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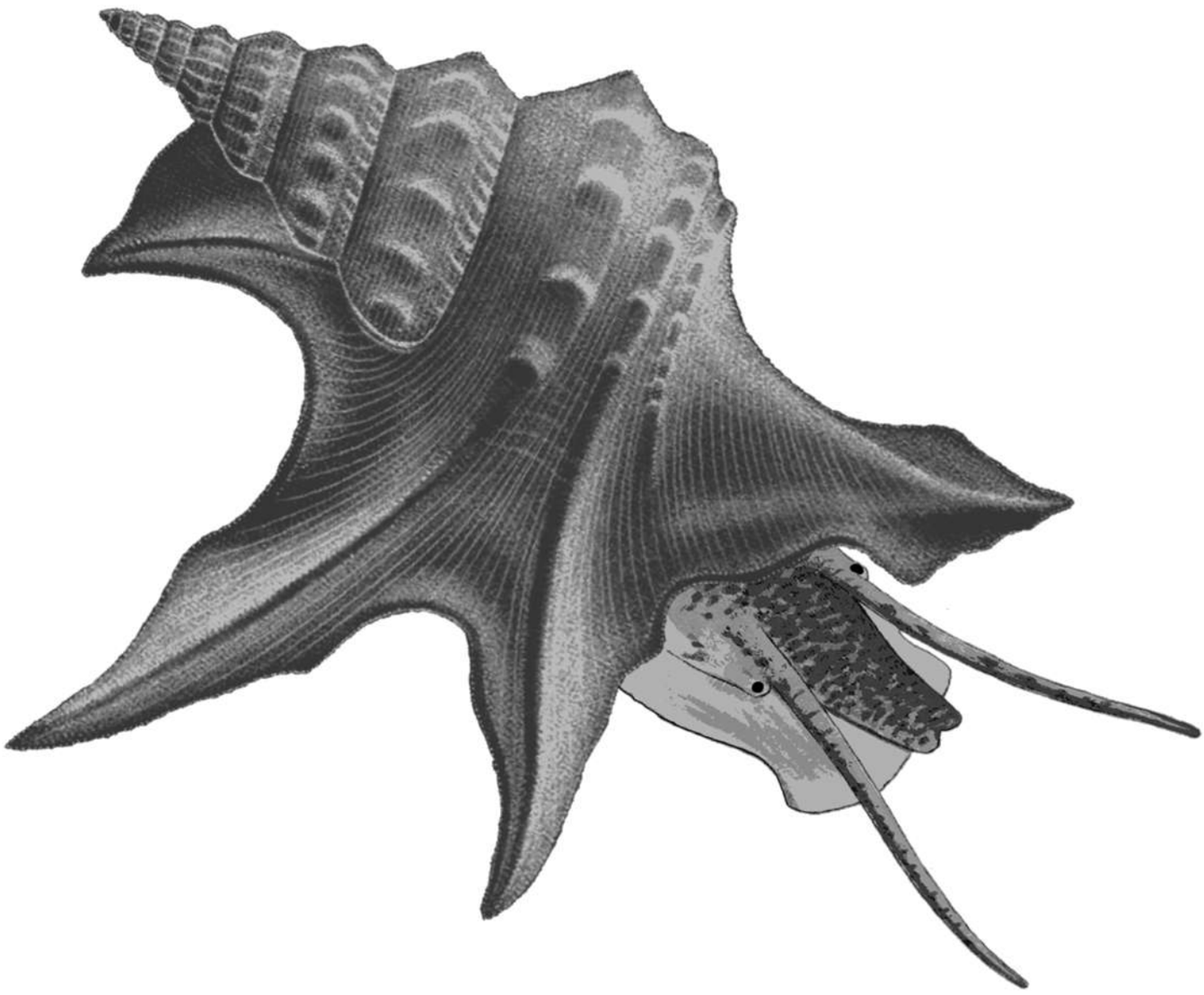

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Editorial

Again, many thanks to all of you who sent me comments on the second issue of *Mollusc World*. The two colour identification keys met with approval but were accompanied with requests for more! So, we have included a colour identification guide to turrids in this issue, which we hope will prove useful. However, these do require considerable time and effort to construct, so please do not expect an identification guide in every issue. In the meantime we continue to offer a rich mix of features for our diverse membership. I'm grateful to all of you who have voluntarily submitted items for this issue, but I am still having to solicit a substantial portion of the content. I would be delighted to receive articles from more of you. Please note that the final deadline for submission of items for *Mollusc World* 4 is Friday 13th February 2004.

Many of you will know that Nora McMillan died on 23 August after a fall at her home – she was 95. Nora had been a Member since 1930 - she was a past President, former Editor of *Journal of Conchology* and an Honorary Life Member. A formal obituary will be published in the Journal. However, earlier this year, Julia Nunn paid Nora a visit in Liverpool, whereupon she recounted much of her early life and work in Ireland. We hope to publish these recollections in a future issue of *Mollusc World*.

Ian Killeen

Mollusc World

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

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

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

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

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Society Notes

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

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

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

Subscriptions

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

Ordinary Membership	£23.00
Family/joint membership (open to two people living at the same address)	£25.00
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Early payment discount (Ordinary, Family and Student Members) for paying the correct amount before 31 March £1.00

Please pay by one of:

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Eurocheques are no longer accepted by UK banks, but we can accept cheques drawn in euros on an EEC bank. Please make sure that these cheques are made out to *"The Conchological Society"* and not to the Membership Secretary.

Sterling direct transfer in favour of "The Conchological Society" to National Westminister Bank plc, Bolton Branch, PO Box 2, 24 Deansgate, Bolton, Lancs., BL1 1BN (Sort Code 01-30-99, Account 0652384062);

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Society Projects

On the trail of the greater pellucid glass snail

Phenacolimax major, the greater pellucid glass snail, is an uncommon semi-slug found in Britain (post-1965) in fifty-nine 10x10Km grid squares in southern England and south-east Wales, with pre-1965 records in four further squares; elsewhere its main range is in France and west Germany. (Kerney, *Atlas of the Land and Freshwater Molluscs of Britain and Ireland*, 1999, p. 135). We do not know if it is in decline or maintaining its status in Britain; it could be as rare as the mountain bulin (*Ena montana*), but it does not have any particular conservation status - should it?

In Britain, one other semi-slug, the widespread *Vitrina pellucida*, is associated with it. Both species are annuals, maturing, breeding and then dying off in the Spring. *Phenacolimax majo*r is found into May and early June rather later than *V. pellucida* which disappears by the end of April, or earlier.

Here, *P. major* is associated with old woods, perhaps especially with wetter places near springs, streams and flushes, whereas *V. pellucida* occurs in a variety of habitats - woods, vegetated stone walls, grasslands, and even gardens.

Live animals of *P. major* differ externally from *V. pellucida* in having a slightly flatter shell and a mantle edge which extends back over the shell to reach the apex; the mantle is also often blotched with black. *V. pellucida* has a much smaller mantle edge with a small dark mark near the mantle opening. There are also differences, internally, in the reproductive system (see Kerney & Cameron, *A field guide to the land snails of Britain and north-west Europe*, 1979, pp. 109 and 115).

The Conchological Society wishes to carry out a survey for *P. major* in the periods from November 2003 to the end of May 2004, and November 2004 to the end May 2005, and to publish the results in the *Journal of Conchology*.

The survey would start with sites from which *P. major* has already been recorded. Other apparently suitable sites would be visited as time permits. We will need volunteers.

As with the survey for *Malacolimax tenellus*, in view of the scarcity of the animal, the preferred method of verifying the animal is by photography or digital imaging. And again, could recorders please note the habitat in which the snail was found e.g. under Hartstongue fern in a damp valley bottom in Ash woodland with Hazel coppice and site management.

It is planned to have old records available to assist recorders, and the co-ordinator can suggest where recorders might look, and where to seek permission for access to sites.

Project co-ordinator: David Long, email:davidandpat.long@virgin.net

Annual General Meeting 3rd April 2004

Members are reminded that they can nominate candidates for election to the Council. Rule no. 12. Candidates for nomination to the Council shall be paid-up members of the Society and shall be nominated by two members. Nominations, other than those made by the Council itself, shall be sent in writing to the Hon. Secretary at least six weeks before the AGM, and shall be accompanied by a signed declaration of the candidate's willingness to serve. Note: Nominations must be received by the Hon. General Secretary **not later than** 31 December 2003.

FOR SALE - Watercolours of Coastal sites on the Land's End Peninsula, Cornwall.

Stella Turk has generously donated four unmounted water colours of coastal sites in Cornwall to be sold on behalf of the Society. They measure 38 by 28cm. They were painted in 1964/5 by Sheila Ellis, a retired teacher and amateur artist, sister of the late Arthur Ellis - an eminent name in British conchology. It is proposed to sell these, possibly by auction, at the Indoor Meeting on December 13th and it is hoped that this advance notice will ensure those members who are interested can attend or arrange for a member to bid on their behalf. The sites featured in these paintings are all based on the Land's End Peninsula: there are two of Cape Cornwall, one of Carn Gloose and one of Gurnard's Head. Further information about the paintings can be obtained from Jan Light, tel. 01483 417782.

ANAGRAM COMPETITION

I wasn't overwhelmed with entries to the competition, but thanks to those of you who did have a go at constructing an anagram from ***Scaphander lignarius***. Here is a sample of some of the (printable) entries!

Graphics under a snail
Crash a pruned sailing
Snail punches arid rag
Cars dash ailing prune
Cunard liner ship saga
A prudish lacing nears

The prize goes to Jane Reynolds for her entry: 'Rapid slug nears China'. No prize offered this time but you might like to have a go at seeing how many words you can get from ***Archachatina marginata.***

Field Meeting to the Northcot Brick and Tile Company

Blockley, Gloucestershire, 29 March 2003

1

2

3

4

1 Belemnites
2 *Cosmetodon*
3 *Liparoceras*
4 *Eucyclus*

Ten members and seven friends, including four from the Kent Geology Group, attended the society's third visit to one of the best inland exposures of the early Jurassic Lower Lias in England. This is a popular meeting because everyone who comes here leaves with more than enough material to keep them happy for some time to come.

On this occasion the day was warm. The very early Spring meant that the site was drier than we had known it in the past, but not dry enough to avoid the need to dig out one member when his wellies got trapped. The party divided their time between sampling the working faces for selected specimens and sediment samples and searching dumps of clay, especially those where material from the Blockley Shell Bed (Bed 2) not wanted for brick-making, had been spread.

The section had not changed basically since our last visit, except that a basal shell bed, the Z bed, could be seen in the base of the pit. As usual everyone found parts of Liparoceratid ammonites (a good ex-situ place was the rock pile below the conveyor belt taking clay to be processed), many well preserved bivalves such as *Pseudopecten acuticostata* ((Lamarck, 1819), belemnites, occasional gastropods such as *Pleurotomaria amalthei* Quenstedt 1858 and *Ptychomphalus politus* (J Sowerby 1821) and a scaphopod or two. So far as I know no-one found a pleisiosaur, though others have, but a good time seems to have been had by all.

Our member Phil Palmer and friends are working on producing a faunal list for the site: at least 47 species of bivalves, 20 of gastropods, 5 of belemnites and 15 of ammonites are known.

If you wish to visit this site you must get permission from: Northcot Brick Ltd, Blockley, Nr Moreton-in Marsh, Gloucestershire, GL56 9LH, telephone 01386 700551, and get them to send you a Visitors Declaration form. This you will need to fill in on the day, and you can expect to have it checked, and to hand it in on leaving the site. You should wear high visibility clothing; but the company does not stipulate a hard hat.

David Long

Exploring Alderson's Ampullarids at Basildon Park

The historical mansion at the Basildon Park estate stands proudly against the beautiful backdrop of the Berkshire countryside. The estate was purchased by Sir Frances Sykes in 1771, who had returned from India having gained great wealth. Sykes then commissioned John Carr of York to build the beautiful Georgian house between 1776 and 1783. From its birth to present day it has seen a roller coaster ride of decline and resurrection, resulting in the house being stripped of many of its original features, so by the 1950s it was no more than an empty shell.

It was in 1952 that its fortune changed for hopefully the last time. Lord and Lady Iliffe purchased the house and estate and transformed it to its original beauty and more. Then, in 1978, the Iliffe's generously donated the estate, property and a collection of furnishings to the National Trust, to whom it still belongs today.

The transformation continued in the hands of the National Trust and included the decoration of one of the upstairs rooms into a 'shell room'; reminiscent of the shell grotto that had been built on the estate before Sykes' ownership. Decorated in the 18th century fashion, most of the walls are dripping with extravagant designs made up of an uncountable number of molluscs and other marine pieces, such as crab carapaces. They form the setting for the cabinets showing an array of exotic shells and a large centrepiece draped with fabric, displaying geological and molluscan items.

The shells on display are mainly the large showy marine molluscs collected by Reverend Ellerton Garside Alderson (1868-1933), famous for his 'Studies in *Ampullaria*' (1925). He left this entire collection to his sister in his will and upon her death in 1945 it came up for sale, still contained in his 40 drawer Victorian mahogany cabinet. It was then that Lady Iliffe purchased it.

In 1947 Lady Iliffe became acquainted with Tom Pain, undoubtedly as a result of his interest in Alderson's collection, as he too was passionate about the Ampullaridae. Having viewed the collection he proceeded to catalogue the Ampullarids and mark those he could distinguish as being figured in the beautiful hand painted book. Alderson was a very gifted artist and so it was quite easy for him to recognise the figured shells with accuracy. It was at this time that Mr Pain was gifted some of the specimens by Lady Iliffe, and since 1981 they have resided at the National Museum and Galleries of Wales (NMGW) with part of Tom's extensive collection of land and freshwater molluscs. On its arrival Dr. Graham Oliver investigated Alderson's specimens and found that 95 of them were in fact figured. It was noted at this time that there were still 68 illustrated shells that were unaccounted for and could not be located in the Pain collection.

The death of Tom Pain earlier this year prompted us to revisit this part of the collection. Dr. Mary Seddon and myself, having spent two days in Kent with Celia Pain viewing the remainder of Tom's collection, took a detour on our return journey so that we could visit the Basildon Park estate near Reading.

It was immediately apparent when we investigated the 'shell room' that those we were looking for were not on display. Although scientifically important they do not really visually compare to the flashy marine gastropods and bivalves which were out in full glory. Once we had permission we started to explore the wooden cabinets and found that the large, covered up centrepiece was in fact Alderson's beautiful mahogany cabinet! We then proceeded to find nine drawers of Ampullarids and the catalogue Tom Pain had written in 1947. An hour or so later we had a list of species and the number of specimens present, in addition to any markings indicating that they were figured.

The collection at Basildon Park contained 529 specimens, of which our initial find suggests 36 were figured in Alderson's *Studies*. Now that we know the collection is present and safe we hope to borrow it to confirm these figured specimens and perhaps even locate more. We would also like to take this opportunity to image the material so that even if the specimens cannot be together physically they can be brought together visually. This will be an excellent opportunity for us to advertise the location of both the specimens at NMGW and Basildon Park so that the scientific community can use them in the future.

Harriet Wood, NMGW

What's the latest in molluscan names?

Over the period 1978 to 2001 there were 42,678 changes in molluscan names worldwide (information from BioSIS, who produced the serial *Zoological Record*). This represents 11.9% of all nomenclatural changes over the period. So molluscan taxonomists are still quite active, despite their ageing population! However nomenclatural changes can create some problems when conversing about species where popular guidebooks which the rest of the community use for identification do not use updated names. On average 80% of the recent changes were describing species which were new to science, with a further 10% description of new generic names, and only 1% replacement names where the original name was preoccupied. Thus, it is not surprising that we have seen various nomenclatural changes for species occurring in Britain and Ireland. There are several sources available where you can check out nomenclature if you come across a name that is unfamiliar to you.

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The Largest Invertebrate?

Many members of this Society are interested in Gastropods and Bivalves, but the Cephalopoda, which is the most active group of molluscs, is also fascinating, though it is very difficult for us to observe them in the field.

One of the most exciting areas in the study of cephalopods is the research on the large squids which are living in the deep ocean, usually they can only be found at a depth of more than 500m. There are at least two species of large squid, the giant squid *Architeuthis dux* and the colossal squid *Mesonychoteuthis hamiltoni.* Two resent issues of *New Scientist* reported some advancement in this area (*New Scientist*, 12 April, p.18; *New Scientist*, 2 August, p.24 – 29). A female colossal squid (*Mesonychoteuthis hamiltoni*) (total length = 6 metres) was hauled by a fishing boat from the Ross Sea off Antarctica in April 2003. The specimen has the longest mantle length of all squids that have ever been caught — 2.5 metres. However, examination of the ovary revealed that this species has not reached adulthood. The specimen of this species is extremely rare, and based on the information that we have, the adult of this species could be up to 15 metres long, with a mantle up to 4 metres. However, evidence suggests that there may be some undiscovered species of large squids. A one-metre-long squid was dragged out of sea in July, 2002 near Macquarie Island, halfway between Antarctica and Tasmania. This specimen could be a new species. No one has ever seen or film a live adult giant or colossal squid in the wild. Projects are going on, and good news may come soon.

Further Readings

(Previous issues of *New Scientist* can be assessed at **http://archive.newscientist.com**)

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Young, E. (2003) Giant squid emerges from the ocean's deep. *New Scientist*, 178 (2390), 18.

Young, E. (2003) Monsters of the deep. *New Scientist*, **179 (2406)**, 24 – 29.

News from Scotland

Non-marine *by Adrian Sumner*

Compared with England, Scotland may at first sight seem conchologically impoverished. The 1999 *Atlas of the Land and Freshwater Molluscs of Britain and Ireland* certainly shows that the number and distribution of species thins out as one goes further north, not surprisingly given the supposedly colder climate and the lack of extensive chalk and limestone. There is nevertheless much of interest. The recent discoveries of the blind white snail *Cecilioides acicula* (on Arthur's Seat in Edinburgh), hitherto almost unknown in Scotland, and the Red Data Book species *Truncatellina cylindrica* in Fife are especially noteworthy, and rare species of *Vertigo* have been found around isolated limestone flushes high on remote mountains. The spread of the slugs *Arion flagellus, A. owenii* and *Limax maculatus* (as well as *Boettgerilla pallens*) is a striking phenomenon, although the hot, dry summer of 2003 has been less than ideal for recording slugs. The two *Arion* species have their strongholds in the west (*A. flagellus* is the predominant large slug on the Isle of Lewis), but have now spread even to the east of Edinburgh. Conversely, *L. maculatus* seems to have its headquarters in the Lothians, but has apparently not yet reached Glasgow. All records would be valuable for tracking the extension of the range of these species.

When the *Atlas* was published in 1999, Michael Kerney commented on the paucity of modern records of freshwater molluscs in Scotland, particularly in the south-east, which was due simply to a lack of up-to-date recording. However, recent surveys show that many freshwater species are in fact much more widely distributed in the Scottish lowland canal system than previously thought, possibly aided by the recent restoration and reconnection of the Forth & Clyde Canal and the Union Canal, and their re-opening to navigation, as the Millennium Link. *Bithynia leachii*, which has hitherto only been recorded from a single site in the Forth & Clyde Canal, is in fact widespread in both canals.

The non-marine molluscan fauna of Scotland is therefore highly dynamic. Many areas, even in the more highly populated areas, are not yet adequately recorded, and rarities turn up quite regularly. Many remote parts are still in need of detailed study. Given also that several species are expanding their ranges, there is much for the conchologist to do. Although CSGBI members are not thick on the ground in Scotland, there is nevertheless plenty of interest in molluscs among members of local natural history societies and the general public. To stimulate this interest, the society plans to hold a Scottish meeting in the spring of 2004, in Edinburgh on March 13th. This should raise the profile of the Society in Scotland, and it is hoped that it might become a regular feature in the Society's programme. Watch out for further information as the programme for this meeting is developed.

Marine *by Shelagh Smith*

Scotland has a higher diversity of marine molluscs compared with land and freshwater molluscs. Not only is the coastline extremely long with a greater wide variety of habitats than elsewhere in the UK, but it also has a greater variety of habitats below low water, both those accessible to divers and those which require remote means of sampling. At the present time the west coast is moderately well covered and an Atlas of the area from Cape Wrath to Loch Ryan, including the Inner and Outer Hebrides and deeper waters to the west, and the coast of Ireland, is in a late stage of preparation. This shows that in some small areas such as around Oban there are are nearly 300 living species – nearly

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NMGW


Peter Topley


Peter Topley


Jan Light

These images relate to specific articles within the magazine.

1. Ampullarids from Basildon Park. Page 5.

2. *Achatina reticulata* aged 3 weeks.

3. *Achatina reticulata* aged 7 weeks

4. *Achatina reticulata* aged 9 weeks with parents

5. *Achatina reticulata* adult (2 - 5 relate to Page 8*)*

6. Stella Turk with Lady Mary Holborrow and Howard Curnow, Chairman of the CWT

7. Stella receives her award from Lady Mary Holborrow

8. Stella with her MBE at Shang-ri La. (6 - 8 relate to Pages 16-17*)*


Peter Topley


Jan Light


Peter Topley

Jan Light

Achatinidae: The many lives of the "Giant African Snail"

Children often develop an interest in snails after an encounter with the "Giant African Snail", possibly at school, perhaps as part of the National Curriculum "Habitat" module (4b) or through a purchase following a visit to a local aquatics or garden centre. It is most likely that the snail in question will be *Achatina (Lissachatina) fulica* (Bowdich 1822), which originates from East Africa. It's subsequent and ultimately ecologically disastrous introductions to tropical countries around the world have been well documented. The "success" of this species is testimony to its adaptability and concomitant suitability for keeping in captivity. If you wish to try this for yourself, guides and internet sites are available to help you get started (see a list of some of these at the end of this article).

Perhaps less familiar than *A. fulica* are the other members of this genus together with those of the closely related *Archachatina* and *Metachatina*, part of the family Achitinidae which includes thirteen genera, all endemic to Africa. Among these other genera are the large, heavy *Burtoa* with a single species only from East Africa (superficially resembling those other giants of the land snail world, the *Megalobulimus* from South America). Others include the smaller *Limicolaria* from the West Coast, which often favour cultivated land, burrowing in the soil and spending a long time there at appreciable depths (Crowley & Pain 1970); the beautiful and under-recorded *Pseudachatina* which live in an area extending from Southern Nigeria to north of the Congo and "deposit their eggs up the trees in the forks of the branches closest to the trunk" at a height of up to 5m (Pain & Paul 1967); and the curious elongated and sinistral *Columna* from the islands in the gulf of Guinea. Larger members of this family are often used locally for food. A large proportion of the rural populations in Africa live on the edge of poverty and have to struggle to survive. Under such conditions even small incomes such as that derived from the seasonal collection of *Achatina* snails by women could determine whether or not a child continues school. A "closed" season for forest snails was strictly enforced in most Ashanti Villages in Ghana. At the beginning of the snail season when the snails were laying their eggs the town crier would inform the community of the ban on snail collection.

The genus *Achatina* comprises some 75-100 species, depending upon whether you are taxonomically a "splitter" or a "lumper". The largest species, *Achatina (Achatina) achatina* (L.), has earned a place in the Guinness Book of Records and a specimen labelled from "West Africa (probably Liberia)" which was formerly in the collection of T.E. Crowley, measures 205mm x 105mm. However, occasional "giant" individuals of other species have been recorded, such as a 213 x 124mm specimen of the West African *Archachatina (Calachatina) marginata* (Swainson, 1821) recorded from Nyangong in SW Cameroon in 1996.

Much smaller *Achatina* species, such as the 3cm *A. tracheia* Connolly, 1929 from South West Africa also occur, but because of their relatively large size, conchologists have been aware of this genus for over two hundred years. One of these was Joseph Charles Bequaert (1886-1982), a Belgian who became a U.S. citizen in 1921. As well as being a malacologist, he was also a well known entomologist and botanist. As a botanist his travels took him to what was then the Belgian Congo, where he encountered *Achatina* in the wild. His experience of the malacology of the Congo in general was later incorporated into his collaboration with Henry Pilsbry (author of a classic earlier review of the Achatinidae in the *Manual of Conchology*, volumes 17 and 18) called "The aquatic Mollusks of the Belgian Congo"(*Bull Am. Mus. Nat Hist.* 1927). It was while Bequaert was Curator of Insects at the Museum of Comparative Zoology at Harvard that he began his idea to write a monographic revision of all "Achatininae". Later realising that, with other commitments, it would not be possible to complete this mammoth task, the final result became "Studies in Achatininae, a group of African Land Snails."(1950) Although covering only a portion of this group of snails, the work is now a standard reference work in the area, although long out of print.

One of the species included by Bequaert is *Achatina (Lissachatina) reticulata* Pfeiffer, 1845 from Tanzania and Zanzibar. He describes this species as "the most handsome of the Achatinidae". The shell can exceed even *A. achatina* in length but it is less bulky. It has a thick, solid shell with an extremely rough body whorl and is the most coarsely sculptured of the Achatinidae. A few years ago I obtained two young snails of this species via Jane Reynolds, originally bred from individuals of a colony at London Zoo. The snails were kept in clear plastic lidded crates or glass tanks on peat substitute supplemented with cuttle bone. The tanks were heated to 24-26°C via reptile heat mats placed over one half of the base in all except the summer months. The snails were fed on a mixed diet of lettuce, cucumber, melon, apple, broccoli stems, tomato and shredded carrot as available. They also took "Oyster Shell Grit" (a type of bird feed!). The tanks were cleaned and the soil partially replaced every 1-2 weeks with occasional water misting and cleaning of the shell. The hermaphrodite snails were first observed mating when their dimensions were approximately 157 x 75mm, the 406 resulting eggs being laid in the soil around three weeks later (79% of these were a pale yellow colour, 7% bright yellow, the remaining 14% white and they measured around 7mm in height). It is worth pointing out here that not all members of the Achatinidae produce eggs in the same way. For example; the eggs of *Archachatina marginata* are much larger, about 20 x 14mm, and far fewer eggs are laid whilst both *Achatina iredalei* and *Achatina zanzibarica* are oviviparous, bearing live young. The very young snails of *A. reticulata* are little gems, with bright reddish zig-zags on a smooth shell, quite unlike the more rugged appearance of the adults. The height and width of the shells was monitored on a regular basis (see Figure 1), demonstrating the change in height/width ratio of the shell as the animal matures. Photographs of a growth series of individuals are shown on page 7.

The Achitinidae remain a fascinating, and apart from a small number of well known species, sometimes neglected family of tropical snails. *A. fulica* is regarded as a pest species in many countries and efforts to control its spread by the introduction of alien carnivorous snails in an attempt to control it has instead seen the extinction of many smaller endemic species. At the same time, other giant Achatinas, such as the sinistral *Archachatina bicarinata* of the islands off the West Coast of Africa, may be endangered as a result of direct competition with introduced *A. fulica*. Closer encounters with these giant snails, whether as pets, teaching aids for children, or as part of conservation research can only help to broaden our understanding of these fascinating creatures.

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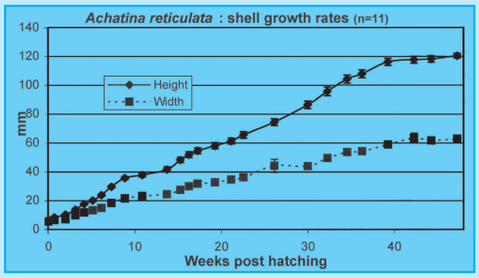

***Achatina reticulata*: shell growth rates. Proportion of height/width**

Molluscan names continued

European Marine Mollusca:

CLEMAM Database on European Marine Mollusca web-site: http://www.somali.asso.fr/clemam/index.clemam.html

The interface at this site is not very user friendly if you are not familiar with the main marine families, but you can access changes there. For example the trochid *Monodonta lineata* has now become *Osilinus lineatus*. The *European Register of Marine Organisms* also uses the same source for Mollusca, but you can view a webpage with all the species names on this as well as a more detailed page with sources of information:
http://erms.biol.soton.ac.uk/

European Land and Freshwater Mollusca

Most recent changes are listed in Gerhard Falkner, Theo EJ Ripken & Margrit Falkner (2002) *Mollusques Continentaux de France Liste Reference Annotee et Bibliographie* 350 pages, col photos, b/w photos, figs, tabs, maps. Obtainable from NHBS Price £ 38.00. This publication is the source of many nomenclatural changes, although it is not the easiest reference source for cross referencing to the names in Kerney & Cameron (1976). Some of the changes are already in the Kerney *Atlas* (1999; Harley Books). The electronic data will eventually be made available as part of a EU Fauna Europea project, but it is not due on-line until 2004. There are several different *Lymnaeid* species recorded from the UK and an additional species of *Euconulus*. We will continue to add notes in *Mollusc World* reviewing these changes.

Mary Seddon

Molluscs in the news

Garlic: not just the sauce with cooked Snails

Garlic is not just useful as a source of flavour when cooking snails. Scientists at Newcastle University have discovered that it may be useful for repelling slugs and snails in your garden. Garlic is already widely used as an insect deterrent and has been used in 'companion planting' strategies for hundreds of years; garlic is planted among other crops in order to repel aphids and around fruit trees where it discourages borers. Farmers have difficulty with conventional molluscicide pellets, as they are ineffective in very wet or very dry weather. There are also well known issues for the rest of the ecosystem as baits are also toxic to other creatures living in the soil.
The scientists carried out a series of tests on nine potential molluscicides and showed that one of the most effective agents was a highly refined garlic product. Further tests are needed to assess the commercial potential of this pesticide, how the garlic affects other soil creatures, the right concentration to use and whether there are any effects on the taste of food once it has been used on crops! But the research suggests that a home-made recipe of crushed garlic bulbs mixed with water could work on a small-scale in gardens. This could be used alongside coffee grounds, another agent that has shown to be effective, for those snail friendly gardeners looking for alternatives to pesticides. If you are interested in the use of this product look at web-site http://www.eco-spray.org

Schuder, I., Port, G.R & Bennison, J. (2002). Novel pesticides for slug and snail control in horticulture. The BCPC Conference - Pests and Diseases 2002, Brighton, British Crop Protection Council, Farnham, Surrey. 873-878.

Other Insect Repellent recipes on the web:

Chop up roots, stems, and leaves of onion, garlic, horseradish, red pepper, mustard, and mints in blender. Add water to make one quart of repellent. Spray on infested plants.

Are Oysters becoming another species threatened by human induced hormonal changes?

Oysters, famous for their aphrodisiac qualities as food for humans, may have their sexual reproduction damaged by pollution. A study recently carried out on the Pacific oyster *Crassostrea gigas* showed that that exposure of oyster larvae to low levels of an industrial chemical increased death rates, sexual deformities and caused abnormalities in shell hinges. The study also found that c.30% of molluscs which survived to maturity developed into hermaphrodites and these failed to produce offspring. Dr Nice found that oyster larvae could be damaged by pollution levels of nonylphenol, equivalent to less than 10% of the concentrations which are permitted in

continued on page 21

What's happening in Europe?

There was little change of molluscan interest at the Council of Europe Berne Convention Group of Experts for the Conservation of Invertebrates meeting in Cardiff in September. It is recognised that there are many molluscan species that could benefit from listing on the Berne Convention appendices, but at present most of the proposed changes relate to adding species that occur in countries that are not part of the EU and are not found on EU territory. The role of the Berne Group of Experts is likely to be kept under review over the next two years, and there is a call for a broader Europe-wide strategy for the conservation of Invertebrate species. The European Invertebrate Survey will be the lead agency for the preparation of this strategy, and UK and Irish invertebrate specialists are already involved in the development plans.

The meeting coincided with the launch of the IUCN SSC European Invertebrate Specialist Group, and one of the many tasks the groups hopes to take on is the promotion and publicity of important conservation actions in Europe. Along with the IUCN SSC Mollusc Specialist Group, there will be a push to up-date the IUCN Red List status of all threatened species in Europe. The goal is to assess as many of the past species by the next launch of a published list in November 2004 using the revised criteria version 3.1.

The EIS colloquium contained some talks about Molluscs. Marian Ramos from Madrid provided a fascinating insight into the problems of conserving small spring-snails of the family Hydrobiidae in Spain including endemic species. Local people traditionally exploit the water at many of the springs where these species are found. The farmers and landowners believe that the water quality will be improved and the water resources conserved if they improve the spring by concreting around the point of discharge and place a tap there for people to use. If they are not aware that there is a rare species on their land, then they will change the habitat, and as such many spring-snails are faced with extinction. The challenge for the taxonomist is to describe these species before they become extinct.

Ulf Gärdenfors from Sweden talked about his experience of assessing the invertebrates for their threatened species status. In the region species such as *Catinella* (or *Quickella*) *arenaria* and *Vertigo geyeri* are widespread leading to an assessment as "Least concern". In contrast other common UK species, including *Spermodea lamellata*, are considered to be threatened by habitat degradation resulting from acid rain (One of Ulf's points was that the pollution is an export from the UK!). The freshwater Pearl Mussel is also considered to be Vulnerable in Sweden as they have seen declines of 40% of the population over the last 40 years. A poster on the hydrological requirements for *Vertigo moulinsiana* for some of the UK sites attracted much interest from colleagues in Latvia, Germany and Poland, where the species is also of conservation concern.

On Sunday there was a field meeting to Kenfig Dunes and Pant-y-sais fens, which was most entertaining, with varied attire from suits and umbrellas to full field srivey kit. The fen site attracted most interest for the recent spider records, but many people had not seen species such as *Theba pisana* which is abundant at Kenfig near the beach area. *Cochlicella barbara* is still present at Kenfig along with *Cochlicella acuta*.

Mary Seddon (Chair: IUCN SSC Mollusc Specialist Group)
Deborah Procter (Chair: IUCN SSC European Invertebrate Specialist Group)

Are you a climber?

We are all aware of the wonders of a good limestone crag for finding land-snails, but have you ever wondered about what damage is done to the snails by the use of these sites by rock-climbers. Research by Jeff Nekola has already shown that plants and lichens growing on the Niagra Escarpment in Canada are less common in popular climbing spots than in unclimbed areas. This time, they compared the snails in soil samples taken from climbed and unclimbed areas. The results show that snails, too, are sensitive to impact of boots and fingers in the crevices and on the ledges. Nekola says "We found that snails documented to be tolerant of human activity had become the dominant species along [climbed] routes". In general snail density, richness, and diversity were lower along climbing routes than in unclimbed areas, and community composition differed between climbed and unclimbed samples. Although most of the species were widespread in their US distributions it does give an indication that we should be concerned where we have rare species that are most frequently found in regions used for recreational rock climbing. It is possible for climbers and snails to live together in harmony.

The first step is obviously to draw attention of reserve managers to the impacts of climbing on the cliff dwelling species. In order to do this data is required to demonstrate that there is evidence of decline in species richness and abundance is areas that are heavily used by climbers. Nekola's research showed that the base of the crags and the talus slopes were those with the greatest diversity, but where there was greatest evidence of decline in species richness when used by climbers. Maybe this small article will get you looking at the snails in your area!

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Submitted by Mary Seddon

Documenting the past:
Insights into the Tomlin archive

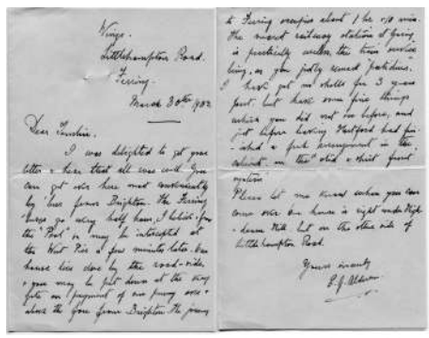
At the National Museum and Galleries of Wales we are privileged to hold the Tomlin archive of correspondence. In total, these amount to approximately 1200 letters dating from the early 1800s through to the mid 1900s. These are an incredibly important resource holding a wealth of information, chronicling a lifetime of work. The letters range in content, mostly dealing with the day to day details of collecting, exchanging and identifying material, but also dealing with other topics such as recounts of expeditions in foreign countries, photographs and portraits of various conchologists. The archive has also provided us with a more intimate insight into the lives of these collectors through the discovery of dinner invitations, directions to houses, and recounts of family holidays. On a broader scale it has also expanded our understanding of the historical side to the collection through reading letters written during wartime. These detail procedures for evacuating collections from museums, how various society meetings were affected, the occupation of the Channel Islands and its effects on people's lives.

To link with Harriet Wood's article concerning the Alderson collection, I thought it would be interesting to look at his correspondence. A letter dating from May 19th 1925 from Alderson to Tomlin typifies many of the letters held in the archive. The first part concerns some identification work that Tomlin asked him to do on his *Ampullaria* (Alderson's work having only recently been published that year), it talks of species such as *A. globosa, A. speciosa* and *A. gradata* and addresses morphological features in great detail. He then goes on to discuss the topic of African fauna-specifically exotic Lepidoptera, a topic which looks to have been ongoing. He also talks of an article published in *The Illustrated London News* (March 14th, 1924) which details the findings of a third species of gorilla in the Eastern Congo. At that time it appeared that the gorilla was "so large and offensively conspicuous a beast" that only two species could survive in Africa, this new animal he hears is "so numerous and savage as to be a terror and a nuisance to a whole district". He closes by saying:

"When what may be called spectacular animals provide surprises at this time of day, may we expect the humble river snails like Ampullariae to astonish us at some future time?"

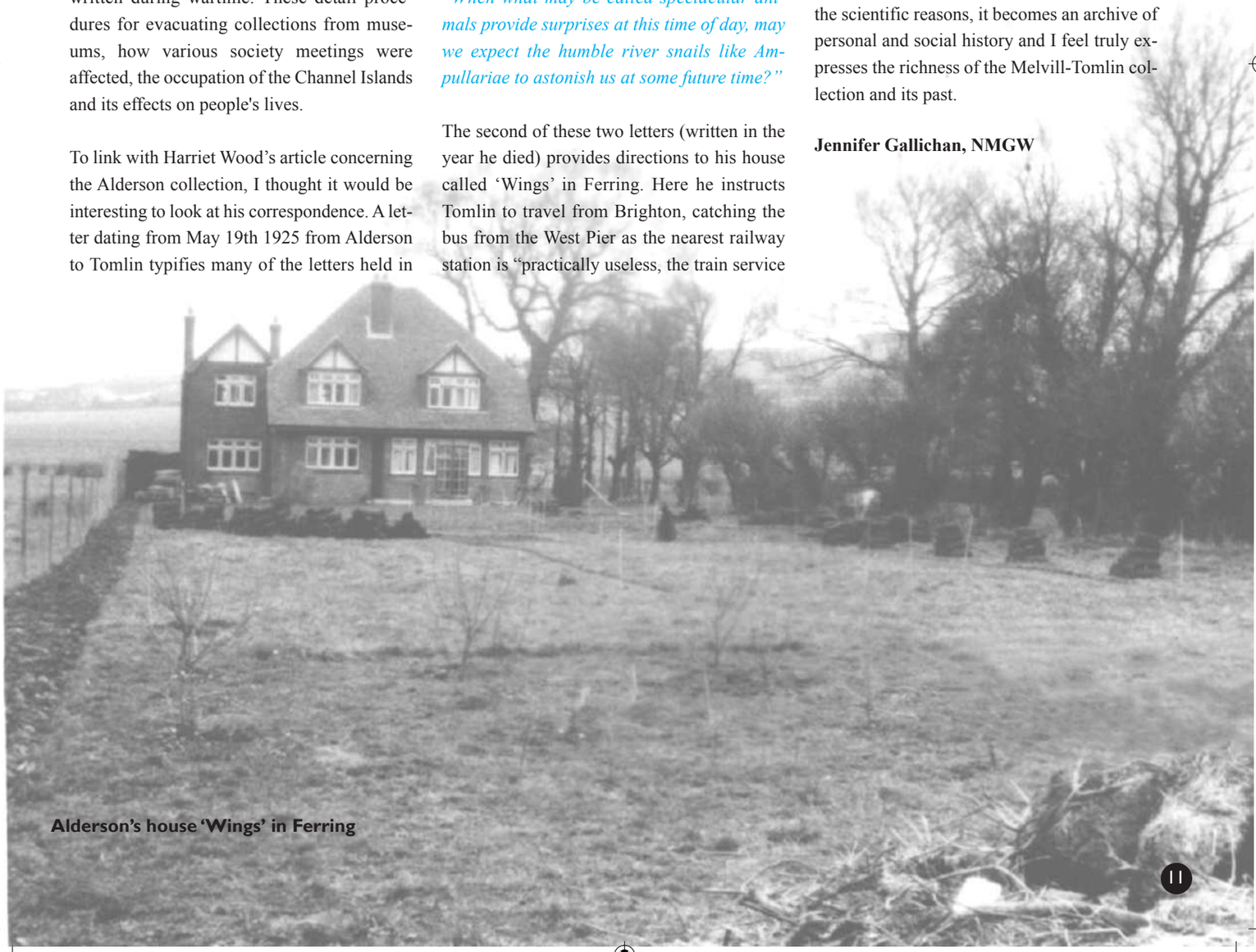
The second of these two letters (written in the year he died) provides directions to his house called 'Wings' in Ferring. Here he instructs Tomlin to travel from Brighton, catching the bus from the West Pier as the nearest railway station is "practically useless, the train service being, as you justly remark 'putidius' ". He encloses a black and white photo of his house and garden, which lay "right under Highdown Hill but on the otherside of Littlehampton Road".

Letters such as this really help to develop a sense of the characters of these collectors, transforming them from greying portraits and



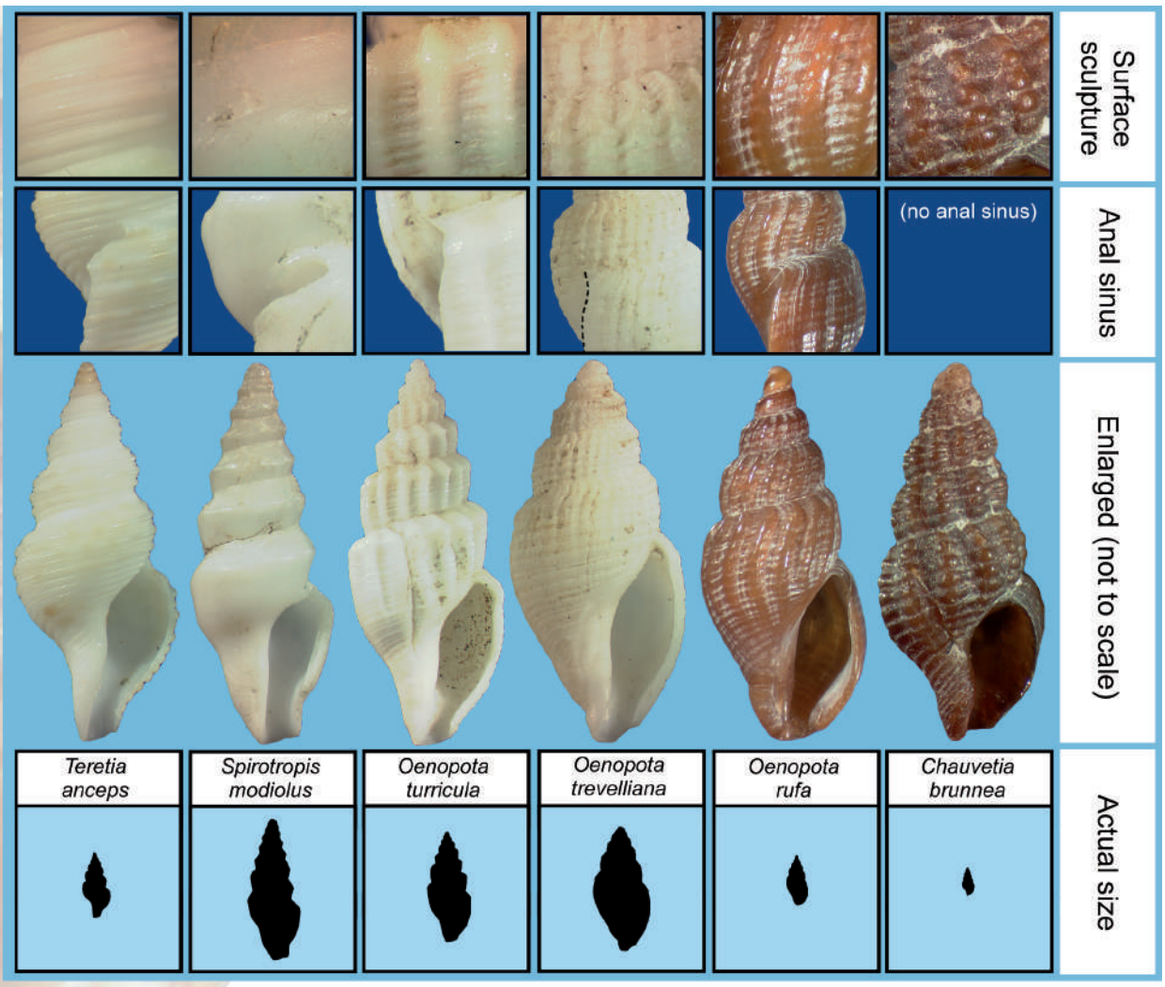
bringing them to life. In this way the archive forms an invaluable resource for more than just the scientific reasons, it becomes an archive of personal and social history and I feel truly expresses the richness of the Melvill-Tomlin collection and its past.

Jennifer Gallichan, NMGW



Alderson's house 'Wings' in Ferring

A Colour Guide to British Turrids

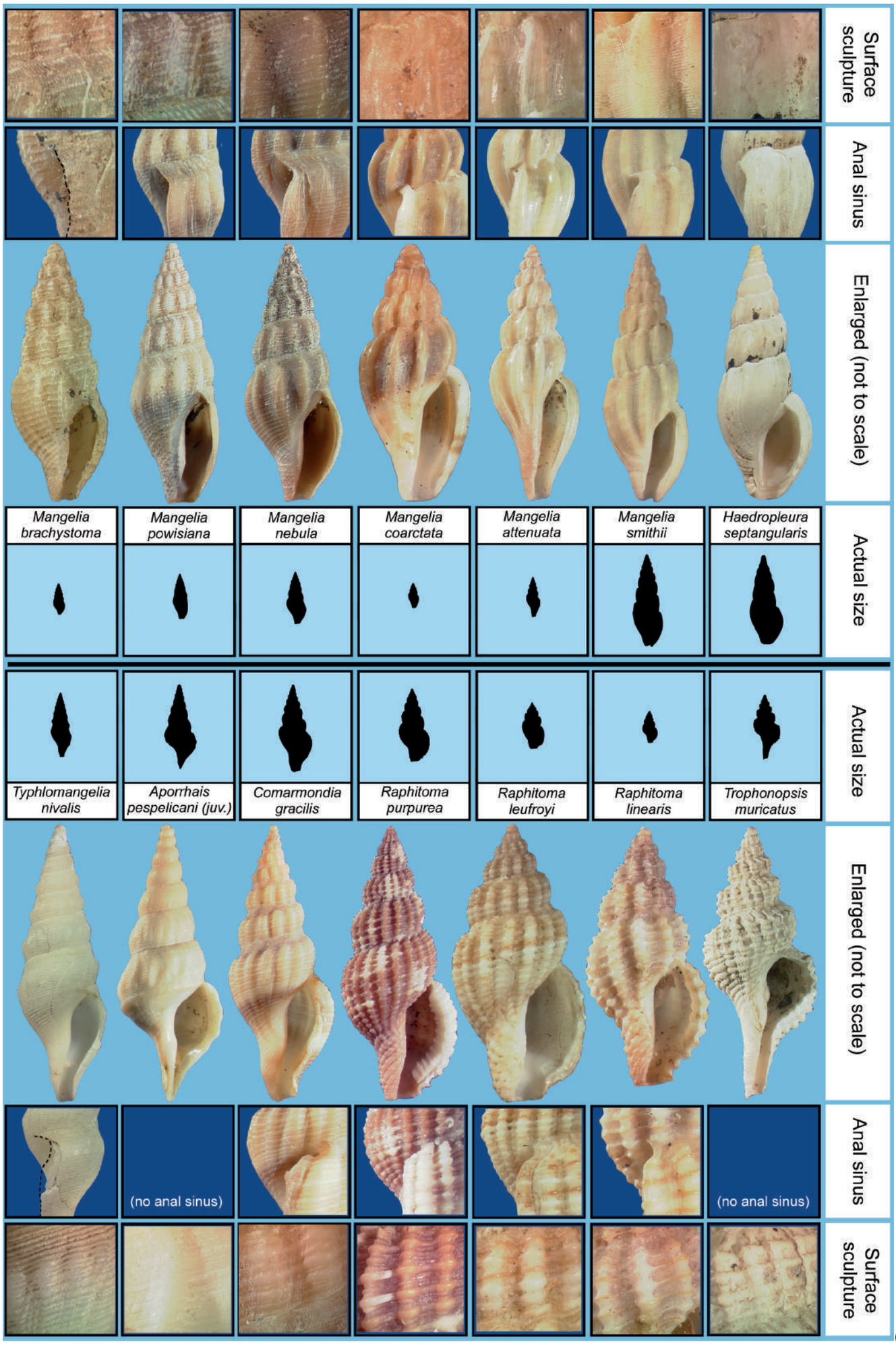


Turrids belong to the superfamily Conacea which includes the tropical cones and terebrids. Graham (*British Prosobranch and Pyramidellid Gastropods*, 1988) covers 23 species from 'British' waters. Smith & Heppell (*Checklist of the British Marine Mollusca*, 1990) list considerably more but they include many deep water taxa. Turrids may be characterised by the presence of a siphonal canal, an anal sinus, and some combination of axial and/or spiral sculpture. Many species have a highly ornate protoconch which may be seen under high magnification (although this feature may be lost, even in live specimens).

This guide includes most of the turrid species that have been recorded on the British continental shelf (to 200m depth). Also included are three species which are not turrids, but which often get mistaken for them: *Chauvetia brunnea, Trophonopsis muricatus* and juvenile *Aporrhais pespelecani*. However, the absence of an anal sinus immediately separates them from turrids. The illustrations show for each species, a magnified frontal view, a silhouette at natural size, detail of the anal sinus, and detail of the sculpture on the penultimate whorl.

Unless you are lucky enough to go dredging or have access to sub-littoral benthic samples, most specimens of turrids will be encountered only as dead shells cast up on the shore. Unfortunately, this inevitably results in wear to the specimens and important diagnostic features such as protoconch sculpture are lost. However, there are some species that may be found living on the shore at extreme low water spring tides (ELWST). *Raphitoma purpurea* and *R. linearis* may be found on the undersides of rocks and *Mangelia coarctata* is sometimes retrieved in samples of weed-washings. Further south, on the Channel Islands or northern France for example, species such as *Mangelia nebula* and *M. powisiana* may occasionally be found burrowing through silty sand at ELWST. Three species, *Teretia anceps, Spirotropis modiolus* and *Typhlomangelia nivalis* are recorded principally from northern and deeper waters near the shelf edge, and are, therefore, unlikely to turn upon the shore.

Photography and layout by Ben Rowson at NMGW.


Surface sculpture
Anal sinus
Enlarged (not to scale)
Actual size
Mangelia brachystoma
Mangelia powisiana
Mangelia nebula
Mangelia coarctata
Mangelia attenuata
Mangelia smithii
Haedropleura septangularis
Actual size
Typhlomangelia nivalis
Aporrhais pespelicani (juv.)
Comarmondia gracilis
Raphitoma purpurea
Raphitoma leufroyi
Raphitoma linearis
Trophonopsis muricatus
Enlarged (not to scale)
Anal sinus
(no anal sinus)
(no anal sinus)
Surface sculpture

Molluscan Conservation Statuses:
A summary of the current situation

Various protective designations and conservation statuses have been given to those native plants and animals considered to be of conservation importance. A combination of rarity and threat to existence have been used by a number of schemes, several of which adopt a hierarchical system of threat-based categories. It is now over 22 years since a few molluscs were given protection by the Wildlife and Countryside Act and 12 years since the Government's Joint Nature Conservation Committee (JNCC) published the *British Red Data Books: 3. Invertebrates other than insects* (Bratton 1991), which included 33 RDB species of mollusc. Of particular importance was the launch of the Government's UK Biodiversity Action Plan in 1995 (HMSO 1995), with its Biodiversity Action Plans (BAPs) for Priority Habitats and Priority Species including 14 Priority Mollusca.

Since the appearance of the RDB and BAP Priority molluscan lists, considerable progress has been made in advancing knowledge of both our rarer BAP species, but also many less threatened species. Publication of the Conchological Society's second and greatly enlarged non-marine Atlas (Kerney 1999), added much new biogeographical data. Additionally, in only about eight years, work on the BAP Priority Species (funded and led by the governmental agencies English Nature, The Countryside Council for Wales, Scottish Natural Heritage and the Environment Agency) has considerably increased our understanding of the ecology and ranges of many threatened species.

In 2005 the JNCC will be undertaking a thorough review of the BAP Priority and Species of Conservation Concern listings. The Conchological Society has been invited to assist in reviewing the BAP lists and recommending where changes might be made. With so much new information appearing as a result of both the BAP initiatives and the continuation of the Society's recording schemes we are in an excellent position to play a full part in this process. It therefore seems timely to undertake a summary of the Mollusca currently appearing on the key conservation related lists and statutes to assist in the initial stages of the BAP review process.

For each of the categories appearing in the summary tables, short explanations follow to help in understanding the meanings of the various designations:

1. Red Data Books: The RDB categories used by Bratton (1991) are similar to those appearing in *The British Red Data Books: 2 . Insects,* (Shirt 1987), who closely followed those used by the International Union for the Conservation of Nature (IUCN).

2. Biodiversity: The UK Steering Group's Action Plans: The BAP plans were published in 1995 (HMSO 1995). Initially these consisted of three lists; the 'short' 'middle' and 'long' lists of globally threatened species. In 1998 these were rationalised with Priority Species combining the 'short' and 'middle' lists to create the Priority Species with the 'long list' becoming Species of Conservation Concern (SoCC). Selection for the Priority Species was based on the following 5 criteria:
1. Threatened endemic & globally threatened species.
2. Species where the UK has more than 25% of the world or appropriate biogeographical population.
3. Species where the number or range has declined by more than 25% in the last 25 years.
4. Species foud in fewer than 15 ten Km squares around the UK.
5. Species for which the UK has international obligationsor which are protected under UK legislation.
Arguably only a proportion of the UK Mollusca conforming to these criteria actually became Priority Species (the ones where Biodiversity Action Plans has been produced followed by funded research). Species on the SoCC list have received very much less attention than the BAP Priority species although, in some cases, they may be more 'deserving cases' in conservation terms.

3. The Wildlife and Countryside Act (1981): Several molluscs appear on Schedule 5 of the Act, which provides full protection for a few species deemed to be in danger of extinction in the UK without the use of conservation measures. A few changes have occurred to the protected species list as a result of the 5-yearly 'quinquennial' reviews; these are shown in the summary table below.

4. The Berne Convention (Convention on the Conservation of European Wildlife & Natural Habitats: Two UK molluscs appear on Appendix III, which regulates the exploitation of listed animals (in at least some countries).

Summary of Red Data Book criteria (modified from Bratton, 1991*)

Threat category	Summary of criteria used (in 1991*)
Endangered = RDB 1	Species in danger of extinction, includes single populations, some species present in especially vulnerable habitats and those that having shown a continuous decline over 20 years are present in 5 or less 10 km squares.
Vulnerable = RDB 2	Species that are on the brink of entry to RDB 1 threat. The category includes taxa where populations are all decreasing because of habitat damage or disturbance; species with seriously depleted populations or those with populations that although possibly abundant in some locations are under threat from various factors throughout their range.
Rare = RDB 3	Taxa with small populations not deemed to be RDB 1 or 2 but with localised populations and at risk. Usually such taxa are unlikely to exist in more than fifteen 10 km squares or rather more than this number if occupying small areas of vulnerable habitat.
Insufficiently known = RDB K	Taxa suspected of falling into either RDB 1, 2 or 3 about which there is insufficient data.

5. EC Habitats Directive (on the conservation of natural habitats and of wild fauna and flora): Some species (all BAP Priority species) appear on Annex Iia, which requires member states to designate protected areas (SACs) for these species. One UK species also appears on Annex Va, which governs the management of exploited species.

6. The JNCC 'Recorder' software package: Early versions of 'Recorder' included species of 'lesser importance than those listed on

Molluscan conservation statuses

	RDB	BAP Priority	BAP SoCC	WCA Schedule 5	Berne Conv.	EU Species Habitats direc.	'Recorder' pre 2002	'Recorder 2002'	Overall status might: ▲ go up ▼ go down ■ remain as present ? unclear
Non-Marine & brackish Species:									
Valvata macrostoma	2		✔						▲
Hydrobia ventrosa			✔						■
Hydrobia neglecta			✔						■
Mercuria confusa	I		✔						▲
Marstoniopsis scholtzi	3								?
Truncatella subcylindrica	3		✔						▲
Assiminea grayana							✔ Nb		■
Paludinella littorina	3		✔	S5: 1992					▼
Acicula fusca							✔ Nb		■
Lymnaea glabra	2		✔						▲
Myxas glutinosa	I	✔		S5: 1981					■
Anisus vorticulus	2	✔							▲
Gyraulus laevis							✔ Nb		■
Gyraulus acronicus	2		✔						■
Segmentina nitida	I	✔							■
Catinella arenaria	I	✔		S5: 1981					■
Succinea oblonga	3		✔						▲
Oxyloma sarsi	2		✔						▲
Truncatellina cylindrica	2		✔						▲
Truncatellina callicratis	3		✔						■
Vertigo pusilla							✔ Nb		■
Vertigo moulinsiana	3	✔				IIa			▼
Vertigo modesta	I		✔						▲
Vertigo lilljeborgi	3		✔						▲
Vertigo genesii	I	✔				IIa			■
Vertigo geyeri	I	✔				IIa			■
Vertigo alpestris								NN	■
Vertigo angustior	I	✔				IIa			■
Abida secale							Nb		■
Leiostyla anglica			✔						▼
Lauria sempronii	I		✔						▲
Spermodea lamellata								NN	■
Ena montana	3		✔						■
Phenacolimax major								NN	?
Vitrea subrimata							Na		?
Tandonia rustica	K								?
Malacolimax tenellus			✔					NN	■
Deroceras agreste								NN	■
Macrogastra rolphii							Nb		■
Clausilia dubia			✔				Nb		■
Balea biplicata	3								▲
Monacha cartusiana	3		✔	S5: removed 1998					▲
Ashfordia granulata			✔						■
Perforatella rubiginosa	2								■
Ponentina subvirescens							Na	NN	■
Helicodonta obvoluta	3		✔						■
Helix pomatia			✔		III	Va			▲
Margaritifera margaritifera		✔		S5: 1998 (full protection)	III	IIa Va			■
Pseudanodonta complanata		✔							▼
Sphaerium solidum	I		✔						▲
Pisidium conventus			✔					NN	▲
Pisidium pseudosphaerium	3		✔						■
Pisidium pulchellum									■
Pisidium moitessierianum									■
Pisidium tenuilineatum	3	✔							■
Marine species:									
Stelliger bellulus			✔						■
Ostrea edulis		✔							■
Nucella lapillus			✔						■
Modiolus modiolus			✔						■
Atrina fragilis		✔		S5: 1998 (partial protection only)					■
Tenellia adspersa	K		✔	S5: 1992					■
Caecum armoricum	K		✔	S5: 1992					■
Thyasira gouldi		✔		S5: 1992					▼

RDB categories 1 – 3. These were:
1. Notable A (Na): Uncommon species present in 30 or fewer 10 Km squares or 7 or fewer vice-counties.
2. Notable B (Nb): Relatively uncommon species that occur within the range 16 – 100 10 Km squares or for less well recorded groups, between 8 – 20 vice-counties.
3. Nationally Notable: the latest version of the package, Recorder 2002 only uses the broader Nationally Notable category (a range of 16 – 100, 10 Km squares approximately).

7. A review of the conservation status 'profile' of species: Since most of the conservation statuses were awarded knowledge of the distribution, habitat preferences and general ecology of many molluscs (particularly the BAP Priority taxa) has increased substantially, especially since the start of the BAP work in 1995. Review of the BAP and RDB lists will take place in the next two years and will need to be based, wherever possible on, a sound objective basis. Column 7 of the table includes the author's opinion (which may not be the same as the Society's) as to how the overall status 'profiles' for particular species might go. There is not space in this short article to discuss the reasoning behind these suggestions, but open discussion on the merits of various changes will follow in forthcoming editions of *Mollusc World.*

Thanks are due to Michael Weideli and Deborah Proctor (of JNCC) who both supplied information and gave valuable advice.

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M.J. Willing
Conservation Officer

New from Scotland continued

twice the number of land and freshwater molluscs in the whole country. On the other hand, the north coast, Orkney and Shetland and the east coast has been largely neglected for many years, with few records coming in. Thus there is an excellent opportunity, in fact a necessity, for these coasts, and the waters off, to be revisited to upgrade records to the years 2000 and after. Also with the likelihood of seas getting warmer with global warming, this will probably show with southern species creeping round into northern and eastern waters before effects are seen on the west side of Scotland where adventitious southern species have always been recorded. The one area of Scotland which does not have many records is the southwest coast abutting the Irish Sea. There are few habitats, both onshore and offshore, the area being largely sand or mud with a few scoured rocks, and it must be said, not inviting! Recording should not just be of the large and obvious species, and shellsand, which can provide valuable information, but also the small species such as those which live in crevices and amongst algae and holdfasts.

In conversation

In October 2002 taking a tape recorder with me, I paid Stella Maris Turk a visit at her home in Cornwall to talk over some aspects of her life in natural history and marine recording.

Can we start with your childhood and your early recollections as they relate to your love for natural history?

I was born on the Isles of Scilly where my father was chaplain to the islands of St Martin's and St Agnes. As I was only two years old when my parents left in 1927 (to live in New Zealand), I have no memories of the Isles. However I was to make return visits many years later, mainly for residential natural history courses with FAT (Frank Archibald Turk).

My father had a chaplaincy in New Zealand from 1927 to 1932 and when we returned 'home' it was to Cornwall where I have lived to this day. He had been a schoolteacher before he took Holy Orders and he undertook to teach his four daughters at Trevone, and later Treleigh. The two boys had a more formal education. My younger brother and I were interested in all aspects of natural history, particularly butterflies and birds and we had a range of pets. We kept a little 'museum' in one of the many outhouses of Treleigh Vicarage, where we bred Lepidoptera as well as keeping various curiosities of natural history.

Growing up was tempestuous. Between 1939 and 1941, I was in the Land Army for a short time; assisted in a children's home in Plymouth with one of my sisters until the air-raids forced the home into the countryside; taught in a private school for infants; and worked on a farm at Feock where my father had retired in 1939.

It was while in Plymouth that I was loaned a book called 'The Journal of a Disappointed Man' by W. N. P. Barbellion, This was the pen-name of Bruce Cummings, a naturalist who worked on lice at the British Museum (Natural History) and who had a rare sense of wonder. He wrote so evocatively that he raised intense nostalgia for my earlier interests and I decided to resume my studies. My elder brother had become a teacher and nobly undertook to continue my education which had stopped at 14, enabling me to attempt matriculation by external exam. He arranged for me to attend FAT's Adult Education classes in Biology (a fateful move). I used to cycle from Feock to Redruth where I stayed with my brother and his wife and also attended these biology classes at nearby Camborne. Feock is on the Fal estuary so we lived a few hundred metres from shores that were sheltered and yet fully marine. Here my interest in marine life in general and 'shells' in particular was born and nurtured. A garden shed allowed the creation of another 'museum', with my first small marine aquarium. I wrote a little essay on the marine life of Feock which won me the Sir Edward Nichol Silver medal from the Royal Polytechnic Society.

From those early encounters with marine life on the shore do you have a special memory?

I remember the delight of finding my first so-called 'bubble shell' – *Akera bullata*. A shell collection was started. FAT helped me acquire a microscope through the Exchange and Mart, and I saved up for a copy of *A History of British Mollusca* and their shells by Forbes and Hanley. Fourteen years older than myself, but still only a young man of 30, FAT seemed to know everything, and he certainly had an uncanny knowledge of the key works on zoology and botany, as well as the humanities. He was still scanning the book catalogues up to the time of his death in 1996. And so my commitment increased; but it was joining the Conchological Society that enabled me to place my interest in wider context.

I believe you joined in 1960. Who were some of your first contacts?

By correspondence I was soon in touch with many members most of whom I was to meet later. Cyril Raffray, then the Treasurer, was very welcoming, and I visited him and Peter Earle more than once when in Hampshire. I met Peter Dance and H.E.J. Biggs at the Museum, and helped the latter form Student Membership with *Papers for Students*. Arthur Ellis, Tom and Celia Pain, Nora McMillan and Terry Crowley were amongst those who visited 'Shang-ri La' in these early years, and the few times I came to 'Conch. Soc. 'meetings, it was with Terry. David Heppell recorded in Cornwall in 1962 when he was Marine Recorder; and, with Barbara Stephens, we collected molluscs for the Conchological Society Collections, housed at the Natural History Museum and soon to become part of the National Collection. My activities in marine recording accelerated when, in turn, I became the Society's Marine Recorder (1966-1972). During these years we 'appointed' Area Recorders, and the correspondence and associated identification grew geometrically! Beryl Rands had joined the Society at much the same time as myself, and like me, had found her self quickly 'in office' so our correspondence was voluminous. I met Shelagh Smith when she became Marine Recorder, and collected quantities of relevant paperwork.

In 1972, the Institute for Cornish Studies was established by the University of Exeter and FAT was asked to centralise the biological records. I helped when I could, but from 1972 to 1974 I was also working on Acari (one of FAT's 'groups' on which he had extensive literature) with the County Dermatologist

For many years, from the 1960s, I was involved with Adult Education classes, sometimes jointly with other tutors. As well as indoor meetings, there were many outdoor ones, both marine and non-marine. Survey notes and lists were prepared of everything we could identify, many specimens being sent to various national experts and all being used for the Cornish Biological Records Unit – card-indexed until the start of computerisation in 1985.

This brings us to your interest in the historical aspects of natural history and the people concerned. Do you think that was fostered early in your life, perhaps stimulated by the role your husband Frank played?

Yes, indeed he did and 'what was where' continues to interest me as much as 'what is where'. When with various groups I visited places worked by earlier naturalists, I would

incorporate their records with the relevant, dates and references. In well-worked places like the shores of Falmouth there would be a plethora of early records, dating from the 1840s. In these days of climate change, such records are becoming of greater use.

Now that all these records are computerised, together with those from published literature (which was combed for Cornish material), a wealthy databank has been established. It is fascinating to see the patterns of recording since the mid-18th century. Cornwall and the Isles of Scilly have always been of interest to naturalists because of their geographical position. Thus, many early naturalists - Jeffreys, Forbes and Hanley - tended to go to the far north and to the far southwest to compare the two. Residents like William Borlase and William Pennington Cocks and the botanist Hamilton Davy would receive requests for information and/or specimens from up-country naturalists. This tradition has been continued with those of us who live in Cornwall.

In the mid-1980s, the University of Exeter employed Dr Colin French to devise a system that would encompass all the data on the existing record cards. This index and much more was duly computerised, and on my computer I have a copy of the 1,300,000 records which cover about 23,000 species. Cornwall Wildlife Trust is in process of transferring the data to Recorder 2000. In some ways we were too far ahead because there are subsequent computer programmes which are much more easily exported than ERICA.

I think that you now spend a good deal of time checking the computerised records? This must be an essential task because with all the help you had from volunteers and government-paid keyers, inevitably there must be errors that have got into the system.

Yes, sources may be left off, map references be too detailed or insufficiently detailed, the record attributed to the wrong collector and so on. So it is a constant task of re-evaluation, but never dull, as it enables me to re-live the past I knew, as well as contemplate the past before my time.

Stella, you have mentioned some of the people involved in conchology but one name which hasn't come up is Fowler.

I corresponded briefly with TGWF, but never met him. When he lived at Sennen near the Land's End he was delighted to find stranded *Janthina* species, including *exigua* and the shells of the tiny cephalopod *Spirula spirula*. Specimens which he had collected live and carefully cleaned, were sent to many museums. The bulk of his collection was left to the Natural History Museum, but a large number of the Scillonian shells went to the Isles of Scilly Museum where Barbara Stephens and I displayed them many years ago. He was a voracious collector, always looking for the biggest and the best. I was told by Norman Holme, that he used to keep his taxi waiting whilst he and his 'man' would dig so enthusiastically that he was actually warned off some of the shores.

It has been quite something to winkle you out of Cornwall!

Every time I went out it was foraging for Cornwall, whether it was the library at the Plymouth Marine Laboratory or the Natural History Museum. I was more ready to travel then than I am now; but that isn't saying much. All I know of London is the Mollusca section at the NHM! With one or other of my naturalist friends, we would catch the 05.00 train from Cornwall and be walking up the steps of the Museum by 10.30!

Yet you have broad horizons so you have, in a way, travelled through your literature and your correspondence without stirring from Shangri-La.

That is a great compliment. I've always admired those naturalists who can stay in one place and learn in depth about their own immediate area and yet see it in context, but I have never felt one of them. However, some people need the stimulation of travel.

Now we've mentioned 'Shangri-La' which is the home you have had for many years.

with Stella Turk

You have ventured out of Cornwall seldom?

When I accepted the honour of Presidency of the Society it was understood that I would rarely be able to come to London. Luckily my predecessor Francis de Bartolomé was happy to continue to chair meetings.

I remember your attendances very clearly because your term as President began when I attended my first meeting and you were able to help me identify all the tiny shells I had taken from shell sand from Porthcurno.

I well remember, and I thought the 'bring and display' a splendid way of meeting others and sharing their interests. As for Porthcurno, I have often puzzled as to why there should be so great a diversity of species on such an exposed coast line. The sand is granitic, derived from the dominant rock Other famous catchment areas are on the north Cornish coast where mighty sand dunes roll inland like the spectacular waves.

I think you played a prominent part in the computerisation of Cornish records didn't you?

FAT bought 'Shang-ri La' in 1939 and I met him in the early 1940s. He believed that one should finish travelling early in one's life giving time to meditate on one's experiences. His library was formed by scanning book catalogues from all over Europe to feed his twin interests in Oriental Studies and Natural History (he held a double Readership with the University of Exeter). He used to say that his hobby was "staying at home".

Before we close, I'd like us to mention your garden which is such a delight with its various huts dedicated to different aspects of natural history.

I share 'Shang-ri La' with botanist Rose Murphy, who has lived here almost as long as I have. She looks after the lower half of the garden where she has her botany garden huts, complementing the two zoology huts. The garden has matured over 60 years and is venerably clad with ferns, lichens and mosses, whilst the bamboo and maples add a suitably oriental flavour.

I believe you have a little tailpiece to conclude our conversations -

continued on page 20


1


2


3


4

David Long


5

Geraldine Holyoak

These images relate to specific articles within the magazine.

1 - 3. See captions on facing page.

4. *Phenacolimax major.* Page 3.

5. Weedy bulb field near Middle Town on St. Martin's.

6. Middle part of Annet with bracken and tussocks of thrift.

(5 - 6. Scilly - 2003. Page 20 - 21)


6

Geraldine Holyoak

On a photo of Charles Oldham *by S. Peter Dance and J. G. J. Kuiper*

In 1960 we joined forces to study the specimens that feature in the *Catalogue of the British species of Pisidium* by B. B. Woodward (1913). More than forty years later we published the results of our study of those specimens in our article 'B. B. Woodward and the *"Pisidium Affair"' (Journal of Conchology* 37: 635-650, 2002). Accompanying our rather specialised text were photos and signatures of the characters caught up in the controversy that followed publication of the *Catalogue*: B. B. Woodward, A. W. Stelfox, R. A. Phillips, and C. Oldham. We were quietly confident that our long-delayed article would satisfy modern students of *Pisidium*. Our confidence was shaken, however, by someone with a keen eye for detail and a sound knowledge of local topography. Shortly after our article was published, one of us (SPD) received the following letter, dated 14th November 2002, from Dr J. M. C. Hutchinson of the Max-Planck-Institut für Bildungsforschung in Berlin:

'In your recent paper in the *Journal of Conchology* on the *Pisidium* affair there is a picture of Oldham beside a lake which you say was possibly in the English Lake District. I am absolutely certain that the mountain in the background is the Matterhorn and that the lake is one of several along the side of the Findeln valley, a side valley above Zermatt in the Pennine Alps. Just on the opposite side of the Findeln valley is the Riffelalp, where Oldham reported on the occurrence of *Zoogenetes harpa* (Oldham, C. 1939. *Zoogenetes harpa* (Say) in Switzerland. *J. Conch*. 21: 142-144).'

We both agreed with Dr Hutchinson that the photo, reproduced on page 18 in its actual sepia colour, shows Charles Oldham scooping in a tarn with what is generally considered to be the most celebrated mountain in Europe as a faint but unmistakable backdrop. Moreover, JGJK had collected *Pisidium* at almost the identical spot in 1967! From a large collection of photos of Alpine tarns he has selected one, reproduced on page 18, showing the Matterhorn in its full splendour from almost the same viewpoint as that shown in the Oldham photo. The tarn portrayed is the Riffelsee, about 7 kilometres east of the famous mountain and about 4 kilometres south of Zermatt, as the crow flies. At an altitude of about 2760 metres, the Riffelsee is situated far above the greatest height Oldham could have attained in the English Lake District!

When studying Woodward's material at London's Natural History Museum in 1960 JGJK had noticed some lots of *Pisidium* specimens preserved there that Oldham had collected at or near Zermatt. The Mollusca Collections Manager at the museum, Kathie Way, kindly sent them to him on loan for examination, with the following result. In each lot the specimens were few in number. One tube, containing a single example of *Pisidium hibernicum,* was labelled by Oldham '*P. hibernicum* Westl. Riffelsee Zermatt, Switzerland 6. IX. 37, C. O. 2194' (BMNH Reg: 20030241). On the reverse side of the label he has written 'circa 8900 ft'. Oldham could easily have sampled the bottom sediment of this shallow tarn. According to labels in other tubes of his Oldham also collected *Pisidium* in the Zermatt area in 1931 and 1934, but it seems he did not collect any specimens in the Riffelsee.

There are surprisingly few specimens from the tarns near Zermatt in the Oldham collection and it is difficult to explain why it contains only a single *P. hibernicum* and no specimens of *P. casertanum* from the Riffelsee. In September 1967, at five different points along the edge of this shallow tarn, JGJK collected more than 2000 specimens belonging to these two species. Oldham, moreover, was renowned for his skill as a collector of *Pisidium*, it being his normal practice to use a fine-meshed metal scoop to sample a locality thoroughly. A scoop similar to the one he may have used at the Riffelsee is owned by SPD, a gift from the late A. E. Ellis, who had received it from Oldham (as a 'duplicate') in 1940. This question, however, is of secondary interest. It is more important to know that the photo of Charles Oldham was probably taken on 6th September 1937, in the shadow of the Matterhorn in Switzerland, not in the English Lake District.

Editor's Note: Dr J.G.J. Kuiper is the world's leading authority on *Pisidium* and as he enters upon his 90th year, we are please to include a photograph of him and Peter (Dance) together (page 18).

see photos on facing page

1. Charles Oldham (1865-1942) scooping for *Pisidium* in the Riffelsee, a tarn at 2760 metres in the Swiss Alps, with the Matterhorn in the background. The photo, probably taken on 6th September 1937, is in the form of a postcard.

2. The Matterhorn, seen from the Riffelsee tarn. The photo is dedicated to Dr J. M. C. Hutchinson of the Max-Planck-Institut für Bildungsforschung in Berlin.

3. S. Peter Dance (left) and J.G. J. Kuiper enjoying a drink after dining in the restaurant 'La Poivrière' at Vaucresson, near Paris, 31st May 2001. Here they discussed the finer points of their article 'B. B. Woodward and the *Pisidium* Affair' which was published 18 months later.

Stella Turk continued

I am an old woman
In 'Shangri-La' shoe
With plenty to do
And more than one book
In which to look
To answer the series
Of often strange queries
Re lice and mice
Fleas and bees
Shellfish and sailfish
And all things nice.

Interview by
Jan Light

Stella's MBE

The Cornwall Wildlife Trust held an Open Day at its headquarters in Allet near Truro on August 21st. The highlight of the day was the presentation ceremony of Stella Turk's MBE. She received this from Lady Mary Holborrow, Lord Lieutenant of Cornwall. As part of her acceptance speech Stella recited a short verse which she had written to express her feelings on being awarded the honour.....

Astonishment

It can't be me
With an MBE.
I don't recognise
Me in this guise.

My Stella Turk
Enjoys her work
And expects no award
When the work is reward.

Cornish natural history
Freshwater, land and sea
Fills my years, and months and days
Yet still has mystery.

Each record has a written word,
a human voice, a human face
Peopling my life through time
as well as over space.

SMT August 2003

Recording Land and Freshwater Mollusca on the Isles of Scilly, April 2003

The Isles of Scilly lie 40 km south-west of Land's End, forming the most south-westerly land in Great Britain, with five inhabited islands the largest being St. Mary's and St. Martin's. Most of the land on the inhabited islands has been influenced by cultivation especially during the years when bulb and flower-growing flourished. Today many of the small fields are abandoned, some stone walls and buildings have fallen into disrepair and bracken is encroaching from the ungrazed coastal slopes. There are few trees on any of the islands, although St. Mary's has a little semi-natural woodland and there are few water-bodies without a saline influence, with streams only on St. Mary's. The natural habitats are mainly rather acidic because of the granite bedrock. As is normal on islands, habitat diversity is restricted, and this together with the relative isolation of the islands may account for the low number of species of land and freshwater molluscs known.

However, the slugs and snails are also surprisingly poorly recorded on these popular holiday islands, where although 50 species have been recorded from SV91 (the richest hectad), for at least 18 species the records are pre-1965 and for a few species the only records are even older. There are only two species recorded for SV80, with three for SV81, and no records at all for the scrap of land in SV90. It also seems surprising that no really 'exotic or alien' molluscan species have been recorded from the Scillies, even as casuals, despite the presence of Tresco Abbey Gardens with their long history of introducing and growing exotic plant species, and the many introduced plant species that have become established on the islands.

I visited the islands for two weeks in April 2003 with two enthusiastic bryologists. The weather was atypically dry and hot throughout, it had not rained for about a month prior to the visit and the dry ground seemed more like that of central Spain in mid-summer than the south-west of England. Conditions therefore seemed very unfavourable for mollusc 'hunting' although the dry weather at least meant that every day could be used, so that 'no stone was left unturned' and gradually the lists grew. We stayed on St. Mary's, to make the most of the regular tourist boats across to the other inhabited islands of St. Martin's, Tresco, St. Agnes and Bryher. However, whilst the boat trips make it easy to travel between the main islands their timetables are arranged with holiday-makers in mind, so they tend to depart mid-morning and return mid-afternoon, allowing only a few hours for recording molluscs. The regular boats do not land on the uninhabited islands of Samson and Annet, although with the help of the Isles of Scilly Environmental Trust we obtained a permit to land on Annet, and helpful local boatmen took us there and to Samson.

The two weeks recording proved very successful with 28 species recorded in SV80, 39 in SV81, 15 in SV90 and 45 in SV91 (Table 1). Ten species of mollusc were recorded as new to the Isles of Scilly. *Boettgerilla pallens* which has been known for many years on the 'mainland' of Cornwall was found under wood just outside the Abbey Gardens on Tresco. Also, like recent experience in Cornwall a *Lehmannia* matching *L. valentiana* was found to be widespread and common on all five of the main islands. It was found well away from houses and the present, cultivated areas, which would seem to suggest that it has been present on the islands for some years.

But it wasn't just the introduced species that were found as new records. Several native species were added to the list: *Carychium minimum* and *C. tridentatum* on St. Mary's; *Leiostyla anglica* in two locations on St. Mary's first in a *Phragmites* bed at Higher Moor and then a more surprising find from litter at the base of bracken and *Festuca rubra* on rather dry coastal slopes of The Garrison (there was an uncomfirmed record of this species from 1852 in 'a garden' which was dismissed by Marquand in 1883). Also *Zonitoides excavatus* proved to be very common at Higher Moor on St. Mary's and small numbers of *Clausilia bidentata* were found in the churchyard at Old Town on the same island.

One of the delights of the trip was the opportunity to visit Annet. This is the most westerly of the 'real' islands (other than rocks), west of St. Agnes. It is a small uninhabited low-lying island, with a granite boulder beach, and is notable for its breeding colonies of manx shearwaters, storm petrels and puffins. Large numbers of nesting birds and the effects of regular drenching with salt-spray greatly influence the vegetation which is a strange mix of thrift, bracken and dry heath. Access is restricted with permits given only for visits outside the sea-

Table 1: Species recorded from the Isles of Scilly in April 2003

Nomenclature follows Kerney (1999).
Abbreviations: **An** = Annet; **B** = Bryher; **Ag** = St. Agnes; **Ma** = St. Martin's; **My** = St. Mary's; **S** = Samson; **T** = Tresco. *denotes first record for the islands.

Species	An	B	Ag	Ma	My	S	T	SV80	SV81	SV90	SV91
Potamopyrgus antipodarum	-	-	x	-	x	-	-	x	-	-	x
**Carychium minimum*	-	-	-	-	x	-	-	-	-	-	x
**Carychium tridentatum*	-	-	-	-	x	-	-	-	-	-	x
Ovatella myosotis	x	-	-	-	x	-	-	x	-	-	x
Physa sp.	-	-	-	-	-	-	x	-	x	-	-
Lymnaea truncatula	-	-	-	-	x	-	-	-	-	-	x
Lymnaea peregra	-	-	-	-	x	-	-	-	x	-	x
Anisus leucostoma	-	x	-	-	x	-	x	-	x	-	x
Oxyloma pfeifferi	-	-	-	-	x	-	-	-	-	-	x
Cochlicopa lubrica	x	x	x	x	x	x	x	x	x	x	x
Cochlicopa lubricella	-	-	x	-	-	x	-	-	x	-	-
Columella aspera	-	x	x	x	x	x	x	x	x	x	x
**Leiostyla anglica*	-	-	-	-	x	-	-	-	x	-	x
Lauria cylindracea	x	x	x	x	x	x	x	x	x	-	x
Vallonia excentrica	-	-	-	-	x	-	-	-	x	-	-
Discus rotundatus	x	x	x	x	x	x	x	x	x	-	x
Arion ater agg.	x	x	x	x	x	x	x	x	x	-	x
Arion subfuscus	-	-	x	x	x	x	x	x	x	x	x
Arion hortensis seg.	-	-	-	-	x	x	x	-	x	x	x
**Arion distinctus*	-	-	-	-	x	-	-	-	-	-	x
Arion intermedius	x	x	-	x	x	-	-	x	x	x	x
Vitrina pellucida	x	x	x	-	x	x	x	x	x	x	x
Vitrea contracta	-	-	x	-	x	-	-	x	x	-	-
Nesovitrea hammonis	-	-	x	-	-	-	-	x	-	-	x
Aegopinella nitidula	x	x	x	x	x	x	x	x	x	-	x
Oxychilus draparnaudi	-	-	x	-	x	-	x	x	x	x	x
Oxychilus cellarius	-	x	-	-	x	-	x	-	x	-	x
Oxychilus alliarius	x	x	x	x	x	x	x	x	x	x	x
**Zonitoides excavatus*	-	-	-	-	x	-	-	-	-	-	x
Milax gagates	-	-	-	-	x	-	x	-	x	-	x
Tandonia sowerbyi	x	-	x	x	x	-	x	x	x	x	x
**Boettgerilla pallens*	-	-	-	-	-	-	x	-	x	-	-
**Lehmannia valentina*	-	x	x	x	x	-	x	x	x	x	x
Deroceras laeve	-	-	-	-	x	-	x	-	x	-	x
Deroceras reticulatum	-	x	x	x	x	-	x	x	x	x	x
Deroceras panormitanum	-	x	x	x	x	-	x	x	x	x	x
Euconulus fulvus agg.	-	-	-	-	x	-	-	-	-	-	x
**Euconulus fulvus* seg.	-	-	x	-	-	-	-	x	-	-	-
**Euconulus alderi*	-	-	-	-	x	-	-	-	-	-	x
**Clausila bidentata*	-	-	-	-	x	-	-	-	-	-	x
Balea perversa	-	x	x	x	x	-	x	x	x	-	x
Candidula intersecta	-	x	x	x	x	x	x	x	x	-	x
Cernuella virgata	-	-	x	-	x	x	x	x	x	-	x
Cochlicella acuta	x	-	x	-	x	x	-	x	x	-	x
Ashfordia granulata	-	x	x	x	x	-	x	x	x	x	x
Trichia striolata	-	x	-	-	x	-	x	-	x	-	x
Trichia hispida	-	x	-	-	x	-	x	-	x	-	x
Pontentina subvirescens	-	x	x	x	x	-	x	x	x	x	x
Cepea nemoralis	x	x	x	x	x	x	x	x	x	x	x
Helix aspersa	x	x	x	x	x	x	x	x	x	-	x
Pisidium casertanum	-	x	-	-	-	-	x	-	x	-	-
Pisidium personatum	-	-	-	-	x	-	-	-	-	-	x
Pisidium obtusale	-	x	-	-	-	-	x	-	x	-	-

bird breeding season, so few people land on the island. Three hours were spent ashore on the island and 13 species of land molluscs were recorded. This total far exceeded what I had expected to find given the small area of land and the relative isolation of the island. Perhaps the most surprising records were of the introduced species *Tandonia sowerbyi* and *Helix aspersa*, which were unexpected on a small exposed island with so little habitat and frequent exposure to salt-spray. They both seemed to thrive in a small area at the top of the beach beneath debris and boulders, but *Helix aspersa* was especially abundant and by far the commonest snail species over the whole island.

It remains the case that no exotic species of land or freshwater molluscs have been recorded on the Isles of Scilly despite the presence 'in the wild' there of many exotic plants, along with alien mosses, liverworts and stick insects, so you wonder what still remains to be found. Botanical gardens and garden centres elsewhere in Britain have produced occasional records of alien molluscs so the 'odds must be high' for such occurrences in the Tresco Abbey Gardens.

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Geraldine Holyoak

Molluscs in the news continued

discharged sewage water. These hormonal changes resulted from brief exposure of the larvae to nonylphenol, at a critical stage in the development of the oyster. This research adds oysters to a growing list of creatures, including frogs, fish and alligators, whose hormones appear to be disrupted by pesticides, detergents, spermicides and cosmetics, all products from human waste. Given the place of the oysters in the food chain such results must be of concern, for the species, as well as to consumer's, and raises the question about the possible impacts of these chemicals on other organisms in similar environments.

Nice, H.E., Morritt, D., Crane, M., Thorndyke, M. (2003). Long-term and transgenerational effects of nonylphenol exposure at a key stage in the development of *Crassostrea gigas*. Possible endocrine disruption? *Marine Ecology Progress MEPS* **256**:293-300

The global market in seafood disperses many live organisms to distant locations. These organisms can be released into the environments of the new locations, where they can establish reproductive populations. The risks of such introductions are thought to be widespread but data are needed to demonstrate any impacts. In a recent paper Chapman *et al* surveyed the west Pacific bivalves that are commercially available as seafood in the United States. 64% were non-indigenous and 30% (11) of these species have now established, self-sustaining populations in the northeast Pacific., with a further three as potential additions to this list. In the USA distributors and consumers are advised to screen imported seafood species for invasiveness, to monitor estuaries and coastal ecosystems for early detection of escapees, and to develop rapid-response plans for containing new invaders.

Chapman, J.W., Miller, T.W. & Coan, E.V. (2003). Live Seafood Species as Recipes for Invasion *Conservation Biology* **17** (5):1386.-1395.

Molecular variation in cockles

Results of a study on the molecular variation of the lagoon cockle *Cerastoderma glaucum* was published recently. The study used the mitochondrial COI gene sequences from samples taken from the northern Baltic to the Black Sea and the Caspian Sea. Scientists found that a major phylogeographic break separated a group of Ponto-Caspian and Aegean Sea haplotypes from those to the west of the Peloponnese peninsula in the Mediterranean and in the Atlantic-Baltic sector. These results suggest that long-term isolation of populations took place in parts of the Eastern Mediterranean or Black Sea basins through the Pleistocene. The subdivision differs from previous views on the systematics of the *C. glaucum* complex, but the pattern is notably similar to that described earlier for some fish species. There is also low level phylogeographic structuring into six regional or local haplotype subgroups within the major Mediterranean-Atlantic phylogroup of *C. glaucum*, which may date back one or several major Pleistocene climatic cycles.

R. Nikula, R. Väinölä (2003) Phylogeography of *Cerastoderma glaucum* (Bivalvia: Cardiidae) across Europe: a major break in the Eastern Mediterranean. *Marine Biology* **143** (2): 339 – 350.

Compiled by Mary Seddon

Diary of Meetings - Conchological Society

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

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

Members attending indoor meetings in the De La Beche Room at the Natural History Museum, which is not in a public access area, will need to sign in at the visitors' window in Museum Lane. Please remember to sign out again when leaving so that Security know that you have left the building.

Key to meetings:

NHM	=	Natural History Museum, London, indoor meeting
FIELD	=	Field Meeting at outdoor location
WKSHP	=	Workshop on molluscan topics

NHM – *Saturday 13 December 2003:*
14:30 in the De La Beche Room.

We welcome as Guest Speaker John Llewellyn-Jones from West Mersea on the subject of 'Mother-of-pearl molluscs, how they are worked and uses'.

Abstract:
A lecture dealing with the mollusc species used commercially for producing mother-of-pearl; how the material is worked and the different ways it is used will be discussed and illustrated. Objects showing the different styles used in various countries around the world will be on display. Some objects will also be passed round the audience for closer examination.

As it is the Christmas meeting, please bring along an object or objects either made of mother-of-pearl or using mother-of-pearl, simple or complex, little or large, to display for everyone's interest and enjoyment.

NHM – *Saturday 7 February 2004:*
14:30 in the De La Beche Room.

We welcome as Guest Speaker Richard Preece from Cambridge University on the subject of 'Land snails from the islands of the Tristan da Cunha group (South Atlantic)'.

Abstract:
Tristan da Cunha is one of the most remote inhabited islands in the world. It is the largest of four volcanic islands that form the Tristan-Gough group situated in the middle of the South Atlantic, about 2800 km from South Africa and 3200 km from the nearest point of South America. Three islands, Tristan, Inaccessible and Nightingale, lie close together and form the northern group, whereas Gough lies about 350 km to the SSE. Dispersal to such remote oceanic islands obviously presents severe difficulties to those organisms lacking any ability to fly. Nevertheless, two indigenous genera of land snails occur. The first includes a genus (*Tristania*) originally believed to be endemic to these islands. However, recent work has shown that *Tristania* is congeneric with the clausiliid genus *Balea*, known from the Palaearctic region. This therefore provides one of the most spectacular examples of long-distance passive dispersal reported for any land snail. The second indigenous family includes at least four species of Succinea, 3 of which are undescribed. The distribution and ecology of all these indigenous species will be discussed. The islands are seldom visited, except for the annual visit of the supply ship. Nevertheless, a number of species (3 species of land snail and five species of slug) introduced by humans have now become naturalised on the islands. These introduced taxa have western Palaearctic origins but are likely to have reached the Tristan-Gough islands with supplies imported via South Africa.

Cardiff - *13th/14th March:*
National Science Week at the National Museums and Galleries of Wales, Cathays Park. The Conchological Society will be represented. Children particularly welcome.
For further details please contact John Llewellyn-Jones (01206 381650) (home)

Edinburgh - *Saturday 13 March:*
Molluscan meeting in the Eric Liddell Centre. For further details please contact Adrian Sumner (01620 894640) (home)

FIELD – *Saturday 27 March:*
Worcestershire
Leader: Ron Boyce (0118 935 1413)

Another opportunity to search for *Phenacolimax major*. Meet in the Talbot Hotel car park at Knightwick (Grid Ref: SO733560) at 10:30.

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

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

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

FIELD – *Wednesday 5 to Sunday 9 May:*
Dorset. Marine meeting
Organiser: Lin Baldock.
(01305 852585) (home) lin.baldock@virgin.net

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

The first site to be visited on 5 May 2004 will be Osmington Mills (Grid Ref: SY735817) which has a shore with a variety of habitats: rocky ledges and deep intertidal pools, boulders on rock and gravel, freshwater input. The accessible shore is extensive to both the east and west and access is easy. There is a good pub at the end of the road for lunchtime refreshments. Other possible locations to be included on our itinerary are: Durlston Bay just to the south of Swanage; Chapman's Pool; A site on Portland Bill.; Golden Cap; Lyme Regis.

It is proposed that a dredging trip will be arranged from Lyme Regis using a local fishing boat on either Saturday and/or Sunday depending on interest. We hope to have at least a grab of some description and a pipe dredge. The skipper is very well informed about the variety of subtidal habitats in Lyme Bay having worked there for many years and also having been involved with baseline studies in the area when the possibility of drilling for oil was being investigated. The boat will leave from the Cobb (Grid Ref: SY340916).

Lin will coordinate the records from this field meeting which will be passed on to the Dorset Environmental Records Centre

which has established a marine database for Dorset. The mollusc records will be fed into the Conchological Society's Recorder 2000 database.

FIELD – *Saturday 22 May:*
Branscombe, Devon. Non-marine meeting
Leader: Keith Alexander
(01392 413092) (home)

FIELD – *Saturday and Sunday 5-6 June 2004:*
Sandwich Bay, Kent
Leader: Eric Philp
(01622 718158) (home)

FIELD – *Saturday and Sunday 26-27 June:*
Wyre Forest, Worcestershire
Leader: Harry Green
(01386 710377) (home)

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

WKSHP – *Saturday 7 August:*
Richmond, Surrey

Molluscs in microfossil samples
Bookings to Adrian Rundle (020 8878 6645) (home)

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

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

FIELD – *Friday 24 – Sunday 26 September:*
North York Moors
Leader: David Lindley
(0113 269 7047) (home)

FIELD – *Saturday 9 October:*
Kew area, London
Leader: Simon Terry.

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

We welcome as Guest Speaker Evelyn Moorkens from Dublin with 'News from Ireland - LIVE!!'.

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

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

WKSHP – *Saturday 27 November:*

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

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

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

Forthcoming events in UK:

BRITISH SHELL COLLECTORS CLUB SHELL SHOW,
April 2004
Napier Hall, London, England
Contact: Kevin Brown, 12 Grainger Road Isleworth, Middlesex TW7 6PQ, England

THE MALACOLOGICAL SOCIETY OF LONDON BEHAVIOUR & NEUROPHYSIOLOGY OF MOLLUSCS
Friday 16th & Saturday 17th April 2004
Kingston University, Surrey, UK

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

YORKSHIRE NATURALIST UNION CONCHOLOGICAL SECTION
Indoor meetings in Winter held at Leeds City Museum Resource Centre, Yeadon. Field meetings held April to October. Contact Secretary: D. Lindley, 46 Sutherland Avenue, Leeds, LS8 1BZ Tel: 0113 2697047

Forthcoming events overseas:

WORLD CONGRESS OF MALACOLOGY
11-16 July 2004
Venue: Perth, Western Australia

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

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

Molluscan Aquaculture and Fisheries
Some species of molluscs are important organisms for both wild caught fisheries and for aquaculture. This symposium is for researchers working on wild caught and aquaculture species to discuss the latest advances in the field. Contact: Dr Fred Wells, E-mail fred.wells@museum.wa.gov.au.

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

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

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

Reproduction and developmental patterns
The study of reproduction and developmental patterns in molluscs is now based on thorough studies of reproductive anatomy, physiology and biochemistry of reproduction and intracapsular development, as well as sophisticated studies of the embryonic and larval stages. For contributed papers contact: Dr Helena Fortunato, Smithsonian Tropical Research Institute, Panama, E-mail fortunae@ancon.si.edu

Biology and systematics of opisthobranch molluscs
Opisthobranchs are a small, but structurally diverse group of marine gastropods. Their fascinating biology attracts considerable scientific interest, and the relationships between

many of the major groups are

poorly known. For contributed papers contact: Dr Gilianne Brodie, JCU, Australia E-mail

many of the major groups are poorly known. For contributed papers contact: Dr Gilianne Brodie, JCU, Australia E-mail gilianne.brodie@jcu.edu.au

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

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

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

Social programme: In addition to the paper and poster sessions there will be a full social programme, with excursions on Wednesday planned to Rottnest Island, a dive expedition, river cruise to a winery, and tour of Perth and Fremantle.

Congress Organiser:
Fred Wells (E-mail: wellsf@museum.wa.gov.au)

AMERICAN MALACOLOGICAL SOCIETY MEETING

Saturday, July 31, to Wednesday, August 4, 2004.

This will take place on beautiful Sanibel Island, Florida famous for its molluscan resources. The event will be hosted by The Bailey-Matthews Shell Museum and will have as its main venue the Sundial Beach Resort, located on the eastern part of the island. It is sponsored by the American Malacological Society and the Sanibel-Captiva Shell Club
Special sessions will include Biodiversity of Marine Mollusks, Coastal Molluscan Assemblages as Environmental Indicators; Systematics of Freshwater Gastropods; Terrestrial Mollusks as Agricultural and Environmental Pests and Theory and Practice of the International Code of Zoological Nomenclature. In addition, a special forum organized by Ken Hayes, Anna Bass, and Amy Wethington, all graduate students in malacology, will focus on and discuss common issues and problems faced by soon-to-be professionals in the field.

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

SHELL SHOWS AND CONVENTIONS

A shell show in the US and UK is a competition. Individuals construct exhibits using their shell collections and enter them in various competitive categories. Such exhibits are often very educational and usually very beautiful. There are place ribbons and trophies awarded. There may also be shell dealers and sales booths present. In Europe, shell shows are often commercial expositions at which there may be educational non-commercial exhibits as well.

If you are visiting Florida on holiday why not visit one of the many shell shows. They are open to the public and welcome all shellers, regardless of age, experience and area of interest

Jan. 17-18, 2004
CENTRAL FLORIDA SHELL SHOW,
Orlando, FL, USA
E-mail: dekwait@netscape.net

Feb. 13-15, 2004
SARASOTA SHELL SHOW,
Sarasota, FL Bradenton,
FL 34203, USA
E-mail: shellhunter@att.net

Feb. 20-22, 2004
NAPLES SHELL SHOW,
Naples, FL
The Nature Conservancy,
E-mail: schmelz@att.net

Feb. 27-29, 2004
ST. PETERSBURG SHELL SHOW, Treasure Is., FL, USA.
Exhibits accepted at web site:
http://web.tampabay.rr.com/shellclub

Feb. 28-29, 2004
XVIéme RECONTRES INTERNATIONALES DU COQUILLAGE Bourse de Commerce, 2 rue des Viarmes, Paris, France (Note: new venue for 2004) E-mail: wantiez.mada@liberty-serv.fr

Mar. 20-21, 2004
5th AUSTRALIAN NATIONAL SHELL SHOW,
Morphettville Race Course,
S. Australia
E-mail:
hunt.trottpk@chariot.net.au

June 27-July 2, 2004 CONCHOLOGISTS OF AMERICA ANNUAL CONVENTION,
Tampa, FL.
E-mail: rlipe1@tampabay.rr.com

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