



*Chromodoris magnifica*

# SLITHERY BEAUTIES

**E**ast of the iconic coastal fishing village of Wooli on the northern New South Wales coast, lies the sprawling North Solitary Islands Marine Park which encompasses the North Solitary Islands about 15km offshore. These islands were named by Captain Cook as he sailed along the East Coast of Australia. Viewed from the shore, there are two main islands known locally as the Turtle and the Elephant. Not far away is North Rock home to the famous dive site 'Fish Soup' with a heavy concentration of fish. Diving is concentrated around the main islands from the northern tip with 'Anenome Bay', going south along the western side there

are 'Mackerel Run', 'Canyons', 'Air Bubble Cave', 'Roger's Run' and the 'Elbow Cave' with just closer inshore the 'Sinkholes'. Grey nurse sharks are common and occasionally cruise through Anenome Bay, usually just when you are doing macro photography!

The unique marine life of the North Solitary Islands results from the interplay of the nutrient-rich south running Eastern Australia Current (EAC) and colder southern waters. Northeasterly winds periodically replenish the waters with upwellings from the deep waters off the continental shelf. These waters support abundant fish populations with fusiliers, angelfish, butterflyfish and other brightly coloured tropical fish species side by side with schooling southern species of sweep, snapper, kingfish, samson, jewfish and leatherjackets. Visibility is better during the summer months; I personally saw 40m during summer. The rocky underwater landscape, especially Anenome Bay, is famous for its anemones and resident clownfish. Generally there's a rich and diverse carpet of soft corals, hard corals, sponges, algae, grasses and seaweeds, all excellent habitats for slithery invertebrates.

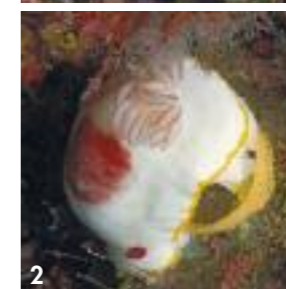
This unique marine environment has a diversity of nudibranchs and their non nudibranch opisthobranch relatives. These delightful creatures can be found from depths as little as 1.5m (five feet), to over 30m (100 feet) and are often more plentiful during a full moon and the warmer summer months.



*Hypselodoris bennetti* mating

> STUNNINGLY BEAUTIFUL NATURE! MY THOUGHTS... AFTER SCUBA DIVING WITH COLOURFUL MARINE SEA SLUGS, HIDDEN BEAUTIES MOST HAVE NEVER SEEN, IN OUR OWN AUSTRALIAN BACKYARD.

: DR ROGER WELCH

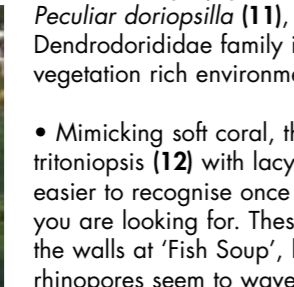
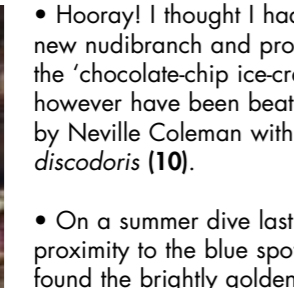
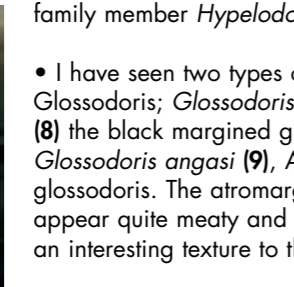
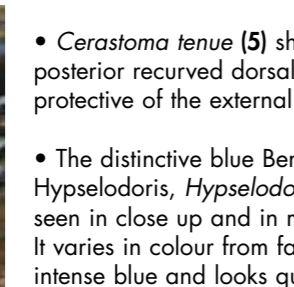
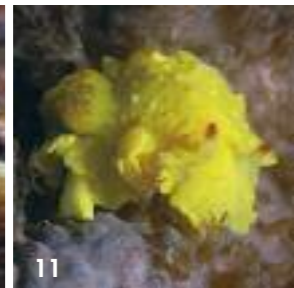


**Nudibranchs families seen around the islands include Hexabranchnidae, Chromodorididae, Discodorididae, Dendrodorididae, and Tritoniidae.**

- Family Hexabranchnidae, particularly *Hexabranchnus sanguineus* (1) include the well known Spanish dancer. When free swimming these nudibranchs imitate the swirl and undulation of the Spanish Flamenco dancer. These are the largest of the nudibranchs found at the North Solitary Islands. Their blood-like colours range in intensity from faded orange to bright red. They lay eggs in pink spirals.

- The more numerous of the nudibranch families are the Chromodorididae. *Chromodoris splendida* (2) is probably the commonest either individually, or in social groups. No two have the same pattern of dorsal red splotches and they lay a yellow egg ribbon. Seen occasionally are the *Chromodoris magnifica* with its vivid orange, black, white, and blue colours. The hidden chromodoris, *Chromodoris aliis* (3), is resplendent in golden specks with a purple edged creamy body.

- *Cerastoma amonum* (4) has vivid candy-like colours, and as a result is known as the sweet cerastoma. Here, I respect the advice of experts as I have not personally tasted one! On a serious note: nudibranchs are highly toxic, being poisonous if eaten.



• *Cerastoma tenue* (5) shows a prominent posterior recurved dorsal horn seemingly protective of the external gills.

• The distinctive blue Bennett's Hypselodoris, *Hypselodoris bennetti* (6) seen in close up and in mating behaviour. It varies in colour from faded to more intense blue and looks quite different to its family member *Hypselodoris jacksoni* (7).

• I have seen two types of the Glossodoris; *Glossodoris atomarginata* (8) the black margined glossodoris, and *Glossodoris angasi* (9), Anga's glossodoris. The atomarginata can appear quite meaty and in close up have an interesting texture to their skin.

• Hooray! I thought I had discovered a new nudibranch and proposed calling it the 'chocolate-chip ice-cream nudibranch' however have been beaten to the punch by Neville Coleman with his *Mildewed discodoris* (10).

• On a summer dive last year, in close proximity to the blue spotted elysia, I found the brightly golden coloured *Peculiar doriopsilla* (11), of the Dendrodorididae family in 3m in a vegetation rich environment.

• Mimicking soft coral, the white elegant tritoniopsis (12) with lacy filigree gills are easier to recognise once you know what you are looking for. These hang out on the walls at 'Fish Soup', but their rhinopores seem to wave good bye to you as you are swept along in the current!

## TIPS AND TRICKS



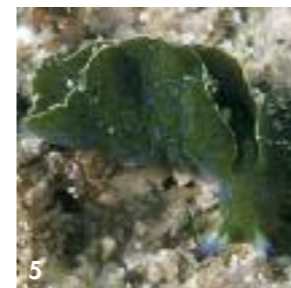
• Although nudibranchs are slow moving, they can be difficult to photograph in swirling water and some perversely place themselves at photographically hard angles (our creed is not to displace the creature for the photograph, right?). Some nudibranchs display special light effects: the *Chromodoris geometrica* projects an irregular diffused light reflection that confuses both my retina and my camera so it is hard to get in focus (could this be a stealth feature which makes it harder to be seen by predators perhaps?).



• *Risbecia tryoni* has a luminous quality to its colours and texture. Generally it is best to use plenty of flash - double, if you can, to lessen shadow, with aperture priority or manual setting on camera and smallest F stop to enhance depth of field. Sharpening the image in this way can accentuate colour contrast against a dark background. My preference is to show the nudibranch in native habitat and often the natural background colours enhance the image. I'm a beginner with Photoshop which can be useful in extracting background scatter from an image. If you get the focus right with plenty of flash, you may not need to doctor your images, although centration is helpful. If you're a 'frequent shopper', get the best focused RAW image, then edit.



• Take plenty of images; I try to photograph all nudibranchs I see, as occasionally you'll surprise yourself with a new perspective such as my *Chromodoris splendida* and anemone tentacles.



Non nudibranch families I've seen include Umbraculidae, Aplustridae, Pseudoceratidae, and Plakobranchidae.

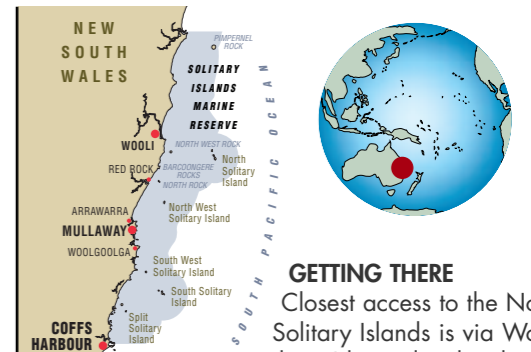
• The umbrella shell, *Umbraculum umbraculum* (1) was found on wall depth 6m in company with another feeding on soft sponges. Seen only once, in January 2010.

• Wavy line bubble shell, *Micromela undata* (Aplustridae) (2). This colourful beauty has a widespread global distribution. Observed for the first time October 2010.

• Flatworms are uncommon at the North Solitary Islands. This polyclad flatworm, *Acanthozoon sp* (Pseudoceratidae) (3) was seen at 5m during the full moon in October 2010, motoring along on its mucus trail confident in its own skin and seemingly oblivious to the world around.

• The distinctive brightly coloured *Pseudoceros bifurcus* (4), has also been seen in waters around Lord Howe Island at similar latitude to North Solitary Islands.

• The blue spotted elysia, *Elysia sp* (Plakobranchidae) (5) with distinctive blue spots and blue antennae, is in fact really surprisingly tiny because it is only about 1cm long and requires the magnification of the camera to be fully appreciated.



## GETTING THERE

Closest access to the North Solitary Islands is via Woolli where I have dived with

Captain Stan Young of Woolli Dive Shop over the last 8 years. Stan, himself an accomplished diver, runs a Steber 34 *Erebus* and the new 12m catamaran *Kraken* which is purpose-built as a dive charter boat. He is justifiably proud of the *Kraken* which is the most comfortable, well thought out day dive boat you will ever enjoy, especially as I had a bit to do with the design of the dive ladder which is custom built for easy egress from the water. With twin 300hp outboards giving both rough water and bar capability, "the cat" gets you out to the dive sites within half an hour, sometimes with a spot of whale watching on the way; then back home again in safety and comfort. Two tank dives are offered usually during the mornings. These trips are very friendly to underwater photographers; as a macro photographer you get plenty of time to dive, but with a specified safety requirement of come back with 50 bar. A hot soup and banana cake always is waiting for you during the surface interval. Accommodation is plentiful to suit every diver's budget. Book ahead for holiday times. The Woolli Bowls Club is welcoming, especially known for the best food in town, Harry's Chinese Restaurant.

## EQUIPMENT

Photographs were shot using a Nikon D 80 SLR digital camera in an Ikelite housing with an Ikelite sub strobe 125 flash, in TTL mode, and usually without flash diffuser.

## ACCOMMODATION

Whale Song - [www.stayz.com.au](http://www.stayz.com.au)



## CAN YOU HELP?

The slithery beauties living in the rich marine environment of the North Solitary Islands are both diverse & colourful. Interestingly, they can also be found in other distant oceans. Because the North Solitary Islands waters are often turbulent, nudibranchs can be difficult to find and photograph. Nudibranchs are so engrossing, that it may become a life quest to find them all. Can you help me with more photos of the splendid chromodoris I have seen, but not photographed, the black spot jorunna which is a vibrant orange with black spots, in 15m at the 'Canyons'. And, I am on the track of a larger blue nudibranch with yellow spots and prominent cream coloured gills; probably of the Polyceridae family. I hope these images whet your photographic appetite to discover more. See you at the North Solitary Islands for some slithery sleuthing.