

# THE ARCHAEO+MALACOLOGY GROUP NEWSLETTER

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### Editorial

Due to a pending change in my circumstances when I retire next March (which I hope will give me more time to devote to archaeomalacology), the next issue of the AMG Newsletter will probably be the last that will be distributed by email. Instead, plans are underway to post future issues on a website, where, theoretically, the Newsletter will become freely accessible to all. This will be good news with regard to the promulgation of archaeomalacology, but it does have implications regarding data protection. I hope that this will not discourage people from continuing to submit contributions for the Newsletter, but please let me know in future if you would prefer to have your postal and/or email addresses withheld. Any comments on the website proposal, or other ideas for disseminating the Newsletter, will be welcome.

The next issue of the Newsletter, which is scheduled for January 2004, will contain details of the intended changes. This will be sent out by email as now but will (hopefully) also appear on a website. My intention is to continue to produce the Newsletter at six-monthly intervals, so please keep those contributions - short articles, research in progress, requests for information, news, conference notices and reports, publications, etc. - coming in! Please remember to let me know if you change your email address (or you won't receive the next issue) and also please let me know if you want your name to be removed from the membership list. Until further notice, my email address (given above) remains the same. (JRS)

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### People

Chris BARNHART: [chrisbarnhart@smsu.edu](mailto:chrisbarnhart@smsu.edu)

Professor of Biology at Southwestern Missouri State University; working on eco-physiology and conservation biology of land and freshwater molluscs, particularly Unionidae; interested in the use of shells to infer growth patterns and ecological influences on growth.

Websites: <http://courses.smsu.edu/mcb095f/home/> and <http://unionid.smsu.edu>.

Arthur BOGAN: [arthur.bogan@ncmail.net](mailto:arthur.bogan@ncmail.net)

Curator of Aquatic Invertebrates at the North Carolina State Museum of Natural Sciences; working on the distribution and a worldwide phylogeny of Unionoida; long-standing interest in the role of land and freshwater molluscs in archaeology; has worked on freshwater bivalves from archaeological sites in the southeastern USA, also terrestrial and freshwater gastropods from archaeological and Pleistocene sites in Yemen.

Matthew COLLINS: [m.collins@ncl.ac.uk](mailto:m.collins@ncl.ac.uk)

Member of the Ancient Biomolecules Group at the University of Newcastle upon Tyne; interested in protein degradation within mollusc shells, specifically amino acid racemization (the accumulation of non-biological D-amino acids in shells as a function of time and temperature); has investigated racemization in archaeological shell middens in Portugal and Denmark and (under contract) shells from Palaeolithic cave sites, hoping to develop ways to explore the stratigraphy of middens and to estimate accumulation rates.

Website: <http://nrg.ncl.ac.uk/research/resareas/ancient-biomols.html>.

Vesna DIMITRIJEVIC: vesnadim@beotel.yu

Working at the Faculty of Mining and Geology, Institute of Regional Geology and Palaeontology in Belgrade; interested in Quaternary faunas, especially Pleistocene mammals from cave deposits, and animal remains from archaeological sites, mostly Palaeolithic, Mesolithic and Neolithic; working on shell objects from Neolithic sites in Serbia.

Burcin Askim GUMUS: burcinaskim@hotmail.com

Doctoral student from Isparta, Turkey, working on the distribution of Clausiliidae in Western Anatolia; interested in the artificial dispersal of land snails by human agencies in the past, including Neolithic trade routes in Turkey.

Laura KOZUCH: lkozuch@uiuc.edu

Is now Curator at ITRP, University of Illinois, and has changed her email address as shown.

Dan MARELLI: dmarelli@adp.fsu.edu

Invertebrate Biologist and Coordinator of the Academic Diving Program at Florida State University; interested in the ecology, systematics and evolution of marine and brackish-water bivalves, especially the biogeographical history of the Dreissenidae and the recent history of *Argopecten* populations in the Gulf of Mexico, including evidence from archaeological deposits.

Nigel THEW: Nigel.Thew@ne.ch

Working on terrestrial and freshwater molluscs in Switzerland from both archaeological and natural Quaternary deposits; special interests include the development of a molluscan biostratigraphy for western Switzerland and adjoining areas that could be useful as a stratigraphic and relative dating tool; also interested in molluscs from archaeological deposits as a means of reconstructing local environments; working on freshwater molluscs including *Pisidium* as a method for estimating past lake/water levels.

Jesse TODD: JesseAntTodd@aol.com

Owns MA Consulting which analyses both terrestrial and aquatic molluscs from archaeological sites, mainly in north-central Texas; working as an archaeologist for AR Consultants, Inc. based in Dallas; interested in palaeoenvironmental reconstruction as well as diet based on information derived from shells and shell middens; also interested in sphaeriacean clams.

Jim WILLIAMS: jim\_williams@usgs.gov

Working at the Center for Aquatic Resources Studies, US Geological Survey, at Gainesville, Florida; interested in unionid biology, conservation and zoogeography; studying freshwater mussels from archaeological sites to determine changes in distribution and relative abundance. **Ref:** Williams, J.D. and Fradkin, A., 1999. *Fusconaia apalachicola*, a new species of freshwater mussel (Bivalvia: Unionidae) from precolumbian archaeological sites in the Apalachicola Basin of Alabama, Florida, and Georgia. *Tulane Studies in Zoology and Botany* 31 (1): 51-62.

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## Requests for information

### From David Lubell:

I am collecting data and information on Late Pleistocene and Holocene sites in which land snails can be shown to have been a part of the human diet. I am primarily interested in the circum-Mediterranean region, but would also appreciate information from other parts of the world. I already have reasonably good data for most of the following: Maghreb, Cantabria, eastern Pyrenees, southern France (too numerous to list); Cyrenaica (Haua Fteah); Italy and Sicily

(Grotta dell'Uzzo, Grotta di Levanzo, Grotta della Madonna, Grotta di Pozzo and Grotta Continenza); Balkans, Greece, Aegean, Anatolia (Badanj, Kopaina, Pupiina, Crvena Stijena [data needed], Foeni-Salas, Franchthi, Cyclope, Maroulas and Okuzini); Near East (Zawi Chemi Shanidar, Shanidar, Jarmo, Asiab, Gerd Banahilk, Karim Shahr, Nemrik 9, Palegawra, Tepe Sarab and Warwasi); Levant (Djebel Kafzeh, Hayonim, Erq el-Ahmar, Mugharet ez-Zeitina, Ein Gev and Ksar 'Aqil). Please respond by email to: dlubell@ualberta.ca or by post to: David Lubell, Department of Anthropology, University of Alberta, Edmonton AB T6G 2H4, Canada. Many thanks.

**From Janet Ridout Sharpe:**

I am currently working on a shell assemblage from a Bronze Age tell site on the Upper Euphrates in northern Syria, not far from ancient Carchemish. The bulk of the assemblage consists of freshwater mussels (Unionidae): could anyone please tell me what species I might expect from this site, and, if possible, how to distinguish them by shell characters? Many thanks. Email address: j.ridout-sharpe@cabi.org.

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**What can we learn from a second look at the shells from the excavation of**

**Mit Rahena, Egypt?**

Henk K. Mienis

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In 1987 an excavation was carried out at Mit Rahena, on the west bank of the river Nile at Badrashien-Giza, 22 km west of Cairo. This site is part of the famous ancient capital city Memphis. The archaeozoological remains, consisting of shells and vertebrate bones, recovered during the excavation, were published in a 64-page paper in a highly specialized academic journal in an East European country.

The original author referred in the archaeomalacological section of that article to two encyclopaedic works (Dance, 1974 and Anonymous, 1982) and four general textbooks (Moore *et al.*, 1952; Moore and Pitrat, 1960; Moore and Teichert, 1969a-b)\*, but not to any specific works dealing with the molluscan fauna of Northwest Africa, the Mediterranean or the Red Sea. The unfortunate choice of literature to identify the material has led to some embarrassing misidentifications, which are rectified in this short note on the basis of the photographs illustrating the species in the original article.

**Revised identifications**

Family Viviparidae: *Bellamyia unicolor* (Olivier, 1804)

The illustrated specimens (p. 7: text-figure), identified as either *Littorina coccinea*: a littoral gastropod which has a distribution from the eastern Indian Ocean to deep into the Pacific Ocean, or *Littorina fasciata*: a related species from the west coast of Central and South America (!), do not represent marine periwinkles but a common freshwater snail living in the Nile.

Family Cypraeidae: *Erosaria spurca* (Linnaeus, 1758)

The figured specimen (p. 9: text-figure), identified as *Cypraea ventriculus*, does not depict that rare cowry species which has a restricted distribution in the central Pacific, but a common Mediterranean species.

Family Muricidae: *Bolinus brandaris* (Linnaeus, 1758)

The photographs (p. 8: text-figures) of the *Murex* species have been inverted and show a sinistral species. They were taken from a worn purple dye murex missing the long siphonal canal. This species occurs commonly in the Mediterranean Sea.

Family Glycymerididae: *Glycymeris insubrica* (Brocchi, 1814)

This (p. 10: text-figures) has been correctly identified, but *G. violascens* is a wrong spelling for *G. violacescens*, a junior synonym of *G. insubrica*. It is a common Mediterranean species.

Family Mutelidae: *Chambardia rubens arcuata* (Cailliaud, 1823)

The illustrations (p. 12: text-figures and p. 13: photo 9) show clearly several damaged valves and fragments of the large pearly freshwater mussel living in the Nile, which has been known until recently as *Aspatharia rubens*. This mussel has indeed the general form and outline of marine bivalves belonging to the genus *Lutraria*, in particular that of *L. lutraria*, but it lacks the characteristic large resilifer, an internal ligament set in a deep socket, of the latter. In addition the interior of *Chambardia* always shows a layer of nacre, which is never the case in *Lutraria*.

Family Corbiculidae: *Corbicula consobrina* (Cailliaud, 1823)

The photographs (p. 11: text-figures) do not represent *Dosinia elegans*, a southeast United States to Caribbean marine bivalve, but a common freshwater species from the Nile.

### Discussion and Conclusion

According to the identifications supplied by the original author one may reach the conclusion that the shell material recovered during the excavation at Mit Rahena had been imported from all corners of the world: Mediterranean Sea, southeast United States and/or Caribbean, west coast of Central and South America, central Pacific and the Indo-Pacific. Although the ancient Egyptians were known as keen seafarers, as far as we know they never crossed any oceans!

A revision of the identifications shows that the material came in fact from two nearby areas only: the river Nile (*Bellamyia unicolor*, *Chambardia rubens arcuata* and *Corbicula consobrina*) and the Mediterranean Sea (*Erosaria spurca*, *Bolinus brandaris* and *Glycymeris insubrica*).

The large differences in the specific identifications are due to a wrong choice of literature. When one studies the shells of an archaeological site somewhere in the Middle East, it is important to keep in mind that the majority of the shells will have originated from three, sometimes four, areas: marine molluscs come either from the Mediterranean or the Red Sea, while terrestrial and freshwater molluscs are usually from the vicinity of the site or from somewhere else in the Middle East (a good example of the latter is the large freshwater mussels from the Nile which are often found at archaeological sites throughout the Levant).

In the case of the molluscs found at Mit Rahena, it is noteworthy that all the shells could have been identified correctly with the help of various malacological monographs published during the 20th century by the Institut Égyptien in Cairo.

\* The bibliographic references in the original article are inaccurate and have been corrected below.

### References

- Anonymous, 1982.** *The MacDonal encyclopedia of shells*. 512 pp. MacDonald and Co., London and Sydney.
- Dance, S.P., 1974.** *The collector's encyclopedia of shells*. 288 pp. McGraw-Hill Book Company, New York, St. Louis, San Francisco and Toronto.
- Moore, R.C., Lalicker, C.G. and Fischer, A.G., 1952.** *Invertebrate fossils*. 766 pp. McGraw-Hill, New York, Toronto and London.
- Moore, R.C. and Pitrat, C.W. (eds.), 1960.** *Treatise on invertebrate palaeontology*, Vol. 1: I-XXIII and 1-351. Geological Society of America and University of Kansas Press.

**Moore, R.C. and Teichert, C. (eds.), 1969a.** *Treatise on invertebrate palaeontology*, Vol. 6 (1): I-XXXVIII and 1-489 pp. Geological Society of America and University of Kansas Press.

**Moore, R.C. and Teichert, C. (eds.), 1969b.** *Treatise on invertebrate palaeontology*, Vol. 6 (2): 491-952. Geological Society of America and University of Kansas Press.

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## **Molluscan studies at Wessex Archaeology, UK**

Michael J. Allen

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(m.allen@wessexarch.co.uk)

Archaeomalacological research at Wessex Archaeology is wide-ranging and includes the study of both land and freshwater snails for environmental reconstruction and the analysis of marine molluscan assemblages to further our knowledge of ancient economies and diet.

Land snails (and freshwater and brackish snails) from Holocene samples are used to reconstruct past landscape ecologies and human land-use. Some of these studies can be relatively large scale and some are huge. A project nearing completion has involved the sampling of 21 sites over the past five years, the processing and analysis of 397 samples, representing some 640 kg of sediment to 500 <micro>m, and the extraction and identification of 172,620 snails (excluding *Cecilioides acicula*) and excluding the last four samples which are still in progress. All the samples are from a small Dorset landscape and cover the period 5000 BC to 100 BC (Allen, 1999; Allen, 2000; Allen, 2002). This is thought to represent the largest single land snail study to be carried out in northwest Europe. Processing, extraction and some identification is conducted by Sarah Wyles (Environmental Supervisor, WA), and analysis and reporting is conducted by Mike Allen (Environmental Manager, WA).

The analysis of marine assemblages from archaeological sites has centred primarily on oysters (following the concepts defined by Winder), to examine substrate type, farmed versus natural colonies, the location of ancient oyster beds around the British coastline, and ultimately diet and the status and economy of the archaeological site. A recent study has been the marine molluscan assemblage from Carisbrooke Castle on the Isle of Wight (Wyles and Winder, 2000). Analysis and reporting is conducted by Sarah Wyles.

### **References**

**Allen, M.J., 1999.** A note on reconstructing the prehistoric landscape environment in Cranborne Chase; the Allen Valley. *Proceedings of the Dorset Natural History and Archaeological Society* 120: 39-44.

**Allen, M.J., 2000.** Soils, pollen and lots of snails. In: Green, M.A. (ed.), *Landscape revealed; 10,000 years on a chalkland farm*, pp. 36-49. Stroud, Tempus.

**Allen, M.J., 2002.** The chalkland landscape of Cranborne Chase; a prehistoric human ecology. *Landscapes* 3: 55-69.

**Wyles, S.F. and Winder, J., 2000.** Marine Mollusca. In: Young, C.J. (ed.), 2000 Excavations at Carisbrooke Castle, Isle of Wight, 1921-1996. *Wessex Archaeology Report* No. 18: 185-188.

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## **Publications received**

### **La Conchiglia**

This quarterly publication from Italy has an international appeal for those interested in the marine Mollusca, including archaeomalacologists. Since 1995 the magazine has been published in two separate editions, English and Italian, which are identical in content.

The issue for January-March 2003 (volume 35, number 306) includes an article entitled 'Seashells from archaeological complexes of antique Crimea (Tauride)' by Igor Bondarev, writing from Sebastopol, Ukraine. Exotic imports, such as *Murex brandaris* [= *Bolinus brandaris*] from the Mediterranean which is found in funerary contexts from the 1st century BC to the 5th century AD, provide evidence for widespread trade. This extended at least as far as the Red Sea because

*Cypraea pantherina* is an occasional find in 1st-3rd century AD Scythian burials; one tomb yielded a remarkable series of disks cut from *Strombus tricornis* and *Lambis truncata* which had been threaded onto an iron rod. Other artefacts from the area include gold and silver pendants and containers modelled on scallop shells.

Topics covered by other articles in this issue include Spondylidae from the Italian Pliocene, new distribution records and descriptions of new species. The magazine also includes news items, book reviews and correspondence. Further information and subscription details may be obtained from the Editor, Maria Antonietta Fontana Angioy (email: mafa@evolver.it).

### **Morphometric analysis of limpets from an Iron-Age shell midden in northwest Portugal**

This is the title of a paper by Joao Paulo Cabral and Armando Coelho F. da Silva, published in the *Journal of Archaeological Science* 30 (2003): 817-829.

A 1st century BC-1st century AD (Roman period) shell midden from the Terroso hillfort yielded 684 well-preserved *Patella* shells. The shells were identified and compared with modern examples from two nearby coastal localities. The relative abundance of *Patella* species in the midden (dominated by *P. vulgata*) was different from modern populations (dominated by *P. intermedia*). Shell length range and variability in the midden shells were lower than in modern shells. Log height versus length plots were also different, with the midden shells significantly taller than modern examples. These differences could be attributed either to environmental changes resulting from a rise in mean sea level from 2000 BP to the present, or to collecting strategies: the midden shells could have been selected by size and collected preferentially at high shore level and in sheltered sites.

Joao Cabral is based at the University of Oporto and may be contacted by email at jpscabral@hotmail.com.

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### **Postscript: archaeomalacology - or malacoarchaeology?**

A re-read of Tony Legge's thought-provoking essay on the role of zoological disciplines within the larger field of archaeology (Legge, 1978) has prompted a reconsideration of the terms we use as molluscan specialists. Following Legge's premise, 'archaeomalacology' simply implies 'old malacology' and there is already an adequate term for this in palaeontology. The alternative, 'malacoarchaeology', puts the animals first with the concomitant danger that they will remain first in the mind of the specialist.

The point being that neither term is satisfactory and the specialist must never lose sight of the archaeological aim of furthering knowledge of **human activity** rather than just the palaeoecology of the species concerned. The study of molluscan material in isolation from other data is a limited approach: the specialist only provides the information that he/she sees as relevant, whereas the aim of the exercise should be to solve problems. A set of testable hypotheses should be formulated before analysis begins otherwise little more than a species list may be produced. In the absence of archaeological objectives, the specialist may work only within a broadly-defined culture concept with the result that his/her report 'is rendered a self-fulfilling prophecy'. The specialist must therefore be at least part archaeologist. A foot in both camps is essential if the interdisciplinary approach is not to result in a site report consisting of a collection of quite separate essays, each representing the interests and priorities of the various specialists involved, with little overall advance in archaeological knowledge. (JRS)

### **Reference**

**Legge, A.J., 1978.** Archaeozoology - or zooarchaeology? In: Brothwell, D.R. *et al.* (eds), Research problems in zooarchaeology. *Occasional Publication, Institute of Archaeology*, No.3: 129-132.

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