October - December 2019

OZDIVER

AUSTRALIA'S PREMIER DIVE MAGAZINE

MV OCEANIA PAPUA NEW GUINEA

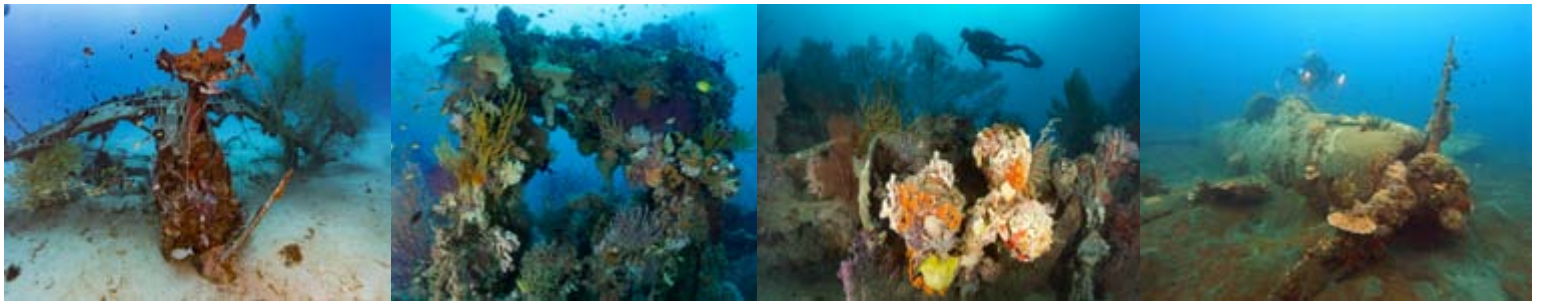
CEBU ISLAND

MAGIC ISLAND PHILIPPINES

MILFORD SOUND

SEA TURTLES

PAPUA NEW GUINEA & THE PHILIPPINES



Johan Boshoff

Editor's Deco Stop

Underwater photography is the new "in thing" to do in the diving industry. Digital cameras and waterproof housings have become relatively cheap and just about every diver can now afford to take one on their dives to capture a few special moments or scenes.

With the amount of digital cameras and video camcorders in the water today, it's not surprising that divers are discovering more and more new species of marine life. In the old days you would see a fish and try to describe it to your dive master after the dive.
If they couldn't help you identify the animal, you'd be forced to bury your nose in marine books to find it. After a couple of photos, everything starts to look the same – you could easily spot one that looks almost like the fish you saw.

Today, you simply click a few buttons on the camera when you get back to the boat and the dive master will be able to see the exact fish you saw. This means that an accurate description of the animal is given and it can be identified correctly. Sometimes people hear divers' tales about magical animals they saw while diving and don't believe them.

Nowadays, you can prove it was real by showing these disbelievers a photo of the creature!

The problem is just how far a diver will go to get the perfect shot. Some underwater photographers stand on corals and damage them terribly while harassing the fish just for a photo. The fish become stressed and panic and can often get injured against sharp rocks while trying to escape.

Remember, the ocean is your responsibility. Dive smart.

I hope that you enjoy this edition of OZDiver.

The Editor & Publisher

Johan Boshoff

-it is all about the journey and not the destination

Matthew 6:33
But seek ye first the kingdom of God, and his righteousness; and all these things shall be added unto you.

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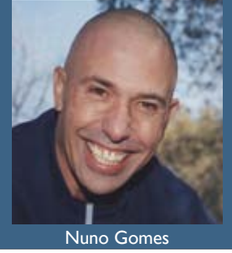
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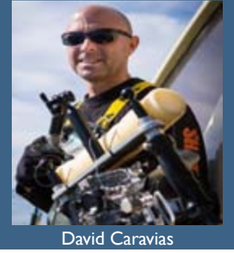
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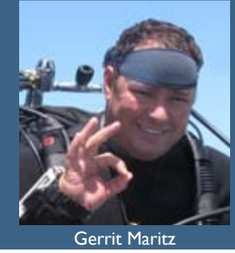

Gerrit Maritz

CONTENTS

COVER PHOTO
Peter de Maagt

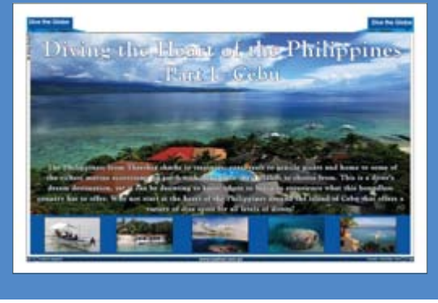
Johan Boshoff

Milford Sound - Pg 15

FEATURE

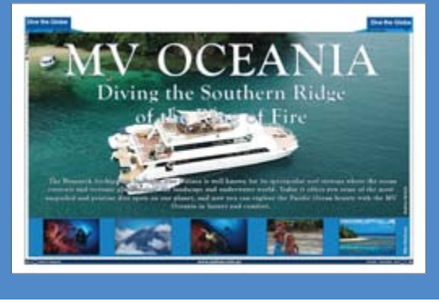
Cebu - Philippines - Pg 47

FEATURE



MV Oceania - PNG - Pg 63

FEATURE



Macro LIfe - Pg 111

FEATURE

Log Book

By Rodney Hope Photo Christopher Bartlett

I have been diving for several years now and am truly enjoying every moment. For those that have never dived, I guess one can only describe it as a truly mind blowing experience. There is this perception though that we scuba divers are ambassadors for the world's oceans…

I unfortunately do not quite see it that way. While we do not exactly 'damage' the oceans by doing what we love to do, we are not exactly doing the oceans any favours either.

Like any business, dive centres are mainly involved in the industry for the purpose of making money. If there was no money to be made there wouldn't be any dive centres around.

One of the first things we are taught in scuba is 'look, don't touch, leave only bubbles'. I often see experienced divers dragging their gear or themselves over the reefs, breaking off pieces of coral and doing all kinds of damage to these ecosystems. How often doesn't it happen that a diver has his cap/bandana blown off his head on the way to the dive site, never to be found again?

And what about those sucker wrappers that so often make their way into the waters? I know of instructors who have marked exact locations of where a certain fish was seen on a dive to later return to catch that same fish to be placed in an aquarium.

I know of centres that provide an air filling service to abalone poachers and will sell them gear knowing what the gear will be used for! Anything for a quick buck.

I'm sure there are many other cases that are far worse than what I have mentioned. I went diving in Thailand just over a year ago and one of the sites I dived. I think is called Birthday Ledgers, and on this dive I was shocked to see the litter scattered all over the reef – plastic bags, bottles and all kinds of junk. I had no intention of picking up any of the rubbish for the reason that if nobody else is going to do it, why then should I?

My buddy did actually start picking up the rubbish so I felt I was obligated to do the same. At the end of the dive we both had so much trash in our hands and under our arms that it was actually quite difficult performing a proper 'safe' ascent.

Of all the other divers on the boat not one other person had thought to collect a single piece of trash! On other dives the skippers of our boats would sometime pull up next to a fishing boat and they would tell the fisherman about spots where big fish could be found... what the hell people?

I recently watched Animal Planet and they were showing this National Geographic photographer in action. He was busy filming sharks on this amazing reef. What got to me was how he was making himself comfortable on top of this reef to get into the best position for that perfect shot. I'm talking about anchoring himself onto the coral to steady himself.

If anything, these are the people we should be looking at to set the right example. If they can't get it right at the top then why should we care about these little things?

We complain about everything that is wrong with the world, but what do we do about these things? Nothing! We wait for someone else to do something about it. This is just the way we go about things – we complain and complain like this in itself makes us out to be good people. As for the good people out there actually trying to do something to improve matters, these efforts are shadowed by the wrongdoings of others. We are also supposed to be the most intelligent of all animals.

Then why is it that governments spend billions on the building of new soccer stadiums and roads and other countries spend billions on technology development and sending people to the moon when they are unable to provide basic living conditions to the vast majorities of their own people?

Why is it that certain species of animals get culled when their numbers grow too big for the surroundings that sustain them, yet we are busy overpopulating every corner of this earth we live on, and this for the most part is able to continue unchecked?

We are the only species on earth that can be held accountable for every kind of destruction and wrongdoing known to mankind.

There are many other 'worse' issues that one could mention, but this is a dive magazine.

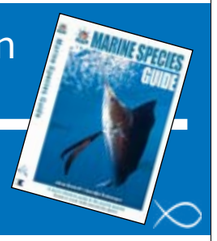
The only point I am trying to make is that if we are unwilling to change what is wrong in the dive industry today, then what hope is there for doing something about the bigger picture?

So it is obvious that I am rather unhappy with everything going on in the world. If someone must ask me though if I intend doing something about these things, my truthful answer would most likely be this…

Probably not.

WIN

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

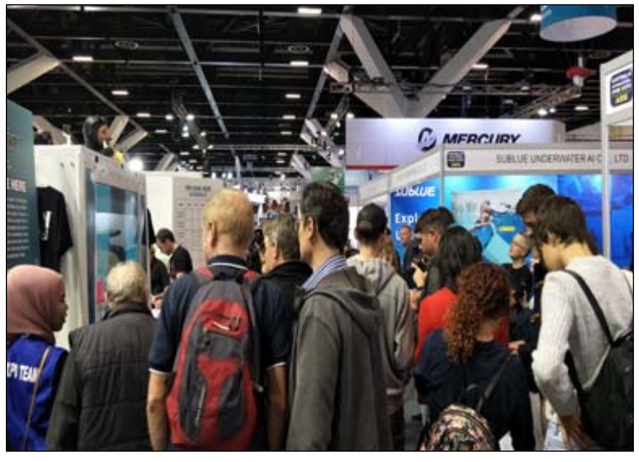


Here is a chance to be heard! If you have anything that you would like to share with OZDiver Magazine and other divers, send an email to Log Book at info@ozdiver.com.au. Remember that letters have more impact when they are short and sweet. We have the right to edit and shorten letters. In every issue,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

OZ NEWS

Australia International Dive Expo Announces New Location for 2020

After another successful year, the Australia International Dive Expo (AIDE) has announced that their 2020 show will be in a different space within the Sydney International Boat Show (SIBS). After three years on the lower level floor, the dive section will relocate to level four at the exhibition centre and feature a brand new floor plan for the expanding expo.



With more than 60,000 visitors attending the event over the five days from 1-5 August 2019, organiser and director of AIDE, Ness Puvanes, said the dive show is not only steadily gaining the attention and support of key industry players and the diving community, but it has piqued the interest of newbies and the younger generations as well.

"We've welcomed many new exhibitors to our show this year and caught the attention of school leavers in marine studies," said Ness. "We've also received encouraging and positive feedback from our exhibitors about the high quality of visitors that are coming through, who are serious about diving, learning and improving their skills, exploring new destinations, learning about new products, and of course networking with like-minded peers.

"This tells us we are heading in the right direction as we continue to grow the Australian dive community, and provide the industry with an inclusive and friendly platform to do just that."

Records show that the interest in learning to dive more than doubled this year as compared to 2018, with a string of newbies (families and individuals) jumping into the on-site pool to give the breathing underwater a go.

As with previous years, visitors met with a host of tourism bodies from new and popular dive destinations, dive tour operators and various suppliers of dive equipment who featured their latest in dive technology and trends.

The show also welcomed more than 350 high school children from around NSW doing marine studies, where they were introduced to the underwater world, heard from industry experts on getting into scuba diving, freediving, as well as learning about travel and career opportunities and marine conservation.

The key objective of this annual marine program is to equip the next generation with the necessary information to keep the oceans clean and to dive sustainably.

Apart from dive try-outs in the onsite pools, visitors also

enjoyed underwater drone and scooter demonstrations. For the first time also, visitors were treated to a live freediving demonstration by experts Lucas Handley and Sandra Dohring, where they showed the preparation and technique used to hold one's breath underwater.

Visitors also heard from an A-list line-up of international and local speakers passionate about the ocean, marine life and the preservation of the environment. Speakers included Brett and Sarah-Jo Lobwein, David Strike, Terry Cummins, PT Hirschfield, Lucas Handley, Damian Jones, Vanessa Mignon, Gaetano Gargiulo, Joni-Pini Fitzsimmons, Monica Chin, Kel Bradley, Simon Mustoe, Mike Scotland, Dr David Wilkinson, Michael Aw, Dominik Fretz, Fiona Merida, Witold Hoffman, Jahna Luke, and many more.

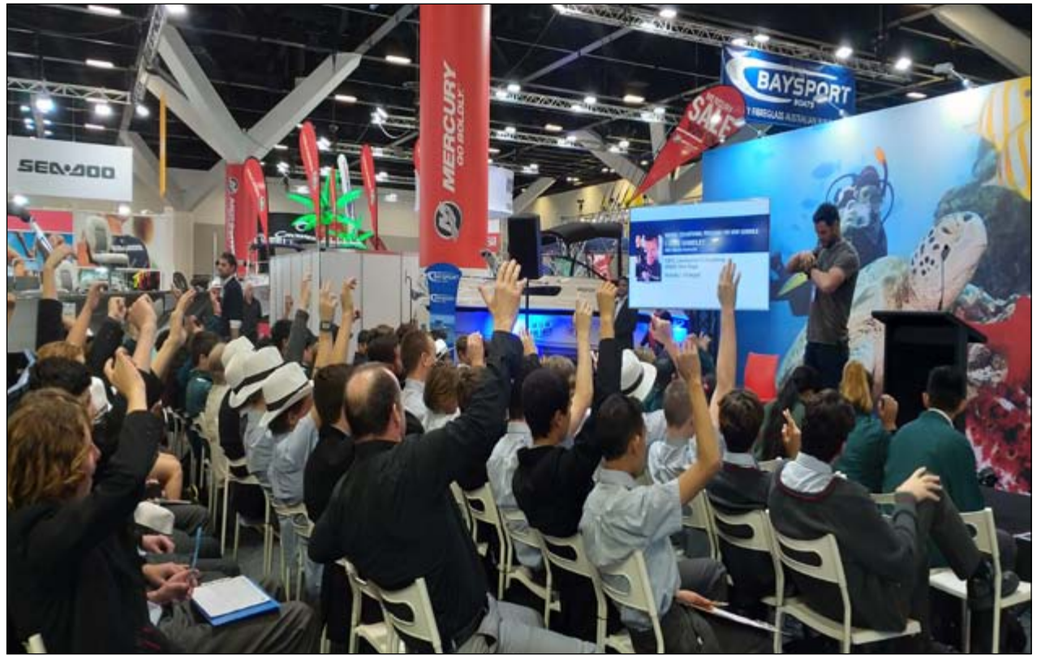
The Marine Rescue Forum and Freediving Forum received exceptional interest from visitors and will be repeated again in the 2020 Show.

AIDE2019 also saw with six lucky visitors taking home $10,000 worth of prizes from the lucky draw. The winners and their prizes were:

1. Marcus Lockley - $2,500 Flight Centre voucher for two pax to Hervey Bay
2. Silke Stuckenbrock – Overnight for two pax at Lady Elliot Island
3. Agata Wypych – 2D/1N on board Diver Den's Ocean Quest liveaboard for two pax
4. Ian Harrison – a sailing day to the outer Great Barrier Reef aboard Passion of Paradise
5. Tiffany Kentwell – an SSI Open Water Course with Sea Rovers Dive Centre
6. Edward Hawkins – 6D dive package at Pemuteran Bay with Sea Rovers Dive Centre

With a brand new location, AIDE 2020 promises a better configuration, a more intimate layout, more high quality exhibitors to cater to the increasing number of underwater enthusiasts and more engaging speakers.

AIDE will once again be part of the SIBS 2020 show at the Exhibition Centre of the International Convention Centre in Darling Harbour from 30 July – 3 August 2020. Bookings for AIDE2020 will be open from 1st September 2019 to 31 May 2020. Please direct all booking inquiries to info@australiadiveexpo.com.



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

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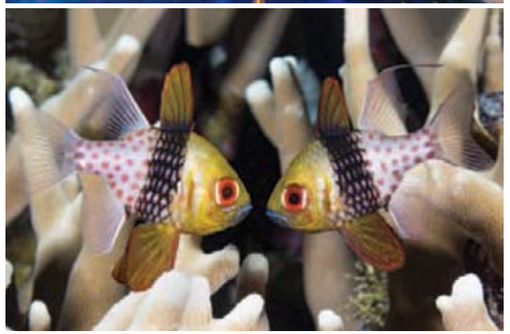

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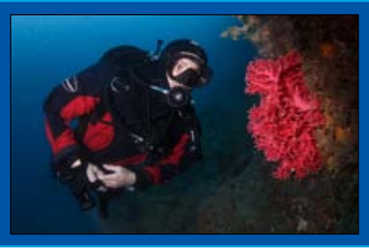
Dive the Continent
Dive OZ

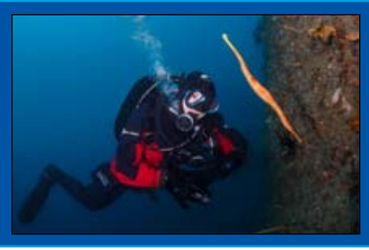
Milford Sound

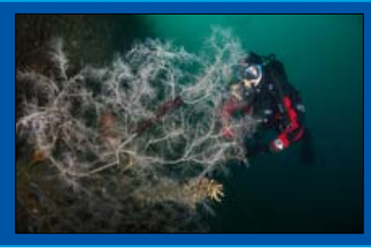
By Carrie Poborsa-Cox and Simone McKirdy

Grant Thomas www.grantthomasphotography.com

Located in the southwest corner of New Zealand's South Island in Fiordland National Park







By Carrie Poborsa-Cox and Simone McKirdy

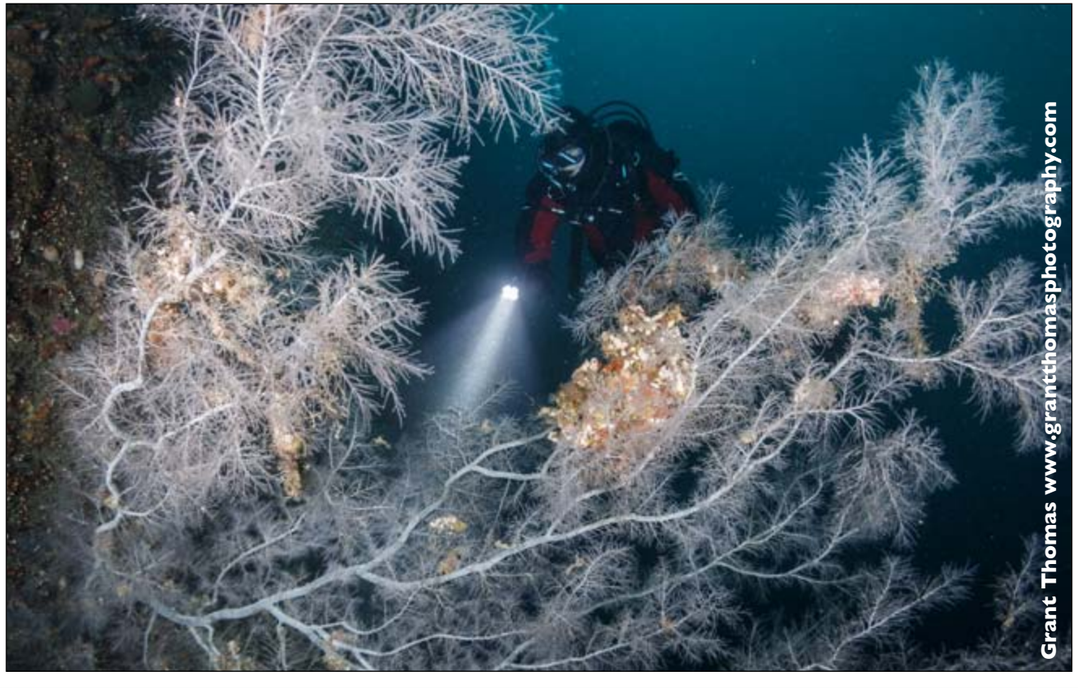
Milford Sound has been proclaimed as the "8th wonder of the world." The misnamed fjord is lined with dramatic sea cliffs and dense native forest. Mitre Peak, New Zealand's most photographed mountain, rises straight from the water to 1,683m. When it rains, as it often does, the fjord comes alive with hundreds of waterfalls, tumbling down these mountains, creating one of the most unique marine environments in the world.

Milford Sound has three distinct histories. Maori explorers first began visiting the fjord around 1000 years ago and named it Piopiotahi after a now extinct bird. They continued to visit the fjord over the centuries to hunt, fish and collect precious Pounamu--New Zealand jade or greenstone. When you visit Piopiotahi be sure to ask a local about the legend of its creation as the best way to hear is while standing among the towering mountains.

The name Milford Sound comes from the fjord's European history. European sealer, John Grono, discovered the fjord in 1823 and named it after an inlet on the Welsh coast. For decades after his arrival the New Zealand Fur Seals that inhabited the area were threatened by the thriving European fur trade.

Around the turn of the 20th century Milford's third phase in history began as it became a tourist destination. Until the 1950's it was only accessible by foot along the infamous Milford Track which is still an incredibly popular walk. When the Homer Tunnel was completed in 1954 Milford opened up to mass visitation and has become one of New Zealand's most popular destinations. Hundreds of tourists visit the area every day but only a few are adventurous enough to explore the mysterious world beneath the water.

Milford Sound's marine environment is unique for several reasons. Most obviously, it is a fjord; a deep narrow inlet carved out by multiple ice ages and protected from coastal storms. The most dramatic effect on the marine environment comes from the surrounding rainforest. Milford is one



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The Way the World Learns to Dive®

By Carrie Poborsa-Cox and Simone McKirdy

of the wettest places on the planet, receiving an average of almost 7000mm of rain each year. As the rainwater runs down the mountains it collects tannins from the decaying plants and is stained a brownish tea colour. This brown fresh water sits on top of the saltwater and acts like sunglasses, blocking the sunlight from reaching the marine life below. The freshwater layer changes day to day with the weather and tides, averaging 1-3m thick but can be up to 16m thick after very heavy rains.

This layer causes a phenomenon called deep water emergence. Deep water species that thrive in dark, still environments live much shallower in Milford and can easily be viewed by divers. As you descend through the hazy fresh water you might see ancient Brachiopods encrusting the rocks.

Eleven Armed starfish can be found at the edge of the halocline where they wait for the saltwater to envelope the living fossils so they can ascend to feed on them. As you continue below the freshwater into the clear, but often dark, saltwater you will start seeing Black Coral trees as shallow as 6-8m.

These delicate corals are one of the slowest growing coral species in the world and are usually found much deeper than the average diver can go. Fiordland boasts one of the densest populations of black coral in the world with over seven million individual colonies, some of which are hundreds of years old. The coral trees provide shelter for a multitude of sea creatures. You'll find butterfly perch, snake stars, anemones, sponges and even shark eggs.

While you're getting a close look at a Carpet shark embryo you might be lucky enough to spot the Broadnose Sevengill shark slowly cruise by. If you look up at just the right moment you might see a huge short tailed stingray silhouetted by the sun, while a group of kingfish swoop by behind you. If you have a very keen eye you may even be fortunate enough to spot a seahorse or spiny sea dragon hiding in the reef while you look at the bright purple Jason's nudibranchs.


Grant Thomas www.grantthomasphotography.com

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By Carrie Poborsa-Cox and Simone McKirdy

Recognizing the uniqueness of this underwater habitat, the Piopiotahi / Milford Sound marine reserve was established in 1993. It covers an area of 690 hectares along the northern side of the Milford Sound where New Zealand Spiny Rock Lobsters, or crayfish, have been flourishing ever since.

The crayfish in Fiordland are known to be some of the largest and most numerous in New Zealand and can be found on all of our dive sites. Our most popular sites are home to resident crayfish that we've come to know over hundreds of dives and they have become quite friendly with us.

The marine ecosystem varies between the inner fjord and outer fjord, providing an interesting contrast in dive sites. Inner fjord sites tend to have a much thicker freshwater layer and are home to more of the deep water species. Encrusting sponges, ascidians and echinoderms cover the vertical walls that drop into the darkness. This is where we most frequently find the largest sharks and one of our favourite inner fjord sites, The Triangle, is home to one of our largest Black Coral trees.

Outer fjord sites offer a variety of fjord species and coastal species, with pelagic ocean goers arriving in the summer when the water temperature rises. Most of our dive tours start in Penguin Cove, a perfect site for beginners and advanced divers alike. T

he shallow protected cove has a gentle sloping reef where we see some of our most beautiful coral trees, crowds of crayfish, sparkling fresh water vents and often visitors like deepwater Lings, Stingrays and Kingfish. The edges of the cove drop into steep walls down to depths where technical divers can find Sea Pens and recreational divers can spot Spiny Sea Dragons.

Our more coastal sites like Greenstone Point and Dale Point, the markers to the entrance of the fjord, are home to more of our smaller sharks and beautiful swaying seaweed gardens. Walls

Grant Thomas www.grantthomasphotography.com

By Carrie Poborsa-Cox and Simone McKirdy

carpeted in bright yellow Zoanthids and cracks crowed with vibrant red Hydrocorals, along with the clear blue ocean water draw divers out to these sites.

Most of our dive sites are advanced wall dives, with vertical drops of up to 200 meters. There are plenty of shallow reefs for divers to get comfortable before exploring the walls. We have about 10 dive sites along the fjord that we frequent. On a given day we select the sites that best suit divers ability levels and that will provide the best underwater experience overall.

We meet in Deepwater Basin to begin our tours and divers suit up on land before boarding the boat which is equipped for ten divers and two guides. Most divers choose to use our high quality rental suits— 8mm semidry suits or ScubaForce drysuits. Each trip includes a sightseeing tour of the fjord and as we make our way out to the Tasman Sea we often find Tawaki (Fiordland Crested Penguins), Bottlenose and Dusky dolphins and our resident Fur Seals. We'll choose our first dive site and brief everyone on the gear, environment and dive plan.

After the dive we head to our surface interval site where divers are provided with hot drinks, snacks and a light lunch. Given time and conditions we have the chance to let divers explore Bridal Veil falls on land. This gives divers a chance to get close to the native flora and spot some native birds. After a relaxing float in the waterfall's pool we get back on the boat and move to our second dive site.

To finish off the trip after the second dive we get a very close look at one of the permanent waterfalls, Sterling Falls, which is fed by Mt. Pembroke Glacier. The average trip last 5-6 hours.

Diving is interesting year round as

Grant Thomas www.grantthomasphotography.com

By Carrie Poborsa-Cox and Simone McKirdy

changing seasons bring new species.

Spring months are the best chance to see penguins and migrating whales. During the summer months the water warms up to about 16 degrees and brings with it the pelagic species. Stingrays, Eagle Rays and Kingfish are seen more frequently as well as schools of baitfish and unpredictable ocean visitors. The summer crowds slow down in autumn and the warm water continues to provide excellent diving as the days grow shorter. The later winter months bring calm days and cool water. Short days and quiet seas set against the backdrop of snowcapped mountains provide a uniquely beautiful experience for the most adventurous divers.

The only accommodation in Milford Sound is the Milford Sound Lodge which books out early in advance. Most divers use Te Anau as a base for accommodation, supermarkets and restaurants. The travel time from Te Anau is two hours but the road itself is a tourist draw and it is well worth it to spend some time sightseeing, tramping and camping along the Milford Road.

Contact details – Bookings

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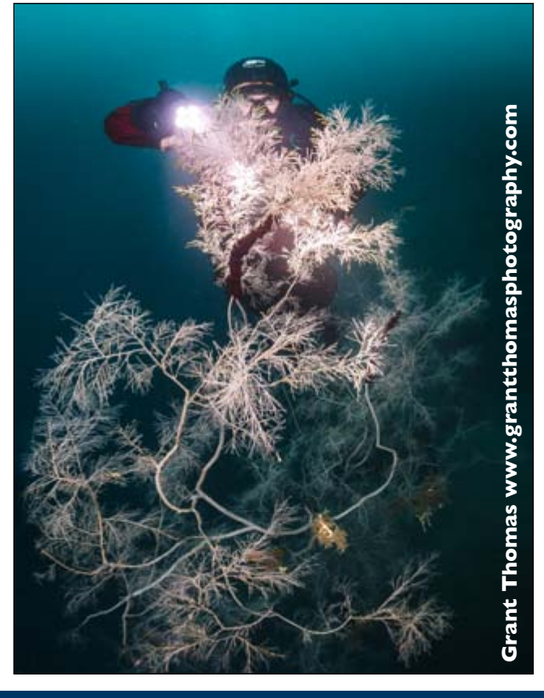
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just add water

By Jill Holloway

Spanish Dancers

Nudibranchs come in brilliant colours with fabulous markings, and they can vary in size from 1mm to 600mm.

They are primarily carnivores and will eat hydroids and other species of nudibranchs, but most of them feed on sponges; all of which are animals. A few will eat algae or seaweed.

They feed where food is available so they frequent areas where coral growth is limited; even the cold northern European waters harbour these colourful sea slugs and nudibranch hunting has become a global passion.

Nudibranch means exposed gills. Hexabranchus, for example, has six sets of exposed gills. All but two nudibranchs are called by their Latin names. The scientific community frowns on them being given common names so the study of these creatures is not for the fainthearted.

Most of them breathe using the exposed bunches of gills on their backs, and their sensual organs are contained in a pair of rhinopores on the front of their heads which look like horns. All are hermaphrodite, with both male and female sex organs which are always on the right hand side, below the neck.

These can be expelled to accommodate a large meal, and then re-ingested.

All of them are poisonous to fish, and a single nudibranch can kill an entire aquarium full of fish if it becomes stressed and lets off a toxin.

This occasionally benefits the palatable flatworm – he sometimes mimics the shape and rhinopores of the poisonous nudibranch, escaping predators and protecting itself.

There is even a species that farms algae in its gills. It is long and thin and has many sets of gills or cerata which it uses to collect algae. You will sometimes find it spread out along the top of the reef on a sunny day, cerata exposed to catch the sun so the algae will grow faster.

The spectacular Spanish dancer (Hexabranchus sanguineus) is one of the very few nudibranchs that goes by its common name.

They grow up to 600mm long, so are clearly identifiable. They are nocturnal animals in our waters, so we rarely spot, however, we found two at the point of mating on Seven Mile in broad daylight.

They lined up neck to neck, and then they exchanged sperm, fertilising each other. After five or six days each lays a long egg ribbon in a continuous circle, and you can see these on the reef looking like soft rosettes – they are normally pink, reddish or orange. These ribbons are preyed upon by other nudibranchs of the Favourinus family and the survivors hatch into tiny nudibranchs that look nothing like their imposing parents.

Other species lay egg ribbons that hatch into tiny veligers, which are a larval stage, and they can float around in the ocean, following currents for months on end. When they sense that there is a food source, they will descend onto the reef and metamorphose into small nudibranchs.

The study of these creatures is still in its infancy, although some were described as early as the 1700s, but they are fascinating creatures and there are still many unnamed and quite rare species in our waters.

Once you know what you are looking for, you can find them almost everywhere.

Photos Christopher Bartlett

50 Interesting Ocean Facts

PART I

1. The ocean is about 140 million square miles (362 million km²), or nearly 71% of the earth's surface.
2. The average depth of the ocean is 12 200 feet (3 720m).
3. The deepest point is 36 198 feet (11 033m) in the Mariana Trench in the western Pacific.
4. More than 97% of all our planet's water is contained in the ocean.
5. The top ten feet of the ocean hold as much heat as our entire atmosphere.
6. The average depth of the ocean is more than 2,5 miles.
7. The oceans provide 99 percent of the earth's living space – the largest space in our universe known to be inhabited by living organisms.
8. More than 90% of this habitat exists in the deep sea known as the abyss.
9. Less than 10% of this living space has been explored by humans.
10. Mount Everest (the highest point on the earth's surface at 5,49 miles) is more than a mile shorter than the Challenger Deep (the deepest point in the ocean at 6,86 miles).
11. The longest continuous mountain chain known to exist in the universe resides in the ocean at more than 40 000 miles long.
12. The Monterey Bay Submarine Canyon is deeper and larger in volume than the Grand Canyon.
13. The Antarctic ice sheet that forms and melts over the ocean each year is nearly twice the size of the United States.
14. The average temperature of the ocean is 2ºC, about 39ºF.
15. Water pressure at the deepest point in the ocean is more than eight tons per square inch, the equivalent of one person trying to hold 50 jumbo jets.
16. The Gulf Stream off the Atlantic seaboard of the United States flows at a rate nearly 300 times faster than the typical flow of the Amazon River, the world's largest river.
17. The world's oceans contain nearly 20 million tons of gold.
18. The color blue is least absorbed by seawater; the same shade of blue is most absorbed by microscopic plants, called phytoplankton, drifting in seawater.
19. A new form of life, based on chemical energy rather than light energy, resides in deep-sea hydrothermal vents along mid-ocean ridges.
20. A swallow of seawater may contain millions of bacterial cells, hundreds of thousands of phytoplankton and tens of thousands of zooplankton.
21. The Blue whale, the largest animal on our planet ever (exceeding the size of the greatest dinosaurs) still lives in the ocean. Its heart is the size of a Volkswagen.
22. The Gray whale migrates more than 10 000 miles each year, the longest migration of any mammal.
23. The Great Barrier Reef, measuring 1 243 miles, is the largest living structure on earth and it can be seen from the moon.
24. More than 90% of the trade between countries is carried by ships and about half the communications between nations use underwater cables.
25. More oil reaches the oceans each year as a result of leaking automobiles and other non-point sources than was spilled in Prince William Sound by the Exxon Valdez.

Information supply by www.savethesea.org

Weird and Wonders
Ocean Facts

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Namibian Sealing

By Francois Hugo, Seal Alert

The largest slaughter of mammals in Africa occurs in Namibia, the least populated country on earth.

Namibia's seal hunt is the second largest in the world and it is the only country which commercially kills nursing baby seal pups.

The sealing quota for these endangered listed Cape fur seals is 86 000. Namibian sealing regulations award four seal rights holders the right to club 80 000 seal pups younger than a year old on the head with a wooden pick-axe until dead.

It is immensely cruel. Throughout the civilised world it is considered a criminal and punishable offence to beat or club an animal to death. The Animal Protection Act's of the world dating back to 1962 confirm this, the US Government banned Cape fur seal imports in 1972 due to its cruelty and two US independent veterinarians judged that the sealing on two mainland seal colonies did not attain the standard of humaneness required by the US Department of Commerce in 1974 Furthermore, the EU banned nursing baby seal imports in 1983 and in 1987, Canada, Greenland, Russia and Norway banned in their own regulations the clubbing or killing of nursing baby seals in breeding grounds.

Yet, since its independence in 1990, Namibia has continued to award sealing quotas to four sealing rights holders, and awarded them quotas which are 90% nursing seal pup based.

There is no dispute that these pups, at 7-8 months of age when herded together and clubbed to death, are nursing baby seals.

The Namibian government earned 206 000 Namibian dollars from sealing last year.

Prior to independence in 1989, its seal population on the three sealing colonies of Wolf/Atlas Bay in the diamond restricted area and Cape Cross in the Seal Reserve, numbered 122 018 seal pups born in December, of which 6 285 were clubbed to death. Seventeen years later, these colonies produced 121 462 seal pups.

We have all seen the dead seal pups on the beaches over the years; scientifically this natural mortality has averaged, since 1972, 44% of the pups born.

Subtracting this would leave 68 000 seal pups alive, facing a seal pup quota of 80 000. Whilst the seal population has not increased in 17 years, the sealing pup quota has increased 1 172% since independence, from 6 285 pups to 80 000.

The largest seal colony at Cape Cross, which attracts over 70 000 visitors each year, contributing over two million Namibian dollars to the economy, completely collapsed, with not a single seal left in the colony. De Beers, the largest employer and contributor to Namibia's economy has publicly stated its disproval of seal culling.

Between July 16-23, 2008, 27 countries of the EU voted to ban Cape fur seal products being imported into the EU, as Belgium, Netherlands, Germany and Italy have already done.

These bans are based on one thing – seal cruelty. No matter what is said on radio, television, in documentaries, in newspapers, in reports, in meetings or on the Internet – the thing that cannot be changed is that it is cruel.

You know it, I know it, the world knows it and Namibia knows it

Scuba Diving and Decompression Illness

By Dr. Jean Vorster

Since the invention of the demand valve in 1943 by Emile Gagnon and Jacques Cousteau, scuba diving has become a popular leisure time activity. Diving, however, imposes several physiological stresses on the body, in part as a result of breathing compressed air (or various other mixtures of oxygen, nitrogen or helium).

Most of the medical health problems in recreational diving are consequences of decompression during the ascent. Decompression illness is the term used to describe disorder of decompression.

Barotrauma encompasses medical problems particularly related to over expansion of air-filled spaces (i.e., mainly the lung, ear and sinuses). Barotrauma occurs as a result of unintentional breath-holding, bronchospasma (abnormal constriction or spasm of airways such as occurs in asthma) or mucus plugs inhiting deflation ascent.

This is a consequence of Boyl's law: due to the decrease in ambient pressure, the gas volume in the lungs and airways proportionally expands. If no expiration of gas takes place, lung tissue will over-expand and rupture, with secondary migration of gas bubbles into the blood circulation.

Decompression sickness on the other hand occurs as a result of the growth of gas nuclei in predominantly fatty tissue. Due to the high ambient pressure at depth, a large volume of gas is dissolved in blood and tissue. With a sudden decrease in depth and therefore in the partial pressure of nitrogen, the inhaled gas may come out of the dissolved state and form gas bubbles or nuclei.

Blood itself seems to be resistant to bubble formation, however, bubbles form with much greater ease in tissue (especially fatty tissue) and from here migrate into the blood circulation.

Small volumes of gas bubbles are tolerated and are exhaled from the lungs – large amounts, on the other hand, overload the filter capacity of lungs and bubbles escape into the systemic circulation (the part of the blood circulation responsible for transporting oxygen-rich blood from the lungs and heart to the various organs).

Of all the possible pathways for the bubbles to enter from the lung (venous) circulation into the systemic circulation, the most prevalent pathway is via a patent foramen ovale. A patent foramen ovale is an abnormal communication between the cardiac chambers that can facilitate the passage of gas bubbles from the lung circulation into the systemic circulation.

One of the more serious complications of this abnormal crossover of bubbles from the lung into the systemic circulation is the disruption of bloodflow in the vessels supplying the brain (cerebral decompression illness). This disruption in cerebral bloodflow results in clinical features similar to that of a stroke.

The importance of a patent foramen ovale for decompression events in divers has been repeatedly demonstrated. Overall, patent foramen ovale increases the risk for decompression illness four to five times, even in divers strictly adhering to decompression tables.

Current examination of divers with a history of cerebral/neurological decompression illness after a dive within decompression table limits (i.e., with an unexpected decompression illness event) should include special investigations by a cardiologist for exclusion of a patent foramen ovale.

For divers with a patent foramen ovale and a history of a major decompression illness, not much data exists about the risk for future events.

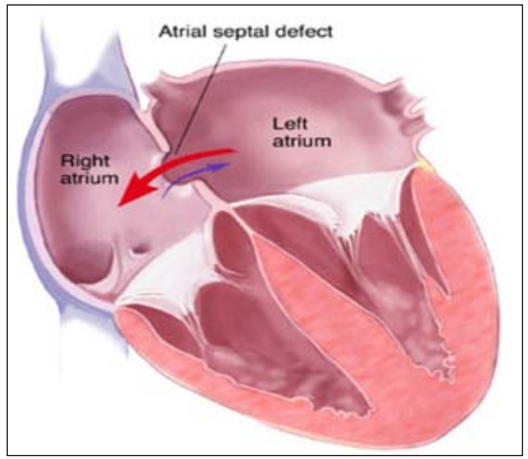
Consequently, these divers are advised to stop diving. If they refuse, they should minimise the load of tissue nitrogen during dives, e.g., by refraining from long, deep dives, from repeated ascents and decents during the same dive or from diving several times a day.

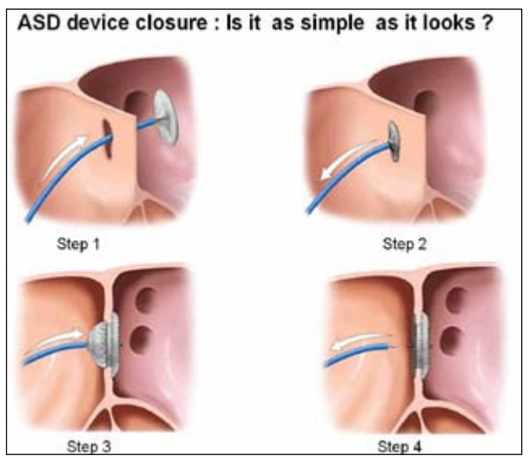
Some divers try to decrease the amount of nitrogen by load by using special nitrogen-oxygen mixtures (nitrox).

Closure of the patent foramen ovale may reduce the risk for recurrent cerebral-neurological decompression events, but this therapeutic option has not yet been proven to be effective. Routine medical screening of asymptomatic sport, commercial or technical divers is not mandatory.

Regarding the lack of data about possibilities for minimising the risk of decompression events in divers with patent foramen ovale, they could only be advised to refrain from diving.

However, the low individual risk does not justify the exclusion of a quarter of the population (the documented prevalence of a patent foramen ovale in the general population) from diving.





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Global News

Conservation Pays Dividends at Wakatobi

Coral reefs around the world face threats from both destructive harvesting practices and coastal development. The conventional solution to such threats is to create restrictions that limit or halt human activity. But regulation alone is rarely enough, as laws can be difficult and costly to enforce in remote areas, and local communities often depend on the harvesting of coral reef resources for their livelihood, and understandably resist outside forces that seek to compromise their livelihood.

The founder of Wakatobi Dive Resort envisioned a different solution to coral reef protection, one which would succeed based on voluntary cooperation and mutual benefit. His vision has now become one of the world's most successful and acclaimed examples of a privately-funded and community-based marine conservation initiative.

The story begins in the mid-1990s, when Swiss Diver Lorenz Mäder's search for the perfect location for a dive lodge led him to a small island in the remote Sulawesi region of Indonesia. The waters surrounding this island contained some of the most dramatic coral formations Lorenz had ever seen. Reefs beginning two meters below the surface turned to steep walls; slopes riddled with caverns and ledges sheltered thousands of species of marine life, and coral-encrusted pinnacles swarmed with schooling fish. A beachside coconut palm grove facing one of the area's most spectacular reefs would become the site of Wakatobi Dive Resort.

At that time, destructive fishing practices such as netting and dynamite fishing were spreading through the Indian Ocean, laying waste to coral reefs. To safeguard the future of the reefs in his area, Lorenz met with local fishermen and village elders from surrounding communities and offered a unique proposal.

In exchange for agreeing to honor a "no take" zone on six kilometers of reef, the residents of some 17 area villages would receive direct lease payments from Wakatobi. "From the first day, it has been a business agreement," Lorenz says. "That stops the destruction because it's about money. Everybody understands that."

But the program was more than a simple deterrent measure. Drawing on his background in marine biology, Lorenz met with villagers and explained the ways that "no take" zones could increase fish populations. Eventually, he was able to convince fishermen to close some 40 percent of their fishing grounds for replenishment. As fishermen began to see improved catches in areas surrounding these no-take zones, they became the ardent supporters of the program. "You have to work together with the locals," Lorenz says. "You have to build trust and show that there is a reward." Preaching the long-term benefits of conservation may not work, he says. What does work are actions that have immediate and demonstrative results. "And it's not important that everybody understands what the long term plan is about," he says. "What they will understand is business."

With the beginnings of his conservation program in place, Lorenz then began to create his resort. He knew that dive tourism would be an important component of his plan, as it would generate the revenue needed for lease payments to the villages. But he also understood that resort development and diver traffic could create negative impacts on the local marine environment. "There's always some degree of negative impact to development," Lorenz says. "But if we can improve more than we destroy, and the impact balance is on the positive side, then we can win, long term."

To minimize his resort's impact, Lorenz built his lodge in the traditional regional style, using locally-sourced materials and labor. As the resort expanded, a collection of unobtrusive single-unit bungalows and villas were tucked into the landscape, and infrastructure such as wastewater management were created based on eco friendly principles. Wakatobi established its own recycling station, and actively works to reduce the use of disposable plastic items in all phases of resort operations. To combat the problem of plastic waste carried by ocean currents the staff engages in a number of ongoing debris removal efforts. Each day the staff cleans more than a kilometer of surrounding beaches, removing plastics and any other debris that may wash ashore. On a daily basis, members of the dive team collects any trash and debris that may gather on the reef.

Wakatobi's commitments to environmental protection and cleanup go far beyond the resort boundaries. The resort sponsors weekly village cleanups that involve up to 100 local people, and works closely with local communities and governments on the issues of waste management. Wakatobi provides waste bins, organizes waste collection vehicles and sponsors additional waste storage and removal mediums for the adjacent island of Tomia. To enhance local awareness of the issues, and promote sustainable practices, the resort pays a team of 20 well-respected community leaders and influential individuals. These spokespersons use their social status within the community to increase public awareness on the issues of reef conservation and waste management on Tomia.

Some 25 years after it's founding, Wakatobi's Collaborative Reef Conservation Program has expanded to cover more than 20 kilometers of reef, and provides a number of additional benefits to the local community. Among these are a network of moorings placed in area harbors, the sponsorship of reef patrols and shore cleanups, supplying power and clean water to a nearby village of 500, providing educational materials for schools, and employing more than 300 local workers at the resort. "We have paid millions to the community," Lorenz says. "It's money we could have spent on fancy boats or whatever, but we see it as an important investment in the future, and in the health of the reefs."

Learn more at www.wakatobi.com.
Email: office@wakatobi.com

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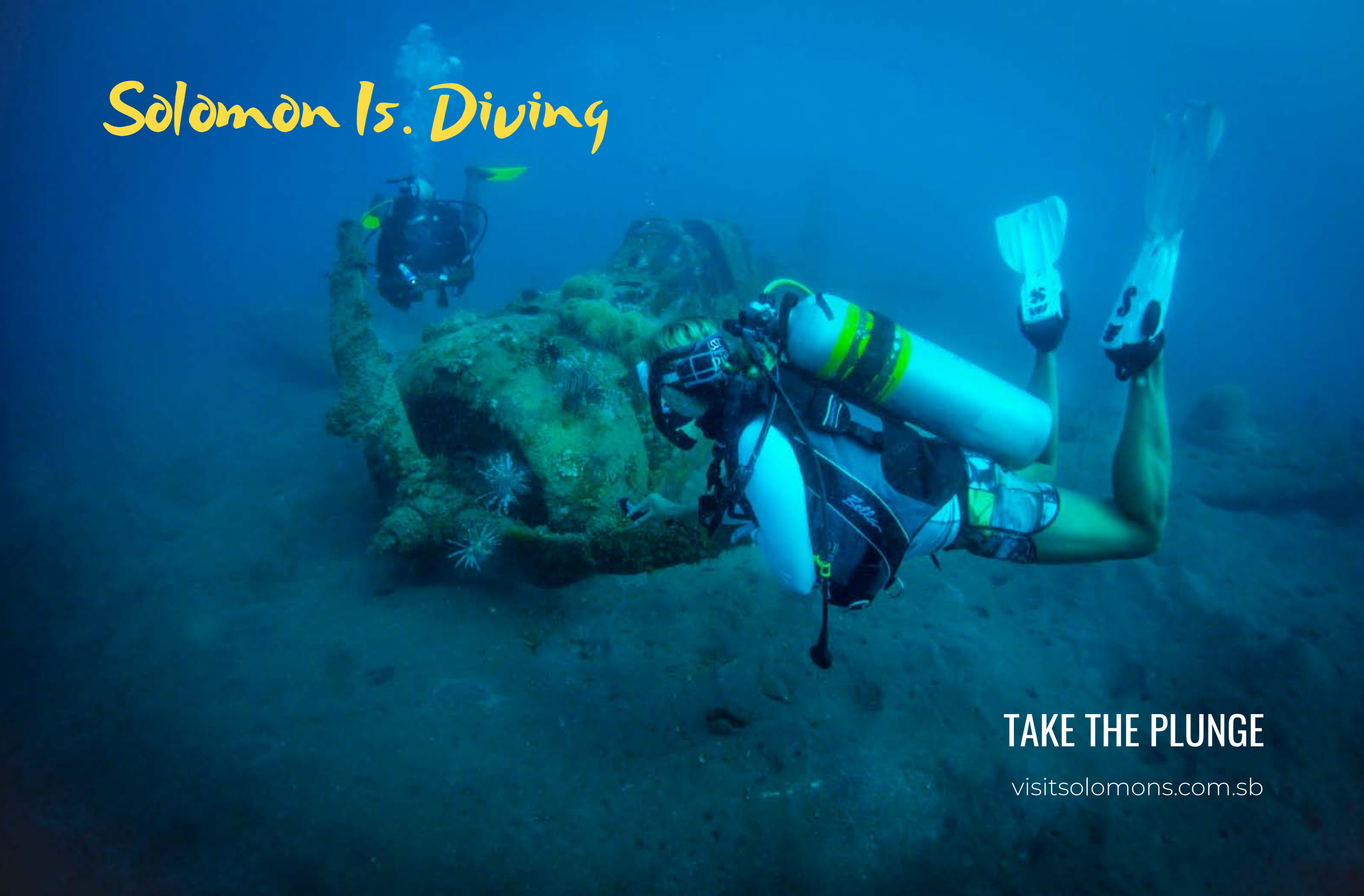

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Dive the Globe
Cebu - Philippines

By Johan Boshoff

Diving the Heart of the Philippines

Part I - Cebu

The Philippines; from Thresher sharks to treasures, coral reefs to gentile giants and home to some of the richest marine ecosystems on earth with more than 7000 islands to choose from. This is a diver's dream destination, yet it can be daunting to know where to begin to experience what this boundless country has to offer. Why not start at the heart of the Philippines around the island of Cebu that offers a variety of dive spots for all levels of divers?

By Johan Boshoff

The Philippines consists of more than 7000 islands which lie just north of the equator. It is a hidden gem that many travellers, fortunately for all of us, overlook.

For many years the Philippines has received so little publicity that it is still a relatively secret destination among travellers and divers.
In the middle of the Philippines lies the Island of Cebu, located in the Central Visayas region.

It was the original capital of the Philippines until the 17th century. Cebu Island is a long and narrow island which stretches about 200 kilometres from north to south and still remains a prominent and popular area for tourism in this great archipelago, boasting an ethnically diverse population and numerous cultures.

It is considered to be one of the most dynamic islands in the Philippines, attracting local and international tourists from all over the world.
About 8 kilometres from the northern tip of Cebu Island is the small island of Malapascua. It is only about 2.5 kilometres by 1 kilometre and relies on tourism, fishing, boat building and coconuts for its inhabitants to make a living.

This island is well known for its macro life and famous for its Thresher sharks. It is one of the few places in the world to see them where the sharks come in every morning just before sunrise for a clean at one of the cleaning stations around the island.

Yet the main diving area is Moalboal, about 100 kilometres south of Cebu city. Moalboal is situated on a peninsula which stretches out from the main island and is home to many unusual underwater creatures that are rare elsewhere in the world. It offers some of the country's most dazzling dive opportunities where the western side of the peninsula is a reef wall which runs straight down to around 60 metres.

The stunning sheer walls have many cracks, crevices, caves and overhangs, which provide a suitable shelter for a wide variety of marine life. They are a wonder to dive, being covered with a vast number of hard and soft corals, huge Basket sponges, Sea whips and some of the biggest Gorgonian sea fans in the world.
Moalboal peninsula has a number of different dive spots for you to go and explore, but you can break up the Moalboal peninsula into four different areas; the Northern peninsula, Middle/Panagsama section, the Southern peninsula where Magic Island Dive Resort is situated and the island of Pescador.

Dive the Globe
Cebu - Philippines

The northern section of the peninsula is fringed by white sandy beaches with some of the pristine coral reefs in the area. The area is also known as a sanctuary zone where some of the dive spots are out of bound for any fishing; even the locals are not allowed to fish there and this creates a rich ecosystem for the marine environment.

The dives around the northern tip are outstanding with colourful coral slopes and walls rising to a few metres below the surface.

In the shallows, stony hard corals grow with confidence. Anemones thrive, nestled between coral boulders and surrounded by an abundance of reef fish.
Heading into deeper water the beauty of the walls unravels – large Gorgonian sea fans, huge Barrel and Leather sponges, colourful Crinoids and Tunicates, Long whip corals and delicate soft corals are on display. The area, where a plane was sunk to create an artificial reef is known to be home to spotted Eagle rays and Black and White tip reef shark.

In the middle of the peninsula around the backpackers village of Panagsama is one of the few places in the world where you are guaranteed to see schools of sardines in the millions.

This is an exceptional marine phenomenon with so many sardines that at times the sun is completely obscured and you can't find your dive group.

Upwelling currents from the deeper water around the peninsula bring nutrient-rich waters to the coastline and consequently brings food for the sardines.

The sardines, in turn, attract a substantial number of predators, including schools of Jacks, Tuna and Mackerel, offering you a once in a lifetime experience.

On the southern side of the peninsula you

By Johan Boshoff

can expect to find an astonishing number of turtles swimming freely around the walls, but my favourite is the Mandarin fish; at sunset they look for another mandarin fish to mate with. The male and female rise in unison above their coral-rubble home to spawn, dorsal fins erect and colours blazing.

The sexual encounter is over in an instant and they disappear back into the coral in a second. This spectacular site can been seen on the home reef at Magic Island Dive Resort.

However, the real star of this region is Pescador Island which is located in the Tañon Strait, a few kilometres west of Moalboal. The waters surrounding this small uninhabited island are extremely deep and reach up to 400 metres in some areas. This marine sanctuary consists of a sandy slope that is covered with hard and soft coral to about 10 metres where the wall starts and then drops straight down to about 40 metres. The wall is covered with hundreds of sponges and colourful sea fans providing a great place for a Frog fish to hide.
Large numbers of resident schools of

Dive the Globe
Cebu - Philippines

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DEEP DOWN YOU WANT THE BEST

By Johan Boshoff

Barracuda and Jacks can be found around the island and on the west side of the island an open-top underwater cave nicknamed 'the Cathedral' can be found.

Around the Moalboal peninsula you can see over 500 species of coral and more than 1500 species of fish, but my favourites were the huge amount of Frog fish, Nudibranches, Ghost pipe fish, Leaf fish and the Pigmy seahorses.

But let's keep the best for last, how about diving or snorkelling with the gentle giants of the ocean? Just over an hour's drive from Magic Island Dive Resort is Oslob, a world renowned village to dive or snorkel with Whale sharks.

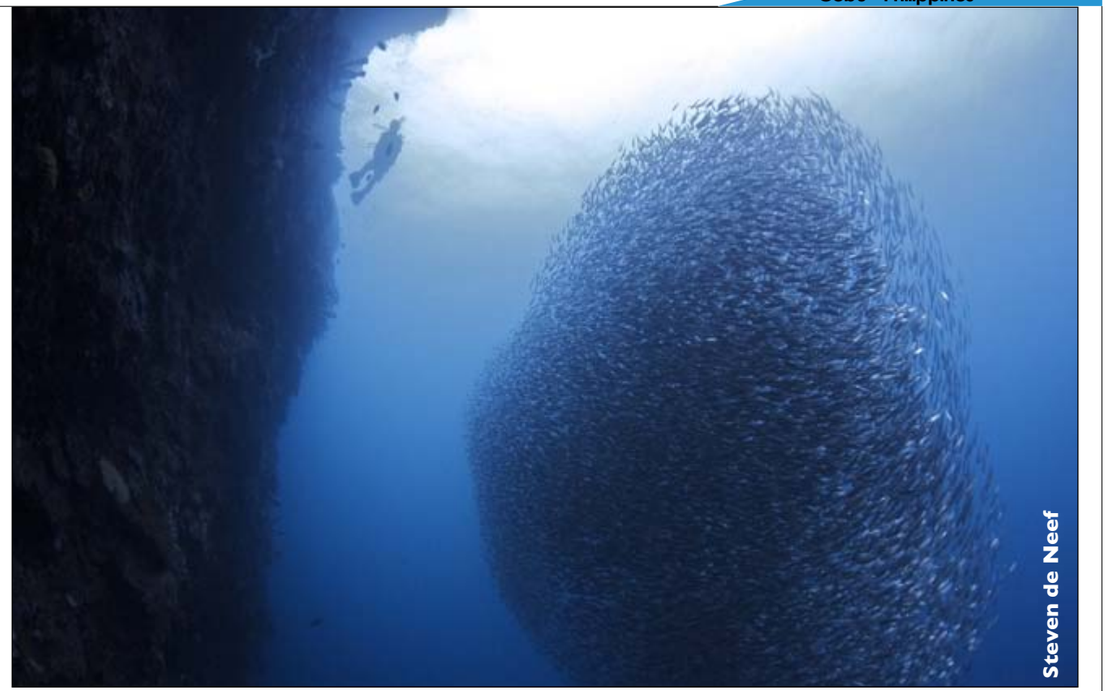
It is guaranteed on a daily basis where you are able to get right up close to the world's largest shark. Locals say that Whale sharks have been swimming around Oslob for ages, but only as recently as the past few years have fishermen begun taking tourists to encounter these massive wonders, an incredible experience for tourists and divers. I estimate that I spotted at least a dozen Whale sharks during the days diving and snorkelling and it was absolutely amazing.

And there is no better way to explore the underwater world and everything that Cebu has to offer than with Magic Island Dive Resort, a jewel situated on the southern tip of the Moalboal peninsula.

It is a stunning resort that is surrounded by mountains and nestled in between lush tropical gardens with palm trees right on the ocean. It's a real island resort gem in this rugged country.

The resort is small and exclusive resort and guarantees personal attention and great service; the resort has 10 bungalows with private balconies with either a pool or sea view. It is ideally located between the town of Moalboal and Panagsama, the main tourist village in the area.
Each bungalow is spacious and fully equipped with everything that you need for you stay. There are many areas around the resort for relaxing; you can lay around the pool or sit at the ocean view bar and have a drink, or even go for a manicure, pedicure or a

Dive the Globe
Cebu - Philippines



Steven de Neef

J.P. Bresser

By Johan Boshoff

relaxing body massage while overlooking the ocean and hearing how the waves break against the rocky coastline.

The whole resort is built on multiple terraces and the main terrace is used for your meals, which offers an awesome view and a cool sea breeze. The open view kitchen allows you to see how the chefs prepare a variety of delicious meals that will suit every taste.

There are many areas around the resort where you can just sit back and relax while the wonderful staff will look after all your needs, especially the resort manager Concheng who makes sure that all the guests are treated like kings and queens.
The dive centre is located at the bottom of the restaurant right on the ocean's edge and it is fully equipped with a separate camera room.

It is designed and well laid out for the modern diver with helpful staff and dive guides. But the best of all, it is a few steps from the dive boats that will take you out for the day's diving, or simply walk a few metres to dive their famous house reef where the wall drops to about 50 metres.

Magic Island Dive Resort also offers two unique dives; have you ever heard of Fluoro Dives where you use a special UV torch and a special lens over your mask which allows you to see the fluorescent colours emitted by the fish or coral when under UV light?

For some strange reason, unknown to science, many marine creatures fluoresce


J.P. Bresser

Dive the Globe
Cebu - Philippines

By Johan Boshoff

under UV light, which is usually invisible to the human eye. The reef turns into a whole new spectrum of colours during these dives. For the braver divers, try the Blackout Dive where they take you out to the open ocean during the night and you descend on a line with lights attached to see what the lights attract in the dark and deep ocean.

Cebu Island has so many things to offer other than diving and Magic Island Dive Resort can organise more than just great diving. Take daytrips to the local waterfalls or explore the surrounding towns and villages, dive or snorkel with Whale sharks or for the more adventurous, try to do the Kawasan Canyon Trip.

If I asked you to describe a perfect traveling destination, I'm willing to bet this would be a perfect match for you.

Information

Traveling: Cebu City, the principal port and the second-largest city in the country, is the gateway for the region. Both Manila and Cebu City are serviced by international flights from many cities in Asia including Singapore, Hong Kong, Taipei, Kuala Lumpur, Bangkok, Tokyo and Seoul.

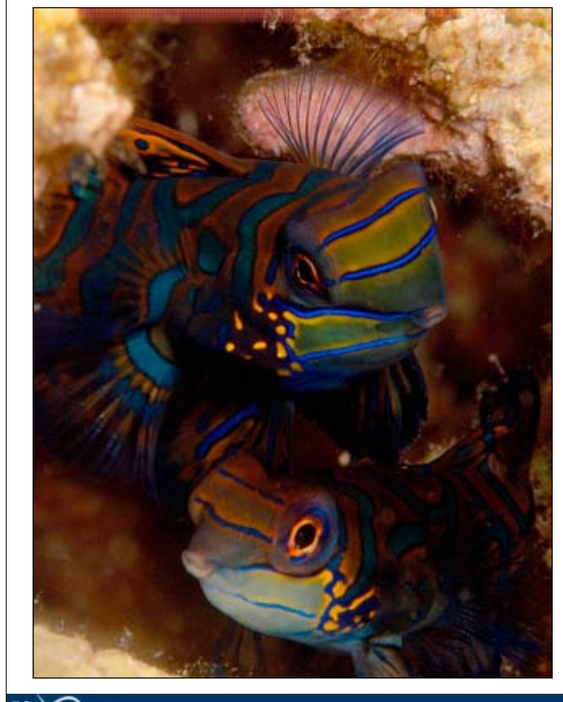
Entry/visa requirements: Visitors from most countries may enter the Philippines for three weeks without a visa as long as they have a passport valid for six months beyond the period of stay and a return or onward ticket. For longer stays, visas should be arranged prior to departure.
Extensions can be obtained within the country.

Currency: Philippine Peso (AUD$1 = 35PhP)
Weather: Average daytime temperatures in the Visayas are 30°C. The rainy season lasts from July to October.

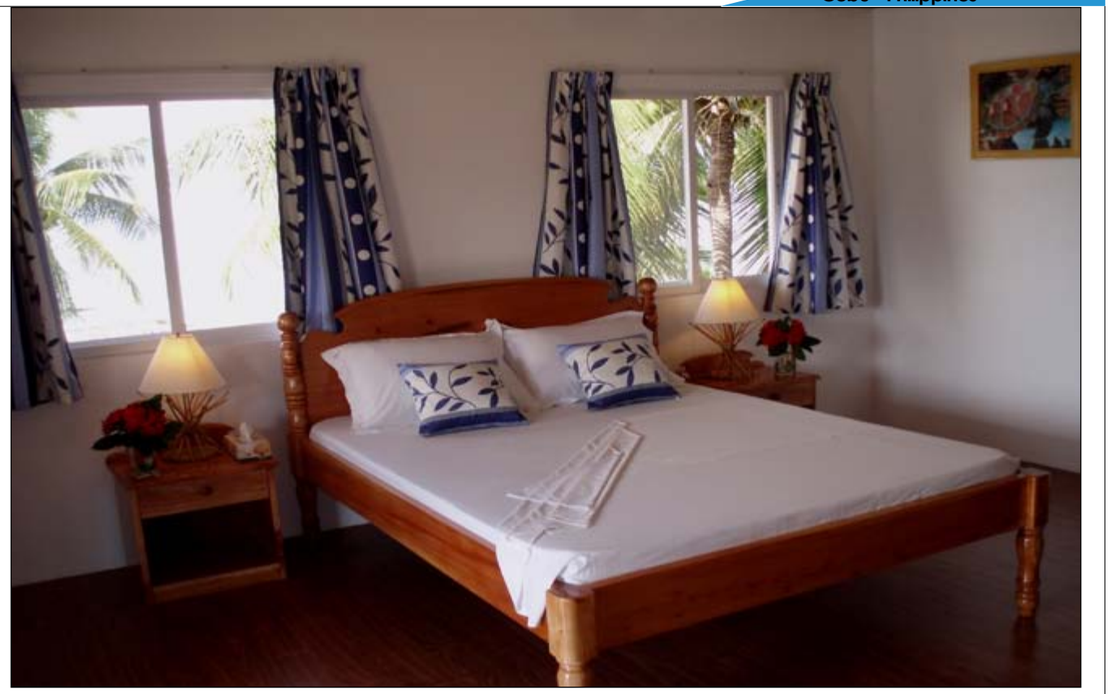
Water: The water is colder from December to February (26-27°C) and warmer in March to May (29°C) with an average visibility of around 20-25 metres.

Best time to dive: Diving is possible year-round, with the prime season being November to June. There is virtually no rain between April and May.

Magic Island Dive Resort: For more information or bookings go to www.magicresorts.online or email them on reservations@magicresorts.online



Dive the Globe
Cebu - Philippines



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Dive the Globe
MV Oceania

By Johan Boshoff

MV OCEANIA

Diving the Southern Ridge of the Ring of Fire

The Bismarck Archipelago in Papua New Guinea is well known for its spectacular reef systems where the ocean currents and tectonic plates shaped the landscape and underwater world. Today it offers you some of the most unspoiled and pristine dive spots on our planet, and now you can explore the Pacific Ocean beauty with the MV Oceania in luxury and comfort.

Andrew Dutton

Mike Workman

By Johan Boshoff

The Bismarck Archipelago is located north of the New Britain province in Papua New Guinea.

It is so remote that in the early nineteen hundreds, new villages were discovered in the highlands where the inhabitants had never seen civilization and never even heard of the invention of the engine. Still today there are few roads and limited air travel; banana boats are the main transportation between the islands.

Yet it's this lack of development that facilitates the true beauty of this country and its exotic cultures where locals spend days weaving leaves and flowers together to create mysterious outfits. Expect to see warriors with painted faces, wooden swords and spears, kundus drums and women and children that are dressed in nature's finery'.

And so the dive adventure starts on the MV Oceania in Rabaul, the town considered the 'pearl of the Pacific' until 1994, when two volcanoes on the perimeter of Simpson harbour erupted simultaneously and blasted forth a cloud of ash and rocks into the atmosphere, smothering the town in a layer of ash five metres thick.

Rabaul is well known for its mountain ranges and tropical islands and played a huge part in World War 2, where Rabaul became one of the main Japanese army bases and where allies were determined to stop them as it became one of the foremost Imperial strongholds in the South Pacific.

Evidence of the war can still be seen around Rabaul with World War planes and wrecks scattered around the bay.

And this is where we started our adventure in the Solomon Sea before we headed west down the amazing coastline of New Britain province. As


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By Johan Boshoff

soon as I boarded the MV Oceania I knew that this trip would be done in style and on one of the nicest liveaboards that I have been lucky enough to experience.

MV Oceania is a 27 metre catamaran accommodating up to 16 guests. It started operation in early 2019 out of Walindi Plantation Resort. This is a world class, well-designed liveaboard with a great dive platform with ample room for camera and dive equipment of the modern divers.

The vessel has a combination of twin share and queen bed rooms that are all individually air-conditioned with en-suite bathrooms. All the rooms are above deck with a great ocean view. Spacious dining and entertainment as well as a sun deck are provided where guests can sit back and relax.

It is still unbelievable how the chefs prepare all the delicious meals and snacks out of that kitchen. Roast lamb, sea food, pasta, pork chops, soups, lasagne, pizza and beef stroganoff, just to name a few, and of top of that, a glass of wine and amazing disserts. With a good night's sleep and an early start, it was time to dive the Rabaul area. The first checkout dive was a macro photographer's dream just under the Tropicana jetty.

You mug dive between the jetty's pylons searching for critters like Frogfish, Ghost pipefish, Seahorses, Razer fish, Gobys, Boxer shrimps and Bumblebee shrimps.

Due to the sea conditions, the captain decided to head for the Duke of York Islands in the channel between New Britain and New Ireland where we dived some of the coral reef structures around the island.

We even had the opportunity to see some World War 2 tanks that made their final journey to the bottom of


Mike Workman


Mike Workman

Dive the Globe
MV Oceania


Mike Workman


Andrew Dutton

By Johan Boshoff

the ocean; the reason for the two Japanese Chi-ha tanks being there is still unknown. The day finished in the Solomon Sea with a night dive and a dinner.

Overnight we cruised north around the tip of New Britain province on the edge of the Solomon Sea and started the next day just south of Watom Island diving Kabwel, a coral wall with great visibility and a lot to see around the wall and in the blue water.

But my favourite dive spots in the area, where we spent the rest of the day, is called Tom, Dick and Harry. It is three coral outcrops, around 200 metres apart with plenty of fish action. It was the first time that I saw fish bump in to each other, and on every dive we saw three species of king fish, three species of Barracuda, Wahoo, and the occasional reef shark swimming by. After a great day of diving we anchored at Horseshoe reef for some night diving, with great macro opportunities, and again a great dinner before we went to bed to recharge for the next day of diving.

Then it was time to start diving Bismarck Sea where the water temperatures are about two degrees warmer than the Solomon Sea. During the dive briefing, I looked over the side of the boat and saw the current running over the top of the reef.
Beyond the reef wall lies Solomon Trench, one of the world's deepest trenches. Upwelling currents from the trench bring nutrient-rich waters to the Bindings area, with White tips, Black tips, Grey reef sharks, big Tuna, schooling Jacks, Barracuda's and even sometimes rays being seen.

In the shallows, stony hard corals grow with confidence and Anemones thrive nestled between coral boulders


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MV Oceania


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By Johan Boshoff

with thousands of reef fish all around. The day ended as the crew decided to change the night dive to a sunset dive to see how the marine life changed from day to night.

The captain and the crew decided that we would stay just north of the Gazelle Peninsula for the day to discover the unknown; the area is surrounded by small scattered islands which are remote, undeveloped, uncharted and protected. We will never know, but it is possible that we were the first divers ever to see the pristine reeds, walls and coral outcrops in the area.

Around the islands is plenty to see while exploring underwater. Soft and hard corals all over are patrolled by various schools of Fusiliers. Baby White tip sharks sought peace and quiet under a rocky shelter and Harlequin sweetlips stopped off for a dental clean from a cleaner wrasse. The walls that get most of the stronger current are littered with stunning yellow and orange gorgonian fans with pretty Anthias and damsels milling around them dizzily like living sequins.

After a great day of exploring it was time to steam to the well-known Fathers reef. Fathers is a series of offshore reefs and pinnacles and was formed over thousands of years because of the volcanic activities in the area. Sea mounts rise from unknown depths with steep drop-offs, walls and sandy slopes.
Being offshore, the reefs are quite exposed and often experience currents, making it an ideal area for pelagics and big stuff that comes to feed, such as White tips, Black tips, Silver tips, Grey reef sharks, Dogtooth Tuna, schooling Jacks, Wahoo, King mackerel, Rays, Turtles, Napoleon wrasse, and big schools of Barracuda and Jacks.
The reef was carpeted in incredible soft and hard corals, whip corals, towering barrel sponges and multi coloured feathers painted a rich canvas with photo opportunities at every turn. Just off the walls you will encounter large schools of snappers, surgeonfish and fusiliers.

Fathers is by far the best area to dive on this trip and that is why the captain decided that we would spend the last couple of day around the Fathers, one of the best places that I have dived and definitely a world class dive.


Andrew Dutton


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Dive the Globe
MV Oceania


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Andrew Dutton

By Johan Boshoff

And what better way to explore this part of the world than in luxury, with a fantastic liveaboard and even better crew that provide five-star service that will make your trip unforgettable? Throughout the year the MV Oceania offers occasional specialist itineraries within the Bismarck Sea and surroundings but their three most popular diving areas are Kimbe Bay, Witu Islands and Fathers Reefs.

Unfortunately due to weather patterns and the time of the year we could not dive Kimbe Bay and Witu Islands. Kimbe Bay is a world-renowned scuba diving hotspot, supporting an incredibly diverse marine habitat with coral reefs, mangroves, seagrasses, deep ocean waters and seamounts with superb visibility and big fish. Reefs are shrouded with a patchwork of anemones, giant orange sponges and hard corals. Swirling amongst them were successions of purple Anthias, Angelfish, Surgeonfish, Triggerfish.


Mike Workman

School of pelagic fish patrolling the blue waters around the sea mounts like Barracuda and Big-eye Trevally's. Kimbe Bay is also known for the whales, dolphins and sharks that feed and breed in the bay's waters.

Witu Islands is situated to the North West of Kimbe Bay and this area is visited by MV Oceania at selected times during the year. A cross section of diving includes sea mounts and black sand bays around the islands, so this area provides a perfect mix of both pelagic activity and small critters.

Travel Information
How do you get there:
There are a couple of flights from all over the world to Port Moresby, where you can get a short connection flight to Rabaul or Hoskins depending where you trip starts.

How do the visas work:
You can get a visa at Port Moresby but I would suggest that if you have a short connection to then apply for a visa before leaving home.

Currency:
Kina (1 Kina = $0.40)

Language spoken:
English or Pidgin.

Depths on dive sites:
Between 10 to 40 metres

Water temperature:
28-30 Degrees Celsius

Best time to dive this site:
Papua New Guinea can be dived all year round but January to March is normally the rainy season. The MV Oceania will run different itineraries during the year to suit the weather patterns of each season.

Contact Details:
MV Febrina & MV Oceania
Phone: +61 (0) 438464451
Mail: reservations@mvoceania.com
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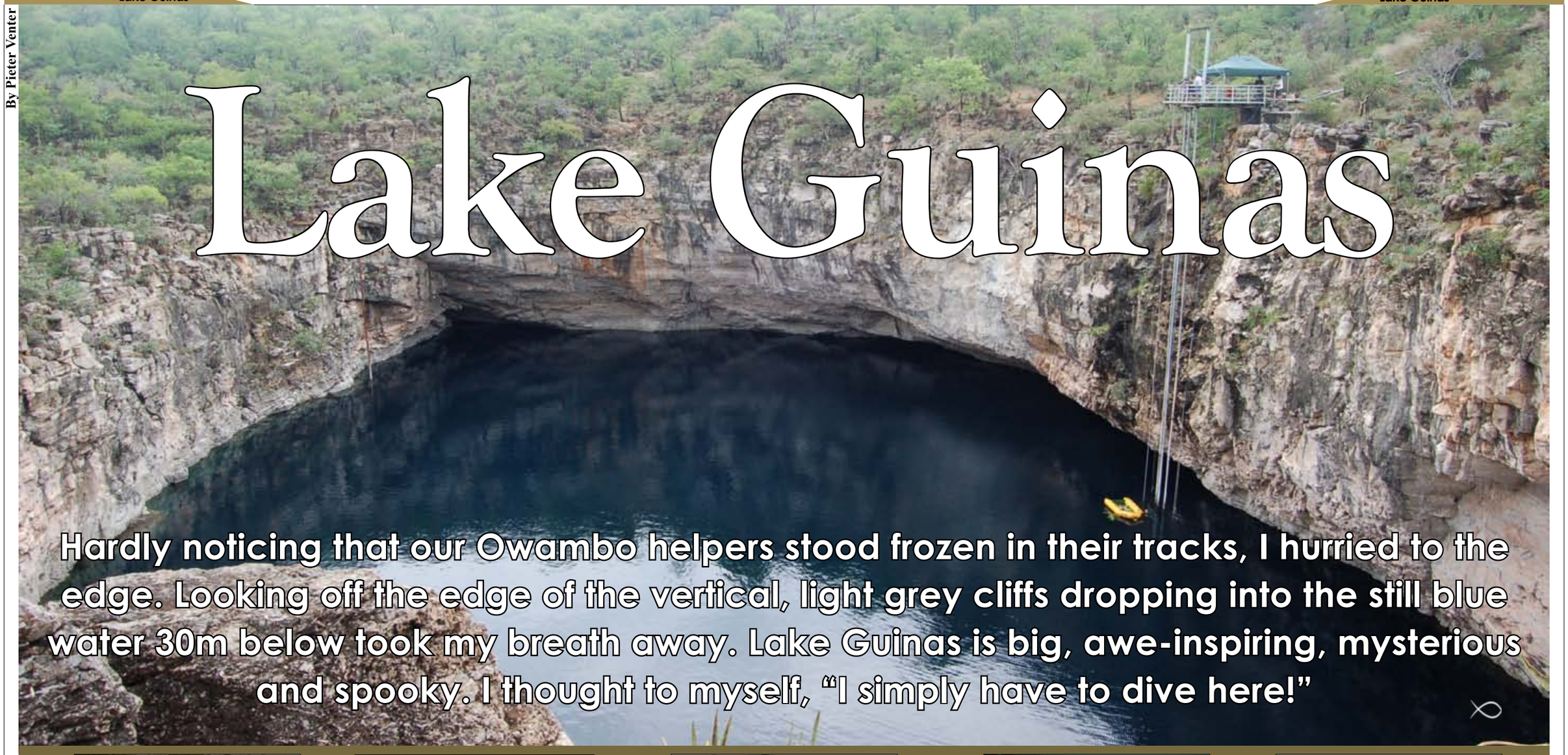
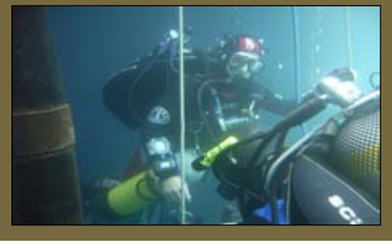
Exploration
Lake Guinas

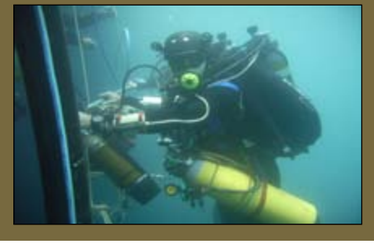
By Pieter Venter

Lake Guinas



Hardly noticing that our Owambo helpers stood frozen in their tracks, I hurried to the edge. Looking off the edge of the vertical, light grey cliffs dropping into the still blue water 30m below took my breath away. Lake Guinas is big, awe-inspiring, mysterious and spooky. I thought to myself, "I simply have to dive here!"




By Pieter Venter

The dizzying height down to the water spawned doubt in our minds. Was it possible or not to dive here with five cylinders each without anyone getting hurt? There was only one way to find out! Getting our Trimix team down to the water and back up, as well as the film crew of the legendary French cave diver and now film-maker Francis le Guen, seemed like an accident looking for a time and a place.

Our host from Skeleton Coast Divers, Thinus van Wyk, noticed the doubt wrinkled all over our faces and assured us that it had been done before and that we could do it just as safely. He explained that he would be the one operating the rigging system – after having seen his systems up at Lake Otjikoto, I felt a less apprehensive than before.

A few years earlier, Thinus had manufactured the equipment for his dive to the bottom of Guinas, so maybe he was the right person to have with us!

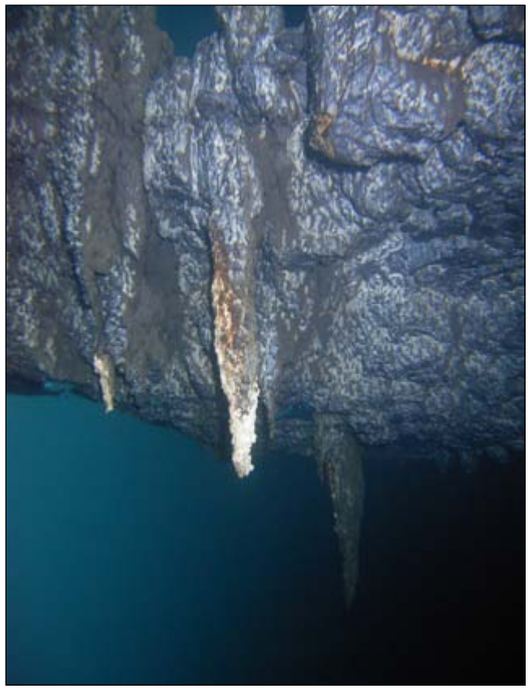
We operated from a water-pump station platform that was more than 10 stories above the water, and the platform hummed and shook as water was pumped out for nearby irrigation. Thinus operated the basket which we were lowered in. the basket could hold one person or equipment and was attached to a static rope provided by Toprope.

The basket itself fitted neatly through a hole in the floor of the platform and a shotline was lowered from the platform to the bottom. An oxygen decompression tree was rigged in the water from a 50l oxygen cylinder on the surface.

An inflatable raft was lowered for loose items. Then the system had to be tested with a live subject. When Thinus asked for a volunteer, everybody tried to avoid eye contact and desperately tried to look occupied with an important task. Johan Botha cleared his throat and broke the uncomfortable silence - everybody instantly focussed their attention on him. He had no choice and volunteered, much to everyone's' relief. White knuckled, he survived the test run down and this boosted confidence all round - we were ready!

The following morning our team of Trimix divers (made up of three deep divers and three support divers) set out to do a full-kit build-up dive to 50m on air. Our kit included 24 cylinders and was lowered into the water before us. With no dry ground nearby, we kitted up in the water with the help of Steff Viljoen of Otjikoto Dive Enterprises, who stayed in the water all day.

The water was a pleasant 28°C, with a visibility of about 12m on the surface. Schools of curious multi-coloured cichlid fish (tilapia guinassana) which are endemic to Guinas and Otjikoto, gave this inland sinkhole a coral reef feel. We descended, burdened with five



By Pieter Venter

cylinders each, deeper underneath the roof of what can only be described as a 100m high cave which slowly narrows vertically as you swim deeper and leave the sunlight behind.

In the shallower parts, the roof is littered with stalactites which disappear as soon as we go below the lowest drought-caused water-level line. The visibility improved as we descended and we practiced the drill for the 110m dive planned for the next day.

The next day the atmosphere was a little more serious during the 110m dive preparation.

We were many hours away from the nearest decompression chamber at Luderitz, so we couldn't afford to make a mistake. We descended to 45m on air, before switching over to our Trimix back gas. The visibility improved to about 30m as we got closer to the bottom.

Apart from the handful of small fish scurrying away and the odd item lost by divers, there wasn't much to see. Swimming in near darkness and with no wall in sight, I became a little more familiar with the ghosts and myths feared by our Owambo helpers.

The bottom was surprisingly silt free and strewn with rocks, sloping gently down into the cave. We explored a bit and stayed within clear view of the shotline, before starting our ascent at 10 minutes runtime.

We were met by our support divers as scheduled and the decompression stop was uneventful. The dive was relaxing and we looked forward to our last dive in the opposite sinkhole. We were planning to locate and film the arms and ammunition that was reportedly dumped into the sinkhole during the Angolan border war.

The scenery on our last dive wasn't that much different to the first dive.

We spent a few minutes looking for arms and ammunition but found none, although we spotted what we can only hope were animal bones.

We then moved into a cave that was about 30m from the bottom before turning around. During the decompression stop, accompanied by our back-up divers and schools of colourful fish, we explored the sides with many caves, overhangs and stalactites.

Diving in Lake Guinas is not a one day picnic, but any qualified advanced diver with good buoyancy control can dive here with the help from Thinus.

By Pieter Venter

Diving History

Although not often dived, Guinas has provided some notable dives over the years:

• Charles Maxwell and a friend first dived Guinas in 1971 while returning from a spear fishing holiday in Angola. Yes, some people did actually go to Angola for a holiday! When they arrived at Guinas, they met a scientist from the Windhoek Museum who was doing research on the fish.

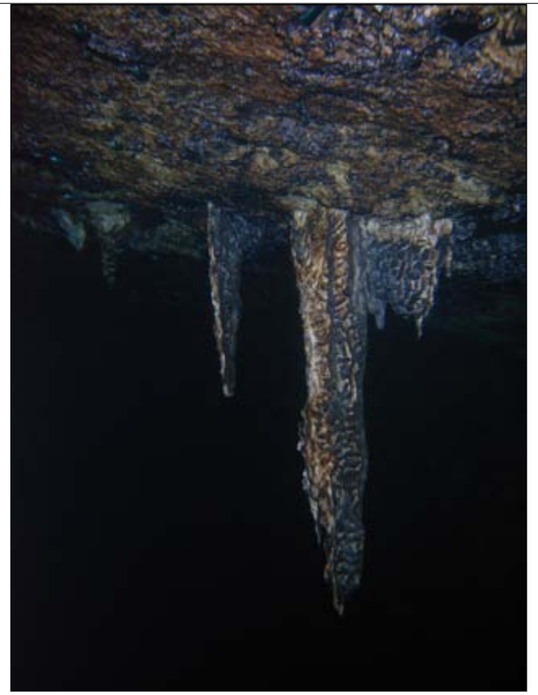
He only had one diving cylinder and kindly lent it to them on a 1/3 each agreement. On his share, Charles managed a 30m bounce to the overhang. Today, you can abseil to that depth! Charles returned several times over the years with various expeditions to film underwater, before returning in 1988 to conduct a sonar survey.

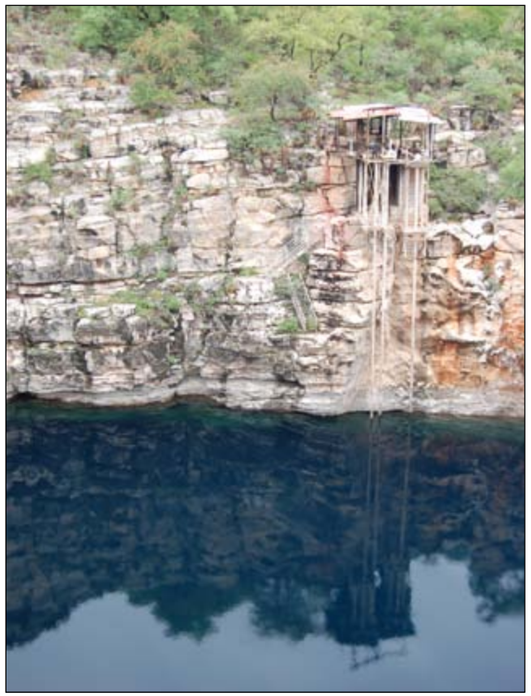
He found the bottom to be at 119m and dived to about 60m to film. Later in 1988, Boetie Scheun (diving on Trimix) entered the cave and reached a depth of 132m - a remarkable dive for 1988!

• Other early divers included Dave Kleiman and his buddies from the Transvaal Underwater Research Group. In October 1983 when the water table was 10m higher than it is today, they dived to a depth of 60m (see photo). In 1992, Nuno Gomes did his first solo dive to the bottom at about 115m to recover a friend's sunken dive set.

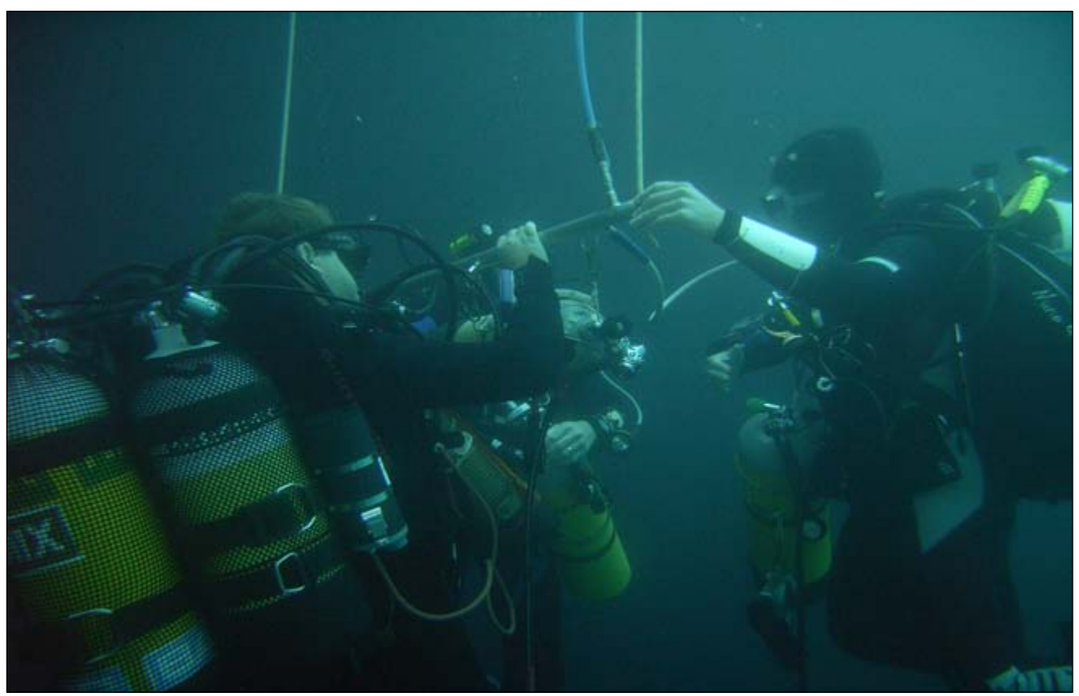
• In 1999, while on an expedition when the whole system had been surveyed and mapped, Nuno dived to the deepest point in the cave - a depth of 123m and when the water level was 20m lower than in 1988.

This dive required a 100m horizontal penetration at depths of more than 90m to get to the deepest point. During the same expedition, Verna van Schaik also dived to 117m.





Exploration
Lake Guinas



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Photographic Competition

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Through the Lens
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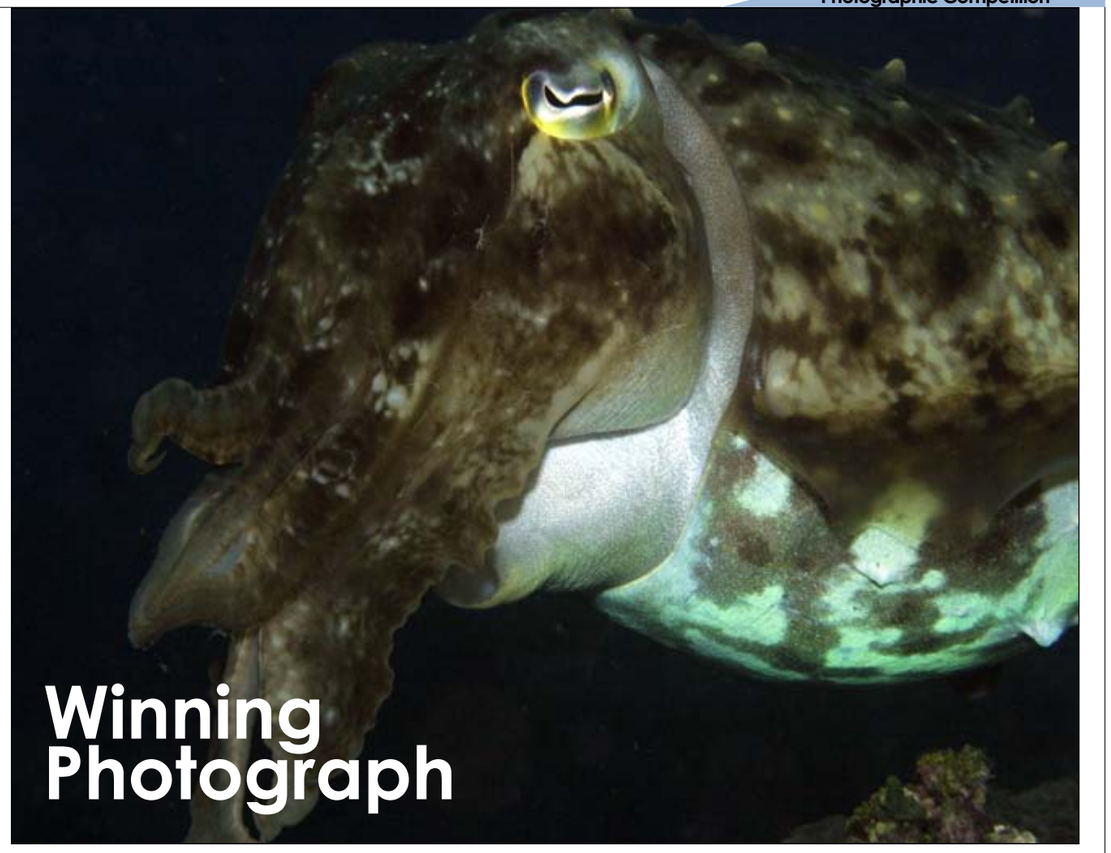

Winning Photograph

Gavin Chamberlain

How to enter your photograph

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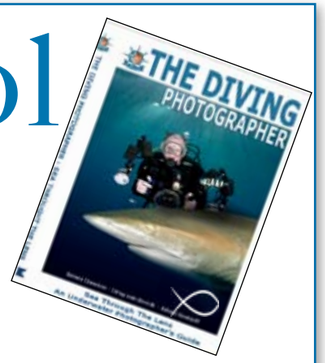
By Rian Bester

Photo School



Composing techniques

This issue we are going to look at basic composition. Think about the difference between 'taking' a photograph and 'making' a photograph. Making a photograph is about observing and seeing visual elements in a photograph or by creating personality or mood in a photograph.

Photography is about being able to isolate a subject, define its essence and then lift it out of a bewildering background. This is what pre-visualisation is all about – making a conscious decision on how to obtain the photograph.

Amazing photographs originate in the brain. You need to evaluate and then isolate your subject and then select the special features that make it unique.

Give the photograph a purpose. You need to learn how to use your imagination and to apply the techniques to compose great photographs. There are some basic techniques you can learn about composition and these, along with your imagination, can create amazing photographs.

The most basic rule is the 'Rule of Thirds' which is applied in every form of photography. Essentially it divides the photograph into nine equal sectors by drawing three imaginary horizontal and three imaginary vertical lines through the frame.

This enables you to position key elements of the subject within or at the intersections of these areas to create a flow and a central focal point in the composition.
By applying the Rule of Thirds you can achieve a sense of balance in the photograph before pressing the shutter release.

Another important point is to fill the frame.
By reducing the distance between you and the subject, you increase your chances of capturing rich colour and a lot more detail. Only include what is essential to create the photograph.

Always compose through the viewfinder of the camera as this narrows your vision to a much smaller image. Play around with both positive and negative space. Positive space is everything about your subject – its colour, shape and character. Negative space is everything else that is not your subject.

A good rule is that negative space should only form about one third of the photograph. You can use the negative space to create a frame around your subject that conveys a feeling of space and harmony. Give your subject enough room to breathe.

Also look for lead-in lines that allow your eye to travel through the photograph. These lines help the eye focus on the subject. Change your viewpoint and vary the format – if a horizontal doesn't work, try turning your vertically.

Try to create a sense of depth in the photograph. Photography in its final format has only two dimensions and therefore photographers need to create the sense of depth in the photographs by using layers. Having a clear foreground, a subject and a background will definitely help.

Try including some deep water and/or sky into the photographs as this also adds depth and substance to the photograph. Remember to shoot for an audience – what are your viewers going to enjoy and how is it going to capture their imagination? You need to take photographs with a purpose so that they capture your audience.

The final point regarding the basic rules of composition is that you also need to experiment with your own ideas and techniques because no two people are the same.

So when you have got all the basics right and know all the rules, break them.

By David Caravias

Photo Editing

Backscatter is when the internal flash or strobe of your camera underwater highlights particles in the water between the lens and the subject. This may even happen in seemingly clear water with good visibility. Many particles are not visible to the naked eye and when using a flash/strobe the photographer must always bear in mind where the strobes are pointing.

Even if the visibility is fairly poor, a good photographer should be able to take stunning photographs using the right lenses and careful strobe positioning. The key is to light up the subject without forcing particles around and in front of this to reflect. Unfortunately the bulk of the compact cameras on the market use the standard built-in flash when underwater. The flash is normally directly above the lens, in line with the point of view, so all photographs taken with the flash will light up everything between the lens and the subject. Camera manufacturers supply diffusers to attach to the housing to help soften and spread the flash to prevent backscatter and these tend to work fairly well, but definitely do not eliminate backscatter completely. The answer is to use external strobes which can be positioned in a way to light up the subject indirectly. There are dozens of positions to choose from depending on what type of lens and picture you are after. Below are the most commonly used strobe positions for the type of shot required.

The ideal position when using a fish eye lens/wide angle lens is slightly behind the camera and facing slightly outwards. Fish eye lenses capture 180°, so if the light from the strobe is pointing forwards or inwards then the edges of the picture may show scatter. If you want to capture something close up with this lens then the strobes will have to be moved closer to the housing, otherwise the subject will have a shadow cast over it.

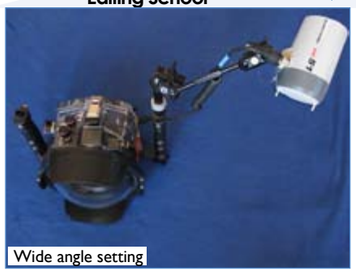
There are a few ways to light up subjects when taking macro photographs. A good way to light up small, stationary objects such as nudibranchs is to move the strobe over and on top of the subject. This position will light up the subject without lighting particles between the lens and subject. This is the best position when you have only one strobe. With macro photographs, other positions may be required as subjects may be tucked into a hole or partially obscured by their surroundings. For these photographs you will have to get in close to the subject anyway so you can move the strobe close to the lens, pointing directly at the subject. Backscatter is not normally an issue for these photographs.

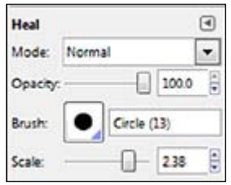
Keep the strobes out wide of the subject, turned slightly out. The light will then evenly project towards the subject. If you only have one strobe, then position this either high above the housing or wide outside and then point it at a 45° towards the subject.

Fixing backscatter

We have selected free and easy software to explain to you how to fix your backscatter problems.

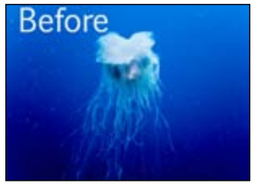
Gimp is a versatile, free programme which offers similar tools to Photoshop, the Rolls Royce of the industry. You may have read many Photoshop articles on how to fix your images, but the reality is that many people cannot afford to pay thousands of rand for software to fix their diving photographs. Let's leave Photoshop to the professionals and show you that similar results are possible to achieve with free software.

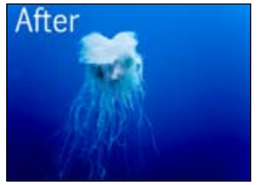


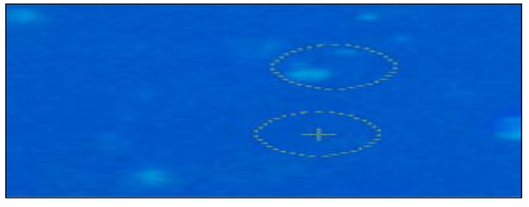



Clone Tool


Heal Tool





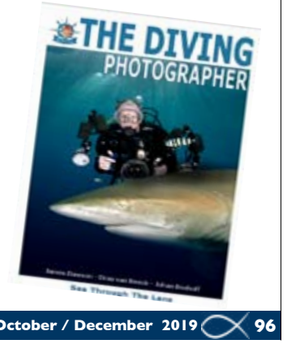


a little more brutal and replicates a selected area into the new 'target' area. This is especially useful when working close to edges such as the edge of the jellyfish in the picture below. The Heal Tool tends to use some of the edge when healing, resulting in smearing.

Click on the Heal/Clone icon and you will see the crossed plaster attached to the cursor with your selected pen shape (a circle as default). Select the source area to be cloned by left clicking Ctrl. This will leave a circle where you clicked to show you the area which will be used for the cloning.

The cursor will now have a second circle (the target) attached. Position this circle in the area to be healed and left click. You will see the spot miraculously disappear. To heal or clone a line, just left click and drag the cursor over the line to heal this.

An important feature to use is the opacity of the cloning or healing. By reducing the opacity you will have control over the strength of the clone or area to be healed. This will allow you to heal the area in a much more accurate and controlled manner. You can also select the scale of your brush which is very important, especially when clearing up very small specks which are close together.



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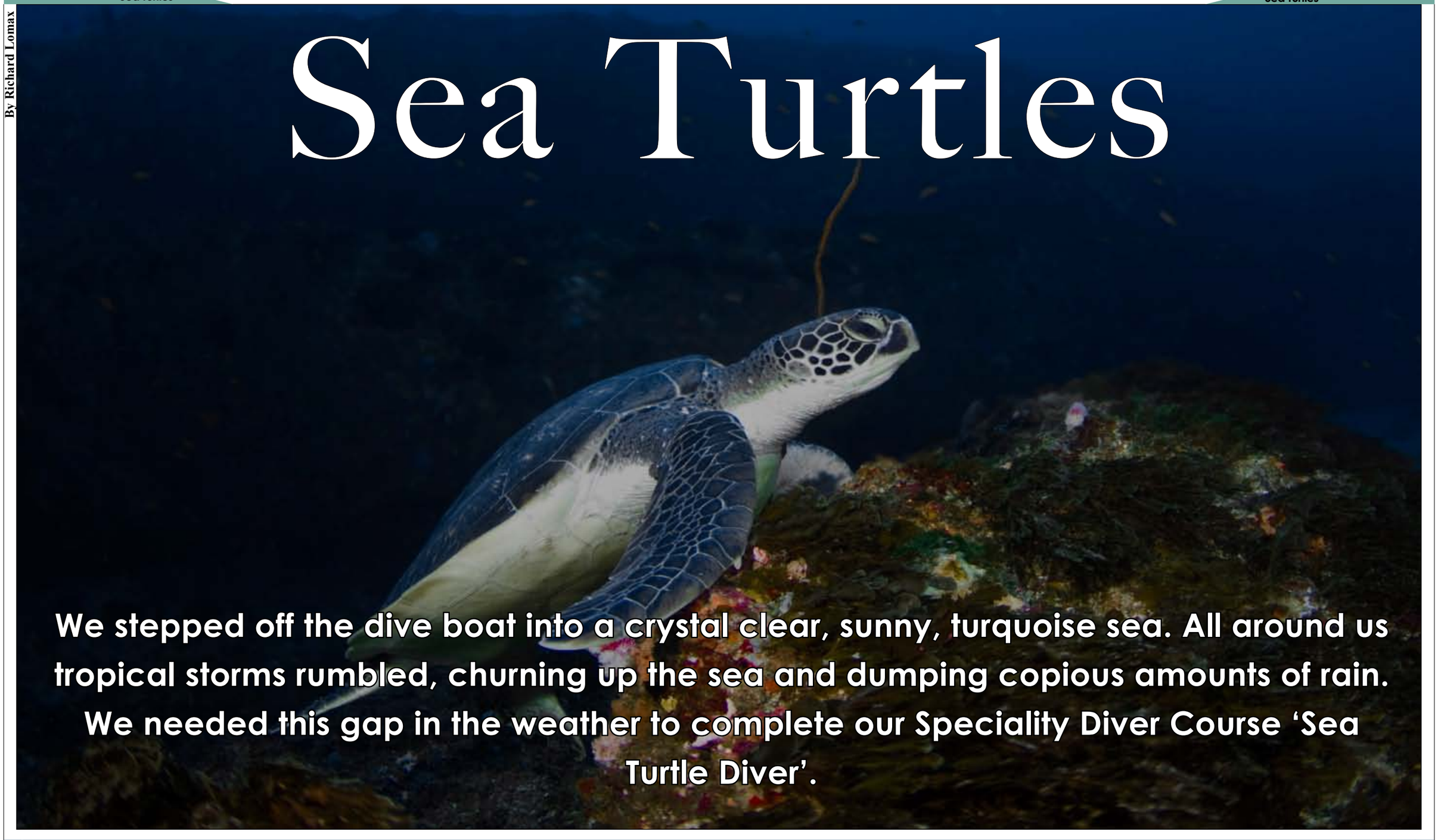
Giant Stride
Sea Turtles

Sea Turtles

By Richard Lomax



We stepped off the dive boat into a crystal clear, sunny, turquoise sea. All around us tropical storms rumbled, churning up the sea and dumping copious amounts of rain. We needed this gap in the weather to complete our Speciality Diver Course 'Sea Turtle Diver'.

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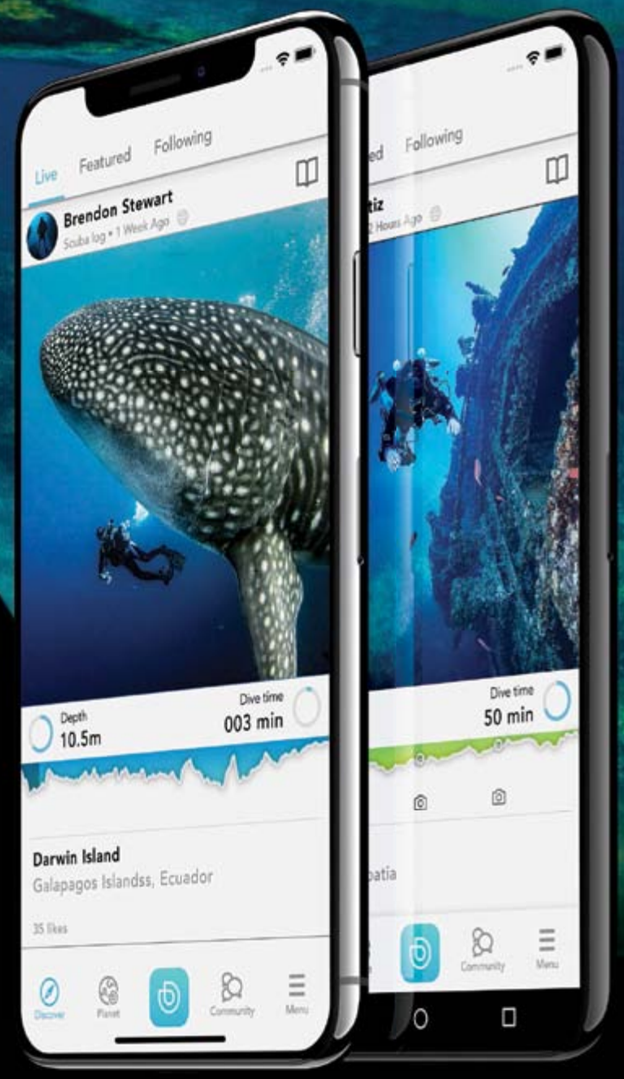

By Richard Lomax

In the reef below us were 'sea-caves', a favourite place for green turtles to rest and sleep offering us the chance to observe this unique behaviour. This species of turtle can slow its heart rate down to one beat per minute, which allows it to stay under water for up to five hours.

We found a few sleeping turtles in the caves at 20m, just as a surrounding storm arrived over us, blotting out the sun. Flash photography was not allowed, lest we disturb their sleep. We did, however, find a turtle to photograph, a hawksbill.

They prefer to sleep/rest by hooking onto the reef with their front flippers – it was blissfully unaware of our presence. Our 60 minute dive was soon over. The tranquil descent was replaced by an ascent into driving rain, metres high waves and a seriously heaving boat. Safely on board, all the talk was about the turtles.

Turtle facts
Sea turtles are a class of animal that are under extreme threat. The 2010 marine census showed that the population has declined from millions to the just thousands.

Habitat destruction, long line fishing, plastic pollution, hunting and the long time it takes to reach sexual maturity (more than 20 years) means that only a few of the turtles born each year become parents.

Turtles are reptiles (modern dinosaurs) like snakes, crocodiles and tortoises. They are cold blooded, air breathing, solitary and egg layers.

Taxonomy
The seven species are divided into two families. The construction of the carapace (shell) separates the families. The leatherback with its leather-like carapace, is the only member of the family Dermochelys. The six members of the family Cheloniidae have a hard shell.

Eggs and sand
All sea turtles lay eggs in a hole on a beach. The eggs are covered with sand and left. Temperature determines the sex of the hatchlings. ±29°C means an equal mix of male and female turtles.

Higher temperatures will mean that mostly females hatch. With cooler temperatures, male hatchlings predominate.

A clutch of eggs could vary between 100 and 250 and take between 45 to 70 days to hatch, dependant on the species – some species lay up to five clutches in a season.

The beaches where the eggs are laid, are for most turtles, site specific. A female turtle will return to the beach where she was born to lay her eggs. For the leatherback, this could mean a

Giant Stride
Sea Turtles

By Richard Lomax

round journey of 6 000km between her feeding grounds and the beach of her birth.

A recent finding suggests that if hatchlings are carried from the nest and not allowed to crawl their way to the water, they lose the ability of finding their birthing beach.

Investigations into how turtles navigate are now underway. Why is this relevant you may ask?

Lost years
When turtles are born, they disappear into the ocean and are not seen again until they are few years old. A 2007 study found that green turtles, during 'the lost years' are living in sargassum (floating mats of drifting seaweed). The drifting mats may take them hundreds, if not thousands of kilometres from their birth beach.

The leatherback
The leatherback holds the record amongst turtles for being the biggest (±2m) and diving the deepest. (more than 1 000m). Considering that its principle food is jelly fish and salps, one can only wonder what attracts them venture to those depths?

The green turtle
The green turtle is a herbivore, feeding mainly on sea grass (T. tostudium) and algae. It starts life out as a carnivore during 'the lost years', and only becomes a herbivore when it becomes shore based.

What and why the switch occurs is still a mystery. The rest of the sea turtles

By Richard Lomax

are mostly omnivores, eating both animals and plants.

Olive and Kemp's Ridley

The smallest turtle and the most threatened, with less than a 1 000 nesting females, is the Kemp's Ridley.

The Olive Ridley is the least threatened. The Olive Ridley and Kemp's Ridley have a nesting behaviour which is unique to the animal world.

Females gather off their nesting beaches during the egg-laying season, and on some unknown signal, in chorus, rush ashore to lay their eggs.

The phenomenon is known as the 'arribada'. The reason for the behaviour, what brings then all together at the same time and what triggers the simultaneously rush on shore, is another turtle mystery.

Hawksbill and flatback

The hawksbill is the second most threatened species. It lives around coral reefs feeding on sponges and other invertebrates. The flatback is mainly found around northern Australia.

Help preserve these endangered reptiles by supporting dive sites in countries that have strong, enforced turtle conservation policies. Snorkelling/diving with turtles is fun, but please, do not touch the turtles as the transfer of oils and bacteria from our fingers may cause harm.

Common name	Scientific name	Distribution	Weight (±Kg)	Length (±mm)
Leatherback	(Dermochelys *coriacea*)	Worldwide	900	2000
Green turtle	(*Chelonia mydas*)	Worldwide	159	910
Loggerhead	(*Caretta caretta*)	Worldwide	*113*	*920*
Flatback turtle	(*Natator depressus*)	Australasia	90	1000
Hawksbill turtle	(*Eretmochelys imbricata*)	Worldwide	68	900
Olive Ridley	(*Lepidochelys olivacea*)	Worldwide	*45*	*790*
Kemp's Ridley	(*Lepidochelys kempii*)	*Gulf of Mexico*	*40*	*700*

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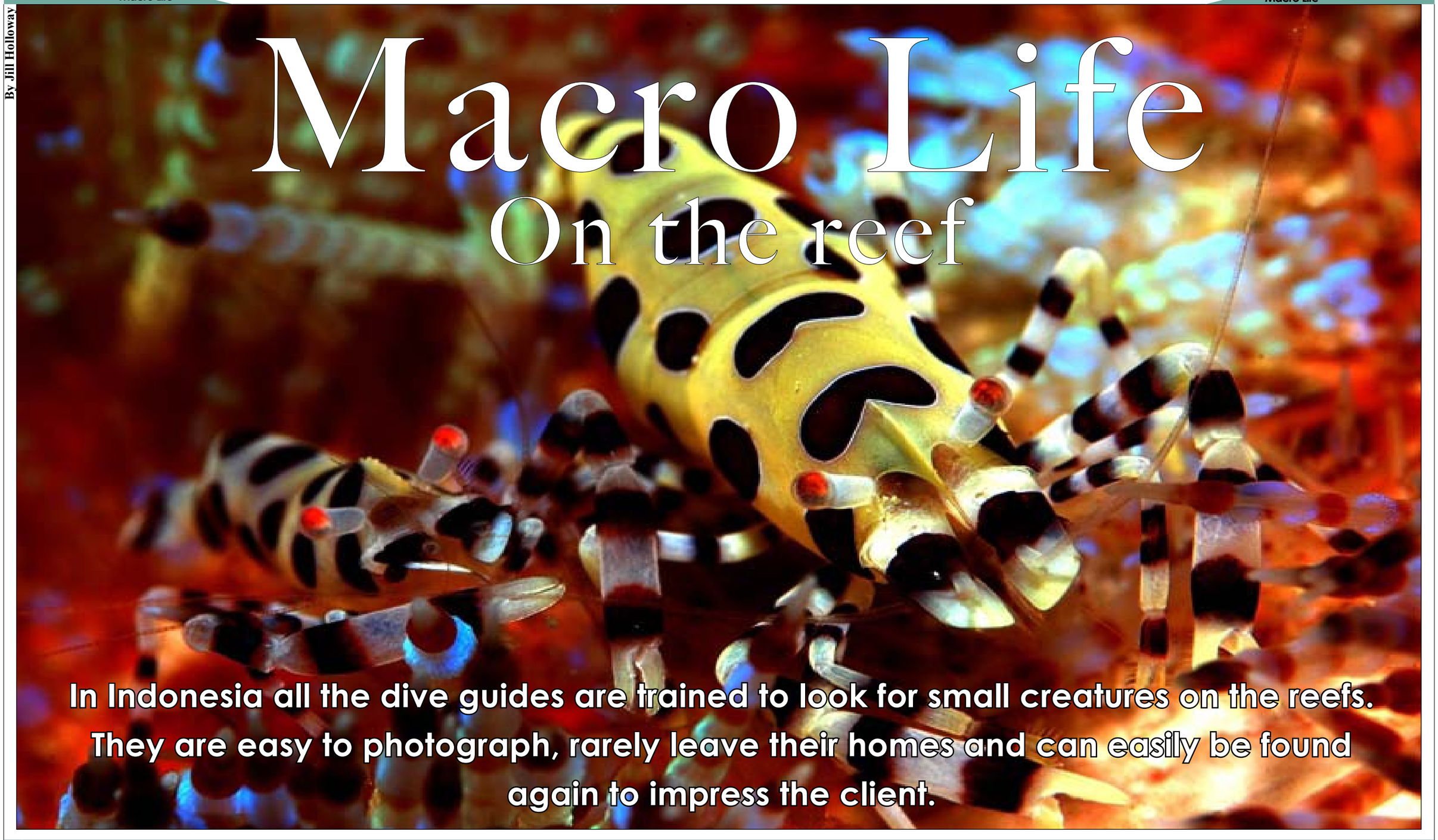
Macro Life

By Jill Holloway

Macro Life

On the reef



In Indonesia all the dive guides are trained to look for small creatures on the reefs. They are easy to photograph, rarely leave their homes and can easily be found again to impress the client.

By Jill Holloway

Once your eye is conditioned to looking for minutiae on the reef, a world of incredible creatures is revealed. Look closely at the olive-green coral whips, which sway on the deeper reefs in lazy arcs.

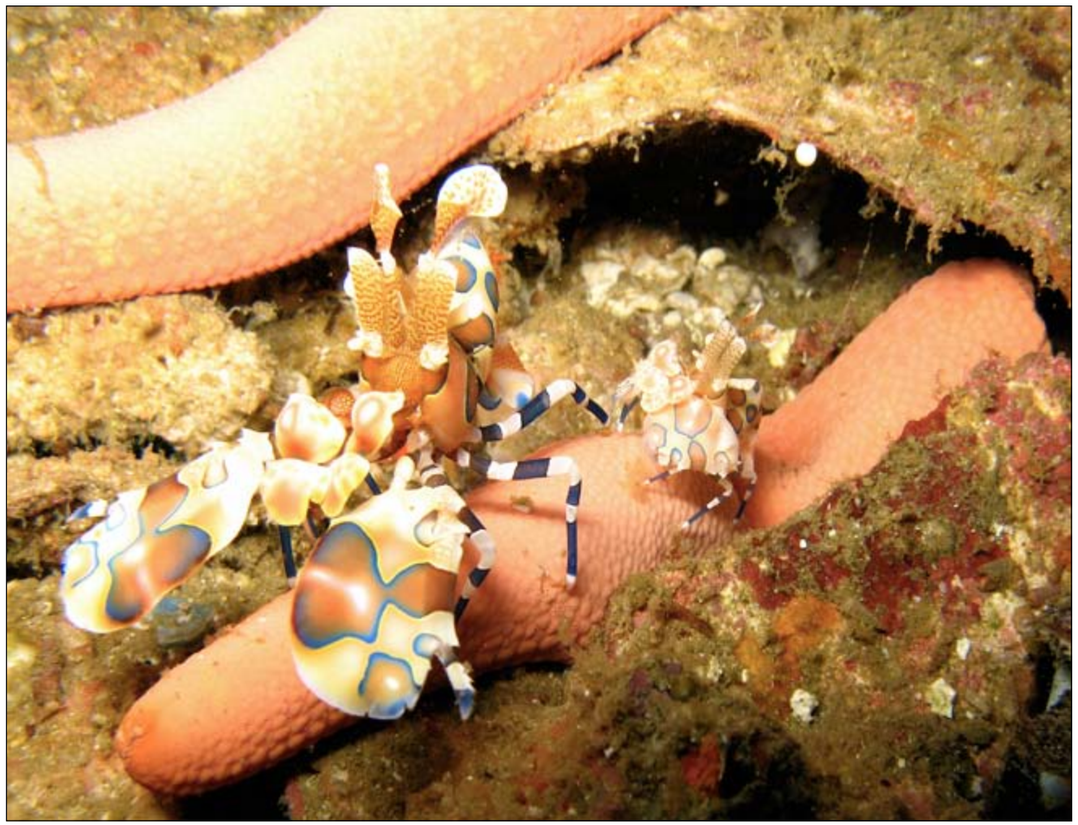
The tiny sea whip gob (Bryaninops Yonger) is almost transparent, grows up to 4cm long, and is nearly invisible. Whole families of them live on a single coral whip. Others live inside sponges and there are even some on the hard coral bommies in deeper water.

Many of them have never been identified or described, so there is a wealth of treasure to be found if you look out for them. Invest in a small, strong LED torch, and diving will become an exciting revelation.

Inside small crevices, under overhangs and inside sea urchin spines you can find some exquisite little pipefishes. We have seen the banded pipefish on many reefs, together with the scribbled pipefish, the ghost pipefish and in Mauritius, a pregnant male banded pipefish, eggs lining his underbelly. Like emperor penguins, pipefish females are intelligent enough to realise that egg rearing is a guy thing.

So they lay their eggs in the pouch or egg sac that the male obligingly provides for them, and he remains in control of the next generation until it hatches.
Seahorse males also incubate their eggs in a special brooding pouch, and they too give birth to live young.

Inside the finger corals on the shallower reefs are some amazing small creatures. The most colourful and fascinating are the yellow spotted scorpionfish (Sebastapistes



By Jill Holloway

Cyanostigma).

Growing to less than 5cm, these timid little fish slide away from sight between the hard finger corals if you approach them and are difficult to see unless you know they are there. They are plentiful in the shallower reefs at Sodwana and are often spotted together with red spotted coral crabs and yellow spotted coral crabs.

In mid-water and sometimes sliding, twisting and turning over rocky bottoms are the juveniles of some of the members of the wrasse families. From 3mm to 5cm, they look for all the world like small leaves. The most spectacular of these are the rock mover wrasse (Novaculichthys taneourus) juveniles.

Twisting and turning over the sand they are almost invisible, and they are completely different from the large and colourful adults.

The flat fingered acrapora corals on the deeper reefs like Bikini play host to the colourful reticulate humbugs (Dascyllus Reticulatus) who cultivate and feed on algae in their host corals.

They hover above their home until they spot a diver, when they drop down into the coral fingers until the danger is past. To see them you have to dip below the level of the coral and wait until they come out again. Colonies of colourful juvenile pallet surgeons can also be found there.

We have dived with Tiger Sharks, been buzzed by Bull sharks and swum with the bump head parrot fish, but one of the most exciting dives I have ever done was to see a Hippocampus Bargibanti, the recently scientifically described pygmy sea horse.

It is so small that it was spotted for the first time by a researcher looking at a Muricella soft coral under a microscope. Under 2cm long, tail curled around its coral host, it is almost invisible to the naked eye. Found in deep water over 20m, its distribution and habits are still not known, but it is worth the trip to Bali just to see it.

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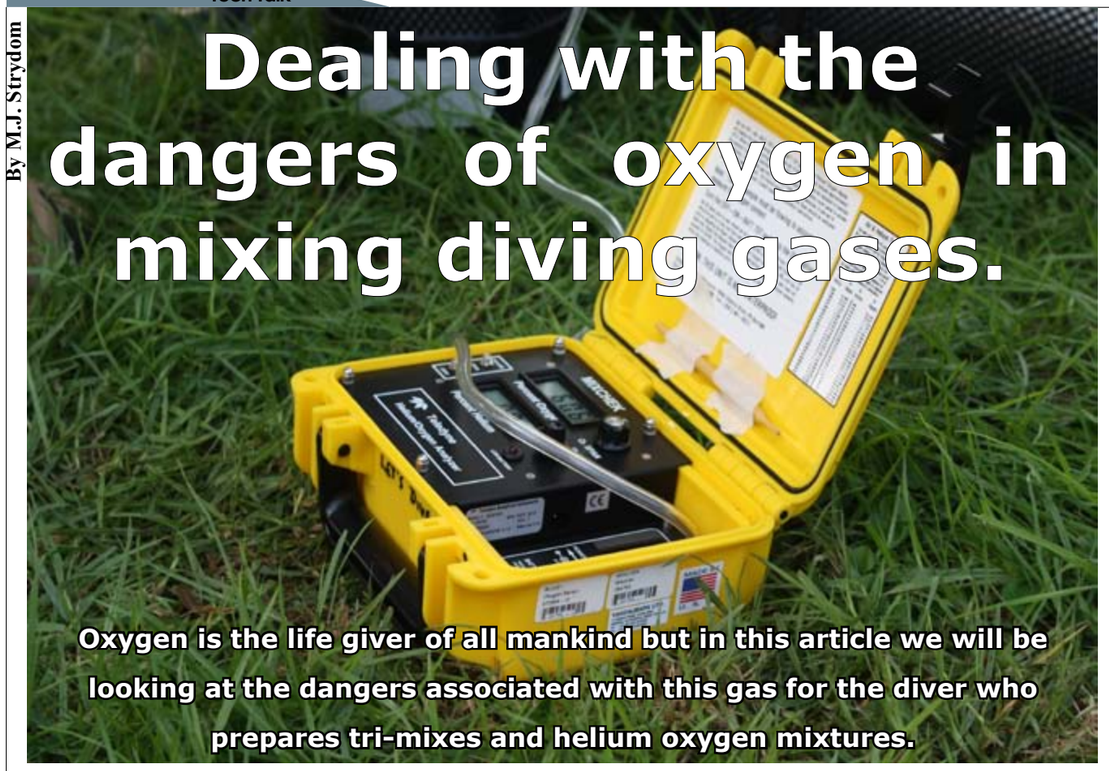
Dealing with the dangers of oxygen in mixing diving gases.

By M.J. Strydom



Oxygen is the life giver of all mankind but in this article we will be looking at the dangers associated with this gas for the diver who prepares tri-mixes and helium oxygen mixtures.

Oxygen is not flammable in itself, but will support and accelerate combustion. The normal concentration in air is around 21% by volume and that will support a normal fire as we know it. However, if that concentration is increased, the fire it supports will become more vigorous to the point where it will almost explode.

The ignition temperature and ignition energy will also become lower as the oxygen concentration increases and this will start a fire in places you would not have thought possible.

The flame temperature is much higher in oxygen than with air and the destructive power much more as well.

Oxygen enrichment can happen in various ways, such as a gas leak from pipe connections or breaking into a pipeline system. Should you have a large leak and an ignition, a torch of flame can develop in no time at all.

Many oxygen fires have been caused by the improper use of oxygen – examples are the inflation of tyres, rubber boats and driving pneumatic tools.

Before using high pressure oxygen one should ask yourself if what you are doing could possibly cause a fire. There are some incorrect operations which could contribute to the risk of an oxygen fire.

When a regulator is used, ensure that it is closed after use, as when you open the cylinder again the high pressure of the cylinder on the opened regulator will cause a high flow of oxygen in an uncontrolled manner that can cause an ignition and a resulting fire.

When rapidly opening the valve of a cylinder, a similar action can be the cause of a fire due to the excessive friction of high pressure and velocity of the oxygen. Should a valve of a cylinder be opened with oxygen flowing down a pipe against a dead end, you could find that due to the rapid increase in temperature of the adiabatic compression, a fire could result. Oxygen booster pumps have a specific way they should be operated and all the correct precautions should be adhered to as per the manufacturer's manual.

Compatibility of all the materials should be assessed as o-rings and seals could have an exact lookalike substitute, resulting in a tragedy.

Even PTFE thread tape comes in an oxygen compatible variant and a non-compatible variant, so make sure that you get the right one. Replacing metal alloy parts on an oxygen system should be done with the help of the original equipment supplier as the wrong alloy could lead to a disaster.

Lubricants are not allowed in oxygen service as almost all of them are flammable in oxygen and could cause an instantaneous explosion.

Clothing can also be a source of concern as most materials enriched with oxygen will burn vigorously, even fire resistant materials. In an oxygen enriched atmosphere of 40% vol/vol the burn speed goes from 3,5cm/sec in air to 13,75cm/sec.

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Do you use dive computers or dive tables for technical diving?

Q&A

Nuno Gomes

The quick answer is both! I would not dream of using any less than two dive computers plus tables on any technical dive.

My dive would generally be based on a profile generated by software such as "Z planner," the computers would be back-up. I would, through the dive, compare the tables with the computers to ensure that there is not much deviation between the two.

It is interesting to note that two exact same computers on any one dive will give slightly different deco time readings; two computers, made by different manufacturers, will generally give totally different readings.
It is important to note that the batteries of computers can and do run flat during a dive, therefore tables are essential. In general, computers complement tables and vice-versa.
The dive computer has three functions: Depth, Time and Decompression times. If a diver has only one computer and it stops functioning, even with dive tables, the diver will still be in trouble unless he/she has a dive watch and a depth gauge.

Basically the minimum should be:
* 1 set of tables (many divers use two sets of tables in case one gets lost during the dive).

* 1 Dive computer.

* 1 Dive watch.

*1 Depth gauge.

I use one set of tables, two computers and my Casio watch (it also has a depth gauge).

Barry Coleman

Over many years I was a strong proponent of dive tables for technical diving, but slowly, and for sometime with hesitation, I started to rely more and more on dive computers as my diving moved to objective-based projects and away from run times. One of the many reasons was that diving with rebreathers allows this type of

ability, although the risks have not gone away, they have simply changed faces.
The best laid plans often change underwater and dive computers can track these and adjust accordingly.
A diver using tables would have to try and second guess problems before a dive and make back-up tables for such events as changes in depth, gas mixtures and run times. This can be done with some accuracy, but it is still second guessing.

When entering the technical diving world it is advisable to follow the instructor's methods, whether it is using dive tables or computers. I believe that the recreational industry has proven that dive computers are more reliable, with thousands of safe dives made every day, and as more and more manufacturers release mixed gas dive computers, dive tables will gather dust and join the museums.

Pieter Smith

Dive computer or dive tables for technical diving? – Both. Why?
Dive tables must be used for dive planning, and as we have learned at open water level, 'plan your dive and dive your plan,' is still the golden rule.
Dive tables assume you spend more bottom time at maximum depth and therefore will produce a more conservative profile than computers, which will calculate decompression obligations on a minute by minute/metre by metre basis as you do the dive.
Dive computers must be used and they have a definite role in technical diving as a back-up device and for adjustment of the dive profile during the dive in case of emergency. Dive computers are also very handy when doing multi-level diving, but then you need to consider back-up in case the computer fails, such as a second computer.
A diver needs to plan his/her dive in detail prior to the dive (manual or dive tables). In technical diving it is of utmost importance to understand and to be able to calculate or plan a dive manually. With today's computers (like the VR3), it is so easy for a diver to do a technical dive without proper manual planning and to rely on the computer, but should it fail during the dive, then the diver has no back-up plan..
Technical divers should write their dive plan on a slate and dive according to that plan. Statistics show that fewer accidents occur when divers have used dive tables and dive computer as back-up vs. only dive computer.

Pieter Venter

Dive tables, if you use the correct ones correctly with sufficient safety, should be safe and easy to use. The main disadvantage for me is that the profile is set in stone and you have to dive within it or abort the dive. A small delay during the descent eats up bottom time, causes stress or can force you to abort.
Technical dive computers have come a long way to become safe and easy to use. However, they can fail, a gas switch can be missed or it can be wrongly programmed and a set of back-up tables is essential. Not even two computers solve the problem – if you forget to switch gasses on one computer, chances are good that you forgot to change the other one as well.

The main advantage of a dive computer for me is that the dive plan can be varied within reason and available gas. My personal choice is to dive with my VR3 set conservatively, a bottom timer, and a set of laminated back-up tables ready. For extreme deep dives I will tend towards dive tables being the primary concern and the computer being the back-up. My short answer is that both should be used and the primary method should depend on the type of dive.

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By Quintin de Boer

Even accounting practices worldwide have now acknowledged this fact with business owners now being allowed to include a value, which is difficult to calculate and quantity, for goodwill.

Goodwill is an accounting concept meaning the value of an asset owned that is intangible but has a quantifiable 'prudent value' in a business, for example a reputation the firm enjoyed with its clients. Conventional wisdom in respect of business studies dictates that it costs 5-7 times more to secure a new customer than it does to sell to an existing customer.

Therefore it is very important to keep and retain clients in order for them to 'return' to your business. Returning clients can only be achieved by ensuring that every experience with your business and services is a pleasant one.

Here it might be valuable to understand some of the theory behind relationship management in order to understand how contact points between you and your business need to be positive at all times in order to ensure a satisfied customer.

In a nutshell, you, as a business owner, need to realise that every contact you have with your client in terms of the overall relationship only has three possible outcomes. These possible outcomes are as follows:

• Positive – the relationship is stronger and the client walks away feeling they are valued and that their needs have been met to their expectations or above.

• Neutral – the relationship remains as per the status quo and the client walks away feeling that their needs have been met to their expectations. Here the client does not particularly enjoy the experience but also does not feel put off by the experience.

• Negative – the relationship is weaker and the client walks away feeling they have been done in and that their needs are not understood to the extent that they should be and they are not valued.

The later, obviously being the worst possible outcome of contact with your client, may even cause a loyal and regular client to start looking for alternatives.

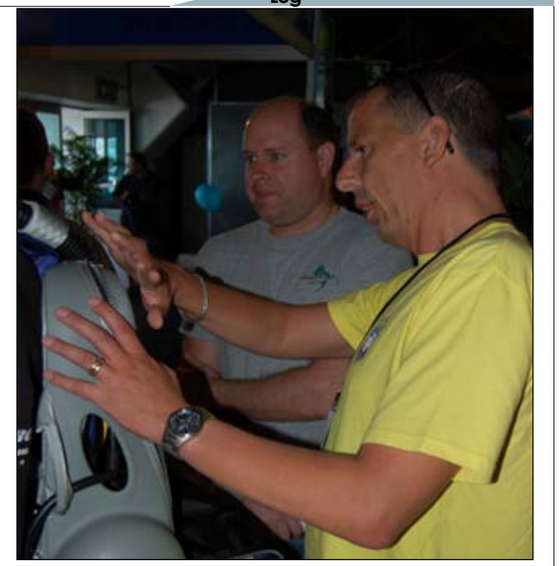
Instructor Diaries
Log

This is exactly the 'space' we don't want a client to reach as this will open the door for a competitor to gain a new client and if they can meet the need of that client more effectively, then you might as well add that client to the list of ones lost.

Another benefit of keeping clients satisfied is the fact that a happy client will most probably be your best form of advertising as they will tell their friends and family about your good products or services.

Such 'word of mouth' recommendations are very strong and normally already form a trust relationship between you and the prospective client as trust is transferred with the referral.

Such clients will expect a similar level of service and this will now be your opportunity to either rise to the challenge or point the client in another direction.



How Old Is Too Old?

Replacing dive computers and BCDs

By DAN's Francois Burman, Pr. Eng, MSc., and Peter Buzzacott, Ph.D., MPH

Everyone loves the smell of a new car, but eventually the car develops problems, and you realise current models have new safety features. Dive gear such as dive computers and BCDs get old, too. When should we consider replacing them?

Dive Computers

Divers don't buy new dive computers every year, so it is not uncommon to see older computers while on dive trips. But just because those models were the best options 15 years ago doesn't mean they're ideal to use now. New technology has improved computer processing power, battery life, sensor sensitivity and display screens.

Older dive computers are often not able to fully implement some decompression algorithms; modern computers are more powerful and in many cases are better able to compute a more faithful rendition of the underlying algorithm. Modern sensors can detect even slight changes in pressure

By DAN's Francois Burman, Pr. Eng, MSc., and Peter Buzzacott, Ph.D., MPH

and register changes in water temperature in a tenth of the time it takes older dive computers. This improvement provides more accurate estimates of water temperature, depth and ascent rate, although the dive computer's physical design can affect these measurements — and measuring depth to the nearest inch of seawater may not have any practical impact on safety.

Many manufacturers will factory test dive computers for accuracy, so DAN® recommends that divers contact the manufacturer of any dive computer that is 10 years old or older or that has made 1,000 or more dives and ask if it should be tested for accuracy.
Years of diving can take their toll on computers in terms of wear and tear, exposure to sun and salt water, being dropped and other neglect.

As our dive computers steadily age, so do we. Many newer dive computers have sharper screens that are brighter, have larger numbers and are more intuitive to use than older models — worthwhile reasons to add a new dive computer to our wish list.

Buoyancy Compensator Devices (BCDs)
A comfortable and good-fitting BCD can give us years of reliable service. Do a few scuff marks or a broken clasp or two signal the end of its usefulness? Does a BCD have an expiration date?

We rely on our BCD to ensure we have both a comfortable and a safe dive; a BCD failure could have very dire consequences when we most need to control our buoyancy, so we need to monitor the BCD's condition as well as its age.
In general, we might provide a cursory inspection of our BCD before and perhaps after use, but rarely do we consider getting them serviced.

Before using your BCD, especially when using it for the first time in many months, inspect the condition of the inflator hose, check the materials for degradation, fully inflate and inspect the seams for leaks and dump valves for function, and look for any significant scuffing or tearing.

The inflator and dump valves need to be periodically serviced, especially as the BCD

ages. Annual inspections are a good standard of practice, especially for BCDs in use for five years or more.

While BCDs don't have an explicit shelf life, it is important to carefully and regularly monitor their condition.

If the hose is sound with no signs of cracking, there are no leaks, buoyancy control is good and you service the inflator and dump valves annually after the first five years of use, then you should still have a reliable BCD.

A good service technician will alert you of any embrittlement of the plastic parts, cracks in the hoses or excessive wear and tear. Keep an eye out for leaks and cracks, especially if your BCD is more than 10 years old.

If fashion or function doesn't prompt you to retire your old BCD, just be sure you stay alert for any warning signs that its functionality, and thus your safety, may be compromised.

For more Diving Health & Safety information visit 'Diving Safety' at DANAP.org

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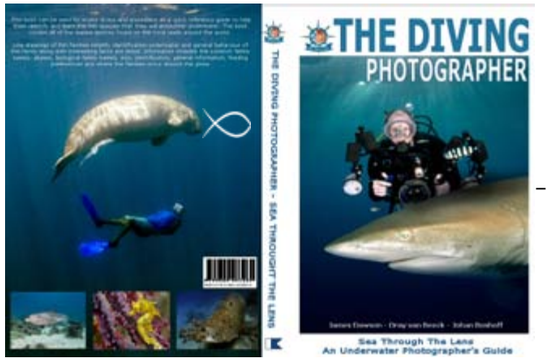
WWW.OZDIVER.COM.AU

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 programes 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.thedivespot.com.au. Cost: $15

Marine Species Guide –

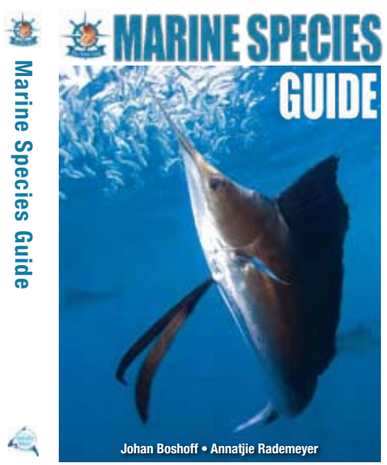
Yes, it happened…I had to buy a larger bookshelf. The latest book from The Dive Spot has landed on our shores – The Marine Species Guide.

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.

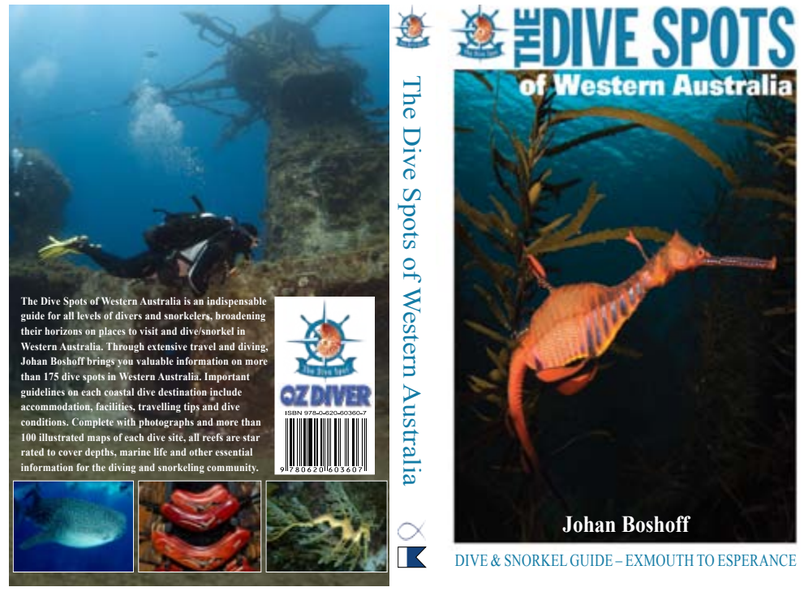
The book works very well in accompaniment with the Marine Species Slate, which can be taken underwater to help with fish identification.

To buy your copy for $ 25, visit www.thedivespot.com.au or email info@thedivespot.com.au



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. The book has 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.

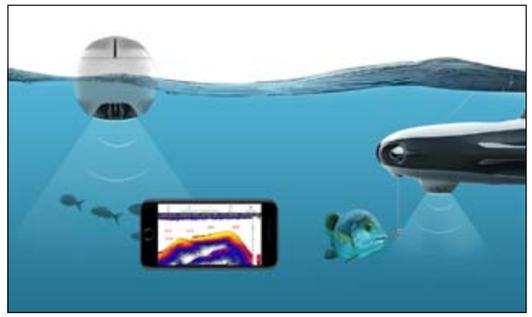


To buy your copy for $ 30, visit www.thedivespot.com.au or email info@thedivespot.com.au

By Johan Boshoff

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/devises 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 sapture just the right shot or fish.

For more information on The PowerRay or The PowerVision's visit: 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 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.
• Kneepads: a thermoplastic rubber (TPR) that is applied without glue or stitching.
• 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.

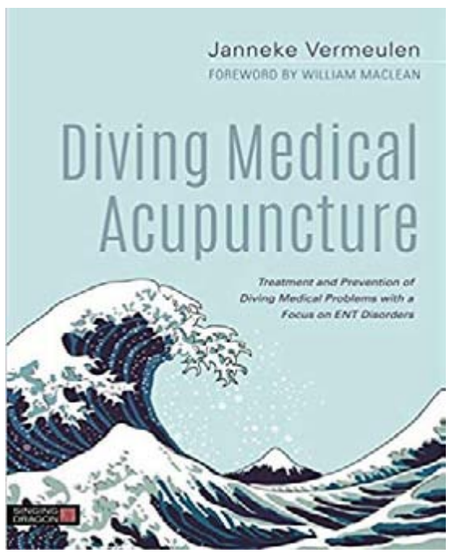
To find out more, visit www.scubapro.com or contact your local Scubapro dealer.

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.
To order her book, visit www.singingdragon.com.

Send your funnies to info@ozdiver.com.au

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Web: www.perthscuba.com

Perth Diving Academy - Hillarys

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Underwater Explorer's Club of WA

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Mandurah

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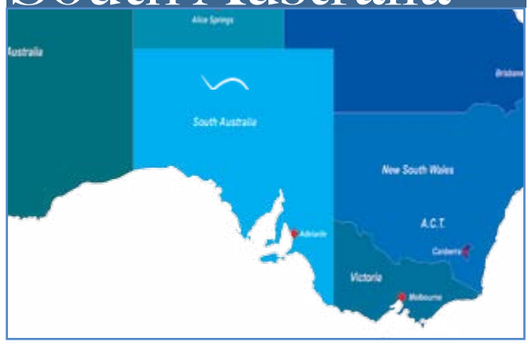
South Australia



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Underwater Explorer’s Club of SA

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