3:11 July 2001

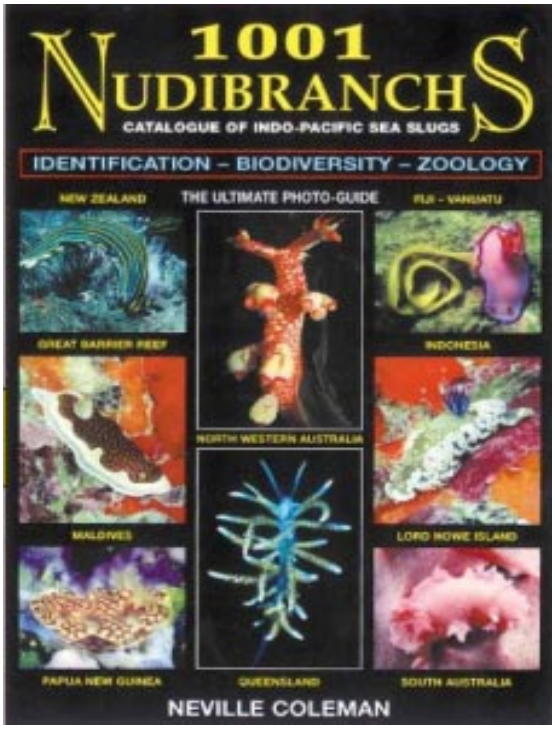
Never be afraid to try something new. Remember that amateaurs built the ark.
Professionals built theTitanic

nudibranch NEWS

editorial

Neville Coleman's latest offering has been released. Pre-released copies are in the mail. Readers in Australia can purchase copies for $66 + $6.60 postage (includes GST). For overseas readers the price is $70 including postage. Visit Neville's site at www.nevillecoleman.com.au or Dave Behren's Sea Challengers www.seachallengers.com

Congratulations go to Neville for the time and effort he has applied to producing this great field guide.



in this issue

Jim Anderson has added new material to his site site http://www.a4454.freeserve.co.uk/scotnud1.html. Have a look

miquel pontes

Berghia coerulescens (Deshayes, 1838)

This nudibranch was described by Deshayes in 1838. It was formerly known as *Eolidia souleyeti* Vérany 1853 and *Berghia modesta* Trinchese 1882, now these names are considered synonyms.

Its body is thin and relatively long as it can reach sizes up to 45 or 70 mm, depending on the authors. The body is colored white while cerata are colored blue with yellow tips.These spindle-shaped cerata are characteristic of this animal and they are arranged in 8 to 10 clusters. The first clusters of cerata are placed in the precardiac zone and arranged in arches, while the others are arranged in rows. Juvenile specimens have a small number of cerata while adult individuals have them in great number, giving the impression of almost covering the full top of the body.

Two thick orange rhinophores are located in the front part of the nudibranch and have the same length as the oral tentacles. These rhinophores have lamella in the front side and papilla in the back side.

Berghia coerulescens lives on rocky bottoms and feeds on actinians, as most aeolids in the family *Aeolidiidae*. Main preys are those of the gender *Aiptasia* and *Sagartia*, so this nudibranch must be searched for in the nearby of these stinging animals. These predatory habits are well known to aquarists, even to the point of selling live *Berghias* to take ride of actinians in their tropical aquariums.

This nudibranch is an Atlantic and Mediterranean species, more common in warm waters than in cold waters, but it's presence in Western Atlantic is not yet clear.

Juveniles of this aeolid are very similar to *Cuthona caerulea*, but it can be differentiated by the cerata, that seem to cover the whole body of the *Berghia* (unlike the *Cuthona* whose cerata are sparsely distributed) and by the thick orange rhinophores which are distinctive of the *Berghia*, as the *Cuthona* has white, thin rhinophores.

Reader can find more information and pictures in the following web sites:

Bill Rudman's Sea Slug Forum:
http://www.seaslugforum.net/bergcoer.htm
Erwin Köhler's Medslugs:
http://www.medslugs.de/E/Mediterranean/Berghia_coerulescens.htm
Mondo Marino di Guido Picchetti (Italian):
http://gpicchetti.mondomarino.net/molluschi_102.htm
La Plongée avec L'Amiral (French):
http://plongee.amiral.free.fr/phot/inv1/nudibran1.htm
Luis Sánchez Tocino's site on Mediterranean invertebrates (Spanish):
http://www.ugr.es/~lstocino/b_coerulescens.htm
M@re Nostrum (Spanish)
http://marenostrum.org/opistobranquios/bcoerulescens
A curious link where they sell *Berghias* to keep coral aquariums free from *Aiptasia* anemones:
http://www.seaslug-vs-aiptasia.ebz.com/US/

Pictures 1-4 by © Albert Ollé and 5 ©© Luis Sánchez Tocino

heron island

opisthobranchs

julie marshall

Heron Island is a coral cay situated in the Capricorn Bunker Group of the Great Barrier Reef about 64 km offshore from the Queensland port city of Gladstone. In previous months I have shown some of the cephalaspideans and nudibranchs that can be found in the sandy zone which occurs round the island. This month I am featuring some of the members of the family, Aplysiidae (generally known as sea hares) found in this zone.

Sea Hares found in the Inner Sandy Zone

Sea hares are some of the largest of the opisthobranchs but are often very cryptic due to the green mottled colour patterns of most species. This means that they blend into the background and are well camouflaged. Often their presence is only observed if they are inadvertently stepped on or disturbed in some way, when they secrete large amounts of reddish-purple dye.

Aplysias are commonly known as sea hares because of their large scrolled rhinophores which are thought to superficially resemble the prominent ears of rabbits. Most sea hares have large parapodia that fold over the mantle cavity on the back of the animal, and have a small internal shell. Despite their large parapodia most sea hares cannot swim. They are herbivorous, feeding on a variety of algae.

Sea hares, like all other opisthobranchs, are hermaphrodites with fully functional male and female reproductive organs. When they mate they sometimes form “daisy chains” of three or more animals in which, apart from the front and back animal, each animal acts as a male to the animal in front and a female to the one behind. They produce enormous numbers of eggs. These are laid under coral slabs and consist of long strings of eggs clumped together in a tangled, spaghetti-like mass and are usually olive green or pale brown.

Aplysia dactyolomela

This is the most common of the sea hares found at Heron Island where they are usually found on the sand moving between patches of dead coral covered with algal growth, or at the reef crest on clumps of turfing algae, often in the late afternoon. *Aplysia dactylomela* has high paradodia that join low down posteriorly near the tail. It has an olive green body with reticulate black markings that join to form circles, especially on the parapodia, and there is a prominent black spot on its short tail. The second photo shows a couple of animals forming part of a mating daisy chain as described above. Animals are usually from 200 to 300 mm in size.

Aplysia extraordinaria

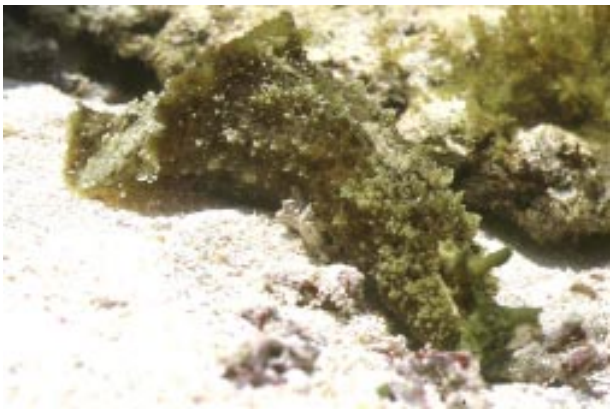
This is one of the few sea hares that is an active swimmer. It achieves this by vigorously flapping its very large parapodia and flexing its body up and down. It is rare on Heron Island and more usually found off the coast of New South Wales where it can reach sizes of up to 400 mm. The pictured animal found at Heron Island was 120 mm. *Aplysia extraordinaria* has a pale brown body with a reticulate pattern of very thin dark brown to black lines, white spots and patches, and some dark brown dots. The patterns are less obvious on the parapodia with the white patches forming pale lines.

Aplysia parvula

This is one of the smallest of the sea hares with most animals found at Heron Island measuring 20 to 40 mm in size. The animals found on algae on the sand flats or at the edge of the reef have a brown or olive brown background colour and are covered with white dots. Animals found subtidally are reddish pink (see second photo) as they feed on red algae of the genus *Plocamium* (Burn 1989). The edges of the parapodia, the foot, and the tips of the rhinophores and oral tentacles have a thin black line. The parapodia enclose the mantle cavity in which the thin shell can be seen through an opening (foramen). This hole in the mantle is edged with a black line and can be seen in the second photo.

Dolabella auricularia

This sea hare differs in shape from species of *Aplysia,* and is immediately recognisable as its sloping back end looks as if it has been cut off. Its parapodia are also greatly reduced.. It has a small, narrow head and the body increases in width and height to just over two-thirds of the length of the animal where it ends abruptly and slopes sharply down. The colour of its body is mottled shades of green with scattered patches of brown and black, which makes it very well camouflaged. *Dolabella auricularia* is usually found in the late afternoon either on the sand, or on the platform like region of the living coral zone, which occurs on the mid and outer section of the reef flat at Heron Island. During the day it is sometimes found buried in the sand. For information on the burrowing habits of these animals see the message by Don Barclay on Bill Rudmans Sea Slug Forum.



References.

Barclay, D. 2001 (March 19) Re: *Dolabella auricularia* and burrowing. *[Message in] Sea Slug Forum.* http://www.seaslugforum.net/find.cfm?id=4009

Burn, R. 1989. Opisthobranchs (Subclass Opisthobranchia). In: S.A. Shepherd and I.M. Thomas (eds). *Marine invertebrates of southern Australia*. Part II. Adelaide, South Australian Government Printing Division, pp. 725-788.

Marshall, J.G. & Willan, R.C. 1999. *Nudibranchs of Heron Island, Great Barrier Reef: a survey of the Opisthobranchia (Sea Slugs) of Heron and Wistari Reefs.* Leiden, Back

---

feedback

Bill Chambers sent the above images ifor identification. It appears to be the undescribed Jorunna sp. The picyure below was taken by the editor at the Co-op, Port Stephens See Bill Rudman's site for further information (http://www.seaslugforum.net/janosp1.htm)

Field Guide of Shallow Water Invertebrates of American Samoa
1999. Larry G. Madrigal

D. albobrunnea by J. Hoover

Photos: T. bayeri by Mike Miller.

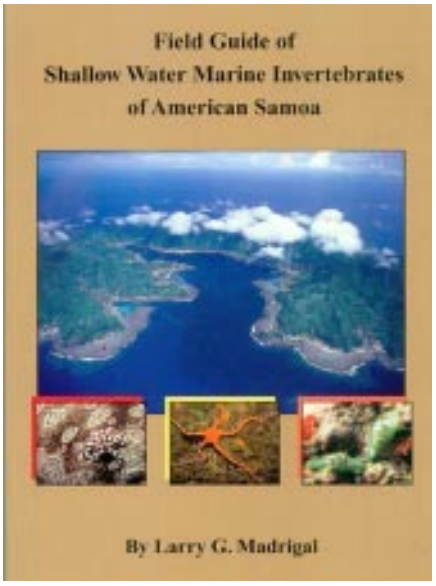
R. gracilis by Mike Miller.

book review

dave behrens

Field Guide of Shallow Water Invertebrates of American Samoa
1999. Larry G. MadrigalField Guide of Shallow Water Invertebrates of American Samoa
1999. Larry G. Madrigal

Everything you ever wanted to know about the invertebrate fauna of Samoa under one cover. Larry produced this guidebook following the format of the very popular Sea Challengers marine life guides published by our parent company, Sea Challengers, of Monterey, California. The author, who taught school in American Samoa for many years is known by his students as Mr. Palolo. As energetic and cosmopolitan as the Palolo worm, Larry's desire to share with readers the fauna he has experienced while living and raising his family in Samoa are demonstrated by the fact that he published this book himself, with support from the Samoan department of Education.



The 132 page guide covers over 350 invertebrate species across all groups, sponges through crustacea, mollusca, echinoderms and tunicates. For the opisthobranch enthusiasts he has included 38 species. Each species description includes the necessary scientific name, morphological description, habitat preferences and size you will expect to find them.
All the photos were taken by Mr. Palolo, and are beautiful.

We highly recommend this guide for your library, whether or not you plan to travel to the isles of American Samoa.

Softcover, 6 1/2 x 9 inches
132 pages
Over 350 color photos

(Photos: T. bayeri & R. gracilis by Mike Miller. D. albobrunnea by J. Hoover)

Sea Challengers Natural History Books
35 Versailles Court
Danville California 94506 USA
Ph. 925-327-7750
www.seachallengers.com
dave@seachallengers.com