

nudibranch NEWS 2:10

Feature Creature

Actinocyclus japonicus
(Eliot, 1913)



This photograph was taken 11th July, 1998 at Point Cartwright, SE Qld, on a low tide. The purple egg mass on a sponge gives the animal location away (top left). The sponge and the animal look very similar and it would be easy to miss without the eggs.

Actinocyclus japonicus is found in the tropical central and western Pacific, to 10m (Willan & Coleman, 1984) and most common intertidally to 3m.



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Editor's Notes...

Each month we welcome new readers and thank the regular contributors. This month is no different, readership is up and we have new contributors. With my business taking up more time the newsletter would grind to a halt without those who write the columns.

This month, Valda Fraser kindly prepared a feature on her "home waters" in South Africa and her favourite nudibranchs. To see more of Valda's images check out the Australian Museum's Sea Slug Forum Site, prepared by Dr. Bill Rudman.

Bruce Potter sent enough images to prepare a feature on the Solomon Islands. Bruce dives and videos marine life regularly.

Richard Willan continues his Nuts & Bolts column, Miquel shares of his Mediterranean nudis with us and Dave Behrens' book reviews are always enlightening.

The Sunshine Coast Species List will be updated shortly. New sightings occurred recently at Point Cartwright. Watch for the feature in a coming issue.



Feedback

Richard Willan's new column received complimentary feedback.

The concept of a PhyloCode being devised by a group of scientists to replace the current system certainly raised some interesting points. For those interested in this brave new world visit the following sites.

<http://www.plantbio.ohiou.edu/message/message.htm>

<http://www.plantbio.ohiou.edu/message/message.htm>

<http://cladistics.com>

<http://www.oak.cats.ohiou.edu/~rothwell/691-99/background.htm>

<http://www.archive.csee.uq.edu.au/~cs270/articles/class.29.9.99.htm>

<http://www.archive.csee.uq.edu.au/~cs270/articles/class.29.9.99.htm>

Maybe someone can explain the principles behind the need for a new system or the benefits of the one we use?

Hallaxa iju has been sighted again at Point Cartwright, SE, Qld, this time with a white filamentous egg mass. Three animals were found on the outing. Neville Coleman turned up some interesting new discoveries for the area.

nudibranchs

bruce potter

I live in Honiara, Solomon Islands and have video footage of 80 nudibranchs with more than 40 nudibranchs on the same 100 metre section of rubble that we dive every Sunday. Below is a small selection of my finds. See back issues of this newsletter for more.



Fig.1 © 2000 Bruce Potter



Fig.2 © 2000 B. Potter



Fig.3 © 2000 B. Potter



Fig.4 © 2000 B. Potter



Fig.5 © 2000 B.Potter



Fig.6 © 2000 B. Potter



Fig.7 © 2000 B. Potter

fig. 1 *Glossodoris* sp.

Fig.2 *Noumea crocea* Rudman, 1986

Fig.3 *Scyllaea pelagica* Linnè 1758

Fig.4 *Chromodoris collingwoodi* It was about one inch long, at about 14 meters.

Fig.5 *Gymnodoris ceylonica* (Kelaart, 1858)

Fig.6 *Hypselodoris emma* Rudman, 1977

Fig.7 ?*Stylocheilus longicauda* (Quoy & Giamard, 1825). I found several hundred of these little fellows in a small area, and wondered if they might be a recent hatching of sea hare eggs. They were about 1 to 2 centimetres long. I found several other patches of them in an area of about 400 square meters. There may have been thousands all together.

We look forward to hearing from Bruce again once the civil unrest in the Solomons is resolved. Foreign nationals are currently being evacuated from the Islands.

mediterranean

miquel pontes

nudibranchs

Spurilla neapolitana

Described by Delle Chiaje in 1841, this is a medium sized nudibranch, reaching 5 to 7 cm long and half this size wide. It lives in shallow water, from 1 metre deep, under stones and in seagrass meadows. It is also found on certain algae.

It is colored light pink to brown, the dorsum with a darker shade than the rest of the body. Many specimens show white spots, which gives them a typical mottled appearance.

The *Spurilla neapolitana* has a pair of light brown cephalic tentacles and two lamellated rhinophores, usually colored white but dorsally colored light brown. These organs are presumably used to search for food and mate. The eyes are located behind the base of the rhinophores.

The dorsal appendixes or *cerata* are distributed in 8 to 12 groups on each side of the animal, and have a flattened shape with curled white tips. They are usually coloured brown to dark green. Depending on the local feeding habits – the colour being given by intestine ramifications in the *cerata*, which show their contents through the body wall.

The colour of certain parts of the body may suggest the presence of symbiotic algae (*zooxanthellae*) acquired from its food, which may eventually help the animal to complete its energy source (see the article *Solar Powered Sea-Slugs* at the **Sea Slug Forum** <http://www.austmus.gov.au/seaslugs/solarpow.htm>).

The colour of the tip of each *cerata* is white because of the cnidosacs – accumulations of active stinging cells for defensive purposes obtained from its prey, the sea anemones *Anemonia viridis*, *Aiptasia mutabilis* or *Bunodactis verrucosa*. In fact the *Spurilla neapolitana* is often found in the neighborhood of these cnidarians.

This *aeolid* reproduces in summer, from June to August. The egg strings are coloured white and laid in a scalloped spiral shape on the substrate.

Some authors qualify this species as uncommon, while others say it is abundant; in any case, it is more frequent in winter but present the whole year-round. Most authors specify that the *Spurilla neapolitana* is distributed along all the Mediterranean basin and the nearby Atlantic Ocean, but there are documented sightings reported in the West Atlantic, from Florida to Brazil, in Baja California and Hawaii.

Two of the pictures displayed with this article clearly show a copepod parasitization on the back of the nudibranch, seen as a kind of white appendixes on the *dorsum* of the animal, which correspond to the twin egg sacks of the parasite.

You can find more information and pictures at the following web sites: Medslugs at http://www.medslugs.de/E/Mediterranean/Spurilla_neapolitana.htm and the Sea Slug Forum at <http://www.austmus.gov.au/seaslugs/spurneap.htm>



nomenclature

richard willan

The International Commission on Zoological Nomenclature

Haminoeid bubble snails are generally drab brown, black or green cephalaspideans with a large and thin, inflated shell whose diameter is greatest in the middle, and whose spire is sunken (involute). Haminoeids spend their lives burrowing shallowly in mud from where they emerge to graze on filamentous green algae. One exceptionally colourful species is *Haminoea cymbalum* (see accompanying photo) which lives on the outer parts of coral reefs. Haminoeids are probably more renowned for being prey of spectacular predatory aglajids like *Navanax* species than noteworthy opisthobranchs in their own right.

Hardly the stuff of massive excitement that would provoke longstanding confusion and debate amongst taxonomists the world over. Yet the name for the genus and the family have been so controversial they have had to be settled by a decision by the ultimate arbiter of scientific names in Zoology, the **International Commission of Zoological Nomenclature** (hereafter ICZN).

I present the saga of *Haminoea* below as a case study involving a decision by the ICZN. It had more twists and turns than a fictional detective novel and neither was it the cleanest nor the quickest decision the ICZN has ever reached (most cases take about two years, but this one took 13!), but it eventually produced a definite answer to an intractable question. Such authority and finality in an open international forum are probably the greatest strengths of the ICZN.

Essentially, if one wants a binding decision on a scientific name, one makes a submission to the ICZN, the submission gets published in the Commission's own journal called **Bulletin of Zoological Nomenclature** and there is a six month period for replies. Other workers make comment during this time and these comments get published eventually. The Commissioners vote on the case and the final decision gets published in the *Bulletin of Zoological Nomenclature* as what's called an "Opinion". Unlike the legal system, which operates on precedents, the ICZN assesses every application separately, so this means it is necessary to draft every application as though it were the first one.

A one-letter difference in a scientific name can indicate an entirely different species, so the correct spelling is absolutely crucial in scientific nomenclature. Though several malacologists had realised three different spellings (*Haminoea*, *Haminea*, *Haminaea*) had been in usage for the same genus of cephalaspidean for about two hundred years, it took Riccardo Gianuzzi-Savelli to raise the matter with the ICZN in a submission published in September 1987 to achieve a final result. Riccardo's case rested on the fact that *Haminoea* was the first correct original spelling actually published, even though it appeared without any author in a guide book on natural history published by William Turton and J.F. Kingston in 1830. These authors had actually made a spelling error for *Haminaea* that their friend William Leach had intended to use (but he had died before his work containing the name could be published, and it never came out till 1847). That was the same year that John Gray published it again, but spelt *Haminea* this time. If all this sounds confusing, it was actually even worse because the family was also known by another name (Atyidae) that was also used for a family of crustaceans and the type species of the different *Haminoea* spelling permutations were not the same, but they are other twists that need not confuse the main plot.

So Riccardo's submission was essentially that *Haminoea* should be accepted as the valid spelling because that's how it was published first. Other arguments in favour of this spelling are that for a long time it was the spelling most frequently used, it was the only spelling ever used by Australian, New Zealand, Asian and North American researchers, and that it formed the stem of four related generic names (*Lamprohaminoea* for example).

The waters got muddied when Riccardo changed his mind, and in December 1990 he made a totally different submission; one in favour of *Haminaea* this time. This new submission (jointly with one of the ICZN's own staffer, Anthea Gentry) rested on the fact that that name had first been used the Leach manuscript. The ICZN did nothing for a further nine years and usage of all three names continued; some workers changed to *Haminaea* thinking that a



decision had been made by the ICZN because of the second application. As soon as the scientific community were informed that a vote on the second submission was due to take place malacologists from all over the world, myself included, wrote into the ICZN, all arguing that *Haminoea* was eminently preferable. Riccardo even wrote to say that he favoured that spelling too. All the replies were published in the *Bulletin* in March 1999. When the Commissioners finally voted in September 1999, 21 of them, a clear majority, voted in favour of *Haminoea*. None of the three commissioners who did not cast a vote was opposed to the spelling *Haminoea*, so the case was clearly decided. It was finally concluded when the Opinion was published in March 2000. So ***Haminoea* (and Haminoeidae) is now included on the Official Lists of Generic Names in Zoology** and both *Haminaea* and *Haminea* are now included on the Official Lists of Invalid and Rejected Generic names in Zoology as invalid emendations of *Haminoea*.

References (arranged chronologically)

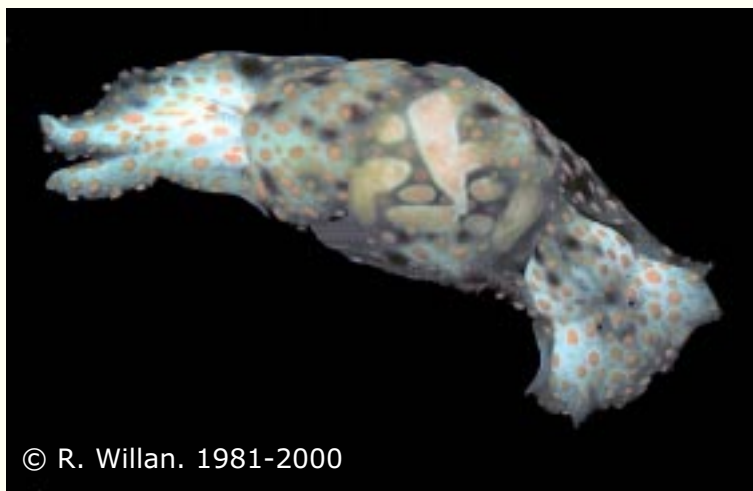
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Haminoea cymbalum, 22mm, found in an intertidal rock pool, shallow lagoon at southern end of Flinders Reef, N.E. of Cape Moreton, Southern Queensland. 12/8/1981

valda fraser

I live in a paradise for those who like nudibranchs. They live here in large numbers and the variety is amazing!

The area which we dive regularly lies south of Durban, roughly from Aliwal Shoal (off Umkomaas) to Protea Shoal (off Shelley Beach) - a distance of 75km. Aliwal, the most popular dive site by far, is almost 5km out to sea. Protea is further by about 2km. Both these reefs rise up from the ocean depths forming a distinct ridge which supports a rich diversity of marine life.

This ridge stretches all along the south coast of KwaZulu-Natal and extends into the Transkei. It is not a continuous reef, as it sometimes breaks up only to reform again. The big difference between these two areas is that Aliwal is shallow (i.e. 5m - 28m), while Protea is 27m at its shallowest point. The water along the coast of KwaZulu-Natal is generally warm as it is influenced by the Mozambique Current.

The number of places that are dived by commercial dive operators is very limited. Dive boats only launch from Umkomaas, Park Rynie and Shelley Beach. Furthermore, the dive sites regularly visited by divers can be counted on both hands.

I am fortunate in that we have our own boat and enjoy exploring. In the 1½ years that I have become a "nudibranch noticer," I have seen and photographed about 75 different species. In some cases the recording of a particular nudibranch from KwaZulu-Natal has been interesting in terms of distribution. For example, *Chromodoris roboi* was previous only known from tropical western Pacific.

I was also pleased to find *Chromodoris cavae* on a shallow reef off Hibberdene. Apparently this species was collected in Zanzibar and described in 1904 by Elliot. It was never seen again until November 1999.

While it is true that identification can only be conclusively settled by scientific methods, it seems that about 25 nudibranchs which I have photographed have not been described. A few of these have been reported before (eg: *Glossodoris sp 1*, *Noumea sp2*), while others have been seen for the first time. The "new" nudibranchs belong to a variety of families (i.e. *Dorididae*, *Chromodorididae*, *Phyllidiidae*, *Bornellidae*, *Tritoniidae*, *Arminidae*, *Tergipedidae*, *Glaucidae*, *Aeolidiidae*).

In a few weeks time I will have an opportunity to dive further south in the Transkei - a remote place often called the Wild Coast. I wonder what "new" finds await me there?

An online map of the area is available by visiting <http://www.adventurescuba.co.za/map.htm>.

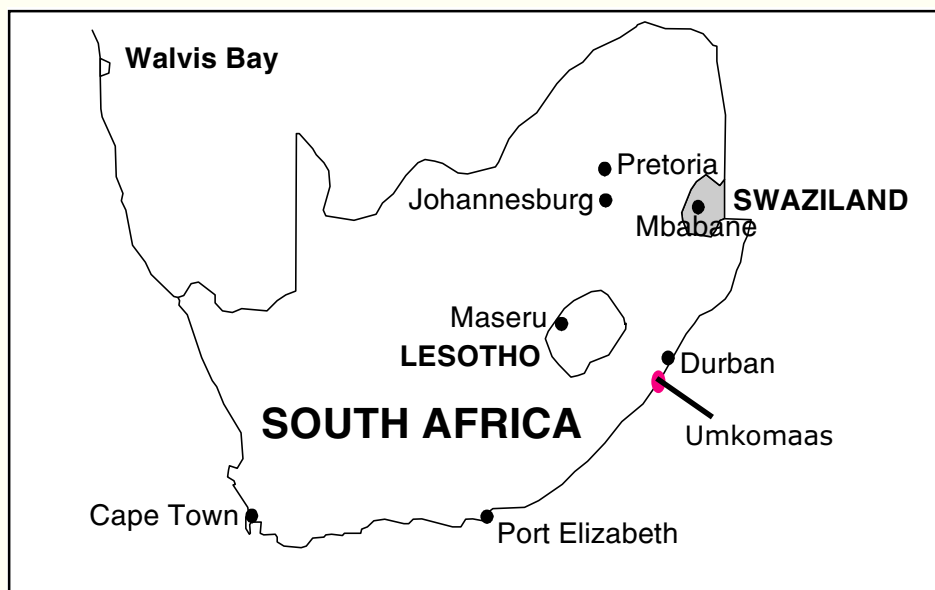




Fig.1



Fig.2



Fig.3

I have included photographs of a few of my favourites species.

Fig. 1 *Bornella sp*

Fig.2 *Cuthona sp*

Fig.3 *Phyllodesmium sp*

Fig.4 *Chromodoris cf geminus*

Fig.5 *Armina sp*



Fig.4



Fig.5

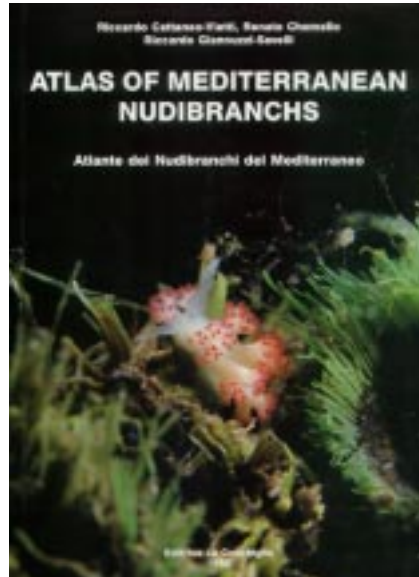
Dave Behrens' Book Review

Atlas of Mediterranean Nudibranchs

1990. R. Cattaneo-Viatti, R. Chemello and R. Gianuzzi-Savelli

Most of us have not had the good fortune to sample the diverse nudibranch fauna of the Mediterranean. With over 250 of Nudibranchs alone, it should certainly not be overlooked. *The Atlas* is your opportunity to learn about and enjoy this unique fauna. Each section of the book is written in both English and Italian, which should appeal to a more global audience. Each species presentation includes: full taxonomy, synonyms, physical description, radula, size, habitat and range. The large 8 1/2 x 12 inch format make it easy to read and find the specific information your are looking for.

The Check-list of Species, Glossary and Bibliography are excellent.



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I particularly appreciate the black and white line drawings of particular diagnostic features and the SEM's of the radula. This really assists identifications. All this is supplemented with 108 color photographs.

Although a little pricey, the value of the comprehensive technical presentation is its attention to detail. It is worth every cent. 264 Pages 8 1/2" x 12", Hardcover 108 Colour Photos and 180 Black & White drawings. Sea Challengers Item #3CCG. \$149.00, plus shipping.



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