THE MALACO+ARCHAEOLOGY GROUP NEWSLETTER
Issue Number 2, April 2002

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Editorial

Welcome to the second issue of the Malacoarchaeology Group Newsletter - or should it be Archaeomalacology Group? Your comments are invited for the next Newsletter.
Thank you to everyone who responded to the first issue (July 2001), and especially to those who have provided material for this one. All being well, the third issue will appear after the ICAZ 2002 Conference in August. Contributions (news, meeting reports, short articles, abstracts and reviews, lists of publications, etc.) will be very gratefully received!

New Group Member

Dennis NIEWEG: dcnieweg@xs4all.nl

Archaeologist working in the Caribbean on 'man and molluscs' (diet, landscape reconstruction) for Leiden University in the Netherlands and the University of the West Indies, Trinidad and Tobago; Honorary Curator of Molluscs at the Natural History Museum, Rotterdam.

Nomenclature in archaeological reports dealing with material from the Middle East

by Henk K. Mienis
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There has been a remarkable increase in the number of reports dealing with molluscs recovered during archaeological excavations carried out in the Middle East. This is a positive development because molluscs can supply archaeologists with lots of valuable information: trade routes, food exploitation, changes in climate, etc. A comparison of the various reports has revealed a striking discordance in the scientific nomenclature used. In my opinion, this is a rather unfortunate situation.
The malacologist will immediately recognise that *Murex trunculus*, *Phyllonotus trunculus*, *Trunculariopsis trunculus* and ***Hexaplex trunculus*** (the current correct name in bold) are one and the same species. The same is true for other species which have been exploited as a source for the coveted purple dye: *Murex brandaris* contra ***Bolinus brandaris*** and *Thais haemastoma* or ***Stramonita haemastoma***. However, the archaeologist, not specialised in malacological nomenclature, will get the impression that he is dealing here with numerous different species.
The situation becomes even more complicated when the names are completely different. In the past the edible cockle living in the eastern Mediterranean has been identified as *Cardium edule*. However, today we know that *Cerastoderma edule* is an Atlantic species

which does not occur in the Mediterranean Sea, where it is replaced by a closely related species: ***Cerastoderma glaucum***. A similar mix up in identification exists among the common blue mussels: not *Mytilus edulis*, an Atlantic species living in the Mediterranean Sea, but ***Mytilus galloprovincialis***.
In order to minimise differences in the nomenclature used in archaeological reports, authors are advised to use a standard nomenclature, such as that proposed by Sabelli *et al*., 1990, or better still to consult the CLEMAM-list: a checklist of European marine Mollusca based in principle on Sabelli *et al*., 1990, but updated regularly and available on the internet at: http://www.mnhn.fr/base/malaco.htlm.
More advice: never write *Hexaplex (Murex) trunculus* or *Cerastoderma (Cardium) glaucum* as a way to show that *trunculus* and *glaucum* were once considered members of the genera *Murex* and *Cardium* respectively. In zoological nomenclature the name placed in brackets between a generic and a specific name indicates a subgeneric name. If you would like to indicate that in old reports they are reported respectively as *Murex trunculus* or as *Cardium edule/Cardium glaucum*, add a sentence or footnote explaining the name change.

Reference

Sabelli, B., Giannuzzi-Savelli, R. & Bedulli, D., 1990. *Annotated check-list of Mediterranean marine mollusks*, 1: 348 pp. Liberia Naturalistica Bolognese, Bologna.

Protohistoric shell bead manufacture and the problem of string suspension: recent studies in the northwest Mediterranean region.

By Paulette Pauc* and Jacques Reinhard**
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In Europe, on the western Mediterranean coast between eastern Provence (France) and the southern Iberian Peninsula (Spain), evidence has been found for shell bead manufacture at outdoor sites, together with beads in the course of production in a burial context, dating from the Early Neolithic to the Early Bronze Age (Barge, 1982; Courtin, 2000; Pascual Benito, 1998; Pauc, 1997, 2000a, 2000b, in press and in preparation; Siret & Siret, 1890; Taborin, 1974; Teruel Berbell, 1986).
Our study area covers part of the Aude department in the south of France, where over the last 10 years numerous open-air workshops have been discovered for the manufacture of circular or disk-shaped beads for threading, made from the shells of *Cerastoderma glaucum* (Brug.). This craft industry appears to have been practised on a family scale between the Late Neolithic/Chalcolithic and the Early Bronze Age. The archaeological remains have allowed us to describe the stages of the manufacturing process in detail, from the raw material to the perfect completed bead (Pauc, 1997).
We have also described some unusual production stages that may be attributable to the work of apprentices and/or to the use of a different manufacturing technique (Pauc, 2000b; in press and in preparation).
During our experimental study, which began in 1996, we investigated the marine shell deposits that the protohistoric craftsmen used as a source of raw material. We also attempted to reconstruct the manufacturing process in parallel with a study of the archaeological material. These two aspects are inseparable if we are to be able to answer satisfactorily the many problems posed by the manufacture of simple circular beads from

the shell of *Cerastoderma glaucum*: although they look simple, they are not easy to reproduce.

Traces of working have been observed on numerous examples using a binocular microscope, and this has helped us to reconstruct the different stages of manufacture in more detail than has previously been described.

Among the stone tools, which form an integral part of the production process, we have identified grinding stones made of calcareous and siliceous sandstone, and drill bits or micropoints of flint which have previously been described as tools used for perforating shell (Pauc, 1997, 2000a, 2000b; Yerkes, 1989, 1991, 1993, 1995, 1997, 1998). Grooved polishing stones, although absent from our sites, are known from Chemin de Sens at Marolles-sur-Seine (Augereau & Bonnardin, 1998) and at L'Abri de la Font-des-Pigeons at Chateauneuf-les-Martigues (Courtin, 2000). Ethnographic studies in the Solomon Islands (Woodford, 1908) and New Guinea (Malinowski, 1922) have demonstrated the use of grooved polishers to calibrate circular shell beads (we are grateful to Katherine Szabo for this information).

The principal raw material, represented by *Cerastoderma glaucum*, was obtained from the Quaternary coastal marine deposit formed during the marine transgression dated to the Eutyrrhenian period (the maximum date for which has been estimated at +/-129,000 years BP in the Mediterranean) and known in our region from the literature and from personal experience. During this interglacial period, which was warmer than the present climate, the glaciers melted to produce a sea level that was 2-8 m higher than at present, at least on the coastline of our study area. Other names for this deposit in the Mediterranean are the 'Cardium' or 'Strombus' level. The relative abundance of *Cerastoderma glaucum* made it the raw material of choice among the numerous other taxa present in this deposit. The shells (adult and juvenile specimens) occur in both a usable subfossil form from marine clay deposits and an unusable form from shell coquina. The assemblage in the intermediate lagoon-marine levels and in shallow lagoons supplied the rest of the malacofauna that we have found in the archaeological sites. The size and thickness criteria of the valves from the sites appear to correspond with those from the deposits, but the choice of shell was not limited to the mean thickness of the shells (between 3 and 5 mm, according to the different varieties of *Cerastoderma glaucum*). A biometric study of potentially usable fragments, and crude and rounded shell blanks found at the archaeological sites, has shown that valves as thin as 2.2 mm and as thick as 6 mm were used.

After many trials, beads were reproduced using different species of shells and threaded on a thin cord of lime bast fibre. This experimental reconstruction was encouraged by the discovery of cords in the lake sites of western Switzerland, which had been made with lime or willow bast, dating from the Neolithic to the Bronze Age. The technique used for the S-2Z or Z-2S twisting of the string is described by Reinhard & Pillonel (1989) and Reinhard (1993, 1997, 2001). The use of twisted cords to decorate Corded Ware and Bell-Beaker ceramics of the Late Neolithic and Chalcolithic provides additional evidence for the presence of these cords.

The use of a thin cord (the nature of which was not determined) to thread *Dentalium* beads has been attested in the Near East during the 4th millennium BC, thanks to exceptional preservation in arid conditions at Nawamis in southern Sinai (Daniella Bar-Yosef, personal communication), and beads have also been found on a suspension cord in

the cave of Nahal Hemar in the southern Judean desert in Israel, dating to the Pre-Pottery Neolithic B of the 8^{th}-7^{th} millennium BC (Schick 1988).

These examples suggest that similar discoveries may yet be made in a humid environment. The lake site of La Draga at Banyoles (Girona, Spain), dated to the Early Neolithic, where the early stages of a workshop for marine shell bead and pendant manufacture have been found (Pauc, 2000a), may one day provide evidence of perishable materials used in bead production including the thin cords used for threading the beads.

Observations made after one month (from 15 October to 15 November 2001) of continuous wear of the experimental string of beads showed that:

- distortion of the perforation cone and punched hole did not affect all the beads;
- those beads which were affected occurred in different places along the cord;
- two perforation cones (in circular beads) were distorted more than others;
- four punched holes (in circular beads) were distorted more than others;
- the punched holes on gastropod shells of different thickness presented different types of distortion, according to shell taxon;
- the most obvious distortion was observed around the hole in a *Hexaplex trunculus*, caused by the string wearing a notch equal to its width: it had acted like a 'saw' on part of the shell which was very thin and therefore vulnerable;
- holes in two *Nassa* sp., one *Trochocochlea turbinata* and two *Cerithium* sp., made by superficial abrasion and perforated using a flint point, presented an arc of wear surrounding the point of contact with the cord, which caused the hole to become oval in shape;
- partial wear of the thin cord, which is known to be very resistant, was observed, with the superficial layer of fibres in some places becoming bent transversely and then breaking with use.

This first attempt will be repeated following a more conventional protocol.

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Recent Publications

from **Catherine Dupont**, 11 Le Grand Etang, 44270 Machecoul, France (tel. 0240022703); email: Catherine.Dupont @ malix.univ-paris1.fr and **Aydin Orstan,** 13348 Cloverdale Place, Germantown, MD 20874, USA; email: bdelloid1@aol.com

Gruet, Y. & Dupont, C., 2001. Au Neolithique dans le Centre-Ouest de la France, la peche des coquillages reflete-t-elle l'environnement marin? pp.183-199. In: L'Helgouach, J. & Briard, J. (eds), *Systemes fluviaux, estuaires et implantations humaines de la prehistoire aux grandes invasions, 124e Actes des congres nationaux des societes historiques et scientifiques, Nantes, 1999.* Editions du Comite des travaux historiques et scientifiques, Paris.

Abstract: Marine shells from Neolithic sites of western central France have been analysed. Cumulative graphics have been drawn to compare the composition of shell assemblages with their ecological distribution. The malacofauna can be classified into three main biotopes: rock, sand and mud. The same method was used to study core shell assemblages. The results from Neolithic sites are compared with those from cores, and the sources of shellfish and the possible transportation of shells over long or short distances are discussed.

Dupont, C. & Gruet, Y., 2001. Variations morphologiques de mollusques gastropodes (*Nucella lapillus* and *Hinia reticulata*): interets pour l'archeologie. G.M.P.C.A., Archeometrie'99, 21-24 avril 1999, Lyon, France. *Revue d'Archeometrie* 24: 53-61.
Abstract: The shape of *Nucella lapillus* and *Hinia reticulata* varies with the ecology of the biota. This variation in shape is known in the Atlantic and the English Channel. *N. lapillus* tends to be more elongate in sheltered inlets compared with those from exposed rocky shores. Two varieties of *H. reticulata* differ in shape: *H. reticulata nitida* is typical of very sheltered inlets and has less numerous and larger costae. Living populations of gastropods were studied in the Atlantic (Gulf of Biscay). The intensity of exposure is correlated with depth near the shore and wave action. Shape variations were clearly correlated with exposure. The opposite reasoning was applied to archaeological samples. From the shape of the shell, the biotope is deduced and the probable type of shore from which it was collected. Shape variation in *H. reticulata* from the Mesolithic site of La Vergne suggests they were collected on sheltered shores about 60 km away from the site. The shape variation of *N. lapillus* from the Neolithic site of Ponthezieres shows this species was collected on mid-exposed shores, such as the one close to the site.

Orstan, A., 2001. A preliminary survey of *Albinaria* populations around Kusadasi Bay, Turkey. *Triton* No. 4: 42-44.
Abstract: A survey of *Albinaria* snails at 44 stations (approx. 10x10 m) in the vicinity of Kusadasi Bay in southwest Turkey in 1998 and 2000 revealed four conchologically distinct taxa: *A. caerulea maculata, A. caerulea calcarea, A. lerosiensis* and *A. puella*. These were absent from 11 calcareous stations and all five non-calcareous stations. Together with other land snails, they were absent from the marble ruins of ancient Claros, probably because this site is in marshy ground and by the 1950s was partly buried by alluvium. *A. caerulea maculata* and *A. caerulea calcarea* coexisted at only two stations. The distribution range of *A. lerosiensis* appeared to be centred around two archaeological sites. It was found at Notium in 1998 but previously was known only from the Bodrum (ancient Halicarnassus) area approx. 110 km to the south. This disjunct distribution suggests that it was introduced to one or both sites by human activity.

Meetings

International Council for Archaeozoology 2002 Conference, Durham, UK, 26-28 August 2002.
For further details, contact the organisers at: ICAZ 2002, Department of Archaeology, University of Durham, South Road, Durham DH1 3LE, UK; tel: 0191 374 1139; email: icaz.2002@durham.ac.uk; website: http://www.nmnh.si.edu/icaz

IV Reunion Nacional de Geoarqueologia, Almazan, Spain, 16-18 September 2002.
This conference is organised by the Geoarchaeology Group of the Spanish Association for Quaternary Studies (AEQUA). For details, contact Alfredo Perez-Gonzales, Facultad de Ciencias Geologicas, Universidad Complutense de Madrid, 28040 Madrid, Spain; tel: +34 91 3944890; email: alfredog@geo.ucm.es, or the AEQUA website at http://tierra.rediris.es/aequa/congres2.htm.