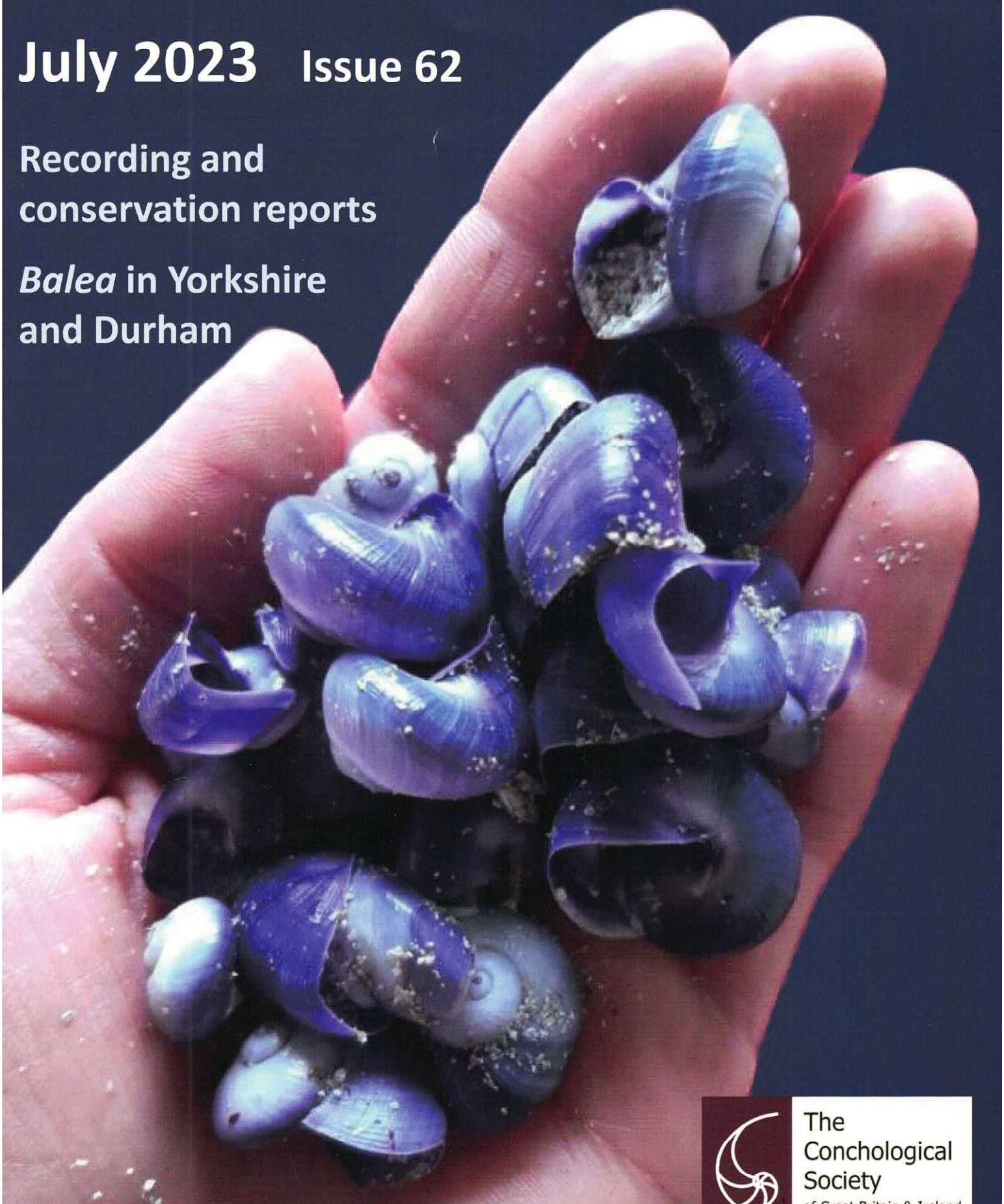
Mollusc World

July 2023 Issue 62

Recording and conservation reports

Balea in Yorkshire and Durham



The Conchological Society of Great Britain & Ireland

Helping to understand, identify, record and conserve molluscs

From the Hon. President

Urgent help needed: Editorial Assistant(s) for the Journal of Conchology

The Journal of Conchology is about to undergo one of the most major changes in its long history. Next year it will become fully digital and will no longer be published as a printed volume. Our Journal is the second oldest conchological journal still in publication, and its continued success depends on many factors.

Of course, we depend on the submission of good quality papers, and we encourage both members and non-members to support the Journal in this way. But we also need help with the production of the Journal. We are proud that all our submitted articles are peer-reviewed, although this process takes time and effort. We are urgently seeking an Editorial Assistant(s) to take some of the burden off the shoulders of our Honorary Editor. Their role will mainly be to oversee the review process.

Please do think about offering to help us. We are all aware that everyone leads very busy lives but do consider if you could spare some time to fulfil this essential role. If you would like to know more details, or offer yourself, please contact our Honorary Editor, Anna Holmes, on journal@conchsoc.org.

Tom Walker

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 280 members and subscribers worldwide. Members receive three issues of this magazine a year. The Journal of Conchology, which specialises in Molluscan Biogeography, Taxonomy and Conservation, will be published in open access digital format (only) from 2024 (see above). New members are always welcome to attend field meetings and indoor meetings before joining.

From the Hon. Editor

This issue of your magazine includes reports from our Marine and Non-Marine Recorder's and Conservation Officer of the work of the Society in these areas for 2022. This must be an encouragement to each one of us to join in when we can and record and report what we see.

I encourage you to look at the meetings diary on the back cover and page 35 (whilst checking the web site for updates) to see if there is anything you can join in with during the rest of the summer and autumn and if you are inspired, please write about it!

Peter Topley

Mollusc World

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 many 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 34 for further details).

Contents

The Hon. Editor's thanks go to Janet Ridout Sharpe for her vital help with checking and copy editing.

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Front Cover: Violet snails, *Janthina janthina* (Linn., 1758) stranded on Oronsay, Hebrides, Scotland. (photo: Amy Millard, see page 12).

Notes on *Balea* in Yorkshire and Durham

Tony Wardhaugh

Regional distribution

Balea heydeni was initially described as a species distinct from *B. perversa s. s.* by Gittenberger *et al.* (2006). Prior to this the two had been regarded as a single species, *B. perversa*, recorded as such and known to have a widespread but westerly distribution in Britain with a pattern of loss from the south and east of England, possibly owing to atmospheric pollution (Holyoak 1978; Kerney 1999). With the realisation that two species were involved, one of the first questions to arise was to what extent do they differ in distribution? Table 1 summarises all the records I have been able to find for the two species in Yorkshire and Durham, these being derived very largely from the Conchological Society database.

Vice-county	*B. perversa*	*B. heydeni*
SE Yorks. (61)	0	1
NE Yorks. (62)	0	20
SW Yorks. (63)	0	2
Mid-W Yorks. (64)	1	39
NW Yorks. (65)	12	47
Durham (66)	1	5
Total	**14**	**114**

table 1: *Balea* species: number of records by vice-county.

Clearly, *B. perversa* has been much less frequently encountered than *B. heydeni*, with both showing a westerly bias in distribution. In NW Yorkshire *B. perversa* records are centred around Swaledale and in the Richmond and Leyburn areas of Wensleydale. The single record for Durham is from Bowlees (NY 908282) in Teesdale and very close to the boundary with NW Yorkshire.

B. heydeni is known from a much wider area with apparent strongholds in the NW and Mid-W Yorkshire vice-counties. In NE Yorkshire records are mainly from the southern edge of the North York Moors, approximately from the Helmsley to Scarborough areas, but there are also records from ancient semi-natural woodlands near to the north-east coast, from Saltburn to Robin Hood's Bay near Whitby. The five Durham records are widely scattered, but three are from woodlands not far from the coast: two from Castle Eden Dene (NZ 442401 and NZ 431392) and one from near Dalton Piercy (NZ 4631). These extend northwards the known, somewhat coastal range in NE Yorkshire. Both species are doubtless under-recorded, especially in Durham, but the data are sufficient to give an idea of their overall distribution in these six vice-counties.

Co-occurrence

Gittenberger *et al.* (2006) state that 'mixed populations are known from the British Isles, the Netherlands, Belgium and France' and go on to add: 'In the Netherlands the range of *B. heydeni* is concentrated in the coastal area, where it may be sympatric with *B. perversa* which is distributed all over the country. In Belgium and France a similar pattern seems to exist.' A second question regarding distribution then arises – do these two species ever occur as genuinely mixed (i.e. sympatric) populations or do they exist as discrete colonies within certain localities?

In this context it is interesting to note that in the Yorkshire and Durham data there is only one possible and one certain record of them occurring together as mixed populations. Both species are known from Swinden in Mid-W Yorkshire (SD 865540, 2nd July 1978, collector L. Lloyd-Evans, identification Adrian Norris). As this record is based on a retrospective re-assessment of museum specimens, they may or may not represent genuinely sympatric populations. The single certain record of a mixed population is from a dry-stone wall at Marrick, near Richmond, NW Yorkshire. The wall crosses three 1-km squares: SE 0797, SE 0798 and SE 0898. Here, the two species were first encountered during a Yorkshire Conchological Society meeting on 7th September 2019 attended by Terry Crawford, Adrian Norris, my wife Moira and myself. Having realised that both species were present, I collected several samples from various places along the wall on this date and subsequently on 13th July 2021, in part to confirm that this was a genuinely mixed population. This did indeed prove to be the case, with instances of the two species being found together, alive, beneath the same cap-stone (figure 1). It will be of interest to monitor this mixed population in future years. Will the situation remain stable or will one species prevail, perhaps as a result of competition or just possibly asymmetrical introgressive hybridisation?

figure 1: Live juvenile *B. perversa* (left) and *B. heydeni* (right) from a mixed population at Marrick (07/09/2019, SE 08019 98204).

Habitat

Kerney (1999), and earlier similar comments by Boycott (1921), described the habitat of *Balea* agg. prior to the separation of the two species as 'rocks, stone walls and trees, often on surfaces encrusted with lichens or other epiphytes. It is almost never found on the ground. It favours dry, relatively exposed places and is rare in heavily shaded woods. On trees it prefers those with a rough bark offering crannies in which to hide, or alternatively it shelters under loose, dead bark.' Gittenberger *et al.* (2006) list several deciduous tree species which *Balea* agg. is known to inhabit, with an evident preference for those with more basic bark, e.g. elm (*Ulmus*), apple (*Malus*) and willow (*Salix*). Interestingly, Anderson (2017) found *B. heydeni* in large numbers feeding on foliose lichens on Sitka spruce (*Picea sitchensis*) in County Fermanagh, Ireland. Near Cricceith, north Wales, Topley (2016) found *B. heydeni* deep inside cracks in the mortared stone wall of an old farm building and nearby on the trunk and branches of a field maple (*Acer campestre*) in an overgrown hedge.

In Yorkshire and Durham, I have found *B. perversa* only on dry-stone walls but *B. heydeni* on both walls and occasionally in deciduous woodland. On dry-stone walls both species have been found beneath cap-stones and from beneath smaller moveable stones along the wall sides, often about 300 mm below the wall top. The snails are sometimes located at the edge of patches of moss, sometimes among rocky debris and dust, and sometimes on bare stone. Where *B. heydeni* has been found in woodland, the specific habitat has been most frequently timber fencing, on the vertical surfaces and on the underside of rails, well-coated with unicellular green algae (figure 2). It has been found much less frequently on tree

figure 2: *B. heydeni* habitat, fence, Rifts Wood, Saltburn (01/08/2022, NZ 6639 2070).

trunks or on coarse woody debris near ground level. One such woodland colony seemingly occupies a single, very large old sycamore (*Acer pseudoplatanus*) in Avens Wood, NE Yorkshire (NZ 7003 1328). The tree has an extensive cover of ivy (*Hedera helix*), this in leaf from about 4 m upwards. The lower part of the trunk has a covering of moss on its more shaded east side and lichen on the west (figures 3 and 4).

figures 3 and 4: *B. heydeni* habitat, sycamore, Avens Wood, Moorsholm (07/02/2023, NZ 7003 1328).

Here, individuals are sometimes found on adjacent fallen branches close to the ground but I have not so far been able to find *B. heydeni* anywhere else on nearby trees, nor anywhere else in this wood. *B. heydeni* has been found occupying a large isolated ash tree (*Fraxinus excelsior*) near Bracey Bridge, SE Yorkshire (Norris & Lindley 2011). This tree (at TA 08291 61278) was in a hedgerow rather than in woodland and covered with abundant ivy. On 5th May 2007, sieving litter at the base of the tree yielded *B. heydeni* shells and *Lauria cylindracea*, the former assumed to be living up the tree in detritus held in ivy growth. (My thanks to Terry Crawford for these additional details.) This appears to be the only record of *B. heydeni* in SE Yorkshire (VC61).

Appearance

Gittenberger *et al.* (2006) describe several differences between the two species in the appearance of the body and shell. Some of these are quoted below [a) to e)] with added notes based on the observation of a series of populations in Yorkshire between 2018 and 2021 (table 2, figures 5 and 6).

Species	Locality	Grid ref. Altitude (m)	Notes
B. perversa	Marrick	SE0898 (313)	Dry-stone wall through farmland. Mixed population with *B. heydeni*
B. perversa	Old Glebe N	SE100897 (141)	Dry-stone wall, north end of a Yorkshire Wildlife Trust Reserve (one field, unimproved grassland)
B. perversa	Old Glebe S	SE100895 (114)	Mortared but partly derelict wall at south end of the above field.
B. heydeni	Marrick	SE0898 (313)	Dry-stone wall through farmland. Mixed population with *B. perversa*
B. heydeni	Seata Quarry	SD992884 (235)	Dry-stone wall at west side of an abandoned quarry site, now a Yorkshire Wildlife Trust reserve.
B. heydeni	Mill Gill	SD941912 (241)	Dry-stone wall between pasture and a wooded valley
B. heydeni	Rifts Wood	NZ663207 (43)	Timber fence rails and posts by a footpath through ancient semi-natural woodland

table 2: Populations sampled.

figure 5: *B. perversa* habitat, north wall, The Old Glebe, Wensley.

figure 6: *B. perversa* habitat, south wall, The Old Glebe, Wensley (22/05/2021, SE 100895).

a) 'In a limited number of animals that have been observed … in *B. heydeni* the tentacles, the head and the neck are dark, in contrast to the light, nearly transparent flanks and tail, whereas in *B. perversa* the entire animal has a dark colour.'

Boesveld *et al.* (2005) include images illustrating this difference which is seen easily in active animals. During the present investigation both species have been found to vary somewhat in overall body colour with occasional individuals being paler than the majority. The paler flanks and tail of *B. heydeni* have, however, always been found to be a distinctive feature (figures 7 to 10).

figure 7: *B. perversa,* south wall, The Old Glebe, Wensley (12/06/2018, SE 1002 8955).

figure 8: *B. heydeni*, Avens Wood, Moorsholm (14/11/2016, NZ 70034 13289).

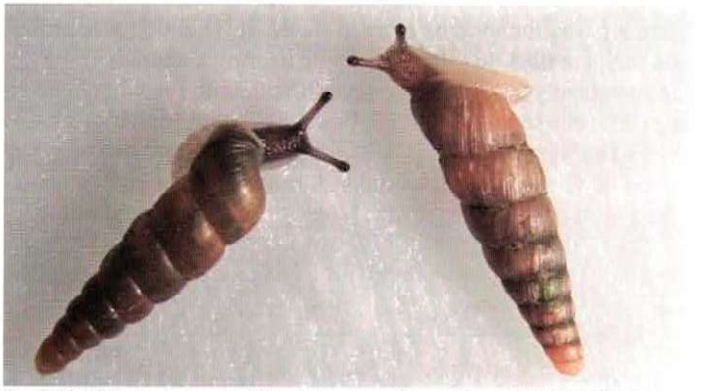

figure 9: *B. perversa* variation in body colour, Marrick (13/07/2021, SE 079982).

figure 10: *B. heydeni* variation in body colour, Seata Quarry (22/05/2021, SD 9922 8845).

b) '*B. heydeni* can be distinguished from *B. perversa* by … a yellowish rather than a brownish colour.' (This referring to the shell.)

In the Yorkshire populations *B. heydeni* has sometimes been found to have a greenish-coloured shell, notably in the population from Rifts Wood (figure 11).

figure 11: *B. heydeni* variation in shell colour. Left, Rifts Wood (04/11/2022, NZ 6639 2070); right, Mill Gill (29/03/2019, SD 9415 9122).

c) 'The maximum shell height of *B. heydeni* is usually below 7 mm whereas *B. perversa* may be somewhat larger.' (No quantitative data accompany this statement.)

Table 3 summarises measurements of shell height and breadth of the populations sampled. Measurements were made using a GX stereomicroscope (XTL3T101) fitted with a reticule eyepiece. A sample of repeat measurements showed this to be accurate to at least ± 0.05 mm. The data on shell height concur with the statement above. Thus, of 51 *B. heydeni* shells measured from the four sampled populations combined, only six were 7.0 mm tall or more whereas no *B. perversa* were less than 7.0 mm tall. Interestingly, five of the six *B. heydeni* that were 7.0 mm tall or more were from Seata Quarry, i.e. five of the rather small sample of 11 from this site. For the three *B. perversa* samples, the ranges in height are broadly similar but the mean for Old Glebe N is statistically significantly less than the mean for each of the other two samples, which are closely similar to one another (Old Glebe N mean 7.52 mm; Old Glebe S mean 7.81 mm; unpaired two-tailed t test: $t = 2.78$, $P = 0.0077$). Similarly, there is variation in shell height between the four *B. heydeni* samples, with the Seata Quarry sample being the tallest (mean 6.83 mm). This is significantly greater than the next tallest sample from Marrick (mean 6.23 mm; $t = 4.70$, $P < 0.0001$).

d) '*B. heydeni* can be distinguished from *B. perversa* by its less slender shells.' (No quantitative data accompany this statement.)

The data for shell breadth of the two species are very similar (overall ranges: *B. perversa* 2.1–2.6 mm; *B. heydeni* 2.2–2.6 mm). Thus, there seems to be no absolute difference in breadth but owing to the greater height of *B. perversa* it is proportionately more slender. This is indicated by the data on height/breadth (h/b) in table 3; there is no overlap in mean h/b between the two species and very little overlap in ranges. Thus of 100 *B. perversa*, only one had a h/b index of less than 3.00 and of 51 *B. heydeni* only six had an index of 3.00 or more. Of the four *B. heydeni* samples, those from Seata Quarry stand out as being proportionately the most slender (mean 2.94 mm), the difference between these and those from the nearest sample, Rifts Wood (mean 2.67 mm) being statistically significant ($t = 5.67$, $P < 0.0001$).

Species	Locality	Date	N	Mean height ± S.D. (mm) [range]	Mean breadth ± S.D. (mm) [range]	Mean height/breadth ± S.D. (mm) [range]
B. perversa	Marrick	13/07/2021	50	7.84 ± 0.319 [7.0 - 8.5]	2.32 ± 0.074 [2.2 - 2.5]	3.39 ± 0.144 [3.13 - 3.70]
	Old Glebe N	10/05/2021	19	7.52 ± 0.279 [7.0 - 8.1]	2.25 ± 0.061 [2.1 - 2.3]	3.34 ± 0.144 [3.17 - 3.64]
	Old Glebe S	10 & 22/05/2021	31	7.81 ± 0.398 [7.1 - 8.8]	2.33 ± 0.124 [2.1 -2.6]	3.36 ± 0.157 [2.92 -3.68]
B. heydeni	Marrick	13/07/2021	15	6.23 ± 0.329 [5.7 - 7.0]	2.41 ± 0.122 [2.2 -2.6]	2.59 ± 0.131 [2.38 - 2.83]
	Seata Quarry	22/05/2021	11	6.83 ± 0.304 [6.2 - 7.2]	2.33 ± 0.101 [2.2 - 2.5]	2.94 ± 0.136 [2.80 - 3.18]
	Mill Gill	29/03/2019	12	6.18 ± 0.191 [5.9 - 6.6]	2.33 ± 0.114 [2.2 - 2.5]	2.66 ± 0.149 [2.48 - 3.00]
	Rifts Wood	15/05/2022 04/11/2022 13/11/2022	13	6.04 ± 0.307 [5.65 - 6.75]	2.26 ± 0.065 [2.2 - 2.4]	2.67 ± 0.090 [2.51 - 2.81]

table 3: *Balea* species: height and breadth compared.

Gittenberger *et al.* (2006) made no mention of any difference between the two species in whorl number of fully formed shells. For the samples collected, with the shell upright and the mouth facing the observer, the number of whorls visible was counted. Very little overlap in whorl number was found between the two species (table 4). All of the *B. perversa* had eight or nine whorls. The Marrick sample had proportionately more shells with nine whorls than with eight, the reverse being true for the two Old Glebe samples. The Marrick shells were marginally the tallest (table 3), suggesting that greater whorl number contributes to greater height, but this is seemingly contradicted by the data for Old Glebe S (almost identical mean height to the Marrick sample but with proportionately fewer nine-whorled shells). An explanation for this might be that steeper pitch may contribute to greater height in the Old Glebe S sample but more data are needed in order to confirm this. There is some evidence to suggest that both greater whorl number and steeper pitch contribute to greater height in *Clausilia bidentata* (Wardhaugh 2015). Again, in the *B. heydeni* sample from Seata Quarry, where shells were relatively tall and slender for this species, whorl number departed from the mode of seven with the majority, in this admittedly small sample, having eight whorls.

Species	Locality	Sample Size	Number of Whorls			
			6	7	8	9
B. perversa	Marrick	50	0	0	18	32
	Old Glebe N	19	0	0	11	8
	Old Glebe S	31	0	0	17	14
	Total	**100**	**0**	**0**	**46**	**54**
B. heydeni	Marrick	15	3	11	1	0
	Seata Quarry	11	0	4	7	0
	Mill Gill	12	0	12	0	0
	Rifts Wood	13	1	12	0	0
	Total	**51**	**4**	**39**	**8**	**0**

table 4: *Balea* species: number of whorls.

e) 'A weak parietal denticle may occur but only in fully grown specimens of *B. perversa*' (figure 12).

Casual observation of *B. perversa* at the Old Glebe sites in 2018 and 2019 suggested that the frequency of occurrence of this denticle might differ between the two sites; somewhat

figure 12: *B. perversa*, parietal denticle. Old Glebe S (10/05/2021, SE 1006 8954).

surprisingly, given that these are walls at opposite sides of the same field although not connected by walls along the other two sides. This was investigated further in 2021 and the difference was found to be marked (table 5). The high proportion of shells in the Old Glebe S sample bearing a denticle (64.5%) is statistically significant compared with both the Old Glebe N (26.3%; chi-squared = 6.876, P = 0.0087) and Marrick (34%; chi-squared = 7.182, P = 0.0074). This difference between the two Old Glebe sites was similar during 2018 and 2019 when the initial counts were made. When all the data are combined for 2018 to 2021, 17.3% of shells from Old Glebe N bore a denticle (N = 81) compared with 64.8% of shells from Old Glebe S (N = 37).

Locality	Collection Date	Sample Size	With Denticle (%)	Without Denticle (%)
Marrick	13/07/2021	50	17 (34.0)	33 (66.0)
Old Glebe N	10/05/2021	19	5 (26.3)	14 (73.7)
Old Glebe S	10/05/2021	31	20 (64.5)	11 (35.5)

table 5: Parietal denticle frequency in *B. perversa*.

Historically, the occasional presence of a parietal denticle in *B. perversa* agg. has been known for a long time, for example: 'In old and fully grown shells there may be observed a slight fold or tooth about the middle of the pillar, but which is seldom to be met with' (Gray 1857: 177 and plate VI, figure 70) (figure 13).

As ever, questions arise. Will these denticle frequencies remain stable during future years? What, if any, is the adaptive significance of this denticle? It is reminiscent of numerous other well-studied examples of seemingly trivial variations in appearance, such as the number of spots on the hind-wing of the meadow brown butterfly (*Maniola jurtina*). For this and other examples, see Ford (1975) and Berry (1990).

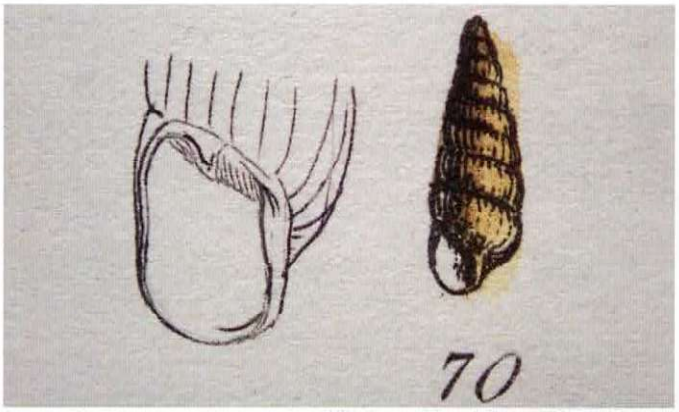

figure 13: *B. perversa* agg., plate VI, figure 70 of Gray (1857) showing a toothed shell. (photo: Peter Topley)

Acknowledgements

I am most grateful to Adrian Norris for providing me with the Conchological Society terrestrial mollusc databases for vice-counties 62 to 66 from which most of the records in Table 1 were extracted. Most of these records were made by Adrian himself, without whom it would not have been possible to write the first part of this article. Adrian, Terry Crawford and my wife Moira all very kindly read and provided useful comments on a draft of this article. Moira accompanied me on virtually every field excursion during which I collected the information in this article and I am ever grateful for her unstinting help and support.

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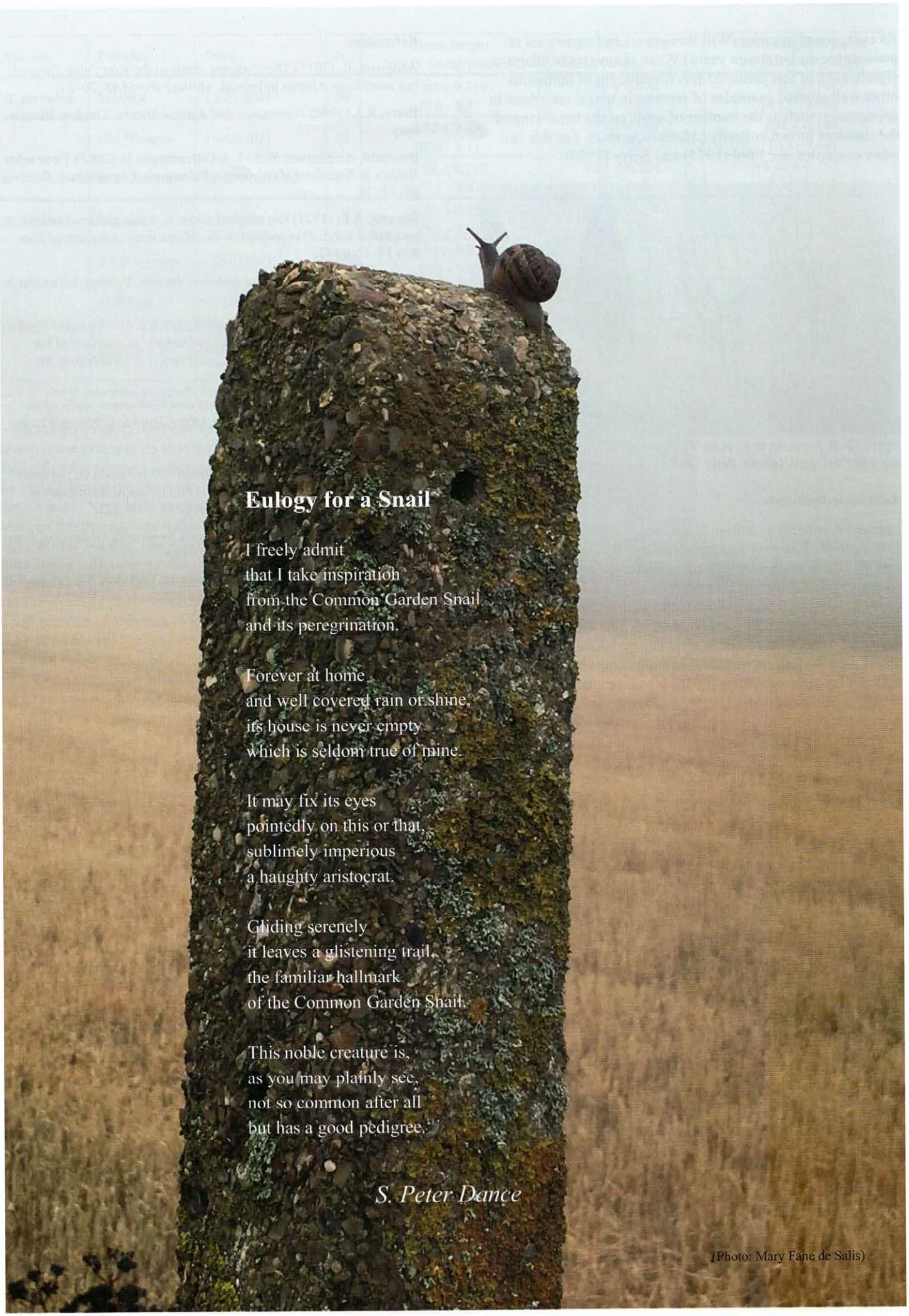
Marine mosaic at Brixham harbour

Peter Topley

Whilst on holiday last year in Brixham, Devon, I spotted this mosaic, which incorporates the shells of *Mytilus edulis, Pecten maximus, Cerastoderma edule, Turritellinella tricarinata, Patella* spp., *Nucella lapillus* and other species, and depicts a range of Devon sealife. It was made by pupils of the 2001 Brixham Community College art class and brightens up the harbour wall.



Eulogy for a Snail

I freely admit
that I take inspiration
from the Common Garden Snail
and its peregrination.

Forever at home
and well covered rain or shine,
its house is never empty
which is seldom true of mine.

It may fix its eyes
pointedly on this or that,
sublimely imperious
a haughty aristocrat.

Gliding serenely
it leaves a glistening trail,
the familiar hallmark
of the Common Garden Snail.

This noble creature is,
as you may plainly see,
not so common after all
but has a good pedigree.

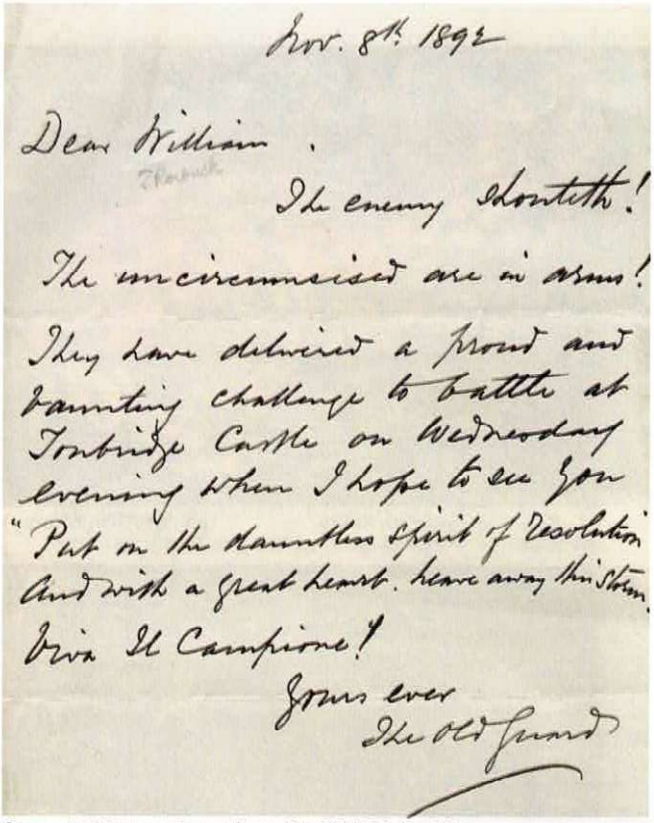
S. Peter Dance

(Photo: Mary Fane de Salis)

Calling all Poirot's! A mystery letter

Brian Goodwin

In the Conchological Society Archive at Leeds there are many pieces of conchological correspondence from the recent and not-so-recent past. For most, the context and/or subject are readily apparent – but not always! The letter in figure 1 is certainly one of the latter, and one on which I would welcome colleagues' views or theories.



Nov. 8th 1892

Dear William.

The enemy shouteth!

The uncircumcised are in arms!

They have delivered a proud and vaunting challenge to battle at Tonbridge Castle on Wednesday evening when I hope to see you "Put on the dauntless spirit of resolution And with a great heart, heave away this storm. Viva Il Campione!

Yours ever
The Old Guard

figure 1: Mystery letter from the CSGBI Archive.

For clarity, I have transcribed the letter (below) and provided some notes which may also offer a few clues to the writer and the subject:

Dear William[1] *Nov. 8th 1892*

The enemy shouteth![2]
The uncircumcised are in arms![3]
They have delivered a proud and vaunting challenge[4]
to battle at Tonbridge Castle[5] *on Wednesday evening*[6] *when*
I hope to see you "Put on the dauntless spirit of resolution" [7]
And with a great heart, heave away this storm. [8]
Viva Il Campione![9]

Yours ever The Old Guard[10]

Notes

1. There is the pencil note here which says '? Roebuck' in Terry Crowley's hand. William Denison Roebuck was one of the founder members, and Secretary at the time. However, there were plenty of other 'William' candidates in the membership at the time, including Messrs Cash, Nelson, Heathcote and Moss.
2. A Wikipedia search revealed that 'The enemy shouteth, the godless come fast! Iniquity, hatred, upon me they cast!' are lines from a Christian anthem, *Hear my prayer*, written by Felix Mendelssohn in 1844 and derived from Psalm 55.
3. I take this to imply 'non-believers' but there may be other interpretations.
4. 'A proud and vaunting [i.e. boastful] challenge' sounds like a quotation but I have been unable to trace it as such. Erasmus Darwin, in his poem *The botanic garden*, used the words 'vaunting challenge', while Nathaniel Crouch in *David and Goliath* wrote: 'Thus proud Goliath oft does vaunt, and challenge them to fight'.
5. Quite what conchologists would be doing on an 1892 winter evening at Tonbridge Castle is, indeed, a mystery to me. So much so that it even led me to wonder if the letter has nothing whatever to do with conchology!
6. Since 8th November 1892 was a Tuesday, it is possible that the meeting referred to would have been on the following day, the 9th. What we now disparagingly call 'snail mail' was both rapid and reliable in those days – '*Turbo*-charged' even!
7. This and the next line are both from Act 5 of William Shakespeare's play *King John*. This, from scene 1, delivered by Philip the Bastard (illegitimate son of Richard I) ....
8. .... And this by Louis the Dauphin, to Lord Salisbury.
9. Italian for 'long live the champion'.
10. Possibly a reference to a military background?

I must confess that the first thing that caught my eye in the letter was the reference to Tonbridge Castle, as I was born in Tonbridge, Kent (see figure 2). Among those more eminent than I, and also born in Tonbridge are CSGBI's John Llewellyn-Jones and the influential botanical artist and early photographer Anna Atkins*. Growing up there, my family often visited the castle and once we saw an albino squirrel on the associated motte which we knew more prosaically as 'the mound'. The site was purchased by the local council around 1900 and the mansion is now used as offices. Prior to that, around the time of the letter, it may have been used as a preparatory school.

Clearly the writer (presumably a man) was an educated fellow in view of the literary references.

If any amateur detective can shed light on the matter, a response to the editor would be welcomed. Alternatively, you can reach me by email at bjgoodwin44@icloud.com or by post to 44 Amber Crescent, Walton, Chesterfield, S40 3DH.

figure 2: Tonbridge Castle – Norman gatehouse and late 18th-century mansion, with part of the motte visible on the left.
(photo: Clem Rutter (CC-BY-SA-2.5))

* Anna Atkins (1799–1871) was a botanical artist and the first person to illustrate a book with photographic images. See: https://en.wikipedia.org/wiki/Anna_Atkins and https://www.nhm.ac.uk/discover/anna-atkins-cyanotypes-the-first-book-of-photographs.html.

Marine Recorder's report 2022

Simon Taylor

Two distinct themes literally stole the headlines in the marine recording scheme in 2022: colourful nudibranchs and (a repeating theme over recent years) species range extensions.

In fact, the two themes overlap in the cases of some outstanding nudibranch reports. *Babakina anadoni* (Ortea, 1979) is surprisingly poorly recorded and indeed was only first described relatively recently, despite being a remarkably colourful species inhabiting shallow water well within the range of divers; it is possibly even intertidal. Until recently it was considered restricted to NW Africa, the Canary Islands and the Iberian peninsula, but it would appear to be spreading north, having recently been seen off Brittany and then in August 2022 observed in Scilly by diver Allen Murray. Allen was working as a volunteer with the Wildlife Trusts and the combination of the slug's undeniable beauty – displayed very well in Allen's photographs (figure 1) – and the Trusts' public relations capabilities saw the find featuring prominently in national media, e.g. *The Guardian* (2022); ITV (2022). The media focus no doubt raised awareness of the find and possibly helped to produce subsequent observations off western Cornwall. It is, of course, possible that the species was always present and merely overlooked, although given its colourful appearance and not unusually small size (c. 20 mm), plus the fact that the shores of Cornwall and Scilly are among the better scrutinised in Britain, it seems more likely that its distribution is indeed extending northwards.

It can sometimes feel a bit of a cheat referring to the Channel Islands in these reports, being as they are so close to the French coast, although nature itself pays little heed to national boundaries. The second colourful nudibranch has now been seen several times in Jersey and the reef chain known as Les Écréhous north-east of the island. Les Écréhous is a 25-km^2 area of rocky reef submerged almost entirely at high tide except for three very small islands, and has been the study area of Jersey amateur marine biologist Nicolas Jouault for several years. In the latter part of 2022 he was excited to discover several specimens of *Berghia coerulescens* (Laurillard, 1832) while surveying the reef (Jouault 2023), in no small part due to their colourful blue cerata tipped with egg-yolk yellow, and fiery orange rhinophores (figure 2). Possible range extension here is less striking than with *Babakina anadoni*; again, *Berghia coerulescens* is primarily a species of NW African and Iberian coasts (it is also recorded from the Mediterranean) but records of 20th century observations exist from Brittany. There then appears to have been a gap of several decades until recently, with new records now also from Brittany. Further Channel Island observations were made off Jersey late in the year by Chris Isaacs.

A third nudibranch new to Britain in 2022, again following the pattern of being previously known only from the Atlantic inshore waters of the Iberian peninsula and SW France (Trigo *et al.* 2018), is the rather unusual dorid *Corambe testudinaria* Fischer, 1889, a specimen of which was photographed by Charlotte Cumming while surveying intertidally at Newtrain Bay, Trevone, Cornwall, on 18th May. Charlotte photographed what she thought was a possible *Lamellaria* sp., but when reviewing her images she realised it might be something else. Posting on social media soon revealed that her hunch was correct. As can be seen (figure 3), Charlotte's initial impression of a small *Lamellaria* is not far-fetched. The animal's network-like pigmentation pattern on the dorsum provides excellent camouflage when feeding on its usual bryozoan prey, particularly *Membranipora* sp. when attached to brown algae.

figure 1: *Babakina anadoni*, Scilly. (photo: Allen Murray)

figure 2: *Berghia coerulescens*, Jersey. (photo: Chris Isaacs)

figure 3: *Corambe testudinaria*, Trevone, Cornwall. (photo: Charlotte Cumming)

Cadlina pellucida (Risso, 1826), another dorid nudibranch, was first recorded for Britain by David Kipling in 2012 (Taylor 2014). While not brightly coloured, it has an attractive appearance with an ivory white body contrasted

by dark smut-brown rhinophores and gill. Records have trickled in ever since, always from SW England and always from divers, usually observed in August or September. Eddie Rickard's 2022 sighting of the species in March, on the *Coronation* wreck off Plymouth, was therefore notable and prompted something of an audit of observations of the species (the Society holds nine records in its dataset).

Other notable nudibranch records in 2022 include:

- *Calma gobioophaga* Calado & Urgorri, 2002. Originally recorded for Britain by David Fenwick in Hayle, Cornwall in 2013 (Fenwick 2014), this species has been cropping up in a few other places, even as far north as Skye. It was photographed in April 2022 by Steve Trewhella on the east side of Kimmeridge Bay, Dorset, its easternmost record along the coast of southern England.
- *Trinchesia cuanensis* Korshunova, Picton, Furfaro, Mariottini, Pontes, Prkić, Fletcher, Malmberg, Lundin & Martynov, 2019. Split, along with two other non-UK species, from *Trinchesia caerulea* (Montagu, 1804) as a result of a molecular study, this slug is relatively easy to determine from the latter, especially with good quality photography. Its type locality is Strangford Lough and it has also been recorded, often by reviewing old underwater photographs, from sites off Scotland and Wales, but it had not been recorded from England until September 2022 when avid Seasearcher Dawn Watson photographed a specimen off the north Norfolk coast (figure 4). It is very unusual for a first English record of any mollusc (other than perhaps an invasive non-native species) to be from the North Sea.

figure 4: *Trinchesia cuanensis*, Iron Road, north Norfolk. (photo: Dawn Watson)

- *Trinchesia genovae* (O'Donoghue, 1926). A small and poorly recorded species, known from the west of Ireland but more common to the south and into the Mediterranean. Found by Steve Trewhella on a pontoon in Portland Harbour in December, the first time I have known it to be found in Britain.
- *Pruvotfolia pselliotes* (Labbé, 1923). Another warmer water species at the northern limits of its range in the southern British Isles, it was also recorded by Nicolas Jouault and Chris Isaacs from Les Écréhous and Jersey, respectively.
- *Discodoris rosi* Ortea, 1979. A delightfully named and pretty little species, again at its northern limit in SW England. Lucy Martin photographed a specimen on 25th September off Stoke Point, SW Devon, suggesting the species is gradually colonising eastwards.
- *Thecacera pennigera* (Montagu, 1815). An attractive species, familiar to many as the subject of one of the series of postcards produced by the Society back in the 1980s. While not terribly rare, there are few records from the North Sea; that number was increased by an observation made in Brightlingsea Creek, Essex, by Roger Tabor.

There was some range expansion news on the shelled gastropod front too. Of our two widespread species of the trochid genus *Steromphala*, only *S. cineraria* (L., 1767) is universal. *S. umbilicalis* (da Costa, 1778), while common on many shores, is absent from the North Sea (unfortunately there are several incorrect North Sea records of the species shown on the NBN Atlas, from datasets other than this Society's). Specimens can be found sporadically in Orkney but not beyond Duncansby Head, while in the south they were recorded as restricted to no further east than Beachy Head (Seaward 1990). Since then, the species has crept further east and by the beginning of the century was recorded from southern Kent and then round to the north Kent coast as far as Whitstable. Very late in 2021, specimens (figure 5) were found for the first time on the northern side of the Thames estuary, in fact quite some distance up the Essex coast at Colne Point (Taylor 2023, forthcoming). While this continued expansion into the North Sea from the south seems to merely demonstrate a progression of the pattern followed over the last two decades around the Kent coast, it represents quite a geographical leap. The most likely explanation is climate change (Mieszkowska *et al.* 2006), but in such examples a key factor can be the minimum winter water temperature and December 2022 has already proved to have been considerably colder than at any time in at least the previous two winters, in the south-east at least. The presence – or otherwise – of *S. umbilicalis* in East Anglia will remain under scrutiny.

figure 5: *Steromphala umbilicalis*, specimens from Colne Point, Essex.

Another trochid of related interest, *Phorcus lineatus* (da Costa, 1778), is restricted to Ireland and SW Britain and hence has a limited distribution eastwards along the southern shore of England. The extent of this is known to fluctuate over time in correlation with cold winters (Smith 2015) but since the turn of the millennium the eastern limit has been reported as the Isle of Wight and Solent (Mieszkowska *et al.* 2007). Its continued presence in that area was confirmed during Society fieldwork in 2021 but I also found it significantly further east at Church Norton, at the mouth of Pagham Harbour, during the Society's field visit in August 2021. In 2022 the Society verified online records much further east still, with one observation reported from east of Brighton by R. Tomlinson. As with *S. umbilicalis*, *Patella depressa* Pennant, 1777 and others, the easternmost extent of these temperature-sensitive species will continue to be monitored with great interest.

Further trochid-related excitement was prompted by Adrian Brokenshire microscopically examining some Hebridean offshore samples dredged in 2018/19 and provided by David McKay. Within the species lists generated were several notes of a mystery trochid which defied determination. Adrian sent the specimens to me and the immediate impression was that they were a *Solariella,* but most unlike the *S. amabilis* (Jeffreys, 1865) occasionally encountered in the NE Atlantic. Images of the best specimen (figure 6), with a diameter of 2.4 mm, were shared with Suzanne Williams at the NHM (who has worked on *Solariella* and delivered a lecture to the Society on the subject in the past) with a tentative determination of *S. obscura* (Couthouy, 1838) based on Warén (1989). Suzanne supported this suggestion, citing a more recent Russian study of the species (Krol & Nekhaev 2018) in which the specimens most resemble the depiction of *S. obscura* var. *bella* (Verkrüzen, 1875). The four specimens Adrian sorted from the various samples are the first that he, I, David or Suzanne have seen from British or Irish waters; all four were empty shells, although two appeared relatively fresh, so the hunt continues for live material.

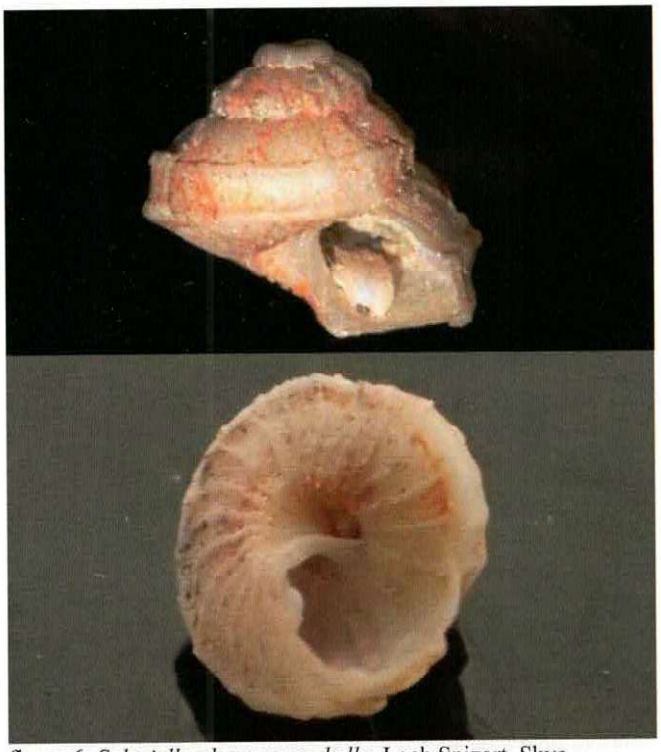


figure 6: *Solariella obscura* var. *bella*, Loch Snizort, Skye, Hebrides.

It was a good year for *Janthina* strandings with several reports from different locations and at different times of year. Again, the Wildlife Trusts' publicity machine was active in the south-west, which led to *Janthina* featuring on the BBC News (BBC 2022) following strandings on Tresco and St Mary's in Scilly in mid-July. Other reports were received from Co. Donegal, Ireland (Michael Bell, in May) and Oronsay, Hebrides, Scotland (Clive Walton and Amy Millard, in late July). Although only photographs have been seen, all reports appear to be of *J. janthina* (L., 1758) and they were significant strandings in terms of the numbers of specimens found, often including moribund individuals still with bubble rafts attached (figure 7 and front cover).

There were also a number of reported strandings of wood containing shipworms, but in all cases examined the species proved to be either *Psiloteredo megotara* (Hanley, 1848), *Nototeredo norvagica* (Spengler, 1792) or *Teredo navalis* L., 1758. It is always worth checking to see if any of the more exotic species are present. There is little other news on the bivalve front from 2022, other than to mention Bas Payne's continued investigation of *Cerastoderma*, on which he spoke at the Regional Meeting in Liverpool in November. While the 'traditional' methods of determining between *C. edule* (L., 1758) and *C. glaucum* (Bruguière, 1789) have been shown to be reasonably reliable, genetic comparison of specimens has proved them not to be infallible, particularly in what could be described as atypical or unusual habitat. An example of this arose at Medmerry, West Sussex, an active managed coastal retreat site very much in transition and visited by the Society in August 2021 (Willing 2022). Here, cockle specimens strongly resembling *C. edule* were identified genetically as *C. glaucum* (and the molecular test is considered to be very accurate and reliable).

Cephalopod news was thin on the ground in 2022 too, although a stormy autumn produced a few reports of strandings of the cuttlebones of the two less frequently encountered species: *Sepia orbignyana* Férussac, 1826 and *Sepia elegans* Blainville, 1827. South coast strandliner and regular recorder Stephen Green found numerous specimens amongst wrecks of *Sepia officinalis* L., 1758, allowing useful comparisons to be drawn.

figure 7: *Janthina janthina* stranded on Oronsay, Hebrides, Scotland. (photo: Amy Millard)

iRecord and iNaturalist

It is now ten years since I was elected as the Society's Marine Recorder. There have been some significant changes in that period, easily the greatest of which is the emergence of online reporting facilities – primarily iRecord and iNaturalist – as by far the principal means by which the Society receives species observation records. In many cases those who report their findings do not do so specifically with the intention of providing the information to the Society, but we provide a mechanism by which the species determination and some other aspects of the record can be verified and, if deemed correct, then openly shared via the NBN Atlas. For the Society's marine recording scheme, the majority of verifications are performed by Ian Smith, to whom I am very grateful. If there is any query over a species identification then Ian and I will often attempt to direct the recorder towards a reference through which they may be able to reassess their opinion, rather than simply telling them they are wrong, or redetermining the observation ourselves without explanation. Providing such feedback helps not only to educate recorders but encourages them and hopefully recruits them to provide more data. Incidentally, Ian continues to publish his excellent species accounts openly online through ResearchGate at https://www.researchgate.net/profile/Ian-Smith-40/research.

Although this verification process can be time consuming and, of course, involves lots of records of the commoner species, it has undoubtedly increased the volume of marine records being added to the Society's dataset. There are some issues which have to be overcome, particularly the central necessity of having to verify species determinations just from photographs, which can be far more difficult than one would initially imagine, especially if the recorder is inexperienced and is perhaps not aware of key features which need to be seen to facilitate determination. Another consideration arises from the 'Four Ws' theory of biological recording, which states a record must consist of: Who (the recorder); What (the species); When it was recorded; and Where. Many people use online recording facilities under a pseudonym or username, which poses the question of whether the 'Who' aspect is satisfied; if future workers wish to investigate details of a record then they would need to know the true identity of the recorder involved. The recorder could, in theory, be contacted via the username involved but these details often change with time so efforts are being made to build a list of actual names which can be linked to usernames.

Other data sources

Notwithstanding the above, quantities of data are still gratefully received in hard copy or in spreadsheets from established recorders. David McKay, for example, provides extensive lists in spreadsheet form compiled from shore recording and offshore dredging.

Hard copy lists, including the Society's archive of recording cards, continue to be digitised by the volunteer team of Brian Goodwin, Andrew Wright and Val Marshall, whose assistance is very welcome. Working through the archive, the most recent batches examined all turned out to have already been keyed into the database some years ago, helping to reduce the scale of the overall project.

If you are in possession of any old record cards, or indeed have any digital lists of marine observations you or others have made, then please contact me with a view to having them added to the dataset. It is noted that gaps exist in the dataset where species lists from samples gathered on Society field visits have not been provided, so please, if you do any marine fieldwork, go through your files and make sure everything is processed, listed and fed back to me to be added to the dataset.

Field work

The Society held two dedicated marine recording trips during the year. A week-long event in Northumberland, organised by Rosemary Hill, was well attended with a group of seven staying the entire week and numerous members dropping in on various days. A variety of shores was visited during the course of the event, providing up-to-date coverage of the area between Newbiggin-by-the-Sea and Budle Bay. Perhaps the biggest surprise of the week was the absence of *Littorina arcana/saxatilis* agg., which was not seen alive at any site until the final day when we visited Newbiggin, the only shore of the week which had rock exposed in the necessary zone.

A weekend was also arranged in the Solent, which I unfortunately had to miss due to contracting Covid (Payne & Topley 2023). Bas Payne and I conducted an interesting weekend surveying the landward side of The Fleet in Dorset as part of his *Cerastoderma* project, which produced a number of other species records. All have been shared with The Fleet Study Group and the reserve Warden. David McKay and I also spent a week surveying the shores around Upper Kyle in Argyll during the spring low tides.

Vagrants and adventives

Despite apparently promising storms in the autumn and the stranding of numerous pieces of flotsam with goose barnacles and Columbus crabs, no transatlantic rafters were reported other than a few dead juvenile encrusting bivalves.

Several adventive reports were received (in this sense 'adventive' is used to refer to specimens, usually dead shells, somehow transported here and found hugely out of context):

- Late in 2021, Adrian Brokenshire found a well-preserved shell of the Indo-Pacific naticid *Paratectonatica tigrina* (Röding, 1798) on the shore at Bigbury, South Devon.
- In May 2022, the Society was contacted by the Marine Biological Association regarding a *Haliotis* shell which had been found during a bioblitz at Wembury in SW Devon in 2019. With ormers (*H. tuberculata tuberculata* L., 1758) present on the other side of the English Channel, plus occasional attempts to farm *Haliotis* in Britain and Ireland, such finds often prompt excitement that ormers may have colonised from across the Channel, or that escaped/discarded farm stock may have naturalised. The photographs provided (figure 8, left) indicated the specimen was not an ormer and was more likely a small (28 mm) *H. discus* Reeve, 1846 or *H. diversicolor* Reeve, 1846, both Asian species. Both are farmed for food and occasionally sold in this country, usually with the shell, but 28 mm is too small for such an origin, hence the source remains a mystery.
- Perhaps most mysterious of all, a large and fresh-looking shell of the Caribbean king helmet, *Cassis tuberosa* (L., 1758), was trawled up from 20–25 fathoms by the fishing vessel *Star of Jura* in the Tiree Passage, off Jura in the Hebrides at 56°37.1'N 006°24.8'W (figure 8, right).

figure 8: Left: *Haliotis ?discus* Reeve, 1846, Wembury, SW Devon (photo: Jack Sewell, MBA); right: *Cassis tuberosa* (L., 1758), trawled, Tiree Passage, Hebrides, Scotland (photo: Kenny, skipper of *Star of Jura*).

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Conservation Officer's Report 2022

Mags Cousins

Various members of the Society continue to engage in conservation initiatives and projects raising awareness of molluscs, particularly through invertebrate conservation projects, not all of which can be reported here. Deserving particular mention is Imogen Cavadino who, in pursuing her PhD on slugs, engaged with and provided training to a huge number of citizen scientists, mostly new to slug recording, and won a much-deserved award as joint runner up for 'Wildlife recording – terrestrial' at the National Biodiversity Network Awards 2022. The recording project, 'Slugs Count', generated 21,000 identifications of slug species, resulting in 3047 records. Congratulations Imogen!

Invertebrate recording generally has benefitted from some increased funding in the past few years. I led two online training sessions and three field meetings with a focus on training in Wiltshire in 2022, through the 'Action for Insects' project managed by Michael New of the Wiltshire Wildlife Trust (Cousins 2023).

Martin Willing, on behalf of the Society, concluded the consultation on the 7th Quinquennial Review of Schedule 5 and 8 of the Wildlife & Countryside Act 1981 in February last year, with details of the subsequent listings for mollusc species in Schedule 5, Section 9 (Willing 2022). We are still waiting for final confirmation from Defra on changes to be implemented through QQR7. The Society is indebted to Martin for his dedication in seeing through this laborious and iterative process and the benefits to mollusc conservation achieved through the WCA.

There has been a slew of legislative changes and government initiatives, not least the Environment Act 2021, for which the legally binding targets to protect our environment were published in December 2022. The species target D4: *Relative abundance and/or distribution of widespread species is to halt the decline in species populations by 2030, and then increase populations by at least 10% to exceed current levels by 2042. Alongside this is the target to reduce the risk of species extinction D5: Conservation status of our native species*. Molluscs are included in these targets and there will be a reporting cycle for which the Society's dataset will be invaluable. The work by Ben Rowson (Non-Marine Recorder) and Simon Taylor (Marine Recorder) on maintaining the Society's dataset, and of course all the recorders for submitting records, is invaluable for highlighting changes in distribution, abundance and threats.

Meanwhile, pressures on important mollusc habitat continue unabated. Norfolk Wildlife Trust (NWT) are leading a

campaign opposing the Norwich Western Link Road proposal for a three-mile section of dual carriageway that would cross the River Wensum. This has the potential to impact on a population of Desmoulin's whorl snail (*Vertigo moulinsiana*), an Annex II species, which is found on the margins of the River Wensum SSSI/SAC and is listed as a qualifying feature of the SAC (Special Area of Conservation). *V. moulinsiana* is not the only important species at risk, there are also white-clawed crayfish, a nationally important barbastelle bat population, and important invertebrate assemblages in ancient woodland.

Some rare species are so infrequently recorded that even records from known sites are worth mentioning. For instance, over the last two decades, the Society has only received 23 records of Lilljeborg's whorl snail (*Vertigo lilljeborgi*) (figure 1). On average this is roughly one record per year. The equivalent for the similarly-sized *Vertigo pygmaea* is over 70 records a year! In August Ben Rowson undertook a survey for *V. lilljeborgi* near Porthmadog, on the banks of the river between Merionethshire (VC48) and Caernarvonshire (VC49). This was commissioned by Natural Resources Wales as part of investigations into future flood management in the area. *Vertigo lilljeborg*i was discovered at the site by Peter Dance in 1970 and has periodically been detected since. The previous survey by Martin Willing (2009) showed that it survives only in very low numbers: just seven individuals, at one small part of the site. The 2022 survey, which used the same methodology, found that it is still very scarce: a total of 12 individuals, in two parts of the site (Rowson 2022). Martin has been working with NRW on similar *V. lilljeborgi* surveys at other sites in Wales, some discovered by Arthur Chater in the 1980s. The suggestion of new *V. lilljeborgi* sites in central Ireland (Wright 2022) is therefore intriguing.

figure 1: *Vertigo lilljeborgi*, Ambleside, Cumbria, 1987. (photo: Derek Rands)

Queries on identification continue to come in via social media and email, and also requests for information, such as those following the release of a news item by Isobel Ollard (2022), a PhD researcher, University of Cambridge. The study found that freshwater mussels in the Thames have declined by almost 95% since a 1964 survey and that the mussels were smaller and growth rate had fallen by 10–35% compared to 1964. The study team hypothesised that lower levels of nutrients, such as phosphate, in the river may be part of the reason why mussels are smaller and slower to grow than observed in 1964, when the Thames was more polluted with phosphate. Reduced nutrient content could lead to lower food (algae) availability for mussels and slower growth rates as a result. This study sparked some questions, including from Defra, but it should be noted that the picture is more complicated than this implies, as no data exists on other factors such as nitrates and suspended sediment in the two time periods; there are now invasive species and other threats to habitat, such as dredging and intensive land use along the riverbank, which may also have driven declines. Martin Willing followed this up with Isobel's PhD supervisor, Prof. David Aldridge (Dawson Professor of Zoology, St Catharine's College, Head of Aquatic Ecology Group, Cambridge) and also asked if Isobel would be prepared to speak to the Society about her work.

Look out for Martin Willing's 'Molluscs' wildlife reports to *British Wildlife*. The February 2023 issue (volume 34 (4)) summarised the discovery of minute fibres of glass from decaying glass reinforced plastic boats found within the tissues of marine molluscs (Ciocan *et al.* 2020), and the impacts of climate change on freshwater pearl mussels *Margaritifera margaritifera* (Cosgrove *et al.* 2022).

Many thanks to all the members who have contributed to mollusc conservation in 2022, many more than are mentioned here.

Note that awareness of molluscs, in a rather strange form, may also build following the win at the BAFTAs for 'Marcel the Shell with Shoes On', a mollusc movie animation released in 2021. It is the story of a lonely young snail who goes on a long journey searching for family. In order to enjoy the movie, malacologists everywhere will have to suspend their disbelief at the two little feet (wearing shoes) and one eye peering out of the aperture.

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Non-Marine Recorder's report 2022

Ben Rowson

The year 2022 saw a number of interesting discoveries and developments in the Society's non-marine dataset. Recording continued in the field and in archives, with data entered from record cards and old reports. Particular attention was paid to records from Ireland (both Northern Ireland (NI) and the Republic of Ireland (ROI)) this year. Indeed, 2022 was unusual in that we received more records from Ireland than from Britain.

We received (and granted) requests to use the Society's dataset from various UK Local Environmental Records Centres (LERCs), the UK Biological Records Centre, and researchers on projects at universities in York, Cardiff, and Brno, Czech Republic. A Conservation and Recording meeting at the Society's Regional Meeting in Liverpool, and a subsequent Council meeting, saw us agree to move towards a CC-BY (Creative Commons Attribution) licence on NBN, increasing the accessibility of the Society's data. The history of the Non-marine Recording Scheme was presented in a short talk at the Liverpool meeting, and as part of a session about citizen science at the 2022 World Congress of Malacology in Munich, Germany.

Last year was again the warmest year on record in both the UK (Met Office) and Ireland (Met Éireann). Many areas experienced a summer drought, or severe winter storms. The latter sadly affected an experimental partnership we tried out with the Natural History Museum, London (NHM) in February. The online project 'Slime Search' (https://www.nhm.ac.uk/take-part/citizen-science/slime-search.html) aimed to encourage recording, via iNaturalist, of ten snail and slug species in UK cities over a set period. These were carefully selected to be likely to be found in urban areas and to be easy to distinguish from photographs, while still being priorities for recording. I thank Imogen Cavadino for helping me fine-tune the list of species and Mags Cousins for helping the NHM and me publicise the project on Twitter. Unfortunately, the 'Slime Search' period coincided with the worst storms of the year (with exceptional red weather warnings) and the response was disappointing. Only 23 records of the target species were received, and 14 of them concerned *Hygromia cinctella*. The project may be revised and tried again in future. iNaturalist lends itself well to such projects, and overall was once again a major source of new records. In 2022 the 'City Nature Challenge', another iNaturalist initiative, resulted in many urban UK mollusc records, 355 of which concerned *Hygromia cinctella*.

New data received

At the time of writing (21st February 2023), over 13,000 new records have been compiled to import into the Society's database. These represented over 150 species and came from 136 vice-counties (VCs) throughout Britain and Ireland: 4372 (32%) of the records originated in iRecord and 4855 (36%) in iNaturalist (as acquired via iRecord). As usual, thanks go to Chris du Feu for verifying the majority of slug records on these platforms. The remaining 4100 (31%) of the records were received directly or input by myself.

We also received an additional, exceptionally significant dataset of 27,000 records kindly made available by Roy Anderson. (The true total for the year is therefore over 40,000 records.) Roy's records range from the 1970s to the present, and cover all 40 VCs in NI and ROI. There is some overlap with data we already have, but Roy's data include at least 84 new VC records. The data are currently being compiled into the Irish dataset by Evelyn Moorkens, after which the main Recorder 6 database will be updated.

The second largest submission this year was from Andrew Wright, of nearly 2000 records from the Boyne area of ROI, including another 14 new VC records (see Wright 2022 and below). Additional contributors are too numerous to mention, but include Clive Walton (RSPB sites in western Scotland), David Adams (Sussex churchyards), Rosemary Hill (West Midlands), Adrian Brokenshire (Cornwall), Tim Rayner (Ceredigion), and Mags Cousins (Wiltshire and Lincolnshire). Thank you, as always, to everyone who sent in records.

A special effort was made this year to ensure that all the VC occurrences listed in previous Non-marine Recorder's reports, particularly those from Ireland from 2007 onwards, are substantiated in the Society's Recorder 6 database. On checking through the submission from Andrew Wright, it was discovered that some of these had apparently never previously been entered and were missing from the VC Census table as updated in 2021 (see Rowson 2022). This has led to errors. For example, in a previous report (Rowson 2021) I listed *Hygromia cinctella* as new to South Kerry (VCH1) based on a record from 2019. At the time I was unaware that the 2007 report (Norris 2008) had done the same with a record by Richard Preece from 2004, because this was missing from our databases. I have been trying to resolve this frustrating situation with the help of Evelyn Moorkens and Roy Anderson. All new VC records for Ireland have therefore been re-digitised from the reports between 2007 and 2017, so that we can be certain that all will be present in the Society's database. We also now have the complete dataset from Roy. Evelyn is continuing to compile and update the complete dataset for Ireland to try to eliminate any gaps. Finding and filling these has proven difficult using the Recorder 6 software, which I am looking to replace as soon as a suitable alternative system is found.

New vice-county records

A total of 112 new VC records were recognised this year and are listed below, 98 of which are from Ireland. These are listed by VC rather than species name. Records received via iRecord are marked with *, and those received via iNaturalist with **.

I emphasise that these are all newly recognised VC occurrences (even the ones with pre-2022 dates). This list does not include the other records re-digitised from past Non-marine Recorder's reports, as explained above.

West Cornwall with Scilly (VC1): *Ambigolimax parvipenis*, Tuckingmill, 22/4/2001, G.A. & D.T. Holyoak (conf. D.T. Holyoak, 2022).

East Cornwall (VC2): *Ambigolimax parvipenis*, Pentireglaze, 2001, G.A. & D.T. Holyoak (conf. D.T. Holyoak, 2022).

North Somerset (VC6): *Sphaerium nucleus*, Moorlinch SSSI, 28/7/2017, Mags Cousins (conf. M.J. Willing)*.

North Wiltshire (VC7): *Selenochlamys ybsryda*, Corsham, 14/3/2022, Ann-Marie Ricketts.

South Hampshire (VC11): *Cipangopaludina chinensis*, Southampton Common, 23/4/2021, 'gman122'**. (The species was again recorded from this site on 26/1/2022, by 'eurypomus'**).

West Kent (VC16): *Heleobia charruana*, Woolwich, 1/6/2003; Environment Agency (conf. Tim Worsfold).

Surrey (VC17): *Heleobia charruana,* South Bank Centre, 1/9/2004; Environment Agency (conf. Tim Worsfold); *Arion* sp. 'Davies', Shere Road, West Clandon, 17/5/2022, I. Cavadino & FSC course participants.

South Essex (VC18): *Heleobia charruana,* Barking Creek, 23/6/2005; Environment Agency (conf. Tim Worsfold); *Corbicula fluminea,* Barking Creek, 23/6/2022, W. George (conf. S. Taylor).

Middlesex (VC21): *Heleobia charruana,* South Dock, 9/11/2005; Environment Agency (conf. Tim Worsfold).

East Suffolk (VC25): *Ambigolimax parvipenis*, Pakefield Church, 1/6/1987, D.C. Long (conf. A. Norris, cited by Killeen 1992 and Rowson *et al.* 2014, now accepted as the first record of this species in Britain; see below and Hutchinson *et al.* 2022).

Shropshire (VC40): *Sphaerium nucleus*, Old River Bed SSSI (VC40), 14/3/2019, Mags Cousins (conf. M.J. Willing)*.

Carmarthenshire (VC44): *Helix lucorum*, Aberglasney Gardens, 12/6/2022, Jessica Perry*.

Cumberland (VC70): *Assiminea grayana*, RSPB Campfield Marsh, Cumberland (VC70), 21/9/2022, Clive Walton.

Outer Hebrides (VC110): *Ambigolimax valentianus*, Eochar, South Uist, 15/4/2022, Robin Sutton*.

Orkney (VC111): *Ambigolimax valentianus*, Mayfield, Westray, 3/1/2022, A. Phillips & S. Dudley.

Shetland (VC112): *Limacus maculatus,* Schoolton, Fair Isle, 7/3/2015, N. J. Riddiford (conf. from old photo, previously identified as *Lehmannia marginata*); *Cornu aspersum*, Lerwick, 22/10/2022, 'account120'**.

North Kerry (VCH2): *Testacella maugei,* Ballybunion, 10/3/2022, Chris Gleed-Owen.

West Cork (VCH3): *Daudebardia rufa*, Ballycommane House, 13/7/2021, Julia Cooper (conf. R. Anderson).

East Cork (VCH5): *Arion rufus*, Rostellan, 4 km SW of Cloyne, 1/9/2011; *Balea heydeni*, Fota Wildlife Park, Foaty Island, 13/4/2011; both R. Anderson.

Waterford (VCH6): *Physella acuta*, Annestown, 9/6/2009; *Arion rufus*, Pickardstown Fen, 28/7/2009; *Ambigolimax valentianus*, Data Centre, Cariganore, 25/7/2009; *Euconulus alderi,* Ballyshunnock Reservoir, 29/7/2009; *Euconulus fulvus*, Annestown, 9/6/2009; all R. Anderson.

South Tipperary (VCH7): *Arion flagellus*, Glengarra Wood, 31/7/2005; *A. rufus*, Cahir Castle, Cahir, 16/4/2013; *A. hortensis*, Cahir Castle, Cahir, 16/4/2013; all R. Anderson.

Limerick (VCH8): *Stagnicola fuscus*, Massy's Bridge, Barnakyle River, 21/8/2001; *Physella acuta*, Bunlicky Bridge, Ballincurra Creek, 2/10/2008; both R. Anderson.

Clare (VCH9): *Balea perversa*, Slievecarran NR, Burren, 3/6/2018, R. Anderson; *Euconulus alderi*, Slievecarran NR, Burren, 10/8/2018; *Euconulus fulvus*, Slievecarran NR, Burren, 10/8/2018; both A. Mantell (conf. R. Anderson).

North Tipperary (VCH10): *Viviparus viviparus*, Terryglass, 16/10/2021; *Arion flagellus*, Garrykennedy, 17/10/2021; *A. rufus*, Gortmungo Wood, 16/10/2021; *A. circumscriptus silvaticus*, Garrykennedy, 17/10/2021; *A. owenii*, Garrykennedy, 17/10/2021; *Euconulus fulvus*, Gortmungo Wood, 16/10/2021; all R. Anderson.

Kilkenny (VCH11): *Stagnicola fuscus*, Rosbercon, River Barrow, 6/8/2001, G. A. Holyoak (conf. R. Anderson); *Arion distinctus*, Kilkenny Castle Grounds, 19/4/2021; *A. hortensis*, Kilkenny Castle Grounds, 19/4/2021; both R. Anderson.

Wexford (VCH12): *Arion rufus*, Tintern Abbey, 13/7/2013; *A. circumscriptus circumscriptus*, Johnstown Castle, 10/7/2011; both R. Anderson.

Carlow (VCH13): *Physella acuta*, Milford Bridge, River Barrow, 18/4/2014; *Ambigolimax valentianus*, Oak Park, 17/4/2014; *Arion circumscriptus circumscriptus*, Johnstown Castle, 10/7/2011; *A. distinctus*, Oak Park, 17/4/2014; *A. hortensis*, Oak Park, 17/4/2014; all R. Anderson.

Leix (Queen's County) (VCH14): *Ambigolimax valentianus*, Heywod Gardens, Ballinakill, 14/3/2012; *A. rufus*, Bishop's Wood, SW of Durrow, 26/11/2008; *A. circumscriptus circumscriptus*, Emo Park, 16/4/2013; *A. c. silvaticus*, Emo Park, 16/4/2013; *A. distinctus*, Bishop's Wood, SW of Durrow, 26/11/2008; *A. hortensis*, Emo Park, 16/4/2013; all R. Anderson.

South-east Galway (VCH15): *Arion flagellus*, Portumna Abbey, 25/9/2007; *A. rufus*, Coole Park/Estate, 5/9/2001; *Boettgerilla pallens*, Coole Park/Estate, 5/9/2001; all R. Anderson.

West Galway (VCH16): *Arion flagellus*, White Strand, Salthill, 6/9/2011; *A. rufus*, An Spideal Lair, Spiddle, 6/9/2011; both R. Anderson.

Offaly (King's County) (VCH18): *Ambigolimax valentianus*, Birr Castle, 10/10/2021; *Euconulus alderi*, Killaun NR, 10/10/2021; both R. Anderson.

Wicklow (VCH20): *Physella acuta*, National Irish Garden Centre Exhibition, 11/7/2010, R. Anderson.

Dublin (VCH21): *Arion circumscriptus circumscriptus,* Luttrellstown House, 26/9/1981; *Euconulus alderi*, Bog of the Ring, Balrothery, 13/2/2010; both R. Anderson.

Meath (VCH22): *Physella acuta*, Beauparc, 7/5/2019, A. Wright; *Arion flagellus,* Kells, 12/8/2008, A. Norris (conf. R. Anderson); *Arion hortensis*, Duleek, 5/4/2017; *A. circumscriptus circumscriptus*, Mosney, 22/7/2019; *Boettgerilla pallens*, Ardmulchan, 15/11/2018; *Euconulus* cf. *fulvus*, Oldbridge, 28/10/2018; *Balea sarsii*, Duleek, 22/4/2017; *Acanthinula aculeata*, Bellewstown, 17/7/2018; *Vertigo angustior,* Ardmulchan, 2/4/2019 (conf. BR, but shell only); *Ashfordia granulata*, Slane, 24/3/2019; *Hygromia cinctella*, Navan, 2/4/2019; all A. Wright.

Westmeath (VCH23): *Arion distinctus*, Belvedere House, Mullingar, 12/9/2013; *A. hortensis*, Belvedere House, Mullingar, 12/9/2013; both R. Anderson.

East Mayo (VCH26): *Bithynia leachii*, Caher Pier, SW of Caher, 21/5/2003, R. Anderson; *Vertigo lilljeborgi*, Knockmore Bay, Lough Conn, 17/5/2003, G.A. Holyoak (conf. R. Anderson).

Sligo (VCH28): *Stagnicola fuscus*, Carrownagh, Slish Wood, 18/7/2008, R. Anderson.

Leitrim (VCH29): *Stagnicola fuscus*, Greenaun, Inisfree, Lough Gill, 4/8/2000, G.A. Holyoak (conf. R. Anderson).

Cavan (VCH30): *Bithynia leachii*, Lough Sheelin, 2/7/2020, A. Wright; *Ambigolimax valentianus,* Owendoon or Jampa Ling Buddhist Centre, 23/10/2010, R. Anderson; *Arion circumscriptus circumscriptus,* Legvaeagh south of Blacklion, 19/8/2001; G.A. Holyoak (conf. R. Anderson).

Louth (VCH31): *Bithynia leachii*, Oldbridge, 11/4/2019, A. Wright; *Arion rufus,* Soldiers Point, Dundalk, 30/5/2013, R. Anderson; *A. circumscriptus silvaticus*, Townley Hall, 21/9/2018; *Euconulus cf. fulvus*, Townley Hall, 21/9/2018; *Columella edentula*, Townley Hall, 21/9/2018; *Zenobiellina subrufescens*, Ravensdale Forest, 22/1/2019; all A. Wright.

Monaghan (VCH32): *Arion rufus*, Castle Leslie, Glaslough, 18/7/2009; *A. hortensis*, Castle Leslie, Glaslough, 18/7/2009; *Ambigolimax valentianus*, Castle Leslie, Glaslough, 18/7/2009; all R. Anderson.

Fermanagh (VCH33): *Ambigolimax valentianus*, Colebrooke Park, 25/5/2013; *Balea perversa*, Tully Castle, 1/9/2020; both R. Anderson.

East Donegal (VCH34): *Arion flagellus*, Cloghan, 30/5/1976, R. Anderson; *Tandonia sowerbyi*, SE of Clonmany, 19/5/2002; G.A. Holyoak (conf. R. Anderson).

Tyrone (VCH36): *Ambigolimax valentianus,* Washing Bay, Lough Neagh, 31/1/2013, R. Anderson.

Armagh (VCH37): *Cochlodina laminata*, Loughgall Country Park, 27/11/2012; *Vallonia pulchella*, Lower Kiltubbrid Lough B, 15/11/2015, both R. Anderson.

Down (VCH38): *Ferrissia californica*, Lough Brickland, 18/7/2018; *Daudebardia rufa,* Mount Stewart House and Gardens, 17/4/2022; *Ambigolimax parvipenis*, Stormont Estate, 10/6/2019; *Xeroplexa intersecta*, 15/10/2015; *Hygromia cinctella*, Rowallane (National Trust), 11/2/2019; *Vertigo moulinsiana*, Corbally Ponds Fen, 14/9/2018; all R. Anderson.

Antrim (VCH39): *Viviparus viviparus*, Ballyginniff Milltown, Lough Neagh, 12/8/2019; *Stagnicola fuscus*, Crumlin Waterfood, Lennymore Bay, Lough Neagh, 1/2/1974; *Physella acuta*, Tropical Ravine, Belfast Botanical Gardens, 29/3/2000; *Ambigolimax parvipenis*, Tropical Ravine, Belfast Botanical Gardens, 19/4/2013; *Arion circumscriptus circumscriptus*, Belfast Castle Gardens/Grounds, 28/10/1973; all R. Anderson.

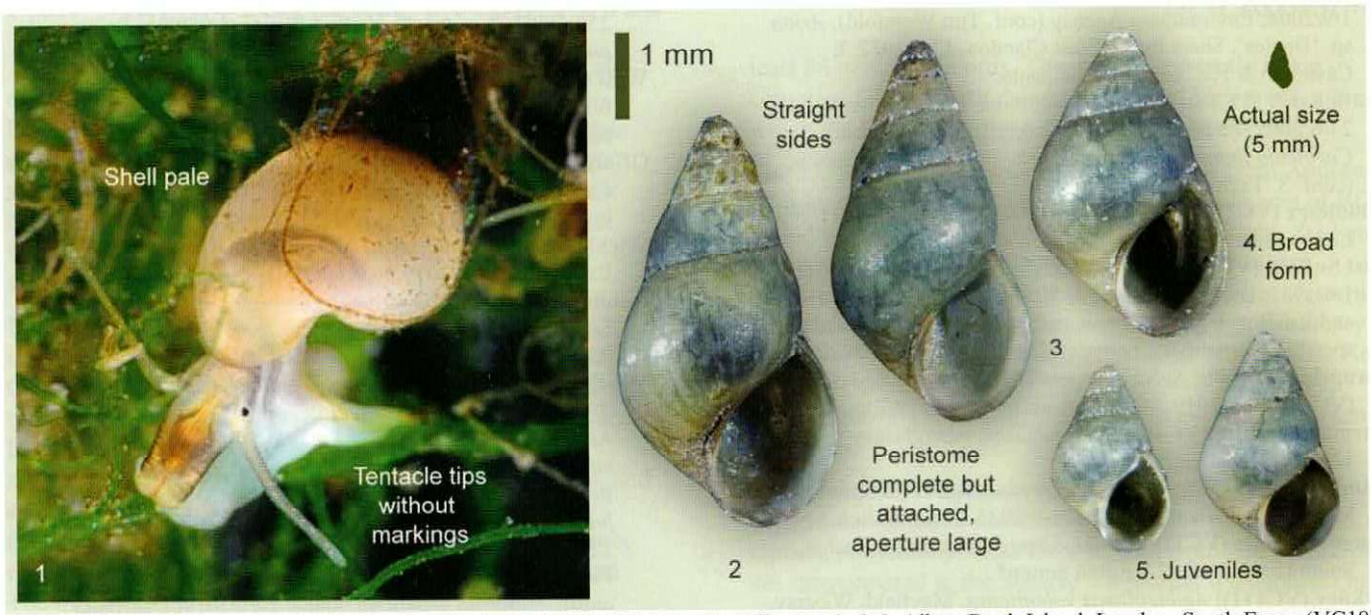

figure 1: *Heleobia charruana*. 1, Nordzeekanal, The Netherlands (photo: R. Offermans); 2-5, Albert Dock Island, London, South Essex (VC18). Reproduced from Rowson *et al.* (2021).

Many entries on this list have arisen thanks to Roy's recording work around Ireland over the last five decades (the earliest new VC record being from 1973!). The spread of non-natives is evident, including the Irish debut of *Daudebardia rufa*, which Roy confirmed from both West Cork (VCH3, 2021) and Down (VCH38, 2022). There can now be no doubt that this little semi-slug, first noted in Britain in 2016 and 2020 (see Rowson 2021) is a recent import from the continent rather than an overlooked native. Andrew Wright's work in the Boyne Valley has filled several 'gaps' in the lists for Meath (VCH22) and Co. Louth (VCH31), with some of the *Vertigo* species worthy of further investigation (Wright 2022).

The Uruguayan spire snail, *Heleobia charruana* (d'Orbigny, 1841) (figure 1), is represented by four new VC records from the London docks and the Thames estuary, using data from van Haaren *et al.* (2021), with further details from Society member Tim Worsfold. Their discovery and identification of this unexpected import was announced just in time to be squeezed into the FSC freshwater snails guide (Rowson *et al.* 2021), but was not included in my 2021 report. It might be established in other docklands and estuaries around Britain and Ireland. *Heleobia charruana* looks very much like a pale *Peringia ulvae*, without dark tentacle tips, and it is abundant at some of the London sites where it has lived since at least 2003. Its whitish shells are a little thinner and more straight-sided than those of *P. ulvae*, and with a more attached peristome, but the distinction is very subtle. As with the other rarer hydrobioids, specimens or good photos of live individuals will be needed to confirm any new *H. charruana* sites.

At the other end of the size scale, new VC records for three of our biggest snails were found in 2022, all via iRecord and iNaturalist. Having grumbled about the preponderance of large species on iNaturalist, I am still happy to accept interesting records that arise this way. To my surprise, *Cornu aspersum* appears not to have been recorded from Shetland (VC112) until this year. Shetland still has the shortest list of species of any VC, but this now totals 69 species thanks to the confirmation of *Limacus maculatus* (from an old photo) by Nick Riddiford. The new record makes *Cornu aspersum* the 30th mollusc species to have been recorded from every VC in Britain and Ireland. Having been introduced in Romano-British times, it has taken roughly 2000 years to reach them all! One could contrast this with *Potamopyrgus antipodarum*, which has nearly managed the same in only 200 years. *Potamopyrgus* would be the only modern introduction to make the 'every VC' list, if it were not for a lack of verified records from the Clyde Islands (VC100). This is perhaps an easy target for any snailers recording on the Isle of Arran. Other runners-up, i.e. species missing from just one or two VCs, include *Vertigo pygmaea, Deroceras invadens* and *Euglesa casertanum*.

The other two 'giant' snails were from much further south (figure 2). Jessica Perry's record of *Helix lucorum* was made when visiting Aberglasney Gardens, Carmarthenshire (VC44) and was submitted under the name *H. pomatia*. I contacted her via iRecord, and quickly invited myself to Aberglasney, where the snail had been found among potted plants for sale at the gift shop. In the days before my visit, the staff kindly apprehended the snail. It was kept in a tightly sealed box, *H. lucorum* being very good at escaping (the species is the 'Cool Hand Luc' of the snail world). I spent the day thoroughly searching the site, but found no evidence of any other *Helix* or their eggs and have not heard any more since then. It seems likely that the individual spotted by Jessica was the only one present, and that it arrived (perhaps already fully grown) directly through the potted plant supply chain. Like Buglife and others, our Society has been raising awareness about how potential pests can be spread in this way.

More alarmingly, the Chinese mystery snail, *Cipangopaludina chinensis*, has been discovered at a site in South Hampshire (VC11), far from the first known population at Pevensey in East Sussex (VC14). Early in 2022 I noticed a record on iNaturalist showing *C. chinensis* shells from the artificial Boating Lake at Southampton Common. I contacted Martin Willing who, with Evan Jones, Gavin Measures of Natural England, and others, has been working on eradicating this species in Pevensey. Martin contacted Gavin who arranged a NE survey of Southampton Common in August. This confirmed empty *C. chinensis* shells in and around the Boating Lake, and around 50 live adults and half-grown snails in the Ornamental Lake nearby.

While the Boating Lake is drained in winter (partly to help great crested newts), the Ornamental Lake is permanent and has shallow, vegetated margins. It is not clear how the snails arrived at Southampton Common, but this population may well result from a separate release of this edible and aquarium species into the wild. The likelihood of the snails being spread out of this popular recreation area is also a cause for concern.

figure 2: Above: *Helix lucorum*, Aberglasney Gardens, Carmarthenshire (VC44) (photo: Jessica Perry on iRecord). Below: Chinese mystery snail, *Cipangopaludina chinensis*, Southampton Common, South Hampshire (VC11) (photo: 'eurypomus' on iNaturalist, CC-BY-NC).

As usual we also received several new VC records of slugs, including *Testacella maugei* from North Kerry (VCH2), found by Chris Gleed-Owen. Adrian Norris and Terry Crawford published a useful article on the rarer slugs of Yorkshire in *The Naturalist* (Norris & Crawford 2022). This includes details on *Arion* sp. 'Davies', a mysterious slug similar to *A. vulgaris*. Records for this species are still scarce, but are gradually accumulating. In May 2022, the first site in Surrey (VC17) was found by Imogen Cavadino and students attending her FSC slugs course, and confirmed by dissection. So far, all records of *A.* sp. 'Davies' are from the eastern half of England.

Hothouse species and adventives

Working through the collections of the National Museums Scotland (NMS), Edinburgh, Adrian Sumner discovered a set of 30 shells of the North American lymnaeid *Pseudosuccinea*. He and Tom Walker have looked into their story. *Pseudosuccinea* is relatively characteristic due to its microscopic spiral sculpture and very *Succinea*-like shell (although unlike *Succinea,* it is an aquatic snail). The species *P. columella*, which the Edinburgh shells appear to represent, was included in the FSC freshwater snails guide as 'a potential future arrival' (Rowson *et al.* 2021). So once again, I spoke too soon! The shells at the NMS were collected on 15th May 1935 at the Aroid House in the Royal Botanical Garden, Edinburgh, by A.R. Waterston, then a curator at NMS. Waterston was also the Society's Non-marine Recorder between 1938 and 1943 or so (when he left to serve with the armed forces). Tom managed to find a published reference to *P. columella* in the 7th edition of the VC Census (Anon. 1951). The Census was compiled by A.E. Ellis, who succeeded Waterston as Recorder in 1948. It includes lists of greenhouse and adventive species, with brief notes on previous occurrences. *Pseudosuccinea columella* is listed from Edinburgh, but the supporting reference in the Census (Meeuse & Hubert 1949) says only that Meeuse collected it in 1948 'in the houses of the Botanical Gardens, Edinburgh'. It does not refer to Waterston's specimens. However, their existence implies that the population survived at the Gardens for at least 13 years.

Not for the first time, this raises the problem of how to record adventive and indoor species in a mapping scheme. The records by Waterston and Meeuse should have earned *P. columella* a place among the other greenhouse species on British and Irish lists, or even in Macan's identification key (1969), but did not. The non-marine mollusc checklist was updated in 1976, with one list for terrestrial species (Waldén 1976) and another for fresh and brackish-water species (Kerney 1976). While the terrestrial list included greenhouse aliens, the freshwater list specifically omitted them. Neither checklist included adventive species. The records of *P. columella*, and several other species listed in the 7th Census (Anon. 1951) have therefore slipped through a crack. *Pseudosuccinea* did not feature in the 8th and final edition of the VC Census (Kerney 1982) or subsequent checklists (Anderson 2005, 2008; Anderson & Rowson 2020). Ideally, a list of adventive species recorded in Britain and Ireland will be included in a future version of the checklist.

In 2022, outdoor records were obtained for two other adventives, both Mediterranean land snails recorded on previous occasions in the UK (Anon. 1951). These also happen to be new VC records. *Otala punctata* (figure 3) was found at Stopsley, Luton, Bedfordshire (VC24) in June 2022 by David Oakley-Hill and confirmed by Peter Topley. The record of *Eobania vermiculata* from Lewisham Station, West Kent (VC16) in April 2006 by David G. Notton is an older one. It was confirmed by Peter Mordan and published in *Mollusc World* by Notton (2006) but has not previously been included in the database.

figure 3: *Otala punctata* at Stopsley, Luton, Bedfordshire. (photo: David Oakley-Hill)

Other noteworthy records

The focus so far has been on alien species and their spread. We should not, of course, overlook our rare native species, for which new records and new sites are inevitably uncommon. Again, Roy's and Andrew's datasets are important in this regard, dealing largely with less well-recorded parts of Ireland. Adrian's travels in southern

Scotland included a visit to the only Scottish site for *Clausilia dubia*, a cemetery in Roxburghshire (VC80). Shells were found and confirmed (after a little discussion) by Robert Cameron and me. Adrian also entered a record of *Acicula fusca* from Midlothian (VC83) from the late Barry Colville's recording cards which Adrian digitised at NMS. This is the first record of *A. fusca* from the area since the 1930s. Another large stack of Barry's recording cards is present at the National Museum of Wales (NMW), Cardiff, should any volunteers be keen to digitise the records.

Perhaps the most interesting native species record of 2022 is the first record of *Omphiscola glabra* from the Wyre Forest, Staffordshire, (VC39) by Brett Westwood and confirmed by Rosemary Hill and Rosemary Winnall (figure 4). Whilst not a new VC record, *O. glabra* is rare in Staffordshire (VC39), Worcestershire (VC37) and Shropshire (VC40), the three VCs that intersect in the Forest, and new sites for this species are rarely found anywhere. That this is the first record from the area is all the more remarkable given that the finders have spent many years recording molluscs throughout the Wyre area. Brett described the *O. glabra* site as an impeded boggy flush, which dries out in summer and is surrounded by sallows and birch. It was found in late April. The only other aquatic snail present was *P. antipodarum*. Just why *O. glabra* is found in such inhospitable sites remains a mystery. Brett says that the pool had been earmarked for 'improvement and restoration' by Forest England and Natural England, potentially bad news for the snail, so the recorders alerted them to the presence of *O. glabra* and later had a helpful meeting at the site.

figure 4: *Omphiscola glabra* and its habitat at Hawkbatch, Wyre Forest, Staffordshire (VC39). (photos: Brett Westwood)

Changes to species names

Each year a small number of taxonomic or nomenclatural changes affect the names of mollusc species in Britain and Ireland. I recommend MolluscaBase (www.molluscabase.com) as the first port of call for taxonomic queries, and the classification to follow in most circumstances.

Name changes affecting species in Britain and Ireland are dealt with in periodic updates of the checklist, currently Anderson & Rowson (2020). (For earlier versions see Waldén 1976, Kerney 1976 and Anderson 2005, 2006). This list is followed by the UK Species Inventory (UKSI) at NHM, and feeds into the (separate) lists used by iRecord, iNaturalist, NBN, NBDC, and Recorder 6. It can take a little time for changes to percolate through all these systems.

Here I draw attention to just one change, which involves the frequently recorded species *Ambigolimax nyctelius*. The new name for this species in Britain and Ireland is *Ambigolimax parvipenis* Hutchinson, Reise & Schlitt, 2022, a fairly straightforward change for recorders. However, the underlying story is far from simple and I have been asked by some members for a short explanation.

In recent years, two species of *Ambigolimax* (the 'threeband slugs') have become a common sight in gardens and disturbed areas throughout Britain and Ireland. They can only reliably be distinguished by dissection, although *A. valentiana* is often a little larger, with weaker markings. John Hutchinson and colleagues at the Senckenberg Institute in Görlitz, Germany, have studied them in a thorough piece of detective work using museum specimens (Hutchinson *et al.* 2022). The first species, *A. valentianus*, was first found in Britain in glasshouses in the 1930s. It has been established outdoors since at least 1981 and is now recorded from 89 VCs in Britain and Ireland. It has a distinctive, blunt appendix on the penis that prevents confusion with any other limacid in Britain or Ireland.

The second species, *A. parvipenis*, has until now been known as '*A. nyctelius*'. It is almost as common as *A. valentianus*, to which it is externally almost identical. It was presumed to have had a similar history, originating in glasshouses in the 1930s. It was first recorded outdoors in 1987 and is now recorded from 29 VCs. Hutchinson *et al.* (2022) have convincingly shown, however, that the name '*A. nyctelius*' can no longer be used for this now common species, which they rename *A. parvipenis*. The new name is derived from its penis, which lacks a penial appendix and is very small, even in adults.

Hutchinson *et al.* (2022) also looked at the '*A. nyctelius*' collected in the 1930s from glasshouses at the Royal Botanical Garden, Edinburgh, by A.R. Waterston. Like the *Pseudosuccinea* collected by Waterston, these specimens are in the collections at National Museums Scotland. On closer examination, the researchers discovered that they actually belong to a third *Ambigolimax* species, which they have named *A. waterstoni* after its original collector. Like *A. parvipenis*, it lacks a penial appendix, but has a much longer penis. So far, additional populations of *A. waterstoni* have not yet been found in Britain or Ireland, and it has not been found at Edinburgh in recent years.

The exact geographical origin of the different *Ambigolimax* species remains uncertain, partly because they have each been introduced to numerous places, and partly due to the confusion of '*A. nyctelius*' with other species. The original '*A. nyctelius*', described by Bourguignat from North Africa, is now considered by Hutchinson *et al.* (2022) to refer to a species in the family Arionidae! The name '*A. nyctelius*' has been applied to other species elsewhere in Europe. In our field guide (Rowson *et al.* 2014) we referred to *A. valentianus* as the 'Iberian threeband slug' and '*A. nyctelius*' as the 'Balkan threeband slug'. These English names are thus no longer particularly appropriate, so (as usual) it is best to use the scientific names. Please do keep those eyes peeled and consider dissecting any well-grown *Ambigolimax* found.

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Treasurer's annual report 2022

The Society's financial situation is satisfactory, with enough assets to cope with even a difficult financial climate for several years. However, a persistent issue in recent times has been a shortage of liquid assets. Put simply, our income has fallen short of our expenditure, fairly consistently for a number of years. Thus, in order to meet our short-term obligations, it has been necessary to sell off some of our investments. Since 2017, £20,000 of investments have been converted to cash to balance the books. This approach is acceptable in the short-term, but obviously cannot be sustained indefinitely. Every time we cash in investments, we not only lose the value of the investments themselves, but also reduce the annual income they produce.

One way to create a better balance between income and expenditure would be to increase the annual subscriptions. Council has been reluctant to do this because moving the *Journal of Conchology* to an online platform should produce a significant reduction in printing and distribution costs. It will be necessary to keep a close watch on how much is actually saved, and how that relates to the continued upward pressure on other elements of our expenditure. In connection with the move 'online', the Society's thanks go to Robert Cameron who has made a generous donation to help smooth the transition. I would also like to thank Martin Willing, Ben Rowson and Imogen Cavadino for donations; Gill Earle, our bookkeeper; and Rupert Honnor, for his careful audit of the accounts.

This is a simplified version of the full accounts. I hope the table is easy to interpret, but if you have any specific queries, or wish to receive a copy of the detailed accounts submitted to Council, please get in touch via Treasurer@conchsoc.org. Alternatively, they can be accessed via the CSGBI website.

Brian Goodwin
Hon. Treasurer, March 2023

Conchological Society of Great Britain and Ireland.
Summary of Accounts. Year ended 31st December 2022.

	2022	**2021**
Income	£	£
Fees and subscriptions	10,686	10,993
Giftaid recovered	864	920
Investment income	4,136	4,060
Book donations and sales	-	550
Donations and legacies	310	32
Royalty income	68	34
Snail ID guide sales	156	395
Restricted funds (inc Giftaid) [1]	1,250	
	17,470	**16,984**
Expenses		
Journal	(9,272)	(10,497)
Mollusc World	(5,290)	(4,929)
Other publication costs [2]	(136)	(446)
Bookkeeping [3]	(600)	(1,170)
Membership services	(2,365)	(2,337)
Insurance and bank charges	(287)	(286)
Meetings costs	(573)	(788)
Website	(805)	(268)
Postage and sundry	(297)	(363)
Grants and donations made	-	(778)
(Loss) /gain on investments	(10,976)	7,846
	(30,601)	**(14,016)**
Net profit/(loss)	**(13,131)**	**2,968**

Notes

There may be small £1 discrepancies in the table due to 'rounding up'.

1. The Restricted funds in 2022 is a donation from Robert Cameron. This was made for a specific purpose (to facilitate the move to online publishing of the journal) rather than as a general contribution to CSGBI funds.

2. The publication costs in 2021 relate to printing of the snail identification guide. Those in 2022 were for the membership booklet.

3. The apparent variation in Bookkeeping costs is simply an issue of which year invoices are settled.

First record of *Pseudosuccinea columella* in Britain

Adrian T. Sumner

Pseudosuccinea columella (also known as *Lymnaea columella*) (figure 1) is a freshwater lymnaeid snail; the generic name refers to the resemblance of its shell to that of a succineid. It has a thin shell, up to about 20 mm high, which has a distinctive pattern of fine spiral grooves, visible at higher magnification (figure 2). The animal has the triangular tentacles typical of lymnaeids, with the eyes at the base of the tentacles. It was originally described from eastern North America (Baker 1911), but is now found almost throughout the world (Madsen & Frandsen 1989; Ngcamphalala *et al.* 2022). It is a self-fertilising hermaphrodite and so can become established easily, even from a single individual (Lounnas *et al.* 2017). As it is an intermediate host of the liver fluke, *Fasciola hepatica,* it is a potential health and economic problem wherever it occurs (Madsen & Frandsen 1989), although populations of this species that are resistant to *F. hepatica* have been found in Cuba (Lounnas *et al.*2017).

figure 1: Shell of *Pseudosuccinea columella*, from the collection obtained by A.R. Waterston at RBGE in 1935.

P. columella was first recorded in Europe in 1927, in Denmark, and other early records were in Germany (1928), Poland (1936), and the Netherlands and Belgium (1937) (Meeuse & Hubert 1949), but now it is found in most European countries. It seems to be largely restricted to hothouses in places such as botanic gardens, although it has been found living in the open in France (Pointier *et al.* 2007). It is thought to be unable to survive the cold European winters (Horsák *et al.* 2004), although it lives in the wild as far north as southern Canada in North America

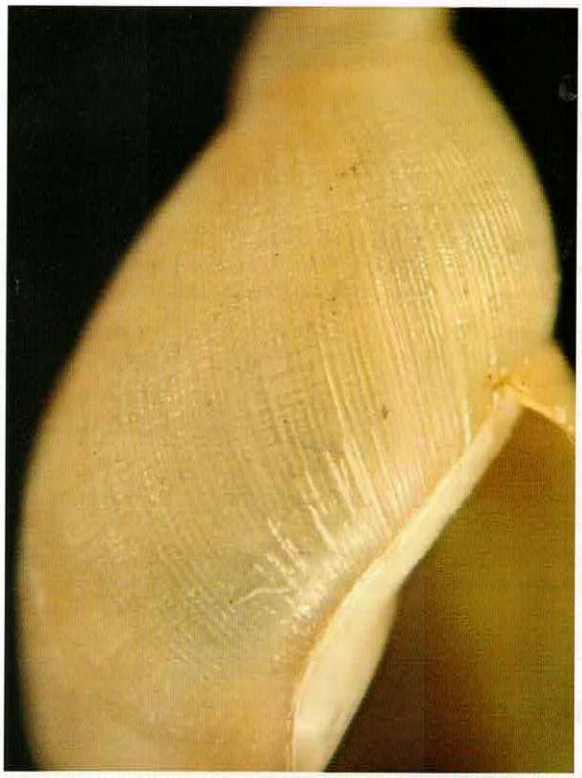

figure 2: Higher magnification image of part of the shell of *P. columella*, showing the characteristic spiral grooves.

(Baker 1911). *P. columella* was thought not to have reached Britain, so that I was surprised when working in the collections of the National Museums of Scotland in Edinburgh to find a sample labelled '*Pseudosuccinea* sp.'. The sample consisted of about 30 shells, collected from the Aroid House at the Royal Botanic Garden Edinburgh (RBGE) on 15th May 1935 by A.R. Waterston, then Assistant Keeper of Natural History at what was then the Royal Scottish Museum, and who subsequently also became the Conchological Society's Honorary Non-Marine Recorder. The Aroid House was part of the glasshouse range erected at RBGE between 1890 and 1914, which was replaced by a new range officially opened by Princess Margaret in October 1967. A booklet describing the RBGE states that the 'Aroid and Nepenthes House' gave an impression of the floor of a tropical forest; obviously there must have been a pond as well. Waterston's record does not appear to have been published; at least, I have found no mention of it in either the *Journal of Conchology* or *The Scottish Naturalist*, the most likely journals for such a finding to be published in. However, in 1948, Dr Meeuse from the Netherlands, who had been investigating hothouse aliens in the Netherlands, visited RBGE and found some specimens of *P. columella.* These were subsequently exhibited at the 686th meeting of the Conchological Society on 2nd October 1948 by Bernard Verdcourt. This later record was included in the Census of British non-marine Mollusca by A.E. Ellis (1951). Since Waterston had collected a substantial population of shells of different sizes (figure 3), and Meeuse found *P. columella* still present 13 years later, it is clear that there must have been a thriving breeding population at RBGE for a good many years.

When did *P. columella* arrive at RBGE, and when did it disappear? Tom Walker tells me that he didn't find it at RBGE during his thorough search in 2016, so it is probably safe to say that it is now extinct there. It seems reasonable to suppose that the population would have been lost when the older glasshouses were demolished and replaced by the new ones in the 1960s. No doubt an effort would have been made to ensure that any plants transferred from the old glasshouses to the new ones were as free as possible from infestation. In theory, *P. columella* could have arrived at RBGE at any time after the garden was established on its present site from 1820 onwards. Through the kindness of Graham Hardy, Serials Librarian at RBGE, I have been able to examine some of the registers that record what plants have been brought into the garden from time to time. What struck me about them was how little material was received from North America, and much of that was either seeds or woody plants, so there would have been limited opportunities for the introduction of freshwater snails such as *P. columella*. Since *P. columella* was found at other European sites in the late 1920s and early 1930s, it might be supposed that it could have arrived at RBGE at about the same time, and there is some negative evidence for this.

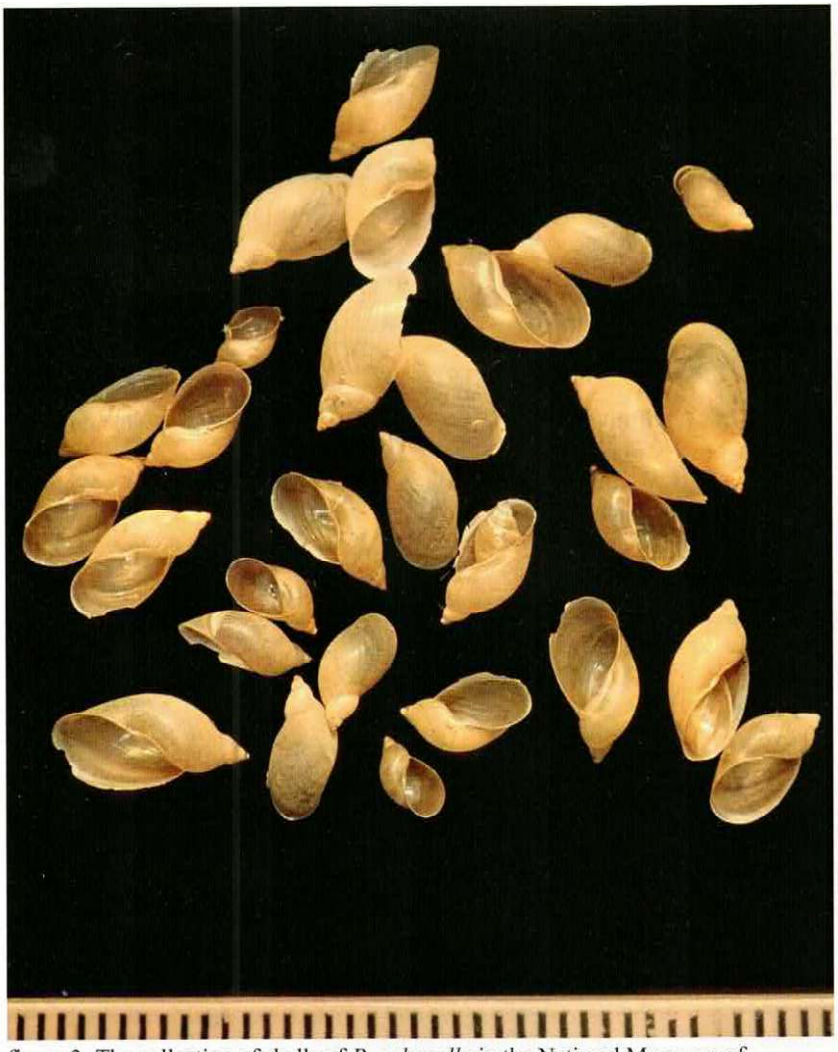

figure 3: The collection of shells of *P. columella* in the National Museums of Scotland, obtained from RBGE on 15th May 1935. Shells range in height from about 4 mm to about 11 mm. Each division on the scale is 1 mm.

A.R. Waterston visited RBGE in 1930, and found *Physella acuta,* but does not seem to have recorded any other snails; similarly, when D.K. Kevan visited in the following year he only recorded *P. acuta.* However, we do not know how thoroughly they searched the various ponds at RBGE, and this cannot be taken as incontrovertible evidence that *P. columella* was absent in 1930 and 1931. Graham Hardy has a suggestion that *P. columella* could have arrived very much earlier. In 1834, James McNab, who later became Curator at RBGE, went on a tour of North America to study the flora (Hardy 2011). Among other places visited were the swamps of New Jersey, from which McNab brought back many plants, wrapped up in damp moss, which survived the journey home and subsequently grew in Edinburgh. It does not seem impossible that specimens of *P. columella* from the swamps could have been packed up with the moss and thereby reached Edinburgh, where they might have established a breeding population that survived for over a century. Unless further evidence comes to light, it will be impossible to substantiate this, but there can be no doubt that the population of *P. columella* at RBGE was among the first on the east side of the Atlantic.

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Some more conchologically related bookplates

S. Peter Dance

In a recent article, Peter Topley described and illustrated several conchologically related bookplates (Topley 2023). There would seem to be few bookplates of this nature, so it is not surprising that little has been published about them. His examples provide a welcome supplement to the four pictured in my book *Out of my shell* (Dance 2005: 47–48). Each of the four I included shows one or more images of shells and the name of the owner of the book (Edmund Kendall, Luis Pisani Burnay, J.G.J. Kuiper, H.E. Coomans). By contrast, five of Topley's figured examples show one or more images of shells and the name of the owner of the book (P. Pallary, B. Verdcourt, T.E. Crowley, D. and J. Heppell, G. Collett). Two others do not feature shells, but show the name of the owner of the book, in each case a person of some historical interest (J. Pyrke, E.A. Robins). These labels often say 'ex libris', the Latin for 'from the library' (of the person whose name follows).

Since my book was published, I have enlarged my collection sufficiently to justify this article. I deal with each bookplate briefly, under the name of the person who commissioned it, the illustration being the main reason for its existence and survival. Most of the individuals represented are British, three are from Europe and one is from the USA. For sure, other examples of these ephemeral objects await discovery, loose or pasted inside book covers. Some European examples must surely have been overlooked and I am reasonably confident some Japanese examples are waiting to be discovered. Some bookplate images are available online, including one of Erasmus Darwin that I reproduce here because it is virtually impossible to acquire a real one. Someone, some day, may publish a definitive catalogue of these beguiling objects – but it shall not be me!

*****

figure 1: Erasmus Darwin (1731–1802).
British physician, scientist and author, grandfather of Charles Darwin. This early traditional style bookplate, displaying three scallops on a diagonal band within a mirror-like shield, has been printed from an online (public domain) image, the bookplate itself being virtually unobtainable. 'E CONCHIS OMNIA' may be translated as 'Everything from a shell'. This contrasts with William Harvey's 1650 motto 'EX OVO OMNIA', or 'Everything from an egg'.

figure 2: Joseph Goodall (1760–1840).
British cleric who became Provost of Eton. Traditional style bookplate showing his name, but with no shell images. Some shells he owned were illustrated in William Wood's *Supplement to the Index Testaceologicus* (1828). He arbitrarily altered some of the scientific names while Wood's book was passing through the press!

figure 3: William Clark (1788–1869).
British author of *A history of the British marine testaceous Mollusca* (1855), a large book. It lacks illustrations, but has much information about living marine molluscs. 'William Clark' is printed at the bottom. His shell collection was acquired by J.G. Jeffreys.

figure 4: John Gwyn Jeffreys (1809–1885).
Prominent British conchologist, author of the five-volume *British conchology* (1862–69) and many publications in scientific journals. Leading proponent of deep-sea investigations. His family crest provides the central image of his bookplate. He was born near Swansea in Wales, but lived most of his life in England. His large shell collection was acquired by the United States National Museum in Washington, DC.

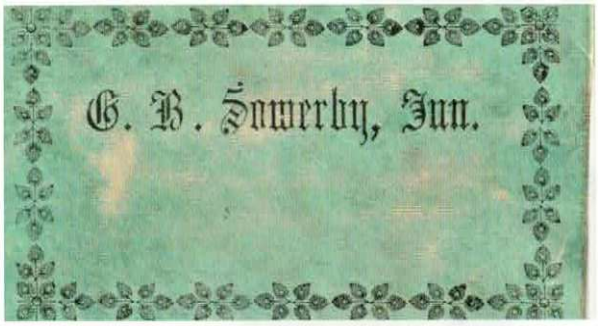

figure 5: George Brettingham Sowerby II (1812–1884). Prolific describer and illustrator of shells. Simple design with 'G.B. Sowerby, Jun.' enclosed within a decorative border of leaves. In view of Sowerby's artistic credentials, his book label is disappointing.

figure 6: Rev. Henry Baker Tristram (1822–1906). Outstanding field naturalist who combined theology with science when studying the plants and animals he collected in Palestine. Ornate circular design with his personal details in an eye-catching red.

figure 7: Reginald Cholmondeley (1826–1896). British conchologist whose shell collection was auctioned in London by J.C. Stephens in 1897. The ornate circular design, replete with pictorial symbols, encloses the words 'Cholmondeley Reginald' and a motto, with 'Condover Hall' at the bottom. Condover Hall is a mansion in Shropshire.

figure 8: Frederic William Harmer (1835–1923). British wool merchant who studied geology in his spare time, concentrating on fossils of the Pliocene period; shells in particular. He became so adept in his speciality that, between 1914 and 1925, he published a definitive monograph, *The Pliocene Mollusca of Great Britain*. His bookplate is notable for the beautifully drawn shell of *Neptunea antiqua* Linnaeus, 1758, the quintessential gastropod shell of the Pliocene period.

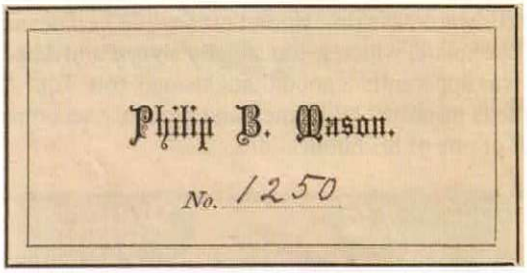

figure 9: Philip B. Mason (1842–1903). British conchologist whose shells were acquired by Ronald Winckworth (1884–1950). The joint collection was largely destroyed by enemy action in the Second World War. A simple design showing 'Philip B. Mason' above and a hand-written catalogue number below, enclosed within two single-line borders.

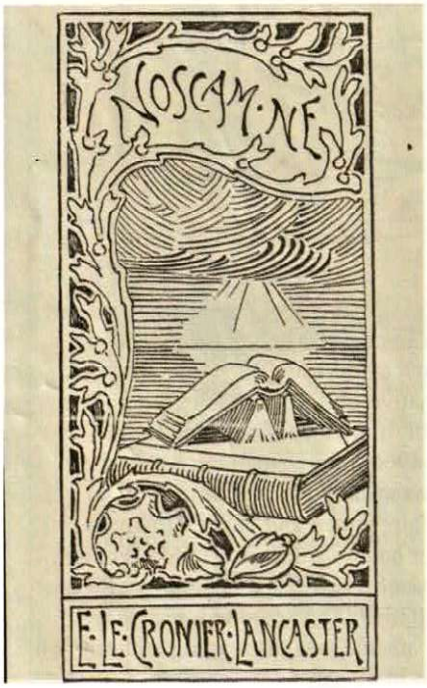

figure 10: Ernest Le Cronier Lancaster (1862–1945). A British consulting physician who collected shells and old shell books. Some artfully displayed volumes towering over two seashells declare his main predilection: old books. There is a motto at the top and 'E. Le Cronier Lancaster' at the bottom.

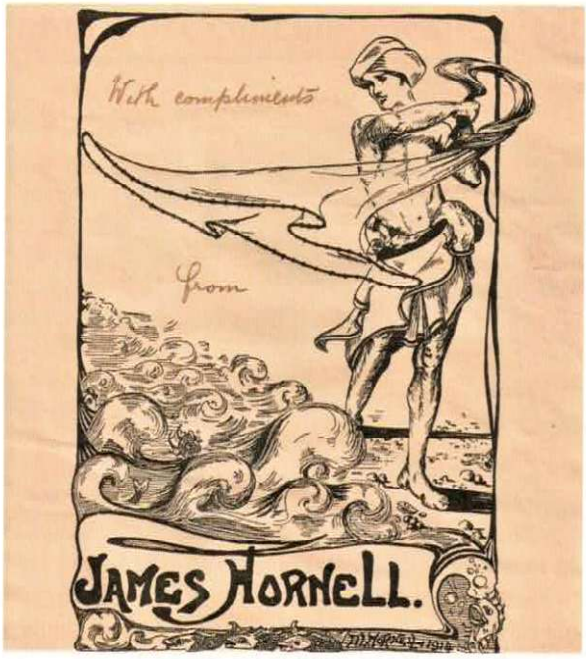

figure 11: James Hornell (1865–1949).
British marine zoologist and ethnographer, formerly Superintendent of Pearl and Chank Fisheries, Madras, who became Director of the UK Fisheries Department. The author of several works on marine biology, including some on molluscs, he was a cousin of the prominent Scottish painter Edward Atkinson Hornel (1864–1933). The designer of his bookplate, which is indistinctly signed and dated 1914, was apparently a good draughtsman, too. This example is inscribed by Hornell and probably accompanied the gift of one of his publications.

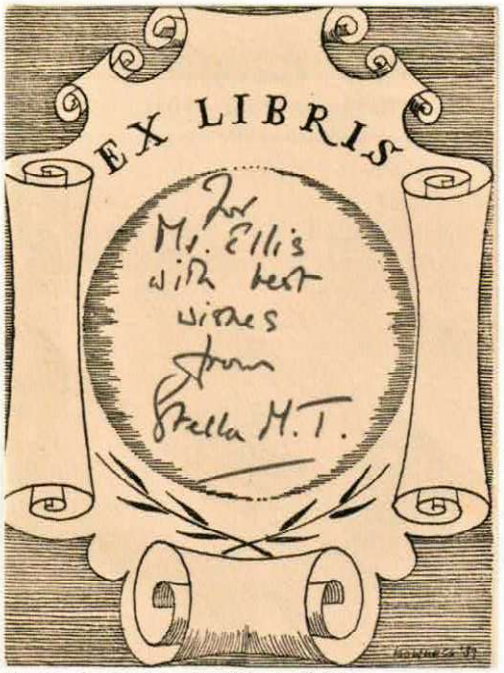

figure 12: Stella M. Turk (1925–2017).
British naturalist and a native of the Scilly Isles where she became a devoted student of the local fauna and flora. *Collecting shells* (Turk, 1966) was a small book that she wrote to publicise her favourite preoccupation. Her bookplate is a simple affair, signed and dated 'Howness '89'. My copy carries her hand-written inscription 'For Mr. Ellis with best wishes from Stella M.T.' The recipient was Arthur Erskine Ellis (1902–1983) who edited *Journal of Conchology* for many years and was the leading authority on British non-marine snails in his day.

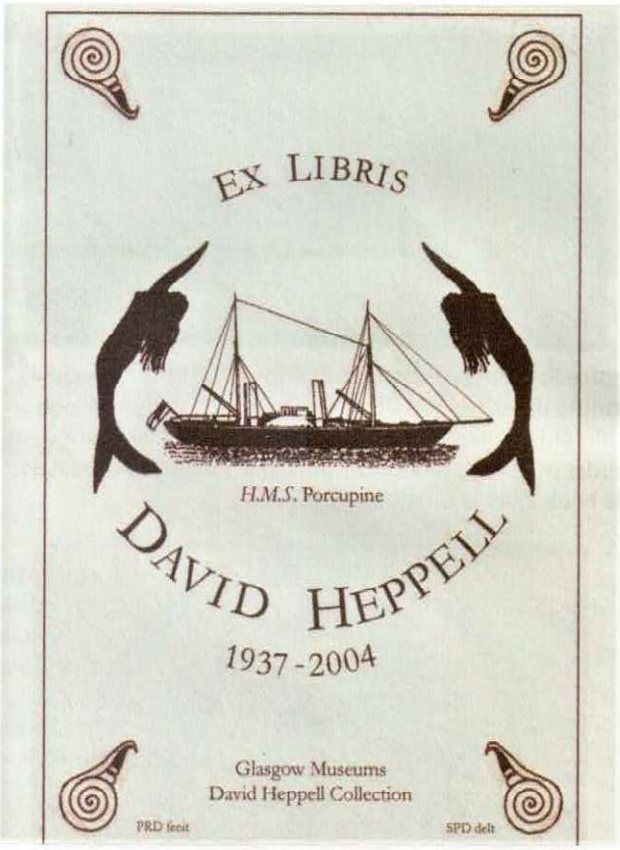

figure 13: David Heppell (1937–2004).
British student of the Mollusca who trained as a dentist. He soon abandoned this profession and eventually became a curator at the Royal Scottish Museum, Edinburgh. There he made a special study of the Indian chank industry, becoming a leading authority. He also studied mermaids and investigated the activities of the deep-sea exploratory vessel, H.M.S. *Porcupine*. I tried to reflect these interests in the bookplate I designed for the Glasgow Museums David Heppell Collection of books. The four corner motifs are stylised designs of the Indian chank, while the other illustrations display their subjects more naturally.

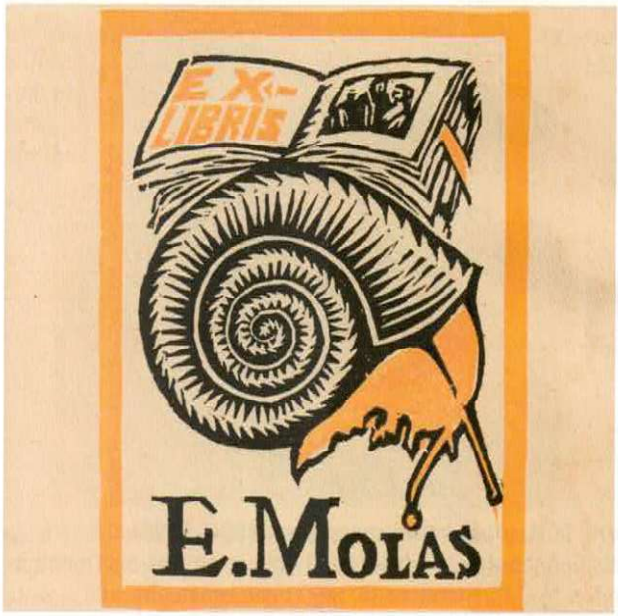

figure 14: E. Molas.
The stylised design of a *Helix pomatia* Linnaeus, 1758, has an ex libris motif above and 'E. MOLAS' below. It is the largest bookplate featuring a mollusc known to me.

figure 15: J.J. Schwencke.
Presumably a Dutch naturalist with a liking for invertebrates. The bookplate is an exquisite etching by the late Dirk van Gelder, given to me by my late friend Hans Kuiper. At the same time Hans gave me an example of the equally exquisite bookplate etched for him by van Gelder, the one reproduced in *Out of my shell*. At bottom left we see a living specimen of *Cepaea nemoralis* Linnaeus, 1758. Its shell is undoubtedly sinistral. The Kuiper bookplate also includes a sinistral example of this species and I suspect van Gelder introduced a sinistral snail into each etching just for the fun of it.

figure 16: Woutera S.S. van Benthem Jutting (1899–1991).
Prominent Dutch conchologist at the Zoological Museum, Amsterdam. Although the floral images decorating her bookplate suggest an interest in botany, she is best known for her work on tropical land snails and historical aspects of conchology.

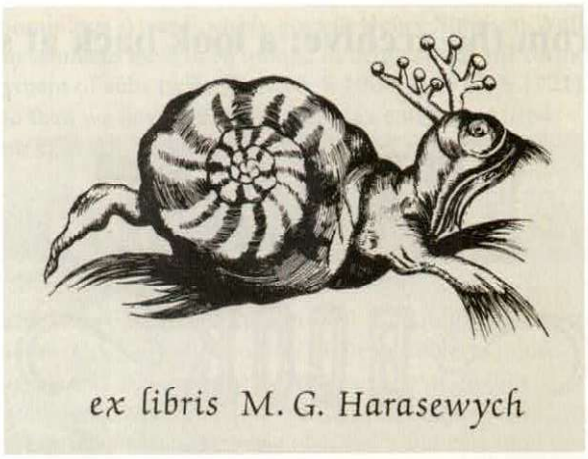

figure 17: Myroslaw George [Jerry] Harasewych (b. 1949).
American biochemist who, having discovered the attractions of the shell world, chose to pursue a career as a museum professional, specialising in biochemical genetics and systematics of predatory marine gastropods. His penchant for rare and curious old books is manifest in his bookplate which features a very odd creature. As it is nameless, we are left wondering what it is. Fortunately, I have established its identity (Dance 1988). The figure is a copy of one published in the *Cosmographie universelle* of André Thevet (1502–1590). In that work the author says he had seen this enigmatic creature in Denmark! Its shell may be said to bear some resemblance to one of the larger species of *Cassis*, but not enough to persuade me to relinquish Thevet's name for it: *Cochlea sarmatica*.

References

Dance, S.P. (1988) *Cochlea sarmatica*, a verie monstrous snail. *Pallidula* **19**: 36–37.

Dance, S.P. (2005) *Out of my shell: a diversion for shell lovers*. Florida: C-Shells-3.

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Turk, S.M. (1966) *Collecting shells*. London: W. & G. Foyle.

From the archive: a look back at some members past … and 'passed'

Brian Goodwin

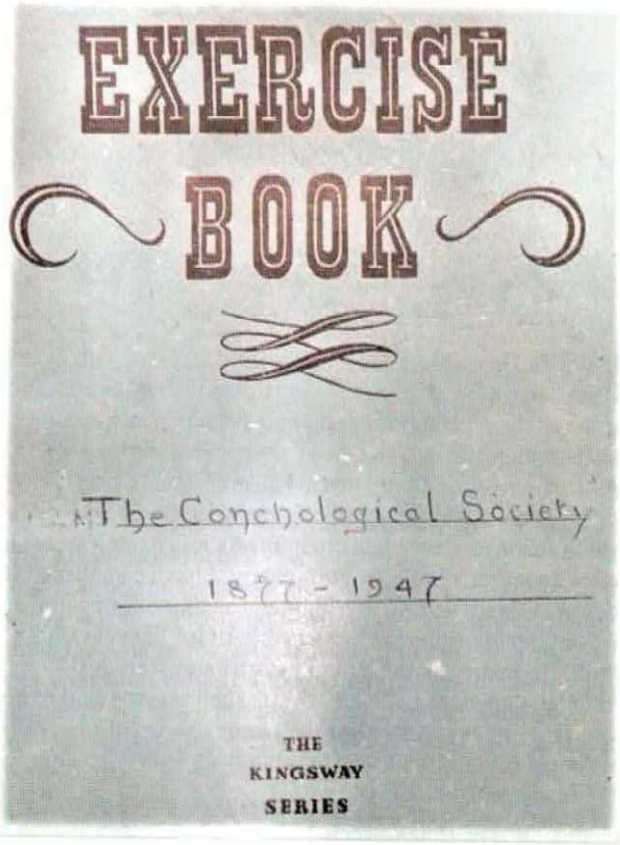


figure 1: The list of members 1877–1947 (CSGBI archive, Leeds).

In the Society's archive at Leeds, there exists a modest 'school exercise book' (figure 1) which contains:

A LIST OF MEMBERS
OF THE CONCHOLOGICAL SOCIETY
OF GREAT BRITAIN AND IRELAND
for the seventy years November 1877 – November 1947
prepared from the minutes and lists of members in the
JOURNAL OF CONCHOLOGY

The compiler is not recorded in the book, but it was described as 'Castell's' in Terry Crowley's *A History of the Society*[1], that is, Cyril Philip Castell, who was succeeded by Crowley as Honorary Secretary in 1960. However, the handwriting is most certainly not that of Castell. Careful examination of the handwriting shows the true compiler was actually Ronald Winckworth. I can only assume that Crowley referred to the Membership Booklet as 'Castell's' in his *History* because Castell gave it to him when the roles changed, and Crowley unthinkingly made the assumption Castell had been the author.

The list is alphabetical, in a neat hand, and records the details of members using the following code:

E = elected; *EH* [or *H*] = elected Honorary Member;
R = resigned; *S* = struck off or removed from list (payment in arrears or address unknown);
X = disappeared from the list without cause given (e.g.resigned or died?);
† = died;
a to z and α to ω [Greek letters alpha to omega] refer to yearly lists of members in the *Journal of Conchology*.

Broun, V.A.G. E 24. X Reading: Bournemouth, λ".
Brown, W.D. E 01. R 04. Southport: Ormskirk q.
Brown, W. Stanton. E 26. R 32. Bradford: Exeter, κ.
De Bruyne, Pieter. E 26. R 31. British Vice Consul, Middelburg.
Bryan, Bertram. E 13. Longton, Staffs.
Bryan, (Mrs) E. Letson. See Letson.
Bryant, (Miss) Anne. E 29. R 32. Univ. Coll. Cardiff. MB. BCh. MD.
Buckle, W.F. E 31. Dr. Alcester: Clare, Suffolk λ": Cambridge μ.
Bullen, Robert Ashington. E 97. †12. Rev. BA. FGS. Reigate: Horley, m: Woking, o: Tonbridge, γ.

figure 2: Extract from the list of members (CSGBI archive, Leeds).

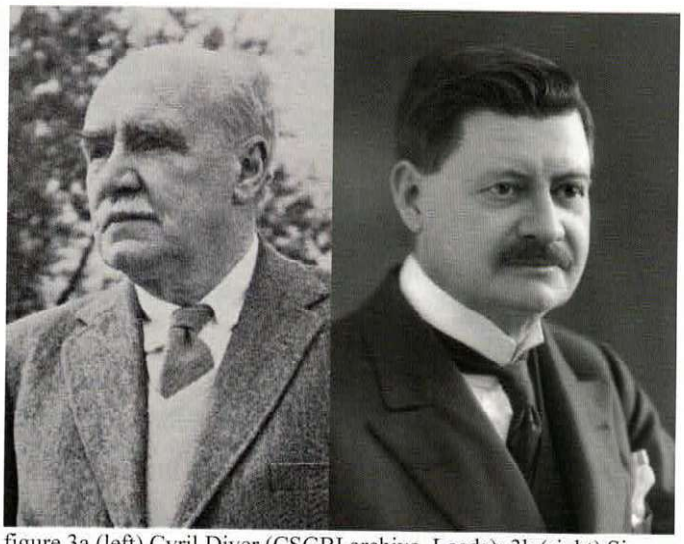


figure 3a (left) Cyril Diver (CSGBI archive, Leeds); 3b (right) Sir Charles Eliot (Public Domain).

Other details are sometimes included, such as qualifications and membership of other societies (e.g. D.Sc., F.G.S.), main place of residence, and significant publications in the journal. The letter 'O' denotes an original member. A fairly typical extract is shown in figure 2.

Delving into the list reveals many interesting names and items of conchological trivia. The first thing I noticed was:

Honours abounding

Our early members were a well honoured bunch (not always for their achievements in natural history), including: OBEs for A.J. Arkell and W. Cartwright (later Arthur Blok and June Chatfield); an MBE for G.D.H. Carpenter (later also Stella Turk and Nora McMillan); while Cyril Diver (figure 3a) was awarded the CBE. The number of Knights represented is even more impressive, including: Sir Charles Eliot (figure 3b) and Sir Rawson William Rawson, together with Sir Cyril Fox and Sir Mortimer Wheeler – of which pair, more later.

Academic honours litter every page, but worth a special mention are the large number of Fellows of the Royal Society, including three CSGBI Presidents (H.H. Godwin-Austen, Sydney J. Hickson and Canon A.M. Norman) and H.L. Hawkins, W.A. Herdman, Sir Henry Hoyle Howorth (figure 4), A.J. Jukes-Browne and E.J. Lowe.

figure 4: Caricature of Sir H. H. Howorth by 'Spy', from Vanity Fair (1895) (Public Domain).

'Gold watches' and ... blink, and you missed them!

Our longest serving male and female members – J. Wilfrid Jackson and Nora McMillan – are only partly covered by the period in question. The longest period recorded when the booklet was compiled (64 years) appears to be for the Rev. H. Purefoy FitzGerald (E 1884, † 1948). On the other hand, among those who clearly left it far too late to join the Society and whose memberships were thus summarily curtailed, were Mrs Nutcombe Gould (E 1901, † 1902), Norman William Sier (E 1920, † 1922) and John Henry Goodson (E 1936, † 1938).

The short membership of Kenneth Ironside Anderson (E 25, † 26) was 'extended' by his wife Alice who, following Kenneth's death in 1926, joined herself and was a member for the next 17 years. A surprising number had their memberships cut short of their own volition. In the year 1888 for example, there were at least three who joined, apparently had second thoughts and, before the year was out, resigned: J. Clegg, James T. T. Reed and William Dean. Quite what prompted such fleeting dalliances was not recorded!

What happened here, then?

The lack of explanation for most 'comings and (especially) goings' has created a number of other intriguing situations. Rather strange occurrences include the Rev. Ellerton Garside Alderson whose initial single year (E 1897, R 1898) was followed by a more sustained period of membership (E 1919, R 1927), a pattern mirrored by Joseph Moorcock (E 1900, R 1901 followed by E 1910, † 1918). The 'Most Ignominious Award' surely goes to Henry Simpson Wallace who seems to have been unique in being struck off for non-payment of subs twice (E 1896, S 1900; E 1917, S 1921). And then we have the rather complex entry for Alfred Hands Cooke (figure 5).

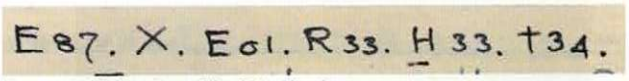


figure 5: Entry for Alfred H. Cooke.

Careful consideration of the extensive coding indicates that the Rev. Cooke (Fellow of the Linnean Society) joined, 'lapsed' and then re-joined. After a 32-year membership (during which he served as President in 1920) he resigned, was elected an Honorary Member the same year, and then died the following year!

Keeping it in the family

Quite a few family connections are recorded in the list and pride of place should go to the Dales, comprising Henry, his wife (Violet) and three of Henry's sisters: Alice, Ellen and Mary (figure 6).

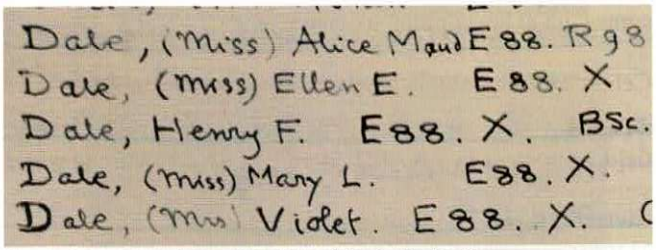


figure 6: Recorded membership of the Dale family.

Brothers include the Burkills (Clifford and Isaac Henry), the Scharffs (Robert Francis and William Edward) and the much better known Winckworths: Harold, Charles and Ronald.[2] Among sisters, I had planned to mention the Heles[3], but on checking the list I was reminded that only the eldest, Juliana FitzGerald (née Hele) was actually a member. Father and son-in-law duos include four former Presidents: the Manchester Museum pairing of Robert Standen and J. Wilfrid Jackson (figure 7), together with Standen's conchological collaborator J. Cosmo Melvill, whose daughter Gladys Bertha married Ernest Ruthven Sykes.

figure 7: An Egyptian mummy unwrapping at Manchester Museum in May 1908 (apparently before an audience of about 400 people). Left to right: Robert Standen (Jackson's father-in-law), Margaret Hart-Davis, Margaret Murray, J. Wilfrid Jackson (photograph courtesy of Buxton Museum & Art Gallery).

Another member listed, Arthur Blok (mentioned above, whose OBE was awarded in 1946) had a son, Geoffrey David Maurice Block[4], who joined the Society after 1947 and who also earned the recognition of OBE (in 1960).

The long and the short

The shortest surname name of any CSGBI member probably belongs to G. A. Te. However, George Ang Te (1946–2013), whose 'Mollusca Mastermind' subject would have been Michigan Physidae, was too late for this listing. Conversely, the owner of what is a candidate for the longest name[5] was listed: L.A.W.C. Venmans. Dutch zoologist Venmans (1898–1959) gloried (or laboured?) under the full name of Leonardus Alphonsus Wilhelmus Cornelius Venmans[6], 43 characters in total. Coincidentally, his obituary[7] was written by Tera van Benthem-Jutting, whose full name, Woutera Sophie Suzanna van Benthem-Jutting, probably qualifies her for the longest female name with 37 characters. In 1945 she married zoologist Pico van der Feen but continued to publish under her maiden name. However, I have seen an 'in memoriam' reference to her as Woutera Sophie Suzanna van der Feen-van Benthem Jutting which comes out at a whopping 47 characters[8].

Celebrity conchologists?

Of course, many of the listed members were eminent in the field, but one or two might be termed celebrities in the wider sense. Perhaps the most obvious, for those of us more advanced in years at least, was the archaeologist Sir Mortimer Wheeler who Wikipedia describes as 'the embodiment of popular archaeology through the medium of television' (for younger readers, think a be-whiskered Tony Robinson!). He was Television Personality of the Year in 1954 and appeared on the popular series *Animal, Vegetable, Mineral?* Figure 8 shows one of several portraits from the National Portrait Gallery.

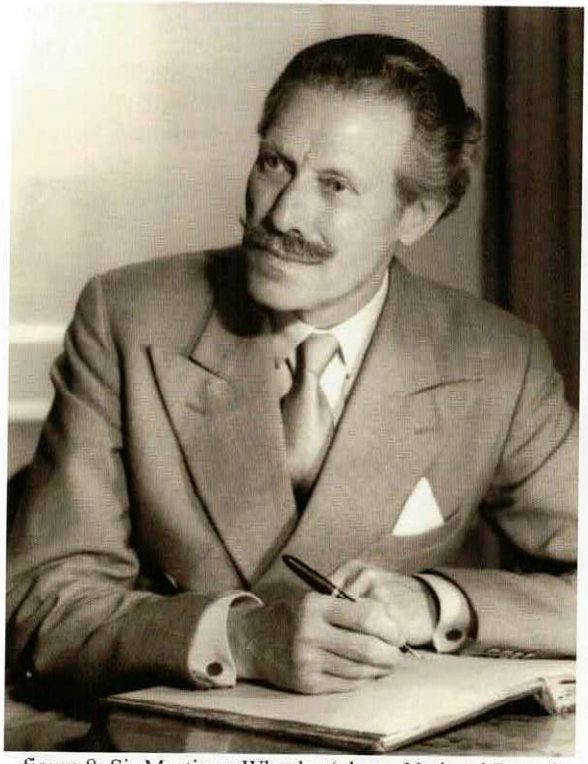


figure 8: Sir Mortimer Wheeler (photo: National Portrait Gallery – Creative Commons).

Earlier in his career, in 1924, Robert Eric Mortimer Wheeler was appointed to replace Conchological Society stalwart William Evans Hoyle as Director of the National Museum of Wales. Both Mortimer and his close friend (Sir) Cyril Fox, who succeeded him as Curator of Archaeology, and then Director, at the Museum in Cardiff[9] are listed as members, albeit with '(no record)' shown against their names. This presumably means that they appeared on a members list but their election was not specifically recorded in the journal. Thus, the circumstances of their election, membership, and interest in molluscs (or not?), for the moment at least, remain something of a mystery.

If being the owner of a Wikipedia page and/or a famous name qualify you for minor celebrity status, then at least two more members are worthy of inclusion here. Linnaeus (i.e. the man himself) was a bit too early to have been a member, but we have had two other Linnaeus's in the Conchological Society. One, Mrs G. Linnaeus Banks, acquired the name through marriage to George Linnaeus Banks. She is described by Wikipedia as a 'journalist, editor, poet, playwright, amateur actor, orator, and Methodist'. She was better known as Isabella Banks (figure 9) and achieved a measure of fame, in particular for her book *The Manchester Man*, published in 1876. As a shell collector, her interest in molluscs was at least more obvious that that of Wheeler, and the sale of her collection in 1898 was included in Tomlin's series of articles on 'Shell sales' [10].

figure 9: Isabella Banks, or Mrs G. Linnaeus Banks (Public Domain).

I did a quick double take when I saw the next entry in the list (figure 10):

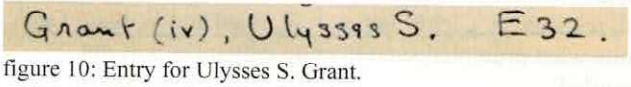


figure 10: Entry for Ulysses S. Grant.

Clearly not that Ulysses S. Grant, but the grandson of the 18th president of the United States, Ulysses Simpson Grant IV [11]. 'Our' Grant was a palaeontologist, best known for his work on the fossil molluscs of the Pacific Coast of California, who worked at the Los Angeles Natural History Museum and University of California, Los Angeles. Figure 11 shows him as a Lieutenant in World War I.

A rapid 'elevation'!

I have already mentioned quite a few former CSGBI Presidents, and one more cannot be passed over. Sylvanus Charles Thorp Hanley might have been worth a brief mention for the mildly interesting fact that his address matched his name: 'Hanley Road, Hornsey Road, London'. This fact becomes less surprising when we learn from Wikipedia[12] that Hanley Road was in fact named in honour of his father, William. However, the circumstances of Sylvanus Hanley's inclusion here rest on a much greater 'quirk', namely the fact that he was elected a member and President at the same CSGBI meeting! Having been nominated at the ordinary meeting of 3rd November 1887, he was duly elected as one of the early agenda items at the Annual Meeting on 15th December. Later in the same meeting, 'The scrutineers announced that 89 voting papers had been received, and the results of the voting was: PRESIDENT – Sylvanus Hanley, F.L.S., 75 votes'. A veritable landslide. S.C.T. Hanley was, of course, a conchologist of some standing[13], but one cannot help but feel sorry for the other potential presidential candidates whose length of membership had exceeded that of Hanley, which was measured in minutes!

And finally...

The observant among the persistent (anyone who has reached this far) may have noticed that I reported two Linnaeus's as members. One, Mrs G. Linnaeus (Isabella) Banks, we have already met. The second, a Major-General from Devonport, was elected in 1897, the same year Isabella died. He went by what may be the most unusual, and dare I say comical, name in the list of members: Linnaeus Tripe!

In fact, according to the V&A museum web site[14], Linnaeus Tripe (1822–1902) was a 'pioneering 19th-century British photographer ... best known for his striking views of Indian and Burmese landscape and architecture taken between 1852 and 1860, while he was an officer in the East India Company army.' However, the V&A concludes its account with what appears to be a hint of regret: 'Tripe left India in 1873 and retired from the army in April 1874. Back in England he spent his retirement with his extended family, more concerned with collecting shells and corals rather than practising photography'!

Acknowledgement

The author wishes to thank the Editor, Peter Topley, for adding the final paragraph and figure.

figure 11: Ulysses Simpson Grant IV (Public Domain).

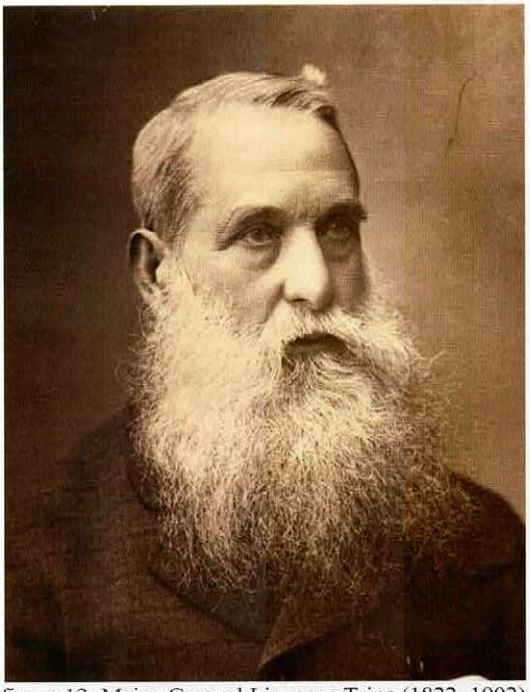


figure 12: Major-General Linnaeus Tripe (1822–1902), (?) 1880s.
(photo: British Library, Photo 612(1). Public Domain).

Endnotes

1. *Journal of Conchology* **28**: 265–293 (1976).
2. See https://conchsoc.org/node/630 and https://conchsoc.org/node/631, respectively.
3. See my previous article: The Ladies Who Conch – Part 2 (*Mollusc World* **57**: 20–26).
4. He changed his name by deed poll in 1942.
5. Measured in total characters.
6. It is noteworthy that all four of Venmans's given names have exactly nine characters – of course, this may just have been a coincidence.
7. *Journal of Conchology* **24** (12): 449–450 (1960).
8. https://natuurtijdschriften.nl/pub/596972.
9. See https://en.wikipedia.org/wiki/Mortimer_Wheeler.
10. Tomlin, J. R. le B., 1942. Shell sales. II. *Proceedings of the Malacological Society of London* **25** (1): 25–27.
11. One might have expected the grandson to be Ulysses Simpson Grant III, but that was applied to an earlier cousin. See: https://en.wikipedia.org/wiki/Ulysses_S._Grant_IV. An obituary can be found at: http://texts.cdlib.org/view?docId=hb4q2nb2nd&doc.view=frames&chunk.id=div00028&toc.depth=1&toc.id=.
12. https://en.wikipedia.org/wiki/ Sylvanus_Charles_Thorp_Hanley.
13. See https://www.conchology.be/?t=9001&id=20204.
14. https://www.vam.ac.uk/articles/linnaeus-tripe-life-and-work.

Molluscs and mathematics: the collaboration of Ronald Winckworth and D'Arcy Wentworth Thompson

Deborah Kent

My connection to the Conchological Society started in the archives at the University of St Andrews. I came upon a letter with compelling sketches of shells dated 19th March 1941, from Ronald Winckworth to D'Arcy Wentworth Thompson. I was familiar with Thompson, a 19th-century Scottish polymath who is most often remembered for his landmark book *On Growth and Form* and his vision for mathematical biology. But who was Ronald Winckworth? This question led me to the Conchological Society website and biographical information about Winckworth (Ellis 1951). I was fascinated by Winckworth, a long-time member and one-time president of the Society. After exhibiting a childhood interest in natural history, Winckworth read mathematics at Oxford, graduating in 1910. He had a number of teaching posts before 1914, when he joined the Navy and through the war years became an excellent officer, knowledgeable in gunnery and navigation. In 1924, he travelled extensively in South India and Ceylon. After that, he worked for nearly 20 years at the Royal Society, first as Librarian in 1925, then as Assistant Secretary in 1932 and as Assistant Editor in 1937 until he retired in 1944. Winckworth is remembered for creating the 'Great British Sea Map', which divided the then British marine area into 20 census areas as a basis for mapping (Winckworth 1921) (figure 1), as well as for his remarkable shell collection and encyclopaedic knowledge of marine Mollusca.

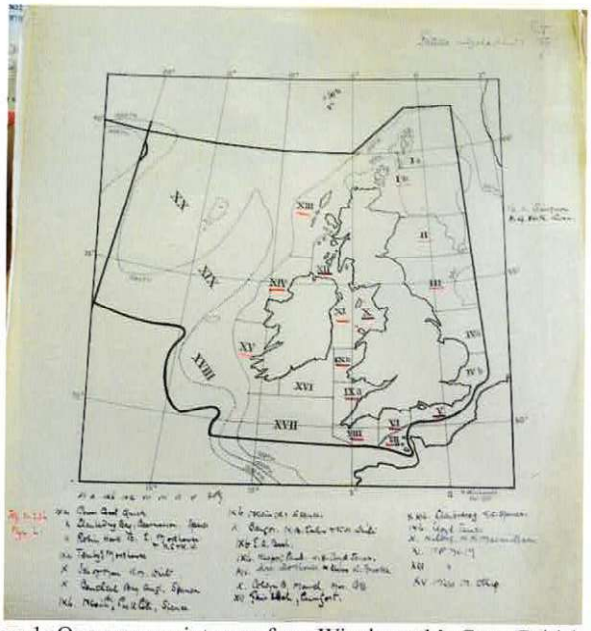
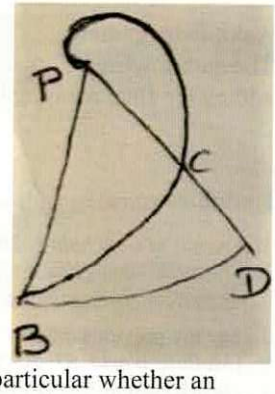


figure 1: One manuscript page from Winckworth's Great British Sea Map. (Image courtesy of West Yorkshire Archive Services)

A series of letters from Winckworth to Thompson in the Special Collections at St Andrews runs through March 1941 when Winckworth was at the Royal Society. Thompson was then preparing the second edition of *On Growth and Form*, which is widely credited as a foundation text to the field of mathematical biology for its pioneering use of mathematics to describe the growth and formation of organisms. Thompson's earliest known mention of this idea was in an 1889 letter to Mary Lily Walker, in which he wrote, 'I have taken to Mathematics, and believe I have discovered some unsuspected wonders in regard to the Spirals of the Foraminifera!'

This early inspiration grew alongside Thompson's criticism of Darwin's theory. In 1894, at a British Association meeting, Thompson presented a paper positing that 'the profusion of forms, colours, and other modifications [are] due merely to laws of growth' (Anon. 1894). As an example, he attributed the pointed shape of a guillemot egg to mechanical forces of pressure rather than to natural selection. He formalised the project in 1910, saying he 'had an idea … of a little book with some such title as 'The Form of Organisms', or 'Growth and Form'…'. In 1915 he published a paper entitled 'Mathematics and Morphology' (Thompson 1915) that presented his theory of transformation, material that remains the most famous feature of *On Growth and Form.*

When the book finally appeared (several years past the contract deadline) wartime conditions had relieved Thompson of some of his teaching and administrative duties. *On Growth and Form* begins with chapters on growth rate and cell structures and progresses to specular skeletons and logarithmic spirals. There are chapters on shells of the Foraminifera; on the shapes of horns, teeth and tusks; on phyllotaxis; and on the shape of eggs. The final chapter presents the theory of transformation, which appears nearly identical to that published in Thompson's 1915 paper. Thompson's papers include correspondence that criticises his mathematical arguments and calls for revision and improvement of the original text. While preparing a second edition of *On Growth and Form*, Thompson wrote to Winckworth to ask for his help with species names and for understanding the growth of shells and opercula, as well as for access to the Royal Society collections. On 2nd March 1941, Winckworth responded to Thompson to clarify that '*Turbo duplicatus* Linné is *Turritella duplicata* (L.) the common Indian Turritella'. He further discussed the challenge of tracing the name *Turbo phasianus*[1] through Lamarck, de Montfort, and Sherborn's *Index Animalium*. Thompson had apparently asked Winckworth to look in the Royal Society library for some sources, including a paper by Halley in the *Philosophical Transactions* on the logarithmic spiral.



Winckworth not only supplied Thompson with references and papers – and sketches of logarithmic spirals (figure 2, right) – but also shipped various specimens to St Andrews (figure 3). On 19th March 1941, he acknowledged the return of a loaned *Nautilus* plate and sent Thompson a shell to help him investigate the position of the end of the operculum. Thompson had asked about the growth pattern, in particular whether an operculum's 'growth is in a spiral or outward', and where it attaches to the shell. Winckworth suggested that Thompson check the attachment on a *Trochus zizyphinus* [now *Calliostoma zizyphinum* (Linn., 1758)] which he advised 'you can probably acquire living even in wartime.'

[1] Possibly *Turbo phasianellus* Deshayes, 1863, now accepted as *Calliotrochus marmoreus* (Pease, 1861). [Ed.]

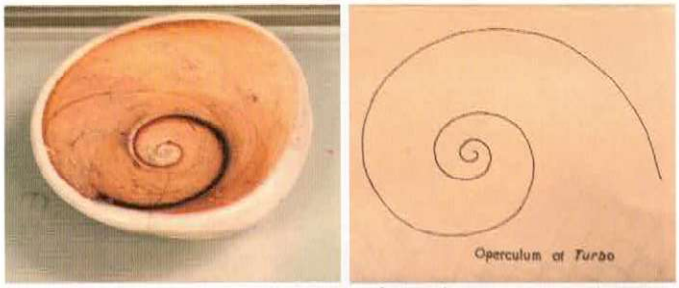


figure 3: An operculum of a *Turbo* sp. from Thompson's specimens in the Bell-Pettigrew Museum and a drawing perhaps produced by Thompson himself. (University of St Andrews Library and Special Collections)

Winckworth reported ongoing gunfire noise in London and lamented that specimens were in rooms that had not been blacked out, which meant he could only draw them in daylight. He could, however, send specimens to Thompson to facilitate his investigations. Winckworth wrote, 'I am sending you an example of *Turritella duplicata* (L.) from Madras in which I think I have placed the operculum correctly'. He was careful to add 'it is the best specimen I have' and emphasised 'I would like to have it back sometime'. Often historical correspondence leaves loose ends, so I was happy to find a letter dated 31st March 1941 in which Winckworth thanked Thompson for returning the prized *Turritella.*

In the same letter, he reported checking the growth patterns of opercula 'among such shells as were easily got at'. Winckworth's investigation led him to agree with Thompson. He wrote, 'I feel sure you are right in saying that few shells have concentric opercula'. Winkworth went on to explain that he had observed spiral opercula in both *Pleurotomaria* and *Trochus*, while *Viviparus*, *Ampullaria*, and *Murex tribulus* had nearly concentric opercula (figure 4). Further postulating that 'they all start as spirals and only later grow on all sides', Winckworth pointed to *Helicina* [now *Waldemaria*] *japonica* as a good example. He highlighted the *Siphonium* [now *Dendropoma*] genus of the family Vermetidae as one that 'appears to have a truly concentric operculum', but said it was not visible on any of his live vermetids due to overgrowth of *Melobesia* [encrusting marine algae].

figure 4: Left: spiral operculum of *Maurea tigris* (Calliostomatidae); right: 'concentric' operculum of *Pomacea megastoma* (Ampullariidae). (photo: Peter Topley)

As I read the correspondence, I wondered whether any of those specimens still existed. Could I find the specific shells that Winckworth consulted in composing his reply to Thompson? Would it be possible to find the exact specimens that he had sent to Thompson? I started corresponding with Tony Hunter, a curator at the Liverpool World Museum (LWM) where Winckworth had donated his collection. Sadly, much of the shell collection was destroyed in the blitz, although some of the pre-war holdings remained. I was eager to take a look.

When I arrived, Tony showed me the papers related to the museum's acquisition of Winckworth's British Mollusca collection. These included museum correspondence about the logistics of the sale, and the packing and retrieval of the collection. Winckworth's collection included the marine species from the collection of Philip Brooks Mason. In a note dated 15th December 1988, Nora McMillan noted that after Winckworth bought the Mason collection, he passed the non-marine species on to Alfred Santer Kennard. Downstairs in the museum, I arrived in a room of high-density mobile shelving with shallow drawers stacked from floor to ceiling and filled with shells. A taxidermised emperor penguin (plastic-wrapped in anticipation of cold storage) looked on from the corner. Faced with the collection stores, it seemed a nearly impossible challenge to determine which specimens might have belonged to Winckworth. His shells – the ones that survived the bombing, anyway – had been received by Nora McMillan and integrated with the museum's research collection. Tony used the shelf list to locate the drawers with the species mentioned in the letters between Winckworth and Thompson. A profusion of small cardboard boxes, corked glass cylinders and little plastic bags filled drawer after drawer, with the shells neatly classified and labelled. The key to determining which were Winckworth's shells came from the collection correspondence. In particular, Winckworth wrote in March 1938 that his 'smaller shells are all in glass top boxes'. And another letter mentioned 'specimens mounted on pink cotton wool'. I now knew exactly what I was looking for and the pink wool was easy to spot. The little blue round cardboard containers had well-fitted lids, some with gold trim. Neatly handwritten on the bottom of each box was species and location information along with, where relevant, a note indicating that the shells had been part of Mason's collection, and a pink sticker labelled 'Winckworth' (figure 5).

The thrill of discovery was dampened somewhat by the realisation that Winckworth's correspondence with the Liverpool Museum was dated throughout March 1938. His collection of British marine Mollusca left his London home in several shipments in the spring of 1938. (He was especially keen to clear it out to make space for an incoming collection of Indian butterflies.) But Winckworth was not mailing specimens to Thompson until three years later, so it's very likely that the shells currently in the Liverpool stores did not circulate between Winckworth and Thompson in preparation for the second edition of *On Growth and Form.*

The 1941 correspondence between mathematical biologist D'Arcy Wentworth Thompson and malacologist Ronald Winckworth presents a collaborative exchange between the two as they discussed patterns of molluscan growth. Specifically, throughout robust discussion of Archimedean and logarithmic spiral patterns in molluscan opercula, Winckworth provided references to the literature, sent relevant images and sketches to enhance the dialogue, offered critiques and corrections to Thompson's biological understanding, and shared specimens from his own collection.

figure 5: *Trochus* [now *Jujubinus*] *striatus*. Example of specimens from the Winckworth collection at LWM.

Thompson's goal in *On Growth and Form* was to argue that mathematical investigation holds the key to biological understanding. The book was first published in 1917. An expanded second edition, prepared in part to address criticism of Thompson's mathematical explanations, appeared in 1942. John Bonner prepared an abridged version in 1962, which has subsequently been reprinted over 40 times. Beginning with the first edition, a photograph of a cross section of a nautilus shell is the persistent icon of this work.

The image of a cross-section of a nautilus and an image of a mould of the interior of a nautilus in Thompson's work raise questions about the production of these visuals. The book reproduces both photographs and radiographs that must have been made by practitioners skilled in the relevant technology (figures 6 and 7). Further, the precision-slicing of the shells suggests artisanal knowledge, specialised equipment and a market for shell sections. There are also, in the Liverpool Museum collection and elsewhere, many marvellous books celebrating shell classification and collection. All of these are avenues of additional research that will enrich our understanding of 19th- and early 20th-century practices related to conchology, and may further illuminate the relationships between malacology and other sciences at that time.

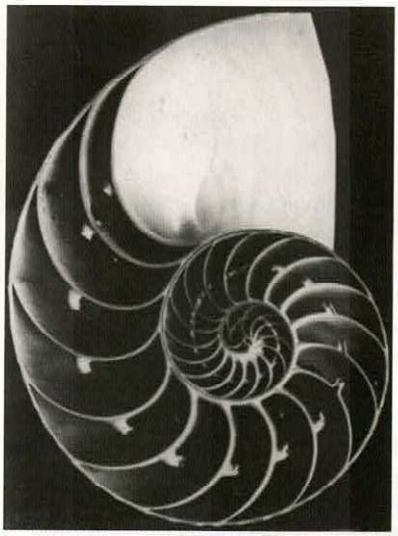


figure 6: image of cross-section of a *Nautilus* from *On Growth and Form*. (Courtesy of University of St Andrews Library and Special Collections)

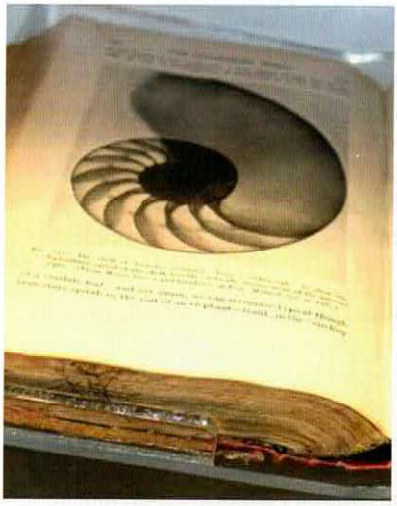


figure 7: *Nautilus* from a radiograph in the first edition of *On Growth and Form*. (Image courtesy of D'Arcy Thompson Zoology Museum, University of Dundee)

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How to become a member of the Conchological Society

The Conchological Society of Great Britain & Ireland

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 postage for distribution from the UK, members living in the Republic of Ireland and Europe will be asked to pay an additional postage charge of £8, and members living in the Rest of the World an additional postage charge of £17.

See website for further details. Payments in sterling only, to Catherine Jagger, CIRCA Subscriptions, 14 St Barnabas Court, Cambridge CB1 2BZ, (shellmember@gmail.com). For UK residents we suggest payment by standing order, and if a UK tax payer, please sign a short statement indicating that you wish the subscription to be treated as Gift Aid. Another simple and secure way of paying for both UK and overseas members is by credit card online via PayPal from http://www.conchsoc.org/join. Overseas members may also pay using Western Union, but a named person has to be nominated, so please use the Hon Treasurer's name, Brian Goodwin.

How to submit articles to Mollusc World

Copy (via e mail, typed or handwritten) should be sent to the Hon. Magazine Editor (contact details above). If sending copy using e-mail please include a subject line 'Mollusc World submission'. When emailing several large file attachments, such as photos, please divide your submission up into separate emails referencing the original article to ensure receipt. Electronic submission is preferred in Microsoft Word. Images and Artwork may be digitised, but we recommend that a digital image size 200Kb- 1Mb (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. Please aim for **copy intended for the November 2023 issue to be sent to him before 20th Sept. 2023**; 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.

Diary of Meetings Field meetings (continued from back cover)

Saturday 9th September 2023: FIELD MEETING (non-marine): Bookham Common, north Surrey.
Joint with the London Natural History Society and the Alton Natural History Society.
Leader: June Chatfield (drjunechatfield@gmail.com; 01420 82214).
The London Natural History Society (LNHS) has been surveying this (National Trust owned) site since 1941 when Conch. Soc. past Presidents C. P. Castell and A. E. Ellis were involved as well as member Col. Bensley, but the molluscs have not been looked at for many years and the common has changed. There is about 400 acres of ancient woodland, glades, semi-acid to acid grassland, ponds and wetland on London Clay. The main trees are oaks and hazels; many are veteran trees and the site is an SSSI. We will have lunch at the LNHS hut by Merritt's Cottage in the centre of the common which is managed by the National Trust with input from London Natural History Society.
The initial meeting place at 10.30am is the car park of the Bookham Common railway station where Steve Mellar the leader of the LNHS survey group, will meet us and direct us to a parking place. If he chooses one of the official car parks it is pay and display and pay by phone but free for National Trust members (bring membership card). Bookham is reached by trains from Waterloo and Guildford (Southwestern Railway) and also by bus 479 from Epsom and Guildford (hourly service) which stops at the station.

Saturday 21st October 2023. FIELD MEETING (non-marine): Wyre Forest, Worcestershire.
Leaders: Rosemary Hill* & Rosemary Winnall (*rosemaryhi@lineone.net; 0121 4431459).
This will be a joint meeting with the Wyre Forest Study Group (WFSG). We will be examining wet flushes in the Wyre Forest. Parking will be on private land and it is essential to contact the organiser(s) if attending. Further details will appear on the Society website.

Details of any further field meetings (including some arranged opportunistically, often at short notice) will be posted onto the Conchological Society website. Society members are encouraged to check this regularly for notification of such meetings as well for updates on the other fixed dates.

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.

Meeting Programme compiled by Martin Willing. Contacts for meetings related matters are either Martin Willing (martinjwilling@gmail.com) OR Rosemary Hill (secretary@conchsoc.org).

Some key Conchological Society contacts

(see web site [http://www.conchsoc.org/pages/contacts.php] for additional contact details)

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For general membership enquiries please contact: -
HON. MEMBERSHIP LIAISON OFFICER: Pat Robbins
125 East Lane, West Horsley, Leatherhead, KT24 6LJ.

Conchological Society of Great Britain and Ireland

Diary of Meetings

Please check website (www.conchsoc.org) for further details/updates, including other meetings arranged at shorter notice.

Indoor meetings

Details of whether a meeting is 'live' plus Zoom or Zoom only, will be circulated to members prior to each meeting, together with instructions on how to access the Natural History Museum (NHM) and /or the online Zoom.

News updates will also appear on the Society's website.

Attending by Zoom: It is ESSENTIAL to let Catherine Jagger at CIRCA (shellmember@gmail.com) know of your intentions to attend by Zoom before each meeting. She will then send you joining instructions and an agenda.
If you do not respond on time, it may not be possible to make the necessary access arrangements.
Zoom meetings will open from 13.45. Please ensure that you join before the 14.00 start as late admissions may be impossible.

Saturday 15th July 2023: ZOOM MEETING with online exhibits and lecture
Guest speaker: Dave Mckay 'The role of serendipity in shell collecting.'
14.00 — 16.00 approx. (13.45 Zoom sign in – please pre-register with Circa (shellmember@gmail.com))
David will talk about his life-long interest in shells, and how it has come to occupy his life. He is an avid collector of marine molluscs especially from offshore, regularly joining trawler fishing vessels on their trips. He has had a hand in describing several new species, and is now concentrating on marine recording as a way of maintaining his interest.
(Council members please note that there will NOT be a Council meeting before this meeting)

Saturday 14th October 2023: INDOOR MEETING with exhibits and lecture (NHM with Zoom link)
Guest speaker: Robert Cameron. 'Snails in the mind: symbolism, superstition and imagery.'
14.00 — 17.00 (13.45 Zoom sign in - pre-register with Circa): Angela Marmont Centre, NHM, London SW7 5BD
(Council members please note that there will be a Council meeting before this meeting (Live and Zoom)

Saturday 11th November 2023. REGIONAL MEETING in Reading.
Organiser: Tom Walker (tom@tmwalker.co.uk, 07488 231574).
The meeting will be held in the Department of Zoology, Whiteknights, University of Reading, Berkshire RG1 5AN. 10.30–4.00. The meeting will consist of short presentations (15—25 minutes) and a tour of the mollusc collections within the Zoology department. The meeting will be live only, and not on Zoom. There are regular busses from Reading Station to the University Campus (route 21, 21a). Please contact the organiser for further details or to offer a presentation. This is an excellent opportunity to tell others of any work you are doing, your molluscan interests or discuss projects you may be considering.

Sunday 12th November 2023. CONSERVATION AND RECORDING FORUM MEETING in Reading.
Organiser: Ben Rowson (ben.rowson@museumwales.ac.uk). The meeting will be held at 38 Redlands Road, Reading, Berkshire RG1 5HD (10.00 start, close around lunchtime) and is open to all members of the Society. The meeting will also be on Zoom – joining details will be circulated nearer to the time of the meeting. Please contact the organiser for more information or suggestions for the agenda.

Saturday 9th December 2023: INDOOR MEETING with exhibits and lecture (NHM with Zoom link)
Guest speaker: Richard Preece. 'William Benson and the Golden Age of Malacology in British India'.
A talk following the publication in 2023 of a monograph on Benson's pioneering work in India.
14.00 — 17.00 (13.45 Zoom sign in - pre-register with Circa): Angela Marmont Centre, NHM, London SW 7 5BD.
(Council members please note that there will be a Council meeting before this meeting (Live and Zoom))

Field meetings

Specific meeting arrangements and any changes will appear on the Society website which Society Members are advised to visit regularly. It is essential for those wishing to attend ANY of the field meetings, to contact the leader in advance (ideally at least a few days before) to book a place and obtain further details.

Saturday 22nd July 2023: FIELD MEETING (non-marine): Whiteknights, University of Reading, Berkshire.
Leader: Tom Walker (tom@tmwalker.co.uk; 07488-231574;)
Molluscs are under-documented on the University grounds (only eight species on CS/NBN databases), which consists of woodland, grassland and a lake. We will explore all areas, including dipping in the lake. The findings will be presented at the regional meeting due to be held at the University on 11th November. Meet at 10.30am in Car Park 4 on the University campus (by the Students' Union: RG6 6EH; grid ref SU735719; contact the organiser for details of how to find this car park). Bus 21/21a runs from Reading railway station every half-hour directly to the University Campus (15-minute journey time).

Sunday 6th August 2023: FIELD MEETING (non-marine): Hook-a-Gate woods, near Shrewsbury
Leader: Mags Cousins (shropshiremolluscs@gmail.com; 07873 532681).
A small woodland with tufa-depositing streams, grid ref. SJ462093. There is no parking at the wood itself, so we'll park in the village of Hook-a-Gate and walk a short distance across fields. Meet at 10.30 am.

The **Diary of Meetings** continues on page 35 (inside back cover)