Non-Marine Recorder's report 2023

Ben Rowson

The year 2023 was another very warm year in Britain and Ireland, and was the warmest year on record in Wales and Northern Ireland (Met Office). The UK also experienced its highest *minimum* temperature on record, cold being an important factor in limiting the range of many molluscs. The year was also wetter than average in most parts of the UK other than western Scotland. The Society once again dealt with a very large number of new records from recent fieldwork, as well as from older sources.

All the data from the last two years (2021 and 2022) was submitted to the UK NBN (National Biodiversity Network) in April, and in October appeared online after a series of infrastructure upgrades to the NBN Atlas. This data includes many species for which none of our records was previously available on the NBN (e.g. *Helix lucorum*). We join many other recording schemes in thanking Sophia Ratcliffe, the outgoing NBN Atlas Data Manager, for all her hard work and wish her replacement, Will Millard, all the best.

A talk on the history of the Society's non-marine recording was given at the annual NBN conference in November (which was held at the National Museums of Scotland, Edinburgh). A meeting of the Conservation and Recording Forum was held in Reading. The Society's dataset is currently still held in Recorder 6. A new laptop has been bought on which to install the updated version when the data can be migrated.

New data received

In 2023, over 19,300 new records were readied for import into the Society's database, representing around 200 species and over 60 vice-counties (VCs): 5100 (26%) of these were submitted directly, with 6300 (33%) via iRecord and 7900 (41%) via iNaturalist in iRecord. Once again, I thank Chris du Feu for verifying the majority of the slug records on iRecord and for discussions about some of the more interesting ones.

Thank you to everyone who submitted records. Especially large individual contributions were made by David Adams, Keith Alexander, Joss Carr, Mags Cousins, Terry Crawford, Chris du Feu, Africa Gomez, Rosemary Hill, Bob Merritt, Dave Nicholls, Rob and Linda Nottage, Peter Tattersfield, Peter Topley, Clive Walton, Tony Wardhaugh (who has now taken over from Adrian Norris as Yorkshire coordinator) and Derek Whiteley.

In particular Adrian Sumner made a marvellous effort to extract over 1900 records, mainly from south-eastern Scotland, from the collections held at the National Museums of Scotland, Edinburgh. The extent to which records based on older museum specimens are featured in recording schemes varies enormously, and this can be an excellent way for volunteers like Adrian to contribute. For my part, I have added approximately 300 records of scarce species held in the collections at the National Museum Cardiff (this data has been available online via a Museum website since 2011, but it has not previously been converted into biological records).

New vice-county records

A total of 68 new VC records were recognised for the census this year, as listed below. Records received via iRecord are marked with *, and those from iNaturalist with **. The list includes a few new census records that were previously unrecognised in the dataset, marked with|.

West Cornwall with Scilly (VC1): *Allopeas clavulinum*, Eden Project (hothouse), 4/4/2014, T. Walker; *Striosubulina striatella* (same details).

East Cornwall (VC2): *Selenochlamys ysbryda*, Sladesbridge, 3/2/2023, P. Floyd-Spong*.

South Devon (VC3): *Allopeas clavulinum*, Paignton Zoo (hothouse), 17/6/2016, T. Walker.

Isle of Wight (VC10): *Melanoides tuberculata*, Ventnor Botanical Gardens (hothouse), 21/9/2022, T. Walker; *Planorbella* cf. *duryi* (same details).

South Hampshire (VC11): *Melanoides tuberculata*, Staunton Country Park (hothouse), 28/1/2015, T. Walker; *Planorbella* cf. *duryi; Radix rubiginosa*; *Striosubulina striatella* (all same details).

West Sussex (VC13): *Cochlicella barbara*, Knepp Walled Garden, 17/4/2023, G. Lyons.

West Kent (VC16): *Hawaiia minuscula*, Hall Place Gardens, Bexley (hothouse), 20/6/2022, T. Walker.

Surrey (VC17): *Melanoides tuberculata*, Kew Gardens (hothouse), 10/10/2014, T. Walker; *Planorbella* cf. *duryi* (same details but 20/10/2023); *Afropunctum seminum*, Kew Gardens (hothouse), 6/3/1993, D. Guntrip (see Verdcourt 1993).

South Essex (VC18): *Helix lucorum*, Woodford Green (pavement in residential area), 23/7/2023, C. Nahaboo.

Oxfordshire (VC23): *Melanoides tuberculata*, Oxford Botanic Gardens (hothouse), 19/7/2014, T. Walker; *Planorbella* cf. *duryi* (same details*); Radix rubiginosa*; *Striosubulina striatella* (same details but 1/10/2014).

Cambridgeshire (VC29): *Striosubulina striatella,* Cambridge Botanical Gardens (hothouse), 13/6/2014, T. Walker.

Bedfordshire (VC30): *Deroceras panormitanum* s. str., Whipsnade Zoo, 5/9/2017, P. Topley (conf. by dissection); *Afropunctum seminium*, Whipsnade Zoo (hothouse), 5/5/2017, D. Guntrip; *Streptostele musaecola,* Whipsnade Zoo (hothouse), 5/9/2017, P. Topley; *Melanoides tuberculata*, Whipsnade Zoo (hothouse), 14/7/2022, T. Walker; *Planorbella* cf. *duryi; Radix rubiginosa*; *Striosubulina striatella* (same details).

West Gloucestershire (VC34): *Planorbella* cf. *duryi,* Bristol Botanic Gardens (hothouse), 16/10/2014, T. Walker; *Radix rubiginosa* (same details).

Worcestershire (VC37): *Physella gyrina*, Waseley Hills Country Park, 20/7/2023, K. Galbraith*.

Glamorgan (VC41): *Abida secale*, Porthkerry, 1915, F.W. Proger|; *Subulina octona*, Plantasia, Swansea (hothouse), 9/8/2015, T. Walker; *Hawaiia minuscula*, Duffryn Gardens (hothouse) 17/2/2023, C. Owen & L. Olds; *Zonitoides arboreus* (same details).

Carmarthenshire (VC44): *Selenochlamys ysbryda*, Ferryside, 2/2/2023, V. Haines*.

Pembrokeshire (VC45): *Selenochlamys ysbryda*, Templeton, Narberth, 20/10/2023, K. Greigworth.

Cardiganshire (VC46): *Selenochlamys ysbryda*, Bryngwyn, Newcastle Emlyn, 19/5/2023, M. Grimleigh.

Caernarvonshire (VC49): *Melanoides tuberculata*, Treborth Botanic Gardens (hothouse), 27/9/2017, T. Walker.

Leicestershire (VC55): *Dreissena rostriformis bugensis*, Rutland Water, 30/7/2022, R. Proudfoot**.

Nottinghamshire (VC56): *Ambigolimax parvipenis*, Upper Saxondale, 31/7/2023, C. Cooper*; *Helix lucorum*, Edwalton (hedgerow in residential area), 5/8/2023, C. Rochelle.

Derbyshire (VC57): *Selenochlamys ysbryda*, Wingerworth, Chesterfield, 20/10/2023, D. Harris.

Cheshire (VC58): *Ambigolimax parvipenis*, Tatton Park, 17/8/2018, T. Walker; *Allopeas clavulinum*, Chester Zoo (hothouse), 16/8/2018, T. Walker; *Striosubulina striatella* (same details).

figure 1: *Helix lucorum* along a fence in Hoddesdon, Hertfordshire (VC20). (photo: Maurice Pledger)

South-east Yorkshire (VC61): *Helix lucorum*, Cottingham (domestic garden), 19/4/2023, 'bahini'**; *Hawaiia minuscula,* Bishop Burton Botanic Garden (hothouse), 25/9/2021, T. Walker.
South-west Yorkshire (VC63): *Hawaiia minuscula,* Anston Butterfly House (hothouse), 11/3/2019, T. Walker.
Mid-west Yorkshire (VC64): *Melanoides tuberculata*, Leeds Tropical World (hothouse), 6/9/2018, T. Walker.
South Northumberland (VC67): *Hygromia cinctella*, Gosforth, 31/10/2023, C. Barlow*; *Physella acuta*, Annitsford, 30/5/2008, A. Norris|.
North Northumberland (VC68): *Hygromia cinctella*, Willowburn Trading Estate, Alnwick, 25/6/2023, A.T. Sumner; *Balea heydeni*, Prior's Lodging, Lindisfarne, 25/10/2023, P. Topley.
Westmorland with Furness (VC69): *Helix lucorum*, Ambleside (car park by industrial unit), 9/7/2023, 'pbuchwald'**.
Dumfriesshire (VC72): *Bithynia leachii*, Castle Loch, Lochmaben, 29/8/2018, R. Meritt|; *Aplexa hypnorum*, Downs Moss, Heathhall, 20/6/2016, R. Merritt|; *Sphaerium lacustre*, Loch Ettrick, Forest of Ae, 3/11/2015, R. Merritt|.
Kirkcudbrightshire (VC73): *Physella acuta*, Lauriston Road, Gatehouse of Fleet, 1/4/2022, J. Logan|; *Bithynia leachii*, Lochrutton Loch, Lockfoot, 6/6/2016, R. Merritt.
Wigtownshire (VC74): *Lymnaea stagnalis*, Crook of Baldoon RSPB, 7/8/2018, R. Merritt|.
Roxburghshire (VC80): *Physella acuta*, Tandlaw Moss, Hawick, 7/7/2019, R. Merritt.
Midlothian (VC83): *Allopeas clavulinum*, Edinburgh Botanic Gardens (hothouse), 7/5/2016, T. Walker.
Aberdeenshire (VC92): *Hawaiia minuscula,* David Welch Winter Gardens (hothouse), 5/5/2016, T. Walker.
West Sutherland (VC108): *Balea heydeni*, Ardoe Croft, 27/6/2021, K.N. Alexander.
North Kerry (VCH2): *Theba pisana*, Inch dunes, 10/6/2018, R. Anderson|.
South Tipperary (VCH7): *Geomalacus maculosus*, Galtee Mountains, 30/10/2020, M. Curtin.
Antrim (VCH39): *Hawaiia minuscula*, Belfast Botanic Gardens (hothouse), 19/9/2017, T. Walker.
Londonderry (VCH40): *Dreissena polymorpha*, Magherafelt, 5/3/2023, M.K. Dapifer**.

It was a remarkable year for two heavyweight alien molluscs: the Turkish escargot, *Helix lucorum*, and ghost slug, *Selenochlamys ysbryda*. New sites are found in most years, but 2023 saw four new VC records for each, a more significant spread. For *H. lucorum* this may be partly due to publicity for *Helix pomatia* in Martin Willing's web article for the RHS in 2023. However, it may also be that the spread of these species is accelerating as source populations grow. Some *H. lucorum* populations, such as that in Hoddesdon, Hertfordshire (VC20), are now very large (figure 1). The four new VC records all come from urban habitats, from South Essex (VC18) to Westmorland (VC69). Whether *H. lucorum* will proliferate in northern Britain is uncertain; on the continent, *H. pomatia* naturally occurs much further north than *H. lucorum*.

The new VC records for *S. ysbryda*, as far apart as East Cornwall (VC2) and Derbyshire (VC57), are all from gardens or residential areas. In the autumn I was amazed to spot live *S. ysbryda* on the lawn beside the National Museum Cardiff, Glamorgan (VC41), a new population right outside my office! I have never released a specimen of this species, or seen it elsewhere in the city centre, so can only guess it was brought in while building hoardings were erected around the Museum in 2019–22, or afterwards when parts of the turf were relaid.

The record of the Kerry slug *Geomalacus maculosus* in South Tipperary (VCH7), at a clear-felled area in a conifer plantation (Curtin 2022) is likely to be a recent introduction like those in similar habitats in Co. Galway. A note on the *T. pisana* population in North Kerry (VCH2) was given by Anderson (2022).

2023 saw the first records of *Hygromia cinctella* in both North and South Northumberland (VC67 and VC68). Both records are from urban sites (figure 2) and it can be predicted to proliferate rapidly in Tyneside. This species has a habit of roosting on man-made objects and vehicles, making it a fast mover when not kept at bay by frost.

figure 2: *Hygromia cinctella* in Gosforth, South Northumberland (VC67). (photo: Chris Barlow, via iRecord; CC-BY-NC)

The find of *Cochlicella barbara* (figure 3) living in a walled garden at Knepp, West Sussex (VC13), is unusual given the distance inland and from other sites. Its recorder, Graham Lyons, suggested it arrived with Mediterranean plants. While still very scattered, a recent study suggests that *C. barbara* has been present in Britain since the 1930s and possibly much longer (Walker 2023). Its spread has been remarkably slow compared to some other helicids.

figure 3: *Cochlicella barbara* from Knepp Walled Garden, West Sussex (VC13). (photo: Graeme Lyons)

The iNaturalist record of quagga mussel, *Dreissena rostriformis bugensis*, in Rutland Water, Leicestershire (VC55), is the first precise record we have had from the East Midlands, a new region for this species. I thank Martin Willing for helping to confirm it from the photograph. A press release that I had not previously seen (Environment Agency 2020) had announced the appearance of *D. r. bugensis* in Rutland Water and also in the River Trent at Newton-on-Trent, North Lincolnshire (VC54). The commoner zebra mussel, *D. polymorpha*, has long been present in the Trent but appears to have been recorded in Rutland Water only since 1989. Precise details of these or other new *Dreissena* populations are worth reporting.

Hothouse species and adventives

Nearly half (35) of the new VC records in 2023 result from Tom Walker's intrepid set of visits to hothouses throughout Britain and Ireland over the last ten years. During his visits, During his visits, Tom discovered at least one hothouse species new to the British and Irish list, the details of which will be published soon. Meanwhile, Dave Guntrip recently discovered *Oxychilus translucidus* in Whipsnade, Bedfordshire (VC30) (see Guntrip & Rowson, 2024). Dave's records of another hothouse species, *Afropunctum seminium*, at Whipsnade (VC30) and much earlier at Kew in Surrey (VC17; see Verdcourt, 1993) have also been added to the dataset..

Adventive species continue to appear in the wild. Alarmingly, the pink eggs of an ampullariid apple snail (*Pomacea* sp., possibly *P. bridgesii*) were noted in West Lothian (VC84) by Bronwen Winter, a Countryside Ranger for the council. Martin Willing confirmed the identification as *Pomacea* sp. and SEPA (Scottish Environment Protection Agency) and Buglife have both been informed, with plans to revisit the site in the spring. While unlikely to survive in Britain or Ireland, apple snails are serious pests in tropical countries. The snail laying the eggs was almost certainly released from captivity, the ban on Ampullariidae in the UK aquarium trade having been lifted in 2021.

A live individual of the West African giant snail, *Archachatina marginata*, was reported from Dalston,

Middlesex (VC21), by Joan Oakley, and is believed to be an escapee from a food market in Hackney. A living *Eobania* (or *Otala*) was found in a nursery in Blackburn, South Lancashire (VC59), by Charlie Hart but has not been identified. A 2023 iRecord observation of *Allopeas gracile* from Polaris House, Swindon, North Wiltshire (VC7), by J. Holbourn requires more details; it may be adventive but could conceivably survive in a sheltered garden outdoors.

On iNaturalist, *Rumina decollata* was reported in a salad purchased in Hertfordshire (VC20) by 'shirley63' and shells of *Melanoides tuberculata* were found on an outdoor lawn on the Isle of Wight (VC10) by D.J. King. It is interesting to note that iNaturalist appears to have suggested the names *Fruticicola fruticum* and *Bradybaena similaris* for some live snails recently photographed in southern England. These records appear to concern *Cepaea* or *Monacha* species, but *F. fruticum* was once established in Kent around 100 years ago but is now extinct (Kerney 1999). *Bradybaena similaris*, the so-called 'Asian trampsnail' was listed as one of the species likely to establish in the UK in future in the DEFRA report by Cavadino (2022), as were *Pomacea* species and several hothouse molluscs. On a similar subject, Hausdorf (2023) recently reviewed those alien molluscs in Europe whose origins lie outside the Western Palaearctic, and this is a useful reference work.

Other noteworthy records

A very interesting find (although not a new VC record) was that of *Segmentina nitida* in a lake at Oakmere, Cheshire (VC58), by Lucy Pocock. Reported on iNaturalist and iRecord, the finding was of several empty shells obtained by kick sampling, which Lucy took to check at the World Museum, Liverpool. There are old records of *S. nitida* from Cheshire, and in our recent book on freshwater snails (Rowson *et al*. 2021) we listed a more recent find in Tatton Park (also VC58) as requiring confirmation. Any living populations of *S. nitida* in north-west England would be of conservation significance, given the widespread decline of this species in the last century.

In Kent, an eDNA technique has recently been trialled for *S. nitida* (Rees *et al*. 2023b), as has one for *Cipangopaludina chinensis* (Rees *et al*. 2023a). Unfortunately the spread of the latter was again confirmed in 2023. Two additional sites for *C. chinensis* were identified at rural fishing lakes in South Hampshire (VC11) by Gavin Measures of the Environment Agency. A full risk assessment for *C. chinensis* produced by Martin Willing has been published on the GB Non-native Species Secretariat website (Willing 2024). It concludes that the long-term potential for future spread in Britain is considerable.

Other noteworthy records include a sinistral *Cernuella virgata* from North Devon (VC4) by Adrian Brokenshire. Confirmation was received from David Adams that *Trochoidea elegans* still thrives at Denton, East Sussex (VC14), and Will Watson found the under-recorded *Sphaerium rivicola* at Clevelode, Worcestershire (VC37). Adrian Sumner has compiled a history of all the molluscs found since the 19th century at Duddingston Loch in Midlothian (VC83) (Sumner 2023).

Changes to species names

There have been a few recent changes to species names which affect recording of the British and Irish fauna. The full implementation of these in the UK Species Inventory, Recorder 6, the NBN, NBDC (National Biodiversity Data Centre), iRecord and iNaturalist takes some time, as does the publication of a revised checklist. Briefly, these are:

- The morphology and genetics of large Arion species (the *'Arion ater* agg.*'*) were dealt with in exhaustive taxonomic detail by Reise *et al*. (2020), with particular attention paid to hybridisation. The resulting status changes relate to five taxa in our fauna (although it appears they have not yet been implemented in MolluscaBase [2024]). The two most widespread taxa once again become the subspecies *Arion ater ater* (Linnaeus, 1758) and *Arion ater rufus* (Linnaeus, 1758). The name of the invasive *Arion vulgaris* Moquin-Tandon, 1855 remains unchanged. The continental taxon referred to as *Arion* sp. cf. *empiricorum* by Rowson *et al*. (2014) and earlier authors should now be called *Arion ater ruber* (Garsault, 1764). This subspecies, often brick red in colour, has only been confirmed once in Britain, by Rowson *et al*. (2014) from a cemetery in central London. The more widespread English taxon known as *Arion* sp. cf. *vulgaris* in Rowson *et al*. (2014) and as *Arion* sp. 'Davies' in the subsequent FSC book, still awaits a formal description and name.

- I thank Ian Killeen for pointing out that *Euglesa hibernica* (Westerlund, 1894) is now considered a junior synonym of *Euglesa parvula* (Westerlund, 1893) by MolluscaBase (2024). MolluscaBase does not yet link to an original source for this synonymy, but to the MUSSELp database (Graf & Cummings 2019) which provides two references I have not yet been able to obtain.

- While *Gyraulus laevis* (Alder, 1838) is certainly native to Britain and Europe, the morphologically very similar *G. parvus* (Say, 1817) was until recently considered to be an invasive counterpart from North America. A genetic comparison between the two has found that they are so closely related as to be conspecific, with the older name *G. parvus* having priority (Lorencová *et al*. 2021).

- Populations of *Mercuria anatina* (Poiret, 1801) sequenced from southern England were found by Miller *et al*. (2023) to belong to a western clade they identify as *Mercuria tachoensis* (Frauenfeld, 1865). The authors did not study any *M. anatina* from its type locality near Paris, which may no longer exist. If *M. anatina* and *M. tachoensis* are found to be conspecific, Poiret's name has priority. In the meantime, populations of *Mercuria* from Britain and Ireland may be referred to as *M. tachoensis*.

MolluscaBase (2024) is increasingly accepted as the foremost classification of world Mollusca, with which national checklists should agree, unless there is good evidence to the contrary. Members aware of any other name changes concerning the non-marine fauna are encouraged to let me know.

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