

April - June 2020

# OZ DIVER

AUSTRALIA'S PREMIER DIVE MAGAZINE

**MALCOLM  
NOBBS**

**SS YONGALA**

**DIVERS  
THEME  
PARK**

**DIVING GREY  
NURSE SHARKS**

**PLUNGE  
AGAINST  
PLASTIC**

# SOLOMON ISLANDS



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OZDIVER

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April - June 2020



April - June 2020 Edition

# Editor's Deco Stop



I don't have a lot to say, looking around at the world we live in and everything that is happening.

I want to start the edition with an old Cree Indian saying that stuck in my mind from one of my trips:

Only when the last tree has died, and the last river been poisoned, and the last fish has been caught, will we realise that we cannot eat money.

This magazine is full of interesting stories and articles. With marine and ocean facts and we travel from Western Australia to the Solomon Islands.

We look at how to take better photos and if you can't how to edit it so it will look better.


Like every other magazine this one is full of articles for the beginner diver to the more technical diver and I hope that you enjoy this edition of OZDiver.

If you want to publish your articles or photos in OZDiver magazine do not hesitate to contact me.

OZDiver.com.au is the gateway for the Australian diving community – the magazine will take you around the world with a click of a button.

Editor in Chief & Publisher

**Johan Boshoff**

But seek first the kingdom of God and His righteousness and... 

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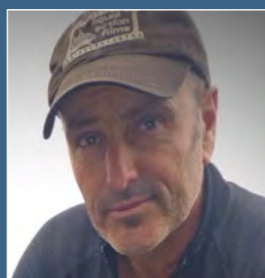
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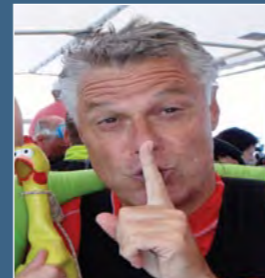
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Malcolm Nobbs

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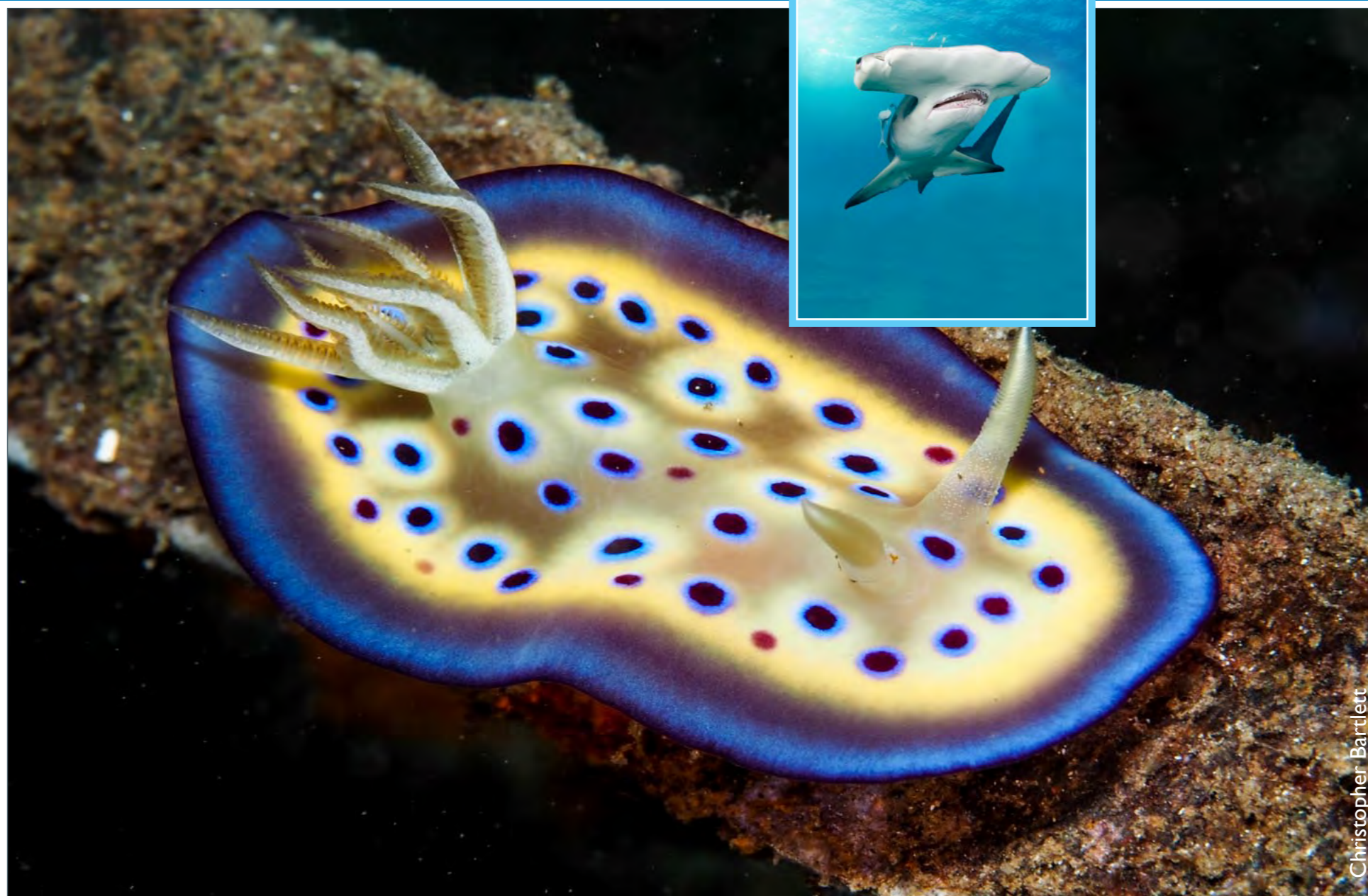
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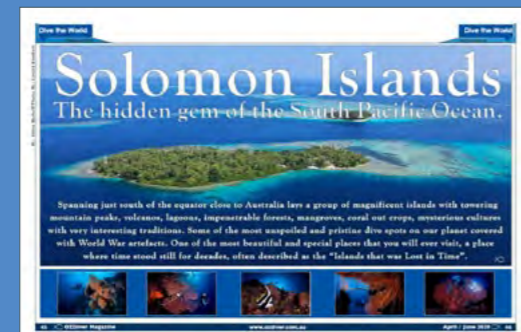
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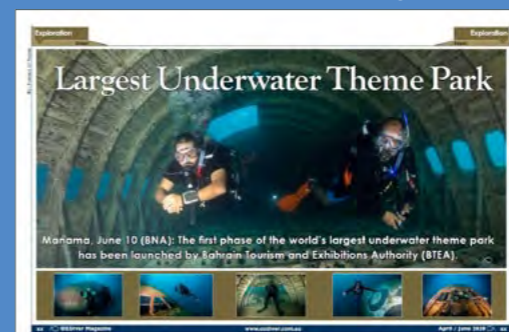
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"What a nice job." That saying has to be by far the one we hear the most, and with a high season just behind us this phrase is still fresh in my mind.

After about the fiftieth time one starts to get into the routine of discussing this topic.

So I decided that I must clear up this matter for all the divers out there. And I will explain it to you in the Gauteng terms which I get from divers.

To become a skipper you need the following.

1. A sports model with a soft top.
2. A 6kg dumbbell.
3. A 28kg dumbbell.
4. A 60kg dumbbell.
5. 12 eggs.
6. An iPod with sounds of water splashing
7. A book which isn't fiction – something like the encyclopedia of diving

Today you are the skipper. So load

everything on the list onto the back seat of your car, except for the 12 eggs. Take them out of the box and lie them loose on the back seat.

Seeing that it is a very wet season, imagine that you are on a farm road with lots of loose rocks and big potholes. You will now have to drive your sports model with the top down (simulating the boat), back to your office. The potholes and the rocks are the surf launch. It doesn't sound too bad, you may be thinking. Anyone can do that. Well here is the trick – those 12 eggs are your 12 divers.

You are holding their lives in your hands. They are fragile, just like divers. If the eggs are not attached properly, sharp turns and heavy bumps could cause one of them to break (or lose their life). You need to plan your trip to perfection as no mistakes are allowed when it comes to the life of others.

Now that we are on the smooth tar road things are better. You can relax and start planning your way through the traffic like we have to plan to drop the group according to the wind and swells out at sea.

Once you arrive at the office, stop, get out and take out the two lighter dumbbells. First take the 6kg one (simulating the average weight belt of a diver). Lift it up and put it down 12 times.

Then take the 28kg dumbbell (the average weight of a set of dive equipment), and lift it up, hold it, turn it side ways and put it down. Do this 12 times and put the weights back in your car.

Now walk over to a grass spot outside the office, put the sounds of water on your iPod and sit down. Now you relax. Every few minutes look around you, make sure of your surroundings (replicating a skipper looking for divers and the buoy line), and listen to the sounds of the water splashing against the boat as you totally enjoy nature and the beauty of the blue ocean. You can now spend some time reading your book to ensure that you know as much as possible about diving should someone ask you a strange question after the dive.

You will have about 40 minutes to read your book before the divers start getting out of the water, so get off the grass, put your iPod away and return to your car. Take the 6kg dumbbell and lift it out of the car, turn and put it down, and repeat this 10 times (this is to imitate lifting weight belts back into the boat – two of the weight belts were thrown onto the boat by divers that did not listen to the briefing of the DM. Take two dumbbells and throw them into you



sports car – aiming is not a necessity.

Now take the 28kg dumbbell and lift it, turn around and put it down 12 times. Once all the equipment is on the boat take the 60kg weight and lift it at least twice in one clean jerk to shoulder height – some divers need a hand to get into the boat.

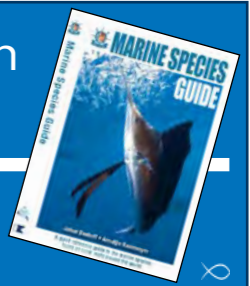
Okay, so all the divers are back on board and we can head back to base. Once again face the off-road track without breaking one of the eggs on the back seat and then brake as hard as you can in front of your house and hope for dear life that all 12 eggs on the back seat are holding on like you asked them to do. Easy isn't it?

So next time you think of asking the skipper about his job remember that we do it because we love it – we love the ocean, we love the outdoors and we love the 40 minutes of nature while we are out at sea.

We definitely don't do it to buy nice cars and we don't need gym memberships. █

**WIN** Send your letter to us and win a Marine Life Species Guide

Here is a chance to be heard! If you have anything that you would like to share with OZDiver Magazine and other divers, send an email to Log Book at [info@ozdiver.com.au](mailto:info@ozdiver.com.au). Remember that letters have more impact when they are short and sweet. We have the right to edit and shorten letters. In every issue, the winning letter will receive a Marine Life Species Guide. █



# OZ NEWS

## AIDE 2020

The Australia International Dive Expo (AIDE) will be back as part of Sydney International Boat Show (SIBS) at the International Convention Centre in Sydney's Darling Harbour from 30th July – 3rd August 2020.

Together with the established Sydney Boat Show, the organisers of both expos have created a platform that is unlike any other, cultivating and drawing the interests of water-lovers and scuba divers alike.

AIDE's aim is to give the niche scuba diving market a boost and grow its community by inspiring, educating and encouraging more people to explore the underwater world.

Being a part of AIDE2020 will no doubt give dive-related brands extensive exposure to the 60,000+ loyal and affluent water-loving visitors (divers & boaters). This not only adds to the bottom-line figures dive businesses, but also converts to AIDE's long-term goal of expanding the dive community.

AIDE's fourth year as part of the Sydney Boat Show will see it move to a new space on Level 4 of the Exhibition Centre, where both exhibitors and visitors will enjoy a brand new set up and ambience.

Under the dive education program, visitors will enjoy a series of presentations and forums on scientific diving, ocean rescue efforts, dive medicine, women in underwater photography and more over the five-day event.

As for educating the next generation, a priority for both AIDE and SIBS, the organiser will once again deliver a dedicated school program to NSW Marine Study Schools. Each year, the expo welcomes more than 400 students, where they gain valuable information, knowledge and ideas through the various presentations and demonstrations at the expo.

Coming back to AIDE in 2020 is the 'Australasia Ocean Photographer of the Year' competition, which will be announced via the AIDE website and facebook page soon. For Exhibitors' keen to exhibit at AIDE 2020, registration is now open to register. Email us at [info@australiadiveexpo.com](mailto:info@australiadiveexpo.com). Visit our website at [www.australiadiveexpo.com](http://www.australiadiveexpo.com). Follow us on Facebook under AIDE Expo and Twitter AIDE Expo for exciting updates.

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AIDE**

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## Underwater Tour 2020

**Stellar international speaker line-up for the Underwater Tour 2020  
Touring Brisbane, Sydney, Melbourne, Adelaide, Perth, Auckland 14-21 May  
2020**

Get ready for an evening of inspiration, adventure and discovery. Now in its third year, the Underwater Tour team have curated a stellar international line-up of underwater photographers for 2020's touring speaker event series.

Aaron Wong (Singapore), Dr Janet Lanyon (Brisbane) and Dr Richard Smith (UK) are setting out on the road together to showcase their extraordinary images live on stage and share stories of marine science, discovery and natural wonder from behind the lens.

### Aaron Wong - Keynote Speaker

Asia's most published, recognised and sought after underwater and commercial photographer, Aaron Wong's sublime body of work showcases the beauty and subtle mystery of the world beneath the waves.

Not only is Aaron field editor for Scuba Diver Australasia, he is also Singapore's favourite 2018 MasterChef finalist and an adventure TV show presenter. Combine Aaron's humble and engaging personality, passion for our underwater world and extraordinary photographic skills and you have a world class recipe for visual storytelling.

Pioneer and Ambassador of the anti-shark finning campaign I'm FINISHED WITH FINS for sharksavers.org in Singapore and Hong Kong, Aaron has also shot for countless fashion magazines, celebrities and advertising campaigns and authored two exquisite coffee table books.

The Blue Within features the best of Aaron's award-winning images from a decade of underwater exploration. Water Colours was the result of a specific project merging two of his greatest passions – bringing fashion photography underwater and ultimately showcased some of the most stunning underwater images the world has ever seen.

If you're at all curious about the realm of underwater photography, don't miss Aaron's first speaking engagement in Australia and New Zealand – you'll be truly inspired!

**Dr Janet Lanyon - Speaker**  
Marine field biologist, marine mammal specialist and world authority on dugongs, Dr Janet Lanyon is Senior Lecturer in the School of Biological Sciences at The University of Queensland where she leads the Marine Vertebrate Ecology Research Group. Her interest in dugongs began as a doctoral student



and she has during the past 30 years as a teaching and research academic at UQ published over 80 scientific publications on diverse aspects of sea cows found in coastal areas throughout the Indo-Pacific region.

Janet's current projects include identification of threats to the health of coastal marine mammals including dugongs and cetaceans along urbanised coasts.

She has served on numerous governmental and scientific committees and is currently associate editor of the world's leading marine mammal journal and sits on the scientific committee of the Sea World (Australia) Research and Rescue Foundation. Janet and her team have also researched whales, sea turtles, sea snakes and coastal dolphins.

A diver for over 40 years, Janet can usually be found underwater, exploring and enjoying the natural marine world.

From Australia's dugongs to America's manatees Janet's fascinating stories will open our eyes to the world of these whacky much-loved marine mammals.

#### **Dr Richard Smith - Speaker**

He's back by popular demand! A firm favourite with diving and photography audiences all over the world, the UK's Dr Richard Smith is returning to share tales of his latest scientific adventures, incredible imagery and endearing stories.

We'll get a sneak peek at some of the wondrous creatures inside his new book *The World Beneath – The Life and Times of Unknown Sea Creatures and Coral Reefs* - and discover how a dedicated group of passionate underwater explorers around the world are pushing the boundaries of science, with new species being discovered more often than you might think!

Marine biologist, underwater photographer and writer, Richard's aim is to enrich our snorkelling, diving and photography by sharing insights about the marine environment, habitats and animal behaviours. He promotes an appreciation for the ocean's inhabitants and raises awareness of marine conservation issues through his photographs and marine life focused features, which have appeared in a wide variety of international publications over the past decade.

2019 Winner of the Animal Habitat category in the Australian Geographic Nature Photographer of the Year competition, Richard combines stunning photography and in-depth science knowledge to show us things we perhaps saw but didn't really see.

#### **Darren Jew, Master of Ceremonies (MC)**

Canon Master Darren Jew, AIPP M Photog IV, was a speaker in our 2018 series and is truly an Australian treasure. Author, publisher and highly regarded six-times Winner of the AIPP Australian Professional Nature Photographer of the Year Award, Darren's deep understanding of nature photography in our underwater world brings yet another level of international expertise to the Underwater Tour's events.

To enjoy this great line-up of speakers LIVE, don't miss the Underwater Tour evening in your city.

**14 May - Brisbane**  
**15 May - Sydney**  
**16 May - Melbourne**  
**18 May - Adelaide**  
**19 May - Perth**  
**21 May - Auckland**

Tickets from \$75. Early bird tickets from \$60 for a limited time only.


Check [www.underwatertour.com.au](http://www.underwatertour.com.au) for venues and to purchase tickets. The Underwater Tour is an annual collaboration between Juliette Myers of IDM and Tim Hochgrebe of [underwater.com.au](http://underwater.com.au), joined in 2020 by creative partners Darren Jew and Jasmine Carey from Finslap. 

## DAN Announces New Cardiac Health Research

DURHAM, NC – February 19, 2020 – Divers Alert Network® (DAN®) has announced its newest research grant, the Alfred Bove DAN Research Grant for Cardiac Health in Scuba Diving. The grant was established in memory of Dr. Alfred Bove, a cardiologist and dive medicine specialist who contributed significantly to the field of dive medicine. In a career that spanned more than 40 years Dr. Bove was most passionate about studying cardiorespiratory fitness and fitness to dive.

Among divers, cardiac health remains an important risk factor. Through this grant, DAN is elevating its support for research that has the potential to increase dive safety and prevent dive injuries and fatalities that result from cardiac events. Specifically, the aim of this grant is to fund research on the possible adverse effects of scuba diving in divers with pre-existing heart conditions, methods of screening for increased risk of fatalities due to cardiac causes, and possible preventive interventions.

Up to US\$250,000 in grant funding is available over the next five years. Both single-year and multi-year projects are eligible, and funds may be used to sponsor one or several projects up to a total of US\$50,000 per year.

Applications with proposals are due May 1, 2020. Successful applicants will be notified once the selection process is complete, and DAN will formally announce the award at the Undersea and Hyperbaric Medical Society Annual Scientific Meeting in June 2020. 



### ***Dive Schools / Operators / Organisers / Instructors***

**Do you have any interesting, newsworthy info to share with the dive industry? If so, we would like to invite you to send us your OZ News section for possible inclusion in the magazine (please note that inclusion is FREE of charge).**

Here's what we need:

- Newsworthy stories (promotional material will not be accepted)
- Word limit: 100 words
- Text prepared in a Word document
- Accompanying high-resolution image(s) are welcome (please supply caption and image credit)

Please send to [info@ozdiver.com.au](mailto:info@ozdiver.com.au) 

# Solomon Is. Diving

A diver is seen in the center of the frame, illuminated by a bright light, surrounded by a dense field of small fish. The background is a vast, intricate coral reef structure, with a prominent green and black coral formation on the left side.

[visitsolomons.com.sb](http://visitsolomons.com.sb)



# The Magnificent Grey Nurse

The Grey Nurse also goes by a couple of other names namely the Sand Tiger (more in the USA than anywhere else) and the Spotted Ragged-Tooth Shark, or just Ragged-Tooth Shark (largely in South Africa).



Did you know, for instance, that the Grey Nurse (Carcharias Taurus) became the very first protected shark in the world when the New South Wales Government declared it a protected species in 1984? I didn't... until I was hunting around for information to share in this article.

I also didn't know that on Australia's East Coast the Grey Nurse is still on the critically endangered list and on the West Coast, as well as globally, it is vulnerable.

The Grey Nurse also goes by a couple of other names namely the Sand Tiger (more in the USA than anywhere else) and the Spotted Ragged-Tooth Shark, or just Ragged-Tooth Shark (largely in South Africa).

I knew the Grey Nurse was protected in some way, but I did not realise that the estimated numbers in 2010 for the East Coast population are only

between 1146 and 1662 individuals... and that is an improvement! In 2001 those numbers were estimated to be between 300 and 500. On the West coast it seems there is no estimated population but that the threat of the population diminishing to a critically endangered level is lower.

Globally the number of locations where Grey Nurses are a common site has diminished significantly and they are now restricted to South Africa, the east coast of the USA, Uruguay, Argentina and Australia.

Sticking to the East Coast population, which is as much to do with the fact that this is where I dive as it is to do with the greater amount of information available, there are several locations where the Grey Nurse hang out.

On the East Coast there are 13 of them (not that many) although some locations like Moreton Island and the



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By: Graham Willis



Solitary Islands have three specific habitats. Seal Rocks and South West rocks have two habitats each.

You can find the list on the Department of Environment and Energy Website in the species profile and threats database [www.environment.gov.au](http://www.environment.gov.au).

It seems a touch shortsighted that the Government cannot afford a more consistent measure of protection to this critically endangered species. Some of the habitats, such as Julian Rocks at Byron Bay, are an Aquatic Reserve, whereas Seal Rocks has no protection status at all.

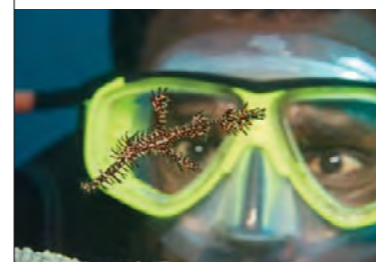
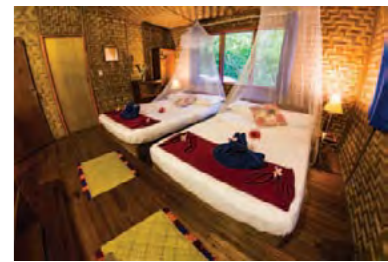
In fact, when you look more closely, 10 of the 19 locations have no protection status at all.

From what is known these sharks are thought to be slow breeders and only

produce one or two pups every two years. It's a competitive world and the pups make sure there are no more than one or two survivors by eating the other embryos in utero as well as the eggs produced by mum's ovaries whilst in utero.

There seems to be a lot we do not know about the Grey Nurse. We are not sure how long they live (although that is looking like 35-40 years), we are not sure when and where they breed, and we are not sure how many there are and whether the population is large enough to be self-sustaining.

My dive buddies and I have dived at four NSW habitats, at Julian Rocks, Fish Rock Cave, Broughton Island and Long Reef in Sydney, over the past few months and have been lucky enough to see 6-10 Sharks in each location.



*Picture a small private island, with white sandy beaches, tall palm trees, beautiful tropical gardens, traditionally-built, comfortable bungalows, magnificent sunsets and fine food.*

*Surrounding this little hideaway are some of the most healthy & colourful reefs and best fish life this planet has to offer...*

## Dive the Continent

Dive OZ

By: Graham Willis

The most recent trip in March 2019, which was to Broughton Island out of Nelson Bay, presented a really healthy population of 25-30 Sharks.

I do not know if the population is slowly increasing or if I have just been lucky, but I have seen more Grey Nurse in the past 12 months than I have seen in the past few years...let's hope that continues.

As divers we can do our bit for Citizen science by sending any photographs we take to Grey Nurse Shark Watch or Spot a Shark [www.reefcheckaustralia.org](http://www.reefcheckaustralia.org) and [www.spotashark.com](http://www.spotashark.com) which uses the individual spot patterns on the sides of the sharks to identify them.

In that way known sharks can be tracked and new Sharks identified.



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E: [amandajayne8@hotmail.com](mailto:amandajayne8@hotmail.com)



By: Graham Willis

### Code of Conduct for Diving with Grey Nurse Sharks

NSW Fisheries and Environment Australia, in consultation with the dive industry, have developed the following Code of Conduct for diving with grey nurse sharks.

To comply with the Code of Conduct for Diving with Grey Nurse Sharks divers must not:

- conduct night dives on known aggregation sites
- block entrances to caves or gutters
- interrupt the swimming pattern of the sharks
- feed or touch the sharks
- chase or harass the sharks
- interfere with the sharks using mechanical apparatus i.e.. scooters, horns

- use Shark Pod / Shark Shield Devices in known aggregation sites

- dive in groups totalling more than 10 divers



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# Porcelain Crabs

These delicately spotted crabs live in a symbiotic relationship with anemones. They keep the anemone clean while benefiting from its protection.

Porcelain crabs (*Neopetrolisthes maculatus*) have modified mouthparts which open out like fans into the oncoming current in order to trap tiny particles of plankton.

**Life span**  
They live for around 2-3 years.

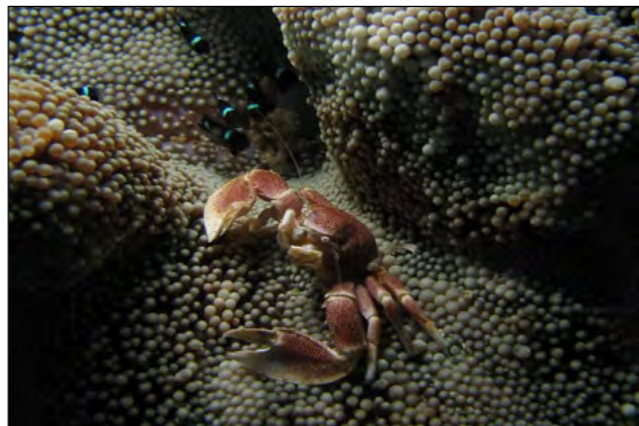
**Statistics**  
They are less than 24mm (1 inch) in width.

**Distribution**  
They are found in the Indo-Pacific.

**Habitat**  
They are also known as anemone crabs due to their close association with anemones. Porcelain crabs may be found singly or in pairs, hidden between the stinging tentacles or near the mouth of anemones. They are

found in reef habitats to depths of around 10m (33 feet).

**Diet**  
They are mainly plankton feeders, sieving tiny particles from the water column using their fan-like mouthparts. They also eat mucus from the anemone.



**Behaviour**  
Porcelain crabs are relatively aggressive, using their large claws to deter invaders, including anemone fish.

Although both use an anemone host, Porcelain crabs and anemone fish are not commonly found together – the crab usually losing out to the tougher


fish.

Like anemone fish, Porcelain crabs are immune to the anemone's stinging tentacles. It is a mutually beneficial relationship; the crab gaining safety and shelter in return for cleaning.

**Reproduction**  
Porcelain crabs are often found in heterosexual pairs.

They have internal fertilisation, with the male passing sperm to the female in the form of a tiny packet called a spermatophore.

The eggs are carried by the female in a brood flap on the abdomen. A single female may carry nearly 1 600 eggs at a time. The larvae are planktonic for several weeks before settling.

**Conservation status**  
Porcelain crabs are not of the IUCN Red List, but suffer from habitat loss if reefs are damaged or polluted. 



# 50 Interesting Ocean Facts

## PART II

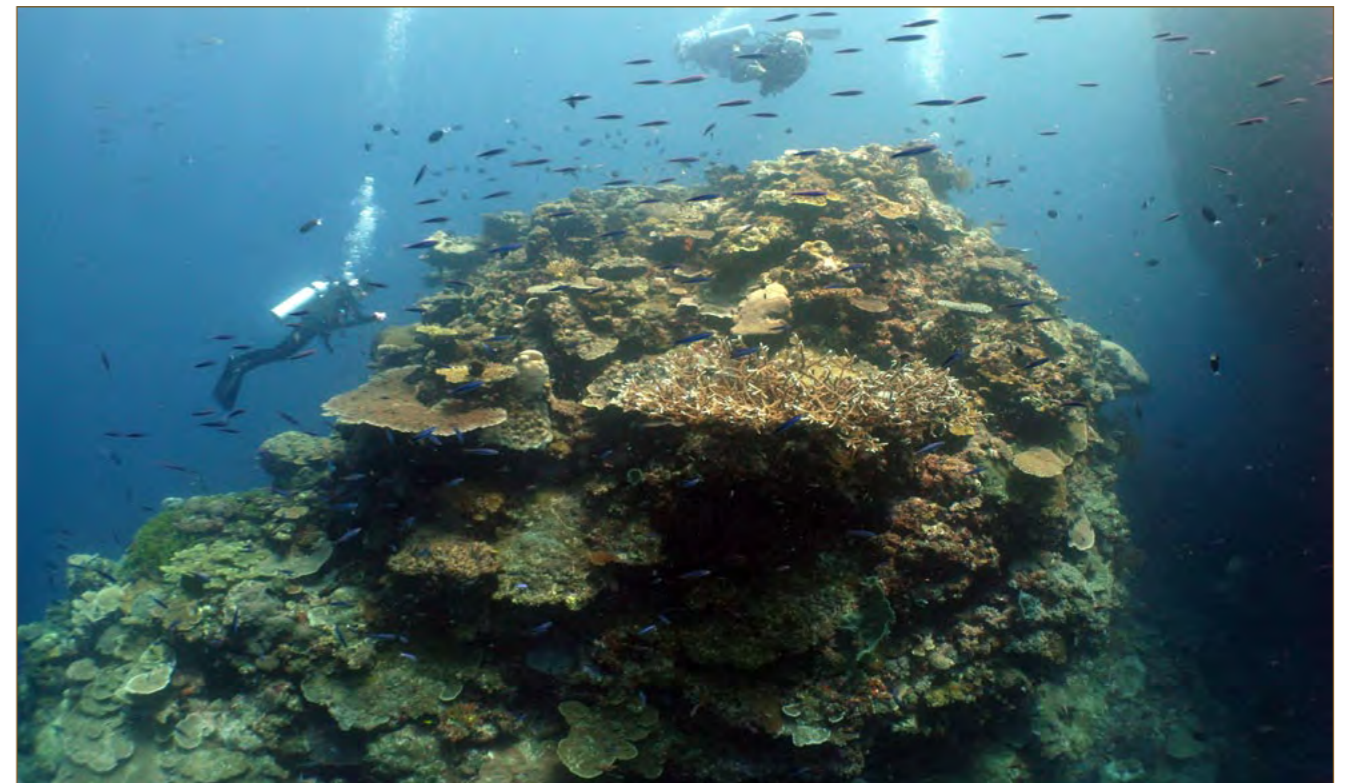
1. Fish supply the greatest percentage of the world's protein consumed by humans.
2. Most of the world's major fisheries are being fished at levels above their maximum sustainable yield; some regions are severely overfished.
3. The Grand Banks, the pride of New England fishing for centuries, are closed due to overfishing.
4. Eighty percent of all pollution in seas and oceans comes from land-based activities.
5. Three-quarters of the world's mega-cities are by the sea.
6. By 2010, 80 percent of people will live within 60 miles of the coast.
7. Death and disease caused by polluted coastal waters costs the global economy US\$12,8 billion a year. The annual economic impact of hepatitis from tainted seafood alone is US\$7,2 billion.
8. Plastic waste kills up to a million sea birds, 100 000 sea mammals and countless fish each year. Plastic remains in our ecosystem for years, harming thousands of

9. sea creatures everyday.
9. Over the past decade, an average of 600 000 barrels of oil a year have been accidentally spilled from ships, the equivalent of 12 disasters the size of the sinking of the oil tanker Prestige in 2002.
10. Tropical coral reefs border the shores of 109 countries, the majority of which are among the world's least developed. Significant reef degradation has occurred in 93 countries.
11. Although coral reefs comprise less than 0,5 percent of the ocean floor, it is estimated that more than 90 percent of marine species are directly or indirectly dependent on them.
12. There are about 4 000 coral reef fish species worldwide, accounting for approximately a quarter of all marine fish species.
13. Nearly 60 percent of the world's remaining reefs are at significant risk of being lost in the next three decades.
14. The major causes of coral reef decline are coastal development,

sedimentation, destructive fishing practices, pollution, tourism and global warming.

15. Less than one half a percent of marine habitats are protected – compared with 11,5 percent of global land area.
16. The High Seas – areas of the ocean beyond national jurisdiction – cover almost 50 percent of the earth's surface. They are the least protected part of the world.
17. Although there are some treaties that protect ocean-going species such as whales, as well as some fisheries agreements, there are no protected areas in the High Seas.
18. Studies show that protecting critical marine habitats – such as warm and cold-water coral reefs, seagrass beds and mangroves – can dramatically increase fish size and quantity.
19. More than 3,5 billion people depend on the ocean for their primary source of food. In 20 years, this number could double to seven billion.
20. Populations of commercially attractive large fish, such as tuna, cod, swordfish and marlin have declined by as much as 90 percent in the past century.

21. Each year, illegal longline fishing, which involves lines up to 80 miles long with thousands of baited hooks, kills over 300 000 seabirds, including 100 000 albatrosses.
22. As many as 100 million sharks are killed each year for their meat and fins which are used for shark fin soup. Hunters typically catch the sharks, de-fin them while alive and throw them back into the ocean where they either drown or bleed to death.
23. Global by-catch – unintended destruction caused by the use of non-selective fishing gear, such as trawl nets, longlines and gillnets – amounts to 20 million tons a year.
24. The annual global by-catch mortality of small whales, dolphins and porpoises alone is estimated to be more than 300 000 individuals.
25. Fishing for wild shrimp represents two percent of global seafood but one-third of total by-catch. The ratio of by-catch from shrimp fishing ranges from 5:1 in temperate zones to 10:1 and more in the tropics. Information supply by [www.savethesea.org](http://www.savethesea.org)



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# Lion of the Deep

**Imagine a predator on the loose. A bold creature, a mindless eating machine with a mantle of venomous spines, prey to no-one else. Imagine a lion on the loose: a Lion of the Deep.**

Even its name reveals the fiery character of the Indo-Pacific red lionfish, scientifically known as *Pterois volitans*. With bold maroon and white zebra stripes, and a plume of feathery spines, the lionfish is a stunning specimen. Elegant, graceful, deadly to its prey.

The red lionfish's profuse dorsal, anal and pelvic spines deliver a venomous sting that is fatal to potential predators and painful and dangerous to humans. Without any natural predators in these waters, the lionfish are thriving – putting indigenous marine species at risk, as well as recreational and commercial divers and anglers who come in contact with the fish.

It is said that six lionfish were first introduced into the Atlantic from Biscayne Bay Florida in 1992 following hurricane Andrew. Genetic analysis reveals that lionfish in the Caribbean have likely all

originated from this source. Lionfish in their native waters reproduce once per year, but with the consistent warm temperatures of the Caribbean they reproduce monthly!

Gelatinous egg masses float to the surface and planktonic larvae drift for up to 40 days before settling, allowing for wide-range distribution by ocean winds and currents. This invasive species has recently arrived in Roatan, a bay island off the coast of Honduras in the Caribbean, one of the most tranquil places I have ever had the privilege of diving.

Just the thought of a fish so exquisite being capable of destroying an entire underwater world of splendour sounds beyond the bounds of possibility. The first lionfish was found by a boat captain from Honduras in 2009 and studies have proven that the juvenile reef fish population has

since decreased by a staggering 79%. Lionfish exhibit opportunistic feeding behaviours, and in addition to fish, feed on a variety of crustaceans and invertebrates. A lionfish can consume prey up to two to three times its own length.

Due to their population explosion and aggressive behaviour, lionfish have the potential to become the most disastrous marine invasion in history by drastically reducing the abundance of coral reef fish and leaving behind a devastated ecosystem. It is also important to note that lionfish have the potential to act synergistically with other existing stressors, such as climate change, over-fishing and pollution, making this invasion of particular concern for the future of Atlantic coral reefs.

When hunting, they herd and corner their prey using their pectoral fins, then quickly strike and swallow their prey whole. While native grouper may prey on lionfish, they have been over-fished and are therefore unlikely to significantly reduce the effects of invasive lionfish on coral reef communities.


A controlled experiment testing the effects of lionfish on native fish communities was done by documenting the recruitment of newly settled reef fishes on 20 patches of reefs – 10 reefs with a lionfish and 10 reefs without.

Fish censuses were conducted at one week intervals for five weeks. Recruitment was significantly lower on lionfish reefs than on the control reefs at the end of the experiment. On one occasion, a lionfish was observed consuming 20 small wrasses during a 30 minute period.

While complete eradication does not seem realistic, affected nations are encouraged to initiate targeted lionfish control efforts as soon as possible, including targeted fisheries (lionfish flesh is tasty and cooking denatures the spine venom). Efforts to reduce densities of lionfish at key locations may help to lessen their ecological impacts. Recovering and maintaining healthy populations of potential native predators of lionfish, such as large grouper and

sharks, may also help reduce the deleterious effects of these voracious invasive predators.

Our whole team at Subway Watersports is actively participating in the Roatan Marine Park Lionfish Control Programme. Only dive professionals that have been awarded a collection license are allowed to participate by using specialised spears approved by the Marine Park.

Speared lionfish must be reported to the Marine Park along with the following information – dive site, depth, an estimate of size and the person responsible for spearing the fish. 



# Making Equalising Easier

**Ear problems are the scourge of many divers. Here, the reasons are explained and what you can do to overcome painful ears.**

Middle ear equalising difficulty is the commonest diver problem and the vast majority are due to nasal allergy - to dusts, pollens, grasses, house mites, smoke, animals and many other airborne allergens. These affect over 90% of the population. In most cases symptoms are mild, causing only minimal nasal stuffiness hardly noticed by the person. In others, more severe allergic symptoms occur and present as allergic rhinitis with nasal congestion, mucus production, postnasal drip and sneezing. It is commonly known as hay fever.

There are two major factors in making equalising easier:

- Ensure your equalising technique
- Use anti-allergy medications

Ensure your equalising technique

There are several equalising techniques involving blowing, swallowing, head, tongue, throat and neck movements and if you cannot equalise easily and at will, you first need to determine the most efficient method in your case. In many divers this alone solves the problem. Your dive doctor can help here too.

Use anti-allergy medications

Medications come next. Like asthma, nasal allergy is an inflammatory process and both swelling and mucus production occur. Allergens react with specific binding sites in the nasal membranes. A cascade of biochemical and cellular reactions is set off and the membranes become swollen, inflamed and exude mucus with dilatation of nasal blood vessels. The tiny cushions which surround the openings of the Eustachian tubes in the back of the nose are also affected. They swell and effectively hamper easy entry of air into the Eustachian tubes. A slimy curtain of mucus oozing over these small orifices aggravates the issue even more. Under diving conditions, pressurised air has to enter the Eustachian tubes in order to equalise. If it cannot, middle ear squeeze results.

1. The most effective method of treating this inflammation involves the use of a nasal cortisone spray. Cortisone is the most powerful anti-inflammatory known. The idea is that blocking the inflammatory process should reduce the allergic response. As it is administered in tiny microgram doses directly to the nasal tissues, inhaled cortisone does not cause the generalised

side effects seen and widely feared by oral cortisone use. A variety of cortisone nasal sprays are available and they are generally used once a day on an ongoing basis.

2. Livostin nasal spray is also an effective anti-allergen. The dose is twice a day for up to eight weeks.

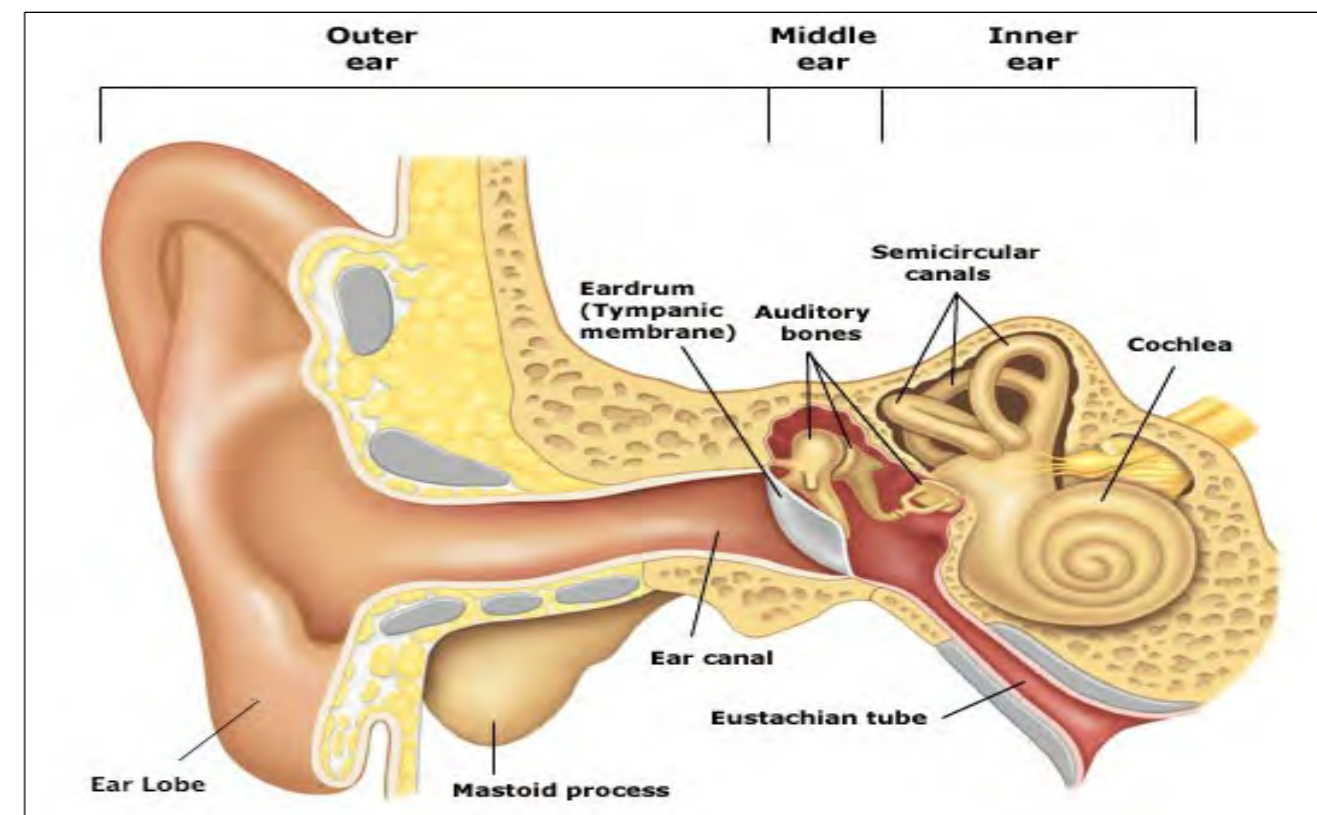
3. Using a 2.5 ml syringe (without the needle!) to squirt a solution of ½ teaspoon of table salt plus ½ teaspoon of bicarbonate of soda dissolved in 300 ml of warm water into the nostrils and allowing the liquid to run out of the nose before using a nasal spray greatly improves the efficacy of nasal medications. Instead of spraying the products on to mucus-covered tissues, the medication is applied directly to recently-washed membranes where it is designed to work.

4. There are also a number of oral antihistamines which are effective. These include Clarityne, Zyrtec and Deselex. These are often very effective in reducing nasal allergic swelling, can be used on an ongoing

basis and, to date, to my knowledge, have not caused any untoward side effects during diving.

5. Drixine and Iliadin nasal sprays are useful adjuncts in facilitating equalising. They also cause intense shrinking of the thickness of the nasal membranes but, take note, the ongoing use of these sprays for more than five days can result in massive intensification of nasal stuffiness resulting a more and more frequent need for the use of these sprays. Many patients become virtually addicted to these sprays, being unable to breathe through their noses without ever-increasing doses. Do not use these sprays except as a single daily dose before diving!

6. The use of oral Sudafed (pseudoephedrine) reduces blood vessel dilatation and shrinks the thickness of swollen membranes. The problem is that pseudoephedrine can also cause palpitations, an irregular heart rhythm, high blood pressure and even precipitate a heart attack or stroke in susceptible divers. ❏





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# GLOBAL NEWS

## LIVE THE LIFE OF YOUR DREAMS TRANSFORM INTO ONE OF THE MOST MARKETABLE PROFESSIONALS ON THE PLANET

5\* PADI Instructor Development Dive Resort, Magic Oceans, has teamed up with the internationally renowned ProDive UK team for the experience of a lifetime. Become a PADI Instructor in Anda, Bohol in the Philippines, the world's leading dive destination.

Both teams are ready to welcome you and provide you with top class facilities, an excellent programme and a fantastic location. There's no better place to take your next professional PADI step and turn your passion into a living.

The course will start on the 28th of May and will lead directly to the IE (on Bohol) on 5th & 6th June.

By signing up to this IDC you will be one of the first people in the world to participate in the BRAND NEW IDC syllabus which is more focused on you and how to become a truly effective instructor!

For more information about the IDC at Magic Oceans with ProDive UK, visit the website: <https://magicoceans.online> or send an email to [reservations@magicresorts.online](mailto:reservations@magicresorts.online)



## Lens Beyond Ocean (LBO) Photo Competition

The annual international underwater photography competition, Lens Beyond Ocean, is back again for the tenth year. Since the competition's humble beginnings in 2011, it has grown each year with more than 850 underwater photographers from around the world participating for their chance to win fantastic prizes.

### Prizes

From dive travel packages at some of the best spots in Asia to top-of-the-line dive gear and camera equipment worth USD 25,000, participants have lots to look forward to winning in this competition. Judges The competition will be judged by renowned underwater photographers including Tobias Friedrich (Germany), Jason Isley (United Kingdom/Sabah) and Nurul Yazid (Malaysia).

### Be A Winner

If you are a diver and passionate about underwater photography, this is your chance to showcase your talent. 1st and 2nd place winners will be selected in each of the seven categories. Other images selected by the panel of judges will be awarded the honorable mention of "Memorable Pictures".

### Deadline

The final date of submission is 15th May 2020.

### Winners' Announcement

Winners will be announced on 5th June 2020. All winners will be awarded at Malaysia International Dive Expo (MIDE) on Saturday at 11.00am on the main stage.

### Winners' Gallery

All winning photos will be displayed during MIDE at the foyer from 12-14 June 2020 at Hall 1, Putra World Trade Centre, Kuala Lumpur. Winning videos will be showcased on the big screen on the main stage.

### Call for Sponsors

Businesses and organizations keen to sponsor the event or donate prizes will benefit from expansive international exposure. Your organization's logo will be present on all print and online promotions. This includes being listed as a sponsor on the Lens Beyond Ocean website with a link to your organization's website; logo presence and brand promotion on social media; and placement on the Lens Beyond Ocean gallery banner as well as the venue banner displayed during MIDE 2020.

For more information, please visit: [Lensbeyondocean.com](http://Lensbeyondocean.com)

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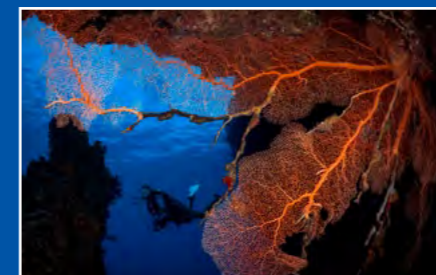
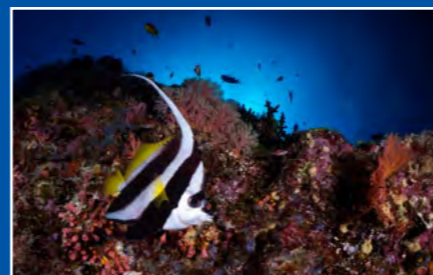


By: Johan Boshoff Photos By: Gerald Rambert

# Solomon Islands

The hidden gem of the South Pacific Ocean

Spanning just south of the equator close to Australia lays a group of magnificent islands with towering mountain peaks, volcanos, lagoons, impenetrable forests, mangroves, coral out crops, mysterious cultures with very interesting traditions. Some of the most unspoiled and pristine dive spots on our planet covered with World War artefacts. One of the most beautiful and special places that you will ever visit, a place where time stood still for decades, often described as the “Islands that was Lost in Time”.



The 992 islands of the Solomon's forms the third largest archipelago in the Pacific Ocean and are fashioned in a double chain with neighbours Papua New Guinea to the east, Vanuatu in the south and Bougainville in the north.

The Solomon's islands are divided in 9 provinces, and New Georgia island that is located in the Western Province is one of the best diving destinations that the Solomon islands has to offer.

Solomon's is a diver and a traveller dream destination and it can be daunting to know where to begin to experience what this boundless country has to offer.

And the best way to explore the Solomon's is to choose an island and then start to do some island hopping to explore and dive its neighbouring islands.

And a why not start this adventure from Munda or Gizo that is situated around New Georgia Island what is surrounded by the largest salt water lagoon in the world.

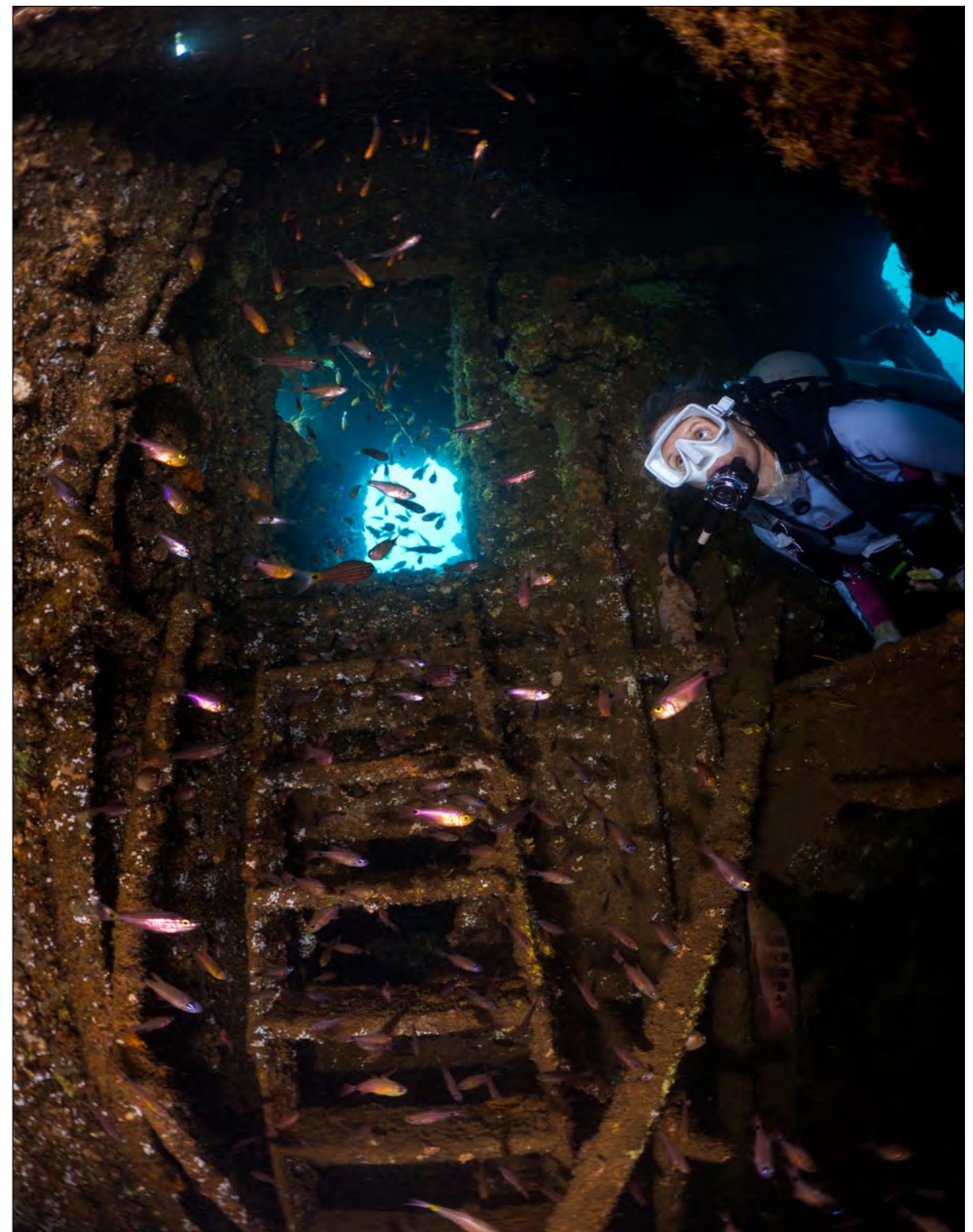
The Marovo Lagoon, is a World Heritage site

that is approximately 157 km long with 2 inactive volcanoes and over 300 islands of only 20 of these are inhabited by 50 odd villages. The islands are surrounded by white sandy beaches and tropical blue water and coral reefs structures as far as you can see.

All around the Solomon Islands you will find mysterious cultures, rich in local traditions and World War 2 history because the Pacific was the biggest battleground in the Second World War. Naval battles raged from Pearl Harbour down to the Solomon Islands up through the Philippines and ultimately culminated at Iwo Jima in Japan.

Distances covered were immense. Thousands of tons of ships and aircraft were lost in the Pacific by both the Americans, Australian's and Japanese. Six decades of corrosion and human expansion took its toll and today very few remnants of the War artefacts remain on land.

Underwater the Pacific is littered with wrecks. Most of them are in deep water out of view or not even discovered, but a few of them that was found lies within reach of divers to revisit the world war.



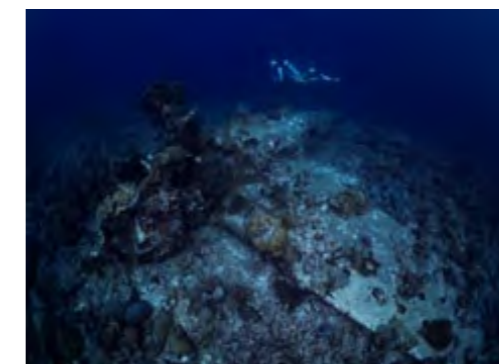
Solomon Airlines offers direct flights from Brisbane to Munda where you will land on one of the smallest international airports in the world. Arriving at the airport the locals welcome you with traditional singing and dancing while you go through customs, and then a short walk to Agnes Gateway Hotel and here we started our island hopping with Dive Munda a well-known dive operator in the Solomon's that offers fantastic service and even better staff.

Situated on the edge of the Marovo Lagoon with spectacular views over the ocean, especially sun sets. A place where you can just sit back and relax and enjoy what this special place has to offer.

Diving around the Munda and Gizo area, you will find spectacular reef systems where the ocean currents and Mother Nature shaped the landscape and the underwater world.

With deep trenches and channels around the lagoon and islands, the tidal flows and diverse underwater topography contributes to the biodiversity and its treasure below. Today it offers you some of the most unspoiled





**Sail around the South Pacific's best kept secret, providing all-inclusive luxurious liveaboard holidays in paradise. Exclusive sailings from Honiara and Munda.**

Dive Munda is a multi-award winning SSI Instructor Training, Certifier and Extended Range Centre in the Western province of Solomon Islands committed to sustainable dive eco-tourism. Discover WWII history and Kastom culture and scuba dive unexplored reefs, hard and soft coral, cuts, caverns and caves along with pelagic life and shark action, all in one of the last wild frontiers left on planet ocean.

*Direct weekly flights from Brisbane to Munda with Solomon Airlines*

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dive spots on our planet and this is why the Solomon's are part of the Coral Triangle of the world.

The Coral Triangle is composed of Indonesia, Malaysia, Philippines, Papua New Guinea, Solomon Islands, and East Timor and is the heart of the world's coral reef biodiversity. The area got its name for the staggering number of corals (nearly 600 different species of reef-building corals alone), and the region nurtures six of the world's seven marine turtle species and more than 2000 species of reef fish.

Wall dives on the outside reefs can drop off to 2000 meters, channel dives between the islands on an incoming current yield rich pelagic sea life whilst reef dives range from hard coral cities to soft coral gardens and to top this of, you have the wrecks.

The lagoon was the ideal place to hide Japanese ships among the hundreds of islands till they had detected by the Allied forces and then made their final journey to the bottom of the ocean floor. And still today you can dive war ships, cargo ships and a

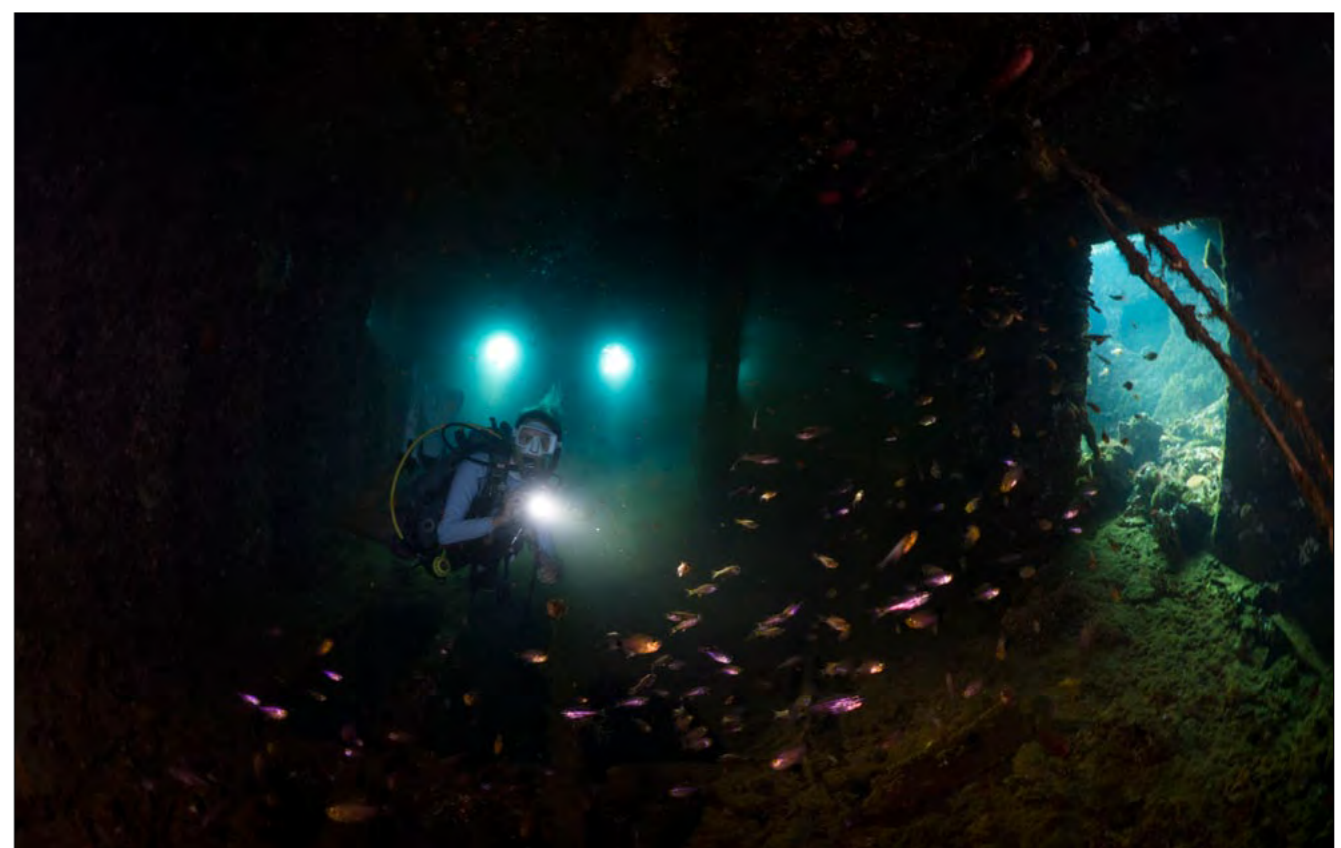
verity of plains from the World War 2 all around the Solomon's.

All around this area you can see Sharks, Eagle rays, Rays, Devil Rays and if you are lucky some Manta Rays or Hammer head sharks if you are there in the right season. Schools barracudas, Oceanic trigger fish, Potato groupers, Dogtooth tuna, Jacks, schooling King fish and Turtles are commonly seen around the dive spots.

As you are driving to your next dive spot or island through the turquoise waters in one of Solomon's traditional Banana boats you realise how beautiful this chain of islands are. Every island doesn't matter how big or small has its own story to tell.

So make sure that you visit some of the more interesting islands during your surface intervals or you can even stay overnight if you want.

And one that you have to visit is Tetepare Island that is about an 2 hour boat ride from Munda, a great place to escape from the real world to stay in an ego resort that is situated



on the largest uninhabited island in the south pacific.

The island was well known in the region where tribes still preform the tradition of head hunting and became uninhabited when a disease broke out and the local tribe's believed that it was their ancestors that was putting a curse on the island.

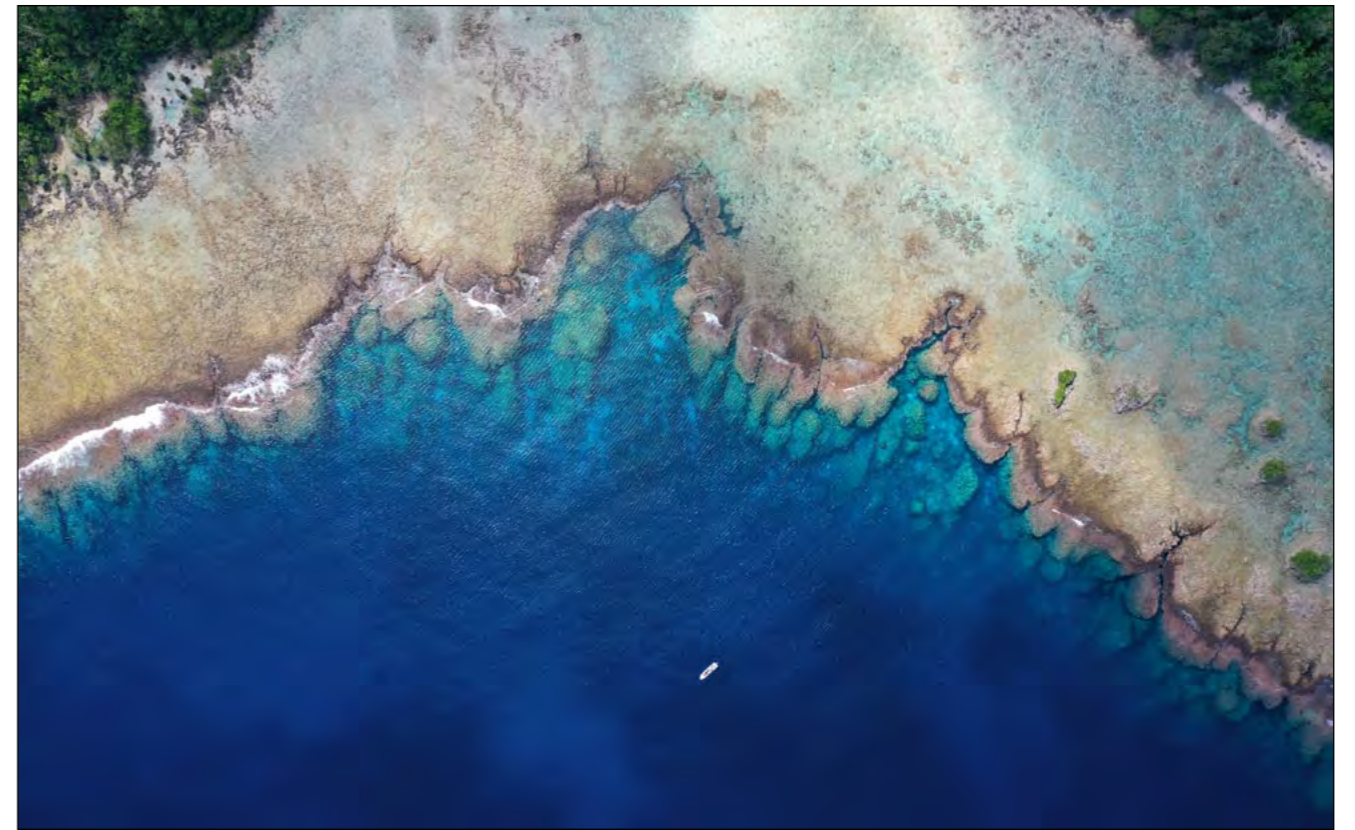
So everyone that was living on the island had to move to other islands. Today you can still find some locals of Tetepare Island all over the Solomon's.

Visiting the Eco lodge on this mysterious island that only allow 12 visitors at any time is an experience that has to be done, Turtle tagging or as the locals call it Turtle rodeo is an exciting thing to watch, but for me it was the coconut crab, the coconut crab is a species of hermit crabs, also known as the robber crab or palm thief.

It is the largest land-living arthropod in the world. If birds or reptiles are your thing then this island is the only place you can find White eyed pitta bird and 2 blind snakes that was only discovered a couple of months ago.

Other islands in the area not to be missed is PT109/Lumbaria or JF Kennedy island that has a very interesting story where JF Kennedy was stationed during World War 2 and artefacts are still seen around the islands.

To meet the locals and see their traditions, a day visit to Rendowa island is brilliant where



## Dive the World

Solomon Islands

By: Johan Boshoff Photos By: Gerald Rambert

the locals take you from Titiru to Ugele for a village and culture tour. Fat boys and Lola island some outstanding places, there is so many to choose from but also make sure that you stop at Skull island, where you can still see the final resting place for numerous skulls that was collected as trophy's when head hunting was still a tradition in the Solomon's.

But by far my favourite island was Ndoke Ndoke where the Cave of the custom shark is. A cave dive where you will take a short walk to a small hole on the island and start the cave dive through a narrow crack in the volcanic rock. As you go through the cave system it will take you back in to the ocean where you exit on a wall reef around 20 meters deep.

Exiting the cave on a wall that drops down to the unknown depths, with 100 plus visibility is amazing. This is a dive that is unique in the world and a dive that everyone that loves caves has to experience.

There is so may dive spots and islands around Munda and Gizo area to go and explore that will keep you busy for months

and Dive Munda and Dive Gizo can take you to all the best spots to dive and explore. If wrecks attract you then this is also the place for you, with number of seaplanes and wrecks scattered around the islands. From spy to surveillance plains to bomber plains and even a plain that the pilot Jim Dougherty that was in the crash in 1943 during the war came back to dive on the wreck on its 50th anniversary.

Also a well-known ship wreck in the area are the Kashi Maru, a Japanese freighter that was caught by USAF bombers on July 2 1943 while unloading a cargo of trucks and fuel to nearby troops based on New Georgia Island.

She lies Mboroko Harbour and are is easily accessible to all levels of diver and the wreck is filled with artefacts and one of the best and most preserved engine rooms in the world!

The wreck now hosts abundant of corals, clams, Moray Eels, Octopi and masses of juvenile tropical fish and crustaceans. This is a truly spectacular dive for World War 2 enthusiasts and wreck divers.



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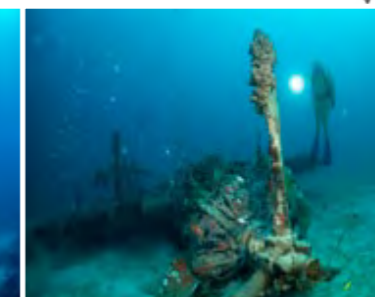
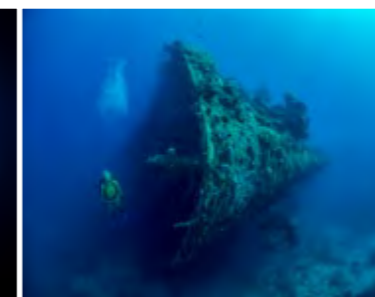
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Conditions : For one person, does not including meals and is subject to availability of flights and rooms. Competition ends 31 December 2020



Solomon Islands is a hidden gem that many travellers overlook, yet fortunately for all of us, over many years the Solomon's has received so little publicity and is still a relatively secret destination among travellers and divers.

There is so many things to say and do in the Solomon's that you can base an entire magazine just on these islands. It is a place where time stood still for decades, the "Islands that was Lost in Time".

**Travel Information:**

Traveling: Solomon Airlines does direct flights from Brisbane to Munda. For more information regarding flights around the Solomon's visit [www.flysolomons.com](http://www.flysolomons.com)

**Passport & Visas:**

All visitors to the Solomon Islands Everyone visiting the Solomon Islands needs a valid passport with a minimum of six months validity in their passports on day of travel to enter the country. But not everyone needs a visa. Most tourists are granted a visitors permit on arrival.

You do not need a visa to enter the Solomon Islands if you are a citizen of the

Commonwealth, a citizen of the United States, or a citizen from most EU countries.

**Voltage:**

220V Same as AU and NZ – Same plug fittings too.

**Currency:**

Solomon Islands dollar (1 Solomon Islands dollar = \$0.20)

**Water temperature:**

28° C - 30° C

**Best time to dive this site:** Solomon's can be dived all year round but January to March is normally the raining season.

**Contact Details:**

**Solomon Tourism**

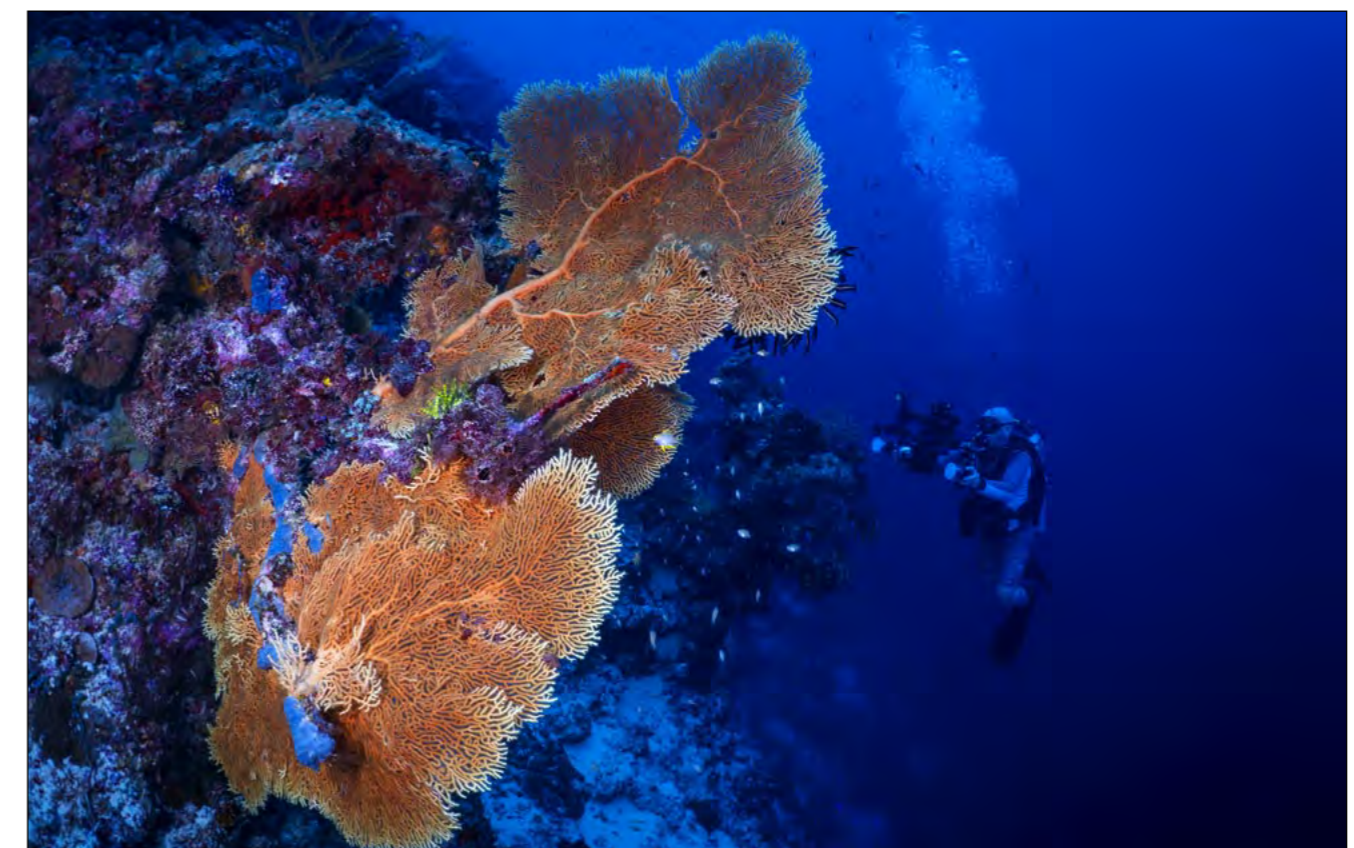
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THE ULTIMATE DIVE EXPERIENCE



# S.S. YONGALA

The S.S.Yongala is a world renowned dive site lying in the central area of the Great Barrier Reef Marine Park, south of Townsville



## Dive the World

S.S.Yongala

The S.S.Yongala is a world renowned dive site lying in the central area of the Great Barrier Reef Marine Park, south of Townsville.

The upper sections of the Wreck can be explored 15m below the water's surface, with a depth of approximately 30m. The structural integrity of the Wreck is retained, and it is well known for being one of the largest, most intact Shipwrecks in the world.

The Yongala also has some of the greatest diversity of marine life on a wreck in the world, which attracts more than 10,000 divers each year. It is also extremely rich in history.

The SS Yongala was declared one of Australia's greatest maritime tragedies. On the 23rd of March 1911, she was on her 99th voyage on a route from Melbourne to Cairns, when tragedy struck amidst a Tropical Cyclone. With 122 passengers and crew onboard,

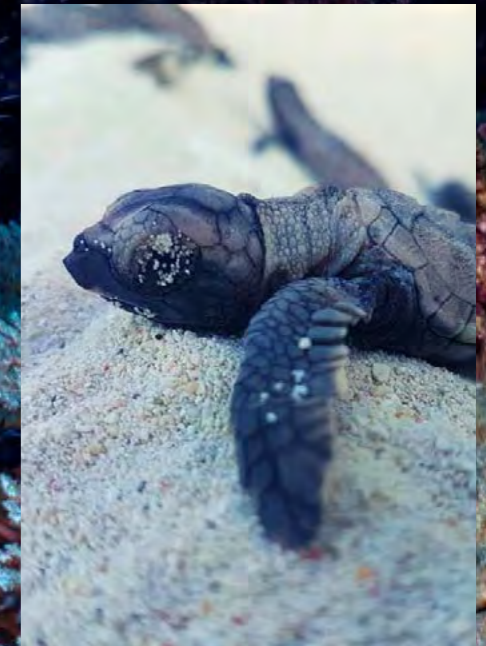
she was on her leg from Mackay to Townsville. After departing at 1.40pm she was scheduled to arrive in Townsville the following morning, however the Yongala never arrived, and was missing along with everyone on board for over 30 years.

The Yongala was built in England in 1903 for the Adelaide Steamship Company. She was built as a luxury passenger ship, and was named after the Aboriginal word "Yongala" (pronounced 'Yonggluh' at the time), which means "broad wide watering place".

The Yongala was the first to set sail on a new route from Brisbane to Fremantle in 1906, which was a 5000km journey - the longest interstate trip at the time. She also operated a passenger and cargo route between the gold fields in Fremantle to Adelaide, Melbourne and Sydney. With a lack of demand in Fremantle, she



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was soon reassigned to the Adelaide Steamship Company, with her new route to include passenger and cargo transportation from Melbourne to Cairns.

With this change came a new Captain, William Knight, who was seen to be one of the Steamship Company's most capable men, and had a 14 year history of service without incident.

The Yongala had originally been fitted with 164 tones of pig-iron ballast while in the West Australian trade, as the recovery time from rollback to upright position took longer than customary.

It was agreed this was unnecessary for the new route to Cairns due to the load of cargo onboard, and these ballasts were removed before the journey North.

On the 14th March 1911, the Yongala began her 99th (and final) voyage from Melbourne to Cairns. On the 23rd of March she arrived in Mackay, departing at 1.40pm after unloading most of her cargo.

Without the pig-iron onboard, many people believe this left the Yongala vulnerable and less stable. On board were 49 passengers, 73 crew, a Lincoln Bull and Racehorse called Moonshine. She was due to arrive in Townsville at 6am March 24th, however she never arrived. It was normal practise for the S. S. Yongala and her sister ship, the SS Grantala, to pass each other during the night as they traveled in opposite directions south of Townsville.

The Grantala had anchored in Cape Bowling Green that fateful night as she waited out the 120km/hr gale force winds and torrential rain, however she had no sighting of the Yongala.

At first there was no panic, as many assumed the Steamship had taken shelter from the tropical storm,



however suspicion arose as days passed with no sighting. Wreckage began washing ashore close to Townsville within days, including a door from inside the music room of the ship, and the body of a horse believed to be that of Moonshine.

The last known sighting of the Yongala was from the lighthouse keeper at Dent Island, who saw her pass by at 6.30pm on March 23rd, just at sunset.

It is believed that by midnight, the SS Yongala was in serious trouble battling a tropical cyclone off the coast of Cape Upstart, with no shelter and nothing to do but battle against the storm.

The Yongala was listed as missing on the 26th of March, and the QLD Premier used all the states resources in a search effort to locate the ship. A 1000 pound reward leading to the discovery of the Yongala was offered,

however was withdrawn after no useful information came through. After finding no fault with the ship or Captain Knight's abilities, the board concluded: "The fate of the Yongala passes beyond human ken into the realms of conjecture, to add one more to the mysteries of the sea. "

Over 30 years passed with no trace of the Yongala. Many speculations were made, and it was often assumed that the vessel sank so quickly that no attempt to launch the lifeboats were made.

In 1943, a steamer clearing shipping lanes of mines lost a paravane after it snagged on an uncharted object.

The steamer sent a telegram to the Department of Navigation, mentioning they might have found the long lost Yongala.

At the end of the war in 1987, the



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obstruction was investigated by HMAS Lachlan, using anti-sub instruments and echo sounders. After several sweeps it was indicated the probability of being a shipwreck, however the Navy investigated no further.

It wasn't until 1958 that a final effort to locate the S. S. Yongala was made, this time by Townsville resident Bill Kirkpatrick. Kirkpatrick teamed up with diver George Conrad, who confirmed the wreckage was indeed that of the Yongala, as he saw the letters written on the ship.

The partnership however didn't work out, and the QLD Underwater Research Group soon contacted Kirkpatrick.

They spent the following few weeks diving the Yongala. In October 1958 a safe was recovered, however it was found to contain nothing more than black sludge.

After much disappointment, the serial number of the safe was soon checked, and alas - it was proven to be a safe supplied to the purser's cabin during the Yongala's construction in 1903. The S. S. Yongala was no longer a missing Shipwreck.

The Yongala now sits on the ocean floor with the bow pointing in a northerly direction. It lies listing to starboard at an angle of between 60 and 70 degrees. The sea floor is open and sandy, however the wreck retains most of its shape and structure.

Access to sunlight at the top of the Wreck has created an abundance of coral gardens coating the outer layer.

The wreck has become an established artificial reef and complex habitat, attracting many large pelagic fish species, sting rays, sharks, sea snakes, turtles, and giant QLD groupers - some exceeding 3m in length! A green



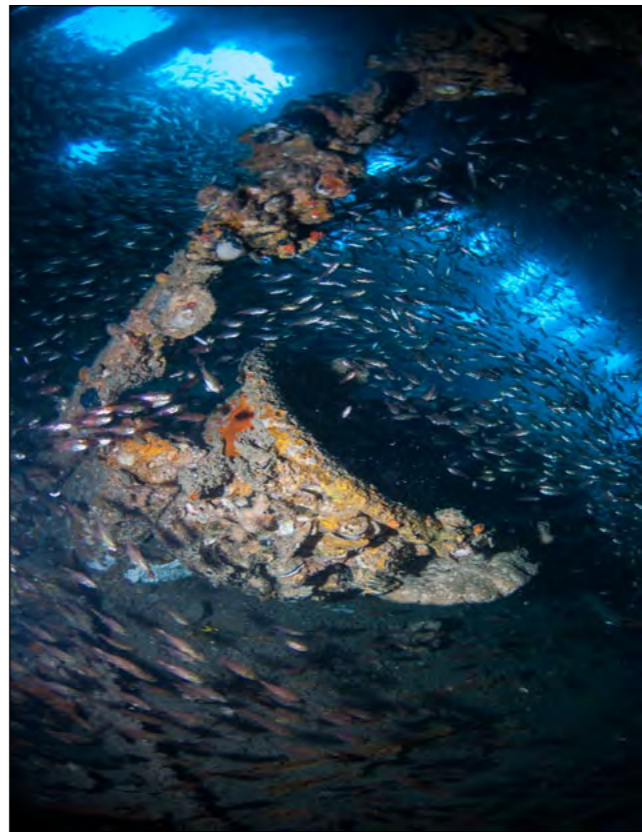
protection zone surrounds the wreck with a 797m radius, and access is by permit only.

Several moorings are installed to reduce impact and damage from careless anchoring, and penetration and interference with artefacts is prohibited.

The S. S. Yongala is not only a stunning dive site, but an incredible piece of history. It is a remarkable gravesite to be respected and enjoyed in the honor of all 122 lives lost at sea.

The quickest way to access the dive site is from the small coastal town of Alva Beach, an 80km drive south of Townsville. Here, Yongala Dive runs regular dive trips with a fast 30 minute boat ride out to the Yongala Wreck.

For more information on diving the S.S.Yongala visit [www.yongaladive.com.au](http://www.yongaladive.com.au) or Email: [reservations@yongaladive.com.au](mailto:reservations@yongaladive.com.au) or Phone: +61 7 4783 1519



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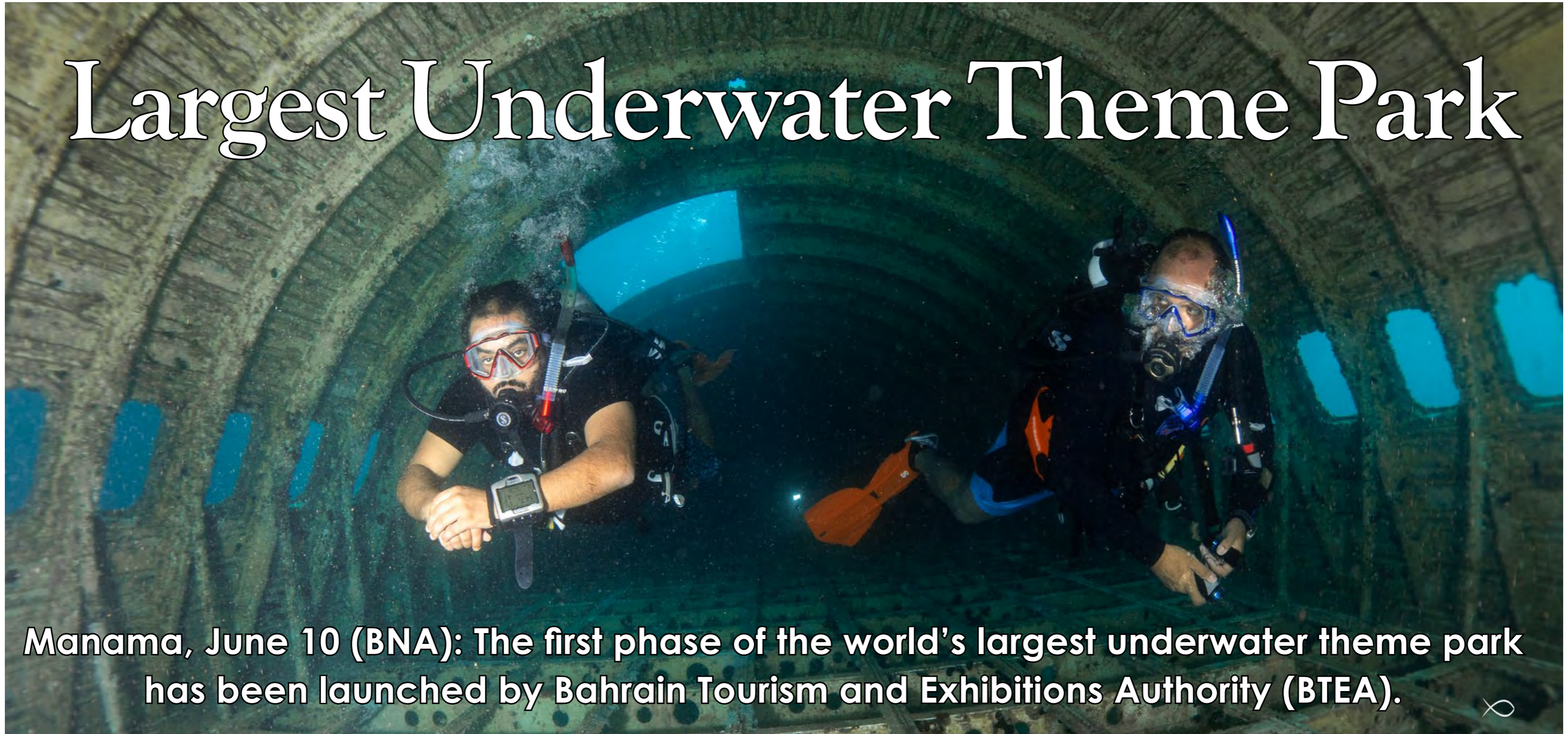
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# Largest Underwater Theme Park



Manama, June 10 (BNA): The first phase of the world's largest underwater theme park has been launched by Bahrain Tourism and Exhibitions Authority (BTEA).



## Exploration

Bahrain

By: Fatema Al Najem

The launch was announced during a press conference held at Diyar Al Muharraq and attended by government officials and local and international divers.

A highly specialized team implemented the required procedures and preparations for the aircraft's submersion in an area that is approximately 20 meters deep. This included ensuring necessary safety measures are in place, reassembling the aircraft's wings, which had previously been dismantled for the aircraft to be transported to Bahrain, and attaching foundations.

The Minister of Industry, Commerce and Tourism and chairman of BTEA board, Zayed bin Rashid Al Zayani, noted that the project will reinforce Bahrain's reputation as a leading regional tourist destination.

The unique dive site, which covers an

area of 100,000 square meters, will have a 70-meter long decommissioned Boeing 747 as its centerpiece, the largest ever to be submerged, he added.

Residents and tourists will be able to book trips through licensed diving centers by August, he said, noting that there will be no fees imposed by the Ministry or the BTEA.

"We are proud to launch this unique eco-friendly project in partnership with local diving companies, the Supreme Council for Environment and the private sector," he said.

"The new theme park will undoubtedly emerge as a global tourist attraction. The world-class project covers an extensive area, and will provide an unforgettable experience for both tourists and diving enthusiasts alike. This initiative also aims to revive the Kingdom's marine ecosystem and to preserve the local marine environment



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by incorporating international environmental standards. It will also position Bahrain as a global leader in the field of eco-tourism and marine wildlife preservation as well as further developing the tourism sector as a main contributor to the national economy and an important source of the diversification of the national income."

Al Zayani highlighted BTEA's close cooperation with Diyar Al Muharraq in designing and building a 900-square-meter pearl merchant's house that will also provide researchers with rich information and data on marine ecology and biology as well as being a major boost to the Kingdom's eco-tourism sector.

Supreme Council for Environment Chief Executive Dr Mohamed Mubarak bin Daina said that the ground-breaking project is unique in its compliance

to strict environmental standards. Preparing the aircraft for submersion included removing wires, hydraulic, aerial and fuel systems, adhesive, plastic, rubber, chemical materials, and all possibly-toxic substances to preserve the marine environment.

The site will provide an exceptional dive experience as it will include several structures in addition to the aircraft, such as a replica of a traditional Bahraini pearl merchant's house, artificial coral reefs and other sculptures fabricated from eco-friendly material, all submerged to provide a safe haven for coral reef growth and a habitat for marine life.

Hasan Janahi, an avid Bahraini diver, commended the high environmental and regulatory standards of the theme park, noting that such structures will enhance marine life, and attract local



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and international divers.

This unique eco-tourism experience is a testament to the Kingdom's rich history that is heavily influenced by the sea. The site of the project was determined following rigorous field investigations, a technical team coordinated with The Survey and Land Registration Bureau to determine the most appropriate area - one that is not only deep enough, but also where the seabed has the appropriate conditions to withstand the weight of the plane.

The project is implemented in accordance with best global practices for better environmental sustainability to ensure that tourist activities do not damage the environment or the marine life.

The project will provide researchers with rich information and data on marine ecology and will raise awareness on the growing importance of preserving

precious marine habitats.

The project is in line with BTEA's long-term tourism strategy that aims to facilitate the attainment of Bahrain's Economic Vision 2030 in addition to enhancing the Kingdom's regional and international standing, under the 'Ours. Yours. Bahrain' slogan. 



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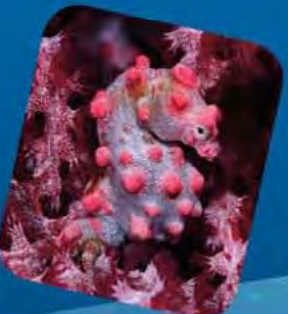
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# Malcolm Nobbs

A journey through the lens



Malcolm is a regular contributor to Australian dive magazines and to dive magazines worldwide. He lives in Nelson Bay, New South Wales, Australia with his wife Mary and their border collie Bella.

Nelson Bay is a relaxed holiday town with fabulous beaches just a few hours' drive north of Sydney and very importantly has some great diving.

Born in the UK, Malcolm holds joint Australian/British citizenship. Formerly an active member of the British Society of Underwater Photographers (BSoUP) he moved to Australia in 2009 having just penned his first underwater magazine article.

Malcolm found writing such articles hard going and only four more followed in the next three years. But fortunately for him in 2013 one of the editorial staff of the UK's DIVER magazine decided to act as a match maker.

Aware of Malcolm's struggles, he introduced Malcolm to Jamie Watts, a talented writer but not such an enthusiastic underwater photographer. Jamie and Malcolm hit it off straight away and ever since have produced a constant stream of articles.

Their modus operandi has changed since they first partnered up not least because Jamie is now otherwise employed as an Antarctic Expedition Leader.

Currently most articles are initiated by Malcolm attempting to photograph an unusual marine species.

If successful Malcolm will then interview an expert on that species, write the first draft of the article and send everything to Jamie by Dropbox. Without fail Jamie will transform that first draft into an article which will be a joy to read.

Malcolm used to have no interest in diving. However, his late wife Eve did and in 1994 he reluctantly joined her on a Try Dive, in the Red Sea.

To his amazement he thoroughly enjoyed it and was soon assuring everyone that he had always wanted to dive. Keen to

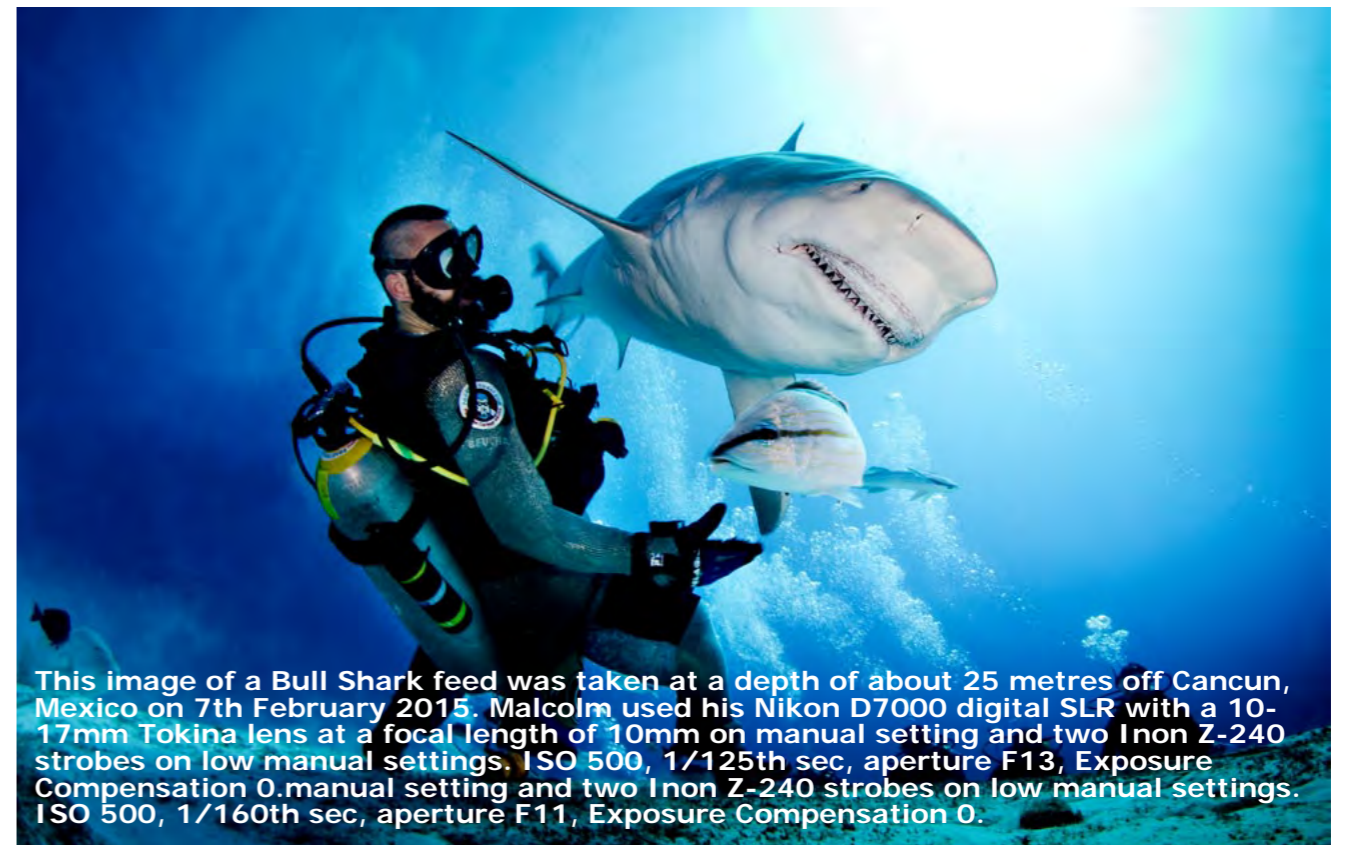
capture memories of his underwater dives, he began shooting video but soon became seduced by, in his opinion, the greater challenge of stills photography.

Well that and very few people wanted to watch his videos! Over the years he steadily expanded his website <http://www.malcolmnobbs.com> into one of the world's largest scuba-related websites.

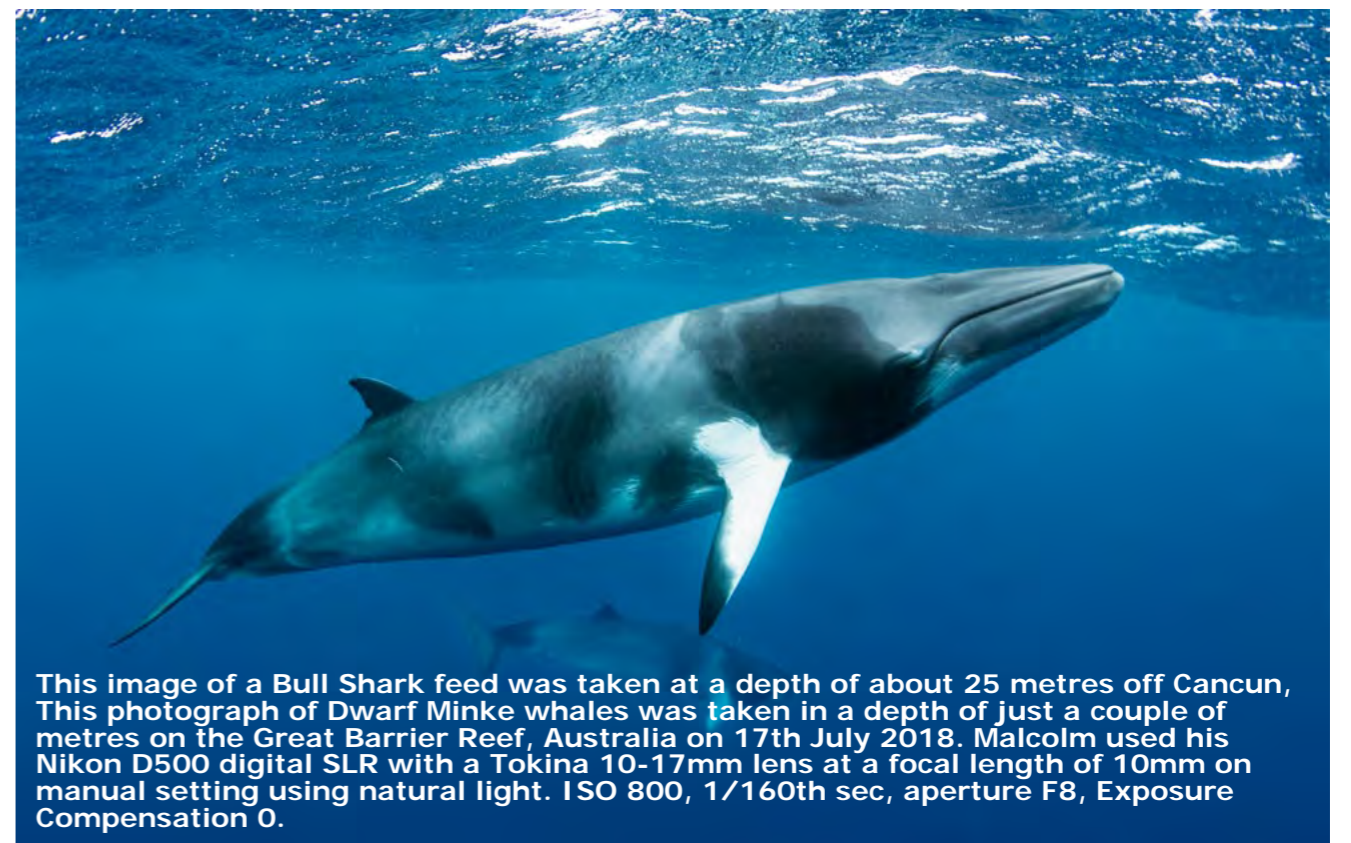
It has over 10,000 categorised and searchable marine life images, numerous dive site location reports, all of Malcolm's published work together with many humorous videos taken on location.



This editions cover shot of a Great Hammerhead Shark was taken in a depth of about 8 to 9 metres near South Bimini, The Bahamas on 16th February 2015. Malcolm used his Nikon D7000 digital SLR with a 10-17mm Tokina lens at a focal length of 10mm on manual setting and two Inon Z-240 strobes on low manual settings. ISO 500, 1/160th sec, aperture F11, Exposure Compensation 0.



This image of a Bull Shark feed was taken at a depth of about 25 metres off Cancun, Mexico on 7th February 2015. Malcolm used his Nikon D7000 digital SLR with a 10-17mm Tokina lens at a focal length of 10mm on manual setting and two Inon Z-240 strobes on low manual settings. ISO 500, 1/125th sec, aperture F13, Exposure Compensation 0, manual setting and two Inon Z-240 strobes on low manual settings. ISO 500, 1/160th sec, aperture F11, Exposure Compensation 0.



This image of a Bull Shark feed was taken at a depth of about 25 metres off Cancun, This photograph of Dwarf Minke whales was taken in a depth of just a couple of metres on the Great Barrier Reef, Australia on 17th July 2018. Malcolm used his Nikon D500 digital SLR with a Tokina 10-17mm lens at a focal length of 10mm on manual setting using natural light. ISO 800, 1/160th sec, aperture F8, Exposure Compensation 0.



This photograph of a Blue Ringed or Blue Lined octopus was taken at a depth of 10.7 metres at The Pipeline, Nelson Bay, NSW Australia on 1st February 2017. Malcolm used his Nikon D7200 digital SLR with a 60mm Nikon lens on manual setting and two Inon Z-240 strobes on TTL. ISO 800, 1/125th sec, aperture F8, Exposure Compensation 0

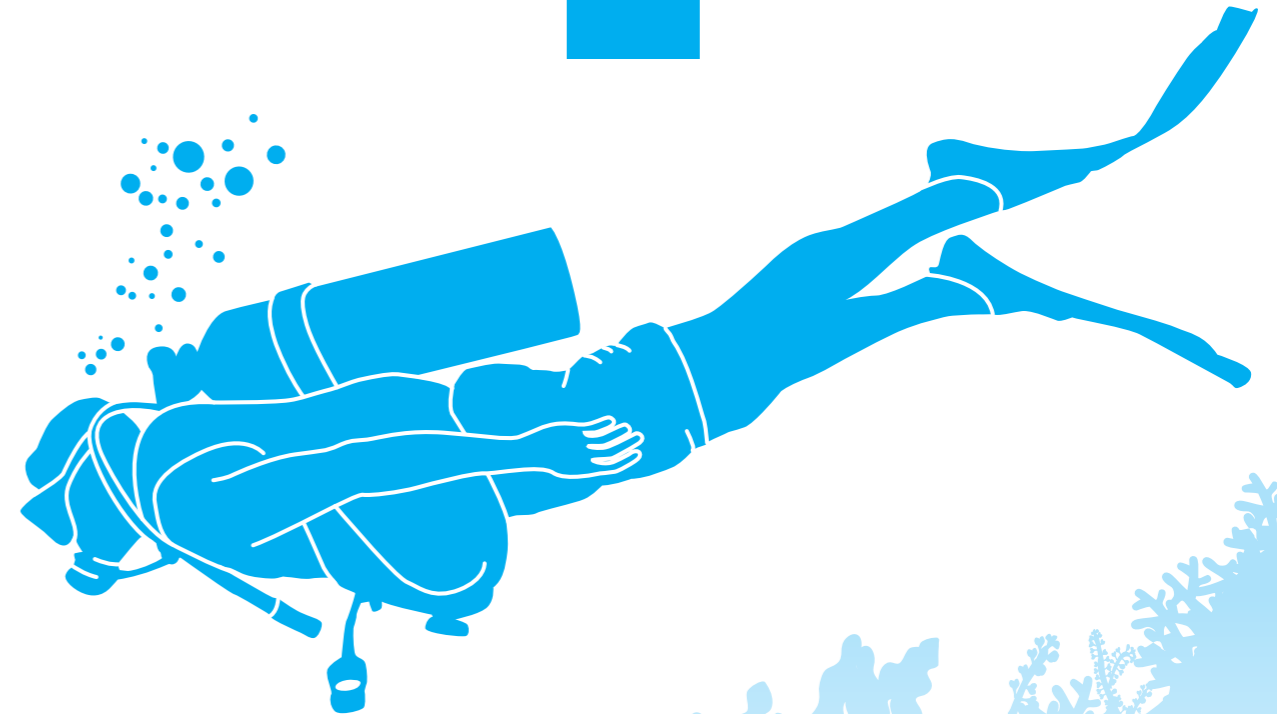


This picture of Whale sharks was taken on 5th July 2014 in a depth of 4 to 5 metres at Tanjung Yaur, Cendererawasih Bay on the north coast of West Papua, Indonesia. Malcolm used his Nikon D7000 digital SLR with a 10-17mm Tokina lens at a focal length of 10mm on manual setting using natural light. ISO 400, 1/125th sec, aperture F7.1, Exposure Compensation 0

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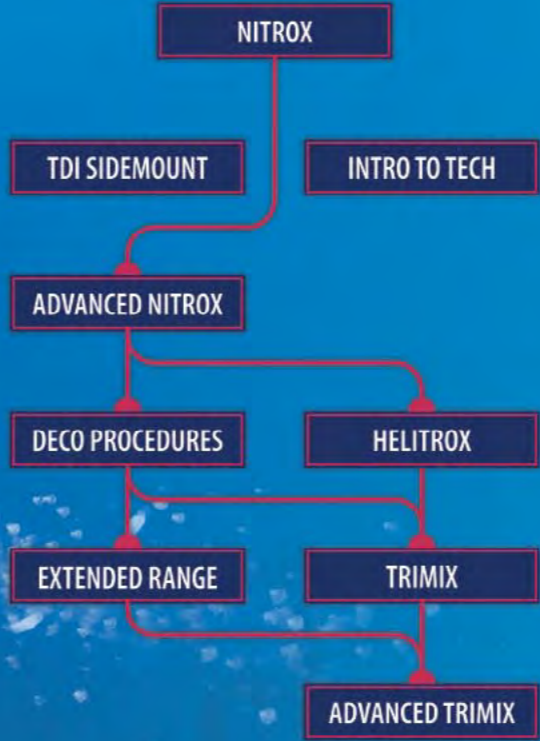




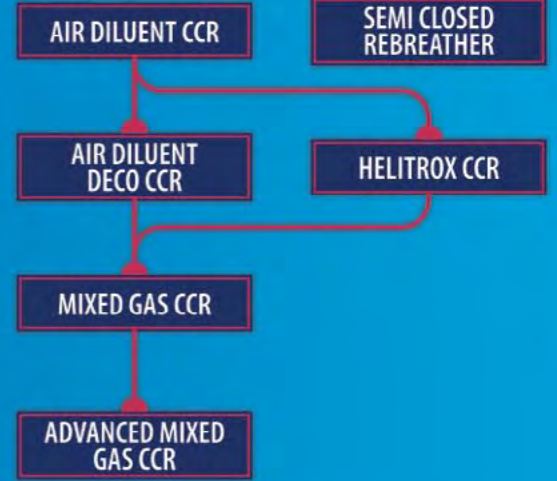
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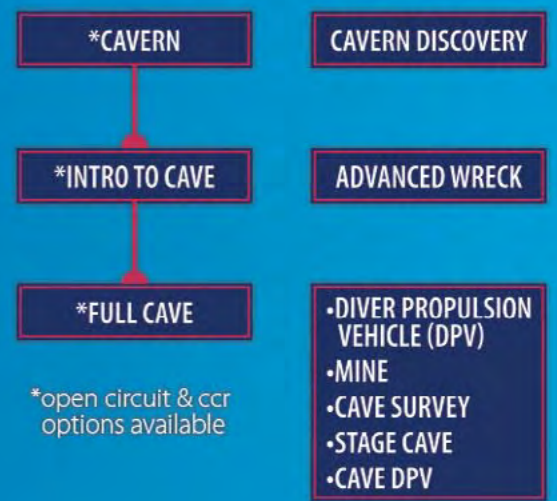
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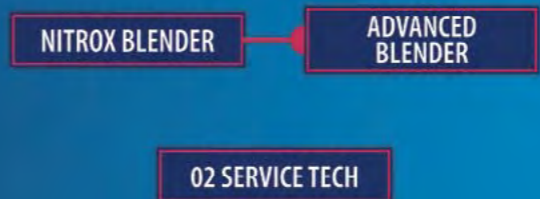


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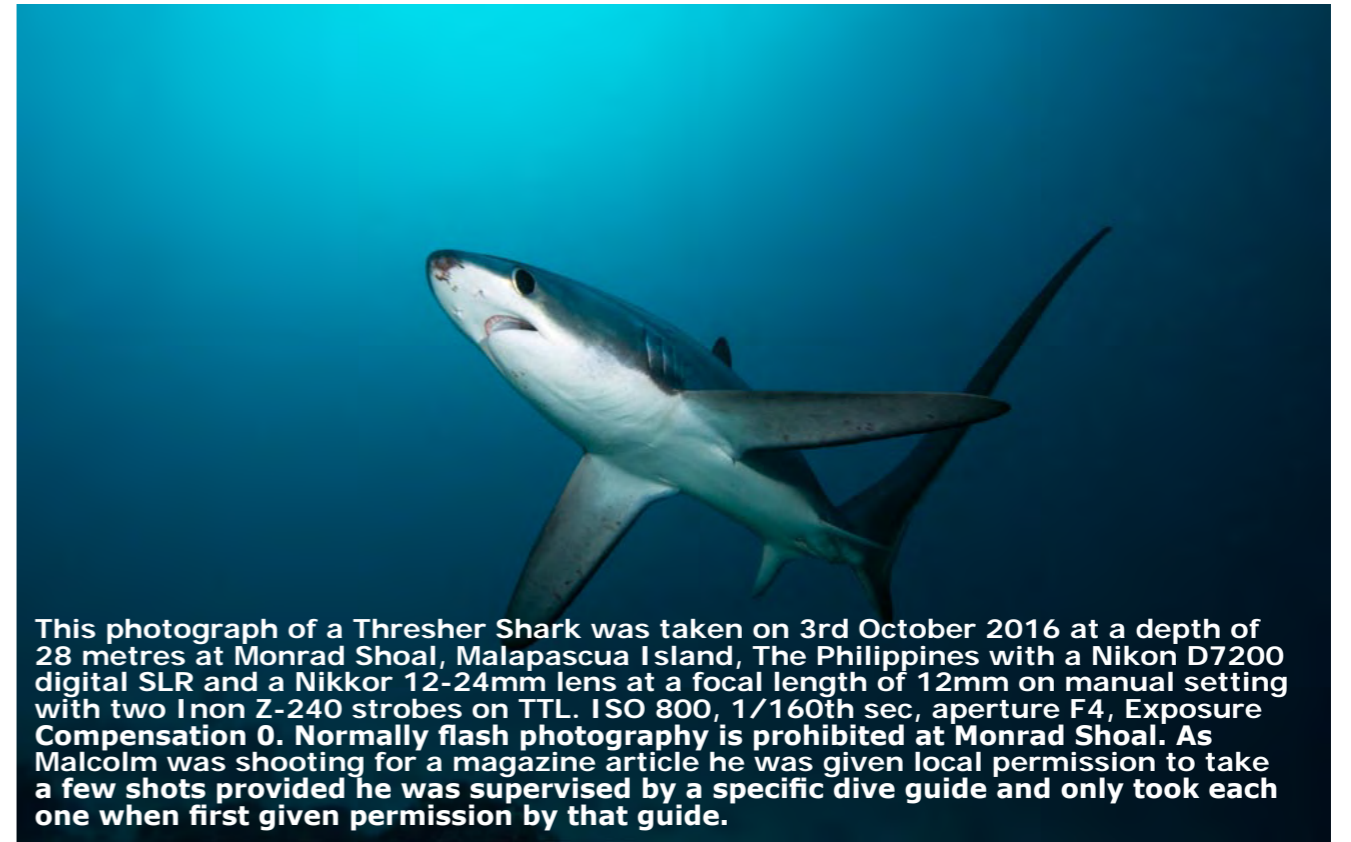


**PROFESSIONAL**





This shot of a Saltwater Crocodile was taken in a depth of just a couple of metres off Schaumann Island, Kimbe Bay, New Britain Papua New Guinea on 4th December 2011. Malcolm used his Nikon D200 digital SLR on manual settings with a 10-17mm Tokina lens at 10mm focal length with two Inon Z-240 strobes on low manual settings. ISO 200, shutter speed 1/125th and aperture F10.



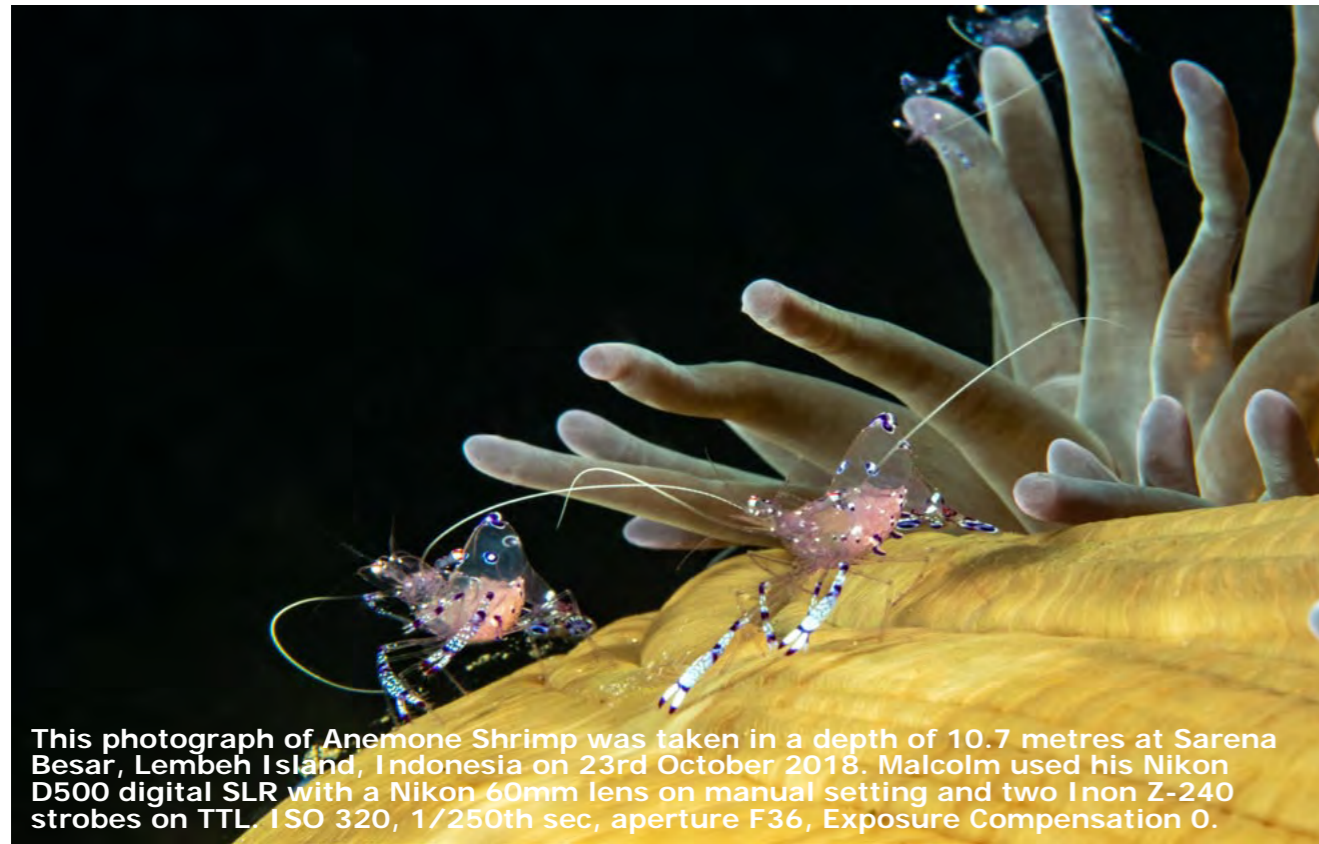
This photograph of a Thresher Shark was taken on 3rd October 2016 at a depth of 28 metres at Monrad Shoal, Malapascua Island, The Philippines with a Nikon D7200 digital SLR and a Nikkor 12-24mm lens at a focal length of 12mm on manual setting with two Inon Z-240 strobes on TTL. ISO 800, 1/160th sec, aperture F4, Exposure Compensation 0. Normally flash photography is prohibited at Monrad Shoal. As Malcolm was shooting for a magazine article he was given local permission to take a few shots provided he was supervised by a specific dive guide and only took each one when first given permission by that guide.



This image of a Sea Lion was taken in a depth of just a few metres by Hopkins Island, South Australia in January 2010. Malcolm used his Nikon D200 digital SLR with a 10-17mm Tokina lens at a focal length of 10mm on Shutter Priority setting and two Inon Z-240 strobes on low manual settings. ISO 200, 1/125th sec, aperture F9, Exposure Compensation -0.7.

Through the Lens

Photographer



This photograph of Anemone Shrimp was taken in a depth of 10.7 metres at Sarena Besar, Lembah Island, Indonesia on 23rd October 2018. Malcolm used his Nikon D500 digital SLR with a Nikon 60mm lens on manual setting and two Inon Z-240 strobes on TTL. ISO 320, 1/250th sec, aperture F36, Exposure Compensation 0.



The pictures of a Leafy Sea Dragon was taken at a depth of about 10 metres below the new Rapid Bay Jetty in South Australia on 4th January 2010. Malcolm used his Nikon D200 digital SLR with a 10-17mm Tokina lens at a focal length of 13mm on manual setting and two Inon Z-240 strobes on low manual settings. ISO 200, 1/60th sec, aperture F10, Exposure Compensation -0.7 step.

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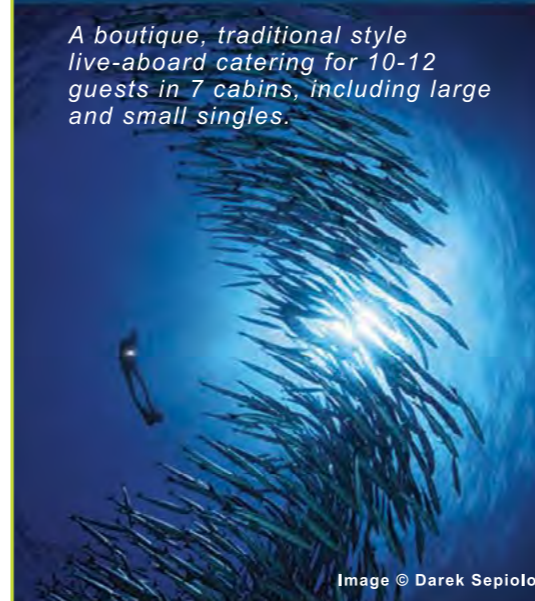


Image © Darek Sepiolo



Image © Franco Banfi



Image © Scott Johnson



This shot of a Marine Iguana was taken in a depth of just a few metres at Cape Douglas, Isla Fernandina, Galapagos Islands on 16th December 2017. Malcolm used his Nikon D500 digital SLR with a Tokina 10-17mm lens at a focal length of 17mm on manual setting and two Inon Z-240 strobes on TTL. ISO 800, 1/160th sec, aperture F8, Exposure Compensation 0.




This shot of a Tiger Shark was taken at a depth of about 3.0 to 3.5 metres at Tiger Beach, Little Bahama Bank in The Bahamas on 11th June 2007 while Malcolm was on a M/V Shear Water liveaboard trip. Malcolm used a Nikon D200 digital SLR with a 12-24mm Nikkor lens at 12mm focal length on Aperture Priority at F7.1 and two Inon Z-240 strobes on manual settings. ISO 400, shutter speed 1/125th, Exposure Compensation +0.7 step.




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This picture of a Humpback Calf and Mother in background was taken on 18th September 2012 with a Nikon D7000 digital SLR while snorkelling in Rurutu, French Polynesia. Malcolm used his Tokina 10-17mm lens on Shutter Priority. Natural light. ISO 400, shutter speed 1/160th, aperture F10, focal length 10mm, exposure compensation +0.3 step.



This shot of a Dugong was taken at a depth of about 7 to 9 metres at Marsa Shuni, north of Marsa Alam, Egypt on 25th July 2009. Malcolm used his Nikon D200 digital SLR with a 10-17mm Tokina lens at a focal length of 10mm on manual setting and two Inon Z-240 strobes on low manual settings. ISO 140, 1/100th sec, aperture F5.6, Exposure Compensation +0.3 step.



This picture of Sailfish was taken in a depth of less than one metre off Cancun, Mexico on 11th February 2015. Malcolm used his Nikon D7000 digital SLR with a 10-17mm Tokina lens at a focal length of 17mm on Shutter Priority with natural light. ISO 1250, 1/160th sec, aperture F13, Exposure Compensation 0.



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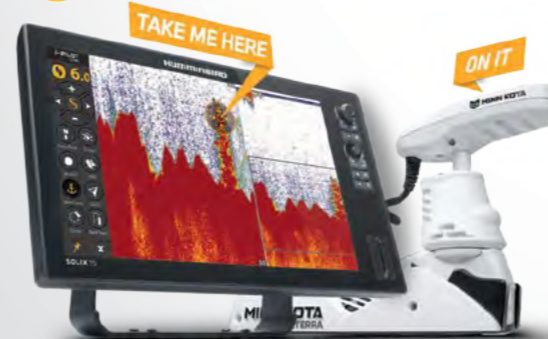
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# Taking the Plunge Against Plastic



Do you like being out of your comfort zone? Last March, I went on the most extraordinary trip and I was totally out of my comfort zone. I scuba dived in the most remote area of our planet to create awareness on plastic pollution. Before telling you more about the moment where I needed the most control over myself that I've ever needed in my life, let me explain to you how I got there.

At a very young age, I was very curious about nature and for as long as I can remember, I always wanted to be a veterinarian. While studying Biology at Montreal University, I applied to enter veterinary school several times. Unfortunately, I was never accepted and I decided to take a break from university completely to see what else young Sarah could be put on this planet to do.

Growing up in Québec, Canada, meant that the cold winters and fresh summers were perfect to learn how to ski, ice skate, bicycle and play soccer. Water sports, on the other hand, were not a typical pastime in Québec. I first became interested in scuba diving through my mother.

She would tell me about her past diving adventures in the Caribbean and it always intrigued me. My mother, Renée, was my role model. I always saw her as a courageous, strong woman and she inspired me to eventually enroll in my first scuba diving class.

The lesson was held in the local University and I will always remember my first breath underwater. I could feel my heart racing with the excitement of discovering a new world. My instructor was calm and professional.

I could feel his passion, but I could see that he was always in control, gracious and stable in the water. I didn't know at that point, that my first breath underwater was going to change my life forever.

I quickly learnt how diving could make you feel. I feel peaceful and comfortable when I am underwater, a little bit like when you are under a heavy duvet blanket.

All the worries stay at the surface; it is only me, my equipment and nature. In that moment, I feel like I'm in control of my life. Because of my equipment, I know how much air I have and how

long I can stay underwater and so I can judge the conditions and respond to them. I never know what I will see and what is going to make the dive unique and fun. There is nothing like it.

I started to travel and gained more experience underwater until I became a professional scuba diving instructor. The thing I enjoy the most about scuba diving instructing is sharing my passion.

I like to see people go through the same process I went as a student — from taking their first nervous breath, slowly getting comfortable to then finally enjoying the feeling of floating in zero gravity.

Every time I certify someone, I make sure they know that it is a privilege to enter the underwater world and that they have the responsibility to protect it. I like to tell them that they are officially ocean warriors.





## Giant Stride

Plastic

By: Sarah Gauthier

While teaching students to dive in the Cayman Islands, I would dive up to four times a day. I got to know the area so well that we would give pet names to sharks with recognisable features and I would use certain sponges or corals as a reference point when guiding people under the water.

Unfortunately, I could also see how the environment was degrading. The coral was losing its colour and plastic would become a regular occurrence on every dive.

At first it made me feel helpless and sad, but then one day I decided that I had to take control and try to do something about the issue. I wasn't an engineer or a scientist that could find the solution to plastic or pollution, but I had something special and powerful,

something that everybody has – a voice.

Nowadays, social media is a big part of our lives and it's given us the possibility to use this voice and share information with the world, so that's what I decided to do. I knew I had to do something big in order to get people's attention so I had the idea to go on a mission and dive in all seven continents by myself to raise awareness on marine conservation and share the underwater world through my photos and videos.

I wanted people to fall in love with the oceans and if I could do that, then they will want to help protect them. An important aspect of this mission was to show the beauty and not focus on the bad images of dead animals and pollution.



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# Giant Stride

Plastic

By: Sarah Gauthier

There is already so much content that highlights the polluted images of the oceans and I wanted to use a positive approach that showed what we have and why it's worth saving. By sharing my experiences and being a role model, I felt that other people would maybe want to do the same and then hopefully create a snowball effect.

I often get asked where my favourite place to dive was. Every location I visited and dived in had something special, whether it was the animals, the culture or the people.

However, the place where I felt the most alive and challenged was Antarctica. This was the most dangerous continent that I would face but it was essential for me to dive all seven continents to show and prove that our planet is an absolute jewel and that it is worth taking care of.

Antarctica is an exceptional place, it is the most remote and harsh area on the planet and it brings a lot of challenges.

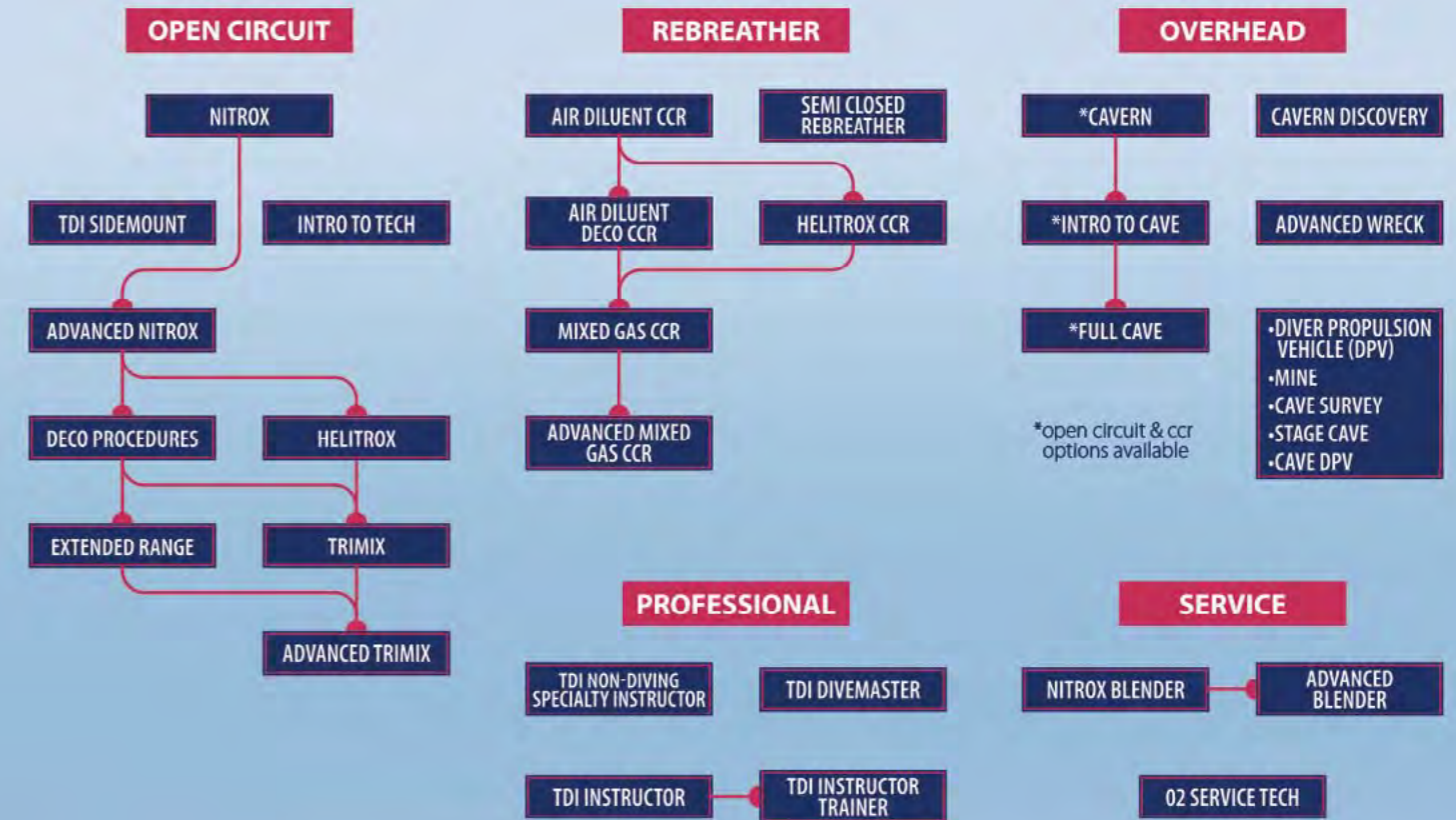
I knew that the water was going to be -2°C. I knew that visibility underwater wasn't going to be great.

I knew that I was going to have to wear a lot of heavy equipment and that the ecosystem might be different and scary, but none of this was going to stop me. I trained hard before the trip,

I got certified for ice diving and got extensive drysuit diving experience. I also had to make sure I had the best equipment on the market because you don't want to arrive at the other end of the world and realise that something is broken or inadequate. I also asked other polar divers for advice; I needed all the questions that were haunting my thoughts to be answered. Will my



## Tech Divers Trained Here



face freeze? How can I keep my feet and fingers warm? And what do I do if I meet a leopard seal underwater?

Before the dive I had the chance to meet Mario Cyr, one of the most experienced polar divers in the world. He was the first to film walrus underwater and one of the first people to dive with a polar bear. He gave me some tips to survive the cold water and be comfortable in it.

He told me to make sure that I drink a lot of water, eat well because you use a lot of energy to keep your body warm, and get dry as soon as possible because the moment I get out of the water I will lose a lot of heat, which is very dangerous.

There were many challenges during this adventure in Antarctica, but first, I had to get there. I boarded an expedition boat in Ushuaia, Argentina and crossed the Drake passage for two days to reach the Antarctic Peninsula. I have never been seasick in the past, but the waves in the channel can rise to 16 meters. I remember feeling so tired and dizzy that I would have to take breaks when climbing the stairs on the boat.

As a scuba diving instructor, I always say to my students that you must stay within your training limits. You should never push your limits because it can cause a fatal accident.

I was ready and had the proper training to accomplish my diving in Antarctica, but there was one limit that was left, the mental barrier. This was uncharted territory for me.

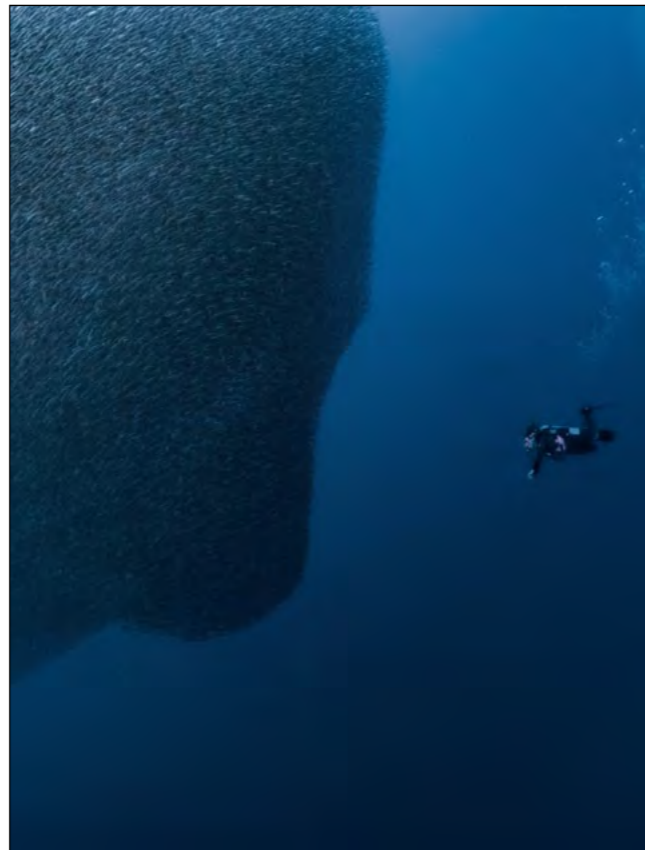
I kept thinking, 'what if something happens?'. This thought stayed with me as I was preparing to lower myself into the water. At that moment, I had to take control of my inner thoughts and it was probably the hardest part of the trip. I was alone, I didn't know anybody on the boat and I was on the other side

of the world. I was about to immerse myself in freezing water filled with the unknown and to make it even scarier, we were a two-day boat trip away from the nearest hospital. I began to have second thoughts about the dive and so I had to give myself a pep talk. After taking control of my emotions I decided to just go for it.

You would think that it is impossible to dive in -2°C water as it should be ice, but because the seawater contains salt, the freezing point is lower than it should be.

I remember getting brain freeze every time I would do my back-roll entry into the sea. It would take 30 seconds until I could no longer feel my face. Under my drysuit, I was wearing three layers of highly technical undergarments, two pairs of merino wool gloves and socks and yet I would still feel the cold.

My longest dive was 50 minutes and



at the end I had to hold my hands higher than my head to let the air fill my dry gloves and insulate my fingers. Manoeuvring my camera with those frozen fingers was challenging. Changing the settings, pressing the buttons and holding it correctly made it harder than with bare hands, especially because dry gloves don't give you a lot of dexterity.

I like to think that growing up in the cold winters of Québec made me more resistant to the cold, but I learnt that polar diving really takes it out of you and leaves you exhausted. It completely drains your energy and I would even have to nap between dives.

I'm very happy with how the trip went and the images I captured, considering the conditions I had to take them in. There was only one occasion during the dive in the Antarctic where I felt like I was in real trouble and that was when I came face to face with a massive

leopard seal carrying a dead penguin in his mouth. I remember looking in its eyes, only a meter away and I started to scream underwater; I was not only surprised by the animal but also shocked by the size of his teeth! After composing myself and breathing slowly, I finally managed to observe the majesty and fluidity of the beautiful creature.

Getting out of my comfort zone was definitely worth it. Not just to raise awareness of pollution, but for worth it for myself too. Going through all the mental and physical challenges of diving in Antarctica, pushed me to live my life to the fullest and led me to some unforgettable experiences.

I must stress that you do not have to go to the other side of the world to prove to yourself that you can overcome fears and challenges. Whether it's for a bigger cause or just for your own personal accomplishments, we should celebrate every little victory. ◀

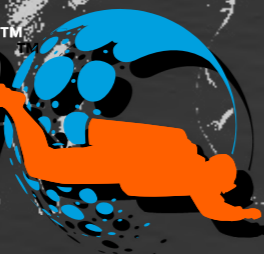


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This course is dedicated to sharpening your skills to a superior level. You will learn a number of skills like advanced buoyancy and trim, propulsion, laying line, emergency procedures, and working while being task-loaded to ensure you can cope with a demanding dive situation.

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- ▶ This is a course every diver from beginner to dive professional will gain enormous benefit from.

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- ▶ Minimum certification is RAID Open Water 20 or equivalent

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The term mix refers to Trimix, the result of adding Helium to air. It is used to overcome the narcotic effect of nitrogen and the toxic effect of oxygen and as a result, the only way to safely dive deeper than 40m. By adding a 'blank' gas like Helium, the nitrogen and oxygen content can be managed within safer levels.

So we can explore, go places other people cannot get to. The trick is to use Trimix in such a way as to increase your personal safety and optimise your decompression profile. When we dive deeper we increase the risk of decompression sickness (the infamous bends). Whilst using mix instead of air enables you to get deeper, it is only through the cunning selection of the right mixes that one can manage both the risk and decompression profile of a dive. Which is really what technical diving is all about, managing risk and complexity. The first step is creating a safe mix, which is defined by the effect its component

gases have on the body. It is not so much the percentage of a gas but its partial pressure that is important, as this is what determines the physiological effect. Partial pressure is a term used to describe the pressure of a single gas element such as oxygen and is directly affected by your depth.

As depth increases so does pressure and therefore so will the partial pressure of the components of a mix. In any mix it is the oxygen and nitrogen that must be managed. This means an oxygen partial pressure of no more than 1.6 bar and preferably 1.4 bar. In addition, the narcotic depth of nitrogen (termed the EAD or equivalent air depth) should be no more than 40m and preferably less than 30m. But selecting a mix is not as simple as just keeping the nitrogen and oxygen within the recommended limits. When diving Trimix you hardly ever dive a single gas mix. On top of which the combination of mixes directly affects your decompression

profile, different mixes can reduce your decompression time, but this might increase your decompression risk. So, what is the right combination of mixes? And when is a decompression profile safe? There is no single answer to either question and probably no right answer.

Dive profiles are unique to individuals, what works for Nuno does not work for me and what works for me will not necessarily work for you. That is why you need to understand the principles that drive a selection. If you understand these you can identify how to apply them to the dive you wish to do.

Gases are not selected purely because they will get you out of the water faster, they must also do it safely. I will often spend an extra 30 minutes in the water just to eliminate the risk of silent bubbling at depth. Silent bubbling happens when your fast tissues outgas at a point deeper than the ceiling defined by your decompression profile and is eliminated by including deep stops in your decompression profile. Obviously the inclusion of deep stops means you spend more time deeper on Helium, which slows down the out-gassing process (which is what you want), which is why you spend longer in the water. However, I would rather spend the extra time in the water and get out safely, than cut corners and bend.

This means that if you do the depth you do the time! There are no exceptions to this, a principle that Don Shirley displayed on his grueling 11 hour dive with an extremely serious and debilitating inner ear bend that had him throwing up and barely able to function for 8 hours. He knew that his life depended on doing his decompression and we knew that the further he got through it the better his chances were of living.


Gases are not selected based solely on thoughtless application of the recommended best practices regarding narcotic depths and oxygen partial pressures. The only person responsible for your life is you. Technical diving is about taking responsibility for your dives.

These are decisions that you as the technical diver must make taking into account the risk inherent in the dive you

are planning. Higher risk demands a proactive management strategy. The prime directive of a technical diver is to dive responsibly and that means to actively reduce the risk in a dive. The aim is to create a dive that is safe and repeatable. Risk that is added as a result of increased duration at depth, physical exertion or tricky navigation, demands that you are more conservative when selecting your gases, selecting lower narcotic depths and oxygen partial pressures.

Mix selection is an imperative process that starts with defining what the safe oxygen and nitrogen limits are for your dive. Then you can combine the mixes and generate a decompression profile. Then, you can see if the mixes will work together.

And only then can you start to tweak the use thereof to optimise your decompression profile. Whilst there will never be a guarantee in technical diving, a disciplined approach to mix selection is a strategy that should give you an edge, an edge that will hopefully enable you to survive the inherent unpredictability of deep diving. Selecting the right mixes, getting the combination right, this is what technical diving is all about.

This is how you get to explore! 





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# What makes good divers, the instructor, the organisation or both?

## Q & A

**Nuno Gomes**




The instructor is by far the most important person in the training of divers; the organisation only assists the instructor by providing the basic framework and the required support. Most dive instructors use supplementary material and do

a lot of reading outside of the manuals provided by their organisation. An instructor that only uses the manuals provided by his/her organisation will not be able to keep up with all the technological advances in diving and will soon be out of touch with the latest developments.

Both the instructor and the student should build and update a book library – especially in the field of technical diving – in order to constantly improve their knowledge.

The older organisations, with a long history and track record, usually attract

instructors more easily because of the prestige that they have. Ultimately it is the job of the instructor to create an interest in diving so that the student becomes a good diver – the more the instructor knows the better the diver will be. 


**Barry Coleman**



With dive training, the more transparent quality control integrated into the agency programmes, the better chance that a student will receive comprehensive training as the development of skills cannot be ignored, provided of course the

instructor has the ability to teach the in-water skills. A facilitator based programme reduces the variances between good and bad even further. It goes without saying that a good instructor requires a good agency to provide good training – without one the

other will not be professional.


The internet has provided a new field from which academic training can be delivered, whilst providing a platform to incorporate quality control which has not been available in the past. Students are able to view directly what skills will be taught and when and how they progress from one to the other, even before they go for the practical in-water training. This forewarned approach will again help towards improving training standards. The instructor still needs the correct attitude to deliver any training programme, and with transparent quality control, student's susceptibility to poor training will be reduced. It must be noted, however, that students are also part of the equation – in their attempt to get everything for nothing, they pay peanuts and get monkeys and wonder what happened! 

**Pieter Smith**



Dive organisations: The theory in teaching diving is more or less the same in all recognised organisations internationally. With today's information sharing, it is fair to say that this will remain the same in future.

The practical lessons in teaching scuba diving do differ slightly from organisation to organisation in that the minimum standards a diver needs to pass are getting less as organisations compete for market share in meeting customer (diver) needs. As the sport of diving is physical, it is obvious that if you do not 'train' enough, you may end up not enjoying the sport or not be able to participate at an enjoyable level. This is the same as any other sport where you need to reach a level of fitness and skills in order to enjoy it at a certain level. With standards being reduced, the diver is not given a fair chance at the basic level or during training to practice and reach a specific level. Instructors: By far the biggest influence (both positive and negative), in training


a good diver or a competent diver is the instructor. In my opinion, instructors are trained with a focus on diving and not enough on the art of teaching. The result is instructors that are internally focused instead of externally focused. Internal focus, where diver training is all about the "look at me and what I can do or have achieved" as opposed to external focus which is "how do I teach different types of students and how and what do I need to do to get my student to a competent level in order to qualify him/her as a diver?" This means that the most popular instructor is not necessarily the best instructor. Scuba diving is in essence a dangerous sport and you teach someone an activity in a different medium (water) to what they are used to. This makes it, in many cases, quite a challenge for an individual, and most likely a stretch in his/her effort to learn. In my opinion, the instructor is the bigger contributor in the making of a good diver. 

**Pieter Venter**



I can hardly remember what organisations my good instructors belonged to, but I can remember the valuable lessons I learned from them. In my opinion, apart from admin issues, all dive organisations have good material and equip an instructor to teach people

to dive safely. No matter how good the material, a bad instructor or good instructor makes all the difference. If the course is interesting, fun, informative, an adventure and leads to the student being comfortable in the water, the student will continue to dive.

If not, the student will never dive again. Some organisations do, however, regulate their instructors more than others and I suppose that if you do not know of a good instructor, such an organisation will have a better chance of making good divers. My advice is to try and find a good instructor first, and if that is not possible, then to go to a reputable dive organisation. 

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# DAN Unveils New Air Quality and Dive Boat Safety E-Learning Courses

DURHAM, NC – November 6, 2019 – Divers Alert Network® (DAN®) has released two new e-learning courses for dive professionals, boat operators and anyone interested in learning more about safe diving practices.

These courses, designed by DAN's risk mitigation and training experts, offer those who put divers in the water an opportunity to refine the safety of their operations.

In 2018 the United States Coast Guard issued a Marine Safety Alert to remind owners and operators of dive vessels that recreational diving is not regulated by the Coast Guard and that licensed masters of commercial vessels that transport divers are ultimately responsible and accountable for the passengers' safety.



DAN created the Dive Boat Safety Best Practices e-learning course to help boat captains and dive professionals understand and implement the Coast Guard's recommendations.

This 30-minute course is designed not only to promote safe operations but also to serve as a reminder of important aspects of maritime safety as they relate to diving, making it useful for boat-diving operations worldwide.

Quality breathing gas is something every scuba diver relies on, and breathing contaminated air underwater can be catastrophic.


All who fill cylinders must be able to assure the quality of the breathing gas they supply and be able to prevent and manage incidents that result from contaminated air.

DAN created the Assurance of Breathing Gas Quality e-learning course to help compressor operators and dive staff identify, prevent and respond to breathing gas contamination incidents.

To access these courses, go to DAN. DiverELearning.com, and click the "Available" tab. Both e-learning courses are available at no cost, and DAN encourages dive operators to integrate them into their existing staff training programs. Successful completion of these courses can shore up gaps in staff knowledge and illustrate your operation's commitment to safe diving.

**About DAN:** The world's most recognized and respected dive safety organization, Divers Alert Network (DAN) has remained committed to the safety and well-being of divers for 40 years.

The organization's research, medical services and global-response initiatives create an extensive network that supports divers with vital services including injury prevention, educational programs and lifesaving evacuations.

Every year, hundreds of thousands of divers around the world look to DAN as their dive safety organization. Join the DAN community or learn more at [DAN.org](http://DAN.org). 



# Scubagear Unmasked



And this edition it is all about masks.

Your mask is a very basic piece of equipment: if it doesn't work, you don't see, and if you don't see diving is no fun. It should last you for a long time, so fork out as much as you have to make as good an investment as you can afford.

Secondly: The most important thing is to buy a mask that fits. If you don't get this right you're whole liquid experience will be one of frustration, irritation and even possible grave danger. All divers

is supposed to know the drill for fitting a mask on dry land to see if it will work: Pull the strap forward over the lens, and push the mask against your face, whilst looking up slightly and making sure that no hair is caught underneath.

Breathe in to suck the mask against your face and now let go of it with your hand. It should stick even if you shake your head quite vigorously up and down or from side to side.



# MAUI DIVE SHOP

[WWW.MAUIDIVESHOP.COM](http://WWW.MAUIDIVESHOP.COM)



QED, right? No, I'm afraid not quite. There are a few other things you might consider. In my experience, not shaving for a few days will make some masks leak where others won't (I'm talking about shaving your face).

And, being such a super friendly guy, I find that smiling, or even just the wrinkles between my mouth and nose when I have a regulator in my mouth, will make some of the masks I've dived with, flood – even though they all passed the dry fit test in the shop.

So apart from the normal routine, I now try to put a dv in my mouth, and pull all sorts of faces when I'm trying a new mask on. Let them laugh I say, after all I'm the one who wants to see what's going on around me while I'm down there.

Other things that make a mask more or less leak prone, would be the width of the skirting as well as how hard or soft the silicone is. Remember though that softer latex could also mean a shorter

life for your mask.

From here on it is pretty much a matter of personal taste. You get single lens masks, split lensed ones, and even fourlensed masks for better peripheral viewing.

You get small lenses and you get huge ones that extend down your cheekbones to give you a greater field of view when you look down. (Handy for those who can't find your gauges).

Colour correction lenses for deeper dives are popular with some divers, but others complain that at shallower depths everything looks pink. The you get high volume (objects look bigger) and low volume (things look smaller) masks.

Low volume also offers better peripheral vision because the lenses are now closer to your eyes.

You can even have prescription lenses fitted to your mask (although it's a lot cheaper to dive with your contacts on).



There are a few things you might want to keep in mind though: Make sure you get a double flanged seal, as it also cuts down on leaks or flooding. (Most but not all masks have them today). Make sure that the strap buckles are strong, and that you can adjust them with gloves on.


Also make sure that you can reach your nose whilst wearing gloves to equalise. Colour could also play a role as darker skirtings work well for photographers because it cuts down peripheral movement, while newer divers may get a bit claustrophobic with them on. On the other hand, lighter coloured masks let more light in, but tend to get ugly quicker with age.

Other fancy and perhaps handy options include purge valves and numbered marks on the strap to remember the size. I do think though that some of it was only conjured up to give salesmen new angles to talk about during their act.

But for me the only real factors in mask selection is comfort and effective sealing.



Get these sorted out, and you won't even think about masks again. There are loads of masks to choose from, and to make sure you get these factors right, you should spend as much time as possible fitting as many of them as you can before you buy.

And, if after a few dives you find that you made the right choice, go back and buy another one, because masks do disappear or break, and then you may have to go through the whole process all over again. 

# PowerDolphin

See Above Sea Below

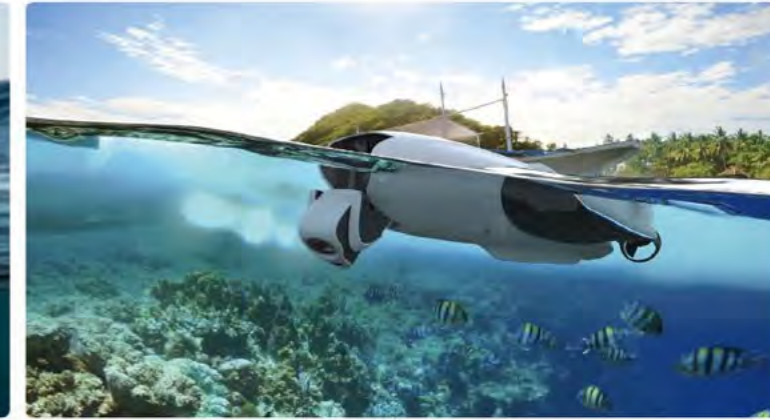


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PowerDolphin has the ability to mount a bait drop trailer and auto fishing device. This allows you to troll any area for fishing and to tow your catches back to your exact location.



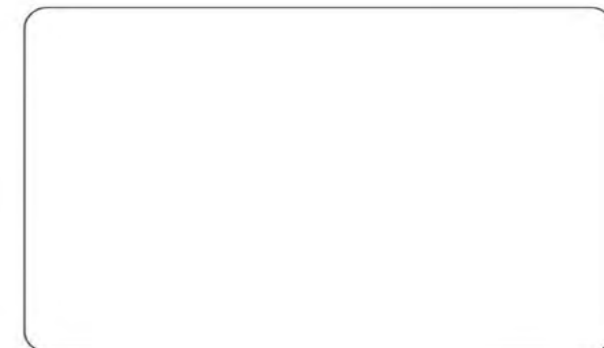
## Real Time Waypoint Mapping

The PowerSeeker sonar also assists with waypoint mapping. This gives you the ability to make a topographic map of any specific area underwater.



## Customized Bait Container

Powerdolphin can be equipped with a bait container trailer, you can set bait in the container and drop the bait in your favorite fishing areas to attract fish and get that amazing catch.



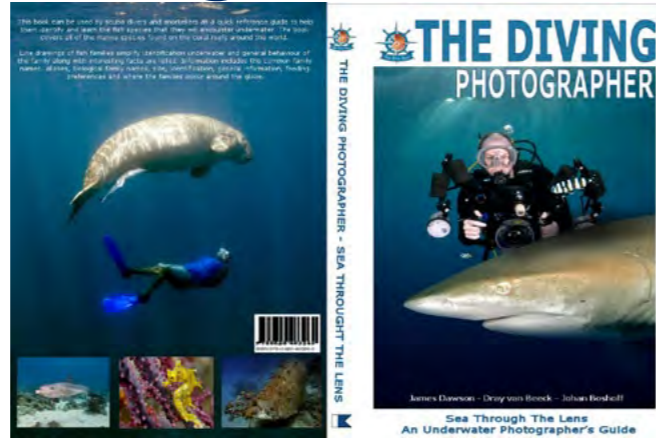
# The Diving Photographer –

As scuba divers, we are not always the best photographers, but we do learn very quickly. And if we have a handy guide book, the time spent with our cameras underwater will increase rapidly.

This easy-to-use guide book for the diving photographer can be used by all levels of photographers. It helps you with choosing the right type of camera for your ability – although with all the information presented you will learn so quickly that you will have to buy a better camera after working through the book! Preparing and setting up your equipment becomes a breeze with easy pointers on how to check and replace o-rings, quick tips on keeping your housing dry and other small things we usually forget to check.

The technical advice on how to perform manual camera settings, lighting techniques and editing the not-so-perfect shot was a great help. One of the main things I took from this book was learning to back up my photographs and then trying anything and everything with them in the photo editing programmes until it looks like the professionally taken shot that you have been aiming for the whole time. Some other topics covered are strobe positioning, ambient light, photographing wrecks, long exposures and equipment maintenance.

I must say that this book has proved to be a great help in improving my photographing and editing techniques. Photographer is available in all good scuba diving and book shops or online at [www.ozdiver.com.au](http://www.ozdiver.com.au). Cost: \$19



# Marine Species Guide –

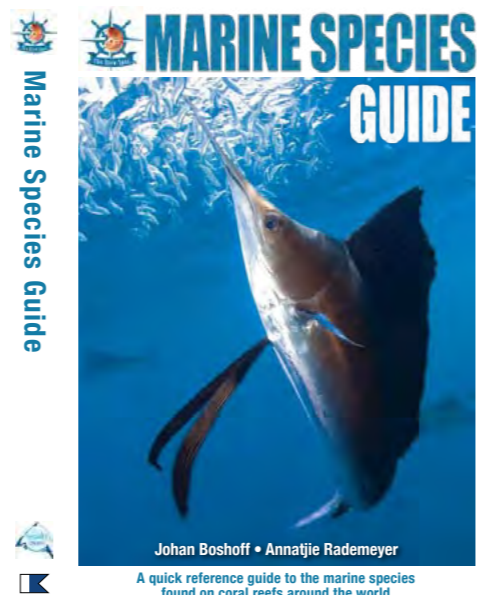
Yes, it happened...I had to buy a larger bookshelf. The latest book from The Dive Spot has landed on our shores – The Marine Species Guide.

A book for both scuba divers and snorkelers to identify and learn all about the different fish species they will come across under water. The book covers most of the marine species found within coral reefs around the world. Line drawings of fish families simplifies identification underwater, while general behavior of the family along with other interesting facts are listed.

Information include common family names, aliases, biological family names, size, identification, general information, feeding preferences and where the families occur around the globe. Photographs of the most common of the species found when scuba diving or snorkeling are included and the fish families are organised for easy reference.

The book works very well in accompaniment with the Marine Species Slate, which can be taken underwater to help with fish identification.

To buy your copy for \$ 29, visit [www.ozdiver.com.au](http://www.ozdiver.com.au) or email [info@ozdiver.com.au](mailto:info@ozdiver.com.au)

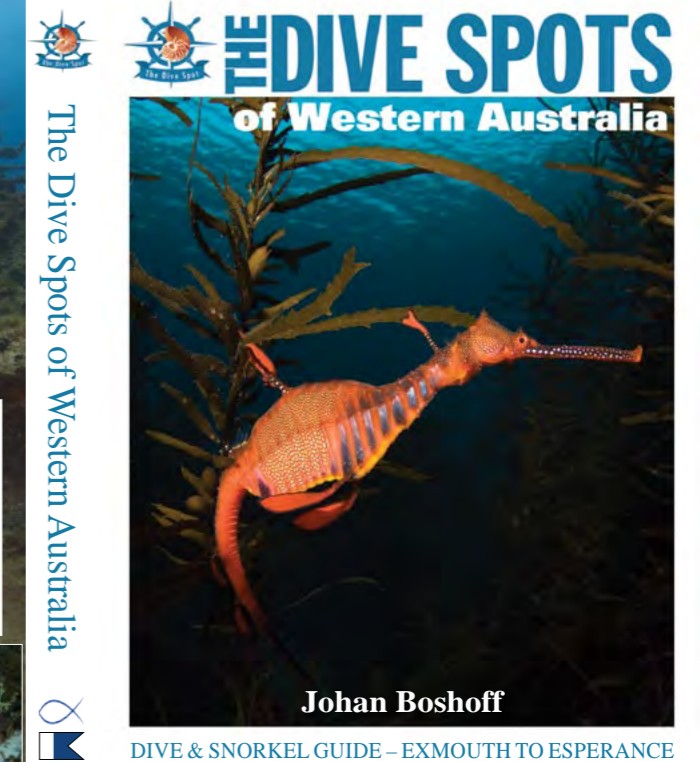


A quick reference guide to the marine species found on coral reefs around the world

# The Dive Spots of Western Australia



The Dive Spots of Western Australia is an indispensable guide for all levels of divers and snorkelers, broadening their horizons on places to visit and dive/snorkel in Western Australia. Through extensive travel and diving, Johan Boshoff brings you valuable information on more than 175 dive spots in Western Australia. Important guidelines on each coastal dive destination include accommodation, facilities, travelling tips and dive conditions. Complete with photographs and more than 100 illustrated maps of each dive site, all reefs are star rated to cover depths, marine life and other essential information for the diving and snorkeling community.



DIVE & SNORKEL GUIDE – EXMOUTH TO ESPERANCE

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To buy your copy for \$ 39, visit [www.ozdiver.com.au](http://www.ozdiver.com.au) or email [info@ozdiver.com.au](mailto:info@ozdiver.com.au)

# The Rottnest Island Fish Book

Dr Glen Whisson  
Alexandra Hoschke  
Aqua Research & Monitoring Services

Many visitors to Rottnest Island are fascinated by the amazing marine environment. The beaches, the swimming, the reefs and fish life are an integral part of the Rottnest Experience. Even the Aboriginal name 'Wadjemup' refers to Rottnest as being the 'Place across the water'.

The Rottnest Island Fish Book, originally published in August 2017, is the result of many years hard work by authors Dr Glen Whisson and Alexandra Hoschke. The first printing sold out in just 18 months, which is not surprising given the wonderful presentation and incredible photographs of the hundreds of fish species found around Rottnest Island. In 2019 the authors produced an updated version that includes several additional species and updated photographs. Containing over 420 colour images, The Rottnest Island Fish Book is the most comprehensive fish guide ever produced for Rottnest Island - one of Western Australia's most popular destinations.

This publication is an essential resource for visitors who wish to engage with the stunning marine environment through snorkelling, fishing or diving. It contains fishing advice and cooking tips for over 20 commonly caught species, snorkelling maps of several beautiful bays, feature articles about Rottnest's unique marine life, and an identification section describing the key features of all the fish species likely to be encountered around Rottnest Island.

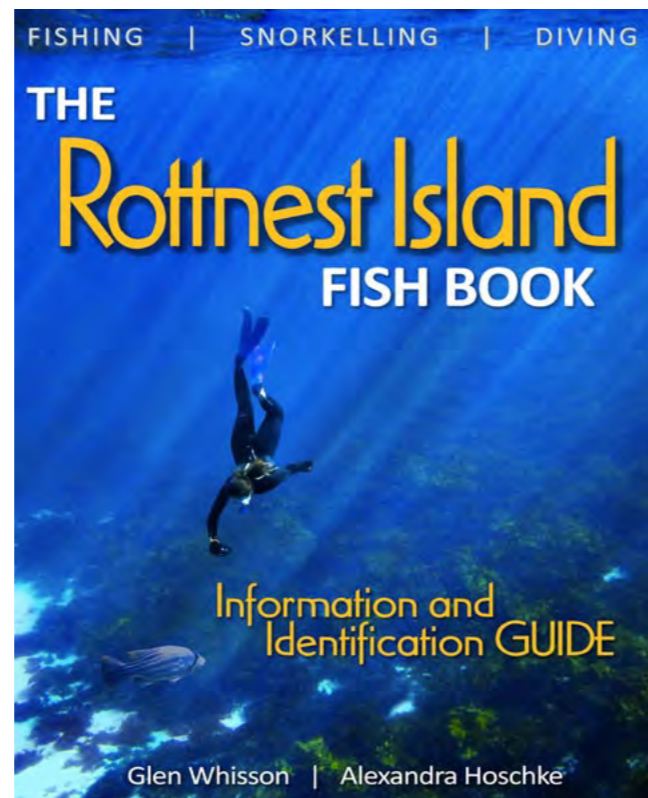
Feature articles include interesting insights into Grey Nurse Sharks; ocean temperatures; marine habitats like coral, seagrass, etc; herring life cycle; tropical fish species; and even the fascinating subject of sex change in fish!

The beautifully-presented book is 176 pages long and contains colour photographs of over 250 fish species seen around Rottnest Island. It would be an ideal publication for the general public interested in beginner/intermediate level fishing/snorkeling/diving; advanced marine enthusiasts wanting a comprehensive photographic identification guide; or anyone generally interested in the WA marine environment. Many featured species are also found on the Perth Coast, so local divers and fishers will also find this book an ideal addition to their library.

#### ABOUT THE AUTHORS:

Dr Glen Whisson and Alex Hoschke have spent many years conducting marine research at Rottnest following extensive academic careers at Curtin University in the aquatic sciences. Their other research includes internationally published studies on Grey Nurse Sharks, ocean temperatures at Rottnest and Exmouth, and marine biodiversity monitoring programmes around WA.

To buy your copy for \$ 25, visit [www.ozdiver.com.au](http://www.ozdiver.com.au) or email [info@ozdiver.com.au](mailto:info@ozdiver.com.au) 



# The Dive Spots of New South Wales

The Dive Spots of New South Wales is an indispensable guide for all levels of divers and snorkelers, broadening their horizons on places to visit and dive/snorkel in New South Wales. Through extensive travel and diving, Johan Boshoff and Graham Willis brings you valuable information on more than **XXX** dive spots in New South Wales. Important guidelines on each coastal dive destination include accommodation, facilities, travelling tips and dive conditions. Complete with photographs and more than **XXX** illustrated maps of each dive site, all reefs are star rated to cover depths, marine life and other essential information for the diving and snorkelling community.

**OZ DIVER**  
9 780620 817066

**Graham Willis • Johan Boshoff**  
TOP DIVE & SNORKEL GUIDE - TWEED HEADS TO EDEN

## Gear, books, software, apps and scuba diving gadget reviews.

Here is a chance for your diving gear, books, software, apps and gadgets to be reviewed. If you have anything that you would like to share with the OZDiver Magazine and other divers, send an email to Log Book at [info@ozdiver.com.au](mailto:info@ozdiver.com.au).

# OZ DIVER

## The PowerRay and The PowerVision

Ever wondered what is happening under the water. Now it is possible without scuba gear using the new PowerRay. An underwater drone that allows you to go and explore the ocean secrets and to top it off, you can add the PowerVision so your underwater drone becomes a fish finder with so much more possibilities.

The PowerRay is not just an amazing good looking toy but for fishermen, videographers, photographers and underwater enthusiast a great device to use to explore the surrounding waters.

This Underwater ROV can dive down to 30 meters in salt, fresh or even chlorinated water for up to 4 hours. With its amazing lights and camera that is situated in front of the unit the camera can capture 4K footage or 12-megapixel still photographs and stores them all on-board on its internal storage device.

If you are a fisherman, you can add fantastic accessories like the PowerRay Angler package that was specifically designed for fishermen, accessories include Precision Remote Bait Drop which allows you to place the fish bait at a desired position and the PowerSeeker/Fish-finder can dock directly into the PowerRay or be used separately as a standalone device.

This PowerSeeker provides you with detailed information on depth, fish distribution, underwater landscape and temperature. If you love fishing, you should certainly consider these added benefits to the PowerRay.

The PowerRay is really easy to operate with its PowerVision App Interface. PowerVision has included a unique live streaming.



If you have an Android or iOS device you can connect directly to the PowerRay to live stream 1080P video at 30 frames per second by docking your smartphone into the remote controller that allows full range of motion and speed control.

The PowerRay also has an option to use a VR headset to have a first-person perspective of the drone and also impressive, you can connect to multiple goggles/devices simultaneously and switch between basic viewing mode and control mode.

This allows you and multiple friends to all share the same first person viewing experience.

The PowerRay is a great underwater drone with so many features that gives you a spectacular real-time view underwater and allows you to capture just the right shot or fish.

For more information on The PowerRay or The PowerVision's visit: [www.powervision.me](http://www.powervision.me) 

## Scubapro Everflex Steamer 7/5mm Wetsuit

As we all know, Scubapro have extremely good scuba diving equipment, and when it was time for me to upgrade my wetsuit there was no other option to go but Scubapro.

By Johan Boshoff

After many years of diving it was time for an upgrade as a standard 5mm wetsuit doesn't work for me anymore, especially when I do long tech dives. The one option was to use my dry suit, but as all dry suit divers know, a dry suit is high maintenance and it gets really hot in the suit before a dive.


There was no way I would be able to dive in a dry suit the whole year round...

So what was my next option? To switch to 7mm, but that's a lot of rubber and it makes it very difficult to move around, not to mention the buoyancy issues. Then I heard about the solution; a wetsuit that has a combination of 5mm and 7mm Everflex neoprene and best of all, it was made by Scubapro.

The new Scubapro Everflex Steamer 7/5mm Wetsuit is made of Everflex neoprene (I don't know what that means exactly, but it's a very stretchy neoprene that makes donning and doffing very easy and also offers outstanding thermal protection). It was exactly what I needed, and as I know that the Scubapro designers work tirelessly to improve and restyle their wetsuits and try to expand the features of all their suits, I was confident that it would be what I was looking for. My mind was made up and I knew that I had found my suit for many years to come.

Extra features:

- Equipped with a compression-moulded combination zipper flap/spine pad to reduce water entry and improve back protection.
- Added heliospan lining in the torso area of the steamers, for added protection and insulation.
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- Safe-straps on both arms for a securing of wrist instruments such as dive computers, depth gauges or compass.
- Diamond Span thermal inner liner has a second lining that increases stretch by 20 percent.
- Glued and stitched seams for durability
- Glide Skin Seals: Keeps You Warmer-Longer
- Ankle zippers aid in donning and doffing the suit.
- Tatex knee and shoulder pads offer protection against abrasion.

To find out more, visit [www.scubapro.com](http://www.scubapro.com) or contact your local Scubapro dealer. 



# Diving Medical Acupuncture

Diving, medical problems and acupuncture needles... Have you ever heard about this combination?

## Diving Medical Problems

Not being able to clear the ears or having difficulty equalizing is the most common problem experienced by divers and it's often caused by a common cold, rhinosinusitis and allergic or non-allergic rhinitis. Having to stop a dive when just getting under the water surface due to equalization problems is very frustrating, besides that it can be painful with risk of an ear drum perforation when ignoring the ear pressure. The fact that acupuncture can help to get rid of these ENT disorders and other diving medical issues is not well known to most divers around the globe.

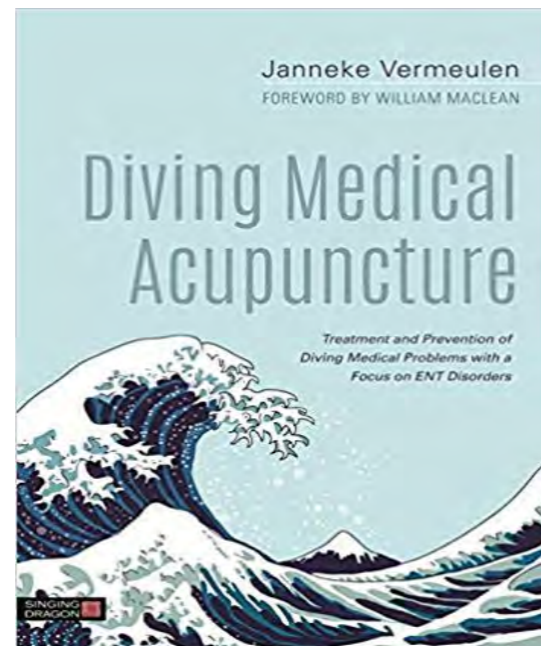
## Benefits for the Diver

In her practice in The Hague, the Netherlands, Janneke Vermeulen, physiotherapist, acupuncturist, Chinese herbalist and specialist in Western diving medicine, treats divers from the whole country with a wide range of health issues: especially chronic or recurring ENT disorders that affect pressure equalization of the ears and sinuses. Furthermore: TMJ disorders, sea sickness, stress, tiredness, high blood pressure, migraine, lung disorders, addiction to smoking, being overweight, neck and back disorders, muscle cramps, etc. The diver with medical problems can benefit from the positive effects of acupuncture treatment. Acupuncture can transform phlegm and reduce its production, decrease swelling of the mucous membranes in the nose, sinuses, Eustachian tube and middle ear and address underlying energetic disturbances (such as deficiency or stagnation of Qi). When the Eustachian tube has a free air passage, the diver will normally be able to equalize the middle ear pressure well (in case the clearing techniques are performed correctly). When having more energy, less stress and a better immunity as a result of acupuncture the diver will become ill less quickly in general. For sure that the diver will feel better under and above the water surface! The lung function can be improved whereby breathing will be easier and the diver will be able to stay under water longer. When having lower back problems jumping into the ocean may be fine but climbing at the stairs of the boat can be very painful. Acupuncture can relieve pain, muscle tension and improve the mobility of the spine. Acupuncture also can contribute to lower certain risk factors on decompression illness like tiredness, being overweight and decreased blood circulation (but of course to prevent D.I. all diving rules regarding the laws of physics need to be performed well in any circumstance!).

## Book

All Janneke's diving related knowledge is collected and structured in her well endorsed book *Diving Medical Acupuncture* (published by Singing Dragon the 19th of April 2018). This way innovative information can be shared with acupuncturists, non-acupuncture medicals and divers worldwide. *Diving Medical Acupuncture* describes the medical conditions that can prevent, complicate or result from diving and other water sports, and provides effective clinical treatments. It's an integration of Western diving medicine, diving techniques and Chinese medicine. Complete with anatomical diagrams and acupuncture point charts, this is a practical resource for acupuncture clinicians who deal with the issues associated with diving. Advice for divers is given at the end of each chapter, and is available as a handout in downloadable form.

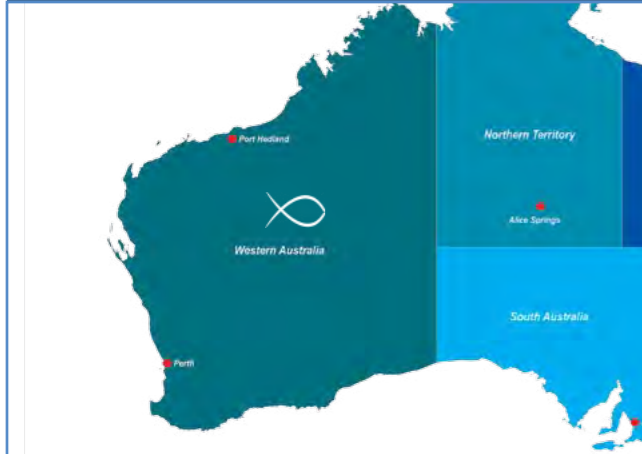
For more information please watch her website [www.mermaidmedicine.com](http://www.mermaidmedicine.com). To order her book, visit [www.singingdragon.com](http://www.singingdragon.com).




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# Western Australia



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## Geraldton

### Albatroz Scuba

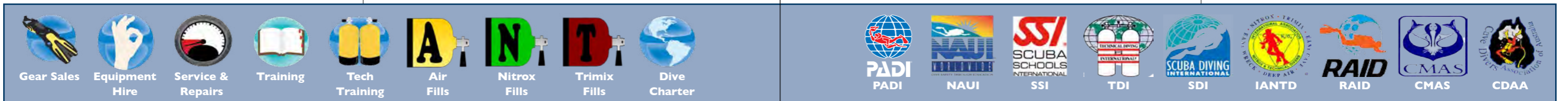


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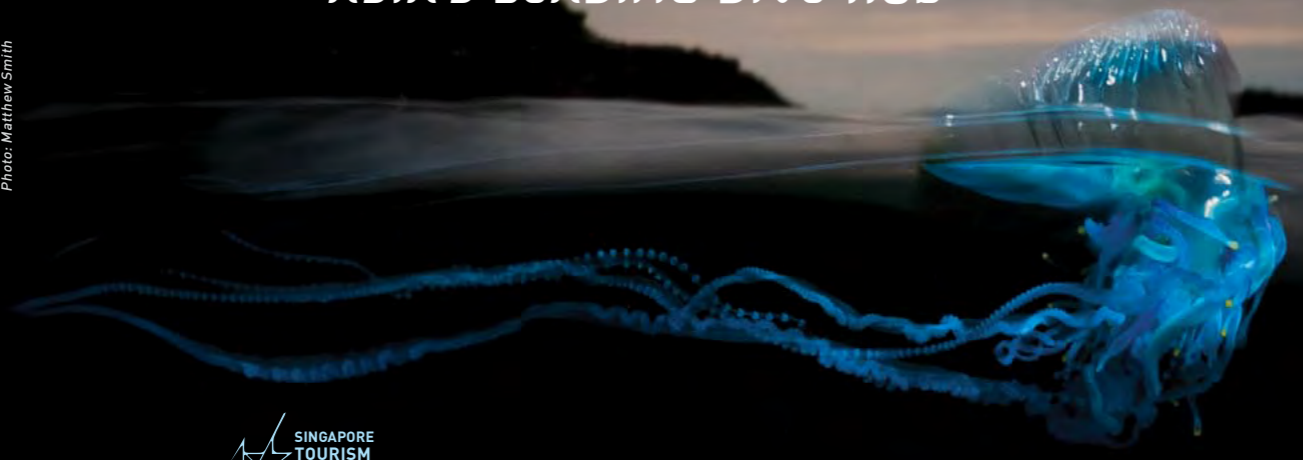


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Photo: Matthew Smith



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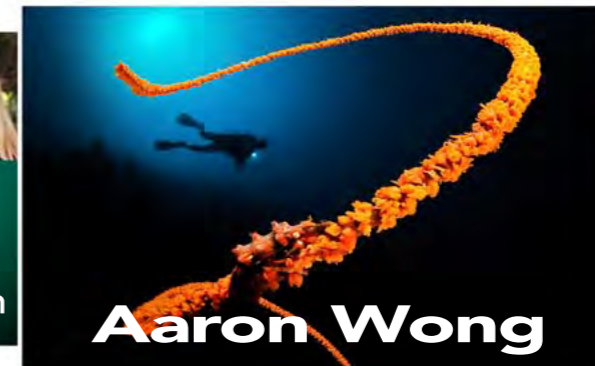
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Adelaide

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Glengowrie

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Dive Victoria Group



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# New South Wales



## Sydney

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# Queensland



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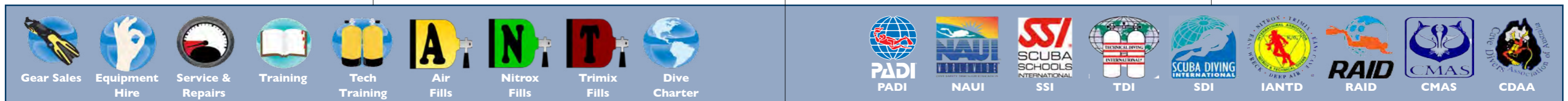
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