

THE ARCHAEO+MALACOLOGY GROUP NEWSLETTER

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Editorial

Please note the Newsletter's change of name. After some deliberation, this was finally brought about by the recent proposals for a new Archaeomalacology Working Group within the umbrella of the International Council for Archaeozoology, prompted by the success of the special Archaeomalacology session held at the ICAZ Conference at Durham, UK, in August 2002. If you can't beat 'em, join 'em! A brief overview of the ICAZ session and the mission statement of the new Working Group are included in this issue.

Thanks are due to everyone who provided copy for this Newsletter - please do keep those short articles, reports, news items, reviews and lists of publications coming in and, who knows, it may become possible to produce the Newsletter more frequently. Also, please don't forget to let the coordinator know if you change your email address, or would like your name to be removed from the mailing list.

New Group Members

Alberto GIROD: fraberto.girod@libero.it

Independent malacologist specialising in land and freshwater snails, their palaeo-environmental significance and changes during the Holocene, mainly between the Mesolithic and Neolithic and Bronze Ages; areas of interest include Italy, the Sahara, Turkey, Syria and the Arabian Peninsula; Consultant for several Italian institutes for archaeology and geology, museums, and government departments concerned with archaeological surveys.

Gustaf MAMANGKEY: gustaffnm@lycos.com

Working for the Tropical Marine Mollusc Programme at Sam Ratulangi University, Manado, Indonesia; has conducted research on the Teredinidae of North Sulawesi and the Indo-West Pacific; interested in the archaeomalacology of Indonesia.

Yves-Marie PAULET: Yves-Marie.Paulet@univ-brest.fr

Marine biologist at the European Institute for Marine Studies, Brest, France; working on the ecology and ecophysiology of marine bivalves; reconstruction of palaeoclimates from shells based on daily calcitic increments, stable isotopes and trace elements, with promising results using scallops from a Neolithic site in Brittany; special interest in creating a European inventory of *Pecten maximus* from archaeological sites for palaeoenvironmental reconstruction - **please get in touch with Yves-Marie if you would like to be involved in this project**; ancient use of marine resources.

On the practicalities of shell analysis

Daniella E. Bar-Yosef Mayer

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When I was first faced with the analysis of 5000 shells from an archaeological site, I was overwhelmed by the fact that they had to be studied both from zoological and archaeological aspects. I realised that the very first stage would have to be the description of the material. This would be followed by dividing the described material into groups, based on genera and species, but also on artefactual typology as well as stratigraphic and contextual information. Here, I would like to discuss the first step of the description component of the analysis.

The zoological aspect is first and foremost the identification of the species, and following that any other observations, such as whether it is an adult or juvenile specimen, and whether it has been perforated by a gastropod, etc. Identifying the species of the mollusc will determine its origin (aquatic or terrestrial) and in the Near East this can be rather dramatic, as it usually means either the Mediterranean or the Red Sea, which are only about 200 km apart (as the crow flies). Other species originating in freshwater, such as the River Nile, also have important archaeological implications.

The archaeological aspect entails evidence for human and natural manipulation of the shell: whether it was collected as a live animal or as an abraded shell on the beach; whether it was worked into a bead or any other kind of artefact; what techniques were used for the modification (drilling, grinding, etc.). There are also other observations that may be significant, for instance, whether the shell is burnt, covered with ochre, etc.

Writing this detailed description for each of the 5000 shells seemed like an impossible task. I therefore devised a typological list that addresses all of these questions, and enabled entering the information into any database software. I may add here that the idea of a 'type-list' comes from my strong background in prehistoric archaeology where a type-list is one of the leading tools for lithic analysis. However, since the type-list will have to include so much information, each type consists of four digits. The idea for numbering each type came from my very shallow background in computer programming, where in BASIC one would give a number to each command, and leave some extra numbers in between for future commands should they be needed.

The following is part of the type-list I use. This particular type-list is suitable for studying materials from the Near East, as it includes the genera most commonly found in archaeological sites there. The genera are arranged in taxonomic order, which follows that published by Vaught (1989). Since most species in the same genus have the same archaeological features (i.e. they are worked in the same way) they are not distinguished in the type-list, although species are recorded in a separate column on the database.

1640 - Mitrella	
1650 - Nassarius	complete
1651 -	fragment

1652 -	broken
1655 -	worked: dorsum ground; columella exposed
1656 -	worked: dorsum ground; broken
1657 -	worked: hole in body whorl
1658 -	1657 + eroded apex
1659 -	hole near aperture
1660 - Cyclope	complete
1661 -	fragment
1662 -	broken
1665 -	hole perforated

Each genus is assigned a four-digit number that ends with zero. Zero stands for a complete shell. The following number, which ends with one, represents the same genus but a fragment thereof, where a fragment is defined as a part of the shell where less than half is present. The next number, which ends with two, stands for a broken shell, one that is incomplete but more than half is present. The following number, which ends with three, is there for a heavily naturally abraded specimen, such as a 'cassid lip' of the genus *Phalium* (see Reese 1989).

The succeeding numbers, which end with five to nine, are for artificially worked shells. Additional observations are given a letter. For instance, a burned shell will get 'f' (for fire) and thus a *Nassarius gibbosulus* burnt bead will be 1655f. Another *Nassarius gibbosulus* bead that has colour pigment on it will be 1655c.

This is true for gastropods, all of which start with 1000. Bivalves follow the same principle in my list, but they start with 2000. One should note, though, that 'fragment' and 'broken' refer to a valve and not to a complete shell. For example:

2250 - Glycymeris	complete
2251 -	fragment
2252 -	broken
2253 -	abraded all around
2254 -	natural hole at apex
2255 -	ground hole at apex

Right and left valves are counted to determine the minimum number of individuals when relevant, especially when dealing with shell middens, but when bivalves were used as individual shells each valve is counted separately on the assumption that this is how the population that used them viewed them.

The advantage of using this system is that it enables you to enter the relevant data of an assemblage into a database programme fairly quickly. Once the list is complete it is possible to sort the shells by taxonomic order (the order in which I think it should be published, rather than alphabetically or quantitatively). Unidentifiable fragments are designated 1991 and 2991 for gastropods and bivalves, respectively. A database software that has filters will enable further sorting by any category based on these numbers and

letters. When summarising the information for a report, you do have to verbally describe (in as much detail as possible) the assemblage, but for the process of analysis in the laboratory, this method can speed up your work.

References

Reese, D. S., 1989. On cassid lips and helmet shells. *Bulletin of the American Schools of Oriental Research* 275: 33-39.

Vaught, K. C., 1989. *A classification of the living Mollusca*. American Malacologists, Melbourne, Florida.

Land snail survey in southwest Turkey

Aydin Orstan (Aydin.Orstan@cfsan.fda.gov)

A land snail survey of the Bodrum Peninsula in southwestern Turkey took place in August 2002. Members of the expedition were Aydin Orstan (Carnegie Museum of Natural History, Pittsburgh, USA), Francisco Welter-Schultes (Zoologisches Institut, Goettingen, Germany), and Burcin Gumus and Zeki Yildirim (both of Suleyman Demirel University, Isparta, Turkey). During the eight-day survey we collected at about sixty stations over a roughly 30 x 10 km area. Despite the mountainous terrain, humans have heavily occupied the Bodrum Peninsula for thousands of years. Hence, several of our stations were at ancient ruins. Some of these were the remnants of remote unidentified buildings, while others were well-known locations, including the famous Mausoleum in Bodrum (ancient Halicarnassus). In addition, we collected at many cliffs located at steep hilltops approachable either through thorny bushes or over the footprints of goats.

We collected about forty species, including two or three first records for Turkey and possibly one undescribed species. The comparison of the land snail species found at ruins with those from more natural areas will help us determine the native land snail fauna of the survey area. For example, *Caracollina lenticulata* was present only at ruins; a strong indication that it is an introduced species. In contrast, the large *Levantina spiriplana*, frequently found in less disturbed locations, is probably native to the area.

A full report of the survey is in preparation.

ICAZ Durham 2002: Archaeo-Malacology

The International Council for Archaeozoology Conference held at Durham, UK, in August 2002 included a special one-day session on Archaeomalacology, organised by Daniella Bar-Yosef. Eighteen high-quality papers and one poster were presented, and the session was rounded off with a General Discussion. The twenty-minute papers covered topics as diverse as diet and palaeoenvironmental reconstructions to symbolism of shell amulets.

The morning session was chaired by Cornelia Becker and began with a presentation by Irvy Quitmyer (coauthored by Douglas S. Jones and C. Fred T. Andrus) on **Seasonal shell growth and oxygen isotopes in the variable coquina clam, *Donax variabilis* Say, 1822: a modern analogue to determine the season of resource procurement during the Late Archaic period of coastal northeast Florida, USA**. Nathalie Serrand

(coauthor D. Bonnissent) followed with a talk on **The Preceramic Orient Bay site's shell remains (Saint-Martin, northern Lesser Antilles): consumption and production - preliminary results**. Next, Ermengol Gassiot Ballbe spoke about **Shell middens on the Caribbean coast of Nicaragua: prehistoric patterns of mollusc collecting and consumption**, and Nicky Milner talked about **Looking for human over-exploitation and environmental change in prehistoric oysters**.

After coffee, Jan Light presented the results of her work on *Mytilus* shells from a Romano-British site in Cornwall, UK, entitled **Marine mussels - wear is the evidence**. Barbara Wilkens (coauthor Andre Colonese) talked about **The exploitation of molluscs in the Late Pleistocene and Early Holocene of Italy**, and this Mediterranean theme was continued by Annalisa Rivoli (coauthors S. Chilardi, L. Guzzardi and M. R. Iovino) on **The evidence of *Spondylus* ornamental objects in the Central Mediterranean Sea: two cases of study - Sicily and Malta**, Nathalie Serrand (coauthor J. D. Vigne) on **Marine shells from the early Preceramic Neolithic of Cyprus at Shillourokambos (9th-8th millennium BC): a mainly ornamental set with similarities to the mainland PPNB**, and Liliane Karali on **Shells from prehistoric sites of northern Greece**.

Lunch marked the half-way point and the afternoon session was chaired by Irvy Quitmyer. The scene remained set in the Mediterranean as Deborah Ruschillo presented **To dye for: reconstructing Murex Royal Purple and Biblical Blue**, Cornelia Becker talked **On the divergent exploitation of marine resources in two Bronze Age Mediterranean sites**, Wietske Prummel spoke about **Marine and terrestrial molluscs from Neolithic, Bronze Age and Hellenistic sites in the Almiros and Sourpi plains, Thessaly, Greece**, and Inbar Baruch (coauthors Michal Artzy, Joseph Heller, Jacqueline Balensi and D. Herrera) discussed their work on the **Molluscan fauna from Late Bronze and Iron Age strata at Tell Abu Hawam** in northern Israel.

After tea the geographical boundaries widened to include Chloe Martin's **Study of a shell midden in the Sultanate of Oman: the excavation of Suwayh 1**, Joel Janetski on **Shifts in Epipalaeolithic marine shell exploitation at Wadi Mataha, southern Jordan**, Daniella Bar-Yosef's **From statue decoration to floor foundation: the role of *Glycymeris* in the Levant**, Arati Deshpande-Mukherjee on the **Exploitation of marine molluscan resources during the Holocene in India**, and Evan Peacock and Janet Rafferty's **Using land snails to understand site formation processes: an example from the southeastern United States**. Last but not least, Claudia Minitti presented a poster on **Shells at the Bronze Age settlement of Coppa Nevigata, Apulia, Italy**.

The proceedings of the ICAZ Conference, including the papers from the session on Archaeomalacology, will be published as a series of ten volumes by Oxbow Books of Oxford, UK, in 2003.

ICAZ Archaeomalacology Working Group

At the ICAZ Conference in Durham, preliminary steps were taken to form a special Archaeomalacology Working Group, subject to approval by ICAZ. The formation of the

Group is being coordinated by Irvy Quitmyer and Katherine Szabo, who have prepared the following mission statement:

There are over 100,000 living species of molluscs, many of which have been important to humans. The use of members of the phylum Mollusca has been documented in archaeological sites as early as the Middle Palaeolithic. It has long been recognised that mollusc shells are an important zooarchaeological tool for interpreting various aspects of material culture, palaeoeconomy and the environment. Shells originating in marine, freshwater and terrestrial environments are found in archaeological sites where they represent subsistence resources and raw materials for the manufacture of a diverse group of artefacts. Cross-culturally, molluscs were collected as or made into artefacts, exchange items, grave goods, etc. with various symbolic meanings attached to them. Mollusc exploitation is also manifested in the use of certain species for the production of dye and construction materials. Further, mollusc shells are often used to reconstruct the season of site occupation, as well as interpreting palaeoclimates, using isotopic and other methods.

Presently, the ICAZ does not have a working group that deals with molluscs in archaeological sites. We propose to form the ICAZ Archaeomalacology Working Group whose mission is the liberal exchange of data and information about the phylum Mollusca in the zooarchaeological record. It is our goal to focus our activities on molluscs in the zooarchaeological record and to contribute to the methods and theory relevant to the analysis of such remains. In so doing, we seek to encourage the publication of data and information concerning the use of this very important group of animals commonly found in archaeological sites.

Twenty ICAZ members have already committed to the formation of this Working Group and a further twenty-two have expressed a desire to participate in the Group. Fourteen of these names are also on the mailing list for the Archaeo+Malacology Group Newsletter and it may be possible in the future for these groups to liaise.

Proceedings from Nebraska

Information provided by Henk Mienis

The Nebraska Association of Professional Archaeologists and the Nebraska State Historical Society have published the proceedings of two symposia devoted to shells (particularly freshwater mussels) and archaeology:

Marine shell ornaments from the Plains, *Central Plains Archaeology* 5 (1): 107 pp. (1997) contains seven papers;

Freshwater mussels in the Great Plains: ecology and prehistoric utilization, *Central Plains Archaeology* 8 (1): 150 pp. (2000) contains thirteen papers.

These publications are available from Karin Roberts, NAPA Secretary-Treasurer, Midwest Archeological Center, 100 Centennial Mall North, Room 474, Lincoln, NE 68508, USA (Karin_Roberts@nps.gov), at US\$9.00 each. Please add US\$1.00 for postage within the USA or US\$15.00 for postage outside the USA.

