

DIVING

Nelson Bay

Scuba Diver's Senior Travel Editor Don Silcock ventures into the waters off Nelson Bay, which as he explains, is critter central for those in the know

Photographs by Don Silcock





Did you know?

Muck diving gets its name from the sediment that lies at the bottom of many dive sites - a frequently muddy or 'mucky' environment. Muck dive substrate can also consist of dead coral, discarded fishing gear and other man-made garbage.

“ Just north of those ledges and in about 16m of water is my favourite part of Fly Point, the rich and incredibly beautiful sponge gardens! ”

Every region seems to have at least one... In Indonesia it would have to be the Lembeh Strait in North Sulawesi, and in Papua New Guinea, it's either Dinah's Beach or Samarai Jetty in Milne Bay, while over in Florida, it is West Palm Beach's Blue Heron Bridge.

Here in New South Wales, it's Nelson Bay - the wonderfully picturesque town located on the southern shore of Port Stephens, about an hour north of Newcastle on the state's central coast.

We are talking renowned critter sites... where the smaller, colourful, and incredibly photogenic creatures of the oceans seem to gather. And concentrated in a relatively small area along Nelson Bay's foreshore are a couple of exceptional sites that showcase the wonderful temperate and tropical marine diversity of eastern Australia.

Port Stephens 101

Located some 220km north of Sydney, Port Stephens is a large, drowned-valley estuary that covers a total area of some 134 km² – almost 2.5 times larger than Sydney Harbour! There are many things that are special about Port Stephens, but let's start with its geomorphology... the shape and structure of the two large lobes, or ports, that make up the bay area, together with the relatively narrow and shallow mouth of the estuary where it discharges into the Tasman Sea.

The bay is divided roughly into two by the Soldiers Point peninsular. And the inner, western port is the immediate catchment area for the large fresh-water Karuah River that rises in the Barrington Tops National Park and means the west port has a mainly estuarine ecology. The outer, eastern port receives most of its water from the twice-daily incoming tides from the Tasman Sea and therefore has a predominantly marine ecology.

With a maximum depth of just 40m, abundant sunshine and a benign, sheltered location, Port Stephens provides a superb environment for biodiversity to thrive. With studies showing that it is home to over 400 species of fish, 200 plus species of nudibranchs, plus numerous cuttlefish, octopus and squid together with rich sponge gardens and temperate water soft corals.

But the real key to understanding why Port Stephens has some incredible biodiversity hotspots are those incoming waters from the Tasman Sea... ▶



Toadfish

The EAC MixMaster!

Usually referred to by its acronym, the EAC forms in northern Queensland where the Pacific Ocean's Southern Equatorial Current (SEC) meets the continental shelf and splits into two, with the southern split becoming the Eastern Australian Current and then surging down the east coast of the continent. The EAC is both the largest and strongest movement of water in Australia and, at times, is up to 100km wide, 500m deep and reaches speeds of almost four knots. Although not particularly rich in nutrients, it does however transport huge quantities of warm water from the north. And where those waters meet the colder ones from the south, it creates the basic mechanism that enables rich biodiversity – upwellings...

Virtually everything that dies in the sea descends to the bottom, where it decomposes and creates a dense, rich layer of phosphorous and nitrogen-based nutrients. When warm surface waters are displaced by wind or currents, they are replaced with cold water rising from the depths, which suck up those rich nutrients.

The Tasman Sea between south-east Australia and New Zealand is where the warm waters of the EAC meet the cold ones from the south, creating 'eddy fields' which are at their most-active offshore from northern NSW.

This places Port Stephens right in the eye of an incredible hydrodynamic phenomenon and those twice daily incoming tides deliver a potent brew of nutrients from the deep, mixed with the northern tropical and southern temperate larvae of eastern Australia.

Nelson Bay 101...

If you stand on Nelson Head, with the old lighthouse behind you and look down at the east port of Port Stephens, the wonder of this special part of NSW is displayed before you in all its scenic splendour! But look closer, down at the waters flowing into the east port and you will start to understand why certain parts of Nelson Bay have such incredible biodiversity. The bathymetry (underwater landscape) of Port Stephens is a complex thing, with large areas of shallow sand banks and deeper channels. Those rich tidal waters will always follow the path of least resistance through the channels and the deepest one is right in front of you.

Because of its huge size, complex bathymetry and relatively narrow and shallow estuary mouth, the tidal flows in and out of Port Stephens are fierce and positively dangerous if underestimated. Viewed at their peak, as they surge around Nelson Head, those tides are an awesome



sight to behold. After rounding Nelson Head they flow along the southern shore of the east port, past the small bays that are home to the biodiversity hotspots Nelson Bay is renowned for. That flow of tidal water creates eddies which deliver the rich nutrients and larvae to the hotspots enabling them to thrive and pulse with biodiversity!

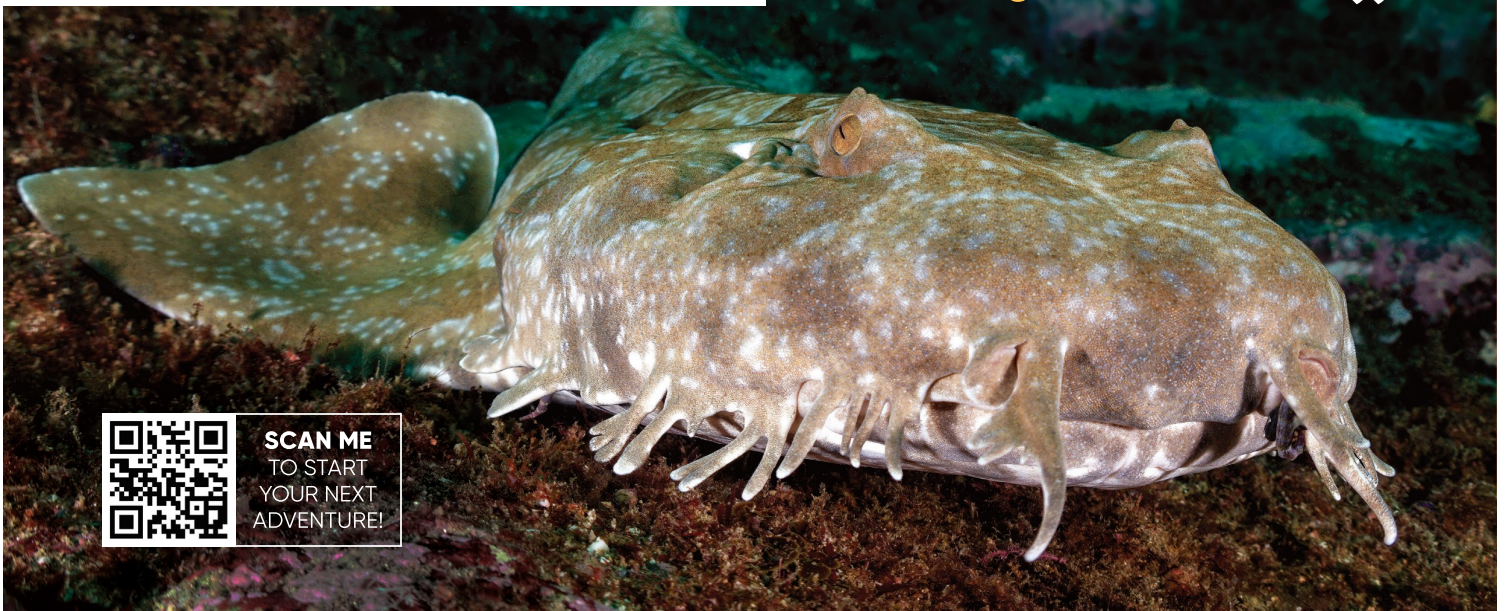
2021 floods

Over a period of several days in March this year, NSW experienced some of the heaviest rainfall on record and in the Port Stephens area 457mm fell in just three days - the highest total recorded since records were first taken in 1889.

Such a massive volume of fresh water, carrying with it large amounts of pesticides and herbicides, dramatically changed both the chemical composition and salinity of the water flowing through Port Stephens. The result was an almost 'neutron bomb-like' destruction of all marine life down to about 6m depth!

Thankfully, the marine life down deeper was not severely impacted as the lighter fresh water floated as a layer on top of the denser sea water...

“ Worse still would be diving on a falling tide and the very real risk of being taken out to sea! ”



SCAN ME
TO START
YOUR NEXT
ADVENTURE!



A face only a mother could love!

Don Silcock

Scuba Diver's Senior Travel Editor, in more normal times, Don is based on Bali in Indonesia, but is currently hunkered down in Sydney rediscovering Australian diving... His website has extensive location guides, articles and images on some of the best diving locations in the Indo-Pacific region and 'big animal' experiences globally. www.indopacificimages.com



Healthy reefs await



Nudibranchs of all shapes and sizes

Initially, at least, there was great concern that the damage was so bad recovery was out of the question. But nature is a powerful thing, and the signs are very positive that the balance will be restored and by next year much of that marine growth will have returned.

Diving Nelson Bay

There are three well-known hotspots along that southern shore – Halifax Park, Pipeline and Fly Point.

Halifax Park - This site was generally considered as one of the very best shores dives in Australia, because of its stunning sponge gardens and the extraordinary amount of marine life to be found there. Then sadly from around 2005, the sand came... Divers noted increasing amounts of sand being deposited on the shallower parts of the site and then over a number of years much of those incredible gardens.

Rarely dived these days, Halifax is a distant shadow of its former self and the whole topic of where the sand came from is a very emotive subject in Nelson Bay. One school of thought being that the over-development along the southern

shore is causing it. The alternate view being 'shifting sands' are a natural phenomenon in estuaries like Port Stephens, which is why dredging is often required.

One thing is very clear though... those shifting sands have effectively decimated one of the underwater wonders of Nelson Bay!

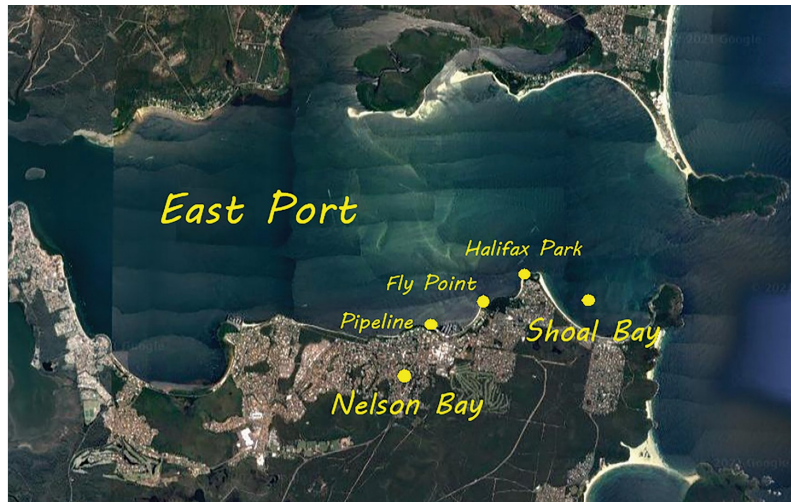
Pipeline - Located near the breakwall of the Nelson Bay marina, this site takes its name from the disused former sewerage pipe which extends well out into the east lobe of Port Stephens. It enjoys a stellar reputation as great place to see and photograph an incredible number of critters such as numerous species of nudibranchs, pipefish, seahorses, eels and the occasional weird and wonderful tropical critters!

Steps and concrete steps have been provided just to the east of the disused sewer pipe to make entry to the site easy and swimming over to it provides an excellent way to initially navigate around the extended area.

The pipe heads out straight north and following it out and back again will ensure you don't get lost as you get to know the lay of the land! ▶



The area is fringed by sandy beaches



Fly Point - Opinions vary on whether this is the best site in Nelson Bay, but for me there is no argument... Fly Point is located at the northern end of Little Nelson Bay and the main area of the site is around the rocky point and in the small bay just to the east.

There are a few ways to dive Fly Point, but they all involve the same initial swim straight north past the 4m wall at about 20 metres out, and then over the second slightly deeper wall another 20 metres on. At this point you will be in about 6m of water, and you can either turn left and head west along that ledge which will take you to the tip of the rocky point. On the way there is much to explore in the kelp and in the nooks and crevices of the wall.

This is definitely the best option if you have not dived Fly Point before as the navigation skills required are minimal and yet there is still a great deal of marine life to see.

Or you can take the more adventurous option and keep going north till you are in 12m and then turn left to head west towards the rocky point. On the way you will find series of ledges, also in about 12m, where there is almost always a lot of fish patrolling mid-water. While under the ledge are a plethora of benthic species plus shy creatures like pineapplefish. Just north of those ledges and in about 16m of water is my favourite part of Fly Point, the rich and incredibly beautiful sponge gardens!

While the sponges themselves are prolific and very photogenic, they are also host to a great variety of fish and critters and spending time there is basically why I like Nelson Bay so much!

Mentioned in Dispatches...

Special thanks to Meryl Larkin and Tom Davis of the DPI, along with Tim Austin of UNSW for helping me to better understand the complexity of Port Stephens!

How to Dive Nelson Bay

All the main sites in Nelson Bay are shore dives with easy entry and exits, especially at Fly Point and the Pipeline where there are excellent steps and railings provided - no scrambling over rocks required.

The main danger is the tides and the only real option being to dive at high tide as trying to do so on a rising tide exposes you to the strong risk of being swept into the busy main channel and taken into the bay. Worse still would be diving on a falling tide and the very real risk of being taken out to sea! Most of the local divers opt for Sydney's Fort Denison tide tables, because of the time lag with the Port Stephens table and gets you in the water just before the peak, giving you the optimum time in the water.

There are two local dive shops – Let's Go Adventures and Feet First Dive - both of which know the area extremely well and can provide all the support you might need to dive these waters safely.

In Summary

Nelson Bay is for me a really special place – relatively close to Sydney, but far enough away to have its own personality. The whole Port Stephens area is wonderfully scenic and very photogenic. Add in the great diving and it's very easy to see why it is so popular.

Dived at high tide, both Pipeline and Fly Point offer some of the best shore diving in NSW! ■