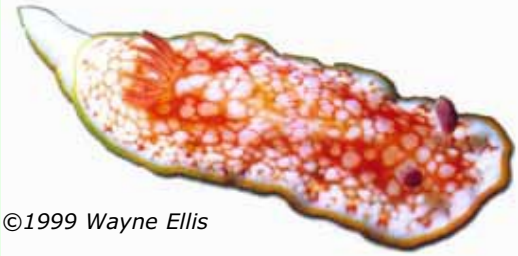
australasian nudibranch NEWS 2:3

Feature Creature

Chromodoris tinctoria (Rüppell & Leuckart, 1828)



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Bill Rudman kindly identified this species and included further information on the Australian Museum's "Sea Slug Forum". To quote Bill, "Although I initially thought (Rudman, 1973) there were differences between ***Doris tinctoria*** Rüppell & Leuckart,1828, ***Doris reticulata*** Quoy & Gaimard, 1832, ***Goniobranchus reticulatus*** Pease, 1866, ***Chromodoris alderi*** Collingwood,1881 and ***Chromodoris inopinata*** Bergh,1905, extensive collections from throughout the Indo-West Pacific indicate that the species differences suggested by different colour patterns is not supported by internal anatomy".

This specimen was photographed at Lord Howe Island in October 1987.

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Editor's Notes...

On Monday the 25th of October we visited Point Cartwright and like most trips this year, could not find a single nudibranch. Several ***Aplysia dactylomela*** were grazing on algae. We turned up one new flatworm along with two "common" species. This year was been the wettest since the early 1970's and it will be interesting to see how long it is before species occur again in the rock pools. On trips earlier this year even the sponge and coral life had dramatically reduced.

Dave Behren's has joined the anNEWs team and will be contributing book reviews each month. Dave contributes to Mike Miller's "Sea Slug Site", authors scientific publications as well as books on the marine environment and with his lovely wife Diana own and operate **Sea Challengers Natural History Books** out of Danville, California.

Special thanks goes to the European contributors, **Miquel and Joseph.** English is a third language to Miquel and monthly he and Joseph produce informative and easy to read columns.

Feedback

It was another great weekend for nudi diving in Brisbane. At "Cherubs Cave" I found a white juvenile ***Pteraeolidia ianthina.*** This was a first for me as I have only ever seen large adults. This beastie certainly stood out as it was such a white contrast to the background reddish algae it was lying on. Also on this dive I saw a ***Phyllidia sp***. I'm not confident to say which one as it had yellow tips on white pustules. After "Cherubs Cave" it was off to the "Aarhus Wreck" for a beautiful dive (25+m vis) and a pair of what could only have been ***C. lineolata.*** At the "Pines" on Sunday we saw many nudis including ***H. obscura, C. trilobatum*** and two ***Mexichromis mariei*** which were quite pretty with their purple pustules and yellow border. **Sophia Philipp** Brisbane Australia

New Papers and Updates

Shireen J. Fahey and **Terry Gosliner** have produced a new paper, *"Description of Three New Species of Halgerda from the Western Indian Ocean with a Redescription of Halgerda formosa,* Bergh, 1880*".* Contained in the paper are these updates for T. Gosliner's "Nudibranchs of Southern Africa" (**NSA**) and Wells and Bryces' "Sea Slugs and their relatives of Western Australia" (**SSWA**).

NSA: *Halgerda punctuta* is *H. formosa* Bergh, 1880
68 top; *Sclerodoris sp.* is *Halgerda dalanghita* Fahey and Gosliner, 1999
69 top; *Halgerda formosa* is *H.dichromis* Fahey and Gosliner, 1999

SSWA: #127; *Halgerda formosa* not *H. punctata.*

Mediterranean Nudibranchs

Dondice banyulensis

By Miquel Pontes and Josep Mª Dacosta
Pictures by Lluís Aguilar

This beautiful nudibranch can be easily identified thanks to two unmistakable traits: its body's colour, translucent bright orange, and its size, which reaches a maximum of 60 to 70mm on adult animals.

The oral tentacles are quite characteristic on this ***aeolidacean*** being double the length of the rhinophores, and coloured, orange with translucent white tips. The rhinophores have transversal rings and are also coloured orange. The *Dondice banyulensis* has a white line along the top of its body, from between the oral tentacles down to the tail. Another white line runs along the foot's border, whose front end corners resemble bent tentacles.

It has many appendixes on the dorsum called *cerata*, distributed in 5 groups and coloured bright orange with red tips. ***Cerata*** contain ramifications of the medium intestine where the animal stores the urticant cells (cnidocysts) of the hydrarians it seems to prey on.

According to the bibliography, the *cerata* can be erected when the animal is disturbed, giving it the dangerous aspect of a stinging anemone. This **defensive** action also puts the cnidocysts as a primary, and expendable, objective for a possible predator. The *cerata* can be easily replaced by the nudibranch, while the aggressor has to cope with the stinging cells (still active) stored in them, bitterly learning which possible preys can be attacked and which not.

Some authors discuss heavily this animal's feeding habits. Some suggest that this nudibranch feeds on algae and annelids, while others state that it preys on ***Eudendrium sp***. hydrarians. This kind of feeding seems likely, as in our observations *Dondice banyulensis* surrounds the hydrarian colony's trunk with its foot while apparently feeding on it. Other authors even suggest that this nudibranch preys on other opisthobranchs like ***Flabellina affinis*** or ***Cratena peregrina*** when starved (i.e. in aquarium).

Dondice banyulensis lives on rocky bottoms at depths ranging from 2 to 35 meters, and occasionally seen in shallower waters. It is a fast moving nudibranch so, if approached incautiously, it may adopt its defensive strategy and the diver may miss the opportunity of taking impressive pictures.

This nudibranch can be easily confused with similarly coloured ***Coryphella lineata***, but this one is much smaller (up to 30mm maximum) and the oral tentacles have the same length of the rhinophores, while these organs and the *cerata* end in white tips instead of red tips.

Dondice banyulensis was formerly known as ***Godiva banyulensis*** but, as certain authors still use this name, it has been kept as a synonym. According to the BEMON etymological index, the new genus name *Dondice*, like some of the taxon names created by the Berlin zoologist **Ernst Marcus**, (1893-1968) and his wife **Eveline du Bois** (1901-90), are difficult to derive. It seems that *Dondice* was the name of a firm in **São Paulo** (Brazil) where they lived in the past.

We consider this is not an uncommon species, but neither is frequent. It's considered endemic (exclusive) to the Mediterranean Sea. You can find more pictures at Erwin Köhler's site about Mediterranean Opisthobranchs, Medslugs, at http://www.medslugs.de/E/Mediterranean/Dondice_banyulensis.htm

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All pictures were taken on May 29th, 1999 at the Punta del Bau del Molí, El Port de la Selva, Costa Brava, Spain.

Opisthobranch Feature

Aplysia dactylomela Rang, 1828
Synonym *Aplysia angasi* Sowerby, 1869

Sea Hares are **herbivorous** marine opisthobranchs usually found on intertidal platforms, estuaries or in shallow waters feeding on red and green algae. *A.dactylomela* is reported to feed on the red seaweed, ***Laurencia spp***. They reach such a large size by consumption of large amounts of algae.

These "bat-winged" animals are characterised by their green to brown ground colour and black circles and black spot on the tail. The distinct head has oral tentacles and large erect grooved rhinophores leading to the common name **sea hare** When mishandled they emit purple ink. The **parapodia** (extension of the foot) form what resemble wings that wrap over the animals back and can be used for swimming. An **internal shell** is present. Despite their size and colour they can easily blend into their environment.

References to Sea Hares date back two thousand years. They are **circumglobal** in distribution, found in tropical and temperate seas, most often in locations of brisk water movement. The largest specimens reaches 400 mm in length.

Even when their relatives are hard to find *A. dactylomela* can be observed **grazing** on algae in small rock pools or near the low tide mark on rock platforms at Point Cartwright or Shelley Beach, Caloundra (South East Queensland). On a recent excursion to the coast I was able to observe animals ranging from 25 mm up to 150 mm grazing on algae during **mid afternoon** in shallow rock pools.

Alpysia live for about **one year** and are known to form "daisy chains" when mating, excluding the first and last each animal acts as a male to the animal in front and a female to the one behind. The animals die after mating on mass, sometimes washing ashore in large numbers. A single animal can lay **180 million** eggs in it's lifetime. The planktonic **larvae** reportedly survive for up to 200 hundred days in this stage before metamorphosing. This allows for a wide distribution in ocean currents.

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Gosliner.T., 1987. ***Nudibranchs of Southern Africa***
Wells. F. E. & Bryce. C. W., 1993. ***Sea Slugs of Western Australia***
Various Authors, 1998. in ***Mollusca: A Southern Synthesis***

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Gosliner in "Nudibranchs of Southern Africa" observes that these animals are seen actively crawling in tide pools at night, but during the day the animals remain inactive in crevices and under rocks."
In South East Queensland these animals are reguraly found during daylight hours (at low tide) actively grazing. (personal observation, Ed).

Dave Behren's Book Review

Dave Behren's kindly forwarded this list of currently available books from Sea Challengers. Prices are in US$. To order see details at the side. Some of these books are hard to get and with Dave or Diana's wealth of knowledge they can recommend suitable books. A catalogue is available or visit their site for further details.

Behrens, David W. 1991. ***Pacific Coast Nudibranchs: a guide to the opisthobranchs of the North Eastern Pacific***. 2nd Ed., Sea Challengers, Monterey. Item #2B. $25.95.

Bertsch, Hans and Scott Johnson. 1981. ***Hawaiian nudibranchs***. Oriental Publishing, Honolulu. Item #28BJ. $15.95.

Bleakney, J. Sherman. 1996. ***Sea Slugs of Atlantic Canada and the Gulf of Maine***. The Nova Scotia Museum Field Guide Series. Item #15B. $14.95.

Cattaneo-Vietti R., R. Chemello and R. Giannuzzi-Savelli. ***Atlas of Mediterranean nudibranchs***. Naturana, Palermo. Item #3CCG. $149.00

Colemen, Neville. 1989. ***Nudibranchs of the South Pacific. Volume 1***. Neville Coleman's Sea Australia Resource Centre, Queensland. Item #100C. $9.45.

Debelius, Helmut. 199x. ***Nudibranchs and Sea Snails - Indo-Pacific Field Guide***. IKAN Unterwasserarchive, Frankfurt. Item #114D. $57.95.

Gosliner,Terrence. 1987. ***Nudibranchs of South Africa, A guide to the opisthobranch molluscs of southern Africa***. Sea Challengers, Monterey. Item #117G. $37.95.

Gosliner, T. M., Behrens, D. W. and G. C. Williams. 1996. ***Coral Reef Animals of the Indo-Pacific***. Sea Challengers, Monterey. Item #209GB. $45.00.

Kite, Patricia. 1994. ***Down in the Sea: The Sea Slug***. Albert Whitman & Company, Morton Grove, IL. Item #170K. $14.95.

Ono, Atsushi. 1999. ***The Opisthobranchs of Kerama Islands***. TBS-Britanica,Toyko. Item # 40A. $32.95.

Picton, B. E. & Morrow, C.C. 1994. ***A field guide to the Nudibranchs of the British Isles***. Immel Publishing Ltd., London. Item #109PM. $32.00.

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