

Conservation Officer Annual Report 2018 (MK I)

1. NATIONAL BIODIVERSITY NETWORK (NBN) SENSITIVE SPECIES POLICY

In mid-2018 the NBN requested assistance from specialist taxon groups to review their sensitive species list and to make suggestions for additions to it. The Sensitive Species Policy (SSP) aims to get a standardised, agreed method for handling sensitive species data. There is a slight dilemma here as NBN (as does the Conch Soc) wants to maximise the availability of species data to assist research, planning decision making, conservation and other land management, but afford an appropriate level of protection for species that could be harmed if detailed information about their location was freely available. There are apparent contradictions here, as just because a species is rare or even threatened it may not be at risk if its location is known; by contrast it might, in many instances, be at greater risk if a location is kept secret e.g. a potential development site. In order to assess if a species qualifies for site location restrictions under the SSP, 10 assessment criteria have been devised (to view: <https://nbn.org.uk/news/nbn-draft-sensitive-species-policy%e2%80%af/> (accessed 4.3.2019)).

The NBN's preliminary species suggestions included the Freshwater Pearl Mussel *Margaritifera margaritifera*, the marine scallops *Pecten maximus* and *Aequipecten opercularis* together with the edible oyster *Ostrea edulis* and its habitat. The Society (in particular the two census recorders) considered these suggestions and made a number of suggestions.

In terms of non-marine options *M. margaritifera* was agreed and three further suggestions were made; *Helix pomatia*, *Lauria sempronii* and *Vertigo modesta*. The first two species are already ones where the Society has a policy of data confidentiality, whilst the latter two were felt to be at potential risk from open access site location availability. Reasoning concerning these four species was as follows:

***Margaritifera margaritifera*:** Has legal protection under WCA 1981 (as amended). At particular risk from multiple factors with very low population levels in England, Wales & Northern Ireland; larger but still vulnerable in Scotland. Knowledge of habitat (soft water rivers) does not easily lead to location of *M. margaritifera* as the species is often very localised. The mussel is at risk from agricultural pollution, sedimentation, but one of factors that can decimate healthy, recruiting population is illegal pearl fishing and still causing significant losses in Scotland. A single intense bout of illegal fishing can cause long-term local damage to this long-lived, slow breeding species. Some of the healthiest remaining populations in Scotland are where precise locations have not been released.

***Helix pomatia*:** Has legal protection under WCA 1981 (as amended). Although widely distributed (in Cotswolds, Mendips, Chilterns and North Downs in particular), where the locations of some populations are known there are well-documented cases of significant damage being done in some areas due to illegal collection for gastronomic purposes. Restriction of site location of new populations may protect them from illegal collection.

Lauria sempronii: This species has no legal protection in the UK and is restricted to a few ivy-covered limestone walls in one region of the Cotswolds. There are reliable recent reports of excessive shell collection at some sites resulting in possible population depletion or loss; knowledge of the precise wall location is required as the snail is only present on a very small proportion of similar looking walls in the area.

Vertigo modesta: This species has no legal protection in the UK and is currently only known from two remote, high mountain tops in the Grampians living in a very specific vegetation community. The snail lives in very low numbers and areas of suitable habitat are very restricted, slow growing and easily damaged. Revealing exact locations could damage the populations of the snail by (1) direct collecting (requiring the collection of 'bulk samples' of vegetation for later lab processing) and/or (2) physical damage due to trampling of the slow-growing plant community.

The Society carefully considered the marine molluscan species options, but did not feel that any would benefit from being placed on the sensitive species list. None seemed to qualify using the 10 SSP criteria. *Pecten maximus* and *Aequipecten opercularis* are both very common and widespread species caught commercially in large quantities and so no need to keep locations secret. They may suffer from local over-collection but the best conservation is linked to fishery regulations. *Ostrea edulis* is much rarer but, again the location of most remaining populations are well known (many now carefully managed and seeded with oyster spat) and subject to fishery protections. Again we couldn't see a need to place the species or its habitat on the SSP list. The final NBN sensitive species list will be finalised in 2019 and will be reported in the 2019 officer report.

2. THE GULF WEDGE CLAM *RANGIA CUNEATA* : FURTHER DEVELOPMENTS

In last year's report I discussed trial sclerochronology (shell-aging using growth increments) work undertaken on *Rangia cuneata* at School of Ocean Sciences at Bangor University (MW 47: 27). In late 2018 Dr. Phil Hollyman formulated an MSc proposal to continue this work by examining and aging *Rangia* shells from different populations across Europe. This aimed at trying to more accurately assess when *Rangia* had colonised sites as distinct from when populations were discovered. In early 2019 following a successful publicity a suitable student was enrolled. The Society was able to assist by contacting colleagues across Europe who had previously worked on the clam. As a consequence *Rangia* shell material was obtained from Belgium, Estonia France, Germany, Russia and together with material from the UK (see also J. Conch 42: 189 – 192.). Between spring and early autumn shells were successfully sectioned and aged with specimens from two areas being at least 10 years old. Following the successful completion of the MSc the results are to be written up in early 2019 with further help and support offered by the Society. Following the anticipated successful publication of the results a further summary will appear in a Society publication.

3. ASSISTANCE WITH EUROPEAN RESEARCH PROJECTS

The *Cerneuella virgata* conundrum!

In July 2018 Dr Eike Neubert (Natural History Museum Bern, Switzerland) contacted Ben Rowson to seek help in obtaining English specimens of *Cerneuella virgata* for genetic, anatomical and shell morphological studies. This request followed a three-year study by Eike and others in Tunisia which revealed that '*Cerneuella virgata* type-taxa' living there actually displayed enormous radiation and consisted of many different, but as yet undescribed species. Their study then extended to compare these North African '*virgata*' to material from various European mainland locations. Studies here revealed more surprises by contradicting the established hypothesis that *C. virgata* in Europe is a single polymorphic species. If suitable material could be supplied, Eike planned to use English *virgata* specimens (ideally from close to type localities) to genetically calibrate application of the name. The clade that includes the British specimens will then be the 'true' *virgata*; the other closely-related *virgata* will then be ascribed names from the approximately 60 valid options available for the various 'forms' of the taxon. UK material was sent by three Society members: Richard Preece (specimens from near a type location in Cambridgeshire), Ben Rowson (from Southerndown, Glamorgan) and Martin Willing (two locations: Amberley, West Sussex & Whiteford Burrows, Gower) the results from studies of these may reveal whether British populations of the snail are a polymorphic single taxon or represent several closely related species. Possible future studies here might enable further Society involvement in the wider collection of *C. virgata* from across the country. At the time of writing, Eike and colleagues were undertaking analysis, with results to be published in 2019.

***Mercuria* species in Iberia**

In May 2018 I was contacted by a PhD student in Spain working on Hydrobiidae snails on the Iberian Peninsula (mainland Spain and Portugal). The research is based at the Museo Nacional de Ciencias Naturales (<http://www.mncn.csic.es/>) in Madrid under the direction of CSIC (Consejo Superior de Investigaciones Científicas (<http://www.csic.es/presentacion>)); outcomes will feed into the national 'Fauna Iberica XI' project. The main focus of the work was an investigation into the complex systematic position of all Iberian *Mercuria* species, adopting a combination of molecular and anatomical studies. As well as working to unravel the entangled issue of the Iberian *Mercuria* it is intended to place the outcomes into the wider context of *Mercuria* from North Africa other European countries including the UK. I was approached because of my work on the habitats and distribution of *Mercuria similis* (formerly *Pseudamnicola confusa*) on the lower River Arun in West Sussex. In autumn 2018 30 adult specimens were extracted from a larger sample collected from the muddy upper-tidal river banks near Arundel and sent in ethanol to Spain. The project is ongoing into 2019 and a summary of outcomes will appear in a future Conchological Society report.

4. COUL LINKS – A THREATENED SAND DUNE HABITAT IN SCOTLAND

Coul Links consist of an extensive area of dune grasslands and dune slack wetlands forming part of the Loch Fleet Site of Special Scientific Interest (SSSI), the Dornoch Firth and Loch Fleet Special Protection Area (SPA) and a Ramsar site. The site also falls within the Dornoch Firth Important Invertebrate Area (IIA), which was recently identified in the first IIA mapping for Scotland. IIAs are nationally and internationally significant places for the conservation of invertebrates and the habitats upon which they rely. This data-led work, highlights the importance of the Dornoch Firth area for invertebrate conservation in the UK.

Many conservation organisations were alarmed to discover that this planning application had been submitted: *“Highland Council Planning Application: 17/04601/FUL Development of 18-hole golf course, erection of clubhouse, renovation of existing buildings for maintenance facility, pro-shop, caddy hut, workshop, administration building, information booth, formation of new private access from C1026”*. There was even more surprise and concern when it was discovered that, in early summer 2018, the Highland Council had granted planning permission for the venture. This was done despite being provided with overwhelming evidence from numerous environmental and ecological organisations that development of the site would lead to the extensive degradation to a nationally important area. There was surprise that the scheme had passed in the absence of an independent environmental impact assessment. Insufficient information is currently available for an informed decision to be made. Following this news a campaign was launched (chiefly led the Scottish Wildlife Trust, RSPB, Buglife and Plantlife Scotland) to persuade the Scottish Government to ‘call in’ the application for further scrutiny and to allow additional ecological investigations of the site. It was suggested that Scottish Government’s support for the project might imply an apparent disregard of the numerous well-respected protective designations (e.g. SSSI, SPA & Ramsar protections) applying to this site. The Conchological Society was made aware of this issue in late July 2018 and with little time ahead of a deadline, submitted a short letter together with numerous others sent to the Scottish Government, requesting ‘call in’ of the application. It was therefore with considerable (possibly short term!) relief that, in late August 2018, the Scottish Government responded positively to the representations and called in the application for ministerial scrutiny. For summary details visit: <https://www.bbc.co.uk/news/uk-scotland-highlands-islands-45295948> It is understood that a public inquiry will be held in early 2019; outcomes will be reported in Mollusc World in 2019.

For additional current and historical Coul Links information also visit:

https://www.buglife.org.uk/search?combine_2=Coul+Links and

<https://www.rspb.org.uk/our-work/our-positions-and-casework/casework/cases/coul-links/>

5. IMPORTANT MOLLUSC COLLECTIONS SAVED

The Ed Bishop Collection

In the spring of 2018 came the sad news of the death of Dr. E. O. Bishop. Ed had been a Society member since he joined as a junior member in 1951; a membership of 67 years is a noteworthy achievement! He was a Reader in molecular sciences at Sussex University and held a lifelong passion for shell-collecting. In early May 2018 I received a telephone call from Ed's wife Anne to ask if I could advise on the disposal of his collection. I duly visited her home near Brighton shortly afterwards to review the situation. Not having seen the collection previously I was taken aback by its size, variety and quality. Shells occupied 28 multi-drawer filling cabinets and about 100 additional boxes, each equivalent to a filing drawer; material was spread over three rooms, taking a good proportion of two. In the time available I assessed that the collection had worldwide content, but with a predominance of both European non-marine and marine specimens. Sampling throughout demonstrated that virtually all specimens were well-labelled with sound provenance. A good proportion and probably the most scientifically valuable parts, were self-collected but material obtained from purchases, exchange, residues of other valuable collections (e.g. a part of A. Blok's extensive work) was also present. The material included very good European non-marine and marine including from the UK, southern Italy, Crete, Majorca, Sardinia, Sicily, the Azores, the Canary Islands. Further afield Ed had collected in Cuba, Barbados and possibly India and Sri Lanka. Another valuable feature of the collection, particularly in relation to own-collected European material, was the large number of specimens of many species which is a feature of particular value in assessing shell morphological variability within a population. Finally, locality data for much of the UK material also provided the opportunity to study valuable historic distributional data for species such as *Helicella itala* now lost from many sites.

Following discussions with her children, Anne decided that any parts of the collection judged to be of value by a museum should be gifted to them for future safekeeping and study. I approached Ben Rowson at the National Museum of Wales describing my impressions of this extensive resource. Initially my approaches were treated with justifiable caution, Ben stating that, *"From what we have heard it appears the collection is of very good quality but is evidently very large. An estimate of the approximate number of lots based on the number of cabinets and boxes you supplied suggests there could be 26,000 lots in total this would still be one of the largest Mollusca collections we have been offered in recent years. Were we to take a collection of this size, the impact in terms of staff time available for curation and on storage capacity would be substantial"*. Initially it therefore seemed that Cardiff might be prepared to accept a small proportion of the collection, chiefly those components with a Welsh provenance. A NMW visit to view the collection by Ben and Harriett Wood in autumn 2018 led, however, to a welcome change of position. They were so favourably impressed that instead of only accepting a small proportion decided instead to accept everything! Plans were made to transport the collection for safekeeping in Cardiff in early 2019, a fitting tribute to Ed's lifetime dedication to conchology. A more detailed description of the Bishop Collection will appear in Mollusc

World later in 2019. It only remains for me to end this happy saga with thanks to Anne Bishop and her family for their far-sighted generosity.

The Barry Colville Collection

In 2017 past Conchological Society President Dr. Barry Colville decided to donate his UK and European non-marine terrestrial mollusc collection to a suitable museum for safekeeping and study. When more mobile, Barry was a field-work pioneer with a special interest in locating populations of rare and elusive *Vertigo* spp. (noteworthy early publications include: Coles & Colville 1979 & Coles & Colville 1980) Barry was especially skilled in investigating limestone 'flush' sites, initially in the Pennines and then later further north on Deeside and in the Cairngorms where he discovered new sites for species such as *Vertigo geyeri*, *V. genesii* and *Quickella arenaria*. He also did important work in North Wales, locating new populations of *V. geyeri* and *V. moulinsiana* there. Fortunately Barry's historically and scientifically valuable collections have found excellent new homes with his Scottish material appropriately moving to the National Museum of Scotland in Edinburgh and with all of the Welsh, English and some of the continental European material joining the Bishop collection in the capable hands of the National Museum of Wales.

6. FRESHWATER GASTROPOD IDENTIFICATION

I wrote in my last report about the possibility of a HLF supported bid to produce a freshwater gastropod identification guide. Since then things have moved on considerably and following a successful HLF award in mid-2018. 'Brought to the Surface: a new beginning for freshwater snail identification' was launched in the autumn of 2018 (MW 48: 3). The first steering group meeting was held at The National Museum of Wales in November 2018. At the end of the year applications for the post of Project Officer were being sought.

As part of the project the Conchological Society formerly transferred the extensive and very high quality Derek Rands 35mm colour slide archive to the museum for safekeeping. The transfer included a total of about 70 slides including 20 slides of fresh and brackish water taxa, many of which will be scanned for possible use in the project. Storage at the NMW will allow the Society full use of this valuable resource.

7. HELPING OTHER ORGANISATIONS

***Vertigo moulinsiana* at Burton Mill Pond**

In my 2016 Conservation Officer Report (MW 45: 27) I wrote about conservation work at Burton Mill Pond the most important population stronghold for *Vertigo moulinsiana* in Sussex. The pond is managed by West Sussex County Council and it is their intention to improve the pond margins by reducing encroaching shade to enhance the zone for a range of rare animals such as *V. moulinsiana* but also the very rare cowbane *Ciruta virosa*. As a volunteer member of the Burton Mill Pond Project Board I spent a day in a boat on the pond in June 2018 with the site manager assessing the entire perimeter to plan future management options to improve conditions for the snail.

Help in Scotland

In autumn 2018 the Society was asked to support Joanna Lindsay, a Conservation Volunteer working at Buglife Scotland. Jo was working to produce "A Beginners Guide to Freshwater Snails of Central Scotland". Jo had drafted a leaflet intended to be simple to use and aimed for use by beginners, families, school groups, community groups etc. Adrian Sumner played a very important role in acting for the Society to assist Jo in advising on content the editing and. The leaflet was finally published in late 2018 with support from the Society as well as Buglife, The National Museums of Scotland and the Esmée Fairbairn Foundation.

8. SOCIETY PROJECTS & PROJECT PARTICIPATION (CURRENT & FUTURE)

Surveys at High Park, Blenheim

In 2017 a project was initiated by Aljos Farjon (Honorary Research Associate, Royal Botanic Gardens, Kew) in High Park, Blenheim (home to the greatest collection of medieval oak trees in Europe), to carry out the first detailed multi-disciplinary assessment of the park's natural history and wildlife. With the consent of the Blenheim Estate, Rosemary Hill, has organised several visits on behalf of the Conchological Society, surveying together with 'team members' Peter Topley, Tom Walker and Rosemary Winnall. A detailed picture of the molluscan fauna is being recorded; surveys are currently ongoing.

The Knepp Estate

The Society has already forged links with the Knepp Estate including the running of a field meeting in October 2017 (MW 48: 18 – 21). There are plans to continue these links with:

1. Further surveys of the estate to get a complete picture of its molluscan populations. A second field meeting is planned for early October 2019.
2. More specific monitoring of selected areas to study successional changes as areas are 'rewilded' from former arable fields to a mix of dynamically changing secondary habitats.
3. Discussions are underway with the estate to initiate a mud snail *Omphiscola glabra* introduction programme. Historically the species has been recorded close to Knepp in temporary pools in the Low Weald but populations of the snail are believed to have declined here as in much of southern England. *O. glabra* reintroductions have successfully been undertaken elsewhere (MW 45: 15), sometime with 'award-winning' success! <https://www.buglife.org.uk/news-and-events/news/%E2%80%98marvellous-mud-snails%E2%80%99-a-buglife-project-wins-national-lottery-support-to-help>

Medmerry

The Medmerry managed coastal retreat area (lying between East Wittering and Selsey in West Sussex) offers an opportunity for long-term Conchological Society involvement. A baseline marine molluscan survey was undertaken in autumn 2018 (and is also the subject

of the talk to be given at the April 2019 AGM). It is hoped that in collaboration with the RSPB regular Society meetings will allow successional changes to be studied as this dynamic habitat develops over the years.

Exotic Mollusca living in zoological garden sites

In his role as Mollusc Recorder for the Bedfordshire Natural History Society (BNHS)

Peter Topley, together with others including Dave Guntrip, Alan Outen and Mark Telfer, have been involved in recording molluscs from synanthropic sites at the ZSL Whipsnade Zoo. Recent records from the Butterfly House have included the Streptaxid *Streptostele musaecola* (Morelet, 1860), the Sicilian slug *Deroceras panormitanum* (Lessona & Pollonera, 1882) s. str. and at least two other, still unidentified, species. Further recording is continuing on an occasional basis throughout the grounds. A similar project is also planned at ZSL London Zoo, organised through Paul Pearce-Kelly (Senior Curator of Invertebrates, Lower Vertebrates and Research at ZSL) with some promising initial records already obtained.

***Ena montana* – what’s happening to this snail?**

Several other projects are currently in the development phase one of which, a suggestion by Keith Alexander, concerns the Mountain Bulin, *Ena montana*. This snail has a scattered distribution across southern England with a fragmented distribution running from the Mendips to east Suffolk with a stronghold in the Cotswolds and a cluster of populations on the South Downs and Chilterns. *E. montana* is mostly found living in old deciduous woodland but, can occur in hedgerows and even roadside ditches. The most recent British non-marine molluscan status review (Seddon *et al* 2014) assesses the snail as ‘Near Threatened’ and notes ... “believed to be in slow decline with changes in land management close to meeting the criteria for ‘Vulnerable’.” The continued presence of the snail at many historic sites has not been confirmed for many years. A study of the current status of this species would make an ideal and valuable Society conservation project. If this gets underway it will also establish the current existence at many sites but may also allow studies of the ecology of this rather elusive snail.

9. BRITISH WILDLIFE

Three molluscan ‘Wildlife Reports’ were published during 2018 (*British Wildlife* **29:3** 216 – 218; **29:5** 372 – 374 and **30:1** 58 - 60). As in previous years these were able to cover a range of molluscan news, issues and discussions, partly drawing upon and discussing the Society’s non-marine and marine reports as well as a selection of reports and papers from *Mollusc World* and *The Journal of Conchology*.

10. FURTHER eDNA WORK WITH *ANISUS VORTICULUS*

Work on this project initially described in earlier reports (MW **45**: 25 – 26; **47**: 28). Work continued in 2018 with the field eDNA water testing of samples taken from Hooe Levels (Pevensy) ditches selected using 2018 surveys results. The outcomes of the tests are ongoing into 2019 and a summary of results will appear in a future *Mollusc World*.

11. ASSOCIATIONS WITH OTHER ORGANISATIONS

The Conchological Society has active associations with many other conservation organisations.

The main ones are **Buglife, Invertebrate Link*** (to which an annual report was sent in November 2018 consisting of an amalgamation of the two census recorders' reports and that of the Conservation Officer), and the **Wildlife Trusts** (by way of membership of the Conservation Committee of the Sussex Wildlife Trust). In relation to the Trust's Biological Records Centre I include an annual report to **Adastra**, the annual review of wildlife recording in the county (www.sxbrc.org.uk). For 2018 this included news of (1) news of the discovery of *Cipangopaludina chinensis* (Gray, 1833), an invasive new to the UK found in a Sussex ditch, (2) publicity for the *Brought to the Surface ... a new beginning to freshwater snail identification*", (3) awareness raising for Asian Date Mussel *Arcuatula senhousia* (4) the possible presence of *Hydrobia acuta neglecta*, (5) mention of the Medmerry marine molluscan survey and (6) updates on *Anisus vorticulus* surveys in the County and progress on the eDNA initiative.

Additionally, the Conservation Officer is a member of the Arun & Rother Rivers Trust (ARRT); this provides numerous opportunities to become involved in river catchment discussions where molluscan assessments and conservation issues are of relevance.

* Invertebrate Link: further information @ <https://www.royensoc.co.uk/invertebrate-links/>

In 2018 fellow Council member Mags Cousins generously accepted a role as Conservation Officer 'support colleague'; I thank her for her interest in the Society's conservation work and for her help and support.

References:

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Coles, B., & Colville, B. 1980. A glacial relict mollusc. *Nature*, **286**: 761.

Seddon, M.B., Killeen, I.J. & Fowles, A.P. 2014. A Review of the Non-marine Mollusca of Great Britain: Species Status No. 17. *NRW Evidence Report No. 14*. Natural Resources Wales.

M.J. Willing (March 2019)

Illustration options to accompany report:

1. A shot of *Vertigo modesta* habitat;
2. A shot of *Helicella virgata* and habitat;
3. *Mercuria similis* plus habitat on the Arun;

4. An aerial view of Coul Links;
5. A shot of a drawer of shells from the Ed Bishop collection;
6. A shot of Barry Colville;
7. A view of High Park, Blenheim;
8. A shot of Medmerry.