

# Mollusc World

November 2017 • Issue 45

**Discovery of  
*Onchidoris sparsa*  
Spawn**

**DNA sequencing the  
narrow-mouthed whorl snail**

**Conservation and Non-  
marine recording reports**

**Lee Bay Bioblitz**



The  
Conchological  
Society  
of Great Britain & Ireland





## From the Hon. Editor

This summer the Conchological Society ran some successful field meetings, including two longer (mostly) marine trips to Orkney and the Gower (Pembrokeshire). Hopefully the results of these will feature in a future issue of this

magazine; a potentially exciting field meeting to Ireland is already in planning for next year (pages 32-33). It is also gratifying to see field meetings organised in conjunction with other organisations; I am sure that this is the way forward for the success of such events in future. A big 'thank-you' is due to all those who arrange these events; if you have not done so in the past please consider organising one yourself next year – even if only one or two others turn up, you are contributing valuable records (including of common species). Please contact the meetings organiser (see page 36).

A revision of Alastair Graham's classic 1988 marine prosobranch and pyramidellid gastropod book in the Linnean Society's Synopsis of the British Fauna series has been needed for some time and two of the three books planned in this series, updated and expanded by Geoff Wigham, Associate Professor at the Plymouth University School of Marine Science and Engineering, have now been published: *Marine Gastropods 1: Patellogastropoda and Vetigastropoda (Synopsis of the British Fauna 60)* and *Marine Gastropods 2: Littorinimorpha and other unassigned Caenogastropoda (Synopsis of the British Fauna 61)*. These are becoming available as I write from various suppliers including FSC and Pemberley Books.

For probably the first time, on 20<sup>th</sup> October this year, newspapers carried the obituary of a snail. The Guardian newspaper's headline ran: 'Snail in the coffin: left-coiling mollusc Jeremy dies after finding love.' The article explained consolingly: 'But Jeremy did not die alone. The lovelorn gastropod had finally been able to mate with another left-sided snail, Tomeu, before he perished. The couple produced 56 baby snails – all right-sided – of which one-third were estimated to be fathered by Jeremy.' It was a rather modern love story for *Cornu aspersum* snail biology...

As usual, please put a (mostly nowadays metaphorical) 'pen to paper' on that article that you always wanted to write for *Mollusc World* but have never quite got around to doing. The darker nights are a good time to get down to some writing (apart from sorting out those shell sand or leaf litter samples)!

*Peter Topley*

## Mollusc World

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

We welcome all contributions in whatever form they arrive (see page 35 for further details).

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No representation is made about the accuracy of information included in any articles, which solely constitute the authors' personal views on the subjects covered, and are not necessarily those of the Hon. Editor or the Conchological Society.

**Front Cover:** Jenkins's spire snail (*Potamopyrgus jenkinsi*) in a local stream at Lee, Devon (see page 4). (photo: Peter Topley)



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## Some Snaily Conundrums

Robert Cameron

I led a field meeting (jointly with the Sorby NHS and the Dearne Valley Landscape Partnership) to Wombwell Wood in South Yorkshire (Grid Ref SE 38 02) on July 1<sup>st</sup> 2017. The wood is mostly an ancient oakwood on Coal Measures sandstone, managed by the Forestry Commission. It is very disturbed by recent logging, and there is a very bad litter problem along paths and rides. It adjoins an area of open grassland that was an opencast coalmine in the recent past. This has been landscaped, and includes a substantial car park.

As expected, the slug and snail fauna was not rich (15 snail and nine slug species being found), though it was sad not to find *Limax cinereoniger*, which occurs in most old woods in the area. The real surprise, however, was that both the most littered areas, and a patch of damper soil with ash and sycamore held very large populations of *Cepaea nemoralis*. While this is present in many similar woods in the area, it is usually hard to find, and often confined to the edges. *C. nemoralis* is famous for its shell polymorphism, and indeed, these populations held both yellow and pink shelled snails, but none with brown shells. Unusually, however, there were no unbanded or mid-banded shells. In nearby Sheffield, very few populations contain only five-banded shells. These many banded shells were mostly of the form known as 'punctate', where the dark band pigment varies in intensity around the shell, and where the upper bands in particular are often reduced to traces (figure 1). While this form is widespread, it seems particularly common in South Yorkshire, while very rare in the nearby White Peak District.

But around the car park, in the open and only about 500 m away from the woodland edge, eight out of nine *C. nemoralis* found had brown, banded shells that are not punctate (figure 1), the exception being a single yellow shell with normal bands. Given the history of the site, these snails must be relatively recent arrivals. Brown shells are uncommon in South Yorkshire, found in only 10% of samples from Sheffield, and they are usually unbanded. While it can be hard to distinguish pale brown banded shells from those that are pink, these shells are typically dark, and easily told apart. It seems most unlikely that they are descendants of those within the wood, so where did they come from?

Short of comprehensive DNA analysis of many populations, we may never know how it comes to be that the wood lacks unbanded or mid-banded shells, nor why brown shells are so common in a nearby population in the open, going against the general trend for darker shells to be more frequent in shaded habitats. In our extensively disturbed landscape, however, these oddities remind us that the accidents of colonisation, including passive transport over greater distances than we would expect the snails to crawl in the time available, may account for many local peculiarities in distribution. In a polymorphic species like *C. nemoralis*, differences like these attract our attention, but there is no reason to think that similar processes are not occurring in species that lack these visible clues.



figure 1: Left and centre: yellow and pink punctate banded shells from Wombwell Wood. Right: a brown banded shell from the car park.



Several Conchological Society (CS) members attended this event at Lee, near Ilfracombe on the north Devon coast, organised by the Marine Biological Association (MBA) in partnership with Coastwise North Devon and North Devon Coast AONB. Lee Bay is set into a valley and habitats include rocky shore, woodland, streams, and cliff-top grassland. The village hall was used as a base with display tables set up by various organisations including CS. Visitors to our stand included several groups of primary school children who enjoyed looking at the examples of marine shells on display, using the microscope and doing a land snail ‘identification quiz’ (figure 1).



figure 2: Above: Lee Bay, Devon; below: Lee Bay from the West. (photos: Peter Topley)

Lee Bay is a fairly exposed shore, open to the north and without much protection from the west; the rock is shattered jagged acid slates, forming gullies and shallow pools. In the middle of the bay a narrow ribbon of sand leads down from the short beach; the sand is mobile, scouring the rocks and gullies. Reflecting this, the list of species listed by NBN as having been recorded from the bay is fairly short - only about 30 species.

The strandline produced almost nothing - in the centre of the bay, high water reaches the sea wall, and there was very little shell lying on the sand; to the east, there is a strandline of sorts but the beach there is stony, with only the occasional battered limpet.



figure 3: *Melarhaphe neritoides*, Lee Bay. (photo: Peter Topley)



figure 1: Bas Payne with local school children and teacher on the CS stand at the Lee bay Bioblitz. (photos: above: Peter Topley, below: Sue Austin)





figure 4: *Phorcus lineatus*, Lee Bay. (photo: Peter Topley)

The rocks had a fair amount of seaweed - mainly *Fucus* with some *Ascophyllum*; there were plenty of limpets, topshells, winkles (figures 3 and 4) and dog whelks, but few other species - even mussels were very scarce, though one specimen of bearded mussel (*Modiolus barbatus*) was found wedged in a crevice. As the tide wasn't low enough to expose much kelp, and the stones we turned had little under them apart from baby top shells and chitons, and as NBN's list included no smaller molluscs - not even *Rissoa parva* - we decided to concentrate on collecting a weed washing sample, even though this was hard work as the pools weren't easy to access, with sparse clumps of ringing seaweeds, including some *Corallina*, but clearly much scoured by sand and small shaley pebbles. Forty minutes of hard work produced a third of a bucket of weed, which in turn produced around 25 species - nothing of particular note, (apart from a damaged shell of the higher shore cave-dwelling *Paludinella littorina* which may or may not be of local origin) - but adding around 20 new species to NBN's list for the bay.

Looked at in one way, this was a small return for the effort; but even though it was trying to rain some of the time, a day on the shore is always a pleasure, especially in congenial company; and we added many more species to the site list than is usually possible from a 'honey-pot' site.

Inland the area designated for the Bioblitz was large, encompassing two wooded valleys with streams along with coastal cliffs and the village itself. Inevitably only a small fraction of this area was covered in the time available and much of the wooded area was not visited; however, a total of 21 species were recorded, including in local streams the almost ubiquitous *Potamopyrgus antipodarum* (see front cover) and the freshwater limpet *Ancylus fluviatilis* (figure 5). Several slugs were recorded including *Arion owenii*\* (figure 6) and a first 10Km<sup>2</sup> record for the introduced Iberian threeband slug, *Ambigolimax valentianus* (figure 7, confirmed by Adrian Norris). An attendee of the Bioblitz brought in a live specimen of the tree snail *Balea sarsii* from a village garden and *Clausilia bidentata* was recorded from an unusual open site next to a stream behind the shore near Sandy Bay. Walls with old mortar and ivy in the village yielded species including *Lauria cylindracea*, *Hygromia cinctella* and *Cecilioides acicula*. Despite a concentrated search of areas of cliff-top grassland, habitat typical for the green snail *Ponentina subvirescens*, this species was not recorded.

It was very encouraging to be part of an event which involved participants from a number of different natural history and conservation organisations and which encouraged adults and children of all levels of interest.

\*See also the Non-Marine recording highlights article in this issue for comments on the distribution of this species.



figure 5: *Ancylus fluviatilis*, abundant under stones in stream on cliff, Lee Bay. (photo: Peter Topley)



figure 6: *Arion owenii*, from under slates by road, Lee Bay. (photos: Alan Outen)



figure 7: *Ambigolimax valentianus*, with accompanying springtails, under plants on top of wall, Lee (new 10Km<sup>2</sup> record for species). (photo: Peter Topley)



figure 8: Wall in the village of Lee, site of several molluscs including *Lauria cylindrica* (right: shell *in situ* in old mortar). (photos: Peter Topley)



## Cataloguing L.W. Grensted

Terry O'Connor

Once upon a time, a kindly old Doctor of Divinity named Laurence William Grensted\* wished to encourage the young son of some family friends in his budding interest in natural history, so he gave the small boy part of his extensive collection of non-marine mollusc shells, collected over many years from all parts of Britain. The kind gesture may have been successful, for that small boy, Mark Williamson, grew up to become a leading population biologist and Professor at the University of York from 1963 to 1984. In 1983, with his retirement approaching, Mark sought out a young Research Fellow in his Department whom he knew to have an interest in snails (me). 'Here', he said, handing over a large box. 'Grensted gave these to me and I'm giving them to you': Mark's talent for concise brevity was something of a by-word at York. For years, the collection did good service as a comparative collection for the identification of mollusca from archaeological samples. Now, in my retirement, I am recataloguing the collection, my 1980s listing being incompatible with any software this side of a clay tablet, and taking more of an interest in what it says about Grensted's collecting habits nearly a century ago.

Most of the collection consists of round, glass-topped card boxes containing from one to many shells, with a species name and, usually, location and date written on the paper underside of the box. Very few of these labels are illegible to any degree. With a few exceptions, the specimens are nestled into a white or black fibrous packing material a little stiffer than cotton-wool. The containers are in several sizes (figure 1). In a few cases, the labelling acknowledges that the specimens were donated by another collector, with the names of Tomlin and Fulton occurring most often, and some specifically state 'coll. LWG'. In the absence of that notation, and given the direct provenance of the collection, I assume that all other specimens were collected by LWG himself. When I showed some images of these specimens at a Conchological Society meeting a few years ago, some doubt was expressed that the handwriting on the containers was actually LWG's. Again, given the provenance, it is highly unlikely to be anyone else's, and the handwriting and style of labelling matches that seen on the collection at the Oxford Natural History Museum that was directly donated by L.W. Grensted and understood by the Museum to be his own collection.



figure 1: *Aegopinella nitidula* specimens showing a typical range of containers.

Each container constitutes a record on an Excel spreadsheet, simply listing the current species name, original name on label, location, date and any other writing on the label. I photograph the containers in groups by species, with one view to show the specimens and another of the reverse to show the labelling, making it possible to catalogue from the photographs. I currently house the collection in a series of 'Really Useful' boxes, subdivided by species and in current taxonomic order (figure 2). This organisation inevitably means that specimens collected at the same time and place are distributed throughout the collection. For example, LWG obviously had a thoroughly successful time collecting in North Wales during August 1923, as 'Llanfairfechan Aug 1923' recurs on many containers. One of the purposes of getting the collection listed onto an Excel spreadsheet is to make it easier to recombine records by time and place. Most of the specimens were collected during the 1920s, fewer in the 30s and just a few specimens from as late as 1943 (figure 3). LWG died in 1964 and seems to have kept up his natural history interests into old age, so the 1940s cut-off probably reflects the date at which he passed this collection on to young Master Williamson, who would have been about 13 years old in 1943.



figure 2: The collection is housed in 'Really Useful' boxes and tray inserts.



figure 3: The last-dated specimens in the collection, probably showing the approximate date at which the specimens were given to Mark Williamson.

Cataloguing the collection obviously raises some knotty matters of taxonomy, and many (allegedly) happy hours have been spent going back through A.E. Ellis' *British Snails* (Oxford, 1926, rpt 1969) and other sources trying to disentangle synonymy and taxonomic revision. The collection itself shows changes of name, for example as a little zonitid labelled *Vitrea radiatula* in 1923 was named *Zonitoides radiatula* by 1925 (figure 4). Subsequent revisions moved this species on to *Retinella radiatula* by my student days and thence to its current *Nesovitrea hammonis*. A few specimen labels reflect the difficulty of identifying certain species. LWG clearly had issues with the two *Carychium* species, as do most of us (figure 5). Although I am cataloguing the locations as they are given on the specimen containers, the internet has been a useful resource in reassuring me that some places actually exist and that I have read their names correctly. Nearly all of the labels are in black ink: the exception are specimens collected at Blue Anchor, in North Somerset, which are labelled in appropriately blue ink. Coincidence or LWG's little joke?



figure 4: Two containers of *Nesovitrea hammonis* showing a change of taxonomy from 1923 to 1925.

At the time of writing, cataloguing has reached the Ferussaciidae and all of the gastropods are photographed.



figure 5: LWG clearly found separation of *Carychium tridentatum* and *C. minimum* somewhat challenging.

That leaves a lot of *Pisidium* collections to photograph and many more hours filling in Excel records. Once that job is complete, I can begin the more interesting investigation, tracking LWG's collecting trips around the mollusc hot-spots of Britain and reconstructing his species lists for different locations. LWG was Lecturer in the History of Doctrine at the University of Manchester then Nolloth Professor of the Christian Religion at Oxford, so the frequent records from Lancashire, Cheshire and Oxford are unsurprising. Some of the others, such as an outlying cluster of records from Canterbury, may turn out to coincide with an ecclesiastical conference. Or it may be that LWG, like many of us, just enjoyed collecting shells whilst on his holidays.

\*Laurence William Grensted (1884-1964), Canon Emeritus, Liverpool Cathedral; Nolloth Professor of the Philosophy of the Christian Religion, Oxford (1930-1950). Clubs: British Psychological and Royal Entomological Society. Author of: *A short history of the doctrine of Atonement*, Manchester, 1920; *Psychology and God: a study of the implications of recent psychology for religious belief and practice*, Longmans, 1931; *What is the Oxford Group?*, Oxford, 1933, *Jesus and our need*, 1950 and *The Psychology of Religion*, Oxford, 1952.

## Current status of the *Papillifera papillaris* colony at Cliveden Peter Topley

In 2004 a thriving colony of the Mediterranean clausiliid snail *Papillifera papillaris*, estimated at around 5000 individuals, was discovered on the marble Borghese Balustrade at Cliveden in Buckinghamshire (Ridout Sharpe, 2007). The balustrade was brought from Rome in 1896 and the snails were probably introduced with it at that time. Some individuals were observed away from the balustrade on the walls of the nearby pavilion and terrace. I visited this National Trust property in August three years later (2007) and the snail colony remained large with many individuals obvious in the cracks in the marble and brick infilling and amongst plants at the base of the stonework.

I took advantage of a recent visit to the property in July this year to check on the status of the snails ten years on. Major repair and restoration work by the National Trust to the terrace and pavilion is currently ongoing and it was clear that much of the stonework here had been totally cleaned and there was no sign of life anywhere. However, the balustrade itself has currently been left untouched and remains a likely place for the snails with much moss and lichen present. Despite a very thorough check of both sides of the whole length of the balustrade there were no live

snails visible and in total I only found two rather old empty shells (figure 1). This is in sharp contrast to my earlier visit, which was at a similar time of the year. One could speculate about what may have happened to cause the apparent disappearance of many of the snails from this site, but it would be a pity if this colony is now in terminal decline. Further visits in different weather conditions to more thoroughly assess the situation would be useful.

### Reference

Ridout Sharpe, J. (2007) *Papillifera papillaris* (Müller, 1774) in Britain: a giant leap for a small snail. *Mollusc World*, issue 14:12-14.



figure 1: The Borghese Balustrade at Cliveden, Bucks. and a shell of *P. papillaris* from this site (14/7/2017).



I was fascinated by June Chatfield’s article in the last issue of *Mollusc World* about image reversal resulting in illustrations of ‘sinistral’ shells, and thought some additional comments would not go amiss.

Among the very earliest illustrations of British molluscs were those by Martin Lister. In 1678 he published his *Historiae Animalium Angliae* in which all the shells were shown with reversed images (figure 1); he clearly failed to recognise this engraving error prior to publication, and had the illustrations re-engraved in time for a letter published only a few years in *Philosophical Transactions* (1684, vol. 9, pp 96-99); this time the illustrations show the shells correctly dextral (figure 2).

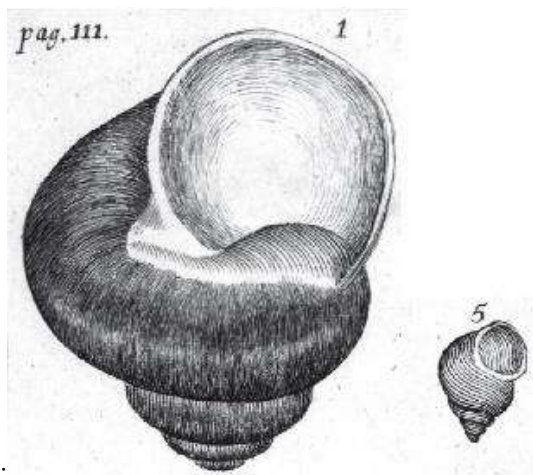


figure 1: Martin Lister, 1678, *Historiae Animalium Angliae*.

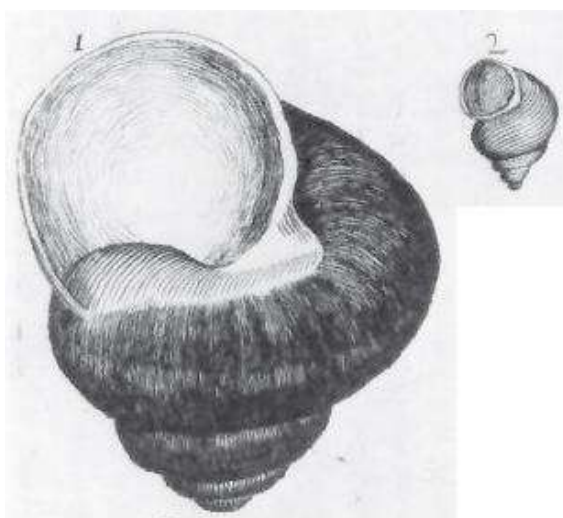


figure 2: Martin Lister, 1684, *Philosophical Transactions*.

One of the most famous engraving errors is that of *Conus marmoreus* by Rembrandt, dated 1650, now hanging in the Rijksmuseum in Amsterdam (figure 3) – is this the first illustration ever of this species?

It is not the only occasion when this shell has been reversed; a stamp issued by Mozambique in 1989 made the same error (figure 4).

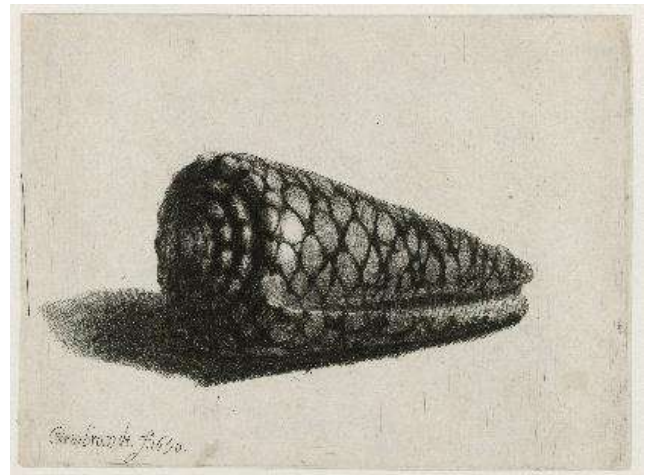


figure 3: Rembrandt, 1650: *Conus marmoreus*.



figure 4: Mozambique stamp issued in 1989.

Stamps are, of course, one of the common media for depicting shells, and reversal of the image as a result of the engraver copying what he saw rather than creating a reversed engraving is a frequent finding. Among the most beautiful stamps ever issued (in my opinion) are the early issues of New Caledonia, and in 1968 a set showed seashells, three of which with cone shells had reversed images (figure 5). These were engraved by Jean Pheulpin (1907-1991), and he really should have known better, being a regular engraver of French and French colony stamps from 1950 to 1988.





figure 5: Set of New Caledonia stamps issued in 1968.

It is understandable that engravers made these mistakes – perhaps they thought that no one would notice the error. Less excusable is when modern photographs are reversed, and this still happens regularly in the world of philately. An example is shown in figure 6, and it is extraordinary that this was not detected during the production process, as the shell on the border is correctly shown, while that on the stamp is reversed.



figure 6: Cayman Island 2010 stamp sheet with dextral and sinistral shells.

A unique example of image reversal arose with the release of a set of stamps by Montserrat in 2005 showing land shells; with the \$6 value depicting *Liguus fasciatus*. The original photograph (by Mark Williams Johnson), shown in figure 7, depicted one

sinistral (on the right) and one dextral shell beside each other on a tree trunk.

The stamp, however, reversed the image (figure 8), so that the dextral shell has become sinistral and the sinistral shell has become dextral. Now that really is strange.



figure 7: Photograph of dextral and sinistral *Liguus fasciatus*.

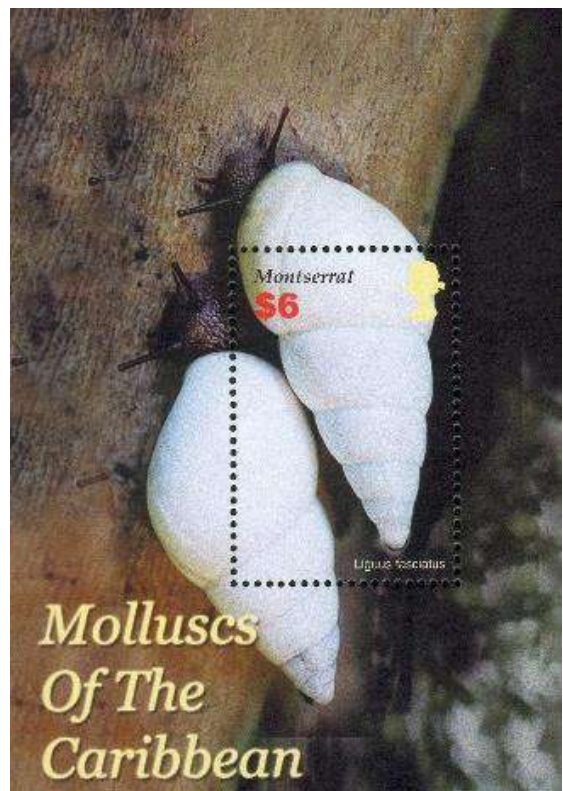


figure 8: photograph reversed on Montserrat 2005 stamp sheet.



# Mystery of the ‘snail rhyme on a sign’

Colin Mcleod

Mollusc World issue 40 (March 2016) included a photo of a sign that Adrian Sumner spotted at Blair Castle, Perthshire featuring a short ‘snail rhyme’ reminding visitors to take their litter home. I thought readers might be interested in this postcard from my collection showing the same rhyme on a noticeboard at the Top of Rowdow, Kemsing (which is near Sevenoaks, Kent) (figure 1). The card was produced by Tunbridge Wells photographer and postcard printer/publisher Harold H. Camburn for T. Brister, Clovelly Stores, East Hill, Kemsing.

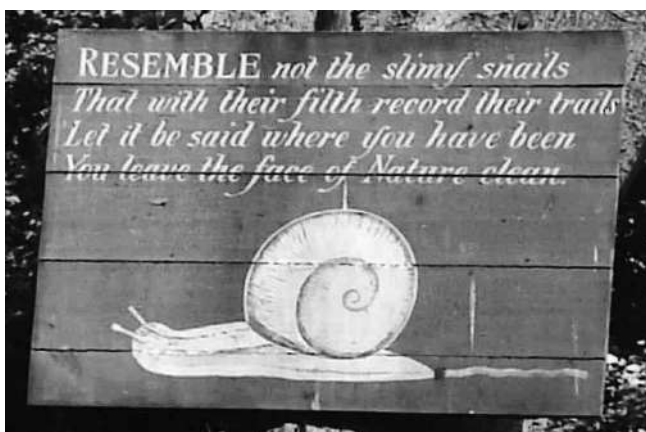


figure 1: postcard of noticeboard at the Top of Rowdow, Kemsing (see text for further details).

I was interested in trying to research the origins of these words a little further. As the notice at Blair Castle photographed by Adrian Sumner gives the initials ‘H.T.’, I first emailed the Atholl Estates Ranger Service to ask who ‘H.T.’ is/was. Polly Freeman, Countryside Ranger, replied that ‘the snail notices were written by Major Trevor from East Haugh (near Pitlochry)’. I found Major Harry Trevor’s obituary in the Perthshire Advertiser (9<sup>th</sup> January 1946). He was born in Wales in 1861, educated at Clifton College, Bristol, and was a veteran of the Indian Army, who served in Egypt, Burma and the North-West Frontier and was a keen sportsman & angler. He moved to East Haugh from his home in Glanweye, Builth Wells in 1937, following the death of his wife in 1933, so was there for less than ten years before he died aged 85. It’s likely that, apart from the shooting and fishing, one reason for his move was to be closer to his only son Mr Raymond S.R. Trevor, who lived at nearby Dalshian, and who died in 1965.

Thanks to the internet, I find that the poem is quite widely known all around the world, and has been quoted in numerous places (with minor variations). The poem apparently dates back to at least 1919, when it appears in MacMillan’s *Teaching in practice, volume 6*, under ‘Health education’<sup>1</sup>. The section was written by Dr Dorothy Hanson, with introductory notes to teachers by Miss Audrey M. Stratford, but neither claims authorship of the poem, nor do they acknowledge anyone else. My own postcard is unposted, but probably dates from the 1920s, although it looks like the hand-painted sign may have been several years old by the time the photo was taken. Sevenoaks isn’t so very far from Dartford Heath, where Dr Hanson worked at Bergman Osterberg’s Physical Training College: could there be a connection? The poem next appears in *The Queenslander* (Brisbane, 4th July 1929)<sup>2</sup>, in ‘A page for the boys’. In his report for 1931<sup>3</sup>, Alexander H. Steele, Sanitary Inspector for the Royal Borough of St Andrews, complains of the problem of litter, and quotes the poem which appeared ‘at Oare, in Somerset’. It appears again in the *New York Evening Post*, 22nd January 1932<sup>4</sup>, where it is quoted from ‘a sign seen near Cardiff, Wales’.

Ernest Mansell in the *Wayfarer’s Book* (Mansell, 1940) quotes a notice with the poem ‘seen near Otford in Kent’, which is very possibly the same sign shown in my postcard. In June 1953, the editor of the *Belfry Bulletin, Journal of the Bristol Exploration Club No. 70*<sup>5</sup> recalls ‘the verse that used to adorn the litter bins in Burrington [Somerset] before the war’. In 1961 Mr Stephen Lee, Chairman of the Gower Association, recited a variation of the poem to pupils of Dynevor Secondary School (*Dynevor Secondary School Magazine 102(29)*)<sup>6</sup>:

‘Resemble not the slimy snail,  
Who leaves a most disgusting trail;  
And be not like the slimier slug,  
For he’s a horrid litter-bug.’

Donald L. Shaw gives a variant closer to the original in the Forestry Commission’s *Gwydyr Forest in Snowdonia – a history* (Shaw, 1971)<sup>7</sup>:

‘Resemble not the slimy snail  
That leaves such filth along its trail,  
Let others see where you have been  
You’ve left the face of Nature clean.’



In the *Redlands Daily Facts* newspaper (California), 3<sup>rd</sup> July 1968<sup>8</sup>, someone called Ezra Shine reported seeing the poem on a sign when visiting Devon. The rhyme is quoted in a New Age book by Frances Nixon (Nixon, 1971)<sup>9</sup> as ‘author unknown’ and also in a book about the plants of Kimberley (Anderson, 2001)<sup>10</sup>, part of South Africa with a hot steppe climate where I would think ‘slimy snails’ might be scarce! It was submitted to the Poem Hunter website in 2009 under the title ‘Face of Nature’<sup>11</sup> with authorship claimed by A.M. Street. No biographical details of A.M. Street are provided, but some other poems on the site by the same author look much more recent than 1919.

Elsewhere online, I found modern photos of similar notices with the same poem or slight variations of it in at least four places, including on all the litter bins at Forde Abbey in Somerset. One has even been applied to the iconic Lord Kitchener recruiting poster of World War I!

While it can’t be ruled out that Major H. Trevor wrote the poem (he would’ve been about 58 years old at its first known appearance in 1919) it does seem a little unlikely for someone with his military background, nor have I found any other poems written by him. Apart from versions listed above which appeared in print, it seems to have been particularly prevalent in south-west England & south Wales, so it’s quite likely that he came across it. I wonder if maybe Raymond Trevor heard the poem from his father and later told it to Atholl Estates, assuming that his father had written it. (I made such a mistake concerning my own grandfather, who used to greatly amuse me as a child by saying he ‘must take his walking stick in case it rains’, and until quite recently I thought this was a saying he’d come up with. It was only decades after his death that I learned that the line is

from a little-known Irving Berlin song, which appears in relatively obscure recordings by several artists including Louis Armstrong. But for the internet, I would probably still be in ignorance to this day!)

#### References

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## Churchyard Bioblitz, Clifton, Beds., 13<sup>th</sup> August 2017

Peter Topley

A ‘Bioblitz’ was organised jointly with the Bedfordshire Natural History Society, partly in the churchyard of this Bedfordshire village. All Saint’s Church has 14<sup>th</sup> century origins with later additions and is surrounded by a churchyard with largely 17<sup>th</sup>–19<sup>th</sup> century headstones, small areas of unimproved grassland which are managed for wildlife, trees (mostly Yew and Sycamore), stone and brick walls with old mortar and log piles. Moth and mammal traps were set up on the previous evening and while others recorded insects and other invertebrates, I concentrated on molluscs. Having lived in the village for over 20 years (Topley, 2010), I have a list of around 26 species of molluscs from the churchyard, but recognised that this could probably be added to, which was indeed the case amongst the species in the final list of 22 found on this occasion.

As on previous occasions here, it was pleasing to find both adult and juvenile examples of the moss chrysalis snail *Pupilla muscorum*. These were in the litter accumulated in mortar-lined drainage channels around the church and had probably originated in the surrounding mossy grass and vegetation. Also found here on this occasion was a single shell of the subterranean blind snail, *Cecilioides acicula*. Other new records were *Nesovitrea hammonis*, along with the tiny *Punctum pygmaeum* (figure 1) and (as in many localities) the green cellar slug *Limacus maculatus* has replaced *Limacus flavus*. Unusually large numbers of Sowerby’s keeled slug (*Tandonia sowerbyi*) were found under some discarded decking in the Rectory garden.

Molluscs recorded: *Aegopinella nitidula*, *Arion ater* agg., *Arion circumscriptus circumscriptus*, *Arion hortensis*, *Cecilioides acicula*, *Cochlicopa cf. lubrica*, *Cochlicopa cf. lubricella*, *Cornu aspersum*, *Deroceras reticulatum*, *Discus rotundatus*, *Limacus maculatus*, *Nesovitrea hammonis*, *Oxychilus draparnaudi*, *Punctum pygmaeum*, *Pupilla muscorum*, *Tandonia budapestensis*, *Tandonia sowerbyi*, *Trochulus hispidus*, *Trochulus striolatus*, *Vallonia costata*, *Vallonia excentrica*, *Vitrina pellucida*.



figure 1: *Punctum pygmaeum* from Clifton churchyard, Beds. (diameter c. 1.5 mm).

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# Discovery of the spawn of *Onchidoris sparsa* (Alder & Hancock, 1846) 171 years after the first description of the species.

Ian F. Smith

In December 1845, Joshua Alder and Albany Hancock obtained a specimen of an unknown seaslug on its food, the bryozoan *Cellepora pumicosa*, from the fishermen's lines at Cullercoats, Northumberland. In 1846 they published an illustrated description and named it *Doris sparsa* (figure 1), now *Onchidoris sparsa* (Alder & Hancock, 1846). They did not observe the spawn, and it seems no one else described it as Thompson & Brown (1984) stated, 'Details of the reproductive cycle are unknown.'



I.F. Smith

figure 1: Image of *O. sparsa* from Alder & Hancock (1845-1855).  
*A monograph of the British nudibranchiate mollusca.*

On 19<sup>th</sup> and 25<sup>th</sup> August 2017, Chris Rickard photographed a specimen and spawn on *Cellepora pumicosa* (figure 2) on a sublittoral, vertical rockface, at 8m depth, at Macduff, N.E. Scotland (figures 3 & 4). This may be the first recorded spawn of the species.

The observed mass was a thick ribbon, attached edge-on to the substrate (figure 5), in the form of a polygyrous, unconvoluted, tightly-coiled spiral of up to nine coils (figure 6). The spawn is very similar to that of *O. inconspicua* which, like *O. sparsa*, eats *Cellepora pumicosa* and *Porella concinna* (figure 7). Several other dorid sealslugs also have similar spawn, but they lay on different species of bryozoan.



figure 2: *Onchidoris sparsa* and spawn on *Cellepora pumicosa* at Macduff, 19<sup>th</sup> August 2017.  
(photo: Chris Rickard)

The extent of the spawning period beyond August is unknown, and it is not known if *O. sparsa* has a planktonic veliger larval stage.

A detailed, revised description of *O. sparsa*, with larger versions of the images in this article, and of further images, can be viewed on-line at <https://flic.kr/s/aHsm7vjCmz>. Alder and Hancock's description and images can be seen at <http://www.biodiversitylibrary.org/item/131598#page/148/mode/1up>.

## Acknowledgement

I am indebted to Chris Rickard for information about his find and for the use of his images for figures 2 to 7.

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figure 3: Vertical rockface, 8 m depth, with *O. sparsa* and spawn on *Cellepora pumicosa* (centre of image). Macduff 19<sup>th</sup> August 2017.  
(photo: Chris Rickard)





figure 4: Sublittoral, vertical rockface with two spirals of *O. sparsa* spawn on *Cellepora pumicosa* (centre of image). Macduff, 25<sup>th</sup> August 2017. (photo: Chris Rickard)



figure 5: Thick ribbon of *O. sparsa* spawn attached edge-on onto *Cellepora pumicosa* in a spiral line. Macduff, 19<sup>th</sup> August 2017. (photo: Chris Rickard)



figure 6: Two polygyrous, unconvoluted, tightly-coiled spirals of spawn at Macduff on 25<sup>th</sup> August 2017. The spawn was deposited six days previously by an observed *O. sparsa*. At the time, the slug was positioned over the upper spiral and was probably in the process of depositing it (see figure 2). It seems likely that both spirals were deposited by the same slug that shifted position and started a second spiral when it ran out of space on the *C. pumicosa* for the first, lower, spiral. If this is correct, a single spiral containing the whole spawn mass would have had about 9 coils. (photo: Chris Rickard)



figure 7: Spawn mass of *O. inconspicua* for comparison with that of *O. sparsa* in figure 6. Both species deposit similar spawn ribbons on *Cellepora pumicosa* and *Porella concinna*. Without sight of the depositing adult, it is doubtful whether the spawns of this pair of species can be differentiated. (photo: Ian Smith)



*Vertigo angustior*, the narrow-mouthed whorl snail (figure 1) is listed under the Natural Environment and Rural Communities Act 2006, Section 41: Species of Principal Importance in England and is an Annex II species of the EU Habitats Directive. It is rare and localised, confined to moist open grasslands and humid low vegetation that is quickly warmed by the sun. It is thought to be a glacial relict whose preferred habitat was restricted by the development of woodland and so became confined to coastal grasslands including sea walls, grazing marsh and dune systems, but also to one area of limestone pavement at Gait Barrows National Nature Reserve (NNR) in Cumbria (Killeen, 2010). It is thought the limestone rock, having prevented the development of tall trees, allowed the snail to survive under mosses in the shallow depressions of the pavement.



figure 1: *Vertigo angustior* specimen from Whiteford Burrows NNR dune grasslands, Glamorgan.

Nevertheless, the limestone pavement at first sight seems remarkably different to the open grassland habitats elsewhere, indeed rather inhospitable on a hot summer's day, the mosses on the rocks dry to a crisp. Presumably the snails find refuge down the fissures in the limestone, but can we be sure it is even the same species?

There was an opportunity to find out the answer to this question by DNA barcoding some *Vertigo angustior* sampled from Gait Barrows limestone pavement in Cumbria and to compare with another population from Whiteford Burrows NNR dune grasslands, Glamorgan. The results strongly indicated that the two populations are indeed very similar, almost certainly conspecific with each other and with continental European *V. angustior*.

Two identical COI (mitochondrial cytochrome c oxidase 1 gene) sequences were obtained from two *Vertigo* collected from the limestone pavement at Gait Barrows, and one from a *V. angustior* specimen from Whiteford Burrows. There were six base-pair differences between the Whiteford and the Gait sequences (about 1% of the positions, so a 99% similarity). There are no *V. angustior* sequences yet on GenBank, so we queried the BOLD Systems BLAST search, which includes unpublished sequences from additional contributors. The BLAST search and neighbour-joining trees place the Gait sequence with those from continental *V. angustior*, to which it is 98.15 - 98.77% similar. The Whiteford sequence is 98.61 - 99.23% similar.

Based on these COI sequences the two populations are almost certainly conspecific with each other, and with continental European *V. angustior*, despite the apparent differences in the habitat. At the microhabitat scale of a tiny snail perhaps they are not so different after all and the snail is well adapted to cope.

Unfortunately drainage, afforestation and other land use changes remain the greatest threats to its survival.

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Contact: Ben.Rowson@museumwales.ac.uk

### CORRIGENDUM

*Mollusc World* Issue 44 (July 2017), p. 14, figure 45.  
Part of the caption to this figure should read:  
4: abundant *Fucus serratus* with small *L. fabalis*.





## Buglife – Marvellous Mud Snails project

Kirsty Grant

This year marks the beginning of a new project, Marvellous Mud Snails, working with a species, the pond mud snail (*Omphiscola glabra*), currently found at only six known sites in

Scotland (figure 1). Funded by the Heritage Lottery Fund, together with Clackmannanshire, North Lanarkshire and East Dunbartonshire Councils, the project covers three aims: a captive rearing and habitat creation programme; a citizen science project to raise public awareness and active learning in schools; and to reassess the current population in Scotland.

Over the next two years Buglife will be working with various partners, including five local authorities and the Royal Zoological Society of Scotland (RZSS) to run the captive rearing programme, which will create a healthier, more resilient population of this species of snail in Scotland. The aim is that by the end, the current number of sites will have increased to at least 20 for this locally rare and overlooked species, with citizen science and public engagement having also increased. Central to this aspect will be the creation of new pond habitats across Scotland, with the help of local groups and volunteers. Towards the end of the project, captive reared populations from local schools will be released into their new homes throughout Scotland.

As a TCV Natural Talent trainee, I will be on board with this brilliant project, helping schools in the local council areas where the Pond mud snail is currently found – North Lanarkshire, West Lothian, East Dunbartonshire, Clackmannanshire and the Scottish Borders, hopefully encouraging children to get excited about sharing a space with this sought-after Scottish celebrity. So far three schools are looking after their tanks of snails and visits to nearby ponds for a session on the life of freshwater invertebrates have also been a success.

Promoting the snail's importance for the Scottish environment will be a main focus and the project will look at bringing in new and engaging ways of learning for the whole community (figure 2). Looking at the natural heritage and historical records of this once wide-spread creature can help understand what conservation is required. Declines in the population, typically found in nutrient poor waters such as pools and ditches, is due to these temporary habitats being lost or degraded through infilling. Many sites have been improved visually for landscape purposes, are affected by scrub encroachment and agricultural run off or are simply under-recorded. Surveys in 2005–6 indicated a decline of at least 64% for historical sites in Scotland and so the reassessment is vitally needed.

Most recently I took a trip to Cumbria to meet with the Freshwater Habitats Trust team who are carrying out work of their own for the Pond mud snail. Linking with other organisations and broadening the range of work with this special species has been particularly rewarding. In a similar way, I have organised samples of the snail from across the

UK to come together for a genetic study with our partners at RZSS, this is further to the six Scottish populations who are being collected for study and should give a picture of the overall species health in the UK.

Through a series of training workshops and enjoyable engagement opportunities for schools and communities the public will play an important role, putting people at the heart of the Marvellous Mud Snails project. I have engaged with almost 900 people over the course of the past five months, at local and school events and found the feedback to be very positive.

We'll shortly be on the hunt for volunteers for things like the creation of new habitat, if you'd like to be involved with the project please contact 01786 447504 or email [Kirsty.grant@buglife.org.uk](mailto:Kirsty.grant@buglife.org.uk).



figure 1: *Omphiscola glabra*. (photo: Paul Baker)



figure 2: Kirsty with local children at a public engagement event. (photo: Daily Record)



# An appreciation of Charles Philip (Phil') Palmer

*Jan Light, Caroline 'Liz' Palmer and John Whicher*

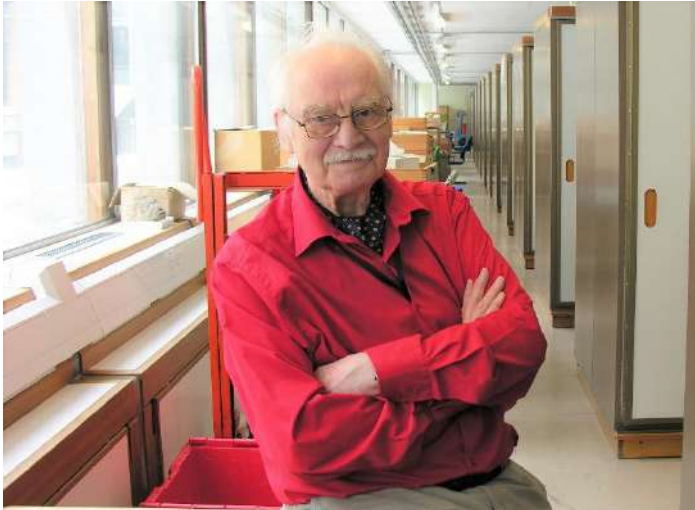


figure 1: Phil' Palmer in the Palaeontology Department at the Natural History Museum, London, June 2009. (photo: John Whicher)

## *Phil' Palmer: A brief biographical timeline*

- Born in London on 23rd March 1927 (an only child)
- 20th October 1958 – following various jobs after a period of National Service, Phil' joins the Natural History Museum (NHM), then still known as the British Museum (Natural History), as a Temp. Scientific Assistant.
- Palaeontology work on molluscs includes scaphopods, bivalves and cephalopods.
- Publishes extensively on fossil molluscs and stratigraphy.
- 1973 – Phil' joined the Conchological Society
- 22nd March 1987 – retires from NHM and begins a three year degree in Philosophy and Logic at Kings.
- Autumn 1990 – returns to NHM as an Associate in Curation until Spring 2011.
- Dies in London on 6th September 2016. Leaves daughter (Caroline 'Liz' Palmer) and granddaughter (Amy Holland).

## *John Whicher writes:*

I first met Phil' as a youngster when I was a keen fossil collector. It would not be an exaggeration to say that Phil' set me on the lifelong hobbies of palaeontology and shell collecting but, more than that, was a strong influence in my decision to make a career as a scientist.

For several years after about the age of 12 I had been taking fossils to the little window at the Natural History Museum where specimens would be sucked in to be retrieved at the next school holidays, duly identified. At some point a characteristic handwriting appeared on the little labels. Then on one visit the girl on the desk told me that one of the staff wanted to meet me. Enter Phil' Palmer. I would have been about 15 I guess, around 1960. Phil' was appointed as a Temporary Assistant on 20th October 1958 and a Scientific Assistant on 5th December 1960. Phil' took me behind the scenes and we talked and talked. It was the first time I had

met a real palaeontologist and I was captivated by all Phil' could tell me and the collections he showed me. So began a lifelong friendship. We went on many field trips together and I learnt the importance of making detailed notes and taking lots of photos, to be developed and printed, in Phil''s kitchen.



figure 2: Dundry Hill, Bristol. Phil' (right) attacking the famous Ironshott Oolite, summer 1972. (photo: John Whicher)

Once I got my driving licence and I could occasionally persuade my mother to lend me her car opportunities opened up. In 1964 Phil' planned a trip up the Jurassic strata of England from Gloucestershire to the Yorkshire coast over a week or so. We camped and bashed the rocks and made notes and had lots of fun. We camped in iconic places (at least to a geologist) like Stonehouse, Waddington, Conesby, Robin Hoods Bay. One night we camped on the top of the 200 ft of lower Lias clays at Conesby mine in Scunthorpe. The mine was working iron ore then with massive walking cranes. Sitting outside our tent after our meagre dinner sipping Kia-Ora orange juice, 'nectar' we called it, we watched the sun go down and both reflected that this is about as good as it gets. Then all of a sudden there was a vast roaring and the blast furnaces of the iron works, which we looked down on, one by one spewed fire into the sky. It was a dramatic sight and we were in silent thought after it. Then Phil' said 'The Cone'. He needed to say no more as we had both had read that horrible story by H.G. Wells worthy of Edgar Allen Poe. Suddenly the blast furnaces now silhouetted against a night sky took on an ominous tone. Up early the next morning we both agreed sleep had been elusive as images from the story flitted though our minds. After we had eaten breakfast a small boy emerged from the ravines of Lias clay below us and started to interrogate us about what we were doing. Phil' was busy concentrating on writing notes of the last days collecting and was not to be disturbed. The boy said to me in a shrill piping voice and a wonderful Lincolnshire accent 'what's with the old man'. Did I think of Phil', who must have been in his early 30's, as an old man - the boy clearly did. – maybe, age is a funny thing. Phil' listening with one ear said to the boy 'my friend, with age comes wisdom enough to know when someone does not want to be disturbed'.





figure 3: Phil' with Ron and Jane Croucher on a field trip to the Dorset Coast, date unknown. (Family photo.)

That was the first of several memorable trips. On another occasion, camped on the top of the cliff at Burton Bradstock in Dorset, we woke up to our water bottles and milk frozen solid. That was at Easter long before global warming. Phil' said 'never mind, who needs breakfast when there are rocks to examine' (figure 3). In no time he was on the top of the rain washed limestone a foot from the edge of a 100 ft drop photographing ammonites of the genus *Zigzagiceras* in situ.

Wisdom and enthusiasm for the natural world are what Phil' bestowed on me from those early days and throughout our time since. I shall remember him for this. Question everything and accept nothing without question. Observe and record first before you start having ideas. Always carry a hand lens, the world is full of interesting small stuff. He was a good and faithful friend and I shall miss him very much, as we all will.

*Jan Light writes:*

I met Phil' Palmer when attending my first Conchological Society (CS) meeting in October 1981. That day is vivid in my memory as if it were yesterday; it has huge significance for me. I had joined the Society during the summer and at that meeting, the first of the CS year, I met other elder statesmen of the conchological world, well-known names in the annals of the Society's history: Peter Oliver, Bob Scase, Fred Pinn, Dr Sandor (I never did know his first name), Tom Pain and Stella Turk. It was Stella's first council meeting since becoming elected President. I would say that Stella and Phil' are the two people to whom I have the greatest debt when it comes to the way the course of my life was changed forever on that October day. Phil and Stella have died within six months of each other, both in their 90s and I feel the loss of them both. It seems appropriate that I would take a 'phone call from Phil's daughter, Caroline, with news of Phil's passing, whilst I was working a shore in Salcombe during a CS field trip.

Phil' was an intelligent and gifted scientist and modest with it. He also had a wonderful sense of humour and was a brilliant conversationalist although not one for small talk! He was hugely helpful to me with his advice and encouragement over the years, as I made the shift from a random collector of pretty shells to someone who needed to apply herself a bit more and would eventually 'get science'. Phil' was good with beginners but they needed to

demonstrate a willingness to learn. He was a stickler for accuracy, a bit of a pedant (note the apostrophe after his name!) and did not suffer fools gladly. At one meeting he once gave me a minor ticking off for using the word 'creatures' in the context of an animal or an organism. Creatures he said were created, this did not apply to living things. He was a natural teacher, with a great ability to share his knowledge and explain his reasoning. He was meticulous in collecting and processing samples, both Recent and fossil. He had a phenomenal ability to write well both scientifically but also in a more popular vein. He sometimes had his own views on taxonomy even swimming against the tide: he tried to make a case for using the genus *Littorivaga* for the *saxatilis* complex (Palmer 1989). My first insight into Phil' the Stickler was on the subject of scaphopods, when I waved a '*Dentalium*' under his nose (his chosen molluscan group). He corrected me and delivered an explanation as to why *Dentalium* was incorrect and I should use the genus *Antalis*. You never forget little lectures like that. He wrote an article for the CS newsletter (Palmer 1983) 'On referring to Scaphopods' and was taken to task by Dennis Seaward in an edgy rejoinder (Seaward 1984), a correspondence I enjoyed. Phil' wrote prolifically and could be very witty. The most enjoyable, laugh-out-loud piece written by Phil' that I ever read appeared in CS newsletter in 1990, entitled 'A Scurrilous Tale of a Conchological Term'.

Phil' was part of the cohort of 'British Marine' in the Society which included Shelagh Smith, Julia Nunn, Celia Pain and others. He once referred to the group as 'The Marine Tendency' (paraphrasing the Trotskyist 'Militant Tendency'), which moniker appealed to the renegade in Phil'. We formed a distinct minority group in a Society which, at that time, was dominated by the non-marine element of membership (figures 4 and 5).



figure 4: Conchological Society dredging trip off Weymouth. Phil' (left) chats to Adrian Rundle. (photo: Jan Light)

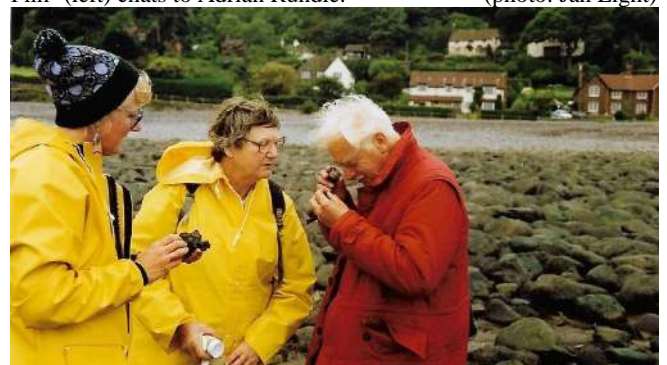


figure 5: Conchological Society field trip to Porlock, Somerset. Phil' with Judith Nelson (centre) and Jan Light.



Non-marine molluscan collecting and mapping formed the original thrust of Society activity, marine recording coming later, and in some ways remained a poor relation for a good while after. It would be Dennis Seaward who would be the person to lift the 'British Marine' game. These days there is a more even distribution of spheres of interest in the Society, including molluscs in archaeology.

I am indebted to Phil' for a valuable friendship that lasted from the moment we met. He took an interest in my family and was later blessed with his own granddaughter, Amy. Having a passion for photography he taught me how to use an SLR camera. He taught several people over the years, I imagine Caroline was his first pupil. But he disliked having his own photo taken, it reminded him that time did not stand still. This is why my selection of photos for this article shows Phil' typically engaging with colleagues in the field.

My greatest debt is that he is the person who nudged me into tackling a taxonomic project after I quizzed him about *Chlamys nivea*, after a field trip to the Isle of Skye. He did not know the answer to my question, he said, I had better go and find it for myself. With my background in modern languages and a modest little GCE in general science, I needed his guidance to conduct a biometric study on shells from several sources, including institutions. I learnt to do standard deviations 'by hand'! The late Nora McMillan loaned me her holdings of what I refer to as the Orkney 'Great White', the large white *Chlamys varia* which can be found on Orkney beaches and, I believe, nowhere else in the British Isles. These shells are a conundrum in themselves: a project waiting in the wings. I wrote my paper on *Chlamys nivea* and it was accepted for the Journal.

Phil' was at his best on a one to one basis, or with small groups. Apart from an informal talk he gave at a British Marine workshop I organised, to the best of my knowledge, he never delivered a lecture because he was fundamentally a shy man. But he was also a maverick and proud of it, and he enjoyed friendships across a spectrum of age groups.

In closing I can only reiterate the sentiments expressed above by John, Phil' was indeed wise, meticulous and uncompromising in his principles. And you could count yourself fortunate to be considered a friend.

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*Caroline (Liz) Palmer writes:*

In the process of having to tell people that my father had died I was thrilled to find that he, who was a fiercely independent and very private person, was well-loved and respected by his neighbours, friends, and colleagues at the NHM and in the Conchological Society.

Despite my parents separating when I was quite young, he was by no means a distant father. I holidayed with him and spent fortnightly weekends at his flat in Sutton. Quiet, leisurely breakfasts with lectures on a wide range of topics – usually his latest interest or passion; construction of bridges (I remember nothing of this), the history of the Wild West (again not much left), the history and development of the bicycle, the history and development of photography. He outlined the battle strategies of the Israeli armies during the Six-Day and Yom Kippur Wars – using the dirty crockery and cutlery!

We had days out to Bookham Common and Boxhill looking at wildlife and photographing things. On rainy days, we went to the cinema or pottered at home. Him, in his workroom looking through his microscope or writing notes and me reading or maybe doing homework (unlikely). He taught me how to use a camera and also how to develop the film and then the prints. He set up a dark room in his kitchen – pinning up black-out cloth on the windows and doors. It smelled slightly musty, damp and very chemically. I think the main and lasting thing he taught me and one which I am probably most grateful for was how to ride a bike.

Holidays with my dad were mostly geological field trips in England. I remember my school friends being slightly bewildered that I went to these strange places (not conventional holiday resorts) whilst my dad effectively 'worked'.

As I grew up, my dad and I remained close and whilst my visits to the flat tailed off we lunched and had supper together regularly. Looking back, I see that our relationship changed as I became an 'adult'. He enjoyed watching me discover new ventures although he was perturbed when I started doing trapeze. He said that watching me perform was once of the most terrifying things ever. He seemed proud of every new venture I embarked on, including motherhood, he was forever saying 'Proud of you, kid'. He also enjoyed the company of his granddaughter and relished their lively discussions about any number of subjects including spelling, a subject about which he held unconventional and robust views as you might expect.

In the last two or three years of his life he was stoical and, mostly, uncomplaining about the various conditions and ailments that made his life difficult. But he hated relying on people to do things for him. The phrase 'I can manage' will stay with me for a very long time!

Dad always found it hard to accept his mortality. Growing up, he maintained that he was '29' years old – this became harder for him to defend as I passed into my 40s! This non-acceptance made it difficult to address what should happen 'after'; to ascertain if he had any particular wishes.



We had several very tricky conversations, mostly resulting in no resolution. We would shrug our shoulders and have a cup of tea. Very near the end, Dad did make it clear that he wanted to be cremated and have his ashes scattered over water. After an initial worry that he might have meant somewhere difficult to administer, I gathered that the coast of England would be fine. We settled on somewhere along the Jurassic Coast and my suggestion that those present would then go to have a nice pub lunch after the ceremony was met with approval.

When the dust settled after the funeral we started to look at places where we could scatter his ashes. There were many places that Dad was very fond of in Great Britain but we finally settled on Kilve Beach near Watchet.

We arrived at Kilve Beach – a typical Jurassic beach with endless steps and shelves in both directions. It was a lovely day with bright blue sky and puffy white clouds. We were a smallish group; just the immediate family plus a few friends, some of whom had not managed to get to the funeral. We traipsed along finding ammonites, shells (live and dead), different kinds of seaweed, photographing cliffs, and remembering Dad (figure 6). Amy, my daughter, found a brilliant place to do the scattering. It was a simple affair, we scattered and said good bye. Jan Light read out several hilarious postcards she had received from Dad during their long friendship. There was lots of laughing and smiling and remembering. We celebrated with afternoon tea in Chantry Tea Rooms on Kilve Beach (figure 7) and then later with a fabulous dinner at the Star Inn, Watchet. It felt like a really ‘Phil’ Palmer’ day: a long informative walk, good weather, followed by good food, good wine, good conversation...things most important to him.

I think my dad would be the first to say that he had had a long, interesting, and on the whole very rewarding, life. He was modest and quiet to a fault, but he did leave me with the

impression that he was “quite satisfied” with his achievements – as he should have been.



figure 6: Limestone ledges at Kilve, walking towards the water’s edge at the end of the bay. (photo: Jan Light)



figure 7: Tea party at Watchet on the day of Phil’s ash scattering. (photo: Nick Light)

## Field Meeting in the Blackbury Castle Camp area of East Devon, 17<sup>th</sup> September 2017

*Keith Alexander*

‘Blackberry Castle near Branscombe in Devon’ is the first locality listed for the slender slug *Malacolimax tenellus* in Arthur Ellis’ *British Snails* (1926). It has not been recorded here since, although is now known from one other site in East Devon. A previous field meeting had focused on Blackbury Camp – an Iron Age hill fort - and the adjoining Castle Down but none were found. On this particular occasion, The Devon Biodiversity Records Centre had facilitated contact with the owners of several ancient woodlands lying to the north and south of the Camp, and the owner of Lovehayne Copse and Radish Plantation had kindly given permission for a party to enter her woodlands in search of the elusive slug. Two members accordingly met at the Camp on a cold but sunny autumn morning and explored the newly accessible area of woodland. The higher woodlands were very dry but the valley bottom below was predominately wet woodland of ash, alder and willow, with areas of tussock sedge *Carex paniculata*, *Sphagnum*, and other wetland vegetation in a complex mosaic. The cold temperature meant that no mollusc activity was apparent,

with searching required to find molluscs sheltering in their refugia amongst debris. Very little by way of fungus growth could be found – *M. tenellus* is known to feed exclusively on fungi. No *M. tenellus* could be found, although the habitat appeared broadly suitable; a relatively small and delicate mollusc like this species can be very difficult to find in its refugia; it is much easier to locate when conditions are warmer and there is plentiful fresh fungus growth for feeding. An ash-black slug *Limax cinereoniger* was found beneath loose bark on a dead tree trunk, but otherwise only common and widespread species could be found. Samples of litter taken from the sedge tussocks disappointingly only contained *Euconulus fulvus*, *Nesovitrea hammonis* and *Oxychilus alliarius*. However, some tiny beetles of interest were present including the very cute, tiny little *Bythinus burrellii* (Pselaphidae), a specialist of tussocks in wet woodland and a species not found by me previously. Although just 1mm long, it has distinctive legs with swollen femora and long palps with a swollen tip, looking like a beetle version of Popeye the Sailorman.



## Giant Snail sculptures visit Southampton

Peter Topley

In June this year I was in Southampton with my daughter, son-in-law and granddaughter to see 'Snailed It', a travelling installation of six giant snail sculptures made from 100% recycled plastic in bright colours of pink, green, yellow, white and blue. The sculptures are by Italian artist Kicco and his company Cracking Art and since 2009 various versions have been on tour, starting in Milan, then subsequently to many countries including the United States, Thailand, Australia, China and Russia. They were installed in the Esplanade of Southampton's large West Quay shopping centre, which was opened in 2000 partly on the former site of the Pirelli Cable Works. Finding the sculptures from the multi-story carpark in this large centre was not as easy as I had anticipated (I am used to mostly keeping my eyes down when looking for snails!), however their sheer size (2.4 x 3 m) eventually gave them away, on a paved area near a surviving stretch of the medieval town walls. From the photos, you can see that the 'Helicid'-like snails are quite stylized, however the body is fairly accurate, with tentacles and foot fringe delineated (although no respiratory pore or reproductive opening – but I guess that would be going too far...).

The Cracking Art Group, a collective of artists from Italy, France, and Belgium, creates public installations of massive sculptural animals made from brightly coloured recyclable plastic. Such works signify and examine the rupture between the natural and the synthetic worlds, with animals representing the former and their plastic construction the latter. The group's name refers to the chemical process of 'cracking,' by which oil molecules are transformed into the building blocks of synthetic materials. Founded in 1993, the group sees its work as an ethical necessity in the face of environmental degradation. It operates under the belief that individuals may easily ignore a water bottle in a stream but are less likely to overlook a huge, fluorescent sculpture and are thus made to think about the effect of plastics on the ecosystem. 'The aim is to connect common reasoning to individual meditation, creating installations with animals that appear unexpectedly in everyday places. The astonishment of meeting an ordinary subject transformed into something extraordinary through its super-size, colour and shape catches people's attention and invites them to see urban life and cities in a different way' (Alton, 2010).

A climax of the installation was a performance by Mayflower Youth Theatre who worked with Southampton Solent University performance students to create a piece inspired by snails called 'Shell we dance', which they performed around the sculptures. Unfortunately, we were not able to be there for the performances, but pictures can currently be viewed online at [www.dailyecho.co.uk/news/15339791.Shell\\_we\\_dance\\_\\_\\_\\_snails\\_inspire\\_performance/](http://www.dailyecho.co.uk/news/15339791.Shell_we_dance____snails_inspire_performance/).

### Reference

Alton P. (2010) in *Treviso 2010 - Cracking Art - Regeneration*, Consorzio Per Mio Figlio, Treviso.





# *Melanoides tuberculata*: just how long has it been in Europe?

Adrian Brokenshire

I was always led to believe that *Melanoides tuberculata* (O. F. Müller, 1774) was of a recent introduction into Europe from the Far East through the Middle East and from there further afield by natural means or more likely by the activities of man through aquaria and other water led activities.

Five years ago, while collecting Pleistocene shells at a small headland by Corallia Beach, Coral Bay, Cyprus, I came across a part consolidated sand/silt lens approximately 1.5 – 2 m below the cliff top from which I collected many *Potamides conicus* (Blainville 1829) (figure 1), a brackish water shell, along with a number of shells of the freshwater *Melanopsis praemorsa* (L., 1758) (figure 2) plus one other freshwater shell, a *M. tuberculata* (figure 3). It seemed a bit of an odd mix for what is principally a marine deposit of boulder beds with cobbles, occasional pebbles and much sand and silt, but I did not give it much more thought, dismissing it as a probable flash flood event deposited into the local marine environment as happens at the present time during the winter months with water off the Troodos Mountains and surrounding area being carried to the sea in extremely large drainage culverts from catchment areas.

During February 2017, I was in Cyprus once again at the same locality doing the same thing, collecting from the Pleistocene of the same headland and cliff section where confirmation of a marine deposit was proven by the large number of marine species (figure 4) including echinoid remains. But once again in one area where sands and silts were slipping out between large rocks the same brackish/freshwater element was there again, *Potamides*, *Melanopsis*, and again a single *M. tuberculata*. How these shells got there is not so much of a concern; I can live with the idea of deposits from flash floods along with the rising or covering of these mainly marine deposits over time, this is not the issue with me, it's the age of the shells, in particular the *M. tuberculata* as it is supposed to be of a recent introduction into Europe.

There is not a lot of modern information on the southern plain of Cyprus regarding its sedimentary/fossiliferous deposits and structures, older papers are full of disagreement about what constitutes Miocene/Pliocene/Pleistocene in Cyprus with little regard for what could also be classed as of Holocene age.

Going back to the shells and *M. tuberculata*, the beds the shells are found in are certainly different from the classic known late Pleistocene of Calabrian age around Larnaka and different from the carbonate cemented thin marine beds overlying blue silts on the Potamos Peninsula, and so could well be Holocene, considering the often uncemented nature of the deposits. More about the age – I will draw on some figures (rounded up), if you take the Holocene as approximately 7000 years and the late Pleistocene at a minimum of 70 000 years, it gives the Cyprus found *M. tuberculata* a potential age that is far older than one where man could have been involved in the distribution. From this conclusion, they should not be there at all, but obviously are, but how?

If anyone amongst the readers has anywhere near an explanation, I would be pleased to hear it.



figure 1: Small group of *Potamides conicus* as an indication of some brackish water influence/occurrence.



figure 2: Shells of the freshwater species, *Melanopsis praemorsa*.



figure 3: Shells of *Melanoides tuberculata* from the same freshwater/brackish deposit.



figure 4: A group of fully marine gastropods as proof of a mainly marine deposit (eg. *Cerithium vulgatum* (right)).



## CONSERVATION & RECORDING COMMITTEE

### 1. What is the Conservation and Recording Committee (CRC)?

Molluscan conservation and recording are two key Conchological Society objectives. To oversee these activities we have three specialist officers for marine and non-marine recording and conservation. The CRC is one of the Society's four committees. In 2015 Robert Cameron retired as chair with the responsibility passing to me. Committee membership remains largely unchanged, comprising Martin Willing (Chair), Adrian Norris (Non-marine Recorder), Simon Taylor (Marine Recorder) Bas Payne, Peter Topley, Mary Seddon, Adrian Sumner, Evelyn Moorkens, Ian Killeen, Robert Cameron and Julia Nunn. This very experienced team represents a wealth of experience covering many aspects of non-marine and marine recording, conservation, ecology and specialist regional issues affecting Britain, Ireland and Europe.

In November 2016, the reformed committee held its first meeting at the National Museum of Wales in Cardiff (preceding the regional meeting) (figure 1). A series of issues were discussed with the main focus on record verification.



figure 1: CRC members in Cardiff (left to right from top): Mary Seddon, Peter Topley, Adrian Sumner, Adrian Norris, Evelyn Moorkens, Ian Killeen, Martin Willing, Bas Payne and Robert Cameron.

### 2. The need for accurate / reliable records – some background.

The Society maintains one of the most accurate and reliable non-marine data sets for Britain. Our records can be viewed through the NBN Gateway (now the 'NBN Atlas') and the National Biodiversity Data Centre (NBDC) (for Ireland). Filtered Conchological Society data is often used in preference to the full NBN data set, which is often 'contaminated' with erroneous or questionable entries.

By upholding rigorous standards our data is invaluable in:

1. Allowing wide-scale condition assessments of both rare and common species;
2. Tracking the spread of native and non-native species;
3. Identifying declines of species both in *range* and sometimes population trends.
4. Maintaining the Society's reputation as a trusted source of British molluscan records.

At present the Society's verification procedures for new records are unclear and possibly inconsistent. Currently the Society offers guidance on our website for those submitting records: <http://www.conchsoc.org/node/2062>. This doesn't, however, explain what our verification and acceptance standards are or provide identification guidance.

### 3. Meeting discussion and decisions:

- A. New Vice-county records and species of conservation importance: It was agreed that generally for new records acceptance a specimen (or specimens) would need to be produced and (except in special cases) retained as a voucher in an appropriate museum (possibly linking to the specimen's origin so, for example, the National Museum of Wales for Welsh finds). A more formalised 'protocol', will be produced during 2017 for discussion and possible adoption at the CRC meeting in November 2017.
- B. Common, 'every day' and non-new VC records: Again, this would be down to a number of factors such as (1) knowing the competence of the recorder, (2) the likelihood of the species being present where it was recorded and possible use of evidence such as photographs.
- C. Plans to develop a verification tool: To assist Society members (and those inputting records to iRECORD and during Bioblitz events) it was decided to develop a 'verification guide tool'. This will be developed throughout 2017 to assist people to undertake simple ID checks. These included:
  - The importance of including **HABITAT details**; some species are generalists whilst others have very specialised habitats. Thus *Pseudanodonta complanata* is most unlikely to be found in still water or *Abida secale* in woodland.



- **GEOGRAPHICAL LOCATION** is revealing; some species are unlikely to be found outside particular regions (e.g. *Cochlicella acuta* mostly in coastal locations and *Clausilia dubia* unlikely outside northern England).
- Is **PHOTOGRAPHIC EVIDENCE** sufficient? For some species, such evidence might be suitable provided that the image shows appropriate views and scale (e.g. a side view is required for verification of *Hygromia cinctella*).
- Is **DISSECTION** required for identification? For certain splits, this maybe essential; thus, in the separation of *Lymnaea fusca* from *L. palustris* and *Ambigolimax nyctelius* from *A. valentianus*.
- The frequent confusion between species with **SIMILAR APPEARANCES** regularly lead to mis-identification. (e.g. *Valvata piscinalis* / *V. macrostoma*; *Segmentina nitida* / *Hippeutis complanatus* and *Anodonta anatina* / *Pseudonadonta complanata*).
- Do species require **EXPERT EXAMINATION** by a Society approved ‘expert’? (Such species include *Vertigo geyeri*, *V. lilljeborgii* and *Valvata macrostoma*).

#### Other items and issues discussed included:

1. It was decided to **retain the Vice-counties** for non-marine recording. Although this system does consist of rather irregular recording units its retention is useful to (1) allow continuity with the Society’s past records and (2) to act as ‘trigger’ for the review of new records.
2. **Non-marine card records.** Work is underway to improve archival storage of the many recording cards stored at the NHM. Work is also in progress to determine if all old records have been digitised.
3. **Marine matters:** In the absence of the marine recorder discussion was limited but the committee believed that:
  - The now discontinued Sea Areas recording system should be replaced with new (more regularly sized) geographical units;
  - That verification procedures adopted for non-marine recording should be broadly similar for marine recording.
4. **Data sharing with Ireland:** This was discussed but not fully resolved. Whilst the Conchological Society provides all of its data to NBN on an ‘open access’ basis (except for some rare protected species subject to illegal exploitation) there were a number of potential legal issues with some Irish records and questions concerning record ownership. It was agreed to maintain the current status quo until some of the Irish committee members had clarified issues.
5. **iRECORD:** Although the Society Recorders can act to help in the verification of records submitted to this open-access repository of individual entries, it was

pointed out that the Society has no official link with, or obligation to this scheme. It was agreed that new records arising from iRECORD should undergo the same level of scrutiny as those submitted directly to the Society (and certainly before they were ‘accepted’ as Society endorsed records).

6. **NBN - erroneous mollusc records:** Following reports of incorrect (non-Conchological Society) records appearing on NBN (e.g. *Vertigo geyeri*, *Valvata macrostoma* and *Anisus vorticulus*) it was decided to launch a rolling programme, initially selecting species of conservation concern, to identify errors and report them to NBN colleagues. It was also felt important to encourage Society members to notify the Recorders of any apparent errors in Conchological Society records.
7. **Monitoring of selected species:** ‘Conservation agenda’ rare species are regularly monitored but the majority of common and local species are not. Consequently, we know little about any changes facing them; even if the overall range appears stable there may be overall population declines. The fortunes of many widespread invertebrate groups in Britain are well known because of widespread popular appeal linked to accessible monitoring schemes. For example, Butterfly Conservation successfully produces annual reviews for most butterfly species. It is difficult for us to achieve such similar outcomes for molluscs; few people are actively involved and identification difficulties for many species is a further obstacle. The meeting suggested that the Society select a suite of widespread species that might form the basis for national or regional schemes. Examples of readily identifiable and widespread species might include *Helicella itala*, *Pomatias elegans*, *Cepaea* spp, *Limacus maculatus* and *Lauria cylindracea*. Additionally, because of low Society membership it was suggested that we also plan to engage the wider public. This would not only generate more data but also raise the Society’s profile and hopefully encourage recruitment.



figure 2: A potential candidate species for monitoring: *Pomatias elegans*. (photo: Peter Topley)

## THE GULF WEDGE CLAM *RANGIA CUNEATA* – FURTHER DEVELOPMENTS

In my last Officer's report, I described the discovery of *Rangia cuneata* (figure 5); work to learn more about the clam continued in 2016.

**1. Risk Assessment:** When newly discovered non-native species are discovered in Britain the governmental Non-native Species Secretariat (NNSS) seek expert opinion to assess the possibility of spread and the possible impacts on native wildlife and the economy. As action maybe required, Rapid Risk Assessment (RRA) documents are produced as a matter of urgency. 2016 saw Society involvement in the completion of a RRA for *R. cuneata* which will be available to view on the NNSS website:

<http://www.nonnativespecies.org/index.cfm?sectionid=51> after April 2017. RRAs have already been produced for 8 mollusc species<sup>1</sup>.

<sup>1</sup>Risk Assessments are also included for:

- *Corbicula fluminea* (Asian clam)
- *Crassostrea gigas* (Pacific oyster)
- *Crepidula fornicata* (Slipper limpet) (figure 3)
- *Dreissena polymorpha* (Zebra mussel)
- *Dreissena rostriformis bugensis* (Quagga mussel)
- *Potamopyrgus antipodarum* (New Zealand mud snail)
- *Ruditapes phillippinarum* (Manila clam) (figure 4)
- *Rapana venosa* (Rapa whelk)



figure 3: *Crepidula fornicata*

(photo: John Fisher)



figure 4: *Ruditapes phillippinarum*

(photo: John Fisher)

## How did *Rangia* get into Britain and spread in Europe?

Another *Rangia* issue concerns the origins of the newly discovered Lincolnshire population as well as established breeding populations in Belgium, Holland and at Baltic sites in Germany, Poland and Russia. Had a first European 'founder population' been established which acted as a spread source within Europe or were these isolated populations the result of a series of separate introduction events from across the Atlantic? If the European populations are linked how are they inter-related and if they arose separately, where were the source populations in the USA? In early 2016 the Conchological Society was invited to help answer some of these questions together with a continental research team based in Belgium and Russia<sup>2</sup>. This project has been using tissue samples to undertake DNA molecular studies to explore genetic links between populations. To provide English material for the study the Lincolnshire sites were revisited in June 2016 to collect live clams. Tissue samples were taken from 25 adult *Rangia* (snips of mussel foot tissue being used). The samples were sent (together with those from other populations across Europe) to Russia for DNA sequencing. The results of this study were still being evaluated at the end of 2016 but answers to these various questions will hopefully be available in published form in 2017.

(<sup>2</sup>F. Kerchoff (Royal Belgian Institute of Natural Sciences [RBINS]), Antwerp; I. S. Voroshilova & K. Pavlova (I.D. Papanin Institute for Biology of Inland Water, Russian Academy of Sciences 152742 Borok) and Elena Ezhova (P.P. Shirshov Institute of Oceanology RAS Kaliningrad).

## Further *Rangia* studies in England

In my last report (*Mollusc World* 41: 18 – 23) I listed a series of questions focussing on further studies on the clam in 2016. Collaborative work with colleagues from the Environment Agency have now managed to plot distribution in the Boston area, reveal more about its salinity tolerances and formulate some hypotheses concerning its colonisation of the South Forty Foot Drain. Work is still in progress on shell aging (sclerochronology), which may provide more precision concerning the time of the bivalve's arrival in Lincolnshire. A meeting at Environment Agency offices in June 2016 considered a number of options to reduce or eliminate this potentially harmful invasive. Studies are still ongoing; more specific results will appear later in 2017.



figure 5: *Rangia cuneata*. Collected from South Forty Foot Drain east of Boston, Lincolnshire. Width of specimen 55 mm. (See also *Mollusc World* 41: 19, figure 2)



## THE POSSIBLE USE OF eDNA FOR THE SURVEY AND CONSERVATION OF THE LITTLE WHIRLPOOL RAM'S-HORN SNAIL *ANISUS VORTICULUS* – NEWS OF A JOINT VENTURE.

### *Anisus vorticulus* – brief background

*Anisus vorticulus* is a very rare freshwater gastropod that in the UK is restricted to three areas of coastal and floodplain grazing marsh in the Norfolk Broads, Pevensey Levels and River Arun valley (the last two both in Sussex). This is Britain's most protected freshwater mollusc as well as being an English Species of Principal Importance (NERC Act 2006) and on Annexes IIa and IV of the EUHSD obliging the government to provide suitable Special Areas of Protection (SACs) and 'strict protection' for the snail. *A. vorticulus* is not easy to survey; quite apart from it being a tiny snail (rarely exceeding 5 mm) and superficially resembling the much commoner and often co-occurring *A. vortex*. Reliable identification requires taxonomic experience and surveyors also need to be licenced. Additionally, *A. vorticulus* is often present in very low numbers, requiring the examination of large quantities of material to locate it, so it can easily be over-looked.

**The start of an *A. vorticulus* eDNA project:** 2016 saw the start of a project to investigate the feasibility of using eDNA to monitor *A. vorticulus* presence in ditches in the Arun Valley SAC as part of the Lower Tidal River Arun Strategy. This eDNA initiative is being project managed by Oliver Sykes (Environment Agency, Worthing) with Dr Inga Zeisset (University of Brighton) undertaking all aspects of the laboratory based eDNA procedures (figure 6). The Conchological Society, also part of the project group, will be offering the help and advice described below.



figure 6: a laboratory set-up for eDNA work at the University of Brighton. (photo: Inga Zeisset)

**What is eDNA?** Environmental DNA (eDNA) is used increasingly in field investigations to detect the presence of organisms without the need to physically encounter them. The use of the technique is now well established in Britain for the survey and conservation management of organisms

like great crested newts. As not everyone is familiar with the eDNA process it is useful to provide a simplified summary of the technique. Environmental DNA (eDNA) is DNA that organisms naturally shed into the environment. Many bodily fluids such as mucus (perhaps especially significant for molluscs), faeces and urine contain cells with the organism's DNA. Additionally, gametes, shed skin and dead and decaying organisms also add DNA to the environment. The quantities released might be incredibly small, degrade quite rapidly (eDNA typically lasts for about two weeks) and also be mixed with the DNA from numerous other organisms. The essence of eDNA monitoring is the development of DNA primers that are complimentary to the target DNA, allowing it to be amplified to obtain sufficient material to confirm the presence of the target organism.

**What procedures are being used to develop an eDNA test for *A. vorticulus*?** To detect *A. vorticulus* eDNA in ditch water samples, species-specific primers need to be developed. The gene targeted in this instance (COI) is found in mitochondrial DNA and one widely used for other eDNA surveys as it can usually be used to distinguish between closely related species. Inga checked on GenBank and discovered sequenced versions for *A. vortex*, *A. leucostoma* and *A. spirorbis*, but not the target *A. vorticulus*. Existing primers were then used to obtain the COI sequence for *A. vorticulus* from which new species-specific DNA primers were produced to amplify a short, species unique region of the COI gene. It is important that the DNA sequence chosen adequately separates *A. vorticulus* from other Planorbidae. If successful the new primers will be trialled in the laboratory to check that they only detect *A. vorticulus* DNA. A further test will try to establish the concentrations of the snail's eDNA that can be identified by the technique. If this succeeds field trials will follow in 2017.

**How does the technique work?** Water samples are collected, typically several litres, and DNA is extracted using one of several methods (depending on the type of sample e.g. the levels of suspended sediment). The extracted and cleaned environmental DNA is then used in a PCR reaction with species-specific primers. This amplifies the target DNA (i.e. a short region of the *A. vorticulus* COI gene) if it is present in the sample. This amplified DNA can then be visualized by electrophoresis. Alternatively qPCR may be applied using a fluorescent label in the PCR reaction to create a signal during the PCR reaction with products quantified in the PCR machine.

**The Conchological Society contribution:** Suitably preserved *A. vorticulus*, live-collected from a ditch on Amberley Wild Brooks in June 2016 (during a 2-year study of the area for Natural England) were used by Inga to develop a species-specific eDNA primer. A review of numerous *A. vorticulus* surveys undertaken on the snail's SACs during the last 20 years allowed a listing of all co-existing freshwater mollusc species (important for the

Planorbidae that might release similar DNA to that from *A. vorticulus*). A field visit to Pulborough Brooks in November 2016 allowed the survey team to meet and also collect additional *A. vorticulus* and associated Planorbidae (*A. vortex*, *Hippeutis complanatus*, *Planorbarius corneus*, *Planorbis carinatus* and *Gyraulus albus*) for further laboratory studies (figure 7). If eDNA primers are successfully developed, then the Society's involvement will continue into 2017 when field trials will begin. Similar eDNA work on great crested newts has shown that although tests occasionally failed to detect newts at certain times of the year, or with animals present in low numbers, they never gave 'false-positives' suggesting that the animals were present when known not to be.



figure 7: Some of the eDNA team on Pulborough Brooks sampling *A. vorticulus* populations. From L. to R.: Inga Zeisset, Ollie Sykes & Paul Spiers (RSPB).

**The rewards of success.** Numerous benefits and opportunities will follow successful development of an eDNA test for *A. vorticulus*. It will mean that:

1. ditches can be surveyed relatively quickly without the need to use licenced operators;
2. traditional survey techniques that are time-consuming, and require a high level of identification skill could be avoided;
3. ditches would not need to be disturbed by potentially invasive survey techniques;
4. large numbers of previously un-surveyed ditches (probably supporting further *A. vorticulus* populations) could be surveyed on the vast Pevensy Levels and Norfolk Broads SACs.
5. Successful use of eDNA surveying for such a small mollusc might encourage the development of eDNA tests for other molluscan species.

In short success with this project will revolutionise both the monitoring and new surveying of this endangered mollusc.

A further use of eDNA testing for another 'conservation priority' mollusc is described in: Stoeckle, Bernhard (2016) Environmental DNA as a monitoring tool for the endangered freshwater pearl mussel (*Margaritifera margaritifera* L.): a substitute for classical monitoring approaches? *Aquatic Conservation: Marine and Freshwater Ecosystems*. **26** (6): 1120 – 1129. doi:10.1371/journal.pone.0156217. ISSN 1932-6203.

For a general introduction to eDNA usage read: Bohmann *et al.* (2014) Environmental DNA for wildlife biology and biodiversity monitoring. This is available at [https://www.google.co.uk/?gfe\\_rd=cr&ei=yK7TWLb3BsXU8gfYwq3YAg#q=http://m.docente.unife.it/silvia.fuselli/dipense-corsi/eDNA\\_TEE\\_2014.pdf](https://www.google.co.uk/?gfe_rd=cr&ei=yK7TWLb3BsXU8gfYwq3YAg#q=http://m.docente.unife.it/silvia.fuselli/dipense-corsi/eDNA_TEE_2014.pdf).

A further interesting account of eDNA used to study freshwater turtles in Canada: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0130965>

### ASSISTANCE WITH CONSERVATION ORIENTATED PROJECTS:

Help and advice were offered to numerous individuals, organisations and academic institutions concerning conservation orientated projects. Examples include:

1. **Detecting invasive freshwater mussels:** A PhD student (School of Biological, Biomedical & Environmental Sciences, University of Hull) was given assistance with a project developing the eDNA detection of a number of invasive species including the Zebra mussel *Dreissena polymorpha*, and Quagga mussel *D.rostriformis bugensis* (figure 8). This work involved the development of specific primers for their detection. Tissue samples of other native freshwater mussel species were required for primer testing. The Society was not only able to assist with identification of juvenile unionid mussels collected by the student (to provide tissue for DNA sequencing) but also with the supply of further live-caught unionid tissue samples from sites in Sussex and Lincolnshire.



figure 8: Quagga musse, *Dreissena rostriformis bugensis* – a rapidly spreading invasive mussel.



2. **The Dyserth Environmental Group:** This is a local biological recording group who have been undertaking surveys and biological recording around the village of Dyserth (Denbighshire, N. Wales). We were able to assist with the identification of numerous larger molluscs solely by the use of digital imaging. The group were assisted in making preliminary identifications assisted by use of the Society land snail guides.
3. **Molluscan Survey of Loch Strathbeg:** Society member Richard Marriott was given assistance with the identification of *Pisidia* taken from the loch, an RSPB reserve with the distinction of being the largest dune pool in Britain (figure 9).



figure 9: Loch Strathbeg. (photo: Richard Marriott)



figure 10: View of Burton Mill Pond showing *V. moulinsiana* habitat.

### CONSERVATION IN ACTION AT *VERTIGO MOULINSIANA* SITES IN WEST SUSSEX

In 2016 the Conservation Officer joined the 'Burton Mill Pond Project Board' and also the 'Burton and Chingford Ponds Local Nature reserve Management Advisory Committee'. The interconnected Burton Mill and Chingford Ponds lie on a north flowing tributary of the River Rother near Petworth in West Sussex. There has been much recent activity at the ponds. Chingford Pond (upstream of Burton Mill Pond) has recently undergone restoration to reinstate a derelict dam so that water levels have returned to former levels leading to losses of some fen. Burton Mill Pond (figure 10) meanwhile has been the subject of detailed ecological and hydrological studies by the Environmental Change Research Centre of University College London. The ponds are of interest in that they support large and regionally important populations of *Vertigo moulinsiana*, the conservation of which has been a high priority for the two management bodies. The catchment is also of molluscan interest in supporting large populations of several unionid mussels. A more detailed report on the work at the ponds is planned for a later Society publication.

### BRITISH WILDLIFE

Three molluscan 'Wildlife Reports' were published during 2016 (*British Wildlife* **27:4** 285 – 287; **27:6** 437 – 439; **28:2** 133 - 135). As in previous years these were able to cover a range of molluscan news, issues and discussions partly drawing upon and discussing the Society's non-marine and marine reports as well as a selection of reports and papers from *Mollusc World* and *The Journal of Conchology*. Additionally, a main feature on invasive bivalves appeared in **27:5** 318 – 331.

### ASSOCIATIONS WITH OTHER ORGANISATIONS

The Conchological Society has active associations with many other conservation organisations. The main ones are **Buglife, Invertebrate Link\*** (to which we provide an annual report of our recording and conservation activities), and the **Wildlife Trusts** (by way of membership of the Conservation Committee of the Sussex Wildlife Trust). Additionally, the Conservation Officer is a member of the **Arun & Rother Rivers Trust (ARRT)**; this provides numerous opportunities to become involved in river catchment discussions where molluscan assessments and conservation issues are of relevance.

\* Invertebrate Link: further information @ [www.royensoc.co.uk/InvLink/Index.html](http://www.royensoc.co.uk/InvLink/Index.html)

# Non-marine Recording – Highlights from the 2016 Recording Year

Adrian Norris and Martin Willing

**Introduction:** 2016 produced a ‘good’ batch of new vice-county (VC) and other records of interest (most from 2016 but some from earlier years). This non-marine report takes a slightly different format from previous ones. It will describe and explain some the key ‘highlights’ of the year chosen from records that have already been validated. It will not, however, give a full list of all new VC records for the preceding year. A wealth of new VC and other ‘notable’ records are submitted to the Society (or are obtained from outside sources such as iRecord), but they often arrive in bulk quite late in the year. It has become increasingly difficult to undertake the all-important checking and validation of these in time to complete an annual report before the AGM in April. Careful scrutiny is time consuming but essential in maintaining the Society’s enviable reputation for trusted data accuracy. The full new VC list will therefore be published later. Such an extended period for record scrutiny and verification is well-established in most other biological recording Societies (e.g. The Botanical Society of the British Isles, The BTO, The Sussex Ornithological Society & many more) who often publish records at least a year in arrears after all necessary checking is completed.

**‘Semi-slug’ News:** Arguably the most exciting reported find was the discovery by Christian Owen in late 2015, of the strange-looking ‘semi-slug’ *Daudebardia rufa* from a small area of spruce plantation near Caerphilly. This non-native is from central and southern Europe (nearest population is in eastern France). Details of this discovery were published in *The Journal of Conchology* (2015. **42**: 119 – 121).

A second notable find was of populations of *Phenacolimax major* from two woodlands surveyed during a Society field meeting to the Harwich area in April 2016. These finds and those of the recorders are fully described in *Mollusc World* (**42**: 3 – 5). They are of interest in considerably extending the eastward range of this scarce ‘ancient-woodland indicator’ species; these are the first *P. major* records from East Anglia lying in VC 19: North Essex.

**Slug News:** Most of the newly submitted records are for slugs. The recent publication of the slug guide to Britain & Ireland (Rowson *et al* 2014) continues to stimulate and support a renewed interest in slugs. With the recognition of many new British/Irish species (most non-native introductions) and the re-classification and/or aggregate species splitting has created a wealth of opportunities to undertake new recording work. Some of the more interesting records include:

- *Deroceras panormitanum*: There is understandable confusion concerning this species, prior to 1999 also known in Britain as *Deroceras caruanae*! The most recent non-marine Atlas (Kerney 1999) shows ‘*D. panormitanum*’ as a common and widespread species in Britain and Ireland. Recent work in slug biology (Reise *et al* 2011) has, however, demonstrated what this slug was not ‘true’ *D. panormitanum* and was reclassified as

*D. invadens*. ‘True’ *D. panormitanum* were, however, recorded in Britain with a first confirmed find from a garden in Cardiff (Rowson *et al* 2014). It was suggested that this slug, a native to Sicily and Malta, had been introduced and may be more widespread in Britain. That suggestion was correct and 2016 saw the confirmation of three new records; Shropshire (VC 40), Glamorgan (VC 41) and County Wicklow (VC H20) the last of particular interest in being a first Irish record for the species. (site details and recorder names will appear on the full VC list when published)

- *Arion (Kobeltia) owenii*: Another slug with an increasing number of new records. This is clearly an under recorded species. A look a UK distribution map for the slug (p. 52, Rowson *et al*; p. 131 Kerney 1999) seems strange! Why is Devon such an apparent hotspot? Well this is something of an artefact due to the intense tetrad recording activities in the county of Michel Hughes and Dave Bolton. Although the slug appears to be genuinely scarce in some parts of the country (e.g. eastern England, northern Scotland) it is unlikely to stop abruptly on Devon’s eastern borders with Somerset and Dorset. A similar ‘liking’ for Devon can be seen on other slug maps most particularly those for *Arion flagellus* (Rowson *et la* p.34, Kerney 1999 p 122) and for *Arion vulgaris*; yet more confusion as named (incorrectly) as ‘*A. lusitanicus*’ in Kerney (Rowson *et la* p.36, Kerney 1999 p 121). *A. owenii*, as one of the most distinctive *Arion* species, can be identified with reasonable certainty without dissection. 2016 saw at least seven new VC records for the slug these being in: VC 7 (North Wiltshire), VC 36 (Herefordshire), VC 48 (Merionethshire), VC 49 (Caernarvonshire, VC 101 (Kintyre), VC 102 (Islay in South Eubudes) and East Sutherland (107) (site details and recorder names will appear on the full VC list when published)
- *Testacella ‘tenuipensis’*: It was long thought that we had three species of the shelled and carnivorous *Testacella* slugs in Britain (figure 1). Recent genetic analysis (see Rowson *et al* 2014) has shown that some supposed *T. scutulium* were in fact a separate species that has been given the provisional name of *T. sp. ‘tenuipensis’*. External differences between the two species are slight but reliable separation can be achieved by dissection.



figure 1: *Testacella* sp. ‘tenuipensis’ (photo: Ben Rowson)



Only a few confirmed records of this newly recognised species exist mostly from sites near the south coast or in southern Ireland. It is therefore of interest that a further record was made in late 2016 by John Hutchinson and Heike Reise from a site near St Lawrence on the SE coast of the Isle of Wight.

- Other slug records: 2016 also saw numerous further slug records including many additional submissions for *Limacus maculatus*, *Ambigolimax valentianus* and *A. nyctelius* (the latter two ‘look-a-like’ slugs often being difficult to separate on external features and so requiring proficient dissection for reliable identification). As not all of these records have yet been fully validated (together with those for several other slug species) they will appear together in the full new VC list appearing later in 2016.

**A Mediterranean snail on the NE coast – further news & some detective work:**

Late 2015 saw the unexpected discovery by Craig and Carl Ruscoe of *Theba pisana* (well beyond its UK strongholds in Cornwall, Devon and south Wales) near to Cresswell at the southern end of Druridge Bay in South Northumberland (VC 67). The record was reported in the 2015 Non-marine Report (Norris 2016). The snails were found in abundance both as juveniles and adults in sand dunes and even buried in sand on the upper sections of the beach over a distance of about 50 m.

Further visits to the site in 2016 by Tony and Moira Wardhaugh and joined by the Non-marine Recorder and others, further confirmed the presence of large numbers of the snail over at least 0.5 km of dunes and adjoining open habitats. Tony’s detective work turned up an interesting reference suggesting that *T. pisana* may have colonised sites in Northumberland previously. A note published in 1831 by Joshua Alder (Alder 1831, p. 41) stated, ‘It may be proper here to mention that I have in my possession specimens of the young of *Helix cingenda*, Mont., given to me by my friend Mr. W. Robertson, who informs me that they were collected by him on the sea banks of Northumberland or Durham, but is not sure of the exact spot: certainly, at one or other of the following places, Seaton Sluice, Bamborough or Hawthorn Dene.’ *T. pisana* was known as *H. cingenda* in the 19<sup>th</sup> century. Although this is not specifically the Druridge Bay site, it does suggest the presence of *Theba pisana* at coastal habitats in Northumberland nearly 200 years ago. It is not known whether populations of the snail have maintained a presence in the area for all that time or whether this is evidence of a previous colonisation that died out. The spread of *T. pisana* in the UK is limited by the species’ susceptibility to frost. As this north-eastern site is subject to occasional extended periods of very low temperatures it seems doubtful, based upon the behaviour of *T. pisana* elsewhere, that this outlying population will remain, let alone spread in the area; only time and further visits will tell!

**New find of a threatened snail:** In June 2016 Adrian Sumner made the important discovery of dead shells of *Truncatellina cylindrica* from Catcraig, a coastal location in East Lothian (VC 82) (figure 2). *T. cylindrica* is a tiny snail (length approx. 2 mm) that typically lives in open dry

calcareous grassland or stony ground at the base of old walls. Currently it is only known living at a few widely-scattered UK sites (in Yorkshire, Norfolk, Bedfordshire, Co Durham and a coastal dune site in Fife). It is thought to have been lost from at least a further 13 sites in the last century. Because of its rarity and vulnerability, the snail was assessed as ‘vulnerable’ in the latest British non-marine status review (Seddon *et al* 2014). The snail is also listed as a ‘Species of Principle Importance’ on the governmental lists of England and Scotland. Adrian found the dead *T. cylindrica* amongst turf in an abandoned limestone quarry in June 2016 at the coastal site which lies a few miles east of Dunbar. This is a new site for *T. cylindrica*, and the first record of this species in East Lothian since Rev. John M’Murtrie recorded it from North Berwick in 1888 (as *Vertigo minutissima*) (Journal of Conchology, 1889, 6: 1–5). Adrian intends to revisit this site in 2017 to undertake further surveys to hopefully locate some live specimens.



figure 2: Left: *Truncatellina cylindrica*, Beds. (photo: Peter Topley). Right: Habitat at Catcraig, East Lothian NT 7175 7725. (photo: Adrian Sumner)

**A rare bivalve in an unusual habitat:** Wybunbury Moss National Nature Reserve in Cheshire is a most unusual habitat. Most of the reserve consists of a floating peat blanket lying over a water-filled depression. Such a feature is sometimes known as a ‘Schwingmoor’ (a German word meaning ‘swinging bog’) and is one of only three such features in the British Isles (for more see: [http://www.iucn-uk-peatlandprogramme.org/sites/www.iucn-uk-peatlandprogramme.org/files/NNR\\_Wybunbury\\_leaflet.pdf](http://www.iucn-uk-peatlandprogramme.org/sites/www.iucn-uk-peatlandprogramme.org/files/NNR_Wybunbury_leaflet.pdf)) (figure 3).



figure 3: Drain habitat at Wybunbury Moss supporting *Pisisdium pseudosphaerium*. (photo: Mags Cousins)

In May 2016, Mags Cousins undertook mollusc sampling in various marginal areas of the reserve including a ditch draining into the Moss. Amongst a limited freshwater fauna, a sample produced two specimens of *Pisidium pseudosphaerium*, (ID by Martin Willing - confirmed by Ian Killeen) a bivalve found in lowland marsh drains (mostly flood and coastal plain grazing marshes) in clean, but stagnant water, typically in sites with a rich aquatic vegetation and soft organic sediments. This is a very local species in the UK with most populations present in southern England and few north of the Midlands. In Cheshire (VC 58) only three discrete sites are known for the species, all situated on the Wirral (NBN Gateway accessed on 5.01.2017). This new Wybunbury find greatly extends the species range in the county and, together with the presence of *V. antiverigo* in adjacent marginal fen, attests to the 'ancient' origins of the habitat.

The Non-Marine Recorder wishes to extend thanks to Mags Cousins (Non-marine Mollusc Recorder for Shropshire) for extracting about 350 historic molluscan records for Shropshire and allowing transfer to the Conchological Society's data base.

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## National Museum of Scotland, Edinburgh.

There are rather few marine mollusc records for east Scotland on the NBN Atlas. In fact, there are many records in a now-out-of-print Atlas published by the National Museums Scotland. Related specimens are in the Museums' collection, and it is intended to upload the data from their labels, and of other specimens, into an electronic data base for public access.



If you live within travelling distance of Edinburgh and can spare a day or half a day per week to help with this valuable work, the museum would be very pleased to hear from you. More details and how to apply are on this link; <https://www.nms.ac.uk/about-us/jobs-and-volunteering/volunteering/curatorial-volunteer/> or email [s.pye@nms.ac.uk](mailto:s.pye@nms.ac.uk)

*Sankurie Pye, Curator of Invertebrate Biology*



(photo: Peter Topley)

## Romantic snail graffiti

Spotted on a bus stop on the B4271 at Lunnon between Llanrhidian and Abertawe, Pembrokeshire, October 2017. The graffiti no doubt refers to a person, but many of us could probably say the same about our relationship with molluscs!

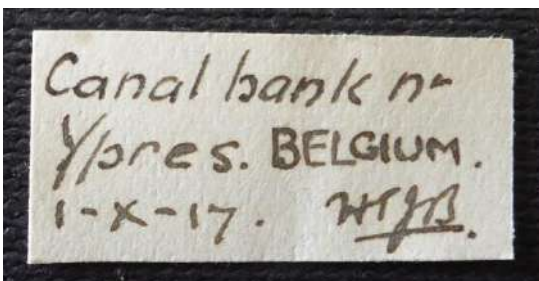


## A reminder of Passchendaele, 100 years on

Peter Topley

Rev. Herbert (Bert) Biggs (1895–1973) was Hon. President of this Society from 1958–9 and was in charge of junior membership in the late 1960's. I met him when I was eleven and he encouraged me in my new found conchological interests. In the 1914–18 war he served as a 2nd Lieutenant in the 10th (Service) Battalion West Yorkshire Regiment. His regiment was part of Kitchener's 'Second New Army' which, in late 1917, moved to Flanders and fought in the terrible first and second battles of Passchendaele, the 100th anniversary of which is being commemorated at this time.

The carnage of war did not stop Bert collecting snails behind the lines (and possibly kept him sane) and I have some *Cepaea hortensis* (see right) labelled by him as coming from 'Canal bank nr. Ypres, 1/10/17.' This was eleven days before the first battle of Passchendaele. I thought it appropriate to show a photograph of two of these shells (with banding formula 10305) as a way of commemorating the c.260,000 casualties suffered on both sides (see also Topley (2006), *Mollusc World* 12: 6–7).



The morning after the first battle of Paschendaele.

A sunburst through the clouds is shown against a landscape of destroyed land with a shellhole in the foreground. Australian Infantry wounded around a blockhouse near the site of Zonnebeke Railway Station, 12 October 1917.

(photo: Frank Hurley – public domain image)



# Mullet peninsula, Co. Mayo, Ireland: Provisional notice of field meeting

Saturday 8<sup>th</sup> to Saturday 15<sup>th</sup> September 2018

Leader: Julia Nunn



figure 1: West facing Portglash, near Aghleam, Mullet peninsula, Co. Mayo.

The Mullet peninsula (a relatively remote area in the NW of Co. Mayo) (figure 2) has been studied since the early 20<sup>th</sup> century when it was visited by Farran in 1909 (dredging/intertidal). Few records were made in the interim period until the University of Reading (including Peter Hayward) visited for four successive years (1969-1972). Although divers undoubtedly visited before the 1970s, Queen's University Sub-Aqua Club visited occasionally from 1978 onwards, Bernard Picton and Dave Connor being amongst those present. In 1988, the National Museum Wales and the National Museums Northern Ireland expedition recorded mainly intertidal molluscs (Graham Oliver, Alison Trew, Helena Chesney).



figure 2: Map showing the Mullet Peninsula.

I started diving there in 1990 (and subsequently every year to 1995) with Dolphins Sub-Aqua Club, mainly the NW peninsula and Eagle Island. The BioMar project surveyed in 1994 (intertidal/sublittoral), followed by a diving survey in 2008 by the company MERC for the designated SAC. Intertidal areas were surveyed for molluscs by myself and Shelagh Smith in 1997 (blue dots on map above), with only myself returning in 2000. *Ad hoc* visits in 2001 (Leam Lough), 2005 (Inishkeas) and 2014 (Scotchport Bay) were my last visits to the area. A visit is therefore long overdue!

216 species of mollusc have been found on the shores of Mullet (198 living). Necessarily this implies that the same sites will also be very good for a wide range of other marine fauna and flora. The sites are a broad range of exposures and habitats, from sand to mud to rock. To my knowledge, the non-native species have not been specifically surveyed here; and a number of other groups are almost certainly under-recorded e.g. bryozoans. Some of the intertidal sites on the peninsula are amongst the best that I know in Ireland ('top ten') e.g. Barranagh Island (figure 3) and Eily Bay (figure 4).

The purpose of this field meeting is to introduce these shores (and some brackish loughs) to those interested, and to survey all species groups where there is appropriate experience.

The excursion is for 7 days, Saturday 8<sup>th</sup> September to Saturday 15<sup>th</sup> September inclusive. The majority of the fieldwork will be for six days from Sunday 9<sup>th</sup> to Friday 14<sup>th</sup>.

It is hoped that a Seasearch diving week will be organised in parallel with the intertidal using a local dive operator. Although there have been professional surveys, and some *ad hoc* club diving, no Seasearch expedition has yet taken place in the area. The diving that I experienced in the NW of the peninsula was excellent. In the event of poor weather, the sheltered east side of the peninsula should provide ample interesting diving (*Zostera* beds etc.). A local dive operator would charge 400 euro per day for a boat to take 12, fills included. For a minimum party of 8, that would be 50 euro per day. There are also shore dives available.



The centre for the activities has not yet been determined, as no accommodation has been booked yet. However, all sites will be within 30mins drive time. It is my intention to book at least one large self-catering house which will have plenty of room for participants to work on material, to get help with identifications and to socialise.

A copy of all records generated will be passed to National Parks & Wildlife Service, Dublin, and uploaded to the NBN Atlas. I have consulted NPWS as Mullet is an SAC, and there are no conservation issues with this field meeting for intertidal or diving.

All those expressing an interest, and wishing to be kept updated with progress, should contact Julia at [jdn@cherrycottage.myzen.co.uk](mailto:jdn@cherrycottage.myzen.co.uk).

It is essential that all who definitely want to attend should let me know as soon as possible, as accommodation and the dive boat must be booked and deposits paid by early 2018.

**All are welcome to attend for any part of the trip or for the entire week.**



figure 3: Barranagh Island, Mullet peninsula, Co. Mayo.



figure 4: Elly Bay, Mullet peninsula, Co. Mayo.

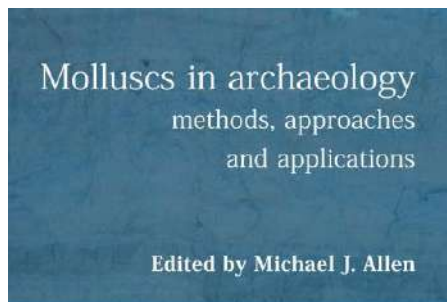
## Book Review:

### *Molluscs in Archaeology. Methods, approaches and applications* Ed. Mike Allen.

Oxbow Books in conjunction with the Conchological Society of Great Britain & Ireland 2017.

434 pages, 109 figures (37 in colour), 12 tables, 5 information boxes. ISBN 9781909686854

Price £25.00. Exclusive permanent 25% discount for Conchological Society members: £18.75\* (other offers available from online distributors)



STUDYING SCIENTIFIC ARCHAEOLOGY 3



I have been interested in nature for almost as long as I can remember, a fascination that began when my dad showed me wildlife in the countryside around Alnwick before I was five years old. Perhaps I began to notice molluscs during childhood trips to the seaside when looking for shells and sea coal on the Northumbrian beaches would have kept me occupied. A move south took the family to Bedford and later Cambridge. Molluscs certainly became a stronger interest then and I acquired *British Shells* by Nora McMillan, my first mollusc book. I also very nearly encountered the Conchological Society (CS) as Beryl Rands, a President of the Society, organised activities for junior members of the Bedfordshire Natural History Society. Schooldays were also the time I had my first practical experience of archaeology, volunteering on digs in Bedford town centre.

Years later, I became involved in archaeology again as a member of the Fen Edge Archaeology Group, based near Cambridge. During an excavation at a Romano-British settlement I learnt how to process environmental samples by bucket flotation to extract charred seeds, small bones – and molluscs. This showed how I could combine conchological and archaeological interests, fortunately so as environmental sampling can yield information not accessible in any other way and no one else in our group was interested in environmental archaeology.

With this background, I was delighted to attend the conference on molluscs in archaeology arranged jointly by CS and the Association for Environmental Archaeology in 2014 (see *Mollusc World* 35, July 2014). I came away having learnt much and with the publication of this new volume, inspired by the success of the conference and edited by the Society's previous president Mike Allen, I no longer need to search for a means to learn more. It's a high quality publication and well worth the wait.

The 23 chapters of *Molluscs in Archaeology* are organised in five parts: Palaeo-environments, environment and land-use; Palaeo-environmental reconstruction; Europe, the Mediterranean and Near East; Marine and Food and Diet; Artefacts; and Science and Snails. Contributors include many who presented at the conferences and others, and some are well known to CS members. Chapter 1 by Mike Allen provides an overview of land snails in archaeology: this will be helpful to conchologists who are unfamiliar with archaeological ideas and lists key texts on identification, taphonomy and archaeology, pointing out those that are essential. The chapters on methods will be useful as they are relevant in many situations. In his chapter on sampling for land snails, Mike Allen tells us not only how things should be done but warns us how to avoid sloppiness in sampling. An overview of marine molluscs is given in the chapter by Liz Somerville, Jan Light and Mike Allen, who also provide guidance on identification and methods. Greg Campbell gives further information on methodology applicable to marine shells. The chapters in the final part describing scientific techniques (radiocarbon and stable isotopes) will help amateurs and non-specialists understand the value of these techniques and their limitations, although only professionals (and not all of them) can use such methods.

Although the emphasis is the UK, geographical coverage is wide: examples in the text come from Australia, Senegal, South Africa, Thailand, and elsewhere. Various chapters review studies spanning the whole time range of interest to archaeologists. Notably, Katherine Szabó on using of shells for artefact production describes shell working linked to *Homo erectus* in Java, 0.5 million years ago. Some topics are already well known, such as oysters in archaeology (Jessica Winder's chapter) and shell middens (Victoria Taylor and Martin Bell on land molluscs, Karen Hardy on marine molluscs), but nonetheless deserve a place in this volume and help to make it so comprehensive.

As a result of sponsorship given by CS to this volume in its production, authorship and funding to enable extensive colour printing, the Society's name and logo appear on the imprint page and there is a half-page summary of the Society (with its logo).

While preparing this review I heard a lecture by Craig Cessford of the Cambridge Archaeological Unit. Craig mentioned a mediaeval site near Cambridge, unique and unexplained in his many years of experience excavating urban sites, as far as the molluscs were concerned – remains of mussels were scattered over the whole site and greatly outnumbered oysters, reversing the usual proportions. I intend to return to *Molluscs in Archaeology* while pondering an explanation of his findings.

*Molluscs in Archaeology* is very well illustrated; photos and diagrams, both colour and monochrome are all printed to high standards. I warmly recommend it. Indeed, it has been so well received it sold out and has already been reprinted.

*Vicki Harley*

\*see CS website: <http://www.conchsoc.org/node/6577>. Use code CONCH17 on web when ordering to get discount.



## About the Conchological Society

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

**Some key contacts** (see web site [<http://www.conchsoc.org/pages/contacts.php>] and 2016 membership list for additional contact details)

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Subscriptions are payable in January each year, and run for the period 1st January to 31st December. Members joining later in the year will receive all publications issued during the relevant calendar year. • Ordinary membership £33 • Family/Joint membership £35 • Under 18 (receiving Mollusc World only) £5 • Student membership £15 • Institutional subscriptions £47

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

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Copy (via e mail, typed or handwritten) should be sent to the Hon. Magazine Editor (contact details above). If sending copy using e-mail please include a subject line 'Mollusc World submission'. When emailing several large file attachments, such as photos, please divide your submission up into separate emails referencing the original article to ensure receipt. Electronic submission is preferred in Microsoft Word. Images and Artwork may be digitised, but we recommend that a digital image size 200Kb- 3Mb (JPEG preferred) be sent with your submission. All originals will be treated with care and returned by post if requested. Authors should note that issues of the magazine may be posted retrospectively on the Conchological Society's web site. Copy intended for the March 2018 issue should be with the Hon. Editor prior to 1<sup>st</sup> February 2017; inclusion in a particular issue is at the Hon. Editor's discretion and depends upon the space available but contributions are always welcome at any time.

### Advertisements in Mollusc World

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

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## Membership update

The following Conchological Society member has not previously been included in either this column of Mollusc World or in the latest edition of the Members' Guide (2016). Please note that to be included here members must sign a data protection consent form. If you have not been included and now wish to be please contact Carolyn Postgate at CIRCA subscriptions (details above).

*(name and contact details removed)*



## Diary of Meetings

Please check the website ([www.conchsoc.org](http://www.conchsoc.org)) for further details and any updates, including other meetings arranged at shorter notice.

### **Saturday 25th November 2017: WORKSHOP MEETING : Woking, Surrey.**

10:00 – 17:00: by kind invitation of Judith Nelson at Hilbre House, Pembroke Road, Woking, Surrey GU22 7ED.

The annual workshop offers members the opportunity to receive tuition and share problems and experiences. Those who wish to come should ring Judith (01483 761210) in advance for more details and to reserve a place. A fee of £5 will be charged to cover expenses. Please note that Hilbre House is a non-smoking property.

### **Saturday 9th December 2017: INDOOR MEETING: A Christmas miscellany**

14:00 – 17:30: Angela Marmont Centre, Natural History Museum.

As usual, a meeting made up of a series of short presentations (5-20 minutes) by members: these can be anything mollusc-related, with or without exhibits. This will be followed by a glass of Christmas wine (free!); and then by supper at a nearby restaurant (pay your share ...). If you would like to make a presentation, or want a place at the restaurant, please get in touch with Peter Topley (contact details on page 35).

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

### **Saturday 20th January 2018: INDOOR MEETING: Lecture and exhibits.**

**Guest Speaker: Robert Cameron: 'Death and Resurrection on the Desertas: a minor molluscan catastrophe?'**

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

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

### **Saturday 24th February 2018: FULL DAY INDOOR MEETING: Demonstrations, discussion, exhibits and lecture.**

**Guest Speaker: Chris du Feu: 'The value of species records?'**

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

The lecture will start shortly after 14:00.

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

### **Saturday 14th April 2017: ANNUAL GENERAL MEETING AND PRESIDENTIAL ADDRESS**

**Speaker: The President: 'Beachcombing on Vancouver Island: giants and interlopers.'**

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

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

Please note the following dates in 2018 for your diary:

Saturday 8th September – Saturday 15th September 2018: MARINE FIELD MEETING, Mullet Peninsula, Ireland.

Saturday 20th October 2018: INDOOR MEETING 14:00 (preceded by Council meeting)

Saturday 8th December 2018: INDOOR MEETING 14:00 (preceded by Council meeting)

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If you intend to attend a **field meeting**, please remember to inform the leader beforehand, and if, on the day, you are held up in traffic or your public transport is delayed, please try to contact the meeting leader if possible.

**Indoor meetings** at the Natural History Museum take place in the Angela Marmont Centre for UK Biodiversity, Darwin Building. *Please bring plenty of exhibits and demonstration material.*

*We are always happy to receive any suggestions for speakers for indoor meetings, or offers to lead field meetings, and also any suggestions about Society participation in the meetings of local and other societies.*

Contact the Programme Secretary:

*Bas Payne, The Mill House, Clifford Bridge, Drewsteignton, Exeter EX6 6QE; 01647 24515  
[programme@conchsoc.org](mailto:programme@conchsoc.org).*