obtained molecular sequence data for this species, using snails from over 100 separate locations across Western Europe, including a transect across the North of Spain and the Pyrenees, and collected mitochondrial sequence data for >950 individuals. Phylogenetic analysis of these sequences reveals that the majority of Irish populations probably originate from a geographically restricted source in the Pyrenees, supporting similar recent results in other species. Given that fossil data indicates the presence of *C. nemoralis* in Ireland for at least 8000 years, the significance of these findings in relation to the post-glacial colonisation of Ireland will be discussed. One immediate consequence is to wonder how many other Irish species are of cryptic "Lusitanian" or Iberian origin?

FIELD -*Saturday and Sunday 11-12 October 2008*
Forest of Dean/Wye Valley. *Malacolimax tenellus* search. Leader: David Long (01242 527673) (home)

Members should bring packed lunch and drinks, also suitable clothing and equipment. It is intended to visit 3 - 4 sites per day.

Meet on Saturday 11 October at 10:30h at the Foxes Bridge car park on the B4226, the Cinderford to Coleford road, at SO 632124. This is about 1 km east of the Speech House Hotel, which should be able to offer coffee and a toilet from c.10:00h.

Meet on Sunday 12 October at 10:30h at the Organ's Green car park, SO 655080, north-west of Blakeney; this is signed by the Forestry Commission as Wench Ford. Toilet facilities (subject to check as closed in off season, but will try and update this on the Society's

Website, nearer the meeting).

Malacolimax tenellus has been found, in small numbers mainly, in a variety of deciduous woodland sites in the Forest of Dean which you would not necessarily associate with many molluscs.

YCS - *Saturday 11 October 2008*
Weedley Springs.
Contact: David Lindley (0113 2697047) (home), david.lindley3@btinternet.com

Meet at 10:30h near the church in West End near South Cave, VC 61, grid ref. SE 915309 for Weedley Springs and 1 km recording

Saturday 25 October 2008
all-day Council meeting at NHM

INDOOR - *Saturday and Sunday 15-16 November 2008*
Amgueddfa Cymru - National Museum Wales, Cathays Park, Cardiff. Two-day meeting. *Contact:* Ben Rowson <ben.rowson@museumwales.ac.uk>, 07817 377 484 (mobile).

The programme will include short presentations on molluscan subjects, a workshop on the marine pyramidellid microgastropods *Odostomia* and *Brachystomia*, and a workshop on comparisons of live British slugs with an introduction to dissection and recent name changes. Difficult-to-identify British bivalves may also be brought to the meeting. Those wishing to contribute a short presentation should contact Ben. Further details to be announced.

WKSHP - *Saturday 29 November 2008*

Annual Molluscan Workshop
This meeting is being held by kind invitation of Judith Nelson at Hilbre House, Pembroke Road, Woking, Surrey GU22 7ED (01483 761210) from 10:00h prompt until approximately 17:00h
Please note Hilbre is a non-smoking property.
Those attending should please bring a microscope and lamps (a few microscopes are available if booked in advance), Petri dishes or other dishes for sorting purposes, a fine water colour paint brush (00), tweezers/forceps, dissecting tools, if possible an extension lead and/or double electric plug, books to help identification, and a packed lunch. Coffee, tea and biscuits are provided. As numbers for the workshop are limited, please confirm any booking made by 1 November so that it can be checked whether there are any places vacant. Those NOT confirming by 1 November will be taken as not wishing to attend and their place will go to someone else. No reminders will be given.
A fee of £5 will be charged to cover expenses.
PLEASE BOOK EARLY.
The programme for November 2008 is as follows but subject to change: Identification of Succineidae and small marine bivalves. If you would like any other subjects dealt with, please contact Judith.

NHM – *Saturday 6 December 2008*
14:00h in the in the Dorothea Bate Room [Palaeontology Demonstration Room], preceded by Council meeting.

Molluscan quiz devised by Jane Bonney.

NHM – *Saturday 31 January 2009*
11:00h in the in the Dorothea Bate Room [Palaeontology Demonstration Room]

Note the revised earlier start time. No Council meeting. Please bring plenty of exhibits and demonstration material. There will be a lunch break at about 13:00h. Lecture to start at 14:00h.

The morning's activities will include a demonstration of the *Cepaea* megalab project including, it is hoped, a live interactive demonstration of the project web site.

Members are encouraged to bring specimens of any Mollusca for identification, a X20 binocular microscope will be available if needed.

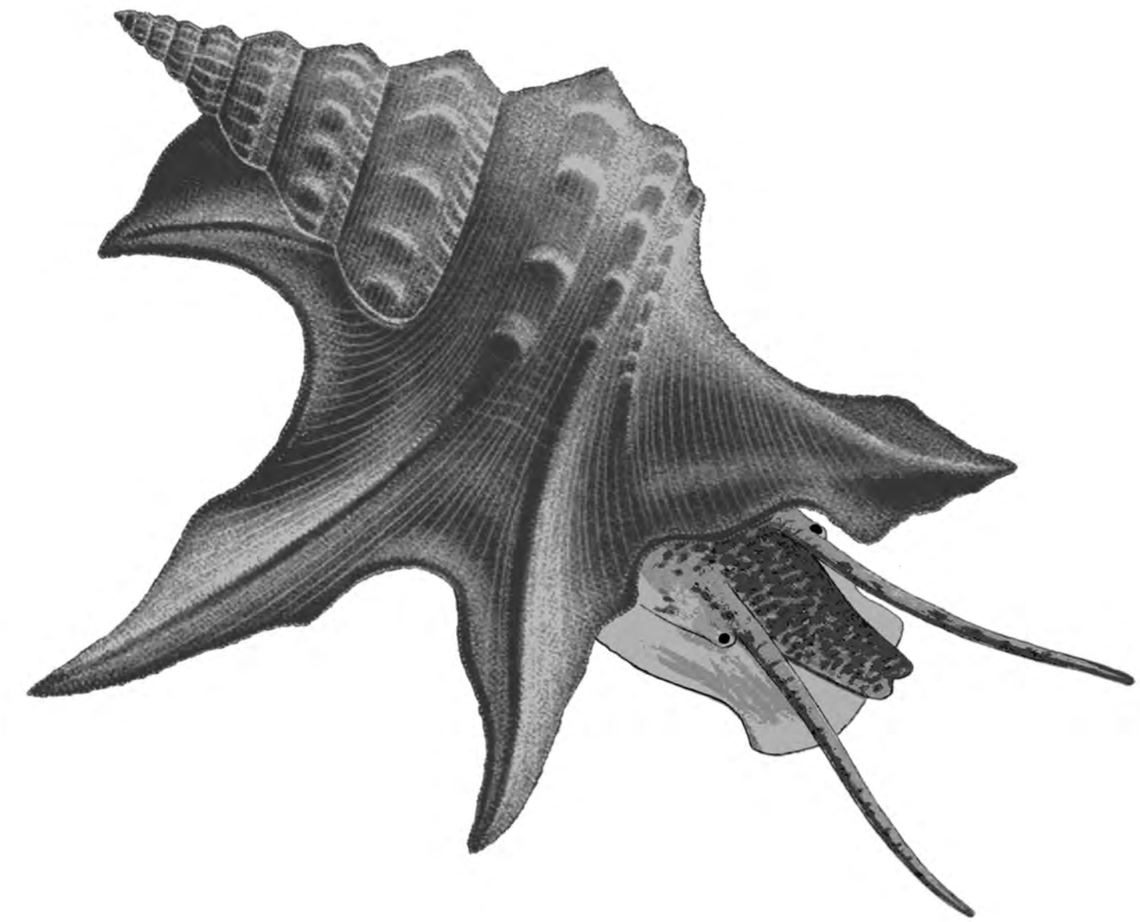
We welcome as Guest Speaker Tom Clifton from Benllech, Anglesey on the subject of 'Recent investigations on shipworms '.

contents

Mollusc World

ISSUE No.17

j uLY 2008



ISSN 1740-1070

THE MAGAzINE OF THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN & IRELAND

Editorial

The last red data book for British invertebrates was published by JNCC in 1991, and 17 years is a long time in terms of pressures facing our more vulnerable molluscs.

The Conchological Society has begun the process of recommending an updated regional red data list for land and freshwater molluscs, which we hope that JNCC will adopt and will help conserve species that are both seriously in danger of extinction, or are on the verge of being threatened with extinction. The best information we have on species distributional changes are the Society's two atlas publications of Kerney from 1976 and 1999. One problem in seeing the true picture of species change is the lack of records in the society's database from recent years. The 1999 atlas itself was relying on older data for many species and is itself 9 years old - and regional red lists should ideally be updated every 5 years!! We have a lot of members out and about looking for snails, and some of the species we find are the usual common species we would expect as well as the few rare gems. However, unless the Society gets the records for the common species as well as the rare ones, we will not be getting the full picture. So here is an appeal to those of you that jot down the snails and slugs you find – please empty your notebooks into the society's database by sending your records, no matter how few or how common you think the species are to the non-marine recorder Adrian Norris.

Now we are in summer, maybe this would also encourage you out to do some fresh recording for even more up to date records! Happy hunting!

Ian Killeen

Mollusc World

This magazine is intended as a medium for communication between members on all aspects of Molluscs from archaeology to life in the sea, field collecting at home and abroad and even eating molluscs. If you look back on the content over the last three years we include articles, field meeting reports, research news, results from the mapping schemes and identification keys. We welcome all contributions in whatever form they arrive.

How to submit articles:

Copy (handwritten, typed or electronic) should be sent to the Editor at the address below. If sending electronic copy using e-mail please include a subject line "*Mollusc World* submission" and send a separate mail without any attachments advising that the e-mail was sent. Electronic submission is preferred in Microsoft Word, but if other programmes (e.g. Works) are used, please indicate the programme used with the accompanying e-mail.

Images and Artwork may be digitised, but we recommend that a digital image size no larger than 8" x 6" and 300 dpi be sent with your submission. For line art we recommend that you send hard copy, all originals will be treated with care and returned by "snail-mail".

Please send articles to:

Ian Killeen, 53 Charleville Square, Rathfarnham,

Dublin 14, Ireland.

E-mail: iankilleen@eircom.net

About the Society

The Conchological Society of Great Britain and Ireland is one of the oldest societies devoted to the study of Molluscs. It was founded in 1876 and has over 300 members worldwide. Members receive two publications *Journal of Conchology* which specialises in Molluscan Biogeography, Taxonomy and Conservation and *Mollusc World*, our newsletter for members. New members are always welcome to attend field meetings and indoor meetings before joining.

How to become a member

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

Ordinary membership	£33.00
Family/Joint membership	£35.00
Institutional membership (UK & Ireland)	£47.00
Institutional membership (Overseas)	£50.00
Student membership	£15.00

Payments in sterling only, to membership secretary at address below. £1 discount given to payments before March 31st each year. For UK residents we suggest payment by standing order, and if a UK tax payer at standard rate we encourage you to sign a Gift Aid form.

Overseas members can pay by IBAN transfer to the following account:

The Conchological Society, National Westminster Bank, Bolton, BL1 1BN

IBAN GB12 NWBK 0130 9906 5238 46 BIC NWBK GB2L

Contact: Mike Weideli, 35 Bartlemy Road, Newbury, Berks, RG14 6LD

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The first all day meeting

26 January impressions by John Llewelln-Jones

We arrived at the Dorothea Bate (Demonstration) Room to find that it was already arranged informally for the day. Rupert Honnor and Celia Pain had brought British carpet shells, *Spisula* and *Lutraria* from their collections. Steve Wilkinson took the opportunity to take photographs of them all, including rare ones like *Lutraria oblonga* and *Mactra glauca,* for the on-line encyclopaedia. Dr Adrian Rundle showed jewel-like *Vertigo s.l.* and marine microscopic bivalves. There were lots of other exhibits: Australian bivalves and books, bivalves from Fetlar, Shetland extracted from shell sand, shells and photographs from the Porcupine Burren field meeting and lots of specimens of Arctica islandica, illustrations and history which related to the talk later.

Pryce Buckle our Webmaster gave a demonstration of our new website, he has been improving it and wanted to hear from his customers what they thought. Three laptops were made available and we had a *serious* play! It was excellent! It had all the things one would expect: about the Society, how to join, field meetings, recording and publications. There is a key to British land snails, it is guaranteed accurate; other on-line keys have miss- identified species!

Dr Paul Butler gave a fascinating talk about *Arctica islandica,* and how old shells can be used in just the same way as tree rings to build up an archive of the marine environment. One specimen 410 years old has been nicknamed *Old Ming,* it is the oldest known animal alive. See the News section of the website: http://www.conchsoc.org. Help the Aged have been helping to fund studies into its longevity!

The new style meeting was a great success, twenty-nine people attended. They enjoyed themselves immensely, chatting and getting immersed in shells as the photographs show. Judith Nelson is thanked for providing hot and cold drinks and bringing her rare specimen of *Spisula elliptica.*

Retrieval and Dissection of Shipworm Timber

Tom Clifton

Shipworms are a particularly difficult group of molluscs to retrieve and identify for two main reasons. One is the fact that they can occur in very large pieces of timber and be stranded in very remote parts of the coastline making their retrieval difficult and physically challenging. The other is that in many cases the species cannot be accurately identified by their shells alone as these can be very variable and similar, it is essential therefore to have the appropriate set of pallets for each shell, the pallets being the most positive source of identification. These notes are a summary of the methods that I have found most helpful in dealing with Shipworm timber.

Retrieval:- In cases where the stranding was not in close proximity to a car parking facility, I found a two-wheel trolley to be a valuable asset where the terrain was suitable. In some cases however, the timber had to be cut into manageable sections on site and then carried manually sometimes for long distances, in these cases, a bow saw was the best cutting medium and the lightest to carry.

The worst case I have encountered so far was a tree trunk 10 inches in diameter by 12 feet long stranded at the mouth of the river Cefni on Anglesey between the northwest tip of Newborough Forest and the Bodorgan Estate on the opposite side of the river. The nearest location where a car could be parked was two miles away. The first two sections were removed on site using a bow saw, a total of three feet was removed. One section was carried in a rucksack and the other by rope sling, neither of these methods proving satisfactory considering the weight and distance involved, the journey being straight across Malltraeth Bay and through dense salt marshes at low tide. Eventually, a back mounted carrying frame like those used by mountaineers in the 1970's was constructed from an old shopping trolley. This enabled me to carry the timber the two miles in lengths of about 2 _ feet, one at a time with relative ease. It took a total of five trips to retrieve all of the timber.
Chain saws can be an easy way of cutting the timber sections on site, these can however be heavy to carry for long distances along with the timber sections as well. Although the back mounted carrying frame is the most effective method of retrieval, the liquid that often pours out of the holes when carrying the timber may not necessarily be clean sea water, but can be an obnoxious fluid from the decaying tissue inside the wood. It was found advisable to carry the samples wrapped in bin liners when transporting them.

Provenancing the shells and pallets:- When there was only one species of Shipworm in the timber, identification was relatively straight forward providing the pallets were present, this fact however did not become apparent until some time into the dissection process.

The greater problem was found to be with multi-species strandings especially when there were warm water species present, such samples may have travelled a very long journey of probably several thousand miles and had been infested by any number of other species during its journey. Again, this was not apparent until some time into the dissection process.

For accurate identification in multi-species timber, it is essential to be able to accurately link the shells with their pallets and also a sample of their calcium linings. Bearing in mind the probability that the shells could be some considerable distance from their pallets and that the timber may have been cut into several sections on site to facilitate removal, the shells could be in a different section from the pallets. It is therefore important to retrieve all of the timber samples and to dissect the whole of the timber in a calculated and scientific manner. If the full range of species in a stranding is not known, the wrong shells can easily be linked up with the wrong pallets.

Dissection of timber samples:- There are three main methods of dissecting timber each of which has varied merits but incurs a different degree of destruction.

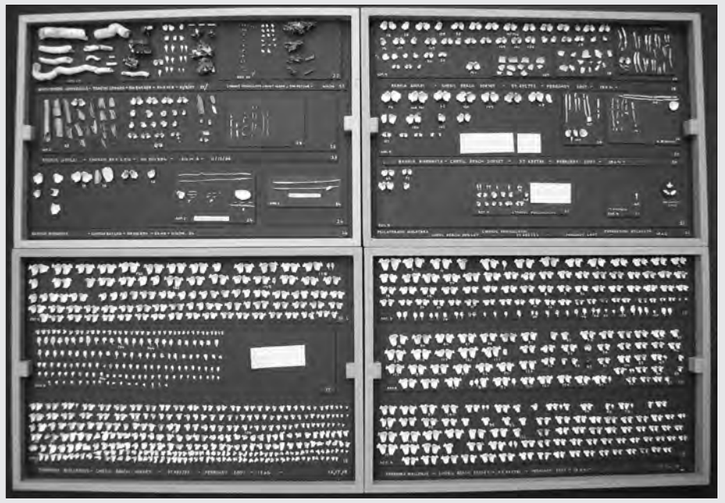
1. Cross Sections - With these there is the inevitable risk of cutting through important shells or pallets, yet causes the minimum degree of destruction to the timber, the sections can be numbered and put back together again to form the original object. This however does not help if one wants to extract a section of calcium lining.

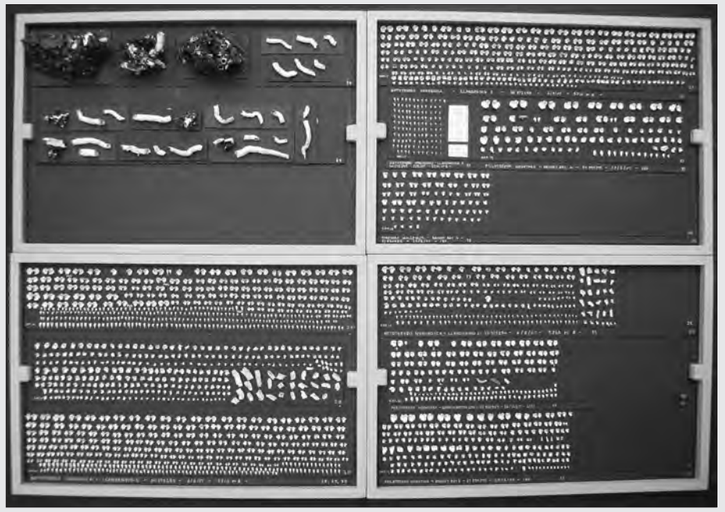
2. Length Wise Splitting – This was done with care making sure that the splitting tool only went far enough into the timber to start a split which could then be carefully levered apart as the splitting tool destroys everything in its path. The presence of knots in the wood made splitting difficult and sometimes impossible. Length wise splitting can reveal good examples of calcium linings and enable one to follow a hole for a greater distance, this was however more destructive of the original timber specimen as the two pieces could not be put back together again without damaging exposed calcium linings.

3. Gouging Out – This was used in relatively thin flat specimens that were not too heavily infested. A rectangular section was cut into the flat face of the timber 1 or 2cm deep using a circular cutter, followed by carefully chiselling out the timber in an attempt to follow each hole from its entry point to the bore head. This revealed some wonderful examples of growth rate of the animal in relation to distance travelled through the timber. It did however involve destroying some holes in order to achieve this. The finished sculpture was then sanded smooth and varnished, this provided a permanent example of complete boreholes. The timber that was removed was however completely destroyed.

When timber samples had been cut into sections, the number of holes in each cross section was noted as this in some cases indicated a general direction of movement of the species in the timber. When this was the case, the dissection was started in the timber section that contained the most holes, as this was where the original entry holes were situated and therefore where the majority of pallets would most likely be found. When a set of pallets were found in a particular hole, especially if they were of a warm water species, the movement of the hole was traced through the timber by placing the timber upright and pouring water down the hole using a small funnel or syringe and noting where the water came out, it should have only one exit. The pallet was put into a numbered container and both ends of the hole numbered likewise, the continuation of the hole was traced into the next section of timber and the holes numbered likewise. This process was continued until the water did not pour out of the end of the timber, this indicated that the end of the hole was that section and that the shells were probably there also. Inserting pipe cleaners into the hole was another method of tracing holes for short distances though care was taken not to damage any shells.

When the first section had been dismantled, the next section was systematically dissected and an attempt made to follow each numbered hole in search of the shells. Also by using a small Dremmel or by careful chiselling it was possible to extract an example of the calcium lining at the same time. This process resulted in a positive link between the shell, its pallets and the type of calcium lining and provided a valuable tool to aid the identification of it and other species. Failure to do this in a multi-species timber sample can result in a mass of similar looking shells with a number of very different pallets and the almost impossible task of matching them together.





Live/Recently Dead Specimens:- Because Shipworms can seal themselves up inside their boreholes using the pallets, they can survive for considerable lengths of time in stranded timber. Usually by the time stranded timber is found, retrieved and dissected, the animals are at the very least recently dead. Where specimens were found in a sufficiently fresh state, they were preserved in surgical spirit.

In the rare case of live specimens being found stranded on the shore at Traeth Crugan near Pwllheli on the Lleyn Peninsula, a sample of timber was brought home and placed in a tank of sea water with air circulation, some of these animals were still alive after six months including what looked like some perfect juveniles. This provided a rare opportunity to photograph some of the pairs of siphons of *Nototeredo norvegica.*

Recording the results:- All of the shells and pallets of each species found were counted, measured and recorded listing quantities, maximum, minimum and

averages sizes and a description of the calcium linings made. Also noted was the maximum, minimum and average hole sizes. This information is important because in the case of Shipworms, the size of shell is not only indicative of maturity of the specimen but also of space limitation inside the timber.

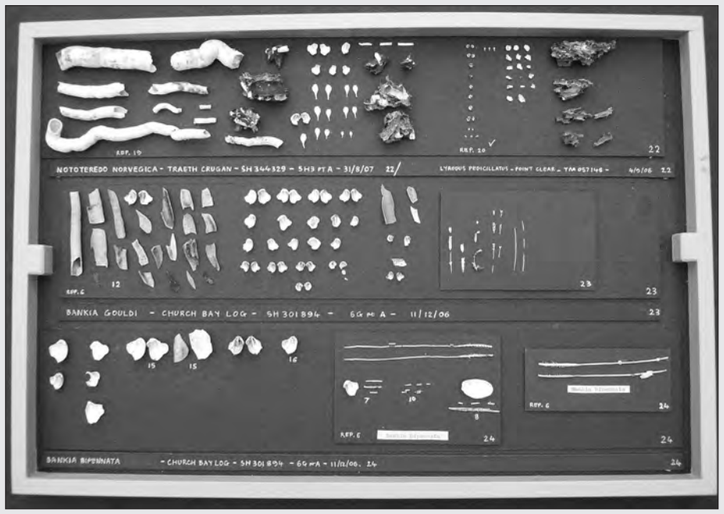
Analysis of the results:- Species will only grow to their maximum size if there is sufficient space available for them to do so. This was indicated in a comparison of Shipworm strandings on Anglesey and the Lleyn Peninsula. In the Church Bay log which contained four species of Shipworms, some of which were warm water species, there were about 40 specimens of *Psiloteredo megotara*, only about four had reached adult size, the rest were quite small and were found mainly at one end amongst a mass of tightly packed entry holes. This suggests that when this species entered the timber, it was already heavily infested with other species leaving little space for them grow, this may well mean that they were the last species to enter the timber.

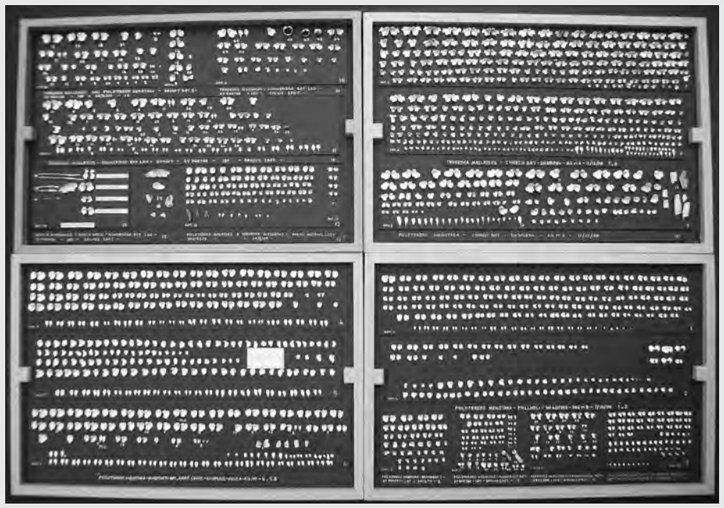
This also compares with the Pwllheli log which although it only contained *Psiloteredo megotara*, the infestation was heavy and they were therefore restricted in space available by their own numbers. In this specimen 414 shells were found but only a small percentage reached adult sizes, the rest were relatively small for this species.

Comparing these results with the Cefni log, which again only contained *Psiloteredo megotara*, the infestation was light leaving an abundance of free space inside the timber. In this timber 497 shells were found, the majority of these specimens were large up to 11mm high suggesting that there was no growth restriction. This provided some of the largest and best samples of this species.

Meticulously recorded information particularly for multi-species warm water strandings can reveal a considerable amount of information about the timber, its inhabitants, the journey it has travelled and possibly the order in which the species entered the timber. As these strandings are not very common, they can provide a rare opportunity to learn more about these remarkable animals.

Storage of Shells and Pallets:- All of the shells and pallets from each particular sample have been kept for future reference including fragments. In order to prevent the delicate apophysis from breaking in the shells, they have been mounted on specimen boards of black cartridge paper 3 inches by 15 inches using Gum Arabic, so that they can fit under a microscope. The specimen boards are stored in trays and fixed by white tack for easy removal. The dissected timber is labelled and stored in plastic trunks. Detailed dissection reports have been compiled for each stranding listing the contents, calcium linings along with pictures, diagrams and conclusions, these now form a volume entitled "Shipworm and Other Wood Borer Strandings 2006/2007". Volume 2 for 2008 has already been started.





2007 - The Year of the Shipworm *Tom Clifton*

Of the 33 years that I have been collecting and recording the distribution of marine molluscs around Britain, 2007 has been the most extraordinary. I have always been mystified by some of the names that appear on the marine lists, names like *Psiloteredo megotara, Bankia bipennata* etc. and wondered why it was that I had never encountered such species and how I would recognise them if I did. From October 2006 and throughout 2007, my waiting has been rewarded with a vengeance. When I found my first piece of Shipworm timber at Pen-ychain near Pwllheli on the Lleyn Peninsula on 7/10/06, I was delighted. After the discovery of my second monster specimen of timber (10 ins, square by 8 feet long), at Church Bay in Anglesey on 11/12/06, I thought that all my birthdays had come at once, I was so delighted, I wrote an article for Mollusc World, "Traumas of Retrieving Shipworms", which was published in Issue No. 13 in March 2007, little did I know then what was in store for the following year.

In February 2007, I received an email from Dr. Ivor Rees formerly of the Marine Sciences Dept. at Bangor University, Gwynedd, he informed me about a large piece of Shipworm timber which had been stranded at the mouth of the river Cefni in south west Anglesey. The log was positioned between the northern tip of Newborough Forest and the Bodorgan Estate on the other side of the river, two miles away from the nearest place where a car could be parked. Newborough Forest is a conservation area which Anglesey is proud of and I did not relish the idea of walking two miles through the forest armed with a bow saw, axe and hammer, so taking the cowards way out, I waited for low tide and waded out through the salt marshes and walked up the middle of the Malltraeth Bay. Although the bay does not drain completely I knew that the water is shallow and that the walking is firm and safe as I had done the journey before, I also knew that this way I would not encounter any bemused onlookers or angry Forestry Commission Officials.

The timber turned out to be a tree trunk 10 inches diameter by 12 feet long, it seemed that the specimens were getting larger and more remote and I felt at that time that I was being tested. After removing two sections from the log, one was carried in my rucksack and the other in a rope sling over my shoulder, at the end of the two mile journey back I realised that this was not the ideal way to retrieve timber. The remaining timber was removed in four journeys over the next few weeks using a back mounted carrying frame which I made out of an old shopping trolley, the exercise however was well worth while, it produced the best examples I have of *Psiloteredo megotara* as the wood was infested throughout and they were the only species in the timber.

By May 2007, after a superb tide day to Kimmeridge in Dorset along with other members of the society, a further seven specimens of Shipworm timber were collected and these were carried back to the car with the kind help of members of the group for which I was very thankful, these were all brought back to Anglesey for dissection. The picture shows some of the timber on my patio in May 2007 waiting to be dissected. By the end of 2007, a total of sixteen specimens of Shipworm timber had been found including more from the Welsh Coast, Essex and west Sussex. The dissections resulted in the collection of 5086 shells and 1401 pallets representing seven species, although many shells were broken, a vast number were perfect. Everything extracted from the timber was retained including fragments in order to obtain information on

TABLE

Specimen	*Psiloteredo megotara*		*Teredora malleolus*		*Lyrodus pedecillatus*		*Bankia goudi*		*Bankia bipennata*		*Teredothyra excavata*		*Nototeredo megotara*	
	Shells	Pallets	Shells	Pallets	Shells	Pallets	Shells	Pallets	Shells	Pallets	Shells	Pallets	Shells	Pallets
3. Shell Island Fragment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Pwllheli Log	414	47	0	0	0	0	0	0	0	0	0	0	0	0
5. Pwllheli Fragment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Church Bay Log	143	22	530	37	0	0	34	8	11	8	0	0	0	0
7. Cefni Log	497	239	0	0	0	0	0	0	0	0	0	0	0	0
8. Silver Bay Log	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. Chesil Beach Log	7	0	865	176	16	6	69	23	31	14	0	1	0	0
10. Kimmeridge Bay Log	0	0	138	48	0	0	6	3	2	2	0	0	0	0
11. Kimmeridge Bay Frag.	73	20	47	0	0	0	0	0	0	0	0	0	0	0
12. Brandy Bay 1	55	0	0	0	0	0	0	0	0	0	0	0	0	0
13. Brandy Bay 2	12	1	52	2	0	0	0	0	0	0	0	0	0	0
14. Brandy Bay 3	120	15	0	0	0	0	0	0	0	0	0	0	0	0
15. Brandy Bay 4	90	17	95	0	0	0	0	0	0	0	0	0	0	0
16. Ilandanwg 1	0	0	0	0	0	0	0	0	0	0	0	0	90	82
17. Ilandanwg 2	0	0	0	0	0	0	0	0	0	0	0	0	1432	532
18. Porth Neigwi Log	101	8	8	1	0	0	0	0	0	0	0	0	0	0
19. Traeth Crugan Log	0	0	0	0	0	0	0	0	0	0	0	0	9	16
20. Point Clear Fragment	0	0	0	0	15	3	0	0	0	0	0	0	0	0
21. Church Norton Log	124	70	0	0	0	0	0	0	0	0	0	0	0	0

quantities and sizes; these were mounted on specimen boards which are cartridge paper boards 3 inches by 15 inches which in turn are mounted in trays using white tack for easy removal for observation under microscope. A full set of dissection reports has been compiled in a volume entitled "Shipworm and Other Wood Borer Strandings 2006/2007" it contains the dissection procedures, summary of the contents of the timber sample and conclusions for each of the timber samples dissected. So far, 2008 has already started off with one piece of Shipworm timber from Normandy and several others waiting to be collected from Kimmeridge. The exercise has highlighted many problems and lessons about the right and wrong way to retrieve and dissect Shipworm timber and also of recording the results. Seven of the specimens retrieved contained more than one species and the sample from Chesil Beach contained six species of Shipworm. This displays the importance of retrieving and dissecting all of the timber, if the full range of species is not known, this results in the wrong shells being linked up with the wrong pallets. The table below shows the range of Shipworm species found, the number of shells and pallets of each, and the timber specimens and area they came from.

Most interestingly of all is that the exercise revealed a new species of Shipworm for the British fauna namely *Bankia gouldi* (Bartsch, 1908). This occurred in three of the timber samples, the Church Bay Log found in Anglesey 11/12/06 at SH301894, this contained 34 shells and 8 pallets. *Bankia gouldi* was also found in the Chesil Beach Log which was found in February 07 at SY682733 by Julie Hatcher, Lin Baldock and Steve Trewhella and brought back to Anglesey for dissection. This contained 69 shells and 23 pallets along with five other species. The Kimmeridge Bay Log also found by Steve Trewhella in the spring of 2007 at SY908788 contained 6 shells and 3 pallets of *Bankia gouldi* along with two other species. In all of these cases, decaying or dead tissue was present in the timber samples. A paper concerning the identification of *Bankia gouldi* should appear in the next issue of the *Journal of Conchology.* It is also planned to produce an article about the "Retrieval and Dissection of Shipworm Timber", and an overall summary of the results of the findings with notes about the calcium linings and boring habits of some species which does seem to vary.

It may be that Shipworm timber is probably more common than may at first appear; the best places to search for it are areas that are known for large accumulations of timber especially after gales. It is also most likely that the majority of timber may be quickly collected and used for firewood in some areas such as Shell Island on the Welsh coast. If one does not quickly search this popular camping area when the season opens in March, the timber is soon burnt in the numerous beach barbecues.

East Beach Café

Rosie Dansey

For long suffering partners who accompany conchologists to the coast the next cup of tea may be more important than identifying a shell. Beach cafes are usually uninspired offerings of drinks, burgers or ice cream. On a recent visit to Littlehampton in Sussex I discovered a gem of a beach café seated right on the promenade where you can dine inside or outside with uninterrupted sea views. This gourmet café carries an unusual design by Thomas Heatherwick inspired by a piece of driftwood. In the design you can glimpse many natural shapes of the coast – sand dunes, waves, rocks, flotsam and jetsam, and even shells. It is a magnificent piece of engineering where ribbons of steel are constructed together as if in a jigsaw. The design and completion took two men eighteen months with the café opening in the summer of 2007 to rave reviews of the design and the menu in quality press travel supplements and magazines. Folders containing these reviews and the history of the cafe are available to browse. A kiosk is incorporated in the design offering the more usual snacks, drinks and ice cream but there is plenty of outside seating overflowing to the nearby green parks or the shingle beach.

Winter opening hours cover lunch and dinner Thursday to Saturday but from 1 July are extended to weekend breakfasts and open every evening with an invitation to sip cocktails before dinner while gazing out to sea. Yes the café is licensed but organic cordials and freshly squeezed juices are also available. Soup, mushrooms, shrimps, herring and mussels feature in the Starters which can also be served as a light lunch. Main courses range from beer battered fish, chips and mushy peas to crab linguine, ham hock, steak and sea bass. Fish is locally sourced where possible but always from sustainable sources. If you are a pudding fan there is tempting brioche bread and butter pudding, rhubarb and caramelised orange trifle, hot chocolate brownie with ice cream or stilton with quince paste and digestives. After this the non conchologist will not complain of time passing as he/she gently slumbers.

It has just been announced as this magazine was going to press that East Beach Cafe, Littlehampton, is one of the winners of the RIBA awards. The judges described it as "both strange and captivating, weird but lovable". For further information phone 01903 731903 or visit the website www.eastbeachcafe.co.uk

SALE OF BOOKS AND OTHER PuBLICATIONS

Books and publications belonging to the late Stella Davies, a member of the Conchological Society for some 60 years, were donated to the Society for sale to members, proceeds to go to Society funds. A list of the books is available from Dr J. Light, 88 Peperharow Road, Godalming, GU7 2PN, tel. 01483 417782, email jan@janlight.eu Postage will be payable over and above the cost of the books, but every effort will be made to deliver books to members at Society meetings.

The Stella Davies library contains a copy of J G Jeffreys' *British Conchology* (1862-9). The 5 volume work contains a coloured plate as a frontispiece in each volume. There are 8 black and white and 102 colour plates in Volume 5. The copy is in fair condition with some foxing and there is a book plate in the name of J E H Blake. Members interested in acquiring this copy should apply by post with a sealed bid in excess of £550 to Mr Kevin Brown, 12 Grainger Road, Isleworth, Middx, TW7 6PQ to arrive no later than 12th September 2008. The highest bid received by this date will secure the item.

At the conference

Klaus Groh & Gethin Thomas at the reception at Clervaux Chateau

International seminar on the rearing of unionid mussels

Ian Killeen

Around 50 biologists from Europe, America and Thailand, mainly involved in captive breeding programmes for freshwater mussels, particularly *Margaritifera*, attended a meeting in Heinerscheid, Luxembourg from 28 – 31 May, 2008. This was held to co-incide with the development of the country's LIFE project (LIFE-Nature « *Restauration des populations de moules perlières en Ardennes* » - Life05Nat/L/000116). This project started in autumn 2005 in order to maintain and enhance one of the last remaining important populations of pearl mussels in central Europe,partially located in the Luxembourgish Ardennes, by restoring the habitat and rearing juveniles ex-situ.

Successful mussel breeders Dick Neves (L) and Alan Keys (R)

Group shot before the conference dinner

The meeting started with a reception at the chateau in the picturesque town of Clervaux where our hotels were located. Oral and poster presentations were made over 2 and a half days covering a range of topics on freshwater mussel conservation but with a particular focus on European *Margaritifera* projects. Several countries are now running breeding programmes, and although many have had some degree of success, the species is so difficult that none have managed to produce and grow very large numbers of juveniles. The most successful programme has been the River Lutter in Germany where the main focus was on river restoration. This became a constant theme throughout the meeting in that captive breeding **MuST** go hand in hand with river restoration or we will just wind up with captive bred individuals in a zoo. There was also a clear message during discussion that where we have large populations (as in Ireland, Scotland and England) we should put strenuous conservation effort into returning these rivers back into favourable condition before captive breeding becomes necessary. The meeting was well paced with frequent breaks (and 3 course luches) and plently of time for discussion and catching up with old friends.

j uergen Geist & Évelyn Moorkens

The River Our

Margaritifera margaritifera

Unio crassus from the Our

Picnic at Kalborn Mill

The breeding facility at Kalborn Mill

The meeting finished with an excursion to the River Our on the Luxembourg/Germany border, the location of Kalborn Mill where the mussel breeding facility is located. This was accompanied by an excellent picnic. We thank Frankie Thielen and all his colleagues at the Hellef fir d'Natur Foundation for their hospitality and arranging such a well organized conference.

Limax cinereoniger in the woods

Helix pomatia was a common sight

All photos Ian Killeen & Evelyn Moorkens (except group shot by Frankie Thielen)

Cepaea Surveys: now…and then!

Robert Cameron

I guess that many members will be aware that the Open University is staging an "Evolution Megalab", a scheme to increase public awareness of evolution, as a contribution to Darwin Year (2009). They have chosen the famous colour and banding polymorphism of *Cepaea hortensis* and *C. nemoralis* (Fig 1) as the object of study, and the scheme involves participants from all the European countries in which the species occur. I did report on it to Council last year. It has received support from the Royal Society and from the British Council.

Participants will be invited to submit records online, detailing samples they have made, including the numbers of each colour and banding morph found. They will get feedback on the composition of other nearby samples, and, where possible, an analysis of how their records compare. There is already an interactive website up and running (a test version) with lots of instructions and background material. You can access it at www.evolutionmegalab.org , but you will need to register (free) before you can enter records.

The aim of the project is to get as many records as possible from across the range, and to analyse the patterns of variation in morph frequency. We know that there are some broad geographical patterns (with many local exceptions!), and there is often variation with habitat too. Over the course of the last 18 months a few of us have been entering historic records; there are around 8000 site records for Great Britain (some with both species). The earliest are records made by A.E. Boycott in Herefordshire in 1893. We have entered about 1600 records for other countries (including the whole of Ireland), but there will be many more as local organisers enter data for their own countries. I have been told that this is the largest genetic database after that for our own species, *Homo sapiens*. We shall use this to see if there have been changes over time. We know already that there have been some changes due to climate, and also that there have been many local alterations of ranges.

The scheme is managed by the Open University; the team is led by Professor Jonathan Silvertown, with the assistance of people like me who have studied *Cepaea* for many years. One aspect of it is worth emphasising: the analyses will be at all scales from the very local to range-wide. Where there are local groups who want to analyse and publish their own data, or to use output for local events and recording schemes, all possible help will be given. We have already agreed that all the records will be entered in the Non-marine Recording Scheme of the Society, but I have had time as yet only to give Adrian Norris a tiny part of the total (my own records for Yorkshire!).
I will be holding some practical workshop sessions for those interested at the long indoor meeting on January 31, and I will give a more formal talk at the recording meeting on April 18. I think the project will start seeking wide publicity early in 2009, by which time the website should be in its final form. I am happy to give talks or workshops from October this year onwards.

So much for the present! This is not the first time that there has been an attempt to get lots of people to survey *Cepaea*. The earliest attempt was made in 1901, when the Society set up a Committee for Collective Investigation, who named one project "Do *Tachea nemoralis* and *T. hortensis* occur together or separately (1) in the same district, (2) in the same locality, (3) in the same kind of habitat? (*Journal of Conchology*, 10, page 88). The response was meagre, and the committee disbanded itself the following year, though some reports trickled through between 1903 and 1922. The question, however, is still of interest!

Much more significantly, Cyril Diver attempted to organise a survey of the polymorphism in 1938. Diver himself had accumulated many records between 1920 and the Second World War. He had been receiving samples from other people for many years including A.E. Boycott, A.E. Ellis and Greevz Fisher. His own records, and those sent to him are meticulously entered in his notebooks, part of the Diver Archive in the Natural History Museum, London. I have entered more than 300 records into the Megalab database. He evidently wanted to expand this work, and prepared instructions for participants. Here is a transcript. The original (of which there are several copies) is in the Diver Archive in the Mollusca section, Natural History Museum, London (Box 4). It is dated October 1938. It was evidently sent to several people, and there is at least one reply as late as April 1939, from Lionel Adams. In going through the entire archive to extract details of *Cepaea* samples scored by Diver, I have not found any records later than 1938/9. It would appear that the Second World War put a stop to any further effort, although Diver had clearly returned to his interest in the polymorphisms in the late 1930s. The instructions are interesting both for what he thought it practical to ask of people, and for what ideas were going through his mind at the time. He was clearly considering both selection and drift. They have a surprisingly modern feel for something now 70 years old. Note that today's instructions are a little different!

The Distribution of Variation in Natural Populations of *CEPAEA*.

1. The primary object of the enquiry is to determine the **frequency** with which the different varieties (phenotypes) occur in the colonies of *C. hortensis* and *C. nemoralis*; and how these frequencies vary from colony to colony within the same area, or in different parts of the geographical range. A secondary object is to increase our knowledge of

the ecology of these two species. The method of the main enquiry is essentially statistical, and to be of value all collections from colonies must be **random samples** – that is, the collector must not exercise any selection whatever against poor or bad specimens, but all must be included.
2. The method of collecting employed is to take **every adult** shell, alive or dead, that can be found during a single period of collecting. Experience suggests that, apart from exceptional circumstances, such a sample probably represents about 30% of the total adult population, so that the method is not so destructive as it sounds. But obviously continuous collecting from the same colony may well succeed in obliterating it. By "adult" is meant a shell with a completed, firm lip. No young, or shells with a still growing or soft edge, should be taken.
3. The least damage will be done to the continued existence of the colony if the collections are made in the autumn (that is after the adults have contributed their full quota of eggs to the next generation), or in the early spring on emergence from hibernation (before the next generation have completed their lips).
4. The following notes should be made at the time each colony is sampled:-
(a) Date of collecting: weather conditions.
(b) Location of colony, preferably with reference to the 1 inch Ordnance Survey map of the district. If the geological formation is known, it should be included.
(c) Type of habitat (e.g. hedgerow, beech wood, waste land, down grass, sand dune etc.).
(d) Approximate extent of colony (in paces or yds) and/or of the area actually worked.
(e) Where a series of neighbouring but discontinuous colonies is worked (e.g. along a road or hedge system) distances between colonies should be given or marked on a scaled map.

To which should be added if possible:-

(f) A more detailed description of the habitat (e.g. in the case of hedgerows whether the road bank is regularly ditched and topped by well kept quickset or whether the vegetation is rank and seldom interfered with).
(g) A short list of the most prominent plants particularly those up or in which the snails may be found to be moving or resting (e.g. on sand dunes or dune grass whether concentrated in tufts of marram, Iris etc; or in hedgerows whether dead stems of umbellifers or nettles are frequent. It is not suggested that time should be spent on identifying the exact species of dead umbellifers, unless this can be done with certainty at sight). Notes on other species of snail that may be prominent should be included.
(h) Whether the colony is confined to uniform conditions of habitat, or extends continuously through two or more slightly different habitat types; and whether in the former case the colony extends throughout the whole of the habitat or only occupies a part of it.
(i) Any notes about changes in population density that strike the collector, and facts with which it is suggested they may be correlated.
(j) Any peculiarities or other details which may be observed.

Only the first five headings are essential for the general statistical treatment of the sample. But it should be noted that for any ecological study the fullest descriptive details about the behaviour and distribution of a colony in relation to its habitat is of the greatest value; and in the present state of our ignorance it is impossible to say what detail may safely be neglected.

5. The different characters on the shell, e.g. the nature of the ground colour (yellow, pink, brown, etc.), the presence or absence of banding, the band formula, the nature of the band pigment, etc., are known to be inherited on mendelian lines. Therefore, from the distribution of these "phenotypes" it is possible to estimate how the "genotypes" (i.e. the hereditary constitutions) are being distributed by the process of mating, in other words to determine the "breeding structure" of the population. This line of enquiry makes it possible to estimate the parts played by different evolutionary mechanisms. Experience of these species suggests that individual movement for mating purposes is very limited, and consequently there is a large amount of inbreeding, even within different parts of a single colony. It is, therefore, preferable to work any reasonably large colony systematically, keeping the different sub-samples separate.
6. I have found that the most convenient method of collecting is to use bags made of canvas or sacking with a pull-string top, each bag bearing a large clear number in indelible pencil. In working dense sand dune populations of nemoralis where within a single quite small sub-sample area anything from 200 – 500 snails can be collected, sacking bags of about 10 x 10 inches are most useful. For ordinary hedgerow and other small discontinuous populations much smaller bags of less coarse material that will hold up to about 80 snails are much more convenient. The bag has great advantages over the cigarette tin (cardboard and paper cannot be used as they are freely eaten). Not only is it easier to carry and to collect into, but the snails can safely be left in it dry for a week or so (perhaps with a little paper to eat) until they are cleaned. Whereas they cannot be left tightly packed in tins without dying. Further if the number of the bag is clearly given in the field notes no other label is necessary.
7. Information from really small populations (i.e. where the whole colony can be counted in tens) is particularly wanted even though the sample only contains as few as 10 shells. From more populous colonies a sample of at least 20 should be attempted, and samples of 50 to 100 are preferable. But the size of a sample should **never** be increased by going outside what are the obvious limits of a sub- sample area (e.g. where the habitat shows signs of a slight change). A series of small adjacent sub- samples, which can always be amalgamated later if the figures and facts justify this course, is far more valuable than a single large sample from a heterogeneous habitat which cannot later be dissected.
8. Snails are preferably sent uncleaned (particularly from mixed colonies where the two species live together), and if so are better left in their bags which should be packed in some firm box. The bags will be returned later and, if desired, postage will be refunded. I prefer to retain the shells here where they are available for checking or for biometrical measurements if desired. But individual specimens or whole samples that the collector may desire to keep for his own cabinet will of course be returned if asked for.
9. Packages and any requests for further information should be addressed to: Captain C. Diver, 40 Pembroke Square, Kensington, London W. 8. If the systematic working of a large continuous population (e.g. on an area of sand dunes) is contemplated, further information should be applied for before work is begun.
10. The data at present in my possession have been drawn from about 450 different populations, but the majority are from the south of England. Further samples from northern England, Wales, Scotland and Ireland are much needed, and particularly from outlying places near or at the limits of the geographical ranges.
11. Where a number of broken shells is found round a "bird stone", all the broken bits (of whatever species) should be carefully collected, the nature of the "stone" recorded, and if possible a control sample of the living population within a radius of about 10 yds or so should be taken. Similarly rat- or mouse-eaten shells should be included in the samples in which they occur.

October, 1938.

A sample of very polymorphic *Cepaea nemoralis* from Kaszuby (N.W. Poland, near Gdansk) Photo: Robert Cameron.

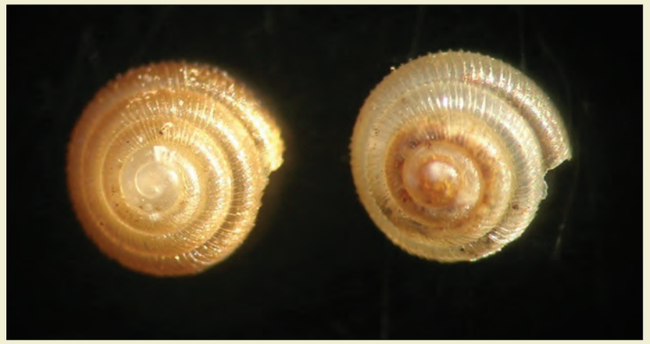
Egg and early stages of development of *Spermodea lamellata*

A A Wardhaugh

Although not of high quality I thought members might like to see the accompanying photographs of the egg and early stages of development of Spermodea lamellata. Adult snails were found in a leaf litter sample collected from Saltburn Gill, North East Yorkshire (grid ref. NZ675207) on 19th May 2007. These were held temporarily until the following August by which time they had bred. The photographs were taken on 16th August 2007. The first photograph shows an egg just before hatching, an individual in the process of hatching and one newly hatched in which the characteristic shell lamellae have started to develop. The second shows two older individuals in which the lamellae are further developed. The photographs were taken under artificial lighting, through one eyepiece of a binocular microscope, using a 5megapixel Nikon digital camera.

Variation in shell colour of *Spermodea lamellata*

A A Wardhaugh



Spermodea lamellata is a terrestrial mollusc which has a north-westerly distribution in Britain and is associated with ancient semi-natural woodland. Its shell colour exhibits little variation and is described succinctly by Kerney & Cameron (1979) as “pale golden-brown, slightly translucent”. Earlier authors provide similar descriptions, for example “grey or pale horn colour….the tip obtuse and usually of a whitish colour (Gray 1857), “yellowish horn colour or tawny” (Jeffreys 1862-9), “greyish” (Tate 1866), “yellowish horn colour. The spire of the shell, especially at the apex, is frequently denuded of its epidermis” (Rimmer 1880). Adams (1896) describes it as a “horn colour” and adds with delightfully dry humour, “It is one of those few species of which no one has been ingenious enough to find varieties”. However, thirty years later Ellis (1926) listed “var albina”, described as “a rare white-shelled form”.

North East Yorkshire (vice-county 62) is something of a stronghold for this very locally distributed species, where it occurs in a number of old woodlands. Here, Hawell (1899) commented “The Kildale specimens are often much lighter than those at Ingleby, and the apex is often of a reddish tint”. Another local naturalist, Bernard Lucas, assembled a collection of land and freshwater shells which he presented to the Darlington and Teesdale Naturalists’ Field Club in November 1928. Among these are four white shelled *Spermodea lamellata* labelled “ACANTHINULA LAMELLATA Jeff. Kildale 4/5/28 BRL”.

During current work in the area, *S. lamellata* was first located in the Kildale area in Mill Bank Wood (grid ref. NZ599098) on 1st June 1996 and has been recorded here on a number of occasions since. As part of a more detailed investigation into the habitat occupied by this species a leaf litter sample of approximately 2 litres was collected from one of the known sites for this species in Mill Bank Wood on 18th August 2007. The litter was mainly beech (*Fagus sylvatica*) with some oak (*Quercus* sp.). Fifty individuals were recovered from this sample by hand searching. Of these, 29 were white shelled and 21 pale brown (Figure), the latter showing little colour variation. The comment by Ellis (1926), quoted above, that the white shelled variety is rare seems to be borne out in NE Yorkshire in that this is the only site where it has been found to date form over 20 where this species is known to occur. It is possible however that white shelled individuals may have been overlooked as the colour is not immediately obvious owing to the underlying body colour showing through the somewhat translucent shell.

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Caption for ghost slug poster (page 15)

Following the recent paper in *Journal of Conchology,* Members might like to see the poster that has been produced to raise interest amongst the public. Please contact Ben at the National Museum of Wales if you would like a copy.

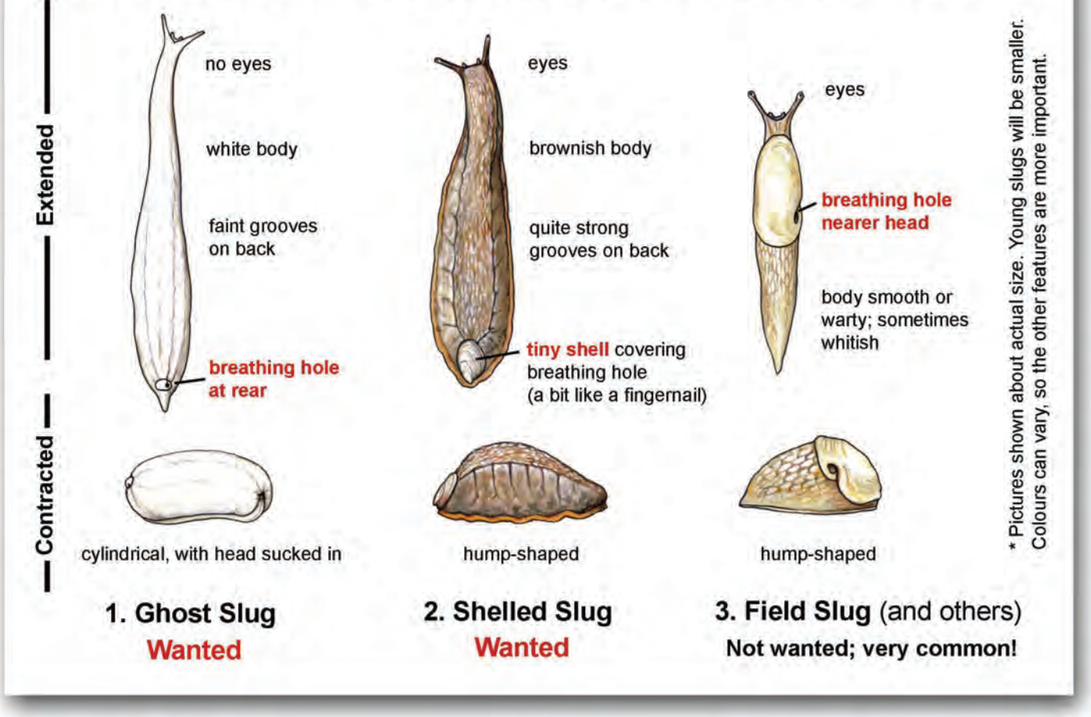
Have you seen the Ghost Slug?

national museum wales / amgueddfa cymru

CARDIFF UNIVERSITY / PRIFYSGOL CAERDYDD

The bizarre Ghost Slug was first found in a Cardiff garden in 2007. It is blind, lives underground, and kills and eats earthworms by squeezing down their burrows. Ghost Slugs are originally from Turkey and Georgia and have not been seen in Europe before, but they may be spreading. We would like to hear from anyone who has seen them.

How to recognise Ghost Slugs, Shelled Slugs, and others*



The best chance of seeing Ghost Slugs is while moving plant pots or digging. They differ from all other British slugs in having a breathing hole very near the tail. Almost as mysterious are the Shelled Slugs. Like Ghost Slugs they live in soil and eat earthworms (but do not seem to be a pest). They have been in Britain for a long time, but are rarely seen.

If you see Ghost Slugs or Shelled Slugs, or would like more information, please contact us at the address below. Digital photographs or live slugs, if you have them, are very welcome.

Ghost Slug Project c/o Ben Rowson, BIOSYB, Amgueddfa Cymru - National Museum Wales, Cathays Park, Cardiff, UK CF10 3NP. **Email:** *ben.rowson@museumwales.ac.uk.* **Tel:** 02920 573 110

FIELD MEETING

River Loddon and Dinton Pastures Country Park, near Reading, Berkshire

Rosemary Hill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Seven members met on Saturday 14th July in fine weather to survey a section of the River Loddon and associated former gravel extraction pits and a small marsh near or in Dinton Pastures Country Park near Reading. The meeting was planned so that members attending were able to come by train, which proved the most popular mode of transport on the day. Once assembled at Loddon Bridge, Earley, the group moved a short distance into Riverside Park (where *Cornu aspersum* was observed mating) to sample the river adjacent to the bridge, where *Theodoxus fluviatilis* was found as expected. Other species found included *Viviparus viviparus, Potamopyrgus antipodarum, Bithynia tentaculata, Physa fontinalis, Physella acuta, Lymnaea stagnalis, Bathyomphalus contortus, Gyraulus albus, Anisus vortex, Pisidium amnicum, P. milium, P. henslowanum , P. subtruncatum* and *P. nitidum*. Other terrestrial species found included *Deroceras panormitanum* and *Trichia hispida.* A particular hazard of the recent wet weather was the muddiness of the riverbank, such that one member slipped nearly into the river at this point and another member had a similar near miss later in the day.

The party then moved into Dinton Pastures. The country park is largely the result of reclamation of the gravel pits formed when aggregate was taken during the building of the adjacent motorways, but once the workings were exhausted, the area was taken over by Wokingham District Council and planted with native shrubs and trees or allowed to recolonise naturally for restoration. The insertion of bridges links the two sides of the Loddon and the area is very popular for local recreation. Fortunately the gravel workings appear to have had little effect on the river which arises on chalk near Basingstoke, and the area provides a useful, and only a week later, very necessary floodplain! Some ditches drain into the river from the A329M motorway but these do not appear to have a significant effect on river water quality.

Once in Dinton Pastures, the translucent leaves of Loddon Pondweed (*Potamogeton nodosus*), one of the special plants of the river, attracted attention. One of the larger ditches was sampled and *Viviparus contectus, Galba truncatula, Pisidum personatum* and *P. obtusale* were found. This ditch is known to virtually dry out during hot spells in summer.

After lunch fishing pitches along the river itself proved more promising, each providing a lucky dip with different species. Those molluscs new to the list included *Ancylus fluviatilis, Valvata piscinalis, Lymnaea peregra, Hippeutis complanatus* and *Pisidium casertanum*. Shells of *Unio pictorum* and *Anodonta anatina* were dredged out of the river bed. The fish miller's thumb and three-spined stickleback were also found in the river.

The long jetty on White Swan Lake provided a good opportunity for several of us to work together. Here the additions to the list were *Planorbis carinatus, Gyraulus laevis, Planorbarius corneus* and *Musculium lacustre.* A juvenile pike was also examined. While some members of the party chose to look in the marshy part of a recently created scrape for wading birds next to a reedbed in the lake, others moved on to Middle Marsh a small wet area not connected to any water body but with a good range of wild flowers including common spotted orchid *Dactylorhiza fuchsii*, common fleabane *Pulicaria dysenterica* and rushes *Juncus* spp. To the surprise of some of those present, Ron Boyce had not been joking when he had said that he had a vacuum cleaner in his field bag. Vacuum sampling of the area revealed *Vertigo antivertigo* among the litter, with the other terrestrial species present including *Arion subfuscus, Cochlicopa lubrica seg, Deroceras laeve, Euconulus fulvus, Nesovitrea hammonis* and *Zonitoides nitidus.*

June Chatfield had visited the area of the survey in November 1997 to look for *Vertigo moulinisana* but this species was not found then or during the meeting. There does not appear to be suitable fen habitat along the river for this species, probably as a result of drainage of habitat in the 1970s. However, other terrestrial species found on the same occasion were mostly present. These included *Aegopinella nitidula, Arion intermedius, Cochlicopa lubrica seg, Discus rotundatus, Eucnulus fulvus seg, Monacha cantiana, Oxyloma pfeifferi, Succinea putris, Trichia hispida* and *Vitrea crystallina.*

The party then retired to Rosemary's house for tea before their return journeys. The organiser would like to thank Dinton Pastures Country Park for permission to hold the meeting, Loddon Bridge Park and Ride for permission to park vehicles and all participants for their records. It is most fortunate that the meeting was not held a week later, as after the torrential rain on the Friday the river became a torrent and entire floodplain was submerged and several houses were flooded out. How many of the snails and other wildlife we had enjoyed a week before were swept away?

1. *Cornu aspersum* mating. Photo Peter Topley
2. Sampling the lake. Photo Peter Topley
3. *Theodoxus fluviatilis*. Photo Peter Topley

Molluscs in the Kelvingrove Art Gallery and Museum

Mike Rutherford

The Kelvingrove is the jewel in the crown of the art galleries and museums in Glasgow. In 2006 it reopened after a three-year refurbishment and has gone on to attract over 4 million visitors and become the most visited tourist attraction in Scotland.


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The displays cover a wide variety of topics from French art to Scottish archaeology and from ancient Greek masks to Italian armour. Throughout the museum molluscs are present in a surprising number of places.

Obviously they are well represented in the natural history galleries. There are the common marine and freshwater shells on display in Life in Scottish Lochs, mainly just empty shells but there are also several beautiful glass models made by Blaschka of Dresden. These include a chequered carpet shell *Tapes decussates* (which has a real shell with glass 'soft' parts added), a sea slug *Eubranchus pallidus* and a flying squid Todarodes sagittatus (photo 1). In Nature's Recordbreakers there are examples of our biggest shells with half of a giant clam *Tridacna gigas* (photo 2) and a trumpet shell *Syrinx auranus* and some of our smallest shells the dwarf snail *Punctum pygmaeum* and the pygmy pea mussel *Pisidium moitessierianum.*


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The plight of some endangered tree snails is shown in Wildlife in Danger with several *Partula sp.*, a *Euglandina rosea* and an *Achatina fulica* all displayed alongside a cartoon story charting the tree snails demise. There is also a display


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about the effects of tourism on threatened species and how some species of mollusc are facing extinction because of over collecting; these include Manus Island tree snails *Papustyla pulcherrima* and queen conchs *Strombus gigas*.

Fossil molluscs are well covered in the Creatures from the Past gallery with a large display of ammonites (photo 3) as well as belemnites and prehistoric gastropods, bivalves and nautiloids all in displays called Life at the time of the Dinosaurs and Local Fossils.

In the display Animal Speak one of the cases contains some curled octopus *Eledone cirrhosa* (photo 4) in spirit, these are used to show how colour is used for communication. This story was aimed primarily at pre-school children and simple rhymes were used as the main type of text so there is even a short poem about octopus in the display.

The Last Pearl Fishers in Scotland looks at the end of the freshwater pearl fishing industry and the people who used to make their living by searching for *Margaritifera margaritifera* in the rivers of Scotland. A life-size model of a fisherman helps show how the different bits of equipment were used (photo 5). This display also details the life cycle of the pearl mussel and shows how its decline was due to a variety of factors and not just fishing.

The Study Centre is an area where visitors can conduct further research into aspects of the collection with the help of computers and a small library. There are also small cases with mini displays of areas of the collection not covered elsewhere in the museum. In one case titled 'What is Real?' there are several models of shells next to examples of real shells. These include a carved wooden *Conus gloriamaris* and a papier-mâché *Pleurotomaria*. In another case there are chank shells *Turbinella sp*. and trumpet shells *Charonia tritonis* that have been turned into horns (photo 6). There are also several examples of different type specimens from the 1910 Thomas Gray collection and the 2002 Peter Dance collection.

The Environment Discovery Centre is a gallery aimed mainly at school groups where visitors can get a more hands on experience and can work closely with education assistants who run short tours and classes. There are shells in several areas including the seashore and invertebrate identification displays but the main feature is the Variety Shells display. This is a small snapshot of the huge diversity of molluscs and includes specimens in spirit, a sorting game, a naming game and drawers showing variety in colour and stages in growth (photo 7).


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There are many examples of using shells for decoration amongst the ethnography collections. These include shells used for a pair of ancient Egyptian earrings, wedding bracelets from India made from chank shells, cowry shells as part of the decoration on a drinking gourd from the Samburu people from Kenya (photo 8) and a large necklace from Peru made from parts of *Spondylus* shells. There are money cowries scattered around the base of a cast bronze mask from Benin and giant clams carved into the base of the unique ceremonial 'turtle posts' from the Torres Straits. Other displays where shells can be seen include a cameo carved on a *Cassis rufa* shell in the Mini Museum; oysters, scallops and limpet shells all found in shell middens from the Mesolithic period in the Scotland's First People gallery and scallop shells next to fluted armour in Animal Armouries.

One of the more subtle areas where molluscs are present in many galleries is in the use of mother of pearl inlay in various objects. In the Mackintosh and the Glasgow Style gallery there are some items of furniture including a delicate card table with an inlay flower design (photo 9) and a chair with butterfly designs. There are several carved Maori figures in different galleries all with paua shell eyes and in the Last Pearl Fishers in Scotland display there is a section looking at the shells most commonly used for inlay as well as a few examples of inlaid objects. In Scottish Identity in Art there is a Jacobite snuff box with inlay and in the Hunting story there are several antique hunting muskets and rifles with very finely detailed characters made from mother of pearl (photo 10).

Throughout the museum there are many paintings depicting molluscs. In a typical example of a Dutch still life by Jan Davidsz de Heem there are several oysters adorning a breakfast table. In a more contemporary still life by David Horn there are various shells depicted including a cone shell, a cowry, a turban shell and a large conch as well as strings of pearls (photo 11).
In several paintings there are living slugs and snails depicted, such as an identifiable *Arion sp*. and a *Cepaea sp*. in 'Fairy Raid' by Noel Paton, a tiny yet perfectly formed snail in 'An allegorical landscape' by Jan Bruegel II, and another possible *Cepaea sp*. in 'Flowers by a tree trunk' by Rachel Ruysch (photo 12)

There are also many paintings where the people in them are wearing pearls, these include pearl necklaces in 'Portrait of Frances' by John Michael Wright, 'A woman in a satin dress' by Caspar Netscher, 'Salome with the head of John the Baptist' by Carlo Dolci and in one the museums most important paintings, 'A Man in Armour' by Rembrandt, the man in question is sporting a pearl earring.

In almost every gallery molluscs are represented in some way showing how ubiquitous shells and their products have become in the world around us. If any members happen to visit Glasgow please get in touch and I would be more than happy to show them around the molluscan treasures of Kelvingrove.

Helen Parker, author of two nineteenth century American children's books about shells

Peter Topley

Peter Dance, in his recent fascinating book of conchological anecdotes, "Out of My Shell" (C-Shells-3, Inc., 2005), devotes a chapter to books about shells for children, in which he mentions a book entitled "Frank's search for Sea Shells"(1866). Having recently been given the opportunity by Peter to read this compelling story, I tried to find out a little more about the mystery author "H.F.P." and the second book by the same author "Rambles after Land Shells." Both books were published by the American Tract Society (Boston, U.S.A.) the latter in fact being the first published, in 1863. They are about a twelve year old boy called Frank and his adventures, whose knowledgeable relatives open up to his enquiring mind the whole new world of molluscs. The books are not written in the rather dry, uninteresting way that often characterises 19th century children's books. On the contrary the stories are exciting, the writing knowledgeable (for the time) and easy to read. Since the books were produced by a religious publisher there are many analogies and it is clear here that molluscs were also placed on the earth in order to teach mankind about God! But there are also other fascinating snippets of the time, as the American Civil war rages in the background.

A little research on the internet revealed the author to be Helen Fitch Parker. She was born Helene Eliza Fitch in 1827 and educated at Auburn female seminary, New York State. Little is known about her life, however she was married in 1852. There is some confusion about who her husband was, some sources say Samuel Parker (1779-1866) and another his son Henry Webster Parker (born 1824), both of whom were Presbyterian clergyman. Due to the disparity of the dates I have assumed here that Helen's husband was Henry. Henry was also a scientist, for after their marriage he went to study at the Lawrence scientific school of Harvard University, later in the 1870's becoming professor of mental science and natural history at two colleges. In addition he also published two volumes of poetry. His father, Samuel Parker was also a missionary to the then new territory of Oregon. It is obvious that an interest in natural history and conchology in particular ran in this family, since in 1851 Samuel Parker presented a "Description of a new Species of *Helix*" to the American Association for the Advancement of Science. Apart from the two books relating to shells, Helen also published five further books of a Christian nature as well as "Arthur's Aquarium" in 1872. She died in Amhurst, Massachusetts on 4th December 1874.

"Rambles after Land Shells" is fortunately available to read on-line at more than one location (web address at end).

One of the things that is striking about this short book (172 pages) is its coloured frontispiece (reproduced here), of which the author says "the shells of our temperate zone are homely in comparison with those of the tropics, which can be procured in exchange or by purchase. To illustrate the subject, a few tropical land shells have been drawn and coloured from nature for the frontispiece of this volume." The shells are from a number of well recognisable families such as the Annulariidae, Achatinidae, Acavidae, Camaenidae and Orthalicidae and are arranged artistically amongst vegetation.

In the first chapter of the book, Frank is looking at the books in his grandfather's library (possibly a depiction of Samuel Parker's library?). He is surprised when his mother mentions to him that there are molluscs with shells that live on the land. She then says to him:

'"In England, they are found in the hedges, ditches, old ruined walls, in the gardens, and even in the cellars. Bring me the thin volume next the one at which you were looking, and you shall see what I mean. There." said she, turning to the plates of the *British Mollusca* [presumably those in the fourth volume of "A History of British Mollusca..." E. Forbes and S. Hanley 1853], are they not beautiful?"

"How I wish I lived in England!" he [Frank] said, looking wistfully at them.

"What would you do?"

"I should go into the garden this minute, and bring you a handful."'

Frank later discovers the delights of the shells of his own land (and also incidentally further afield to places like St Helena and China) and also does travel briefly to the U.K!

http://digital.lib.msu.edu/projects/ssb/display.cfm?TitlelD=541&Format=jpg)

Freshwater Pearl Mussel - Pearl Fishing - Manufacturing of Nacred Objects. The Special Exhibition in the Museum of Adorf

Steffen Dietz (Museum Adorf, Freiberger Str. 8, 08626 Adorf - E-mail: museum-adorf@freenet.de)

The editor of *Mollusc World* has been meaning to publish an article on the Adorf shell museum since attending a pearl mussel meeting in nearby Bad Elster in 2006. I am very grateful to Robert Vandré for supplying me with this article and photographs. I have only reproduced the English summary, but the full reference is: pages 55-60 in: Vandré R. & Schmidt C. (Eds.) 2006: *Proceedings from the Workshop "Pearl Mussel Conservation and River Restoration" 15.-16.11.2005 in Bad Elster, Germany.* Bezirk Oberfranken & Anglerverband Südsachsen Mulde/Elster e.V.

The local museum in the town of Adorf in the region "Oberes Vogtland", Saxony, was originally established in 1955 as an exhibition of local history. In the former town gate now the museum shows the largest German collection of mother–of-pearl with more than 700 exhibits. In former times freshwater pearl mussels occurring in the rivers of the "Vogtland" were the basis of pearl fishing and the development of a nacre industry in Adorf since about 1850. A few years later, more and more material from the sea was used. The fabrication boomed and about 1870 Adorf became the center of German nacre industry. Souvenirs (e.g. little ships, painted mussel or snail shells) were produced as well as other room and table decoration (thermometers, clocks, picture frames, mirrors). In the 20th century the industry declined. Nowadays there is only one company in the "Vogtland" that perpetuates this old tradition.

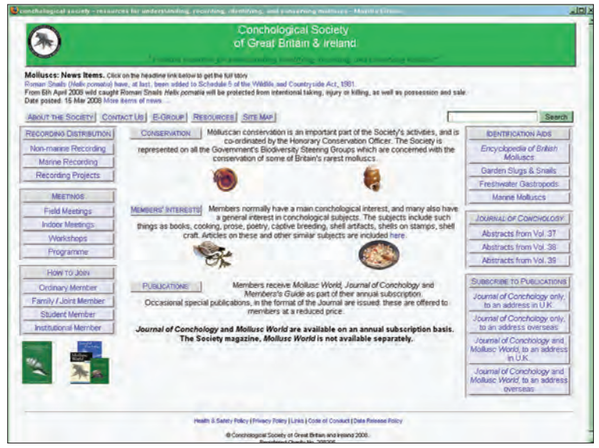
1. *Early products of the nacre industry at Adorf, made from local pearl mussels.* Photo: Reinhard Altmüller
2. *Objects of decoration and of utility, made from the nacre of sea mussels.* Photo: Robert Vandré
3. *Wall clock, covered with mother-of-pearl.* Photo: Reinhard Altmüller

All other photographs of objects and displays in the museum - Photos: Robert Vandré

The New http://www.conchsoc.org Website

Pryce Buckle and Jan Light

"Provides resources for understanding, identifying, recording, and conserving molluscs"



Introduction

The Society's website has a new look. In its new guise it aims to improve its approach to supporting and advertising the promotion, study and conservation of molluscs by providing a range of resources for identification and recording distributions. It incorporates the following features:

- Easy navigation around the site.
- No registration or login is required.
- Encyclopedia of molluscs.
- Guide to identification of freshwater and brackish water gastropods.
- Search facility.
- Site map.

If you are not already familiar with the website, or indeed the Internet, this is an ideal opportunity to get started with a step-by-step guide outlined in the following article. Why not log onto the Internet now (www.conchsoc.org) as you will almost certainly find the following information and instructions easier to follow if you read this article in conjunction with the website on the screen in front of you. In addition to specific details about the Society's website, this article also provides basic information on how a website works which you may find of general use and interest.

Home or Index page

The opening page gives immediate access to the main sections, including Recording, Conservation, Identification Aids, Meetings, Members Interests, Publications, etc. The most recent News Headline on a molluscan or conservation topic is displayed immediately below the title banner. It provides access to the full story and to other recent news items. An archive of previous news items and press releases is also maintained on the site and is reached from within the Site Map (see below).

In order to keep the news up to date, it is important that the webmaster be advised by email of items of molluscan or conservation interest of which you may learn. If you spot a story in whatever format do let the webmaster know. A brief summary with the source and headline should enable the news item to be tracked down. Keeping the news page up to date is an important indicator to website visitors that the site is active and maintained.

The Home page includes a facility at the top right hand for searching the entire site, but see below for details of this.

Navigation

The main navigation bar is situated below the title banner on each page after the Home page. On the majority of the pages there is a supplementary menu of links on the left. These links are to pages to which you might wish to refer, or are related to the page you are on, so that you do not have too far to go to find related information. Links are a useful tool to benefit from the interconnectivity of the Society's website, or may take you to other websites which contain information that may be helpful for your particular requirements.

The text at the foot of every page provides links to Health and Safety Policy, Privacy Policy, Links to related sites, Code of Conduct for Field Work, and Data Release Policy.

On some pages, particularly those relating to identification, there are "breadcrumb trails" (just below the top navigation bar) to enable you to quickly return to a page in order to confirm key features or to take another route in the identification key. The News pages and Abstracts of Papers from the Journal open with a list of headlines. Each headline is a link to the full story or Abstract. When you hover over or click on one of these headlines the text turns green. Having opened and read an Abstract, when you return to the main page again, the headline is then in purple font. This indicates to you that you have 'visited' this particular Abstract.

Encyclopedia of Molluscs

This is a new feature on the website and will form the subject of a separate article. It is an evolving section and aims to provide a general reference source to help with identification, for all species of mollusc found within the UK. At the present time it covers mainly marine molluscs. The account of each species includes descriptions, images, details of the distribution (including a map of the recorded distribution within the UK as shown on the National Biodiversity Network [NBN]), key identification features, and comparison with species with which it could be confused. The speed with which the Encyclopedia can be built up will be greatly enhanced if Society members are able to loan good specimens to be photographed.

Guide to freshwater and brackish water gastropods

This guide is designed to help identify the majority of the species of freshwater and brackish water snails likely to be found in Britain and Ireland. It is adapted from the excellent "Süsswassermollusken" by P. Glöer and C. Meier-Brook, 1994, published by Deutscher Jungendbund für Naturbeobachtung, Hamburg. Dr. Peter Glöer has kindly provided copies of the photographs used in his book and has granted the Society permission to use them to illustrate the section.

Search facility

Starting a search is simple. If you are not on the Home page (the opening screen of the website) click on the word HOME where it appears at the top of each page on the left hand side below the Society's name. When on the Home page, type your key words in the box next to the word Search then click on the word, Search. This facility then searches the whole website for your chosen word or words and the results are shown in the browser window that follows. Even a mistype can sometimes still find the correct information.

The search is powered by "Atomz" (http://www.atomz.com/). This is a hosted 'application' (piece of software) delivered completely free over the Internet; the suppliers support their costs through text-based advertisements. The advertisements are a small price to pay for the advantages the application brings to navigating the Society website and consist of a few lines of innocuous text of Related Sponsored Results above the Site Results.

The links to pages containing the requested information are in blue underlined text. 10 results are shown per page, below the horizontal line under the Sponsored Results. (If you click a Sponsored Result it is easy to get side tracked, which, of course, is what pays Atomz bills). The term used in your search is shown in bold text.

You probably already know that clicking on a link will open the page showing results. However, not all users are aware of the different features and items of information that can be shown on the results page.

Here are the basic elements of a search page:

- **Show** or **Hide Summaries** – most times you will want to display the summaries in order to see the description relating to what you are seeking.
- **Sort by Date** or **Sort by Relevance** – sometimes you need to find the most recent information, and at other times you need the most relevant. These alternatives are most useful when the results are many.
- **Page Title** – This is the name of the page, and is always the first line of a search result. You may see a URL (Universal Resource Locator, the 'web address' which enables a web page to be located wherever it may be) instead of a title if the page doesn't include a title in its HTML code. (Hyper Text Markup Language, the coding which enables the web browser to function) Also, if Google hasn't yet indexed a page, it may not show the title.
- **uRL (universal Resource Locator)** – is shown below the text information about the page and is shown in green.
- **Text for search result** – The text below the title is a clip from the result page that contains your keywords. You see the search terms in bold on the search result.

Site map

The site map is sometimes the simplest way to find your way around the new site. It isn't actually a map but a list, arranged alphabetically by main sections, and alphabetically within each main section. Remember: all links are coloured – blue for unvisited, purple for visited, and green underlined whenever you place the cursor over one. If it is black text, it is NOT a link.

File formats

The majority of the files are in a format that will open in your browser without any problem. A few, which are mainly confined to the Reports of Field Meetings and Species Lists from field meetings, are in pdf (Portable Document Format) which requires Adobe Acrobat Reader as a "helper application". Most modern computers come with it already installed, but if you do not have a copy, it is available as a free download from http://www.adobe.com/products/acrobat/readstep2.html.

Adobe Acrobat's logo is included on the relevant pages and by clicking on it the download will start, making it readily available.

The reason for using the pdf format is that it makes for fast downloading of documents, even long ones, and it can incorporate text, graphs, tables and images all in one document completely independently of the operating system and programs available on the user's computer.

Home page

You may return to the Home Page at any time by clicking the link in the top navigation bar or by clicking the logo at the top of any page.

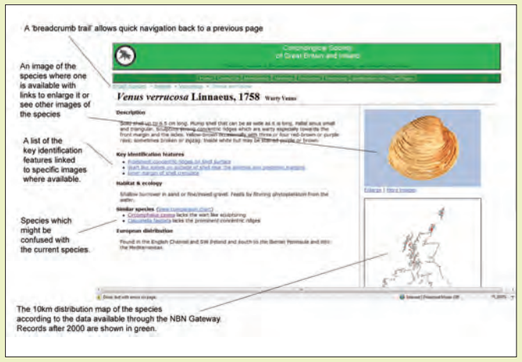
Last words

The website is there to be used by Society members, as well as to inform any member of the general public who happens upon it during a surf of the Internet searching for information on shells, molluscs, snails, slugs – whatever keywords they have selected. Hopefully you will find most of your molluscan enquiries answered on our website but if not, why not try the links to other similar organisations, links to which are included in the Links page, accessed from the navigation text at the bottom of every page.

A good website relies on regular updates, new information, and new resources. If you have any suggestions for additional content or have some material to contribute, do get in touch with the webmaster whose details are provided, along with those of all the Officers of the Society, on the Contact Us page, accessed from the second button on the top navigation bar.

The on-line species encyclopedia

Steve Wilkinson



Over 700 images and 250 species accounts are now available through an emerging "Encyclopedia of British Molluscs" which will form an important aspect of the Society's website. This article gives an overview of the rationale behind the project, how far it has got, what is next and finally how *you* could get more involved.

Background

It is hard to believe that it is about fifteen years since the first website and there are now over 8 billion pages available across the globe. It obviously provides a very cost effective means of publishing material and particularly images which are intrinsically relatively expensive to print. It also provides a route to new audiences that may not have access to printed publications and particularly the younger audience.

The Society has already embraced the Web and maintained an active website over the last five years. Indeed a revised version of the Society's website has just been released. Sometime ago the Council recognised the benefit of having standard species pages available within the Society's site that other sections of the site could reference to bring the subject more alive. For example, rather than simply presenting a list of scientific names that would mean nothing to a naive reader, each name could be linked to a page with more information including an image.

Current progress

Work began on the project two years ago and is progressing steadily. With over 600 marine species that would merit inclusion and about 200 non-marine the project will take quite a while to complete but there is already a substantial volume of content available principally around the Patellacea (Limpets), Mytilacea (Mussels), Pectinacea (Scallops), Mactracea (Trough shells), Tellinacea (Tellins), Solenacea (Razors) and Veneracea (Carpet shells).

To access the site simply go to http://www.conchsoc.org/encyclopedia. Note that it is draft and has not been linked up to the Society's main site so none of the menu items in the top of the pages work. In addition, the actual look and feel will be integrated into the revised version of the Society's website.

What is next?

In addition to providing a lookup for each of the British species the pages can obviously be linked from all sort of other places. Some examples which we have in mind include:

- On-line identification guides – providing introductory identification guides which are navigated through photographs is a good way to get beginners and new enthusiasts more interested. The identification guide itself could then link on to a full account of the species.
- Species lists in advance of a field trip – it is only a matter of time before the Society starts listing the species which have already been recorded from a site as preparation for a field trip. However, rather than just producing a list of species, which would potentially be meaningless for a new recorder, each species listed could link to its account allowing a new user to brush up before the actual meeting.
- Quizzes – as the whole system is databased it would be very easy to set up a system that randomly selects an image of a species and asks the user what it is. This sort of thing could be used to brush up your own identification skills and also potentially assess the level of competence of a recorder.
- Enhancing recording and field guides – another section of the Society's site provides advice on where to look in particular habitats for molluscs and what you might expect to find. Again, at the moment, this is a list of scientific names – linking each name to an account helps bring it more alive for a novice.

How could you help?

There are all sorts of ways that could help to get this resource up and running:

- Providing general ideas on how the pages or navigation could be improved – the layout, content and navigation of the pages are intended as draft. Any comments or ideas on how they could be improved would be very welcome.
- Reviewing or editing sections that have been drafted – many of the accounts have been written by myself and I would not by any means consider myself expert. If you are prepared to look over species or groups that you are particularly familiar with that would really help to improve the quality of the information. I can provide the accounts for species or superfamily as a Word document that can be printed to make reviewing sections easier.
- Drafting accounts for species or groups you are particularly interested in – there are obviously many more accounts to be drafted and the non-marine species have not even been started yet. If you have a favoured species or group – why not draft an account and get it onto the Web.
- Providing specimens to be photographed – I, deliberately, do not have an extensive shell collection and so many accounts do not yet have images to accompany them. If you are prepared to lend specimens or bring them along to one of the Society's meetings that would really help to fill in some of the gaps.
- Providing photographs – alternatively, if you already have images of species that you would be prepared to publish through the Society's website

If you would be prepared to help in anyway to get the site up and running then please do get in touch. My email address is SteveBWilkinson@btinternet.com. In the meantime, why not go and have a look at what is already available.

Scotland 2007 *a vintage year*

Adrian T. Sumner

It may have been the wet weather. It may have been because my wife retired and we had the opportunity to travel more. It may just have been chance. Whatever the reason, 2007 turned out to be a particularly good year for finding freshwater and terrestrial molluscs in Scotland.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It started in January, only a few hundred yards from home in North Berwick, just over 20 miles east of Edinburgh. The North Berwick doocot (dovecote in plain English) (Fig. 1) is surrounded by a small wooded area which, although used as a racetrack by local youths, nevertheless still has quite an abundant fauna. A few years ago, Chris du Feu showed me some specimens of the "greenhouse" slug *Lehmannia valentiana* (Fig. 2) from Edinburgh, and back in 2005 I had found a slug that I thought looked like this species. However, Geraldine Holyoak, then Non-Marine Recorder, could not be certain as it was too immature. There was, however, no doubt about the specimen I found in January 2007, which was confirmed by Adrian Norris. The species can still be found there regularly, and by the end of the year it had turned up in my garden. *Lehmannia valentiana* also turned out to be very widespread in the City of Edinburgh, and in addition was present in Peebles, some 24 miles to the south.

Business took me up to Aberdeen in late March, and I used the opportunity to travel up there early and go beyond Aberdeen to the small towns of Huntly, Insch and Inverurie, on the railway to Inverness. These all seemed to be under-recorded areas, but I was lucky to find fairly rich sites at each place (where I only had an hour or two to spare), and came away with some good lists of molluscs. Particularly noteworthy were *Limax maculatus* at both Huntly and Insch, a very long way from the nearest place where they have been recorded previously, and *Helix aspersa* clustered in cracks in a wall at Insch (Fig. 3), a long way inland from the coastal sites that it prefers so far north (see Kerney, M.P. 1999 *Atlas of the Land and Freshwater Molluscs of Britain and Ireland.* Harley Books, Colchester; this is referred to below simply as *Atlas*). Both sites for *Limax maculatus* were disturbed habitats, so the slugs could well have been recently introduced, but as so


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Encyclopedia continued

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often happens with this species, they were quite numerous, especially at Insch.

A week's break in May took us down to Galloway, in south-west Scotland, and it turned out to be quite easy to find plenty of new records in this poorly recorded area. Species such as *Arion flagellus* and *Arion owenii* were widespread, and *Limax maculatus* and *Boettgerilla pallens* were also found in a number of places. No doubt they have all been there for a number of years, but too few conchologists visit this beautiful area. Perhaps the highlight of the holiday, however, was finding two species of *Oxychilus* unusual in Scotland. This was near St Ninian's Cave on the south coast near Whithorn. St Ninian (circa 360–432) used to retire to the cave to escape from the stresses of monastic life. Now the cave is a popular tourist attraction, but presumably none of the visitors to it realises that the verges of the wooded path leading down to the beach where the cave is are rich in *Oxychilus draparnaudi* (which has a rather sparse and patchy distribution in Scotland, mainly in the central belt), and the even rarer *Oxychilus helveticus* (Fig. 4), which is known from only three other places in Scotland.

It is often not necessary to go far to make new discoveries, and in late June, at Aberlady in East Lothian, only a few miles from home, I spotted a snail that had become unfamiliar to me since moving to Scotland nearly 40 years ago. This was a specimen of *Monacha cantiana* (Fig. 5), new to East Lothian and known from only a few sites in Scotland. The county is known for its dry sunny climate, but it hardly resembles the Mediterranean where this species originally came from!

My wife was keen to see the Scottish Primrose (*Primula scotica*), which only grows on the north coast of mainland Scotland and in Orkney, so in July we headed north. On the way I found *Boettgerilla pallens* at Tain in Ross-shire; could this be the furthest north for this species? We stopped for a few nights at Golspie in Sutherland, where I had my first surprise within a few minutes of arrival. As we took a walk along the promenade by the sea, I only just avoided treading on a specimen of *Monacha cantiana* – thirty-eight years in Scotland without seeing one, and then two sightings within a few weeks! There was apparently a flourishing population of this species, at a place even less Mediterranean than East Lothian. Although the east coast of Sutherland is quite dry, it can certainly suffer from cold easterly winds. There appears to be an interesting story about this population that I hope to be able to tell some time. Incidentally, it is not in quite the same spot as shown in the *Atlas*. Just south of the village of Golspie, Balblair Wood, the most northerly pinewood in Scotland, yielded a specimen of the calcifuge snail *Zonitoides excavatus*, rare on the east coast, but little else. Pine woods are rather an acid environment, and generally have a poor molluscan fauna.

A few miles south of Golspie, at Dornoch, there is still a thriving but somewhat isolated population of *Cernuella virgata*. This species was common on the sand dunes, but also occurred on the saltmarshes, where it was mixed up with huge numbers of shells of *Myosotella myosotis*, no doubt washed up by winter storms – a surprising combination of species. However, it was in the beautiful gorge of the Big Burn in Golspie itself (Fig. 6) that I had my nicest finds. This small area proved to be very rich, even with only a rather cursory examination. The tall railway bridge at the entrance to the gorge carried a large population of *Clausilia bidentata*, no doubt attracted by the lime in the mortar, and confirming a pre-1965 record in the *Atlas*. *Boettgerilla pallens* was soon discovered as well – Tain was evidently not its furthest north! Further up the gorge I collected some small shells, thinking they were probably something ordinary, but which turned out when I examined them later to be the rare ancient woodland species *Spermodea lamellata* and *Leiostyla anglica*, both present in good numbers; I had previously found only a handful of specimens of the first, while I had never before found

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specimens of the latter myself.

Pressing on further north, I found the most northerly specimen yet of *Boettgerilla pallens* at Helmsdale, just south of the border with Caithness.* Caithness, our ultimate destination, was less exciting than east Sutherland, though I was able to confirm the continued presence of *Helicella itala* on the east coast north of Wick; the 1999 *Atlas* only shows a pre-1965 record for this area. Although there were some large green slugs in Thurso, when I got some specimens home they turned out to be too poorly preserved or too immature to determine if they were *Limax flavus* (as shown in the *Atlas*) or *Limax maculatus* (which largely seems to have replaced *L. flavus* in Scotland).

Since discovering in 2002–3 that several freshwater species were much more widespread in the canals of central Scotland than had previously been recorded (Sumner, A.T. 2006 Distribution of certain molluscs in the lowland canals of Scotland. *Journal of Conchology*, **39**: pp. 221–228) I have been monitoring their distribution each year. By 2007 *Bithynia leachii* had filled almost all the gaps that I found in 2003, and so was present virtually throughout the length of the canals, whereas before 2003 it had been recorded only from a single site. Other species had also extended their ranges, though not so spectacularly. But what of the other

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Scottish population of *Bithynia leachii* at Pitlochry shown in the *Atlas*? The reported site was at Loch Dunmore, an artificial but lovely loch in Faskally Woods to the north of the town (Fig. 7). However, although there were plenty of freshwater molluscs here, there was no sign of *Bithynia leachii*. On the other hand, the surrounding woods turned out to be a good site for *Malacolimax tenellus*, normally "difficult to find" according to Michael Kerney (*Atlas*). Back in the town of Pitlochry, I found *Limax maculatus*, once again a long way from its previously known haunts.

In early September I needed some specimens of *Potamopyrgus antipodarum*, and to get to the nearest stream where they lived I took a walk along the beach at North Berwick. I remembered that I'd found some specimens of *Candidula gigaxi* here a few years ago, and wondered if they were still present. The only reported Scottish population of this snail had last been reported in 1930 from Canty Bay, a couple of miles east of North Berwick. Michael Kerney had asked me to look for it, and in due course I re-found it in 2000, and the North Berwick population proved to be still there in 2007. So how far did this species extend? Aided by the wet autumnal weather in 2007, which made both *Candidula intersecta* (which is widespread along this coast) and *Candidula gigaxi* much more active and easy to find, I discovered that *Candidula gigaxi* extended quite a few miles in both directions from its original site at Canty Bay, and in some places seemed to have displaced *Candidula intersecta* completely. But yet another surprise was in store! Back in 1999 I had found *Cernuella virgata* at Longniddry, nearly 10 miles west along the coast from North Berwick, and so far as I knew the only site in the Lothians for this species. But the wet weather had brought it out, and it turned out to be present along many miles of coastline, even in places which I passed regularly, and where I had had no idea of its existence.

So what can be deduced from all this activity? First, that conchology is fun and exciting; there is always a thrill in finding a new species, or a familiar species in an unexpected place, and it can take one to some beautiful places. Secondly, new species can still be found in areas one thinks one knows well. More important, though, is finding how the ranges of various species are extending, and being able to monitor this process. Finally, however much one finds, there is always a lot more to be done. 2008 promises to be another busy season!

* This year (2008) I discovered *Boettgerilla pallens* further north at Dunbeath and Wick in Caithness, but not in Thurso.

Fig. 1. North Berwick doocot, site where *Lehmannia valentiana* was found in 2007.
Fig. 2. *Lehmannia valentiana*
Fig. 3. Specimens of *Helix aspersa* sunning themselves in a crack in a wall at Insch, Aberdeenshire, a surprisingly long way inland so far north.
Fig. 4. *Oxychilus helveticus* from St Ninian's Cave, Galloway
Fig. 5. Monacha cantiana from Aberlady, East Lothian.
Fig. 6. The Big Burn waterfall, Golspie, Sutherland, at the head of the gorge that provided several interesting finds.
Fig. 7. Loch Dunmore, Pitlochry, Perthshire. No Bithynia leachii were found here in 2007.

An encounter with the Banff Springs Snail

Peter Topley

On a winter trip to Banff, Alberta, in the Canadian Rockies earlier this year, I was not expecting to encounter any snails: most would be hidden, deep in the soil or at the bottom of lakes, trying to escape the deep snow and a temperature which one day was as low as -20°C. However I was surprised to see, on a visit to the Information Centre of the Cave and Basin National Historic Site, about 1 mile outside Banff above the Bow River, a display (Figure 1) about an unusual snail that is found in the local sulphurous thermal springs: points of groundwater discharge that form the mineral pools which are characteristic of the area.

Physella johnsoni (Clench, 1926) is a small (c.5-8mm shell length) member of the Physidae family of freshwater snails. It is endemic to only five thermal springs on Sulphur Mountain in the Banff National Park. DNA evidence suggests that the species evolved recently in the springs; since the retreat of the glaciers around twelve thousand years ago. Thermal springs are often altered for human use, resulting in a loss of native species and ecological integrity and this has been the case for several of the Banff springs which no longer harbour the snail. Thermal springs can be considered harsh environments with high temperatures (in this case 30-35°C), high concentrations of dissolved minerals and low dissolved oxygen levels. Seasonal fluctuations in flow rates also occur, leading to changes in sulphur and dissolved oxygen levels which effect the growth of the floating bacterial/algal communities on which the snails live.

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Physella johnsoni made history in 1997 as the first living mollusc listed by the Committee on the Status of Endangered Wildlife in Canada and National Parks Canada is actively working to protect the snail, through research and conservation. I was very pleased to be able to observe many individuals of the snail crawling on floating mats of algae (Figure 2), both in the former public pool (Figure 3) at the visitor centre and also in the pools of emerging springs in the woods of the mountain above (Figure 4). Gastropods can have important effects on algal production and *P. johnsoni* are important grazers in the thermal spring ecosystems as well as contributing organic nutrients. Thus the snail may be a keystone species, the absence of which could seriously shift the ecosystem of the hot springs.

On the outskirts of Banff to the North are three lakes known as the Vermillion Lakes. Walking in the area I saw that the ice and compacted snow was thick enough on the first two lakes to walk across them, but I noticed that an area of the third lake remained unfrozen. The reason for this became clear when I discovered another spring emerging from rocks at the bottom of a slope that was constructed in the 1950's to take the Trans Canada Highway which runs along the Northern edge of the lakes. It turned out that this spring is the remains of the Vermillion Cool Spring whose natural course was altered when the highway was built. The water of this spring has a temperature of 18-19°C and may have once held a


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population of *P. johnsoni*, although this is debatable since although classified as a thermal spring, the level of dissolved mineral salts here is lower than in the other springs. I noticed that there were mats of algae present and there were *Physella* snails active on the rocks of the spring itself and also in small unfrozen pools at the edge of the lake (Figure 5). These however turned out to be individuals of the larger, widespread and common *Physella gyrina*, although it was interesting to see that that raised water temperature caused these animals to be active when nearby lakes were under ice.

More details of the conservation efforts to help preserve this interesting snail can be found on the Parks Canada's web site at: www.parkscanada.gc.ca/speciesatrisk/ and from the publication sited below (which is also available online).

Reference

Lepitzki, D.A.W. 2002. Status of the Banff Springs Snail (*Physella johnsoni*) in Alberta. *Alberta Sustainable Resource Development, Fish and Wildlife Division, and Alberta Conservation Association, Wildlife Status Report No. 40, Edmonton, AB.*

Officer's Reports for 2007

Report of the Hon. Conservation Officer 2007

Martin Willing

Some of the key items of interest from the year 2007 are described below.

Advice and help:
Has been given to many individuals and organisations including specimen identification and advice on habitat management.

British Wildlife:
The production of a molluscan wildlife report for this journal has continued with the publication of two reports in February and October 2007. These reports included (1) news that 19 non-marine proposals had been accepted by the UK BAP review to be forwarded for government approval, (2) interesting key points from the marine and non-marine 2006 Officers' reports particularly with regard to new finds of *Assiminea grayana* in NW England and (3) details of Robert Cameron's observations on the absence of certain mollusc species around Sheffield, possibly as a result of air pollution. These reports have allowed publicity to be given to the Conchological Society.

Invertebrate Link and The Invertebrate Conservation Trust (Buglife):
Membership of Invertebrate Link and Buglife continues to provide useful contacts with members from other NGOs and governmental organisations (e.g. Natural England, Countryside Council for Wales) concerned with invertebrate conservation.

Biodiversity Matters:
The UK BAP (Biodiversity Action Plan) review has been described in earlier issues of *Mollusc World* (**4**:10; **6**: 10; **8**: 22, **13**: 26). In October 2006 a final BAP list was presented to UK Government ministers from the Priority Species and Habitats Review Working Group. The final BAP lists were approved by all four UK administrations in early summer 2007 prior to the official 'launch' on 28th August 2007 at Brentlands Farm in Gloucestershire. At this event the Minister for Biodiversity, Joan Ruddock, presented a new priority list of 1149 species (including 19 non-marine Mollusca) and 65 habitats. The new list, which will assist in the prioritisation of conservation action under the UK Biodiversity Action Plan (BAP), replaces the first list (that included 577 species and 49 habitats) compiled 10 years ago. The increased number of species and habitats is chiefly due to a more rigorous analysis and increased knowledge of a broader range of habitats and species. In terms of Mollusca, work undertaken since the launch of the first BAP (on both BAP priority and non-priority species) in the mid 1990s has allowed a much better understanding of the status and conservation actions required for those non-marine molluscs of 'conservation concern'. This has allowed the proposal and acceptance of the extra 8 priority species (*Vertigo modesta, Truncatellina cylindrica, Valvata macrostoma, Sphaerium solidum, Gyraulus acronicus, Omphiscola glabra, Heleobia stagnorum* and *Mercuria confusa*) that 'missed out' on the first BAP listing.

Earlier in 2007, before the final governmental approval of the BAP listings described above, the joint Nature Conservation Committee (JNCC) initiated a draft 'signposting exercise' for the BAP proposals, the aim being to compile the priority actions needed for each of the species. As a result, partly completed spreadsheets were circulated in February 2007 to be completed by the very beginning of March! Despite the incredibly tight deadline 19 forms were completed in little more than a week providing first thoughts on the key conservation actions required for each species together with associated success criteria. Later in the year, at the end of 2007, JNCC again wrote to the Society requesting that the draft proposals submitted earlier (now further refined and expanded by Invertebrate BAP

Working Group) be re-examined and checked to ensure that the conservation actions plans for the 19 new BAP species:
1. were appropriate;
2. correctly assigned to each UK principality; 3. reflected known distribution;
4. and included 'SMART' success criteria (or at least milestones towards these criteria).
The final upgrading process was to continue until the end of January 2008 and so final outcomes will be reported in the Officer Report for 2008. The draft conservation action plans will be circulated widely to authors of the original BAP proposals as well as many other experts (including non-society members) before returning to Adrian Norris and Robert Cameron for final Society approval.
In September 2007 JNCC also approached the Society to scrutinise (and yet again within a very tight time-scale!) a series of governmental reports to be submitted to the EU concerning the 'European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora'. These documents were the Second Reports by the UK under Article 17 on the implementation of the Directive from January 2001 to December 2006. The species concerning the Society were those molluscs appearing on Annexes IIb, IV and V of the Directive and included *Vertigo geyeri, V. angustior, V. moulinsiana, V. genesii, Anisus vorticulus, Margaritifera margaritifera* and *Helix pomatia.* These documents had been prepared by a variety of people from government agencies and although most were reasonable, several required extensive revision by the Cochological Society team!

Deborah Proctor of JNCC has advised the Society that it is timely to review the Red Data Lists in light of the considerable amount of information that has been gathered since the first RDB was produced. As with similar Societies, Deborah has invited the Conchological Society to collaborate in the production of a revised Red Data list (rather than a book). The original lists, which were published in 1991, included 33 molluscan species together with short descriptions giving a brief summary of distribution, habitat / ecology, status, threats, conservation and authorship. The RD lists will be updated using modified criteria produced by the IUCN in 2001 . The process of revision should be fairly straightforward and might mean the addition of new species, 'status changes' for several and possible 'demotion' for others. Many of the RD species will be those also on the BAP priority species list, but a good number will have no other designation to 'flag-up' their conservation importance. Perhaps the species of most importance on the RD lists are those that are not BAP species. Although RD status may carry less 'punch' it is often used on a regional and local basis to inform conservation management. Thus RD status is of assistance to developers and those running local biodiversity schemes or managing nature reserves. Work to review the RD listings should begin this year . As with the successful BAP initiative, it is hoped that the RD review will allow wide consultation to take place with input invited from both the 'experts' and also the wider Society membership.

Associations with other organisations:
The Conservation Officer continued to attend conservation committee meetings of The Sussex Wildlife Trust. He wrote a report highlighting new vice-county molluscan finds made during 2007 for the 'Adastra' magazine (Adastra 2007, Sussex Biodiversity Record Centre, Henfield, West Sussex). In February 2007 the Conservation Officer spoke to the Amberley Wildbrooks Private Landowners Association on the rare and endangered molluscs living on or near Amberley Wildbrooks, West Sussex. The particular focus of the talk related to land management for the European Protected Species *Anisus vorticulus* (also a UK BAP priority species).

Marine Recorder's Report 2007.

Jan Light

Data policy for records
In my report for 2006 I outlined the Society's decision to make all validated records for marine molluscs freely available and I would like to remind members that a copy of the Policy on release of data is provided in the Members' Guide. Those people who have submitted records to the Society Recorders and for whom we have contact details should have received a letter from the President requesting that they give their permission for release of data (for all molluscan records not just marine). Other contributors remain to be tracked down. Whilst there has been a very positive response in terms of replies and willingness to release records (we have only received one outright refusal) we are still waiting for replies from others. This means that a majority of records on the marine database are now freely available under the Society's policy, but a tranche of records are tagged against downloading for NBN purposes and are thus effectively frozen, until letters of permission from the respective contributors are received by the President on behalf of the Society. I would like to remind members too that should they have concerns over certain records or aspects of data release, they are at liberty to make separate data release agreements with the Society.

Noteworthy records
I am grateful to Paul Brazier of CCW for drawing my attention to the occurrence of *Petricola pholadiformis* living in Holocene clays in the Dee estuary North Wales (Sea Area 24 Liverpool Bay). It lives with *Barnea candida*, which it superficially resembles, although *Petricola* is a venerid not a pholad. In the Netherlands and Belgium it has been observed that *Petricola* has a tendency to replace the piddock *Barnea candida*. *Petricola* is a species native to the USA and must have been introduced, unintentionally, no later than 1890, when it was found in the River Crouch, Essex with the American oyster *Crassostrea virginica*. In Britain it is mainly distributed along south and east coasts of England from Dorset round to the Humber and this new record represents a disjunct occurrence of the species in North Wales. The record is interesting because it overturns an entry in the MMNWE. There Dennis Seaward deleted a previous record for S24 made by the late Nora McMillan. Possibly it was considered suspect, presumably on the basis of its disjunct occurrence. Paul's find confirms that the species is indeed living in that Sea Area.

Atrina fragilis: This species has featured regularly in recent annual reports. In April, three individuals were found in the Salcombe and Kingsbridge estuary in Devon. This followed a sighting of a single individual the month before. Whilst one might lament the paucity of individuals being reported, it is gratifying to know that the species has a sufficiently high profile that people are reporting occasional specimens. There are now reports for 18 individuals of the species and these are monitored. Larger fanshell beds are known to occur in Cornish and Scillonian waters but are highly vulnerable to trawl fishing.

Caecum armoricum: At the beginning of the year *Caecum armoricum* de Folin, 1869 was known to be living only in the Fleet, Dorset, having been discovered there by Dennis Seaward (Marine Recorder at that time) in 1986. He found up to 100 living specimens and many shells in pebble samples from sites on the landward side of the Chesil Bank where springs emanate from the shingle and drain into the Fleet. Now, some 20 years later two further sites for *C. armoricum* have come to light. In July Celia Pain carried out survey work with Kent Wildlife Trust at saline lagoons on Lydd Ranges (Army Training Estate). She sieved mud and pebbles from the bottom of a lagoon at the site. At home she found live *Caecum* which appeared to be *C. armoricum*. These were confirmed by Dennis Seaward. In October at Pagham Harbour, Steve Wilkinson found the species living in a similar habitat (Figure 1) and closely associated with *Truncatella subcylindrica,* which also occurs in the Fleet. A more detailed account of these finds will appear in Journal of Conchology.

Aplysia species: Marine workers are familiar enough with the common aplysiid of our shores, *Aplysia punctata.* It can be found amongst weeds in very shallow water and in rock pools. Records for the other two *Aplysia* species known from northeast Atlantic waters have always been scarce. Until last year there were only three authenticated records for *A. fasciata* (Figure 2) from British shores and a number of misidentifications. Between the end of August and December 2007 16 separate sightings were reported, all from southwest England, Scilly or the Channel Islands and collated by Douglas Herdson at the Plymouth Marine Aquarium. Thompson (1976. *Biology of Opisthobranch Molluscs Volume I.*) has described the species as rare on our shores although it is locally common on the Atlantic coast of France and in the Mediterranean Sea and West Africa. A species, then, that would appear to be migrating northwards. The other hitherto rare visitor to our shores is *Aplysia depilans*. The species has a broad, dark red/brown foot unlike *Aplysia punctata,* which has a narrow foot which is yellowish white. It is also distinguished from *A. punctata* in that the parapodia are fused posteriorly. Richard Lord has photographed a fine specimen on Jersey (Figure 3), the only previous record for the species from the Channel Islands being in 1949. I am grateful to Richard Lord and Andrew Syvret (both of Jersey) for allowing me to include their photos of the 2 species.

Further to the finding of *Assiminea grayana* at Haverthwaite in Cumbria reported last year, Simon Taylor has found another site, this time at Bolton-le-Sands at the top of Morecambe Bay (*Mollusc World* **14** July 2007). His find was serendipitous in that he observed snails he believed to be hydrobiids crawling over a Thornback Ray egg-case and only later identified them correctly.

Julia Nunn continues to report new and updated (post 1990) live records from Irish Sea Areas: (see below)
It is timely to remind members that the marine recording scheme covers the continental coast of Europe. Not many records are forthcoming although the advent of electronic databases and moves towards data exchange agreements could reverse that trend. From the other side of the English Channel there are 2 new records. *Leptochiton scabridus* is the smallest chiton species in northeast Atlantic waters and can be found at ELW and sublittorally attached to stones or pebbles which are often embedded in sand to a depth of 10-20 cm. A single specimen was taken from a small semi-embedded cobble on the muddy sandy shore at St Vaast La Hougue on the east Cotentin peninsula in Normandy during survey work at the Equinox tides in March 2007 by Celia Pain. This is the first record for the species from SA54, Seine. On the same trip a single live specimen of *Cerithiopsis pulchella* was taken from weedwashings at Portbail on the west Cotentin, SA17F, Bay of St Malo. These are both new Sea Area records.

I am pleased to see new names amongst those submitting records, notably Richard Lord who has been a regular contributor of observations, accompanied by excellent photographs of the molluscs he finds on Jersey, all this made so easy via the Internet. (His website www.sealordphotography.net is worth a visit.) This has greatly improved the process of identification and confirmation of specimens, especially species which are too delicate or large to pass through the post in good condition. In addition to those mentioned above I also thank Tom Clifton, John Llewellyn Jones, Julia Nunn, Celia Pain, Shelagh Smith, Mike Weideli and Steve Wilkinson all of whom are supporting marine recording in the Society in various ways. All the records mentioned in this report are new information to the Society's Marine Census.

Figure 1: Upper shoreline at Church Norton, Pagham just before high tide. Searching is taking place amongst the shingle beneath the plants of *Halimione portulacoides* and *Suaeda* spp. photo Jan Light.

Figure 2: *Aplysia fasciata* photographed in a tank by Andrew Syvret. A distinguishing feature of the animal is the red colouration on the edge of the parapodial and frontal lobes.

Figure 3: *Aplysia depilans* photographed by Richard Lord at Belle Greve Bay, Jersey. The animal, described as larger than a fist and resembling the holdfast of a furbelows (the kelp, *Saccorhiza polyschides*), was attached to the underside of a boulder.

Sea Area	Type	Species	Location	Date	Recorder
SA29A	post-1990	*Hinia reticulata*	Skerries	2006	JDN
SA29A	post-1990	*Hinia incrassata*	Skerries	2006	JDN
SA29A	post-1990	*Facelina bostoniensis*	Skerries	2006	JDN
SA34	post-1990	*Callochiton septemvalvis*	Murles Point	2007	JDN
SA36	NEW	*Calytraea chinensis*	Carrowmore	2000	SMSmith
SA36	NEW	*Polygireulima polita*	Parknahallagh	2007	SMSmith
SA36	NEW	*Ondina warreni*	Parknahallagh	2000	SMSmith
SA36	post-1990	*Rissoa lilacina rufilabrum*	Carrickadda	2007	SMSmith
SA36	post-1990	*Epitonium clathrus*	Muckinish	2007	SMSmith
SA36	post-1990	*Epitonium turtonis*	Carrickadda	2007	SMSmith
SA36	post-1990	*Diaphana minuta*	Carrowmore	2000	SMSmith
SA36	post-1990	*Onchidoris bilamellata*	Srucorrafaan Rapids	2007	JDN
SA37	NEW	*Doto maculata*	Kenmare	2007	JDN
SA37	post-1990	*Cuthona rubescens*	Kenmare	2007	JDN
SA37	post-1990	*Onchidoris sparsa*	Kenmare	2007	JDN

Treasurer's Report for year ending 31st. December 2007

Pryce Buckle
Hon. Treasurer

Income
Subscriptions were down by £556 from last year.
Income from sales was down by £196.
Income from investments was approximately the same as last year – £5,639 compared with £5,567, just £72 more.
Donations and legacies were down by £517.

Expenditure
Publications costs were similar to 2006 – in fact, £216 less. Included is £694 for design and printing of a promotional leaflet. In 2006 publication costs included £386 for posters.
The cost of stationery and postage in 2007 was similar to 2006 – £975 compared with £982 in 2006.
The only grant made during the year was the UNITAS award of £500. No appropriate requests for Research Grants were received during the year.
Summary
In 2007, the net loss of income over expenditure was £1,199, compared with a loss in 2006 of £416
To that must be added a loss in value of investments of £1,832, compared with a gain in 2006 of £2,578.
Net loss of funds for the year was , therefore, £3,031.
The loss in market value of our investments was due to the volatile stock market during the year. The market is also expected to fluctuate during the coming year, but with our reserves at £117,011 it is my opinion that the financial position of the Society remains strong.
Our expenditure on publicity material in the form of posters and promotional leaflets over the past two years is designed to raise the profile of the Society and gain new members. A copy of the leaflet was despatched to all members in January, and we would ask everyone to use it to recruit a new member.

Financial Statements for the year ended 31 December 2007

Statement of Financial Activities

	Note	2007	2006
Incoming resources			
Fees and subscriptions		**£12,935**	£13,491
Investment income	1	**£5,639**	£5,567
Income from activities for generating funds		**£195**	£391
Other incoming resources		**£31**	£10
Donations and legacies		**£116**	£633
Total incoming resources		**£18,916**	£20,092
Expenditure			
Publications costs		**£15,970**	£16,186
Stationery and postage		**£975**	£982
Meetings costs		**£2,280**	£1,134
Sundry expenses and fees		**£390**	£546
Grants	2	**£500**	£1,660
Total expenditure		**£20,115**	£20,508
Net incoming/(outgoing) resources		**(£1,199)**	(£416)
Gains / (Losses) on revaluation		**(£1,832)**	£2,578
Net movement in funds		**(£3,031)**	£2,162
Fund balances brought forward		**£120,042**	£117,880
Fund balances carried forward		**£117,011**	£120,042

Balance Sheet at 31st December 2007

		2007	2006
Fixed Assets			
Investments at market value	3	**£87,485**	£89,317
Total fixed assets		**£87,485**	£89,317
Current Assets			
Debtors	4	**£1,000**	£500
Cash at bank and in hand		**£38,562**	£37,622
Total current assets		**£39,562**	£38,122
Short term creditors	5	**£9,665**	£7,026
Net current assets/(liabilities)		**£29,897**	£31,096
Total assets less current liabilities		**£117,382**	£120,413
Provisions for liabilities	6	**£371**	£371
Net assets		**£117,011**	£120,042
unrestricted income funds			
Total funds		**£117,011**	£120,042

Notes to the Financial Statements

Accounting Policies
General
- These statements have been prepared in accordance with Financial Reporting Standard for Smaller Entities (FRSSE) and the Charities SORP (Statement of Recommended Practice)
- Investments are valued at market value on 31st December.
- No trustee has received any remuneration during the current or previous year. Expenses incurred on behalf of the Society have been reimbursed.

Funds
- All Society funds are unrestricted funds
- The accounts include transactions, assets and liabilities for which the Charity can be held liable.

Note 1. Investment income from:	**2007**	2006
Stock listed on recognised stock exchange	£5,151	£5164
National Savings Income Bond	£488	£403
Total	£5.639	£5,567

Note 2. Grants awarded:	**2007**	2006
(In 2006 - Adele Grindon)		£1,000
UNITAS award (In 2006 - Luciana Génio)	£500	£660
	£500	£1,660

Note 3. Investments:	**2007**	2006
Market value at beginning of year	£89,317	£86,739
Net gain/(loss) on revaluation	(£1,832)	£2,578
Market value at end of year	£87,485	£89,317

Note 4. Analysis of debtors:	**2007**	2006
Tax recoverable (not recovered within 2007 period)	£1,000	£500

Note 5. Analysis of creditors and accruals:	**2007**	2006
Publications accruals	£5748	£5,070
Meetings costs	£2100	£0
Subscriptions in advance	£1817	£1,956
Total	£9665	£7,026

Note 6. Provision for liabilities	**2007**	2006
Marine fieldwork provision	£371	£371

Pryce Buckle *Honorary Treasurer*
N. Light *Honorary Examiner*

Non-Marine Recording – Activity and Highlights 2007.

Adrian Norris
Acting Non-Marine Recorder.

Since taking on the responsibility for the non-marine recording scheme in late spring 2007, a great deal of work has been undertaken to try and establish a new electronic data system using Recorder 6 software.

This has resulted in over 50,000 records being transferred by myself into the Recorder 6 database by the end of 2007. However, the society holds many hundreds of thousands of recording cards, plus individual records, for British non-marine mollusca, some dating back over 300 years, so a great deal more needs to be done before we can establish a meaningful database. William Denison Roebuck established the first meaningful recording system for the Society over 100 years ago and several very eminent members followed in his footsteps, not least of whom was Dr Michael Kerney who published two important distribution atlases during his tenure as national recorder. Both of these atlases were based on a paper system, which although computerised for the purposes of producing the distribution maps, did not go any further than the basic data required for these maps. Thus, the resulting data which was later transferred into the NBN database shows little more than presence or absence within any single 10 km square. Hence, of the 216,998 records held on the NBN gateway, only 11,069 are at a level of 1 km or less.

Modern recording systems demand a high standard and quality of data and, in most cases any publicly supported database requires these data to be available to all. Many interested parties, from town planners to conservationists and government agencies, need the data to be accessible and reliable so as to ensure that the correct conservation and planning strategies are put in place to conserve and preserve our natural and man made environments to the highest standards. Some safeguards have been put in place to ensure that data on the rarest and most vulnerable species are not made available to the more unscrupulous elements of society. If we are to protect our molluscan fauna in the future we need to have considerably more accurate data, including six-figure GPS references, with precise dates and habitat notes, as well as other reliable evidence, presently available for many of our more common species.

The Vice-County system has served us well over the past 100 years or so but it is now a very outdated concept and so we may no longer publish a list of new VC records as part of the Annual Report, but this may depend on our members' response to this proposal. The Vice-County lists can be found on the Society's Website and, over the next year or so, I hope to update each of the VCs with information on the first record for each and every one of the VCs, and I will try and keep this as up to date as possible. So whatever happens, I would ask members to submit new VC records as before. One of the problems of the VC system is the fact that many species reported by us as new to a VC are, in fact, not new at all. It is just as likely that the species occurrence within the VC has only just been brought to our attention. A second problem with the system is the fact that information on species known to occur within a VC prior to 1921 is not included in our records.

I am still new to the post of National Recorder and am, therefore, unfamiliar with some of our recorders and their activities, as they are with me, and thus I am aware that we need to fully develop the trust of the various recorders with both myself as recorder and the Society as a whole.

Highlights of 2007
A number of important finds have been brought to my attention; some are important rediscoveries such as *Segmentina nitida* which was re-found in Hornsea Mere in East Yorkshire, others are important new discoveries such as Martin Willing's record of *Heleobia stagnorum* in Chichester Harbour, the first record of living animals in the UK as well as his record of *Paraloma servilis* at Mill Marsh, Sidlesham both new to West Sussex, and Geraldine Holyoak's find of *Oxyloma sarsi* in the Grand Canal at Victoria Lock (M947131) Co Offaly, only the second county record for this species in the Republic of Ireland. Some very good work has been undertaken on the recent split of the genus *Stagnicola* and numerous new VC records of *Stagnicola fusca* are now within the system. Global warming appears to be the cause behind the continued spread of *Lehmannia valentiana* but other factors appear to be behind the continued spread of *Arion flagellus* and *Boettgerilla pallens*. The Vertiginidae continue to fascinate members with new records of *Vertigo angustior* from North Kerry and *Vertigo geyeri* from Co Meath. Work has started on the recent split of Balea perversa into two species with *Balea heydeni* apparently being the more widespread of the two species. I hope to be able to report more about this in the next report.

New VC Records
The following records are new to the Conchological Society's VC recording scheme but some may have been published previously from earlier collections without the information coming into our recording system.

West Cornwall (1) *Ferrissia wautieri,* Trecombe (SW76342978) 06.04.2006: *Planorbis carinatus,* Treworgans (SW78365999) 28.04.2006: *Planorbarius corneus,* Argal reservoir (SW760327) 06.11.2001: all G.A. Holyoak
East Cornwall (2): *Acroloxus lacustris,* River Camel, Boscarne (SX0410067340) Tim Geaches Conf. G.A. Holyoak: *Dreissena polymorpha,* Bude Canal at Bude (SS20) Anon per A. Brown 2006, conf. Bude Canal at Bude (SS20670618) 01.08.2006 G.A. Holyoak
South Somerset (5): *Planorbarius corneus,* Bridgwater (ST289359) 13.10.2007: *Stagnicola fuscus, Acroloxus lacustris, Haitia acuta,* Huntworth (ST313350) 14.10.2007 all G.A. Holyoak
West Sussex (13): *Heleobia stagnorum,* Chichester Harbour (SU70) 2005 (Found living 2006), M.J. Willing, Conf. R. Preece & Tom Meijer: *Paralaoma servilis,* Mill Marsh, Sidlesham (SZ860975) 09.2007, M.J. Willing
West Gloucestershire (34): *Ferrissia wautieri,* Clearwell Meend Ponds (SO580081) 15.02.2007 John Harper, Conf. A. Norris
Pembrokeshire (45): *Planorbis carinatus,* St Catherine's Bridge, Nr Haverfordwest (SM9428619502), 18.12.2006, J. Hudson, Conf. A. Norris
Yorkshire, South-east (61): *Stagnicola fuscus,* Near Bracey Bridge (TA08476141) 05.05.2007, A. Norris: *Balea heydeni,* near Bracey Bridge (TA082612) 05.05.2007,Tom Webborn Conf. A.Norris: *Limacus flavus ss,* Driffield (TA0157) 07.10.2000, A. Norris, Conf. D. Lindley: *Limacus maculatus,* Hanging Cliff near Kilham Bottom (TA020658) 05.05.2007 D. Lindley Conf. A.Norris: *Limax cinereoniger,* Brantinghamthorpe, Welton Dale (SE9628) 27.05.1901 J.E.Crowther, Conf. J.W.Taylor. (Naturalist: 1901 p.228)
Yorkshire, North-east (62): *Arion flagellus,* Castle Howard (SE7070) 25.04.2007 A.Norris: *Limacus flavus ss,* Kirby Misperton (SE7779) 08.09.2005, A. Norris, Conf. D. Lindley: *Lehmannia valentiana,* York, Rawcliffe Lake (SE5854) 14.11.2005 A.Norris: *Limacus maculatus,* Bulmer near Castle Howard (SE6967) A.Norris 25.04.2007: *Pseudanodonta complanata,* River Derwent at Hutton (SE7667) 21.06.1918, A Smith
Yorkshire, South-west (63): *Arion flagellus,* Loxley Valley, near Stopes, Sheffield (SK2888) 05.07.1986 A. Norris
Yorkshire, Mid-west (64): *Stagnicola fuscus,* Malham Fen (SD8867) 23.07.2005 A.Norris/D.Lindley. Conf. R. Carr: *Limacus flavus ss,* Tadcaster (SE4843) 29.09.2001, Chris Du Feu: *Truncatellina cylindrica* as *P. minutissima,* Skipton, Yorkshire (SD/95) VC64, Leeds City Museum William Nelson Collection ex coll. Seth Lister Mosley. Undated, but pre 1900
Yorkshire, North west (65): *Arion flagellus,* Catterick (SE2498) 24.07.2004, A. Norris Conf. D. Lindley & T. Wardhaugh: *Arion*

owenii Gilbeck Bridge (NZ062104) 06.10.2007 A.Norris: *Lehmannia valentiana,* Castle Bolton (SE0391) 20.10.2003, A.Norris Conf. D.Lindley: *Limacus flavus ss,* Bedale (SE2688) 18.07.1982, A. Norris, Conf D. Lindley: *Limacus maculatus,* Sixlands Wood near Thwaite NZ0311 06.10.1207, A.Norris: *Unio tumidus*, River Ure, Ulshaw (SE145873) & Masham (SE225812) 01.06.1991 Collector Unknown Yorkshire Water, Det F.R. Woodward: River Ure, Masham (SE44/226814), 20.01.2007, J. Lambert, Conf. A. Norris

Roxburghshire (80): *Succinea putris*, Ancrum (NT621248) 04.06.2006 A.T. Sumner. Conf. A. Norris

East Lothian (82): *Lehmannia valentiana,* North Berwick (NT549850), 15.01.2007, A.T. Sumner. Conf. A. Norris: *Monacha cantiana,* Aberlady (NT467795) 26.06.2007 A.T.Sumner Conf. A. Norris

Mid Ebudes (103) *Oxychilus draparnaudi*, Grounds of Abbey, Iona. 20.02.2007 Coll. S.P. Dance Conf. A. Norris

South Kerry (H1): *Boettgerilla pallens, Lehmannia valentiana,* Abbey Island (V520582) 01.06.2005: *Theba pisana,* Magherabeg (Q617151) 25.06.2005: *Semilimax pyrenaicus,Testacella scutulum,* E. of Derynane House (V533588) 18.05.2006: *Acroloxus lacustris, Lymnaea stagnalis, Haitia acuta,* Derreen House and gardens (V769587) 06.05.2006 all G.A. Holyoak

North Kerry (H2): *Boettgerilla pallens,* Kilmore (Q846377) 31.05.2005: *Lehmannia valentiana,* Barrow Harbour (Q751182) 17.06.2005: *Stagnicola fusca,* Gortracussane (V947848) 17.05.2005: *Theba pisana,* Banna (Q750222) 30.05.2005: *Vertigo angustior,* NW of Ballinprior (Q7525) 29.05.2005 all G.A. Holyoak

Waterford (H6): *Arion flagellus,* Tankerstown (X450987) 04.04.2007 G.A. Holyoak

Kilkenny (H11): *Kobeltia owenii,* Jenkinstown Park nr Ballyrafton (S490635) 04.09.2005: *Ashfordia granulata*, nr Granny (S574146) 07.09.2005: *Lehmannia valentiana,* nr Inistioge (S637373) 06.09.2005: *Haitia acuta seg.* Dinn River, Jenkinstown nr Ballyafton (S491638) all G.A. Holyoak

Wexford (H12): *Arion flagellus,* nr Ballyhack (S710105) 08.09.2005: *Stagnicola fuscus,* White Gap (T111275) 07.03.2007 all G.A. Holyoak

Leix (H14): *Anodonta anatina,* Grand Canal (Barrow Line) Ballymanus Bridge (S616985) 25.08.2005: *Arion flagellus,* Bolangree, SW of Monaserevin (N606082) 25.08.2005: *Dreissena polymorpha,* Grand Canal (Barrow Line) Bolangree, SW of Monasterevin (N606082) 25.08.2005: *Stagnicola fusca*, SW of Monasterevin (N606082) 25.08.2005: *Haitia acuta seg.* River Barrow nr Tankerstown Bridge (S703883) 31.08.2005 all G.A. Holyoak

Offaly (H18): *Arion flagellus*, near Letter Cross Roads (N257041) 12.08.2005: *Kobeltia owenii,* Birr Castle demesne (N057050) 15.08.2005: *Stagnicola fusca*, (SO897) 13.08.2005: *Planorbarius corneus*, nr Gortachallow (M968151) 16.08.2005: *Oxyloma sarsi*, Grand Canal at Victoria Lock (M947131) 16.08.2005 all G.A. Holyoak

Kildare (H19): *Anodonta anatina*, Grand Canal (Barrow Line), Littletown (N765251) 27.08.2005: *Boettgerilla pallens*, edge of Ballymore Eustace (N925098) 01.09.2005: *Dreissena polymorpha*, Grand Canal (Barrow Line), Littletown (N765251) 28.08.2005: *Lehmannia valentiana*, edge of Ballymore Eustace (N925098) 01.09.2005: *Haitia acuta seg.* River Barrow near Maganey Bridge (S716846) 31.08.2005 all G.A. Holyoak

Wicklow (H20): *Anisus vortex*, SE of Crosscoolharbour (O009156) 28.08.2005: *Arion flagellus*, E of Crosscoolharbour (O010156) 28.08.2005 all G.A. Holyoak

Meath (H22): *Stagnicola fusca,Vertigo geyeri,* Duleek Commons (O0469) 14.09.2007: *Lehmannia valentiana,* by R. Boyne, E edge of Navan. All G.A. Holyoak

Westmeath (H23): *Lehmannia valentiana,* E of Carrick (N5587050) 26.08.2007 G.A. Holyoak

Longford (H24): *Dreissena polymorpha, Stagnicola fusca,* E. edge of Lough Ree at Cod Island (N009598) 03.09.2007: *Arion flagellus,* Royal Canal at Archies Bridge (N134579): *Musculium lacustre,* Royal Canal nr Ards Bridge (N101668) 05.09.2007: *Boettgerilla pallens,* Limestone Quarry (N009600) 07.09.2007 all G.A. Holyoak

Roscommon (H25): *Gyraulus laevis, Planorbarius corneus* nr Devenish Island (M982287) 06.09.2007 G.A. Holyoak

Louth (H31): *Lehmannia valentiana,* Clogher Head (O172845) 29.08.2007 G.A. Holyoak

Monaghan (H32): *Arion flagellus, Boettgerilla pallens,* Rossmore Forest Park (H654315) 31.08.2007: *Stagnicola fusca, Anodonta anatina* nr Hilton Park (H491203) 31.08.2007 all G.A. Holyoak

How some 'Roman Snails' ended a Roman war

S. Peter Dance

In 1831, in the first edition of his *Manual of the Land and Fresh-water Shells of the British Islands*, William Turton tells how some examples of what he thought may have been the Roman Snail, *Helix pomatia*, helped a Roman general capture a fort, thereby ending what became known as the Jugurthine War (111-105 BC). For the benefit of students of snail lore here is a condensed version of it, based on a modern translation of the Latin text Turton would have used, *The Jugurthine War*, written by the Roman historian Sallust (86-34 BC).

Towards the end of the 2nd century BC Rome was bogged down in a war with Jugurtha, ruler of a kingdom bounded by the river Mulucha (now Moulouya), situated in the north-eastern quarter of modern Morocco. In the year 106 the Roman general Gaius Marius had been besieging a small fort, strategically situated on a rocky hill, not far from the river. Sallust was either ignorant about African geography, or was careless about his facts, so the exact position of this fort is debatable, but it seems to have been in a mountainous district, possibly a short distance inland, near the border between modern Morocco and Algeria.

The fort had repeatedly resisted capture and Marius was almost at the point of admitting defeat when he received some promising news from a Ligurian mercenary who had been out of the Roman camp, searching for water. Having wandered to the vicinity of the fort furthest from the besiegers, the mercenary had seen some snails crawling among the rocks and decided to collect them. In his eagerness to collect more and more of them, presumably to eat, he had climbed almost to the top of the hill. Making use of the boughs of an oak tree at the top he had found he was able to survey the fort and its defences without being detected.

Encouraged by this news, Marius decided to mount an attack on the part of the fort the mercenary had just surveyed and sent some scouts to assess the chances of success. Receiving a positive report, he sent some armed men up the hill, guided by the mercenary. By attacking from this unexpected quarter they achieved a breakthrough, enabling Marius to make a successful assault. The capture of the fort ended the Jugurthine War.

The identity of the snails collected by the mercenary is uncertain. *Helix pomatia*, after all, is a Central European species and those he collected are unlikely to have been descended from specimens possibly imported for culinary purposes by the Romans. There are isolated instances of its occurrence well outside its natural range, however, including this one: 'Specimens of *H. pomatia*, recently procured from Fez, are of extraordinary thickness as compared with forms from our own chalk downs of Kent and Surrey' (A. H. Cooke, 1895, *The Cambridge Natural History, Molluscs,* p. 25). With good reason perhaps, another authority regarded these Moroccan shells as 'probably not truly native' (J. W. Taylor, 1910, *Monograph of the Land & Freshwater Mollusca of the British Isles,* Part 17, Vol. 3, p. 235). We cannot be sure of the identity of the snails collected by an unknown mercenary, but this in no way diminishes the interest of a story unique in the annals of conchology. This, surely, is the only instance of a long-protracted conflict being terminated because a man could not resist the temptation to collect snails!

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 0794 109 4395 on the day of the meeting for information on the location of the field site being surveyed.*

Indoor meetings at the Natural History Museum will take place in the Dorothea Bate Room [Palaeontology Demonstration Room] at the end of Gallery 30. Please note the earlier start times, and also the long indoor meeting in October with an early start time of 11:00h. Please bring plenty of exhibits and demonstration material.

The Programme Secretary will be happy to receive any offers to lead field meetings or suggestions for speakers for indoor meetings.

Key to meetings:

NHM	=	Natural History Museum, London, indoor meeting
FIELD	=	Field Meeting at outdoor location
WKSHP	=	Workshop on Molluscan topic
YCS	=	Yorkshire Conch. Soc. events

FIELD - *Saturday and Sunday 16-17 August*
County Fermanagh, Northern Ireland.
Leader: Roy Anderson.
(02890 582686) (home),
roy.anderson@ntlworld.com

The intended study locations for this weekend meeting are: the Lough Navar Highlands south of Lower Lough Erne to search for *Vertigo geyeri, V. lilljeborgi, Succinella oblonga* etc.; Florencecourt Demesne (NT) in south Fermanagh, which despite being a fabulous place scenically and with limestone cliffs etc. has very few molluscan records; Pettigo Plateau, west Fermanagh, an area of bog with small limestone loughans, not well known but could be interesting; and Marl Loughs, South Fermanagh, which are spring-fed limestone lakes possibly with *Vertigo moulinsiana.*

Members interested in joining this meeting over the weekend should contact Roy Anderson at roy.anderson@ntlworld.com or Adrian Norris at AdrianXNorris@aol.com If you would like to book accommodation for the weekend please contact Roy Anderson as soon as possible so that he can supply you with the information as soon as it can be made available.

We hope to be able to have a pre-field meeting to talk through various recording issues which will probably take place on Friday 15 August in N. Ireland. If you are interested in attending this far more informal meeting please inform us in advance.

YCS - *Saturday 6 September*
Haxby.
Contact: David Lindley
(0113 2697047) (home),
david.lindley3@btinternet.com

Meet at 10:30h at Terry Crawford's house,
2 Crooklands Lane, Haxby, York, grid ref. SE 610586 for Haxby ponds and general area.

FIELD - *Monday to Thursday 15-18 September*
Lleyn Peninsula, North Wales.
Marine meeting.
Leader: Tom Clifton
(01248 853359) (home)
(07767 494355) (mobile)
cliftontom4048@uwclub.net

Meet initially in Benllech, Anglesey at a time to be arranged.

Monday 15 September
Afternoon. Trefor, Lleyn Peninsula SH 372476. Meet at the car park on the sea front at Trefor SH 376473 at 15:00h. Between Dinas Dinlle and Nefyn there is a long stretch of uninteresting shores of unstable rolling boulders, this is where the shore starts to improve before reaching Nefyn; a full survey of this area would be helpful. **(1.1m tide at 16:59h).**

Tuesday 16 September
Morning session at Seaspray, Rhianfa, Benllech, SH 519820 to examine specimens; all are welcome. If anyone can bring a microscope along it will help this session.

Tuesday 16 September
Afternoon. The Swellies, Menai Bridge, Anglesey, SH 549716. Meet at the Menai Bridge car park SH 554718 at 16:30h. This local site will reduce the daily driving to the Lleyn, it is also an interesting area where the Straits narrow to pass under the Menai Bridge and is an excellent catchment area for material coming up the Strait on the tide. **(0.8m tide at 18:52 h)**

Wednesday 17 September
Morning session at Seaspray, Rhianfa, Benllech, SH 519820 to examine specimens, all are welcome. If anyone can bring a microscope along it will help this session.

Wednesday 17 September
Afternoon. Traeth Crugan, Lleyn Peninsula, SH 343326. Meet at SH 341327 at 14:30h. This will hopefully provide an opportunity to see live Shipworms providing they are still in situ. This area has a unique range of live species which can be found from shore based surveys, such as *Modiolus modiolus, Tapes aureus* and *decussatus* etc.; it will be interesting to know why this area is so different from others. **(0.7m tide at 16:51)**

Thursday 18 September
Morning session at Seaspray, Rhianfa, Benllech, SH 519820 to examine specimens, all are welcome. If anyone can bring a microscope along it will help this session.

Thursday 18 September
Afternoon. Porth Towyn/Porth Ysgaden, Lleyn Peninsula, SH 230375/SH 219375. Meet at Porth Towyn Farmer's field car park SH 232374 at 16:00h. This will hopefully allow time to collect some top quality shell sand. Those who want to go to Porth Ysgaden can park at SH 220375 at 16:15h. **(0.9m tide at 18.20).**

NHM – *Saturday 4 October 2008*
11:00h in the Dorothea Bate Room [Palaeontology Demonstration Room].

Note the revised earlier start time. No Council meeting. Please bring plenty of exhibits and demonstration material. Lunch break at about 13:00h, lecture to start at about 14:00h.

The morning's activities will include a talk about the microfauna of semi-embedded littoral boulders by Jan Light, including a demonstration of species and searching techniques, exhibits and demonstrations on recent and fossil Pectinidae, and other options still at the planning stage. Members are encouraged to bring specimens of any Mollusca for identification, a X20 binocular microscope will be available if needed.

We welcome as Guest Speaker Adele Grindon from Nottingham University on the subject of 'The colonisation of Ireland: Myths, Mystery, and Molluscs '.

Abstract
While more than 99% of the Irish biota is in common with Britain, it has long been recognised that there is also a characteristic but mysterious "Lusitanian" element, since several species are present in Iberia and Ireland but absent from Britain (e.g. Strawberry tree, Kerry slug). Although the land snail *Cepaea nemoralis* is widespread across Europe, it has been suspected that some populations on the west coast of Ireland may have a Spanish, specifically Pyrenean, origin because of their characteristic morphology. I therefore