

Mollusc World

Issue 36

November 2014



How fast are land molluscs?

Russian miniature lacquer art and mother-of-pearl

Island snails on the edge

A stygobiont nerite

EuroMal 2014



The Conchological Society of Great Britain and Ireland

Helping to understand, identify, record, and conserve molluscs



The field meeting this September to the Yorkshire coast organised excellently by Paula Lightfoot and attended by members of the Conchological Society, the Yorkshire Naturalists' Union and Seasearch was very successful and involved dredging (which I witnessed, rather than participated in very much, due to the effects of a rather choppy sea – see

photo!), diving, shore work and non-marine. Hopefully the results of this trip will be reported in a 2015 Mollusc World issue.

As I write this (October 2014), news of the first discovery in the UK (at Wraysbury reservoir, near Heathrow Airport) of the highly invasive freshwater mussel *Dreissena rostriformis bugensis* has been in the media. This species was recently identified by the Centre for Ecology and Hydrology as 'the top ranking threat to our natural biodiversity...It poses a high risk because it is an ecosystem engineer with the potential to disrupt the ecological function of freshwater environments.' (see http://www.ceh.ac.uk/news/news_archive/top-30-high-risk-invasive-alien-species-identified-by-uk-scientists_2014_30.html). The seriousness of this discovery emphasises the continuing need for the regular recording of molluscs, even in those places we think we know well!

I am very grateful to all those who have sent in material for this issue; I am always grateful for anything that can be included – keep up the good work.

Peter Topley

Mollusc World

This magazine is intended as a medium for communication between Conchological Society members (and subscribers) on all aspects of molluscs, in addition to the material found on our web site. Hopefully it will also be of interest to all those enquiring about this subject or the work of the Society.

We include articles, meeting reports, research news, results from the mapping schemes and identification aids. We welcome all contributions in whatever form they arrive (see page 33 for further details).

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Front cover: *Discus rotundatus*, High Farm Meadow County Wildlife Site, Bedfordshire. (photo: Andrew Green)

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My appeal for more information on the speeds of slugs and snails in *Mollusc World* 34 (March 2014) provoked a magnificent response. Some readers have conducted their own experiments, and others pointed me to published sources that I had not found, including material from the nineteenth century. I am sure there are many more, but speed is often mentioned incidentally in papers dealing with other things. Bernard Verdcourt was certainly not the only one to measure snail speed. I have since done a few trials myself. There is also a lot of online information; but not all of it is reliable. There are some very odd estimates of speed, especially for the garden snail *Cornu aspersum* (see below), and these have been repeated in many educational and general sites. I have not managed to track down their origin. Further, using Google to look at snail speeds revealed the existence of a 'giant snail race' online game that features more prominently than the real thing.

Speed is actually quite a difficult thing to discuss. We take it for granted for ourselves that the speeds achieved in a 100 m sprint will be faster than for a marathon, and in the context of normal life we do not expect all movement to be at the maximum possible speed. Similarly, an average speed does not seem to mean much in the context of slugs and snails. The maximum, even if sustained only for a few minutes, does give us an indication of what is possible, and there are suggestions in the literature that speeds are fastest when escape from predators or a hostile environment is involved. In looking at the recorded speeds for slugs and snails, I have looked for the fastest speeds recorded over relatively short times (at most, a few minutes). When these are considered, it is obvious that they are not sustained for long periods, and certainly not in a straight line; slugs and snails disperse much less than they could if they moved at maximum speed in one direction even for only a few hours.

So, here are some results (table 1), separated between snails and slugs. In each case, I have given the fastest speed recorded over short periods. Clearly, there must have been many differences in the temperatures at which the trials were conducted and, of course, the animals will have differed in size. Nevertheless, there are some rather consistent patterns. Among snails, it appears that *Cornu aspersum* is the fastest so far recorded. The record of approximately 4 mm/sec. comes from a laboratory experiment; the average speeds recorded there were around 2 mm/sec. The record holder at the Congham World Championships is markedly faster than the average winning speed over the last six years. Interestingly, the Congham rules bar giant African snails, but on the slender evidence available, their size would not appear to give them an advantage. Other estimates do not show adults moving faster than Justin Gerlach's larger juveniles (Gerlach, 1999). There is not enough information to tell us whether size and speed are directly related, but Gerlach's studies do indicate the link for the notorious predator *Euglandina rosea*. *Colobostylus bronnii* is a large Jamaican operculate.

There is an often repeated figure of *Cornu aspersum* moving at 0.03 mph. Translated, this works out at 13.6 mm/sec. or 81 cm/min.; fast indeed! I suspect some misplacing of decimal points has occurred along the way. Looking at online contributions relating to the Congham races, it appears that some owners believe that training improves performance. Scope for some experiments!

The slugs are a mixed bag. Limacids are clearly faster than European *Arion*, but the great Banana Slug, *Ariolimax columbianus*, from the west coast of N. America, appears to match them, although an arionid. Our own arionids seem particularly sluggish! Among agriolimacids, *Deroceras invadens* (ex *D. panormitanum*, ex *D. caruanae*) appears to be the all-time champion among all those I have found, with one individual studied by a student of Chris du Feu clocking up nearly 5 mm/sec. The second fastest achieved a measly 2.4 mm/sec. In general, *Arion* excepted, the slugs so far recorded seem to be faster than most snails, but I have records for rather few snail species. *Leptichnoides verdcourtii* is an ariophantid slug introduced on Mauritius.

At the bottom of the table are a set of figures obtained by Tony Wardhaugh. These relate to slugs and snails crawling up the vertical sides of a water-butt while actually under water. Except for *Lehmannia valentiana* all seem to move rather slowly relative to recorded speeds on horizontal surfaces. However, we have very little information on speeds at different angles from the horizontal. Several correspondents commented on the considerable vertical distances some slugs and snails must cover both up and down in a single night when feeding on roofs or up trees. Chris du Feu reports *Limacus* sp. sustaining 1.6 mm/sec over an hour while climbing, and Adrian Sumner estimates at least 0.4 mm/sec. over longer periods for the same genus. *Lehmannia marginata*, for which I have no data, must also move up and down trees at a fair speed.

The take home message seems to be that speeds of more than about 4 mm/sec. are very unusual for land slugs and snails, even over short distances. Even so, it is clear that slugs and snails could move far further from home than they do in practice; most appear to move less than 10 m from their place of hatching.

Many thanks to all who replied to my appeal: Tony Wardhaugh, Chris du Feu, Harry Green, Aydin Örsan, Terry Crawford, Adrian Sumner, David Long, Colin McLeod and Ruth Brooks.

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Snails	mm/sec.	cm/min.	m/hour	Source
<i>Achatina fulica</i> <20mm	0.7	4.0	2.4	Gerlach (1999)
<i>Achatina fulica</i> >20mm	1.2	7.4	4.5	Gerlach (1999)
<i>Cepaea hortensis</i>	0.8	5.0	3.0	Verdcourt (1947)
<i>Cepaea hortensis</i>	0.8	4.8	2.9	RADC
<i>Cepaea nemoralis</i>	1.0	6.0	3.6	RADC
<i>Colobostylus brononii</i>	1.2	7.2	4.3	Brown (1910)
<i>Cornu aspersum</i>	1.8	10.5	6.3	Congham av. 2008-13
<i>Cornu aspersum</i>	2.4	14.4	8.6	Congham record (1995)
<i>Cornu aspersum</i>	4.0	24.0	14.4	McKee et al. (2013)
<i>Cornu aspersum</i>	1.4	8.3	5.0	Brooks
<i>Euglandina rosea</i> Adults	2.2	13.0	7.8	Gerlach (1999)
<i>Euglandina rosea</i> Juveniles	1.4	8.5	5.1	Gerlach (1999)
<i>Euglandina rosea</i> Hatchlings	0.4	2.6	1.6	Gerlach (1999)
<i>Helix pomatia</i>	1.2	7.0	4.3	Web
<i>Mesodon albilabris</i>	0.7	4.0	2.4	Baker (1897)
<i>Oxychilus draparnaudi</i>	0.5	3.2	1.9	RADC
<i>Oxychilus navarricus</i>	0.3	1.6	0.9	Verdcourt (1947)
<i>Trochulus striolatus</i>	0.4	2.5	1.5	RADC
Slugs	mm/sec.	cm/min.	m/hour	Source
<i>Ariolimax columbianus</i>	3.3	19.8	11.9	Lai et al (2010)
<i>Ariolimax columbianus</i>	3.2	19.2	11.5	Pearson et al. (2006)
<i>Arion ater rufus</i>	0.7	4.3	2.6	Boyce
<i>Arion rufus</i>	0.9	5.5	3.3	RADC
<i>Arion circumscriptus</i>	0.4	2.1	1.3	Boyce
<i>Arion circumscriptus</i>	0.3	2.0	1.2	RADC
<i>Arion flagellus</i>	0.7	4.0	2.4	RADC
<i>Arion hortensis</i>	0.5	2.9	1.7	Verdcourt (1947)
<i>Arion intermedius</i>	0.5	2.9	1.7	Boyce
<i>Arion silvaticus</i>	0.3	1.8	1.1	Boyce
<i>Arion subfuscus</i>	0.6	3.6	2.2	Örstan
<i>Arion subfuscus</i>	0.8	5.0	3.0	Boyce
<i>Arion subfuscus</i>	0.5	2.7	1.6	du Feu
<i>Deroceras invadens</i>	4.9	29.4	17.6	du Feu
<i>Deroceras laeve</i>	1.7	10.2	6.1	Boyce
<i>Deroceras laeve</i>	2.9	17.6	10.5	Gerlach (1999)
<i>Deroceras reticulatum</i>	1.8	10.9	6.5	Boyce
<i>Deroceras reticulatum</i>	1.2	7.2	4.3	du Feu
<i>Lehmannia valentiana</i>	1.7	10.0	6.0	RADC
<i>Leptichnoides verdcourti</i>	3.1	18.7	11.2	Gerlach (1999)
<i>Limacus flavus</i>	3.5	21.0	12.6	RADC
<i>Limacus flavus</i>	3.2	19.2	11.5	du Feu
<i>Limacus maculatus</i>	3.7	22.0	13.2	Green
<i>Limax maximus</i>	2.9	17.6	10.6	Runham and Hunter (1970)
<i>Limax maximus</i>	2.8	17.1	10.3	Boyce
<i>Limax maximus</i>	4.0	24.0	14.4	Crozier & Pilz (1924)
<i>Limax maximus</i>	2.6	15.6	9.4	Gilperin (1974)
<i>Limax maximus</i>	3.0	18.0	10.8	du Feu
<i>Tandonia budapestensis</i>	0.4	2.5	1.5	Boyce
<i>Tandonia budapestensis</i>	1.3	7.8	4.7	du Feu
<i>Tandonia budapestensis</i>	1.0	6	3.6	RADC
Underwater	mm/sec	cm/min	m/hour	Source
<i>Cornu aspersum</i>	0.7	4.1	2.4	Wardhaugh
<i>Lehmannia valentiana</i>	1.8	10.8	6.5	Wardhaugh
<i>Limax cinereoniger</i>	1.2	7.2	4.3	Wardhaugh
<i>Limax maculatus</i>	1.1	6.5	3.9	Wardhaugh
<i>Tandonia budapestensis</i>	0.5	2.7	1.6	Wardhaugh

table 1: Maximum speeds recorded over short distances in land snails and slugs. Undated sources represent unpublished records sent to me by the people concerned. Congham data and those for *Helix pomatia* come from relevant websites.

Two Manus islanders

Ben Rowson

Papustyla pulcherrima I. Rensch 1931 is one of the most famous tropical land molluscs (figure 3). Also known as the Manus Island tree snail or emerald tree snail, it is the only member of the Camaenidae with a vibrant leaf-green shell. Indeed, according to a monograph of the genus (Clench & Turner, 1962) this colour is almost unique among land snails. The green resides entirely in the periostracum and does not fade, even after decades, and camouflages the snail in its arboreal habitat. The species has a very restricted distribution and is endemic to the forested interior of Manus Island, the largest of the Admiralty Islands of northeastern Papua New Guinea. Manus is about the size of the average British vice-county. On Manus, the shells are conventionally used in jewellery and the decoration of woven bags and baskets. As a testament to their local importance, five of them are featured on the official flag of Manus Province (figure 4).

Beyond its island home, this beautiful species has also become something of an emblem – if not a flagship – for snail conservation. It is listed by CITES (the Convention on International Trade in Endangered Species), is on the IUCN's Red List and even the USA's Federally Endangered list. Commercial harvesting, export, and logging of *P. pulcherrima*'s forest habitat seem to have driven these listings, which have contributed to a widespread awareness that this and other tropical snails may need protection. The display on land snail conservation at the National Museum of Wales, Cardiff (NMW) includes a Manus bag (figure 2), confiscated by HM Customs, decorated with 34 *P.*

pulcherrima shells. In print, the snail has appeared on at least one Papua New Guinean postage stamp, and graces the cover of Tucker Abbott's sought after *Compendium of Landshells* (Abbott, 1989).

Frank Philip (figure 1) is a Papua New Guinean entomologist originally from Wuvulu, a smaller island off Manus. He and a colleague from the Binatang Research Centre spent a week with Mike Wilson, Head of Entomology at NMW in September 2014 as part of a training visit to the UK, which also included a visit to the Royal Botanic Gardens at Kew and a week's professional tree climbing training near Bath. Frank told me that efforts are being made to culture, or at least safeguard, *P. pulcherrima* populations on Manus with the establishment of gardens and greenhouses in which they are protected from predators (and rival collectors). Though the species still thrives in some inland forest areas, Frank said it is now difficult to find large specimens, suggesting the average adult shell size has decreased over time. Harvesting continues, but it was a pleasure to find out from him that *P. pulcherrima* is still at least as esteemed by the Manus islanders as it is by shell lovers around the world.

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- figures (clockwise from top left):
- 1) Frank at the National Museum of Wales.
 - 2) The Manus bag in the galleries.
 - 3) Still lovely after all these years: *Papustyla pulcherrima* from Drabui, Manus Island, collected by the Whitney South Seas Expedition of 1921-1932 (NMW; height 39 mm).
 - 4) The flag of Manus Province.

(all figures © National Museum of Wales, used with permission)

Shell artwork sent in by Geoff Powell

In response to my request for shell artwork in the previous issue of this magazine, I was very pleased to receive a letter from member Geoff Powell that included some photographs of beautiful hand painted bookmarks he has produced. He says that the pictures of *Armoria undulata* and *Lambis crocata* were both done using coloured pencils and the remainder with watercolours. I am sure that members would like to see these and they are reproduced on the next page. Geoff occasionally sells his artwork at Shell Club events. Once again, many thanks to Geoff for sharing the results of his talent with us!

Hon. Editor

WoRMS database and the development of MolluscaBase

The aim of a World Register of Marine Species (WoRMS) (<http://www.marinespecies.org>), hosted by the Flanders Marine Institute (VLIZ) is the provision of an authoritative and comprehensive list of names of marine organisms, including information on synonymy. Earlier this year a meeting was held at VLIZ to discuss a plan to expand the molluscan component of WoRMS to what will be called MolluscaBase. This will be a Global Species Database covering not only marine, but also freshwater and land molluscs, both recent and fossil. It is estimated that only about 5% of valid marine mollusc species are missing from WoRMS, but this gap is gradually being filled.

The WoRMS website gives some further information: 'A similar global list of the freshwater and terrestrial Mollusca is lacking. Although there is a wide variety of resources out there (e.g. Fauna Europaea, the Australian Faunal Directory, ITIS ...) the malacological community is still lacking an authoritative online resource for all non-marine molluscs. It is estimated that there are about 23,000 species of land snails/slugs and about 5,000 freshwater gastropods and bivalves. Rather than developing a separate project, the chief Mollusca editors in WoRMS have decided to expand the database, and also include land and freshwater Mollusca within Aphia. And, in a bold move, they also agreed that the list should not be limited to Recent Mollusca, but will also, in the longer run, include all fossil mollusc names ever published. The magnitude of the fossil molluscs name bank is not known, but is certainly in the many tens of thousands...'. During 2014, the concept of MolluscaBase will be further developed, including the first imports of terrestrial and freshwater groups and a test project on fossils and their indexing in the geological time scale.'

[many thanks to Ian Smith for highlighting this; see also page 11 – Ed.]

Letter to the Editor on items in Mollusc World issue 35

I thoroughly enjoyed the latest 'Mollusc World' [Issue 35, July 2014] as always. A couple of points arising:-

a) regarding your 'Fountains of Love' piece [page 25] I certainly agree that the shell basis of the fountains look more like *Cardium costatum* than a scallop. Perhaps it's

interesting that ancient Greek statuettes show the goddess Venus emerging from a pair of *Cardium* shells, which can't be confused with the flat valves of a pair of scallop shells. Several of these statuettes are depicted in 'Shells from the Greek Seas' by Marianne Delamotte and Eli Vardala-Theodoru [Mouseio Goulandri Fysikis Istorias, 2001]. They are from the National Archaeological Museum in Greece and mention *Acanthocardium* and *Cardium* separately.

b) secondly regarding the photo of the 'Danish snail' pastries [page 8] I have read somewhere, possibly in a Sunday paper supplement, that the Danish term for what we call Danish pastries is 'sneglbrød', meaning snail bread.

Kevin Brown

[Kevin also sent in the news below that he first noticed on 'teletext'!]

Deep sea octopus broods eggs for four years.

Octopuses typically have a single reproductive period and then they die (semelparity). Once a clutch of fertilized eggs has been produced, the female protects and tends them until they hatch. In most shallow-water species this period of parental care can last from one to three months, but very little is known about the brooding of deep-living species. In the cold, dark waters of the deep ocean, metabolic processes are often slower than their counterparts at shallower depths. Extrapolations from data on shallow-water octopus species suggest that lower temperatures would prolong embryonic development periods. Likewise, laboratory studies have linked lower temperatures to longer brooding periods in cephalopods, but direct evidence has not been available. We found an opportunity to directly measure the brooding period of the deep-sea octopus *Graneledone boreopacifica*, in its natural habitat. At 53 months, it is by far the longest egg-brooding period ever reported for any animal species. These surprising results emphasize the selective value of prolonged embryonic development in order to produce competitive hatchlings. They also extend the known boundaries of physiological adaptations for life in the deep sea.

The above abstract is from: Robison B., Seibel B., Drazen J. (2014). Deep-Sea Octopus (*Graneledone boreopacifica*) Conducts the Longest-Known Egg-Brooding Period of Any Animal. *PLoS ONE* 9(7): e103437. doi:10.1371/journal.pone.0103437.



Thanks to Dr Richard Preece I am now in a position to start uploading all of the 3,000-plus recent fossil records left by Michael Kerney into our database. This has been a major project during which I have been very grateful for his help and knowledge of the subject.

This year has seen the first confirmed record of *Pupilla pratensis* recorded by Barry Colville in Easter Ross, the first Scottish record, which is now included. This was first recorded by Barry in 2005 but we have been awaiting confirmation of this by Ted von Proschwitz. A number of new alien records have been submitted and I have placed these on record below. These include *Kaliella barrackporensis*, *Subulina octona*, *Pleurodiscus balmei*, *Stretostele* sp., *Striosubulina striatella*, etc. Several other new VC Records appear to be several years out of date. This is due to the backlog of data being submitted to me all the time. Other interesting records include yet another extension of the distribution of the rare *Lauria sempronii* by John Flemming in Gloucestershire bringing the site numbers up to 13 sites in four distinct areas of the county.

The occurrence of a colony of *Pisidium tenuilineatum* at Sutton End Stream near Shopham Bridge close to the River Rother at SU9890418284 collected 05.07.2013 by Martin J. Willing clarifies this species as a resident of West Sussex, VC23. This species was first reported by Michael Kerney from fine sediments in an outflow stream at Harting Pond near South Harting in 1970. Surveys to relocate this species in 2000 failed to find any evidence, and so it was presumed that the pond management in the mid-1970s caused the loss of this species. This new find places this species firmly back on the county list.

Over the past year I have worked closely with iRecord trying to vouch-safe records submitted to them. These records, however, are not at present being extracted and downloaded into the Conchological Society database as the NBN will not currently facilitate this. As a result I have been unable to extract the large number of records which are available, including some new Vice County records. This form of recording is the future; however, the Society must prevent the NBN from downloading these records directly into our database. The records, even after checking, still contain errors which need to be corrected prior to accepting, either that or we must accept that a large number of records are rejected and will be lost forever. More and more records are being submitted via such online websites and we as an organisation must move with the times and extract them whenever possible.

The record marked with * are VC re-confirmation records; they all appear to have been recorded in these VCs before as given by Kerney 1982 and/or Kerney 1999, but are not on the Society's current electronic data base. The source records may occur on Conch Soc recording cards held at the British Museum, but as yet appear not to have been transferred to our new digital format". See Kerney, M.P., 1976, *Atlas of the Non-Marine Mollusca of the British Isles*, Conch. Soc. NERC, London & Kerney, M.P., 1982, *Vice-Comital Census of the Non-Marine Mollusca of the British Isles* (8th Edition) *J. Conch.* **31**:63-71.

West Cornwall (with Scilly) (VC1): *Columella edentula* (SW4339) Rosewell Hill 05.06.2000 K.N.A. Alexander; *Hygromia cinctella* (SV906102) St Mary's, Isles of Scilly Martin J. Willing 20.05.2013

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East Cornwall (VC2): *Euconulus alderi* (SW951) Woodland Valley Farm, Ladock 28.03.2011 K.N.A. Alexander; *Kaliella barrackporensis*, *Subulina octona* (SX005554) Eden Project 03.2010 Richard Preece & Fred Naggs

North Wiltshire (VC7): *Arion distinctus*; *Lehmannia valentiana*; *Limacus maculatus* (SU2077) Chiswick House Gardens 21.04.2013 all A. Norris

South Wiltshire (VC8): *Zonitoides excavatus* (SU228225) Brickwell Quarry 20.05.2012 Chris Gleed-Owen Det Martin Willing

Dorset (9): *Arion ater* ss; *Arion vulgaris* (ST929047) Redbridge Farm, Lythett 08.10.2012 Chris Gleed-Owen

Isle of Wight (VC10): *Cochlicopa lubricella** (SZ5882) Shanklin 18.04.2013 Stephen Green Det. A. Norris

South Hampshire (VC11): *Physella acuta* (SU216041) Forest Road Pond, Burley 08.09.2012; *Gyraulis cf laevis* (pending conf. with voucher) (SZ160931) River Stour, Purewell Meadows 30.07.2012; *Oxychilus navarricus* (SU130014) Matchams Close, Matcham 20.08.2012 all Chris Gleed-Owen

North Hampshire (VC12): *Limacus maculatus* (SU7239) Alton 17.02.2013 June Chatfield Middlesex (VC21): *Arion distinctus* (TQ381790) Isle of Dogs 09.04.2013 Terry Crawford

Berkshire (VC22): *Physella acuta* (SU751711) Maiden Erlegh Lake 05.04.2013 R.E. Hill and R. Boyce, det. Rosemary Hill

East Norfolk (VC27): *Anisus leucostoma** (TG084204) Whitwell Common R.Merritt 25.09.2007

East Gloucestershire (VC33): *Limacus maculatus* (SO86710342) Painswick 06.01.2014 John Fleming det. A. Norris

Worcestershire (VC37): *Spermodea lamellata*, *Columella aspera* (SO753762) Shelf Held Coppice, Wyre Forest 15.06.2013 Rosemary Hill; *Arion hortensis* ss. River Rea Valley (SP052795) 16.04.2013; *Limacus maculatus*, *Lehmannia valentiana* Kings Norton Park (SP052792) both R.E. Hill and R. Boyce det. Rosemary Hill 05.05.2013; *Arion flagellus* Wyre Forest (SO768756) Wyre Forest Study Group det Rosemary Hill 15.05.2010

Caernarvonshire (VC49): *Hawaiiia minuscula* (SH5505171020) Treborth Botanical Gardens, Bangor, Ben Rowson 04.09.2013

Anglesey (VC 52): *Anisus leucostoma**, *Arion ater* ss (SH5183) Benllech 27.09.1998; *Euconulus alderi* ss (SH477823) Cors Erddreiniog 13.08.1994 all R.W. Marriott det. D.K. Marriott

South Lincolnshire (VC53): *Limacus flavus* (TF143176) Baston Fen NR 04.09.2011 E.J. Redshaw North Lincolnshire (VC54): *Anisus leucostoma** (SE757014) Haxey Carr 26.10.2004; *Omphiscola glabra* (SE758037) Epworth Turbury R. Merritt 10.05.2008

Leicestershire (VC55): *Limacus maculatus* (SK567047) Leicester 21.05.2013 Stephen Green Det. A. Norris

Cheshire (VC58): *Arion distinctus* (SJ642796) Antrobus 03.03.2013 Terry Crawford

South Lancashire (VC59): *Hygromia cinctella*; *Lucilla singleyana* (SJ826978) Regent Retail Park, Manchester 20.05.2013 A. Norris

West Lancashire (VC60): *Anisus leucostoma** (SD346322) Lytham Moss R. Merritt 08.09.2010

North-east Yorkshire (VC62): *Physella acuta* (TA022809) River Hertford 23.04.2013 Terry Crawford, Det. A. Norris

South-west Yorkshire (VC63): *Arion ater* ss. (SK311894) Little Matlock Wood 18.05.2013 Coll.Conch Soc. Det. A. Norris

Durham (VC66): *Arion rufus* ss. (NZ280409) Great High Wood, Durham 25.08.2013 A.T. Sumner

South Northumberland (VC67): *Arion owenii* (NY667659) Walltown A.T. Sumner 23.08.2013

North Northumberland (VC68): *Arion flagellus* (NU070022) Cragside Estate A.T. Sumner 22.08.2013

Lanarkshire (VC77): *Melanoides cf tuberculata*; *Pleurodiscus balmei*; *Stretostele* sp.; *Striosubulina striatella* (NS5667) Glasgow Botanic Gardens (Hothouse) 12.02.2013 A.T. Sumner Det. Ben Rowson; *Arion ater* ss., *Lehmannia valentiana* (NS6065) Glasgow Necropolis M. Davidson & R. Weddle det A.T. Sumner 2012; *Columella edentula* ss. (NS735536) Chatelherault Country Park A.T. Sumner 02.08.2013

Berwickshire (VC81): *Balea sarsii* (NT5834) Tweedwood - Gateheugh SSSI 25.05.2011 K.N.A. Alexander East Lothian (VC82): *Arion rufus* ss. (NT548849) Doocot, North Berwick A.T. Sumner 08.11.2013

Midlothian (VC83): *Zonitoides arboreus* (NT247755) Royal Botanic Gardens, Edinburgh 22.06.2013 A.T. Sumner; *Stagnicola palustris* ss. (NT201761) Edinburgh-Kyoto Friendship Garden, Lauriston Castle, Edinburgh A.T. Sumner, det. R. Carr 06.08.2013

West Lothian (VC84): *Arion vulgaris* ss. South Queensferry (NT137782) A.T. Sumner 27.09.2013 Fifeshire (VC85): *Arion owenii* (NT090870) Pittencrieff Park, Dunfermline 30.04.2013 A.T. Sumner

Stirlingshire (VC86): *Limacus flavus* agg (NS768743) Cumbernauld 08.05.2013; *Arion circumscriptus* (NS923812) Grangemouth 16.05.2013 all A.T. Sumner

Mid Perthshire (VC88): *Euconulus alderi* (NN714574) Schiehallion R.W. Marriott 08.10.2004

East Perthshire (VC89): *Balea perversa* (NO135226) Kinnoull Hill R.W. Marriott 11.08.1984; *Euconulus fulvus*, *E. alderi* (NN90806621) Loch Moraig R.W. Marriott 02.02.2005; *Arion owenii* (NO339294) Kingoodie 16.06.2013; *Arion flagellus*, *Arion vulgaris*, *Lehmannia valentiana*, *Tandonia budapestensis* (NO2448) Alyth, Perthshire 18.06.2013 all A.T. Sumner; *Physella acuta* (NO339294) Kingoodie A.T. Sumner det. Roy Anderson 16.06.2013

Angus (Forfar) (VC90): *Arion owenii* (NO633411) Lochlands Road, Arbroath 15.06.2013 A.T. Sumner; *Columella edentula*, *Vallonia pulchella* (NO7153) Rickle Crag – Scurdie Ness SSSI all N.K. Atkinson 1979-1982 Conf. K.N.A. Alexander; *Stagnicola fuscus* (NO445504) Forfar Loch A.T. Sumner det. R. Carr 17.06.2013; *Cochlicopa lubricella** (NO714533) Boddin Point R.W. Marriott 17.09.2013

Kincardineshire (VC91): *Balea sarsii* 02.05.1993, *Cochlicopa lubricella* (NO839859) Fetteresso 16.05.1993 R.W. Marriott det. D.K. Marriott; *Zonitoides nitidus* (NO766648) Rockhall 26.05.2004; *Limacus maculatus* (NO839859) Fetteresso 21.08.2008; *Balea perversa* (NO745639) St Cyrus NNR 18.06.1983 all R.W. Marriott

South Aberdeenshire (VC92): *Arion silvaticus*, *Euconulus fulvus* ss (NO246985) Lower Glen Gairn 24.09.1994 R.W. Marriott det. D.K. Marriott; *Vertigo antivertigo* (NJ780080) Loch of Skene 29.04.2012; *Balea perversa* (NO190929) Craig Leek 05.06.1983 both R.W. Marriott

North Aberdeenshire (VC93): *Cochlicopa lubricella**, *Vertigo pygmaea* (NK053300) Slains Castle 17.03.2007; *Euconulus fulvus* (NJ7939) Windyhills 15.09.2007 all R.W. Marriott

Banffshire (VC94): *Columella edentula* (NJ1805) Stron nam Boc, Inchroy 15.09.2007; *Cochlicopa lubricella**, *Euconulus fulvus* (NJ1807) Craig Builg, Inchroy 25.07.2003; *Balea sarsii* (NJ837662) Troup Head 15.06.1980 all R.W. Marriott

Moray (VC95): *Arion circumscriptus* ss, *Arion owenii*, *Arion flagellus*, *Cochlicopa lubricella**, (NH8913) Aviemore 23.05.2013 all A.T. Sumner; *Physella acuta* (NJ0358) Forres A.T. Sumner det. Roy Anderson 27.05.2013

East Inverness-shire (with Nairn) (VC96): *Euconulus fulvus* ss (NH493274) Divach Falls 25.06.1989 R.W. Marriott det. D.K. Marriott; *Balea sarsii* (NH557418) Moniak Gorge 10.09.2008 R.W. Marriott; *Cepaea hortensis*

(NH886563) Nairn 24.05.2013; *Tandonia budapestensis* (NH658469) South Kessock 26.05.2013 all A.T. Sumner; *Physella acuta* (NH656435) Inverness A.T. Sumner, det. Roy Anderson 26.05.2013

West Inverness-shire (VC97): *Balea sarsii*, *Euconulus alderi* (NM6861) Camas Salas, Loch Sunart 12.02.2005 both R.W. Marriott; *Cermea virgata* (NM6942) Ardtornish Old Castle, Morven 03.06.2011 K.N.A. Alexander

Mid Ebudes (VC103): *Balea sarsii* (NM4736) Creag Mhor, Mull 26.09.1983 R.W. Marriott

North Ebudes (VC104): *Stagnicola fusca* (NG6120) 27.07.2003 R.W. Marriott det R. Carr

West Ross (VC105); *Boettgerilla pallens*, *Euconulus fulvus* ss. (NG831408) Courthill House 15.07.2013; *Arion circumscriptus* ss. Tornapress Bridge (NG837420) 15.07.2013; *Columella edentula* (NG844430) Rassal 15.07.2013 all A.T. Sumner

East Ross (VC106): *Arion circumscriptus*, *Limacus maculatus*, *Tandonia budapestensis* (NH6569) Alness; *Arion ater* ss (NH5966) *Limax cinereoniger* (NH602665) Evanton woods; *Tandonia sowerbyi* (NH704684) Invergordon 25.05.2013 All A.T. Sumner; *Stagnicola fuscus* (NH560582) Dingwall 28.05.2013 A.T. Sumner Det Ron Carr; *Pupilla pratensis* (NH 64295711) Belmaduthy B. Colville Conf. Richard Preece; *Physella acuta* (NH5349) Lily Loch, Muir of Ord A.T. Sumner, det. Roy Anderson 28.05.2013; *Trochulus hispidus* (NH75796092) Learney, Black Isle 09.04.2006 R.W. Marriott

Waterford (H6): *Arion silvaticus*, *Balea sarsii* (X049988) Lismore 14.04.2012 Roy Anderson

South Tipperary (H7): *Arion circumscriptus*, *A. distinctus*, *A. silvaticus*, *Lehmannia valentiana* (R977165) Shanbally Castle Estate 17.03.2012 Roy Anderson

North Tipperary (H10): *Arion ater* ss, *Stagnicola fuscus*, *Oxyloma sarsii* (R8296) Kilgarvan Quay; *Lehmannia valentiana* (M842009) Gortmore Point all 08.11.2012 Roy Anderson

Offaly (H18): *Arion ater* ss (N270122) Clonaslee Esker 09.11.2012 Roy Anderson

Dublin (H21): *Hygromia cinctella* (O292367) Great Bally, Howth Head 07.06.2013 Roy Anderson

West Mayo (H27): *Cochlicopa lubricella** (F638260) Barrack, The Mullet 08.06.2012; *Lehmannia valentiana* (F651185) Blacksod Point, The Mullet 07.06.2012 both Roy Anderson

Louth (H31): *Arion flagellus* (J095095) Bellurgan 22.03.2012; *Cochlicopa lubricella* (J218052) Templetown 16.10.2012 both Roy Anderson

Fermanagh (H33): *Arion flagellus* (H283346) Belleisle 22.10.2012 Roy Anderson

East Donegal (H34): *Cochlicopa lubricella** (C423533) Five Finger Strand, Trawbreag; *Stagnicola fuscus* (C333272) North of Fahan both 04.06.2012 Roy Anderson

Tyrone (H36): *Stagnicola fuscus* (H763609) Black Lough 24.05.2012 Roy Anderson Armagh (H37): *Viviparus viviparus* (J003633) Ardmore 24.06.2013 Roy Anderson

Appreciative farewell from a long-time member

In August our membership secretary, Briony Eastabrook, received the following reluctant resignation from someone who has been a member of the Conchological Society for nearly fifty years:-

'I have been a member of the Conch. Soc. Since 1965 but I am 94 years old, creaky and achy, so the time has come to say farewell. I have enjoyed reading the various publications, especially the articles by Peter Dance and John Llewellyn-Jones....

Regretfully yours, John F. W. McOmie'

British Shell Collectors' Club



Saturday 25th April 2015

Shell Convention

Saturday 31st October 2015

Shell Show

Both at: Theydon Bois Community Centre, Coppice Row, Theydon Bois, CM16 7ER.

Open from 9am to 5pm, admission free.

Saturday 5th September 2015

Chatsworth Shell Fayre, DE45 1PP.

Open from 9am, admission free.

For further information about the club see:
www.britishshellclub.org

EuroMal 2014: The 7th Congress of the European Malacological Societies (7th – 11th September 2014)

Martin Willing



figure 1: St. Catherine's College, Cambridge.



figure 2: The conference in progress at St. Catherine's College.

The seventh Congress of European Malacological Societies took place at St Catherine's College, Cambridge (figure 1). The event was hosted by the Malacological Society of London in association with ten other European malacological societies¹. EuroMal, has, since November 2000, run six conferences at intervals of between one to three years in locations throughout Europe². This seventh conference was attended by 109 delegates from 19 countries, mostly within Europe, but also from Russia, Morocco, New Zealand, Argentina, USA, China and Thailand (figure 2). The Conchological Society was represented by eight members, all of whom also belong to the Malacological Society (figure 3).



figure 3: Some Conch. Soc. members at the conference. Above: Left – Robert Cameron, Right – Ben Rowson, Below: Left – Martin Willing, Right – Richard Preece.

Following the first evening 'ice-breaker' and registration session, there were 49 lectures spread over three full days. These were conveniently broken up into four themes: 'Biogeography, Ecology and Conservation' (17 lectures); 'Molluscan Biology and Physiology' (ten lectures); 'Climate, Palaeontology and Archaeology' (nine lectures); '(Molecular) Taxonomy and Phylogenetics' (eight lectures) and finally 'Miscellaneous Highlights' (five lectures). In addition to the talks, on Monday evening a poster session included 47 varied presentations, mirroring the breadth of topics covered by the main lectures (figures 4 and 5).

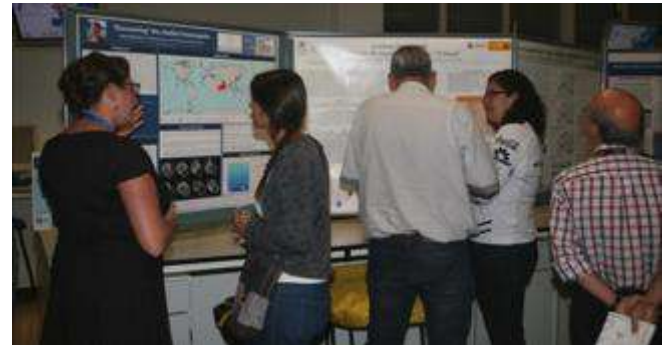


figure 4: Delegates study the poster exhibition.

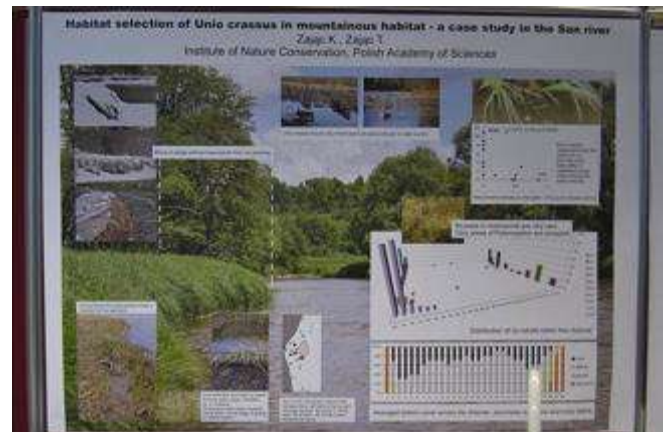


figure 5: Example of a poster display: *Unio crassus* research in Poland (K. and T. Zając).

One of the conference 'missions' was to encourage student malacologists and celebrate some of their achievements. As a result the Malacological Society and the Spanish Malacological Society each awarded a prize for the best poster and best presentation. Presentation prizes went to Pedro Romero (Goethe University, Frankfurt am Main) for his talk, 'Molecular adaptations in Euthyneura mitogenomes: possible clues to land colonization' and Lauren Sumner-Rooney (Queen's University, Belfast) for her talk 'Chitons that live in the dark can see light (Polyplacophora: Lepidopleurida) (figure 6)'. The two poster prizes were awarded to Philip Hollyman (School of Ocean Sciences, Bangor University) for 'Timing of growth line formation in accreted structures of the whelk *Buccinum undatum*' (figure 6) and to Elisavet Georgopoulou (Natural History Museum, Vienna) for 'The FreshGEN Project: Europe's Neogene and Quaternary lake gastropod diversity – aims, scope and first results'.



figure 6: Left to right – David Aldridge awards conference prizes to Lauren Sumner-Rooney and Philip Hollyman.

Following three days of intense academic presentation and discussion, the final day was planned to provide a choice from three ‘lighter’ options providing a taste of Cambridge. Richard Preece and Tom White organised a trip to study the land and freshwater molluscs present in the Cambridge Botanic Garden. This trip followed on from an earlier ‘Bioblitz’ event that took place in the gardens in July 2011 when (combined with some earlier historic records) an extraordinarily diverse assemblage of land and freshwater species were recorded (Preece and White, 2012). Those wanting some relief from malacology could alternatively opt for a ‘blue badge’ guided tour of Cambridge’s historic buildings or risk a dip into the River Cam during a punting session on the river.

The Conchological Society made its presence known at the conference with a display of Society publications and other literature. At the conference dinner (figure 7) we were also able to give a vote of thanks to David Aldridge (St Catherine’s College Cambridge) and the rest of the Malacological Society’s conference committee³ for organising such a stimulating and successful event .



figure 7: Conference discussion over lunch.

The talks were extremely wide ranging. It is perhaps invidious to select particular presentations and posters, but here I describe a selection that I found particularly absorbing, providing a ‘flavour’ of the event and that might also be of interest to other Conchological Society members.

Summaries from a selection of conference presentations:

Catastrophic events shape patterns of mollusc biodiversity in ancient lakes. Tom Wilke (Justus Liebig University, Giessen, Germany)

Ancient lakes (in existence for at least 20,000 years, a time pre-dating the last glacial maximum) frequently contain large numbers of endemic species. Examples include Baikal (Russia), Tanganyika and Malawi (central Africa), Titicaca (Andes, South America), Biwa (Japan) and Ohrid (Balkans). Tom Wilke’s introductory keynote talk explored the possible evolutionary patterns and processes that have resulted in the high biodiversity in such lakes. Are their faunas the result of the lakes acting as reservoirs for relict species that have died out in surrounding but less stable environments, or did the lakes serve as cradles of evolutionary radiation that occurred within the lakes themselves? Tom combined evidence from both molluscan phylogenetic and palaeontological sources to explore these questions. He showed that in many lakes (such as those in tropical Africa, which may have experienced episodes of water loss) the current faunas are very much younger than the lakes, with most evolutionary diversity occurring after catastrophic events. Interestingly, he suggested that lakes at higher latitudes, such as Ohrid (a European UNESCO World Heritage Site), are less affected by such periodic catastrophes. The extraordinary diversity in Ohrid (the lake supports 343 endemic species including molluscs) was explained, not by a burst of evolution following a catastrophic event, but as a consequence of prolonged environmental stability that resulted in reduced extinction rates and continuous speciation and radiation.

The Lusitanian species *Geomalacus maculosus* – a ‘native’ Irish Slug? Inga Reich (National University of Ireland)

Inga Reich delivered a talk about the origin of the Kerry Slug *Geomalacus maculosus* (an EU protected species) in Ireland, a subject of long-standing debate. Is it ‘native’ to the country, representing in situ survival through the last glacial stage, or is it a relatively recent colonist? Phylogenetic data from Ireland and Spain indicate that the Irish populations have reduced genetic diversity consistent with recent introduction from Iberia, probably by human agency, although the timing of this introduction has not yet been established. This finding poses issues relating to the conservation status of the species. It was suggested that the Iberian populations are very important to maintain genetic diversity, but that climate change may, unlike in Ireland, have negative effects there. It was suggested that captive breeding of Iberian stock may be important to maintain genetic variability.

Malacology and marine climate: using mollusc shells to investigate the history of the marine environment during the past 1,000 years . Paul Butler (School of Ocean Sciences, Bangor University)

Paul summarised recent work undertaken on the growth-banding patterns in the shells of some very long-lived bivalve molluscs, such as *Arctica islandica* and *Glycymeris glycymeris*. Like trees, such species add annual growth increments, the widths of which vary, reflecting the local environmental conditions (e.g. temperature, nutrient availability) during which the growth occurred. These annual banding patterns can be recognised in the same and other species that lived in the same vicinity and, together

with geochemical data, can be used to build annually resolved records extending back hundreds or even thousands of years. These records can therefore be used to investigate changes in ocean circulation patterns, in climate, and as a means of quantifying radiocarbon reservoir effects that affect the dates derived from marine organisms.

MolluscaBase – announcing a World Register of all Molluscs. Serge Gofas (University of Málaga)

Serge Gofas, acting as the spokesperson for a further 15 eminent malacologists, announced the launch of the new MolluscaBase initiative. Currently the Mollusca, the second largest phylum on earth, lack a global listing of recent or fossil species. There is currently a World Register of Marine Species (WoRMS), which contains 44,000 valid recent marine species, but there is no similar list for freshwater and terrestrial molluscs (estimated to include about 5,000 and 23,000 species respectively). It is also estimated that there is additionally a similar number of named fossil Mollusca. It is intended that MolluscaBase, which is supported by LifeWatch, (the E-Science European Infrastructure for Biodiversity and Ecosystem Research) will build upon the WoRMS initiative and also incorporate existing initiatives (such as CLEMAM, FreshGEN, and Fauna Europaea). It intends to become the authoritative taxonomic data base (and will include known distributions as well as taxonomic history) using published sources and built by active malacologists. To complete the goal of list-completion will require help! All malacologists with a taxonomic interest are invited to participate. If you are interested let the WoRMS team know at info@marinespecies.org or contact sgofas@uma.es. [see also page 6 – Ed.]

Unravelling the taxonomy of *Myosotella* (Gastropoda: Ellobiidae): penial structure is the key. António de Fias Martins (University of the Azores).

António gave a talk discussing his work trying to resolve *Myosotella* issues. Tony is employing anatomical studies of *Myosotella* penial complex to try to resolve questions about the range of the two species *M. myosotis* and *M. denticulata*. Tony has asked for help from malacologists all over Europe in providing him with fresh specimens to use in his studies. Read more about his work and how you might be able to help in a further short article in this issue of Mollusc World.

Conservation of European Freshwater Mussels: Historical Background, challenges and Future Perspectives. Manuel Lopes-Lima (University of Porto / Mollusc Specialist Group, Cambridge).

Compared to a North America with its approximately 300 species of freshwater mussels, Europe has relatively low diversity, with only 16 species of freshwater Unionidae bivalves. Nevertheless European mussels are ‘keystone’ species in many aquatic habitats across the continent but worryingly many species are declining, vulnerable or endangered. Manuel Lopes-Lima presented a talk discussing a pan-European initiative (involving a further 48 malacologists) aiming to coordinate unionid work across the continent. Current knowledge on species is unevenly spread with considerable variation existing between species and countries. Additionally disproportionately more is known about certain widespread taxa such as *Margaritifera margaritifera* and far less about some of the locally distributed species from southern Europe. In order to develop a more consistent and effective conservation for all European Unionidae, the initiative aims to foster greater

international cooperation and the standardisation of survey and conservation techniques.

Other freshwater mussel talks and posters:

Freshwater mussels are currently a ‘hot topic’ with projects taking place across the continent - several talks and posters also focussing on mussel-related conservation initiatives (figure 8). Rebecca Kyle (Queen’s University, Belfast) gave a presentation describing efforts to both captive breed *Margaritifera margaritifera* and also undertake habitat improvement in one of Northern Ireland’s six remaining pearl mussel rivers. Also dealing with *M. margaritifera* Janhavi Marwaha of the University of Bergen, Norway, discussed work investigating if juvenile mussel growth rate relates to time spent on host fish gills. A further *M. margaritifera* project was the subject of Alexandra Richter’s poster describing work by her and three colleagues at the University of Oviedo, Spain, on the distribution, population structure and growth of the mussel in the river basin of the Narcea in Northern Spain.

Other mussel species were also considered. Joaquim Reis (Instituto Português de Malacologia, Albufeira, Portugal) described efforts of his team to restore and enhance the habitat of a small temporary stream to assist populations of the endangered southern European *Unio tumidiformis*. Iga Lewin (University of Silesia, Katowice, Poland) presented a poster describing rare, threatened and alien molluscs living in lowland rivers and oxbows in an agricultural area of the country. Her work included reference to *Unio crassus* (a strictly protected species), *Pseudanodonta complanata* and *Anodonta cygnea*. Katarzyna Zajac (Polish Academy of Sciences, Kraków, Poland & working with T. Zajac) presented two posters also dealing with *Unio crassus* studies in Poland, one looking at what can be inferred from mussel shells and a second detailing a project to study habitat selection in a mountain stream by the mussel. For those interested in mussel biology, conservation and biogeography Karl-Otto Nagel’s (Senckenberg Research Institute, Frankfurt am Main, Germany) poster held special significance. Otto is working on the collection of river mussels housed in the Senckenberg Research Institute and is, with about 60,000 mussel specimens, amongst the largest worldwide. In terms of conservation the collections are of immense value as they contain material revealing the unionid faunas of all major European rivers dating back to a period where they were exposed to relatively low levels of human impact. This resource allows species range shifts, declines and other changes to be studied in a historical framework.



figure 8: ‘Mussel Men’ (L. to R.: Katarzyna Zajac, Karl-Otto Nagel, student delegate, Manuel Lopez-Lima). International cooperation between unionid experts from Poland, Germany and Spain.

Strange snails indeed: Swash-Surfers, Self-Mutilators, Wave-Combers and Cannibals that dominate Panamic sandy beaches Winfried Peters (Indiana/Purdue University, USA and representing nine other colleagues from the USA, Costa Rica and Uruguay).

If one talk was to be awarded a prize for ‘fun and entertainment’ then it had to be that delivered by Winfried Peters. Winfried’s talk focussed upon a group of olivid species (families Olividae and Olivellidae) that are common inhabitants of wave-swept sandy beaches on the American west coast between Baja, California and North Peru. Three olivid species display a range of unusual behaviours adapting them to live in this dynamic environment including the use of mucus sheets to capture particles from the backwash of waves and also using flattened parts of their bodies to act as underwater sails to move on the beach surface using wave swash. One of these species, *Agaronia propatula* is an aggressive opportunistic predator, that not only preys on other smaller olivid species but also cannibalistically on smaller individuals of its own species. The talk was accompanied by fascinating movie footage showing these snails in action. Particularly memorable was a ‘race’ across wet sand between a larger pursuing *A. propatula* and a smaller olivid ‘desperately’ attempting to avoid capture. The inevitable outcome showed the smaller gastropod enveloped by foot folds of the pursuer, to be pulled down into the wet sand and eaten. *A. propatula* is so aggressive that it was even shown attempting to attack a human finger, temptingly placed in its path.

Marine molluscs at high latitude Lloyd Peck (British Antarctic Survey).

Lloyd Peck, who delivered the prestigious 2004 Royal Institution Christmas Lectures, gave the final keynote talk. He spoke about the particular adaptations exhibited by organisms that inhabit high latitude polar regions. However, he pointed out that molluscs are not well represented in such places. Difficulties that need to be overcome include low temperatures and a highly seasonal environment, coupled with the presence of ice in various forms. He played a video showing how rapidly certain bivalves can burrow following dislodgement – a useful behavioural adaptation to such extreme dynamic environments affected by floating ice.

Conference overview

EuroMal 2014 was an academic conference, almost exclusively involving teams of people from universities or research institutions (such as the British Museum, British Antarctic Survey and Biodiversity and Climate Research Centre in Frankfurt). There was little or no evidence of lone amateur or ‘citizen science’ input or influence, which of course forms a considerable part of the Conchological Society’s remit. Nevertheless there was much here to interest, enrich and involve society members. It may surprise many how much taxonomic and evolutionary work now relies upon molecular and phylogenetic techniques. About 20% of the conference talks, and many of its posters, involved partial or complete use of such techniques. Taxonomical studies based upon shell morphology and / or animal anatomy are increasingly being accompanied or replaced by molecular techniques. Thus revision of the Pyrenean genus *Pyrenaearia* (by a team from the University of the Basque Country) and also the evolutionary

insights into the origin of Ireland’s *Geomalacus* (see notes on Inga Reich’s talk above) rely on molecular phylogenetic techniques. There are challenges here for the Conchological Society as we are increasingly likely to need to form partnerships with organisations that might assist us to provide molecular analysis facilities when we embark upon taxonomic and some evolutionary work. It also suggests that the Society’s strengths probably lie in its conservation and biogeographical (‘recording’) work; in these fields there is still plenty to valuably contribute to for those not professionally working in an academic institution.

A conference such as EuroMal 2014 is both refreshing and challenging in providing insights into the whole spectrum of malacological work, both within and beyond one’s range of interest. It is also invaluable in making contact with malacologists from elsewhere in Europe and the world. All of the Society’s biogeographical, taxonomic and conservation work has a European perspective; we can’t operate in isolation. This is especially clear in our conservation work, which is increasingly focussed by the requirements of the EU Habitats and Species Directive. This was brought home particularly clearly in relation to the considerable interest and volume of work involving freshwater mussels across the continent.

EuroMal 2014 was extremely well organised; no detail, however small, had been overlooked in order to make delegates feel at home. Lunches, served in The Main Hall of St Catherine’s College, gave a welcome break from proceedings to allow informal discussion and networking, whilst enjoying some tasty and imaginative dishes. The Conference Dinner, held at Corpus Christi College on the Wednesday evening, was a splendid event; delegates who only three days before were strangers now met as friends and colleagues. The next EuroMal conference will be held at Kraków in Poland in 2016. If this event is even partially as rewarding as that in 2014, then it would be well-worth more Conchological Society members attending. It will broaden your perspectives, present new challenges and allow you to meet up with equally enthusiastic colleagues from across Europe (and beyond); quite apart from anything else it will be extraordinarily enjoyable.

Acknowledgements

Thanks are due to Richard Preece and Tom White for assistance in the preparation of this report.

Reference

Preece, R.C. and White, T.S. (2012) Molluscs in the Cambridge Botanic Garden *Nature in Cambridgeshire* **54**: 53-55.

Notes

¹**Societies involved with EuroMal 2014:** Including: The Conchological Society of Great Britain & Ireland; Deutsche Malakozoologische Gesellschaft; Instituto Português de Malacologia; Magyar Malakológiai Társaság; Malacological Society of Latvia; Nederlandse Malacologische; Sociedad Española de Malacologia; Società Italiana di Malacologia; Société Belge de Malacologie; Stowarzyszenie Malakologów Polskich.

²**Previous EuroMal conferences**¹ 2000: Genoa, Italy; 2002: Vigo, Spain; 2003: La Rochelle, France; 2005: Naples, Italy; 2008: Ponta Delgada, Azores; 2011: Vitoria-Gasteiz Spain.

³**The conference organising committee:** Jon Ablett (Natural History Museum), David Aldridge (University of Cambridge), Katrin Linse (British Antarctic Survey), Richard Preece (University of Cambridge), Tony Walker (Kingston University), Tom White (University of Oxford).

Field meeting to Bedfordshire: Wrest Park and Woburn Bioblitz

18th and 19th September 2014

Peter Topley

Wrest Park is an English Heritage property near Silsoe, Bedfordshire. It comprises a country house, and Wrest Park Gardens, both Grade I listed. Wrest Park has an early eighteenth-century garden, spread over 92 acres, which was probably originally laid out by George London and Henry Wise for Henry Grey, 1st Duke of Kent, then modified by Lancelot 'Capability' Brown in a more informal landscape style. The park is divided by a wide gravel central walk, continued as a long canal, that leads to a Baroque style pavilion (the Long Water). The boundary canals were altered to take a more natural shape by Capability Brown, who worked there between 1758 and 1760, and who also ringed the central formal area with a canal and woodland. From 2007 extensive restoration work on the house and garden has been carried out.

On Thursday 18th September eight of us from the Bedfordshire Natural History Society invertebrate group (BIG) and the Conchological Society met at Wrest Park with the aim of recording land and freshwater molluscs and other invertebrates at this site.



figure 1: The author and Tom Walker recording freshwater molluscs at Lady's Lake, Wrest Park, Beds. (photo: Caren Topley)

The lakes and canals in general have been the subject of drainage and restoration over a number of years and feature a lining of either clay or concrete and areas of weed or open water with variable shading from overhanging trees. The formal Long Water yielded vast numbers of *Potamopyrgus antipodarum* and many *Bithynia tentaculata*. Also present here in smaller numbers were the planorbids *Anisus vortex*, *Gyraulus albus*, *Gyraulus laevis*, plus the most common species here, *Planorbarius corneus*. The pond snail *Radix balthica* was also common and a number of bivalves were present, including *Sphaerium corneum* and *Pisidium* species (identity to be confirmed). One of two clay-lined side ponds, at right angles to the Long Water and called 'Lady's Lake', was also sampled (figure 1). This had a very similar mollusc fauna, as to be expected since the water for this pond drains into it from the Long Water, with the addition of *Lymnaea stagnalis*. A large horseshoe-shaped canal surrounds the southern part of the park on three sides and this was sampled from the bank in a number of places, although the number of species found was small due probably to large areas of stagnant water and hard, concrete substrate (figure 2). Additional species recorded here included *Hippeutis complanatus*, *Physella acuta*, *Valvata cristata* and a single *Bythinia leachi* although largely just empty shells.



figure 2: Sampling the East canal at Wrest Park, Beds. (photo: Caren Topley)

After lunch Tom Walker and I focused on the land snail fauna. On the northwest corner of the site is situated the 'Bath House', a sandstone folly surrounded by damp mossy vegetation and trees on the edge of small ponds and water features (figure 3). Tom was lucky to spot on a twig a fine example of the spiny snail, *Acanthinula aculeata*, (figure 4) which was also present in the surrounding moss, where we found *Carychium tridentatum* in very large numbers (figure 5) with smaller numbers of other species including *Aegopinella pura* and *A. nitidula*, *Nesovitrea hammonis*, *Vallonia costata*, *Vitrea crystallina*, *Punctum pygmaeum* and *Trochulus hispidus*. We later looked in some of the more wooded areas of the Park but few mollusc species were recorded, among them *Aegopinella nitidula*, *Arion subfuscus*, *Deroceras reticulatum*, *Discus rotundatus*, and *Oxychilus navarricus helveticus*.



figure 3: Damp mossy habitat near the Bath House, Wrest Park.



figure 4: *Acanthinula aculeata* (height c. 2.5 mm) at Wrest Park.



figure 5: Colony of *Carychium tridentatum* (height c. 1.75 mm) in moss/litter sample from near the Bath House at Wrest Park.

The following day Tom and I were invited to join other local naturalists on the first day of a Bioblitz in Woburn Safari Park, which is about 10 miles to the West of Wrest Park. Woburn Park is situated on the Greensand so I expected numbers of molluscs there to be small. However we recorded ten slug species, eight of them under the many logs lining the path in a closed down section of the 'Australia Walkthrough' area, previously inhabited by Wallabies and Rheas (figure 6) (*Arion ater* agg., *Arion fasciatus* (figure 7), *Arion distinctus*, *Arion intermedius*, *Deroceras laeve*, *Deroceras invadens*, *Deroceras reticulatum* and *Limax maximus*).



figure 6: Recording in the 'Australia Walkthrough' area, Woburn Safari Park.



figure 7: *Arion fasciatus*, on log, 'Australia Walkthrough' area, Woburn Safari Park.

We were let into the lemur enclosure by the keeper to check for molluscs under the watchful gaze of the inhabitants (figure 8) and also investigated the Parrot (figure 9) and Lorikeet houses (where under a drain cover in the latter we found two further slug species, *Limacus flavus* and

Lehmannia valentiana along with the snail *Oxychilus cellarius*). A solitary *Vallonia cf. excentrica* was discovered under grass near a water feature in the 'animal encounters' section, otherwise land snails were few and far between. A further search in the afternoon by the author and Alan Outen under Horse Chestnut trees along the drive yielded just *Oxychilus alliarius* and the Helicids *Cepaea nemoralis*, *Monacha cantiana* as well as further nice examples of *Arion intermedius* (figure 10). On the second day of the Woburn Bioblitz Alan added yet another slug species, *Arion subfuscus*, to the list!



figure 8: Tom Walker talking to the Keeper with a friend (!) in the Lemur enclosure, Woburn Safari Park.



figure 9: Investigating the Parrot House at Woburn for molluscs (a solitary *Cornu aspersum* was found in the food preparation area!).



figure 10: Two *Arion intermedius* on a twig under Horse Chestnut, Woburn Safari Park.

Finally it is not often that other invertebrates are featured in Mollusc World, but for both these field events we were accompanied by those with an interest in recording other groups and some of their findings were of significance to the county of Bedfordshire, so I thought that I would include some remarks by Alan Outen together with some images of some records from Wrest Park, for those who are interested. This also demonstrates the opportunities that can arise for participants to increase their knowledge of less familiar groups when joint field meetings are held between Conch. Soc. and other organisations.

Alan writes:

A species of plant hopper *Anakelisia fasciata* (family: Dephacidae, order Hemiptera) which I swept from sedges by the river at Wrest Park was new for Bedfordshire and a local species nationally so a very good find. It was about 4 mm long and like all this group it can jump considerable distance (30 cm being routine and they often then convert the jump into a flight!) This meant that after having taken just a few, less than brilliant images (figure 11), the creature disappeared without trace!

The barkfly species *Valenzuela atricornis* (an order of insects called Psocoptera) found by Ian Dawson with another by me was also new for Bedfordshire (figure 12). This was one of a remarkable total of 14 species of this group found at the site, several of which have few records for the county. Many naturalists are completely unaware of this group of tiny insects!

A curious bag-moth species was found by Ian Dawson (*Luffia ferchaultella* (Psychidae), figure 13). This species was rarely recorded in Bedfordshire up until 2000 but has now proved to be fairly common with different techniques for finding it! Only larvae and the self-fertile wingless female of this species are known: no males! The cased larvae feed, often gregariously, on lichen on tree trunks and, sometimes, on posts, sloe branches, or rocks. After the moth has emerged, the empty cases, about 6 mm long, remain fully exposed on the trunk into the following spring when they can alert attention to the presence of the smaller occupied cases, often concealed in crevices.

The final image (figure 14) shows the spider *Clubiona phragmitis*. This is yet another of the many things found in the sedges in the area southeast of the orangery at Wrest Park. Although this is not uncommon it does have very impressive jaws!



figure 11: A plant hopper, *Anakelisia fasciata* from Wrest Park, new to Bedfordshire. (Photo: Alan Outen)



figure 12: A barkfly, *Valenzuela atricornis*, from Wrest Park, also the first record for Bedfordshire. (Photo: Alan Outen)



figure 13: A bag moth, *Luffia ferchaultella*, Wrest Park. (photo: Alan Outen)



figure 14: Spider, *Clubiona phragmitis*. (Photo: Alan Outen)

Acknowledgements

Thanks are due to Sheila Das and Chris Slatcher of English Heritage for permission to record and for approval of the risk assessments for the meeting at Wrest Park. At Woburn Safari Park the Bioblitz was organised with permission of the Duke of Bedford and we were all grateful to Hayley Potter and the staff at the Park who accompanied us and showed a great interest in the invertebrate recording. I thank Alan Outen for co-leading the Wrest Park meeting, organising our access to the Woburn Bioblitz and encouraging us to combine with the BIG group on these occasions.

Conchological Society

Book Sale 2014/5

Terry Wimbleton's library

Another book sale will be held this winter. It includes a very good range of books, mainly from Terry Wimbleton's library. It is intended that the catalogue will be posted on the website by the end of November; and that bids must be received by midnight on 28 February 2015. (Please see the website for updates.)

The rules of the sale will be available on the website. Preference will be given to bids from members of the Society and of the British Shell Collectors Club on an equal basis. People who are not members of either society may bid, but their bids will only be considered in the absence of acceptable bids from members.

If you do not have web access and would like paper copies of the catalogue, bid form and rules, please send a stamped addressed envelope (A4 envelope, large letter rate stamp) to Bas Payne, The Mill House, Clifford Bridge, Drewsteignton, Exeter EX6 6QE.

Bas Payne

Rediscovery of the Aldabra banded snail *The Seychelles Islands Foundation*

The Aldabra banded snail (*Rhachistia aldabrae*), declared extinct in 2007 (Gerlach, 2007), has been rediscovered living on Aldabra (figures 1 and 2). Aldabra Atoll, part of the Seychelles archipelago in the Western Indian Ocean, is one of the largest raised coral atolls on Earth and is significantly less disturbed than most other coral atolls elsewhere in the world. Aldabra was designated a World Heritage Site by UNESCO in 1982 and is managed and protected by the Seychelles Islands Foundation (SIF), a Public Trust established by legal decree in 1979. Aldabra is a refuge for many endangered species including the world's largest population of giant tortoises (*Aldabrachelys gigantea*) and one of the largest congregations of nesting green turtles (*Chelonia mydas*) in the Indian Ocean.

Records of land snails on Aldabra were first made in 1895, with occasional collections since then and extensive surveys in 1997, 2000 and 2005 (Gerlach 2007). Aldabra supports one freshwater and 16 terrestrial mollusc species. *R. aldabrae* is endemic to Aldabra where in the past it has been recorded from islands in the archipelago including Picard, Malabar, Grande Terre, Ile Michel and Esprit, (Gerlach, 2006). Fossil remains of this species have been found on Aldabra in deposits dating back 100,000 years (Taylor *et al.* 1979).

Before the rediscovery of *R. aldabrae* the last living individual of the species was recorded in 1997. Subsequent searches yielded only shell remains. The snail's apparent demise was linked to declining rainfall on Aldabra and was widely publicised internationally as one of the first casualties of climate change impacts.

The snails were spotted on Saturday 23rd August 2014 by the keen eyes of Junior Skipper Shane Brice when he noticed a snail that he didn't recognise in dense mixed scrub of a little-visited part of Aldabra. 'I was bush-bashing through the scrub when I spotted a mysterious snail that I'd never seen before on the island, I was very excited!' he said.

Senior Ranger and Assistant Training Officer Catherina Onezia's suspicions were immediately raised as the snails were found on one of Aldabra's endemic trees. 'When Shane showed me the snail I thought deep down, surely it can't be the endemic snail! I only dared to believe it once I checked it out back at the office'. On searching the area further, the team located several individuals, including juvenile snails. The discovery of the young snails is very encouraging as the last juveniles were recorded in 1976. The juvenile snails were considered to be particularly vulnerable to desiccation as a result of reduced rainfall.

The team of Seychelles Islands Foundation (SIF) staff were exploring infrequently visited parts of Malabar Island when the snails were found. Malabar is the second largest island of the ring of islands that make up Aldabra Atoll, to the north of the lagoon. One of the aims of the field expedition was to document all of the invertebrates observed, but the team never dreamed that they would make such a find. The snails are unmistakable, with beautiful elongated deep purple shells lined with bright pink bands. Identification of the snails has also been confirmed by mollusc experts Dr Vincent Florens (University of Mauritius) and Pat Matyot.

There is still very little known about the ecology of this rare snail but the rediscovery provides an incredible second chance to protect and study this historical species in the wild

and ensure that it is not lost again. Climate change may not have caused the demise of this snail, but climate change impacts remain a likely threat to this species and many others globally.

The rediscovery of the Aldabra banded snail provides a beacon of hope. SIF CEO Dr Frauke Fleischer-Dogley said of the rediscovery, 'Despite major global environmental threats like climate change, this discovery shows that investments into protecting unique island biodiversity are well placed. This snail provides hope for other island species, of which we have already lost too many. I hope that those of the international community take note that their investment is needed to generate such success. Nature has a resilience that may surprise us'.



figures 1 and 2: Living *Rhachistia aldabrae* on Malabar Island, Aldabra Atoll, Seychelles. (photos: © Catherina Onezia, SIF)

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Editorial Acknowledgements

The Hon. Editor would like to thank Rowana Walton, Communications Officer of SIF, for permission to use this edited version of their press release and accompanying photos. Many thanks also to Kevin Gray for bringing this to my attention via an article in the Times newspaper.

Neritilia are widely distributed in the tropics and subtropics with the majority living in the Indo-Pacific. The adults of the most common species are found in freshwater streams and rivers. In common with some genera of Neritidae, such as *Clithon* and *Neritina*, the planktotrophic larvae emerge from egg capsules deposited on rocks and other hard surfaces and are carried downstream and out to sea where the larval shell develops. The larvae eventually settle in river mouths and crawl upstream to reach freshwater. However *Neritilia* also occur in other habitats: *N. littoralis* is an interstitial species from Amami-ohshima Island, Japan, which lives on the underside of rocks embedded in coarse-grained sand in the lower intertidal zone where brackish water flows through a porous sand bar (Kano *et al.* 2003) and three species are known from anchialine habitats. 'Anchialine' being a term used to describe pools of salt or brackish water which fluctuate with the tides and have subterranean rather than surface connections to the sea. *Neritilia hawaiiensis* lives in volcanic anchialine pools on Hawaii (Kay 1979) and *N. mimotoi* inhabits an anchialine lake in western Japan (Kano *et al.* 2001). *Neritilia cavernicola* was described in 2004 by Kano & Kase from anchialine caves on Bantayan and Panglao Islands in the Philippines.

For some time *Neritilia* was considered to be a genus of Neritidae even though the family Neritiliidae had been established by Shepman in 1908. Holthuis (1995), on the basis of anatomical data, reassigned *Neritilia* to the Neritiliidae and this has been confirmed by subsequent molecular studies (Kano & Kase 2002). There are also differences in shell morphology which are considered by some authors to distinguish the two families including spiral microstriae on the last whorl of the larval shell and a globular embryonic shell, wholly or partially obscured by a thin larval shell layer. The axis of the protoconch in *Neritilia* is noticeably inclined relative to the axis of the teleoconch and this was regarded as an important characteristic in separating the shell of Neritiliidae from that of Neritidae. However species of *Pseudodostia*, a fossil genus of Neritidae, also show this characteristic (Tracey & Symonds, in prep.) and it is not, therefore, a reliable distinguishing feature. *Neritilia* is uncommon in the fossil record and the earliest known species is *Neritilia lawsoni* from the early Eocene, Blackheath Formation some 55 million years ago (Symonds & Tracey 2014).



figure 1: Hinagdanan Cave, Panglao Island, Philippines.

A holiday in the Philippines in November 2012 gave me an opportunity to visit Hinagdanan Cave on Panglao Island, the type locality of *N. cavernicola*. The cave (figure 1) some 60 m from the shore, is not particularly large and a substantial part of it is occupied by a body of clear, brackish water. It is not completely dark as part of the cave roof has collapsed allowing a shaft of light to enter which in turn has enabled algae to grow. There is no obvious connection to the sea but as the water level fluctuates with the tide there must be a subterranean link. The neritiliids occurred in cavities in the limestone floor of the cave in shallow water. Kano & Kase (2004) also found *Thiara scabra* and *Melanoides tuberculata* in the cave but I did not find either species. They are both common in surface streams in the Philippines and are thought to occur by accident in caves, unlike *N. cavernicola* which is an obligate stygobiont, living only in caves. It is a small species, the specimen shown in figure 2 having a maximum diameter of 2.6 mm, although some specimens exceed 3 mm. The shell is translucent white and the skin is also white, a common adaptation to a cave existence. It is smooth apart from very fine growth lines and micropustules on the callus covering the septum on the inner lip (figure 3.). These micropustules form a characteristic feature which it shares with other Recent *Neritilia* species and also the fossil species *N. lawsoni*. As with the other



figure 2: *Neritilia cavernicola*. Maximum diameter 2.6 mm.

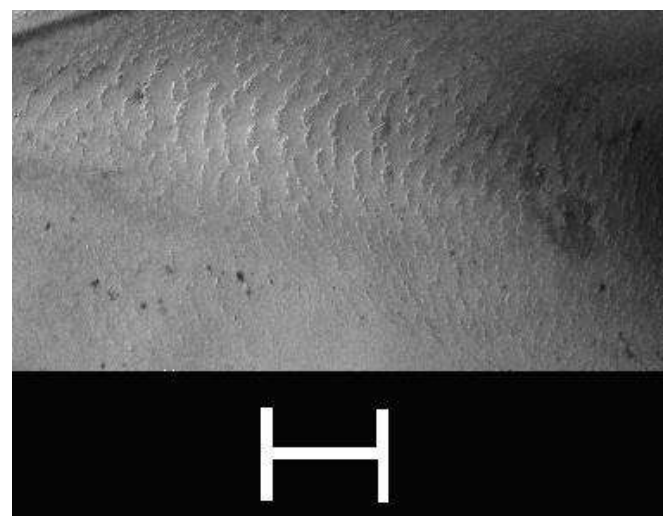


figure 3: Microornament on the columellar callus of *N. cavernicola* (Scale bar 100 μ m).

species of *Neritilia*, its eggs are contained in capsules and these are deposited on the limestone floor of the pool. The larvae are planktonic and presumably are carried by the tide through a subterranean passage and out to sea. The caves on Bantayan and Panglao are some 200 km apart which raises the question of how such a small mollusc with a very specialised habitat has managed to colonise two caves so far apart. Although there may be as yet undiscovered colonies in caves on other islands in between, the drifting of their planktonic larvae with ocean currents seems to be the most likely means of dispersal (Kano & Kase 2004).

Acknowledgments

I am grateful to the Natural History Museum, London for the use of the Leo 1455VP scanning electron microscope in the preparation of figure 3.

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The following figure from Malcolm Symond's article 'Observations on some nerites from New Caledonia' (MW 35, July 2014) was ommitted in error and is included here:



figure 2: Beach north of Hienghène, New Caledonia, where freshwater flows across the shingle.

Gibbula species mentioned in 'Some notes on shells in the Lofoten Islands' (Mollusc World issue 35:20-21, July 2014)

Peter Topley

Following my mention, in the above article in the previous issue of this magazine, of recording *Gibbula umbilicalis* in the Lofoten Islands, I have received helpful comments from both Ian Smith and (via Ian) Ivan Nekhaev. They point out that *G. umbilicalis* has not been recorded as occurring in Norway and is therefore likely to have been a mis-identification on my part (and also of Herschberg (1992) who states that it is 'The commonest member of this family [Trochidae] in the littoral zone of Northern Norway'...), probably mistaking the more flattened appearance of juvenile *Gibbula cineraria* for this species. Unfortunately I did not collect specimens of *Gibbula* in Lofoten, relying on my field notes, so this may have been the case (despite my frequent experience of seeing juvenile *G. cineraria* in the U.K. – figure 1) and I therefore cannot go back and confirm the presence of *G. umbilicalis* subsequently from any specimens collected. Ian comments that *G. umbilicalis* does not have a fully planktonic larval stage and would be very unlikely to survive winter temperatures in Lofoten, which despite the warming effects of the gulf stream, are below freezing for around one third of the year due to the islands' location above the Arctic Circle. NBN Gateway shows records of *G. umbilicalis* for both Orkney and even Shetland (although the two records for the latter from the 1970's may be doubtful) but there have as yet been no confirmed records from Norway (Høisæter, 2009) at this latitude.



figure 1: *Gibbula cineraria*, Adult and juveniles, Filey Brigg, N. Yorkshire.

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NBN Gateway: <https://data.nbn.org.uk>

Acknowledgements

To Ian Smith for highlighting this anomaly and for forwarding helpful comments from Ivan Nekhaev as well as the two further useful references cited above.

On our recent visit to Russia to see the wonderfully decorated cathedrals, churches, monasteries and palaces (which included the Winter palace now the Hermitage museum) of St.Petersburg we came across some small exquisitely painted lacquered papier-mâché boxes (figure 1). You might well ask what have these boxes to do with molluscs?



figure 1: A typical group of lacquered boxes.

We were told that these boxes were produced in four villages north of Moscow: Palekh, Kholui, Mstiora and Fedoskino. The boxes I was interested in came from Fedoskino (Pedocknho in Russian). Fedoskino is a small village about 25 miles north of Moscow. It has a community of several hundred artists plus scores of craftsmen involved in papier-mâché production, lacquering and polishing. There is an art school (it takes over five years to master the techniques of miniature painting) and a museum of lacquer art. A small river meanders through the village which is surrounded by an expanse of forest and grassland. A little wooden church graces the main street and beyond it the artist's workshop looms up through the trees.

My interest in Fedoskino boxes lay in the fact that mother-of-pearl is used on some of them. The mother-of-pearl comes from the black-lipped pearl oyster (*Pinctada margaritifera*) which is pearlised and then cut into extremely thin slithers which are then glued onto the lid. The picture is then painted in oils and re-lacquered. The mother-of-pearl creates an extraordinary inner luminosity and ethereal effect under the paint. It is particularly good in snow scenes (figure 2) and gives a shimmering effect on water, glass, windows (figure 3), silks and satins (figure 4). The favourite subjects of the Fedoskino artists were land and cityscapes either in autumn or winter but their repertoire today has extended to fables, folklore and many other subjects.

In the past the boxes tended to be square, rectangular and oval but today new shapes and sizes are being introduced. We saw one or two boxes with small whole pearlised pearl oysters being used as lids (figures 5a and b); some with a painted pearlised paua shell (figure 6); others using fresh water mussels which were by-products of the Chinese and Indian pearl industries.



figure 2: A Fedoskino winter scene on a box lid. Note the effect of the mother-of-pearl around the church towers.



figure 3: A picture of the Cathedral of Christ the Saviour, the canalised river Moskva, part of the Kremlin wall and towers and the city of Moscow behind.



figure 4: A couple, showing how the mother-of-pearl highlights the silk dress.



figures 5a and b: A picture of St.Isaac's Cathedral, St.Petersburg , with a monument of Nicholas 1 on horseback, and an open box showing the shell lid.



figure 6: A painted pearlised paua shell lid on the box.

Some years ago I bought a couple of brooches, at an antique fair, with pictures of the countryside in autumn and winter. It wasn't until after visiting Russia that I realised that they were both signed and had come from Fedoskino (figure 7). On our visit we didn't see any brooches for sale but a number of beautifully painted pendants instead, also signed (figure 8). There were thousands of boxes for sale both in cheap souvenir

shops, market stalls and soviet state owned shops. The question was which boxes were genuine and which counterfeits? Luckily there are three ways to tell the difference. The first was to find the name of the village in which it was painted, the artist's signature and the date it was painted, along the edge of the lid. The second was to look for the artist's brush strokes. The third the price! Genuine boxes were extremely expensive being between £200 (10606 roubles) to £1000 (53030 roubles) and more, while the counterfeits were from £20 (1060 roubles) to around £100 (5303 roubles).



figure 7: Two painted and lacquered mother-of-pearl brooches from Fedoskino.



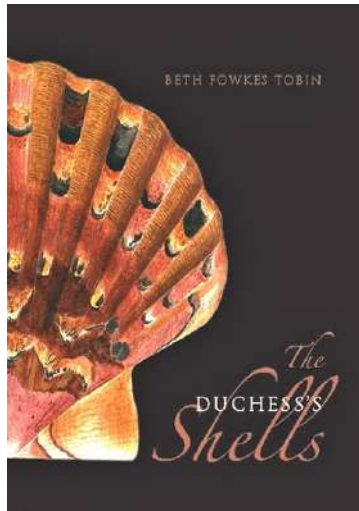
figure 8: A disc of mother-of-pearl, pearlised, lacquered and painted with a bright red poppy.

To finish with we found not one terrestrial or freshwater snail on our 1,350 km journey through the rivers, canals and lakes between St.Petersburg and Moscow.

Book Review: *The Duchess's Shells: Natural History Collecting in the Age of Cook's Voyages* by Beth Fowkes Tobin.

Yale University Press 2014. 316 pp. black & white and colour images and photographs. ISBN 978-0-300-19223-0.

Publisher's price £30.00.



Margaret Cavendish Bentinck, Duchess of Portland (1715–1785) is a well-known name to those interested in the history of conchology due in part to her connections with, and encouragement of, naturalists of her day and her very large and fine shell collection, which included shells collected during Cook's voyages to the Pacific and other sources as well as a large number of British species, but was unfortunately dispersed by auction after her death. Some details of her life and influence have been published previously, for example by Rebecca Stott (*Duchess of Curiosities: The Life of Margaret, Duchess of Portland*, Welbeck: Pineapple Press/ Harley Gallery, 2006) and earlier by Peter Dance (*A History of Shell Collecting*, revised edition, Brill 1986); however, the aim of the author of the present volume is to focus on the shell collection itself in the context of the eighteenth century culture of collecting, shell dealing, patronage, exchange, exploration and book publication. In order to do this she has consulted many sources, including letters that exist between the Duchess and the Dorset naturalist Richard Pulteney, as well as many other contemporary writings and publications. Numbered notes to these references and other comments are provided for each chapter; however, one of the main problems with this book is that these are gathered in chapter order into a single section at the back of the book and there is no separate bibliography.

The book is written in a somewhat academic style where the author describes what she is going to discuss in each chapter before discussing it, leading in some cases to unnecessary repetition and even to chunks of quoted text being repeated. The author also occasionally indulges in what this reviewer feels is an over-analysis of her sources. For example in chapter four she quotes George Forster, a naturalist on Cook's second voyage to the Pacific, speaking of relying on the local population of Tahiti to help them collect specimens: '...they brought off several [specimens]...I also collected by these means many shells...&c.' The author's analysis runs: 'The statement contains a veiled acknowledgement of his dependence on locals to collect for him, but this idea is undercut by the phrase 'I collected', which puts him in the sentence's subject position to suggest that he was the active agent in the process of collecting.'

Furthermore, the phrase 'by these means' buries the islanders' activities in a prepositional phrase and reduces humans to a process ('means'), thus obscuring the islander's role in collecting specimens for him.'

In a section about the eighteenth century naturalist Thomas Pennant relating to his dealings with the Duchess (page 187) the author says 'Although Pennant's dedication in the fourth volume of *British Zoology* is full of kind words about the [dowager] duchess, he managed to slip into six copies a nasty little joke [in Greek and Latin] at her expense, playing up the sexual innuendos that were never far from the surface of conchology [!]. He asked his publisher to include a passage from Virgil about 'the fondness of widowed ladies for this [oblong] shell' [presumably a razor shell]...probably a very bad 'joke' at the duchess's expense... It is not surprising that Sir Joseph Banks possessed one of the six copies containing the joke; such high jinks were typical of the kind of misogyny that the duchess must have encountered often, surfacing frequently as a reaction to her power and influence in this male-dominated sphere.'

Out of interest I immediately went to my own copy of volume IV of the 1777 Pennant and was surprised to find the phrase included. Had I in my possession one of the only six copies not intended 'for the public'? I subsequently went online and found two copies of this volume available to view. On scanning through they both had the offending passage included as well (it is even present in an online scanned copy of the 1812 reprint). I also asked two other Conch. Soc. members to check their copies and the phrases were included in theirs as well. So this has left me a little confused. Either Pennant meant this 'joke' to remain private but his wishes were ignored by the publishers, not only for the 1777 edition but also for the 1812 edition, or this is actually incorrect and every book has this included as a matter of course, in which case the duchess herself and many of her friends before and after her death would have read it, making it not just a little private joke between Pennant and one or two friends but a general addition. I contacted the author about this strange anomaly and she referred to the publishing complexity of *British Zoology* and that it was something to puzzle over!

On the positive side, *The Duchess's Shells* contains much of interest including discussions about the relationships between collectors and dealers of the day, the value placed on specimens, book use and production as well as the 'entertainment' afforded to the public by the sale and dispersion of the Portland natural history collection. A chapter describing the decline into obscurity of the Duchess' important influence in early British conchology and with it Daniel Solander's unpublished descriptions of her shells is very interesting. The book is produced in an attractive format and is well illustrated with examples of relevant shells, contemporary book illustrations, portraits and manuscripts.

Peter Topley

Conchological Baking

Lucy Moore*

Leeds Museums & Galleries conchology collection is a pride of the museum service, has massive research value, and is a valuable resource for learning and display. We hold a range of type and figured material, such as specimens collected by Sylvanus Hanley and material described by Terry Crowley.

The conchology collections have also been drawn upon by another area of Leeds Museums' staff expertise – that of our voluntary project 'Collections through Cake'. The idea is that in turns different curators highlight fascinating objects from our collections – but through cake!

Conchology, and in particular mollusca, have been a popular choice and we thought that readers of *Mollusc World* might be excited to see the fruits (*de mer!*) of our efforts.

Juvenile giant squid cake (figure 2)

The Giant Squid in our collections (figure 1) is a model alas, but it one of the most remarked upon objects in the store and has the additional honour of being the only object that 'isn't real'.



figure 1: Giant squid model in the Leeds Museum Discovery Centre.



figure 2: Juvenile giant squid cake.

Mummies eyes cake (figure 4)

In our Victorian collections are these 'mummies eyes' that we are told are actually made from the lenses of Humboldt squid (figure 3)



figure 3: Nineteenth century 'Mummies' eyes', Leeds Museum Discovery Centre.



figure 4: 'Mummies' eyes' cake.

Ammonite cake (figure 5)

As one of the most recognisable fossils, ammonites are regularly used by our outreach officer to enthuse and educate different groups. This example was part of a typical outreach box, baked entirely by hand. What else can you spot in there?



figure 5: Ammonite and other cakes.

All images are ©Leeds Museums & Galleries.

*Project curator: First World War, Leeds Museum Discovery Centre.

George Hannah (1923–2002): The story behind a shell and how his interest in shells reached from the Pacific Islands to Haslemere Educational Museum June Chatfield

As part of a drive to catalogue the collections at Haslemere Educational Museum, Surrey in 1998 a team of volunteers was assembled and I was asked to co-ordinate the computer cataloguing of the R.H. Moses collection of worldwide shells that had been bequeathed to the museum and arrived in 1950. R. H. Moses was a member of the Conchological Society. One of the volunteers in the cataloguing team was the late George Hannah.

George had previously worked in architectural drawing offices of some London boroughs. His skills of small neat writing were put to good use in labelling and incorporating the new accession numbers. In the course of work with the team at the museum we often had to unravel location data from original labels. George showed remarkable knowledge of obscure islands in the Pacific Ocean: no need to look these up in the atlas, just ask George. It transpired that he had lived on Nauru and visited Ocean Island as a child where his father, the Reverend Percy Hannah was a missionary in the mid-1930s in charge of the Congregational Church on Nauru. We were all intrigued when, one lunch hour, George brought out some albums of photographs taken on Nauru and Ocean Island where his interest in shells began. He related painful memories of treading barefooted on a large tropical spiny sea urchin (we were then just doing an exhibition case on urchins for the new gallery). He had kept some of the shells from Nauru all his life and a few years previously had donated them to the museum. One of these, the Trumpet Triton *Charonia tritonis*, was incorporated in the new galleries that opened in 2003 (figure 1). After a few happy years volunteering at Haslemere, George's health declined and he died of liver cancer in 2002.



figure 1: *Charonia tritonis* from Nauru donated by George Hannah on display in the natural history gallery at Haslemere Educational Museum.

George died a widower and left no surviving family. A friend who had helped to clear his flat came into the museum bearing the photograph albums, an account he had written of his life, some information on family history and a book *Ocean Island and Nauru – their Story* that had been presented by the author to his father and was duly inscribed to him (Ellis, 1935). At the time the staff and volunteers at the museum were very busy working on the new galleries so it was not possible to follow this up, but here was a story worth telling and archive material that needed to be kept safe. It is of interest that the missionary service gave opportunity for shell collecting in remote parts of the world where few other collectors had visited and that

one of this society's past Presidents, the Reverend H.E.J. Biggs, was collecting shells as a missionary in Persia (Iran) also in the 1930s. Some shells from Biggs' collection were given to Moses whose shell collection is now in Haslemere Museum where George Hannah was involved in cataloguing.

The Hannah family and their departure to the Pacific

The Hannah family lived in the north of England, but were originally from Scotland. George's father, Percy Hannah, was born at Morpeth in Northumberland in 1893, and after initially working in the mines with his brother George (George and Percy being much repeated family Christian names), he trained for the ministry and worked as Congregational Minister at Sowerby Bridge, Yorkshire. Here he married Gladys Beverley in 1922 and that was where George Hannah was born in 1923. Gladys Hannah was born in Scunthorpe, Lincolnshire in 1898 and she had trained as a nurse. She was a remarkably strong-minded lady who chose not to say 'obey' or be given away when she married, coped admirably as a missionary's wife in the Pacific islands and lived to be 100.

In 1927 the Reverend Percy Hannah decided to become a missionary with the London Missionary Society and he was posted to Nauru and Ocean Island in the Pacific Ocean. His brother George Richard Hannah had emigrated to Australia a few years earlier and the Hannah grandparents soon followed him. Little George with his parents travelled on the P & O Liner 'Chitral' in 1927 bound initially for Sydney, Australia, a journey of some weeks from whence they transferred to the mission ship 'John Williams 4th' for another long ocean journey to Nauru (figure 2).



figure 2: George Hannah and his mother in a passport photograph taken about 1927, prior to their departure for the Pacific.

Life on Nauru and Ocean Island

Nauru and Ocean Island in the Gilbert Island group in the Pacific Ocean, then British Mandates, were rich in phosphate which was mined and shipped to Australia for fertiliser. Phosphate had been discovered in 1900 and the economy of the islands depended on it. This part of George's life is supported by a manuscript story of his life written in 1993, two albums of photographs (figures 2 to 4) and a newspaper cutting from the *Scunthorpe Leader* of December 1933. This was an account of life on Nauru

relayed home to England by George's mother who was spending Christmas 'with coral reefs and blue lagoons, and sharks, and fringes of palm-trees just behind the foreshore'. There are also copies of family history sent to him in 1998 when he re-established contact with his Australian relations, while his mother was still alive.



figure 3: George's mother being carried ashore as large vessels could not reach the beach.



figure 4: The Hannah family on the coral reef at Ocean Island.



figure 5: George with local person, Nauru.

George had happy memories of his time in Nauru and also going with his parents to Ocean Island; such experiences kindled his interest in going on the shore and collecting shells and it was an influential part of his childhood. However educational opportunities on Nauru were limited so the Reverend Hannah took on some of the role of teacher himself, which may have resulted in the next move. About 1932 George's parents made the decision to take their little boy away from Nauru to live with his paternal grandmother at Broken Hill, New South Wales in the outback of Australia. The memoir recalls this journey. His uncle, George Richard Hannah, worked in the mines and there were various cousins of similar age. At Broken Hill he was many miles inland and was unable to visit the seashore. George duly settled in with the family in Australia but did not see his parents again until 1935 – and at first did not recognise them when they called in to Australia to collect him from his grandmother for the return to England.

Return to England

The Reverend Percy Hannah took a Ministry near Catford, south-east London where George continued his education at Eltham College to gain the Schools Certificate. He started work as a junior at the London County Council and studied architecture in the evenings at Regent Street Polytechnic. In 1942 he was called up for training and service in the Second World War in the Royal Engineers. He went into action overseas serving in Sicily, France, Holland, Belgium and Germany.

The memoir mentions George's war experiences. After this he worked locally in Guildford for British Telecom before transferring to the London area. He held responsible positions in some borough surveyor's departments in London. Shells did not have a place in his life at this time. After the war, he married twice, subsequently losing both wives to cancer.

Connections with Haslemere Museum

At their retirement George's parents had moved to Haslemere and George told me he had visited the Museum when staying with his parents. At the Museum he was encouraged in his interests and given use of the library by Arthur Jewell (Assistant Curator, later Curator). He was thus on hand to be a volunteer at the museum at a later time when, in his 70s he was himself living in Haslemere caring for his own elderly mother. Shells which had gone into abeyance from his time inland in the outback resurfaced later in life and played a part in his recovery after bereavement. He donated some of his large shells to the museum and was an active volunteer in the cataloguing of the R.H. Moses collection (figures 5 and 6). Shell collecting continued in his later years during a holiday in the Channel Islands when he came back with a colourful selection of smaller shells from the beach. A photograph of these was enlarged to form the design background to a shell display in the new galleries that opened in 2003 (figures 7 and 8).

This story links Pacific islands, Haslemere Museum and the Conchological Society through shell collecting and demonstrates the frequent and unexpected inter-relationships in the natural history world. It also highlights the importance of an interest, such as shells, taken in childhood that, after a break, resurfaces to play new roles in later life and gives a rewarding retirement. Many naturalists, including conchologists, can trace their interest in shells to their early years and this may be the powerful learning stimulus of



figures 6 and 7: Wedge shells from the R H Moses collection at Haslemere Museum with a data label written by George Hannah.



figure 8: Channel Island shells collected by George Hannah used for a gallery backcloth.

being able to handle and observe real objects – ‘concrete operations’ – in the jargon of educationalists. Time spent overseas with access to the larger more showy shells, such as the triton shell, is also a stimulus. Missionaries and members of the armed services, and their families, based in isolated locations frequently took up natural history in their spare time (see table 1).

Museums with their collections, archives, keen curators, volunteers and their involvement with the general public have a strong role to play in keeping interest and memories alive. They also work with and inspire children.

I thank Ray Ogborn, Haslemere Museum volunteer, who worked with George Hannah in the cataloguing team, for his assistance with this article. Ray is still with us entering data on to the computer. We continue to admire George’s neatly printed labels and have memories of his tales of life in faraway places that neither of us has been to.



figure 9: Gastropod display at Haslemere Museum with backdrop of Channel Island shells and the Triton collected by George Hannah on bottom shelf, left.

Reference

Ellis, A.F. (1935) *Ocean Island and Nauru – their Story*, Angus and Robertson Limited, Sydney, Australia.

Interconnections between the Conchological Society and Haslemere Museum.

- 1) R.H. Moses, a retail pharmacist, was a member of the Conch. Soc. from 1932. He built up a worldwide collection of shells which, after his death, came to the Museum in 1950.
- 2) The Rev. H.E.J. Biggs, one-time President of the Conch. Soc., collected shells whilst he was a missionary in Persia. At meetings of the Society he exchanged shells with Moses and so some of Biggs’s shells are in the collection at Haslemere.
- 3) Col. J.F. Bensley, a retired army officer, became acting curator of the Museum in the late 1940s. Also interested in shells, he was a member of the Conch. Soc. and met Moses at meetings. It was probably through him that the Moses collection came to Haslemere Museum.
- 4) George Hannah, the subject of this article, was a volunteer at Haslemere Museum with a particular interest in sea shells derived from his childhood as a missionary’s son on a Pacific island.
- 5) June Chatfield, author of this article, is a member and past President of the Conch. Soc. and has worked on the shell collection at Haslemere Museum both on contract and as a volunteer. She also knew the Rev. H.E.J. Biggs.

table 1: Interconnections between the Conchological Society and Haslemere Museum.

Some more information on the whorl snail *Truncatellina callicratis* from Portland and the Weymouth area, Dorset.

Adrian Brokenshire

As I live in Portland, Dorset and have a view of Southwell Business Park from my living room windows, I was pleased to read the article by Chris Gleed-Owen (Gleed-Owen, 2014) on his collecting and recording at that locality.



I also attended the Conchological Society's field meeting on 31st May this year at Durlston Country Park, another 'classic' locality for *Truncatellina callicratis*, with the intention of finding it there on the park's calcareous coastal grasslands. Despite intense searching I did not personally find it in this favoured habitat (although some examples were found that day), so it might well deserve its title of a rare British snail. Figure 1, left, shows a specimen from

Portland (height 1.8 mm) (photo: Peter Topley).

I have certainly never found this snail to be rare on Portland, but some of my finds are not always in its 'favoured' habitats. In some instances, I have found *T. callicratis* in what might be considered an almost alien environment for it. On Portland I've found it at the base of old stone gate posts in build-ups of fine soil/humus and in leaf litter on well used grass paths where the dominant surrounding vegetation is scrub and brambles.

The area known as the East Weares looks a bit more of a classic locality with thin soil and sparse grasses covering ancient land slips and scree slopes. There are open grass areas between course grasses and scrub where *T. callicratis* can be found in the soils and vegetation of bunny scrapes (on Portland it's unlucky to call those little furry animals by the 'R' word). The ruins of the old St. Andrews church below Pennsylvania Castle, also on the East Weares, might also be considered as not typical habitat. There are grasses between the walls of the ruins but I've found this snail in soil/humus and leaf litter against the base of walls after the clearance of brambles and *Buddleia*. This is a shady and damp environment and would not normally be considered at all suitable for this snail.

Tout Quarry, on the Northwest side of the island, is now a nature reserve and sculpture park. This area looks a little more suitable for *T. callicratis* although not what you might expect as a 'classic' site. Essentially it is a manmade environment of old quarry workings, waste stone and scree slopes, at the least a very disturbed site in the past. There are areas of stable, poorly vegetated thin soils with grasses occurring on higher ground. These produce reasonable numbers of snails with a mix of old and fresh shells; they are never found in profusion. In the quarry proper they can be found in soils and debris of scree slopes, even in the shady areas against large stone blocks. *T. callicratis* seems to have survived the impact of quarrying in this area and over many decades has re-established itself in a very harsh environment.

What I consider to be the most intriguing sites for *T. callicratis* on Portland is my garden. Found in the edges of the front lawn on almost bare soils under large shrubs that produce fine leaf litter (figure 2). In the back garden they are

found around the edge of my vegetable plot against the block wall, on a concrete stand at the rear of the greenhouse where fine soil/humus/leaf litter builds up over time (figure 3) and also at the end of a concrete path against the same wall where fine windblown soils and leaf litter occur. This is remarkable for the fact that this area has no grasses nearby at all. The house was built in 1968 on what was previously fields and grassland. The gardens would be manmade and an artificial environment, so how has this snail got there? Has it survived the building and ground works to re-establish itself like at Tout Quarry? Who knows!*



figure 2: Front garden, leaf litter and fine soil under shrubs.



figure 3: Concrete area at rear of greenhouse in back garden.

In the title I have mentioned *T. callicratis* in the Weymouth area. I collected shells in Portland harbour and the Fleet. I had never considered the coastal area of both these places as being suitable for them. My specimens have never come from in-situ but always empty shells, old and fresh, from fine beach organic drift samples, particularly after high tides or storms have washed the banks. To collect it at all in these areas it must be living nearby and not transported from distant more suitable habitats!

After the lack of personal success at Durlston Country Park, perhaps it might be worth a revisit to look in 'less favoured' habitats like on Portland. It seems to me also that the use of the word 'rare' is often not appropriate. It could be that if a snail is not found in its supposed 'favoured/classic' habitat, it might just be hiding somewhere else less obvious.

*Note

Other species found alongside *T. callicratis* in my back and front garden: *Pyramidula pusilla*, *Vertigo pygmaea*, *Pupilla muscorum*, *Lauria cylindracea*, *Vallonia costata*, *Vallonia cf. excentrica*, *Cecilioides acicula*, slug shells of *Testacella maugei*, slug plates of several species in process of determination, *Candidula intersepta*. and *Ceruella virgata*.

Reference

Gleed-Owen C. (2014). Non-marine molluscs from Southwell Business Park, Portland, Dorset, including the nationally rare British whorl snail *Truncatellina callicratis*. *Mollusc World* issue 34: 21-23.



figure 1: A live *Myosotella*.

Until the publication of Roy Anderson's non-marine mollusc list (Anderson, 2005) *Ovatella myosotis* was recognised as a single, widespread and variable species (figure 1). In his taxonomic review Roy revised the species name and additionally accepted that, in the British Isles, we had two species, *Myosotella myosotis* and *M. denticulata*. The former species, which has a less-toothed shell aperture, is typical of the upper shore of estuaries and saltmarshes whilst the latter, more dentate species, occurs on more open and exposed coastlines. Confusingly, however, there are difficulties with this seemingly convenient and simple picture as populations with a graduation of shell dentition are frequent. There also some exposed rocky shores, such as seen on some on the Isles of Scilly (personal observation), where the 'less-dentate' variety dominates.

Prof. António M. de Frias Martins (University of the Azores) has been working to try to unravel the complexities of *Myosotella* taxonomy and biogeography. Tony writes: 'Recent studies on the common European salt marsh snail *Myosotella myosotis* (Draparnaud, 1801) have revealed that it is in fact a complex of species. The apertural dentition, once used as the main diagnostic character, appears to be an unreliable feature to separate the various taxa. Of the names given to Great Britain specimens, all refer to the highly dentate form, *Myosotella denticulata* (Montagu, 1803) this being the available name for an eventual recognition of a valid taxon. However, inspection of the anatomy of specimens around Great Britain is essential for a conclusion'.

Figure 2 is a selection of images provided by Tony that show four *M. denticulata* specimens, all from the British Isles.

Tony invites Conchological Society members to send him preserved *Myosotella* material from a wide variety of sites so that he can examine anatomical details from a range of

populations and locations. The more material that he receives the better! All contributions will be duly acknowledged.

Here are Tony's instructions: 'To relax specimens and preserve them for anatomical studies: submerge them under salt water in an air-tight jar for three days; then, preserve in 70% ethanol*. After one week in ethanol, put them in a plastic vial with cotton soaked in ethanol and post them to: Prof. António M. de Frias Martins – Department of Biology, University of the Azores – 9501-855 PONTA DELGADA – Azores, Portugal'. (*ethanol can be industrial methylated spirit).

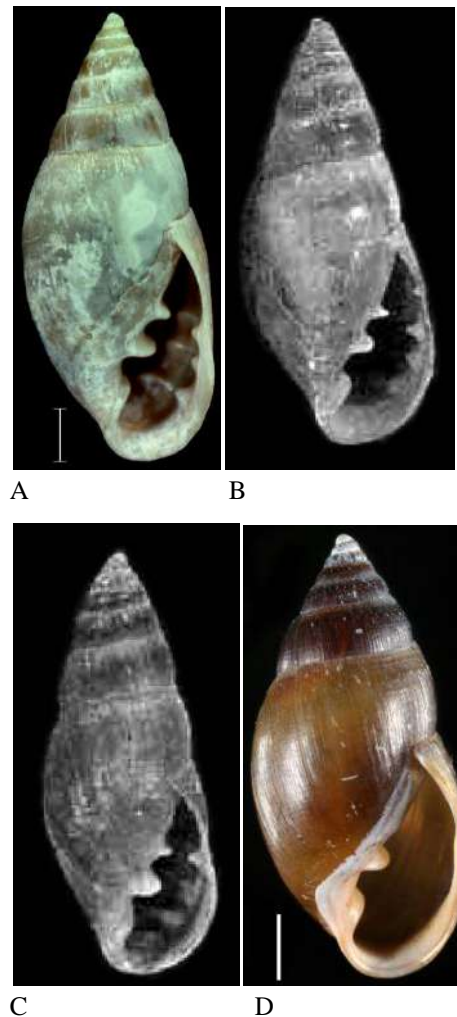


figure 2: A = *Voluta denticulata* Montagu, 1803 – lectotype (Devon); B = *Voluta ringens* Turton, 1819 – lectotype (British Isles); C = *Voluta reflexa* Turton, 1819 – holotype (Exmouth); D = *Myosotella denticulata* (Salcott, Essex, col: Simon Taylor).

(above images provided by Tony Martins)

Reference

Anderson, R. (2005) An annotated list of the non-marine Mollusca of Britain and Ireland. *Journal of Conchology*. 38, 607 - 638

Dear Peter/Editor,

Issue 34 of *Mollusc World* (March 2014) is a continuing source of delight. It took me back to the 1960s and 70s – perhaps the best days of the Conchological Society. Membership and participation was based on an embracing principle and meetings were about molluscs, their shells and ecology [they still are!! – Ed.]. You did not need to have access to a scanning electron microscope, DNA sequencing equipment nor a library to match that of the Natural History Museum in London in order to give a shell a name. This was all cemented by growing friendships.

I was one of the many people who called Nora McMillan ‘Mrs Mac’ and spent most Saturdays (1966–1969) helping her in the City of Liverpool Museum. Much of my contribution was in amalgamating the ex-Bootle Museum Mollusc Collection into that of Liverpool’s Museum Collection. In between times other local conchologists joined us for informal meetings or we met up to participate in field visits. Marjorie Fogan was one of the very few people who used ‘Nora’ and usually with a great deal of emphasis in order to get Mrs Mac’s attention whether this be in the field, the museum or our favourite tea room at Southport. If our field trip had been marine, the follow-up work in the museum was usually prefaced by Mrs Mac’s plea, ‘We ought to see what Chaster (1895) has to say’, as he had written a list of marine mollusc finds based on Southport. If further enlightenment was needed ‘Look at Marshall (1890 onwards)’, was always the proffered support. (I believe that at one time the Society might have been thinking about re-issuing Marshall’s *Additions to British Conchology* as a special publication). Mrs Mac always advised caution over using Jeffreys (1857) and Winckworth’s List (1932, 1951) – ‘but they are all we have’. Mrs Mac gave more than one audible sigh of relief and hope for the future with the publication of Bowden and Heppell’s papers (1966, 1968). Tebble’s book of 1966 was icing on the cake.

If our field work follow-up was based on land and/or freshwater molluscs the cry would be to use Rimmer (1880), as his book was readily intelligible, or Ellis (1926) if you were really stuck. All of this kind guidance was wrapped up in Mrs Mac’s commentary about the shells and conchologists of an earlier generation. Mrs Mac used a tense that does not exist. She always spoke of earlier conchologists in a past tense but at the same time conveying the idea of the immediate past: they were personal friends (she knew their literature almost by heart), she acknowledged that they were dead (perhaps only last week(?)) and that she had been talking to them about our very shells only the week before that. ‘Dennison always said,’ ‘Roebuck always thought that.....’ (See also Goodwin, 2014). Any and all guidance could vanish into the distance if Mrs Mac had set off to retrieve the Botany Department’s copy of Clapham, Tutin and Warburg (1962) – somewhere deep within Mrs Mac was a naturalist in the best traditions of the nineteenth century.

I remember her enthusiasm for re-writing Step’s *Shell Life* (1901) given that it lacked comprehensive cover and short, simple statements as to how species differ (McMillan, 1968). I still have my autographed copy. I also remember her heart searching about the offer to write an Observer’s

book (McMillan, 1977) – no royalties, only a cash payment. Parallel to this Mrs Mac was instrumental in my acquiring a suitable library on the mollusca. My original sole source of shell data being Barrett and Yonge (1958) was judged to be woefully inadequate and ‘not very helpful’.

As a real treat Mrs Mac arranged for me to go to Ireland to meet Arthur W. Stelfox (figure 1), explore the marine molluscs in Dundrum Bay and following her arrival to go to the White Bog and dig some holes in the peat to look for a specific *Pisidium* (freshwater pea clams)-bearing horizon. To say the least I was well briefed. Perhaps Stelfox was equally forewarned. Thus we met every morning for several days and I was given extended and extensive guided tours to the delights of his garden. As advised I avoided treading on the excavations made by his solitary bees. The afternoons were for marine work and late afternoons for extensive instruction and guidance on the nature of the White Bog, the location of his original finds (late glacial *Pisidium* fauna characterised by thinly developed shells), the soil sequence or profile and an extensive introduction to the species of the genus *Pisidium*. For a number of days Mrs Mac and I had a taxi to the White Bog. Our taxi driver insisted on helping us carry our equipment over to the bog then spent the whole day sat on the grass giggling at ‘the mad English’ for trying to dig a hole in a bog. This work eventually led to a paper in *The Journal* but I no longer remember when.

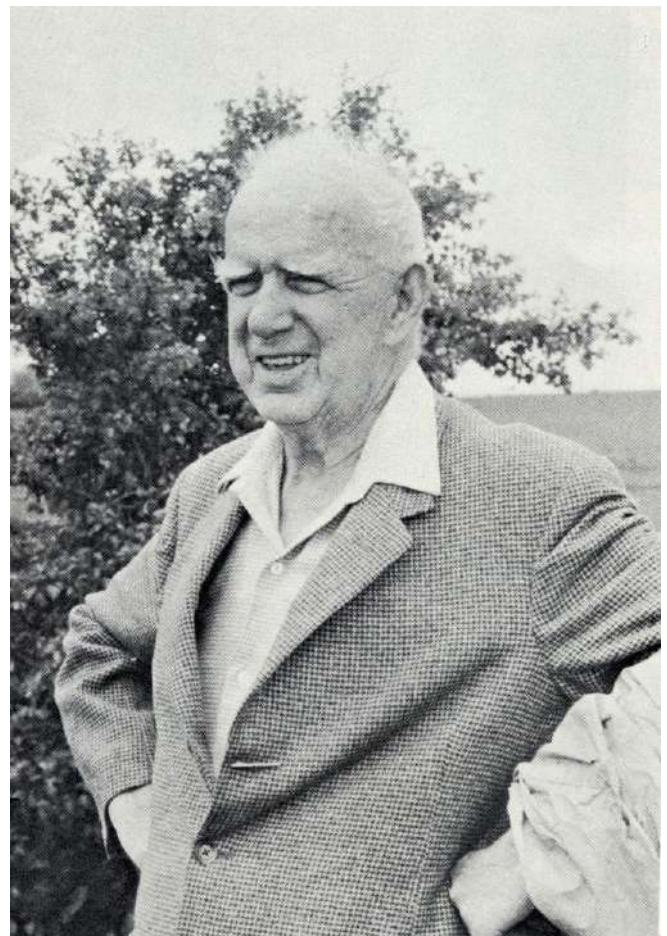


figure 1: Arthur Wilson Stelfox (1883–1972) aged 86 (photo: Hans Kuiper, from *Journal of Conchology* 27:520 (1972)). See also <http://www.conchsoc.org/eminent/Stelfox-AW.php> for more details about his life.

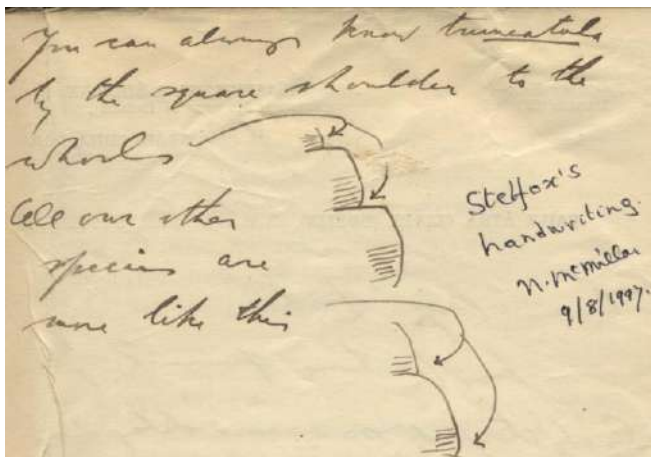


figure 2: Stelfox's notes on the identification of the freshwater snail *Galba truncatula*, signed by Nora McMillan in 1997 and pasted into her copy of *The Collector's Manual of British Land and Freshwater shells* by L.E. Adams (Bell and Sons, London, 1884). (Peter Topley collection).

I have four great regrets about this venture to Ireland. Firstly I had to return to work as a teacher on the day that Dr Hans Kuiper [1914–2011; a *Pisidium* specialist] arrived to work on the finds and continue the exploration; secondly that I was never able to dig deeply enough to find the desired horizon or was not digging in the right place and that I was not able to make use of Stelfox's magnificent gesture to guide my learning about *Pisidium* species once back at work. My one humorous memory was being asked to care for the *Cornu aspersum* (L., 1758) that he was continuing to rear as they had very thinly calcified shells. I duly cleaned them out, provided fresh food and grated the provided chalk (that was not finding its way into their shells). For perhaps the only time in my life I managed to be highly diplomatic – to convey the news that the grated chalk being provided was calcium sulphate and not calcium carbonate. That news produced an amazing smile and a pensive few minutes, then another more wistful smile. My last and perhaps deepest regret is that I was not able to keep the many letters that I received from Stelfox nor any of those from Mrs Mac.

I am not sure they make them like her anymore. I wish they did! (see Chatfield, 2014)

PS. You may well not wish to print these ramblings. My memories will always remain. So I have omitted the time spent at each Conch. Soc. meeting in the BM(NH) discussing the virtues of smoking Condor with Tom Pain, [1915–2003; see *Journal of Conchology* **38**:179–191 or <http://www.conchsoc.org/eminent/Pain-T.php>] nor John Llewellyn Jones' painstaking introduction to microshells when my only book was Barrett and Yonge.

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About the Conchological Society

The Conchological Society of Great Britain and Ireland is one of the oldest societies devoted to the study of molluscs. It was founded in 1876 and has around 300 members and subscribers worldwide. Members receive two publications: Journal of Conchology which specialises in Molluscan Biogeography, Taxonomy and Conservation and this magazine. New members are always welcome to attend field meetings and indoor meetings before joining.

Some key contacts (see web site [<http://www.conchsoc.org/pages/contacts.php>] and 2014 membership list for additional contact details)

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How to become a member

Subscriptions are payable in January each year, and run for the period 1st January to 31st December.

- Ordinary membership £33
- Family/Joint membership £35
- Under 18 (receiving Mollusc World only) £5
- Student membership £15
- Institutional subscriptions £47

In view of the high cost of overseas postage, members living in Europe will be asked to pay an additional postage charge of £8, and members living in the Rest of the World an additional postage charge of £17. See website for further details.

Payments in sterling only, to Carolyn Postgate, CIRCA Subscriptions, 13-17 Sturton Street, Cambridge, CB1 2SN, (shellmember@gmail.com). For UK residents we suggest payment by standing order, and if a UK tax payer, please sign a short statement indicating that you wish the subscription to be treated as Gift Aid. Another simple and secure way of paying for both UK and overseas members is by credit card online via PayPal from <http://www.conchsoc.org/join>. Overseas members may also pay using Western Union, but a named person has to be nominated, so please use the Hon Treasurer's name, Nick Light.

How to submit articles to Mollusc World

Copy (via e mail, typed or handwritten) should be sent to the Hon. Magazine Editor (contact details above). If sending copy using e-mail please include a subject line "Mollusc World submission". When emailing several large file attachments, such as photos, please divide your submission up into separate emails referencing the original article to ensure receipt. Electronic submission is preferred in Microsoft Word. Images and Artwork may be digitised, but we recommend that a digital image size 200Kb- 1.5Mb (JPEG preferred) be sent with your submission. All originals will be treated with care and returned by post if requested. Authors should note that issues of the magazine may be posted retrospectively on the Conchological Society's web site. The general copy deadline for the March 2015 issue is 1st February 2015 but it would be helpful to the Editor to send articles by mid January in order to keep to publishing deadlines; inclusion in that issue depends upon the space available but contributions are always welcome at any time.

Advertisements in Mollusc World

We are pleased to invite advertisements, provided they are in line with the Conchological Society's charitable objectives and responsibilities. Advertisements of shells for sale from commercial shell dealers will generally not be accepted. Please contact the magazine Editor for further details.

Membership update

The following members have joined the Conchological Society recently or have not previously been included in either this column of Mollusc World or in the latest edition of the Members' Guide (2014). **Please note that to be included here members must sign a data protection consent form.** If you have not been included and now wish to be please contact Carolyn Postgate at CIRCA subscriptions (details above).

Conchological Society of Great Britain and Ireland

Diary of Meetings

Please check the website (www.conchsoc.org) for further details and any updates, including other meetings arranged at shorted notice.



Saturday 15th November 2014: INDOOR MEETING: lecture and exhibits.

Guest speaker: Amy Prendergast – ‘Land snails, stable isotopes and rainfall reconstruction over the last glacial cycle in the Gebel Akhdar, Libya’

14:00 – 17:30: Angela Marmont Centre, Natural History Museum, Cromwell Rd., London SW7 5BD. The lecture will start shortly after 14:00.

(Council members please note that there will be no Council meeting before this meeting.)

Please note that this replaces the regional meeting previously announced for 8th November, which has had to be cancelled.

Saturday 29th November 2014: WORKSHOP MEETING.

10:00 – 17:00: by kind invitation of Judith Nelson at Hilbre House, Pembroke Road, Woking, Surrey GU22 7ED. The annual Woking workshop offers members the opportunity to receive tuition on identifying difficult groups. Those who wish to come should ring Judith (01483 761210) in advance for more details and to reserve a place. A fee of £5 will be charged to cover expenses. Please note that Hilbre House is a non-smoking property. Will include discussion of identification of *Spisula* spp.

Saturday 6th December 2014: INDOOR MEETING: A Christmas miscellany.

14:00 – 17:30: Angela Marmont Centre, Natural History Museum, Cromwell Rd., London SW7 5BD.

As last year, this will be a meeting made up of a series of short presentations (5-20 minutes) by members: these can be anything mollusc-related, with or without exhibits. This will be followed by a glass of Christmas wine (free!); and then by supper at a nearby restaurant (pay your share ...). If you would like to make a presentation, or want a place at the restaurant, please get in touch with the Hon Meetings Secretary (contact details below).

(Council members please note that there will be a Council meeting before this meeting.)

Saturday 24 January 2015: INDOOR MEETING: lecture and exhibits.

Please note corrected date, with apologies for the error in the last MW.

Guest speaker: Anna Holmes, – ‘British Saddle Oysters’.

Saddle Oysters (Anomioidea) can be difficult to identify and there is a long standing debate in the UK over the number of species of *Pododesmus* in British waters: one or two? Using DNA and anatomy as well as shell characters Anna has a conclusive answer to the problem and will present her findings. This research was aided by a Conchological Society grant.

14:00 – 17:00: Angela Marmont Centre, Natural History Museum, Cromwell Rd., London SW7 5BD.

The lecture will start shortly after 14:00.

(Council members please note that there will be a Council meeting before this meeting.)

Saturday 28 February 2015: FULL DAY INDOOR MEETING: Demonstrations, discussion, exhibits and lecture.

Guest speaker: Peter Dance - ‘A talent for getting through doors.’

11:00 – 17:00: Angela Marmont Centre, Natural History Museum, Cromwell Rd., London SW7 5BD.

The lecture will start shortly after 14:00.

(Council members please note that there will be no Council meeting before this meeting.)

Saturday 18 April 2015: ANNUAL GENERAL MEETING AND PRESIDENTIAL ADDRESS.

Speaker: The President, Dr Mike Allen - tba

14:00 – 17:30: Angela Marmont Centre, Natural History Museum, Cromwell Rd., London SW7 5BD.

The lecture will start shortly after 14:00.

(Council members please note that there will be a Council meeting before this meeting.)

Please note the following dates in later 2014 for your diary:

Saturday 17 October 2015: INDOOR MEETING (and Council meeting).

Saturday 7 November 2015: REGIONAL MEETING.

Saturday 12 December 2015: INDOOR MEETING (and Council meeting).

Indoor meetings at the Natural History Museum take place in the Angela Marmont Centre for UK Biodiversity, Darwin Building. From the main entrance hall, turn left at the tail of the *Diplodocus*, go past the dinosaur exhibition, then down the stairs, and then turn left. The door of the Centre will be locked; please ring the bell and someone will come to open it. **Please bring plenty of exhibits and demonstration material.** If you intend to attend a **field meeting**, please remember to inform the leader beforehand, and if, on the day, you are held up in traffic or your public transport is delayed, please try to contact the meeting leader if possible.

We are always happy to receive any suggestions for speakers for indoor meetings, or offers to lead field meetings, and also any suggestions about Society participation in the meetings of local and other societies. Programme Secretary: Bas Payne, The Mill House, Clifford Bridge, Drewsteignton, Exeter EX6 6QE; 01647 24515, programme@conchsoc.org