# NZ Dolphin Underwater & Adventure Club

# **Newsletter December 2022**

<u>Club Meeting 6:30pm Wednesday 7<sup>th</sup> December 2022</u> Speaker: Pot luck/BBQ dinner at Denis' place

# www.dolphinunderwater.co.nz



Club's Mail Address 14 Gails Place Okura RD3 Albany



Club Contacts Inside Website As Above

# COMMITTEE MEMBERS: 2022/2023

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#### Life & Honorary Members

Barry Barnes – Life	Peter & Margaret Howard – Life	Brian Horton – Life
Reg Lawson - Life	Roberto Tonei – Life	Dave Quinlan – Life
Graham Thumah – Honorary	Tony & Jenny Enderby - Honorary	Eileen Slark – Honorary

Cover Page Photo:- Trish looking for critters in a hole in Tonga by Denis

7<sup>th</sup> November – Wednesday- 6:30pm Pot luck/BBQ at Denis & Trish's place Club Meeting,

No meeting in January – too many away on holidays usually.

<u>Dive trips, NZ & Overseas</u> - Check out the dive shop's web sites, there is plenty available, but you do need to contact the shops in person to confirm costs & booking availabilities.

Performance Dive NZ - Ph. 489 7782. or

https://www.performancediver.co.nz/Dive+Trips++Events/All+Upcoming+Dive+Trips.html

Global Dive - Ph. 920 5200. or https://www.globaldive.net/page/trips

Aucklandscubadive - Ph. 478 2814 or https://www.aucklandscubadive.co.nz/dive-trips

Other events & suggestions please contact a committee member or organise it yourself & get the club to make up your numbers. i.e. – Dives, trips NZ & O'Seas, Events, Outings, Tramps, Dinners, Movies, etc.

### **Our Club's Trip Rules (Organiser's rules apply for overseas trips)**

- A. Bookings allowed on all trips. *Two trips & club membership is a must.*
- B. A deposit or full payment to be made at time of booking.
- C. Full payment <u>MUST</u> be paid at least two weeks before departure date.
- D. Trip Organiser to handle trip & bookings, & Treasurer to handle finances. Cancellations due to weather will be refunded in full, or transferred to another trip.
- E. Members cancelling for any reason will lose full monies unless they find a replacement for their position on the trip.
- F The trips Organiser will determine if there are enough people to run a trip & if not will notify cancellation two weeks prior to departure. Non financial members will be charged an extra \$10 on trips.

# NB: All Memberships Now Due: Single – \$40 Family - \$50.00

For the club to continue we need paid up members see Margaret or Trish next meeting or do it online.

#### Club's Internet bank account is 06 0122 0074227 00 & don't forget to put in your name Club Membership also includes Affiliation to the New Zealand Underwater Association

#### Open letter to guys who might not make it through summer

A letter from Water Safety NZ CEO Daniel Gerrard to New Zealand men as we look forward to the coming summer season

Safety

Water Safety NZ Nov 12, 2022

Ready to dive with scuba equipment in New Zealand

Make no mistake about it, we've got a national disaster on our hands. Summer is coming up, and by all accounts, it will be a scorcher.



If you're reading this there's a good chance you or someone you know will drown this summer. Around 30 Kiwis, mostly male, will die over the next two months through drowning.

Some might make it to celebrate the festive season with their family, but most won't get to see the New Year. There's no easy way to put this, but it's on us guys to look out for our mates, whanau and everyone else out there.

No one is planning to become 'That Guy' but it's now or never to make a real effort about being safe in, on, and around water as we enjoy our great beaches, lakes, and rivers. While these spots become summer playgrounds and pantries, let's make sure they don't also become our graves.

You can't afford to half-arse your safety any longer. We've all been 'That Guy' who made bad decisions around the water and we've all been 'That Guy' who thought she'll be right. But I promise you it's only luck and not skill, that you're still with us today. **Please don't be 'That Guy', this summer.** 

In 2021 we lost 90 people to drowning, and 76 were male. And already this year, 70 families have lost a loved one. More often than not they're a father, a son, an uncle, a brother or a grandfather. Do you want to know the real reason women live longer than men? It's because time after time we continue to make bad decisions around the water.

To Pakeha males in power boats, Māori men gathering kai underwater, Asian men fishing from rocks, Pasifika men fishing from boats... you guys are consistently over-represented in our drowning tragedies.

No one is coming to save you. If you want to get home safely this summer, we need to man up and look after our mates.

#### Be prepared, watch out for other, be aware of the dangers, and know your limits.

It's common sense, apparently not so common anymore. By knowing the conditions, supervising the kids, wearing a life jacket, and remembering you're not as good as you were when you were 20. You will make it home at the end of the day.

Our friends at ACC remind us all to "have a Hmmmmm". And I agree. Let's have a hmmm -before we swim, let's have a hmmm before we jump in. It is the simple difference between life and death.

By now some might be wondering why I've taken the time to write this open letter. Well, I'm a 49-year-old Pakeha male, a husband, a father, a son, a brother and an uncle.

I'm also a boat owner and active fisherman. I'll surf when I can, but love to dive to put kai moana on the dinner table.

In short, I'm exactly the kind of bullet-proof 'Kiwi Bloke' we'll lose over the coming months due to bad decisions made around water. And, in my other role as the Chief Executive of Water Safety New Zealand, I need your help.

From one guy to another. He waka eke noa – we're all in this together.

#### Nga mihi Daniel Gerrard

### Keeping a Profession a Passion – Exploring Rarotonga's Deep Drop Offs





When you tell someone that you own and run a dive centre on a tropical island, most people think that you hardly do any real work and that everything you do is just fun. Don't get me wrong, operating a dive centre on a tropical island is a lot of fun and I wouldn't want to change it for any other job in the world. After all, diving has always been my passion. Yes, you have your days, but so does everybody else. However, the perception of not having to work hard is definitely wrong!

### **Multifaceted tasks**

Running a dive centre, as any business, is a lot of work. Additionally, when living on a small island, there are only limited options when it comes to getting things repaired. Therefore, whenever possible, you tend to do all the repairs and maintenance yourself. For our shop, this does not stop at vehicles, the boat and dive equipment. We also hire out scooters, bicycles and kayaks and they all need their fair share of tender, love and care.

Once you get home from work, your days are not finished. You continue to spend hours on the computer. The evenings are the time to answer any emails you have missed during the day, place orders, work on the website, read repair manuals or watch repair videos on YouTube to fix some piece of equipment.

I do not like it when things break or go wrong, but overall I enjoy all aspects of the job. As I enjoy the work and spend an awful lot of time on it, you could say it is my profession turned into passion.

#### In search for a hobby

A few years back now, my girlfriend asked me if I had any resolution for New Years'. As I had none, she said that she wished that I would find a hobby so I don't spend all my time on work.

After some brainstorming and dismissing some ludicrous and absurd ideas, I knew what I wanted; I wanted to get into rebreather diving. So there it was, settled. The following year I did my first training course on my newly acquired CCR and never looked back. The costs for travel expenses, training and equipment were quite staggering, but as it was (somehow) suggested by the love of my life, I never felt bad about it!

It turned out that I loved diving on the rebreather: gliding through the water without feeling the change in buoyancy when I breathe. The bubble free silence. It lets me get right up close to marine life, just like freediving. For underwater photography, this is a fantastic tool.

# Integrating the new passion into work

As I own and run a dive centre, the natural step was to integrate my new passion into my profession. Apart from diving with the rebreather on days off, I used it as much as I could when guiding experienced divers. When you dive every day, it is easy to clock up hours. After hundreds of hours, the natural next step was more training.

Today, Adventure Cook Islands not only offers recreational diving, but also technical diving and rebreather training.



The best thing about the New Years' resolution some years back was that we also started to explore the deeper areas of Rarotonga's drop-offs. This led us to cater for experienced mixed gas rebreather divers.

The sea floor around the volcanic island of Rarotonga

Exploring the deep drop-offs



is between 2000 and 4000 metres deep. As no other dive centre here offers any type of technical diving, pretty much nobody really knew what was down there. Apart for a few scientists and fish enthusiasts that have done deep dives on isolated spots over the years, no one has really explored all the deep sites around the island.

Conducting deep dives on open circuit is just not a viable option here. We are in the middle of nowhere and everything needs to be shipped in. Helium is expensive enough in any country, but when you have to ship it in, the costs just get ridiculous. Having the helium recirculating in the loop is the only way to keep gas costs within an acceptable budget. By using rebreathers, mixed gas dives have become affordable in Rarotonga.

# Let me take you on a dive

After a short swim from the anchor in about 16 metres you reach the drop-off. Your senses sharpen, you are totally focused on your dive. As you follow the drop off down, the slope gets steeper and steeper, the deeper you go. In 33 metres, a giant moray peeks curiously out from its hole. At 45 metres a whitetip reefshark is resting on a sandy patch. Being silent and bubble free, you get right up close without perturbing the shark.

Once you descend past 60 metres, drop-off slopes turn into vertical walls, with only the abyss below. As you dive down the drop-offs cliff you take in its enormity; the water is extremely clear.



Peeking back, you see a school of black trevallies, curiously checking you out. You glance up and spot a small school of tunas, swimming away into the blue void. As your torch light hits the wall, you see brightly coloured soft corals growing next to massive gorgonian sea fans.



Recreational divers really appreciate Rarotonga's stunning, healthy hard coral formations. However, Rarotonga is not famous for their soft corals. In fact, apart from some smaller, less striking soft corals, you won't really see any colourful soft corals. Unless you go deep.

#### **Rarotonga's deep treasures**

Amidst the beautifully coloured corals you can find the true treasures of this stunning world, often shyly peeking out from cracks in the walls. Rarotonga's deep drop-offs are home to some of the rarest tropical reef

fish in the world. Amongst others, the peppermint angelfish is probably the best known. This little beauty is only 7 cm long but so rare that some fish enthusiasts are willing to travel to Rarotonga from the other side of the world only to see this fish. I love living on Rarotonga and I consider the island my home. Exploring the islands' deep drop-offs has become my passion. It is extremely rewarding, as you never know what you may see. Being able to show these beautiful sites to fellow divers is a privilege.







# Learn more about diving in Rarotonga at:

https://www.adventurecookislands.com

Maybe we should organise a club trip next year in July-August time frame?

# What is Harming the Ocean More: Climate Change or Overfishing?

In this edition of Ask a Marine Biologist, Dr. David Shiffman compares two grave threats to wild marine life and places.



By David Shiffman August 4, 2021

With multiple forces are pressuring ocean ecosystems, it can be difficult to weigh one threat against the other.

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# Question: What's a more immediate threat to the health of our oceans at the moment: climate change or overfishing? -Van, Georgia

**Answer:** Our ocean and the marine life that call it home face many threats, including not only climate change and overfishing, but habitat destruction, pollution, and more. Last month alone, I saw news stories of <u>toxic algal</u> <u>blooms killing endangered fish</u> and record heat harming <u>salmon</u> and other <u>marine life</u>. So what's the biggest threat?

As with many scientific questions, the answer is "it depends." It depends on what scale you're looking at, and what marine life you're focusing on—the biggest threat to manatees (boat strikes) is not the same thing as the biggest threat to angel sharks (being caught as bycatch). But you asked about the whole ocean, and you asked about in the short-term.

Climate change is <u>not a far-off problem</u>, it's here already—those salmon and other marine animals suffering from a <u>recent heat wave</u> that was climate change induced. Climate change's worst impacts, however, aren't here yet. Climate will make habitats unlivable for many marine species, including ecologically important species and those we depend on for food. It may be the death knell for many coral reefs, on which so many unique and beautiful species depend. It is already causing large marine life to move into new habitats, with unknown consequences for the animals already living in the places to which they are migrating. And don't forget about <u>ocean acidification</u>, "climate change's evil twin," which will change the very pH of the ocean so that, among other things, shelled organisms cannot build their shells. Climate change is, in short, extremely bad news for the ocean and the animals that live there.

<u>Overfishing</u> and associated unsustainable fishing practices mean that we aren't just taking too many fish out of the sea, but we're also having indirect harmful impacts on other ocean animals (through bycatch) and on habitats themselves. Increasingly large and powerful fishing vessels mean that few parts of the ocean are safe from humans simply because they're inaccessible to us. When overfishing is allowed to continue and fisheries collapse, this is devastating not only ecologically, but for the humans who depended on that fish stock for food security and livelihoods.

So what's a greater threat to the oceans? I want to stress here that both are extremely bad and we need to focus on solving both, as well as other threats to the ocean. I also want to stress that everything is connected, and climate change (including the aforementioned tendency of species to move in response to climate change) will impact <u>overfishing</u>.

Overfishing is, in my professional opinion, the greatest short- and medium-term threat to marine biodiversity. While many of the worst impacts of climate change aren't here yet and the impacts that are here aren't global in scope yet, many of the worst impacts of overfishing are here now, are already worldwide in scope, and are already affecting entire ecosystems and the humans who depend on them for food and jobs.

The good news is that folks claiming that overfishing is such a big problem that we all need to give up all seafood immediately are not correct, and science-backed sustainable seafood absolutely exists. But it's no accident that non-profits like the Environmental Defense Fund <u>call overfishing "the greatest threat to the ocean,</u>" or what we regularly see articles like '<u>Overfishing is a Worse Threat to the Ocean than Climate Change.</u>' And it's no accident that I've chosen to work for an environmental non-profit that focuses on ending overfishing.

<u>Ask a Marine Biologist</u> is a monthly column where Dr. David Shiffman answers your questions about the underwater world. Topics are chosen from reader-submitted queries as well as data from common internet searches. If you have a question you'd like answered in a future Ask a Marine Biologist column, or if you have a question about the answer given in this column, email Shiffman at WhySharksMatter@gmail.com with subject line "Ask a marine biologist."



Dr. David Shiffman Courtesy David Shiffman

Dr. David Shiffman is a marine conservation biologist specializing in the ecology and conservation of sharks. An award-winning public science educator, David has spoken to thousands of people around the world about marine biology and conservation and has bylines with the Washington Post, Scientific American, New Scientist, Gizmodo and more. Follow him on <u>Twitter</u>, <u>Facebook</u> and <u>Instagram</u>, where he's always happy to answer any questions about sharks. The views expressed in this article are those of David Shiffman.

# Ask DAN: Can Diving with Nitrox Prevent Fatigue?

Diving with Enriched Air Has Many Benefits — Is Preventing Fatigue One of Them?

By Divers Alert Network July 11, 2019

Nitrox is a great tool for divers to have on hand — it can extend bottom times, increase conservatism and make possible dives that would otherwise require planned decompression or a rebreather. A catch-all term for breathinggas mixtures with higher oxygen content — and in turn, lower nitrogen content — than surface air, nitrox has become commonplace in all but the most remote dive destinations.



Nitrox divers learn to analyze their gas mix.

Stephen Frink

After more than 25 years of recreational nitrox use, divers and researchers have gained operational experience and significant research-based knowledge of the various nitrox mixes and their effects on dive profiles. The advantages of nitrox are well-researched and documented, and can be learned quickly by eager divers. In it's nearly three decades of use, however, several misconceptions have surrounded the use of nitrox, most notably that divers report feeling less tired after a dive on nitrox than they would on air. These reports come from divers of all experience levels, and more than one diver has started a heated debate over the topic in postdive conversation. While the reports of this phenomenon are widespread and often fiercely defended, our best understanding is that nitrox can prevent fatigue about as well as a manatee can pass for a mermaid: There might appear to be some similarity on a foggy day, but a close look reveals little resemblance to the truth.

#### WHAT IS FATIGUE?

Understanding the relationship between nitrox and fatigue presupposes a basic understanding of fatigue. Physical tiredness is a physiological consequence of exercise. It's best understood as a subjective feeling of temporarily reduced capacity for work and is frequently associated with lethargy and decreased cognitive performance. It is not an uncommon symptom following an inconsequential dive with no other symptoms of decompression sickness, but it is also a frequently reported symptom of DCS.

Despite divers' frequent reports to the contrary, objective studies have not found a reliable difference in either physical fatigue or cognitive performance following dives on air compared to identical dives by the same subjects on nitrox.

Given an identical dive, it is generally understood that the higher partial pressure of oxygen in nitrox — and the lower partial pressure of inert gases — will result in less decompression stress. It's easy to make the logical leap to connect fatigue to minor decompression stress at this point, but it's important to recognize that a higher partial pressure of oxygen also causes a different type of stress: oxidative stress. Several studies suggest the oxidative stress generated by high partial pressures of oxygen can cause mild endothelial dysfunction, which might actually lead to feelings of fatigue.

This challenges the nitrox-as-fatigue-buster myth. This oxidative stress is particularly apparent in hyperbaric treatments, where long exposures to high partial pressures of oxygen result in frequent reports of post-treatment fatigue. Is it likely that nitrox will make you more fatigued in the water? In short — no, but it's a significant step away from proof that nitrox can combat post dive fatigue.

#### SO WHAT CAUSES FATIGUE AFTER A DIVE?

Diving is work, no matter how much fun it is. Thermal stress, decompression stress, exercise, prolonged oxygen exposure, anxiety and seasickness can all contribute to leaving you exhausted after a relaxing dive. Being immersed in water even without descending pushes about two-thirds of a litre of blood to the heart during the resting phase of the cardiac cycle and starts a cyclical reaction that releases hormones, eliminates fluids in the body and shunts warm blood to the core. This phenomenon resolves once a diver leaves the water, and the decline in central blood volume and pressure can cause significant fatigue on top of all the other factors in play.

#### WHAT ABOUT DCS?

Subclinical DCS — minor or difficult-to-distinguish symptoms of DCS — throw a wrench in what would otherwise be fairly straightforward myth-busting. We have no definitive reason to believe that nitrox can reduce diver fatigue, but unusual fatigue in excess of expected levels or feeling sick after a dive can indicate a more serious issue. Even if you feel less tired after a dive on nitrox, keep in mind that fatigue alone can be a symptom of DCS, and significant fatigue might indicate a need to seek medical evaluation. If you or a buddy feel markedly tired, significantly ill or even just a little funny after a dive, make sure to ignore the nitrox-versus-air debate and seek professional help — your choice of diving gas might make a great conversation starter, but you shouldn't expect to be more fatigued just because you decide to do an otherwise conservative dive on air.

For more information on nitrox and diving, visit dan.org/health.

#Updating dive shop's contact details still in progress

The MAF regulations vary in particular when it comes to your catch size/limits & locations.

Practice being safe & staying safe for you & your buddies & we will see you all at the club meeting