Marine Recorder's Report 2022 *Simon Taylor*

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

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

Fig.1. *Babakina anadoni* (Ortea, 1979), Scilly (photograph by Allen Murray).

It can sometimes feel a bit of a cheat referring to the Channel Islands in these reports, being as they are so close to the French coast, although nature itself pays little heed to national boundaries. The

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

Fig.2. *Berghia coerulescens* (Laurillard, 1832), Jersey (photograph by Chris Isaacs).

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

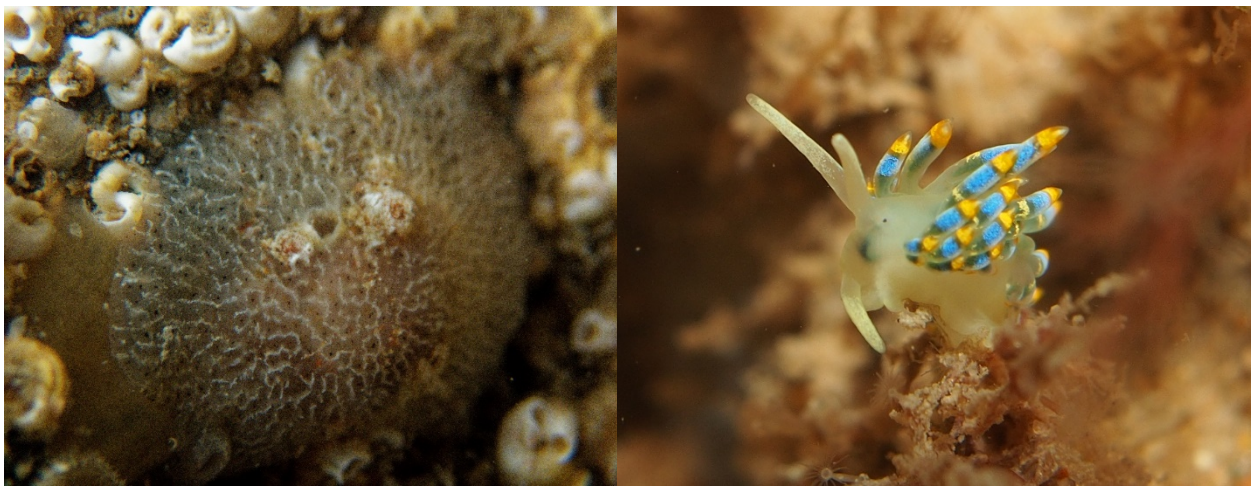

Fig. 3. Left, *Corambe testudinaria* Fischer, 1889, Trevone, Cornwall (photograph by Charlotte Cumming). **Fig.4.** Right, *Trinchesia cuanensis* (Korshunova et al., 2019), Iron Road, North Norfolk (photograph by Dawn Watson).

Cadlina pellucida (Risso, 1826), another dorid nudibranch, was first recorded for Britain by David Kipling in 2012 (Taylor, 2014). While not brightly coloured it has an attractive appearance with an ivory white body contrasted by dark smut-brown rhinophores and gill. Records have trickled in ever since, always from south-west England and always from divers, usually observed in August or September. Eddie Rickard's 2022 sighting of the species in March, on the Coronation wreck off Plymouth, was therefore notable and prompted something of an audit of observations of the species (the Society holds 9 records in its dataset).

Other notable nudibranch records in 2022 include:

- *Calma gobioophaga* Calado & Urgorri, 2002. Originally recorded for Britain by David Fenwick in Hayle, Cornwall in 2013 (Fenwick, 2014) this species has been cropping up in a few places, even as far north as Skye. It was photographed in April 2022 by Steve Trewhella on the east side of Kimmeridge Bay, certainly its easternmost record along the coast of southern England.
- *Trinchesia cuanensis* Korshunova, Picton, Furfaro, Mariottini, Pontes, Prkić, Fletcher, Malmberg, Lundin & Martynov, 2019. Split, along with 2 other non-UK species, from *Trinchesia caerulea* (Montagu, 1804) as a result of a molecular study, this slug is relatively easy to determine from the latter, especially with good quality photography. Its type locality is Strangford Lough and it has also been recorded, often by reviewing old underwater photographs, from sites off Scotland and Wales but had not been recorded from England until September 2022 when avid Seasearcher Dawn Watson photographed a specimen off the North Norfolk coast (Fig.4). It is very unusual for a first English record of any mollusc (other than perhaps an invasive non-native species) to be from the North Sea.
- *Trinchesia genovae* (O'Donoghue, 1926). A small and poorly recorded species, known from the west of Ireland but more common to the south and into the Mediterranean. Found by Steve Trewhella on a pontoon in Portland Harbour in December, the first time I have known it to be found in Britain.
- *Pruvotfolia pselliotes* (Labbé, 1923). Another warmer water species at the northern limits of its range in the southern British Isles, it was also recorded by Nicolas Jouault and Chris Isaacs from Les Écréhous and Jersey respectively.
- *Discodoris rosi* Ortea, 1979. A delightfully named and pretty little species, again at its northern limit in SW England. Lucy Martin photographed a specimen on 25th September off Stoke Point, SW Devon, suggesting the species is gradually colonising eastwards.
- *Thecacera pennigera* (Montagu, 1815). An attractive species, familiar to many as the subject of one of the series of postcards produced by the Society back in the 1980s. While not terribly

rare, there are few records from the North Sea; that number was increased by an observation made in Brightlingsea Creek, Essex, by Roger Tabor.

There was some range expansion news on the shelled gastropod front too. Of our two widespread species of the trochid genus *Steromphala*, only *S. cineraria* (L., 1767) is universal. *S. umbilicalis* (da Costa, 1778), while common on many shores, is absent from the North Sea (unfortunately there are several, frankly, incorrect North Sea records of the species shown on the NBN Atlas, from datasets other than this Society's). Specimens can be found sporadically in Orkney but no further around Duncansby Head, while in the south they were recorded as restricted to no further east than Beachy Head (Seaward, 1990). Since then, the species has crept further east and by the beginning of the century was recorded from southern Kent and then round to the north Kent coast as far as Whitstable. Very late in 2021, specimens (Fig.5) were found for the first time on the northern side of the Thames estuary, in fact quite some distance up the Essex coast at Colne Point (Taylor, 2023 forthcoming). While this continued expansion into the North Sea from the south seems to merely demonstrate a progression of the pattern followed over the last two decades around the Kent coast, it represents quite a geographical leap. The most likely explanation is climate change (Mieszkowska et al., 2006) but in such examples a key factor can be minimum winter water temperature and December 2022 has already proved to be considerably colder than any time in at least the previous two winters, in the south-east anyway. The presence - or otherwise – of *S. umbilicalis* in East Anglia will remain under scrutiny.

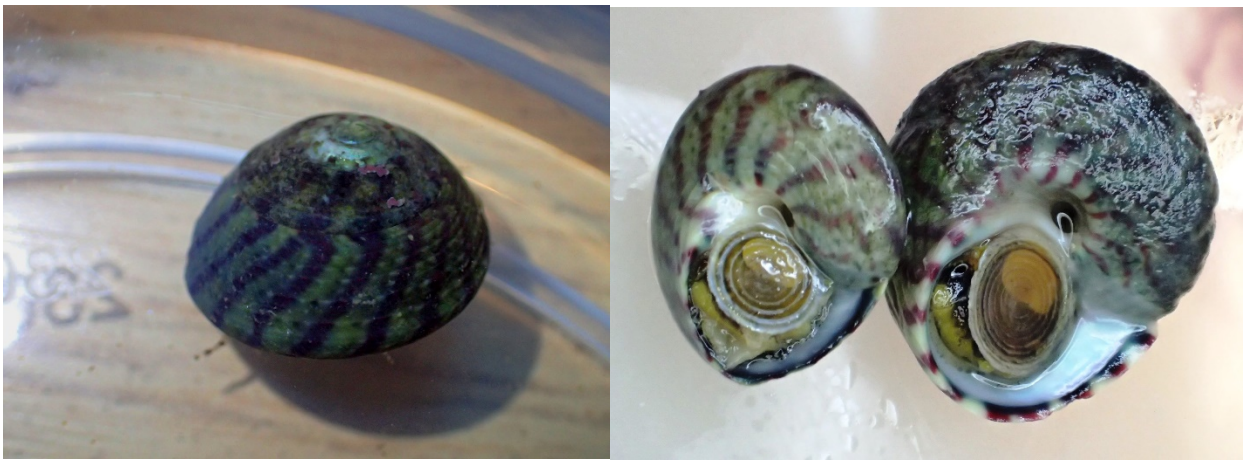

Fig.5. *Steromphala umbilicalis* (da Costa, 1778), specimens from Colne Point, Essex (photographs by the author).

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

Further trochid-related excitement was prompted by Adrian Brokenshire microscopically examining some Hebridean offshore samples dredged in 2018/19 and provided by David McKay. Within the species lists generated were several notes of a mystery trochid which defied determination. Adrian sent the specimens to me and the immediate impression was they were a *Solariella,* but most unlike

the *S. amabilis* (Jeffreys, 1865) occasionally encountered in the NE Atlantic. Images of the best specimen (Fig.6), with a diameter of 2.4mm, were shared with Suzanne Williams at the BMNH (who has worked on *Solariella* and indeed delivered a lecture to the Society on the subject in the past) with a tentative determination of *S. obscura* (Couthouy, 1838) based on Warén (1989). Suzanne supported this suggestion, citing a more recent Russian study of the species (Krol & Nekhaev, 2018) in which the specimens most resemble the depiction of *S. obscura* var. *bella* (Verkrüzen, 1875). The four specimens Adrian sorted from the various samples are the first he, I, David or Suzanne have seen from British or Irish waters; all four were just empty shells, although two appeared relatively fresh, so the hunt continues for live material.

Fig.6. *Solariella obscura* (Couthouy, 1838) var. *bella* (Verkrüzen, 1875), Loch Snizort, Skye, Hebrides. (photographs by the author).

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

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

Cephalopod news was thin on the ground in 2022 too, although a stormy autumn produced a few reports of strandings of the cuttlebones of the two less frequently encountered species: *Sepia orbignyana* Férussac, 1826 and *Sepia elegans* Blainville, 1827. South coast strandliner and regular

recorder Stephen Green found numerous specimens amongst wrecks of *Sepia officinalis* L., 1758, allowing useful comparisons to be drawn.

Fig.7. *Janthina janthina* (L., 1758), stranded on Oronsay, Hebrides, Scotland.
(photographs by Amy Millard)

iRecord & iNaturalist

It is now 10 years since I was elected as the Society's Marine Recorder. There have been some significant changes in that period, easily the greatest of which is the emergence of online reporting facilities – primarily iRecord and iNaturalist – as by far the principal means by which the Society receives species observation records. In many cases those who report their findings do not do so specifically with the intention of providing the information to the Society, but we provide a mechanism by which the species determination and some other aspects of the record can be verified and, if deemed correct, then openly shared via the NBN Atlas. For the Society's marine recording scheme, the majority of verifications are performed by Ian Smith, to whom I am very grateful. If there is any query over a species identification then Ian and I will often attempt to direct the recorder towards a reference through which they may be able to reassess their opinion, rather than simply telling them they are wrong, or redetermining the observation ourselves without explanation. Providing such feedback helps not only to educate recorders but encourages them and hopefully recruits them to provide more data. Incidentally, Ian continues to publish his excellent species accounts openly online through ResearchGate at https://www.researchgate.net/profile/Ian-Smith-40/research).

Although this verification process can be time consuming and, of course, involves lots of records of the commoner species, it has undoubtedly increased the volume of marine records being added to the Society's dataset. There are some issues which have to be overcome, particularly the central necessity of having to verify species determinations just from photographs, which can be far more difficult than one would initially imagine, especially if the recorder is inexperienced and is perhaps not aware of key features which need to be seen to facilitate determination. Another consideration arises

from the “Four Ws” theory of biological recording, which states a record must consist of: Who (the recorder); What (the species); When it was recorded; and Where. Many people use online recording facilities under a pseudonym or username, which poses the question of whether the “Who” aspect is satisfied; if future workers wish to investigate details of a record then they would need to know the true identify of the recorder involved. The recorder could, in theory, be contacted via the username involved but these details often change with time so efforts are being made to build a list of actual names which can be linked to usernames.

Other Data Sources

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

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

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

Field Work

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

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

Vagrants and Adventives

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

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

- Late in 2021, Adrian Brokenshire found a well-preserved shell of the Indo-Pacific naticid *Paratectonatica tigrina* (Röding, 1798) on the shore at Bigbury, South Devon.

- In May 2022, the Society was contacted by the Marine Biological Association regarding a *Haliotis* shell which had been found during a bioblitz at Wembury in SW Devon in 2019. With ormers (*H. tuberculata tuberculata* L., 1758) present on the other side of the English Channel, plus occasional attempts to farm *Haliotis* in Britain and Ireland, such finds often prompt excitement that ormers may have colonised from across the Channel, or that escaped/discarded farm stock may have naturalised. The photographs provided (Fig.7) indicated the specimen was not an ormer and was more likely a small (28mm) *H. discus* Reeve, 1846 or *H. diversicolor* Reeve, 1846, both Asian species. Both are also farmed for food and occasionally sold in this country, usually with the shell, but 28mm is too small for such an origin, hence the source remains a mystery.
- Perhaps most mysterious of all, a large and fresh-looking shell of the Caribbean 'King Helmet' *Cassis tuberosa* (L., 1758) was trawled up from 20 - 25 fathoms by the fishing vessel 'Star of Jura' in the Tiree Passage, off Jura in the Hebrides at 56°37.1'N 006°24.8'W (Fig.9).

Fig.8. Left, *Haliotis* ?*discus* Reeve, 1846, Wembury, SW Devon (photograph by Jack Sewell, MBA).
Fig.9. Right, Cassis tuberosa (L., 1758), trawled, Tiree Passage, Hebrides, Scotland (photograph by 'Kenny', skipper of 'Star of Jura').

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