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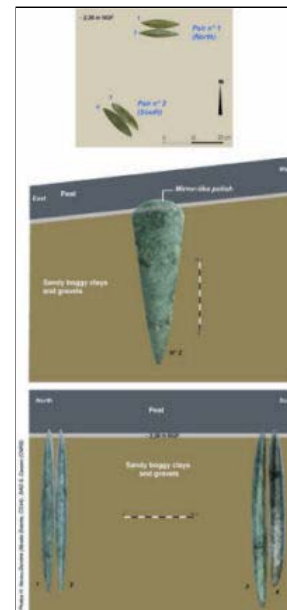
## Discovery of an underwater deposit of Neolithic polished axeheads and a submerged stone alignment at Petit Rohu near Saint-Pierre-Quiberon (Morbihan, France)

**Serge Cassen, Christine Boujot, Michel Errera, Dominique Marguerie, David Menier, Yvan Pailler, Pierre Pétrequin, Sandy Poirier, Elisabeth Veyrat & Emmanuelle Vigier**

In August 2007, holidaymakers discovered two pairs of polished jadeite axeheads that had been set vertically in gravelly silt on the beach of Porh Fetan, at a location called Petit Rohu (Figure 1). The shape and material of these axeheads allowed them to be identified straightaway as being of Alpine origin, in common with a number of axeheads found in the region (Bailloud *et al.* 1995; Pétrequin *et al.* 1997). Archaeological fieldwork, both on the land in the vicinity of the findspot and underwater, was subsequently carried out by the Laboratory of Archaeological Research (CNRS - Nantes University), in order to examine the context of the findspot and to try to delimit the extent of the site.

Initial fieldwork, carried out during the September spring tide, yielded no further artefacts but did produce evidence for at least one submerged stone alignment (Figure 2), located to the south-east of the axehead findspot and several dozen metres away. Only one of the stones was still standing; the others had fallen. An initial plan of this structure was made at that point, and completed during the next investigation, which took place during the October spring tide. The structure is readily distinguishable from a more recent stone structure, relating to fishing, located 800m away. A third investigation, carried out during the last spring tide of the year in November, led to the discovery of a fifth axehead, this time of fibrolite, found resting against one of the fallen stelae.

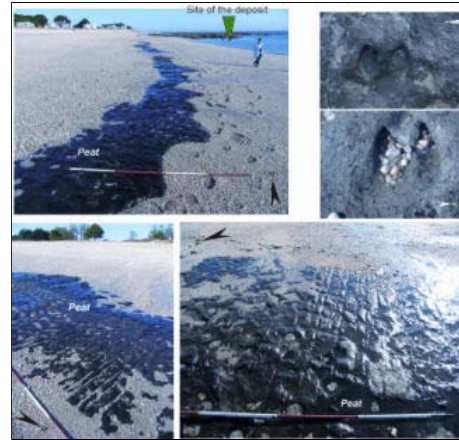
Peaty soils had been intermittently observed over several years, buried beneath marine sand; these are being progressively eroded away by the force of the sea, as their sand cover becomes thinner (Figure 3). These soils preserve marks, criss-crossing each other in places, which relate either to cultivation or to salt extraction; and there are also hoof-prints of ungulates (cattle and pigs). This palaeoenvironmental context allows us to argue that the axeheads had been deposited in a marshy environment that had developed behind a dune system, at the foot of a remarkable granite outcrop. Sea level rise since the mid-fifth millennium BC - the likely date at which the axeheads were deposited - means that the shore has advanced by some 500m since then (Cassen & Pétrequin 1999).



**Figure 1.** Position of the two pairs of axeheads, according to the reliable account of the finders, Sonia Hoba and Adam MacHale (photographs and CAD: H. Neveu-Derotrie & S. Cassen).  
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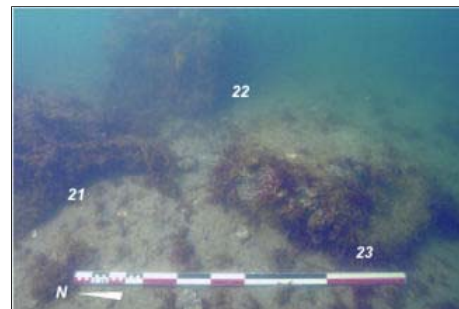
**Figure 2.** The stone alignment, photographed at extreme low tide during the September 2007 spring tide (photographs: S. Cassen).  
*Click to enlarge.*



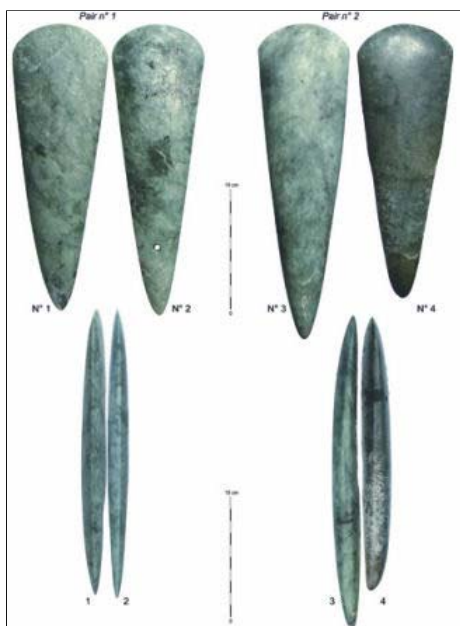
**Figure 3.** Peat deposits under the beach, and hoof-prints on their surface (photographs: C. Boujot, S. Cassen & E. Vigier).  
*Click to enlarge.*

Today, the findspot of the stone alignment and axehead deposit lies beneath 5m of sea (Figure 4). These architectural vestiges join the list of recent discoveries (since 1998) of submerged monuments in the Bay of Quiberon, the Etel estuary and the Gulf of Morbihan. Of particular note is the site of Kerbougne, several hundred metres to the north of Rohu, where a dozen lines of fallen stones, extending over at least 400m, have been found under the sea (Cassen & Vaquero Lastres 2003). This site is comparable in stature to the Carnac alignments. At the foot of the largest stela (8m long), a fibrolite axehead was found in 2006, in conditions similar to those obtaining at Petit Rohu.

Initial spectroradiometric analysis of the two pairs of axeheads, undertaken as part of the Agence Nationale de la Recherche-funded Programme Jade (2007-2009; directed by Pierre Pétrequin and involving Serge Cassen, Michel Errera & Yvan Pailler), has confirmed that they are of jadeitite, originating in the Italian Alps. Indeed, at least three of the axeheads (Nos. 1-3, Figure 5) certainly originated in the same block of jadeitite. Their surface finish attests to a considerable investment of time in order to achieve their mirror-like polish (which survives over part of their surfaces). This underlines the fact that these were not utilitarian axeheads, but instead were very special and precious artefacts.



**Figure 4.** Stelae nos. 21, 22 and 23 under the sea. The morphology of stone 22 shows that it has been dressed (photograph: Teddy Seguin).  
*Click to enlarge.*



**Figure 5.** The four polished axeheads (including one with a perforated butt): reconstruction of their original positioning as vertical pairs (photographs and CAD: H. Neveu-Derotrie & S. Cassen).  
*Click to enlarge.*

To summarise: this discovery on the Quiberon peninsula lends credence to several ancient accounts of other discoveries, which had previously been hard to validate from recent observations. It also allows us to gather and reassess information about Alpine axeheads within several investigative domains, namely:

- Burial in a marshy context. The practice of depositing hoards of polished axeheads in wetland contexts is attested by many examples in Europe (Pétrequin *et al.* 2005). Marshy ground is the milieu par excellence for ensuring the transition between states of being and between this world and the Otherworld.
- Deposition as grave goods. This is the best-known of the archaeological contexts for finds of Alpine polished axeheads in Brittany; their discovery, from the time of the first explorations of the tombs in the Carnac area ('tombeaux carnacéens') in 1860, contributed to the renown of these monuments. Discovered both in impressive numbers (at Tumiac, Mané er Hroëck and Saint-Michel) and as more isolated deposits (at Mané Hui, Er Grah and Mané er Ouah Tihir), these axeheads greatly impressed their finders, and subsequent commentators, with their striking form, texture, colour and surface sheen. It was clear that these objects had been manipulated by an elite.
- Deposition in pairs. The deposition in the ground of pairs of polished stone axeheads is well known from the literature, but has only rarely been directly witnessed over the last few decades; most of the recent examples have been of axeheads made from Alpine rocks (Pétrequin *et al.* 2005). These pairings of axeheads clearly relate to Otherworldly beliefs in which divine twins and mirror effects constitute one of the 'motors' driving the world, or even act as an agent in its creation (Cassen 2000).
- Burial in a vertical position. The positioning of the Petit Rohu axeheads side by side and vertically, with their blades uppermost and pointing towards the sky, was not a casual act. This positioning is universally known and, within Brittany, one could cite as parallels the Alpine axeheads found in a chamber inside the famous Tumulus Saint-Michel, and the five axeheads found in the body of the earthen barrow Manio 2 at Carnac. The latter had been placed beside one face of the engraved stela that had been erected at the western end of one of the two cists of this monument (Le Rouzic *et al.* 1922).
- Relationship with stelae. The Manio 2 example is joined by others (including the aforementioned example in fibrolite from Kerbougne) demonstrating a topographic and semantic contiguity between polished stone axeheads and standing stones. On the one hand the axeheads represent stone that has been extracted, shaped and polished; on the other, the stela represents a piece of rock that has been raised up to a vertical position, having sometimes been carefully prepared and dressed in a particular

environment.

- The relationship between Alpine axeheads and those of fibrolite. The earliest stone axeheads from Brittany are of fibrolite, a material that is hard to work and which has to be sawn, like jadeite (Pailler 2007; a further similarity with Alpine rocks is the green colour of much fibrolite). Fibrolite axeheads have regularly been found accompanying those of Alpine rock dating to the fifth millennium BC. The importance of fibrolite as a material can be gauged by finds of fibrolite axeheads from north-western Iberia: here, in an area rich in fibrolite, the inhabitants rejected the circulation of Alpine rocks.

In brief, then, the Petit Rohu discovery illustrates the wealth of issues that surround Alpine stone axeheads.

The magnificent axeheads from Petit Rohu are to be placed on display in the Carnac Museum during the spring of 2008. They are witnesses to a massive, Europe-wide phenomenon - the circulation of Alpine axeheads - that links the Mediterranean to the Irish Sea and to the Baltic.

## Acknowledgements

Translated by Alison Sheridan, member of the Programme Jade, who is warmly thanked by the authors for her valuable assistance.

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