

Inspiring People to Care About our Oceans Since 1995

DIVERS FOR THE ENVIRONMENT

WWW.EMIRATESDIVING.COM | MAGAZINE | MARCH 2020 | VOLUME 16 | ISSUE 1



ON THE WILD COAST DIVING THE SARDINE RUN

SAVING JAWS WITH VOX CINEMAS • EDA'S 25th ANNIVERSARY • THE DIVE MENA EXPO 2020
• ENTER DIGITAL ONLINE 2020 • THE WORLD'S 20 BEST WRECKS • BACK PAIN & DIVING

WWW.EMIRATESDIVING.COM

ENTER DIGITAL ONLINE

EDA'S UNDERWATER PHOTOGRAPHY
AND FILM COMPETITION 2020

SUBMISSION DEADLINE

(Sunday 26th April 2020 @ 11:59 pm (GST)

THE EVENT



DIGITAL ONLINE

جمعية الإمارات للغوص
EMIRATES DIVING ASSOCIATION
PHOTOGRAPHY AND FILM COMPETITION

AN EVENT BY



EDA

جمعية الإمارات للغوص
Emirates Diving Association

EXHIBITION HOST

AUD

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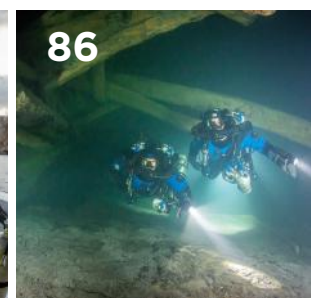
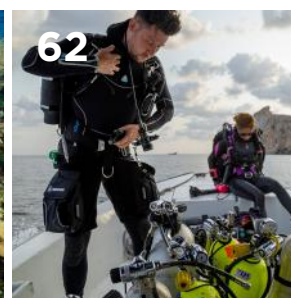
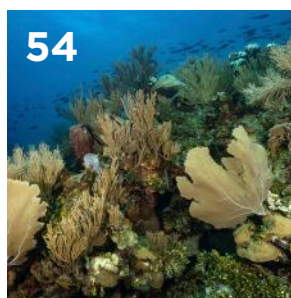


www.funundivetravel.com



www.sundive.com.au





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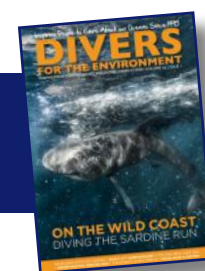
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DIVERS FOR THE ENVIRONMENT

Please note that EDA's magazine, 'Divers for the Environment' includes articles written by individuals whose opinions, whilst valid, may or may not represent that of EDA's. The magazine is a platform for individuals to voice their opinion on marine and diving related issues. You are welcome to suggest an article for the next issue released in June 2020. Send all articles, feedback or comments to: magazine@emiratesdiving.com

COVER

PHOTO BY PIER NIRANDARA
The Sardine Run in South Africa's Wild Coast.



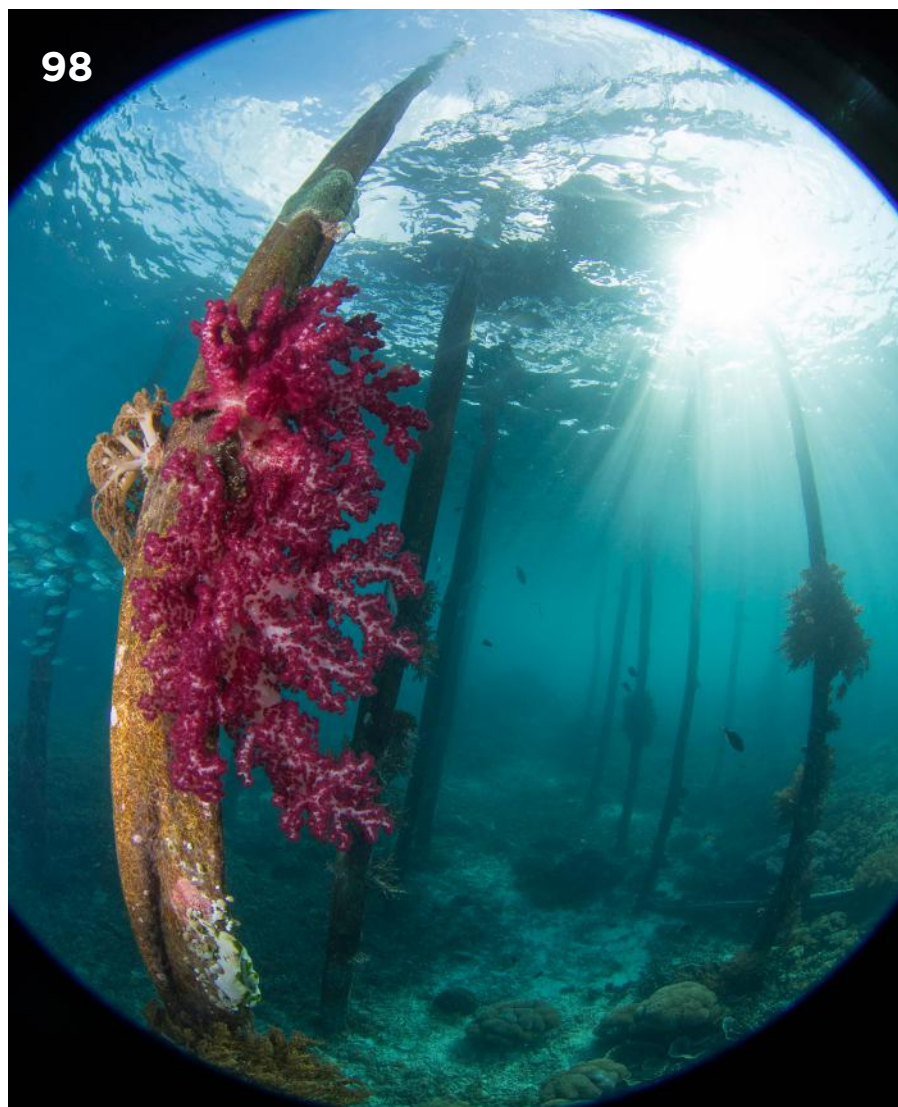
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KIDS CORNER – FONT USED: **DYSLEXIE FONT**

Dyslexie font has developed a typeface especially for people with dyslexia called Dyslexie. People with dyslexia have problems distinguishing some letters. They sometimes turn, mirror and switch letters whilst reading. The Dyslexie typeface targets these problems by altering the shape of the letters so they are clearly different from any other letter. As well as this, the spaces between the letters are improved and capitals and punctuation are bolder so people with dyslexia don't read words or sentences together anymore. Representative research among many dyslexics has now shown that the font actually helps them with reading texts faster and with fewer errors.

EDITOR & DESIGNER

ALLY LANDES

Ally is EDA's Project Manager, Event Planner, Graphic Designer, Writer, Editor, Photographer and Videographer. She created and introduced 'Divers for the Environment' back in December 2004 as an educational tool to share information by the dive industries professionals, conservationists, underwater photographers, scientists and environmental enthusiasts from all over the world, to better care for and protect our underwater world.



COVER STORY AUTHOR & PHOTOGRAPHER

PIER NIRANDARA

Pier Nirandara is a bestselling Author, Hollywood Film Executive, and Underwater Photographer from Bangkok, Thailand. She began her career as Thailand's youngest author when her first novel, "The Mermaid Apprentices" was published at the age of 15 to critical and commercial success. Since then, she has served as a Brand Ambassador for UNESCO literary campaigns, a judge for writing competitions, and a speaker at TEDx events, schools, and international book fairs. Her works have sold over 100,000 copies in multiple languages.

As a passionate solo traveller, Pier has also visited over 90 countries across 7 continents, scuba diving in many of them. She founded the first Hollywood Scuba Divers club, and hopes to use storytelling to bring attention to fragile ecosystems and marine wildlife.

www.piersgreatperhaps.com
[Instagram.com/piersgreatperhaps](https://www.instagram.com/piersgreatperhaps)



THE QUARTERLY CONTRIBUTORS

Meet the regular magazine contributors who share their passions and interests with our readers. Want to contribute? Email: magazine@emiratesdiving.com

JESPER KJØLLER

Professionally involved in the diving industry since he started diving in the early nineties, Jesper ran a successful Scandinavian divers magazine for many years. His articles and photos have appeared in books, magazines and websites all over the world. Today he lives in Dubai, involved in marketing but finds time to teach diving to Global Underwater Explorers.



SARAH MESSER

Sarah has been living in Dubai since 2012 and discovered her diving addiction just 3 years ago. Since then she dives whenever and wherever she can, both locally and internationally. When not working in her actual day job, Sarah organises dive trips for her UAE based diving group, Dubai Divers Team.



PATRICK VAN HOESERLANDE

Diving opens up a whole new world. Being a writer-diver and co-editor of the Flemish divers magazine, Hippocampus, Patrick personally explores our underwater world and shares his experiences through his articles. You'll find a collection of them on www.webdiver.be.



CELEBRATING 25 YEARS

SILVER JUBILEE, CELEBRATING 25 YEARS...



IBRAHIM AL-ZU'BI
EDA Executive Director

I would like to welcome you all to the March issue of 'Divers for the Environment'. This year we are celebrating our Silver Jubilee – EDA is 25 years old, with 25 years of promoting for diving, conserving the marine life and most importantly, a platform for all divers in the UAE and the region to meet, discuss and enjoy our beautiful underwater world. In February, 25 years ago, the late Sheikh Zayed bin Sultan Al Nahyan – may his soul rest in peace – gave his blessing to establish EDA and place at the heart of EDA's main objectives; marine conservation, promoting marine heritage and encourage people to take up diving as a sport.

Looking back at the last 25 years and reflecting on the great moments we all had and still have at EDA and the amazing projects that we have run, and some we continue to do so, such as:

- Reef Check, EDA was the first training facility in the UAE and the region;
- Crown-of-Thorns Starfish Project;
- Artificial Reef Project;
- Coral Reef Planting Project;
- The Dive Expo, the region's first and only dive exhibition;
- Digital Online's underwater photography and film competition, the region's first underwater media competition;
- Cleanup Arabia, the region's biggest underwater annual clean-up campaign;
- Divers for the Environment magazine, the region's first and only (free) diving and environmental magazine.

In addition to the many other initiatives that EDA championed with the support of partners, staff and members, I want to take this opportunity to show my appreciation to all our members from all nationalities and our multicultural staff for the dedication, loyalty and enthusiasm that they have demonstrated throughout this journey. Of course, none of what we have accomplished so far would have been possible without the leadership and visionary thoughts from our Board of Directors. I am confident that the next 25 years will hold even more achievements we can be proud of. In addition, I would like to take this opportunity to thank our sponsors and partners, we are grateful for the support they have given EDA to enable us to continue our mission of conserving and protecting the UAE marine resources. We salute them for being environmentally responsible organisations and we hope that our partnership will last for a long time to come.

This year, we lost one of our resident diving legends who had been with EDA since the very beginning. He was not only a passionate diver and a marine life conservation activist, but also a great documentary and film-maker who produced one of the first marine life documentaries of the UAE. RIP Jonathan Ali Khan (aka JAK).

Dive MENA Expo 2020 – the leading dive exhibition of the region will be in March this year with a new location at Dubai Harbour where the diving community of the UAE and the region will meet alongside the Dubai International Boat Show to discuss diving updates and share the latest dive gear on the market. We're looking forward to seeing you all there.

I am also very much looking forward to this year's Digital Online – EDA's Underwater Photography and Film Competition to see all the participants results from all their amazing photo and film entries of the varied marine life our members have witnessed from all the places they have dived over the world. It is always such a great event to get together. I want to thank the members of the jury and wish them luck in their tough job ahead.

I also want to take this opportunity to thank our EDA members who share their informative diving experiences and underwater photos with us. Your insights are imperative in recommending when and where to go diving, as well as what to look out for on trips.

We hope your passion and enthusiasm continues, and you'll send us news about your next diving adventures. We always look forward to seeing your water world snaps and reading about your recommendations!

I do hope you enjoy reading this issue of 'Divers for the Environment'. We have a busy year full of activities and events waiting for you. The EDA team is working tirelessly to run another successful year and we're looking forward to seeing you all at the events.

Happy reading and dive safe!

Ibrahim Al-Zu'bi

Ibrahim N. Al-Zu'bi

THE DIVE MENA EXPO

CO-LOCATED WITH THE DUBAI INTERNATIONAL BOAT SHOW

The Dive MENA Expo, now at Dubai Harbour (formerly Dubai International Marine Club), is co-located with the Dubai International Boat Show and offers everything a scuba diver can imagine – from the most advanced equipment on the market, to product showcases, demos and speaker presentations.



DIVE TRACKS

There are a series of exciting talks led by diving experts and celebrities to cover a complete range of topics for divers and snorkellers – from underwater photography, film-making, Guinness World Record breakers, marine conservation, dive travel, adventure and more!



DIVE TRACK 2020 SCHEDULE

	12 MARCH 2020	13 MARCH 2020	14 MARCH 2020
4 pm	Yuriy Rakmuttiah – Freediving Association	Chris Fallows – Diver & Photographer	Paul Emous – Dive SSI
5 pm	Adam Broadbent – ZuBlu	Ahmed Gabr – Guinness World Record Breaker	David Diley – Award Winning Film-maker
6 pm	Abi Caranadie – The World's Centre of Marine Biodiversity	Faisal Jawad Hassan – Paraplegic Diver	Chris Fellow – Diver & Photographer
7 pm	Michela Colella – Divers Down UAE	Imran Ahmed – Underwater Photographer	Imran Ahmed – Underwater Photographer
8 pm		Nouf Alosamo – Diver	

INTERACTIVE DIVING POOL SESSIONS – DIVE IN!



www.scubadiving.ae

Dive in for an interactive pool experience to witness the world of diving. Bermuda Diving Center has partnered with Dubai International Boat show to conduct dive activities in the pool. Get ready to get staggered with interactive dive sessions in a dedicated pool on all days of the show.

Whether you are new to diving or a veteran scuba diver, you'll love the Dive Experience!

DIVE TRACKS | THE SPEAKERS



YURIY RAKHMATULLIN

Yuriy could not love the sea more if he was born in it – and we think he may well have been. His love for the sea is only bested by his love of freediving. He is the best in town at teaching his favourite pastime. Yuriy hates “banana-divers”, as much as being nibbled at by marine creatures during freefalling. He is known for his terrible sailing techniques and his lousy attire. Yuriy also happens to be a certified Apnea Academy, AIDA and PADI instructor, as well as an AIDA Judge.



ADAM BROADBENT

Adam is the Founder of Asia's leading dive travel company. ZuBlu is the leading dive travel platform to search, compare and book scuba diving and underwater adventure travel in Asia. With over 150+ eco-friendly resorts and liveaboards to choose from, guests can travel green while exploring the big blue. www.zubludiving.com



DANIEL ABIMANJU CARNADIE

Diving Indonesia: The World's Centre of Marine Biodiversity. Indonesia comprises a large part of the 'Coral Triangle', an area which contains approximately 76% of the world's coral species and 37% of the world's coral reef fish species. Indonesia has the highest coral reef fish diversity of the world. Marine Bio-Diversity in the Indonesian Archipelago is 5 times that of the Caribbean and 25 times of the Mediterranean.



MICHELA COLELLA

Michela Colella is an ocean loving PADI Course Director, managing Divers Down in the UAE. She sees diving as a great tool to make the big change in saving the ocean. You will also find her taking care of school programmes or events to instill in people a lifelong love of the natural world and protect delicate ecosystems for generations to come.



CHRIS FALLOWS

Chris Fallows is a world renowned wildlife photographer and authority on Great White Sharks. When he is not on the ocean, Chris spends his time in the African bush or at other remote locations around the world immersing himself in wildlife. His first ever African safari was at two years of age. Since that time his whole life has been about wildlife and his passion to observe animals in their natural habitat whilst seeking out what makes each species so spectacular. He was the first person to discover and photograph the now famous breaching Great White Sharks of Seal Island in Cape Town, South Africa. It was this discovery that bridged the gap between Chris being a wildlife naturalist to a dedicated photographer intent on capturing this never before seen behaviour in order to showcase and bring it to the world.



AHMED GABR

Ahmed is a three-time Guinness World Record breaker:

- Deepest Scuba Dive
- Deepest Sea Dive
- Largest Underwater Clean-up (he mobilised 614 divers in 2015)



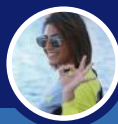
FAISAL JAWAD HASSAN

The 33-year-old Kuwaiti is paraplegic after having lost the use of his legs in a car accident when he was 20. In August 2018, he became the Guinness World Record holder for the fastest 10 km scuba dive with an amazing time of 5 hours and 24 mins in Hurghada Egypt, beating the previous record of 6 hours 21 mins – which was set by an able-bodied diver. The record had been a long-standing ambition of Mr Hassan's, who learned to scuba dive to assist with his personal recovery following the accident. "After the car accident, the first thing I did was challenge my fears. I chose to learn how to dive" said Hassan, adding, "diving sets me free from sadness and hopelessness and makes me feel free."



IMRAN AHMAD

Imran Ahmad is Asia's most celebrated and internationally published underwater photographer. He has been capturing the magnificence of life both below and above the water's surface for over 20 years. His style is different from anything seen. He is known for his experimental photography with light and motion.



NOUF AL OSAIMI

Nouf is passionate about inspiring women in Saudi Arabia to learn to dive. Her journey started back in 2008 in Manchester City in the UK while she was completing her undergraduate degree in Tourism – missing her home, the warm weather and the culture. Nouf decided to take a break and head to Sharm El Sheikh, Egypt for a recharge. During the trip, she decided to sign up for a PADI Discover Scuba Diver course, and since then fell in love with the underwater beauty and wonders.



PAUL EMOUS

Paul is a dive professional, an SSI Recreational Instructor Trainer and Technical Extended Range Instructor. He's passionate about diving, education and the exploration of new dive sites. He's also fascinated about shipwrecks, cave diving, recreational diving and technical diving. Paul is a Dive Nerd!



DAVID DILEY

Of Shark and Man is a feature documentary by the award-winning UK based film-maker David Diley, telling the story of Shark Reef in Fiji where divers can come face to face with up to a hundred of the world's biggest bull sharks on one dive. Shark Reef in Fiji was described by underwater film-makers Ron and Valerie Taylor as "the best shark dive in the world." Of Shark and Man was released on June 29, 2017 and is Diley's first feature documentary, and is the first in a series of films documenting the relationship between sharks and humans around the world. Of Shark and Man has received eight award nominations, winning five.

EMIRATES DIVING ASSOCIATION
STAND NO: D-29


Inspiring People to Care About our Oceans Since 1995!

EDA is a non-profit voluntary federal organisation accredited by UNEP as an International Environmental Organisation. Our mission is to conserve, protect and restore the UAE marine resources by understanding and promoting the marine environment and promote environmental diving. Divers prove extremely utile in conserving the marine environment through observing, reporting and preventing environmental abuse.

Come on over to say hello to the EDA team and collect a copy of EDA's 2020 March magazine issue, 'Divers for the Environment'.

For more information about EDA, go to www.emiratesdiving.com

SEA@DEEP
STAND NO: D-115


Sea@Deep is owned by Captain Mohamed Khalifa Ahmed Bin Thaleth Alhemeiri, a passionate Emirati, captain, diver, artist, and entrepreneur.

Sea@Deep is the first UAE marine inspired jewellery & accessories business, designed to reflect your passion for the oceans treasures.

Using silver and gold parts with original marine rope, string or leather, your piece will be as authentic and unique as our original designs.

Sharks, starfish, anchors, hooks, shackles & whales' tails are a few from our wonderful collection.

Visit our website to view the complete collection, and select your unique design.

www.seaatdeep.com

DIVERS DOWN UAE
STAND NO: D-114


Divers Down UAE is the only PADI Career Development Centre in the UAE, GCC and Northern Africa and meets the highest requirements for training PADI Professionals. Located in Dubai and on the East Coast, inside the 5 Star Miramar Al Aqah Beach Resort & Spa, Divers Down UAE has a fleet of 3 boats which can accommodate any PADI Courses and customer needs. We also train divers beyond recreational limits, with PADI TECREC and CCR.

www.diversdownuae.com


DIVE GARAGE
STAND NO: D-114

Dive Garage is proud to be the distributor and dealer for many of the best recognised products and manufacturers in the world. These include Cressi, Dive Rite, Waterproof, TUSA, Shearwater and many more. The main shop is located in Dubai, with an additional shop on the East Coast. We also have a full online retail store.

Dive Garage is also proud to be the Authorised Service Centre in the GCC for Suunto – both for the dive and outdoor range.

The Dive Lab offers a full workshop facility for all of your diving equipment. Authorised to repair and service regulators, wetsuits, drysuits and any other equipment that you have. With over 25 years of experience, their technicians can get you back in the water with no delay!

www.divegarage.com

AMIT
STAND NO: D-100 & D-120


Experienced sea captain, Abdulla Mohamed Ibrahim, founded his trading company in 1981 to serve the growing demand for modern marine technology in the United Arab Emirates. Over the years, he has navigated the company through a period of intense growth and secured regional distributions for leading International brands across multiple sectors from marine and aviation navigation, to water sports, outdoor recreation and fitness.

With showrooms in Dubai, Sharjah and Abu Dhabi, and a growing network of offices in Saudi Arabia, India and Bangladesh, AMIT International Group is now the region's premiere marine and land technology company. Driven forward by a culture of innovation, strategic decision-making and reliability, delivered by a highly qualified team of experienced professionals, our offers are second to none.

DIVE INTO INDONESIA
STAND NO: D-19


Dive Into Indonesia proudly presents three Diving Resorts in three of the most incredible locations in the world, Ambon, Lembeh and Raja Ampat. All Resorts are run with the same philosophy... The Best Value World Class Service, and World Class Diving without Compromise.

Muck/macro diving, pristine corals, caves, swimthroughs, wrecks... we have it all.

Run by seasoned diving professionals, we cater to everyone. Whether you are a professional photographer/videographer; or just starting on your diving journey, we will ensure you have an unforgettable vacation.

www.diveintoambon.com
www.diveintolembeh.com
www.diveintorajaampat.com

PADI
STAND NO: D-30

Seek Adventure. Save the Ocean.™

PADI Instructors have safely guided divers below the surface for over 50 years. Teaching the world's most popular dive curriculum transforms lives, and opens hearts and minds to the hidden beauty of nature's creation, and it is our obligation to protect it.

Seek Adventure. Save the Ocean.

www.padi.com

NARDI COMPRESSORI
STAND NO: D-124


Nardi Compressori is among the most renowned producers of compressors in the diving industry. Professional and amateur divers from all over the world trust Nardi Compressori as their partner of choice, thanks to its innovative solutions for breathing air and mixed gas.

Through its newly established branch in Dubai Investment Park, Nardi Compressori is now even closer to you!

www.nardicompressori.com

ALCAN
STAND NO: D-132


Alcan is the leading manufacturer and exporter of extruded seamless high pressure aluminium scuba diving cylinders.

Alcan cylinders are manufactured following the ISO 7866:2012 standards in a state of the art manufacturing plant in Mumbai, India. The cylinders are certified by TUV and PESO (Petroleum and Explosives Organisation), and are PIE/CE MARK approved.

www.alcancylinders.com

AL-AHLAM TOURISM
STAND NO: D-130


Al-Ahlam Tourism – Dream Divers – is the brainchild of His Highness Prince Abdullah bin Saud, and reputed as the largest dive operator in

the Middle East complying with many of the worlds best dive practices.

Al-Ahlam has built up a massive fleet of larger vessels, two over 95 ft, six over 55 ft, all Caterpillar Marine powered, and numerous smaller day boats from 20 ft to 30 ft, powered by Yamaha four stroke engines.

www.alahlam.sa & www.dreamdiver.net

**MINISTRY OF TOURISM AND
CREATIVE ECONOMY OF THE
REPUBLIC OF INDONESIA**
STAND NO: D-25


Home to over a quarter of the world's marine life, the Indonesian Archipelago is truly the ultimate paradise when it comes to scuba diving. Stretching from the Indian Ocean to the Pacific Ocean, Indonesia is blessed with some of the planet's most spectacular dive sites that are renowned among scuba divers worldwide.

www.indonesia.travel/gb/en/home

DJIBOUTI TOURISM
STAND NO: D-136

**“THE SEA, ONCE
IT CASTS ITS
SPELL, HOLDS
ONE IN ITS NET
OF WONDER
FOREVER.”**

JACQUES COUSTEAU

**DIVE
MENA EXPO**
10-14 MARCH 2020

*Loving
what's to come*

Now at

Dubai
Harbour

SHARK GUARDIAN CONSERVATION AND EDUCATION

PHOTOGRAPHY **ALLY LANDES**

To kick start 2020, we introduced a lovely new venue location to our members, with a special presentation by our friends, Brendon Sing and Liz Ward-Sing from Shark Guardian who engage in various international activities and projects for shark conservation.

The Shark Guardian Conservation & Education presentation was held at the Dubai Offshore Sailing Club (DOSC) in The Loft, overlooking the beautiful marina on the 15th of January. Water, teas and coffees were available during the registration before taking a seat.

As DOSC is a members only club, there is a AED25 gate fee which has to be paid at the gate in order to enter, but which members got to claim back if they chose to stay on and have dinner at the Clubhouse after the presentation.



SCHOOL VISITS

GEMS JUMEIRAH PRIMARY SCHOOL

PHOTOGRAPHY **ALLY LANDES**



EDA & DGRADE

The Emirates Diving Association (EDA) and DGrade joined forces on the 26th of February and visited the GEMS Jumeirah Primary School to run a clean-up exercise based on EDA's Cleanup Arabia campaign to spread awareness on single use plastics. We showed the children which plastics can be recycled and how, and what they can potentially be replaced with for a sustainable future, and Ella Clemits, DGrade's Simply Bottles Coordinator, demonstrated how they make their t-shirts out of recyclable plastic waste.

THE ASSIGNMENT

We needed assistance from the parents to help their children collect the household disposable plastics and containers (plastic bags, plastic water bottles, yoghurt pots, beverage cans, plastic straws and cutlery, take away drinks cups, etc.) which come from our weekly grocery purchases. The collected plastic items had to be washed and free of food waste and with the children's help, we showed them which plastics DGrade can recycle and filled

Ella's bag to go towards DGrade's company production. The remaining items that cannot be recycled, went towards the children's upcoming art project.

We hope to inspire tomorrow's leaders and show them why it's important to clean-up our marine and wildlife environment.

DGRADE

DGrade produces sustainable clothing from recycled plastic bottles. Our mission is to divert plastic from landfills and provide a sustainable solution for clothing and accessories, supporting a circular economy in the UAE.

DGrade promotes and facilitates recycling through our #SimplyBottles recycling initiative. The initiative works with more than 150 schools, in addition to numerous events, businesses, and other organisations. We also work with many of these organisations to help them close the supply chain loop by recycling their plastic into uniforms, t-shirts and more. This means in addition to preventing plastic

from going to landfills, they are also saving new resources from being consumed such as oil, energy and water.

Approximately 10 million plastic water bottles are produced every day in the UAE, but less than 10% of all plastic is recycled. DGrade believes that we all need to take responsibility to reduce our impact on the environment by acting more responsibly with plastic ensuring what we do consume is recycled.



For more information visit: www.dgrade.com
Or contact them on email: info@dgrade.com

You can follow DGrade on Facebook and Instagram:
[@dgradeclothing](https://www.instagram.com/dgradeclothing)

AN EDA MOVIE NIGHT WITH VOX CINEMAS

SAVING JAWS



We had a great turnout to our first Movie Night of the year on the 12th of February in partnership with VOX Cinemas in Mercato Mall for our screening of *Saving Jaws* by Director, Brando Keoni Bowthorpe. Bowthorpe, is known for the rescue of Colin Cook, a fellow surfer who lost his leg in a tiger shark attack back in 2015. They share the same sentiment saying, "surfers know that they enter the ocean as guests."

For those of you who were not able to join us and would like to see the documentary, you are able to purchase the film on www.vimeo.com/ondemand/savingjaws/330846805.

A NEVERLAND PRODUCTIONS FILM **SAVING JAWS**

Follow Ocean Ramsey, renowned marine biologist (aka "The Shark Whisper"), and Juan Oliphant, award-winning underwater wildlife photographer, on their journey to combat the negative media associated with sharks. Ocean credits her unparalleled connection with sharks to over a decade of research. However, others are convinced it is something more...

Watch them travel the world to uncover the reality of shark behaviour and speak out for sharks' well-being. With the majority of media

coverage focusing on the small percentage of negative shark encounters, this team will attempt to change the narrative on sharks for the better. Perception is everything and *Saving Jaws* has the goal of turning media coverage on sharks in a positive direction.

Ocean gives expert advice about what to do if you come face to face with a shark, and provides insight on changing our perceptions in time to combat the looming extinction of the species.

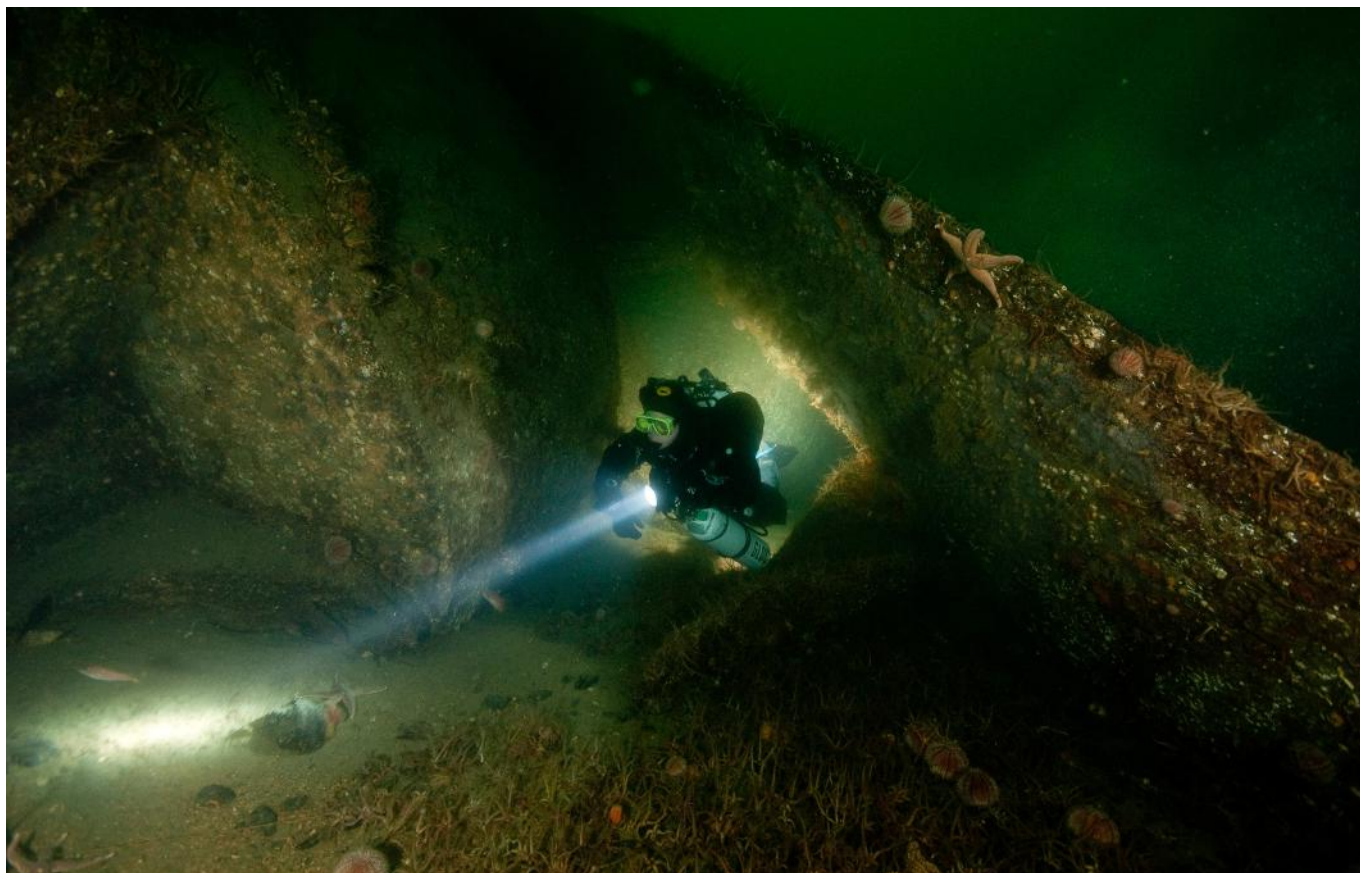
www.oneoceanconservation.com



COUNTER-ERRORISM IN DIVING

HAVE YOU HEARD ABOUT HUMAN FACTORS?

BY **DARRYL OWEN – FREESTYLE DIVERS**



There is a growing focus on Human Factors and non-technical skills in the global diving industry, much of which is being driven by Gareth Lock, the UK-based founder of the system described on www.thehumandiver.com. His book 'Under Pressure' has helped thousands of people worldwide to take a fresh look at the way they think about diving.

You may be wondering what human factors and non-technical skills are, as it's not something we talk much about locally.

To demystify these terms, let's first talk about what they are not. These are not diving qualifications – they are not going to take you deeper or teach you about new diving equipment or diving skills (hence the term 'non-technical skills') and they are definitely not 'just another cert card' to add to your collection.

Non-technical skills are all about improving decision making, through good situational awareness, communication, teamwork and leadership. In other words, all the human factors that keep us safe and well during high risk activities. The aviation industry was instrumental in developing many of these concepts and all our diving buddies from Emirates and Etihad will be familiar with

them. In aviation, these concepts are known collectively as Crew Resource Management or CRM. It is a vital part of the airline safety system that helps to keep passengers and crew safe in a high-risk environment.

As divers, instructors or dive centre managers, not all of us work in aviation – so why should we be interested in this topic?

Probably, the most important reason is that we want to enjoy our wonderful sport to the maximum, but still have everyone get home safely to enjoy another dive. So let's take a look at why things sometimes go wrong.

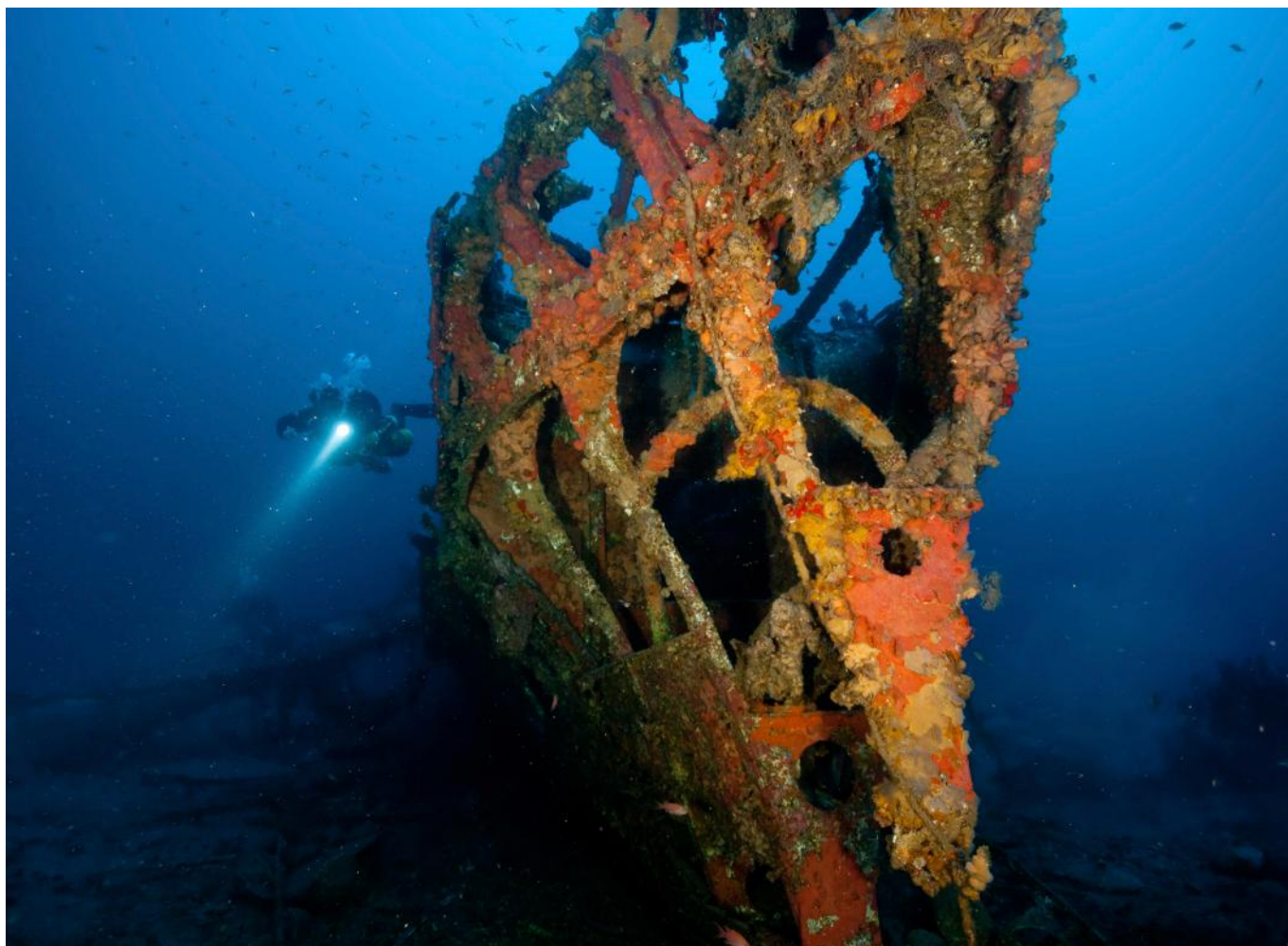
Most divers have had an uncomfortable experience underwater at some point. It might have been a leaky mask, getting lost, running out of gas, equipment failure or even being a victim or witness of a diving accident. Whatever it was, nobody woke up that morning and planned to have problems – we all look forward to a lovely day of diving and then 'stuff happens'.

Maybe it was because we didn't check our gear properly and just assumed everything would work (complacency). Maybe we misunderstood or didn't listen carefully to the

briefing (communications). Maybe we didn't realise what role we were playing in our buddy team (teamwork). Maybe we didn't notice what was going on around us and then didn't know what to do next (situational awareness). Maybe we just felt tired or distracted and nothing seemed to go quite right (stress and fatigue).

Perhaps it was a combination of many things that all aligned to create a bad day. We've all had them. But what have we done about it afterwards to make sure it doesn't happen again? Very often, the answer to that question will depend on the outcome (located somewhere on the scale of good to bad), and whether we actually took the time to debrief the dive to learn from it. If an incident was perceived to be just an annoyance, let's say a leaky mask, maybe we say to ourselves that it wasn't that bad, throw the mask into our dive bag and forget about it until the next dive, perhaps hoping that it will be better next time. But what if it's a leaking regulator or hose? If we get back from the dive safely, do we do the same and throw it in the bag until the next dive? After all, it was only small bubbles...

We know that we shouldn't dive with faulty equipment but as humans we often rationalise



situations based on the result (outcome bias). 'I dived with a leak in my first stage, but everything worked out fine and we had a nice dive'. In this situation, we just went past the first safety boundary, but we survived. Then we decide to dive the first stage again (why not? It worked last time) and still survive. Our brain has now moved the safety boundary from 'never dive with faulty equipment' to 'it's OK to dive with slightly faulty equipment'. This can continue until the first stage fails underwater and provokes a far more complex incident. In human factor terms, this is called normalisation of deviance and we all do it – to use another example, most drivers will have a couple of speeding fines a year from pushing over the speed limit, it's the same concept.

Many of us will have read online accounts of diving accidents or fatalities and often the stories are missing a lot of details. That doesn't stop people who were not present from making all sorts of assumptions to fill in the gaps, followed by an after-event review based on the information they have available or have assumed.

A typical analysis would involve comments like 'they shouldn't have done that! It was obvious it would go wrong!' Except that the victim's choices made perfect sense to them at the time, based on their view of the world at that moment – they didn't wake up thinking, 'today

I'm going to have an accident'. People have a tendency to look at outcomes in hindsight, using words like 'they could have...', 'I would have...' and 'they should have...'. This is a natural reaction. We are trying to bring order to disorder and it is known as counterfactual reasoning. We think that if the people had taken different actions, then the outcome would have had a happy ending. The problem is that rewriting the story doesn't help us to establish the underlying causes (why the incident occurred), which is an essential part of avoiding similar problems in the future.

We've looked at several examples of how human factors affect diving which I'm sure will resonate with most divers, from beginners through to professionals. Assuming that none of us want to have a bad day, part of the answer is to introduce a different type of training to help improve our non-technical skills. We are all human and we all make mistakes, the key to a long and happy life as a diver, is learning to fail safely.

The Human Factors in Diving course places a sharp focus on the "why?", to complement the diving training you will have already taken (the "how"). It is designed to help you understand the techniques you can use to stay safe.

There are no drills from a conventional scuba standpoint, we don't even get wet!

The Human Factors class is a way to probe around why we behave the way we do as individuals and as part of a team through discussion and computer simulation. We practice different non-technical skills to work towards reframing our understanding of ourselves, to inspire ourselves towards greater effectiveness as communicators, as team members, and as divers.

COUNTER-ERRORISM



IN DIVING

THE HUMAN DIVER.com

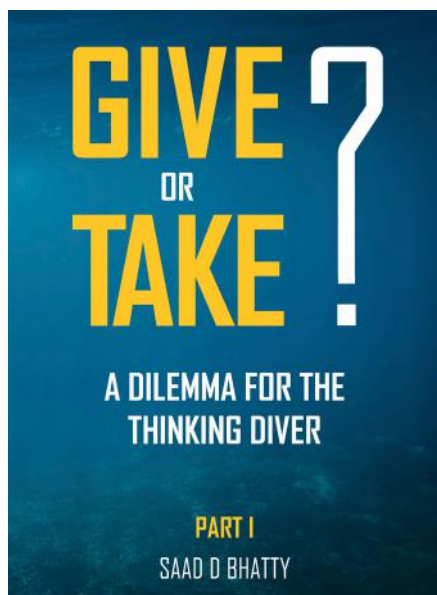
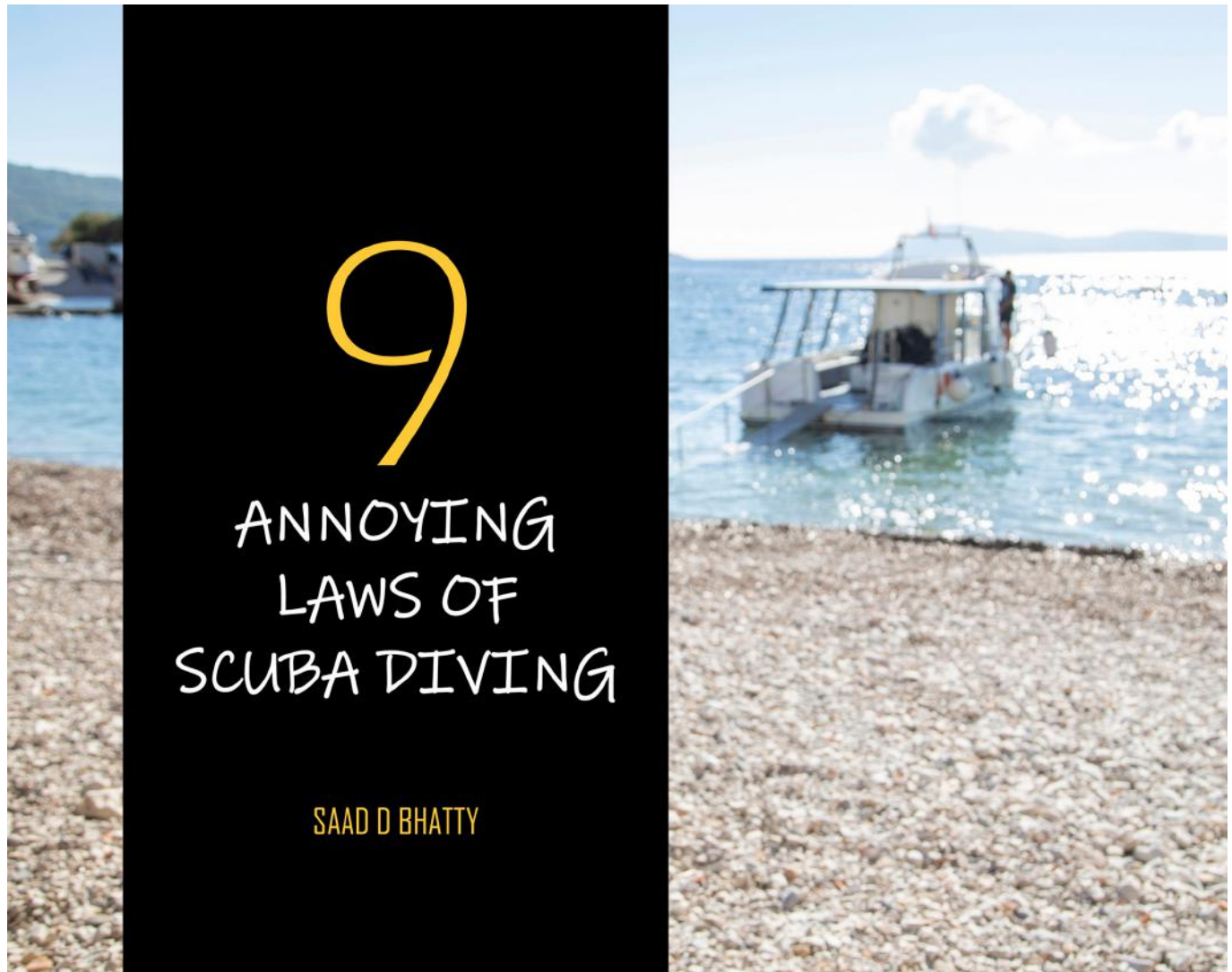
The Human Factors in Diving course is now available in the UAE, if you're a diver, instructor or dive centre and you'd like to learn more, contact:

Darryl Owen at Freestyle Divers

Email: darryl@freestyledivers.me

BOOK REVIEW:

9 ANNOYING LAWS OF SCUBA DIVING



After the success of his critically acclaimed 'Give or Take? A Dilemma for Thinking Divers' which forced us to rethink our approach to emergency air-sharing, author Saad D Bhatti has returned with another must-read book for scuba divers.

Since the earliest days of scuba, divers have intuitively felt the existence of powerful laws which seem to govern our enjoyment of Earth's aquatic realm. Omnipotent laws which take perverse delight in ruining our dives and spoiling our fun. They prefer to lurk elusively in the shadows, but Saad's new book boldly exposes them for the world to see.

Written in a fast-paced style, '9 Annoying Laws of Scuba Diving' is at times hilariously funny yet always remains insightful and engaging. A thoroughly enjoyable read for divers of all levels and experience. As a bonus, at the end

of each chapter Saad helpfully includes tips and tricks to enable scuba divers to fight the nine Laws.

THE LAWS OF SCUBA DIVING

1. Law of Frigidity
2. Law of Klutziness
3. Law of Portage
4. Law of Divestment
5. Law of Exception
6. Law of Congestion
7. Law of Shrinkage
8. Law of Rarity
9. Law of Entanglement

9 Annoying Laws of Scuba Diving is available in print and eBook editions from Amazon. For more details, visit www.SomewhatSalty.com

FREEDIVING NUTRITION

GET THE RIGHT FOOD FOR APNEA

BY **BASSEL OUNAH – PADI FREEDIVING INSTRUCTOR TRAINER**

In water, we lose a lot of energy from our bodies – that's why what we intake before and after a dive, is a very important issue.

When it comes to diving, we should be careful with our choices. Equalisation plays a vital role for freedivers during a descent, that's why avoiding dairy products which may affect our equalisation and make it more difficult to perform, can be replaced with almond milk, for example. It's a good replacement and contains minerals and vitamins!

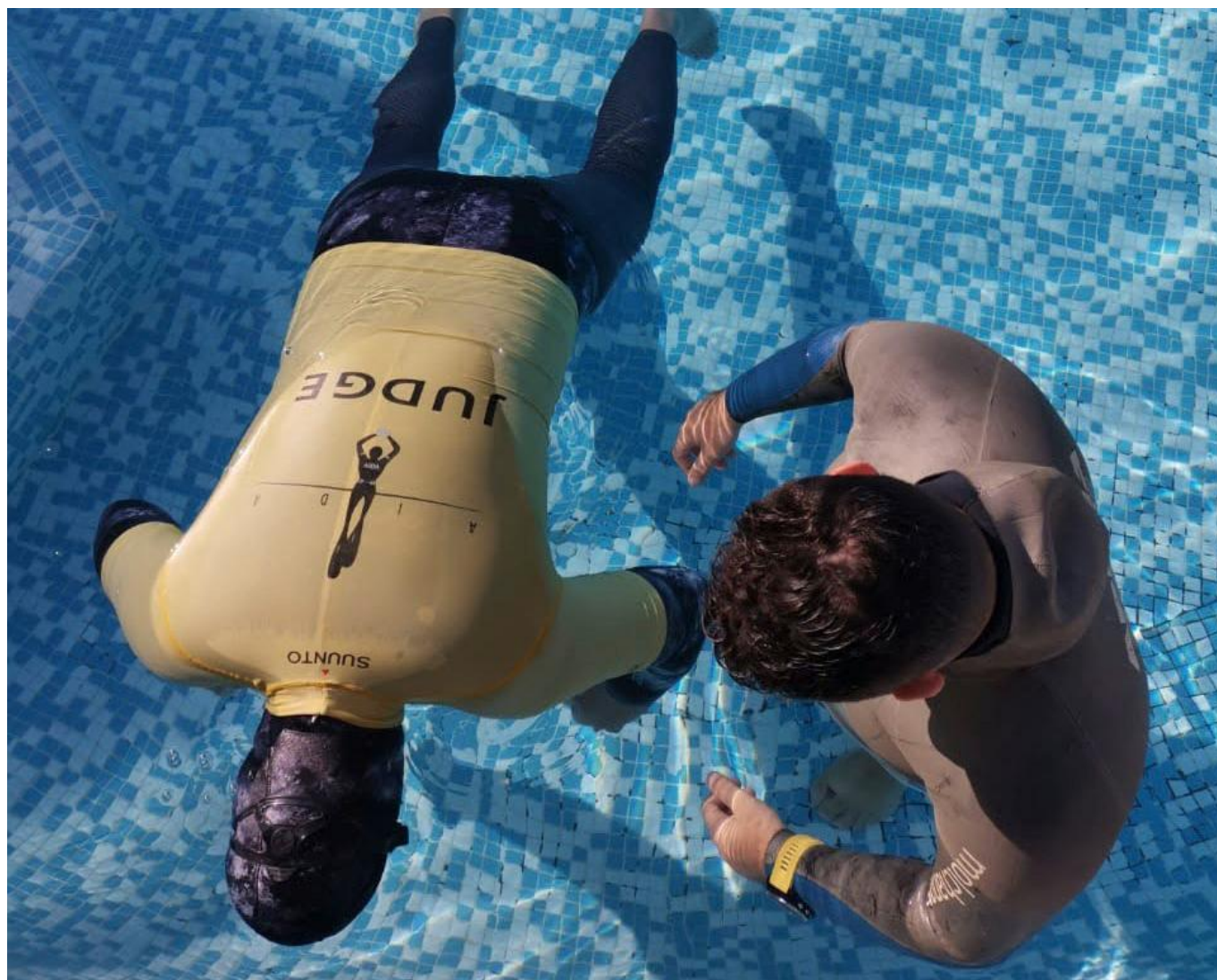
Many agree that coffee is a freedivers number one enemy. We should try to give up or reduce the intake of caffeine because it will increase our average heart rate, and give us less hydration as coffee is a known diuretic. Decaffeinated coffee is a good alternative for freedivers. Before a dive, avoid citrus fruits, ginger, vinegar, cinnamon, and cider. All of these

will increase stomach acidity. Stay away from too much sugar and honey, avoid chocolate or sweets as it will increase blood sugars and it will make all the carbohydrates disappear from a freediver's blood.

Carbohydrates and foods with high iron are good fuels for our bodies during freediving. Consider having oatmeal for breakfast which contains carbs, and bananas which are rich in potassium is also good for muscles. Dried fruits such as dates would be good as they contain vitamin B, iron and fibre. Beetroot can increase breath hold time up to 10%, and will also help muscle oxygen consumption during a freedive, it will increase blood circulation as it's also high in iron. You have to choose foods which are easy to digest, and plan to eat 2-3 hours before your dive. Berries would be beneficial as an antioxidant and includes vitamin C and E. Vitamins play a very important role in a

freediver's intake, green tea for cold days could be a better option than decaffeinated coffee. We have to increase the intake of alkaline foods as well, it has a good impact on increasing blood PH levels which give freedivers a higher CO₂ tolerance. Low metabolism is the secret to a freediver's nutrition, small meals but frequently is always advisable.

No nutrition article would be complete without mentioning water! Men should drink more water than women, on average 3 litres for men and 2 litres for women. Proper hydration will avoid lower breathhold times, fatigue, black outs and difficulties with equalisation. Our bodies will lose a lot of water due to diuresis, the hot temperatures of the UAE, and the intense activity done during freediving, so we should consume water even before we feel thirsty. Better nutrition, makes better freedivers!



THE FIRST DOLPHIN

STORY BY PATRICK VAN HOESERLANDE ILLUSTRATION PETER BOSTEELS

Now they both understood it. It wasn't that difficult, and it was very similar to a sports game, without it being a competition.

Or was it a bit of a competition? One to becoming a better diver, but with yourself as the only participant. It is not a contest against others, or to getting a Dolphin as fast as possible. No, you have to train in the pool and then dive in open water. That way you become a better diver and earn a Dolphin. First you get bronze, then silver, and finally gold. It is only when you turn 14 that you can earn your first divers star.

The colour of Dolphin shows everyone how much you know about diving and how well you can dive. It is a bit like a school report, but for diving, and without an exam. Your dive leader will also quickly know what you can do, depending on your Dolphin.

"When will I get my bronze Dolphin?" asked Skubba.

"One more dive and your booklet will be full. Then you get a card like this one, but with a dolphin on it," Nella explained.

She opened the door of her car and pulled out a large case. She reached inside it and said "Ha, there it is".

She pulled her hand out and showed Skubba a card that was very similar to what his Dad puts in a cash machine at the bank when he needs money. It was almost the same, but it had two golden stars on it.

They looked at it as if it was the key to a whole new world.

"Nice!" said Skubba.

"These two gold stars show that you are an instructor?" Fred asked.

"That's right," said Nella proudly.

"Can you only get dolphins or stars for diving? Are there sharks or frogs?" enquired Fred further.

"No, there are no other animals to earn." she laughed.

"So only Dolphins for us?" he insisted.

"Yes, and no. Besides the Dolphins, you can add other qualifications. For example, you can learn how to take underwater photos. Or how to offer help if a diver is in trouble."

"Didn't we already see that in the pool?" Fred asked.

"Yes, but we can learn even more on how we can help another diver," was her reply.

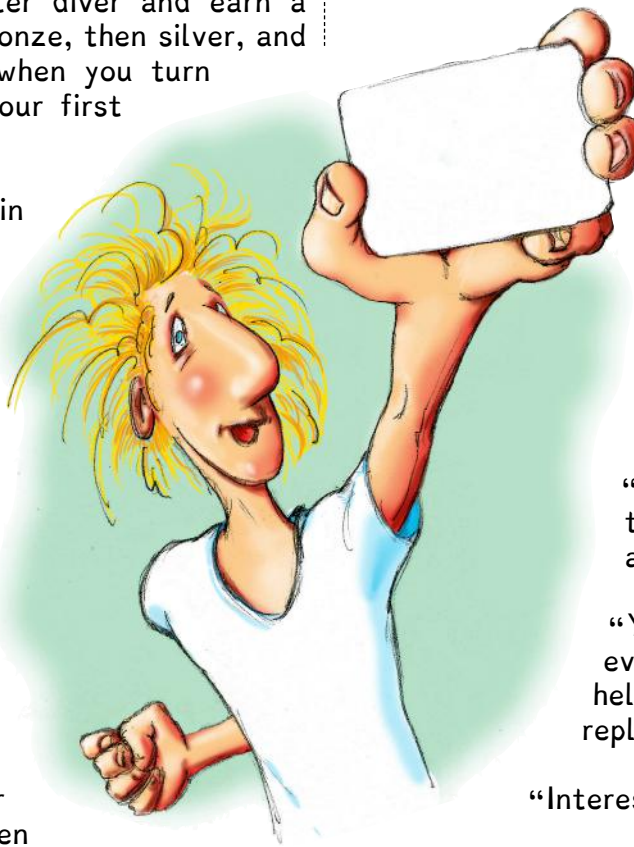
"Interesting."

"I will tell you all about it later if you want, but before you can take on other qualifications, you must first obtain your silver Dolphin," Nella continued.

Skubba had not followed the conversation about qualifications. He was daydreaming about the moment he would get his first Dolphin. Perhaps tomorrow? And what would it be like to then get his first star?

When he heard the word 'diving' however, it pulled him straight out of his daydream and back to the conversation.

He looked at Nella and asked, "When are we going to dive?"



A DIVE IN THE SEA

STORY BY PATRICK VAN HOESERLANDE ILLUSTRATION PETER BOSTEELS

It was going to be an adventurous day for Skubba and because he was nervous, he didn't sleep well the night before. Normally Skubba would dive with his instructor Nella, but today she was away with Fred. Skubba would instead dive with another instructor. That was not why he was nervous though. He was nervous because it would be his first dive in the sea. In saltwater.

Skubba's dad had loaded all his diving equipment into the back of the car. Skubba double checked to make sure all of his equipment was there, and ready. He was a real diver now and therefore responsible for his own equipment even when someone else took care of it. Everything was in good order and they could leave.

It was a long drive because they had to drive across the border into another country. They were going to the Netherlands.

"Am I diving abroad today?" asked Skubba.

His Dad laughed for a moment and confirmed that Skubba would indeed be diving abroad. Many divers went to dive in the Netherlands because it was easy to do and not that far away.

When they arrived at the dive site, Skubba saw a lot of cars. Some cars had divers and marine animals painted on them, and others advertised diving schools or shops. His Dad was right, this place was clearly very popular with divers.

They looked for Skubba's buddy's car. They would immediately recognise it because it had a large dive flag painted on it. Fred had told him that the dive flag was blue and white and it was missing a small triangle.

Skubba's Dad parked their car next to it and Skubba started unloading his equipment. He neatly placed everything down, side by side. When all his equipment was assembled, they prepared themselves for the dive. While Skubba put his suit on, he saw his buddy and instructor for this dive, Britt, check over everything. She told him that he needed to add a little more weight than usual to his belt because saltwater would make him float more. He made a mental note to tell Fred all about this later.



When they had both completed their preparations, Britt gave her briefing with a detailed explanation about the dive site. Once in the water, she connected them together with a buddy line and they checked each other's equipment. They briefly repeated a few dive signals and they were ready to go.

They saw all kinds of marine animals. Because he had never

dived in the sea before, everything was new to him. He saw an anemone that pulled in its tentacles as they swam by, a sea urchin, a little crab looking for protection in a small gap, a shrimp swimming away, a flatfish was moving like a flying carpet over the ground... and so much more.

When Britt signalled to tell him it was time to surface, Skubba obeyed, but he really wanted to dive longer. Together they went up and surfaced at the same time. He had barely just taken his regulator out of his mouth when he started to list everything he had seen. And he did not stop talking until he fell asleep on the car journey back.

It had been a fun and exhausting day. Skubba was so excited to next see Fred as he had so much to tell him.

REEF CHECK CALIFORNIA PRESENTS FINDINGS AT THE WESTERN SOCIETY OF NATURALISTS CONFERENCE

BY **DAN ABBOT**, REEF CHECK CALIFORNIA CENTRAL COAST MANAGER



Every year, the Western Society of Naturalists holds an important conference largely focused on west coast nearshore marine ecosystems. This year was the conference's 100th anniversary and Reef Check attended in force! Reef Check staff from north, central and southern California travelled to Ensenada, Mexico to present data collected by citizen science divers to the larger scientific community.

Tristin McHugh presented data on the status of North Coast fish populations in the five years after the onset of Sea Star Wasting Disease and the phase shift of that region's kelp forest to urchin barrens. Fish populations have varied by location and by species but interestingly, many species appeared to undergo a big increase around 2016 before dropping back down to historic levels this year. The cause of this apparent spike in populations is so far a mystery and Reef Check is going to be studying this phenomenon going forward.

Dan Abbott presented data collected by

Reef Check's team of volunteer divers on the varied response of kelp forest ecosystems to environmental stressors that have occurred off the California coast the last few years, including the loss of sea stars, marine heatwaves, and the dramatic increase in the purple urchin population. Responses in kelp forests to these events have varied from the North Coast where there has been an almost complete loss of kelp, to Big Sur where there has been little change and kelp forests remain entirely intact. Along the Monterey Peninsula and in Carmel Bay responses were mixed with some sites becoming urchin barrens, some sites remaining kelp forests, and some sites becoming a mosaic of barren and forest areas. Most interesting are sites along the outer peninsula that went from being a forest of giant kelp, to a complete urchin barren for a number of years, back to a kelp forest but now dominated by the canopy-forming bull kelp.

Selena McMillian gave a talk on how monitoring programs have to adapt their

protocols to capture the nature of a changing ocean. Examples she gave included Reef Check expanding the list of species it counts by adding previously rarely seen organisms that have become much more common either due to range expansions or species invasions. Selena also talked about how protocols that accurately characterise an ecosystem in one area may not accurately characterise a similar ecosystem in a different area. In particular, she mentioned kelp forests in the southernmost part of the state where some kelps exhibit different growth forms or occur deeper than in the rest of the state, requiring Reef Check to adapt its protocols so that these areas are recorded as the lush areas of kelp that they are.

In addition to presenting data collected by citizen scientists, Reef Check's staff was able to engage and collaborate with other marine scientists to further our understanding of California's kelp forests and the changes these ecosystems are experiencing.

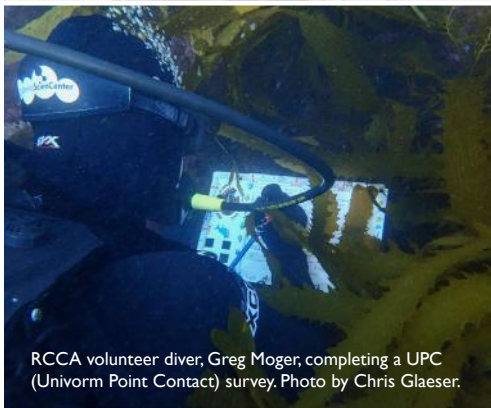
BACKSIDE OF CATALINA TRIP

OFFERS UP EPIC CONDITIONS AND IMPORTANT DATA

BY **SELENA MCMILLAN**, REEF CHECK CALIFORNIA SOUTHERN CALIFORNIA MANAGER



Photo by Rob McClelland



RCCA volunteer diver, Greg Moger, completing a UPC (Univorm Point Contact) survey. Photo by Chris Glaeser.



Horn Shark. Photo by Chris Glaeser.



Giant Kelp. Photo by Chris Glaeser.

We did it again! The Reef Check California trip to the Backside of Catalina Island for 2019 was a tremendous success!

On the weekend of November 23rd and 24th, thirteen volunteer divers completed surveys at all 5 sites located inside and outside of the Marine Protected Areas (MPAs) along the far coast of Catalina Island. We were also able to exchange temperature loggers at 3 of the sites for our Climate Change Monitoring Program.

We boarded the recreational dive boat, the Bottom Scratcher, Friday evening to cruise overnight to the backside of Catalina Island.

Due to recent storms, we were surprised to wake up to epic conditions with extremely calm seas, clear weather; and, relatively, little swell. It was magical!

The conditions underwater were even better and made our work very easy and enjoyable. The water was warm at about 64°F (17°C) and the visibility was incredible! We had at least 10 metres (about 33 feet) at most of our sites. We worked our way along the dramatic coastline from east to west, working hard, but also having a wonderful time. We gathered information on tons of fish, invertebrate and kelp species and even had a few sea lions

and a couple of harbour seals join us during our dives. And, of course, the trip would not have been complete without a couple of magnificent sunsets.

Without the incredible work of the amazing volunteers that joined us for this adventure, the important information collected on these unique and dynamic rocky reefs would not have been possible. Thank you to all of these hardworking folks, the crew of the Bottom Scratcher, and Captain Kevin Bell for a fantastic trip! And we cannot forget our wonderful sponsor, Southern California Edison, for their support of these efforts.

ITALIAN ECODIVER

DIVES WITH PURPOSE IN INDONESIA

BY **GIULIA ZINI, REEF CHECK ECODIVER** PHOTOGRAPHY **REEF CHECK ITALY**



It's a cold December morning in Italy. Looking out of the window, a thick fog is enveloping everything it meets, but my mind races back and I immediately remember an image of a coral garden. Just two months prior, on the other side of the world, I opened my eyes underwater and enjoyed a new landscape I had never seen before: through my mask I explored the seafloor in front of Bangka, an island in Sulawesi, Indonesia at the centre of what is called the Coral Triangle.

Together with other young marine biologists from all over the world, we went there, sharing the same great passion and the same goal: to learn more about the fascinating world of corals, which are among the most threatened ecosystems in the world. Humans, directly or indirectly, are responsible for overfishing, water pollution, climate change, along with other factors. We went to Indonesia to research and find out more about how to protect coral reefs from these threats, because we want to save the oceans we love. That's why we participated in this workshop, that's why we applied and travelled for so long – some

more, some less – before finally arriving in this paradise, and it absolutely is. Believe me.

In Bangka, we alternated between theoretical lessons, seminars and sea sessions, allowing us to put our knowledge into practice. We learned how to distinguish the species of coral, methods to measure their health and how to estimate bleaching, and more. These are methods designed by Reef Check for volunteers. Citizen science encourages ordinary people to participate in scientific research, providing the scientific community with important data, which are then made available to everyone. I think research should not be confined to the scientific community. It's important to share the results with the community; otherwise, discoveries remain only relevant for science and not the general public. Conservation must not be the sole business of conservationists; it must be achieved by everyone or we risk not being able to reach our goals. Thus, I believe it's important for people to contribute in whatever way they can; a good start would be participating in projects such as the one conducted by Reef

Check in tropical and temperate seas.

Reflecting now, more than two months later, I would love for anyone to witness what I experienced in Indonesia. The days were intense – seminars and dives occupied most of our time – and I was always eager to arrive the next day and learn more so that I could apply the new skills on a dive; utilise this newly acquired awareness and see things with new eyes. Things which were there before now appear differently, and a profound appreciation comes with knowledge.

I have met so many young people in Indonesia who had a strong, likewise desire to learn and this experience, on the other side of the world, helped me grow. This is what we need: an ongoing learning process. We must continue conserving the oceans and we can achieve this goal with the help of people all around the world who have the same hope. I will treasure this experience wherever I'll go which will remain indelible in my memory. Today, I feel grateful to be able to share this experience with you.

2019 YEAR IN REVIEW

OUR REEFS NEED YOUR HELP

BY **JAN FREIWALD, EXECUTIVE DIRECTOR**



Thanks to all our friends and supporters help, Reef Check has achieved its goals in education, research and conservation in 2019. We could not have done this work without you!

Our education and citizen science programmes have grown worldwide and hundreds of volunteers have worked tirelessly for the protection of reefs from the devastating effects of overfishing, pollution and climate change. While we have seen many negative impacts on our reef ecosystems, we also have some good news to report. Twenty years of Reef Check data showed that corals can now withstand higher temperatures than they could a decade ago, suggesting they are becoming resistant to the effects of rising water temperatures. In California, despite large stretches of the coast still being devastated by the loss of kelp forest, we have also seen local recoveries of kelp forest habitats.

We are very grateful to you for contributing

to our successes. Here are a few highlights of what your support made possible in 2019:

- We certified over 800 volunteer citizen scientists and 20 Trainers in coral or kelp forest monitoring in 21 countries around the world and here in California;
- We completed over 250 coral reef surveys in 17 countries and over 100 surveys of kelp forests and marine protected areas in California;
- We conducted seven EcoExpeditions – two in California to the Northern Channel Islands and along the Big Sur coast, and five worldwide to Colombia, Indonesia, Madagascar and the Maldives;
- We taught almost 300 middle & high school students in Los Angeles about the oceans and the threats they face through our EMBARC marine biology education programme;

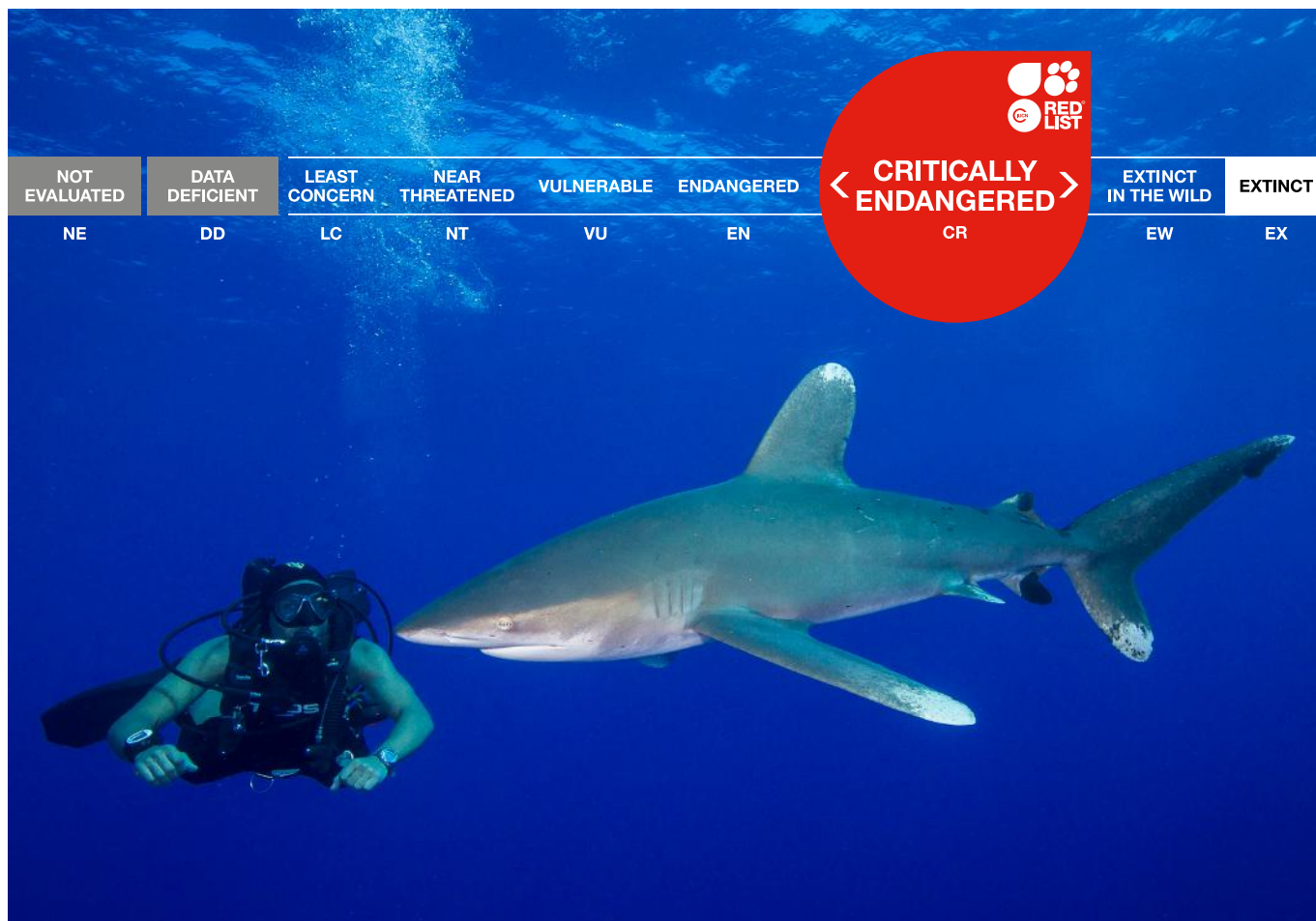
- We started a partnership with Outward Bound Adventures to provide marine science education and scuba diving training to urban youths in Los Angeles County;
- A group of dedicated volunteers in central California has started experiments with purple urchins to see what can be done about the loss of kelp forests;
- Reef Check Maldives found against expectations that corals are showing some resilience, adaptability and even recovery from a massive die-off in 2016.

All of these efforts will continue into next year and as we look forward to 2020, we need your help to continue Reef Check's global efforts to educate young people and to conserve the reefs that we all depend on. Please consider ending 2019 with a tax-deductible contribution to Reef Check. Your generous contributions make our work possible.

FEATURE CREATURE

OCEANIC WHITETIP SHARK (*CARCHARHINUS LONGIMANUS*)

FEATURE **IUCN RED LIST 2019** PHOTOGRAPHY **PHILIPPE LECOMTE**



RED LIST CATEGORY & CRITERIA: **CRITICALLY ENDANGERED**

Scientific Name: *Carcharhinus longimanus*

Synonyms: *Squalus longimanus* Poey, 1861

Common Names:

English: Oceanic Whitetip Shark, Whitetip Oceanic Shark, White-tipped Shark, Whitetip Shark

French: Requin Océanique

Spanish: Tiburón Oceanico

JUSTIFICATION

The Oceanic Whitetip Shark (*Carcharhinus longimanus*) is a large (to 350 cm total length) wide-ranging, oceanic species of tropical and temperate seas worldwide with a preference for surface waters, though it has been reported to depths of 1,082 m. It has litters of 1-15 pups and likely has a biennial reproductive cycle. The species is caught globally as target and bycatch in pelagic large and small-scale longline, purse seine, and gillnet fisheries and is often retained for the meat and fins, unless regulations prohibit retention. The species has a high catchability due to its preference for surface waters and its inquisitive nature. Steep population declines have occurred in

all oceans. The Oceanic Whitetip Shark was once one of the most abundant pelagic shark species in tropical seas worldwide but is now rare in some regions. The global population is estimated to have undergone a reduction of >98%, with the highest probability of >80% reduction over three generation lengths (61.2 years). Therefore, the Oceanic Whitetip Shark is assessed as Critically Endangered A2bd.

PREVIOUSLY PUBLISHED RED LIST ASSESSMENTS

2015 – Vulnerable (VU)

2006 – Vulnerable (VU)

2000 – Lower Risk/Near Threatened (LR/NT)

GEOGRAPHIC RANGE

Range Description: The Oceanic Whitetip Shark occurs worldwide in tropical and temperate waters (Last & Stevens 2009, Ebert et al. 2013).

Country Occurrence: **Native:** American Samoa; Angola; Anguilla; Antigua and Barbuda; Argentina; Aruba; Australia; Bahamas; Bangladesh; Barbados; Belize; Benin; Bermuda; Bonaire, Sint Eustatius and Saba; Brazil; British

Indian Ocean Territory (Chagos Archipelago); Brunei Darussalam; Cabo Verde; Cambodia; Cameroon; Cayman Islands; China; Christmas Island; Cocos (Keeling) Islands; Colombia (Colombia (mainland), Colombian Caribbean Is.); Comoros; Congo; The Democratic Republic of the; Cook Islands; Costa Rica; Côte d'Ivoire; Cuba; Curaçao; Djibouti; Dominica; Dominican Republic; Ecuador (Ecuador (mainland), Galápagos); Egypt; El Salvador; Equatorial Guinea; Eritrea; Fiji; France (Clipperton I., France (mainland)); French Guiana; French Polynesia; Gabon; Gambia; Ghana; Grenada; Guadeloupe; Guam; Guatemala; Guinea; Guinea-Bissau; Guyana; Haiti; Honduras; Hong Kong; India; Indonesia; Israel; Jamaica; Japan; Kenya; Liberia; Macao; Madagascar; Malaysia; Maldives; Marshall Islands; Martinique; Mauritania; Mauritius; Mexico; Montserrat; Morocco; Myanmar; Nauru; New Caledonia; New Zealand; Nicaragua; Niue; Northern Mariana Islands; Oman; Pakistan; Palau; Panama; Papua New Guinea; Peru; Philippines; Pitcairn; Portugal (Azores, Madeira); Puerto Rico; Réunion; Saint Barthélemy; Saint Helena, Ascension and Tristan da Cunha; Saint Kitts



and Nevis; Saint Lucia; Saint Martin (French part); Saint Vincent and the Grenadines; Samoa; Sao Tome and Principe; Saudi Arabia; Senegal; Seychelles; Sierra Leone; Singapore; Sint Maarten (Dutch part); Slovenia; Solomon Islands; Somalia; South Africa; Spain (Canary Is., Spain (mainland), Spanish North African Territories); Sri Lanka; Sudan; Suriname; Taiwan, Province of China; Tanzania, United Republic of; Thailand; Togo; Tokelau; Tonga; Trinidad and Tobago; Turks and Caicos Islands; Tuvalu; United States (Hawaiian Is.); United States Minor Outlying Islands (Johnston I., Wake Is.); Uruguay; Vanuatu; Venezuela, Bolivarian Republic of; Viet Nam; Virgin Islands, British; Virgin Islands, U.S.; Yemen.

FAO Marine Fishing Areas: Native: Atlantic - western central, Atlantic - eastern central, Atlantic - southwest, Atlantic - southeast, Atlantic - northwest, Atlantic - northeast, Indian Ocean - western, Indian Ocean - eastern, Pacific - southeast, Pacific - western central, Pacific - eastern central, Pacific - northwest, Pacific - southwest.

POPULATION

There is no data available on the global population size of the Oceanic Whitetip Shark. Genetic studies suggest there may be some genetic structures between the Western Atlantic and the Indo-Pacific, however the data are preliminary and stock structures require further investigation (Camargo et al. 2016, Ruck et al. 2016, Young et al. 2017).

Population trend data is available from six sources: (1) standardised catch-per-unit effort

(CPUE) in the Northwest Atlantic (Young et al. 2017); (2) standardised CPUE in the Southwest Atlantic (Tolotti et al. 2013); (3) standardised CPUE in Hawaii (Brodziak and Walsh 2013); (4) stock assessment biomass in the Western Central Pacific Ocean (WCPO) (Rice and Harley 2012); (5) updated standardised CPUE in the WCPO (Rice et al. 2015); and, (6) standardised CPUE from the Spanish longline fishery in the Indian Ocean (Ramos-Cartelle et al. 2012). The trend data from each source were analysed over three generation lengths using a Bayesian state-space framework (a modification of Winker et al. 2018). This analysis yields an annual rate of change, a median change over three generation lengths, and the probability of the most likely IUCN Red List category percent change over three generations.

First, the observer CPUE time-series from the United States pelagic longline fishery for 1992–2015 indicated that the abundance in the Northwest Atlantic had declined from the 1990s to 2000s, after which it fluctuated but then remained relatively steady (Young et al. 2017). It was noted that fishing pressure had been present for decades prior to 1992 and that the species had likely experienced significant historical declines of 50 to 88% in the Northwest Atlantic and Gulf of Mexico, respectively (Young et al. 2017). The trend analysis of the same time-series for 1992–2015 (24 years) revealed annual rates of reduction of 4.3%, consistent with an estimated median reduction of 93.1% over three generation lengths (61.2 years), with the highest probability of >80% reduction over

three generation lengths. Although reported to have stabilised (Young et al. 2017), the annual rate of reduction in the time-series produced a high reduction when extrapolated beyond the length of the data time-series to three generation lengths.

Second, robust catch data from the South Atlantic are lacking (Young et al. 2017). Observer CPUE data from the Brazil longline fishery from 2004–2010 showed a slight increase in abundance, however the data are from a short time-series and were susceptible to changes in fishing strategy during those years (Tolotti et al. 2013). The trend analysis of the same time-series for 2004–2010 (7 years) revealed annual rates of increase of 13.9%, consistent with an increasing abundance over three generation lengths (61.2 years). These CPUE data are from a large area around Brazil, but they may not be representative of the entire South Atlantic region. A more comprehensive analysis of catch rates of Oceanic Whitetip Shark on longlines in the South Atlantic revealed steep declines of 85% in the average CPUE from 1980–2011 (Barreto et al. 2016), however because the data were not considered robust due to the low catch rates and large confidence intervals (R. Barreto unpubl. data), they were not analysed over three generations.

The third to the fifth data sources are all from the Pacific. Third, the observer standardised CPUE from the Hawaii-based pelagic longline fishery for 1995–2010 indicated a highly significant decline of 90% over the time-series (Brodziak and Walsh 2013). The trend analysis



of the same data for 1995-2010 (16 years) revealed annual rates of reduction of 16.3%, consistent with an estimated median reduction of 100.0% over three generation lengths (61.2 years), with the highest probability of >80% reduction over three generation lengths. Fourth, the stock assessment based on observer longline data from the WCPO for 1995-2009 indicated an 86% decline in spawning stock biomass and that the stock of Oceanic Whitetip Shark is overfished with overfishing occurring (Rice and Harley 2012). The trend analysis of the same time-series for 1995-2009 (15 years) revealed annual rates of reduction of 14.1%, consistent with an estimated median reduction of 100.0% over three generation lengths (61.2 years), with the highest probability of >80% reduction over three generation lengths. Fifth, updated standardised CPUE data from the WCPO observer longline data from 1996-2014 indicate continuing declines with the stock likely maintaining an overfished status (Rice et al. 2015). The trend analysis of the same time series for 1996-2014 (19 years) revealed annual rates of reduction of 5.3%, consistent with an estimated median reduction of 98.6% over three generation lengths (61.2 years), with the highest probability of >80% reduction over three generation lengths.

Sixth, the standardised CPUE from the Spanish longline fishery in the Indian Ocean from 1998-2011 was highly variable, influenced by the low-prevalence of the species in some

years, and not considered a plausible indicator of stock abundance (Ramos-Cartelle et al. 2012). The trend analysis of the same time series for 1998-2011 (14 years) revealed annual rates of reduction of 5.0%, consistent with an estimated median reduction of 92.9% over three generation lengths (61.2 years), with the highest probability of >80% reduction over three generation lengths. Data from the Japanese longline fishery in the Indian Ocean was not analysed due to unrealistic CPUE in the early years of the time-series, although in the latter years from 2003-2011, there is a generally decreasing trend (Yokawa and Semba 2012).

Further to the above CPUE trend analyses, in the Eastern Pacific, nominal catches of Oceanic Whitetip Shark in purse seine fisheries have declined by 80-95% from the late 1990s to 2009 (Hall and Roman 2013, Young et al. 2017). In the Arabian Seas region, the species is inferred to have declined by >80% over the last three generations (Jabado et al. 2017).

This species was historically one of the most abundant shark species in tropical seas worldwide, and regional trends indicate it has experienced significant historical declines across its range, likely continues to experience global declines in abundance, and it is now rare in some regions (Young et al. 2017).

Across the regions, the Oceanic Whitetip Shark was estimated to have severely declined in all

oceans, including the South Atlantic. To estimate a global population trend, the estimated three generation population trends for each region were weighted according to the relative size of each region; the two sources of WCPO data were used to generate two global trends that both gave essentially the same result. The overall estimated median reduction was 98-100%, with the highest probability of >80% reduction over three generation lengths (61.2 years), and therefore the species is assessed as Critically Endangered A2bd.

Current Population Trend: Decreasing

HABITAT AND ECOLOGY

The Oceanic Whitetip is one of the most widespread sharks, ranging across entire oceans in tropical and subtropical waters (Young et al. 2017). It is an oceanic-epipelagic shark usually found far offshore in the open sea with a preference for surface waters, but it has been reported to depths of 1,082 m (Bonfil et al. 2008, Tolotti et al. 2015, Weigmann 2016). It reaches a maximum size of 350 cm total length (TL), possibly 395 cm TL; males mature at 168-198 cm TL and females at 175-224 cm TL (Ebert et al. 2013, Weigmann 2016, D'Alberto et al. 2017). Reproduction is placental viviparous with litter sizes of 1-15 pups and litter size increases with female size; gestation period is 10-12 months with most likely a biennial reproductive cycle and size at birth of 57-77 cm TL (Seki et al. 1998, Bonfil et al. 2008, Last and Stevens 2009, Clarke et



al. 2015). Consequently, the rate of population increase is very low and has been estimated at 0.039-0.067 (Smith et al. 2008), or 0.110 (Dulvy et al. 2008), although these may be overestimates as they are based on younger age-at-maturity and maximum age than has since been reported. There is regional variation in age estimates: female age-at-maturity is 4.5-8.8, 6.5, and 15.8 years, and maximum age is 11, 17, and 24.9 years in Northwest Pacific, Southwest Atlantic, and Western Central Pacific, respectively (Seki et al. 1998, Lessa et al. 1999, Liu and Tsai 2011, Joung et al. 2016, D'Alberto et al. 2017). Studies have verified annual periodicity of band formation but none have yet validated the age estimates. Using the precautionary approach, the older age-at-maturity of 15.8 years and maximum age of 24.9 years are used to calculate a generation length of 20.4 years across all regions.

Systems: Marine

USE AND TRADE

The species is used for its meat, fins, liver oil, and skin (Ebert and Stehmann 2013). The Oceanic Whitetip Shark accounted for 1.8% in 1991-2001 and 0.6% in 2014, of the fin imported in Hong Kong (Clarke et al. 2006a, Fields et al. 2018). In some regions, the meat of juvenile Oceanic Whitetip Shark is sold fresh for human consumption at local markets.

THREATS

The Oceanic Whitetip Shark is caught globally

as target and bycatch in commercial and small-scale pelagic longline, purse seine, and gillnet fisheries. Most of the catch is taken as bycatch of commercial pelagic fleets in offshore and high-seas waters (Camhi et al. 2008). It is also captured in coastal longlines, gillnets, trammel nets and sometimes trawls, particularly in areas with narrow continental shelves (Camhi et al. 2008, Martinez-Ortiz et al. 2015). The species is often retained for fins, and sometimes, the meat (Clarke et al. 2006a, Clarke et al. 2006b, Dent and Clarke 2015, Fields et al. 2018), unless regulations prohibit retention. Under-reporting of catches in pelagic and domestic fisheries is likely (Dent and Clarke 2015). At vessel mortality of 34.2% was estimated on Portuguese longlines in the Atlantic (Coelho et al. 2012). The species has an inquisitive nature that increases its catchability (Ebert et al. 2013).

CONSERVATION ACTIONS

The success of actions agreed through international wildlife and fisheries treaties depends on implementation at the domestic level; for sharks, such follow up actions have to date been seriously lacking. The Oceanic Whitetip Shark was the first (and is still currently the only) shark species to be subject to prohibitions on retention, transshipment, storage, and landing by all four major Regional Fishery Management Organisations (RFMOs) focused on tuna fisheries: the International Commission for the Conservation of Atlantic Tunas (2010), the Inter-American Tropical Tuna Commission (2011), the Western and

Central Pacific Fisheries Commission (2012), and the Indian Ocean Tuna Commission (2013). In 2013, the Oceanic Whitetip Shark was added to Appendix II of the Convention on International Trade in Endangered Species (CITES), which requires exports from CITES Parties to be accompanied by permits based on findings that parts are sourced from legal and sustainable fisheries. In 2018, the Oceanic Whitetip Shark was added to Annex I of the Convention on Migratory Species (CMS) Memorandum of Understanding (MoU) for Migratory Sharks, even though the species is not (yet) included on the CMS Appendices. The MoU is aimed at facilitating regional conservation of listed shark and ray species. To allow recovery, it is recommended that all Oceanic Whitetip Shark retention and landings be prohibited, in line with tuna RFMO obligations, at least as long as the global population is classified as Critically Endangered or Endangered. Initiatives to prevent capture, minimise bycatch mortality, promote safe release, and improve catch (including discard) reporting are also urgently needed, as is full implementation of additional commitments agreed through international treaties.

CITATION

Rigby, C.L., Barreto, R., Carlson, J., Fernando, D., Fordham, S., Francis, M.P., Herman, K., Jabado, R.W., Liu, K.M., Marshall, A., Pacoureau, N., Romanov, E., Sherley, R.B. & Winker, H. 2019. *Carcharhinus longimanus*. The IUCN Red List of Threatened Species 2019. www.iucnredlist.org

EDA WAS ESTABLISHED ON THE 23rd OF FEBRUARY 1995 IN DUBAI, UAE



A LOOK AT A SELECTION OF EDA'S ANNUAL CLEANUP ARABIA EVENTS





1995

1996

1997

1998

1999



EDA IS BORN

The Emirates Diving Association (EDA) was established by Federal Decree No. (23) Under Article No. (21) on 23/02/1995 and chose Dubai as its base.

EDA is a non-profit regulatory body under the UAE Federal Ministry of Youth & Sports, governing all aspects of diving relating to recreation, commercial, and scientific activities.

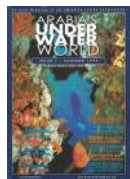
EDA CLEANS UP

EDA has become highly active in beach and dive clean-ups and inspires a strong following of environmental divers.



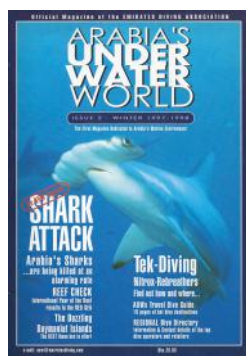
EDA'S FIRST MAGAZINE

EDA dedicates the first magazine to Arabia's Marine Environment. Arabia's Underwater World is published as the Official Magazine of the Emirates Diving Association, and is managed as an independent quarterly magazine by ICA (Innovative Creative Advertising) Abu Dhabi. Retail Price: AED20.



EDA'S MAGAZINE

Issue 2 was sadly the last issue produced from Winter 1997-1998.



CLEAN-UP THE WORLD DAY

EDA held a string of clean-up dives in different locations around the country.

EDA GOES ONLINE

EDA gets an online platform and gets a dedicated website.

EDA GETS A NEW LOGO

To conserve, protect and restore the UAE's marine resources by emphasising and promoting the marine environment and environmental diving.



EDA'S RESPONSIBILITIES ARE:

- Legislate all diving activities in the UAE.
- Ensure environmentally respectful diving practices in all EDA Members.
- Promote and support the diving industry within the UAE by coordinating the efforts of the diving community.
- Promote diving safety in the commercial and recreational diving fields through standardisation of practices.
- Promote and preserve historical aspects of diving within the gulf region and enhance environmental education to diving and non-diving communities through EDA projects and events.

EDA STEPS BACK

TO LOOK AT 25 YEARS OF ACHIEVEMENTS

FEATURE **ALLY LANDES**

EDA was established on the 23rd of February 1995 in Dubai, in the United Arab Emirates to conserve, protect and restore the UAE marine resources by emphasising and promoting the marine environment and environmental diving.

As a nation of seafarers and pearl divers, the UAE is historically and socially indebted to its seas. The timeless heritage and traditions as people dependent on fisheries and seaborne trade, have contributed enormously towards the regional prosperity and development.

EDA came into being through the mindset of the pearl diving history, which developed an intimate relationship with the natural world.

Many seafarers, divers and fishermen had the instinctive ability to read every wave, to hear the wind and to feel the forces of nature. The old ways made way for the new and the quest for prosperity enhanced a desire to further knowledge and understanding. As more and more scientists and divers explored the UAE's coastline, the information they unveiled became paramount to the government's efforts towards ensuring the survival of the seas.

Divers are aware of the fragility of the oceans and EDA wants to encourage the diving community to use their knowledge in helping others understand the needs of our marine world. EDA is fully committed to creating a harmonious and healthy diving environment so that future generations will continue to enjoy the same marine life and experiences that we have.

Faraj Butti Al Muhairbi – EDA's Late President



2000

DUBAI POLICE CLEAN-UP

The first underwater dive clean-up in partnership with Dubai Police is run at the Dubai Creek.



CROWN-OF-THORNS PROJECT

EDA started the Crown-of-thorns Project with a \$3,000 donation from the United Nations Environment Programme – The Regional Office of West Asia (UNEP-ROWA).



2001

PEARL DIVING IN ABU DHABI
EDA introduces educational Pearl Diving expedition activities.



TREASURE HUNT

EDA introduces a treasure hunt competition for the members.



2002

EDA'S FIRST GALA DINNER
EDA hosts its first Gala Dinner to celebrate the annual achievements, and to thank the EDA sponsors, partners and members for all of their support.



2003

TREASURE HUNT

EDA holds another very popular and successful treasure hunt.



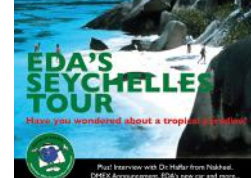
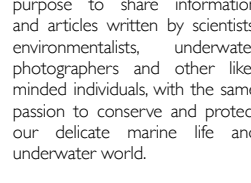
2004

EDA ACCREDITED BY UNEP
EDA is accredited as a non-governmental organisation (NGO) by the UNEP Governing Council/ Global Ministerial Environment Forum (GC/GMEF).



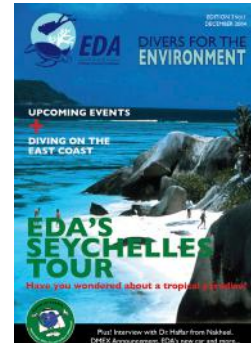
EDA'S FIRST MONTHLY TALK

EDA introduces monthly talks for members to hear prominent figures in Dubai speak about topical and innovative subjects related to the marine environment.



THE FREE MAGAZINE ISSUE

EDA introduces the first free quarterly magazine issue of Divers for the Environment, with the purpose to share information and articles written by scientists, environmentalists, underwater photographers and other like-minded individuals, with the same passion to conserve and protect our delicate marine life and underwater world.



CELEBRATING

25
YEARS



2005

EDA'S 10th ANNIVERSARY

EDA held a six day global environmental gathering in association with the Naturalization & Residency Administration Dubai Immigration, in collaboration with the United Nations Environment Programme, the Regional Office of West Asia (UNEP-ROWA).

EDA'S FIRST DIVE SHOW

EDA hosts the first ever UAE dive show, the Dive Middle East Exhibition (DMEX) on the 10-15 May 2005 at the Madinat Convention Centre in Dubai, organised by the conference and event management company, NettResults.



EDA GALA DINNER

EDA hosts their annual Gala Dinner to coincide with DMEX.

REEF MONITORING PROJECT

EDA upgrades the Crown-of-thorns Project from 2000, to the quarterly Reef Monitoring Project, registered with Reef Check International to regularly dive and monitor the marine species of the region. The Mooring Buoy Project was introduced alongside it, to protect the UAE's dive sites.

PEARL DIVING PROJECT

EDA introduces a Pearl Diving Awareness Project in order to conserve and promote the UAE's diving heritage.

I*INTERNATIONAL CLEANUP

EDA and 28 EDA Members participated in the First International Tsunami Cleanup Group in Thailand, organised by Thai Airways from the 15-20 June.

2006

MAJID AL FUTTAIM

MAF provides EDA with financial support as part of their ongoing commitment towards sustainable development throughout the UAE.



FORD GRANT

EDA receives a grant of \$5,000 to train and educate divers on the conservation of the UAE's East Coast coral reefs.

MINISTRY OF ENVIRONMENT AND WATER

The Ministry of Environment and Water signed a Memorandum of Understanding (MoU) with EDA to further protect the UAE's shorelines and reefs.

SAFETY COMMITTEE

A Safety Committee was created for EDA to set universal safety standards in promoting safe recreational diving, to be managed by the UAE dive centres.

CLEAN UP ARABIA'S JOINT REGIONAL FORCES

Clean Up Arabia was joined by Oman, Kuwait and Bahrain, making it the largest clean-up campaign to date in 2006.

EDA SOCIALS

Monthly Talks is replaced with the all new EDA Socials, events welcoming new members with current members to get together to gain knowledge on topics relevant to the diving community.

CRAMP TRAINING BEGINS

The Reef Monitoring Project appoints committee members for training and becomes the Coral Reef Monitoring & Awareness Programme (CRAMP).

2007

DMEX JOINSTHE BOAT SHOW

The Dive Middle East Exhibition takes place alongside the Dubai International Boat Show for the first time at the Dubai International Marine Club, Mina Seyahi, organised by the Dubai World Trade Centre.



DUBAI PROPERTIES SUPPORT

Dubai Properties becomes EDA's newest financial supporter towards the conservation and protection of the UAE's marine resources.

ENVIRONMENTAL GUIDELINES

EDA, ICRAN, CORAL, Project AWARE, IFAW, WIDECAT, The Ocean Conservancy and the Dubai Education Council, with the financial support from MAF and DP, English and Arabic guidelines were created on the Good Environmental Practices concerning Diving, Snorkelling, Whale and Dolphin Watching, Turtle Watching, and Underwater Cleanups.



GO GREEN DUBAI

EDA supported Go Green Dubai for 'Live Earth' during the latest awareness campaign on global warming at Dubai Festival City (DFC).

RESIDENT MARINE BIOLOGIST

EDA introduces new Resident Marine Biologist to the team.

2008

CRAMP JOIN ICRAN/IYOR

The Coral Reef Monitoring & Awareness Programme (CRAMP) join the ICRAN Programme to ensure the success of IYOR 2008 activities in the UAE.



EDA REPRESENTS THE UAE

EDA joined the Editorial Board of the Indian Ocean Turtle Newsletter (IOTN) as country representative, becoming the 15th board member among representatives from Africa, Asia and the Middle East to submit information on the turtle research being done in the UAE.

EDA JOINS FACEBOOK

EDA creates a page on Facebook in order to communicate directly with members, diving enthusiasts, and keep in the loop with other relevant pages and sites that are in the interests of the EDA mission.

DIBBA MANAGEMENT DIVES

EDA's Marine Biologist introduces a three months Dibba Rock management plan, with dives every Tuesdays and Wednesdays.

IYOR DIVES

CRAMP and IYOR 2008 conduct reef monitoring dives at Dibba Rock every first Friday of the month from Sept. to Dec.

MUSANDAM EXPEDITIONS

EDA's Marine Biologist gets invited to study the reefs of the Musandam and start the first EDA Reef Check and Biosphere Expeditions.



2009

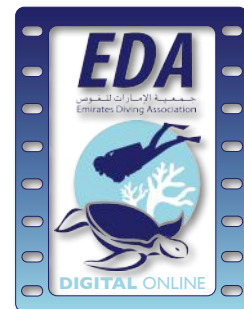
REEF CHECK TRAINING

EDA becomes a Reef Check (RC) Training Facility with EDA's Marine Biologist as the resident RC Course Director. Reef Check training opens to all diving EDA members.



DIGITAL ONLINE

Introducing EDA's brand new annual event – Digital Online, an Underwater Photography Contest – to develop the human interaction with the underwater environment and highlight the beauty of its flora and fauna; to gather information on the number of underwater photographers in the UAE (both professional and amateur); and to discover new promising underwater photographers in the UAE.



2015

EDA'S 20th ANNIVERSARY

20 years of marine conservation.



SHARKS & RAYS SLATE GIFT

EDA and the Gulf Elasmobranch Project teamed up to bring EDA members a very unique gift to take along on their dive trips. The Arabian Sharks & Rays slate was made in support of shark conservation in the region and to help divers identify the species found in the Arabian Gulf.

EDA'S NEW OFFICES

After having been located in the Diving Village in the Heritage Village by Shindha Tunnel for the past 19 years since 1997, EDA relocated its headquarters to the Al Hudaiba Awards Buildings in Jumeirah 1, Block B, Second Floor, Office 214.



2017

CUA REBRAND REVISED

Cleanup Arabia's campaign gets a new and final makeover! The campaign is made up of EDA members and stakeholders that participate in dive site and coastal clean-ups which help shape their consciousness concerning marine litter and saying no to single-use plastics! Inspiring change to make a difference together.



2018

EDA AND THE MOCCA

The Ministry of Climate Change & Environment signed an MoU with EDA to enhance the collaboration in preserving and rehabilitating the marine environment and sustaining its resources.



UNITED ARAB EMIRATES
MINISTRY OF CLIMATE CHANGE
& ENVIRONMENT

DIGITAL ONLINE'S BOOK

EDA has compiled a beautiful collection of 292 members' best Digital Online entries from 2011-2017, showcasing a limited edition, hardback book.

2019

CUA LED BY SUSTAINABILITY

Cleanup Arabia puts sustainability at the forefront and has removed single use plastics from all of EDA's events.

DMEX GETS A REBRAND

The Dive Middle East Exhibition becomes the Dive MENA Expo – Reformed and Rejuvenated.



2010

EDA'S 15th ANNIVERSARY

15 years of marine conservation.



UPDATING EDA'S LOGO

EDA's logo gets a revamp.



DIVE EQUIPMENT MARKET

EDA holds the first Second Hand Dive Equipment Market at the Diving Village by Shindagha Tunnel for those looking to sell their equipment and those looking to purchase second-hand material.

EDA MOVIE NIGHTS BEGIN

EDA partners with Cinestar Cinemas at Mall of the Emirates (soon to become VOX Cinemas) in order to screen environmental and educational documentaries for members.



CUA LOGO REBRAND

Clean Up Arabia's logo gets a new look.



2011

FORD GRANT

EDA receives a grant of \$9,000 towards the preservation of the UAE's coral reefs from the Ford Motor Company's Conservation and Environmental Grants.

Ford Motor Company



REEF CHECK TRAINERS

EDA's Marine Biologist, a certified Reef Check Course Director, offers training for wannabe Reef Check Trainers.



FORD GRANT

EDA receives another grant of \$10,000 towards the importance of grazers for healthy reefs in extreme environments from the Ford Motor Company's Conservation and Environmental Grants.

EDA'S CORAL REEF PROJECT

EDA's marine biologist started the new Coral Reef Project to help understand how elevated temperatures affect coral reef communities and their grazers.

2012

DIGITAL ONLINE REBRAND

Digital Online's logo gets a face lift, and video gets an opening category, becoming the Underwater Photography and Film Competition.



CUA AND CSR EVENTS

EDA starts offering private Cleanup Arabia Events to companies in search of CSR initiatives and team building activities. Coca Cola's Women's Linc Group cleaned up JBR Beach, collecting 2,407 items, (1,985 cigarette butts).



NYUAD WORKSHOP

EDA was invited to join the week long, 'Biology of Coral Reefs in Extreme Environments' workshop with the New York University Abu Dhabi (NYUAD), led by international scientists from Australia, the UK, USA, Saudi Arabia and the UAE, with the support from the Ministry of Environment and Water – Marine Environment Research Centre, Environment Agency Abu Dhabi, and the Fujairah Municipality. The workshop addressed how coral reef fauna counter and adapt to the harsh conditions of the Arabian Gulf, and how reef fauna may adapt to future climate change worldwide.

LOVE ART

EDA was involved with setting up an underwater photography exhibition from Digital Online entries for Deira City Centre's 'LOVE ART' event to raise awareness on the underwater world in order to protect the UAE's marine environment.

2013

WORKING WITH THE LOCAL AUTHORITIES

EDA has been working with local authorities in promoting diving to the younger generation in the hope to encourage them to become passionate about marine conservation. In collaboration with the General Authority of Sports and Youth Welfare, 24 students were invited to take part and received their PADI Open Water certifications.



الهيئة العامة لرعاية الشباب والرياضة
GENERAL AUTHORITY OF YOUTH & SPORTS WELFARE

NYUAD WORKSHOP

EDA was invited to join the 5 day, 'Conserving Coral Reefs in the Arabian Gulf: A Capacity Building Workshop' with the New York University Abu Dhabi, offering training in fundamental methods for surveying and monitoring coral reefs.

DIGITAL ONLINE EXHIBITION

The Digital Online Awards and Exhibition Night was held in the Gallery of Light, DUCTAC in Mall of the Emirates – for 24 hours only. This event held the largest number of photography entries submitted to the competition to date. Print Works, Digital Online's printing sponsor, printed all 143 images that were hung on display, filling every wall space available. This was an exhibition to be remembered.

PRINT WORKS



2014

MOU WITH AUD

EDA signed a Memorandum of Understanding (MoU) with the American University in Dubai (AUD) to collaborate and engage their media students with EDA events and projects as part of their university curriculum, and work experience.



NEW EVENT VENUE

EDA's Underwater Photography and Film Competition, Digital Online, now has a new annual venue in the Rotunda Gallery at the American University in Dubai.



FORD GRANT

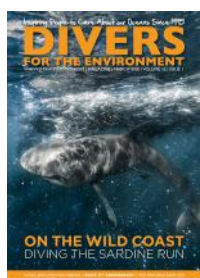
EDA receives a grant of \$5,750 towards 'Urchins Versus Fish: Who Will Help our Reef's Under Climate Change' from the Ford Motor Company's Conservation and Environmental Grants. This project's results will be invaluable in providing insight into the potential changes in herbivore guilds in the Arabian Gulf and how these may affect reef ecosystems in the future.



2020

FIRST FEMALE COVER STORY

Pier Nirandara becomes the first ever female cover story in Divers for the Environment – and to mark the first issue of 2020!



OUR GIFT TO YOU!

For EDA's 25th Anniversary, we are gifting all our renewing members our refillable water bottles to bring along to all your activities.



EDA'S NEW WEBSITE

Check out EDA's brand new websites' look and feel. We want to make it easier to follow us around. Tell us what you think!



EDA CONTINUES TO BE JUST AS BUSY: THE ANNUAL PREPS

EDA continues presenting to local schools to inspire the younger generation; organising special talks and presentations by guest speakers; sourcing new documentaries for our quarterly EDA Movie Nights with VOX Cinemas, running Digital Online – EDA's annual Underwater Photography and Film competition, and partnering with amazing prize sponsors for our inspiring photography and videography members; preparing for and consulting the annual Dive MENA Expo co-located at the Dubai International Boat Show; and planning our annual Cleanup Arabia campaign, as well as organising private Cleanup Arabia event CSR activities.

We are always outsourcing interesting and inspiring articles, beautiful illustrative photography, educational and environmental material, and sharing information for all levels of divers to include in our free quarterly divers magazine, Divers for the Environment.

Follow us on our social media platforms for relevant posts we share with info, tips and inspiration!

FEATURES

2010 Home



2011 Disney Earth



2016 Arabia's Sharks, A Journey of Discovery with a Q&A with Jonathan Ali Khan



2016 Of Shark and Man with a Q&A with Film-maker, David Diley



2017 Sea Shepherd Jeedara & Jairo with a Q&A with Natalie Banks



2018 Chasing Coral



2019 Revolution



2019 Sharkwater Extinction

2012 Requiem with a Q&A with Jonathan Ali Khan & Rima Jabado



2015 Mexico Pelagic



2017 A Plastic Ocean



2017 Lagoon of Lost Ships with a Q&A with Jesper Kjøller



2018 Sharkwater



2019 Blue



2019 Zayed's Antarctic Lights with a Q&A with Winston Cowie & Humaid Al Khanji



2020 Saving Jaws

JONATHAN ALI KHAN AN INSPIRATION

AND A LOSS TO THE NATURAL WORLD

FEATURE **ALLY LANDES**

JAK was a topside wildlife and underwater cameraman, producer, director and editor with a strong passion for the natural world having worked on a wide range of unique projects in the region, and was recognised as an authority on environmental, conservation and diving related issues.







LEFT: Jonathan Ali Khan (JAK), Sharkquest Arabia Project Leader, Director and Underwater Cinematographer. **RIGHT:** JAK, Dr. Ralf Sonntag and Al Reeve plan the anchorage sites enroute to the Northern Musandam. Photo by Ali Al Hafez.

JONATHAN ALI KHAN 1960-2019

Jonathan Ali Khan was respected and loved by so many people of the UAE, in the region that had been his home for 25 years. He was a great friend to EDA and was a part of the association's journey since 1997. It was an honour to have known and have worked by his side. Jonathan – or JAK as he was fondly known by his friends and colleagues – had a formidable story to share and one I am obliged to tell for those that did not know him well.

Sadly, JAK lost his life's battle to a complication from pneumonia. He was admitted into hospital in Dubai on the 26th of December 2019 with a severe lung infection and passed away 24 hours later, never regaining consciousness after his heart failed on the 29th of December. Our heartfelt condolences go out to his loving family, but we take comfort in knowing that JAK has found his peace now reunited back with his wife – his Jodybird – who also tragically died earlier in the year, in July 2019, from a cardiac arrest.

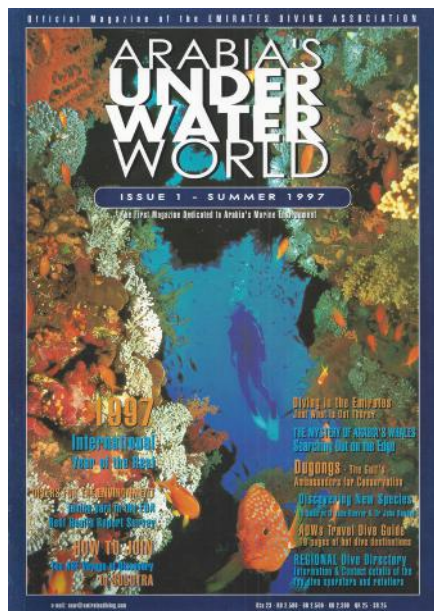
JAK'S WORK

JAK was a topside wildlife and underwater cameraman, producer, director and editor with a strong passion for the natural world having worked on a wide range of unique projects in the region, and was recognised as an authority on environmental, conservation and diving related issues.

His fascination with filming started after years of working as a photojournalist and shooting underwater stills. His primary interest was in marine subjects that led to the creation of Ocean World Productions in 2003. In 2008, JAK left Ocean World Productions in order to focus entirely on natural history TV development, leading to the creation of Wild Planet Productions.

JAK'S WORK WITH EDA

JAK created the first 'Official Magazine of the Emirates Diving Association – Arabia's Underwater World' in 1997. He had been an EDA Digital Online Judge since the competition began in 2009 and submitted his final scores last year – EDA will deeply feel his loss at this year's event.



ARABIA'S CYCLE OF LIFE

JAK's natural history TV project, the 12 part series, 'Arabia's Cycle of Life' reached 25 million viewers in the MENA region by broadcasting simultaneously on Showtime and Al Arabiya News. It later went on to Animal Planet Asia reaching another massive audience.

SHARKQUEST ARABIA

In the 2009 December issue of 'Divers for the Environment', JAK announced the first

part of a 3 part series of magazine articles on his project Sharkquest Arabia to produce two 47 minute documentary films on the status of Arabia's sharks. One film was to be based on the natural history and distribution of sharks generally throughout the seas of Arabia, highlighting shark hotspots, focusing on the status of research and the scale of shark fisheries in relation to the Far East. The second film was dedicated to the whale sharks that frequent our waters and was to explore the theory that this region is in fact part of the main nursery and pupping grounds for the Indian Ocean population.

Part 2 was published in the June 2010 magazine issue following the difficulties of the expedition in Sudan. With days of delays from getting out into the field – being shammed into purchasing extortionate free filming permits and unexpected boat repairs in Port Sudan – the exploration finally got underway. Unfortunately, strong currents and the disappointment of not having any shark sightings – despite having researched the time of year to visit on good authority from local dive operators – became taxing. There was some light at the end of the tunnel though.

The project was in production for a little over 4 years, made possible with a grant from the Emirates Foundation (Abu Dhabi), IFAW (International Fund for Animal Welfare) and SOSF (Save Our Seas Foundation) and had some additional support from other UAE-based companies. Filming expeditions had been made to Sudan, Djibouti, the Maldives and the Musandam, with some additional filming trips in the UAE and Oman.

THE LAST WILDERNESS

In the September 2011 magazine issue, JAK



Digital Online 2012 – Ibrahim Al-Zu'bi, EDA's Executive Director with JAK who was a judge for the underwater photography & film competition since 2009. JAK with EDA's Head of the Technical Committee, Omar Al Huraiz. Photos by Ally Landes.

announced that Wild Planet Productions was working on pre-production and fundraising for what promised to be the flagship natural history TV series of all time featuring the UAE's remaining natural world. JAK took a break from his ongoing shark work to explain why "The Last Wilderness" would be an important project and provided us with an overview of this fascinating project, asking us all to help raise interest in order to find sponsorship.

The Last Wilderness of the UAE was a series of 12 natural history films documenting the wildlife, ecology and last remaining wilderness areas of the United Arab Emirates. Jonathan's interest in the subject was borderline obsessive, but natural history TV was to JAK the key to safeguarding Arabia's natural world.

CONFERENCES & WORKSHOPS

In December 2009 JAK held the first 2 day Arabian Sea Whale Shark Research Symposium and Workshop at Le Meridien Al Aqah Beach Resort designed to introduce the regional status of whale sharks into a platform of debate and presentations to Arab World counterparts, followed by another in 2010.

He also worked with David Robinson to launch the region's first Foto ID Database called Sharkwatch Arabia (www.sharkwatcharabia.com) designed to involve the Arab World's diving communities.

In October 2012, JAK held the Shark Conservation in Arabia Workshop in collaboration with IFAW, which was held under the auspices of the UAE's Ministry of Environment & Water.

ARABIA'S SHARKS: A JOURNEY OF DISCOVERY

A story about Arabia's shark research and the growing awareness of the region's shark issues. Set against the region's shark fin trade, Arabia's first shark awareness project embarked on expeditions to Sudan, Oman, Djibouti and the Arabian Gulf, revealing new and emerging information about whale sharks and assessing the status of sharks in the seas surrounding Arabia.

On the 3rd of October 2016, JAK invited EDA's

members to a one-off screening of the film which was shown at the Dubai Mall's Reel Cinemas with Dubai Aquarium & Underwater Zoo, as well as the documentary's camera equipment Sponsor, Canon Middle East FZ LLC. The film had previously been aired on the Discovery Channel, exclusively on OSN during Shark Week.

A Q&A was held after the 56 minute film with JAK himself on the production and challenges encountered to completing a project of this genre and topic. He was joined by guest speaker Paul Hamilton from the Dubai Aquarium and their role in the documentary and Munther Ayache from Canon, in regards to the production's camera equipment used.

JAK'S LIFE WORK'S FUNDING

Frustratingly, JAK was limited to sponsorship as his only budgetary support mechanism and this gravely set him back on completing many of his projects.

In his own words, "Where we really differ from the international players, is that at the heart of all of our own projects, we really care about the conservation message as our focus is on making our films to serve the additional purposes of educating people as part of an awareness outreach initiative on top of the entertainment values. For the internationals, it remains just about entertainment and filling programming quotas. For us, it's about trying to create the interest in regional TV channels to actually have programming quotas in the first place!"



JAK's screening of Arabia's Sharks, A Journey of Discovery and the Q&A panel. Photos by Ally Landes.



FINDING

MY CREATIVITY AND PURPOSE

FEATURE **EMMA SKINNER**

Throughout my life I have experimented with photography and creativity to explore the human experience of the ocean. I have been increasingly concerned about the number of endangered species and the human impact on marine life. This has driven me to research ways I can help, which led me to support Plastic Bank's initiatives around the world.







Break Free at Butterfly Reef

I am a British born artist currently living in Dubai with my husband and three children. I have a BSC in Biological Sciences and a diploma in Naturopathy but my first love has always been art and the ocean. Throughout my life I have experimented with photography and creativity to explore the human experience of the ocean. I have been increasingly concerned about the number of endangered species and the human impact on marine life. This has driven me to research ways I can help, which led me to support Plastic Bank's initiatives around the world.

I have a strong affinity with animals and the sea, which started from a very young age. I developed multiple aquariums at home before maintaining corporate aquariums in the UK and spending time working at Sea World, Florida and Taronga Zoo, Sydney.

While living in the UK, I set up a Mobile Zoo which I would take to schools, fairs, care homes and public events to teach people about ecology, the food chain, adaptation and animal care. What surprised me most, was the lack of awareness about the food chain, and how society has become disconnected from its sources of food. Education was a key theme

of our business, while also using social media to highlight the work we were doing.

Since moving to Dubai, I have been working on a series of paintings depicting the delicate balance of the ocean, the beauty of the animals within and the uncertainty of their future.

I have also donated time painting Ramadan Fridges and creating large scale live school art. This includes wall murals, graffiti and indoor displays working with classes of children and parents to create exciting backdrops for productions and performances.

HOW IT ALL STARTED

My mother and paternal grandfather were both artists. They encouraged me and my sister to be creative from a young age, and we explored various artistic avenues including painting, sculpture and photography. This was also the time I developed a love of the ocean, and by the age of 14, I owned three aquariums, bred and sold tropical fish and maintained multiple corporate aquariums.

Eventually however, my studies veered towards the sciences and so my creative endeavours were put on hold while I

developed my interests in biological sciences. Following completion of my university degree, I re-engaged with my creative side through photography.

After having children, I was concerned about their lack of connection with nature, so we started a smallholding in the UK; a miniature horse, pygmy goat, pigs, chickens and ducks were soon followed by invertebrates, reptiles and many rescue animals, which taught my children about animal care, the food chain and the life cycle of animals. This experience inspired me to teach other children and parents about the animal world, which resulted in 'Warescot Farm', the Mobile Zoo that I started with my neighbour.

This was a natural extension of my love of animals, and I've spent my life exploring ways of introducing nature to others; through public speaking about conservation, biodiversity and adaptation and studying Naturopathic Nutrition to help people understand the power of the natural world.

A family move to Dubai meant I had to leave my businesses behind in the UK, creating time and space to experiment with art.



With Brave Wings She Flies

THE JOURNEY

I spent months looking for inspiration after we moved. As a family, we regularly snorkel, paddle board and spend hours searching the beach for treasures. This reconnected me with my experiences in aquariums and the ocean life I was so obsessed with as a child. Seeing the plastic rubbish on the beaches and in the oceans also disturbed me, and I wanted to find a way to convey the message about the damage I was seeing. This led me to pick up a paintbrush again and to explore the aquatic world in my art.

I had so many ideas and inspirations that it was difficult to get them all down onto canvas fast enough. While my early pieces were smaller, I am now expanding onto large canvases that allow me to explore the interplay of sea, light and animals in more depth and variety. I paint every day, and once I am at my easel, all concept of time disappears.

MY CREATIVE STYLE

I work mainly in acrylics, and sometimes use resin, gold leaf, oils and dyes to accentuate certain features, particularly around light. I love the way light can fundamentally change perspective and the feeling of a piece; and

how shadow and movement can represent the fluidity of the ocean.

I am drawn to realism in paintings, but I prefer my pieces to include an aspect of fantasy. I choose a wider range of tones to put my subjects in an abstract environment and use pallet knife work to guide the eye around the image and create texture to represent uncertainty, whilst keeping true to the subject of the painting.

MAKING IMPACT WITH THE PLASTIC PROBLEM THROUGH ART

I am passionate about the growing 'plastic problem' our generation has created and the impact it is having on the ocean ecosystem.

It is estimated 8 million tons of plastic waste enters the ocean every year. Countless numbers of birds and animals are dying as a result of encountering plastic, we are racing towards extinction of many species, and plastic is now within the food chain.

I have watched in dismay as the levels of waste products on our beaches and in the ocean increases year by year. I'd head down to the sea, searching for the inspiration for my next

piece and leave with a bag of trash instead. I decided to start researching different ways to help, and to create meaning and purpose with my work.

In my research, I came across the organisation called Plastic Bank. They have developed an economic model that encourages the ultra poor to become entrepreneurs, by collecting plastic rubbish and taking it to recycling centres. The plastic is weighed and its value transferred into cryptocurrency which can be used to purchase many essential items such as education, medical treatment, insurance and WIFI minutes. Instead of handouts, members can earn the money they need; increasing their feelings of independence and self-worth.

This recycled 'social plastic' is then sold to corporations for use in their products. These sales fund the currency used to pay the collectors. Value is given to the plastic waste collected whilst also alleviating poverty and removing ocean bound plastic from the ecosystem.

As consumers, we can choose to support organisations such as this by buying items that use social plastic. We can close the loop and



address several problems within the world at the same time

I have come to realise that the very last thing we should do is clean the ocean, we need to turn off the tap that is pouring plastic into our rivers, lakes and seas by seeing its value and removing the term 'waste'.

With this in mind, I pledge to give 20% of my sales to support this system. I have found a way to create meaning and purpose to my passion for painting ocean wildlife, while opening the conversation about the power

of conscious consumers, social plastic, and positive environmental impact.

Each of us is such a small unit of this world, but if we unleash our consumer power and take care with the choices we make, we will create change and a brighter future for our children.

One of humankind's greatest mistakes is thinking that this is not our problem and that someone else will save us. It is each and every one of our responsibility to act in whatever way we can to make a difference, no matter how small.





EXHIBITED WORK

Emma's Art has been exhibited at many venues in Dubai, UK and USA.

THESE INCLUDE:

- 'Glowing Gone' selected for video display at Times Square, New York by Glowing Gone Campaign
- 'Follow Me', selected for 'Sketch for Survival' to go on tour with Explorer's Against Extinction across UK
- Surf House, Ocean Film Festival; 24th World Energy Congress
- DIFC Art Nights, Apero Magazine
- Dubai Aquarium & Underwater Zoo
- JYSK
- Dubai Design District
- Etihad Modern Art Gallery

FIND OUT MORE

www.emmaskinnerart.com

PLASTIC BANK

Find out more about Plastic Bank at www.plasticbank.com





BREATHING WAVES

FEATURE AND PHOTOGRAPHY **PAOLA IDRONTINO**

My marine inspired anthropomorphic costumes, represent bleached corals. Their majestic presence reflects the complex and breath-taking beauty that lives underwater. Breathing Waves is an exhibition in which I invite the audience to experience the enchanting beauty hidden beneath the waves.







ARTIST STATEMENT

Stirred by a passion for storytelling and the beauty found within nature, I combine complex textile arrangements to create otherworldly costumes inspired by grotesque creatures that express an affection for tales and myths. My inspirations come from opulent Victorian and Elizabethan costumes, wigs, whimsical and bizarre textures found in nature.

My passion for textiles led me to the creation of marine inspired sculptures and costumes. My photography, is the final combining agent that allows all of what I do to come together in their different forms.

My work has focused on creating awareness since 2016 from taking a closer look into what is happening to our world's oceans, in particular, the corals.

WHAT IS 'BREATHING WAVES' ABOUT?

My marine inspired anthropomorphic costumes, represent bleached corals. Their majestic presence reflects the complex and breathtaking beauty that lives underwater. Breathing Waves is an exhibition in which I invite the audience to experience the enchanting beauty hidden beneath the waves. A glimpse into the devastating effects of coral bleaching caused by climate change. By creating something wearable, I was challenging the idea that "we are what we wear" to begin to see ourselves as part of nature, to be able to empathise with it because we are one. When we see ourselves as part of nature, we understand that saving nature is really about saving ourselves.

The world is going through a devastating climate crisis. We need to protect what we have, we need to restore what we have lost,

and we must act now in order to mitigate the effects of global warming and the catastrophic effects that it can bring to this planet, and all of its species, including us.

BY LAURA CORNEJO – ART CURATOR

In Breathing Waves, Paola Idrontino – aka "Papayapie" – presents her fascination with the sea; at the same time, she tries to understand the peculiar way in which humans relate to this extremely powerful entity of our planet, one that both literally breathes life and has also been described countless times by great literature, as a metaphor for life itself. British author, Philip Hoare, reminds us "The sea, like the imagination of the writer or the artist, drags all sorts of obsessions, stories and ambitions."

Paola Idrontino's photographs and textile sculptures express an affection for tales and myths, with references to a feminine world that becomes a protective deity of underwater creatures. Honouring the physical dimension of the oceans, the artist's work represents beauty, exuberant and chromatic, assuming it is metaphysics that defines and connects us. In contrast, Idrontino's majestic anthropomorphic creations magnify with their preciousness, the other side of the mask and what is hidden beneath the disguise: a condition of fragility and of climate urgency – such as the bleaching of corals – instigating the participation, the interpretation and the conscience of the spectator.

Art has everything to do with submerging oneself – the unknown territory of exploring those depths – and in front of Paola Idrontino's work, we immerse ourselves in an extraordinary and hidden, yet perceivable universe that provokes us with each wave.



PAPAYAPIE.COM

ABOUT PAOLA IDRONTINO

Born in Italy, Paola Idrontino is a multi-disciplinary artist based in Barcelona. In 2004 she completed a first class BA (Hons), graphic design at Central St Martins College, London. In 2005 she launched a label called Papayapie, with the intention of exploring new ways of highlighting and dramatising the natural silhouette of the body using costumes and accessories. She is stirred by a passion for storytelling, textile and beauty within nature, otherworldly wearable costumes and creatures from the deep sea. With an underpinning of traditional techniques, she exploits the manipulative properties of fibres and combines them with unexpected and widely contrasting materials, both new and recycled.

WEBSITE: www.papayapie.com

INSTAGRAM: @paolaidrontinoart

FACEBOOK: @paolaidrontinoart





MY BUDDY

THE MERMAID

FEATURE **PATRICK VAN HOESERLANDE**

It is hardly an escape into a child's fantasy, but an integral facet of a diving sport. As an experienced diver, I would not be great at it and would certainly not slip through the water like Neptune.





Every diver's dream is to dive with a mermaid, right? Many years ago, I had that privilege. Her picture is still found in my first logbook. However, yesterday, I bumped into a school of mermaids. That was not entirely a coincidence, because my buddy was Anne Verelst, also known as 'Mermaid Ariel Starfish' or 'Mermaid of the Kempen'. While kids were watching through the window from the public area, I tried to capture the dancing motion of the underwater ladies on camera.

In all fairness, I must say that when I discovered there were women – and the exception of one gentleman – who wanted to live their fantasies out as mermaids, I found it to be quite a bizarre idea. It seemed as if these women were refusing to grow up and trying to escape reality by reliving a childhood imagination. As a diver, I could not take this seriously. Yet, I felt from an unbiased journalistic point of view, I had to write about this type of diving. Whatever my opinion on this pastime, I could not leave it out of 'My Buddy' series.

I felt a bit caught out when Anne refutes this with verve. Yes, she caught the mermaid virus after watching Disney's movie "The Little Mermaid", but how many of us did not start our diving paths because we got hooked watching Cousteau's documentaries? As scuba divers, aren't we trying to get that same feeling

we had when we watched those films? And as apnea divers, are we not searching for 'The Big Blue'?

To swim like a mermaid is not just about swimming around with a fish tail. It is a combination of:

- **Being an underwater model:** whatever happens, always smile at your audience and move elegantly;
- **Free diving:** after all, you have to give the impression that water is your natural environment;
- **Mono finning:** I know from a recent experience how difficult it is;
- **Endure cold water:** you don't get to wear an insulated dive suit, mermaids have to wear a costume bikini to play the part.

If you look at it in this way, it is hardly an escape into a child's fantasy, but an integral facet of a diving sport. As an experienced diver, I would not be great at it and would certainly not slip through the water like Neptune.

Anne tells me that she has been doing this for quite a while and still likes it. Despite her visual handicap, the group immediately accepted her. Her limitation in sight, hinders her less in the water and so she feels at home. When she casually mentions that she also mermaids in open water, I delete my last mental bias and see

this branch of diving in a completely new light. She never travels without her tail and promptly shows me some holiday photos to prove it. I can imagine the scenario on the beach when a sunbathing tourist spots her tail and yells to his wife, "Honey, I think I saw a mermaid!", to which she replies, "Yeah, sure. You've been lying out in the sun too long, darling."

The tail is characteristic to the mermaid. It is an evolutionary thing: most start with a simple homemade tail which is basically nothing more than a fabric tube to camouflage the mono fin. Later, after gaining experience and exchanging ideas, they switch to a more graceful and complex tail. The creative ones make their tails themselves, while others have them custom-made which come with a fairly high price tag.

Although you recognise a mermaid by her tail – and I speak out of experience – the garment is also the most difficult item of the costume to put on. It's quite an awkward task lying on the side of the pool and crawling backwards into your cocoon. Before the start of the dive, my buddy expressively asked me not to take pictures of this part of the ritual: it would not be flattering and it would ruin the 'little mermaid' magic. A bit like you shooting spoilers in Santa's dressing room. While observing the difficulties of the preparations, I completely understood her request.



The helpless ladies slowly transformed into mermaids as they gracefully moved through the water. I donned my BCD and joined them. Amongst the fish, I looked for a good place to position myself, out of the way. I watched them diving alone or in small groups as they invariably swim towards the window where a lot of children and parents wave to them. The children come to admire the mermaids underwater after they have been introduced to a dry specimen in the cafeteria downstairs. Everyone is gazing in wonder as the smiling mermaids parade in front of the glass. The spectacle is visibly enjoyed on both sides.

As a scuba diver, I feel out of place at this underwater party. In the meantime, there are other divers who have joined us, but they hardly give the mermaids a second look. Do they lack the spark of fantasy or do they find mermaiding an inferior activity? I shake off the thought and continue to enjoy this unique diving experience.

It's time to use my role as an underwater journalist to get better acquainted with the tailed beauties and start to socialise. They are more than happy to explain the different tails and how to recognise the different mermaids. Some of them are scuba divers, others have experience in free diving. They all have their own personal plan to become a better mermaid.

They all enjoy it and it warms them to see the joy it brings to the children. And they need the warmth, because the lack of a neoprene gives some of them goose bumps. Still they do not hesitate to dive for another round of applause in front of the happy audience.

When the cold becomes too much for Ariel, she offers me a last opportunity to take pictures with a big smile on her face and to film her swim to the other side. I struggle to keep up with her with all my equipment on and clearly less graceful in my crossing.

After a reverse metamorphosis and a hot shower, we talk for a moment longer: A first encounter with a mermaid is always special, and a dive with a group of them, is worth it. The chance to meet them is greatly enhanced after researching their Facebook page, and mermaids are not just found in Belgium.

Thank you, Anne, aka Ariel, for being my buddy and introducing me to the 'Mermites'. With my dive gear loaded up and some nice memories to take with me, I leave TODI. I draw a line through my list at 'diving with a mermaid' and drive on to meet my next buddy.

Do you know someone with a special interest in diving who would take me on as his or her buddy? Are you such a buddy? If so, please contact me at patrick.vanhoeserlande@nelos.be. I look forward to your suggestions.



Mermaid: Anne Verelst

First Year: 2012

Total Dives: 20 scuba dives, I don't log my mermaid dives.

Club: Sub Aqua Nijlen

Certification: I* Diver

Other Certs: Free Diving level 2

Special Equipment: Dive mask with special lenses for my eyesight, fully customised mermaid tail made from silicone rubber, and a mono fin.

Favourite Dive Site: TODI, Lac of Ekeren, Oosterschelde and Transfo dive tank.

Favourite Dive Site Abroad: Crete

Preferred Type of Dive: When there is a lot to see in clear water.

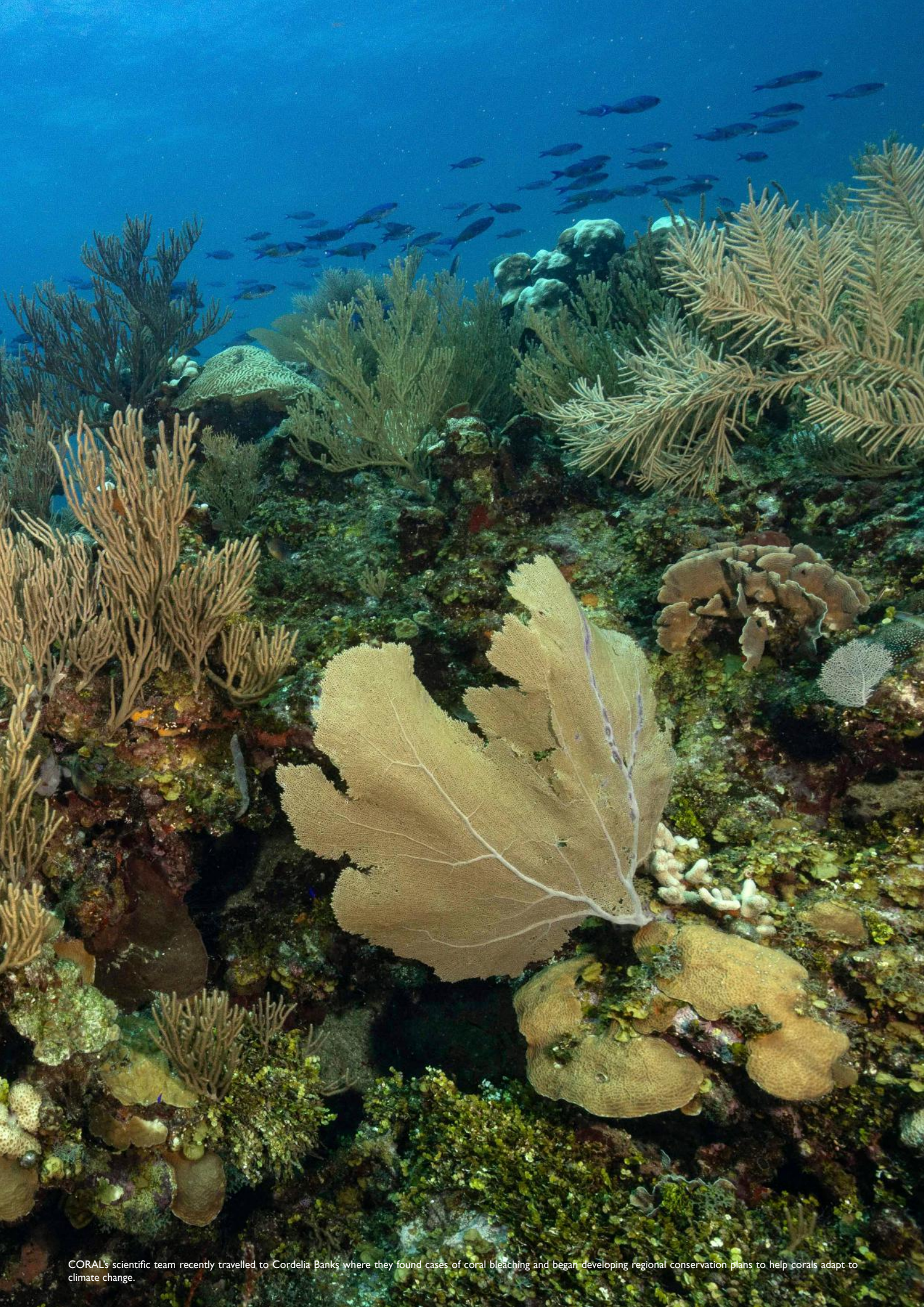
Most Spectacular Dive: My first wreck dive in Crete.

WHAT WILL IT TAKE TO SAVE THE WORLD'S CORAL REEFS?

FEATURE **DR. MADHAVI COLTON, EXECUTIVE DIRECTOR AT CORAL REEF ALLIANCE (CORAL)**

I've seen the positive change that local communities make when protecting their reefs. And I know that these local actions can have a larger impact because our scientific research shows that this is what helps corals adapt. We can help corals survive and continue to provide benefits to people and wildlife for generations to come.





CORAL's scientific team recently travelled to Cordelia Banks where they found cases of coral bleaching and began developing regional conservation plans to help corals adapt to climate change.



Dr. Madhavi Colton (centre) and scientists on a coral survey.

We have a daunting task ahead of us. Our planet is changing rapidly, and each day brings new stories of the alarming effects of climate change. Antarctica just registered a temperature of 68 degrees Fahrenheit (20°C) for the first time on record, and the burning bush fires of Australia shocked the world. The speed at which our planet is changing means that the fate of coral reefs will likely be decided within the next 25 years, which is why at the Coral Reef Alliance (CORAL) we've pioneered a new, science-based approach to conservation that we believe can save the world's coral reefs.

In 1994, CORAL was founded by scuba divers who were looking for a way to get involved in protecting coral reefs. These founding members saw their favourite dive sites in decline, so they began to organise underwater clean-ups, held trainings at scuba shops, and worked with local communities, governments and management agencies to help ensure that

reefs were getting the protection they needed. These efforts focused on individual reefs in particular locations, but they weren't designed to help coral reefs on a global scale.

In the last five years, coral reefs have repeatedly made the news with headlines about their imminent demise. Given the increasing impacts of climate change, it was clear to us that we needed to do more.

In 2016, CORAL asked a critical question: What can we do to help coral reefs survive the coming decades? We convened a group of scientific experts to figure out whether or not coral reefs could adapt to life on a warming planet, and what we could do to help. Our scientific research shows that there is hope for coral reefs. We published our first results in the journal *Nature Climate Change* in July 2019. This paper is one of the first to show that conservation that facilitates evolution can help rescue coral reefs from the

effects of climate change. We found that the likelihood of successful adaptation increases if local threats are reduced through effective management. Effectively managing reefs includes protecting them from overfishing and water pollution, which improves local conditions for corals. Managed areas serve as sources of repopulation over the long term – corals in managed areas rescue the rest of the reef.

Based on these findings, we are now focusing CORAL's work on creating networks of healthy reefs in which corals can adapt to warming oceans. If we can create enough networks of well-adapted coral reefs that survive to repopulate other regions, we can ensure the survival of coral reefs for generations to come.

At CORAL, we also know that reducing local stressors is most successful when it happens in partnership with the people that rely on



Dr. Madhavi Colton (third from right) and CORAL team members and partners in Utila, Honduras.

reefs for livelihoods and well-being. Today, we are proud to partner with local communities to reduce local stressors, including land-based pollution and over fishing. For example, in Honduras, our partnership with residents, business owners and the government has improved water quality resulting in fewer instances of coral disease. We have also partnered with local non-profits to make sure that the marine protected areas (MPAs) that we have helped to establish are effectively managed, resulting in increased fish biomass. Efforts like these are creating the local conditions that allow healthy corals to thrive, and because this work is part of a network, these reefs contribute to adaptation and repopulation across the entire Mesoamerican Reef system.

Simultaneously, we're turning our scientific results into actionable conservation guidelines that can be used to help corals around the world adapt to a warming world. We are

doing this by building mathematical models and using them to develop regional coral reef conservation plans for the Caribbean, Pacific, and Coral Triangle. From this, we will be able to identify the conservation actions that facilitate evolutionary rescue. We are putting these guidelines into action through our conservation programmes in the Mesoamerican Region and the Main Hawaiian Islands.

I've seen the positive change that local communities make when protecting their reefs. And I know that these local actions can have a larger impact because our scientific research shows that this is what helps corals adapt. We can help corals survive and continue to provide benefits to people and wildlife for generations to come.

But we can't do this alone: Success requires that we work together. At CORAL, our vision is a world where corals have adapted to

climate change because of our actions and also those of our partners, fellow scientists and scuba divers like you. It's not too late to save the world's coral reefs; learn more and join us at www.coral.org.



Dr. Madhavi Colton

MILITARY DIVERS DIVING WITH OXYGEN

FEATURE **PATRICK VAN HOESERLANDE** PHOTOGRAPHY **SEDEYN RITCHIE**

Sports divers may not have an advantage when diving with oxygen, but military divers can exploit a tactical advantage if they use the gas in its pure form. Every military activity is a balancing act between risks and potential benefits.







A few months ago, an article appeared on dolphins and divers. The journalist wrote, "In Vietnam, dolphins guarded the ports. If an animal detected a diver, it attached a buoy to the diver's oxygen tank to mark his presence."

As journalist-divers, we have developed a kind of sixth sense in spotting articles that claim that we dive with oxygen. There are many articles out there already explaining why we do not dive with oxygen, but those do not stop non-diving writers to commit this mistake. So, when the article was published, some colleague-divers wanted to contact and inform the journalist of his mistake, and ask for a correction. After all, we breathe air and do not (or rarely) dive with oxygen. But, was this a mistake? Time to do some digging.

NITROX

Admittedly, we sometimes use oxygen to enrich the air to lower the percentage of inert nitrogen in our tanks and to alleviate the decompression obligations. Although Nitrox can greatly reduce the deco time by 3 metres, it comes with a reduction in maximum dive depth. As with all mammals, our bodies are optimised for 21% normobaric oxygen and any deviation from this ideal situation has consequences.

On every diving course – in particular during nitrox courses – you get acquainted with the effects higher oxygen partial pressures have on the body. Certainly, the danger of oxygen poisoning from the central nervous system (CNS) or Paul-Bert in the short term, and that of the lungs or Lorrain-Smith in the longer run, are explained.

100% OXYGEN

Oxygen is a blessing and a curse for us divers. After all, we use this vital gas as a preventive measure against shock and to combat symptoms in the event of a decompression incident. Some of us also use the pure stuff on the shallowest deco stops for accelerated decompression after a long, deep dive. Of course, with due regard to the appropriate preventive measures.

Can we tell the world that divers do not dive with oxygen? We do not have oxygen tanks strapped to our backs, but air tanks. The 'air' (or nitrox) may not always have the same composition as on the earth's surface, but it remains a breathable mixture of oxygen and nitrogen. Was the reaction to the article on dolphins and divers necessary? Umm, no. Sports divers may not have an advantage when diving

with oxygen, but military divers can exploit a tactical advantage if they use the gas in its pure form. Every military activity is a balancing act between risks and potential benefits.

The first group to have filled their tanks with oxygen are the Explosive Ordnance Disposal (EOD) divers. Certain sea mines are equipped with acoustic sensors that are sensitive enough to ignite the explosive charge upon hearing the noise of bubbles. As an EOD diver, you want to be far away when a mine explodes and so you absolutely want to avoid producing bubbles.

You cannot prevent bubbles when diving with an open scuba system like the one recreational divers use. Holding your breath is not a solution. To glide silently through the water, you must use a closed system. The 'Closed Circuit Rebreather' (CCR) was an early solution for this problem (in 1879 Siebe Gorman already dove with an oxygen rebreather based on the invention of Henry Fleuss). This system converts oxygen to carbon dioxide through combustion in our cells, there is no air in the bottle. This would only lead to an excess of nitrogen in the circuit in a very short time. The used oxygen needs to simply be replaced by pure oxygen. Although there are now rebreathers which



allow to dive with mixtures and despite the limitation, rebreathers with pure oxygen only remain popular with military divers.

There is a second group of divers who want to avoid bubbles: the combat divers, in particular, the Special Forces. An infiltration while leaving a trail of bubbles behind does not lead to success. Besides, the oxygen rebreather comes with several additional benefits. The control system is very simple and very robust. There is no need for an electronic control board. If there is one thing that soldiers like, it's simplicity. The more complicated, the greater the risk in which something could go wrong. Keep it as simple as possible. In addition to simple, such a device is also compact. You only need the volume of oxygen that you will consume. Compact means fewer transportation problems and it's easier to hide. Because the device is smaller, you can wear it on your front without hindering your movements which makes it possible to also carry a backpack. The lack of nitrogen means that there is no need for a deco stop. The final advantage is that breathing out in the counter lung, does not change buoyancy during a breathing cycle. You can therefore easily maintain your position in the water at all times. Another very tactical advantage.

The use of an oxygen rebreather requires discipline. Not only should you stick to the maximum depth, although this is deeper than for sports divers, certainly in case of tactical necessity, but you must purge or flush your system frequently. When a diver starts breathing from an oxygen rebreather, the fraction of inhaled nitrogen is zero. However, the diver's body contains litres of dissolved nitrogen and the pressure gradient ensures that this nitrogen goes back to the lung and into the counter lung. The oxygen is consumed, the carbon dioxide produced is mechanically removed, but the nitrogen remains and accumulates, whereby the percentage of oxygen in the opposing lung is gradually reduced with constant ambient pressure. This can lead to unconsciousness. Periodic purging of the system with pure oxygen overcomes this problem. Military divers need to flush every half hour if the tactical situation permits. After all, a flush releases a full lung volume of bubbles and gives up the diver's location. A flush has another disadvantage: the high partial pressure of the oxygen increases blood pressure and lowers the heart rate. However, these effects are small and reversible. Strictly following procedures, ensures safe operation.

As an example: the Belgian Defense is currently using the Aqualung Amphora (see photo above). This allows a diver, in good physical condition and with the necessary breathing discipline, to stay in the water for up to 3 or 4 hours with 2.1 litres of oxygen at 200 bar and 3 kg of breathing time. If the soldier must go deeper, then he or she can with the press of a button and a twist on the overpressure valve, turning the system into a "semi-closed circuit rebreather", whereby the maximum depth suddenly extends to 24 m.

RESULT

As divers, we must respond in a nuanced way to articles about diving with oxygen. In most cases, we will have to tell the poorly informed journalist or writer that there is air or a nitrox mixture in our tanks, but when it comes to military divers, we cannot immediately rule out the possibility that they indeed use pure oxygen.

This article was written with the assistance of Captain Philip Dekkers, commander of the Platoon Combat, Swimmers of the 11th Engineering Battalion.



AL MARSA MUSANDAM

INTRODUCING NEW HORIZONS

INTERVIEWEE AND PHOTOGRAPHY **PAUL EMOUS**

Musandam is vast. We have hundreds of kilometres of coastline with depths ranging from 3 metres to well below 100 metres. Although the diving itself is fantastic, one of my goals is to find shipwrecks and new dive sites we can explore. Our green speedboat has been in the Al Marakeb Shipyard for the past month being converted into a new styled exploration boat, fitted with 3D Side Scan Sonar, proper marine maps and a 9" display to seek out untouched, unexplored dive sites.





Al Marsa Musandam welcomed a new General Manager last summer, Paul Emous, who is a Dutch dive professional and has been living in the region for over a decade. We sat down with him in their office in Dibba to understand how he sees the future of one of our favourite Oman dive destinations.

You have been in the region for over 10 years! Have you been working in the dive industry since you arrived?

Actually, no. Not at all. Prior to joining Al Marsa in mid-July 2019, I was the managing partner of a media production company in Dubai, with over 15 years of experience in film production.

So how come the sudden change?

I am a recreational and technical diving instructor for 2 of the largest international dive training agencies and I have a massive passion for diving. I was already acquainted with the company as a guest and I'm truly fascinated by the Musandam region, not only with the diving itself, but also for its raw untouched landscapes. Musandam – for me – is best described as alien. The high mountains that meet the vast sea are truly incredible. The dive sites are simply stunning and vary from easy recreational diving, to challenging deep technical diving. What ever you want to do, you are guaranteed to see loads of marine life and epic underwater terrains, ranging from wall dives, to sand and rocky slopes. It's fantastic!

So, when I heard that the owners of Al Marsa where looking for a new General Manager, I was ecstatic. Although, the company already offered a great product, the owners and I agreed that it was time to rework Al Marsa's concept, and bring it to an entirely new level. The deal was sealed, and I joined the team mid-July 2019.

Sounds like a match made in heaven. Many UAE divers have probably already visited Musandam before, maybe even with Al Marsa. What changes can they expect in the future?

That is correct, we have many regular guests from the UAE, but we also cater longer trips for our international clients who are looking for something unique without having to travel all the way to the far east. Musandam is located just 1.5 hours away from Dubai International Airport and we have our own transportation options at our disposal.

Although Al Marsa had already provided its guests with a superb service – having fantastic crew members on board from dive masters and instructors, to captains and cooks – we wanted to take it a step further and push boundaries to become the best option when it came to liveaboard diving experiences in Musandam, while having safety and convenience as our top priorities.

The task at hand, although not complicated, involves lots of re-training for our staff, acquiring new instructors, implementing new policies and

taking care of maintenance, which is a priority as we have a large fleet of vessels that require a lot of upkeep.

Over the last couple of months we have been working on adding a lot of additional value to our portfolio. Free Nitrox on all our trips, more instructors per trip, high quality training, but we also offer more catering options now. Technical diving is fairly new here. Although there have been some pioneers, there was – until now – no company that provided consistent offers when it comes to technical diving or exploration. We offer full trimix capabilities and blending services on our vessels. We also have large quantities of medical grade oxygen available on board, as well as trained support staff to make sure everything is done as smoothly and safely as possible.

This sounds great! Not only the free Nitrox – big thumbs up I must say – but the added safety measures as well will be very much welcomed by the divers.

We get great feedback from our guests regarding that Al Marsa has an excellent reputation and safety track record, and we would like that to continue. But we haven't stopped there. As a diving organisation, I think it's important to take care of the environment. So we have also implemented the no single-use-plastic policy. We provide our guest with a personal aluminium water bottle that they can refill using our onboard water dispensers. Honestly we got such great feedback on this. Not only from the guests, but also from



the staff. For example, instead of having to offload ten big trash bags, we have now reduced it to only three. You can't make that stuff up. It's really great.

So what else have you been working on?

I have big plans, but I noticed that something was lacking; mainly from the marketing side. Knowing this, we decided to create something special. The Musandam 5 Billion Star Hotel video.

And you did a fantastic job! It really is spectacular and very professional. What is the story behind it?

I wanted something grand. Something that other dive centres had not done before. The internet is full of great short clips using drones or underwater GoPro footage. And you know what, quite frankly, they work.

However, I wanted to take it a step further. I wanted to make a video that shows what Al Marsa and the Musandam have to offer in its full glory. It had to be dramatic, epic, yet real. Everything you see in the video is real. It truly is. All the staff works at Al Marsa, all the boats are part of our own fleet. The scenery is real, and most importantly, all the guests on board are real. We didn't want to use actors and certainly no non-divers.

For the photography and video enthusiasts, the entire video is shot in RED cameras to give it the cinematic effect it deserves. We

produced the film over the period of 3 days with a production team of 5 people. We have plenty of additional footage to make more videos to be released throughout the year.

You mentioned you are also a diving instructor. Do you still have time to teach?

Occasionally yes, but unfortunately not as often as before. I recently gave some SSI Technical Extended Range courses for a few of Al Marsa's guests.

Does this mean that Al Marsa also offer SSI dive courses?

Correct, and we also officially became the SSI Service Center for the UAE and Oman since the 1st of December, 2019.

Prior to taking over the management of Al Marsa, I got acquainted with SSI (Scuba Schools International) and did some technical training with some truly remarkable people in the diving industry. Although I considered myself an experienced diver and (PADI) instructor, it was eye opening to receive SSI training from people like Adam Wood and Xavier Vrijdag. SSI offers fantastic courses and they are completely digital. Their EMS (Education Management System) simply has the best any organisation has to offer. You can study on your phone, iPad, tablet or laptop and the prices are very competitive.

By chance, I got the opportunity to speak with

Guido Waetzig, the CEO of SSI, who told me that the SSI UAE Service Center contract was due for renewal and that they were looking for somebody new to represent it. After some discussions with SSI, Al Marsa agreed to take on the role of SSI Service Center in the region.

Weekend trips, international trips, maintenance and safety enhancements... sounds like you and the team won't have the time to get bored.

Not at all, and we like it this way. With 4 main dhows in constant operation, you want to make sure they are in prime condition. It also added to our task list that our beloved Queen of Musandam (Yellow Dhow) has been out of commission for almost a year, due to an engine fire. Although the fire was quickly contained by our staff and with the help of the local authorities, she was not in any condition to operate. We have been working on the vessel for the past 5 months, overhauling the 650 Horsepower YANMAR engine, installing new generators, water makers, the isolation (sound proofing) and fire alarm system. We are aiming to have her back on the water by April and in better shape than ever.

Further to improving our maintenance and marketing presence, I have closely been working with the fantastic staff I have. It's completely understandable that with change of management and the introduction of new policies, some people might feel uneasy. Al Marsa has been around for 17 years and some

of my staff have been with us from the very beginning, a few are very new. The team is strong, knowledgeable and I am truly blessed to have them!

They are fantastic – I can confirm that firsthand! You mentioned before that you now offer full TRIMIX. Does that also mean new compressors?

Not new, but enhanced and properly maintained. Being a diver myself, I know how important it is to have good breathing gas (or air). All our compressors are undergoing stricter service intervals, we set tight policies on our air purifier filters timing, and also monitor our air quality with a DE-OX Multi gas metre we have recently purchased. This way we can monitor our air and confidently say we have the best compressed air and TRIMIX available.

Our TRIMIX and NITROX is either partially blended, or mixed using a state of the art NARDITT-Pro Mixer. We have a 200 Litre 300 bar (60.000 litre) NITROX 32 bank and offer up to 40% Nitrox, any time, free of charge. Each of our dive team members is an SSI TRIMIX Gas Blender. They know how to blend Nitrox and Trimix from doing the calculation on a piece of paper, and use an app to make sure the mixes requested are accurate. We also have 5 Analox Pro Nitrox testers as well as a DiveSoft O2/He Analyser.

I'm sure technical divers are on the edge right about now. Is there anything additional Al Marsa can offer them?

Musandam is vast. We have hundreds of kilometres of coastline with depths ranging from 3 metres to well below 100 metres. Although the diving itself is fantastic, one of my goals is to find shipwrecks and new dive sites we can explore. Our green speedboat has been in the Al Marakeb Shipyard for the past month being converted into a new styled exploration boat, fitted with 3D Side Scan Sonar, proper marine maps and a 9" display to seek out untouched, unexplored dive sites. We will be running special trips to cater to all levels (recreational and technical) to explore the unknown. We will be announcing these trips soon, led by myself and a team of experienced divers.

Where do I sign up?

Soon! You will be the first to know, I promise.







WWW.EMIRATESDIVING.COM

ENTER DIGITAL ONLINE

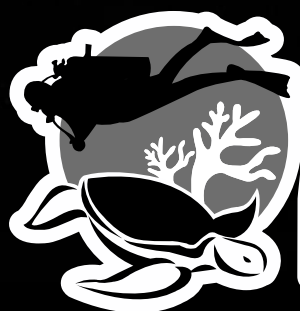
EDA'S UNDERWATER PHOTOGRAPHY
AND FILM COMPETITION 2020

HOW TO TAKE PART

Register online as an EDA Member to take part in Digital Online and get the chance to win some amazing prizes. Membership gives you access to all of EDA's annual events and activities.

SUBMISSION DEADLINE

Sunday 26th April 2020 @ 11:59 pm (GST)



DIGITAL ONLINE

جمعية الإمارات للغوص
EMIRATES DIVING ASSOCIATION
PHOTOGRAPHY AND FILM COMPETITION

DIGITAL ONLINE 2020

EDA'S UNDERWATER PHOTOGRAPHY AND FILM COMPETITION

SUBMISSIONS OPEN: Sunday, 29th March 2020 | **SUBMISSIONS CLOSE:** Sunday, 26th April 2020 @ 11:59 PM (GST)
DIGITAL ONLINE AWARDS NIGHT & EXHIBITION OPENING: Wednesday, 20th May 2020 | American University in Dubai

THE EVENT



AN EVENT BY



EXHIBITION HOST



PRINTING SPONSOR

PRINT WORKS

PRIZE SPONSORS



DIGITAL ONLINE'S MAIN OBJECTIVES ARE:

- To develop the human interaction with the underwater environment and highlight the beauty of its flora and fauna.
- To gather information on the number of underwater photographers in the UAE (both professional and amateur).
- To discover new promising underwater photographers in the UAE.

Digital Online is open to all photographers and videographers of all skill levels with a valid EDA Membership status. EDA membership must be renewed if expired or acquired in order to take part.

DIGITAL ONLINE 2009-2020

Digital Online is about to celebrate its 11th Anniversary! The competition was introduced by EDA in 2009 to resident photographers to develop a relationship and human interaction amongst those unfamiliar with the underwater world environment. The competition holds both local and international marine life categories to offer variety between our local and international diving enthusiasts. The film category was introduced as an extension to the competition in 2012 to share our underwater world through motion pictures and deliver a better understanding of the habitats and surroundings.

The event, now going into its 11th year, sees the continuous and steady growth of new underwater photographers taking part and joining our regular yearly participants. The enthusiasm and passion strives on, and the drive to bring our underwater world's conservation to the forefront increases over

time. The purpose of Digital Online is to keep our underwater world visible by displaying its hidden beauties and to exemplify its importance to all life on Earth through the powers of its ecosystems.

The event has attained equal success with the non-divers who come to support the participating photographers and videographers at the Awards and Exhibition Opening Night. Whether it's through discussion or

articles brought to our readers through our free quarterly magazine – Divers for the Environment – the inspiration the event brings, is a success in its own right.

COMPETITION CLAUSE

EDA does not disclose photographers' names during the judging process. The competition is run fairly and without prejudice, professionally adhering to all of Digital Online's rules and guidelines throughout.



DIGITAL ONLINE
 جمعية الإمارات للغوص
 EMIRATES DIVING ASSOCIATION
 PHOTOGRAPHY AND FILM COMPETITION

THE DIGITAL ONLINE RULES AND GUIDELINES 2020

RULES AND GUIDELINES

- Digital Online is open to all photographers and videographers of all skill levels with a valid EDA membership status. EDA membership must be renewed if expired in order to take part.
- Each competitor can only win one prize or prize package.
- Winners will choose their own prize.
- Participants are obligated to follow environmental conservation regulations and to respect the underwater world during the process of taking their stills and video. Be advised that any damage to the underwater world, including the disruption of the natural habitat of the marine life, provocation through touching, displacing, feeding or annoying, is prohibited and will disqualify the images or the photographer/ videographer.
- By entering the competition, entrants declare that they own copyright of the submitted photographs and films and it entails an automatic acceptance of all the rules. EDA reserves the right to publish images in the 'Divers for the Environment' magazine, EDA's social media pages and on the EDA website. Images will also be used in any future promotional material for EDA events and competitions royalty free, but copyright remains with the photographer.
- Use of images or video will require no additional written or verbal permission from the photographer or videographer.
- Images (photos or videos) must not have already been submitted to previous Digital Online Competitions.
- Photos and videos must be taken underwater unless specified in a category description.
- Manipulation is restricted to colour correction, brightness, contrast, sharpening and cropping. The Digital Online judges

reserve the right to examine untouched images if requested.

- Removing backscatter is allowed to an extent, this does not include the removal of subjects such as fish or divers or cutting and pasting sections of images from one to another.
- The winners will be announced and their work displayed at the exhibition and award ceremony in May 2020 (date TBC) at the American University in Dubai. Participants who do not make it to the evening of the event will be asked to collect their prize from the EDA offices.
- Sponsors' prizes will be announced in the March 2020 magazine issue.
- We pledge to run this photography and video competition ethically and with integrity. Our judges have volunteered their time to help. The photographers' details remain hidden to the judges during the judging process.
- All judges' decisions are final.

REGISTRATION AND UPLOADING ENTRIES

- Submissions can be entered from Sunday, 29th March 2020.
- The entry deadline is Sunday, 26th April 2020, at 11:59 pm (GST – Gulf Standard Time).
- The participant must be a valid EDA member. Submit entries via email to photo@emiratesdiving.com with the requested category detail information.
- File names should include photographer's name and the category:
 - Name-Macro.jpg
 - Name-WA.jpg
 - Name-UAE.jpg
 - Name-BW.jpg
 - Name-Compact.jpg

- Photo entries must be saved in jpeg format and should be sized between 2000 and 6000 pixels in the longest dimension. Please limit your images to a maximum file size of 5MB. Images will be viewed on a monitor and should be in the Adobe RGB 1998 or sRGB colour space.
- Video submissions must be in mp4 format with the Videographer's name used as the file name.
- The preferred method for photo and video entry is electronically, however, if this method is not possible due to slow internet connection, you are able to submit via memory stick. Please note, media will not be returned.
- You will receive an email to confirm your registration and photo/video upload. If you do not receive one within 24 hours, your email may not have come through and you may need to try again.

Good luck to everyone taking part in Digital Online 2020. Dive safely and have fun!

*NOTE: HOW PRIZES ARE AWARDED

Once the judging is complete, the winners will be able to choose a prize available to them on the list they will receive via email. Digital Online Judges award a 3-way point system to each photograph/video consisting of Technique, Composition and Impact which is added to give the photograph's or video's total grand score.

Best of show with the highest points will get first choice. 1st place winners by highest score will choose a prize before all other winners, 2nd place winners before 3rd place winners, etc. Please note, each individual can only win one prize or prize package.

PHOTOGRAPHY CATEGORIES

Photographers may enter one photo per category.

Details to include with each photo submission:

- Photographer's Name
- Category
- Location
- Story Behind the Shot
- Camera Gear
- Settings

1. MACRO (DSLR/MILC ONLY)

Definition: Photographs taken with close-up equipment, portraying underwater flora and/or fauna. The photographer may not crop the original more than 20%. The original image may be requested.

2. WIDE ANGLE (DSLR/MILC & COMPACT)

Definition: Photographs taken with a wide-angle lens (or adapters that provide an equal field-of-view), with or without human presence, portraying the natural beauty of the underwater environment.

3. BEST OF THE UAE (DSLR/MILC & COMPACT)

Definition: Any underwater subject taken in the UAE and the Musandam.

4. BLACK & WHITE (DSLR/MILC & COMPACT)

Definition: Black & white photography is timeless and elegant. Focus on tonal contrast, shapes and textures and the composition of the shot.

5. COMPACT CAMERA (COMPACT ONLY)

Definition: Point & shoot photographers only.

VIDEO CATEGORY

Videographers may enter one film.

Title: A BLUE VOYAGE

Definition: Looking for films of all genres – documentaries, narratives, shorts and animation films. Film subject must focus on all aspects of our underwater world including but not limited to, ocean exploration, wildlife, environmental, conservation and oceanography.

- All film genres will be accepted.
- Content must focus or relate to the ocean.
- Non-English films must have subtitles.
- If music is used, it must be from a public domain or royalty-free.
- Film length should be 5 minutes or less, including credits.
- Winning films will be chosen on the basis of creativity and the ability to tell a story that leaves the audience better informed and/or moved about the ocean.

THE SPONSORS AND PRIZES

Digital Online's 16 Prize Sponsors are giving this year's winners 27 prizes to choose from!

NOTE: Participants are only able to win one prize each. Entrants with multiple winning entries will be given priority in the points awarded.



1. **FUN SUN DIVE TRAVEL** | www.funsundivetravel.com
Destination Package – Dauin package for 2 pax at Fun & Sun Dauin, Negros Island, Philippines.

Included: Airport transfers (Dumaguete Airport), 5 nights accommodation double shared AC with breakfast, 4 days of diving (usually 3 dives daily at Dauin Costal and Apo Island, free Wi-Fi, coffee, tea, and water.

Not included: Lunches and dinners, marine park fees if applicable, airfare/seafare to Dumaguete Airport/Port (via Manila or Cebu).

2. **SUNDIVE BYRON BAY** | www.sundive.com.au
Destination Package – 3 days diving package for one person (up to 3 dives per day) at Julian Rocks Marine Park, Australia.

Not included: Flights or accommodation.
Valid until 15 December 2020.

3. **AL MARSA MUSANDAM** | www.almarsamusandam.com
Day Trip for 10 divers
The winner can enjoy a fun day-out on our White Dhow, with 9 buddies. Available any day of the week – depending on availability.

Included:

- Hot lunch, snacks, coffee, tea, water, soft drinks
- Towel for each guest
- On-board SSI & PADI Instructor / Dive Master
- 2 guided dives
- FREE Nitrox for Nitrox certified divers
- Gear rental (excluding computer and torch)

4. **XR HUB DIVE CENTER** | www.puretech.me
Paralenz® Dive Camera+

- Waterproof: 250m
- Video Resolution: 4k-30 FPS / 2.7k-60 FPS / 1080p-100 FPS / 720p-200 FPS
- Weight: 155g (5.5oz)
- Dimensions: 116 x 35 x 38 mm (4.5 x 1.4 x 1.5")
- Port: USB-C (for fast charging)
- Storage: 64 GB or 128 GB Micro SD-card (Class: U3 or V30) – not included
- Mounts: Mask & universal mount included

5. **GRAND STORES** (2 Prizes) | www.grandstores.com
Rollei Actioncam 425

- 4K Video Resolution (3840 x 2160 pixels/25 fps)
- 2.7K Video Resolution (2704x1524 pixels/30 fps)
- Full HD Video Function (1920 x 1080 pixels, 60/30 fps)
- 170° Super Wide Angle Lens
- Loop function
- Burst photo, photo time lapse, snow mode
- Integrated WiFi with up to 20m range
- Access to camera via App (iOS/Android) from your Smartphone or Tablet PC*
- Incl. 2.4 G RF wireless remote control for wireless shootings up to 15m distance, waterproof up to 1m
- Incl. underwater/protective case for depths up to 40m

6. **BERMUDA DIVING CENTER** | www.scubadiving.ae
MARES Smart Dive Computer (Black & White)
The Smart is the quintessential dive computer!
www.mares.com/shop/en-AU/smart-15.html

7. **TRULY MADLY DEEPLY** (6 Prizes) | www.alibinthalith.com
A Signed Copy of Ali Bin Thalith's Book:
With oceans covering two thirds of our planet, the underwater world is a mysterious place. Emirati photographer, Ali Bin Thalith, gives us an insight into a world that has yet to be discovered in depth.

8. **STEVE WOODS** | www.stevewoodsphotography.com
Choose an Original Steve Woods Print from:
www.stevewoodsphotography.com/prints
All prints are 13" x 19" including a signed border. All prints are sent carefully wrapped in recycled paper and placed in a recycled shipping tube for delivery.

9. **DR RICHARD SMITH** | www.oceanrealmimages.com
A Signed Copy of Dr Richard Smith's Book:
The World Beneath: The Life and Times of Unknown Sea Creatures and Coral Reefs.

10. **EMMA SKINNER ART** (2 Prizes) | www.emmaskinnerart.com
Print of 'With Brave Wings She Flies': 60 cm x 40 cm (Framed)
Print of 'Break Free at Butterfly Reef': 60 cm x 40 cm (Unframed)

11. **EDA** (3 Prizes) | www.emiratesdiving.com
A copy of the beautiful hardcover photography book: The Best of Digital Online – EDA's Underwater Photography & Film Competition.

12. **AL MAHARA DIVING CENTER** | www.divemahara.com
2 persons dive trip in Abu Dhabi to Al Mahara's Zone One Dive Sites, plus all day non-motorised watersports on same day booking.

13. **DIVERS DOWN** | www.diversdownuae.com
6 Dives Package on East Coast, including equipment.

14. **SANDY BEACH DIVE CENTRE** (2 Prizes) | www.divesandybeach.com
Double tank dive trip with or without equipment, including tanks and weights.

15. **FREESTYLE DIVERS** | www.freestyledivers.me
A black water photo session, including the dive and equipment.
Not included: Camera

16. **AL BOOM DIVING** (2 Prizes) | www.alboomdiving.com
2 dives on East Coast (Fujairah) with full equipment for 2 persons.
Valid until 22 November 2020.

THE DIGITAL ONLINE JUDGES

STEVE WOODS

Adventure and Wildlife Photographer



Steve is a British adventure and wildlife photographer, based in Vancouver, Canada. His aim is to photograph the natural world to show people how beautiful and awe-inspiring it is as well as trying to highlight the danger we are inflicting on the very ecosystems we revere so much, by photographing and documenting the issues at hand. Steve has worked for many years as a photographer in the

UK and abroad, firstly as a newspaper and sport photographer, then moving into commercial, advertising and wildlife/adventure photography. With his passion for the natural world, he uses his skills as a photographer to work in marine conservation.

WEBSITE: www.stevewoodsunderwater.com

FACEBOOK: @SteveWoodsPhotographer

INSTAGRAM: @steve_woods_photography

DAVID DILEY | SCARLET VIEW MEDIA

Film-maker, Underwater Cinematographer and Digital Colourist



David Diley is a multi-award winning Film-maker, Underwater Cinematographer and Digital Colourist from the UK best known for his work with sharks and large marine megafauna as well as his multi-award winning feature documentary, "Of Shark and Man". His profile has increased rapidly thanks to his work on a wide variety of projects for film and television, alongside his

commercial work for a number of household brands.

David is the owner of Scarlet View Media, a high end boutique Production House in the north of England, and is a Panasonic Professional Ambassador and Angelbird Media Creative.

WEBSITE: www.scarletviewmedia.com

FACEBOOK: @daviddileymaker

DR RICHARD SMITH | OCEAN REALM IMAGES

Underwater Photographer and Writer



Dr Richard Smith is a British underwater photographer and writer who aspires to promote an appreciation for the ocean's inhabitants and raises awareness of marine conservation issues through his images.

A marine biologist by training, Richard's pioneering research on the biology and conservation of pygmy seahorses, led to the first PhD on

these enigmatic fish. Over the past decade, Richard's photographs and marine life focused features have appeared in a wide variety of publications around the world. Richard organises and leads marine life expeditions where the aim is for participants to get more from their diving and photography by learning about the marine environment.

His book 'The World Beneath: The Life and Times of Unknown Sea Creatures and Coral Reefs' is now available on Amazon.

WEBSITE: www.oceanrealmimages.com

FACEBOOK: @OceanRealmImages

INSTAGRAM: @dr:richardsmith

TWITTER: @Rich_Underwater

MOHAMED ABDULLA

Underwater Photographer and Marine Scientist



Mohamed is a son of the Arabian Gulf. Coming from a long line of legendary pearl divers and fishermen, a strong bond ties him to the deep blue. Born in Dubai on a stormy night in November of 1989, he started his passion as a free diver and a spear-fisherman at an early age and naturally fell in love with the beauty of the underwater world. Mohamed started his underwater

photography in 2008 which won him several awards and to which he has been published internationally since. His eye-catching and distinctive style is aimed at pushing the limits of how photographers represent life below the waves. Mohamed has dedicated himself to conservation and to the Art of Underwater Photography, putting forth the message, "the Ocean has given our ancestors everything, now it is our turn to give back". As a marine scientist with a masters degree in Environmental Science, he works closely with sea turtles, dugongs, dolphins, sharks and all other exotic species, as well as being responsible for many rare scientific discoveries in the Arabian Gulf region. Mohamed is also a PADI Instructor, the lead scientific diver for UAE University, as well as a research collaborator with many other universities in the UAE.

INSTAGRAM: @b47r

SIMONE CAPRODOSSI | SUNDIVE BYRON BAY

Underwater Photographer



Simone is an Italian underwater photographer, who has been awarded in several prestigious competitions and published internationally. After over 10 years of corporate life in Dubai, he recently moved to Australia where he now co-owns and manages Sundive Byron Bay, a PADI 5 Star Dive Centre offering dives at the amazing Julian Rocks in Byron Bay. After travelling to and photographing many

unique diving destinations worldwide, he also runs expeditions with Sundive to help others experience and photograph his favourite ones such as the Sardine Run and Djibouti. Simone was the Overall Winner of Digital Online for two consecutive years until he became a judge for the competition and has been a main feature contributor to the EDA magazine, 'Divers for the Environment'.

FACEBOOK: @SimoneCaprodossiPhotography

INSTAGRAM: @scaprodossi

ALLY LANDES | EMIRATES DIVING ASSOCIATION

Project Manager, Editor, Graphic Designer, Photographer & Videographer



Ally has worked with EDA since December 2004 when she created and introduced the quarterly magazine, 'Divers for the Environment', as magazine Editor and Graphic Designer. She branded and helped foresee the development of Digital Online – EDA's Underwater Photography and Film Competition from its launch in 2009 and has since managed the event. Ally also coordinates the Dive MENA Expo with the Dubai World Trade Centre Exhibitions and Events Management team for the Dubai International Boat Show.

She keeps busy within her fields of passion, managing the EDA team, developing EDA's brand, running the events and social media, and FAM trips.

WEBSITE: www.emiratesdiving.com

FACEBOOK: @emiratesdivingassociation

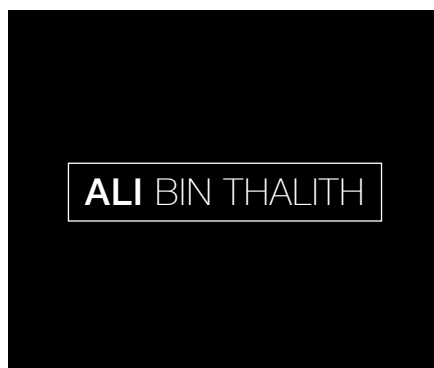
TRULY, MADLY, DEEPLY

AN UNDERWATER PHOTOGRAPHY PUBLICATION BY **ALI BIN THALITH** | **WWW.ALIBINTHALITH.COM**

Ali Bin Thalith is a professional photographer and documentary filmmaker from Dubai in the United Arab Emirates. In Recent times, he gained recognition on an international level as a specialised underwater photographer, he is also the Secretary General of one of the biggest photo competition in the world (HIPA). Ali holds diplomas in Photojournalism and Documentary Photography, as well as French language and literature from the London Academy and University of Montpellier respectively. He was awarded in 2010, with the Mohammed bin Rashid Al Maktoum Award for young projects in the category of marketing and promotions.

In 2014, Ali was awarded with the International Photographic Council (IPC) Professional Photographer Leadership Award for his career work in the field of photography. As a result, Bin Thalith became the first Emirati and Arab recipient of the prestigious accolade at the IPC Pro Luncheon at the United Nations in New York City.

In 2016, Ali launched his long anticipated debut book, 'Truly, Madly, Deeply' featuring



some of the best underwater photography from his 20 plus year career. In this stunning collection of underwater photography, Ali underlined his passion for the sea by capturing some of the most beautiful and unheard of species living in the depths of the ocean. Described as, "An incredible collection of underwater photography" by the Daily Mail, 'Truly, Madly, Deeply' received testimonials from photography mainstays such as Steve McCurry, Reza and Alex Mustard.

In 2018, Ali was granted a Direct Fellowship

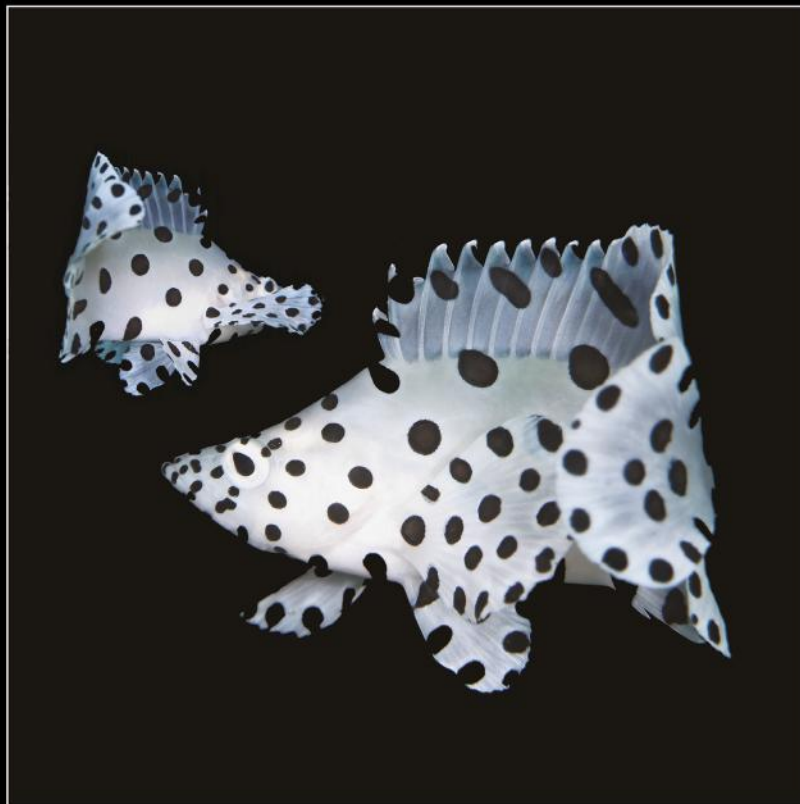
of the Royal Photographic Society (FRPS) which is the highest distinction and is awarded for excellence and distinguished ability in photography. Ali has also been awarded the title of 'Photographer of the Year' in 2018 by the International Photography Exhibition held in Datong, China in its fourth edition 'Power of the Image'. Ali was recognised for his passion for underwater photography along with his un-wavered support of marine life and conservation through the power of his photographs.

These amazing photographs showcase the stunning variety of marine life, from gargantuan sharks to microscopic invertebrates to vast gardens of coral. Gathered over 10 years, these glorious images explore the colours, patterns, and textures in the ocean, and will inspire the amateur marine biologist inside us all.

With oceans covering two thirds of our planet, the underwater world is a mysterious place. The photography of Emirati photographer Ali Bin Thalith, gives us an understanding and an insight into a world that has yet to be discovered in depth.



TRULY, MADLY, DEEPLY



UNDERWATER PHOTOGRAPHY BY ALI BIN THALITH

THE WORLD BENEATH

THE LIFE AND TIMES OF UNKNOWN SEA CREATURES AND CORAL REEFS

A NEW RELEASE BY **DR RICHARD SMITH** | WWW.OCEANREALMIMAGES.COM



ABOVE: A tiny juvenile hogfish comes face to face with a hidden frogfish. Negros Island, Philippines. **RIGHT:** Male blue flasher wrasse, measuring just 2.5 inches long, West Papua, Indonesia.

Meet the sea's most fascinating creatures – see the lives and curiosities of charmers and tricksters – many newly identified and some on the verge of extinction.

From one of the world's premier marine biologists, an award-winning underwater photographer, and a leading expert on seahorses, comes a spectacular guide to hundreds of the ocean's fish and coral reefs.

In this richly informative volume, brimming with new discoveries and more than three hundred colourful images, you'll swim in the Atlantic, Pacific, and Indian Oceans; you'll be dazzled in the Coral Triangle and amazed in Triton Bay. Up close you'll meet the Cenderawasih fairy wrasse, with its florescent yellow streak; the polka-dot longnose filefish; and the multicoloured seadragon. There are scarlet-coloured corals, baby-blue sponges, daffodil crinoids, and all sorts of mystifying creatures that change colour at the drop of a hat. The whale shark is almost larger than life and the author's beloved pygmy seahorse, unless photographed, is almost too tiny to see.

The wondrous creatures inside excel in the arts of seduction and deception, and you'll have the



Ocean
Realm Images

rare chance to see and delight in their antics. You'll also learn what they eat, how they play, and how they care for one another; live on one another; and mimic others when they're afraid. There is also compelling insight into the naming process, which creatures are facing extinction, and how we can help them before it's too late.

Dr Richard Smith is a British underwater photographer and writer who aspires to promote an appreciation for the ocean's inhabitants and raises awareness of marine conservation issues through his images.

A marine biologist by training, Richard's pioneering research on the biology and conservation of pygmy seahorses, led to the first PhD on these enigmatic fish. Over the past decade, Richard's photographs and marine life focused features have appeared in a wide variety of publications around the world. Richard organises and leads marine life expeditions where the aim is for participants to get more from their diving and photography by learning about the marine environment.

His book 'The World Beneath: The Life and Times of Unknown Sea Creatures and Coral Reefs' is now available on Amazon.

THE
WORLD
BENEATH

*The Life and Times of Unknown
Sea Creatures and Coral Reefs*



DR. RICHARD SMITH



ON THE WILD COAST

DIVING THE SARDINE RUN

FEATURE AND PHOTOGRAPHY **PIER NIRANDARA**

The truth is that the sardine run is a total roll of the dice. Some days, I was in and out of the water dozens of times. Others, the action was too fast to even get in. I was wet, cold, and salty – my body sore from bouncing along on the boat for hours on end. But the exhilaration of the hunt made everything incredibly worthwhile. For anyone with nerves of steel who doesn't mind jumping into shark-infested waters, there's the chance to witness one of the most exciting events on earth and under the sea.





My name is Pier Nirandara, and I'm an author, underwater photographer, and Hollywood film executive – but most of all, I'm a storyteller at heart. As a lifelong lover of the ocean and its habitants (fantastical or otherwise), I began my career as Thailand's youngest author, writing children's novels about mermaids. This led to working as a literary Brand Ambassador for UNESCO, and eventually to a job in LA's film industry bringing stories to the big screen. A year ago, I took a break from the corporate world to embark on a solo backpacking trip across five continents, looking to face fears and seek adventure.

Why?

It all goes back to the Wild Coast.

I was working in Hollywood when a scuba trip to South Africa changed everything. Far from the urban sprawls of Cape Town and Johannesburg lies a part of the country that few venture to: it's where you can wake up to blazing sunrises over the ocean, surf your soul away, and witness the greatest underwater migration on earth.

After thirty hours of travel, I arrived in Cintsa – a small beachside community and the start of South Africa's Wild Coast. As its name suggests, it's the untamed wilderness of a breathtaking

coastline tucked away on the perimeters of the Rainbow Nation. Wide estuarine bays are fringed on one side by empty beaches, and on the other, amber-turfed hills – etched with arteries flowing from the country's heartland out to the open sea.

Due to its remoteness and lack of accessibility, the Wild Coast is more known to travellers than tourists, and a rewarding destination for those willing to endure hours driving down pot-holed dirt roads to venture off the beaten path. It's not uncommon to hear of people who visit for a few days only to end up moving there permanently.

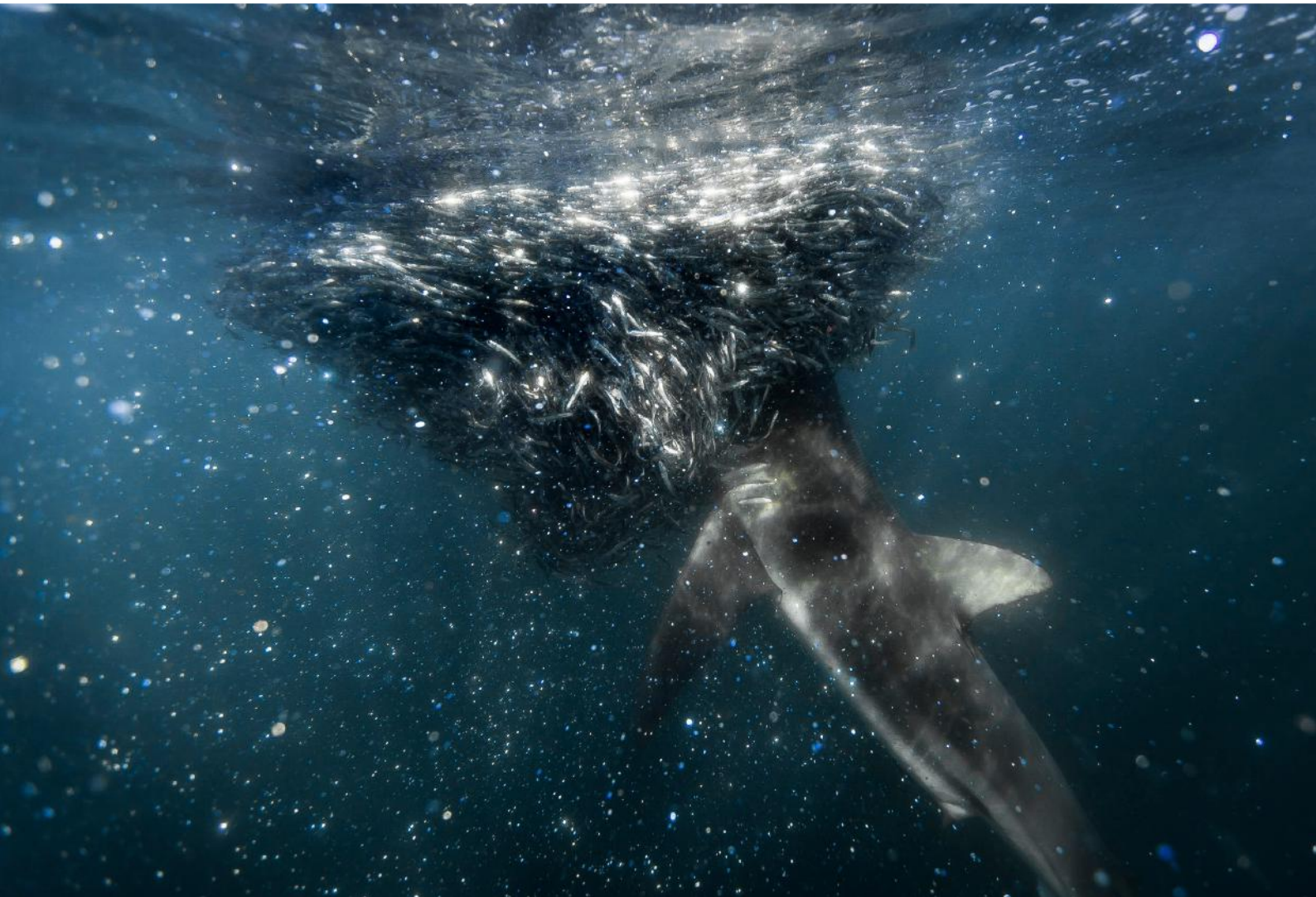
The sole purpose of my own visit? To photograph the sardine run.

Despite the misnomer, the sardine run has nothing to do with marathons. Nicknamed the "Blue Serengeti," this is a massive movement of animals – larger in number than the wildebeest of eastern Africa – as millions of fish migrate up the Eastern Cape of South Africa towards KwaZulu Natal each year. Sometimes, the greatest shoal on earth can stretch for kilometres long. With these fish come the predators that hunt them, and the opportunity to share the ocean with some of its most majestic wildlife as they chase baitballs in frenzied feeding.

At the crack of dawn, I joined the crew in pulling on our wetsuits and windbreakers before launching our boat into the surf. The waves pummelled the sand in foamy blasts of colourful orange mist. Endless beaches, raging seas, and sun-drenched skies: it was quintessential Wild Coast. Then, in the true sense of an expedition, we spent the majority of the day zipping along the coastline, riding free on the open ocean looking for signs of marine action. This is the farthest thing from your typical liveaboard – there are no scheduled dives or timed surface intervals!

The skippers spotted activity long before my own untrained eyes. Usually, it was a squadron of Cape gannets swirling in a chaotic dance above an innocuous patch of sea – a sure sign of a baitball. The guides would take it upon themselves to bring us closest to the action as was 'safe' before yelling, "Jump!" I learnt to override my survival instincts and plunge into the frigid waters.

The waves pitched and fell, sending me tumbling at their mercy. The water was a cool 15 degrees Celsius, and the chill of the Agulhas current sank deep into my bones. My teeth gripped the snorkel's mouthpiece tightly, the mask on my face fogging up from my deep, laboured breaths as I fought to stay warm and afloat all at the same time.











A grey shape cut past. I turned, head rapidly swivelling side to side. What was that?

The choppy waves continued to move, making it harder to see. I dipped beneath the surface, peering through the murky gloom, but spotted nothing save for my own blue fins kicking beneath. Raising my head above the waterline, I glimpsed it out of the corner of my eye. There was no doubt about it.

Shark.

With my brain screaming in panic, I plunged back beneath the surface. It was similar to the experience of watching a horror film – you know that what you're about to witness will terrify you, but you can't help but look with morbid curiosity anyway.

But the shark didn't materialise out of the gloom like expected. Instead, I found myself staring down into the deep blue void, watching the fierce African sun play in the waves as it refracted in shafts of gold. And then the world was filled with silver: I had floated right into the middle of a baitball.

A static number of fish pulsated gently in the current. I knew that upon predatory presence, sardines are herded inward into a tight "ball" as a protective mechanism, creating a glittering mass that moves as a singular organism. It's quite a sight, and mesmerising to watch. Amidst the frenzy, I had found the brief, transient moment of calm.

Then out of nowhere, the frenzy began. The birds dived, their dull thudding sounds on the water drawing the sharks from the deep blue below. The predators ploughed through the baitballs, sending the fish into a mad dash for survival. Dolphins and tuna showed up seconds later, each chomp bringing about an eruption of scales and leaving the ocean sparkling like a galaxy of stars. I was no longer aware of the

cold, my heart pounding with adrenaline as I watched the natural phenomena unfolding before my very eyes. I now understood why this spectacle was aptly dubbed the Blue Serengeti. It was complete and utter chaos – beautiful, mind-blowing chaos.

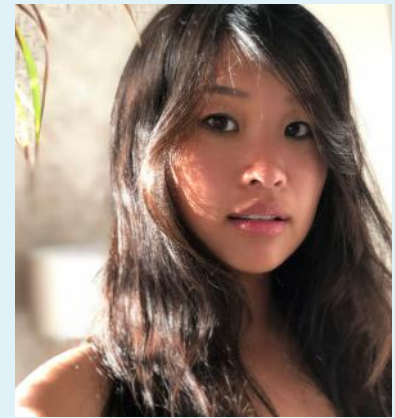
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I returned to California a different person, constantly feeling like my life was moving so fast, but I wasn't really living it. I ended up making the conscious decision to take a break from corporate life to focus on just that – living. As someone who's always been a planner, this was terrifying, exhilarating, and freeing all at the same time.

20 countries across five continents later, and I returned to LA – primed with newfound perspective, widened horizons, and a cemented love for using stories to further social causes. Within a few months, I'd landed a new job in the film industry that only happened because of my time abroad, and married my passions by starting a Hollywood scuba club for film executives who also dive.

Ultimately, the chaos of the sardine run had taught me to face my fears and embrace the unplanned. And what do you know? It opened so many new doors – ones I never could have planned for.

**With excerpts from the upcoming novel Chasing the Rising Sun by Pier Nirandara.*



PIER'S GREAT PERHAPS

I founded Pier's Great Perhaps, a community with over 50,000 travellers from around the world across various platforms. The brand focuses on solo backpacking, particularly empowering women to explore the world on their own, with an eye towards underwater photography, diving, and writing.

INSTAGRAM: @PiersGreatPerhaps
www.piersgreatperhaps.com

PHOTOGRAPHY PORTFOLIO:
www.piernirandara.com

HOLLYWOOD DIVING CLUB

More information can be found on the Hollywood Diving Club here: www.bit.ly/3bNCS1K

AUTHOR

Pieretta Dawn is the pen name of Praekarn (Pier) Nirandara, the youngest English-writing author in Thailand. She received national critical acclaim when her debut young adult novel The Mermaid Apprentices, the first of The Interspecies Trilogy, was published at age 15 in 2009. Her books can be found in the links below.

PIER'S BOOK TRILOGY:
www.amzn.to/2P2QOLQ
www.amzn.to/38BS1JD

THE SARDINE RUN

Pier can highly recommend both Pisces Divers and Sardine Run South Africa for anyone who is interested in experiencing the sardine run. Contact Pier directly if you would like any further info on her website above.

DIVE OPERATORS PISCES DIVERS

Pisces Divers is a PADI Five Star Instructor Development dive centre and Cape Town scuba diving operator, offering a full range of PADI dive training and daily dive excursions, as well as a retail shop, servicing centre, dive gear rental service, coffee shop and air and nitrox filling station.

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SARDINE RUN SOUTH AFRICA

Sardine Run South Africa has been offering all-inclusive Sardine Run Packages since 2003. Experience this annual phenomenon of millions of sardines which takes place off the coast of Port St Johns in the Eastern Cape of South Africa whilst being in the presence of hundreds of dolphins, sharks, diving birds, whales, game fish and seals. During your Sardine Run trip you will also get to dive one of the top-10 dive sites in the world, the Aliwal Shoal in KwaZulu-Natal. You'll feel like you're in a David Attenborough production or filming for Natgeo or the BBC Earth series.

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THE 20 BEST WRECKS IN THE WORLD

FROM ATLANTA TO ZENOBIA

FEATURE AND PHOTOGRAPHY **JESPER KJØLLER**

What creates a great wreck? Obviously, personal preferences will make some divers choose differently, but my subjective hitlist is based on factors such as historic importance, an interesting narrative surrounding the loss at sea, and maybe a certain X-factor that is hard to quantify.





LEFT-RIGHT: 1. SS Andrea Doria in the North Atlantic, sunk in 1956; 2. USS Atlanta in the Solomon Islands, sunk in 1942 and 3. Bianca C found in Granada, sunk in 1961.

What creates a great wreck? Obviously, personal preferences will make some divers choose differently, but my subjective hit list is based on factors such as historic importance, an interesting narrative surrounding the loss at sea, and maybe a certain X-factor that is hard to quantify. Some of the most exciting wrecks have more than one story to tell. If the wreck both has an interesting history surrounding the initial loss and an equally compelling tale concerning the later discovery, it scores higher on my list. It also matters that the wreck is photogenic, has a certain size and is in good shape for its age. Interesting artefacts still on board, level of intactness, and the marine life are also factors considered. I have dived more than a dozen of the wrecks on this top twenty list already, and the rest is on my bucket list.

1 SS ANDREA DORIA

TYPE Ocean Liner
AREA Nantucket Island, North Atlantic
DEPTH 82 metres
LOST 25 July 1956

A luxurious ocean liner and an icon of national pride as the largest, fastest and allegedly safest of all Italian ships of the time. While heading

for New York, she collided with MS Stockholm in one of history's most infamous maritime disasters. The top-heavy Andrea Doria started to list severely, which left half of the lifeboats unusable. But she stayed afloat for 11 hours and "only" 46 people lost their lives.

Andrea Doria's depth was a huge challenge for the first generation of advanced divers. The coveted branded porcelain lured many divers deep into the wreck and the "china fever" claimed numerous lives. Today, she is fast decaying and is believed to be empty of artefacts. However, since she played an important role in the development of deep wreck diving techniques such as the use of helium, accelerated decompression and advanced penetration procedures, she still belongs on the top 20 list.

2 USS ATLANTA

TYPE Light Cruiser
AREA Guadalcanal, Solomon Islands
DEPTH 130 metres
LOST 13 November 1942

In her short life, she played a pivotal role in the Pacific War theatre escorting famous aircraft carriers such as the USS Enterprise and USS

Hornet back and forth between Pearl Harbor and Midway before moving onto the Solomon Islands. She was hit by friendly fire during the battle of Guadalcanal and ended up sinking three miles west of Lunga Point.

The wreck was located in 1992 by a team led by Robert Ballard (who also found the Titanic and Bismarck), but because of strong surface currents and the remote location in the Solomons, with very poor infrastructure, the wreck has only been dived a few times and very sporadically. Last successful expedition was carried out by a team of leading GUE-divers.

3 BIANCA C

TYPE Passenger Ship
AREA Granada
DEPTH 50 metres
LOST 22 October 1961

Not many ships can brag about being wrecked twice, but Bianca C can. Construction began in France under WWII but the unfinished hull was scuttled by German troops. After the war, the 180-metre-long structure was salvaged and completed. In 1961, while anchored in Grenada, an explosion shook the engine room. The burning ship could potentially block the



ABOVE: 4. HMHS Britannic. RIGHT: 5. Hilma Hooker.

harbour, so an attempt to tow Bianca C was made. Thousands of Grenadians watched from the mountains as the tow progressed for six hours, but the Bianca C had only moved 5 km when the towline broke. Bianca C sank – again. Today she is the largest wreck in the Caribbean and it takes several dives to explore the site.

4 HMHS BRITANNIC

TYPE Ocean Liner

AREA Kea Channel, Greece

DEPTH 120 metres

LOST 21 November 1916

If the Titanic did not rest at 3,800 metres, she would probably be the star of any wreck divers wish list. Fortunately, her sister ship is within diveable depths, but only for the most experienced tech divers at 120 metres in the busy Kea Channel outside Athens. It's a challenging dive by any measure.

As her ill-fated sister, Britannic was supposed to enter service as a transatlantic passenger liner and was improved in a number of ways due to lessons learned from the sinking of the Titanic. She never went into service but was operating as a hospital ship during WWI when she hit a mine and foundered in less than an hour.

Britannic has it all: A marvellous pedigree, a mystery concerning the sinking, an exciting narrative surrounding Cousteau's discovery, early trimix dives on the wreck in 1975, and a number of high-profile expeditions from 1999 and onwards.



5 HILMA HOOKER

TYPE Freighter

AREA Bonaire

DEPTH 30 metres

LOST 12 September 1984

The only wreck on the list that can be reached from shore. The ship was under surveillance by drug enforcement agencies and local authorities inspected her while docked at Town Pier in Bonaire. They discovered and confiscated 11 tons of marijuana. The owner was never found and the ship was left to rot away. One morning she began to take in water, but before sinking in the harbour she was towed away and ended on a sandy area between two coral reefs. It is unclear if Hilma Hooker was put there on purpose by the local dive centre community, but the location is perfect for divers and she is among the best shore diving wrecks in the world.





6 S/S HINDENBURG

TYPE Icebreaker

AREA Åland Islands, Bothnian Sea

DEPTH 50 metres

LOST 9 March 1918

Not to be confused with SMS Hindenburg in Scapa Flow or the ill-fated blimp of the same name, the S/S Hindenburg was a German icebreaker. During WWI she was part of Transportflotte I of the Sonderverband Ostsee when she hit a mine frozen in the ice. Three men were killed in the explosion. What makes this dive special is the fact that all wrecks in the autonomous Finnish province Åland is protected by law and you will see artefacts here that would be long gone almost anywhere else. Hindenburg is extremely well preserved in the cold and fresh water in the Bothnian Sea and you can enjoy many details like telegraphs, compass housings, and a complete galley on Hindenburg.



7. SMS Kronprinz Wilhelm in the Scapa Flow, lost in 21 June 1919.

7 SMS KRONPRINZ (WILHELM)

TYPE Battleship
AREA Scapa Flow
DEPTH 43 metres
LOST 21 June 1919

The König class battleship SMS Kronprinz was laid down in Kiel in 1911. She participated in the Battle of Jutland, the largest naval battle of World War I, but she remained unharmed and suffered no loss of life. In 1918 she was renamed Kronprinz Wilhelm. And the following year she was part of the interned fleet in Scapa Flow and was eventually scuttled by admiral Ludwig von Reuter. The immense size of the wreck can be intimidating and you need several dives to come away with a greater appreciation for her many details. Many of the 12-inch guns are accessible and visible.

8 HIJMS NAGATO

TYPE Battleship
AREA Bikini Atoll
DEPTH 54 metres
LOST July 1946

Admiral Yamamoto directed the attack on Pearl Harbor on December 7, 1941 from the bridge of the Nagato. The battleship with the pagoda style superstructure was later impounded by the Americans and included in the Operation Crossroads in Bikini to gather information on enemy shipbuilding techniques after an atomic explosion.

Nagato's biggest highlights are the four enormous propellers and the twin 16.1-inch guns which were the biggest in the world at the time. Even though the superstructure is partly squashed under the weight of the overturned hull, it is possible to squeeze into the bridge and pretend to be Admiral Yamamoto listening to the famous radio code word Tora! Tora! Tora! – the signal to commence the attack on Pearl Harbor.

9 MARS THE MAGNIFICENT

TYPE Battleship
AREA Swedish East Coast, Baltic Sea
DEPTH 72 metres
LOST May 1564

The oldest ship on the list, and possibly the most significant wreck discovery of the century.

Mars was located by Richard Lundgren and his team in 2011 after searching more than 20 years for it. This Swedish battleship was the largest of its time, but Mars was defeated by a fleet of Danish soldiers and German mercenaries, and when the powder stores on board caught fire, Mars exploded, and 800 soldiers perished.

Ongoing scientific research projects on Mars are breaking new ground in digital excavation. The photogrammetry models based on data collected by divers, are setting new standards in non-destructive archaeology.

10 USS ORISKANY

TYPE Aircraft Carrier
AREA Mexican Gulf
DEPTH 64 metres, flight deck 41 metres
SCUTTLED 17 May 2006

The only wreck on the list scuttled on purpose, which among some purists, disqualifies the Oriskany from being a "real" wreck, but the sheer size of this mighty one – for me – is enough to warrant a nomination. And she is one of the very few aircraft carrier wrecks in the world. USS Oriskany was completed right after WWII and operated in the Pacific well into the 1970s. She served during the Korean War and later the Vietnam War. After being decommissioned in 1976, she lay idle for almost 30 years until it was decided to scuttle her outside Pensacola in Florida. It took a lot of work to clean the enormous vessel and make her environmentally ready for disposal on the seabed. She remains the biggest artificial reef in the world.

11 PRESIDENT COOLIDGE

TYPE Ocean Liner
AREA Vanuatu, Pacific Ocean
DEPTH Bow 21 metres, stern 73 metres
LOST 26 October 1942

Built as an American luxury ocean liner in 1931, she served as a troopship during the beginning of WWII. She sank after hitting two mines in the New Hebrides (today part of Vanuatu).



8. HIJMS Nagato in Bikini Atoll, lost in July 1946.

The captain realised the ship was lost, so he ran her aground and ordered the 5,340 troops to disembark without their belongings as he thought they would be able to retrieve them later, but shortly after, the enormous wreck slid down the sloping coral reef.

President Coolidge is probably the most accessible large ocean liner wreck and you need several dives to explore the almost 200-metre long ship. Beware though, as it is very easy to exceed dive limits due to the gradual downward slope.

12 PRINZ EUGEN

TYPE Heavy Cruiser
AREA Kwajalein Atoll
DEPTH 34 metres
LOST 22 December 1946

The German heavy cruiser was launched in 1938. She saw lots of action in famous battles during WWII, primarily in the North Sea war theatre. After the collapse of the Axis Powers in 1945, she ended up with the US Navy as a war prize. It was decided to include her in Operation Crossroads to evaluate the effect of a nuclear bomb on a German built battleship. Prinz Eugen survived both atomic blasts and was later

towed to Kwajalein Atoll 400 miles away. She started to take in water but the leak could not be fixed due to the radiation. She capsized and sank in shallow water. Today the enormous wreck can easily be dived as the propeller sticks out of the water.

13 SS NUMIDIA

TYPE Steam Cargo Ship
AREA Brothers Islands, Northern Red Sea
DEPTH Stern 80 metres, bow 10 metres
LOST 6 July 1901

The SS Numidia was built in Scotland and embarked on her maiden voyage in February 1901. The ship's second journey however, would be her last.

After a smooth passage of the Suez Canal, the ship hit the Big Brother Lighthouse and the bow was seriously damaged. The captain ordered the crew into the lifeboats. He stayed on the island for seven weeks to supervise the salvage of the ship's cargo, before the hull finally slid into the depths of the reef's northern tip. The marine life on the Numidia, especially the soft corals, are splendid, and the setting with the impressive stern at 80 metres, with the reef in the background – is a spectacular sight.

14 SAN FRANCISCO MARU

TYPE Passenger Cargo ship
AREA 4th Fleet Anchorage, Truk Lagoon, Micronesia
DEPTH 62 metres
LOST 17 February 1944

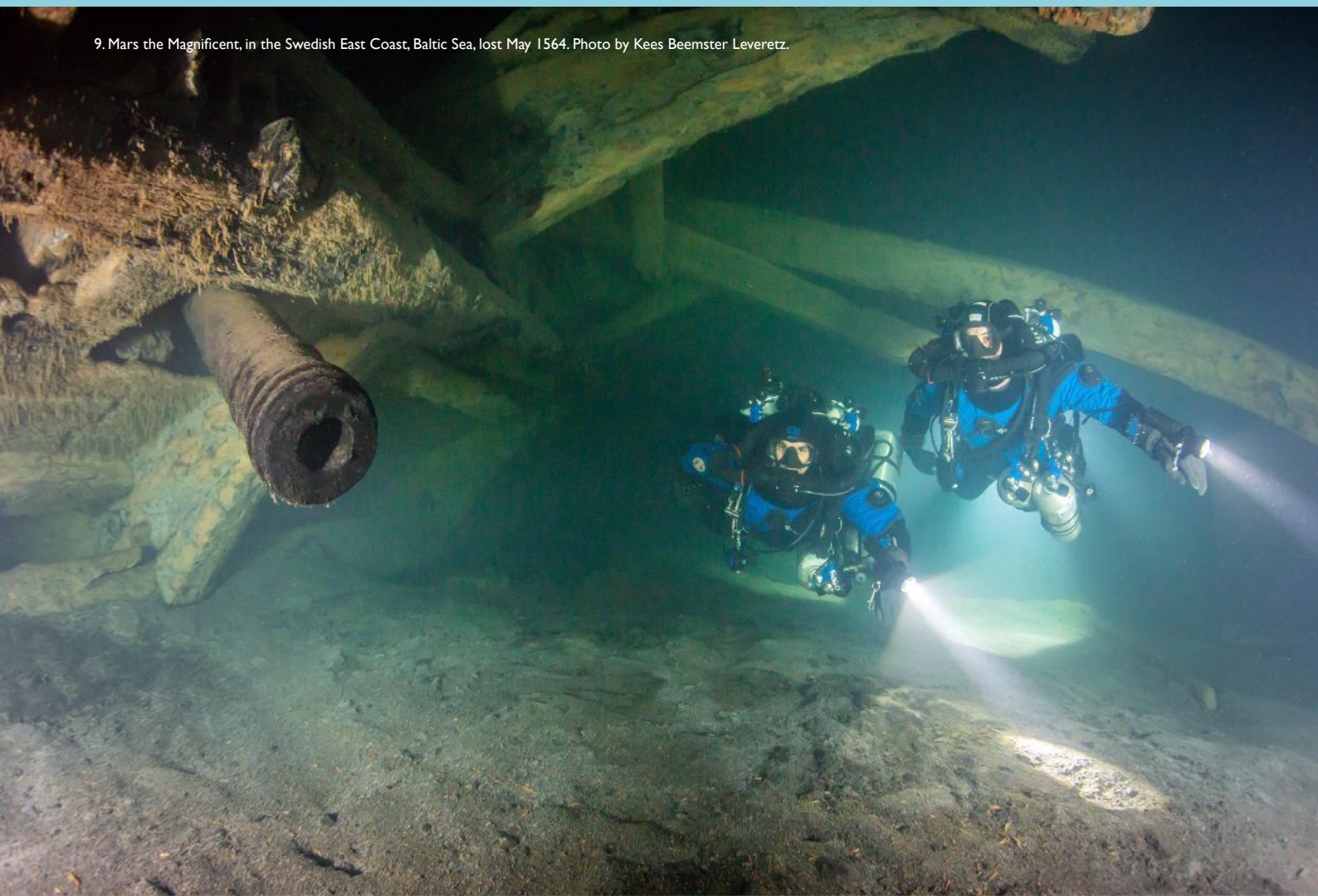
In 1944, Operation Hailstone wiped out most of the Japanese Pacific fleets and 275 aircraft in Truk Lagoon in just two days. With 60 wrecks to choose from, it is hard to single out just one, and at least five other Truk wrecks could have easily made it onto the list. But there is a reason why San Francisco Maru is one of the most famous wrecks in the lagoon. She is loaded to the brim with war materials such as the small Japanese HA-GO tanks, trucks, various types of ammunition, mines and aircraft parts. She is in good shape as she is one of the deeper wrecks.

15 USS SARATOGA

TYPE Aircraft Carrier
AREA Bikini Atoll
DEPTH 52 metres
LOST 25 July 1946

In 1946, the United States conducted Operations Crossroads in Bikini to test the impact of atomic explosions on military

9. Mars the Magnificent, in the Swedish East Coast, Baltic Sea, lost May 1564. Photo by Kees Beemster Leveretz.



12. Prinz Eugen in Kwajalein Atoll, lost in December 1946.

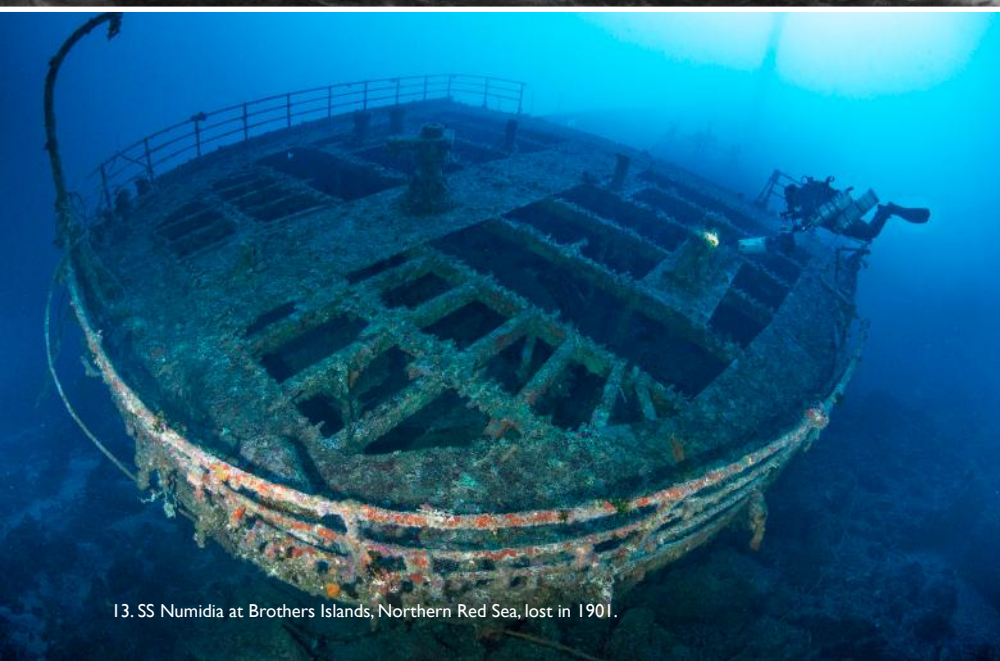




10. USS Oriskany near Midway Atoll in 1967. Scuttled in the Mexican Gulf in 2006.



11. President Coolidge (1931) by Newman. Lost in October 1942 in Vanuatu, Pacific Ocean.



13. SS Numidia at Brothers Islands, Northern Red Sea, lost in 1901.

vessels. The 270-metre-long aircraft carrier USS Saratoga had an impressive track record and was involved in many major conflicts and campaigns during WWII, but after the war she became a sitting duck in Bikini. She survived the first blast, but succumbed to the second three weeks later.

Sara is most likely the largest diveable wreck in the world and with so many penetration possibilities and an abundance of details inside and outside, you could easily go to Bikini and only dive the USS Saratoga for a week. In fact, if the aircraft carrier was the only wreck here, it would still be worth the long journey.

16 THISTLEGORM

TYPE Cargo Ship

AREA Strait of Gubal, Northern Red Sea

DEPTH 32 metres

LOST 6 October 1941

One thing is certain: no diving career is complete without this wreck in your logbook. In September 1941, she was part of a convoy up through the Red Sea. While anchored, waiting for the Suez Canal to open, her ammunition stores in hold 4 were struck by a 2.5 ton bomb from a German Heinkel He 111 and she sank immediately. Thistlegorm owes her stardom to the amazing cargo of military vehicles, motorbikes, aeroplane spare parts, weapons and ammunition. But her legacy is even more impressive as she was found and explored (looted) by Jacques Cousteau in the early 1950s. She was then lost again until an Israeli liveaboard rediscovered her in the early 1990s. Since then, the huge number of daily divers has taken its toll and parts of her have collapsed, but she is still an epic dive.

17 SS MAIDAN

TYPE Steam Cargo Ship

AREA Rocky Island, Southern Egypt

DEPTH 120 metres

LOST 9 June 1923

SS Maidan hit Rocky Island on her way back to Europe after visiting India. She disappeared in deep water with her cargo of colonial imports – including elephant tusks – but not until the crew and the passengers managed to get to the island where they were rescued that same day.

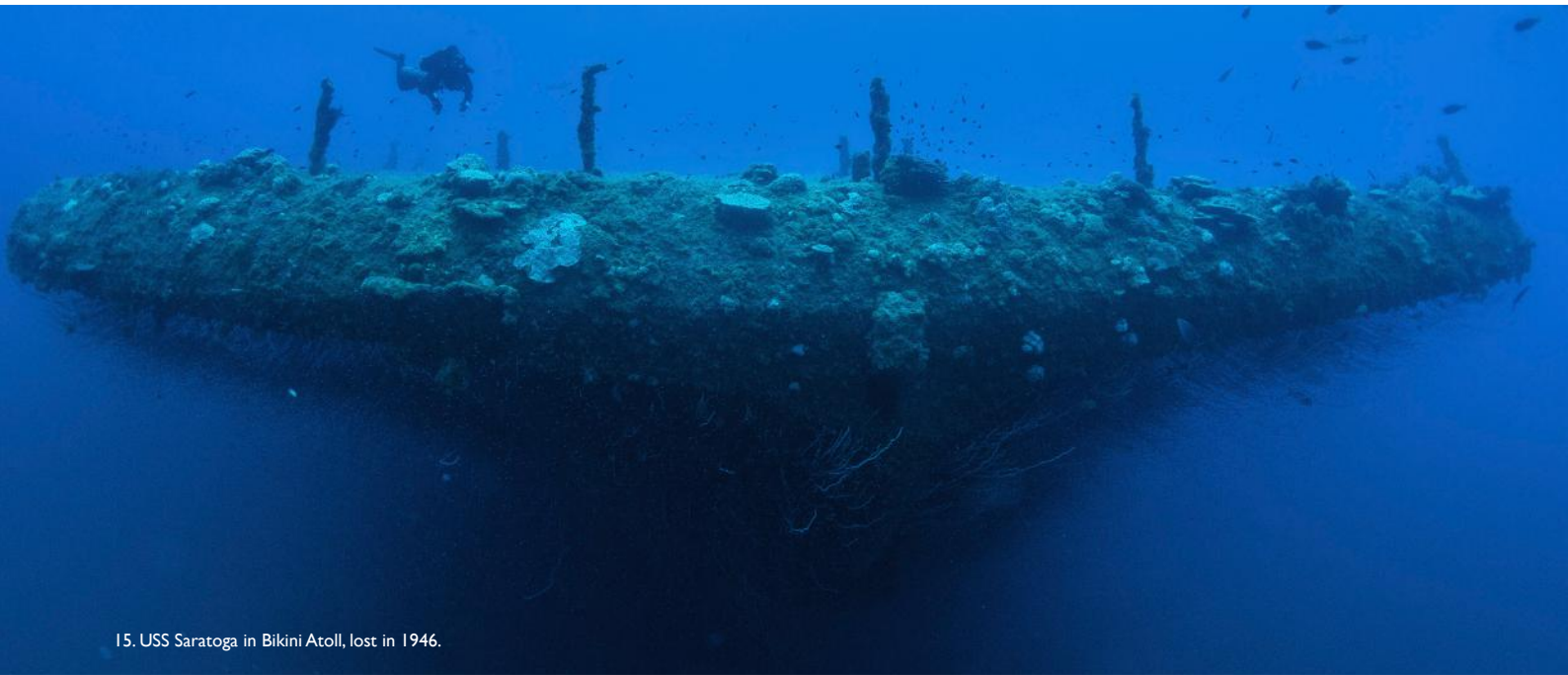
Because of the depth and the inaccessible position, not many dives have been conducted here since her discovery in 2003, so the 152-metre-long wreck is still in very good condition with some nice penetration options, including engine room and cargo holds. During decompression stops along the spectacular walls of Rocky Island, it is not uncommon to be accompanied by tiger sharks or curious longimanus.

DIVING DESTINATIONS

14. The San Francisco Maru in Truk Lagoon, Micronesia, lost in 1944.



15. USS Saratoga in Bikini Atoll, lost in 1946.



16. Thistlegorm in the Strait of Gubal, Northern Red Sea, lost 1941.



17. The SS Maidan at Rocky Island, Southern Egypt, sunk in 1923.





18. Umbria at Wingate Reef in Port Sudan, lost in 1941.



19. SS Yongala in the Great Barrier Reef, Queensland, lost in 1903.



20. Zenobia in Larnaca, Cyprus, lost in 1980.

18 UMBRIA

TYPE Cargo and Passenger Ship
AREA Wingate Reef, Port Sudan
DEPTH 35 metres
LOST 9 June 1941

Italy had not officially joined WWII on the German side when Umbria fully loaded with ammunition and war supplies was anchored outside Port Sudan.

The British had a suspicion and detained the Italian ship and its crew. Umbria's captain heard Italy's declaration of war on the radio and realised the Brits would impound the cargo, so he managed to scuttle the 155-metre-long ship under the pretence of doing a muster drill. Umbria lies on its port side with the davits still sticking out of the water. She has enough explosives in her hulls to blow Port Sudan to kingdom come.

19 SS YONGALA

TYPE Passenger Ship
AREA Great Barrier Reef South of Townsville, Queensland
DEPTH 33 metres
LOST 23 March 1903

SS Yongala steamed into a tropical cyclone and 122 crew and passengers died in the disaster. The wreck was not located until 1958 and has since become a major tourist attraction. Due to the many fatalities, it is not allowed to penetrate the wreck, but the marine life surrounding Yongala is amazing as the structure provides an oasis in the barren underwater landscape. Majestic fan corals, soft and hard corals decorate the reef. Giant groupers, eagle rays, mantas and various sharks are spotted frequently, and the site is also visited by minke or humpback whales between June and November.

20 ZENOBIA

TYPE Roll On-Roll Off Ferry
AREA Larnaca Cyprus
DEPTH 42 metres
LOST 7 June 1980

The Swedish RO-RO ferry was on her maiden voyage from Malmö, Sweden bound for Syria. During a stop in Cyprus, the ship began listing to port and it was discovered that excess water was being pumped into the ballast tanks due to a computer malfunction. She was towed out of the harbour in Larnaca to prevent her from becoming an obstruction, and a few days later the captain had to order everyone to leave the sinking ship with its cargo of trucks estimated to be worth £200 million. This enormous wreck has been hugely important to the diving industry in Cyprus. Zenobia is a giant playground for divers of all levels.



A full-page underwater photograph serves as the background. On the left, a large, intricate, orange-brown coral structure dominates the foreground. The water is a deep, clear blue, filled with numerous small, silvery fish swimming in various directions. In the lower right, some darker, more complex coral structures are visible, along with a few larger, more colorful fish. The overall scene is vibrant and captures the biodiversity of a healthy reef.

RAJA AMPAT

THE ADVENTURES OF A UAE DIVER

FEATURE **SARAH MESSER** PHOTOGRAPHY **NICHOLAS CHEUNG**

Raja Ampat forms part of the coral triangle and is an archipelago formed of 1,500+ islands. It is famous for its extreme bio diversity, with more species of coral and the highest variety of marine life than anywhere else in the world. Today it is a highly protected area where its pristine condition is continuously maintained and monitored, and its marine life can continue to flourish. In fact since protection laws were introduced some years ago, shark and fish numbers have grown considerably, demonstrating how important it is that these ocean environments are given protected status.



Tis the season to be jolly! Around October each year, my parents and friends usually confirm who is coming to Dubai to visit for Christmas and New Year. However at the end of last year, with Mum and Dad packed off to my brothers for the festive period, I found myself free and wondering what to do. It was the first time I was packing up my dive gear to head somewhere new as well as do something new to ring in the new year.

I ummed and ahed, plotted and planned, and eventually decided to tick off one of my top

choices on my ever expanding list. I chose one of the worlds' most famous diving destinations, regularly featured amongst the top spots to visit – Raja Ampat, Indonesia.

The “liveaboard or not” conundrum is mainly taken away from you in Raja; it is possible to get to dive sites staying on the islands, but you can only cover the distance between South and Central Raja with a liveaboard. If you choose the island route, be prepared for very basic homestay options. A liveaboard will give you far greater dive site coverage and distances.

CHOOSING YOUR LIVEABOARD

The Raja Ampat season runs from September to April each year; outside of these months the sea can be rough and visibility poor. Most of the liveaboards there (and there are many) split their annual calendar in two – spending May to August in the Komodo National Park, and the rest of the year in Raja. Something you may not know, is that the boats also run ‘crossing’ dive trips, for 11+ days, where they move from one destination to the other. I haven’t done one yet myself (added to the expanding list) but I’m told as they cross the



Bandar Sea, there is the rare chance to go to some spectacular sites that not many divers know about or have the opportunity to get to.

With so many available liveaboards covering Raja, you can really start to get picky and look for a setup and price range that will work for you. Revisit 'The Adventures of a UAE Diver' article from the last EDA December magazine issue 2019 to remind yourself of the safety tips to ask about when booking your trip. Big, small, old, new, wooden, sails, yacht, engines, you'll find every type of boat in Raja Ampat.

It goes without saying, a budget price will come with budget facilities. Always make sure to read the description and reviews from other passengers carefully to be clear on what you are buying into so that your expectations are realistic. For this trip, I blew caution to the wind and spent the big bucks on 'Solitude One', for a more luxurious vessel. It wasn't the most expensive boat available, but certainly above the average price. I also wanted a less traditional boat, and the Solitude is a modern yacht which stood out from the other options.

I had actually seen 'Solitude One' a few months earlier when I was planning my Eid trip to Komodo, and had enquired about it, but it wasn't sailing at that time – and in fact, if I had taken that trip, I wouldn't have met the lovely EDA Magazine Editor, Ally Landes at Scuba Junkies' dive centre, and then you, Dear Reader, wouldn't be reading this!

So for this reason, I knew the boat had recently been renovated and refurbished, and gone through all the newest safety checks. TICK – book me on!



As a side note, I have booked all of my liveaboards so far through www.Liveaboard.com. They are a UK based company, and I've always had excellent service from them. They respond quickly to questions and give detailed information. There are of course many other booking agents, I just haven't needed to look outside of this company thus far. They seem to have a wide selection of boats per destination and good pricing.

GETTING TO RAJA AMPAT

When the boat is booked, it's time to start finding flights – and Raja Ampat is one of those destinations you need to spend some time planning to line up your schedule carefully. Be prepared to spend a couple of days travelling to get there. I took a direct flight from Dubai to Jakarta, then an internal flight for another 4+ hours to Sorong, on the island of New Guinea. Once in Sorong, my buddy and I spent one night in the Swiss Bel Hotel before boarding our boat the next day.

A useful point to note – we might look to add on a couple of land days either side of a diving trip to see and experience the local life. In Sorong there is really nothing to do and nowhere to visit. If you were staying for several days you might hire a car and drive further out, but if it's just to spend some extra days in Sorong, it's not worth the additional vacation days. I can also highly recommend the Swiss Bel Hotel – having heard stories from divers about the other hotels – this one was clean, had polite, friendly staff, and good food.

SOLITUDE ONE

Having been on a few liveaboards now, I knew as we approached the boat the next day it was going to be special. Shiny white and gleaming in the sunshine, the first thing you really notice is the lovely big dive deck – it's wide and spacious. Perfect for gearing up and down everyday without clobbering your neighbour in the eye with your reg or tripping over your buddy's fins. And really this is one of the things I liked most about the Solitude One, it's a big boat (actually it's a catamaran, which makes for very smooth and quiet sailing, even if the weather is bit rough) but they haven't tried to cram as many divers as possible onto it.

At maximum capacity it has 20 divers and 22 crew. All bedrooms are big enough to be perfectly comfortable with en-suite bathroom. The lounge and dining area is large and roomy with a sofa and TV set-up in the middle. Even the kitchen is bigger compared to others I've seen, and I can't help but think a happy chef, means better food! There is plenty of room for sprawling and dozing between dives both inside and outside on the top deck, and if you prefer to be working on your camera settings when not in the water, there is a dedicated camera room. The divers on my trip even found the space for a make shift gym to daily exercise. It really is the most modern and pristine liveaboard I have seen, and the owners





have really thought about all a diver's needs and comfort. With a warm dry towel handed to you immediately after every dive, they really have thought about all the little things that make a difference. Comfort is the boat's best physical attribute.

Our dive guide for the trip, Peter, is exactly the kind of guy you want running the show. The right mix of, 'this is what we do and how we do it, and that's that', so everyone knows what is expected of them; excellent knowledge of the dive sites and the marine life we found there; and relaxed, and sociable. In fact all of the dive guides were very knowledgeable, and some of the local guys – especially – knew the dive sites inside-out and backwards. The daily routine was clear:

- Wake up between 5-6 am depending on first site;
- Mini breakfast of cereal and toast;
- First morning dive;
- Proper cooked breakfast;
- Snooze;
- Second morning dive;
- Lunch;
- 2 hour snooze;
- Afternoon dive;
- Snacks;
- Brief snooze;
- Night dive when allowed (we did 3 or 4 across the week);
- Dinner;
- The day is over after 9 pm.

DIVING IN RAJA AMPAT

Raja Ampat (translated as Four Kings) forms part of the coral triangle and is an archipelago formed of 1,500+ islands. It is famous for its extreme biodiversity, with more species of coral and the highest variety of marine life than anywhere else in the world. Today it is a highly protected area where its pristine condition is continuously maintained and monitored, and its marine life can continue to flourish. In fact since protection laws were introduced some years ago, shark and fish numbers have grown considerably, demonstrating how important it is that these ocean environments are given protected status.

We started by heading to South Raja, and were promised soft corals and bright colours. True enough, every dive site we visited looked like a summer garden in full bloom, with coral flowers dancing in the water and catching the light. Huge schools of fish swoosh in and out of the coral structures in every direction. There are also very special sharks here that are only found in two locations in the world – the Wobblygong shark in Raja and Australia. We would find one on most dives, sleeping under a ledge. They are very unusual and look like an old man with a straggly beard, they have a flat head, and the most intricate pattern on their skin looks like a tapestry.

My two favourite dive sites in the South were on the same day, Kaleidoscope and Four Kings,

both were just teeming with life and colour. They are the kind of dives you could do repeatedly, over and over.

At this point, you've forgotten it was Christmas, right? Our last day in South Raja was Christmas day, and we got the best presents any addicted diver could wish for. First dive, a lone Manta ray at a cleaning station; second dive a school of hunting Mobular rays swooping through the sea like an aeroplane squadron in formation; third dive, multiple Mantas dancing their graceful ballet for us for a whole hour. I had clearly been a good girl, these were the best Christmas gifts I could have hoped for.

We then made our way northwards to Central Raja, and the scenery changed completely. There is much more hard coral at the central dive sites, and if the south looked like summer gardens, then these sites looked like that of winter gardens – more wintry colours of browns, dark greens and reds. Several dive sites looked like they were under snow because of the white coral. Their polyps looked like snowflakes scattered all over the place.

The marine life is just as abundant, but also very different. There were fewer of the large schools of fish, but more micro creatures to look for. There were many types of beautiful delicate Pygmy seahorses which were incredibly hard to spot as they were so camouflaged with the coral fans they live on. And so many varieties



of Nudibranchs of all shapes, sizes and colours. The old man Wobbegong shark sleeping under the rocks is also found here.

On the fifth day, we briefly went on to land to walk up to the Pianemo Viewpoint which is the most famous image of Raja Ampat you see so often of the multiple small islands surrounded by the beautiful azure sea. The locals have built a stairway so that you can get up to the viewing platform to take photos. It really is a spectacular view and well worth the effort to climb up.

The last dive we did, was a night dive by Yenbuba Jetty. It's a dive all about the zooplankton, and I thought I knew what plankton was until I experienced this for myself. I had a buddy with me who is specifically fascinated by zooplankton which helped me to learn more. Once the sun had set, millions and millions (and really, I mean MILLIONS) of tiny little baby sea creatures still in their transparent egg sacks, came out from under the sand. The sea was thick with them, it was like diving through soup, and you could feel them on your skin. This may not sound pleasant, but when you stop to look closely, you can identify the teeny creatures. My buddy had a special light to attract them and when he turned it on, the millions became billions of swarming larvae all rushing towards the light. It was amazing!

A good hot shower later, soon got rid of the

feeling that things were crawling all over you...

This was truly one of those trips that you never want to end. The lovely boat, the great crew, the good food, a super group of divers, all made this Christmas trip very special. I now fully understand why Raja Ampat is one of the best diving destinations in the world. It is quite simply magical, and likely one of the few remaining places on earth where the biodiversity is still standing and surviving climate change. Long may it last that way.

2020 – THE YEAR OF SHARKS!

As the year of 2019 faded away into the New Year of 2020, I reminisced and remembered, and looked back through my photos. What a year 2019 was for this addicted diver!

Aside from the multiple trips to Fujairah and the Daymaniyat Islands, I was lucky enough to dive in the North Ari Atoll in the Maldives, Hurghada in Egypt, and the Komodo Islands, as well as adding this wonderful trip to Raja Ampat in Indonesia. I fell in love with mantas last year, forever will they hold a special place in my diving world. And if 2019 was the year of the manta, then I am claiming 2020 as the year of the shark. In fact, as I write this article now, I am en route to Bimini in the Bahamas for their legendary shark dives – watch this space for more to come on that topic.

Until next time, dive safely and dive often!



For more details on this specific trip and liveaboard:

SOLITUDE ONE
www.solitude-one.com



AGENT
www.liveaboard.com

GOOD FORTUNE AFTER BAD

FEATURE **JAMES M. CHIMIAK**

THE DIVER

A 40-year-old male did four rebreather dives one day from a liveaboard near Socorro Island. Maximum depths of the dives ranged from 35 to 39 metres of seawater; dive times were from 62 to 76 minutes. This was the third day of his dive series, which totalled 10 dives. All dives were uneventful, and he was out of the water at 6 pm.

THE INCIDENT

Approximately 3.5 hours after his last dive, the diver experienced nausea, vomiting and difficulty breathing during dinner. His fellow divers reported that he was unable to recognise them and could not recall his home address or date of birth. Fortunately, two physicians were among the passengers, and they examined the diver. The exam revealed dilated pupils, slurred speech, motor weakness and involuntary muscle contractions.

The crew activated the vessel's emergency action plan. They placed the diver on oxygen at approximately 10 pm and contacted DAN for medical advice and to initiate an evacuation to a suitable medical facility.

THE COMPLICATIONS

Located in the eastern Pacific south of the Baja peninsula, Socorro Island is approximately 240 nautical miles from Cabo San Lucas. It is one of four volcanic islands that make up the Revillagigedos Islands (the other three are San Benedicto, Roca Partida and Clarion). The boat ride to Cabo San Lucas takes about 24 hours.

A Mexican military airstrip is on Socorro, but the runway is unable to accommodate larger aircraft, including those that can maintain sea-level pressure during flight. Inbound flights require permission from the military and must clear customs and immigration on the mainland before departing. The airstrip is insufficiently lit to allow takeoff or landing at night.

As evacuation plans were being made, the diver's symptoms began to resolve as he breathed supplemental oxygen. DAN established direct contact with the small military facility on Socorro, which has a functional hyperbaric chamber and professional staff. They quickly recognised the severity of the diver's condition and that a favourable window of opportunity existed to recompress him, so they agreed to receive the patient. Though there was no physician at the chamber, the diver's improving condition made treatment at the local facility a good option.

The diver arrived at the military facility within four hours of his notable decline. He was able to walk into the chamber, and the chamber

operators administered a US Navy Treatment Table 6 with guidance from DAN's physicians. The treatment led to complete resolution of symptoms, and the diver was released to the boat for monitoring and frequent detailed neurological evaluations by the physicians on board the vessel. A well-known dive medicine physician happened to be aboard another dive boat in the area, and freely rendered his assistance. After a detailed evaluation, he confirmed full resolution of the patient's symptoms. The diver made an uneventful return home and did not experience any return of symptoms aside from some mild, intermittent general soreness.

DISCUSSION

Evacuation of this diver presented many challenges to the medical personnel involved in his care, and there are excellent lessons to be learned at each phase of treatment.

First, quick recognition of serious dive-related problems is important. In many cases, denial can lead to a refusal to accept that something is wrong and needs attention. Divers may employ hopeful rationalisations to discount early symptoms, because a declared emergency has the potential to end further diving — for both the injured diver and others. Even when an injury is finally recognised, a desire exists for things to spontaneously improve without the need to notify the divemaster. In this case an astute dive team recognised abnormal symptoms and behaviours that led to a diagnosis of cerebral decompression sickness (DCS).

Next, caregivers should administer first aid promptly and conduct further investigation. This dive team quickly provided oxygen, which resulted in dramatic improvement in the diver's condition, and then identified medical professionals in the group and engaged them in his care. They contacted DAN for help with both treatment suggestions and evacuation options. In remote locations, it is important to be familiar with local medical capabilities and evacuation options before emergencies happen.

In this case a two-leg flight would have been necessary to get the diver to a fully capable hyperbaric facility (at the University of California, San Diego). There are hyperbaric facilities in Cabo San Lucas, but getting there would still require air evacuation or a long boat ride. Because of the limited capabilities of the island's airstrip, an unpressurised aircraft would have to take the patient to the mainland, where a second flight

would deliver him to San Diego for definitive recompression therapy. Symptoms developed in the evening, so due to darkness any flight to the island would have to be delayed until morning, introducing further delay.

DAN notified the Mexican navy of the diver's serious condition, and they understood that a delay in treatment could lead to a poor outcome. Despite the busy tempo of the remote diving unit, the commanding officer opened his recompression chamber to the civilian diver. The chamber crew were true professionals who quickly administered the necessary hyperbaric treatment that resulted in complete resolution of all the diver's symptoms. Doctors on the dive boat reevaluated him and decided he could remain aboard and transit back to the mainland according to the ship's original itinerary. Three days after his treatment he made an uneventful flight back home.

Four fortunate events positively affected this diver's episode of serious cerebral DCS. First, his well-trained fellow passengers and the crew quickly recognised the problem and monitored his health until he reached the medical facility. Second, they administered oxygen quickly, which resulted in considerable improvement. Third, an expert in diving medicine was diving in the vicinity and rendered assistance. And fourth, the highly professional Mexican navy opened a restricted facility, which enabled definitive treatment and prevented potentially permanent neurologic injury to the diver. He was indeed lucky, but he also was a beneficiary of divers' willingness to help other divers. Such willingness can overcome significant obstacles, even international borders, as seen in this case.

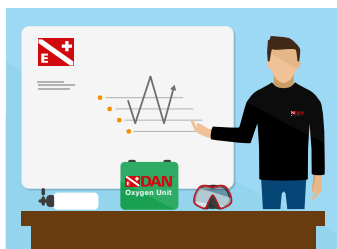
Please take time to thank the professionals who are committed to helping injured divers. In particular, thank those who keep hyperbaric facilities open for diving emergencies 24 hours per day, seven days a week; they are diving's unsung heroes.



THE 10 SAFETY RULES

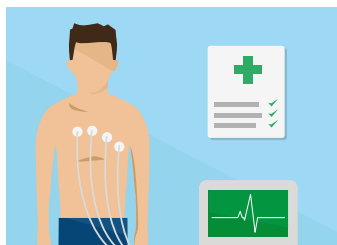
1

Attend diving courses, BLS, First Aid with Oxygen as well as upgrade courses with qualified instructors.



2

Undergo annual diving medical examinations (even after illness and injury or if you need to take medication).



3

Stay hydrated by drinking water regularly. Avoid alcohol and heavy exercise, before and after the dive.



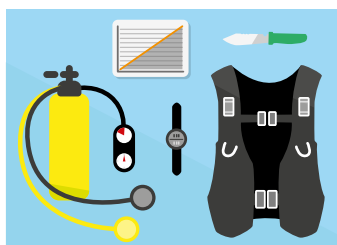
4

Always check the good and proper working condition of all the equipment, yours and your partner's. Make sure it is adequate for the planned dive.



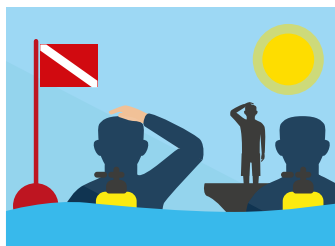
5

Wear a BC, double regulator, pressure gauge and knife; even if you use a computer, bring a depth gauge, watch and tables.



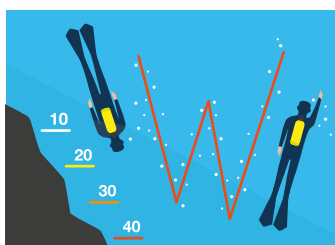
6

Always dive in favourable weather-sea conditions, with a buddy and always with adequate surface support. Use a surface marker buoy.



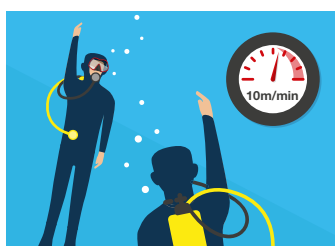
7

Dive within your certified training limits. Avoid "yo-yo" profiles and never hold your breath while ascending.



8

Ascend 9-10 meters per minute, using the most current decompression models and favour greater "conservative" levels.



9

In case of suspected DCI, immediately administer 100% oxygen with a suitable regulator, and for the necessary time. Do not attempt in-water recompression procedures. Call DAN!



10

Before flying, follow DAN recommendations: at least 12 hours after a single dive and at least 24 hours after repetitive dives and/or deco diving.



IMPORTANT

Ensure that first aid materials are readily available together with an adequate oxygen kit (such as the DAN Oxygen kit).

The onset of symptoms (even delayed) after a dive, requires immediate activation of specialized care. Call DAN!

In case of emergency, remember that only DAN members have access to the best worldwide care.

DIVING WITH AND WITHOUT BACK PAIN

FEATURE **PATRICK VAN HOESERLANDE**

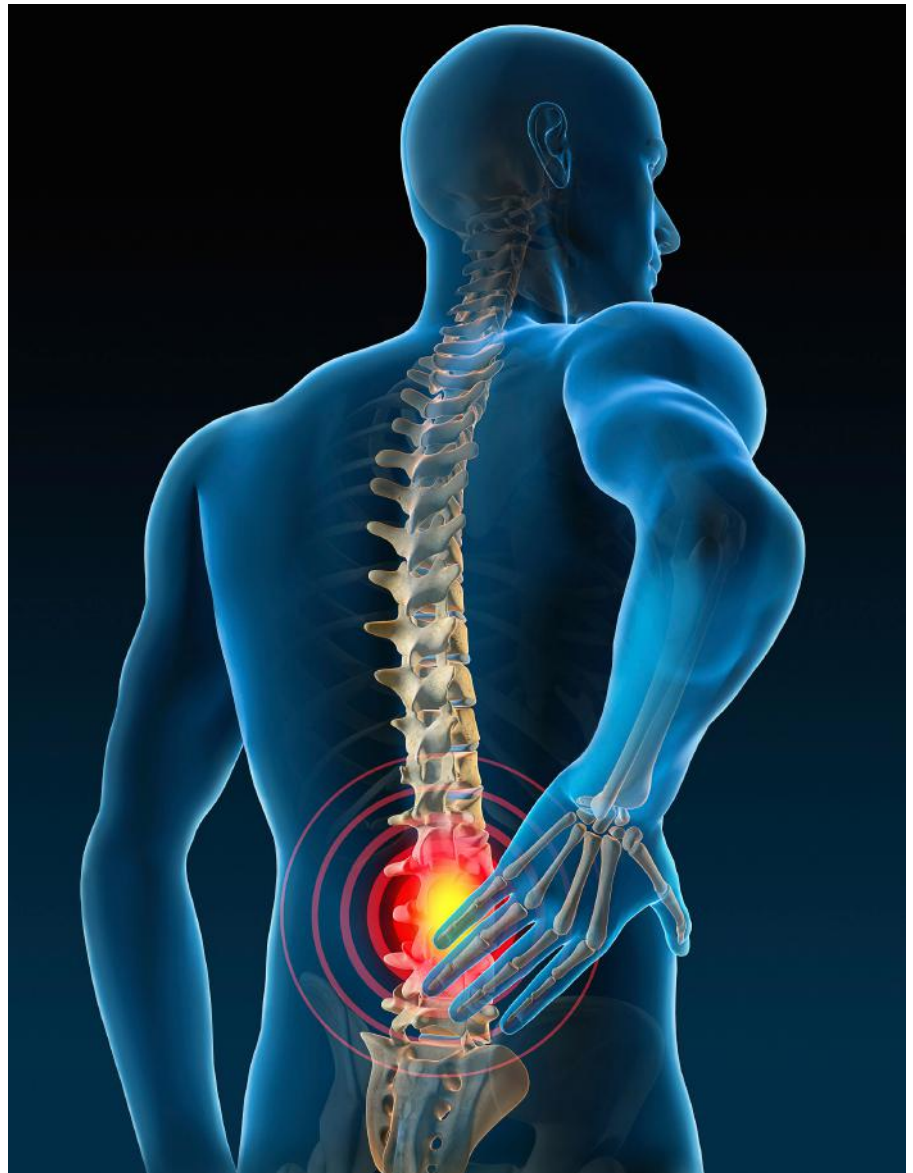
It was an unlucky moment, without really thinking about it, I quickly cleared away some heavy plates. A sharp twinge and there I was, bent over and barely able to straighten my back. A week of doubt between lying flat out, or trying to move around. Both were painful and the transition from one to the other especially hurt. Weeks of physical therapy followed to help gradually return to normality. Step by step, the process was slow, but I eventually got rid of the walking stick, and began to pick up pace on my own two feet, and finally began to properly walk again.

It had taken quite some time before I could even start thinking about getting back into diving. In celebration of my recovery, I took a quick dip in the 'TODI' dive tank. You can imagine, I was looking forward to it. Just before I got myself back into the water, I lifted my tank up in the wrong way and immediately jilted back into lower back pain I had only just managed to dissociate from. I had a choice between cancelling the dive or just going for it. An hour of weightlessness was preferable, but after that, I could barely take my dive suit off. It was a painful drive back home and it was back to weeks of rehabilitation.

After two seasons, everything seemed back to normal. It was thanks to being careful and staying focused when lifting dive boxes and tanks, but it only took that one inattentive moment, and 'crack'. The only thing I could do was shamefully crawl along the floor back to the emergency room only to be sent back home. With no luck, I had to wait a few weeks for a consultation with a doctor specialised in back injuries. The verdict: a major hernia. There was a risk that one of the nerves in my right leg was lost.

After further examination, the abnormal structure of my vertebra prevented this unsettling consequence. Being abnormal sometimes has its advantages. Fortunately, a syringe filled with corticosteroids administered into my back did wonders and specialised back training gave way to diving again.

Diving and back pain is unfortunately a common combination. Luckily, they are not all as extreme as my own experience; although I have discovered after some research that my story is certainly not the worst. As in my case, divers do not necessarily encounter back problems due to diving-related incidents, but



once you are confronted with it, the cause is no longer important. From that moment on you are focused on prevention.

A LUMBAGO OR HERNIA?

It is only when you are personally confronted with a pathology that you develop a deep interest in it. Yes, I have known (and know) people with back problems, but I must admit I didn't know the difference between a lumbago and a hernia. In my mind the result was the same: back pain! I conveniently decided these two terms were of the same phenomenon. Being blocked in a bent position changed that.

To understand the difference and the consequences, I must explain a few things about the anatomy of the spine. Don't panic, I'll keep it short and hopefully easy enough to understand.

The spine consists of a series of vertebrae that hinge over each other. The spinal cord, a bundle of nerves, runs through these vertebrae. At certain places, nerve bundles leave the spinal cord through cavities between the vertebrae to organs and muscles. To prevent the bony vertebrae from rubbing against each other while walking upright, there is a soft cushion between successive vertebrae, called an intervertebral disc. This pad is composed of



Photos by Coolshots.be



viscous fluid filled bags in which a smaller one is enveloped by a slightly larger bag, and this repeats several times. When we walk with a nice straight back, every vertebra rests on a cushion that dampens shocks. The back muscles keep everything nicely together and help to absorb the shocks.

With a back straight, you would have to lift a lot of weight before something goes wrong. Our spine is indeed perfected through evolution for lifting in this position. Unfortunately, we do other movements, which means we deviate from this ideal lifting position.

The most common mistake is lifting with a bent back. Due to the curve, the cushions are compressed at the front and stretched at the back. This way our backbone is under tension even before we have lifted something. When we start with that, the pressure on the cushions increases due to the combination of the weight and the contraction of the back muscles. This can be too much for our muscles, leading to an overload. Result: a lumbago. This is a sudden (acute) lower back pain that is often accompanied by muscle contraction and lower back vertebra irritation. Lumbago therefore does not directly have something to do with the spine because it is a strain of the back muscles. A painful thing, but for the rest, not much else is affected.

A worse case scenario consists of exceeding the critical value of pressure, causing a bag to rupture. This limit pressure decreases with age as the bag edges become less flexible. Imagine an internal pocket of an intervertebral disc tearing. It's a streak of shooting pain. The inner 'syrup' flows into the next bag. This is a mild form of a hernia. The treatment involves waiting for the inflammation to decrease quietly.

It is worse when the outer bag tears. That results in a typical radiating pain – while writing this out, I can feel the pain all over again. Part of the syrupy liquid drips away. The severity of the hernia depends on what is happening next. The pressure allows the next bag to protrude through the tear and to form a small balloon. If it is large, the cavity in the vertebrae will be too small. The balloon will then press on the nerve and the bloodstreams. This can result in a tingling sensation in the extremities, but also in the loss of coordination in the capacity of the muscles or even complete loss of control. The symptoms depend on where the hernia

occurs, and to which side the bulge is directed. It can literally go through the knees.

When a lumbago occurs, you have to sustain the suffering until the pain goes away. You will probably be given anti-inflammatory drugs to prevent or reduce a secondary inflammation. In the case of a hernia, rest, anti-inflammatory drugs and pain killers are prescribed. The possible bulge should disappear as quickly as possible. The degree of intervention depends on the current and possible resulting damage. This can range from a local injection of corticosteroids to reduce the pressure on the nerves, or a surgical removal of the swelling to avoid the nerve from dying. Because the back muscles are severed during such a surgery, the rehabilitation period is very long and painful.

AND NOW?

The best way is of course to avoid a lumbago or a hernia. If you pay attention to how you lift things, you are on the right path. Unfortunately, we don't take enough care of our backs during our youth. We're always in a hurry and quickly pick up heavy containers with bent backs. We throw our scuba gear on and rationally move about with it on to get in the water. Adding a few extra kilos of weight to the belt to make sure we stay under... Sound familiar?

What if prevention comes too late? Well, the answer is surprising. Of course, you must first recover from your accident. You will probably have to follow a few sessions of physical therapy. Ask your physiotherapist how you can properly lift weight. You must not only learn how to lift something heavy with a straight back, but you will also have to train with weights. A set of strong back muscles reduces the risk of a relapse, especially in the case of unexpectedly performing a thoughtless movement. Attending back education sessions is recommended!

HOW DO YOU DIVE AFTER A LUMBAGO OR A HERNIA?

Well, by preventing it from happening again. The best advice I can give you is to analyse what you can do and avoid lifting something heavy, and mostly, lifting it incorrectly.

Throw some weight 'overboard'. Most sport divers carry too much weight. Novice divers start overweight, later they are too lazy to adjust. When was the last time you tested your optimal buoyancy? Are you still diving –

like me – with the same weight on your belt as ten years ago, while your configuration has completely changed? Are you jumping in a lake with the same weight as in the sea? I went through the trouble to test my buoyancy and managed to leave five kilos at home.

In addition to the weight, you must also consider its distribution. A concentration on your lower back is not recommended. Try to spread it out evenly. Lead comes in different shapes and you can get adjusted weights. Make sure that your configuration doesn't get heavier; then you will create a different problem.

Divide a heavy load into smaller, lighter parts. By walking back and forth a few times, you not only avoid having to haul a heavy load, but it is also a lot healthier. Your pedometer will praise you for it. Make sure that your dive equipment is divisible in smaller parts.

I prefer a twin tank setup on my back, because of the improved stability in the water. The metal back plate supports a straight back under and above the water. Ideally, you could adjust your bottle configuration to each dive, but this is not a financially viable option for many. I prefer to dive with a small number of similar configurations to make sure I know my set completely.

When I only have a short distance to walk to the dive site, I buckle my dive equipment on while I am sat on the edge of my car trunk. I never lift it to attach it to my back. The less I lift, the smaller the risk for a wrong movement. If the distance is greater, I carry everything in parts to the place where I can put it on easily and safely. If that is not possible for some reason or it is too far away, I mount the equipment into a small cart and roll the gear over to the dive site. Once there, I then look for a place where I can don my equipment while seated and preferably where I can roll over into the water.

DO YOU HAVE TO GO IN SEARCH OF THE LIGHTEST POSSIBLE MATERIAL?

A carbon composite bottle is indeed much lighter to carry on land, but you will probably have to compensate for it in carrying extra weight. If you do not proceed carefully, you will eliminate the underwater benefits at the surface. A dive torch is better with a neutral buoyancy other than dragging an extra block of weight to compensate for its floating version. And now that we are talking weight, 'saving' on



Photo by Ann Tielen.

body mass helps too. But it is probably easier to reduce the weight of your configuration with a kilo than to lose body mass as a diver.

Lifting equipment is of course not without risk. Keep it light enough. Pick everything up in the correct manner. Your leg muscles are stronger than your back (muscles), use them. Also, ensure an equal load on both sides. Do not carry a scuba tank with one hand – it may look tough, but this way is not spine friendly – carry it with both hands. Also, bend your knees if you want to put it down. Machos will pay the price later with back issues.

Reflect on your dive activities. What can you do to save your back? How do you load your car? Do you lift and turn? Do you store your heaviest dive boxes and your extra weight on the ground? Can you place them at a more comfortable height so that you do not have to lift such heavy loads every time you go diving? Find easily accessible dive sites to get into the water. First, explore the environment and do not necessarily follow the herd. Of course, you do not have to avoid the more technical or adventurous places, but with a little effort, you can make sure your back enjoys the dive for a longer period. Remember that one wrong move could be fatal.

Without having to give up diving, you can also look out for other disciplines within our sport. Apnea diving does away with the need for heavy equipment. You are not only free as a fish in water, but you are also liberated from (almost) all external load. Or try snorkelling. Maybe a 'side mount' configuration is the solution for you? I have thought about it, but I lack the experience to evaluate this configuration regarding back pain. Or 'surface supplied air' diving? And of course, you can ask

for assistance. Four hands working together is less stressful for the back.

TO DIVE!

The chance that you as a diver will have to deal with back problems is high. Research in 2009 (Knaepen K., Cumps E., Zinzen E., Meeusen R., Low-back Problems in Recreational Self-Contained Underwater Breathing Apparatus Divers: Prevalence and Specific Risk Factors. *Ergonomics* 2009;52 (4):461-473) showed that divers especially with a more advanced diving career, suffered from lower back problems. According to the researchers, this is not related to the higher frequency of diving, but rather to the material and responsibility. Experienced divers often carry more equipment, dive in difficult circumstances like strong currents and suffer from more stress because of the responsibility of assisting other divers. It is therefore important that you think about saving your back early on in your diving career.

By applying the above recommendations and the advice listed in the box at the end of this article, I have been diving for months without any problems. Sometimes my back tells me that I am on the edge, a strong signal to free up time to eliminate the cause. Until now, I have not had to cancel a single dive or suffered from any back pain the following day. In the back of my mind I fear the day I may again put too much force on my vertebrae in an unsuspecting movement, but that chance is small.

I do not consider one moment to give up diving. On the contrary, sitting still is moving backwards and that also applies to back problems. Stay active and train your back muscles. Keep your eyes open and reflect frequently on what you do: this is my formula to keep diving free of back troubles.

What can you do to avoid (recurring) back troubles?

A list of possible actions:

- Analyse the preparation and handling of your dives to minimise lifting.
- Accept it when you have a back problem that cannot be cured. Resistance does not make it better.
- Divide effort and relaxation over the day/week.
- Enjoy every dive even when it feels too short. Better a short dive than no dive.
- Make and enjoy dives that match your physical condition. Look at what you can do and not at what you cannot do. Looking at what you cannot do and going beyond your limits is frustrating and does not solve anything.
- Prefer to walk back and forth three times rather than transporting all your equipment at once.
- Take your time for everything. Better slow and pain free, than fast and painful.
- If you want to use painkillers before entering the water, first consult a good diving doctor.
- Search dive sites where you can park your car with your dive equipment near the water and with easy access in.
- Switch often between standing up, walking, sitting and laying down. Being in the same position for too long usually aggravates the symptoms.
- Buy a cart to haul your gear from the car to the water where you can strap your tank on in the water.
- Set your dive configuration up if possible at the height of your car. That way you avoid bending over to pick it up. As a weightlifter, lift with your legs in the correct posture.
- Set up your equipment before you drive to the dive site. That saves extra efforts before you enter the water.
- Discard your weights and fins immediately after the dive and collect them later.
- Ensure good distribution of your weights.
- Make sure the muscles around the weak spots are strong. Choose exercises that you like, so that you are sure that you will continue to train your muscles.
- Find a diving school/diving team/buddy, explain what your limitations are and what help you need to be able to dive. If they respond positively, you know you're in the right place. They will help you to keep diving without ever having you to ask for assistance and feel embarrassed about it.
- If you are a dry suit diver, try diving in a wet suit more often in the summer. That saves on the extra kilos needed.
- For diving activities in a pool, you can use a lighter set of equipment.

UPCOMING EVENTS

DIVE MENA EXPO

DUBAI INTERNATIONAL BOAT SHOW | Dubai Harbour
10-14 March 2020 | 10:00-19:00

The Dubai International Boat Show is the largest and most established boat show in the UAE, GCC and Middle East. Whether you want to buy a boat, discover luxury yachts and super yachts, explore the latest diving and aquatic innovations or ride the sparkling waves, it's the definitive event for luxury and lifestyle. Co-located with the Dive MENA Expo, the only dedicated show for the UAE and GCC diving community.

EDA MOVIE NIGHT WITH VOX CINEMAS

RUBBER JELLYFISH | VOX Cinemas, Mercato Mall
Wednesday 6th May 2020 | 18:30 Registration, 19:00 Movie Starts

Rubber Jellyfish reveals the shocking jellyfish-like shapes that balloons burst into when they are released into the air and how this is affecting sea turtles who mistake these items for prey. We also explore the balloon industry greenwashing that kept this phenomenon a secret for decades.



DIGITAL ONLINE – EDA'S UNDERWATER PHOTOGRAPHY & FILM COMPETITION

AWARDS NIGHT & EXHIBITION OPENING | American University in Dubai (AUD)
Wednesday 20th May 2020 | 21:00 Registration, 21:30 Awards Begin



DIGITAL ONLINE
جمعية الإمارات للغوص
EMIRATES DIVING ASSOCIATION
PHOTOGRAPHY AND FILM COMPETITION

Be the first to see this year's participants showcase their work at the Digital Online Awards Night & Exhibition Opening, and congratulate our winners as they receive this year's fantastic sponsored prizes. The exhibition will be held in AUD's Rotunda Gallery and we will be serving special treats.

DID YOU KNOW?

NATURE TRIPPER – THE INSIDER'S GUIDE TO WILDLIFE TRAVEL & CONSERVATION
BY **DR. SIMON J PIERCE** & **MADELEINE WEBB** | WWW.NATURETRIPPER.COM/MAGAZINE

THE INSIDER'S GUIDE TO WILDLIFE TRAVEL & CONSERVATION

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GIANTS OF THE GALAPAGOS

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#01 FREE

The Nature Tripper magazine is out! It's totally free and contains 80+ pages of beautiful photography, wildlife photography tips and gear reviews, dive destination reviews, wild science, and pages of wildlife travel inspiration.

The aim with Nature Tripper Magazine is to provide an independent guide to wildlife and marine tourism and – especially – to highlight the places in which it's working for both wildlife and people. Often, these aren't the destinations with the largest marketing budgets. We also want to introduce some great conservation projects and science stories.



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جمعية الإمارات للغوص
Emirates Diving Association

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MISSION STATEMENT

To conserve, protect and restore the UAE marine resources by understanding and promoting the marine environment and promote environmental diving.

LEGISLATION

Emirates Diving Association (EDA) was established by a Federal Decree, No. (23) for the year 1995 article No. (21) on 23/02/1995 and chose Dubai as its base. The Decree stipulates the following responsibilities for EDA.

- To legislate and regulate all diving activities in the UAE.
- Ensure environmentally respectful diving practices in all EDA members.
- Promote and support the diving industry within the UAE by coordinating the efforts of the diving community.
- Promote diving safety in the commercial and recreational diving fields through standardization of practices.
- Promote and preserve historical aspects of diving within the gulf region and enhance environmental education to diving and non-diving communities through EDA activities.

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