THE ARCHAEO+MALACOLOGY GROUP NEWSLETTER
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Editorial

With this issue, the AMG Newsletter goes live on the Web! It is being hosted by the International Council for Archaeozoology (ICAZ) Archaeomalacology Working Group on their website, which is produced by Kath Szabo of the Research School of Pacific and Asian Studies at the Australian National University: it can be found at: **http://triton.anu.edu.au/**. It is also being hosted on his website by Aydin Orstan, who is one of the 'founder members' of the Archaeomalacology Group: **http://home.earthlink.net/~aydinslibrary/AMGnews.htm**.

Thanks are due to both Kath and Aydin for agreeing to host the Newsletter: this is the last issue that will be circulated by email, so please look out for future issues on these websites in February/March and August/September each year. It is also hoped to post all previous issues of the AMG Newsletter on these two websites. Bearing in mind the implications this has for data protection, please let me know if you would like to have your postal and/or email addresses withheld from these issues. If I haven't heard from you by the beginning of June 2004, I will assume that you are happy for us to go ahead with this.

Please note my new email address (above) which comes into effect from 18 March 2004. All contributions for future issues should be sent to me by email or to my postal address: the future success of the Newsletter will depend on your articles, research notes, requests for information, news and views, conference notices and reports, publications, etc. Please make sure that all emails are clearly entitled 'AMG Newsletter' - unidentified emails will not be opened! (JRS)

Request for information:
Has the land snail *Zonites algirus* been consumed by humans?

Aydin Örstan
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In August 2002 I found the land snail *Zonites algirus* (Linnaeus, 1758) on Sedef Island in the Sea of Marmara off Istanbul, Turkey (Örstan, 2003). This was the first record of the species from the Istanbul area since 1863. I am planning future surveys in the neighbourhood of the city to look for additional colonies of *Z. algirus*. If I can find such colonies, their habitats will help me determine if the species is native to the Istanbul area. At the same time, I am considering the possibility that this species was introduced by humans to Sedef Island, which has been occupied sporadically at least since Byzantine times. To this end, I am trying to establish if *Z. algirus* has been consumed as food by humans.

I would appreciate any information from readers that will help me determine whether or not humans have consumed *Z. algirus* or other *Zonites* species as food.

Reference

Örstan, A., 2003. The rediscovery of *Zonites algirus* in Istanbul, Turkey (Gastropoda: Pulmonata: Zonitidae). *Zoology in the Middle East*, 29: 75-78.

[David Lubell, at the University of Alberta, Canada, is organising a colloquium entitled **Landsnails as food: past and present**, to be held at the next UISPP (International Union for Prehistoric and Protohistoric Sciences) meeting in Lisbon in 2006. Further details are available on the ICAZ Archaeomalacology Group website at: **http://triton.anu.edu.au/news.htm.**]

Revd H.E.J. Biggs and his archaeomalacological works

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The Reverend H.E.J. Biggs (1895-1973) is well known for his numerous studies dealing with the mollusc fauna of various parts of South West Asia and North East Africa (Smythe, 1974; Mienis, 1994 and in prep.). That is not so remarkable, because he lived for a considerable time in Persia, today's Iran (1922-1928 and 1931-1935) and Egypt (1935-1944). During the latter period he travelled also to Palestine (now Israel), Syria and the Sudan. I refer to Crowley (1973) for more background information concerning this remarkable person.

Because of his first hand knowledge of large parts of the Middle East and its recent mollusc fauna, Biggs was occasionally invited to work on shells recovered during excavations in this region. In this way he was entrusted with material from sites in Israel (Jericho and 'En Gedi), Egypt (Tel El Farâ'în), Syria (Tell Rifa'at), Iran (Bampur) and Cyprus (Kalopsidha). About all these excavations he published brief archaeomalacological reports, which are often tucked away as appendices in the general reports of the excavators.

However, Biggs became best known for his chapter: "Molluscs from human habitation sites and the problem of ethnological interpretation", published in 1969 in the second, enlarged edition of the classic work *Science in archaeology* by Don Brothwell and Eric Higgs (eds). This work has been reprinted several times and even translated into Spanish. Although this chapter was written more than 30 years ago, most of his observations are still valid today. A complete list of his malacological papers dealing with material from archaeological sites is provided here.

Archaeomalacological papers published by the Reverend H.E.J. Biggs

Biggs, H.E.J., 1960. Molluscs from prehistoric Jericho. *Journal of Conchology*, 24: 379-387.
Biggs, H.E.J., 1963. On the molluscs collected during the excavations at Jericho, 1952-58, and their archaeological significance. *Man*, 153: 125-128.
Biggs, H.E.J., 1966. Report on molluscs found in excavations at Kalopsidha, Cyprus. In: Astrom, P. (ed.), Excavations at Kalopsidha and Ayios Iakovos in Cyprus. *Studies in Mediterranean Archaeology*, 2: 135-136. Lund.
Biggs, H.E.J., 1967. Notes on Mollusca. In: Seton-Williams, M.V. (ed.), The excavations at Tell Rifa'at, 1964. Second preliminary report. *Iraq*, 29 (1): 26-27.
Biggs, H.E.J., 1969. Report on the Mollusca. In: Seton-Williams, M.V. (ed.), Tell El-Farâ'în Expedition, 1968. *Journal of Egyptian Archaeology*, 55: 16-17.

Biggs, H.E.J., 1969. Molluscs from human habitation sites and the problem of ethnological interpretation. In: Brothwell, D. and Higgs, E.S. (eds), *Science in archaeology: a survey of progress and research*, pp. 423-427. Revised and enlarged edition. London, Thames and Hudson.
Biggs, H.E.J., 1970. *Ibid.* New York, Praeger Publications.
Biggs. H.E.J., 1970. *Ibid.* New York, Basic Books Inc.
Biggs, H.E.J., 1970. Report on the Mollusca collected by the expedition to Bampur. In: De Cardi, B. (ed.), Excavations at Bampur, a third millennium settlement in Persian Baluchistan, 1966. *American Museum of Natural History, Anthropological Papers*, 51 (3): 333-334.
Biggs, H.E.J., 1980. Notes on the non-marine mollusca from the altar in the sanctuary. In: Ussishkin, D. (ed.), The Ghassulian shrine at En-Gedi. *Tel Aviv*, 7: 42.
Biggs, H.E.J., 1980. Los moluscos en sitios de habitación humana y el problema de su interpretación etnológica. In: Brothwell, D. and Higgs, E.S. (eds), *Ciencia en Arqueologia*, 435-442. Mexico, Fondo de Cultura Económica.

Additional References

Crowley, T.E., 1973. Obituary: Herbert Edwin James Biggs 1895-1973. *Journal of Conchology*, 28: 131-132, pl. 4.
Mienis, H.K., 1994. Revd H.E.J. Biggs (1895-1973): an update of his malacological publications, with a list of taxa introduced by him in the mollusca. *The Conchologists' Newsletter*, No. 128: 293-295.
Mienis, H.K., in prep. Additions to the list of malacological publications of the Rev. H.E.J. Biggs.
Smythe, K., 1974. Publications of the Revd H.E.J. Biggs. *Journal of Conchology*, 28: 262-263.

Exploitation of marine and terrestrial invertebrates by the Saladoid and post-Saladoid populations of the Northern Lesser Antilles (≈ 500 BC-AD 1200): case studies and comparisons

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This PhD research was completed at the Muséum d'Histoire Naturelle (Paris) and the Paris I Sorbonne University. It is a contribution to understanding the use of marine and land molluscs and crabs by the pre-Columbian people of the Antilles, especially the horticulturist-potters who settled the Lesser Antilles around 500 BC. A large corpus of mollusc and crab remains (NISP = 139,053; MNI = 31,317) was studied from 12 sites dated between 500 BC and AD 1200 and located on five islands of the Northern Lesser Antilles (Anguilla, St-Martin, Barbuda, Nevis, Montserrat), which form a coherent cultural area combining various types of environments.

The first part of the work describes the geographical, chrono-cultural and palaeo-economic contexts: geo-ecological characteristics of the Northern Lesser Antilles including the five islands (distinctive features; variability of the terrestrial and marine environments); chrono-typology and socio-economics of the pre-Columbian occupation; main theoretical debates; and ethnographical data concerning the exploitation of invertebrates.

The second part deals with the analytical methods, tools and limitations, with a discussion of the remains witnessing either jointly or exclusively to different types of use (food/industry). A quantitative/qualitative assessment of the data is conducted to define limits to the interpretation, to set methodological, statistical and taphonomic points of reference, and to provide a finely-shaded approach to natural, archaeological and socio-economic factors. Each assemblage is analysed using a similar approach adapted to the sample size (species taphonomy and

representation; horizontal and stratigraphical variations, etc.). Regarding the shell industry, categories of artefacts are described (including likely production waste, discarded shells and debitage), some production techniques are suggested, and species management according to use is discussed.

The results are integrated in a comparative approach. Patterns in species and biotope frequencies, taphonomy, and use for consumption or industry suggest two possible types of gathering. One, mainly for food, was conducted in three major biotopes: the land, the rocky intertidal zone and the infralittoral sea grass beds. It targeted a few major profitable species (land crabs, *Cittarium pica*, *Strombus gigas*) as well as, in the last two biotopes, a less targeted but diversified set of smaller, less cost-effective species which are readily available in colonies. Except for *Strombus gigas*, these species are rarely used for the shell industry. In addition, secondary biotopes (including sandy and coral substrates) would have been less systematically exploited for various species, occasionally for food but mostly for the shell industry (including the picking up of dead shells).

The variability of the data is analysed. The assemblages differ in relation to their location on 'volcanic' or 'calcareous' islands, the dichotomy relating to differences in the geological and physical attributes of the terrestrial and marine environments. Differences are especially seen in terms of the richness of species sets collected in different biotopes (in particular, the rocky intertidal zone). This coarse-scaled distinction suggests the role of variables related to the availability of the different biotopes and to the richness of their mollusc communities without these being determining factors. The exploitation patterns are not radically different in both types of contexts and there is no pattern of opportunist exploitation of the most locally available and rich biotopes. On the time scale, the results are less convincing due to overlapping geographical variability, and to chronological and functional imprecision. Two major points appear, regardless of context: (1) an increasing scarcity of land crabs with time together with a decrease in the average size of individuals in late post-Saladoid sites; (2) a slightly greater representation of bivalves at the end of the sequence.

The data are compared with others available in the Northern Lesser Antilles, including earlier (Preceramic) and later (late post-Saladoid) ones. Data could be added concerning changes in the exploitation of bivalves and crabs in the Northern Lesser Antilles. Bivalves appear to be well represented in most Preceramic sites, are scarce in Saladoid sites and increase in some late Saladoid sites and in post-Saladoid sites. In parallel, land crabs are scarce in most Preceramic sites, are nearly ubiquitous in Saladoid sites and grow scarcer in some late Saladoid and in most post-Saladoid sites.

A few problems relating to the Saladoid/post-Saladoid sequence are discussed on the basis of the results. First, the possible overexploitation of land crabs: their exploitation was major in the Saladoid economy but lasted (very) late where crustaceans had not been exploited earlier. The land crabs were thus a first choice resource which was exploited when available, and their reduced exploitation was not due to post-Saladoid groups changing their economy but took place according to rhythmic fluctuations in crab population densities and in relation to the intensity of earlier exploitations. Even if the metric data are too scarce to validate the overexploitation hypothesis, this pattern may imply it.

The possible intensification of the exploitation of molluscs over time, especially during the post-Saladoid period (in contrast to the decline of land crabs) is also examined. The data do not attest

to an overall intensification, but slight increases in the sequence of several sites of small rocky intertidal gastropods (and later of bivalves) may indicate some form of intensification. Bearing in mind the lack of palaeoenvironmental data, it appears that most of the site spectra do not systematically reflect the immediate biotopes. Sandy substrates, although they offer dense colonies of bivalves and may be in the immediate environment, are poorly represented in most of the sites except for the latest ones. The theory of an opportunist exploitation of the richest biotopes in the site vicinity is thus not valid. The relationships between the food and shell industry aspects indicate a relative dissociation, at least from the point of view of the species used and the biotopes exploited, except in the case of *Strombus gigas* where interactions between acquisition and processing are apparent in both fields.

Further work is necessary to increase the data from various contexts to ensure better archaeological and statistical representation of the assemblages, to characterize the taphonomy, to define the nutritional value of exploited species and the shell industry technology, and to increase palaeoenvironmental data in order to understand the natural and cultural contexts of the exploitation. The research continues with the addition of data from sites ranging from the Preceramic to the very late post-Saladoid periods located in the Northern and also the Southern Lesser Antilles (Martinique, among others), the Greater Antilles (Puerto Rico), and the Bahamas (Middle Caicos, Grand Turk).

Some recent publications received from Henk Mienis

Mienis, H.K., 2000. Appendix II: Archaeomalacological finds from Horvat 'Eleq. In: Hirschfeld, Y. (ed.), *Ramat Hanadiv excavations,* pp. 527-528. Jerusalem, Israel Exploration Society.
Abstract: The excavation of the Roman estate yielded only three marine shells, all of *Bolinus brandaris* which were apparently live-collected. Purple dye production is ruled out on the grounds that thousands of shells would otherwise have been present. Instead, the shells are interpreted as the remains of a meal.

Horwitz, L.K., Tchernov, E. and Mienis, H.K., 2001. Archaeozoology and archaeomalacology of Site 917 in the 'Uvda Valley. *'Atiqot,* 42: 121-127.
Abstract: Only two shells were recovered from Middle Bronze Age contexts at this site, which lies some 40 km north of Elat. A specimen of *Conus flavidus* from the northern Red Sea had an artificial hole in the top of the shell, showing it to have been used as a bead or pendant. The land snail *Sphincterochila prophetarum* still lives near the site today and the shell fragments found may be recent in origin. The animal bone assemblage from Early and Middle Bronze Age levels was dominated by sheep/goats, with traces of donkey, hare, lizard and rodents.

Mienis, H.K., 2002. Finally a confirmation of the former presence of *Leguminaia saulcyi* in Israel (Bivalvia, Unionidae). *Ellipsaria,* 4 (2): 11-12.
Abstract: *Leguminaia saulcyi* was collected on three occasions by foreign travellers at different locations in present-day Israel during the mid-19th century, but is not represented in collections made in Israel over the last 30 years. Specimens have now been recovered from the excavation of a watermill complex [date not given] on the Yarqon River near Tel Aviv. It is concluded that the 19th century identifications were correct and that this species is now extinct in Israel.

Mienis, H.K. and Hadas, G., 2002. Archaeomalacological finds in the vicinity of 'En Gedi. 1. Molluscs found during an excavation in the "Old Roses". *Triton,* No. 6: 30-31.

Abstract: Ten species of land snails and three species of freshwater snails were found inside a Roman-Byzantine period clay water pipe from an agricultural field at 'En Gedi. All except two species still occur in the area today. The presence of *Pupoides coenopictus* is noteworthy as it constitutes the only authentic palaeotropical element in the terrestrial mollusc fauna of Israel, and has been found at several archaeological sites in the Rift Valley area.

Mienis, H.K. and Hadas, G., 2002. Archaeomalacological finds in the vicinity of 'En Gedi. 2. Landsnails recovered from an ancient leopard trap. *Triton,* No. 6: 32.
Abstract: Radiocarbon dating of six species of land snails (*Buliminus alepensis, B. lamprostatus, Sphincterochila prophetarum, S. zonata filia, Xerocrassa seetzenii seetzenii* and *Levantina spiriplana lithophaga*) recovered from an ancient leopard trap showed them all to be of recent origin. Most of the shells had signs of predation by small mammals and it is suggested that they were introduced into the trap by spiny mice (*Acomys* sp.).

Mienis, H.K., 2002. Some molluscs from the excavation of an Iron Age site at Tel Ashdod, Israel. *Triton,* No. 6: 33-34.
Abstract: Fifty-five shells recovered from Iron Age deposits at Tel Ashdod had been used mostly as beads and a pendant. Twelve species were identified: eight from the Mediterranean Sea, two from the Red Sea, one from the Sea of Galilee/River Jordan, and one from the River Nile.

Mienis, H.K., 2002. Archaeomalacological finds from an Early Bronze cave at Asherat, Western Galilee, Israel. *Triton,* No. 6: 35.
Abstract: Two shell artefacts were recovered from an Early Bronze Age tomb near Asherat. These consisted of small oblong-elliptical spangles holed at each end which may originally have been sewn onto clothing. The shell microsculpture showed that one (19.3 x 6.9 mm) had been made from *Glycymeris insubrica* and the other (15.0 x 7.1 mm) from *Cerastoderma glaucum*.

European Quaternary Malacological Groups

EQMal (European Quaternary Malacologists) was established in association with the Subcommission on European Quaternary Stratigraphy (SEQS) of INQUA, and it aims to stimulate the exchange of knowledge in European Quaternary malacology, including taxonomy, palaeoecology, stratigraphy, palaeogeography, dating, correlations, and so on. The Quaternary is considered in the broad sense. An annual newsletter contains a list of members, publications, news and views, and announcements of forthcoming meetings. Members are encouraged to participate in meetings of SEQS and the Unitas Malacologia. Membership is free for active contributors to the subject. The EQMal home page is produced by Tom Meijer of the Rijks Geologische Dienst, Haarlem, The Netherlands. It includes a list of members and can be found at: **http://web.inter.nl.net/users/Meijer.T/eqmal/eqmal.html**.

The Association of Polish Malacologists (APM), based in Poznan, was also founded in 1994 and its membership represents environmental and applied malacology, freshwater and terrestrial ecology, systematics, biogeography, phylogeny and evolution, physiology and palaeontology - especially Quaternary malacology. The APM website hosts the **Quaternary Malacofauna of Poland** home page, which includes a list of Eemian, Late Glacial and Holocene molluscan reference sites in the Polish coastal area, and a bibliography. The site [which does not appear to have been updated recently] can be found at: **http://hum.amu.edu.pl/~polmal/smp/qua.htm.**