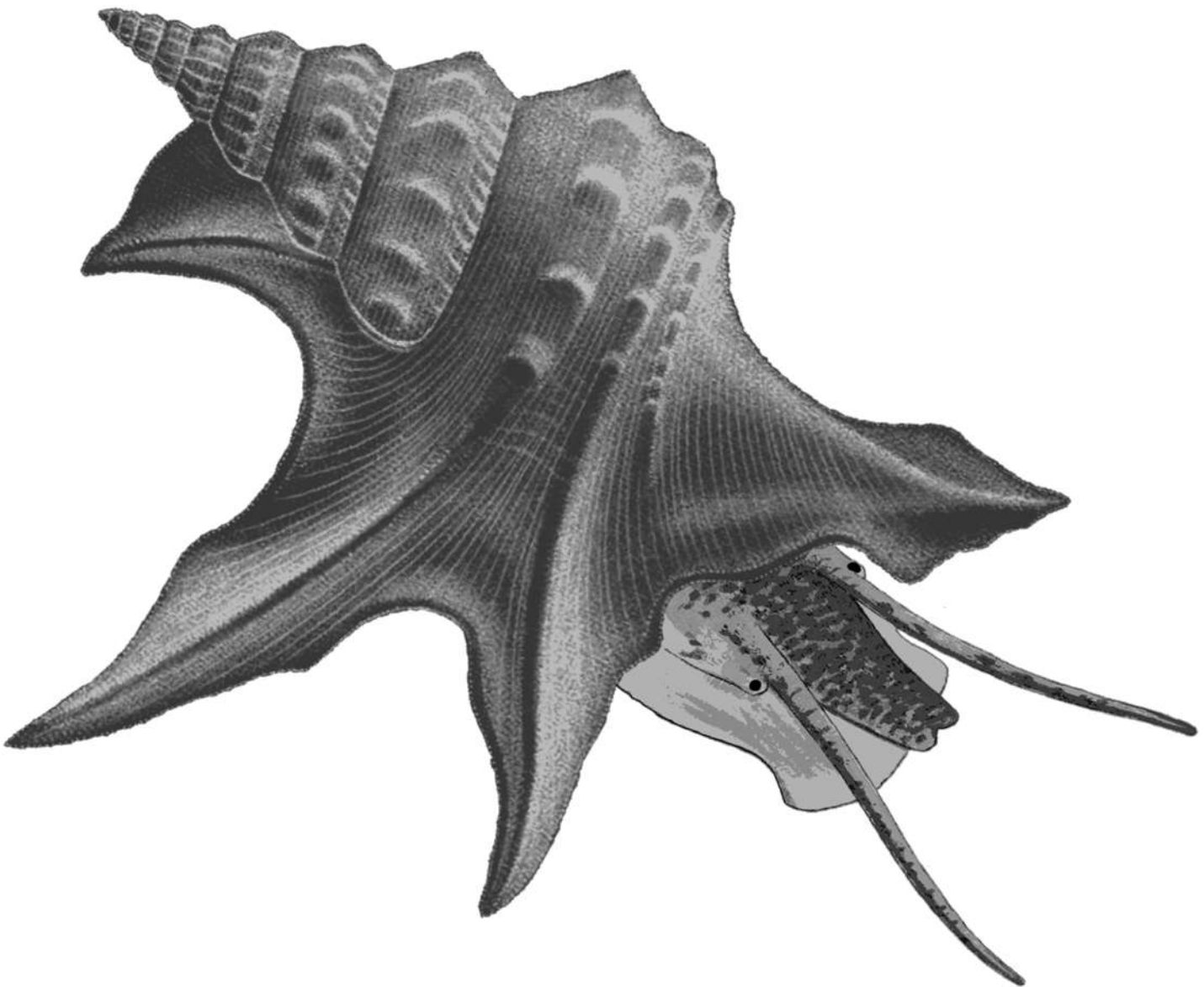


Mollusc World

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THE MAGAZINE OF THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN & IRELAND

Editorial

Firstly, an apology to Peter Topley as his article on "The many lives of the Giant African Snail" in *Mollusc World* 3, page 8, was not credited.

The Society's field programme commences on the 5th of May with an extended meeting to Dorset followed by meetings in Devon, Kent, Hampshire, Worcestershire, Hampshire and Oxfordshire. There are also meetings arranged by the Yorkshire Conchological Society to Selby and Great Ayton. These events provide ideal opportunities to meet other members and to learn more about the ecology

and identification of molluscs. Members who are unable to attend like to read about the meetings, so I would be grateful if the organizers would supply me with illustrated reports. I have nothing in hand for *Mollusc World* 5 so please start writing! Please note that the final deadline for submission of items is Friday 18th June 2004.

Members will be pleased to hear that Robert Cameron's new Aidgap key on the identification of the *Land Snails in the British Isles* has just been published by Field Studies Council. This attractive

82 page booklet replaces the 1976 Linnean Society key and includes new black & white illustrations by Gordon Riley plus 4 plates of colour illustrations taken from Kerney & Cameron's 1979 Collins field guide. As the latter work is now very difficult to obtain, this new guide will be particularly welcomed by students new to mollusc identification. It is available from FSC Publications, Preston Montford, Shrewsbury SY4 1HW for £8.95 inc. p&p.

Ian Killeen

Mollusc World

Mollusc World is published 3 times a year by the Conchological Society of Great Britain & Ireland at the end of March, July and November, and is issued free of charge to members.

We invite all members to contribute to *Mollusc World*. In addition to the traditional articles, field meeting reports, diary of events and so on, we will be including features, profiles, news from recorders, and identification keys. Do not feel that you have to write long or full page articles. We would particularly welcome short pieces, snippets, pictures, observations, new records, book reviews, mollusc recipes, cartoons, requests for information - anything on molluscs! *Mollusc World* will become an important means of staying in touch with the membership and communicating information to the conservation agencies and promoting molluscs to the wider biological community. So, please contribute!

Copy is acceptable in any format - electronic, typed or legible hand-written. When sending copy by email, please ensure that you include Mollusc World in the email title and also include a few lines of text in your message as well as an attachment. Unidentified attachments may not be opened! Please do not include diagrams or pictures embedded in the text - send them as separate attachments. To enable the best reproduction and resolution, any original artwork, diagrams, colour prints or slides should also be sent by 'snail' mail. All will be treated with care and returned. At the present time, we are unable to give precise copy deadlines until we are up and running, but contributors should assume that copy date is a minimum of 8 weeks before publication date.

Neither the Hon. Editor nor the Conchological Society of Great Britain & Ireland accept responsibility for any opinions expressed by contributors.

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Society Notes

Founded in 1876 the Conchological Society of Great Britain & Ireland is one of the oldest existing societies devoted to the study of molluscs. The Society promotes the study of molluscs and their conservation through meetings, publications and distribution recording schemes. The Society publishes *Journal of Conchology* (twice a year) and *Mollusc World* (three times per year).

The Conchological Society of Great Britain & Ireland is Registered Charity No. 208205

The Society's Web Site is at:
<http://www.conchsoc.org>

Subscriptions

These cover 1 January to 31 December and are due on 1 January each year:

Ordinary Membership	£23.00
Family/joint membership (open to two people living at the same address)	£25.00
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Entrance Fee for new members	£1.00
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Eurocheques are no longer accepted by UK banks, but we can accept cheques drawn in euros on an EEC bank. Please make sure that these cheques are made out to "The Conchological Society" and not to the Membership Secretary.

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SOCIETY TRIP TO THE ISLE OF ARRAN **William Penrice**

A small but determined band of conchologists visited Arran, just off the West Coast of Scotland for four days of recording from 14th to 17th of May 2003 (see *Mollusc World* 2). The Island is perhaps the most accessible of the Scottish Islands, being within a couple of hours travel from Glasgow. Although very popular it is certainly not 'touristy'! The outings were based around Brodick, the main town and ferry port. The Society had not previously visited and this was a good opportunity to have a look and introduce a few from the far reaches of the South to what Scotland has to offer! While mainly intending to look at marine species, we managed to include some non-marine and other pursuits during our wanderings.

The weather was good, although not perfect as evidenced by the tarpaulin I ended up putting over the tent, while Peter Dance fished his tent out of a tree at another campsite. Fortunately, the daytime weather was excellent for collecting most of the time. The first day was spent in sunshine at Corrie, just north of Brodick. Following the first ever society official health and safety announcement, something which will be a feature at all field meetings now, the day was kicked off with Peter Dance discovering *Leiostyla anglica* in woods at the base of limestone cliffs, an excellent record for the island. The marine recording was not outstanding, but there was plenty to see nonetheless and this very much reflected the rest of the trip. For instance, during the whole stay only one species of chiton was found (*Lepidochitona cinereus*), *Hinia* spp. and *Trivia* spp. were infrequent and turrids were absent. The shores tended to be quite exposed and many of them had a great deal of freshwater seeping through them which probably didn't help.

While overall the species haul was light throughout the trip, there were definitely things to see. Weed faunas included all three *Lacuna* spp. (I amused myself by finding several monster specimens of *L. vincta* of over 1cm height), *Ammonicerina rota*, *Skeneopsis planorbis* and *Omalogyra atomus*. A range of common rissoids were present along with the more unusual *Obtusella alderi*, *Rissoa lilacina* form *porifera*, *Retusa truncatula* and *Limapontia capitata*. The weed and rock scrubbings revealed an interesting assortment of pyramidellids such as *Odostomia plicata*, *O. turrita*, *Brachystomia eulimoides*, *B. albella*, *Chrysallida obtusa* and *Partulida spiralis*.

I suspect however, it will be for non-molluscan highlights that the participants will remember the trip. On the second day we crossed the highland boundary fault which cuts the island in half and travelled to Lochranza, in the north. An earlier promise to deliver a Golden Eagle was made good, and a pod of Dolphins rounded off the sampling by passing our sample station less than 20 metres away. The day was closed with a look at Hutton's famous geological unconformity, where James Hutton first realised there was something strange about the age of the earth and later confirmed this on the Berwickshire coast. The site will be remembered forever, as we made a point of collecting some records of littorinids from it! The following day, following a visit to the Machrie Moor stone circles, we visited the area around Blackwaterfoot on the west coast. Collecting here was slightly better and probably reflected the fact that rocky platforms helped make the shore less exposed. On the last day, I accompanied Jan Light to Whiting Bay to meet the first tide and to see how I should be sampling sandy shores. It was fairly impoverished for bivalves, reflecting our earlier experiences. Jan noticed the typical surface traces of large numbers of 'sea potatoes' or heart urchins (*Echinocardium cordatum*) and we set about digging them up and sieving the sand around them for *Tellimya ferruginosa*, a

small bivalve which associates with them. When tackled with care this sampling exercise enables the urchins to be reburied without damage. We were not disappointed and I was rewarded by seeing my first live specimens. The second tide of the day was spent at Kildonnan in the extreme south of the island, completing our anti-clockwise tour.

Several of us are still working through samples in alcohol, so it is possible that more finds will come to light. Overall, the field meeting was a great success: Peter got his tent back, I threw mine away and Fred Woodward managed to pick up an Arran Blond (he alleges it's a type of beer), while meantime we all managed to collect some useful records!

Participants

Elizabeth Biles, Ron Boyce, Peter Dance, Rosemary Hill, Rosalind Holt, Jan Light, Nicola Penrice, William Penrice, Fred Woodward and of course Toby the dog.

Society website

The Society's website (www.conchsoc.org) has been recently redesigned and updated. It now includes "fun" pages with a light-hearted approach to molluscs, with cartoons, stories, anecdotes, rhymes and poems about molluscs (mostly about slugs and snails at the moment - we would welcome contributions about other molluscs).

Details of the new initiatives and projects being undertaken by Society are also included, such as the surveys of *Malacolimax tenellus* and *Phenacolimax major*, referred to in *Mollusc World* page 3 of Issues 2 and 3 respectively. Anyone may participate in these projects, which are not just confined to members. It is hoped to include pages in the near future which will enable participants to input their records and submit them on-line, but for the moment records should be sent to the Project Leader by post.

Also under construction are pages which will assist beginners to identify common land molluscs, and will include images of shells as well as of live animals. In the future we hope to extend the proposed aids to identification to cover common freshwater and marine species.

Photos from recent meetings are also included, and members who have any photos they would like to be shown should send them on disk to Pryce Buckle at 14 Roughdown Road, Boxmoor, Herts. HP3 9BJ (Please do not send them by e-mail as uncompressed files take too long to download, and compression of images for use on the web is best left to the webmaster).

Details of the program of meetings are given, as is the Society's Health and Safety Policy, which everyone intending to take part in a meeting is strongly recommended to read before going.

The site is best viewed at a screen resolution of 1024 x 768 pixels, in order to avoid excessive scrolling on the part of the viewer, especially on the longer pages. Those people using Microsoft Windows can easily change the resolution by a right-click on a blank spot on the Desktop and choosing Properties from the shortcut menu; then click on the Settings tab and change the resolution by sliding the bar in the Screen Area box left or right. Sliding to the left lowers the resolution; sliding to the right increases it. Alternatively, the Display Properties dialogue box may be reached by clicking Start, and choosing Settings, Control Panel, and then Display.

Pryce Buckle

Field Meeting to Exmouth, Devon

27/28 September 2003 by Janet Sawyer

Regular field meeting fans will recall past occasions when the lowest tides of the year have brought heavy squalls and torrential rain. This time we were lucky, as a long hot summer had stretched into a golden autumn.

The two principal sites chosen for collection were Dawlish Warren on the first day and Budleigh Salterton on the second, respectively the western and eastern shores of the Exe River estuary in South Devon. The Warren is a stretch of vegetation-covered sand dunes 1½ miles long which is occupied partly by a golf course, partly by a nature reserve, and at the western end by a funfair which fortunately closes down out of the tourist season. On the seaward side there is a wide shallow sandy beach with a number of lagoons and offshore sandbanks, and on the estuary side there is a muddy bay where brackish water species can be found.

Sixteen members gathered in the car park around noon on the Saturday and set out in small groups to see what we could find. Alas, the beneficent weather over a long period had allowed the river to scour the estuary and much of the sand cover had been removed to expose banks of underlying pebbles and grit. This much reduced the availability and quality of the species we discovered. Moreover many of the regular finds from past years were simply not available this time, for example *Helcion pellucidum*, *Gibbula magus*, *Gari depressa* and *Scrobicularia plana*. The search on the estuarine site produced the expected species but very little else. Please see the attached table for a full list of finds.

The following afternoon 17 people gathered in the car park beside the River Otter at Budleigh Salterton with a view to searching the estuarine salt marsh (with kind permission from the Devon Wildlife Trust who manage the estuary as a nature reserve) and the rocky reefs standing out of the pebbly foreshore. Participants divided into two groups, one of which included Dr Mary Seddon and some young staff from the National Museum of Wales being taken to study the marsh by our guest leader, Dr David Bolton, the Curator of Natural History at the Albert Memorial Museum in Exeter. However due to a misunderstanding Dr Bolton led the party to the meadows and dykes on the western side of the nature reserve instead of into the salt marsh proper as had been intended. In fact a member of the marine group did search a small stretch of the salt marsh later in the afternoon and drew a blank, probably due to the long spell of dry weather.

Meanwhile the marine group had crossed the River Otter at White Bridge and proceeded down the eastern side of the estuary in order to gain access over the cliffs to the reefs on the beach. Two members climbed down the cliff of a small bay to a beach of tumbled boulders and searched there, but it appeared that the cliff path which used to lead to the main beach had been eroded recently. Finding no access to the shore, this group returned to Exmouth instead and searched the sandy bay and rock shelves around Orcombe Point. This area has been rather neglected by previous field meeting groups and turned out to be quite prolific. Four members staying on in Exmouth studied it again the following day and found additional species which have been included, in the list which follows. Luckily Dr Rupert Honnor did follow the recommendation to bring waders and was able to cross easily the knee-deep and turbulent River Otter and spend several hours examining the main reef.

Details of the finds from all the sources have been gathered together by John Llewellyn Jones and Celia Pain who has kindly produced a full list of species. Should any member wish to examine the salt marsh at Budleigh Salterton in more propitious weather, as a member of the Devon Wildlife Trust I would be glad to arrange a fresh permit and supply transport to the site.

LIST OF SPECIES

ABBREVIATIONS: L=live; S=shell. R=1; F=100-1000; C=100-1000

Collecting localities	Dawlish Warren Marine	Dawlish Warren Marsh	Budleigh Salterton Marine	Budleigh Salterton Marsh	Orcombe Rocks Marine
<i>Lepidochitona cinereus</i>	LO		LO		
<i>Diodora graeca</i>					SR
<i>Tectura virginea</i>			SR		
<i>Patella depressa</i>	LC		LF		LR
<i>Patella ulyssiponensis</i>			LC		
<i>Patella vulgata</i>	LF		LC		LC
<i>Helcion pellucidum</i>			LC		
<i>Gibbula magus</i>					SR
<i>Gibbula cineraria</i>			LR		SO
<i>Gibbula umbilicalis</i>	SR				
<i>Calliostoma zizyphinum</i>					SR
<i>Tricolia pullus</i>	LR				
<i>Bittium reticulatum</i>			SO		
<i>Turritella communis</i>	LO				SR
<i>Lacuna pallidula</i>					SR
<i>Littorina littorea</i>	LO		LC		
<i>Littorina obtusata</i>	SR				LR
<i>Littorina saxatilis</i>	LO		LC		SR
<i>Rissoa parva</i>	LO		SR		
<i>Alvania semistriata</i>			SO		
<i>Onoba semicostata</i>			SO		
<i>Caecum glabrum</i>			LR		SR
<i>Hydrobia ulvae</i>		LC			
<i>Aporrhais pespelecani</i>	SR				

Notes on European Species of *Euconulus* (Gastropoda: Euconulidae)

by D.T. Holyoak & G.A. Holyoak

Collecting localities	Dawlish Warren Marine	Dawlish Warren Marsh	Budleigh Salterton Marine	Budleigh Salterton Marsh	Orcombe Rocks Marine
<i>Capulus ungaricus</i>	SR				
<i>Crepidula fornicata</i>	SF		LO		LC
<i>Trivia arctica</i>	SR				
<i>Trivia monacha</i>	SR				SO
<i>Palinices catenus</i>	SO				SO
<i>Palinices polianus</i>	SR				SR
<i>Ocenebra erinacea</i>	SR		SO		
<i>Nucella lapillus</i>	LO		LC		LA
<i>Buccinum undatum</i>	SR				LO
<i>Hinia reticulata</i>	SR		SO		SR
<i>Hinia incrassata</i>	SR		SO		SR
<i>Mangelia coarctata</i>			SR		
<i>Raphitoma linearis</i>			SO		
<i>Odostomia turrata</i>	LO		LF		
<i>Brachystomia carrozzai</i>	SR				
<i>Brachystomia eulimoides</i>	SR				
<i>Brachystomia scalaris</i>	SR				
<i>Chrysalida obtusa</i>			SR		
<i>Retusa truncatula</i>			SR		
<i>Ovatella myosotis</i>			AO		
<i>var denticulata</i>					
<i>Striarca lactea</i>			SO		
<i>Glycymeris glycymeris</i>	LO				
<i>Mytilus edulis</i>	LC		LC		LC
<i>Modiolula phaseolina</i>	LC		LO		
<i>Musculus discors</i>			SR		
<i>Ostrea edulis</i>	SF		SO		SO
<i>Chlamys varia</i>	SO				
<i>Pecten maximus</i>	SO		SR		SR
<i>Aequipecten opercularis</i>	LO		SR		SR
<i>Anomia ephippium</i>	SO				
<i>Heteranomia squamula</i>			LO		
<i>Acanthocardia echinata</i>	SO				
<i>Acanthocardia tuberculata</i>	SO				SO
<i>Parvicardium exiguum</i>			SR		
<i>Laevicardium crassum</i>	SO				
<i>Cerastoderma edule</i>	LF				LO
<i>Macra stultorum</i>	SO				SO
<i>Spisula solida</i>	SC		SR		SO
<i>Spisula subtruncata</i>	LO				SO
<i>Lutreria angustior</i>	SF				
<i>Lutreria lutreria</i>	SF				
<i>Ensis arcuatus</i>	SC				SO
<i>Ensis siliqua</i>	SO				SO
<i>Angulus squalidus</i>	SR				
<i>Angulus tenuis</i>	LO				SO
<i>Arcopagia crassa</i>	SR				
<i>Macoma balthica</i>	LR				
<i>Donax vittatus</i>	LO				SC
<i>Gari fervensis</i>	SR				
<i>Abra tenuis</i>		LC			
<i>Scrobicularia plana</i>			SO		
<i>Callista chione</i>	SR				
<i>Chamelea gallina</i>	LO				SR
<i>Clausinella fasciata</i>	SR				
<i>Tapes rhomboides</i>	SR		SR		
<i>Tapes decussatus</i>	SO				
<i>Venerupis senegalensis</i>	SO		SR		LC
<i>Dosinia exoleta</i>	SR		SR		SR
<i>Turtonia minuta</i>	LR		LR		
<i>Mysia undata</i>	SR				
<i>Mya truncata</i>	SR				
<i>Mya arenaria</i>	SO				
<i>Hiatella arctica</i>			SO		SC
<i>Pholas dactylus</i>			SR		LC
<i>Barnea candida</i>	SO				LC
<i>Barnea parva</i>					LC
<i>Sepia officinalis</i> eggs	LR				
<i>Succinea putris</i>				LR	
<i>Galba truncatula</i>				LR	
<i>Arion subfuscus</i>				LR	
<i>Arianta arbustorum</i>				LR	
<i>Ashfordia granulata</i>				LR	
<i>Carychium minimum</i>				LR	
<i>Carychium tridentatum</i>				LR	
<i>Cochlicopa lubrica</i>				LR	
<i>Cepaea nemoralis</i>				LR	
<i>Discus rotundatus</i>				LR	
<i>Euconulus</i> sp. juv				LR	
<i>Oxyloma pfeifferi</i>				LR	
<i>Punctum pygmaeum</i>				LR	
<i>Vertigo antivertigo</i>				LR	
<i>Vallonia pulchella</i>				LR	
<i>Zonitoides nitidus</i>				LR	
<i>Deroceras laeve</i>				LR	
<i>Nesovitrea hammonis</i>				LR	

Most British conchologists first became aware that more than one species of *Euconulus* occurs in Britain and Ireland when Waldén (J. Conch.1976: 23) listed *E. alderi* alongside *E. fulvus* in his checklist. Characters distinguishing these two species were set out by Kerney & Cameron (1979: 148-149), since when it has been usual to record those *Euconulus* with dark grey to blackish bodies and a deep brown shell with strong spiral grooves on the underside as *E. alderi*, while those with light grey bodies, a light brown shell and weak sculpture on the underside were placed as *E. fulvus* seg. Both species appeared to be widespread in Britain and Ireland, with *E. alderi* occurring mainly in wet habitats whereas *E. fulvus* was commonly found in drier woodlands, grasslands, etc. Nevertheless, a proportion of specimens have proved difficult to assign to either of these species and county records of them were never systematically added to the vice-countal Census.

Studies by continental malacologists now suggest that a third species of *Euconulus* occurs in Britain, so this may account for some of the difficulties experienced in trying to identify our material! A formal revision of the west European species of *Euconulus* is in preparation (Von Proschwitz, Falkner & Ripken in prep.) and some of the preliminary results given by Falkner, Ripken & Falkner (2002: 120) in French, are translated below. It is hoped that by making this information more widely available recorders in Britain and Ireland will be encouraged to look again at *Euconulus*. Specimens are needed to confirm vice-county records of all three species. The material sent to GAH should consist of several shells of adult live-collected specimens accompanied by a note of their mantle colour (whether pale grey, light grey, medium grey, dark grey or blackish) along with the usual data and note of the habitat.

Euconulus fulvus (O. F. Müller, 1774)

Shell light coloured, relatively depressed, appearing silky on the upper part of the whorls, with underside very glossy and almost smooth; body of animal light in colour.

Lives in broad-leaved and coniferous woodlands in habitats with moderate humidity; indifferent to soil pH. The distribution extends throughout Europe and probably the Holarctic. In France its coexistence with other species of *Euconulus* appears to be exceptional (recorded with another species only from forêt d'Ermenonville in Dept. Oise).

Euconulus trochiformis (Montagu, 1803)

(synonym. *E. alderi* (Gray, 1840))

Shell dark, spire taller than in *E. fulvus*, appearing matt or only slightly glossy on upper part of whorls, with underside more glossy, with well marked spiral grooves. Body of animal is intermediate in colour between those of *E. fulvus* and *E. praticola*.

Lives in humid, broad-leaved woodlands. Distribution appears mainly Atlantic, extending from Scandinavia to Portugal. In France, it is known with certainty from only three localities. In the Netherlands it has been found living with *E. fulvus* and other collections show it occurs in ancient woodlands that have been little altered by man. It has also been found living with *E. fulvus* in the British Isles. Material examined from the British Isles suggests that this species is more plentiful there than *E. praticola*, so it is probable that a majority of the records mapped by Kerney (1999: 167) as *E. alderi* are referable to *E. trochiformis* rather

***Euconulus praticola* (Reinhardt, 1883)**

Shell dark, red-brown or brown-yellow, relatively larger, often more conical, both the upper part of the whorls and the underside very glossy, the underside with spiral grooves wider spaced than in *E. trochiformis*. Body of animal is very dark, appearing almost black.

Lives in narrow range of very wet habitats, in wet fens, reedbeds, and near water. Confirmed distribution extends from central Scandinavia to Central Europe, the British Isles and north-western Spain. Records confirmed so far suggest that within France it mainly has a northern distribution.

***Euconulus callopticus* (Bourguignat, 1890)**

Shell dark, red-brown or brown-yellow, of moderately large size as in *E. praticola*, with a remarkably tall spire, upper part of whorls matt with microsculpture of very fine riblets, the underside similar to that of *E. fulvus* (i.e. almost smooth) but less glossy. Body of animal is very dark.

Observations from Dept. Drôme, France, suggest it lives in wet habitats near water in river valleys, in open or lightly wooded places. Shells reported from river flood-line debris suggest it may occur elsewhere in similar habitats. Known so far only from five localities in southern France and presumed to occur more widely in the Mediterranean zone in France and perhaps neighbouring countries.

***Euconulus* sp.**

Another as yet un-named species has been collected only from mountains in Corsica.

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Snail density measurements from hedgerows at East Prawle (Devon)

Dr D R Skingsley, Staffordshire University, College Road, Stoke-on-Trent, ST4 2DE UK

Introduction:

This summer I was fortunate to be a lead investigator on an Earthwatch project based in East Prawle (Devon) UK. The project although primarily focussed on the Great Green Bush Cricket (*Tetegonia viridis*) and Gatekeeper butterfly (*Pyronia tithonus*), did allow me time to study the density of the snails; *Helix aspersa*, *Cepaea nemoralis* and *Cepaea hortensis*, in the field site when weather prevented study of the other organisms. The molluscs chosen were those that were commonly identifiable by eye within vegetation.

Methods

The field site at East Prawle was divided into fields, metalled lanes, and green lanes. Each of these areas was subdivided into 30m transects that ran along their margins. 10 randomly selected 30m transects were chosen from each of the categories above. The transects were recorded in wet, warm weather between 31st July and the 1st of August 2003 when snails were most likely to be active. Numbers of snails were counted by eye and the results averaged. A student's t-test provided evidence of significance between the sites.

Results

	<i>Cepaea hortensis</i>	<i>Cepaea nemoralis</i>	<i>Helix aspersa</i>
Field Margin	1.56 ± 0.36	1.00 ± 0.01	2.14 ± 0.32
Metalled Road Margin	4.81 ± 0.94	1.44 ± 0.17	4.08 ± 0.54
Green Lane Margin	2.13 ± 0.36	1.25 ± 0.09	6.06 ± 1.51

Table 1: Mean and standard error of the mean (SEM) values of snail counts for ten 30m plots

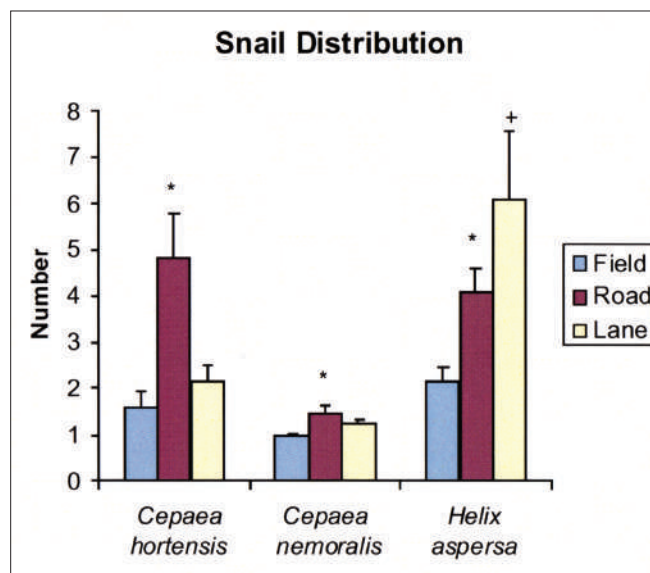


Figure 1: Bar chart illustrating the variation in snail numbers. * indicates a significant difference ($p < 0.05$) with either of the other measurements; + indicates a significant difference ($p < 0.05$) with both the other measurements. Values are expressed as mean and SEM.

From the measurements it was clear that both *Cepaea hortensis* and *Cepaea nemoralis* were at a significantly higher density in road-side hedges, with both the lane and field margins being of not-significantly different. *Helix aspersa* however was in significantly higher densities in the green lanes. All snails surveyed had their lowest numbers associated with field margins.

Discussion

It appears that the snails in this study are significantly more common in hedges associated with roads and lanes than with the fields, with *Helix aspersa* preferring green lanes and both *Cepaea* species preferring roads. At the present time the evidence from the floral studies in the same transects has not been processed, but the by eye observations from the snail density study suggests that the field margins had a paucity of floral species compared with the other two types of site. When fully analysed it maybe that the diversity and density of the flora provides the major influence on the snail distribution within the study site.

I am grateful to the Earthwatch 2003 volunteers for their assistance with data collection for this project.



John Llewellyn Jones

1



John Llewellyn Jones

2



John Llewellyn Jones

3



John Llewellyn Jones

4



John Llewellyn Jones

5



6

These images relate to specific articles within the magazine.

- 1. Exmouth beach east. (1-6 Page 4)
- 2. Judith and Celia collecting live borers.
- 3. Michael, Helen and Celia sorting shells.
- 4. Helen, Rupert, Michael and Celia.
- 5. Judith, Celia and Janet with the Mayor.
- 6. Judith collecting land snails.
- 7. Postcard of the canal facing north-west, showing steep sides in faulted limestone and impressive depth of the cut. (see page 8)
- 8. Shell Sculpture by Maggi Hambling (see page 9)



7



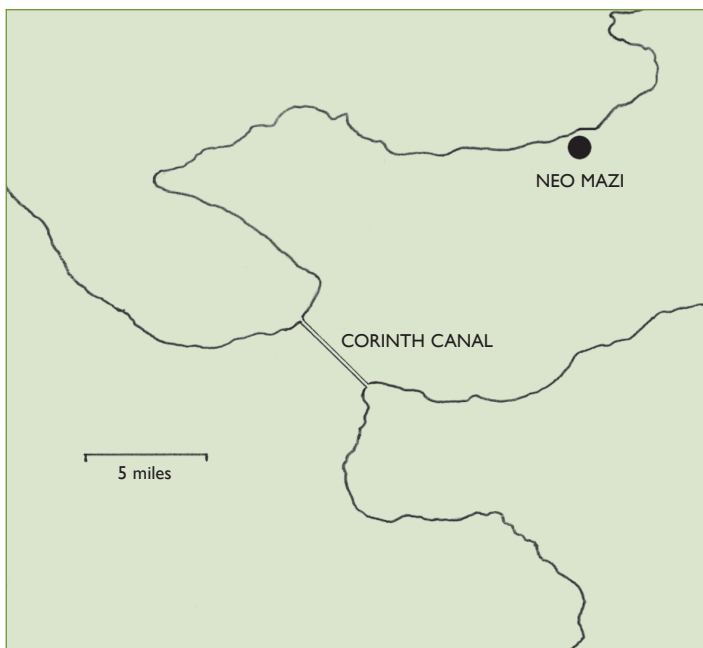
8

Rosie Dansey

Molluscs and the Corinth Canal

By C. P. Palmer and F. Fearnhead

Well preserved molluscan shells, collected from a raised marine terrace, have interesting implications. The collection was made at Neo Mazi, near Alephori, about 13 miles NE of the Corinth Canal, in the Magara Basin, Greece. The raised terrace is on ground rising, in parts, to 100m above sea level, and composed of marine fossils in a matrix of poorly sorted silty sand, sub-round to sub-angular quartz grains and other unidentified grains, with pebbles up to 5mm and grains to 0.5mm. A lump of sandy matrix, attached to a valve of *Pinna rudis*, was removed, processed, sieved and sorted. A fauna of juvenile and small molluscan species was picked from the washed residue, and added to the macrofossils listed below. All species recorded are living in the Mediterranean.



Sketch map showing relative positions of Neo Mazi and the Corinth Canal.

BIVALVIA

Nucula sp., half a hinge plate. Habitat: offshore, shallow-burrowing, sediment ingester.

Modiolus sp., single juvenile valve. Offshore, bysally attached filter feeder.

Mytilus sp., juvenile valves. Intertidal, bysally attached filter feeder.

Pinna rudis Linné 1758. Offshore filter feeder;

Arca noae Linné 1758. Low shore to offshore filter feeding crevice nestler.

Striarca lactea Linné 1758. Offshore shallow burrower in mud and shelly gravel.

Anomia sp., juvenile left valves. Low shore to offshore, bysally attached filter feeder.

Peplum clavatum Poli 1795. Epifaunal, bysally attached, filter feeding scallop.

Proteopecten glaber (Linné 1758). Epifaunal, bysally attached,

filter feeding scallop.

Hinnites distorta (da Costa 1778). Epifaunal, bysally attached, filter feeding scallop.

Spondylus gaederopus Linné 1758. Epifaunal, cemented, filter feeder.

Chama gryphoides Linné 1758, juvenile left valve, offshore filter feeder.

Parvicardium exiguum (Gmelin 1791). Offshore to 55m, shallow burrowing, filter feeder.

Divaricella divaricata (Linné 1758). Offshore to 65m, shallow burrowing, filter feeder.

Thyasira cf. *croulinensis* (Jeffreys 1847). Off-shore 7-146m, shallow burrowing, filter feeder. Sometimes put in genus *Axinulus*.

Loripes lactea (Linné 1758). Low intertidal to 146m, shallow burrowing filter feeder. Often recorded as *L. lucinalis* (Lamarck 1818) but Linne's name has priority.

Chamelea gallina (Linné 1758). Near-shore to 55m, shallow burrowing, filter feeder.

British species *C. striatula* (da Costa 1778) is sometimes regarded as a variety, and recorded by Tebble down to 55m.

Venus verrucosa Linné 1758. Offshore, shallow-burrowing, filter feeder.

Mactra sp. Too poorly preserved for determination, but the true, white *M. corallina* occurs at that end of the Mediterranean.

Tellina fabula Gronovius 1781. Deeper burrowing filter feeder, offshore down to 54m.

Thracia sp. juveniles, offshore, deeper burrowing, filter feeder.

Hiatella arctica (Linné 1758). One very old specimen and a juvenile. Near shore in rock crevices, young in *Laminaria* holdfasts, dredged down to 20m. Filter feeder.

Abra cf. *alba* (Wood 1802). Near-shore down to 65m, shallow burrowing, filter feeder.

Corbula gibba (Olivi 1792). Nearshore to "considerable depths" (Tebble, p.171), shallow filter feeder.

Gastrochaena dubia (Pennant 1777). Single valve in residue, and crypts in *Pinna* valves.

It bores into fairly hard rock at moderate depths.

GASTROPODA

Calliostoma sp. worn and broken apex. Intertidal down to near shore, herbivore.

Tricolia pullus (Linné 1758). Nearshore herbivore, common in laminarian zone.

Caecum glabrum (Montagu 1803). Nearshore herbivore

Caecurn imperforatum (Kanmacher 1798). Nearshore herbivore.

Bittium reticulatum (da Costa 1778). Offshore, microphagous - general organic debris.

Cerithium vulgatum Bruguière 1792. Shore to near shore herbivore.

Juvenile naticid gastropods: nearshore to offshore, carnivore, bores holes in bivalves.

Broken fragments of a turrid, possibly *Comarmondia*, a carnivore.

Retusa truncatula (Bruguière 1792). Nearshore carnivore feeding on foraminifera.

Retusa obtusa (Montagu 1803). Intertidal to nearshore carnivore, feeding on small molluscs.

Non-marine pulmonates, a few poorly preserved.

CHITONIDA: Single unidentifiable head plate of a chiton.

Shore to offshore herbivore, attached to rocks or empty shells.

CRUSTACEA: Claws and legs of a swimming crab, ?*Portuna* sp.

OSTRACODA: a few single valves of a marine species.

ANNELIDA: *Pomatoceras triqueter* (Linné 1758), and *Spirorbis cf. pagenstecheri*. Both species are attached to inner surface of a valve of *Pinna*.

ECHINOIDEA: Spines of a spatangoid infaunal urchin. Shore to offshore. Spines and jaw apparatus of an epifaunal cidaroid urchin. Offshore browser, omnivore.

FORAMINIFERA: *Onionis* sp, *Trochoidea* sp. *Quinqueloculina* sp.

Discussion

It is clear that the fauna (pulmonates excepted) is a wholly marine, shallow, offshore community, dominated by filter feeding bivalves, in well aerated water, and with a good supply of suspended food particles. Preservation of some of the bivalves is near perfect; *Loripes lactea* still has ligament in the hinge which is rarely known in fossils, and only in young clay formations. This deposit is almost all quartz sand and silt where preservation of ligament would be expected to last only a short time.

The totally extant fauna and near-perfect preservation of some bivalves, indicates a young age for this marine fauna, and a younger age for uplift to its present level. If it was within historical times, movement might still be continuing. If so, evidence might be found in the near vertical sides of the canal which is nearly four miles long, 23ft deep, 69ft wide at water level, and 81ft wide at the top. The isthmus through which the canal is cut is of heavily-faulted limestone rising to a maximum of 300ft; it was opened in 1893.

A marine survey boat would allow biologists to examine the sides of the canal above water level and see how high adherent marine organisms range. There is little or no tide at that end of the Mediterranean so that adherent organisms might give some indication of movement since the canal was cut. Serpulids, barnacles and bryozoans stay where they settle and cement themselves, but they have to be below water level.

If remains of these adherent organisms are found well above present water level, then the canal has been uplifted, by that amount, since it was opened 110 years ago. The implication being that the Corinth Canal may, some time in the future, need deepening.

Literature

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Tebble, Norman, 1966. *British Bivalve Seashells: A Handbook*

for Identification. Published by Trustees of the British Museum (Natural History), London.

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Encyclopaedia Britannica: Micropaedia, Vol. 3, page 150, for depth and date of cutting of the Corinth Canal.

Shell Sculpture Controversy

A sculpture in memory of the composer Benjamin Britten, at Aldeburgh has caused a great flurry of local controversy. Britten who died in 1976, was born in Lowestoft, Suffolk, and lived for a time in the Aldeburgh area where he maintained strong links with its musical community. The 12 foot high and 16 foot wide metal piece is a creation from scallop shapes and was designed by a local artist and sculptor, Maggi Hambling. Hundreds of strips were shaped by hand and then welded into place.

The sculpture was unveiled on the 8th November 2003. It is situated on a quiet stretch of shingle between Aldeburgh and Thorpeness, and is easily accessible from an adjacent car park. The controversy began immediately. On the one hand it was described as "an explosion of joy and magic", especially on the seaward facing side. Critics said its presence marred an area of outstanding natural beauty and a rusty piece of steel, costing £70,000, was a waste of money. This area of outstanding natural beauty is already marred by the presence of Sizewell nuclear power station!!

The new year saw the controversy heating up when hundreds of residents signed a petition to remove the sculpture. Maggi Hambling, the artist, saw the sculpture as "a conversation with the sea" and is adamant that the sculpture belongs where it is on the wild coastline that inspired Britten. In February the local paper, the *East Anglian Daily Times*, joined the dispute by launching a poll on whether the sculpture should stay. The sculpture controversy has also been reported in the national press and television.

It looks now as if the sculpture will remain on the coast even if it is not at its original location. A proposal to move the sculpture to nearby Snape Maltings seems to have been rejected. Snape Concert Hall was inspired by Britten/Pears music. Suffolk Coastal District Council which initially approved the sculpture is due to meet soon with Aldeburgh town councillors, the artist and sculpture fund raisers to discuss the issue.

Rosie Dansey

UK BAP Priority Species Review 2005

In 2005 the Government's Biodiversity Steering Group are due to complete a review of those species included on the BAP Priority (formerly 'Short List' species). The current BAP list includes 391 species, 44% of which are invertebrates. It is 9 years since the publication of the first BAP listings (HMSO 1995). This review, which provides an opportunity to remove some species and to add others where there is a strong conservation case, is being managed by DEFRA, who will validate any final changes to the list. At present, DEFRA have not given a timetable for the completion of the various stages. It is unlikely that the total number of Priority Species will change significantly. In order to ensure that the conservation requirements of invertebrates are fully represented, Invertebrate Link (formerly JCCBI) has established a Working Group to liaise with the co-ordinators for various invertebrate taxa and then finally bring together a set of recommendations for the invertebrate Priority Species. Although the revised criteria have yet to be confirmed, they are likely to be similar, if not identical, to those adopted for the creation of the original lists in 1995. The Invertebrate Link Working Group will issue more detailed guidance when the formal timetable and mechanisms are published. Any person wishing to know more about the UK Biodiversity Action Plan, including the review process should visit the BAP website:

<http://www.ukbap.org.uk/>. It is likely that Invertebrate Link will be creating a temporary coordinator post to liaise with the representatives from each invertebrate taxonomic group in order to provide advice and to keep invertebrate groups 'on task' with the review process.

In advance of the DEFRA timetable and species criteria, the Joint Nature Conservation Committee (JNCC) have requested that in 2004, those organisations representing various invertebrate groups initiate a review of the Red Lists, not the BAP Species of Conservation Concern (previously known as 'Long List' species), but those species included in the British Red Books (Bratton 1991). This Red Data review will not only reform and update the present lists, but will also serve to inform the following BAP review process. The Conchological Society are very well placed to fulfil these reviews with the recent publication of the new non-marine atlas (Kerney 1999) and the considerable amount of professional and other survey work undertaken by many Society members on BAP Priority and Red Data listed species. The criteria for Red List reviews are broadly those detailed by the IUCN (International Union for Conservation of Nature and Natural Resources) in the IUCN Red List Categories and Criteria (version 3.1, 2001), which can be viewed on [WWW.redlist.org](http://www.redlist.org) (look under section 'Categories & criteria').

As the Conservation Officer for the Conchological Society I will publish progress reports on both the Red List and BAP Priority Species review in future issues of

Mollusc World to inform members. If you have any comments, questions or views that you wish to be represented then please contact me at martinwilling@godalming.ac.uk or I would welcome a chat if we meet at a Conchological Society meeting.

References:

Bratton, J.H. 1991. *British Red Data Books: 3. Invertebrates other than insects*. Peterborough: J.N.C.C.

HMSO. 1995. *Biodiversity: The UK Steering Group Report. Vol. 2 Action Plans*. London H.M.

Kerney, M.P. 1999. *Atlas of the Land and Freshwater Molluscs of Britain and Ireland*. Colchester: Harley Books.

Trouble in Strangford Lough

Strangford Lough lies on the east coast of Northern Ireland and is a large shallow inlet and bay supporting an immense diversity of marine habitats and associated species. The conservation importance of the Lough has resulted in it being designated as a Special Protection Area as well as a candidate Special Area of Conservation under the EU Birds and Habitats Directives.

One of the most notable features of Strangford Lough is the 'living' (or biogenic) reefs formed from masses of horse mussel *Modiolus modiolus* shells. These structures, which may take thousands of years to develop, form the basis for one of the Lough's most diverse wildlife communities (*M. modiolus* is a BAP Species of Conservation Concern)

The Environment & Heritage Service (of Northern Ireland) commissioned The Strangford Lough Ecological Change Investigation (Queen's University Belfast), which included a diving survey in 2003 to assess the current status of the Strangford *Modiolus* communities. Queen's University published an interim report in December 2003 (Roberts 2003). This is a public document and can be viewed at http://www.ehsni.gov.uk/pubs/pubs_index.asp?qLetter=S on the Environment and Heritage Service (NI) website. This reports on the results of 86 dives as well as some intertidal surveys. The work has, worryingly, concluded that the *Modiolus* reef features in the Lough are not in 'Favourable Conservation Status' compared to their observed state in the 1980s. The report also states that acoustic survey work has revealed there has been a huge 3.7km² reduction in these *Modiolus* communities in the short period of time between 1993 and 2000. The cause of the damage to these reef structures has been trawling (technically described as the use of 'mobile bottom fishing gear') for queen scallops *Aequipecten opercularis* and, in the southern Lough basin, for king scallops *Pecten maximus*. It seems clear that legislation to manage fishing activity in 1993 did not achieve the desired conservation outcome.

On 21st January 2004 The Belfast Telegraph announced, "Strangford Lough fight goes to the highest level ...Fears for future of horse mussels".

David Gordan reported in this paper on 21st January 2004 that representatives from the UK Wildlife Trusts including the Chief Executive of the Ulster Wildlife Trust, Dr. David

Erwin, discussed with DEFRA ministers Ben Bradshaw and Elliot Morley in London the issue of damage to *Modiolus modiolus* populations in the Lough. The Trusts have made an official complaint to the EU about how this issue has been handled by governmental departments in Northern Ireland. The Belfast Telegraph states that agriculture minister Ian Pearson has now banned trawling in the Lough. Although the move has apparently angered fishermen in the area, the preliminary report would suggest that controls on the damaging effects of trawling are long overdue.

Reference:

Roberts, D. 2003. *Strangford Lough Ecological Change Investigation. Work Package 2 – The current status of Strangford Modiolus*. KA2.1: Diving Survey 2003 (Interim Report 2003). Queen's University, Belfast.

Possible legislative protection for Roman Snail *Helix pomatia* – and an appeal for help!

In late 2001 the Conchological Society was invited by the Joint Nature Conservation Committee (JNCC) to consider proposals for additions to and deletions from the Wildlife and Countryside Act as part of the Fourth Quinquennial Review of Schedules 5 and 8. In early 2002 the Society submitted specific proposals to JNCC including the addition of *Helix pomatia* to the Act. Later in that year we were informed by JNCC that *H. pomatia* was recommended for addition to Schedule 5, Sections 9(1) killing, injuring and taking and 9(5) sale.

In later communications with JNCC it was suggested that the Society might valuably be involved in gaining more information regarding the state of various *H. pomatia* populations to further support and strengthen the case for inclusion of this snail on the Wildlife and Countryside Act.

Unfortunately much of the ecological and distributional information on *H. pomatia* populations in the UK is rather patchy and anecdotal. More 'hard data' is required to confirm the presence of existing populations and to record details of population declines and losses. *H. pomatia* populations are at risk for a number of reasons including habitat loss and change. The snail typically lives on calcareous areas in rank grassland and ecotonal scrubby areas on the margins of denser woodland (for an excellent account of the snail's ecology in the Cotswolds see: Alexander, K.N.A. 1994. The Roman Snail *Helix pomatia* in Gloucestershire and its conservation. *The Gloucestershire Naturalist* no. 7: 9 – 14). Probably the greatest threat to *H. pomatia* populations is the collection of snails for domestic culinary use and commercially in the restaurant trade. Adult snails are easily located on warm humid days in late spring/early summer and a determined collector could decimate a small population in a single evening.

On behalf of the Conchological Society as the Conservation Officer I am embarking upon an initiative to try to gather more information on the snail. This will involve both Society members and also targeted conservation groups such as County Wildlife Trusts in the snail's three core areas, the Cotswold and Chiltern Hills and the North Downs. A team of Society members will be advancing the programme with me by leading Society meetings and forming links with other conservation bodies and interested individuals.

To assist JNCC in their work on the snail we need to start gathering data in 2004. I am therefore keen to hear from you if:

1. you know of any *H. pomatia* populations;

2. if so, have you noticed any population changes and;

3. would you be interested in undertaking some straightforward fieldwork to search for and possibly start some simple monitoring? Information forwarded to the Society would pass to the Non-marine Recorder, but would not be released in any way that might disclose the whereabouts of populations to the general public and so compromise their safety due to collection. If you would like to become involved with this project then please contact Martin Willing at martinwilling@godalming.ac.uk.

Work on *Balea biplicata* at Kew

I wrote in *Mollusc World* 2: 10, about 'a new snail at Kew' concerning the protection of an important population of the Two-Lipped Door Snail *Balea biplicata*. An area of sycamore dominated woodland adjacent to Kew railway bridge (about 0.45 hectare) is designated by the Greater London Authority's Biodiversity Group as a grade 1 'Site of Borough Importance' on account of the snail population. As part of their planning consent for an adjacent residential development, the woodland has been safeguarded as a "snail reserve" by developers St George West London. The woodland is subject to a management plan and interpretation boards have been erected to inform the passing public of the importance of the reserve. An ecological consultancy, CPM Environmental Planning & Design, have undertaken the works at the site. Mr. Julian Arthur of CPM is also undertaking an ecological research project, funded by St George, into the habitat preferences and distribution of *B. biplicata*. This work, which is still in progress, has involved not only study of the Kew reserve snails, but also other known local populations of *B. biplicata* at Isleworth Ait, Dukes Hollow and other similar sites where the snail is not known in order to identify possible reasons as to why the snail is not more widespread. Quadrat counts of the snail together with associated Mollusca and botanical information, were taken in order to monitor population numbers and to try to better understand *B. biplicata* habitat requirements. It is hoped that the research will assist in future management for the benefit of the snail, as well as identifying locations for possible introductions. Julian is prepared to share his findings with the Society and has already spoken with Adrian Rundle, who has led Society field meetings to the Kew site.

Clarification of Molluscan Conservation Statuses

In *Mollusc World* 3: 14-15, I wrote an article on 'Molluscan Conservation Statuses'. A couple of sharp-eyed readers pointed out to me that two species, the bivalves *Pisidium pulchellum* and *Pisidium miotessierianum*, did not have any conservation statuses designated to them. This was an omission. They should have both been categorised as Notable B (Nb), a category used in 'Recorder' versions prior to 2002, but not currently in use.

Thanks are due to Dr. Roy Anderson (Queen's University, Belfast), Deborah Proctor (JNCC), Julian Arthur (CPM) and Dr. Mary Seddon (BioSyB, National Museum of Wales) who supplied information and gave useful advice concerning some items appearing in Conservation News.

Items in Conservation News were written by Martin J. Willing
Conservation Officer



We are delighted to publish this image of a Garden Snail, *Helix aspersa* which was awarded 3rd prize in the Professional Category ESB Environmental Photography Awards 2003 in Dublin on 28/1/04. Dublin based

professional photographer Lorcan Breton, received a cheque and framed certificate for his work. The same image also won a silver crest award in the Irish Professional Photographers Association Awards programme. We are very grateful to Lorcan for permission to reproduce this photograph in *Mollusc World*. Further examples of Lorcan's work may be found on his website www.lorcanbreton.com

Presentation photo ESB Environmental Photography Awards 2003 in Dublin on 28/1/04. L to R: Tony Donnelly, Deputy Chief Executive ESB, prize winner Lorcan Breton professional photographer, Maria Dunphy President IPPA and guest speaker Derek Mooney (Mooney Goes Wild - Presenter RTE Radio Programme).



Derek Rands





Partners in Slime

by Ben Rowson

Slugs (Pulmonata) and “sea slugs” (Opisthobranchia) are the molluscs most often neglected in museum displays. Both have an image problem, slugs being a rather mundane nuisance and sea slugs a well-kept secret of the malacologist. Their thin, attenuated shells would make for a pretty uninspiring exhibition, yet the living animals indulge in all kinds of strange behaviours and display a dazzling range of colours.

The National Museum of Wales is fortunate enough to have a handful of temporary exhibition cases ready to give any subject its fifteen minutes of fame. Setting up the display “*Partners in Slime*” in one of these was an attempt to give the slugs and sea slugs a bit of a public relations boost. There are over 100 models on display, life size or somewhat enlarged, showing a selection of British and tropical slugs and sea slugs and some of their behaviour. Museum visitors tend to have mixed feelings about models taking the place of real specimens, but the handful of preserved specimens on show is meant to illustrate how little of their original appearance can survive any period of time in spirit.

The models are made with the popular oven-hardening material Fimo® and then painted. The greatest challenge was finding source material (photographs, paintings and descriptions) of non-European terrestrial slugs. Though diverse, unusual and occasionally colourful, there are precious few illustrations of living animals in the literature. Images of colourful sea slugs, though, abound and thumbing through any of the many publications on the group shows that no two individuals are completely alike. The pictures on Bill Rudman’s “*Sea Slug Forum*” (itself an excellent resource) are one of the strongest arguments I have yet seen for the conservation of biological diversity, without saying a word on the subject.

Perhaps the fact that these creatures are shell-less has meant their biology has been looked into more deeply, with a wider range of behaviours and anatomies being revealed. Perhaps they have been able to evolve in new directions without an encumbering shell. Whatever the circumstances, a generally favourable response from the public so far suggests that slugs and sea slugs deserve a little more exposure.

Images of two of the models (*Chelidonura hirundinina* and *Helicarion* sp.) are shown here. The “*Partners in Slime*” display runs until late spring at the National Museum & Gallery Cardiff, Wales, UK.

Bill Rudman’s “Sea Slug Forum” can be accessed online at <http://www.seaslugforum.net>. Its coverage is global.

These images relate to specific articles within the magazine.

1. The Roman Snail, *Helix pomatia*. Page 10

2. Alex Menez, the snail hunter. Page 15

3-6. Scenes from the Winnall Field meeting. Page 15. (Photos by Ron Boyce & June Chatfield)



Robert Rendall of Orkney

Thanks to Alan Skene for providing this anecdote (does it sound familiar to anyone?)

Robert Rendall (1898-1967) was “an outstanding Orkney man of the 20th century”. He was a shopkeeper and crofter, an all-round amateur naturalist, an amateur archaeologist, a poet, a deeply religious man and a Sunday School teacher of great resource. He was always attracted as a boy by nature and the Orkney shore, and he said of himself “Young eyes have glimpsed God’s glory in dandelions”.

His life-long interest was in marine animals. He collected shells with dedication and patience and studied their classification with characteristic enthusiasm. After forty years study, in 1956 he produced *Mollusca Orkadensia* as a vetted scientific paper in the Proceedings of the Royal Society of Edinburgh, which was a masterly account of the marine Mollusca of the County, and has remained the standard work for consultation since. In 1973 he wrote an autobiography, with many sidelights on natural history called *Orkney Shore* published in Kirkwall. It is from this book that the following anecdote about a sea urchin is taken:

THE first world war interrupted my nature studies, though life on board a depot-ship in Scapa Flow, the H.M.S. Imperieuse, on which I held the undistinguished rank of Officers' Steward, could not stifle my passion for collecting. Trips ashore to Longhope provided an opportunity for becoming acquainted with the beaches along the Pentland Firth, but as His Majesty's ships did not provide facilities for private collecting, what little of this I did had to be done surreptitiously. The Rev. James Wallace in his Description of the Isles of Orkney remarks upon the extraordinarily large size of the sea-'urchins' (or, as we call them in Orkney, 'scaadman's heids' = scaled man's head) found on the shores of the Pentland. On a certain day when crossing the Ayre at Brims I chanced on one of these, still alive, about six inches in diameter. The temptation was too much: I took it aboard and stowed it in a convenient hole in the deck, in one of the lower flats of the ship. In the days that followed, the thing escaped my mind.

Those who have experienced the penetrating effluvia of a sea-urchin gradually decaying into black 'iper' [mud] will not need to be told that soon the whole lower region of the ship was permeated by the mysterious whiff of some malodorous substance. Naval discipline took action. Decks were scrubbed with strong caustic soda, the ship's crew having to forgo their traditional 'heads down', during the afternoon watch in order to carry out this extra duty. The nuisance, however, was only temporarily subdued. Fresh orders were given. With final

resolution such as only an R.N. Captain can command, Captain Philips mustered the entire ship's crew, both officers and men, numbering some three hundred, each at his own station in storeroom or cabin door; and a thorough inspection was made by the Captain himself, supported by his exasperated Commander and by the Officer of the Watch. Vigilant search eventually tracked the smell to a narrow area in the after compartment of the lower flat in which my storeroom was situated. With the zeal of a terrier dog that has cornered an elusive rat the Captain pounced upon my store and triumphantly emerged with a sack of cabbage. This, too, emitted a certain effluvia, and I was ordered to henceforth store all cabbage and fresh vegetables in a meat-safe on the upper deck.

When the excitement had subsided and the Captain and his minions were safely out of the way I gave that inner store a more thorough private examination, for by this time I knew that I must in some way or other be the culprit, and knew also that the sack of cabbages had only given me a short respite from discovery. All at once I remembered the sea-urchin. So late in the afternoon, when the lower deck was quiet, I extracted the putrid remains from its hidey-hole, and gingerly carrying it through devious alleyways and up convenient companion ladders, consigned it to its native element.

How to tackle an octopus

Whilst on anecdotes, here is one sent in by Eleanor Fogan from a book published in 1954 entitled “The frogmen - the story of the wartime underwater operators” - by Waldron and Gleeson. It comes from a section on dealing with problems encountered in the far east!

In tropical waters one is liable to encounter various un-neighbourly types of underwater denizens. I remember an instruction I read about the octopus (which I rather think must have been written with the tongue in the cheek): it said -

“As the octopus is a timid but curious creature, if one is caught by a tentacle, the thing to do is remain motionless. The octopus, being curious, will probably feel you all over for perhaps a quarter of an hour; then it will get bored, and withdraw to its lair. If disturbed, it will get frightened and bring its tentacles into play. The thing to do then is to get as close into its body as possible. The octopus is very sensitive where the tentacles join the body, try to tickle it under the armpits when it will convulse itself with laughter. The other method is to jab it in the eye with a knife”.

How to make marzipan snails, a treat for all the family!

by Jane Reynolds

You will need (fig. 1):

500g marzipan, white or gold, 60g cooking chocolate food colouring, edible silver balls, bowls, according to number of colours, a sharp knife, a teaspoon, baking cases, a heatproof mixing bowl, a small saucepan, disposable vinyl gloves

This makes 8 - 12 snails depending on size.

First of all, decide what colours you want to use. If you are using gold marzipan, you will only be able to make orange and green (using red or pink and blue colouring) although you will not need yellow colouring. With white marzipan you can increase the range of colours to blue, red or pink, yellow, orange, green, mauve and of course white. The shades of green and orange will be different according to whether you use gold marzipan or yellow food colouring.

In the example I have used both.

Once you have decided on your colour range, divide the marzipan accordingly and place in bowls. Add two to three drops of colour to each bowl. For mixed colours, such as mauve, it is best to mix the colours in a teaspoon before adding to the marzipan. Work the colour in thoroughly (fig 2), using a different glove for each colour, as it tends to stain.

To make the snails, take a small piece of marzipan of chosen colour and roll out into a small sausage shape, about the size and thickness of your index finger. This is the body. One end should be slightly tapered to form the tail, the other end should be bent upwards and out in a 'S' shape to form the head (fig 3). If desired a small slit can be cut to form a mouth. Take a very small piece of marzipan and roll it with one finger into a dumb bell shape. Press a silver ball into both ends (fig 4) and stick the centre onto the snail's head by pressing down with the knife (fig 5). A small amount of water may be used to improve adhesion, but this is generally not necessary. Fold the ends upwards; this

forms the eyes.

The shells are made by taking a slightly larger piece of marzipan, usually of a different colour, and rolling it out to form a long cone (fig 6). The base of the cone should be about 1 - 1.5cm diameter (1/2") and the length should be about 10cm (6"). Starting with the tip, coil the marzipan into a spiral shape (remember to coil dextrally!) (fig 7) and stick the base to the snail's body.

Finally, break up the chocolate and place in the heat proof bowl. As a guide, one square of chocolate per snail is about the right amount. Set the bowl over the saucepan with a small amount of water in it, on a low heat, and wait until the chocolate melts. Dip the base of each snail in the chocolate and place immediately in a baking case (Fig 8). Place in fridge to harden both chocolate and marzipan, for at least two hours. This is not essential but the chocolate adds a delicious contrast to the marzipan, especially if dark chocolate is used.

Eat and enjoy! N.B. Not suitable for nut allergy sufferers.

Field Meeting Report:

Winnall Moors, Winchester 12th July 2003

Eight Society members and guests met on a beautiful midsummer's day to visit the Hampshire Wildlife Trust's Winnall Moors reserve. Those attending included Ron Boyce, June Chatfield, Barry Colville, Rosemary Hill, Martin Willing and Terry Wimbleton together with guests Michael Thomas and John Poland.

Winnall Moors lies immediately to the north of Winchester stretching to the A33 Winchester by-pass. The reserve lies between the main River Itchen and a carrier channel lying to the west. Reserve habitats include reedbeds, open mixed fen, cattle-grazed (now non-functioning) watermeadows and small areas of carr together with the gravel bottomed, crystal-clear waters of the two chalk-stream channels. The Hampshire Wildlife Trust is managing the River Itchen at Winnall with a minimum of intervention so that a range of microhabitats typical of a 'wild' chalk stream are able to develop. Environment Agency funded survey work in 2001 and 2002 showed the Winnall stretch of the River Itchen to support some of the largest populations of the Biodiversity Action Plan (BAP) 'Priority' bivalve *Pisidium tenuilineatum* in southern England.

The party were able to sample most of these habitats and were fortunate in being able to confirm the presence of the *P. tenuilineatum* at several locations, by sieving fine silty sediments that are present in some locations on the river margins. Another BAP 'Priority' species, *Vertigo moulinsiana*, was also found in several parts of the reserve in areas of open fen by beating vegetation over sieves and white trays. In total 35 species of mollusc were recorded during a most pleasant day by the river.

The Society thanks the Hampshire Wildlife Trust and the reserve warden, Mr. Mark Langford for allowing us to visit and sample in the Winnall Moors Reserve.

Species recorded (naming follows Kerney 1999):

Aquatic species:

Valvata cristata
Valvata piscinalis
Potamopyrgus antipodarum
Bithynia tentaculata
Physa fontinalis
Lymnaea palustris
Lymnaea stagnalis
Lymnaea peregra
Anisus vortex
Gyraulus albus
Ancylus fluviatilis
Acroloxus lacustris
Pisidium tenuilineatum
 (BAP Priority Species)
Pisidium amnicum
Pisidium casertanum
Pisidium obtusale
Pisidium millium
Pisidium subtruncatum
Pisidium nitidum

Terrestrial species:

Carychium minimum
Succinea putris
Oxytoma Pfeifferi
Columella edentula
Cochlicopa lubrica
Vertigo moulinsiana
 (BAP Priority Species)
Discus rotundatus
Oxychilus cellarius
Oxychilus alliarius
Zonitoides nitidus
Deroceras reticulatum
Euconulus fulvus
Monacha cantiana
Ashfordia granulata
Trichia hispida
Cepaea hortensis

Dr Martin J. Willing
 Meeting Leader.

The Snail Hunter

Alex Menez

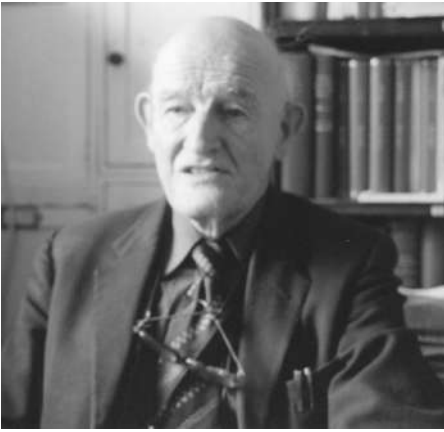
The University of Wales, Cardiff and
 The Gibraltar Museum, Gibraltar.

For the next 20 minutes all my attention will be focused on one square metre (my quadrat). This is how long it will take to count the snails that live there and quantify the structure of their living space. After that I'll examine 19 more quadrats in my 40 by 40 metre selected area (my site). When I'm done I'll have added a little more to what I know of how important the structure of the living space of snails is and how it can explain why there are more species in some places than others. And then I'll do all this again at another 50 or 60 locations.

All these locations will be in south Iberia where many of the species found here live nowhere else and where habitats can be very variable in composition over very small distances: what ecologists sometimes term heterogeneous habitats. It is also an area that provides the snail ecologist with exciting challenges. These challenges are not only intellectual, they are also of a more practical nature. You have to figure out how not to tear your hands to shreds on the fronds of the unforgiving ground palm (by wearing heavy duty gloves), how to avoid the occasional scorpion lurking under the rock you need to overturn, and more challenging still, how to avoid the beastly (and large) Scolopendra centipede from crawling up your trouser leg (by wearing thick socks over your trouser bottoms). And you have to make sure that you remove any ticks that may have attached themselves to unprotected skin during your fieldwork session.

Now it is three in the morning and working under the dim light of my antique brass desk lamp I input the day's data into my computer. I settle into my comfortable chair and look around my cosy study: the many books both new and antique on the shelves, the thousands of papers related to my research neatly stacked in piles, the glistening jars of alcohol-preserved specimens from my reference collection and the many slim draws that contain the dry material of the collection. With Górecki Symphony Number 3 playing in the background my thoughts drift back to the day's fieldwork: on the ground searching through the plants and looking under the rocks, never losing the thrill of finding a new snail for that locality or of finding a rare species, becoming a part of the world of the snail. This is when I am the 'snail hunter' and someone who won't come through in the write-up of my PhD work or of any publications that stem from it: the requirements of scientific writing cannot allow it. But it is from the snail hunter that everything else follows: data input, analysis, interpretation. He is the expression of the awe of nature that is there from childhood, but which some people sometimes forget or lose.

My thoughts return to the present, I continue with my data input, knowing that one day I may be closer to finding out some of the answers to the many questions that I have about snails and where they live.



When I first went to Conchological Society meetings, Bernard attended regularly and was an active member of Council, but as so often happens, I knew very little about what else he did. It wasn't until September 1990 on the first week of the Kew Diploma course that I ran into Bernard outside of meetings. Our group was being given a guided tour of the Kew Herbarium, and I turned to see the unmistakable figure of Bernard bounding up the stairs. Bernard is responsible for naming

collected was some *Carychium* and at that time everyone thought there was only one species and I'd clearly collected what I thought were two, one in beech woods and one in marsh areas and I started writing a little article about this. I'd got to know Hugh Watson and he was also interested in *Carychium* so we agreed to do a joint paper. It took years and years to do but eventually it did come out."

Bernard's early career was in physics; being at the tail end of World War II he was "pushed off into Reading to do radar research. I'd never been interested in physics but you did as you were told in those days." Bernard initially worked for an organisation called the Printing and Allied Trades Research Association (PATRA), as "a sort of dogsbody." Because PATRA's original premises in Holborn had been bombed during the war, they had premises scattered "all over the place." The microscopy lab for paper quality testing, "a great big rambling cottage," was in Boxmoor, close enough to Luton for Bernard to

to the *Conchologists' Newsletter* former printer), let him use the facilities. "I wrote up about the radulae of snails in a journal called *The Microscope* illustrated with the photographs I took." I had heard that Bernard became friends with Tom Pain through meeting him on the railway (Tom a guard, Bernard a passenger) but when I asked him, Bernard said they'd met at Conch Soc meetings, and Tom had asked him to photograph some shells for him at Boxmoor. "Needless to say they were *Ampullarias*, of course. They were published in *Proc. Malac. Soc.* He was interested in *Achatina* and other African shells as well so our interests overlapped somewhat."

Eventually PATRA decided to build new centralised premises in Leatherhead, and this prompted Bernard to rethink his future and his career. "I thought if I'm going to have to go all that way I might as well do something else I wanted to do and go and get a job in Africa." By then Bernard was a keen botanist having already had some papers published. Through

In conversation with

about a fifth of the flora of East Africa as well as many molluscs of the region, and has been at Kew for many years. It was at his garret-like office, crammed with papers, journals, magazines and stacks of *Telegraph* obituary pages, that I interviewed him one sunny morning in late March 2003. I started by asking him how he got interested in shells in the first place.

"Well it goes right back to when I was at Luton Grammar School and it would be about 1942," he said, "and there was a chap called Thompson. We had a roneographed natural history sheet that we put out and he'd put a little article in it about collecting shells and it was something I'd never even thought about doing. The fact that somebody knew something about something I didn't know rather started me off! I got interested through this chap, then there were one or two people much older than me who were interested in plants - John Dony was interested in plants and there was a chap who was interested in Hymenoptera. I used to go round with them." Bernard produced an account of snails of Bedfordshire about 1945. "One of the things I

commute daily. "Work was very varied - paper would come in for analysis to find out what fibres were in it, that sort of thing, or someone would write in from Egypt and say 'our books are being eaten, what could we do about it,' we never knew what was going to happen. We did solve one or two quite interesting problems. The people who printed stamps were complaining. They were sure it was something wrong with the paper because the rollers kept on wearing out 100 times more quickly than they should do. We had to have some of this paper and they cut off little tiny bits: 'we can't give out too much because it's security paper.' We cut it into sections and there were little black granules, very small, but quite enough to cause wear so we thought we must go and see the printing works. To cut a long story short they'd put up a new coal shed for running their machines with and the dust from this was blowing straight into where they were making paper. So that was the sort of thing; quite interesting sort of practical scientific work."

There was also a photographic lab there, and Bernard's employer, Mr. Armitage (no relation

his interest in the natural history of Bedfordshire he had got to know John Dony and Edgar Milne Redhead, who worked at Kew, and through Edgar he heard about a job opportunity. "There was this chap Peter Greenway who was botanist at the East African Agricultural and Forestry Research Organisation. At the time this was a continuation of an important agricultural research station which had been set up by the Germans in 1902 in the rainforest just behind just behind Tanga in the north eastern corner of what is now Tanzania but was then Tanganyika. Anyway he was over here and he was looking for an assistant. He'd been there since 1928 without anyone to help him. I had the interview at Mrs Pitts' just up Kew Green from here; she used to run a boarding house. That wasn't the main interview; I had to go for another interview with the colonial office people up in town. There was another job going too which I was interested in; that was as entomologist in the Sudan. I had an interview which more or less covered both jobs. I was offered both of them in the end and I took the one in Tanzania chiefly because I knew a forested place was much more



interesting than a dry dusty place. I didn't go off straight away because during the war Greenway had sent an enormous amount of specimens to Kew which hadn't been dealt with because all the staff here were either in the army or they were doing other jobs so this stuff had accumulated. I started by having a year at Kew and managed to clear about 5000 specimens, going down to the basement about twice every day. In doing so I built up a knowledge of East African plants; when I got out there I could recognise quite a lot, so that was very helpful."

The herbarium, central laboratory and Bernard's house in Amani were separated by rain forest, now mostly replaced by tea plantations. It was obviously a fairly inaccessible place at the time, although Bernard evidently enjoyed it, but before he even started there, there were plans to relocate: "The story was that the shopping was better (in Nairobi) and the director's wife decided!" One of Bernard's jobs was moving the entire herbarium to Nairobi. "The road

I had collected too, very kindly, before I went out there, had lent me a copy of von Martens' great book of East African molluscs. Pfeiffer died while I was out there and I had to give the book back. A paper was published after he died which I didn't see until my paper on Amani was written and I'd sent it off but it was still in proof. There were one or two things that I found that he'd described so I had to hastily alter my paper. It was amazing, and shows you how rich the place is, that I'd found lots of other things that he didn't find and he found lots of things that I didn't find. Mostly tiny since most of the big things had already been described. You had to be on your hands and knees for hours and not move more than a few yards."

The set up in Nairobi was quite different, so after the move some of the departments split up. "The main people at the EAAFR were chemists, soil people, statistics people, and the actual agriculturists; they all went to Mugaga which was about 20 miles from Nairobi into a big building that had been specially built. The

molluscs as much as possible. I'm quite interested in entomology too so when I get tired of one I turn to the other but I have only done serious work in botany and molluscs."

Bernard has only been back to Africa twice since then. In the '70s he was seconded to do some work in New Guinea and "when I was coming back I thought 'well I could fly to Nairobi for no extra cost, just alter the route home'. I spent about a fortnight, borrowed a vehicle (Kew had a vehicle station there), and went to one or two places." He no longer feels much need to do any collecting himself "there is enough unnamed material in the world's museums without going and getting any more," he says, "at this moment I've got an African collection from Budapest Museum; three or four hundred tubes some of which have got half a dozen species in, others have got one or two. They've sent out botanists and entomologists and they've collected some shells as well. They're not named at all, not to genus or family or anything, which makes the collection rather useless, so the chap in

Bernard Verdcourt

down to the railway station had about 10 hairpin bends and there was always mud. Driving quarter ton trucks up and down there was rather hair-raising." Centralisation had its problems: "What was the East African Commission broke up and now Kenya's got lots of stuff that Tanzania thinks really belongs to it and that sort of thing. Fortunately it hasn't all been divided up again but it would be much better if the three territories Tanzania, Uganda and Kenya got together again as a working trio."

Naturally this environment was a good place to develop an interest in conchology "Of course I got interested in East African molluscs. I was only in Amani for I suppose scarcely more than a year, if that, but I found about 50 species many of which were undescribed so that started me off on doing serious work on them but not as much as I'd have liked because I was paid to be a botanist!" Bernard had joined the Conchological Society in 1943 and was in correspondence with members of the Society. "Pfeiffer, who had collected in East Africa and naturally had collected some of the things that

veterinary people had another similar building quite close and there was a main library there, quite a big library but the herbarium didn't go there. Because there was already in the Coryndon museum (which is now the National Museum of Kenya) a herbarium, the East African stuff from Amani was all united with it as one big herbarium - which is now the East African Herbarium. We still came under the Colonial Office but Peter Bally, who was quite a well known botanist, mainly worked on succulents; he was still paid by the museum which was run by Louis Leakey. There was a bit of friction between the Colonial Office and these local people but actually it all worked fairly well." Bernard stayed in Nairobi until about 1964 when Independence was looming and he was in his 40's. Again this seemed an appropriate time for Bernard to make a change in his life. Fortunately, he'd met and played host to Kew's Director (Sir) George Taylor the year before. "He'd told me 'if you ever want a job at Kew, let me know' and I'd said 'yes I probably would want a job at Kew' and I think that helped at the interview. So I've been here ever since! I've tried to mix botany and

Budapest said could I look at them. Once again new species keep turning up - this is full of new species. I've named a lot of them. Of course a lot of them, not having been collected by snail people are not really in the condition you'd want them to be in." Bernard occasionally gets interesting specimens directly from East Africa. "Someone sent some very peculiar slugs from a forest in Southern Tanzania. They can blow up their heads and a keel on their back appears too. Now I'd had those slugs before pickled, but these were pictures of living ones and he wondered if I could do anything. I said I'd have to have some material and it wasn't until later that I realised I'd had these slugs from exactly the same place before but they showed no trace of this peculiar habit but the anatomy was absolutely the same - new genus I think. I dealt with it but it hasn't been published yet." Bernard is enthusiastic about current field work in the area "One thing that's pleased me very much - we've got a relatively recent new member of the Conchological Society, Peter Tattersfield (who has only been a member for 22 years! JER) and he has shown an absolutely incredible eye for small snails. He's

continued on page 21





Adrian T. Sumner

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Adrian T. Sumner

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Adrian T. Sumner

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Adrian T. Sumner

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Adrian T. Sumner

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These images relate to specific articles within the magazine.

- 1. The lime-rich sandy machair at Fladaig, Harris, sandwiched between sea and mountains.
- 2. *Arion flagellus*, the commonest large slug in Lewis and Harris.
- 3. The standing stones of Callanish, Isle of Lewis.
- 4. *Helicella itala*, the “machair snail”, from Luskentyre, Harris.
- 5. *Cepaea hortensis* with a white-banded shell, from near Tolsta, Isle of Lewis.

Figures 1-5 relate to page 19

6 - 13. Marzipan snails in the making. Photos by Jane Reynolds. See page 14 (referred to as fig. 1-8 in article)



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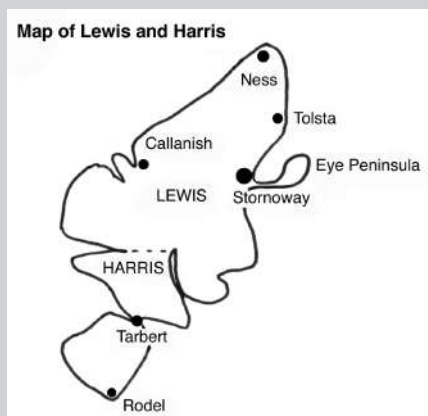
11



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1



Hunting slugs and snails in Lewis and Harris

by Adrian T. Sumner

The publication in 1999 of the Conchological Society's *Atlas of Land and Freshwater Molluscs of Britain and Ireland* was a landmark in studies of biogeography. At a glance, the distribution of every species in the British Isles can be seen, and the amount of work involved to produce this comprehensive coverage must have been immense. Nevertheless, it was remarked that the existence of only old records in certain areas merely reflected a lack of up-to-date records, and not extinction. A close scrutiny of the map even shows that a few parts of Britain still had not a single molluscan record. In fact, publication of the *Atlas* did not mark the end of an era of recording, but rather acted as a stimulus to fill in some of the gaps. Among the under-recorded areas was the Isle of Lewis, and so I persuaded my wife that we should take our summer holiday there in 2000.

A bit of geography

Although people speak of the Isle of Lewis and the Isle of Harris, they are not two separate islands, but parts of a single large island that is the most northerly of the Western Isles or Outer Hebrides, sometimes also known as the Long Island; in prehistoric times there was a single island stretching all the way from the north end of Lewis (the Butt of Lewis) through the Uists and Benbecula right down to Barra and beyond. Nowadays, however, the Sound of Harris separates the island from North Uist.

Lewis and Harris together make what is by far the largest offshore island in Britain, about 60 miles long and nearly 30 miles across at its widest point. It is more than twice the size of the next largest island, mainland Shetland, while the Isle of Man can almost be fitted into Harris, the smaller part of the island that comprises Lewis and Harris. The Isle of Wight is insignificant on this scale.

The northern part of the island consists essentially of a vast peat moor, while the south, mainly in Harris but extending into the south of Lewis, is mountainous, with Clisham (2293 feet) being the highest mountain. This is almost a lunar landscape of bare rock and scree with scarcely any vegetation, the rocks being the hard volcanic gneiss. The boundary between Lewis and Harris (which is of no political significance) does not follow any clear natural line, but cuts through the mountains between Loch Resort in the west and Loch Seaforth in the east. On the

whole, therefore, Lewis and Harris are extremely unpromising territory for molluscs, but fortunately there are some exceptions. Along the more favourable parts of the coasts there are crofting townships with some agriculture on a narrow strip of more fertile ground, and in the best places on the west coast the terrain is the fertile machair, formed when the calcium-rich shell sand is blown inland over the peat (Figure 1). In spring the machair is rich with wildflowers, as intensive agriculture has never reached this part of the world. The other interesting and largely artificial habitat is around Lews Castle, on the outskirts of Stornoway, where vast quantities of good soil were imported in Victorian times and trees and shrubs planted to form what is now the only mature deciduous woodland in the Western Isles.

Lewis can be reached by ferry from Ullapool on the mainland direct to Stornoway (daily except on the Sabbath), or by air to Stornoway airport. Stornoway is the only real town in the Hebrides, with a population of about 6000 (out of about 20,000 in the whole island of Lewis and Harris). It is the administrative centre for the Western Isles. Stornoway is typical of small towns everywhere, with hospital, bus station, schools, factories, traffic lights, roundabouts, supermarkets and suburbs. It may seem odd to many readers to mention these things, but in fact they are extremely unusual in these remote parts. The molluscan fauna of Stornoway would make an interesting comparison with that of small towns elsewhere, but there was no opportunity to do this.

Another ferry, from Uig on Skye, comes into Tarbert on Harris (again, daily except the Sabbath), and a small ferry connects the south of Harris with North Uist, across the Sound of Harris. Tarbert is little more than a large village, constrained in a narrow valley, but is the chief settlement in Harris.

The molluscs

In total, I found 32 species of land and freshwater molluscs in Lewis and Harris. Although this is not a large total for such a large area of land, much of it is inhospitable for molluscs (as well as for people!), and in any case no attempt was made to carry out a systematic survey, which would not have been possible in the time available. The time devoted to different areas also varied widely. Nevertheless, a fairly good idea

emerged, in the course of two weeks' holiday, of what species might be found where, and which were commonest.

The species found have been listed in Table 1, and some idea of their distribution has been given by dividing up the island arbitrarily into eight areas. Species such as the slugs *Arion ater*, *A. subfuscus*, *A. intermedius* and *Deroceras reticulatum* were all widespread, with *A. subfuscus* and *D. reticulatum* being particularly common. No surprises there, then! Also widespread were *Cochlicopa lubrica*, *Lauria cylindracea*, *Arion flagellus*, *Deroceras panormitanum* and *Milax gagates*. The first two of these are, of course, pretty common in most places in Britain. *Arion flagellus*, however, seems not to have been reported previously from Lewis and Harris, but is in fact the common large slug on the island, despite being slightly less widespread than *A. ater*. It is, however, often found in clusters of several individuals, whereas *Arion ater* is generally more solitary. In fact, I had first encountered *A. flagellus* (Figure 2) on Lewis in the previous year, in the course of a cruise round the remotest Scottish islands, when we had to seek the shelter of Lewis because of bad weather. Going ashore at Breascleit to visit the famous standing stones at Callanish (Figure 3), nearby, I had seen a large brown slug, but at the time dismissed it as a colour variant of *Arion ater*, though not without a suspicion that it could be something else. My thanks are due to Stella Davies for confirming the true identity of these large brown slugs. It is now clear that *A. flagellus* is also widespread on other Scottish islands (I have found it on Colonsay, Islay and Jura), as well as on the mainland, particularly in the west, but also at various places in the east. It is probably spreading quite rapidly, but because this species was not properly recognised until recently there are few reliable older records for comparison.

Arion owenii is another species that seems to be spreading quite rapidly in Scotland, but so far it is not as widespread in Lewis and Harris as the larger *A. flagellus*, although it is commoner than the rather similar *A. distinctus*, which possibly it could be displacing.

The presence of *Milax gagates* in Lewis and Harris is not surprising, as it is quite widespread in coastal areas of Scotland, particularly in the north and west. Nevertheless, the *Atlas* only

shows two 10 km squares, one in Lewis and one in Harris, with old (pre-1965) records for this species, compared with the 15 squares where I found it in this study. In fact, the only significant area where it was not found was in the woodland surrounding Lews Castle – hardly surprising as this is not a woodland species.

Deroceras panormitanum (formerly *D. caruanae*) is of course an introduced species that is known to have spread rapidly since it arrived in Britain in 1931. It is almost certainly a much more recent arrival in Lewis and Harris, as the *Atlas* has no records for it here, or indeed in any other of the Western Isles. Somehow it has now got to the island, and found that the conditions are to its liking.

The more accessible parts of the west coast of Lewis and Harris form an especially interesting habitat, the machair, which as noted earlier is grassland rich in wild flowers growing on a lime-rich fertile soil formed from shell sand and peat. In the best places on the west coast of Harris the machair forms part of the most beautiful scenery where stunning white beaches are backed by the green machair with the mountains rising behind (Figure 1). This rich habitat is home to two characteristic species, *Cochlicella acuta* and *Helicella itala*; indeed, the latter (Figure 4) is known locally as the machair snail, according to the tea towels on sale in the Stornoway Museum. I found both species on the machair all the way up the west coast, though in the far north, at Ness, the only specimens of *H. itala* were empty shells. *C. acuta* was busy mating one damp afternoon while we were there in August, but this may not indicate the typical breeding season throughout Britain; after, primroses were still flowering in shady gullies on Lewis, so seasons are evidently different there! These two snails also occur on the east side of Lewis: going north from Stornoway there are a number of crofting townships before the road peters out north of Tolsta, although the sandy soil is probably not the true machair. On the Eye Peninsula I only found them in the sandy soil by the causeway connecting the peninsula with Stornoway. However, except for one live specimen of *C. acuta* I only found empty shells in the east, so perhaps the climate is a bit harsher, or there is less available lime. It was easy enough to find live *C. acuta* and *H. itala* in the appropriate habitats on the west coast, so I suspect the populations on these snails in the east are very small, or perhaps, in the case of *H. itala*, already extinct.

In the north of Scotland, *Cepaea* spp. tend to be coastal, and it seemed a little surprising not to find them on the machair and other places frequented by *C. acuta* and *H. itala* in fact, I only discovered it at two sites: at Ness in the extreme north, and near Tolsta on the east coast of Lewis. Interestingly, at both sites some of the snails had white bands instead of dark on a yellow shell (Figure 5).

Helix aspersa is another species that shows some association with the machair, though it does

occur elsewhere, such as at Tarbert in Harris, and at Rodel in the extreme south of Harris, where the shallow soil and vegetation overlie a rocky substratum. It could be a synanthropic species in both places, and for this reason I should not be surprised to find it in Stornoway itself (which was not studied conchologically, apart from *Lauria cylindracea* and *Trichia striolata* crawling over the rockery of our B & B on damp mornings!).

The other distinctive habitat, for Lewis, was the extensive mature deciduous woodland surrounding Lews Castle, just across the harbour from the town of Stornoway. In the course of perhaps little more than an hour this produced 15 species, several of which I found nowhere else on the island, although they are common enough on the mainland. Perhaps the most remarkable thing was that this was the only place in Lewis and Harris where I found *Discus rotundatus*. After telling people for years that this is probably the commonest snail in Britain, I was astonished to discover that this species is apparently absent from almost the whole of the rest of the island, the *Atlas* only showing a couple more sites with post-1965 records. The other species that I found only in these woods were *Vitrea crystallina*, *Milax budapestensis* and *Limax marginatus*. *L. marginatus* is, of course, a woodland species over much of its range, but it was perhaps a little surprising not to find it elsewhere grazing on alga-covered rocks. There are just three 10 km squares in Lewis and Harris with records in the *Atlas*, all pre-1965. *Milax budapestensis* is another introduced species that has spread

rapidly, but it appears to have only a toehold on Lewis; whether this is a base for further expansion, or the only habitat that suits it I don't know, but so far it does not seem to be generally present in the Hebrides.

There are plenty of freshwater lochs in Lewis and Harris: in the north they are scattered across the great peat moor, and in the south they are hidden away in the mountains. The vast majority of them are not easily accessible, separated from the nearest road by miles of rough walking. As the waters are almost certainly acidic, either from the peat, or from the absence of lime in the gneiss that makes up the mountains, I made no attempt to sample them. The few aquatic snails I found came from small streams or ditches. Hardly surprisingly, the most commonly encountered species was *Potamopyrgus antipodarum*. What incredible powers of dispersion this little snail has, to spread to even some of the remotest parts of Britain in only a century and a half.

I have left until last one of the most intriguing finds. Near the ancient standing stones of Callanish, I found a small cluster of shells of *Helix pomatia*! It hardly seemed likely that there could be an isolated population of these lime- and warmth-loving snails hundreds of miles from its nearest recorded location, and I could only conclude that someone must have had a picnic of escargots there.

Concluding remarks

There can be few things more satisfying than filling in empty spaces on a map. The opportunities for a conchologist to do this in

Table 1. Land and freshwater molluscs from Lewis and Harris, August 2000

Species	10 km squares*	Lewis, West Coast	Lewis, Ness	Lewis, East Coast	Lewis, Eye Peninsula	Lewis Castle	Harris, West	Harris, Tarbert Coast	Harris, Rodel
<i>Potamopyrgus antipodarum</i>	7	+		+	+		+	+	
<i>Lymnaea peregra</i>	4		+				+		
<i>Ancylus fluviatilis</i>	1						+		
<i>Oxyloma pfeifferi</i>	1		+						
<i>Cochlicopa lubrica</i>	9	+	+	+	+	+	+		+
<i>Lauria cylindracea</i>	8	+	+	+		+		+	+
<i>Discus rotundatus</i>	1					+			
<i>Arion ater</i>	10	+	+	+	+		+	+	+
<i>Arion flagellus</i>	10	+	+	+	+		+		+
<i>Arion subfuscus</i>	15	+	+	+	+		+	+	+
<i>Arion silvaticus</i>	2			+					
<i>Arion distinctus</i>	5	+	+		+		+		
<i>Arion owenii</i>	7	+	+	+					+
<i>Arion intermedius</i>	9	+	+	+	+		+	+	+
<i>Vitrina pellucida</i>	2	+					+		
<i>Vitrea crystallina</i>	1					+			
<i>Nesovitrea hammonis</i>	1			+					
<i>Aegopinella nitidula</i>	2			+			+		
<i>Oxychilus cellarius</i>	4		+	+		+			
<i>Oxychilus alliarius</i>	6		+	+		+	+		+
<i>Milax gagates</i>	15	+	+	+	+		+	+	+
<i>Milax budapestensis</i>	1					+			
<i>Limax marginatus</i>	1					+			
<i>Deroceras laeve</i>	1			+					
<i>Deroceras agreste</i>	2	+	+						
<i>Deroceras reticulatum</i>	12	+	+	+	+	+	+	+	+
<i>Deroceras panormitanum</i>	11	+	+	+		+	+	+	+
<i>Helicella itala</i>	10	+	+	+	+		+		
<i>Cochlicella acuta</i>	10	+	+	+	+		+		
<i>Trichia striolata</i>	3		+						+
<i>Cepaea hortensis</i>	2		+	+					
<i>Helix aspersa</i>	8	+	+		+		+	+	+
Total	23	17	21	20	12	15	18	13	9

* Number of 10 km squares in which each species was found

Britain are few, but I was lucky to be able to do this on Lewis and Harris. There is still much to be done, however. There were many areas we never visited: apart from the interior of peat moors and mountains, there is the east side of Harris, where there are a few small settlements connected to the rest of the island by the "Golden Road", so called because it was so expensive to build it through such inhospitable terrain. Even the parts of the island that we did visit would almost certainly yield more species if studied in detail. Remember also that Stornoway itself remains poorly studied.

Lewis and Harris are worth visiting quite apart from any conchological interest. Much of the scenery is stunning, and quite unlike that found in most of Britain. There are archaeological remains, pre-eminent among which are the standing stones at Callanish, perhaps 5000 years old, and already ancient when Stonehenge was built. So, if you can, go to Lewis and Harris, enjoy the island, and fill in a few more gaps in our knowledge of its molluscs.

Bernard Verdcourt continued

been out to East Africa many times and he's turned up an incredible list of stuff. It's going to take a long while to deal with because of course he's got to earn his living as well. I had the idea that no one else was going to be interested in East African molluscs and the whole subject would collapse and die but it's very nice to know that somebody young has taken it over."

Readers of the *Conchologists' Newsletter* will be familiar with Bernard's series of articles on East African collectors. Having written about thirty, Bernard feels he won't do many more, even though the figure is nearer 100. "I think I've done the people who've collected most. People like Percival and Kemp and Stuhlmann. It's very time consuming to go to the record offices. In fact for Kemp I never found out when he died. Some people's birth and death dates just don't get into the records. Some of them I've never been able to find out anything about. There was a chap called Conradt for example who collected in Amani where I first lived in Tanzania. He collected some of the early specimens which von Martens described. Some collectors are really well known - they've had books written about them - they're quite famous people in other fields. Others are people nobody knew about in the first place. All they did was collect empty shells, or they were professional collectors who had been paid to go out there but they hadn't done anything serious enough to have books written about them."

Bernard was also involved in rescuing *Laciniaria biplicata* when there were building

plans in the Kew area. "We first got interested in that when they were going to build a road and a bridge across the Thames at Barnes.

There was a site there by the boathouse which was going to be obliterated so Conch Soc had a meeting and we went there and we collected about 800 specimens actually. We dispersed them around, quite a lot went into my garden and quite a lot went to the Eton Bird Sanctuary, that sort of thing. They used to have tennis courts at Kew and somewhere at the back there were little patches of nettles and things; seemed a suitable sort of place. In most of these places I do find the odd specimen still, but it hasn't really flourished. I found one in Eton Bird Sanctuary last year so its still there, but at Kew the place where I put it near the tennis court has all gone and I haven't found it but it has turned up as you know on the other side of the Gardens."

It was at a Conch Soc field trip which I led when it was found in the Conservation Area. Since then "some upmarket building people in Twickenham wanted to put some very upper class apartment blocks just in front of the Public Records Office. Observation Road is a well known area for *Laciniaria*. I think the council were objecting to the houses and they wanted someone who knew the snails as one way to stop this building. The building people said they'd sent somebody down and they'd found nothing, and I found 8000. I did one metre plots and some metre plots had over a hundred. Only a small part of the area where I found the snails just encroached on where they wanted to build. Although the building plan was thrown out to start with, it really didn't matter too much what they did further along. They eventually obtained planning permission and built the apartments, but there are plenty of *Laciniaria* in the little wooded bit which comes into the area which they bought but is not built on. I think that it could be a success story. It might quite easily be that someone who's living there could be interested and look after them. The only other thing I've done for British snails is to find *Perforatella rubiginosa* at Syon. That's a very interesting site, must be the last remnant of river frontage there which hasn't been ruined. It's still got little water meadows where the water goes up and down. Thames Water wanted to alter the amount of water flowing. Various societies including the Conchological Society objected, because it might alter the site in some way that would wipe out *Perforatella*. Actually we were eventually satisfied it was safe. But once I described the site in detail it's turned up near Maidstone. It's turned up in exactly the same sort of places but I think there are still only ten sites."

Bernard did some work on glasshouse aliens too "I've always looked in the greenhouses here of course." Although he hasn't seen any specimens recently, Bernard did name a glasshouse species. "It turned up in Edinburgh first of all. Connolly identified it as something but when I looked at it I didn't think it was right. It turned up at Kew where it was found in the Aroid House in 1967 by Norris and subsequently in the Palm House. I didn't really want to describe it not knowing its country of origin. Anyway finally I decided I'd better. Someone sent me some from Bratislava from a greenhouse there which was exactly the same thing and so it looked as if it was going to be spreading its way around greenhouses so I thought I'd better put a name to it. So I called it *Gulella io* the traveller but I haven't found anything else new. One would have thought that a lot more things would have turned up."

Bernard's Presidential Address was on East African Molluscs. "I tried to do a complete zoo-geographic account of the molluscs of East Africa. Obviously I only went down to genus. It was published in 1972 and has been quite useful because nobody had ever done it before." By the time Bernard was elected as President he'd already done a substantial amount of paper writing and publication to merit being elected. The wealth of material on Bernard's shelves was evidence of this. "What I've got here in my office at Kew," he said, moving across the room and removing several tomes, "is a bound copy of everything I've written. About five volumes of mollusc papers are going to end up in Cardiff. All my other conchological books and reprints are in my library at home and they are going to Cardiff as well. The sets of the botany papers are going over to the library at Pittsburg." As for specimens, Bernard doesn't keep any. "I've never kept a private collection; it's too much of a nuisance. I've put everything into the Coryndon collection and its still there, my spirit material is actually in the British Museum spirit collection." However, Bernard is acutely aware of how important good organization is to the researcher: "its useful to have all one person's work in one place in a museum library so you can just go to it, otherwise you can just spend hours in libraries going through papers and journals, but if they're all together it gives you more a sense of that person's life and work."

Interview by J E Reynolds
21C Loraine Road, Holloway,
London N7 6EZ

Photo: J E Reynolds

Diary of Meetings - Conchological Society

Programme Secretary: *Ron Boyce, 447c Wokingham Road, Earley, Reading, Berkshire RG6 7EL*

IMPORTANT: Please remember to inform the leader if you are attending a field meeting. If you are held up in traffic or your public transport is delayed, it may be possible to ring the Programme Secretary on 07941 094395 on the day of the meeting for information on the location of the field site being surveyed.

Members attending indoor meetings in the De La Beche Room at the Natural History Museum, which is not in a public access area, will need to sign in at the visitors' window in Museum

Key to meetings:

NHM	= Natural History Museum, London, indoor meeting
FIELD	= Field Meeting at outdoor location
WKSHP	= Workshop on molluscan topics
YCS	= Yorkshire Conch. Soc. Events

Lane. Please remember to sign out again when leaving so that Security know that you have left the building.

NHM – *Saturday 3 April:*
14:30 in the De La Beche Room.

Annual General Meeting
We welcome as Guest Speaker Diana Reynell from London on the subject of 'Shells in Art: restoration work'.

Diana Reynell has 20 years' experience of restoration work in 18th century grottoes such as Goodwood and Hampton Court House - and some new work in England, America and France. The talk will include some historical detail of the use of shells in decorative art: the selection, provenance, and methods of working with shells, and how their differing characters influence pattern and symbolism. It will be illustrated by slides of applied shellwork in grottoes and shell houses, mainly in the UK.

YCS – *Saturday 3 April*
Selby District for *Lymnaea glabra* sites.

Meet 10:30 at the car park off B1 222 at Bishop Wood, grid ref. SE 550345.

Contact David Lindley (0113 269 7047)(home).

FIELD – *Wednesday 5 to Sunday 9 May*

Dorset. Marine meeting
Organiser: Lin Baldock. (01305 852585)(home)
lin.baldock@virgin.net

A field meeting combined with the Porcupine Marine Natural History Society to sites along the Dorset coast. Dorset provides some of the most easterly records on the north side of the English Channel for a number of marine species, some of which are being monitored as indicators of possible climate change for example the top shell *Osilinus lineatus* and the brown alga *Bifurcaria bifurcata*.

The first site to be visited on 5 May 2004 will be Osmington Mills (Grid Ref: SY 735817) which has a shore with a variety of habitats: rocky ledges and deep intertidal pools, boulders on rock and gravel, freshwater input. The accessible shore is extensive to both the east and west and access is easy. There is a good pub at the end of the road for lunchtime refreshments.

Other possible locations to be included on our itinerary are Durlston Bay just to the south of Swanage. This is a boulder beach with low rock ledges. Access is via a steep but adequate path from the cliff top at Grid Ref SZ 034781, parking is a little limited. Participants might like to consider sharing transport into Swanage, leaving some cars in the (free) car park just outside Corfe Castle (Grid Ref: SY 9595/8246).

Chapman's Pool. Access is via a rather steep walk down the cliff from the car park near Worth Matravers. The beach is varied: low flat ledges, in places interspersed with huge boulders. The whole area is subject to rapid cliff erosion and may therefore be rather muddy, depending on the impact of the winter storms.

A site on Portland Bill. Hawthorne's studies on *Osilinus lineatus* showed that an isolated

population of this species survived the 1962/63 winter on the southwest side where it was sheltered from the easterly winds. Site selection will depend on weather conditions.

Golden Cap. An isolated stretch of rocky shore (huge boulders on flat bedrock with shallow intertidal pools) on a predominantly pebble/shingle coast. A walk of about 1km along the pebble beach from the car park at Seatown (Grid Ref: SY 421917).

Lyme Regis (Car Park Grid Ref SY 338915) Easy access to a beach of coarse sand and boulders and broad rocky ledges with deep intertidal pools.

A dredging and/or diving trip will be arranged from Lyme Regis using a local fishing boat on Saturday and Sunday [bookings to Ron Boyce, tel. 0118 935 1413]. We hope to have a grab of some description, a naturalists' dredge and a pipe dredge. The skipper is very well informed about the variety of subtidal habitats in Lyme Bay having worked there for many years and also having been involved with baseline studies in the area when the possibility of drilling for oil was being investigated. The boat will leave from the Cobb (Grid Ref: SY 340916).

Lin Baldock will coordinate the records from this field meeting which will be passed on to the Dorset Environmental Records Centre which has established a marine database for Dorset. The mollusc records will be fed into the Conch. Society's **Recorder 2000** database.

YCS – *Saturday 8 May*

Great Ayton area. Meet 10:30 at Tourist Information car park in the town, grid ref. NZ 564107. Contact David Lindley (0113 269 7047)(home).

FIELD – *Saturday 22 May*

Branscombe, Devon. Land meeting
Leader: Keith Alexander (01392 413092)(home)

The Branscombe area combines

old meadows and ash woodland with land-slipping cliffs of the Cretaceous Chalk, with some exposure of the underlying Triassic Keuper Marl. This area has some of the most westerly exposures of chalk within Britain. Options are to explore West and East Cliffs for chalk grassland and woodland fauna, wet seepage meadows and streamside marsh for wetland fauna, and/or the undercliffs and shingle foreshore. The chalk cliffs have *Truncatellina callicratis* and this will be a focus for the meeting.

Meet at 10:30 in the public car park at Branscombe Mouth (Grid ref. SY 207882). The nearest station is Honiton, on the London Waterloo to Exeter line. Bring lunch or use local pubs.

FIELD - *Saturday and Sunday 5-6 June 2004*

Sandwich Bay, Kent. Leader: Eric Philp (01622 718158)(home)

A meeting based on the Sandwich Bay Field Centre starting from the Centre car park at 10:00h each day.

The land molluscs include populations of *Cochlicella acuta* and *Monacha cartusiana*, and the marine mollusc fauna is amongst the richest in southeast England.

Accommodation is available at the Field Centre (which is run by the Sandwich Bay Bird Observatory Trust) as bunk beds at £8 per night (£6 for members). This includes use of a fully equipped kitchen as well as use of the laboratory, rest room and other facilities. There is also one self-contained flat (2 people) available at £30 per day. For those wishing to stay at the Field Centre then early booking is advised.

The Field Centre is situated at TR 355575 and can only be reached by the Sandwich Bay Estate toll road. The Toll at present is £5 per car each time one enters the estate. However, if you state that you are attending an event at the Sandwich Bay Field Centre then the toll is £1 each time, and you may only take your car as far as

the Field Centre car park. Alternatively, as a member of the Sandwich Bay Bird Observatory Trust, for £2 per annum you can pass through the toll as many times as you like.

Membership of the SBBOT is £15 per year. The address for membership and for booking accommodation is: Centre Manager, Sandwich Bay Field Centre, Guilford Road, Sandwich Bay, Sandwich, Kent CT13 9PF, telephone 01304 617341.

FIELD – Saturday 12 June Hampshire - *Lymnaea glabra* search.

Leader: Martin Willing (01730 814790)(home)

Meet outside Brockenhurst railway station (Grid. Ref. SU 301 019) at 10:30. We will then proceed by car to visit ponds throughout the southern New Forest to look for the rare and declining freshwater snail *Lymnaea glabra*. It is intended to divide the day between visits to selected historic (pre-1965) sites to determine if populations are still present as well as some previously unrecorded ponds in a search for new populations. Results will be forwarded to the New Forest Ponds Project (see *Mollusc World* 2: 10). Please bring wellingtons, protective rubber gloves together with a pond net and sorting tray. Lunch will be taken in the field so a packed lunch, together with plenty of fluids, should be brought (don't forget the sun-screen lotion!).

FIELD – Saturday and Sunday 26-27 June

Wyre Forest, Worcestershire
Leader: Harry Green (01386 710377)(home)

Wyre Forest is an extensive area of semi-natural ancient woodland straddling the Worcestershire-Shropshire border with the central Dowles Brook valley separating the two counties. Several deep stream valleys run into Dowles Brook from the N and S. The Forest is situated on the Upper

Carboniferous Coal Measures and the soils are very variable with marls, conglomerates and small sandstone outcrops. There is a scattering of basic seepages, deposition of tufa and a variety of small bogs and pools. Acidic and basic soils occur in close

proximity to each other. The aim of this field meeting is to explore areas along the Park Brook, Hitterhill Brook, near Knowles Mill, Seckley Ravine, the Great Bog of Wyre, and charophyte pools, and other sites if time allows. Thanks to English Nature, Forestry Commission and private landowners we shall be able to drive along forest tracks to various locations.

Meeting point both days is at the rear of the Forestry Commission Visitors Centre at 10:00. This is situated on the S. side of the A456 running west from Bewdley and about 3 km from the town centre. Participants should enter the second gate (shortly after the main sign-posted entrance) when travelling from Bewdley at SO 750739 to park behind the main Visitors Centre where they will be met and guided into the Forest.

FIELD – Saturday 17 July Lower Windrush Valley, Oxfordshire. Wetland meeting
Organiser: Alison Hopewell (01993 814126)(work)

Over the last 50 years the Lower Windrush Valley has been modified by mineral extraction, with large areas of the riverside pasture transformed into an extensive complex of lakes. Gravel workings commenced at Linch Hill in the 1960's with extraction continuing today. Linch Hill will be the main base for this field visit with a focus on Stoneacres Lake, a 21 hectare lake, which is run as a coarse fishery and has matured over the last 30 years to support a variety of wildlife.

Meet at 10:30h in the public car park at Linch Hill Leisure Park, Stanton Harcourt (Grid ref. SP 417040). Nearest rail station : Oxford c.10 miles. Toilets are available on site. Local pubs and shop in Stanton Harcourt c.1 mile from site.

For further information about the Lower Windrush Valley Project contact: Alison Hopewell, Project Officer (alisonh@oxfordshire.gov.uk)

WKSHP – Saturday 7 August Richmond, Surrey
Molluscs in microfossil samples
Bookings to Adrian Rundle (020

8878 6645)(home)

NHM – Saturday 11 September 14:30 in the Demonstration Room.

We welcome as Guest Speaker Roy Anderson from Belfast on the subject of 'Studies of slugs in Ireland'.

FIELD – Friday 24 to Sunday 26 September North York Moors. Joint meeting with YCS. Leader: David Lindley (0113 269 7047)(home)

FIELD – Saturday 9 October Kew area, London
Leader: Simon Terry (0208 453 1302)(home)

NHM – Saturday 16 October 14:30 in the Demonstration Room.

We welcome as Guest Speaker Evelyn Moorkens from Dublin on the subject of 'News from Ireland - LIVE!!'

YCS - Saturday 23 October 2004
AGM and Presidential Address. Leeds Museum Resource Centre, 1 Moorfield Road, Yeadon, grid ref. SE 217412, 13:00h.

NHM – Saturday 13 November 14:30 in the Demonstration Room.

Short talks and slides by members on the subject of 'Holiday molluscs'.
Volunteers required

WKSHP – Saturday 27 November

The annual workshop held in Woking offers members the opportunity to receive tuition on identifying difficult groups. Bookings to Judith Nelson (01483 761210)(home)

NHM – Saturday 11 December 14:30 in the Demonstration Room.

We welcome as Guest Speakers Keith Hiscock & Nova Mieszkowska from Plymouth on the subject of 'Topshells and climate change in Britain and Ireland'.

Forthcoming events in UK:

BRITISH SHELL COLLECTORS CLUB SHELL SHOW
April 2004
Napier Hall, London, England
Contact: Kevin Brown, 12

Grainger Road Isleworth, Middlesex TW7 6PQ, England

THE MALACOLOGICAL SOCIETY OF LONDON BEHAVIOUR & NEUROPHYSIOLOGY OF MOLLUSCS

Friday 16th & Saturday 17th April 2004

Kingston University, Surrey, UK

The behaviour of molluscs has been studied in a wide range of contexts, including behavioural ecology, the feeding behaviour of agricultural pests, as vectors of disease, in studies of learning and memory, and as models for the neurophysiological bases for behavioural mechanisms. There will be a conference registration fee of around £25 (£15 for students), plus the cost of optional meals and refreshments. If you are interested in giving an oral or a poster presentation, please submit a brief synopsis of no more than 200 words by 15 January 30th 2004 to: Dr R T Cook, School of Life Sciences, Kingston University, Kingston upon Thames, Surrey KT1 2EE

Forthcoming events overseas:

WORLD CONGRESS OF MALACOLOGY

11-16 July 2004

Venue: Perth, Western Australia

The World Congress of Malacology is an opportunity for malacologists from throughout the world to get together to discuss the animals on which we work. The Congress will start with an icebreaker on Sunday night, 11 July 2004. Conference sessions will be on Monday, Tuesday, Thursday and Friday. Wednesday will be an optional field trip day.

Phylogeny of Molluscs

The symposium will be a major step forward in our understanding of molluscan phylogeny. Invited contributions will focus on a state of the art overview of the phylogeny of a major taxon or examine the state of the art in new areas of molluscan research. Contact: Dr Winston Ponder, email: winstonp@austmus.gov.au.

Molluscan Aquaculture and Fisheries

Some species of molluscs are

important organisms for both wild caught fisheries and for aquaculture. This symposium is for researchers working on wild caught and aquaculture species to discuss the latest advances in the field. Contact: Dr Fred Wells, email: fred.wells@museum.wa.gov.au

Ecology of Molluscs

The general theme is assessment of threats to molluscan diversity in the changing world. It will include discussion of habitat loss and fragmentation, effects of introduced species on indigenous diversity, sea-level rise, urbanization. For contributed papers contact: Dr Gee Chapman, University of Sydney, Australia. Email: gee@bio.usyd.edu.au

Medical and Applied Molluscs

The International Society for Medical and Applied Malacology will be meeting as part of the World Congress. Papers, largely dealing with medical aspects and molluscs as pests on land, in the sea and in freshwater, will be organised into separate sessions. For contributed papers contact: Prof Jambari Hadji Ali, University Putri Malaysia, Malaysia. Email: jambari@fsas.upm.edu.my

Bivalves

Bivalve systematics has taken substantial steps in recent years, but the "Tree" and resulting classifications are still far from stable. The symposium will take a journey along major putative branches of the Bivalvia, with each contributor introducing diversity and characters of the group, and discussing hypotheses of relationship as well as resulting classifications. For contributed papers contact: Dr Rüdiger Bieler, Field Museum of Natural History, USA. Email: bieler@fieldmuseum.org

Reproduction and developmental patterns

The study of reproduction and developmental patterns in molluscs is now based on thorough studies of reproductive anatomy, physiology and biochemistry of reproduction and intracapsular development, as well as sophisticated studies of the embryonic and larval stages. For contributed papers contact: Dr Helena Fortunato, Smithsonian Tropical Research

Institute, Panama. Email: fortunae@ancon.si.edu

Biology and systematics of opisthobranch molluscs

Opisthobranchs are a small, but structurally diverse group of marine gastropods. Their fascinating biology attracts considerable scientific interest, and the relationships between many of the major groups are poorly known. For contributed papers contact: Dr Gilianne Brodie, JCU, Australia. Email: gilianne.brodie@jcu.edu.au

Population genetics in the Mollusca

Population genetics has consistently played a significant role in the development of evolutionary biology as well as evolutionarily based taxonomy, also in the Mollusca. Contact: Prof Andrzej Falniowski, Jagiellonian University, Poland. Email: Faln@zuk.iz.uj.edu.pl

Pattern and process in land mollusc diversity.

Twenty years after Alan Solem's global review, many questions remain to be addressed about patterns of land mollusc diversity. This symposium will examine these issues at all scales from different regions of the globe. It will consider technical and analytic issues, and will assess the evidence for the evolutionary, ecological and historical factors that might contribute to diversity levels. Contact: Prof Robert Cameron, University of Sheffield, UK. Email: robert@vicshef.freeserve.co.uk

Curators meeting

The traditional curators' meeting will also be held during the congress. The main topic of discussion will be the problems of offsite stores and moving collections. As the Western Australian Museum is in the middle of such a move, the problems and advantages will be readily seen. A visit to the WAM collections is planned. A modest fee may be required to cover the cost of bus transportation to the new WAM collection site. Contact: Kathie Way, Natural History Museum, London, UK. Email: kmw@nhm.ac.uk

Social programme: In addition to the paper and poster sessions there will be a full social

programme, with excursions on Wednesday planned to Rottnest Island, a dive expedition, river cruise to a winery, and tour of Perth and Fremantle.

Congress Organiser: Fred Wells (wellsf@museum.wa.gov.a)

AMERICAN MALACOLOGICAL SOCIETY MEETING

Saturday July 31 to
Wednesday August 4 2004

This will take place on beautiful Sanibel Island, Florida famous for its molluscan resources. The event will be hosted by The Bailey-Matthews Shell Museum and will have as its main venue the Sundial Beach Resort, located on the eastern part of the island. It is sponsored by the American Malacological Society and the Sanibel-Captiva Shell Club

Special sessions will include Biodiversity of Marine Mollusks, Coastal Molluscan Assemblages as Environmental Indicators; Systematics of Freshwater Gastropods; Terrestrial Mollusks as Agricultural and Environmental Pests and Theory and Practice of the International Code of Zoological Nomenclature. In addition, a special forum organized by Ken Hayes, Anna Bass, and Amy Wethington, all graduate students in malacology, will focus on and discuss common issues and problems faced by soon-to-be professionals in the field.

The Sanibel-Captiva Shell Club will sponsor the Shell Museum Open House on Sunday, August 1. The closing banquet will be a dinner-cruise aboard Captiva Cruises' Lady Chadwick, a two-deck vessel holding 250 passengers. Three field trips are planned (no live-mollusc collecting is allowed in Lee County): A nature-watching visit to Darling National Wildlife Refuge on Sanibel; a daylong boat trip to Cayo Costa State Park offering pristine views of the Gulf, dunes, lagoons, and opportunities for shell collecting; and a visit to a Plio-Pleistocene fossil pit in Sarasota County.

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8-9	Molluscs and the Corinth Canal C.P. Palmer & F. Fearnhead
10-11	Conservation News M.J. Willing
12	Photography awards (<i>Helix aspersa</i>)
13	Partners in Slime Ben Rowson
14	Robert Rendall Alan Skene
	Marzipan Snails Jane Reynolds
15	Field Meeting Report M.J. Willing
	The Snail Hunter Alex Menez
16-17	Bernard Verdcourt Jane Reynolds
19	Hunting slug and snails in Lewis and Harris Adrian T. Sumner
22-24	Diary