, geese and migratory salmon and eels.

Moving from our perception of time (inevitably western, chronological and dominated by scientific

dating), we should consider then how people who inhabited and worked in wetlands understood time. Anthropologists suggest that small-scale communities think about time in quite diverse ways (Ingold 1993, 1995; Harris 2000; Bradley 2002; Lucas 2005, 62–4), variously understanding either it in terms of ancestors, historical pasts and past events (although this is rarely in western, chronological terms) or as a cyclical, unceasing rhythm of birth, life and death, with the recently dead returning to live again as newly-born children. Occasionally, people might have imagined time in terms of an eternal 'now', with all peoples, animals, places and times existing together at this time. This paper, developed from a chapter in our recent study (Van de Noort & O'Sullivan 2006, 89–118), provides some avenues for rethinking our approaches to time in wetland archaeology (fig 1).

## TEMPORALITY OF THE LANDSCAPE: INTERPRETING 'LONG-TERM CONTINUITY AND CHANGE' IN WETLANDS

### LONG-TERM PATTERNS AND SHORT-TERM EVENTS

Wetland archaeologists have thought often about their landscapes in terms of timelessness, persistence and endurance. For example, Coles & Hall (1998, 85), in writing about the people of the Fenlands of south-east England, referred to the 'stubbornness of the Fenlanders – resistant to change, adhering to the way of life that had its beginnings many centuries ago'. This encapsulates an idea that wetland communities are timeless, living outside the forces of historical, social and cultural change. It might be suggested that this is also a perspective similar to that of the influential French historical geographer, Fernand Braudel, who was convinced of the power of the *longue durée* or 'environmental time'; the deep, underlying economic structures that endure, unmoved by the ephemerality of politics and historical events (see Barrett 1989; Gosden 1994;

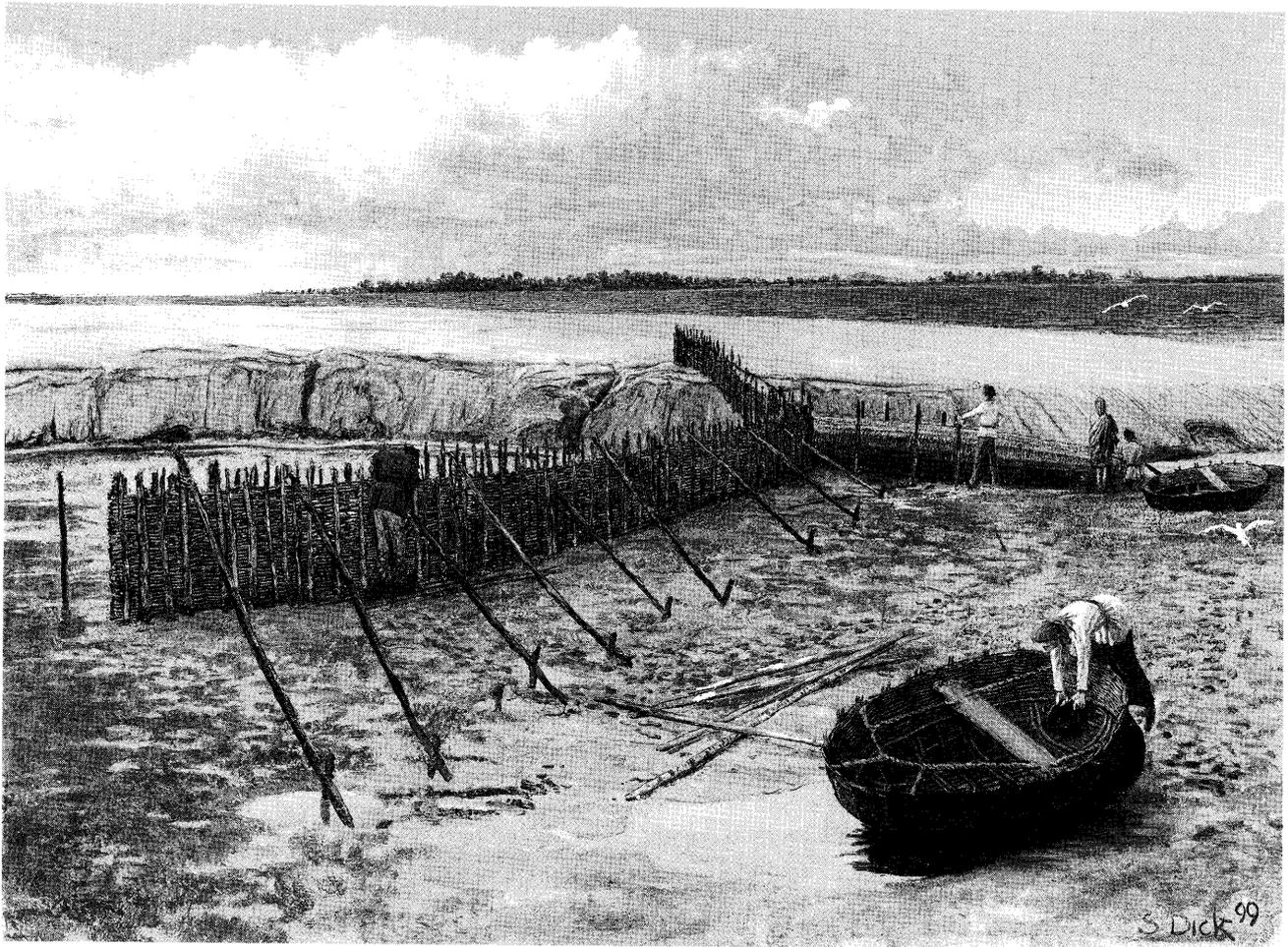


FIGURE 1

Reconstruction painting by Simon Dick of medieval fishing communities working on an estuarine fishtrap at Bunratty, Shannon estuary, Ireland (from O'Sullivan 2001, fig 68). Using archaeology, palaeoenvironmental studies, radiocarbon dating, dendrochronology, anthropology and sociology, wetland archaeologists can explore how past communities inhabited and 'dwelled' in temporal landscapes, working within evolving traditions and using their 'archaeological' knowledge of the historical past to shape their practices and social identities. We can also trace how wetland archaeological sites had cultural biographies, mirroring human lives from birth to death, with shifting historical, social and cultural meanings. Finally, we can reflect on how people's social lives resonated with temporal, seasonal rhythms of water, tides, plants, birds and fish, so that seasonality, economy and sociality should all be seen as inextricably linked.

Bintliff 1996). This belief in the potency of long-term traditions and practices occasionally arises because wetland archaeologists do have a better chronological understanding of archaeological activities and environmental changes within their landscapes of enquiry; perhaps this also encourages a belief that similar activity across time speaks of social, cultural and economic continuity.

#### FROM PREHISTORIC TRACKWAYS TO EARLY MEDIEVAL PILGRIMS' TRAILS IN IRISH BOGS

Sometimes, this ability to reveal a long-term chronology of wetland activities can challenge models

that are based on other, less well-dated evidence. In the Irish midlands bogs, the scanty distribution of early medieval settlements immediately around a monastic site on the bog island of Lemanaghan, Co Offaly seemed to confirm the traditional model that early monastic sites such as this were located in marginal, isolated locations (Stout 1997). However, archaeological survey and dating of wooden trackways in the wetlands demonstrated that the early medieval Lemanaghan monastic site (founded in the sixth century AD) was actually located on a long-term node of communications that had its origins in later prehistory, showing evidence for trackway building

in the Middle Bronze Age, Iron Age and Early Middle Ages. Instead of being placed in a remote, ascetic location, the early medieval monastery may well have been cannily placed on a well travelled routeway, perhaps to serve as a hostel for travellers moving through the midlands bogs (McDermott 1998; O'Carroll 2001; Stanley 2003).

#### NEOLITHIC AND BRONZE AGE TRACKWAYS THROUGH TIME IN THE SOMERSET LEVELS

However, this general picture of long-term landscape persistence and continuity often masks the reality that human activities in wetlands may only be sporadic, occasional and interrupted by centuries of inactivity. A traditional map of 'Neolithic' or 'Bronze Age' landscapes will generally show tens or hundreds of 'dots', each representing individual settlements, burials and findspots from across several centuries. Similarly, a single map of Neolithic or Bronze Age trackways in the Somerset Levels wetlands would also show many dots and lines connecting drylands and islands and would seem to suggest long-term, continuous travel. However, Coles & Coles' critical review (1992) of the radiocarbon dating evidence for all the Neolithic and Bronze Age wooden trackways there demonstrated that in each hundred-year period, there may have been only one or two trackways. This highly visible – it is likely that a survey of wetland sites may represent a better 'cull' of all archaeological activity – and well dated archaeological evidence indicated that instead of continuous activity and stability, there were merely a few occasions of trackway construction and use (each lasting no more than a decade or so) across many centuries in the wetlands. Indeed, it might be argued that in reality we are witnessing short-term human 'decisions and events' rather than long-term patterns.

#### MEDIEVAL FISHTRAPS ON ESTUARIES: RECONSTRUCTING PAST COMMUNITY KNOWLEDGE OF THE PAST

So, we could start to think about wetland landscapes not only in terms of 'long-term continuity' but also in the context of people's decisions, the agency of the past and what we think people are doing when they work in dynamic environments. In recent years, wetland archaeologists have been able to trace surprising patterns in fishtrap use and re-use in estuarine landscapes. On the Shannon estuary (O'Sullivan 2001, 2003a, 2003b, 2005), Strangford Lough (McErlean & O'Sullivan 2002), the Severn

estuary (Godbold & Turner 1994; Nayling 1997; Turner 2002) and on the Essex estuaries (Gilman 1998; Strachan 1998; O'Sullivan 2003b, 452–4), there is often significant archaeological evidence for striking continuities in location, form and character of the fishtraps.

However, wooden fishtraps are badly exposed to damage from erosion and waves and would have been repaired and rebuilt frequently. On the Blackwater estuary, Essex, there is plenty of evidence for rebuilding of fisheries over centuries, but in interesting ways (Gilman 1998; Strachan 1998; O'Sullivan 2003b, 452–4). At Collins Creek, a complex of five V-shaped fishtraps had been built on a mud island, enclosing a huge expanse of mudflats, 3km by 700m. However, these were not contemporary sites, as statistical analysis of the seemingly closely spaced radiocarbon dates indicated construction, 'piece-meal repair, minor modification and radical alteration' from the mid-seventh century to the beginning of the tenth century AD (Hall & Clarke 2000; O'Sullivan 2003b, 452–3).

On the Severn estuary, there is also interesting dating evidence for stylistic change across a fairly short period of time. At Magor Pill, at least seven V-shaped fishtraps (with densely packed post fences, 15m long, leading to baskets) were used within a small area during the twelfth century AD. Nayling's detailed dendrochronological studies (1999) indicated that some were in use about AD 1120, while a second phase of fishing began about AD 1150, almost 30 years later (a significant gap for people whose average lifespan was about 35–40 years). This actually may indicate that the first structures had been out of use, before people came back and re-built what must have been quite dilapidated structures that had been abandoned for a generation. By about AD 1170, there was a third phase of the fishery at Magor Pill, involving a different type of fishtrap that used long straight fences, along which baskets were placed at intervals (Nayling 1997, 1999).

Indeed, we might envisage that medieval fishtraps survived effectively as archaeological sites of rotten wooden posts within the early Middle Ages, actively shaping how later fishing communities lived and worked in these estuarine landscapes. Although medieval fishing communities worked within evolving traditions, the pre-existing fishtraps might have enabled or perhaps even encouraged a continuity with the past (O'Sullivan 2003b). Using theoretical jargon, we might say that material culture in these landscapes was active, structuring people's lives, identities and understanding of their worlds.

## CULTURAL BIOGRAPHIES OF WETLAND DWELLINGS AND OBJECTS

## THINKING ABOUT THE BIOGRAPHIES OF PLACES AND OBJECTS

Wetland archaeologists are well used to exploring the life-cycles of archaeological sites and objects. Archaeological study of a wooden bucket will usually cover such topics as the sourcing and procurement of raw materials; the production of the object through conversion, hewing and carving, followed by its use, damage, repair and ultimately its abandonment in wetlands. This approach is essentially a functionalist approach to life-cycles or use-lives of objects – exploring their changing role and forms across time with a particular emphasis on their appearance, manufacture and function. It is somewhat similar to the processualist approaches adopted to artefact production, exploring the role of commodities within production and exchange systems. Essentially though, the processual approach to object biographies envisages objects as inert, passive things to which things happen and things are done (Gosden & Marshall 1999, 169). Recent post-processual or interpretative approaches to material culture have adopted the concept of the cultural biography. This proposes that between the moment that an object is produced to the moment that it is discarded or forgotten, it goes through several phases of specific social and cultural meaning. In each phase, the function, role, status and perception of an object may change, and through use and handling by different people it acquires its own life-history, biography and social meaning.

Cultural biographical approaches can be made to both dwellings and objects. Kopytoff's anthropological description (1986, 67) of the biographies of huts among the Suku people of Zaire described how a hut initially shelters a couple or a mother and child. After some years, it may serve as a guesthouse for visitors, then as a kitchen until finally it descends to the role of a chicken coop, before its collapse. However, it is not possible for the biography to go in the other direction; for a kitchen or chicken coop to be turned into a dwelling. In recent years, archaeological studies of Neolithic houses in south-east Europe (Tringham 1991, 1995), Bronze Age houses in southern Britain (Brück 1999) and Iron Age houses and farmsteads in the Netherlands (Gerritsen 1999, 2003) have also suggested that prehistoric dwellings had biographies and life-cycles that were practically and metaphorically linked to the lives of the people, their cultural ideas, as

well as the specifics of their actual social and material circumstances. Indeed, Gerritsen (2003, 38) states that wetland archaeological sites with their 'detailed evidence about successive phases of use, reconstruction and abandonment' may produce the best evidence to support the writing of a 'truly detailed archaeological biography'.

## BUILDING, OCCUPYING AND ABANDONING AN EARLY MEDIEVAL CRANNOG AT BUISTON, Ayrshire, SCOTLAND

Wetland archaeological excavations can also enable a closer understanding of both the chronology and environmental conditions on a site – the 'muck of life' as it were. Archaeological excavations, palaeoenvironmental studies and dendrochronological dating of a crannog at Buiston, Ayrshire in south-west Scotland provide a striking example of this (Barber & Crone 1993; Crone 2000). The Buiston early medieval crannog was a small *packwerk* site, of a mound of timber, brushwood and stone dumped onto the lakebed. On this were placed layers of brushwood and turves taken from local agricultural slopes. The site was enclosed within several phases of palisades and was rebuilt and resurfaced on a number of occasions, typically extending it to an oval mound, 17m across. Early medieval Buiston, during the sixth to the seventh century AD, was the island dwelling of a fairly self-sufficient and prosperous community, with evidence for the production and use of wooden and leather objects, herding of cattle for dairying and meat, and the tending and consumption of sheep, pig and geese. They ate a range of cultivated foodstuffs, including barley, oats and linseed, as well as an array of wild foods; hazelnuts, red deer and roe deer.

Palaeoenvironmental studies reveal to a striking extent that, on Buiston crannog, people constantly struggled and coped with mucky, damp conditions, perpetual flood waters, structural collapse and buzzing flies. Insect studies revealed that the site saw only periodic or seasonal occupation, but indicated that people may have endured great swarms of house-flies that thrived in the rotting organic material lying on the floor (also indicated by beetles who inhabit rotting vegetation). Dendrochronological studies were also revealing (and, indeed, also challenging to the radiocarbon evidence that seemed to imply a long period of occupation at Buiston, from the second to the seventh century AD). The site's history of occupation and abandonment was dynamic and compressed into a relatively brief period, between AD 589–630.

The origins of the crannog lay in the Roman period, in the first to second century AD, when it was briefly occupied, abandoned and flooded over. For the next 300 years, the site lay quiet. Then, at the end of the sixth century AD, people returned to it to build an island dwelling, perhaps representing the deliberate re-activation of an antique site (see Crone 1993; Henderson 1998; O'Sullivan 1998; Fredegren 2003 for discussion of 'chronology' of crannogs).

The rebirth of the site comes then in the early medieval phases of occupation beginning in the late sixth century AD. In AD 589 (Phase III), House A was constructed and a palisade erected around the site. This house was represented only by an arc of posts from a roundhouse 5.6m in diameter (25 square metres in floor space). It was occupied for five years. Within that time, the hearth and floor were replaced three times, something like every one to two years. The site may also have been flooded on one occasion during that time also. In fact, insect studies (see below) indicate that there were such swarms of flies in House A that living conditions were sufficiently unpleasant to warrant its abandonment (as indeed happened).

The site matured and increased in scale quickly. In AD 594 (Phase IV), the entire crannog was levelled and rebuilt, extending its surface further towards the northwest. House B, a roundhouse 8m in diameter, the largest house to be used on the dwelling (with a floor area of 50sq m), was constructed of a double wall of post-and-wattle, with internal partitions. This transformation in scale would usually be taken to represent some change in the social status of the site's inhabitants or that the household group itself had grown in size (as younger family members moved in with their grandparents). House B was used as a dwelling for the next 20 years, during which time the hearth and floor were replaced four times, every five years or so, the last time being in AD 609. It is tempting to suggest that people were returning to the crannog and refurbishing it after winter floods and storms. In AD 608, the crannog dwellers had to reconstruct the palisade, after slumping and structural collapse, as waterlogged deposits settled into position and slid outwards.

The site moves towards its 'death' at the end of the next decade. In AD 620, the site's inhabitants replaced the palisade with something more substantial and a timber ringbeam palisade was constructed, to be followed by an arc of alder stakes in AD 630. However, the site was moving towards the final phases of its occupation and was certainly abandoned by AD 650. Explanations for all this structural change can of course be sought in environmental conditions, but

they must also be explained by social and cultural factors; the historical changes in wealth, health and family dynamics that are specific to every household group. We also recognize here the constant choices that people had to make in creating, sustaining, transforming and ultimately abandoning a settlement over a period of a few generations.

#### A CULTURAL BIOGRAPHY OF AN IRON AGE VESSEL FROM TOAR BOG, IRELAND

It should be emphasized that the cultural biographical approach can be used even if precise scientific dating is not available. It is widely known that during the Iron Age people deposited human bodies, weaponry, tools and cauldrons into waterlogged places, for various cultural, ideological and ritual reasons (Raftery 1994). This understanding, as well as surviving evidence on the object itself, provides the context for interpreting the cultural biography of an Iron Age wooden trough that was recently recovered from Toar Bog, Co Westmeath, in the Irish midlands (Murray 2000; Moore *et al* 2003, 134). This marvellous Iron Age object (probably dating from the last few centuries BC) was a large, carved alder-wood trough, rectilinear in shape (1.3m in length, 60cm in width), with projecting handles at the end. The object itself and its treatment in the past provides insights into how it accumulated different meanings and values and how these changed across time.

In conception and design, this Iron Age vessel was clearly always intended to be something special. Firstly, it was carved from an unusually thick and mature alder tree (which was *c* 54 years age) suggesting that it was intended to be impressively and uniquely large. It was a work of several people who came together in its production, as toolmark analysis showed that it was carved using five axes and at least one gouge. The clarity of the toolmarks also show that the timber was green and unseasoned. It might be thought that they were hurriedly preparing an item intended for use in an upcoming event, as the unseasoned character of the wood caused a problem when a worrying split developed in the wood during the last few hours of its manufacture. Close to the handle, a very fine crack started to develop outwards from the heartwood, but its carvers ingeniously used four tiny, cleverly-spaced wooden wedges to staple this crack together, to prevent it shearing along the wood grain. This repair definitely occurred during the manufacturing phase, as subsequent carving deliberately reduced their appearance to near invisibility.

During the early years (months?) of the life of the vessel, it was probably used for some high-status activity, perhaps bathing, feasting or the display and consumption of fine foods. This is suggested by the fact that the toolmarks on its outer surface are pristine and unblurred, suggesting it was not moved around much or roughly handled. As a unique and cherished item, it is conceivable that the vessel was produced for some special event, perhaps a ritual meal associated with a marriage, or an inauguration ceremony or other significant rite of passage; early Irish kings reputedly bathed in horses' blood upon their inauguration. Indeed, bathing is a likely function as early mythological sources place great store on washing, bathing and the body itself in early Irish society.

As the Iron Age trough matured and aged, it was to shift in meaning again. After a time – unlikely to have been long – a second crack appeared along the edge of the vessel where its narrow sides reduced its strength. Perhaps this occurred as the wood was alternately wet and dried, which is something that alder wood tolerates poorly (for all its suitability of holding food and drink). This new crack was also repaired using small, carved ash-wood panels on the inner and outer surface, secured by slight wooden ties through perforations in the vessel's sides. But it seems that this crack somehow changed the meaning of the object, perhaps spoiling or tainting it in some way. For a time, it was to be employed in a more domestic or everyday context, such as salting, curing, tanning or dyeing. This is suggested by evidence for fire-scorching along the top edge, which definitely occurred after the second repair, implying that the trough was used in cooking or the heating of water; small stone chips found in the vessel might suggest the use of hot-stone technology for heating water, perhaps for washing and bathing.

The death of the vessel soon followed. By this time, the perception and social meaning of the vessel had changed once more – leading to its structured deposition in a bog pool. At the end of its life – or perhaps the life of the person most associated with it – people used a series of withy ropes, some of which were found still wrapped around the vessel, to carry the heavy object out into the bog, where environmental evidence suggests that they placed it in waterlogged, reedy conditions; plant macrofossil and beetle studies indicates a bog pool of stagnant water. They propped it upright, using long, vertical pegs driven into the peat, and also pinned it down by using a forked hazel branch – a wooden vessel would tend to float in water,

especially when dry and seasoned. Radiocarbon dating of the branch indicates that this Iron Age vessel was placed in the bog about 197 BC–AD 68. It is also interesting how closely the treatment of the Iron Age trough echoes that meted out to bog bodies recently discovered in the region. An Iron Age body recently found in Croghan Bog, Co Offaly (6km to the south-east) was of a high-status, well-fed individual who was executed and also pinned into position using hazel withies (Ahlstrom 2006). Indeed, the potential metaphorical links between the biographies of Iron Age wooden vessels and human bodies (food consumption, washing and bathing, the body as a container of fluids) are obvious and an anthropological perspective might suggest that sometimes objects are so deeply connected with people that they too must die.

#### SEASONALITY AND SOCIALITY: OTHER WAYS OF THINKING ABOUT RHYTHMS OF WETLAND LIFE

##### ANTHROPOLOGICAL PERSPECTIVES ON THE PERCEPTION AND EXPERIENCE OF SEASONAL RHYTHMS

In tracing cultural biographies of wetland dwellings, we should also reflect on how people in the past may have perceived the passage of shorter periods of time – seasons in particular. Wetland archaeologists have long been interested in seasonality and often explain their sites in terms of the perceived past use and exploitation of economic resources that vary from winter to summer, ie reeds, wood, birds, game, seasonal grazing, wild plant foods etc. Ethnographic sources do indicate that small-scale communities perceived and understood time in terms of seasonal rhythms and cycles. This may have been a calendrical knowledge, involving the recognition of the changing phases of the moon, the changing location of constellations in the starlit sky and the changes in weather, light and darkness, and springs and neaps tides that are governed by these celestial movements. However, people also monitored and 'attended to' seasonal changes in the environment around them; the rise and fall of lacustrine and riverine water levels, bird and fish migrations, the fertility and movement of animals, the cyclical growth and decay of plant life and so forth. Practices, lifeways and even our own bodies 'resonate' with such seasonal rhythms (Ingold 1993, 65; Harris 1998, 2000, 126; O'Sullivan 2005). This suggests that it is time to move

beyond explanations that focus only on economic and subsistence activities and start to think about how past people's social identities, relationships and beliefs were also connected to seasonality.

ETHNOGRAPHIC STUDIES OF SEASONALITY AND SOCIALITY AMONGST RIVERINE COMMUNITIES IN THE AMAZONIAN WETLANDS

Harris's recent anthropological study (2000) of a community of *caboclo* fisherpeople who live in the village of Parú, on the banks of the River Amazon, Brazil, provides some inspiring insights. On the banks of the river, seasonality is intrinsic to the practices and social relationships of the people who dwell there; the community's social relationships have a distinctly rhythmic character that 'resonate' with changes in the seasons (Harris 1998, 2000, 125–41). Indeed, seasonality is the 'frame of life' within which people's social lives are performed. Harris's emphasis on sociality fits with recent Amazonian anthropological theory, where scholars have moved from western-oriented, cultural, ecological and subsistence economic approaches to ideas that explore indigenous collective identities and people's own emphases on 'conviviality' – their beliefs that what is important is how people live together communally (Overing & Passes 2000).

For the wetland dwelling people of Parú, there are distinct social and aesthetic differences between the 'wet season' and the 'dry season'. People find the wet season (December–June) difficult; they feel 'cold', their 'being-in-the-world' makes them feel miserable and wretched. Fish are difficult to catch, crops are impossible to cultivate, so they worry about food shortages and they observe how the flood destroys all their labours (Harris 1998, 2000). On a daily basis, people are isolated by the floods within their own houses, so they live at home, doing odd jobs, sewing, mending, teaching children. It is a time of inner family life, introversion, boredom – people swinging in their hammocks, watching the floodwaters listlessly through the floorboards or occasionally visiting close neighbours by boat.

As the seasons change, the 'dry season' comes on in June, the flood waters retreat again and the land re-appears, richly fertilized by the river's muds. People move out from their houses, wandering around the village, working and chatting together, making plans for the best months of the dry season. In reality, people's social lives are transformed. Men get away from the house, hunt in the forest, fish from boats with nets, sleep in huts by the river and gather

together spontaneously to work in a relaxed way on their gardens. Women also move out into the village, connecting with their friends, helping each other with domestic work and children. Men and women use every opportunity to have a party, to go and visit distant kin. They build temporary 'specialist' huts without fireplaces by the rivers and lakes, so they can remain close to good fishing grounds without the need to return to their villages. People regard this as a 'beautiful time', a joyful time of plentiful food and partying, as well as courting and sex in the forest for unmarried couples. In other words, it is people's social and gender relations that come to the fore, not their economic activities, and all resonate with the rhythms of seasonal and environmental changes (Harris 2000, 140–1).

ETHNOGRAPHIES OF SEASONALITY AND SOCIALITY AMONGST CATTLE-HERDERS IN MEDIEVAL IRELAND AND WALES

It may be interesting to explore these ideas in the context of prehistoric dwellings in wetlands. Recent wetland archaeological projects on the estuaries of Britain and Ireland have uncovered much evidence for what seem to be Bronze Age and Iron Age houses, trackways and platforms in environmental contexts that were originally saltmarshes, raised bogs and fens (see O'Sullivan 2001, 128–33 for a review). In general, it is thought that these were houses and structures used by people herding cattle and sheep on estuarine marshes during spring and summer. There is also evidence for Bronze Age and Iron Age structures and features (eg spreads of burnt stone, charcoal and animal bone, metalwork and skulls) that suggests that some ritual activities were also carried out in these liminal spaces between land and water.

However, if we accept that it was people who were grazing cattle, hunting, trapping and 'inhabiting' the estuarine wetlands, we need to take a social as well as an economic perspective. Closer to home, we find that seasonality and sociality can also be found amongst the transhumance cattle-herders of medieval Ireland and Wales. In the cattle-obsessed culture of early medieval Ireland, from May to October, it was young women who went with the herds to the *macha samraid* – the summer milking place located in the mountains or in the marshlands – and there they tended the animals and engaged in butter making (Ó Corráin 1972, 54; Patterson 1994, 90–1; Kelly 1997, 450). Indeed, in early Irish law, distinctions were made between the home farm (*senbaile*) and the summer milking place (*áirge*). Interestingly, there is

a similar distinction in medieval Welsh between the winter-dwelling (*hendref*) and the summer-house (*bafoty*) (Kelly 1997, 44). In late medieval Ireland, young women also drove the cattle herds to the summer pastures in the mountains and marshlands (Lucas 1989, 58–67). There they lived in booley huts from May to November, milking the cows and making cheeses that children would carry the short distance back down to the lowland settlements (often located only a few miles below the hills). Young men would sometimes visit the booley site and the useful social distance that these places had from the normal world enabled young courting couples to try out various conjugal relationships before the winter marrying season (Patterson 1994).

INTERPRETING SEASONALITY, SOCIAL IDENTITY AND THE IRON AGE MARSHLAND HOUSES AT GOLDCLIFF, SEVERN ESTUARY

Can we trace evidence for seasonality and sociality in Bronze Age and Iron Age marshland dwellings? Probably the best archaeological evidence we have comes from the Iron Age houses at Goldcliff West, on the Welsh shore of the Severn estuary. These buildings were large rectangular structures originally constructed on raised hummocks in a raised bog or on fen-peats at the edge of an estuary. Dendrochronological and radiocarbon dates suggest their construction and use in the fifth to the early third century BC (Bell 1993a, 1993b, 1999; Bell *et al* 2000). They were quite substantial (5–8m in length, by 4–6m in width), with walls constructed of alder roundwood and oak planking, entrances situated at the ends, and internal or axial posts suggest that they were roofed. There was occasional evidence for roundwood, reeds or straw as floors. Beetle and insect studies indicated the presence of decaying vegetation, animal dung and reeds around the houses. Palaeoenvironmental analyses suggest that the Iron Age Goldcliff houses were used during periods of increased marine transgression, when marine flooding altered the vegetation of the raised bogs, making them good seasonal grazing grounds.

Hundreds of cattle hoof prints identified in the clays of the channels around the structures clearly indicated that the animals gathered around the structures, perhaps cooling their heels in the water. Lice found in the palaeochannels also indicated the presence of cattle and the identification of fleas that prey on humans suggested that both people and cattle were sheltering inside these structures – a common feature of historical bothy huts in western Ireland (where

animals provided useful warmth) (Bell & Neumann 1996, 1997, 1998; Bell 1999). The few finds (wooden withy ties and bucket fragments) recovered from the entrances or in the palaeochannels around the Goldcliff buildings suggested that people didn't bring other objects with them and both could be associated with hobbling and milking of cattle. Other structures at Goldcliff included Iron Age trackways that run for up to a hundred metres and directly approach these buildings, either from the estuary channel or bedrock islands in the levels. These may well have been built and used in the winter – tree-ring studies suggested winter cutting – to enable activities in the marshes, such as trapping ducks and geese, although, of course, this wood could have been stockpiled for use in the spring (Bell 2003, 13).

The absence of hearths, charcoal and ash within the Goldcliff houses suggest that these sites were seasonally occupied and not permanent domestic habitations. Moreover, the Goldcliff houses seem to have been used episodically, over several years (Bell 1999). Dendrochronological studies suggest that Goldcliff Buildings 1 and 2 were rebuilt over multiple phases of activity over some time, perhaps up to 17 years. Goldcliff 6 probably had a shorter life. Beetle analyses and lithological studies of lenses of clay between the occupation horizons also suggest that this episodic use was interspersed by periods of flooding under brackish water. Bell (1999, 23) concludes from the presence of neonatal calf bone – calves are typically born in the spring months – that occupation was between May and June, when tides were lowest and the bogs would not have been so regularly inundated by the monthly high spring tides.

Where did these people come from? Several substantial Iron Age hillforts dominate the Gwent Levels on the dryland hills to the north and there are also smaller Iron Age enclosed and unenclosed settlements at the edge of the levels. However, Bell (2003, 12) had noted that the Goldcliff Iron Age buildings are 'odd' in several ways. Other Iron Age houses are usually circular, whereas the Goldcliff buildings are rectangular. Other Iron Age roundhouse entrances usually face towards the rising sun, but at Goldcliff the entrances are generally oriented north-west. Bell (2003, 12) suggests that the architectural 'oddness' of these structures, the surprising lack of pottery – and indeed other finds – indicate that these were wetland communities of 'an impoverished material culture and distinctive identity from those occupying the surrounding hillforts and upland'.

SOCIAL AND AESTHETIC ASPECTS OF MARSHLAND  
GRAZING

The idea of a distinctively different Iron Age wetland community is certainly valid, especially if we consider that these might have been cattle-herders of low social status, responsible for activities out at the 'edge' of the Iron Age landscape. However, even if we accept that Iron Age social identity may have been linked to role and responsibility (reminding us that people's identities are not merely constructed in collective, ethnic or class terms, but also through what they did and the time of the year they did it), it is possible that the materiality of Goldcliff is expressing ideas related to time, rather than social status. Summer dwellings amongst cattle-herders are often different from the 'normal' winter dwelling. It is possible that the Goldcliff Iron Age houses are architecturally distinctive because of when they were used and that they are expressing notions of social identity, lifeways and time – precisely because they are summer dwellings. It is certainly evident that people came out here in spring and summer, stayed for a while and left again and that they did this over a period of years. It is interesting that at Goldcliff there are subtle architectural and technological differences between each building, suggesting that each of them belonged to different social groups who repaired them every year. Bell (2003) also notes that anthropological studies of cattle transhumance groups reveal that each household or extended social group is responsible for the maintenance of its own hut at the summer grazing places.

How about the social and aesthetic aspects of these seasonal economic practices? Summer saltmarshes are pleasant places to be. We might imagine that people did enjoy the sunny months out on the marshes, freed from the winter *ennui* of dryland life in a dark, smoky Iron Age roundhouse. Indeed, it seems likely that these were women and children, and that they were occasionally joined by young men. So, a social interpretation of the Iron Age houses at Goldcliff might be that their distinctive architecture is expressing specific social and gender relationships that were embedded in or intrinsic to the seasonal rhythms of economic activity in the estuarine wetlands. Obviously we cannot prove this, but it provides a social explanation that fits well with our understanding of Iron Age communities, of seasonal cattle-herders and how people dwell amongst ever changing wetlands.

## CONCLUSIONS

In conclusion, amongst wetland archaeology's greatest strengths has been its ability to reveal the 'muck of life', the dirt underneath the fingernails of 'energetic commoners', the physical reality and materiality of past people's existence. We also suggest that wetland archaeology encourages us to think in different ways about time, chronology and past people's perception and experience of it. Indeed, we suggest that all archaeologists interested in the temporal and seasonal rhythms of dwelling, the phenomena of remembering and forgetting, and cultural biographies of place and objects should look again at the astonishingly detailed narratives that it enables.

## REFERENCES

- Ahlstrom, D 2006 'Bog find calls for new view of our Iron Age ancestors'. *The Irish Times*, January 7, 2006.
- Barber, J W & Crone, B A 1993 'Crannogs; a diminishing resource? A survey of south-west Scotland and excavations at Buiston crannog', *Antiquity* 67, 520–33.
- Barrett, J 1994 *Fragments from antiquity: an archaeology of social life in Britain, 2900 BC – 1200 BC*. Oxford.
- Bell, M 1993a 'Intertidal archaeology at Goldcliff in the Severn estuary', in Coles, J, Fenwick, V & Hutchinson, G (eds) *A spirit of enquiry. Essays for Ted Wright*, 9–13. Exeter.
- Bell, M 1993b 'Field survey and excavation at Goldcliff, Gwent 1993', *Archaeology in the Severn Estuary*, 81–101.
- Bell, M 1999 'Prehistoric settlements and activities in the Welsh Severn Estuary', in Coles, B, Coles, J & Jørgensen, M S (eds) *Bog bodies, sacred sites and wetland archaeology*, 17–25. Exeter.
- Bell, M 2003 'Making one's way in the world: trackways from a wetland and dryland perspective', in Croes, D (ed) *Wetland Archaeology Research Project: 10th International Conference: Wet sites connections, April 1–5, 2003, Olympia, Washington. Conference Preprints*, 1–18.
- Bell, M, Caseldine, A & Neuman, H 2000 *Prehistoric Intertidal Archaeology in the Welsh Severn Estuary*. CBA Research Report 120, York.
- Bell, M & Neumann, H 1996 'Intertidal survey in the Welsh Severn estuary', *Archaeology in the Severn Estuary* 1995 6, 29–33.
- Bell, M & Neumann, H 1997 'Prehistoric intertidal archaeology and environments in the Severn estuary', Wales, *World Archaeology* 29(1), 95–113.
- Bell, M & Neumann, H 1998 'Intertidal survey in the Welsh Severn estuary', *Archaeology in the Severn Estuary*, 1997 8, 13–28.

- Bintliff, J (ed) 1991 *The Annales School and Archaeology*. Leicester.
- Bradley, R 2002 *The Past in Prehistoric Societies*. London and New York.
- Brück, J 1999 'Houses, life-cycles and deposition on Middle Bronze Age settlements in southern England', *Proceedings of the Prehistoric Society* 65, 145–66.
- Crone, A 1993 'Crannogs and chronologies', *Proceedings of the Society of Antiquaries of Scotland*, 123, 245–54.
- Crone, A 2000 *The History of a Scottish Lowland Crannog: Excavations at Buiston, Ayrshire 1989–90*, Edinburgh.
- Coles, J & Hall, D 1998 *Changing Landscapes: The Ancient Fenland*. Cambridgeshire County Council/Wetland Archaeology Research Project, Cambridge.
- Coles, B J & Coles, J M 1992 'Passages of time', *Archäologische Mitteilungen aus Nordwestdeutschland* 15. Oldenburg 1992, Seite 5–21.
- Fredengren, C 2002 *Crannogs: A Study of People's Interaction with Lakes, with Particular Reference to Lough Gara, in the North-west of Ireland*. Bray.
- Gilman, P J 1998 'Essex fishtraps and fisheries: an integrated approach to survey, recording, and management', in Bernick, K (ed) *Hidden Dimensions. The Cultural Significance of Wetland Archaeology*, 273–89. Vancouver.
- Godbold, S & Turner, R C 1994 'Medieval fishtraps in the Severn estuary', *Medieval Archaeology* 38, 19–54.
- Gosden, C 1994 *Time and Social Being*. London and New York.
- Gosden, C & Marshall, Y 1999 'The cultural biography of objects', *World Archaeology* 31(2), 169–78.
- Gerritsen, F 1999 'The cultural biography of Iron Age houses and the long-term transformation of settlement patterns in the southern Netherlands', in Fabech, C & Ringtved, J (eds) *Settlement and Landscape. Proceedings of a Conference in Arhus, Denmark, May 4–7, 1998*. Højbjerg, 139–48.
- Gerritsen, F 2003 *Local Identities: Landscape and Community in the Late Prehistoric Meuse-Demer-Scheldt Region*. Amsterdam.
- Hall, R & Clarke, C P 2000 'A Saxon intertidal timber fish weir at Collins Creek in the Blackwater estuary', *Essex Archaeology and History* 31, 125–46.
- Harris, M 1998 'The rhythm of life: seasonality and sociality in a riverine village', *Journal of the Royal Anthropological Institute* 4(1), 65–82.
- Harris, M 2000 *Life on the Amazon: The Anthropology of a Brazilian Peasant Village*. Oxford.
- Henderson, J C 1998 'Islets through time: the definition, dating and distribution of Scottish crannogs', *Oxford Journal of Archaeology* 17(2), 227–44.
- Ingold, T 1993 'The temporality of the landscape', *World Archaeology* 25(2), 152–74.
- Ingold, T 1995 'Building, dwelling, living: how animals and people make themselves at home in the world', in Strathern, M (ed) *Shifting Contexts: Transformations in Anthropological Knowledge*. London.
- Kelly, F 1997 *Early Irish Farming*. Dublin.
- Kopytoff, I 1986 'The cultural biography of things: commoditization as process', in Appadurai, A (ed) *The Social Life of Things. Commodities in Cultural Perspective*, 64–91. Cambridge.
- Lucas, A T 1989 *Cattle in Ancient Ireland*. Kilkenny.
- Lucas, G 2005 *The Archaeology of Time*. London and New York.
- McDermott, C 1998 'The prehistory of the Offaly peatlands', in Nolan, W & O'Neill, T P (eds) *Offaly History and Society*, 1–28. Dublin.
- McErlean, T & O'Sullivan, A 2002 'Foreshore tidal fishtraps', in McErlean, T, McConkey, R & Forsythe, W *Strangford Lough: An Archaeological Survey of its Maritime Cultural Landscape*, 144–80. Belfast.
- Moore, C, Murray, C, Stanley, M & McDermott, C 2003 'Bogland surveys in Ireland: forty shades of brown', in Fenwick, J (ed) *Lost and Found: Discovering Ireland's Past*, 123–38. Dublin.
- Murray, C 2000 'A wooden vessel from Co Westmeath, Ireland', *NewsWARP* 28, 7–8.
- Nayling, N 1997 'Further fieldwork and post-excavation: Magor Pill, Gwent Levels intertidal zone', *Archaeology in the Severn Estuary* 1996, 7, 85–93.
- Nayling, N 1999 'Medieval and later fishweirs at Magor Pill, Gwent Levels: coastal change and technological development', *Archaeology in the Severn Estuary*, 10, 93–113.
- O'Carroll, E 2001 *The Archaeology of Lemonaghan – The Story of an Irish Bog*. Dublin.
- Ó Corráin, D 1972 *Ireland before the Normans*. Dublin.
- O'Sullivan, A 1998 *The Archaeology of Lake Settlement in Ireland*. Dublin.
- O'Sullivan, A 2001 *Foragers, Farmers and Fishers in a Coastal Landscape: An Intertidal Archaeological Survey of the Shannon Estuary*. Dublin.
- O'Sullivan, A 2003a 'A day in the life of a medieval fisherman ... and of intertidal archaeologists', in Fenwick, J (ed) *Lost and Found: Discovering Ireland's Past*, 233–46. Dublin.
- O'Sullivan, A 2003b 'Place, memory and identity among estuarine fishing communities: interpreting the archaeology of early medieval fish weirs', *World Archaeology* 35(3), 449–68.
- O'Sullivan, A 2005 'Medieval fishtraps on the Shannon estuary, Ireland: Interpreting people, place and identity amongst wetland communities', *Journal of Wetland Archaeology* 5, 65–77.
- Overing, J & Passes, A 2000 'Conviviality and the opening up of Amazonian anthropology', in Overing, J & Passes, A (eds) *The Anthropology of Love and Anger: The Aesthetics of Conviviality in Native Amazonia*. London and New York.

- Patterson, N 1994 *Cattle Lords and Clansmen: The Social Structure of Early Ireland*. Notre Dame.
- Stanley, M 2003 'Archaeological survey of Irish bogs: information without understanding', *Journal of Wetland Archaeology* 3, 61–74.
- Strachan, D 1998 'Intertidal stationary fishing structures in Essex. Some C14 dates', *Essex Archaeology and History*, 29, 274–82.
- Stout, M 1997 *The Irish Ringfort*. Dublin.
- Tringham, R 1991 'Households with faces: the challenge of gender in architectural remains', in Gero, J & Conkey, M (eds) *Engendering Archaeology: Women and Prehistory*, 93–131. Oxford.
- Tringham, R 1995 'Archaeological houses, households, housework and the home', in Benjamin, D N, Stea, D & Saile, D (eds) *The Home: Words, Interpretations, Meanings and Environments*, 79–107. Aldershot.
- Turner, R C 2002 'Fish weirs and fishtraps', in Davidson, A (ed) *The Coastal Archaeology of Wales*, CBA, York, 95–108.
- Van de Noort, R & O'Sullivan, A 2006 *Rethinking Wetland Archaeology*. London.