

Mollusc World

July 2021 • Issue 56

Recorder's reports 2020 • Conchologists in conflict 2
Molluscs of northern Cyprus • Succinid identification



The
Conchological
Society
of Great Britain & Ireland

Helping to understand, identify, record and conserve molluscs

From the Hon. Editor

This year there have been a number of changes among the Conchological Society's honorary officers. Dr Martin Willing reached the end of his productive three-year tenure as our Hon. President and we welcome Dr Tom Walker and wish him well in this important role. Nick Light has given many hours of his time over quite a number of years to his role as Hon. Treasurer and the Society is very grateful for his guiding and wise hand in the care of the Society's finances; we now welcome Dr Brian Goodwin to this role. Pat Robbins has become our new Hon. Membership Liaison Officer, coordinating with Catherine Jagger at CIRCA subscriptions management and we thank her predecessor Briony Eastabrook for her work. Peter Barfield is our new Hon. Webmaster (webmaster@conchsoc.org), following on from Paula Lightfoot, and the website has now been updated (QR code link opposite).

In the news in May was the work of one of our Vice Presidents, Dr Mike Alan, who has used recovered snail shells from archaeological soil deposits to inform the dating of one of England's iconic historical chalk figures, the Cerne Abbas Giant. The news article can be read at www.bbc.co.uk/news/uk-england-dorset-57076224 and Mike is planning an article on this subject for a future issue of *Mollusc World*.

The Zoological Society of London is co-sponsoring 'The Wild Oyster Project', the aim of which is to increase native oyster populations by over a million oysters a year, improving marine ecosystems around the UK. As part of the project, ZSL will be 'working with the next generation of conservation leaders, supporting them to monitor and care for newly introduced oysters and learn more about the incredible wildlife in their own back yard.' You can currently read about two arms of this project, in the Firth of Clyde and Conway Bay on the ZSL web site at <https://www.zsl.org/conservation/news/>.

Back in April the BBC reported on the seizure in the Philippines of around 200 tonnes of illegally harvested giant clam shells worth nearly \$25 million (£18 million). This ecologically important species is increasingly vulnerable to poaching for meat and shells, which are used as a replacement for ivory in jewellery and for ornamental purposes. The auction in May of the huge, largely marine, natural history collection of the late William Owen (a sea captain based in the Middle East) included a large specimen of *Tridacna gigas* taken from the sea bed in 1989 and 'measuring approximately 100 cm wide, and weighing approximately 206 kg/433.2 lbs' which was sold for £2,300.

My thanks are due to all those who have submitted material for this magazine, some for the first time. Please keep up the good work!

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 a number of early 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 31 for further details).



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Front Cover:

Incendiary bomb damage to the Shell Gallery of the Natural History Museum night of 16th October 1940 (see pages 20–24) (photo: © The Natural History Museum, London. Used with permission)

Many thanks go to Janet Ridout Sharpe for help with copy editing. Printed by Short Run Press, Exeter, EX2 7LW.

The pandemic significantly limited marine recording activity during 2020 as for long periods of the year, including the best low tides in the spring, non-local travel was prohibited and only those residing near the shore could reasonably travel there for exercise. Recreational diving was also prohibited for much of the year. The Society could only run a single one-day field visit (to Bembridge on the Isle of Wight, led by Bas Payne), although the Marine Recorder was able to conduct a week's intensive surveying on Benbecula and the Uists in the Outer Hebrides during autumn spring lows.

For those fortunate enough to be within 'daily exercise' distance of the shore, lockdown presented the opportunity to conduct some relatively intensive fieldwork over a small area. David Notton, in Edinburgh, was able to make regular excursions in the Granton area where he recorded a variety of molluscs including an intriguing LWB (little white bivalve) which was identified as the first Scottish observation of *Theora lubrica* Gould, 1861 (Notton 2020). This non-indigenous species was mentioned in last year's report (Taylor 2020) following its first UK discovery in Lowestoft Harbour, as reported in the Society's journal (Worsfold *et al.* 2020). It has followed the increasingly familiar pattern of colonisation of continental Europe (in this case the Mediterranean first, before spreading around into the North-east Atlantic) and then the UK, as well as establishing populations elsewhere around the globe. Although David's find was of a single valve, it seemed relatively fresh; an establishing population in the vicinity of a busy harbour would come as no huge surprise. As illustrated in last year's report, this species, although small (c. 10mm) and white, is relatively easy to recognise by a distinct internal ridge running obliquely from the anterior side of the umbo in each valve. Worsfold *et al.* (2020) also provide excellent illustrations and a description). It is certainly one to look out for.

Continuing with the recent tactic in this report of highlighting potential non-indigenous invasives before they have been recorded in Britain and Ireland, field workers should be aware of a recent find of a live *Yoldia limatula* (Say, 1831) in the Western Scheldt in the Netherlands (Driessen *et al.* 2020). The specimen was found in a boxcore sample taken at a depth of 17.77 m. This rather impressive bivalve (figure 1), native to the eastern seaboard of North America, grows to a length of some 5 cm and would be readily recognised as unusual if encountered.



figure 1: *Yoldia limatula* (scale bar = 1 cm).

(photo: National Museum of Wales)

It is not only non-indigenous species which can spread suddenly. Many marine species found in Britain and Ireland have limited distributions here, such as the two native species of *Haminoea*: *H. navicula* (da Costa, 1778) and *H. hydatis* (L., 1758), both of which are restricted to the south-west. At least that was the case until recently when two populations of *H. navicula* were discovered, evidently very recently established, in East Anglian estuaries (Taylor & Faasse forthcoming). These populations will be monitored to establish their long-term viability and further surveys will be conducted to seek additional populations in other estuaries feeding into the North Sea, particularly those popular with leisure craft which are considered to be the most likely dispersal vector.

Research into the biogeography of species with limited distribution in Britain and Ireland is topical, particularly as a potential indicator of climate change. Ian Smith has produced very detailed accounts of his research into the history of the distribution of several such species, including the tortoiseshell limpet *Testudinaria testudinialis* (Müller, 1776), which is thought to be retreating north, and a warmer water species, the trochid *Steromphala umbilicalis* (da Costa, 1778), which appears to be slowly colonising the colder waters of the North Sea (Smith & Taylor 2020, Smith 2021a, Smith 2021b). As mentioned in previous years, Ian has numerous excellent species accounts available online via Flickr and is also now publishing detailed accounts in pdf format, currently available via www.researchgate.net. Society members continue to pursue literature research and field work focused on the current and historic extremes of distribution of many native species. Bas Payne has been conducting survey work on the south coast, specifically targeting *Patella depressa* Pennant, 1777 and *Phorcus lineatus* (da Costa, 1778), and surveys in the Exe estuary region have also produced numerous interesting specimens of *Acanthocardia* spp., detailed investigation of which suggests that *A. aculeata* (L., 1758) is becoming more widespread in the south-west of England and in places may be present, alongside *A. tuberculata* (L., 1758), to the exclusion of the more familiar *Acanthocardia echinata* (L., 1758).

Two new species were confirmed for the UK marine mollusc species list in 2020, not by field work but by molecular research. Through DNA analysis, alongside detailed morphological and ecological study, this has followed the pattern in recent years of demonstrating that what were once thought to be distinct species are in fact multiple species. As well as presenting the challenge of having to learn how to differentiate the new species from those from which they have been split, there is also the consequence that unless old records are supported by voucher specimens and/or photographic (or possibly, in some cases, ecological) evidence they have to be consigned to a species aggregate. The two new species, described from separate research, are both nudibranchs: *Amphorina andra* Korshunova *et al.*, 2020¹ (figure 2) and *Polycera norvegica* Sørensen *et al.*, 2020² (figure 3). Current research suggests that in Britain and Ireland both species are sympatric with those from which they have been split, respectively *Amphorina farrani* (Alder & Hancock, 1844) and *Polycera quadrilineata* (Müller, 1776). As is often the way with nudibranchs, even at what is a better-defined species level, there are multiple colour morphs within each

species which make it difficult to briefly summarise how they are determined morphologically. Those interested are referred to the original descriptions and to the already growing body of online discussion and images.



figure 2: *Amphorina andra*. (photo: Jim Anderson)



figure 3: *Polycera norvegica*. (photo: David Fenwick)

The surveying visit to the Outer Hebrides (in the company of David McKay) had to be rescheduled from spring to autumn due to the Covid-19 pandemic. Consequently the number of opisthobranch records was disappointingly low, although other finds helped to make up for it. Personal highlights were live specimens of *Alvania beanii* (Hanley in Thorpe, 1844) and *Pyrgiscus rufescens* (Forbes, 1846) found intertidally under stones at the north end of the Eriskay causeway. Benbecula and the Uists are renowned for brackish lochs and the presence of *Hydrobia acuta neglecta* Muus, 1963 (figure 4) was confirmed at a number of sites, primarily those lochs on the more saline side of brackish, where the species was found on marine algae alongside other molluscs such as *Littorina saxatilis* (Olivi, 1792), *Rissoa parva* (da Costa, 1778) and *Skeneopsis planorbis* (O. Fabricius, 1780). Some care was required however because, as is often the case, some sites were also inhabited by *Ecrobia ventrosa* (Montagu, 1803), particularly where the salinity was lower. As the salinity declines *H. a. neglecta* gives way entirely to *E. ventrosa* which then itself cohabits with *Potamopyrgus antipodarum* (Gray, 1843) until, in only very slightly brackish to fresh water, the latter species is the sole hydrobiid present. The hoped-for lagoon slug *Tenellia adspersa* (Nordmann, 1845) was not found, although this may simply have been an unfortunate consequence of the time of year.

Often these brackish lochs are separated from the open sea by narrow tidal straits, a classic habitat for rich biodiversity. The characteristic indicators – dense sponge and tunicate growth – were frequently encountered, accompanied by a molluscan fauna dominated at ELWST by *Calliostoma zizyphinum* (L., 1758), both species of *Trivia*, *Talochlamys pusio* (Linnaeus, 1758) – more familiar to many as *Chlamys*



figure 4: *Hydrobia acuta neglecta*.

distorta (da Costa, 1778) – as well as *Hiatella arctica* (L., 1767) and anomiids. *Emarginula fissura* (L., 1758), *Diodora graeca* (L., 1758) and the chiton *Leptochiton asellus* (Gmelin, 1791) were also found in good numbers in these habitats.

A couple of dredging trips off Benbecula were possible, one to the west on the Atlantic side (out of the appropriately named Stinky Bay) and one to the more sheltered eastern side. The latter was by far the most productive, providing records of such species as *Azorinus chamasolen* (da Costa, 1778), *Thracia convexa* (W. Wood, 1815), *Yoldiella philippiana* (Nyst, 1845) and *Nuculana minuta* (Müller, 1776), among many others.

During 2020 the most productive source of new records was iRecord, which is proving particularly popular with ‘casual’ recorders and provides them with the opportunity to have their finds verified by experts. Thanks largely to Ian Smith, who continues to contribute a significant amount of verification effort, approximately 1000 records for the year were verified as correct; 5172 previously verified records were also uploaded to the marine dataset during 2020. This data is particularly useful inasmuch as it tends to provide wide coverage of many of the commoner species, and for records from inexperienced or new workers to be verified as correct it has to be supported by evidence, usually photographic.

The project focusing on digitising the Society’s archive of paper-based records also continued to grow during the course of the year, although lockdown provided a good opportunity for such activity. Volunteer digitisers Brian Goodwin, Andrew Wright and Val Marshall between them typed-up several thousands of records which can now be made publicly available via the Society’s digital dataset and the NBN Atlas. The Society offers its thanks to those digitisers; if anybody else is interested in taking part in the project then please do feel free to volunteer as there is always room for more.

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Hon. Treasurer's report on the financial statements to 31st December 2020 Nick Light

The Society has had a difficult year with funds of £113,537, being a loss of £9,152 in the year.

Our overall income in the year at £16,568 was £1,253 below 2019. Subscription income fell by £441, investment income by £406, sales of books and leaflets by £154 and donations by £225.

Our expenditure before grants at £19,095 was an increase of £914. Of this £825 was publication costs, principally postage increases for both the *Journal of Conchology* and *Mollusc World*. Currently the average cost of posting an issue of the journal is £2 and *Mollusc World* £2.50. The need to offer members the option of a digital copy is becoming pressing. If this cannot be achieved, we should consider an increase in subscriptions for 2023. Work continues on our website to improve security but we do not now expect any further costs to conclude this first stage.

Our investments generated income of £4,049, They followed the poor market performance in the year and we had to write them down by £4,746. We anticipate the market will remain volatile until the full impact of leaving the EU and the Covid-19 pandemic has been established, so we should be prepared for further fluctuations.

My thanks to Gill Earle for preparing our accounts and to Rupert Honnor for giving his time and expertise to examine the accounts.

Our healthy reserves will enable us to continue to meet our charitable objectives in 2021 and beyond.

NOTES TO THE FINANCIAL STATEMENTS

ACCOUNTING POLICIES

General

- These statements have been prepared in accordance with Financial Reporting Standard for Smaller Entities (FRSSE) and the Charities SORP (Statement of Recommended Practice)
- Investments are valued at market value on 31st December.
- No trustee has received any remuneration during the current or previous year. A grant to a trustee of Excc towards the cost of a computer and software was made this year and some postage and travel expenses incurred on behalf of the Society have been reimbursed.

Funds

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

Note	2020	2019
Note 1. Investment income from:		
Stock listed on recognised stock exchange	£4,049	£4,455
Total	£4,049	£4,455
Note 2. Grants awarded:		
2020 – Aimee Tonks	£650	
2020 – Daniella Sloan	£905	
2020 – Simon Taylor	£324	
2019 – Rahul Jaitly		£1,000
Total	£1,879	£1,000
Note 3. Investments:		
Market value at beginning of year	£117,807	£105,298
Net gain/loss on revaluation	-£4,406	£12,509
Market value at end of year	£113,401	£117,807
Note 4. Analysis of debtors:		
Tax recoverable – Gift Aid	£950	£1,105
Note 5. Analysis of creditors and accruals:		
Grants	£905	£1,000
Subscriptions in advance	£3,501	£2,932
Services	£4,105	£920
Total	£8,511	£4,852

Statement of financial activities

	Note	2020	2019
Incoming resources			
Fees and subscriptions		£12,113	£12,554
Investment income	1	£4,049	£4,455
Income from activities for generating funds		£377	£531
Other incoming resources		£0	£27
Donations and legacies		£29	£254
Total incoming resources		£16,568	£17,821
Expenditure			
Publications costs		£15,476	£14,651
Stationery, postage and advertising		£426	£267
Meetings costs		£683	£670
Sundry expenses and fees		£244	£374
Membership Services		£1,386	£1,397
Bookkeeping		£880	£822
Grants	2	£1,879	£1,000
Total expenditure		£20,974	£19,181
Net incoming resources		-£4,406	-£1,360
Gain/Loss on revaluation		-£4,746	£12,509
Net movement in funds		-£9,152	£11,149
Fund balances brought forward		£122,689	£111,540
Fund balances carried forward		£113,537	£122,689

Balance Sheet at 31st December 2020

	2020	2019	
Fixed Assets			
Investments at market value	3	£113,061	£117,807
Total fixed assets		£113,061	£117,807
Current Assets			
Debtors	4	£950	£1,105
Cash at bank and in hand		£8,037	£8,629
Total current assets		£8,987	£9,734
Short term creditors	5	£8,511	£4,852
Net current assets		£476	£4,882
Total assets less current liabilities		£113,537	£122,689
Unrestricted income funds		£113,537	£122,689

Nick Light
Honorary Treasurer
13th March 2021

Rupert Honnor
Honorary Examiner
14th March 2021

Thanks to our many indefatigable contributors, the Society received a very large number of interesting new records despite a heavily disrupted year. Travel and meetings were subject to some level of restriction throughout almost the whole period since the last report in February 2020 (Rowson 2020). Most fieldwork, including Society field meetings, had to be cancelled and many recorders were unable to roam as widely as usual.

Some made up for this by searching locally, or more extensively during the less restricted periods in the summer; others by entering additional old records or research during the extra time spent at home. The nationwide correspondence between members via email, phone, Zoom and Facebook (through which Ian Smith has directed valuable records and even new members) has of course been vital. It also allowed us to deal with a few other issues.

Climatically, 2020 was another mild year and, according to the Met Office, once again warmer, wetter and sunnier (especially in spring) than the long-term average. There was a popular conception that wildlife benefited from lockdowns in the short-term (e.g. Watts 2020; Arora *et al.* 2020). Mollusc populations were probably relatively little influenced, although any effects of changes in habitat or water management caused by restrictions in 2020 may take some time to be noticed.

New data received

At the time of writing (17 March 2021) just over 17,000 new records had been received and readied for import into the Recorder 6 database. Over 10,000 (60%) were received or entered directly, mainly from experienced contributors, and represented over 180 mollusc species from over 80 vice-counties.

The remaining 6,700 (40%) were accepted via iRecord with input dates between 1 January and 31 December 2020. These represented fewer, often commoner, species (150) but more vice-counties (over 100), many coming from more 'casual' mollusc recorders.

In total over 150 new records were received from Northern Ireland, from Roy Anderson and via iRecord. Nearly 900 were received from the Republic of Ireland, mainly from Evelyn Moorkens including the Killarney National Park Survey (Moorkens & Killeen 2021). Copies of other recent Irish datasets were exchanged with Roy and Evelyn, as per the Society's data sharing agreement. This brought the Recorder 6 database up to date for Ireland, and helped to improve the maps in the freshwater snails guide (see below).

Perhaps the most extreme examples of recording under confinement were Matt Law's finds of *Paralaoma servilis* and *Zonitoides arboreus* (the latter a new VC record) from the balcony of a flat in Bristol (Law 2020) and indoor records such as John Fleming's of *Limacus flavus* from Stroud. Many recorded molluscs in their gardens via iRecord, like Jim Logan in Kirkcubrightshire (Logan 2020). New member Jane Thomas submitted over 700 records, via iRecord, from regular visits to St Nicks/St Nicholas' Fields in central York, including a new VC record of *Ambigolimax nyctelius* (from which she studied the eggs, embryos and – in March 2021 – hatchlings).

The lockdowns allowed some the opportunity to revisit older datasets. Chris du Feu generously took on the task of

retrieving and then digitising over 1500 paper records made by the late Rev. Graham E. H. Long (see Chatfield 2021). Graham, who died in September 2020, had contacted Chris while unwell. The records come mainly from North and South Hampshire (VCs 11 and 12) and considerably exceed the 300 records of Graham's that were already held by the Society (figure 1). They cover a period from the 1970s to the 2000s, including a few earlier records from other contributors. We all know that there are additional records like this locked up in paper formats and collections, so it is excellent to have members like Chris willing to tackle them. Not only that, but Chris submitted a further 3000 records of his own this year, mainly of slugs in Nottinghamshire (VC56) over the period 2000–2020.

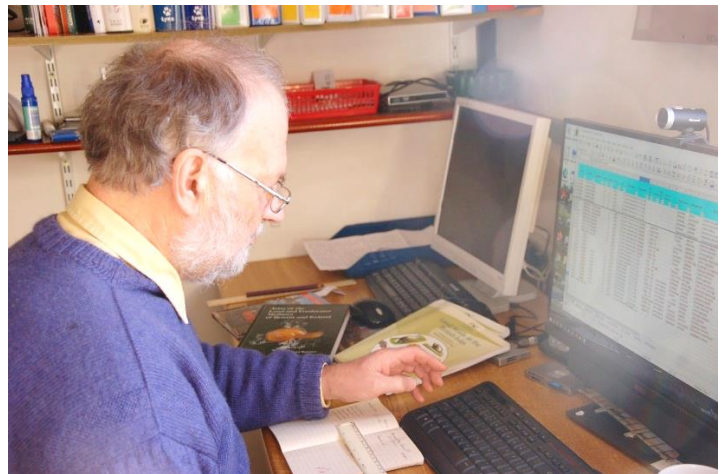


figure 1: Desktop recording: Chris du Feu digitising records from the late Graham Long's notebooks.

A further 1800 records came from a whopping effort by Adrian Sumner to extract data from dozens of sources in the 19th- and 20th-century literature for south-east Scotland. Some of these are impossible to map, such as a 16th-century account of *Margaritifera* in the Lothians, but he has been able to give the majority grid references. They include several records not in the Recording Scheme, including some of rarities such as *Truncatellina cylindrica*, *Helicigona lapicida* and *Dreissena polymorpha* as well as chance introductions like *Papillifera bidens* and *Helix pomatia*. Adrian even unearthed a record of *Ena montana* from Salisbury Crags, Midlothian (VC83) in a general natural history work. After discussion we decided not to map this record, which we suspect was probably misidentified, but have included the more plausible *P. bidens* and *H. pomatia* records. (An additional old Scottish record of *Assiminea grayana* is discussed below.)

The true, current distribution of *Ena montana* was the focus of efforts in the south (Alexander 2020). This year, 181 *E. montana* records were received from John Fleming from woodlands in East Gloucestershire (VC33) and 48 from Tom Walker for woodlands in Oxfordshire (VC23); two more were received from Graham Long for North Hampshire (VC12) and one from Simon Taylor for North Essex (VC19). Of particular interest are John and Tom's efforts to note precise locations and associated tree species, and also to report formerly occupied sites where no live animals were found. The Society's database of course makes the crucial distinction between live records and 'shell only' ones, although this is not yet shown on the NBN Atlas.

The Thames ram's-horn *Gyraulus acronicus* is another species Tom searched widely for, this time in Berkshire (VC22). Dead and old-looking shells were found at several sites but no live specimens were found. Harry Powell and myself had the same experience looking for this species in Oxfordshire (VC23). A grand total of eight records of *G. acronicus* were made this year, all of them of dead shells, although Tom found one shell looking considerably fresher than the others. I entered a further 72 old records from the literature, but we are concerned that no live record of this species has been verified since Ian Killeen's surveys in 2003 and 2010, even at sites where it was common in the early 2000s. The introduced signal crayfish *Pacifastacus leniusculus* may be partly responsible. This native snail clearly needs urgent investigation and a thorough survey, ideally with the Society's involvement, to determine whether or not it still lives in Britain. This situation strikes me as an ideal application for eDNA techniques if they can be developed – although sadly I was unable to amplify DNA from some of Ian's specimens collected in 2003.

This species and others were studied as part of the 'Brought to the Surface' project to produce a new guide to freshwater snails of Britain and Ireland (Rowson *et al.* in press). Harry Powell deserves particular thanks for his help on fieldwork (when permitted) and other aspects of the project throughout the first two lockdowns. Martin Willing was especially diligent in checking outlying records of rarer species and in supplying a large amount of previously unpublished data from survey reports and other sources. All were added to the species maps for the book while some of the more detailed data formed the basis of papers on *Mercuria* (Willing 2020a) and *Semisalsa stagnorum* (Willing & Rowson 2020). Martin, the other members of the team and I are very grateful to the many Society members who contributed to the 'Brought to the Surface' project, especially during its latter stages during lockdown. The only other species that we failed to obtain alive was *Marstoniopsis insubrica*. This has not been reliably recorded alive by anyone since Roy Baker and Derek Howlett in 2008. We hope that publication of the book in early 2021 will stimulate searches for *G. acronicus*, *M. insubrica* and the other less commonly-recorded species. Such species can be rare locally rather than nationally – Adrian Sumner's identification of *Radix auricularia* from a shell collected in Edinburgh in 2011 is one of very few recent records of it from Scotland.

I entered a further 1000 records from fieldwork and enquiries, the remaining records from the NMW for our project on slugs (2011-2014), and from the literature and reports sent by Martin. I also went through my old shell collection for records, a few made while a student in Fife in 2000 using my first snail guide, Tony Wardhaugh's 'Shire Natural History' book (Wardhaugh 1989). Tony is of course still a keen recorder and submitted over 250 records from North-east Yorkshire (VC62) and Durham (VC66) in 2020.

Notable new records

In total 18 new VC records were noted in 2020. Five were from the Republic of Ireland, all for South Kerry (VCH1), as reported by Moorkens & Killeen (2021): *Arion fasciatus*, *Hygromia cinctella*, *Physella acuta*, *Acroloxus lacustris* and *Planorbis carinatus*. The first three are non-native, spreading species. The Society's dataset (e.g. as seen from the maps in Rowson *et al.* in press) suggests that *A. lacustris* and *P. carinatus* are increasingly recorded in parts of northern and western Britain, a trend that might also apply in Ireland.

A further 13 new VC records were noted from England, Wales, Scotland and Northern Ireland. Five of these concerned slugs or semi-slugs: *Ambigolimax nyctelius*, St Nicks, York, North-east Yorkshire (VC62), 23/9/2020, Jane Thomas (confirmed by Roy Anderson and Ben Rowson); *Arion owenii*, Bishop's Park, Abergwili, Carmarthenshire (VC44), 14/10/2020, Ben Rowson and Tim Rayner; *Selenochlamys ysbrda*, allotments, Delapre, Northampton, Northamptonshire (VC32), 8/11/2020, Lisa Rowley; and *Daudebardia rufa*, banks of River Ogwen, near Bangor, Caernarvonshire (VC49), 30/12/2020, Thomas Hughes and Annie Northfield.

The finding of the spreading *A. nyctelius*, *A. owenii* and *S. ysbrda* in new regions is notable, but not unexpected. A record-breaking total of 33 verified records of *S. ysbrda* has been received since January 2020, meaning there are now over 300 in total. Much more surprising was a second appearance of *D. rufa* (figure 2) in Wales (first posted by its finder on Facebook). *Daudebardia* has not been reported elsewhere in Britain since being discovered by Chris Owen in a conifer plantation near Caerphilly, Glamorgan (VC41) in 2015 (Owen *et al.* 2016). The Caerphilly population is clearly *D. rufa*, as later confirmed by a DNA-barcoded specimen matching a *D. rufa* sequence from Germany. The Bangor animals were found living among flood debris and oak, beech and sycamore litter on loamy soil in a river valley. The site is surrounded by ancient broadleaved woodland with the nearest conifer plantation a few miles upriver. Thomas kindly sent a specimen whose shell was checked carefully against National Museum of Wales specimens of *D. rufa* from Caerphilly and continental localities, and those of the very similar *D. brevipes* (the soft bodies of the two being almost indistinguishable). Finding it difficult to be certain I sent shell photos to Marco Neiber (Hamburg, Germany) and Louis Bronne and colleagues (Belgium) for their opinion. The replies were mixed! Some think it may be *D. brevipes*, others *D. rufa*; nor could we agree on the identification of older shells in the collection. It may be that these two semi-slugs are not always possible to distinguish from shells. Thus both British populations are considered as *D. rufa* unless DNA evidence proves otherwise. This genus is so characteristic that, despite its small size, I doubt it has been widely overlooked in Britain in the past and it is probably an accidental introduction. It is curious that both known sites are in Wales, but being so far apart it is still possible they result from separate introductions.



figure 2: *Daudebardia rufa* from near Bangor, Caernarvonshire (VC49).
(Photo: Thomas Hughes)

Perhaps due to wet autumn weather, 2020 also saw records of our longer-established earthworm hunter, *Testacella*. Records were sent in of all four species: *T. maugei* from East Gloucestershire (VC33) by John Fleming; *T. haliotidea* from North Essex (VC19) by Maria Frenliffe (confirmed by Simon Taylor) and East Suffolk (VC25) by Robert Pritchett; and *T. scutulium* from South Hampshire (VC11) by Chris Gleed-Owen. Robert and Chris's specimens were both dissected and the latter seems to represent the rarer, true form of *T. scutulium* as described from Lambeth by G. B. Sowerby I. Meanwhile over on iRecord, a photo posted by Andy Marquis from Guernsey, Channel Is. (VC113) seems to show the *T. sp.* 'tenuipenis' form. This form appears to be more frequently found than true *T. scutulium*, although there remain only a handful of recent records of each. The Museum has amassed an excellent collection of *Testacella* over the last ten years but my efforts to amplify DNA barcodes from them have been sadly rather hit-and-miss. Compared to other pulmonates, a high proportion of specimens did not yield a PCR band or sequence. As scientists monotonously say, more research is needed.

Seven other new VC records concerned snails: *Physella gyrina*, Tully Castle, Lough Erne, Co. Fermanagh (VCH33), 1/9/2020, Roy Anderson; *Balea perversa* (s.s.), walls of Tully Castle, Lough Erne, Co. Fermanagh (VCH33), 1/9/2020, Roy Anderson; *Hygromia limbata* (single empty shell), Starr Gate, South Shore, Blackpool, West Lancashire (VC60), 11/6/2020, Craig and Carl Ruscoe; *Zonitoides arboreus*, pot plants on balcony, Hotwells, Bristol, West Gloucestershire (VC34), 12/5/2020, Matt Law; *Zonitoides excavatus*, West Wood, Crichton Glen SSSI, Midlothian (VC83), 11/7/2020, Adrian Sumner; *Oxyloma sarsii*, Hensol Castle, Glamorgan (VC41), 22/9/2020, Ben Rowson; *Assiminea grayana*, Brora, East Sutherland (VC107), W. Baillie (see below).

The *B. perversa* and *Z. excavatus* records are unusual in being new reports of native species in well-studied areas. The others are spreading species, *H. limbata* being an alien that has spread remarkably slowly compared to the now widespread *H. cinctella*. The Blackpool record requires further confirmation, being based on a single empty shell, but is at least an indication that the species could occur in VC60.

It is difficult to know whether to categorise *Oxyloma sarsii* at Hensol Castle as native or not (figure 3). I have observed this population (by bike) repeatedly in recent years. The animals have a large, elongate shell and dark body and on dissection are very like *O. sarsii* collected in the Norfolk and Suffolk Broads. At Hensol the animals live very near the waterline, both above and below a sluiced dam that separates a large canalised millpond full of waterlilies from a very wet alder swamp. There has been some confusion about the true distribution of *O. sarsii* versus the widespread *O. elegans*, for which the Society's dataset was corrected last year (Rowson 2020). A few records shown by NBN in Scotland and Wales were evidently entered by other organisations under the older, incorrect synonymy of the name *O. elegans*. These organisations have been contacted to try to resolve this. As far as is known the only other anatomically verified records of *O. sarsii* are from East Anglia and, since 2004, central and western Ireland (Long *et al.* 2015). Two Hensol individuals were DNA barcoded, but there are as yet no public sequences of *O. sarsii* (or *O. elegans*) with which to compare them. If members have found populations of suspect *O. sarsii* in other outlying

areas I would be happy to dissect and potentially barcode them. As barcoding initiatives such as the 'Darwin Tree of Life', 'Brought to the Surface' and other projects continue to characterise British molluscs, checking identities will become easier.



figure 3: *Oxyloma sarsii* from Hensol Castle, Glamorgan (VC41).

The known range of *Assiminea grayana* has been expanding markedly in recent decades and appears to be spreading. While curating the freshwater snails at the National Museum of Wales I came across a specimen of *A. grayana* in the J. T. Marshall collection (NMW.1953.183) purportedly from Brora, East Sutherland (VC 107) (figure 4). Sankurie Pyc kindly checked the collection and database at the National Museums of Scotland but found no equivalent material. There are no other records from Scotland's east coast, and indeed when *A. grayana* was found living at Caerlaverock, Dumfriesshire (VC72) in 2011 it was considered the first record for Scotland (Boyce & Hill 2012). It has subsequently been recorded from several sites nearby.



figure 4: *Assiminea grayana* with pill box labels from Brora (ex Baillie), in the National Museum of Wales.

The old Brora specimen is correctly identified and does not seem to contain an operculum, but nor is it badly worn. The label from the top of the pill box bears both the species and locality name in the same handwriting, which appears to be in a 19th-century style. On the bottom of the box 'Byne ex Baillie' has been added by J. R. le B. Tomlin, who dealt with much of the Marshall collection before it came to the Museum in 1953. It is difficult to know how seriously to take the provenance of an old specimen like this. I asked Adrian Sumner of course, who directed me to his article on William Baillie, a schoolteacher active in conchology at Brora in the 1880s (Sumner 2018). Baillie's publications from 1882 to 1889 mainly concern a series of deliberate attempts to 'colonize' Brora with a total of 15 freshwater and terrestrial snail and slug species he felt were lacking from the district. Baillie also collected small species from fishing gear and fish stomachs, many of them identified by J. G. Jeffreys (Anon. 1893). According to Sumner (2018), at least four of Baillie's introduced species are still present in the area today, the others having failed to establish or survive. Adrian confirms that there is little supratidal estuary



figure 5: *Rangia cuneata* from Port Talbot Docks, Glamorgan (VC41).

mud (the typical habitat for *A. grayana*) at Brora, which lies on a predominantly sandy and stony coast, making a natural occurrence of *Assiminea* there unlikely. It seems equally possible instead that *Assiminea* was another of Baillie's attempts at 'colonization'. Baillie (1884; 1887) obtained his live colonisers from as far afield as Llandudno (*Cochlicella acuta*) and Normandy (*Clausilia parvula*; probably actually *C. bidentata*). So it would easily have been possible for him to source live *Assiminea*. The unsuitable habitat might explain why an introduction would have failed. We may never know the full truth of this, but the old record may be of interest if *A. grayana* is found in eastern Scotland in future.

Finally, two new VC records concerned introduced bivalves: *Corbicula fluminea*, River Ouse near Barcombe, East Sussex (VC14), Dave Bangs (confirmed by Martin Willing) and *Rangia cuneata*, Port Talbot Docks, Glamorgan (VC41), 29/11/2020, Ben and Rhian Rowson (confirmed by Martin Willing) (figure 5).

Neither of these is good news. The Asian clam *C. fluminea* is an infamous invader of river systems and Sussex is a well-recorded county, so it was presumably absent until relatively recently. Since it was first detected in 1998, the species has spread to many VCs in southern Britain and in Ireland.

The Atlantic rangia or gulf wedge clam *Rangia cuneata* is part of a longer and stranger story. The condensed version is that I visited Port Talbot in an attempt to find out whether *Corbicula*, reported at the site in 2006 and 2011, was still living in the freshwater basins or not. It is suspected of having been killed off by a salt water ingress in 2005, before it was first noticed at the site. Martin Willing has full details of the story, which appear to be correct. In November 2020, large numbers of apparently long-dead shells of *C. fluminea* were spotted among stones in the clear, shallow basin of the docks near the Wales Coastal Path. Remarkably, scattered among the *Corbicula* were five *Spisula*-like specimens (three paired valves and two others) in a similar state of preservation. Their identity as *R. cuneata* was confirmed by the finely serrated lateral teeth, by comparison with other specimens, and by Martin from a photograph. This is only the second British population of *Rangia*, a species first discovered in 2015 in South Lincolnshire (VC53) where it is thought to have been present since at least 2009 and possibly earlier (Willing 2015; 2020b). The *Rangia* in Port

Talbot appear, on the face of it, to have been killed off by the same 2005 salt influx that killed off the *Corbicula*. If so, the timing of their arrival bears comparison with those in Lincolnshire, and even with the first European record from the Netherlands in 2005 (Verween *et al.* 2006).

Corrections and other issues

The welcome influx of data can make it a challenge to remain on top of longer-term goals for the Recording Scheme. Both are important so that we keep the data updated for members and other users. Data queries answered this year included those from Buglife, the University of East Anglia, the London Natural History Society and the Biological Records Centre. In each case the critical thing was access to our data on the NBN.

Subfossil and non-fossil datasets are kept separate in the Recorder 6 database, but this was not indicated on NBN until this year when we more clearly partitioned the two for the first time. This should allow for better analysis and avoid misunderstandings concerning certain rare species in future. Our datasets on NBN have now all been renamed to include 'Conchological Society of Great Britain & Ireland' so that the origin of our records is now clearer to all NBN users. I am grateful to Sophia Ratcliffe of the NBN Trust for her assistance with these issues.

There are always a few corrections to attend to. Earlier records of *Tandonia budapestensis* from Scilly were brought to my attention by Peter Topley, and were confirmed by David Holyoak from the unpublished records of Geraldine Holyoak. This species was in fact first noted on St Mary's by Stella Turk in 2001 and by June Chatfield in 2004 (Holyoak *et al.* 2005), but had not been submitted to the Society's database; these records and others have now been added. I also corrected a number of early records of *Selenochlamys* that had been input with scrambled dates in 2010 (the earliest record of this species was in 2004, not 2000 as implied). Please keep me informed of any other mistakes noticed via the NBN and of any important omissions.

The limits of the Non-marine Recording Scheme, both in theory and in practice, are affected by a perennial quandary. There are a handful each of aquatic molluscs tolerant of mild salinity and occasionally found with marine species (e.g. *Potamopyrgus antipodarum*, *Peringia ulvae*, *Rangia*

cuneata), and of freshwater or terrestrial species found only in maritime places (e.g. *Onchidella celtica*, *Assiminea grayana*, *Leucophytia bidentata*). As well as determining what could be expected to live at a site, this affects which species appear in checklists, atlases or identification guides, and also which appear in different datasets on iRecord (for verification purposes) and Recorder 6 (in which the Society's two main datasets are held and sent to NBN). With the help of Chris Raper at the UK Species Inventory and Martin Harvey at iRecord, Ian Smith, Simon Taylor, Roy Anderson and I made some progress towards resolving this problem this year by ensuring inappropriate habitat tags are removed from various lists. Simon and I have planned that in future years, all records of the following taxa on the non-marine checklist will be dealt with by the Marine Scheme: Assimineidae, Truncatellidae, Ellobiidae, Otinidae, Onchidiidae and Hydrobiidae other than *Mercuria* (note that *Potamopyrgus* and *Semisalsa* are no longer classified in Hydrobiidae). This should not affect anyone submitting records, since Simon and I will pass them to one another as required. It will not be the end of the affair, but it is a step in the right direction.

Checklists themselves require updating every few years. Our standard reference has been Roy Anderson's list, published in the *Journal of Conchology* (Anderson 2005) and in a revised form online following various comments (Anderson 2008). Roy has been working on an updated version ever since, and in September he approached me for comments and additions. After comments from Dietrich Kadolsky we published the list online on the Society's website, and in a revised form after further comments from Richard Preece, Fred Naggs and Tom White. This online publication can be cited as Anderson & Rowson (2020) and it is accompanied on the website by an Excel version which indicates the changes since 2008. The 2020 list includes 20 additions, virtually all of which are non-native or hothouse species, and 27 changes of genus based on recent taxonomic revisions by others (which are not always in agreement with one another!). There are currently no plans to publish the list in a journal, which would not allow for future updates to be made as easily. These changes always take time to get used to but are as important as ever to help keep our recording up-to-date in an international context. At the time of writing, we have just heard of yet another freshwater taxon to add to the British list, showing how our lists have to continue to evolve.

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Molluscs in North Cyprus

Peter Topley

Over the past year, for reasons we are all very much familiar with, not many of us have been able to travel very far. For me personally this has made me revisit one or two of the trips I have had in the past and the molluscs I encountered. One such visit was to North Cyprus in April 2018, with a group co-led by Alan Outen (on his final trip as a natural history tour leader, having led tours to the area over many years) who has kindly provided many of the images included here.

The geological history of North Cyprus includes a long period of subduction and uplift, following the draining and subsequent re-filling of the Mediterranean Sea between 6 and 2 million years ago, in which the Kyrenia ridge of mountains and hills was formed, consisting partly of hard limestones and marbles and running for about 160 km along the north coast. To the south of this ridge lies the Mesaoria plain, consisting of eroded chalk, limestone and conglomerates. Uplift is still occurring with the resulting formation of raised terraces. Gittenberger (2016) listed 131 species and subspecies of non-marine molluscs recorded in the island of Cyprus, of which around one quarter are endemic, but added that the fauna ‘may still be considered insufficiently well known, in particular from the northern part of the island.’ Many marine species recorded from the coasts of Cyprus and their presence (or absence) may be influenced by the position of the island at the eastern end of the Mediterranean and in more recent years proximity to the Suez Canal and shipping entering from the Red Sea.

The snail that I most frequently encountered was *Eobania vermiculata* (Müller 1774), perhaps the commonest Mediterranean snail, present in both synanthropic and natural areas (figures 1 and 2). More closely associated with

urban environments was the familiar *Cornu aspersum*. In a garden at Dipkarpaz some of these were very large, with shell diameters in excess of 43 mm (figure 3). Other familiar species were *Theba pisana* and *Cochlicella acuta*, often clustered together on dried plant stems.



figure 3: Large *Cornu aspersum*, waste ground at Dipkarpaz (Rizokarpaso).

The Clausiliidae (door snails) form one of the most speciose families of land snails and seven clausiliid species and subspecies in the genus *Albinaria* have been listed as endemic to Cyprus. Of the three Byzantine castles on the Kyrenia ridge, the 11th century Saint Hilarion castle is the best preserved (figure 4). It was here that the endemic *Albinaria virgo* (Mousson 1854) was common on the vertical limestone rocks beneath the castle (figure 5). In the genus *Albinaria* speciation is not accompanied by niche differentiation which means that, due to competition, only one or two species usually occur at a particular locality (Gittenberger 2016). However, hybrid zones have been reported for other *Albinaria* species in Crete (Schilthuizen & Lombaerts 1995); these result from secondary contact and are ‘maintained by a balance between dispersal and selection against hybrids, supporting a model of (sub)speciation in small, isolated populations’ (Schilthuizen 1994). Another clausiliid, *Elia moesta* (Rossmässler 1839), a species also recorded from Israel to southern Turkey, was found in a couple of dry localities near Risokarpaso under stones or on walls (figure 6).



figure 1: *Eobania vermiculata*, in the garden of Bellapais Monastery Village Hotel, Girne. (photo: Alan Outen)



figure 2: *E. vermiculata* on the ‘malodorous inflorescence’ (Christofides 2017) of *Arum dioscoridis*, near Korucam Burnu.



figure 4: Saint Hilarion Castle, Kyrenia.



figure 5: *Albinaria virgo* (h: c. 20 mm), Saint Hilarion Castle.



figure 6: *Elia moesta* (h: 12 mm), Risokarpaso. (photo: Alan Outen)

Part of the Kyrenia ridge is called ‘Five Finger Mountain’. This also gives its name to the whole mountain range (Pentadactylos in Greek or Beshparmak in Turkish). There is a marked difference in vegetation cover between the northern and southern slopes, with the latter sparsely vegetated with the occasional pine and wild olive, and patches of thorn, myrtle and *Cystus* spp. (figure 7). Insects include the spectacular mantis *Empusa fasciata* (figure 8). This was the site of snail species including *Euchondrus limbodentatus* (figure 9) and *Xerotricha conspurcata*.



figure 9: Cyprus endemics *Euchondrus limbodentatus* (h: 11.2 mm left and above) from area below Five Finger Mountain and *E. nucifragus* (h: 7.8 mm) (right) found near Sadrazamköy. (photos: Alan Outen (above) and Peter Topley (below))



figure 7: Five Finger Mountain (Pentadactylos or Beshparmak), western Kyrenia range (above) and habitat on the south side (below).

On the road towards Sadrazamköy on the north-west Koruçam Burnu (Cape Kormakitis) were several open areas with shrub vegetation, the habitat of *Multidentula stylus*, *Trochoidea liebetruti* and *T. pyramidata*. The soil was dry and only dead shells were found, but shells of all species were common. (figures 10 and 11). A water tank was home to abundant *Melanopsis buccinoidea* (figure 12). This was the only confirmed freshwater species observed on our visit, although around a dozen freshwater species are listed for Cyprus.



figure 10: Kyrenia mountains from road to Koruçam Burnu (above). Searching nearby habitat for snail shells and plants (below).



figure 8: The mantis *Empusa fasciata*, Five Finger Mountain.



figure 11: Cyprus endemics: *Multidentula stylus* (h: c. 7 mm) (above) and *Trochoidea liebetrutii* (h: c. 6 mm) (below) found near Sadrazamköy. (Photos: Alan Outen)



figure 12: Water tank, Sadrazamköy, with *Melanopsis buccinoidea*.

The vegetation at Koruçam Burnu (figure 13) consisted of plants adapted to maritime sandy soil, including the rare and endemic three-coloured chamomile, *Anthemis tricolor* Boiss (figure 14). It was here that *Granopupa granum* (Drap. 1801) was very common in sand under plants. This is a common Chondrinidae species with a distribution from the Canary Islands to Afghanistan (figure 15).



figure 13: Buildings and vegetation at Koruçam Burnu.



figure 14: *Anthemis tricolor*, Koruçam Burnu.



figure 15: *Granopupa granum* (h: c. 4.5 mm), Koruçam Burnu. (photo: Alan Outen)

Six species of slugs have been recorded from Cyprus (Vardinoyannis *et al.* 2012). I only came across two species, both in the grounds of our hotel at Bellapais. The first I have designated as probably the endemic *Deroceras famghustense* Rähle 1991, although it may have been an abnormal specimen and therefore identification is not certain (figure 16). The second was the familiar *Limacus flavus* (L. 1758), showing the diagnostic central pale stripe (a species becoming increasingly rare in the UK) (figure 17).



figure 16: An agriolimacid *Deroceras*, possibly *D. famghustense*, garden of hotel, Bellapais.



figure 17: *Limacus flavus*, Bellapais.

I found the widely-distributed Mediterranean trissexodontid species *Caracollina lenticula* (Michaud 1831) in several locations. One particular group of these snails, under a stone near our hotel at Yeni Erenköy, was covered in web and a

spider (possibly the one that spun the web) was also present (figure 18). The spider could be a member of the ant-eating Zodariidae (e.g. *Zodarion granulatum* Kulczyński 1908), in which case it is likely that the web covering the snails was a result of sharing the same habitat and not associated with feeding. The author would be grateful for any other suggestions (see Gilson 2020 on a similar subject).



figure 18: *Caracollina lenticula*: snails covered in web with spider under a stone at Yeni Erenköy (above) and detail of shells (w: c. 8 mm) (below).

(photos: Peter Topley (above) and Alan Outen (below))

Another species, shells of which were found under stones, was *Eopolita protensa* (A. Férussac 1832) (figure 19), an eastern Mediterranean oxychilid with a characteristic grid-like microrelief (figure 20). Living deeply in the soil, this species is also able to temporarily reduce the size of its aperture by means of the ‘simultaneous development of parietal bulges or inner tubercles’ (Schütt 2010) to assist in resisting periods of drought.



figure 19: *Eopolita protensa* (w: 12–15 mm), Bellapais. (photo: Alan Outen)

Some flower-rich meadows at Tepebaşı near Myrtou were visited, primarily on this occasion to look for orchids, including the common *Ophrys mammosa* (figure 21). The

meadows were bordered by sheltered areas of light scrub and trees. This is a typical habitat for *Monacha syriaca* (figure 22). This is a species occurring in the vicinity of the coast in areas of southern Greece through to Syria and Egypt, and its varied body pigmentation is visible through the thin shell).

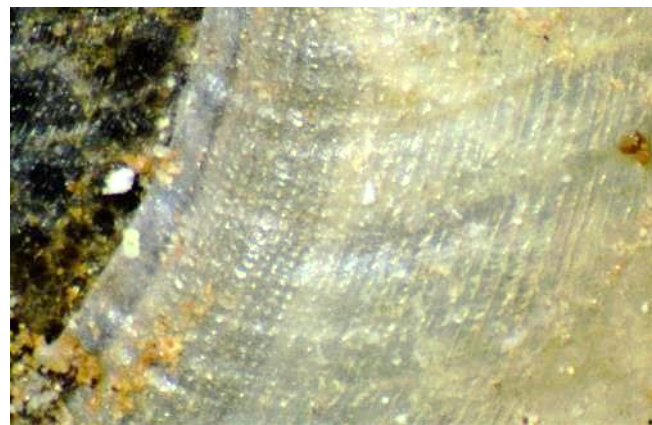


figure 20: *E. protensa*: detail of whorl with microrelief (width of image c. 2.5 mm).



figure 21: Meadows at Tepebaşı with *Ophrys mammosa* (right).



figure 22: Two *Monacha syriaca* at Tepebaşı showing the variation in individual body patterns as seen through the shell.

The ruins of the 12th century church dedicated to Ayios Philon near Dipkarpaz (figure 23) sheltered numbers of the large helixid *Levantina spiriplana* (Olivier 1801) of the form *montuosa* Schütt and Şeşen 2005 which was originally, but is no longer, accepted as a subspecies: the shell is broader and flatter than the typical form and has an open umbilicus (figure 24).



figure 23: Ayios Philon church near Dipkarpaz.



figure 24: *Levantina spiriplana* at Ayios Philon near Dipkarpaz (w: 37 mm).

We also visited the ruins of Aphendrika (a city built c. 200 BC with later Byzantine church remains) (figure 25). Snails found there included *Helix nucula* Mousson 1854 (figure 26) and the operculate *Pomatias glaucus* (Sowerby 1843) (figure 27). Gittenberger (2016) noted that ‘Most probably only a single *Helix (Pelasga)* species occurs in Cyprus, viz. *H. (P.) nucula*’, however he also lists *Helix cincta* Müller 1774 which is included by Neubert (2014) and which I found at two other sites, including Ayios Philon (figure 28). Further revision of *Helix* species in the region will no doubt occur in future.

Whilst looking under stones for molluscs at Ayios Philon I came across a worm snake (*Xerotryphlops vermicularis*) (figure 28). This little snake ranges from the Balkan Peninsula, the Aegean Islands and Cyprus to Afghanistan and is the only blind snake of the genus naturally found in Europe. The black dots on the blunt rigid head (evolved for burrowing) are vestigial eyes.



figure 25: The author at the ruins of Aphendrika.



figure 26: *Helix nucula* (h: c. 28 mm), with epiphragm (right), Aphendrika.



figure 27: *Pomatias glaucus* (h: c. 16 mm), Aphendrika.



figure 28: *Helix cincta* (left) (h: 38 mm) and a worm snake (*Xerotryphlops vermicularis*) (right), Ayios Philon.

Also at Ayios Philon, there were many shells of *Xeropicta krynickii* (Krynicky 1833) between plants near the shore (figure 29). This species has been widely dispersed by man since antiquity (shells have been found in a Late Bronze Age shipwreck) and it is now found in coastal districts from south-east Europe to Iran and Arabia (Welter-Schultes 2012).



figure 29: *Xeropicta krynickii* shells on soil near the sea (w: 13–17 mm), Ayios Philon.

Non-marine molluscs were my main focus while on the tour, and I did not spend a lot of time on the shore, however I did record a number of marine species and feel it would be of interest to include some of them here. On the coast near Dipkarpaz (figure 30) were areas of sand and raised beds of limestone. Here there were many *Phorcus turbinatus* (Born 1778) (front cover) occupying a position on the shore similar to *Phorcus lineatus* in the UK, along with many of the introduced *Cerithium scabridum* Philippi 1848 in rock pools (figure 31); this species is endemic to the north-west Indian Ocean (Evangelisti *et al.* 2016). The only limpet species was *Patella rustica* (L. 1758). On the shore near Ayios Philon were shells of the invasive strombid *Conomurex persicus* (Swainson 1821), another introduction via shipping to the eastern Mediterranean from the Red Sea (figure 32), as well as the purple shells of pelagic *Janthina janthina* (L. 1758) and *J. globosa*. Swainson, 1822 (figure 33).



figure 30: Alan photographing on the shore near Dipkarpaz.



figure 31: *Cerithium scabridum*, on the shore east of Dipkarpaz.



figure 32: *Patella rustica* (left) (l: c. 28 mm) and *Conomurex persicus* (h: 41 and 56 mm) (right).



figure 33: *Janthina globosa*. (h: 17 and 30.2 mm) from the shore near Ayios Philon. (photo: Alan Outen)

A bay near where we were staying on the north coast near Yeni Erenköy yielded some shell sand that boosted the total number of marine species I recorded on the trip to 65. A few examples of these are included in figures 34–39 below.

Due to rapid climate change, a collapse in native marine species has been reported in the eastern Mediterranean, a process that has been accelerating over the last 20 years (Albano *et al.* 2021). This is spreading further geographically and permanent changes to whole ecosystems (both marine and non-marine) are occurring. Because of this it becomes even more important to record and report mollusc species (presence or – more difficult – absence!) whenever we have the opportunity.



figure 34: *Pusia granum* (Forbes 1844) (h: 7 mm) (left); *Charonia variegata* (Lamarck 1816) juvenile (right) (h: 52.1 mm). (photos: Peter Topley (left) and Alan Outen (right))



figure 35: *Rissoa angustior* (Monterosato 1917) (h: 7–8 mm) (left); *Alvania mamillata* Risso 1826 (h: 4–4.5 mm) (right). (photos: Alan Outen)



figure 36: *Thylaeodus rugulosus* (Monterosato 1878) (diameter 1–1.5 mm). (photo: Alan Outen)



figure 37: *Gibbula ardens* (Salis Marschlin 1793) (w: c. 16 mm). (photo: Alan Outen)



figure 38: *Brachidontes pharaonis* (P. Fischer 1870) juveniles (l: c. 10–12 mm). (photo: Alan Outen)



figure 39: *Truncatella subcylindrica* (L. 1767). This species is not strictly marine but the presence of shells indicates that it was probably to be found fairly locally in its typical habitat near or just above the high tide line under stones and pebbles (h: c. 4–5 mm). (photo: Alan Outen)

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Extraction of jaws of Succineidae as an aid to identification Adrian T. Sumner

Of the five species of Succineidae currently recognised in Britain only two, *Succinea putris* and *Oxyloma elegans* (formerly known as *O. pfeifferi*), are reasonably common and widespread. The range of *O. elegans* extends to the extreme north, it having been recorded from the Shetland Isles; *S. putris*, on the other hand, appears only to extend into the southernmost parts of Scotland (Kerney, 1999). The two species are not reliably distinguishable on external characteristics. Shell shape is quite similar in both and in any case is somewhat variable, and although *S. putris* can grow to a rather larger size, there is a good deal of overlap between the two species. In *S. putris* the body is usually pale, while in *O. elegans* it is commonly dark, but both species may have dark or pale bodies. In the past there was a lot of confusion until Quick (1933) described in detail the differences in internal anatomy between the different species of British Succineidae. From this it emerged that the structure of the jaw was the most convenient way of distinguishing *S. putris* from *O. elegans*.

When a number of large, often pale-bodied succineids started to appear in the Scottish Borders and the Lothians in recent years, it was necessary to establish whether they really were *S. putris*, which would be extending its range, or merely variants of *O. elegans*, which was already present. This involved extracting their jaws, and although methods for doing this have been around for a long time, I have not seen an up-to-date account. Two methods have traditionally been used to extract hard parts from molluscs: dissection, and treatment with sodium hydroxide (caustic soda). In addition, I have experimented with hypochlorite and

biological detergent. The hypochlorite I used was Boots Sterilising Liquid, intended for sterilising baby feeding equipment, etc. It contains 2% sodium hypochlorite, which I used undiluted. Although it quickly dissolves soft tissue, it will eventually dissolve the jaws and so did not seem worth further consideration. Biological detergents have been used in museum practice to clean bones and I tried one for extracting jaws from snails. I used Persil Small & Mighty Bio, diluted to about 1:10; material was placed in it for several hours over a hot radiator. The method worked, but a serious disadvantage was that the detergent solution was cloudy, making it rather difficult to find the jaws, which are very small, after the soft tissues have been digested away. It may be that further experiment would result in a more convenient method, but in fact the traditional methods seemed to be best.

The methods I describe are intended for use on specimens preserved in alcohol. You will need the following: blunt forceps, fine forceps, dissecting scissors, dissecting needles, small specimen tubes, plastic pipettes, pins, a cork mat and deionised water. Some of these can be obtained from local shops, and dissecting equipment and specimen tubes from suppliers such as Watkins & Doncaster, NHBS and Brunel Microscopes. Shallow plastic dishes are also useful; I find the lids off many everyday grocery items are ideal. The first thing to do is remove the specimens from their shells. I find that in general it is quite easy to remove specimens preserved in alcohol. Grasp the foot firmly with blunt forceps, and twist in the direction of the coiling of the shell; do not yank, but apply steady force. Often the animal will

come out of its shell easily, but sometimes there is a bit of resistance initially. In passing, this method is simpler, and pleasanter, than the method described by A.E. Ellis (reproduced in *Mollusc World*, No. 47, page 34). The shells of succineids are quite thin and easily crushed, so take care as it may be desirable to keep them for reference. From this stage on, the procedures differ somewhat, depending whether dissection or sodium hydroxide solution is to be used.

If you are going to dissect out the jaw, cut off the visceral hump (the part of the animal that is permanently inside the shell), turn the animal on its back with the foot uppermost, pin it down on a sheet of cork, and locate the mouth at the front end (figure 1). The jaw is above and in front of the mouth and is sometimes visible externally as a golden-brown object, contrasting with the pale tissue surrounding it. Place the specimen under a low-power microscope and cut away the surrounding tissue with a pair of needles. Since the object is just to obtain the jaw, all that is required is to remove as much tissue from around it as possible; you do not need to aim at a neat dissection to show detailed anatomy. Eventually you will have the jaw free of most of the surrounding tissue. Wash it in water (deionised if possible, especially if you live in a hard-water area), remove any surplus, and allow to dry. Note that the jaws may be well under a millimetre across, so they can be quite fiddly to handle. They have a convex surface and a concave one, and it is often convenient to pick up a jaw with the tip of a needle inserted under the concave surface; alternatively, use very fine forceps.

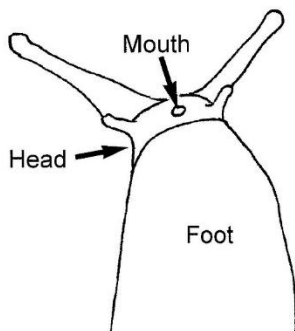


figure 1: Sketch of the underside of a slug or snail, showing the position of the mouth. The jaw is above and in front of the mouth.

To extract the jaw with sodium hydroxide, cut off the head of the animal, place it in a small tube, and add a few millilitres of 10% sodium hydroxide solution (this may be obtained from Brunel Microscopes). Leave the specimen for a few hours – I find that leaving it overnight is convenient – and then all the soft tissue will have been removed, leaving just the jaw, to which is attached the radula. Using a plastic pipette, suck off the sodium hydroxide solution and add it to a jar or plastic tub full of water; this will dilute the hydroxide solution sufficiently so that it can simply be poured away down the sink without any problems. Wash the jaw with water, with the radula attached, and then separate the radula from the jaw with needles. (The radula may be kept for further examination, but that is beyond the scope of this article.) Remove the surplus water, and allow to dry. Remember that sodium hydroxide is a hazardous substance, and should be treated with care; wearing disposable gloves may be advisable.

You should now have specimens of jaws that you can examine under the microscope to identify what species you have. *O. elegans* has a simple jaw (figure 2), whereas *S.*

putris has a more robust tridentate jaw (figure 3). There is a certain amount of variation within each species. This can be due to the degree of maturity of the animal, wear and tear, and damage and distortion during preparation, and animals can apparently develop stronger jaws if their food is tough (South, 1992). Each method of preparation has its advantages and disadvantages. Dissection gives quicker results, but there is a greater risk of damaging the jaw during preparation and it involves more work if you have more than a very few specimens to process. Extraction with sodium hydroxide takes longer, and involves the use of a potentially hazardous chemical (although only in small amounts), but there is less chance of damage during extraction and it is more convenient if you have several specimens to process, as they can all be processed together, instead of dissecting them out one by one.

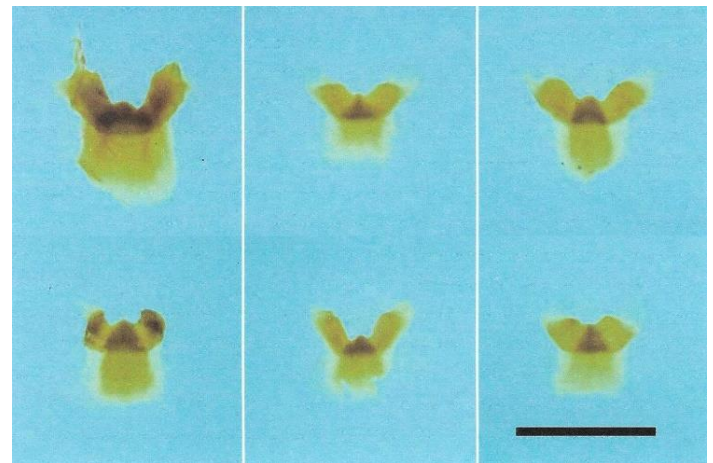


figure 2: Jaws extracted from *O. elegans*, obtained from North Berwick, East Lothian (grid reference NT542847) on 28th May 2019. Although they all conform to the same pattern, there are differences in detail between them. The scale bar represents 1 mm.

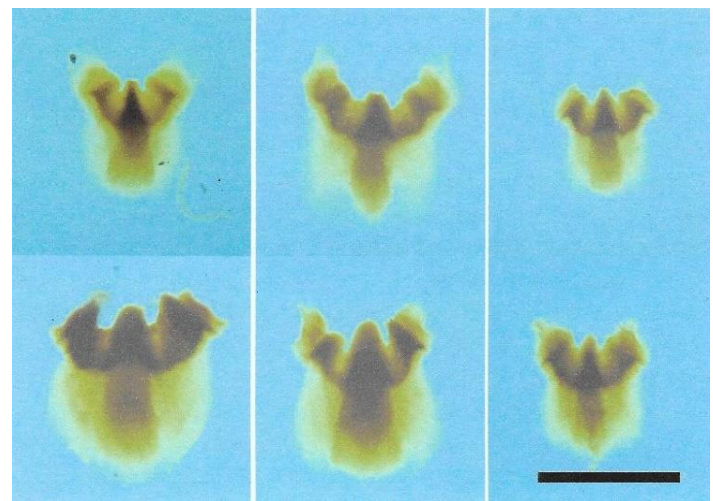


figure 3: Jaws extracted from *S. putris*, obtained from beside the Ettrick Water at Selkirk (grid reference NT475302) on 29th July 2019. As for *O. elegans*, there are differences in detail between them, but all show the characteristic tridentate structure. The scale bar represents 1 mm.

Although you can leave things at this stage, it is possible to make permanent preparations of the jaws. This will not only provide you with reference specimens against which you can compare any subsequent samples, but it also provides evidence in case there should be any queries about your identification. It is worth bearing in mind that determinations of museum specimens can sometimes be changed even after a century or more. To make permanent preparations you will need microscope slides, coverslips,

and a microscopical mountant. These can all be obtained from the suppliers mentioned above; the mountant needs to be a non-aqueous mountant, which may be sold under various names: DPX, Canada Balsam substitute, etc. Some clove oil, which can be obtained from any chemist, is also needed. It is possible just to put some mountant on a slide, place the jaws on it and add a coverslip, but if you do, you will almost certainly get bubbles in your preparations and the jaws will drift around, resulting in an untidy slide in which it may not be possible to see all the necessary detail.

If you want good preparations, make sure the slides and coverslips are clean. This can be done by soaking them in alcohol and wiping them clean until dry. Take particular care with coverslips, as they are very thin and break easily. Firstly, soak the jaws in a drop of clove oil, making sure they are free of bubbles. Then spread a thin layer of mountant in the middle of the slide, take the jaws one by one and position them in the mountant. The clove oil prevents the jaws from drying out while you position them and helps them to be wetted by the mountant. Ideally, if you have more than one jaw from the same sample, aim at spacing them evenly on the slide, all facing the same way. Leave the slide to dry, at least overnight, making sure that it is protected from dust. When the mountant has dried, the jaws should project above the surface. Wet them with a tiny drop of clove oil, add a generous amount of mountant, and carefully lower a clean coverslip on to the slide. Before you forget, add a label to the slide. This must, of course, record the species, date when the specimens were found, the site name and grid reference, and the recorder's name. If the determiner is someone other than the recorder, the determiner's name should be added. Finally, add a note to say that the preparation is of jaws, and I usually add the method by which the jaw was extracted (figure 4). I use a 0.1 mm pen to write labels; the pigment appears to be permanent and the fine tip is ideal for the small writing that is required. Such pens can be bought from any good stationers or art shop. One can buy special slide labels, but a piece of paper cut to size and stuck on with mountant is just as good. The mounted jaws may be examined at once, but be careful until the mountant has dried. If left at room temperature, it will take a long time, perhaps months, to dry hard. Drying can be speeded up by placing the slides on a radiator, taking care that they remain horizontal.



figure 4: A finished slide, with mounted jaws and full labelling.

Using these methods to identify the snails, it is clear that in recent years *S. putris* has expanded its range considerably in southern Scotland (figure 5). As so often, the dots on the map tend to show the distribution of the activity of recorders rather than that of the snails. Currently *S. putris* is found at places along the River Tweed and its tributaries the River Teviot and the Ettrick Water, as well as various other sites. It seems likely that it will be present elsewhere along these rivers, but only further recording effort will establish this.

It has been possible to get measurements from *S. putris* and *O. elegans* in southern Scotland (figure 6). Although *S.*

putris does tend to be larger than *O. elegans*, there is considerable overlap in their sizes, and while it might be possible to say that the very largest specimens would be *S. putris*, smaller specimens cannot be assigned to one species or the other with confidence without examining their jaws.

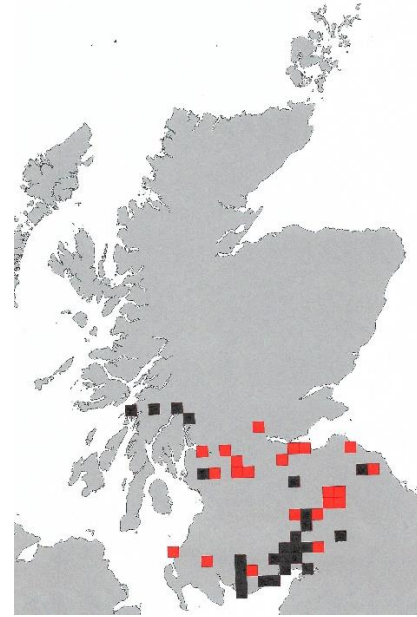


figure 5: A distribution map showing Scottish records of *S. putris*. Sites where *S. putris* was found before the year 2000 are in black, and sites where it was only discovered after 2000 are in red. NBN Atlas occurrence download at <http://nbnatlas.org>. Accessed 27th April 2020.

This is perhaps not surprising, as *S. putris* breeds throughout the year and all size classes can be present in a population (Kuźnik-Kowalska *et al.*, 2013). Since succineids do not form a thickened lip to their shells when mature, it is not possible to pick out mature adults on external appearance.

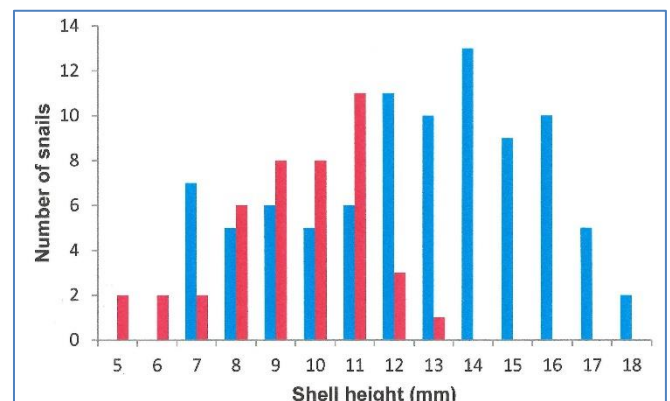


figure 6: Size distribution of the shells of *S. putris* (blue) and *O. elegans* (red) which were identified in this study by extracting their jaws. Shell heights are classed in 1 mm intervals (e.g. '12 mm' includes all shells with a height between 11.5 mm and 12.5 mm).

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Conchologists in conflict – Part 2

Brian Goodwin

Part 1 of this article (*Mollusc World* 54: 8–13, December 2020) dealt with the period up to and including the Great War. Part 2 concerns (mainly) CSGBI members involved in World War 2, ending post-war in 1954 on a slightly more upbeat note.

Compared to previous wars, the Second World War seems to have had a much greater impact on the world of conchology. Taking a broad ‘world view’, Coan & Kabat (2018) note that:

‘World War II probably had the largest number of malacologists serving in active duty in the military. At least two are known to have been killed in battle, both Germans who died on the Eastern Front: Werner Boeckel and Heinrich Wägele, the latter having received multiple medals, including the Iron Cross. Several other German malacologists of that time period were also Nazis in the German Army, presumably without choice, although one, Richard Schlickum, became a high-ranking Nazi judge. Tragically, at least one malacologist is known to have died in a Nazi death camp: Dutch palaeontologist Ella Koperberg¹, killed, along with her family, in Sobibor, in German-occupied Poland. Another malacologist was more successful in escaping the Nazis – Fritz Haas who was fired from his position at the natural history museum in Frankfurt in 1936, going first to Brazil, and then becoming curator of molluscs at the Field Museum in Chicago. Eric Kandel similarly escaped from Austria at the age of 10 in 1939.’

Fritz Haas

Fritz Haas² (figure 1) was actually elected to the Conchological Society of Great Britain & Ireland twice, initially at the 378th meeting on 13th January 1909 when he was still in Germany at the Zoological Institute, Heidelberg. He subsequently ‘disappeared’ from the membership list but was re-elected in 1939 – after his move to the USA. Haas specialised in non-marine Mollusca and was a world authority on the family Unionidae (freshwater mussels). Two works by Solem (1967a, 1967b) provide a comprehensive review and summary of Haas’s career, including the fascinating story of his experiences relating to the two world wars. The following is a brief summary which explains the circumstances leading to his ‘double election’. For this, we briefly revert to World War I.



figure 1: Fritz Haas (second from right, front row) at the 1953 annual meeting of the American Malacological Union at Kansas University. Among the others present is a youthful R. Tucker Abbott (third from left, front row). (Photo: Field Museum of Natural History, Chicago)

In August 1914, Fritz and two companions were on a collecting trip in the French-Spanish border region of the Pyrenees when the French and German armies were mobilised. The three German snail collectors were quickly arrested and jailed but an enlightened magistrate allowed them to go by train to Sète from where they obtained passage on a crowded ship to Spain. Thus, Haas spent World War I stranded in Spain, rather than interned in France, and only returned to Germany in 1919. Later, in 1936, when the political mood in Germany darkened and Jewish persecution ramped up, he was removed from his post as Keeper of Invertebrate Zoology at the Naturmuseum Senckenberg. It became apparent that the family had to depart Germany and Haas visited the United States looking (unsuccessfully at first) for a job. Eventually, in 1938 he was hired as Curator of Lower Invertebrates at the Field Museum of Natural History, Chicago. Haas immediately returned to Germany, to make sure his wife and two young children could join him. Permission to leave (taking only 10 German Marks for each adult) was granted and the family landed in New York on 22nd July 1938. Less than a fortnight later, Haas began his long and distinguished career in the USA. He became a naturalised citizen there in 1944 (figure 2) and died on Boxing Day 1969, just short of his 84th birthday.

No. 5859935	
Name	HAAS, Fritz
residing at	1427 East 67th Place
Age	58 years. Date of order of admission
Date certificate issued	by the
U. S. District Court at Chicago, Illinois	
Petition No.	294812
1356706	Fritz Haas (Complete and true signature of holder)

figure 2: The naturalisation certificate of Fritz Haas, with signature. (Public Record from the Illinois, Northern District, Naturalization Index)

The Conchological Society

The Second World War proved much more difficult than the First for the operation of the Society. J. Wilfrid Jackson, having been pitched into the role of Secretary partway through the First World War, found himself in an even worse situation towards the end of his Manchester Museum career in the years 1939-1945. The museum was closed, although Jackson noted that ‘some schools are using it’ and he was able to ‘call at the museum about once a week to letters, etc.’ (letter from Jackson to C.H. Moore, CSGBI Curator, 7th November 1939). Too old for active service, he was heavily involved in the war effort through his role as an Information Officer and he was away from the museum for long periods. The *Journal of Conchology* Editor, J.R. le B. Tomlin, managed to keep the journal going and Jackson attended to ‘system maintenance’³ but meetings became problematical. This was a pivotal time for the Society and not just because of the war. Manchester was no longer the conchological ‘power house’ that it had once been and for a while the focus of the Society had been drifting south towards the Home Counties and London.

A series of letters (CSGBI Archive) illustrates some of the difficulties faced. Initially (autumn 1939) it seems there was optimism that matters would be resolved quickly⁴:

'I wonder what we had better do about the Annual Meeting this year...[Even] if things go on alright, I shall not be mobilised in time to do anything.' (Jackson to Cyril Diver⁵, outgoing President, 1st September 1939.)

Diver replied (6th September 1939):

'We might consider the matter again in, say, six weeks or two months' time and with the return of something like normality, it might be possible to hold at least a formal meeting towards the end of the year.'

It soon became apparent that a speedy return to normality was a pipe-dream and later (11th October 1939) Diver suggested a brief meeting in Manchester for 'the formal business of electing officers and receiving reports' and noted that he had lined up [A.E.] Ellis as his successor. Jackson promised to see what could be done, and wondered if it 'might not be a bad idea to form an emergency committee to run both the C.S. and the Malac. Soc. together', but nothing came of this. In the same letters, Jackson felt obliged to explain why he was unable to provide his usual exemplary secretarial duty⁶:

'...for some little time, I have been taken over by the Home Office A.R.P. and am under Sir Warren Fisher [the first ever Head of the Home Civil Service 1919-1939, who became Regional Commissioner for the North Western Region from 1st April 1939] for special work, and am on night duty at times.' (1st September 1939.) (See figure 3.)

'...full time on Civil Defence work under the Regional Commissioner ... may have to sleep on the premises.' (14th October 1939.)



figure 3: J. Wilfrid Jackson (seated, right) at work as an Information Officer in Manchester during the Second World War. (J. Wilfrid Jackson Archive, Buxton Museum and Art Gallery)

Jackson, unable to commit to a meeting in Manchester, arranged one in London with Tomlin as acting secretary. With his customary diligence and attention to detail, he provided all the necessary paperwork (figure 4). Ellis was nominated as President, A.E. Salisbury as Treasurer (replacing the ailing Charles Oldham) and Arthur Hopwood filled a vacancy on Council, while all the other positions were pragmatically 're-nominated' as 'war conditions made it impossible to issue ballot-papers.'

An Emergency Council Meeting (as part of a General Meeting) was held at the British Museum (Nat. Hist.), London, S.W.7, on 24th November, 1939, for the purpose of dealing with Annual Meeting business. The President (Capt. C. Diver) in the chair. Present. Messrs Kennard, Wilkins, Peile and Tomlin (Acting Sec.). Apologies from Hon. Secretary and Hon. Treasurer. The Hon. Secretary (who was prevented from attending owing to being engaged on important war work with the Regional Commissioner) prepared and sent the relevant papers, etc., to Mr Tomlin, who kindly took charge of the meeting.

figure 4: From the Minutes of the Conchological Society Emergency Council meeting held on 24th November 1939.

Things got even worse for Jackson the following year as his letter written on Boxing Day 1940 eloquently attested:

'We survived the Blitz. We had two terrible nights Sunday & Monday. What a Christmas. Thousands destitute. Fires everywhere. A great part of the city in ruins, including the Cathedral. The great business houses in Portland Street, Mosley Street, and elsewhere completely wrecked. Some blown up with dynamite owing to unsafe walls, etc. Hundreds of dwelling houses near us are in a shocking state, but ours escaped without damage, thank goodness. Death roll heavy, also other casualties. Some fires still burning. Free Trade Hall and other premises burnt out. I was on duty all Saturday night, had no sleep on Sunday night, called on duty very early Monday morning, home again late that afternoon, no sleep on Monday night, went on duty again Tuesday morning, then Christmas Day afternoon, stayed all night and got home dead tired this morning. I go on duty again tomorrow (Friday). Kept busy with Rescue Parties, Mobile Canteens, etc. I wish I could coil up and sleep for a week. Conch. Soc. and other matters, must wait now.'

However, it was not just the administration of the Society and meetings: Jackson, over-worked and under-appreciated, had other worries – namely the Society's Library and Collection⁶. Although the Society had an elected Curator, Jackson effectively had much of the responsibility (pre-war at least) for looking after the Library and the Collection as they were housed at Manchester Museum where he worked. Unable to give either proper care and attention, he came to the opinion that disposal would probably be for the best. Those who had no responsibility for looking after them were more reticent. Jackson tried to enlist support from senior members such as Oldham and Tomlin and the idea was floated more widely. Others, however, such as Arthur Blok were against the proposal and no clear consensus emerged.

By the end of the war, change was afoot. Jackson was close to retirement age at the museum and took great offence that Ellis recorded a vote of thanks to Tomlin, as Journal Editor, for his efforts in keeping the Society afloat, but ignored Jackson and his equally stalwart efforts. He resigned as Honorary Secretary in 1944, but Ellis tried to smooth the situation over and he was persuaded to stay in post, at least until a replacement was sorted out. At the same time the Library was still stored in nooks and crannies at the Manchester Museum, and had not been used at all for many years. In an attempt to move the debate forward, Jackson mooted a move back to a base in Leeds, suggested William Thurgood (from Leeds) as the new Honorary Secretary, and made arrangements with David Allen at Leeds Museum to take on the Library. However, the Officers and Council were no longer primarily northerners and Jackson found himself in a minority of one.

Operationally, a move south made sense and, ignoring Jackson's recommendation, 'new blood' in the form of Nora McMillan was brought in as the new Secretary. Jackson, who came close to resigning from the Society altogether, retired (hurt) to Buxton where he forged a new career in adult education; Thurgood became secretary of the Leeds

Branch and the Collection was donated to Leeds Museum, while Thurgood and his wife maintained the Library in Leeds for a number of years before its inevitable disposal. Although Tomlin continued as Editor, many other officers changed and the Society, having originated in Leeds and then moved to Manchester, moved into a third incarnation with London as its base for indoor meetings, much as we see it today.

Shell collections

Also worthy of note in relation to World War 2 is its effect on museum collections. Many public buildings, including museums, were damaged in the extensive bombing in countries across Europe. In Britain, museums in London, Hull and Liverpool were among the public buildings where major damage was sustained. Liverpool was bombed intensively and, on 3rd May 1941, a 500-pound high-explosive bomb fell on the library, next door to the museum. Fire spread rapidly, leaving most of the museum a burnt-out shell and destroying material that had not been previously moved to safety. Most regrettably, from a conchological point of view, this included the shell collections. In particular, the Winckworth Collection (incorporating the Mason Collection) was largely destroyed⁷. Both Winckworth brothers, who served with distinction in World War 1 (see Goodwin 2020) also committed themselves to the war effort this time around. Ronald undertook civil defence duties while brother Harold, now living in the Seychelles, initially offered his services in 1939 although these were not accepted until 1941. His obituary (Winckworth 1948) reports that:

'...he was given charge of the Colaha Hospital at Bombay: he next organised the Officers' Convalescent Depot at Poona, and retired a second time in 1944.'

One Society member directly caught up in the Blitz was Cyril Philip Castell who joined the Natural History Museum in London as a Boy Attendant in 1926, and worked his way up to become an expert on British Caenozoic Mollusca in the Department of Geology. His obituary (Cooper 1972) records that he was 'frequently a fire-watcher on the roofs of the various museum buildings during the bombing'. Between September 1940 and April 1941, the museum was severely damaged in several air raids. On the morning of 9th September 1940, two incendiaries and an oil bomb went through the roof of the east wing and into the Botany Department, and on the night of 16th October 1940, the shell gallery received a direct hit from an incendiary bomb (see front cover)⁸.

A mental image of Castell perched on the roof, in tin hat and with fire bucket at the ready, does not really do justice to the selfless heroism that he and others exhibited. And, lest we forget, it was not just British collections that suffered. For example, in Japan, some of the collection of Shintarō Hirase (figure 5) at the Research Institute for Natural Resources in Tokyo was destroyed during World War 2⁹.



figure 5:
Shintarō Hirase
(CSGBI Archive). Hirase died on 9th September 1939, just a few days after the outbreak of WW2 in Europe.

The role of female members in the history of the Society has not been given the recognition it deserves¹⁰, and the same also seems to be true regarding their contribution to the war effort. While not involved in active combat their support roles were invaluable and I can give one example, that of Kathleen Smythe. Her obituary (Chatfield 1992) records that, selflessly, she gave up her undergraduate study of history at Royal Holloway College, London, and enlisted in the WRNS, serving as an Air Mechanic to the Fleet Air Arm in Fife, Scotland. There are no doubt other worthy cases but they seem to be under-recorded¹¹.

I would like to conclude this article with individual cases of 'conchologists in conflict'. Two were Londoners during WW2: one like C.P. Castell (above) was literally 'in the firing line', while the other was a contributor to the means by which the war was eventually ended. And finally, a current Society member who got into hot water (or maybe, not so hot) after the war had ended.

Alfred Santer Kennard

The intense bombing campaign by the German Luftwaffe against London – the Blitz – took place almost daily between September 1940 and May 1941. As a resident of Beckenham, in south-east London, Alfred Santer Kennard (figure 6) frequently had bombs falling nearby.



figure 6: Alfred Santer Kennard.
(J. Wilfrid Jackson Archive, Buxton Museum and Art Gallery)

A good feeling for what it was like can be obtained from the following extracts from his correspondence with his friend J. Wilfrid Jackson (JWJ). I start from March 1941, just a couple of months after Kennard (ASK) had been rushed to Beckenham Hospital for an emergency operation on a strangulated hernia. It seems that 1941 was an *annus horribilis* for Kennard and his (first) wife Florence¹².

19th March 1941 (ASK to JWJ):

'There is a fierce raid on now & the gunfire is incessant but I hope we shall retain our luck.'

8th August 1941 (JWJ to ASK):

'Since I last wrote we have had one or two bad raids and much damage has been done here [in Manchester].'

12th August 1941 (ASK to JWJ):

'We are all right so far. The last raid on London wasn't nice & they dropped 3 bombs about ¼ mile away, shook our place & killed 5.'

Although the Blitz ended in September 1941, the bombing still continued as a letter from Arthur Hopwood to Jackson noted:

'Jerry is still making himself a nuisance at night but it's very different from the blitz. Then it was anything from about 6 hrs up to the record of 16 hrs – now it's about one hour with something like 35 minutes of incredible & indescribable noise.'

17th June 1942 (ASK to JWJ):

'Glad to hear you are well & pleased to say we all are & nothing [a reference to the absence of bombing] doing at night.'

23rd April 1943 (ASK to JWJ):

'I am so sorry not to be able to put you up for the night but if you could see our place you would understand but at present we are living in one room. You know my place is only small but I have accumulated so much stuff. Before the war we managed by keeping a lot in the attic, which is a proper room with a wooden floor and a window and we had to clear it out on account of firebombs. That was the order so everything had to be brought down with the result that there isn't room to turn anywhere.'

2nd April 1944 (ASK to JWJ):

'I had a narrow squeak March 25. 1000 Incendiaries dropped on an area 200yds square. This house was on the edge. Two fires in front garden, one in back & a direct hit in the front bedroom smashed a washstand & broke some china & glass but was a dud. From the number of duds I saw at the Wardens Post it is clear that sabotage is not wishful thinking. £10 will cover the damage. Nearly every house was hit, most were put out but 50 houses were badly damaged & a church & hall burnt out. Casualties one kitten & a clergyman burnt when an incendiary exploded in the church. I was glad when the all clear went at 2 for everyone was in the streets helping to put out the fires directly after the incendiaries came down though the guns were still going. It was a night I shan't forget.'



figure 7: Aftermath of a V1 bombing, London, 1944.
(Public domain: Wikipedia)

24th August 1944 (ASK to JWJ):

'We are having a hell of a time with the Robots [see figure 7] ¹³. Beckenham has had over 100, over 60 within a mile of this house. I have lost windows, of course everyone has, but no damage to the contents but I haven't been to Swanscomb for 2 months. I cannot leave the house unattended for if it were blitzed then the salvage men would come in and goodbye to my little things at once. I don't suppose they would trouble about my shells.'

'We had a warning at 6.50. It is now 8. We had 14 explosions, mostly near & the 15th roared just overhead & then shut off. I heard the propeller going slowly & it dropped ¼ mile away shaking this house but doing no damage, but it ain't nice.'

31st August 1944 (ASK to JWJ):

'Things are a little quieter but it ain't nice yet. I started for Swanscomb Friday & was turned out of the train at Eltham. Jerry had just got the line a little further down. After waiting & taking a bus to Welling we gave it up & came back home. It's a nuisance for the upper beds have turned up shells & I wanted to see the place.'

'Now I have bored you enough & I must turn in, in my clothes & hope nothing will happen. We haven't had a warning since 5.15. We have only had 5 today but our heavies, good luck to them, went out in strength at dusk.'

4th September 1944 (ASK to JWJ):

'The second battle of London is over & won by us. We haven't had a warning since last Thursday when they dropped the last one on a sports ground a mile away & did no damage. Essex & Herts had some early Tuesday. Now I can get on with my work & to Hell with the King's Enemies. Many a man will get a medal & not experienced one tenth of what we have had in the last three months but I don't regret the experience...Three roaring overhead at the same time & you didn't know where they would fall & the ordinary folk just carried on. Many I know went away but I couldn't. My place was here & here I stuck.'

30th September 1944 (ASK to JWJ):

'Things are easier here now. Still get warnings, 3 last night but nothing near.'

15th November 1944 (ASK to JWJ):

'Glad to say I keep well but we are still in the battle zone. This is today's second warning 12.15am-1.5 heard two robots, saw 2 explosions, one too far away to hear. 6-6.15am one robot roared overhead rather low down, didn't hear or see the explosion. Rocket explosions 12.50pm, 5.15. I don't like these [latter] the first information you get is the explosion usually followed by another & in one case by a third. Quite a number explode in the air & do little or no damage. It is rather upsetting when one goes off. Last Sunday we had 5...but nothing near. The nearest was at S. Norwood about a mile away.'

21st December 1944 (ASK to JWJ):

'First to wish you & yours all the best for the New Year. I don't want another like this though I am fairly 'tough'.'

9th January 1945 (ASK to JWJ):

'We are still lively. I was busy this morning looking over Swanscomb stuff when a terrific explosion, windows shook, doors flew open & a fanlight of mine flew out but the hinges held. I went out & half a mile away a dense column of smoke. I hear it was on a cricket ground, but it isn't good for one's nerves.'

And a final comment after the war was over:

28th December 1945 (ASK to JWJ):

'I know how I felt when I retired from Biz. in 1930 & how I enjoyed my liberty, then came the war. However, that's over & I can sleep at night.'

During the Blitz 32,000 civilians were killed, and two million homes (60% of which were in London) were destroyed, with even greater destruction and higher casualties by the end of the war. Alfred Kennard, having survived medical emergency and the death of his first wife (from natural causes), was also fortunate to have escaped with just minor damage to his home. And, throughout all this, Kennard doggedly kept on working on his various conchological projects whenever he could ¹⁴. As late as 1944/5 when he was well into his 70s he was still excavating the gravels at Swanscombe.

At the time of writing (end of 2020), the country has been through about nine months of Covid-19 lockdown and post-lockdown, followed by various ‘tiers’ of restricted activity in different areas. While this has been a tragedy for some families and a major challenge to nearly all, how much worse must have been the nightly horror of the Blitz? And with three more years of bombs, doodlebugs and V2 rockets still to come. The endurance and fortitude of those in London and the South East at that time is simply unimaginable.

Arthur Blok

The shell and book collector, Arthur Blok was, like Kennard, resident in London during the war. The two were ‘chalk and cheese’ in terms of personality, temperament and upbringing. Blok was from the professional classes, university educated, diplomatic, and a recreational conchologist with an extensive worldwide collection of different shell families, purchased and traded. Kennard, in contrast, was working class, largely self-educated, blunt in manner, opinionated, a practical field worker interested in British land and freshwater Mollusca. There was, however, a mutual love of antiquarian conchology books. Unlike Kennard, Blok was still in paid employment during the Second World War, work that was of some importance in relation to the war’s outcome although this only became apparent and more widely known later. In fact, Blok worked as a patent expert for the British Government and in the summer of 1945 he informed the Secretary Jackson that for future Conchological Society lists:

‘...after my name the queer letters O.B.E. shd. appear’, adding ‘I hope you do not think me an immodest fellow in mentioning it: I am far too old for vanities now & I only mention it because I know you like to keep your records accurate.’

Blok went on to explain that:

‘...for the last 3 ½ years I’ve been working in connection with the atomic bomb [which has] left precious little time for anything but bed & work with blitzes & crossings of the Atlantic for light relief. Spero melivra [to hope for better]! But not yet I fear for the work continues.’

Blok, employed in the Department of Scientific and Industrial Research (DSIR), attended high level meetings with Department Head Sir Edward Appleton and USA counterparts in efforts to secure and co-ordinate the cooperation of scientists here and in the USA. The possible transfer of senior scientists from Britain and the status of scientific discoveries that might result were important matters for both governments in their attempts to fast-track the atomic bomb¹⁵. Arthur Blok was awarded the OBE for outstanding scientific services during World War 2, and his letter to Jackson was dated 18th August 1945, just a few days after the Americans detonated the Nagasaki and Hiroshima bombs.

Peter Dance

The surrender of Japan may have formally ended the WW2 conflict but one conchologist who found himself in peril while serving post-WW2 was long-time CSGBI member and past President, Peter Dance. In March 1954, Peter was on board the troop ship HMT *Empire Windrush*¹⁶ en route from Port Said to the UK on what turned out to be her final voyage. Early on the morning of 28th March there was a sudden explosion and fire in the engine room. With the ship out of control and in serious trouble, the order was given to

abandon ship and Peter ended up in the water. His personal belongings (including his diary) had to be left on board and although the *Empire Windrush* (figure 8) was taken in tow she sank in the early hours of 30th March.

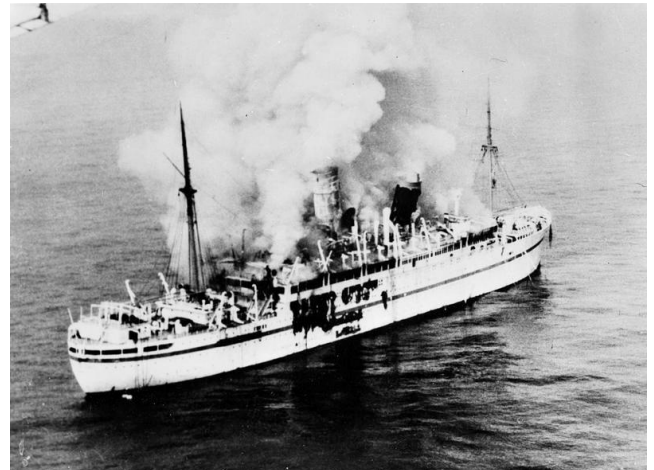


figure 8: An aerial photograph of the burning *Empire Windrush*, taken after the ship was abandoned, 28/29th March 1954. (Public domain: Wikipedia)

Peter’s unplanned early morning dip in ‘the Med’ fortunately ended safely and all the passengers survived¹⁷. And Peter, of course, literally ‘lived to tell the tale’, as he is currently engaged in writing his autobiography, in which the above event will feature in more detail. I am grateful to Peter for not only telling me the story but also allowing me to make brief mention of it here and to finish this article on a positive note.

Acknowledgements

In addition to those in the public domain and in the Society’s Archive in Leeds, I am grateful to the following for supplying illustrations: figure 1 – Paula M. Mikkelsen, Field Museum of Natural History, Chicago; figures 3 and 6 – Ros Westwood, Derbyshire Museums Manager, Buxton Museum & Art Gallery; front cover – The Trustees of the Natural History Museum London. I would also like to thank Jon Ablett for pointing me in the right direction, and Stephen Atkinson (Image Sales, NHM) for granting approval.

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Notes

¹https://www.academia.edu/3572039/Elly_Koperberg_1897_1943_a_necrology_better_late_than_never_with_some_not_es_on_her_new_malacological_taxa.

² I was surprised to see that Fritz was one of eleven named Haas's in Coan & Kabat (2018). Haas is derived from the German word for 'hare', but, apparently, as a Jewish name it can also be an 'ornamental name' or a name selected at random from vocabulary words by government officials when surnames became compulsory.

³This was not easy because Society paraphernalia (journal back numbers, etc.) were stored in whatever nooks and crannies could be found at the museum - rather haphazardly and mostly inaccessibly.

⁴ Rather like the Great War where military analysts led people to believe it would be 'over by Christmas'.

⁵ Captain Cyril Diver, CB, CBE (11th April 1892 – 17th February 1969). After serving in France during World War I with the 1st Royal North Lancashire Regiment, he became a clerk in the House of Commons. He is perhaps best known as the first Director-General of the Nature Conservancy. See also:

<http://www.conchsoc.org/eminent/Diver-C.php>.

⁶ Crowley's (1975) history of the Society briefly mentions the difficulties associated with getting together for meetings, but concentrates mainly on the problems of the Library.

⁷ Of the 62 cases comprising the Winckworth/Mason Collection, just 26 survived the bombing. During the late 1940s and 1950s, J. Wilfrid Jackson sold a good deal of his personal collection of shells and geological specimens to Liverpool Museum to assist the re-building of their collections.

⁸ Further information on the NHM during the Second World War can be found at: <https://www.nhm.ac.uk/discover/the-museum-during-wartime.html>.

⁹ See also: <https://museum.wales/articles/2018-09-07/One-thousand-kinds-of-shells-existing-in-Japan/>.

¹⁰ See my article (Part 1) on this subject in *Mollusc World*, **54**: 8–13 (December 2020).

¹¹ Checking back from 1992 I found only one obituary of a female member in the *Journal of Conchology* in the previous 34 years to 1958 (when I gave up looking).

¹² Kennard's first wife, Florence Archer Kennard, died towards the end of 1943. He remarried, to Daisy Lily Burgess, in 1946.

¹³ Referring to V1 flying bombs or 'doodlebugs'.

¹⁴ A good summary of the scope of his work is given in Preece 1990.

¹⁵ A detailed account of the time and issues is available in *Nuclear dawn: F. E. Simon and the race for atomic weapons in World War II* by Kenneth D. McRae (2014), Oxford University Press.

¹⁶ Just under 6 years earlier on 21st June 1948, the *Empire Windrush* had anchored at Tilbury Docks, Essex, carrying hundreds of passengers from the Caribbean hoping for a new life in Britain. The ship's journey up the Thames on that day is regarded as the symbolic beginning of a wave of Caribbean migration (between 1948 and 1971) known as the 'Windrush generation'.

¹⁷ The only fatalities were four crew killed in the engine room.

Meretrix lyrata (Sowerby 1857) – further finds

David Adams

I was interested to read Adrian Brokenshire's report on *Meretrix lyrata* in Devon (*Mollusc World* 52, March 2020) as I have discovered it in two places in East Sussex – Hove and Newhaven.

At the high tide mark at Hove (TQ285043) amongst seaweed and numerous slipper limpets (*Crepidula fornicata*) I found a fresh pair of joined valves. Local research showed bags of frozen shell-on clams, described as 'Lyrate or Hard White Clams', to be on sale in a nearby fishmonger, Chinese supermarket, and in ready-meals such as paella in supermarkets. Nowhere have I found it on sale live.

At Newhaven the beach is mostly composed of shingle banks, but between the east and west breakwaters of Newhaven Harbour there is a sandy beach, known locally as West Beach (TV449999), which supports a population of cockles (*Cerastoderma edule*). The land end is a 6m sea wall topped by a concrete promenade leading to an area of short maritime grass. Herring and Black-backed gulls, and Jackdaws patrol the beach and promenade.

Unfortunately, the beach is closed to the public as the Port Authority deem it a health and safety risk. This is despite the legal efforts of the local people to keep it open – but that's another story.

On the grass area I found dozens of broken cockle shells that had been picked over and eaten by the gulls. Many are fresh with small pieces of flesh still inside. Amongst the cockle shells were five *Meretrix lyrata* valves, two of them still joined.

How would they have got onto the promenade? One way would be during a storm the cockles are dislodged and then swept over the sea wall at high tide along with seaweed which is also found. Another way is for gulls foraging on the beach to pick up the cockles and drop them on the promenade to crack open or stun them. The direction of the off-shore current and the sweep of the harbour breakwaters makes it likely that the *Meretrix* valves originated from within the port area rather than off-shore.

It seems doubtful that the temperature around Sussex would be high enough to support any live *Meretrix*, so these would appear to be food waste, either domestic, trade, or even a beach picnic or barbeque. I imagine that *M. lyrata* will turn up on many more beaches around the UK as may other imported shellfish.

Burley Ponds: then and now - revisiting the recording of L. W. Stratton

Graham Long

Editor's note

On 12th December 2009 at a meeting of this Society at the Natural History Museum, London, the late Graham Long and June Chatfield gave a joint talk entitled *Non-marine molluscs of Hampshire* (see Chatfield 2021). An article by Graham covering the subject of his part of the talk was later published in *Country-Side* (Long 2012) and is reproduced here with permission as a further tribute to Graham's work (the references have been added). *Country-Side* is the magazine of the British Naturalists' Association (www.bna-naturalists.org).



figure 1: Long Pond, Burley.

Revisiting a recording area first covered nearly 70 years ago involves a number of challenges. The published records of 1942 were all set against local names, not grid references. These had to be pinpointed and in one case the name had changed. Another challenge was the description of a pond by the name of the property owner. There was also the matter of habitat change.

The records were compiled by Mr L. W. Stratton, a schoolteacher who was evacuated with Woolston Boys School from Southampton to Ringwood in the New Forest. Where the school was relocated is still unclear but it may have been at the Picket Post Hotel which has now disappeared. Some *Cepaea* records refer to the school grounds but cannot now be followed through. The area around the village of Burley fascinated Stratton because it was 'an almost perfect example of isolation'. Over the two years he studied the molluscan fauna in and around the village he found only 15 species of snails and slugs which he presented as a composite list in a report in the *Journal of Conchology* (Stratton 1946). In it he comments that he found even fewer freshwater species. However, as he links these to named ponds it has been possible to revisit the records.

Both Forestry Commission staff and local residents helped with site location. The Commission's staff offered extensive knowledge of the area and access to Luftwaffe reconnaissance photographs taken at about the time Stratton was studying the ponds. Though difficult to interpret, these do show the ponds and suggest that the overall habitat around some of them has changed little in the intervening years. One pond ('Mr Doncaster's') proved elusive. This was eventually located through the help of Mr Graham Tucker, a local resident who has amassed a large collection of old postcards of Burley. Some of these depicted ponds as they were in late Victorian times. Though two of them have now gone, their location is readily established by a distinctive tree or property that still exists.

It was while checking the postcard collection that the general area of the elusive pond was found. The old pharmacy records had recently come into Mr Tucker's possession when he rescued them from destruction. These included a generalised address for Mr Doncaster. A nearby resident remembered the Doncasters who had opened their garden in aid of wartime charities. Mr Doncaster's pond

turned out to be an elaborate water-garden constructed in the early years of the last century by the importation of hundreds of tons of limestone from the north of England.

Recent examination of the ponds still in existence (figure 1) has shown that there have been gains and losses. The most substantial loss has been *Lymnaea stagnalis*. An unsubstantiated report suggests that this species was deliberately eradicated in the wild by draining its main stronghold in the 1950s to control redwater disease, a condition fatal to both cattle and ponies. If this is true, it is regrettable: redwater disease is carried by ticks, not snails. Gains include three *Pisidium* species*, *Planorbis carinatus* and one species of *Physella* that is now found in several of the ponds.

In *Your Book of Shell Collecting* Stratton (1968) says, 'I have seen the Great Pond Snail (*Lymnaea stagnalis*) in an acid New Forest pond rasping away at its neighbour's shell to get more calcium'. On his death in 1971, Stratton's very extensive shell collection was split between museums in Manchester and Leeds. The authorities in Manchester helpfully transferred the relevant portion of his collection to the museum in Salisbury for me to examine his New Forest specimens. As shown in figure 2, some of the shells are extensively abraded.



figure 2: *Lymnaea stagnalis* from the New Forest. Stratton collection.

The opportunity to check the status of these ponds after 70 years, involving as it has topography, local and social history, and guidance from both professionals and local residents, has made a fascinating study. Before the war had ended, Leonard Stratton went on to become head teacher at Delrow and later at Redbourn, both in Hertfordshire. He received the rare honour of twice being elected President of the Conchological Society of Great Britain and Ireland.

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* The majority are now placed in the genus *Euglesa*. [Ed.]

Is *Cepaea* a cannibal?

Brian Goodwin

Well, perhaps not... but if you have got past the 'tabloid headline' and are reading this, at least I may have got your attention!

As a molluscophile and a keen gardener, I face a constant battle between protecting vulnerable plants and also allowing slugs and snails to flourish. A patch of *Hosta* plants in my front garden was shredded annually (figure 1) and manual relocation of the molluscs made little difference. Part of the problem was a large clump of *Bergenia cordifolia* (elephant's ears) nearby. Anyone who has grown these will likely know that they are ideal habitat for both *Cepaea nemoralis* and *Cornu aspersum*. Eventually, in 2018, I decided to transplant the *Bergenia* to the wilder part of the back garden and to give up on the *Hostas* (for something more insect-friendly).



figure 1: Adult *Arion* sp. and juvenile *Cepaea* sp. on *Hosta* plants.

The result was a good deal of disturbance, with those snails and slugs not directly moved doing it for themselves – rather more slowly of course. A few, inadvertently, got squashed on the drive and the corpses were left for natural recycling. On one occasion I noticed a deceased *Cepaea nemoralis* with one of its relatives crawling over it, and another immediately adjacent – but thought little of it. And then two days later, on a freshly flattened specimen, I noticed the same thing. This time, curiosity aroused, I looked more closely for about five minutes or so and observed what seemed to be feeding movements. Certainly, the buccal mass was applied to the surface. I also took a few photos (figure 2).

Not having much background in land mollusca I decided to do a quick search on the feeding habits of *Cepaea nemoralis* to see if what (I thought) I had observed was usual or unusual. John Taylor (1914) proved not to be very helpful, although he noted (p. 281): 'They will also devour cooked meat, and dead earthworms, insects, etc.'. However, Amanda Millar (1998) recorded only plant and lichen material in the diet of *Cepaea* species.

Robert Cameron (2016), in his recent tome, had more details on feeding behaviour, but mostly in relation to plant preferences. Citing a study by Phillip Williamson on *Cepaea*



figure 2: *Cepaea nemoralis*, possibly feeding on a deceased relative! (Despite the white lip I think this is *C. nemoralis*, but stand to be corrected.)

nemoralis, he noted that plant material predominated in the diet but the examination of faeces showed that soil and some animal parts were also present, although (p. 147) 'the animal matter (shown, for example, by the presence of earthworm chaetae, or bristles) may have been eaten more or less accidentally.' He went on to comment (p. 149), without giving any further details, that there are 'many eyewitness accounts of snails eating animals (often other snails) [although] the animal component of the diet is small in many species, and may reflect the consumption of carrion...'.

Given the absence of any clear records of cannibalism by such a commonly occurring taxon as *Cepaea*, it seems appropriate to consider if the observation was explainable in some other way. Others, much more expert than I, will be able to compile a more comprehensive list, but a couple of possibilities readily suggest themselves. Leaving aside any chance of it being pure coincidence, it is perhaps possible that the shell calcium (ready crushed!) was the real goal. Alternatively, the trauma to the soft parts may have released a chemical attractant or pheromone – there are plenty of bodily secretions apparent in the photograph.

Arguably, neither of these suggestions fit with the apparent application of the buccal mass to the flesh of the deceased. Perhaps what I observed was either an unusual (or atypical) occurrence of opportunistic cannibalism, but I would be interested to know if there are other theories, and if anyone else has observed similar behaviour.

References

- Cameron, R. (2016) *Slugs and snails*. New Naturalist Library 133. London: William Collins.
- Millar, A. (1998) Mollusc food: the results of a literature search. *Conchologists' Newsletter*, **145**: 29–33.
- Taylor, J. W. (1914) *A monograph of the land and freshwater Mollusca of the British Isles. Pt. 15-21: Zonitidae, Endodontidae, Helicidae*. Leeds: Taylor Brothers.

Slugs as Grass Snake (*Natrix helvetica*) prey

Jonty Denton

The late Graham Long's recent note on 'The Snail and the Snake' (*Mollusc World* **52**:28), comments on the lack of any suggestion that *Natrix helvetica* takes molluscan prey in reptile manuals. Back in 1988-90, part of my research on natterjack toads *Epidalea calamita* was to look at potential predators, and the grass snake proved to be the main culprit at my Hampshire study site at Woolmer Forest. The decidedly unpleasant task of looking at snake diet consisted of picking them up (if they had an obvious bulge) which usually resulted in rapid regurgitation (presumably partly defensive reflex). Adult grass snakes only produced either natterjack or common toads (and never newts despite all three native species being present in large numbers). The small sample of juvenile snakes (4-5) I managed to find in a postprandial state produced *slugs*! Alas I cannot be sure of the species involved, but I recall them being *Arion* and not *Deroceras*.

Woolmer Forest is one of the largest remaining heathlands in south-east, and was at the time devoid of aquatic snails. However, it seems likely that the young snake pictured in the article may well have been attempting to eat the ram's-horn snail.

I once found a large grass snake dead in a funnel trap which had caught numerous golden orfe. The snake had caught and partly swallowed one of the fish which meant it couldn't withdraw its distended upper-body back through the entrance hole and drowned. I suppose the moral of the story is *be careful what you eat!*



figure 1: A la Ronde, Devon. (photo: Peter Topley)

A la Ronde is an 18th-century 16-sided house located near Lypstone, Exmouth, Devon, and in the ownership of the National Trust (figure 1). The house was built for two spinster cousins, Jane and Mary Parminter, and was inspired by their travels and in particular by the 6th-century Byzantine basilica of San Vitale at Ravenna. The Parminter cousins collected shells, feathers, fossils and other natural objects for their home. The house is famous for its fragile shell gallery featuring a frieze created from 25,000 shells and the house now contains many other shells acquired under the National Trust’s ownership.

My partner John Rolfe and I moved to A la Ronde in 1991, he as the custodian and myself as a conservator with a passion for shells. The house and contents when purchased by the National Trust in 1991 were in a parlous state of disrepair and needed a mammoth restoration/conservation project with ongoing fundraising to support it, so when the Mellows shell collection was delivered to us we were surrounded by workmen and a building site. Consequently, when I was able to deal with the shells much later, I only had time to prepare and set up the collection without researching its ownership. The collection came without a provenance, just 'word of mouth' that the donor was a Mrs Mellows, I think, from London.

Various previously used items of stationery had been used to write labels for the shells, including gentlemen’s calling

cards, a wedding invitation torn into many fragments, a pillbox lid and headed notepaper: a detective story in the making.

A first clue is the wedding invitation. When the scraps of paper were put together as in a jigsaw puzzle, they were worded thus: ‘Lady Russell requests the pleasure of ... to the Wedding of her daughter Cloe to the Hon. Ernest Guinness at St. Margarets, Westminster on Wednesday July 15th at 1.15 and afterwards at 14, Berkeley Square ... 4.45. RSVP’ (the wedding took place in 1903). Secondly there is a small lid from a pillbox naming the ‘*Turbo vincten*’ [probably *Lacuna vincta* (Montagu, 1803)] that reads: ‘one pill to be taken at bedtime. G. Russell Esq., STAINET. Folkestone. 10/02/1883’. Next there is an item of headed notepaper attributed to ‘Lord Wantage at Lockinge House, Wantage, Berks.’ on which is written a description of the growth of *Magilus antiquus*. Lastly there are eight gentlemen’s calling cards carrying a variety of shell names on their reverse sides, belonging to The Reverend Biddle of Farley Hill, The Reverend F. T. Lewarne, Mr J. Friedlander, Mr Shaddick Clode, Arthur Singleton Wynne, Mr W. Mortimer Allfrey of Farley Castle, Captain Cobham (see figure 2), Lt Col. Horace Walpole of Heckfield Place and the Marquess of Blandford.

One more addition to my puzzle is Mrs Mellows of London, apparently the donor of the shell collection from which these clues come. Among this very distinguished company I had hoped to find positive confirmation of ownership but so far, apart from grand family histories and marvellous estates, I am no further forward.

The time has come to ask for help and I would be very grateful for any information that might throw light on any of these eminent people, as early collectors or with known interests in conchology. The time period is roughly the late 1700s to the early 1900s. If any of these names should ring a bell, please don't hesitate to contact me. Thank you. marianandrews@gmail.com.

1901.				
EASTERN OR WOKINGHAM DIVISION OF BERKS.—EARLEY POLLING DISTRICT. G.				
Liberty of Earley.				
OWNERSHIP ELECTORS.				
PARLIAMENTARY AND PAROCHIAL ELECTORS.				
Number.	Name of each Elector at full length, the Surname being first.	Place of Abode.	Nature of Qualification.	Description of Qualifying Property.
1	Adams, Charles Edward (clerk)	The vicarage, Earley ...	Freehold benefice ...	Earley Church
2	Cobham, Alexander Cobham	Shinfield grange, Reading	Freehold land ...	Lower Earley
3	Craft, James ...	Oakley, Erleigh, Reading...	Freehold house and land ...	Elm tree road
4	Dunlop, Herbert William	Maisonette, near Erleigh court	Freehold house and land ...	Maisonette, near Erleigh court
5	Fiennes, Eustace Edward Hon.	Erleigh house, Erleigh, near Reading	Leasehold house for 21 years	Erleigh house
6	Friedlander, Julius ...	Whiteknights park, Shinfield road, Reading	Leasehold house and land for 99 years	Whiteknights park
7	Hargreaves, Frank ...	Shinfield manor, near Reading	One undivided fourth part or share of freehold	Maiden Erleigh

figure 2: Electoral Roll featuring Julius Friedlander and Capt. Cobham.

Robert Rendall (1898-1967) is a very well-known figure in Orkney, largely through his critically acclaimed poetry alongside his time spent as a lay preacher around the islands and for his contributions to archaeology. He was a skilled naturalist and his contribution to the understanding of Orcadian molluscan species is incredibly valuable. When Rendall was a teenager, he was inspired by Magnus Spence's 1914 publication *Flora Orcadensis*, which recorded the many species of plants that grew on the islands. From that point on, Rendall decided that he too would create such a work but dedicated to molluscs.

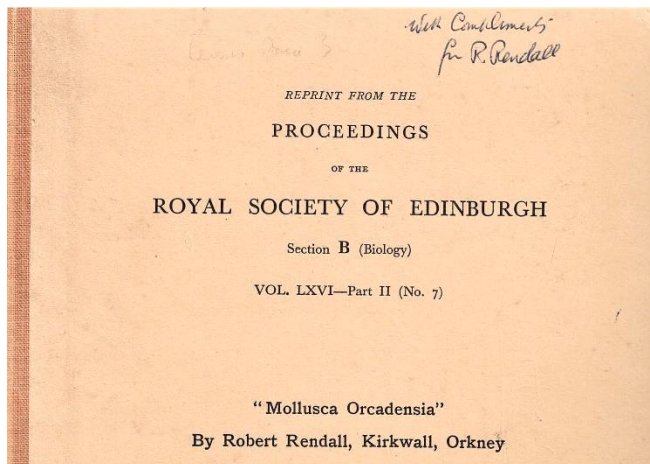


figure 1: Signed cover of the reprint of Robert Rendall's *Mollusca Orcadensia* (pub. Oliver & Boyd, 1956). (photo: Peter Topley)

In 1956 *Mollusca Orcadensia* was read at the Royal Society of Edinburgh (figure 1) and *Orkney shore* was published (by W.R. Mackintosh, Kirkwall) in 1960. *Mollusca Orcadensia* was written for the scientific community and gathered together the records of many past Orcadian naturalists as well as many of his own observations and recordings. In a letter to his peer, artist and limner to the Queen, Stanley Cursiter CBA RSA, he wrote that while *Mollusca Orcadensia* was for the academics, his book *Orkney shore* was written for his fellow islanders. The book is a more personal account of Robert Rendall's own experience of the Orkney Islands and his relationship to its shores. In his later life Rendall developed a great fondness for the town of Stromness and donated his shell collection to the Orkney Natural History Society which runs Stromness Museum. This is where his collection lies today (figure 2).

The cataloguing of the Robert Rendall shell collection is part of a wider LEADER-funded project to make collections more accessible. Contained within a large wooden cabinet are ten drawers filled with 220 specimen boxes. During February and March 2021, each box was recorded and photographed to create an online catalogue. This will be made available to everyone as part of the wider Stromness Museum Collections catalogue which is already accessible via the museum's website.

A report has been written to show that the collection is significant for the local community as well as in a wider museum context. Not only is the collection associated with a significant figure in history but it is also extremely useful as a scientific reference collection. The collection contains around 200 species, not only of marine mollusc shells but also including various species of non-marine molluscs such as *Cepaea hortensis* and *Ampullaceana balthica*.



figure 2: The Robert Rendall shell collection. (photo: Rebecca Marr © Stromness Museum)



figure 3: The author cataloguing the collection. (photo: Rebecca Marr © Stromness Museum)

There are also anatomical elements of cuttlefish, octopus and several species of squid. There is a total of 1402 individual specimens which create a snapshot of the species that resided in Orkney's waters in the mid-20th century.

Highlights of the collection include a specimen of *Pinna fragilis*, the fan mussel, which it is now illegal to collect or kill, as well as a large collection of cowrie shells. The cowrie shell is a hugely important shell to Orcadian culture and across the Northern Isles. Known colloquially as the

'groattie buckie', their association with luck means that collecting them is a popular pastime. Robert Rendall's collection contains a large number of both the spotted (*Trivia monacha*) (figure 4) and the arctic (*Trivia arctica*) species alongside two tiny, delicate juvenile specimens.



figure 4: Spotted cowrie (*Trivia monacha*) in the Robert Rendall collection. (photo: Rebecca Marr © Stromness Museum)

Rendall collected specimens of all shapes and sizes, from the tiniest of shells collected from shell sand like *Rissoa parva* (figure 5) to huge horse mussels (*Modiolus modiolus*). Some species could only have been recovered from dredging and the collection forms a near complete library of Orcadian species. The preservation quality is very good to the point that a number of the blue-rayed limpets still retain their characteristic blue lines which often fade over time (figure 6).



figure 5: *Rissoa parva* specimens in the Robert Rendall collection. (photo: Rebecca Marr © Stromness Museum)



figure 6: Blue-rayed limpet (*Patella pellucida*). (photo: Rebecca Marr © Stromness Museum)

Making this collection accessible to the public will be a huge jewel in the Stromness Museum natural history crown. It is a hugely valuable resource for the conchological and malacological community.

100 years ago: from the *Journal of Conchology* (Jan. 1921, vol. 16 (5), pp. 145, 147)

Prior to *Conchologists' Newsletter*, the *Journal* featured items that today might have been included in the pages of *Mollusc World*.

***Limnaea* [*Lymnaea*]¹ *stagnalis* destroyed by rats.**—Whilst searching for specimens along the banks of a pond near Ashley Mill (Cheshire) during 1919, I came across two or three small pockets or hollows filled with the dead and damaged shells of *Limnaea stagnalis*. On examination I found these had all been broken in a similar manner, a portion of the body whorl having been removed by some creature, evidently with the object of devouring the animal. I visited the spot on several subsequent dates, and discovered further larders, one of which was situated in a tuft of rushes, and contained over fifty dead shells. The water at the edge of the pond near these larders is very shallow and full of weed, and in season literally alive with scores of *L. stagnalis* in all stages of growth. An examination of the soft mud showed the footprints of rats, whilst a well-worn track led from the water's edge to the large larder already mentioned. As the water-vole is supposedly a vegetable feeder and has not been observed on this pond, whilst rats are commonly seen around it, the evidence is sufficiently strong to point to the latter as the enemy which is destroying large numbers of this mollusc.

A. K. LAWSON (Read before the Society, February 11th, 1920)

¹ currently accepted names (WoRMS 2021) are indicated in square brackets. The varietal names are generally no longer used. Many thanks to Tom Walker for providing these extracts [Ed.].

Giant race of *Cardium* [*Cerastoderma*] *edule* L.—While in Orkney in 1917, I came across a giant race of cockles at Congesquoy, near Stromness. Except that they are considerably larger in size, they correspond to *Cardium edule* var. *major* B. D. D. (*Mollusques Marins du Roussillon*, ii, 292, and plate 46, fig. 6). The adults mostly range from 53 to 66 mm in breadth, and average about 60 mm; but I obtained three monsters outside this size even; my largest measures 76 x 64 mm, and 51 mm in thickness; it weighed 5 ounces living; the shell approximately 3 ounces, and containing about 1 ounce water and 1 ounce body. All the cockles in these sands are of the same type, and the smaller specimens are perhaps even more striking, shells up to 53 mm showing signs of immaturity. One day we took 270 live cockles, weighing 28 lbs, and feasted royally on them. The animal does not appear to differ from typical *C. edule*. All the features of the shell are emphasized in proportion to its size and solidity, the ventral margin tends to be straighter than in the type, and the ribs more numerous (27 to 30). Their habitat is clean sand, and the water is clean and presumably somewhat fresh, as it is just below the outfall of the Loch of Stenness. Associated with *Cardium edule* are *Venus* [*Chamelea*] *gallina* var. *laminosa*, *Spisula subtruncata* var. *striata*, *Tellina* [*Macomangulus*] *tenuis*, and *Mya arenaria*, and lower down *Ensis siliqua*—all well developed in size, but none gigantic.

R. WINCKWORTH (Read before the Society, December 10th, 1919)

About the Conchological Society

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



The
Conchological
Society
of Great Britain & Ireland

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

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Subscriptions are payable in January each year, and run for the period 1st January to 31st December. Members joining later in the year will receive all publications issued during the relevant calendar year. • Ordinary membership £33 • Family/Joint membership £35

• Under 18 (receiving Mollusc World only) £5 • Student membership £15 • Institutional subscriptions £47

In view of the high cost of 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, Nick Light.

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. **Copy intended for the November 2021 issue should be with the Hon. Editor prior to 30th Sept. 2021**; 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.

Membership update

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

Codes after a member's contact details denote their interests: **A** Applied conchology; **B** conchological books; **C** conservation; **G** General malacology including genetics and physiology; **Nb** British non-marine; **Nf** Foreign non-marine; **P** photography.

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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.

Conchological Society field meetings

It is essential for those wishing to attend ANY of the meetings, to contact the leader in advance (ideally at least a few days before) to book a place and obtain further details. Regular meeting updates appear on the Society's website.

Saturday 10th July: NON-MARINE: near Watlington, Oxfordshire.

Leader: Tom Walker (tom@tmwalker.co.uk, 07488 231574). This is part of the survey coordinated by Keith Alexander to establish the present status of *Ena montana*. Meet at 10.30 at Greenfield Farm, south of Christmas Common (SE of Watlington) - ample parking (SGR: SU 711918; Sat. nav.: OX9 5HG). We will explore Greenfield Copse and Howe Wood, and perhaps other woods in the vicinity.

Saturday 21st & Sunday 22nd August 2021: MARINE: (1) Medmerry managed coastal retreat reserve area, nr. Selsey, and (2) Pagham Harbour LNR (both on Manhood Peninsula, West Sussex) Leader: Martin Willing (01730 814790 martinjwilling@gmail.com).

Opportunity to (1) monitor colonisation by marine molluscs of this large coastal retreat area. (This a challenging site with some areas of deep mud & fast flowing water) and (2) visit to Pagham Harbour LNR, a site with a wide variety of intertidal and stable shingle beach habitats (use of a small boat might allow the use of sub-littoral sampling). The site supports some rare and local species such as *Truncatella subcylindrica* & *Leucophytia bidentata* but is considered under recorded for lower shore Mollusca. The two sites will be visited on adjoining days and it will be possible to attend for a single or both days. The order of site visits is yet to be decided with the RSPB site manager.

Date in September (date and other details to be confirmed; see p 27 Mollusc World 55) NON-MARINE: Lake Windermere, Cumbria.

Leader: Hannah Shaw (hpecology@hotmail.co.uk). Visit to FBA Freshwater Pearl Mussel Ark project and recording in the area of Lake Windermere.

Saturday 11th September 2021: NON-MARINE: Devil's Punch Bowl, Hindhead, Surrey. Leader: June Chatfield (01420 82214, collections@haslemeremuseum.co.uk) Classic Surrey heath habitats. Meet at 11:00 at National Trust car park/visitor centre, NGR SU 891357.

Saturday 18th September – Saturday 25th September 2021: MARINE and NON-MARINE: N. Pembrokeshire Coast.

Leader: Simon Taylor (marine@conchsoc.org, 01621 810141).

Area with a good variety of rocky and sandy shores, relatively under-recorded. Based at Dale Fort Field Study Centre, where laboratory facilities are available. Those interested please contact Simon, who will coordinate the accommodation booking with Dale Fort.

Saturday 2nd October 2021: NON-MARINE: RHS Gardens, Wisley, Surrey.

Leaders: Imogen Cavadino and Hayley Jones (imogencavadino@rhs.org.uk, 01483 226568). Native and introduced species in the gardens, glasshouses and woodland; help create a reference collection for the site. Meet at 10:30 at the Laboratory Building. Participants must contact leader in advance, for free access to the gardens, and because places are limited, and members of other Societies may also be invited.

Saturday October 23rd 2021: NON-MARINE: Wyre Forest, Worcs.

Leader: Rosemary Hill (secretary@conchsoc.org). Joint meeting with Wyre Forest Study Group. It is planned to survey new areas and if possible, investigate how close to the woodland edge *Malacolimax tenellus* can be found. Meet at 10:00 at Forestry Commission's Wyre Forest Visitor Centre car park (DY14 9XQ; NGR SO 750740) to walk or share cars to access the woodland.

October 2021: Field Meeting NON-MARINE: South Downs, West Sussex.

Leader: Martin Willing (01730 814790, martinjwilling@gmail.com). A further day visit is planned as part of the Society's *Ena montana* project. It is hoped to visit several historic and recent sites including at National Trust woodlands near Slindon and nearer to the West Sussex / Hampshire border at South Harting and Ditcham. Dates cannot be fixed at this stage but will be posted on the Society website by mid-Spring.

Indoor/zoom meetings

Indoor meetings in October and December will be held in the Natural History Museum if Co-19 regulations allow, if not these will proceed as Zoom events. Please see website for updates.

JOINING ONLINE MEETINGS: please email Catherine Jagger at CIRCA subscriptions (shellmember@gmail.com) preferably at least one week prior to the meeting, indicating your intention to attend. She will then send you full joining instructions and a meeting agenda. The meeting will open for joining from 13.45; please ensure that you join the meeting before the 14.00 start time as late admissions may not always be possible.

Saturday 17th July 2021: (ONLINE) Guest speaker: Imogen Cavadino (Royal Horticultural Society), 'For the love of slugs: using citizen science to explore species diversity in UK gardens.'

Saturday 16th October 2021: (ONLINE or at NHM, London) Guest speaker: Gavan Cooke, 'Cephalopods of the UK'.

Saturday 11th December 2021: (ONLINE or at NHM, London) Guest speaker: Ian Killeen, 'Thirty years of *Margaritifera* research – Pearl Anniversary'

Advance Notice for 2022: Indoor meetings are booked for **19th February, 9th April (AGM), 23rd July (Zoom only), 15th October & 10th December**. A **Regional Meeting** is being planned to take place in Liverpool during November 2022; date yet to be fixed.

ONLINE 'EXHIBITS': members are invited to address the meeting for a maximum of four minutes to show an exhibit or speak briefly on a mollusc-related theme. Anyone wishing to do this please e mail the Hon. Secretary, Rosemary Hill (secretary@conchsoc.org) in advance of the meeting. Note that for each meeting the number of speakers will be limited to the first five applicants.

Meeting Programme compiled by Martin Willing. Contacts for meetings related matters are either Martin Willing (martinjwilling@gmail.com) OR Rosemary Hill (secretary@conchsoc.org). See page 31 for further contact information.