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Deer Antler during the French Mesolithic: Technical Exploitation and Symbolic Aspects

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Red deer was one of the main game animal of the french Mesolithic. A source of food, it was also the source of various raw materials :

- soft tissues (skin, sinew... : exploitation difficult to understand)
- hard animal materials
 - Teeth : mainly canines (perforated and used as ornaments)
 - Bones : mainly long ones (often exploited with simple actions, like percussion)
 - Antlers (fig. 1) : used to make domestic tools but also symbolic objects

The exploitation of deer antler is the topic of this poster :

- both osseous and deciduous (Fig. 2), antler is between the animal and vegetal worlds (in French, the translation "bois" indicate both vegetal and animal structure)
- obtain by hunting or the gathering of shed antler

Emblematic raw material of Azilian cultures (flat harpoons) and, later, of the Neolithic (haft sockets), the exploitation of deer antler during the French Mesolithic is less well known but some recent studies have begun to shed light on the production of antler tools. We shall expose the use of antler via three French examples: one a domestic context (recently studied from a technological point of view) and two funerary contexts, all dated to 2nd Mesolithic. We shall show that the same raw material was used for very different purposes, behaviours that are also seen beyond France.

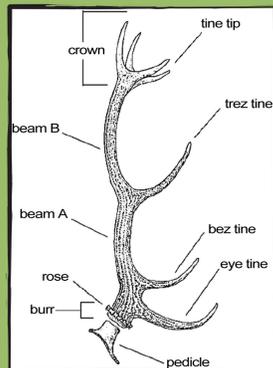


Fig. 1: the different parts of a red-deer antler (from 12)

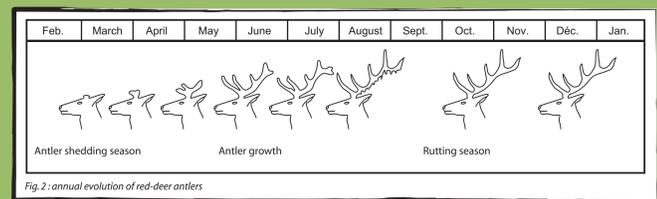


Fig. 2: annual evolution of red-deer antlers

Antler exploitation at the Cuzoul de Gramat

The study of Cuzoul de Gramat is a good exemple to understand the evidence about the domestic exploitation of deer antler for toolkit production. The site consists of a cave and a wide rock-shelter in a large limestone depression. The first excavations were carried out between 1922 and 1933 by R. Lacam et A. Niederlender. They found a deep stratigraphy (fig. 3), covering all of the Mesolithic and a famous mesolithic grave (3). New excavations began in 2005 (13).

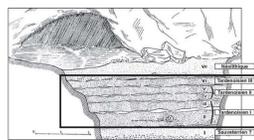


Fig. 3: stratigraphic section. 2nd Mesolithic levels are framed (from 13)

What about the antler equipment of second Mesolithic ? The antler supply was provided by the harvest of shed antler, and large sized antlers were favoured. Their exploitation was mainly oriented toward blank production by sectioning beams or tines, which were shaped to create bevelled tools (fig. 4) by longitudinal scraping, limited to the active part (fig. 5). The significant number of debitage waste products on tines and mental refittings could indicate that the production of blanks on beams seemed to be more frequent than the debitage of blanks on tines. The low number of finished objects on beam segments compared with the amount of waste products, could indicate that Le Cuzoul de Gramat was a production site occupied during the antler shedding season (5).

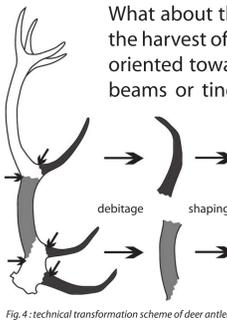


Fig. 4: technical transformation scheme of deer antler

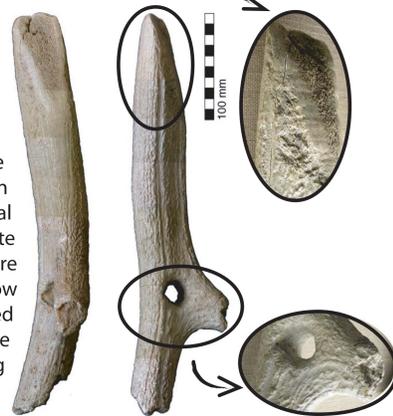


Fig. 5: heavy bevelled tool with details of debitage and shaping traces

Mesolithic populations exploited red deer antler mainly to produce heavy bevelled tools used as mattocks or picks rather than as axes as suggested by use-wear traces (12). Antler is a perfect raw material being both hard and flexible and so able to resist shock without breaking. Mesolithic populations were more concerned with the physical and mechanical properties of antler. Appearance was a minor importance: shaping was limited to the active part, while debitage marks were not removed by the craftsmen and there was no finishing or decoration of the final object.

New study of the former collections of Cuzoul de Gramat enabled us to reconstruct precisely the technical scheme for the transformation of deer antler. This scheme, or more often parts of it, has been identified in material from sites throughout France (for exemple (1), (4)...). However, the sites of Tevieg and Hoëdic are exceptional for the region while the use of antler structures in funerary deposits are also limited to these two sites.

Moreover these two ways of antler exploitation, some objects are both part of domestic and symbolic sphere of activity. For example, there are decorated pieces like hafts found during dredging of the Oise river (fig. 10) (10).

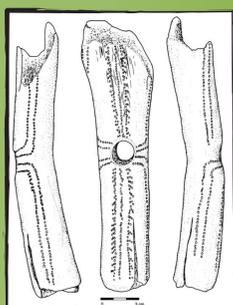


Fig. 10: decorated antler shaft from Longueil, France (10)

- Three types of items :
 - simple domestic tools (undecorated)
 - decorated domestic tools
 - funeral antler structures
- Simple tools are found throughout France while decorated tools and antler funerary structures are only found in the northern third of the country (fig. 11). Decorated antler objects are missing from southern part of France and instead decorated objects are made out of stone or bone.

If we compare the distribution of decorated tools and antler funerary structures on larger European scale (fig. 12), the division between the northern third part and the rest of France can be seen in the light of northern European influences.

Furthermore, in the case of tool production, antler debitage is also different between northern and southern Europe. In northern countries, base, including burr, is a part of the finished objects (and sometimes the active part). In the south, the base is a waste product (fig. 13).

Deer antler during the french Mesolithic :

- a same raw material for very different purposes
 - throughout France, importance of physical and mechanical properties of antler
 - in the third north, importance of symbolic aspects
- northern european influences ? > decoration / funerary structures / debitage
- beware of the problem of differential preservation
 - bog sites in the north Vs cave sites in the south
 - hard to compare antler exploitation on European scale

Antler use at Tevieg and Hoëdic

The old excavations on the sites of Tevieg and Hoëdic in Brittany are the main source of information concerning the symbolic use of antlers. Excavations was carried out by M. and S.-J. Péquart, between 1928-1930 at Tevieg (fig. 7) and 1931-1933 at Hoëdic (fig. 6). They discovered second Mesolithic sites, with domestic occupations and importantly vast cemeteries in huge shell middens (7, 8, 9).

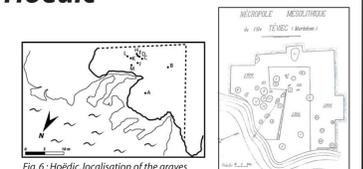


Fig. 6: Hoëdic, localisation of the graves (from 9)

Fig. 7: Tevieg, localisation of the graves (8)



Fig. 8: Hoëdic, the grave K (9)

S.-J. Péquart discussed the significance of these structures (from hunting trophies to the burial of shamans) and highlighted their prestige nature. A recent study has noted the link between antler structures and the richness of object placed with the body (11).

In some graves, deer antlers (often complete, from hunted animals or shed antlers) are associated with the bodies, forming tent-like structures (Tevieg) (fig. 9) or frames (Hoëdic) (fig. 8) over the head and shoulders. Such graves at Tevieg (2 examples) and Hoëdic (4 examples) tend to be of the oldest individuals and the richest burials. M. and S.-J. Péquart discussed the significance of these structures (from hunting trophies to the burial of shamans) and highlighted their prestige nature. A recent study has noted the link between antler structures and the richness of object placed with the body (11).

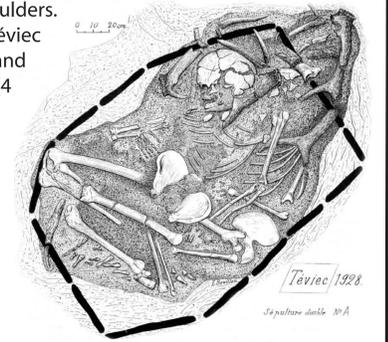


Fig. 9: Tevieg, the grave A (8)

At Tevieg and Hoëdic, complete antlers were placed in the graves without major modification. Was the shape suggestive ? Was it a way to represent the whole deer, a major game animal ? But in that case, why use shed antler ? Or were these deciduous hard material a regeneration/rebirth symbol ? In any case, the link between antler structures and prestige is clear. The Mesolithic populations seemed to desire the antler for its symbolic aspects rather than for its mechanical properties.

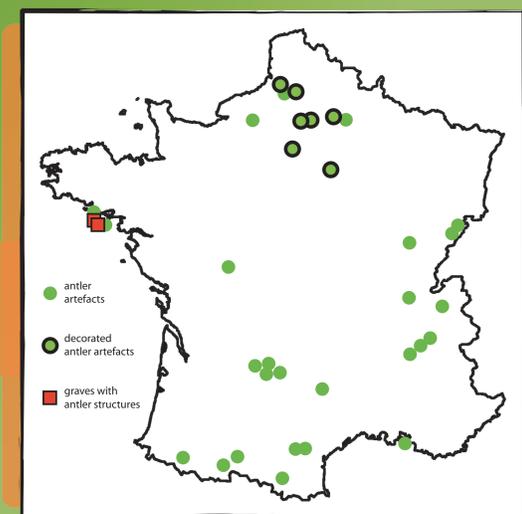


Fig. 11: localisation of French antler objects (decorated and undecorated) and graves with antler structures

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 H. Courville, A. Chavalier, J.B. Faumot, D. Ranty, J. Lacroix, M. L. Sauter : thank you !

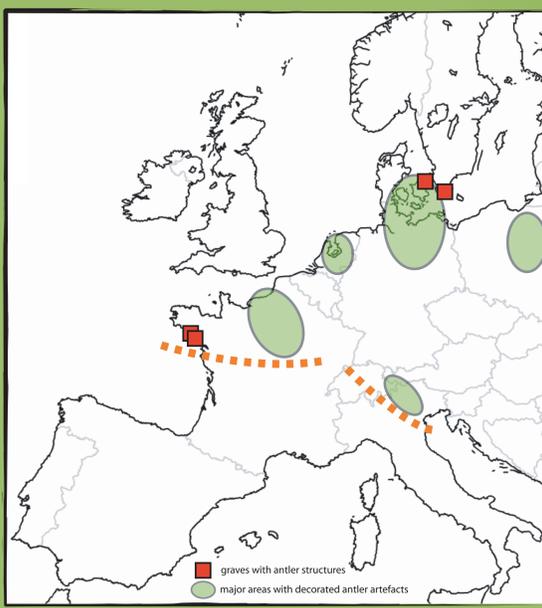


Fig. 12: localisation of western European decorated antler objects and graves with antler structures