

Review Articles

Digging the Dutch Mountains: Recent work by Leendert Louwe Kooijmans

Hardinxveld-Giessendam Polderweg. Een mesolithisch jachtkamp in het rivierengebied (5500–5000 v.Chr.). By Louwe Kooijmans, L.P. (ed.) 2001. Amersfoort (Rapportage Archeologische Monumentenzorg 83), 488 pp. Euro: 34.00

Hardinxveld-Giessendam De Bruin: een kampplaats uit het Laat-Mesolithicum en het begin van de Swifterbant-cultuur (5500–4450 v.Chr.). By Louwe Kooijmans, L.P., (ed.) 2001. Amersfoort (Rapportage Archeologische Monumentenzorg 88), 550 pp. Euro: 34.00

Schipluiden: A Neolithic Settlement on the Dutch North Sea Coast c. 3500 cal BC. By Louwe Kooijmans, L.P. and Jongste, P.F.B. (eds) 2006. (*Analecta Praehistorica Leidensia* 37/38), 518 pp. Euro: 90.00

Introduction

The 'mountains' in the western part of the Netherlands are no longer there. But at the end of the Pleistocene, the combined effects of river sedimentation and the aeolian reworking of these sediments created an undulating landscape with the highest riverdunes rising to some 10 m above the surrounding landscape. These dunes, or *donken*, protruded as islands within an increasingly flat landscape that developed during the early and middle Holocene as rising sea level led to the expansion of the North Sea and the retreat of the mouths of the rivers Meuse and Rhine, turning the former undulating landscape into a delta with extensive wetlands. Especially towards the end of the Mesolithic, and during the early phases of what was, on the higher and drier lands to the east, the Neolithic period, the *donken* became the refuges of hunter-gatherers.

The existence of these *donken* and their archaeological potential has been known for many decades, and the most prominent name associated with their study is that of Leendert Louwe Kooijmans. Over the last twenty years, Louwe Kooijmans, professor of archaeology at the University of Leiden, has dedicated much of his research to

developing a detailed understanding of the transition from the Mesolithic to the Neolithic in the western Netherlands, with the transition period referred to as the Swifterband culture/complex. His doctoral thesis (1974) had already explored this topic. From the beginning, the close integration of archaeology with quaternary geology was established as a hallmark of his research. The best known excavations from these early days include Bergschenhoek (where the famous dogwood woven fish trap was excavated), Hazendonk and Hekelingen III.

These early excavations were on a comparatively modest scale, especially when measured against the excavations of prehistoric settlements to the east, where Dutch archaeology followed the example of the German *Siedlungarchäologie* in the scale of the excavations. The onset of commercial or developer-funded archaeology in the Netherlands in the 1990s provided opportunities to increase the scale of the wetland excavations. The way in which Dutch commercial archaeology is organised, whereby only the state service for archaeology, municipal archaeologists and universities are licensed to excavate, meant that Leendert Louwe Kooijmans was inevitably asked to organise any such excavation in the Dutch mountains. The excavations at Hardinxveld-Giessendam Polderweg and Hardinxveld-Giessendam De Bruin were undertaken in advance of the construction of a new railway, whilst the excavations at Schipluiden were undertaken in advance of the building of a waste water treatment plant.

The three books reviewed here are all from the 'mountains' in the western Netherlands. All three excavations were under the direction of Louwe Kooijmans, all three projects were designed to engage with the Mesolithic-Neolithic transition debate and all three were undertaken in advance of developments. This review takes the opportunity to examine the state of Dutch wetland archaeology at the beginning of the 21st century, with particular reference to the role of developer-funded archaeology in the Netherlands.

Hardinxveld-Giessendam

The two excavations at Hardinxveld-Giessendam are in many ways similar. But whereas the Polderweg dig explored a Mesolithic hunting camp dated to 5500–5000 cal BC, the excavation at De Bruin (phase 2) investigated principally a late Mesolithic site dated to 5100–4800 cal BC (with slighter evidence for an earlier and later phase). The two sites, less than 1 km apart, are located in the municipality of Hardinxveld-Giessendam about 15 km east of the outskirts of modern Rotterdam, in the centre of the Dutch *Rivierengebied*.

Importantly, the Polderweg and De Bruin *donken* largely survived beneath the Holocene deposits and therefore contained *in situ* evidence of archaeological activity: this had not been the case in earlier excavations at sites such as the Hazendonk. The excavations were designed to examine these *in situ* features alongside the cultural dumps within the colluvial and alluvial deposits on the slopes of the *donken*. To this purpose, a coffer dam was constructed providing an excavation area of 30 × 18.5 m. At a depth of 20 m the coffer dam was made watertight through the injection of 'waterglass' (a solution of silica, sodium and water), so that pumping could be limited to the area of excavation and not cause any dewatering or oxidation of surrounding deposits

through increased flow of groundwater. The whole excavation was covered and provided with a gantry for lifting samples, whilst a sieving machine was set up outside the enclosed dig. The maximum depth reached during the excavations was just over 7 m. Once the excavation of the Polderweg site was completed, the whole installation was dismantled and moved to the nearby De Bruin site, where it was reinstated.

At Polderweg, the excavations revealed a number of large pits, interpreted as the remains of huts, but the many postholes found could not be reconstructed into recognisable structures. The *donk* had been used as a place of burial. Perhaps significantly, the oldest evidence encountered was that of a burial of a 40–60 year old woman, with streaks of ochre found in the grave. Additional graves plus three dog burials indicate that this was no specialised hunting camp, but a base camp of whole households, with the animal bone and botanical remains indicating seasonal presence during the winter months. The discarded material from the slopes of the *donk* shows something of the attractiveness of living in an intra-coastal plain, with the bones of ducks, swans, beavers, otters, wild boar and red deer all represented in this broad-spectrum economy. No evidence for domesticated animals, other than the dogs, or for cereal cultivation was encountered. The objects of worked bone and antler are clearly significant in their own right, showing a diversity not previously encountered. The provenance of flint objects show that contacts already existed with the southern Limburg/northern Ardennes region, where around this time the first LBK settlements were being established. Towards the very end of the use of the Polderweg *donk*, locally produced pottery was included in the find complexes, signalling the start of the Swifterband phase.

The De Bruin *donk* included the remains of three phases of occupation. The earliest phase (1) overlaps in time and nature with the Polderweg site, whilst the middle phase (2) represents the period 5100–4800 cal BC and the final phase (3) 4700–4450 cal BC. During these periods of occupation the sea-level rose, and the wetlands were dominated by carr-type vegetation. The island-nature of the *donk* is illustrated by the discovery of a dugout canoe of lime wood, along with a broken and burnt fragment of the bow of a second canoe: the only way to travel through this landscape was by boat. *In situ* evidence for Phase 2 included evidence for huts in the form of deep pits, similar to those encountered at the Polderweg site. Throughout the period of activity here, the excavators recognised a shift from the *donk* being used as a base camp during winter months to a year-round logistic base for hunting and fishing, or an extraction camp. The wealth of animal bone and botanical macrofossils shows the continuing diversity of the economy, although at De Bruin the beaver was hunted more fervently than at Polderweg, presumably for its pelt rather than its meat.

During the final phase at De Bruin, the first evidence for domesticated animals in the western Netherlands was found. However, this evidence came not from the dumps on the slopes of the *donk* but from a cluster of small 'deposition pits' on the very edge of the wetlands. These pits were filled with placed objects including a large pot, a bone and piece of antler, a block of wood and sticks, a neonatal pig and parts of goat and cattle. This ritual activity is linked to the early Neolithic peat deposition of similar date in Denmark and Drenthe, and is described as a desire to communicate with the ancestors at a time in which the interrelationships between people, plants and animals were being reconfigured.

Both multi-authored reports are well-produced and amply illustrated, but without indices. In terms of organisation, both books follow the traditional division of introduction and description of the site, followed by discussion of the various categories of material culture split up into separate chapters, and the synthesis at the end brings all the data together. Louwe Kooijmans presented a summary of these two excavations in English at the *Mesolithic on the Move* conference (2003).

Schipluiden

The site of Schipluiden is situated some 40 km northeast of the Hardinxveld-Giessendam sites, between the conurbations of The Hague and Delft. Schipluiden was located on a lower, coastal dune, within a former coastal wetland landscape. Because of the relative shallowness of the deposits (no more than 4 m below ground surface), and their height above the water table, the engineered excavation pit used at the *donken* sites was not required. Instead, simple sheet piling on one side of the excavated area and groundwater extraction were used to provide a safe and workable environment.

Schipluiden represents the final stages of the Swifterband phase of activity in the western Netherlands: the four or five households who made Schipluiden their permanent residence were active in both the broad spectrum exploitation of the surrounding wetlands and in stock keeping and cereal cultivation, what has been coined an 'extended broad spectrum economy'. There is ample evidence of hunting (especially red deer and wild boar), fowling (in particular ducks) and fishing; the isotope analysis of human bones points at a substantial component of the diet having been derived from freshwater fish. The settlement was fenced, presumably to stop the domesticated animals trampling the crops. In terms of provenancing flint and other materials not available locally, the people who lived at Schipluiden travelled or traded with communities to the south and east, rather than the north.

Schipluiden also offers more insight into non-economic activities: burials of the deceased, including formal burials and the dispersal of some human bones within the settlement refuge; the killing and deposition of dogs with their heads removed; the deposition of three heads of cattle in a 'deposition pit'; and the ubiquitous bones of white-tailed eagle, possibly shot for its feathers rather than its meat. In all, we are given the impression of a society that has become Neolithic in both an economic and a ritual sense.

The Schipluiden report is produced to a very high standard, with many colour photographs and images, and again organised along the concept of presenting different groups of material culture and ecological data in separate chapters, brought together in a very readable synthesis at the end of the book.

Reflections

On an academic level, the contribution these books make to our understanding of the Mesolithic-Neolithic transition is difficult to overstate. The hunter-gatherer-fisher traditions survived on the edges of the first farming communities for a period of about

1500 years after the first LBK settlements materialised in the southernmost parts of the Netherlands. Together these books provide the most detailed information on the pace and nature of this transition yet produced. The progress made since Louwe Kooijmans' comprehensive summary of this topic in 1993 is apparent in the significantly increased diversity of finds and added detail, rather than in completely new ideas about how this transition took place. The pace of neolithisation in these lowland communities was very slow, much slower than has been observed for the Danish coastal Ertebölle complex. Rather than being an unstoppable or inevitable process, it would appear that the neolithisation of the western Netherlands was characterised by the gradual adoption of selected items from the farming communities – many of which were deposited ritually in special pits both at de Bruin (phase 3) and Schipluiden – thus pointing to an indigenous Swifterband complex where aspects of the Neolithic were introduced piecemeal. Even at Schipluiden, where domestic animals were kept and cereal grown, the isotopic analysis of the bones still shows a significant marine and riverine component in protein consumption.

The research falls within the Dutch tradition of archaeology as the study of past human-environmental relationships, with a clear preference for environmental explanations for human actions and changes in society. Where manifest ritual aspects of past behaviour are encountered, these are invariably treated as 'reflecting' or 'illustrating' the changing relationships between people and nature, rather than being forces in their own right. These books do not engage in any depth with theoretical debates, in particular those from the UK, but this may have been a conscious decision.

The presentation of the detailed data in specialist-authored chapters is the traditional method of publishing excavations, but it left me sometimes frustrated in trying to understand the exact context of certain finds, and aspects of the co-deposition of different finds. This is not so much a complaint as an observation, as I realise that to split the specialists' reports by context would have left anybody who wants to read about a particular type of find struggling, but this way of organising the results does prevent aspects of contextualised and structured deposition from being revealed. Maybe this is a matter of accessing the electronic data, but there are no pointers as to how this could be achieved.

Reflecting on the impact of developer-funded archaeology in the Netherlands, these books would suggest that this has been a positive development. The research was undertaken by a commercial unit founded by and housed within the University of Leiden's Faculty of Archaeology, and the Dutch system that enforces close connections between academics and developer-funded archaeologists has clearly paid off, with high-quality, informed and research-led excavations being analysed and published to a very high standard. The scale of the research that has been enabled by the introduction of developer-funded archaeology, especially in deep wetland research as at the Hardinxveld-Giessendam sites, has clearly extended beyond anything that was previously possible, not least because of the high costs of excavation.

It remains with me to congratulate Leendert Louwe Kooijmans on the superb results presented in these three books, and to express the hope that retirement will not get in the way of his research.

References

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