

One of the highlights of 2022 was the first British report of the colourful nudibranch *Berghia coerulescens* (Laurillard, 1832). As is sometimes the case, though, this British first was a little bit of a 'cheat' as it was an observation made in the Channel Islands, a possession of the British Crown but topographically and biogeographically much more closely associated to mainland Europe and further south even than the Isles of Scilly. Including on the British & Irish list species found only in the Channel Islands always feels somewhat awkward but thanks to David Roberts and Matt Slater this no longer concerns *B. coerulescens*. David observed and filmed the species while diving off Porthkerris in Cornwall in June 2023; video footage can be seen on Facebook (Slater, 2023).

The finders of the Channel Islands *B. coerulescens* continued to report more sightings in 2023. One of their number, Nicolas Jouault, also discovered specimens of the rare nudibranch *Atagema gibba* Pruvot-Fol, 1951 at the Les Écréhous site off Jersey (Jouault, 2023). This has been seen in Sark before, and its range extends north as far as the extreme south-west of Britain, but observations are few. Nicolas also made further observations of *Pruvotfolia pselliotes* (Labbé, 1923) in association with the *A. gibba*, and added several additional sightings of *B. coerulescens*.

There was another nudibranch added to the British & Irish list in 2023, namely *Doris verrucosa* L., 1758 (Fig.2). Again it was found in the Channel Islands, with observations made around Jersey by Peter Mark Crowther, Eleanor Amy and Lou Wagstaffe, who also recorded *Rostanga rubra* (Risso, 1818) and the enigmatic *Onchidella celtica* (Audouin & Milne-Edwards, 1832) (Wagstaffe, 2023). The species was also, however, seen by Jenny Mallison in Southampton Water, the inlet of the Solent leading to the port (Fig.1). The animal can grow large, up to 70mm, is colourful and is covered dorsally in a mass of tubercles of varying sizes, hence it is difficult to imagine it has been long overlooked on the south coast. It is common further south from the Bay of Biscay into the western Mediterranean so this must surely represent a northern range extension.



Fig.1. *Doris verrucosa* L., 1758, Southampton Water (photograph by Jenny Mallinson).

Another significant 2023 development on the nudibranch front was not a species observation but the long-awaited publication by Bernard Picton and Christine Morrow of the successor to their classic, and indeed now quite rare and collectible, *A Field Guide to the Nudibranchs of the British Isles* (Picton & Morrow, 1994). The new, much updated and expanded volume (Picton & Morrow, 2023) (Fig.32) adds all the new nudibranch species to have been found in or colonised the area in the intervening 29 years, as well as adding those which have been revealed to exist through molecular studies which have split what were previously considered single species, or in some cases confirmed suspicions that certain taxa were 'cryptic'. In most cases each species is now covered over a two-page spread and illustrated by multiple photographs, often including spawn and food source (many species having characteristic spawn and being very host/prey-specific). Also included are several of the non-nudibranch opisthobranchs, although this coverage is far less comprehensive than that of the book's core subject. It is recommended to anybody with an interest in the marine fauna of the north-east Atlantic.

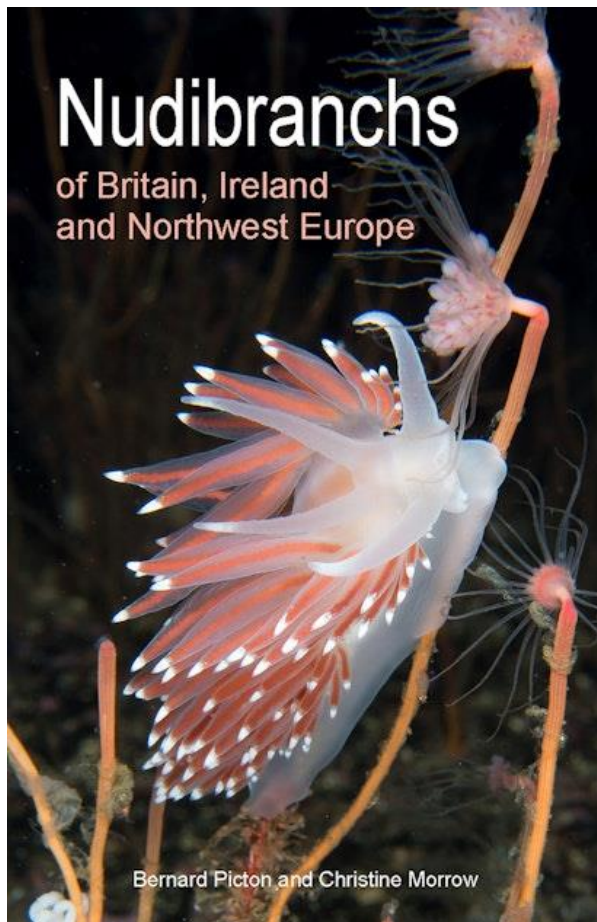


Fig.2. The cover of the excellent new volume by Bernard Picton & Christine Morrow, a worthy successor to their previous 1994 field guide (Princeton University Press).

The earlier and latter parts of 2023 saw several westerly and south-westerly storms in the Atlantic. Whether such a storm will transport significant amounts of flotsam debris across the ocean, and with it a number of rafting organisms, appears unpredictable but all events tend to prompt interest by beachcombers. There were reports this year of the rare pelagic nudibranch *Fiona pinnata* (Eschscholtz, 1831): five individuals, plus spawn, from a clump of goose barnacles washed up on St. Mary's, Scilly (Fig.3, reported by Scott Reid); another found by the prolific south coast worker Steve Trehwella on Chesil Beach amongst the bristles of a stranded plastic toilet brush! Steve also discovered specimens of the limpet *Eoacmaea pustulata* (Helbling, 1779) and the Rough Scallop *Lindapecten muscosus* (W. Wood, 1828), both inhabitants of the south-eastern U.S.A. and northern Caribbean, on an American bait pot on the shore at Worbarrow Bay, Dorset, in early November. Another transatlantic species reported in 2023, though evidently found in November 2022, was a new taxon for the list of rafters:

Pinna carnea Gmelin, 1791. Although primarily an infaunal species, it will occasionally byssally attach to buoys and the like, and this approx. 5cm juvenile was found by Nathan Chadwick of Bangor University on a Scotty Pot (crab fishing gear in the south-eastern U.S.A.) washed up on the shore near Criccieth, north Wales.



Fig.3. *Fiona pinnata* (Eschscholtz, 1831) amongst goose barnacles, St. Mary's, Scilly (photograph by Scott Reid).

Two further species were added to the British & Irish list in 2023, though neither was any great surprise. The Marine Recorder's report for 2019 (Taylor, 2020) noted the recent colonisation of Dutch waters by the opportunistic invasive mactrid bivalve *Mulinia lateralis* (Say, 1822), warning marine workers to keep an eye open for it here. We did not have to wait long; routine sampling from sites in the outer Thames estuary found one live specimen off Gravesend, Kent, in September 2021 and a further 4 at two sites off Canvey Island, Essex, in 2022 (Holmes et al., 2023). As yet there is no evidence that the population explosion experienced of the Netherlands will happen here but it remains a possibility. Fortunately the sites at which the species was recorded are monitored annually. All marine/brackish workers are advised to check carefully any samples containing mactrids, in particular any with *Spisula subtruncata* (da Costa, 1778) with which both UK and Dutch *M. lateralis* records have been associated.

The next new species is, refreshingly, not a non-native invasive, though one could argue that strictly speaking it is not 'new' either. There has long been confusion associated with the polyplacophoran genus *Acanthochitona* in the north-east Atlantic. In recent years the generally accepted position has been that of two species – *A. fascicularis* (L., 1767) and *A. crinita* (Pennant, 1777) – but there has been niggling confusion surrounding a third taxon, *A. discrepans* (Brown, 1827), originally described from specimens from Tenby, Wales. For example, in the Linnean Society Synopsis for the Polyplacophora, Jones & Baxter (1987) list *A. discrepans* as a recognised taxon and describe it very briefly, without illustration, but then go on to suggest "there is no justification" to separate it from *A. crinita*. In 1985 the Dutch chiton expert Piet Kaas published a review of the genus in which he considered *A. discrepans* to be valid, having studied the syntypes and designated a lectotype. Recent research by the Senckenberg Research Institute, based in Frankfurt, Germany (Vončina et al., 2023) has supported Kass' conclusions. Utilising DNA analysis and SEM imaging, consistent patterns emerged suggesting

morphological features, albeit microscopic ones, enable recognition and separation of *A. crinita* and *A. discrepans*. Their initial conclusions suggest that while *A. crinita* is widely distributed in the north-east Atlantic region, *A. discrepans* may be more restricted, with records noted from Norway south to Strangford Lough and south Wales. Further study is required, which may result in the identification of characteristics by which specimens may be determined if not in the field then at least with more accessible means of magnification than SEM.

Returning to non-native species, there have been further developments regarding *Acanthocardia paucicostata* (G. B. Sowerby II, 1834). Firstly, specimens emerged from the collection of late Society member David Long which were collected in the Titchfield Haven area some 4 years earlier (May 2012) than any previous record. Over recent years the species, which has evidently extended the northernmost limit of its distribution to reach southern England, has been a predictable shell find at many Solent coastal sites, but not beyond, and was not found alive until a stranded specimen was discovered by Peter Barfield in August 2019, again at Titchfield Haven (Barfield, 2021). In October 2023 Storm Babet kept many beachcombers busy, and on the 19th of the month Michael Preston found a number of *Acanthocardia* stranded on Preston Sands, near Paignton, south Devon. Amongst them were specimens of *A. paucicostata*, including one which was still alive (Fig.4). While the disturbance caused by violent storm events should not be underestimated, this find represents a westward range extension of approximately 100 miles, the live specimen making it all the more notable.



Fig.4. *Acanthocardia paucicostata* (G. B. Sowerby II, 1834) stranded at Preston Sands, south Devon, 19th October 2023 (photograph by Michael Preston).

The Slipper Limpet *Crepidula fornicata* (L., 1758) is one of the most infamous invasive non-native marine mollusc species in Britain, developing huge habitat-changing populations in some shallow offshore areas. First recorded here from Liver Bay in 1872 and off Essex in the 1890s (though anecdotally from some 20 years earlier: Crouch, 1894) it was accidentally introduced along with imported oyster stock. If you have investigated a shore in south-east England where the similarly invasive Pacific Oyster *Magallana gigas* (Thunberg, 1793) has naturalised and developed large intertidal populations, you will have noted how well camouflaged specimens of *C. fornicata* can be

amongst clumps of oysters. Despite the existence of several oyster fisheries around Scotland, it has remained free of *C. fornicata* (Fig.6), until recently when specimens, including juveniles, have been found by David McKay in various places along the Moray Firth.

Populations of the Native Oyster, *Ostrea edulis* L., 1758, have seriously declined for numerous reasons, initiated by over-exploitation in the latter part of the 19th Century. With the added recent threat of the naturalised *M. gigas*, the *O. edulis* has become something of a flagship species, attracting much funding and support for conservation projects. One such current scheme is the Dornoch Environmental Enhancement Project (DEEP; <https://nativeoysternetwork.org/portfolio/deep/>), a partnership between various organisations including the Marine Conservation Society, Heriot-Watt University and the Glenmorangie Distillery, the latter being keen to promote its environmental credentials and reduce the impact of organic material in the water it discharges into Dornoch Firth. Historically there were Native Oyster beds in the Firth and the aim of the project is to reinstate them, in part so they can serve as natural filtration of the water. To that end, large amounts of waste shells from the scallop and mussel industry were dumped in the Firth to create culch beds, onto which *O. edulis* stock was then laid. While protocols were observed to prevent the introduction of unwanted contaminants with these materials, the apparently contemporaneous appearance of *C. fornicata* in the area seems unlikely to be coincidental. On a more positive note, given the presence of *C. fornicata* in British waters for over 150 years, there must almost certainly have been more northern accidental introductions of the species in the past and they have evidently been unable to persist. Hopefully, despite the implications of modern climate change, that will prove to be the case in the Moray Firth.



Fig.5. Arched stacks of *Crepidula fornicata* (L., 1758) Mersea Island, Essex. (photograph by the author).

New Data.

The online facilities iRecord and iNaturalist remain the Society's principal sources of new marine mollusc records, as described in detail in last year's report. In 2023 they provided some 2500 and 1300 species observations respectively, with verification in the majority of cases performed by Ian Smith, to whom I remain extremely grateful. One benefit of records received in this way is that they are most

often accompanied by photographic evidence, providing access to a further resource which I know Ian has occasionally taken advantage of when researching and producing his excellent species accounts, which continue to be made openly available via ResearchGate.net.



Fig.6. The Society's records of *Crepidula fornicata* (L., 1758) prior to recent discoveries in NE Scotland.

Several members continue to submit data in other ways, mainly via spreadsheets though also occasionally in hard copy using the pro-forma recording cards (they can still be supplied on request).

In the summer of 2023 I was informed that Christine Street, a long-standing member of the Society and formerly very active marine mollusc surveyor, had unfortunately had to be admitted to a care home. Her husband kindly invited me to collect various papers and samples from Christine's extensive surveying effort, particularly focused on strandline collecting and shell grit sampling in the Scottish islands. These are currently being worked through and will produce a plethora of records which I know Christine was always keen should be received by the Society to hold, even though she herself struggled to fully process the very large volume of material she gathered on her extensive travels. I am grateful to Adrian Brokenshire who has already assisted with sorting several of the shell grit samples involved.

Online Promotion

A webinar concerning the Society's marine mollusc recording scheme was held on 15th May as part of the EntoLive series. A recording of the event, mainly an illustrated talk, remains available via YouTube: <https://www.youtube.com/watch?v=hq4N6WxNJKY&t=17s>. The Society's website and YouTube feed – https://www.youtube.com/watch?v=_T0bP40yUoA – also feature a recording of the excellent talk entitled 'The role of serendipity in shell collecting' delivered by David McKay as part of the July online meeting.

The 'British Marine Mollusca' Facebook group continues to attract very regular and pertinent posts, with input from several Society members, many of whom are also active within numerous other related groups, often seeking to glean further species observation records or collaborating with other

schemes (e.g. Seasearch, Porcupine) to help determine and verify identification. It can reveal some gems, such as the *Smithiella costulata* (Risso, 1826) – formerly placed in the genus *Mangelia* Risso, 1826 and familiar to many from Graham (1988) as *Cytharella smithi* (Forbes, 1844) – photographed by Iain Dixon and shared in the ‘Seasearch Identifications’ group (Fig.7). One just hopes that the accessibility and proliferation of online groups will not ultimately see the demise of societies such as ours.



Fig.7. *Smithiella costulata* (Risso, 1826) off the north coast of Skye. (photograph by Iain Dixon).

Field Work

David McKay and I risked the bad weather in March in order to target very low spring tides around the north-west coast of Scotland, between Ullapool and the Kyle of Tongue. We were fortunate in that only one day was lost to the weather, when the wind and rain were so strong it was difficult to even open the door of your vehicle! It was possible to fit in three dredging trips – one in Loch Eriboll, one out of Kinlochbervie in Loch Inchar, and one in the various sea-lochs accessed from Kylesku (Fig.8) – as well as numerous shore surveys on excellent tides. More than a thousand records were added to the Society’s dataset as a result.

The Society held its own marine week in April, organised by Rosemary Hill and surveying the shores around Bude, specifically targeting an area which had not been surveyed for some years. The coastline between north Devon and Cornwall has a lot of cliffs, with occasional access points, and is not the most biodiverse compared with other parts of both counties, but the shores were worked thoroughly, with weed washing and shell grit samples taken where possible, resulting in numerous new species records for the area and a significant increase, as well as a refresh, of the overall volume of local data. Among the various highlights were *Rhomboidella prideauxi* (Leach, 1815), *Parthenina interstincta* (J. Adams, 1797 and *Limatula subauriculata* (Montagu, 1808) from shell grit and live specimens of *Leptochiton scabridus* (Jeffreys, 1880) – under a stuck stone as usual – and *Similiphora similior* (Bouchet & Guillemot, 1978), only the third observation of the species for Britain and Ireland (Hill, 2024).



Fig.8. (left) the dredge ready for launch off Kylesku and (right) a diverse haul of samples. (photographs by the author)

Adventives

As seems to be the case almost every year now, there were intriguing reports received of adventive finds. During the summer, Christopher Smart made contact regarding an unusual shell he had found near Trevoze Head, north Cornwall. He regularly collects specimens of the native *Trivia* species around the Cornish coast and immediately recognised the difference in a pink specimen measuring 30mm in length, tentatively identifying it as a *Triviella aperta* (Swainson, 1822). Looking at the images of the specimen (Fig.9) that determination seems reasonable, other than the fact that it is a South African species. As with the majority of these adventives, it is only possible to speculate as to the its provenance.



Fig.9. *Triviella* cf. *aperta* (Swainson, 1822), near Trevoze Head, north Cornwall (photograph by Christopher Smart).

One species which occurs almost with a degree of regularity when it comes to marine adventives in Britain and Ireland is the Money Cowrie, *Monetaria moneta* (L., 1758). The latest find, was made by Adrian Brokenshire on the beach at Instow, north Devon, in September 2023. As the name suggests, this very common Indo-Pacific species was one of those used for centuries as currency throughout its native distribution, and beyond as it was traded. Its abundance also means that in the modern world it still has a myriad of uses, mainly as an adornment of jewellery, clothing and ornaments. There have been suggestions that old merchant ships carrying shell money were sunk around our shores and are still gradually liberating their cargo. It is a romantic idea but the Instow specimen appears to be relatively fresh and undamaged, implying a more recent provenance.

References

- Barfield, P., 2021. First record of a live specimen of *Acanthocardia paucicostata* (G. B. Sowerby II, 1834) from Britain and Ireland. *Porcupine Bulletin* **16**: 52-55
- Crouch, W., 1894. On the occurrence of *Crepidula fornicata*, L., off the coast of Essex. *Essex Naturalist* **8**: 36-38
- Graham, A., 1988. *Molluscs: Prosobranch and pyramidellid gastropods. Synopsis of the British Fauna (New Series) No. 2. (Second Edition)*. Brill/Backhuys, Leiden, 662 pp
- Hill, R., 2024 forthcoming. Conchological Society marine field meeting to the Bude area, Cornwall, April 2023. *Mollusc World* **64**: 16-17.
- Holmes, A.; Jarvis, S. & Delduca, E., 2023. First record for the UK of the non-native dwarf surf clam – *Mulinia lateralis* (Say, 1822). *J. Conch.* **44**(6): 575-578.
- Jones, A. & Baxter, J., 1987. *Molluscs: Caudofoveata, Solenogastres, Polyplacophora and Scaphopoda: keys and notes for the identification of the species. Synopses of the British Fauna. 37*. Field Studies Council, London, 154 pp.
- Jouault, N., 2023. Rare sea slug *Atagema gibba* recorded at Les Écréhous, Jersey. *Mollusc World* **63**: 8.
- Kaas, P., 1985. The genus *Acanthochitona* Gray, 1821 (Mollusca, Polyplacophora) in the north-eastern Atlantic Ocean and in the Mediterranean Sea, with designation of neotypes of *A. fascicularis* (L., 1767) and of *A. crinita* (Pennant, 1777). *Bulletin du Museum National d'Histoire Naturelle* **7**(3): 579-609.
- Picton B. & Morrow C., 1994. *A Field Guide to the Nudibranchs of the British Isles*. Immel Publishing, London, 143 pp.
- Picton B. & Morrow C., 2023. *Nudibranchs of Britain, Ireland and Northwest Europe*. Princeton University Press, 360 pp.
- Slater, M., 2023. NE Atlantic Nudibranchs [Facebook] 20th June. Accessed 21st June 2023, <https://www.facebook.com/groups/NE.Atlantic.nudibranchs/posts/6133815680062994>
- Taylor, S., 2020. Marine Recorder's Report 2019. *Mollusc World* **53**: 20-22.
- Vončina, K.; Mikkelsen, N.T.; Morrow, C.; Ang R. & Sigwart, J.D., 2023. Clarification of the taxonomic status of *Acanthochitona discrepans* (Brown, 1827) with new data for the North-East Atlantic *Acanthochitona* (Polyplacophora, Acanthochitonidae). *Biodiversity Data Journal* **11**: e109554. <https://doi.org/10.3897/BDJ.11.e109554>
- Wagstaffe, L., 2023. Jersey, the place for sun, sea and summer storms. *Mollusc World* **63**: 20-21.