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DIVERS FOR THE ENVIRONMENT

WWW.EMIRATESDIVING.COM | MAGAZINE | JUNE 2023 | VOLUME 19 | ISSUE 2



DIGITAL ONLINE

THE UNDERWATER PHOTOGRAPHY & FILM COMPETITION
2023 RESULTS ARE IN

• THE MENA OCEANS SUMMIT & EXHIBITION • REEF CHECK NEWS • DUGONGS IN DUBAI •
THE FIRST SATURATION DIVER • DIVE CAMPUS • FINS & TRAVEL • DIVING DESTINATIONS



Reef Check

UNITED ARAB EMIRATES



Join the Reef Check

ECODIVER CERTIFICATION COURSE

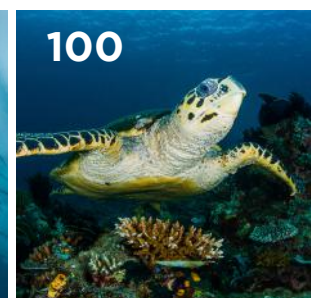
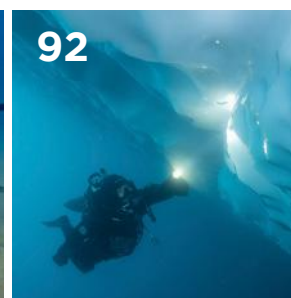
LEARN TO CONDUCT REEF CHECK SURVEYS TO COLLECT DATA ON REEF HEALTH, AND HELP ASSESS CLIMATE CHANGE IMPACTS

When you join a Reef Check EcoDiver Training Course, you will learn about our local ecosystems and you will be able to participate in our regular survey dives which will help us to understand the threats our corals are facing by providing important data.



EMAIL: reefcheck@emiratesdiving.com **WEBSITE:** www.emiratesdiving.com/events/reef-check

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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 September 2023. Send all articles, feedback or comments to: magazine@emiratesdiving.com

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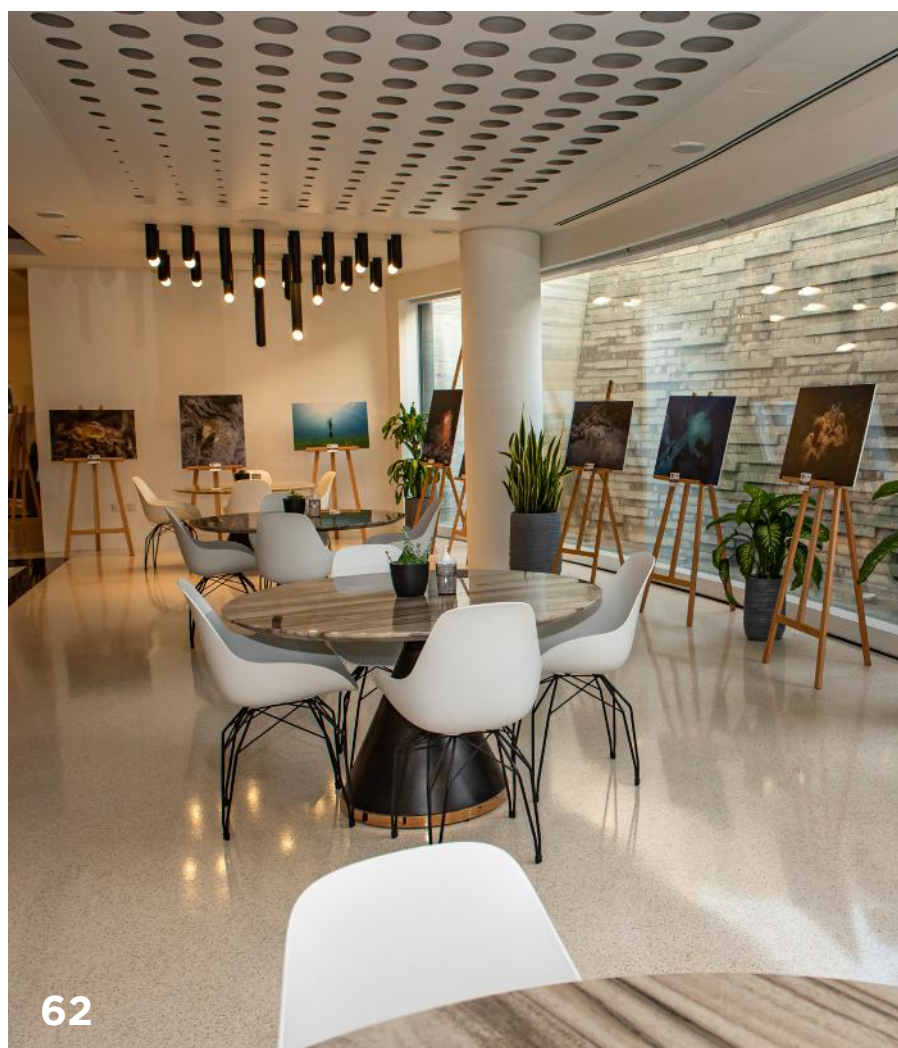
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EDITOR & GRAPHIC DESIGNER

ALLY LANDES

Ally is EDA's Project Director, Event Planner and Coordinator, Graphic Designer, Writer, Editor, Photographer and Videographer. She created and introduced 'Divers for the Environment' back in December 2004 as a free educational tool to share information by scientists, conservationists, underwater photographers, and other like-minded individuals from all over the world with a passion to conserve and protect our delicate marine life and underwater world.



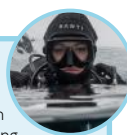
THE CONTRIBUTORS

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

DOROTA CZERNY

Dorota is a highly experienced diver who fell in love with the ocean in 1996. She transitioned from teaching at a university to teaching scuba diving due to her passion for the sport. As Vice President of Global Underwater Explorers, she is highly skilled in technical, cave, and rebreather diving, and is dedicated to developing the organisation's educational component.

www.instagram.com/dorotaczerny



TONY SIDGWICK

Tony is a communications professional, writer and diver based in the UAE. He began his diving journey in 2016, and is now passionate about ocean conservation, with a Reef Check certification and several ocean clean-ups under his belt.



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.



PHILIPPE LECOMTE

Having followed in his father's and brother's love for the sea, French diver and underwater photographer Philippe, took to underwater photography in 2006 after having moved to Abu Dhabi in 2003 and now seldom travels without his camera. www.plongee-passion-photo.over-blog.com



GORDON T. SMITH

Gordon has lived and dived in the Middle East region for the past 36 years. He is a frequent visitor to south east Asia, in particular to Indonesia and the Philippines. Nudibranchs and seahorses are his favourite subjects, and he's always ready to dive in the UAE due to the variation in subjects he encounters.



IT HAS BEEN A BUSY YEAR SO FAR!



IBRAHIM AL-ZU'BI
Co-Founder

The diving industry and community have been busy these last 6 months, and I am sure they will be even busier in the next 6.

We've just held the 14th Digital Online Underwater Photography and Film Competition's Awards Night to announce this year's winners. It was great to meet and catch up with our members. I thank all our underwater photography and videography participants for sending EDA their amazing images of the varied marine life from all the places they have dived. They are very inspiring and beautiful as always. I am sure you will all agree with me when you see the photos in this issue. I also want to thank the judges, the prize sponsors, Print Works & Giga Works, Deep Dive Dubai, and the EDA team for another successful EDA event towards promoting for diving, not only in the UAE, but all over the world.

We are thrilled to have announced the launch of the MENA Oceans Summit in partnership with Goumbook which will take place on the 8-9 June. I am honoured to Chair the event and I will be presenting an address and participating in panel discussions and fireside chats on Day 1. I look forward to seeing those of you who register to attend there. It's going to be an informative event.

I do hope you enjoy reading our summer issue. We look forward to seeing you all at the next EDA events.

Happy reading and safe diving,

Ibrahim Al-Zu'bi

Ibrahim Al-Zu'bi



MENA Oceans

SUMMIT & EXHIBITION

CLIMATE FRESH

A COLLABORATION FOR INTERNATIONAL WOMEN'S DAY

In celebration of International Women's Day, 8 like-minded ladies involved in careers related to environmental/marine conservation and sustainability, took part in a Climate Change Workshop run by Goumbook's Natacha Seker, on the 31st of March called 'Climate Fresh'.

WHAT IS THE CLIMATE FRESH?

It's a collaborative workshop on climate change with different sets of cards that teams of 5 to 8 people have to map in order to identify cause-effective relationships.

Climate change is often dealt with in one aspect only (fires, floods, melting ice, etc.), without understanding the picture as a whole.

This lack of perspective is disarming and anxiety-provoking: we are told everywhere that there is an emergency, without understanding why or how to act.

The 3-phase workshop was an eye opener and a great way to build on climate literacy, call to action, and team building. If anyone would like more information to have their own Climate Fresh Workshops for adults or kids, contact Goumbook for more info.

The workshop itself took three hours to complete, and we shared an Iftar menu together afterwards at 21grams to take the time to discuss what we'd experienced, and for everyone to properly meet over a lovely Balkan meal.

THE TEAM

1. **Ally Landes** – EDA's Project Director
2. **Layla Nouilati** – EDA's Project Coordinator
3. **Nicola Ashton** – Education Leader; Diving Instructor; Ocean Advocate, and Speaker
4. **Alicia Dauth** – Associate Environmental Consultant (MIEMA), Chartered Environmentalist, and Credentialed Specialist for Alliance for Water Stewardship
5. **Elise Marquis** – Marine Ecologist
6. **Ada Natoli** – Assistant Professor at Zayed University; Founder of the UAE Dolphin Project
7. **Chloe Griffin** – Project Manager; Chloe Blue Scuba Diving Founder, and Podcaster for Ocean Sisters
8. **Tiffany Delpont** – Co-Founder to The Possibilities Project: Eco Edition, and Global Ambassador to the One Billion Tree-Planting Initiative

TAKE CLIMATE ACTION

For more information about Climate Fresh with Goumbook, go to:
www.goumbook.com/what-we-do/climate-action/



AMOS NACHOUM

AN EDA EVENT PRESENTATION AND Q&A



Underwater Wildlife Photographer & Explorer, Amos Nachoum came to visit us in the UAE and present to our Abu Dhabi members on the 11th of April at the Royal M Hotel and Resort, and our Dubai members on the 13th of April at Deep Dive Dubai to tell his story in person about his life long journey into underwater photography and conservation in search of his great adventures. Members were able to ask their questions during the Q&A and had a great evening meeting with Amos in person.

AMOS NACHOUM

Amos Nachoum is a professional wildlife photographer and explorer. He is renowned for his close-up underwater photography of large marine animals such as whales, sharks, leopard seals, crocodiles, anacondas, and polar bears.

Amos has received numerous awards for this work and has been featured in publications around the world. In addition to his photography, Amos is also an environmental

activist and works to raise awareness about the importance of conserving the world's natural habitats and wildlife. Amos aims his camera and expeditions to support science and conservation and inspire awareness about endangered wildlife.

Amos arrived in the USA from Israel in 1977. Since 1978, he has explored every significant body of water from the North Pole to Antarctica. His photographs strive to dispel the myth of "dangerous" wildlife and show harmonious interactions between man and animal. His focus is on exploring close encounters with animal behaviour: predation, nursing, socialising, and migration. Amos leads wildlife photography expeditions and has introduced over 6,000 adventurers to the wilderness with his company, Big Animals Expeditions.

AMOS' RECOGNITIONS INCLUDE:

- 1st place for Animals in their Environment Sienna Award 2018 and 2022

- 2021 Nature Photography of the World
- 2019 Sea Keepers Person of the Year Award
- Two time award winner of BBC Wildlife Photographer of the Year for animal behaviour
- Amos has recently published BIG a book of his photography of big animals from around the world. He has also been the subject of the documentary, The Picture of his Life which tells the story of his epic adventure to photography polar bears underwater in the wild. Twelve people have landed on the moon, but only five people have dived with polar bears.

WANT TO JOIN OUR EVENTS?

Our social events are only accessible to EDA members. Members must register by email to book their places as spaces are limited.

You can register for EDA membership or renew it via our website here:

www.emiratesdiving.com/membership-form

AN EDA MOVIE SCREENING PICTURE OF HIS LIFE



Following Amos Nachoum's presentation in April, we screened his documentary film by Yonata Nir and Dani Menkin, 'A Picture of his Life' for EDA members on the 4th of May at Deep Dive Dubai. A big thank you to Amos for allowing us the rights to screen his film, and to Deep Dive Dubai for continually supporting EDA and hosting these quarterly screenings.

SYNOPSIS

He swam with crocodiles and killer whales, with anacondas and with great white sharks but one major predator has always eluded him, the Polar bear. He tried before and barely escaped, but now, as he nears the end of his career, he is determined to give it one last shot.

As the journey unfolds, Amos contemplates the series of unspoken events that drove him here, to the end of the world. It has been a long and painful journey, after serving in an Elite Commando unit and witnessing the horrors of war; but where others find fear, Amos finds redemption.

Available for rent or purchase on Vimeo:
<https://bit.ly/44IFoC8>

WANT TO JOIN OUR EVENTS?

Our social event and online EDA Movie Screenings are only accessible to EDA members. Members must register by email to join our social event, or to receive the special link to view the films online.

You can register for EDA membership or renew it via our website here:
www.emiratesdiving.com/membership-form





OPENING NIGHT
Israeli Competition
DOCAVIV
|2019|



FROM EXECUTIVE PRODUCER NANCY SPIELBERG

"THERE IS A CRACK IN EVERYTHING,
THAT'S HOW THE LIGHT GETS IN."

- LEONARD COHEN

תמונת חייו PICTURE OF HIS LIFE

A YONATAN NIR / DANI MENKIN FILM

"MOST COMPELLING!"

San Francisco Chronicle

"POWERFUL and THRILLING"

Cineuropa

"ASTONISHING and BREATHTAKING"

Israeli News - Danny Kushmaro

HEY JUDE PRODUCTIONS AND YONATAN NIR FILMS AND PLAYMOUNT PRODUCTIONS PRESENT A YONATAN NIR AND DANI MENKIN FILM
SOUND DESIGN AND MIX PHILIPPE GOZLAN MUSIC BY CHRISTOPHER GUBISCH EDITED BY TALY GOLDENBERG MARTIN SINGER SHLOMI SHALOM
ASSOCIATE PRODUCER ALMOG GUREVICH MAOR AZRAN CO-PRODUCER ROGER FISHMAN EXECUTIVE PRODUCERS LATI GROBMAN CHRISTA CAMPBELL
PRODUCED BY YONATAN NIR DANI MENKIN WRITTEN AND DIRECTED BY YONATAN NIR DANI MENKIN
DIRECTOR OF PHOTOGRAPHY ADAM RAVETCH YONATAN NIR MOTION DESIGN JEFF GOELZ
EXECUTIVE PRODUCERS ORI EISEN MIRIT EISEN EXECUTIVE PRODUCER NANCY SPIELBERG



INTRODUCING OUR NEW EDA TEAM MEMBER



We would like to introduce everyone to EDA's Project Coordinator, Layla Nouilati!

Layla is originally from the North Eastern coast of America, also recognised as a maritime hub for marine life. Stemming from this coastal culture, her care and passion to conserve and advocate for the ocean's population has been ever growing. She recently started to dive to get a better understanding of how to help what we cannot see above the surface, and participate in underwater clean-ups.



GET IN TOUCH WITH LAYLA

Layla is our members' point of contact and we're so happy to have her join the EDA team.

✉ projects@emiratesdiving.com
 📷 www.instagram.com/divewithlayla

FIRST MENA OCEANS SUMMIT TO BE HOSTED IN DUBAI

This summit is the first step in the lead-up to COP28, which intends to set the tone and pace for ocean action through panel discussions, thematic workshops and the development of white papers documenting regional challenges, innovations and opportunities.



MENA Oceans
SUMMIT & EXHIBITION

Under the patronage of the Ministry of Climate Change & Environment, Goumbook, the leading social enterprise promoting Sustainability and Climate in the UAE and beyond, in partnership with the Emirates Diving Association, is hosting the first MENA Oceans Summit, focused on accelerating the pace of comprehensive ocean action, to conserve and restore ocean ecosystems, tackle climate change and ensure development of blue economies within sustainable frameworks.

Convening on World Oceans Day (8 June 2023), the two-day event will be engaging under four key streams – Blue Economy, Blue Governance, Blue Science and Blue Collective. The first MENA summit will bring together a diverse range of stakeholders including global leaders, key policy makers from governments, think tanks, research institutions and the private sector. This summit is the first step in the lead-up to COP28, which intends to set the tone and pace for ocean action through panel discussions, thematic workshops and the development of white papers documenting regional challenges, innovations and opportunities.

On day 2, the summit will also feature an inclusive educational and awareness platform for the larger community, to engage with the challenges facing our oceans and discuss creative solutions that can be effected at individual and community levels.

Conducted over two days, the 8th and 9th of June 2023, and across a series of presentations, panel discussions, and fireside chats, the summit organisers and attendees will tackle topics that include Ocean Action at COP28 and the Oceans 30x30 Agenda, regional conservation and restoration projects, enhancing ocean biodiversity, sustainable tourism and the oceans and food security amongst others.

Ibrahim Al-Zu'bi, Chair of the MENA Oceans Summit, Chair of the Global Council on SDG 13, and Co-Founder of the Emirates Diving Association said, "I am honoured to chair the inaugural MENA Oceans Summit 2023, which aims to bring together experts mobilising

action on climate change and SDG 14, including Ministries, the private sector, scientists and the community. This multistakeholder approach is key to developing solutions to tackle climate change, with a focus on the key topics impacting ocean sustainability and biodiversity. We welcome you all to join us shape the narrative on ocean action, especially in the lead up to COP28."

Tatiana Antonelli Abella, Co-Chair of the MENA Oceans Summit and Founder of Goumbook, pointed out that the Arab regions boast a combined coastline of 39,52km, and the region historically holds a strong economic, social, and cultural connection to the marine ecosystem.

She added, "We depend on our blue planet for international trade and economic development, food security, climate regulation, energy generation, waste absorption, recreation, and above all else as a source of our water supply. These interlinkages and their vulnerability to climate change make this topic a critical one to bring to the forefront of regional discussions, for sustainable management of our oceans.

Yousef Lootah, Acting CEO of the Corporate Strategy and Performance Sector, Dubai Department of Economy and Tourism, and a key speaker at the MENA Ocean Summit says, "MENA Oceans 2023 is committed to being an inclusive platform, bringing together the widest cross-section of the ocean community from business and finance to governments, national and international policy-makers, civil society, and academia."

MENA Oceans Summit is delighted to have the Hilton Dubai Palm Jumeirah as their hotel partner and the Emirates Diving Association (EDA) as our knowledge partner.

FOR A FULL LIST OF SPEAKERS AND
THE 2-DAY AGENDA, VISIT:
www.menaoceanssummit.com

A SUCCESSFUL CLEAN-UP DAY IN JEBEL ALI



To commemorate World Water Day, a global event celebrated annually on March 22nd, Chloe Blue Diving Club partnered with The Ja Resort and Soul Beach to organise a beach and ocean clean-up, aimed at raising awareness about the crucial significance of preserving our oceans. Through our collective efforts, we achieved a remarkable feat, successfully removing an astounding 60kg of marine debris, thereby leaving a lasting positive impact on our local marine ecosystem.

Over 30 dedicated volunteers joined the movement against marine debris, equipped with gloves, bags, and a shared commitment

to protecting our oceans. With unwavering determination, we embarked on our mission to cleanse the beach and underwater environments of harmful pollution, meticulously collecting plastic waste, discarded fishing gear, and other debris that posed a significant threat to the delicate balance of marine life.

The tremendous success of this clean-up campaign serves as a powerful testament to the incredible power of collaboration between Chloe Blue Diving Club, JA Resort, and Soul Beach. By synergising our resources, expertise, and networks, we were able to mobilise a substantial number of volunteers

and maximise our collective impact. This partnership exemplifies the vital importance of working together towards a common goal of a cleaner, healthier ocean.

Looking ahead, we are excited to announce our upcoming ocean clean-up event, which will take place on World Ocean Day. If you share our passion for ocean conservation and would like to contribute or get involved, please don't hesitate to contact us at godive@chloebluescubadiving.com. Together, we can make a difference and continue to safeguard the precious ecosystems that our oceans provide.

EPAA AND ZAYED UNIVERSITY

RESPONDS TO BRYDE'S WHALE STRANDING IN JEBEL ALI

BY **FADI YAGHMOUR – SCIENTIFIC RESEARCHER (EPAA) & ADA NATOLI – UAE DOLPHIN PROJECT INITIATIVE & ZAYED UNIVERSITY**



On the 28th of March, a Bryde's whale measuring 13.8 metres was discovered deceased in the waters of Dubai. Through cross entities and the Emirates collaboration, valuable samples were collected. Although a complete necropsy was not feasible due to logistical limitations, the gathered samples will enable scientists to gain a deeper understanding of the species' condition and ecology in the area. This knowledge will aid in the preservation of these magnificent marine animals.

Bryde's whales are a species of baleen whale found in warm, tropical and subtropical waters around the world. They can grow up to 15 metres long. These whales primarily feed on krill, plankton, and small fish, using baleen plates to filter their prey from the water. Although not currently endangered, they face threats

from human activities such as entanglement in fishing gear, ship strikes, and ocean pollution. Bryde's whales play an important role in their ecosystems by maintaining a healthy balance in the food chain and contributing to nutrient recycling.

Thanks to the network of contacts and prompt coordination among private stakeholders, Dr Ada Natoli, Assistant Professor at Zayed University, Founder and Director of the UAE Dolphin Project Initiative, and the Natural Reserves Section of the Environmental Sustainability Department, Dubai Municipality, the body of the whale was safely relocated to an area where samples could be collected. Dr Natoli also immediately connected with the Environment and Protected Areas Authority of Sharjah (EPAA), knowing their expertise in

responding to whale strandings and conducting necropsies through their Sharjah Stranding Response Program (SSRP). With permission from both authorities, a team of experts from EPAA, Dubai Municipality, and Zayed University was dispatched to collect biological and morphological samples to determine the species, assess the animal's condition, and investigate the potential cause of death.

The whale was identified as a female Bryde's whale 13.8 metres long and weighing 11 tons. It appeared to have no obvious cause of death, such as entanglement in marine debris, but tissue samples are being analysed to gain a better understanding of its condition at the time of death. The samples will be used to investigate the animal's toxicological parameters, trophic ecology, and genetic



profile. The frequency of Bryde's whales in the Arabian Gulf is unknown, but they can be seen in the area up to Kuwait, Iraq, and the Arabian Sea. There are two recognised sub-species of Bryde's whales, a larger pelagic form and a smaller more coastal form. In the past, Soviet whalers hunted Bryde's whales in the Arabian region up to the mid-1960s, killing as many as 849 individuals. Although Bryde's whales are globally considered of Least Concern, their population trend is unknown (IUCN Red List). In the UAE, the current status and population size of Bryde's whales is assessed as Data Deficient, making each sighting and sample critical in their conservation efforts.

Whale conservation is crucial for several reasons. First and foremost, whales are a

keystone species, meaning that they play an essential role in maintaining the balance of their ecosystems. They contribute to nutrient recycling and regulate the food chain by consuming large quantities of smaller marine organisms.

Additionally, whales are important for ecotourism and generate significant revenue for coastal communities. The conservation of whale populations also has a significant impact on global climate regulation, as whales store carbon in their bodies and in the ocean floor through their waste products. Finally, the protection of whales is vital for the preservation of cultural and historical heritage, as these animals have played an integral role in human history and mythology for centuries.



برنامج الشارقة للاستجابة لجنوح الحياة البحرية Sharjah Strandings Response Program

ABOUT SSRP:

Sharjah Strandings Response Program

Through the examination of stranded marine reptiles, marine mammals and sea birds, this programme, led by the Environment and Protected Areas Authority (EPAA), aims to expand the existing knowledge on the biodiversity, ecology and threats of marine fauna in the Emirate of Sharjah, UAE.

This knowledge would support the development of evidence-based conservation action and policy in the region as well as educate the wider public on the importance of conserving species and other emerging issues. Additionally, this programme acts as an important tool for the response and rescue of live strandings.

EPAA RETURNS RESCUED AND REHABILITATED SEABIRDS TO THE SEA

BY **FADI YAGHMOUR – SCIENTIFIC RESEARCHER (EPAA)**



The Environment and Protected Areas Authority (EPAA), in cooperation with the Sharjah Investment and Development Authority (Shurooq), Sharjah Police General Command, and Sharjah Municipality hosted a seabird release event on the 16th of March 2023. The event was attended by several senior officials and participants, including HH Sheikh Majid bin Sultan Al Qasimi, Head of the Districts and Villages Affairs Department, and HE Hana Saif Al Suwaidi, Chairperson of the Environment and Protected Areas Authority in Sharjah. The highlight of the event was the release of 158 rescued and rehabilitated seabirds on the Al Heera Beach, Sharjah. An awareness exhibition showcasing different

types of seabirds and their conservation was also organised. The event aimed to raise awareness on seabird conservation and educate the public about the importance of their protection.

The term “strandings” refers to marine animals found on land that are either dead, injured, or exhibiting abnormal behaviour. The Sharjah Strandings Response Program is an initiative established under the Environment and Protected Areas Authority to address and investigate strandings. In the first quarter of 2023, over 750 strandings were identified on the coasts of Sharjah through the SSRP’s Strandings Response Network and reported

to EPAA responders. These strandings included various species of sea turtles, sea snakes, seabirds, and even a whale. Deceased strandings were carefully collected and transported to the laboratory for further investigation, while live strandings were rescued and taken to the Breeding Centre of Endangered Wildlife (BCEAW) for rehabilitation. Seabirds comprised the majority of recorded strandings and their rehabilitation is conducted at the veterinary unit at Sharjah Safari. Once seabirds are assessed to be fit for release by a qualified veterinarian, arrangements are made for their immediate release. This event is only one of many release events the EPAA has conducted across this year.



ABOUT EPAA:

In line with the vision of His Highness Sheikh Dr Sultan bin Mohammed Al Qasimi, Supreme Council Member and Ruler of Sharjah, the Environment and Protected Areas Authority, under the leadership of Her Excellency Hana Saif Al Suwaidi, aims to protect Sharjah's natural environment and conserve its rich biodiversity. This is achieved through data driven policies and increased public awareness and participation in supporting the principle of sustainable development to preserve natural and environmental capital to the benefit of present and future generations.

www.epaashj.ae
[www.twitter.com/epaa_shj](https://twitter.com/epaa_shj)
www.facebook.com/epaashj
www.instagram.com/epaa_shj

Hana Saif Al Suwaidi said, "The bird release event is one of the initiatives of the Sharjah Strandings Response Program (SSRP) to translate its vision and efforts in preserving biodiversity in the region. It is part of implementing the directives of HH Dr Sheikh Sultan bin Muhammad Al Qasimi, Supreme Council Member and Ruler of Sharjah, to preserve the environment, protect marine and terrestrial life, and consolidate concepts and initiatives of environmental sustainability."

Seabirds play a crucial role in marine ecosystems, and their conservation is essential to maintaining a healthy ocean environment. They are not only important indicators of the

health of marine ecosystems, but they also help to control the populations of their prey, including fish and invertebrates, which can have a significant impact on the marine food web. Additionally, many seabirds travel long distances and play a crucial role in transporting nutrients between different regions of the ocean. Seabird populations are facing many threats, including habitat loss, pollution, climate change, and overfishing, and their conservation is critical to ensuring the health of our oceans and the many species that rely on them. Efforts to conserve and protect seabird populations can include habitat restoration, reducing pollution and plastic waste, and enforcing regulations to prevent overfishing and bycatch.

IN ONE OF THE WORLD'S MOST RARE & UNIQUE CASES THE ENVIRONMENT AGENCY – ABU DHABI SAVES AND REHABILITATES MALQOUT THE DUGONG



The Environment Agency – Abu Dhabi (EAD) has rescued and rehabilitated a young male dugong calf, which was found abandoned. The dugong was discovered by Agency rangers at the Marawah Marine Biosphere Reserve. Alone, without its mother and far away from any herd, the dugong was found following a few days of strong winds, which may have contributed to the dugong's separation from his mother and the group. The dugong was named 'Malqout' – an Arabic word that means 'saved' and 'whose owner is not known' – perfectly expressing the young animal's condition.

The Agency's specialised marine species team assessed Malqout's health, supported by experts at the Conservation of Migratory Species of Wild Animals (CMS) Regional Office. Due to Malqout's weight and unstable condition, the Agency's team confirmed that he was suffering from dehydration and malnutrition and needed specialised veterinary care. The decision was made to transfer him to a specialised facility in Abu Dhabi, staffed by animal husbandry experts

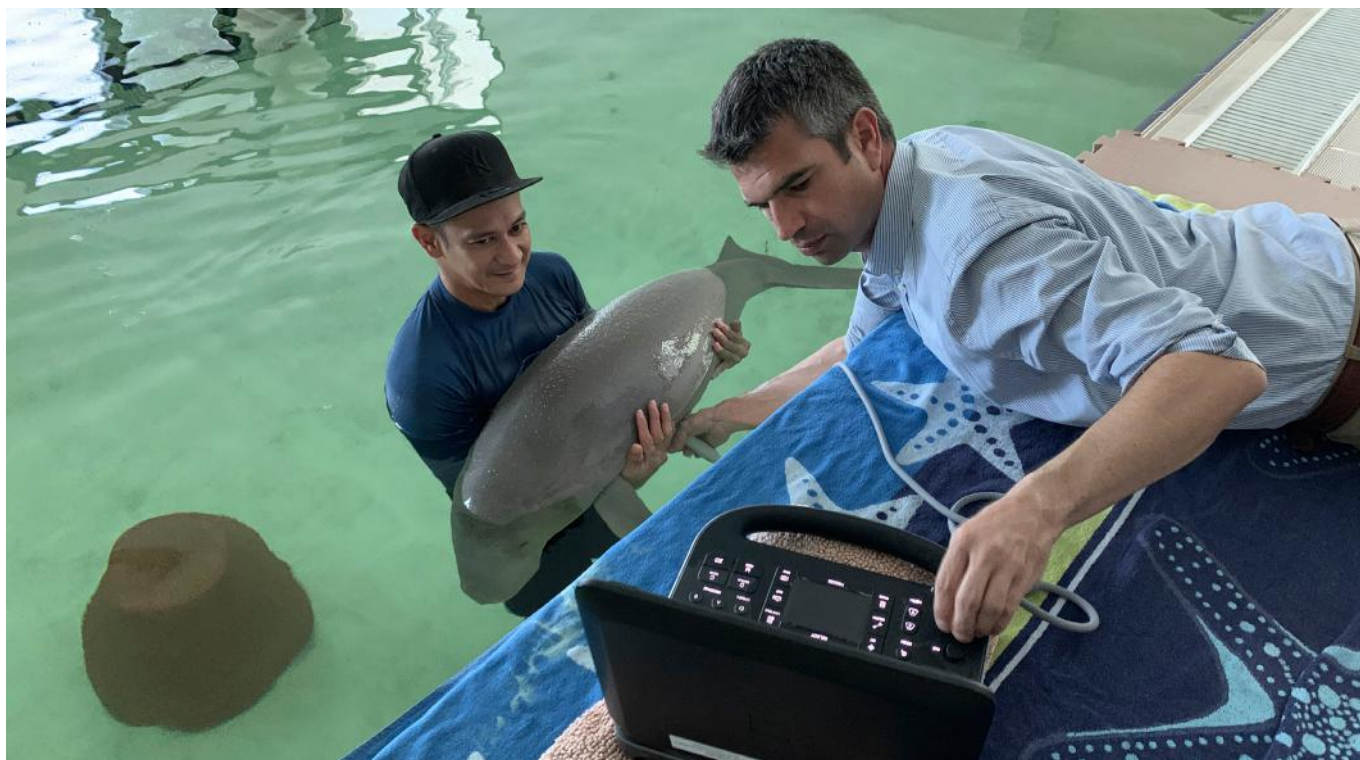
and qualified veterinarians. Here, the Agency coordinated with locally based zoological experts, Worldwide Zoo Consultants (WZC) to provide veterinary consultancy and ongoing specialist animal husbandry care. The specialists advised keeping Malqout under round-the-clock human supervision due to his poor health, supported by the availability of appropriate resources that could provide the highest standards of care.

The successful rescue and rehabilitation process of Malqout is unique and one of the rarest cases in the world. The Agency succeeded in caring for Malqout even though dugongs do not respond well in captivity, by drawing on its extensive experience garnered over 25 years, which includes several research and scientific studies on dugong protection and preserving habitats and marine species. Dugongs rely heavily on their mothers for the first 18 months of their life, but the Agency was able to provide the best environment for Malqout to survive.

To rehabilitate Malqout, continuous 24-hour

veterinary care was provided until he was gradually weaned and trained to eat seaweed. To maintain his quality of life after that initial period, Malqout needed special care from qualified veterinarians, including suitable facilities to accommodate his growth, and to protect him from volatile weather conditions and loud noises. The Agency and the team of experts provided a stimulating environment with suitable space in which Malqout could learn about natural behaviour patterns, while ensuring his long-term growth. The team of experienced veterinarians provided special formula food to treat dehydration and malnutrition. Since then, Malqout has grown from 60cm to nearly two metres long and has been given a clean bill of health.

According to information from an MoU by the Secretariat of the Conservation and Management of Dugongs and previous attempts made around the world, no dugong to date successfully rehabilitated in captivity has been released back into its natural environment. Knowing that Malqout lacks the natural survival instinct acquired in the early



stages of a dugong's life – and in order to mitigate any other risks – the Agency decided not to release him. Being young and reared in a controlled environment, he has not developed normal immunity and has adapted to receiving specialist human care, which hinders his ability to interact with other species and avoid predators.

Since the rehabilitation, the best option for Malqout is to continue his life under consistent human supervision, and his survival story is testament to the quality of care available in Abu Dhabi. The Agency and its partners are well equipped to care for Malqout, while the team of veterinarians and dugong experts will be able to monitor his condition on a regular basis.

Her Excellency Dr Shaikha Salem Al Dhaheri EAD's Secretary General said, "Malqout's story is a story we want to share with the world as it is a unique and rare occasion, as dugongs are fragile animals and rely on their mother during the first two years of their life. This made us realise the task ahead, and that Malqout would need around-the-clock monitoring and rearing to ensure his survival. During his rehabilitation Malqout has grown profoundly and is doing very well, and his case is a perfect example of how local and international collaboration can help save species around the world, as our team of experts at the Environment Agency – Abu Dhabi worked closely with experts through the CMS office, and Dugong MoU, as well as with specialised marine vets, to ensure that we provide the best care possible."

Rouba Abou-Atieh, the Executive Coordinator – CMS Office – Abu Dhabi added, "Rescuing and rehabilitating stranded juvenile dugongs is

a notoriously difficult task. Except for Malqout, there has been only one other documented instance of successful long-term care of a neonate dugong rescued in 1998, which currently resides at Sydney Aquarium. There are no records of successfully releasing hand-reared dugongs back into the wild."

She added, "A recent CMS Publication, titled 'Options for Handling a Stranded Orphaned Dugong Calf – Advice to Policy Makers and Managers' released in December 2022, attempts to shed light on the challenging and restricted options available when a stranded orphaned dugong calf is discovered. Malqout's situation is exceptionally unusual, as he was fortunate enough to receive advanced veterinary care and marine facilities in the UAE after his rescue in 2019. Nonetheless, because of the necessary care he received, he will be unable to survive a return to the wild and will continue to need ongoing human care in a simulated setting to maintain his long-term survival."

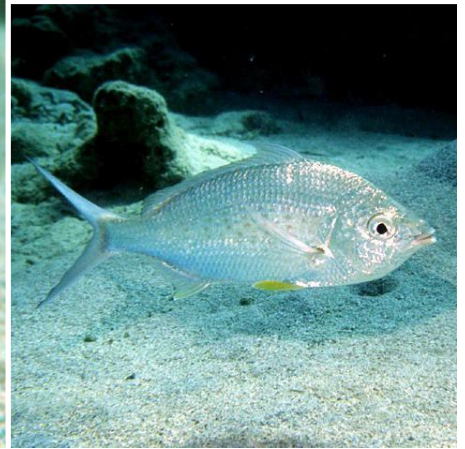
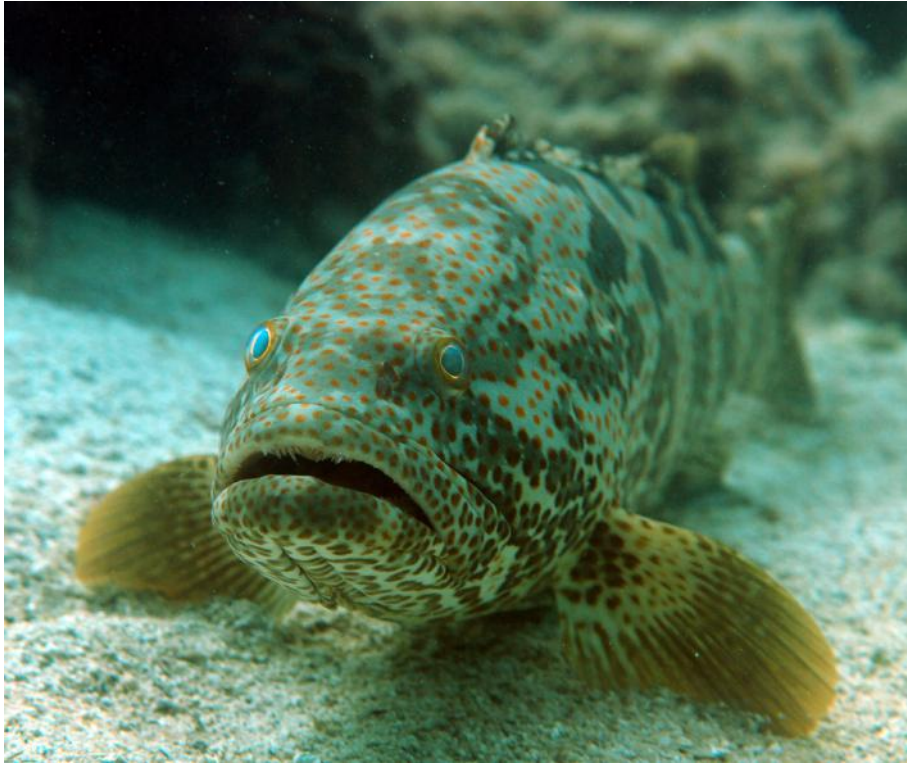
While Tommy Wilken, the Chief Executive Officer from Worldwide Zoo Consultants said, "Worldwide Zoo Consultants is proud to have contributed to the successful rescue and rehabilitation of the dugong, later named Malqout. Over the past three and a half years in coordination with the Environment Agency – Abu Dhabi, our dedicated animal care experts and veterinarians were able to accomplish something that is very rare, the successful rescue and rehabilitation of a stranded newborn dugong calf. We are proud of this exceptional accomplishment. Many hours of round-the-clock care went into this effort, and we could not be happier that he is currently thriving and fully stabilised and

adapted well to living in human care. The lessons learned Malqout has taught us during our rescue and rehabilitation efforts will most certainly be beneficial to future rescue efforts for others of his species."

There are approximately 3,000 dugongs in the territorial waters of Abu Dhabi, and they are mostly found near Bu Tinah Island, which forms part of the Marawah Biosphere Reserve and Al Yasat Marine Protected Area. The Agency is responsible for providing protection for the second-largest gathering of dugongs in the world, after Australia. Therefore, EAD is doing everything in its power to ensure the preservation of the dugong population and reduce mortality rates as well as any risks that threaten them thanks to its specialised team, which includes experts and researchers who are well versed in the habits and behaviour of dugongs.



THE ENVIRONMENT AGENCY - ABU DHABI ANNOUNCES THE FISHING SUSTAINABLE EXPLOITATION INDEX INCREASE



L-R: Hammour (Orange Spotter Grouper), Farsh, and Badah.

For the fourth year in a row, the Environment Agency - Abu Dhabi (EAD) has recorded a significant improvement in the 'Sustainable Exploitation Index' following the implementation of fishing-related measures and procedures. The index increased from 8.9% in 2018 to 69.1% at the end of 2022, and was calculated by evaluating a total of 35 fish species, which accounted for 97% of landings in 2022.

Since 2001, the Agency has been monitoring the state of fish stocks according to two basic indicators of sustainability. The first, the 'Spawning Biomass per Recruit' (SBR) index, is the percentage of the fish that are old enough to spawn, allowing for the renewal of the stock. The second indicator is the 'Sustainable Exploitation Index', used to describe the proportion of species that are sustainably exploited.

An increase in the index indicates that the administrative measures implemented in the fisheries are providing a positive impact, which will help lead to the recovery of fish stocks by 2030. The Agency's data revealed that it had achieved the target percentage of the Spawning Biomass per Recruit, which determines the proportion of the stock volume of 30 main commercial species, compared to the volume of their untapped stock. In 2022, an increase of

40% in the average stock size was recorded, up from 25.6% in 2020.

The landing quantities of some major fish species has improved as has an expansion of their spread thanks to strengthened protection operations and the activation of regulatory procedures carried out by the Agency. This has relieved pressure on fisheries and contributed to their recovery, proving that the results obtained in fisheries performance indicators underscores the importance of EAD's continuing implementation of a ban on Gargoor fishing and encircling nets methods in Abu Dhabi waters.

The Agency stressed the importance of its existing cooperation with the Critical Infrastructure and Coastal Protection Authority in preserving the marine environment, regulating the exploitation of fish wealth, and supporting eco-tourism and cultural and recreational activities in Abu Dhabi.

The Agency also praised the commitment of fishermen and the cooperation of fishermen's associations and their effective role in implementing the decisions and procedures related to fishing taken by the Agency to protect fish stocks. This has contributed significantly to reducing the effects of overfishing on the marine environment, and achieving an improvement in

the state of fish stocks in the emirate's waters for the fourth consecutive year.

The Agency recorded an increase of 91% in the landing rate of 'Zuraidi' (Golden Trevally) fish since 2020, up to approximately 15,000kg in 2022, while the percentage increase in the landing of Jedd (Pickhandle Barracuda) fish reached 90%, reaching about 112,000kg last year. The rate of landing of Faskar (Two Bar Seabream) fish has increased by 96% since 2020, to about 800kg in 2022. With regard to 'Umm Dhrais' (Indian Snapper) fish, the Agency recorded a 25-fold increase in the landing of this species, which increased from a total of 51 kg in 2020 to approximately 1,300kg in 2022.

In 2022, the average mature stock size of 'Hammour' (Orange Spotted Grouper) and 'Naiser' (Ehrenbergs Snapper) fish increased by 18% and 5%, respectively, compared to 2021, while the relative average adult stock size of 'Kanaad', (Kingfish) 'Shaari' (Spangled Emperor), 'Durduman' (Yellow Tail Scad), 'Jesh' (Orange Spotted Trevally) and 'Dhile' (Talang Queenfish) increased by 25%, 20%, 19%, 6%, and 4%, respectively, compared to 2020. The average relative size of mature fish stocks increased by 20% compared to 2019, and the 'Shaam' (Yellowfin Seabream) fish achieved an 8% growth in the average size of mature fish, compared to 2018.

THE ENVIRONMENT AGENCY - ABU DHABI AND THE BRITISH EMBASSY PLANT 70 MANGROVE SAPPLINGS AT JUBAIL ISLAND



As part of the Abu Dhabi Mangrove Initiative and inspired by the Queen's Green Canopy Project, the Environment Agency - Abu Dhabi (EAD) and the British Embassy Abu Dhabi planted 70 mangrove saplings on Jubail Island.

The Queen's Green Canopy Project is a tree planting initiative created in 2022 to mark the Platinum Jubilee of the late Queen Elizabeth II, while the Abu Dhabi Mangrove Initiative was launched in February 2022 during a meeting by His Highness Sheikh Khalid bin Mohamed bin Zayed Al Nahyan, member of the Executive Council of Abu Dhabi and head of the Abu Dhabi Executive Office, and His Royal Highness Prince William, at Jubail Island in Abu Dhabi. The Abu Dhabi Mangrove Initiative was established to provide a platform for the development of innovative mangrove planting solutions, while helping mitigate the effects of climate change, and raising awareness of mangroves' importance and the need to restore them.

Representing EAD at the event was the Secretary General, Her Excellency Dr Shaikha Salem Al Dhaheri, who was joined at the ceremonial planting ceremony by His Excellency Patrick Moody, His Majesty's Ambassador to the United Arab Emirates and Engineer Abdulla Al Shamsi, Corporate Director of Jubail Island. Also in attendance was a group of Emirati and British students, who helped with planting the mangroves as part of a youth outreach programme – a core mandate for both EAD and the British Embassy.

On the occasion, Her Excellency Dr Shaikha,

said, "It is such a pleasure for us at EAD to honour the late Queen Elizabeth and be inspired by the Queen's Green Canopy Project, with today's planting ceremony acting as an extension of the Abu Dhabi Mangrove Initiative, especially in the Year of Sustainability which highlights the UAE's rich heritage to promote sustainable practices. At EAD, we have several UK partners with whom we have developed a series of successful projects and programmes. I would like to thank His Excellency Patrick Moody for joining us today, helping to plant a significant species whose prime carbon-sink properties help us to combat climate change."

She also provided an update on the recent achievements of the Abu Dhabi Mangrove Initiative and outlined the Agency's impressive progress regarding the planting of mangroves in Abu Dhabi as part of EAD's successful marine conservation programmes.

His Majesty's Ambassador to the UAE, Patrick Moody said, "During his visit to Jubail Mangrove Park in February last year, His Royal Highness Prince William had the honour to meet His Highness Sheikh Khalid bin Mohamed bin Zayed where Abu Dhabi set out their ambitious plans to establish the Emirate as a global hub for research and innovation to support the conservation of mangroves. Their first partnership was with the Zoological Society of London, who remain committed to working with EAD to support nature and climate positive mangrove projects internationally.

"As we look forward to the UAE hosting

COP28 later this year, it is important that we take action in a variety of ways to tackle the interlinked crises of climate change and nature and biodiversity loss. Conserving and planting mangroves provides natural adaption to the effects of climate change and helps reduce greenhouse gas emissions."

Engineer Abdulla Al Shamsi Corporate Director of Jubail Island said, "At Jubail Island, we are proud to be part of the Abu Dhabi Mangrove initiative and we are committed to planting one million mangroves on Jubail Island over the next ten years. The Abu Dhabi Mangrove initiative allows us to work towards this target, and we thank the Environment Agency - Abu Dhabi and the British Embassy Abu Dhabi for their support on this project".

Recently, EAD has planted around 15 million mangroves across Abu Dhabi's coastal areas, including Jubail Island, Al Mirfa, and different locations across Al Dhafra region. This is in alignment with the UAE's aim of planting 100 million mangroves by 2030 to help achieve Net Zero by 2050.

EAD has also successfully planted one million mangrove seeds using drones, as part of the first phase of a project supporting the Abu Dhabi Mangrove Initiative. EAD is the first organisation to plant mangroves on such a large scale using drones. The planting of the one million seeds is a result of a successful phase implemented by EAD in partnership with ENGIE, the global energy company, and Distant Imagery, a drone engineering solutions company.

IN PARTNERSHIP WITH THE ENVIRONMENT AGENCY – ABU DHABI, THE CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS HOSTS A THREE-DAY DUGONG CONSERVATION WORKSHOP



The Convention on the Conservation of Migratory Species of Wild Animals (CMS) Office - Abu Dhabi, in partnership with the Environment Agency – Abu Dhabi (EAD), has concluded a three-day workshop on dugong and science and management in the Arabian Gulf region.

The workshop was held on the 2-4 May 2023 at the Khalidiya Palace Hotel, Abu Dhabi and brought together experts and stakeholders from across the region to discuss the current status of the Arabian Gulf dugong population to develop strategies for regional collaboration, and gain knowledge on new technology and research methodologies.

HE Dr Shaikha Salem Al Dhaheri, Secretary General of EAD opened the workshop with remarks highlighting the importance of dugong conservation in the region, saying, "I would like to welcome to this workshop this special delegation of researchers from the GCC region as well as the international team of experts who will be sharing their valuable experience and expertise on the best way to study and protect dugongs. I am sure we all have something valuable to share with each other and something valuable to learn about this remarkable species. It is such an honour to witness all of the region's dugong researchers in one place, and for Abu Dhabi to host this important meeting."

She added, "The dugong population in the Arabian Gulf is the world's second most important after Australia, with the UAE's waters home to 3,000 dugongs. Our wise and visionary leadership have always recognised

the importance of dugongs and that is why we are proud to have hosted the CMS Dugong Secretariat since 2007. We have also progressed over the years to using technology and innovative methods to help us study dugongs to get a better understanding of their characteristics and unique habits. We are now in the age of artificial intelligence and learning new methods for conducting aerial studies, tracking and monitoring dugongs."

She also expressed her gratitude to the CMS Office – Abu Dhabi for organising the workshop and to the participants for their ongoing commitment to this important cause.

Rouba Abou-Atieh, Executive Coordinator of CMS Office - Abu Dhabi, also provided opening remarks, emphasising the importance of collaboration and knowledge-sharing in dugong conservation, stating, "We are thrilled to have such a diverse group of experts and stakeholders here today... I am confident that the discussions that take place over the next few days will help us to advance our knowledge and understanding of dugong conservation, and to develop effective collaborative strategies for the future."

The workshop included a diverse group of international experts in the field of dugong conservation who led interactive panel sessions on a range of topics, including: the use of the CMS Dugong Catch & ByCatch Questionnaire for science and management (Dr Nicolas Pilcher); aerial surveys and the use of artificial intelligence (Dr Chrisophe Cleguer); a practical guide to carrying out necropsies (Dr Daniela Denk), and opportunities for

insights from live-stranded and necropsied dugongs (Prof Helene Marsh).

Participants from Bahrain, Qatar, Saudi Arabia and the UAE were all invited to present on the current status and knowledge of dugong populations within their territories, and Prof Helene Marsh presented on the planned review of the 'Global Report on the status and trends of dugong populations', and the Arabian Gulf chapter. The workshop concluded with a trip to SeaWorld Abu Dhabi, where attendees had the opportunity to observe a dugong necropsy, providing a unique capacity building opportunity.

"The workshop provided a valuable opportunity for stakeholders and experts from across the region to come together and discuss the challenges facing dugongs and their habitat. It is only through collaborative efforts such as these that we can hope to protect and conserve this important species." – Gabriel Grimsditch, CMS Dugong MOU Coordinator.

In closing, the CMS Office - Abu Dhabi expressed its gratitude to EAD for supporting the workshop, to SeaWorld for accommodating a live necropsy, and to all the workshop attendees for their participation and contributions to the panel discussions. The importance of continued regional collaboration to protect and conserve dugongs and their habitat in the Arabian Gulf region was also emphasised. As a primary outcome of the meeting, the CMS Office - Abu Dhabi, Dugong MOU will be seeking to establish a Technical Working Group to discuss a standardised aerial survey methodology across the region.

ELEVATING DIVE SAFETY CULTURE

THE SUPREME IMPORTANCE OF VIGILANCE AND SOUND JUDGEMENT

PADI®, a world leader in diving education and safety since its inception in 1966, is reminding the diving industry that diver safety always comes first.

"Diver safety is each and every diving professional's first and most important priority because when it's lacking, preventable tragedies can occur," says Drew Richardson, CEO and President of PADI Worldwide. "Dive incidents ripple well beyond the victims. They are deep, personal tragedies also impacting families, friends, and the entire global diving community – regardless of the diving organisation individuals are associated with."

"There is generally a reasonably low risk in diving when community, training course, and safe diving practices are followed, but when they are not, the severity of a potential accident will have serious consequences that could have been entirely avoidable," continues Richardson. "While most diving Professionals put safety first, recent incidents where fatalities have occurred were not simple slips or forgetful moments. These tragedies resulted directly or indirectly from violating course standards, abandoning sound judgement and ignoring or overriding obvious and accepted dive community practices."

To refresh the importance of diver safety being at the forefront of every business decision, course training or supervision, PADI shares the five safety points that must never be ignored.

1. COURSE SAFETY STANDARDS AND COMMUNITY SAFE DIVING PRACTICES

These are central to diver safety. Incident data repeatedly show that when someone deviates from these, the potential for an incident goes up. Analyses find violations cause or contribute to many diver fatalities. The lesson is obvious: follow all course standards and diving safe practices always, all the time, to the best of your ability. They work – and the data show it.

2. SAFETY OVERLAP IS NOT SUPERFLUOUS

Safety procedures overlap and repeat, and this is intentional and necessary. No single safety procedure accounts for all variables – and those variables include inevitable human error – so multiple procedure "layers" are applied to close the gaps and help offset unintended

simple mistakes or omissions. Incidents show that skipping seemingly repetitive procedures or disregarding seemingly "minor" standards removes a safety layer that in retrospect, would have prevented a tragedy.

3. SAFETY IS HUMAN

Safety standards and practices work when adapted to the local conditions and to the diver's ability, but they don't work by themselves – nor are they intended to. They rely on conservative good judgment and reasoned application. Doing this is primarily a matter of common sense and choosing the more conservative option should always be selected when in doubt. The basics of depths, ratios, equipment, or procedures are ones that even Open Water Diver students would know are mandatory, so misjudgment from a diving professional in these areas is inexcusable.

4. SAFETY PROCEDURES ARE DYNAMIC

People, weather, diving conditions and circumstances vary. Technology, diving physiology knowledge and community practices change, so Standards and Procedures change with them. Stay updated. If someone finds themselves in a perplexing situation where following standards and procedures seems difficult or even impossible, chances are it's not. In general,

there's no reason or excuse for violating established dive training Standards and Procedures.

5. ALWAYS BE "ON DUTY" WHEN IT COMES TO SAFETY

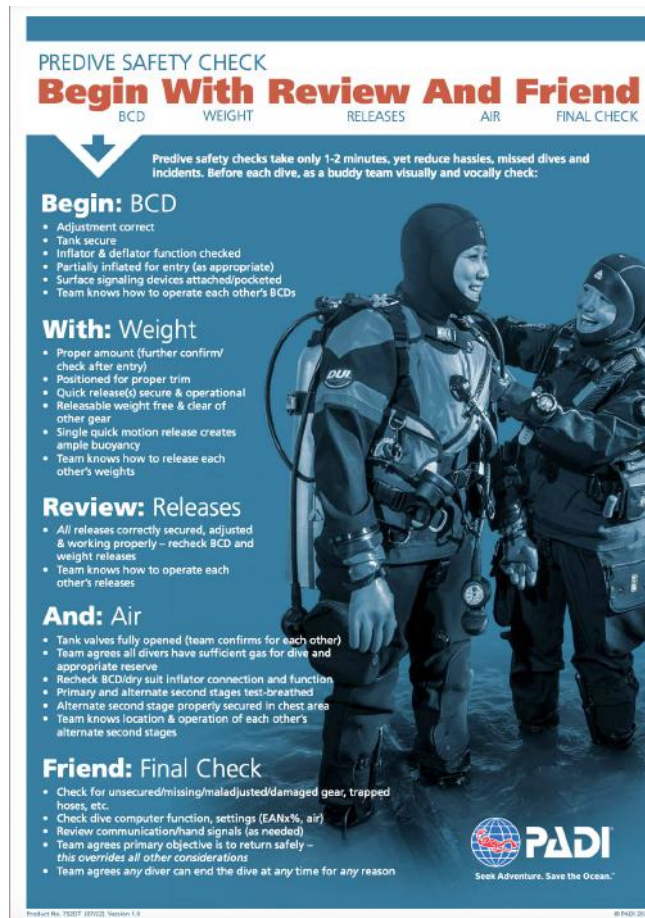
Diving has an impressive safety record but as a community we should always strive to continue to improve it. The actions of diving professionals must be visible and unmistakable, reflecting what is taught and following best practices without exception. A good example of this is prediver safety checks, which sometimes get overlooked outside of training; yet incident data and anecdotal reports suggest that tight checks would prevent many incidents and close calls.

By conspicuously doing prediver checks as professionals, the industry can encourage other divers to do the same. PADI is providing a free Download of a Prediver Safety Check poster to display in prominent places such as boats, dive centres, classrooms or pool areas. Checklists are important safety reinforcers and used in aviation, surgical practice, technical diving and in diver instruction and guiding. They are a way to promote safe diving practices.

"When a dive instructor neglects standards, disregards required equipment or flouts established practices, they not only increase the likelihood of an unnecessary tragedy, but they can also be difficult or impossible to defend reasonably," says Richardson.

"These actions can also void professional insurance warranties, leaving provided coverage for defence and liability in question at best. However, when you follow standards and procedures diligently to the best of your ability, you greatly reduce risk," continues Richardson. "And should there be an incident, your actions can be compared to these standards to defend that they were proper, reasonable and appropriately applied to the local diving conditions for the divers under your supervision."

You can download a Prediver Safety Check poster from the PADI Pro Site under Course Related Documents, which is available in 14 languages. PADI Regional Training Consultants or Quality Management staff personnel around the planet are available to assist and consult where there may be questions.



EDA'S FIRST GROUP OF CERTIFIED REEF CHECK DIVERS

BY **ALLY LANDES**



We have certified the first three of our seven Reef Check candidates from our first group of eco divers on the 3rd of March and want to congratulate both Tony Sidgwick and Gilly Roberts for passing the three theory tests for Substrates, Invertebrates and Fish, and Andrew Bray for passing his Invertebrates and Fish. Despite minimal visibility on the day, all three shone in their practical exams at 3 Rocks in Dibba, Fujairah and they are now certified to take part in our survey dives through their qualified fields all under the guidance of EDA's Reef Check Trainer, Rania Shawki Mostafa.

We're looking forward to our other 4 candidates finding the time to complete their courses as well and getting our monthly Reef Check surveys underway. Group 2 have now started their course. More updates to follow.

HOW BENEFICIAL WAS THE REEF CHECK ECODIVER COURSE FOR YOU AS A DIVER?

"Very, I appreciate the extra knowledge about what I see when I'm diving. I really enjoyed the course as it's given me a greater understanding of the sea life I see, and how it relates to the health of the ocean environment." Tony Sidgwick

"Reef check was very beneficial. It's so good to know how to do these surveys and see and understand the impact of what we do; and then how to manage this. Rania, our trainer was the most positive person I have ever met. She shared her passion for everything involving the oceans; the enthusiasm and motivation she pushed across was amazing." Gilly Roberts

"It was very beneficial to me as a diver as I now identify and notice invertebrates and fish that I did not normally register on my dives before. Secondly, I've started to see the damage that is taking place with coral. Last week I noticed damage to coral from an anchor. It has made all of my dives far more interesting and enjoyable. The course was delivered in an amazing way and I have learned so much more about that environment and the living species that occupy it. I would recommend this course to any diver." Andrew Bray

ALLEN CORAL ATLAS

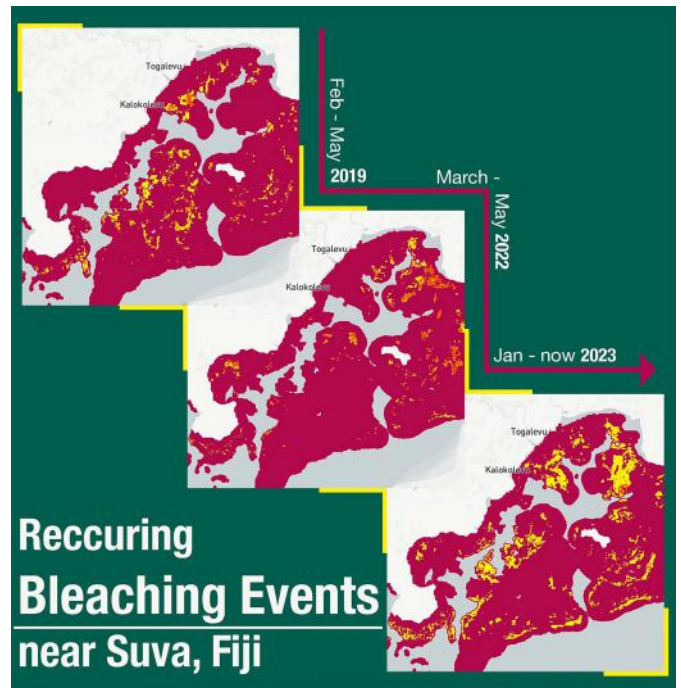
RELEASES UPDATED CORAL BLEACHING TOOL

Allen Coral Atlas recently released a new version of its coral bleaching monitoring system, including biweekly bleaching data from 2019 to the present. This unprecedented data release helps resource managers react to bleaching events as they occur and decision-makers to prioritise areas for restoration and mitigation.

"Coral bleaching is one of the most important threats to the world's reefs. Yet coral bleaching has proven nearly impossible to monitor at a large geographic scale," said Dr Greg Asner, Director for the Centre for Global Discovery and Conservation Science at Arizona State University (ASU) and Managing Director of the Allen Coral Atlas. "That's why we continue to improve our global threats monitoring system, and with our new v2.0 system, we track this threat with improved accuracy and detail."

This improved method was developed and implemented by the ASU team, who leads the Allen Coral Atlas programme. In partnership with Coral Reef Alliance and with the support of monitoring data from MERMAID, Wildlife Conservation Society, Reef Check Foundation, CORDIO East Africa, Great Barrier Reef Marine Park and many others, the Atlas team has spent the past two years gaining feedback from local experts about coral bleaching events to compare with the method for iteration and improvement.

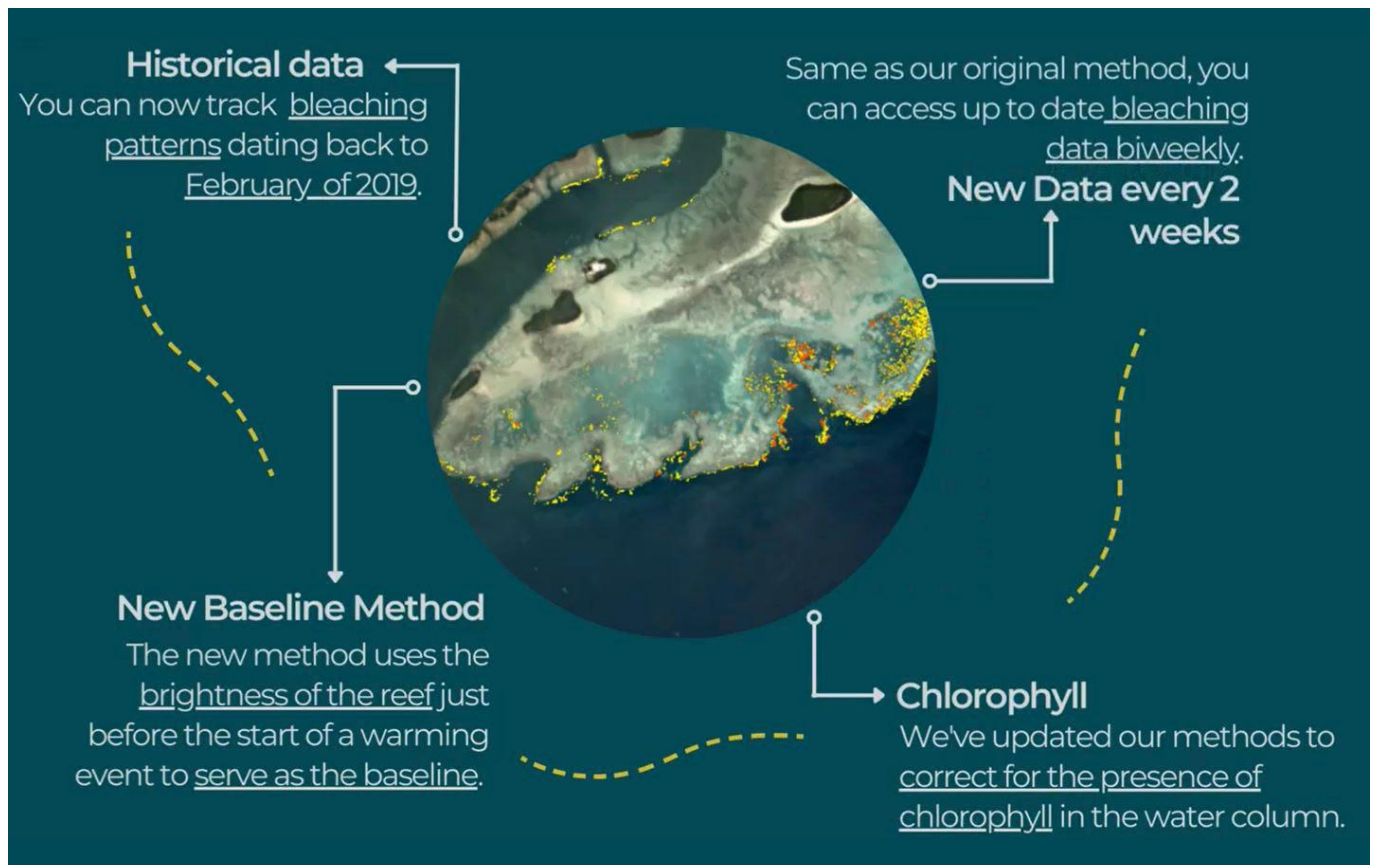
The bleaching datasets are already being used by resource managers globally. "The GBRMPA (Great Barrier Reef Marine Park Authority) uses the bleaching monitoring system feature during the summer's weekly Reef Health Update to inform the general public," said Jessica Stella, Chief Scientist at GBRMPA. "The information is then used by the Reef Authority in targeting specific areas on the Reef for in-water site inspections."



FOR MORE INFO

See the current bleaching event affecting Fiji here and other large-scale bleaching events from around the world:

<https://bit.ly/44Qn0ai>



REEF CHECK TAKES RESTORATION PLEDGE IN SUPPORT OF THE KELP FOREST CHALLENGE

BY ANNIE BAUER-CIVIELLO, REEF CHECK RESTORATION PROGRAMME DIRECTOR



Reef Check is rallying behind the Kelp Forest Alliance who have created a global challenge to restore one million hectares of lost underwater forest by 2040, called the Kelp Forest Challenge. This is intended to be similar to the Bonn Challenge to restore deforested landscapes.

Since November 2022, our Restoration Programme Director, Annie, has joined over

250 kelp experts, professionals, and citizens from 25 countries in a series of workshops to create an inspirational target for kelp forest restoration.

"This initiative aims to encourage and facilitate positive actions and communities that can protect what is remaining and restore what has been lost with an ambitious shared vision

for ensuring our kelp forests and the benefits they provide thrive into the future," says Dr Aaron Eger, Founder/Programme Director of the Kelp Forest Alliance.

For more information, check out the press release here: <https://bit.ly/3Mr8VsA>

IN SUPPORT OF THE CHALLENGE, REEF CHECK PLEDGES THAT BY 2030 WE WILL:

- Work with at least ten local communities across the West Coast of the USA to restore at least five hectares of kelp forest each;
- Lead citizen scientists to conduct annual long-term monitoring surveys to assess the health of kelp forests using standardised monitoring protocol along the entire west coast of North America;
- Share the findings of our long-term monitoring and notify local governing agencies when kelp forests are in further decline, and act as an early warning system;
- Lead and support research to answer critical questions on kelp forest restoration;
- Train at least 1,000 new volunteers to monitor kelp forests and provide education on the declining health of local kelp forests;
- Build awareness for kelp forests through social media, outreach, and education.

SWAY AND REEF CHECK PARTNER UP FOR KELP FORESTS

Reef Check is honoured to be chosen as one of three key partners through 1% for the Planet Member Sway, who creates seaweed-based replacements for single-use plastic packaging. Sway balances market-driven solutions with environmental partnerships and echoes Reef Check's approach to finding ecologically sound and economically sustainable solutions for our planet by sourcing from regenerative ocean farms (which promotes climate-resilient employment and expands the market for their main crop – seaweed) while improving conditions for marine life and mitigating the effects of climate change.

Of this partnership, Sway says, "There are two vital components of the seaweed revolution: creating demand for regeneratively farmed seaweed, which is the direct impact we hope to make, and the restoration of our vital seaweed ecosystems. While Sway pushes for market-driven solutions in our day-to-day work, it is of the utmost importance to us that we also find direct opportunities to support



kelp restoration, which is why we value Reef Check's work in this capacity."

Thank you to the team at Sway and 1% for the Planet for partnering with Reef Check!

FOR MORE INFO

www.swaythefuture.com
www.onepercentfortheplanet.org/stories/sway-is-using-one-percent-flexible-giving

REEF CHECK MALAYSIA'S 2022 ANNUAL SURVEY REPORT

AND A STRATEGY FOR MARINE PARK MANAGEMENT

BY REEF CHECK MALAYSIA



The year 2022 saw a huge increase in the number of sites surveyed for our Annual Reef Check Survey programme, which has now run for 16 years. A total of 323 sites were surveyed in 2022, an increase of 117 sites from the 206 surveyed in 2021. These survey sites, mainly islands, include both established Marine Protected Areas (MPAs) and non-protected areas.

The results of the 2022 survey indicate that on average, the reefs surveyed have a "fair" level of living coral, at 47.83%, which is a slight increase from the 44.26% of 2021. This increase continues a trend noted in last year's surveys, reversing a decline that began in 2015.

The improvement seen could partly be due to a huge reduction in tourist visits to coral reefs during the COVID-19 pandemic. Further monitoring is required to confirm this observation which, if supported by data, might suggest that temporary site closures be considered as a management measure in the future.

The abundance of indicator fish and invertebrates remains low. One possible reason could be the historical over-harvesting. This is the case despite the fact that many of the surveyed sites, particularly those in Peninsular Malaysia, are within MPAs, in which populations are expected to grow.

The indicators of disturbance and pollution have increased in many reef areas, which is a result of human activities such as tourism and development.

OUR RECOMMENDATIONS:

Several recommendations were made in the survey report:

- 1 Improving management of marine resources by addressing local impacts and introducing participatory management. This can be done by giving local stakeholders a stronger voice in decisions that affect their livelihoods.
- 2 Emphasising the building of ecological and economical resilience. Resilient reefs have a higher chance of withstanding or bouncing back from the growing threats of climate change. Resilient communities have diversified economics and will not have to entirely rely on reefs for their livelihoods, and this will reduce human pressure on reefs.
- 3 The government is asked to reconsider a more sustainable tourism model, moving away from the "mass" tourism model, and to "building back better" in the aftermath of the COVID-19 pandemic. Current tourism trends suggest tourists are looking for a different experience, one that is more authentic and in areas with less crowds.

While we welcome the improvement in the percentage of Live Coral Cover, which is a key coral reef health indicator, RCM urges the government to intensify efforts to protect our reefs.

Reefs provide not only food, but also important jobs for many coastal communities in Malaysia, and they are an important tourism

product. Simple actions on a local level can significantly contribute to improving the health and resilience of our reefs.

You can find our 2022 Annual Survey Report as well as previous year's reports at: www.reefcheck.org.my/reports

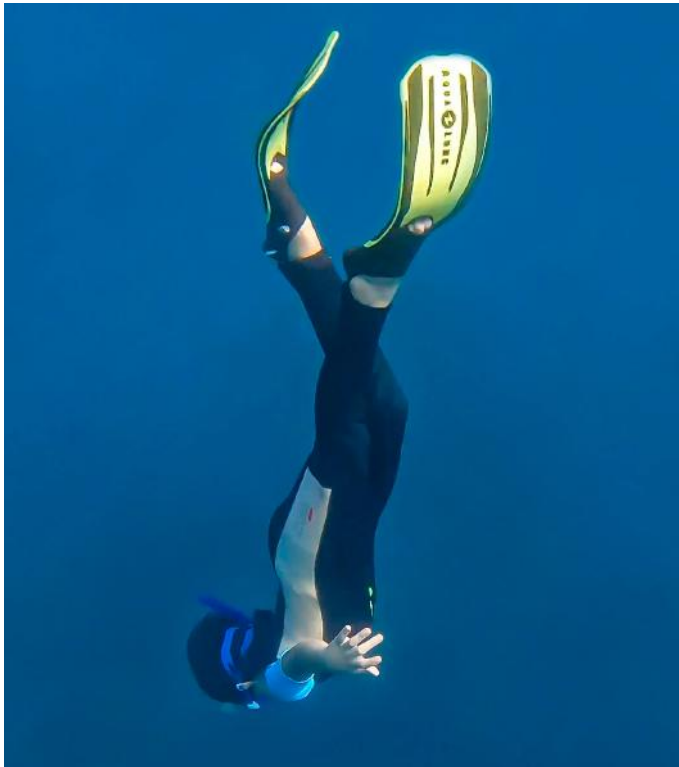
The annual survey data point to the importance of building ecological and community resilience. Working together with the Department of Fisheries, Malaysia (DoF), RCM has recently completed a two-year study funded by NOAA to develop resilience-based management plans and a strategy for holistic management of a network of Marine Parks off Peninsular Malaysia's East Coast.

The project culminated in a workshop in early March during which the strategy was presented to a wide range of stakeholders from all sectors of government, who provided feedback on the strategy. Once finalised, we are hopeful that the strategy will be integrated into DoF's plans to manage coastal resources.



KIDS FREEDIVING

BY BASSEL OUNAH



Freediving is an exhilarating sport that has gained popularity in recent years. It involves diving underwater without using breathing apparatus such as scuba tanks. Instead, freedivers rely on breathing and various techniques to conserve oxygen while exploring the depths. While this sport is often associated with adult thrill-seekers, it is also an excellent activity for children. This article will explore why freediving can be a perfect activity for kids, how to get started, and the precautions to take to ensure their safety.

WHY FREEDIVING IS GREAT FOR KIDS

Freediving is a fantastic way to introduce children to the underwater world. Children are naturally curious, and the ocean offers a new world to explore. Freediving can help foster a sense of wonder and respect for the sea and its inhabitants. It can also help children develop essential skills such as focus, discipline, and self-awareness.

Freediving can also be a great way to improve a child's physical fitness. The sport requires a certain level of strength and endurance, which can develop over time. Regular freediving sessions can help children develop stronger lungs and hearts and improve overall fitness.

Additionally, freediving can be a great way to build a child's confidence. Learning to hold their breath and dive underwater can be challenging at first, but with practice, children

can develop a sense of accomplishment and pride in their abilities.

HOW TO GET STARTED

Getting started with freediving requires some preparation and planning. Here are some steps to take when introducing your child to the sport:

First, find a qualified instructor: It's essential to find an instructor experienced in teaching children and certified by a recognised freediving organisation. The instructor should also be knowledgeable about safety procedures and able to teach proper techniques.

Choose the right location: When starting, it's best to choose a calm and shallow location. A pool or a quiet beach is an excellent choice for beginners. Avoid places with strong currents, waves, or underwater hazards.

Equipment: A wetsuit, fins, mask, and weight belt are essential for freediving. Choose appropriate equipment for your child's size and skill level. Your instructor can help you choose the right gear.

Practice: Practice is critical to improving freediving. Encourage your child to practice regularly to build up their skills and confidence.

SAFETY PRECAUTIONS

While freediving can be an excellent activity

for kids, it is essential to take safety precautions seriously. Here are some tips to keep in mind:

First, always dive with a buddy: Having a partner is vital. The buddy system ensures that there is someone to help in an emergency.

Second, know your limits: Listening to your body and not pushing beyond your limits is essential. Children should be encouraged to start slowly and gradually build up their skills.

Third, stay within your comfort zone: It's essential to avoid diving beyond your comfort zone. Children should be encouraged to stay in shallow waters until they are comfortable and confident in their abilities.

Be aware of the environment: It's essential to be mindful of your surroundings when diving. Watch out for any underwater hazards, such as rocks or marine life that could be dangerous.

Freediving can be a great activity for kids, offering an opportunity to explore the underwater world, build physical fitness, and develop essential skills. With the proper preparation, equipment, and safety precautions, children can enjoy the thrill of freediving while staying safe.

Always dive with a buddy, stay within your comfort zone, and be aware of the environment. With these precautions in mind, freediving can be a fun and safe activity for children of all ages.

MARINE CITIZENS READY FOR ACTION!

BY NICOLA ASHTON



Greenfield International School have taken an innovative approach to leading learning around the UN Sustainability Goals with the launch of Marine March and the Marine Citizen Programme which centred around SDG 14 – Life below water.

THE WHY

We need a generation of informed, responsible, life-long learners who are equipped to make positive changes and difficult decisions in complex environments. Providing unique learning opportunities and ensuring that our young people are creative, curious problem-solvers who are inspired to take action, is not a small task. By learning about ocean conservation and sustainability, young people can develop a deeper understanding of the natural world and a sense of empathy and responsibility to protect it.

THE MARINE CITIZEN PROGRAMME

Developed by a team of Grade 11 students, with Yasmine El Melki leading on the development of a Marine Citizen Passport, 10 missions were devised by the team to be completed by primary students over the month of March. In lessons, students worked on the missions alongside a series of practical activities designed to educate around ocean conservation. Grade 11 students supported by talking with the 'young marine citizens in training' about their experiences and sharing their expertise. Looking into how to clear up an oil spill with spoons, cotton wool balls, soap and paper towels made for an extremely messy day; and graphing the Blue fin tuna populations was by no means an easy task,

but the concrete message that students were able to take away with them about the impact made it worthwhile. Learning is messy, noisy, and often times difficult stuff!

THE MISSIONS

As the passport was created to be accessible by a wide range of ages, reading levels and engagement levels, the missions were split into two categories. Completing five missions for a Marine Citizen Award and eight missions for a Master Marine Citizen. All of the activities fit with the IB Learner Profile and so encouraged skills such as reflection, creative thinking, communication, as well as knowledge.

Missions included activities such as creating a short song about an endangered species, thinking and actioning how to make more sustainable transport choices, and creating a piece of recycled art. Some students even managed to convince their family to participate in a community clean-up – they must have mastered the art of persuasion!

THE SHOWCASE

All students recorded their missions in their online passport, aiming to reduce paper use for our project, and many learners took this, along with their art creations to a Marine March Showcase for Earth Day. Many members of the school community, including our older secondary students, were able to visit the showcase and learn about life below water firsthand from the students.

SO HOW WAS IT?

Some of the students were interviewed for

their showcases and here are some snippets of what they said:

We learned. We were independent. We got frustrated but then we fixed it. We made things, we broke things, and we understood how they work! We reflected and communicated. We asked questions and we thought. We were sad sometimes but we were happy that we can make a change. We had fun.

THE IMPACT

Nicola Ashton and Joe Thorowgood lead the project across the school, and loved how engaged the students were in their learning.

"The students had a whale of a time! There was a buzz around the school while learning about something that we can all relate to. Most of us live around 20 minutes away from the nearest beach. We need to understand how to care for it, we need to want to care about it; and while we avoid introducing catastrophies to the younger students, this doesn't mean that they can't learn to appreciate and value the awe and wonder that comes with all things ocean... turtles, cuttlefish, jellyfish, sand, shells. It is only when they can be creatively curious around something that is so awe inspiring, that we can create a culture of care".

THE FUTURE

We are keen to develop the idea further for next year and look at how we can incorporate visits, speakers, collaboration and other activities into the Marine Citizen Programme. Maybe we can get some of them diving soon – who knows.

GUINNESS

FEATURE **JAMES CAMPBELL** PHOTOGRAPHY **BP ARCHIVE**

“Guinness. It’s good for you!” And believe it or not without it, you may not be sat where you are now reading this article. So, although St Patrick’s has been and gone this year, you should still raise a glass of the famous Irish dry stout and remember the tale which follows. A tale of two black liquids and scuba diving which contributed to shaping the United Arab Emirates into the country you see today. Like all good ripping yarns, it needs a beginning, middle and end, and the best of places to start is the beginning.



COVER PHOTO: ADMA Enterprise at the site of Umm Shaif no.4 well, 1953.





The house of ADMA representative, Mr T. Hillyard in Abu Dhabi, 1953.

"Guinness. It's good for you!" And believe it or not without it, you may not be sat where you are now reading this article. So, although St Patricks has been and gone this year, you should still raise a glass of the famous Irish dry stout and remember the tale which follows. A tale of two black liquids and scuba diving which contributed to shaping the United Arab Emirates into the country you see today. Like all good ripping yarns, it needs a beginning, middle and end, and the best of places to start is the beginning.

In the beginning... tick followed tock, followed tick, followed tock, until eventually some marine animals evolved to become terrestrial animals, tetrapods, some 400 million years ago. Tick continued to follow tock and some of these tetrapods returned to the oceans, around 50 million years ago, the first cetaceans, marine mammals. Not all mammals returned to the oceans though, some decided that utilising opposable thumbs and pointy sticks was a better way of doing things, and some 2 million years ago the first humans started to make their mark on planet earth. Tick continued still to follow tock right up until the present, and here we are stuck in a 9 to 5. Now some of us with a sense of adventure and wanderlust decided to follow suit with our mammalian cetacean cousins and return to the oceans, not by biological evolution but rather technological evolution. So, like all good things that come to those who wait, humans evolved into SCUBA divers and returned to our origins beneath the waves.

Jacques-Yves Cousteau along with Frédéric Dumas and Émile Gagnan, were the pioneers of SCUBA diving, and some of the first to evolve. Cousteau's name and the image of worryingly tight short shorts plus a red woollen hat should be as iconic to all SCUBA divers as the OK sign. They created this technological evolution, the modern demand regulator aka the aqualung, which helped enable our return to the oceans. Far more articulate authors and creators have told the incredible story of Cousteau's life in a range of mediums, so to cover it all in one article would be an injustice. However, part of his story is this story, so firstly let's set the scene.

During the 19th and early 20th century the trucional states, now the UAE, like other gulf states, relied heavily on the pearl industry for commerce. The first world war, the financial crash of 1929 and the influx of cheap cultured pearls from Japan ultimately led to the decline of the pearl industry and subsequent economic struggles in the region. The focus shifted to the first black liquid gold of this yarn – crude oil. Crude oil as most of us will know is fossil fuel, but fossils of what? The answer to that is mainly marine plankton, both zooplankton and phytoplankton. The very thing which creates the majority of the oxygen in the air we breathe also, overtime, decomposes anaerobically at the bottom of oceans; it's then exposed to extreme heat and pressure forming oil. It's obviously rather more complex than this but now is no time to get

into organic chemistry. By the 1930s the oil rush in the middle east and Arabian gulf had begun. Iran, Iraq, Bahrain, Kuwait, Qatar, and Saudi Arabia had struck this liquid black gold and they were enjoying the financial benefits which followed. In 1935 onshore concessions were granted by the Trucional states to begin their own hunt for oil in the region on land. A man with a silly moustache disrupted things a bit between 1939 and 1945, but the demand for oil had never been higher. Somewhat normal service was resumed after silly moustache man was given a good thrashing and by 1950 bore holes hunting for oil were being drilled on land at great expense. These terrestrial explorations had however come up dry, the hunt continued, and eyes turned to the seas.

In 1952 the trucional states council was formed and by 1953 an offshore concession to hunt for oil was granted to D'Arcy Exploration Ltd, a subsidiary of British (at the time Anglo-Iranian) petroleum (aka BP), by Sheikh Shakhbut bin Sultan Al Nahyan the ruler of Abu Dhabi. The problem presented itself – how do you find oil underwater? On land you would hire a geologist, a man who knew about these things, who would collect rock samples and look for tell-tale geological formations where oil may be near the surface. Challenging on land, this task was even more daunting in the depths of the Arabian Gulf. Underwater exploration and marine surveys needed a man who knew about these things. If there's something strange



LEFT: Commander Cousteau on board the CALYPSO, 1953. RIGHT: Undersea Search For Oil, 1954.

in your neighbourhood, you know who to call. If you needed an underwater explorer in the 1950s things weren't quite so straightforward. The scene is set.

Mr Cousteau at this point had been pioneering underwater exploration using his aqualung, post WW2 Cousteau had set up GERS, the Groupe d'Etudes et de Recherches Sous-Marines, the underwater studies and research group as part of the French Navy. During this period, they advanced the use of their aqualung. This ranged from mine clearing missions to underwater exploration. Exploration of roman wrecks off Tunisia pioneered autonomous diving as a means for underwater archaeology. Cousteau also took part in the rescue of the FRNS-2 a bathyscaphe (type of submarine that can go far deeper than normal subs). The bathyscaphe was invented by Auguste Piccard and developed by another underwater explorer, his son Jacques Piccard. He would later on (on January 23rd 1960 to be precise) become the first of two men to reach the challenger deep, the deepest part of the Mariana trench. They achieved this on board the Trieste, another bathyscaphe based off the FRNS-2. Interestingly Auguste Piccard was the inspiration for Professor Cuthbert Calculus in the Tintin series and also for Star treks' Jean Luc-Picard the captain of the USS Enterprise. Where were we? Right, so Cousteau, in 1949 had left the French navy and formed the French oceanographic campaigns. Cousteau with his new venture, needed a vessel. A steed to carry him like the heroes of past, he needed a Pegasus, a Bucephalus, a Llamrei. A vessel of such calibre like any nimble hardy steed worthy of the quest at hand, unfortunately, it came with a price tag – which Cousteau couldn't afford.

Homer's Odyssey tells the Greek mythological tale (amongst others) of Calypso, a nymph

who lived on the island of Ogygia where she detained Odysseus for seven years promising him immortality should he stay with her as her lover – he didn't, and she topped herself. As good a story as that is, it's not the Calypso of our story in anything other than name's sake. Our story is about RV Calypso, Cousteau's magnificent steed on to which he would ride into the underwater world breaking through the waves of archaeology, biology, and oceanography. The vessel built in 1942 started out as a minesweeper during WW2 in the Mediterranean. Post WW2, she become a passenger ferry between Malta and Gozo, which is thought to be the basis for the mythical island of Ogygia. Here, she was re-named RV Calypso in honour of the mythological tale. In 1950 RV Calypso was bought by a private owner with the intention for her to be converted into a luxury yacht. Destiny however, had other ideas. Cousteau met with the owner in Malta and befriended him eventually persuading him to lease the boat to Cousteau to be used as a marine research vessel. Lease it to Cousteau he did, for a fee of just one French Franc a year and an agreement that Cousteau never asked for anything else from him and that the owners identity remained a secret. RV Calypso was refitted in Antibes, turning it into a research and diving vessel. Like Captain Nemo and his Nautilus, Cousteau had his Calypso! However, this steed needed tack, and modern research equipment wasn't cheap. And funding was still elusive. During this period, he compiled a book about his exploits of the late forties and in 1953 the book, 'The Silent World: A story of undersea discovery and adventure, by the first men to swim at record depths with the freedom of fish', was published.

Back in the Trucial states they still needed a man who knew about these things, specifically underwater exploration. As fate would have it,

BP's chief geologist happened to have acquired a copy of 'The Silent World', after reading it he put two and two together realising that Cousteau's work could be utilised to do underwater surveys in the hunt for Oil. Cousteau at this point was off the west coast of France doing some salvage work on Calypso in his own hunt for funding. BP contacted Cousteau and after prolonged negotiations it was agreed that he would bring RV Calypso to the Arabian gulf and perform surveys in the hunt for oil. By February 1954, Calypso had arrived in the Arabian Gulf. Equipped with a Tricolore, navigation equipment, survey equipment, and dive gear including a shark cage, Cousteau riding Calypso was ready for the quest.

Like any heroic story things didn't always go to plan, the solutions they had invented to deal with challenges of such things as getting rock samples from the sea floor, didn't work. Fortunately, Cousteau and his crew were made of sterner stuff and found that a bit of dive gear, elbow grease, a hammer and a chisel was all you really needed to collect rock samples. A rather primitive method but it got the job done. In the Silent world film, there is a seemingly jovial scene where a new recruit is affected by narcosis at 50m whilst hunting for lobsters before running out of air, bolting to the surface, having a pain in his knee and being shoved into the onboard deco chamber. Cousteau and the crew then mock the novice recruit by taunting him, eating the lobsters he caught in front of the deco chamber window. So it wasn't just the sample collection methods which were primitive.

In total, Cousteau surveyed 400 locations and collected rock samples from 150 of them. The rock samples were given to the geologists who knew about these things, for analysis. From the results of these surveys, further work and



Sheikh Shakhbut bin Sultan Al Nahyan, the Ruler of Abu Dhabi, 1953.

exploratory surveys were undertaken. The Abu Dhabi Marine (ADMA) operating company commissioned the ADMA Enterprise, an early form of oil rig, to be built in Germany in early 1956. The plan was that upon completion the rig would be tugged to the Arabian Gulf to drill on one of the more hopeful sites. This was hindered somewhat by a crisis in the Suez in late 1956 and the wreckages which then littered the canal needed time to be cleared. By late summer 1957, the canal was clear and the ADMA Enterprise could "boldly go where no man had gone before". It was then on March 28th, 1958 after 77 days of drilling, 4 years after Cousteau's initial surveys, that they broke through at a depth of 2,668 metres into the Umm Shaif Oil Field. The UAE had struck liquid black gold and the gold rush was on. By 1963 another of the sites from Cousteau's initial surveys proved bountiful becoming the Zakum oil field. The Abu Dhabi Marine operating company and the Zakum development company in 1971 would join to become the state-owned Abu Dhabi National Oil Company or ADNOC. The rest is, well, history.

The whole story of oil in the Middle East is a fascinating one and the inspiration for this article is 'Calypso in the Arabian Gulf: Jacques Cousteau's Undersea Survey of 1954 by Michael Quentin Morton'. Michael Quentin

Morton is the son of Mike Morton an exploration geologist, a man who knew about these things, who worked across the Middle East in the hunt for oil and resources. The works of Michael Quentin Morton go into far more depth and detail than I could here so if you have found this story interesting then I recommend checking out his books.

With a job well done and funding acquired, Cousteau set sail leaving the Arabian Gulf to continue his own odyssey, going on to produce over 120 documentaries and 50 books. Interestingly, on his return to the Mediterranean via the Red Sea and the Suez Canal, he stopped off to investigate information of a wreck from local fishermen... That wreck was the SS Thistlegorm, which I'm sure some of you are familiar with. Cousteau actually named 49 of his documentaries the "Cousteau Odyssey" series. The key thing achieved by the documentaries produced by Cousteau was enlightenment and awareness, not dissimilar to the achievements of the first men on the moon. Importantly this was televised, the underwater world was, as alien to the general public as outer space. The great captain Nemo from the works of Jules Verne in 'Twenty Thousand Leagues Under the Sea' before now was mere fiction, the public now had the adventures before their eyes in Cousteau's documentaries.

In the early days of Cousteau's works there was a focus on science albeit with an antiquated perspective on marine conservation. The 1956 documentary of the same name as his prior book, 'The Silent World' included such classics as blowing up a coral reef with dynamite to do a census of the marine life and exclaiming that a turtle ride "is a lot of fun", hopefully highlights how attitudes and perspectives have changed over the years. Imagine Attenborough, another pioneer in conservation, blowing up a coral reef in the next series of the Blue Planet, yet there Cousteau was. Later in that documentary, what can only be described as barbaric scenes of Cousteau on board calypso, they enthusiastically followed some whales, had the unfortunate event of a prop striking a calf, decided to harpoon it to "put it out of its misery" and, then killing the sharks which came to feed "to avenge the whale". Documentaries would never show that in the modern day, however unfortunately whaling still takes place as does dynamite fishing. We also kill around 100 million sharks annually.

ATTITUDES NEED TO CHANGE

The importance of the marine environment needs to change, and the best method for this is to increase awareness. This underwater alien world which was once out of sight and out of mind, is now available to everyone. Our impact as a species on the planet is no longer a



LEFT AND RIGHT: The town of Abu Dhabi, 1953

secret. The excuse of ignorance no longer cuts it. I would like to think I'm preaching to the converted, and I'm sure the majority of you are. However, on a daily basis at Dibba Rock, I see anchors being dropped on the reef, divers kicking everything in sight, and going forward, this need to change. As divers, one of the most important things you can do is perfect your buoyancy, minimising your own impact. If every diver on the reef every weekend accidentally breaks one piece of coral, let's say reservedly 100 divers, that's 5,200 broken corals annually. We as a diving community should strive to protect the reefs we enjoy and visit on a weekly basis, in fact we have a responsibility to do so.

Cousteau, as his works evolved documenting the importance of the underwater world and increasing awareness, his own attitudes to the conservation of the oceans changed and he became a pioneer for marine conservation. When he first set out on his voyage, no one knew about coral bleaching, pollution of the oceans, coastal development, or exploitation of marine resources. Through his odyssey and the documentaries, he publicised the impact we as humans are having upon the marine environment. In 1973, he created the Cousteau Society to ensure his legacy would be that of marine conservation and research.

Let the tale of Cousteau's odyssey be remembered, and let us take heed to the morals of this story. His is not an odyssey born from mythology, but an odyssey born from fact, let his legacy inspire action and not be discarded like a farcical tale of old.

GUINNESS

That's quite a story in itself and left there it would have already been a ripping yarn, however, that's not the end of it as we come to the second black liquid gold of this article, Guinness. Arthur Guinness started brewing

way back in 1759 and Mr Guinness signed a 9,000-year lease for the brewery's now famous premises at St. James' Gate in Dublin. Mr Guinness' forethought of a lease for such a length, tied in with the price, just £45 pounds sterling per month, which in its day equated to around £8,500. The landowner was delighted, he would never have to work another day in his life and his children would be housed and fed. The lease however never mentioned inflation or rising currency value and still to this day, Guinness only pays £45 rent per month and will continue to do so for the next 8,736 years. Quite the bargain, especially for a company worth around \$2.22 billion. The Guinness family grew and with it their fortunes, diverging into banking and even establishing The Guinness World Records, previously the Guinness Book of Records, which as we're on the topic of ripping yarns, is in itself rather a good one.

One cold November morning in 1951, Sir Hugh Beaver, the managing director of Guinness breweries was out with a shooting party on some mud flats in Wexford, southeast Ireland. Sir Hugh had taken a shot at a golden plover and missed. Attempting to save face, he got into an argument over which was the fastest game bird in Europe with his friend who was adamant it was the red grouse. After much research and bickering over the coming days, it turned out to be the golden plover. Many discussions such as this arose after a few nips of whiskey in an era devoid of the internet or research books. Questions such as "what is the fastest game bird?" or "what's the airspeed velocity of an unladen swallow?", "African or European?" needed answering, and so the Guinness Book of World Records was created. 68 years later, over 115 million copies, in over 100 countries, 23 languages and 53,000 records; you could say it was rather successful. Guinness World Records interestingly actually sponsor one of

the artificial reef structures here at Freestyle Divers artificial reef site. Who would have thought an argument over the speed of some game birds would one day lead to the funding of an artificial reef I built.

As we conclude this story, I hope we can reflect upon Cousteau's odyssey, upon the fortunate circumstances which has led us to this point in our own lives. Most importantly, a time in our lives where somebody else did you a good turn, the smallest of gestures which without it, would not have led to where you are now. Remember the difference that gesture made and remember the impact it had on your world. We as a species need to start giving these gestures back to each other and to the world, because at the end of the day it's the only one we've got. One man who did was Thomas Loel Guinness, a descendant of Arthur Guinness, who in 1953 was sitting on the beach of Malta reflecting on the good fortune and success life had bought him, possibly thinking of paying his good fortune forward, as a peculiar looking French chap approached to enquire about a boat.



LEARN MORE

If you would like to learn more about marine conservation and contribute towards local initiatives protecting the oceans, we offer a full curriculum with in-water training here at Freestyle Divers so that you can have a positive impact on the oceans.

Please contact info@freestyledivers.me for more information.

DUGONGS IN DUBAI!

ANOTHER YEAR IN THE BOOKS FOR THE DUBAI DOLPHIN SURVEY

FEATURE AND PHOTOGRAPHY **BRYANA COPE AND ADA NATOLI, UAE DOLPHIN PROJECT – ZAYED UNIVERSITY**

Throughout the year, we recorded 10 sightings of cetaceans: eight sightings of Indo-Pacific bottlenose dolphins and excitedly, two sightings of Indian Ocean humpback dolphins, a species that was not recorded in the first year of surveys, but frequently reported in the 2013-2014 surveys. Even more thrilling was recording the first sighting of dugongs in Dubai waters!

COVER PHOTO: Mother and calf dugongs sighted for the first time in Dubai during the survey. Dugongs are generally identified by their characteristic surfacing nose first, their brownish colour, and relatively big size. Photo by David Darrell-Lambert.







TOP & BOTTOM LEFT: Indian Ocean humpback dolphins displaying different behaviours like, tight travelling in groups, “tail up” and “back head entrance”. Unlike bottlenose dolphins, this species is usually performing “tail up” just before starting a longer dive. **CENTRE:** Fish escaping bottlenose dolphins during a sighting, we can confidently say that the dolphins were fishing since we observed the fish fleeing from the dolphins! **RIGHT:** Three rays observed during the second year of the survey, close to The World Islands in shallow waters.

The UAE Dolphin Project has completed another year of surveying Dubai waters for small cetaceans. The survey which started in February 2021 has been ongoing, and results from the past year have been analysed up until February 2023. The survey progresses into a third year with the continued support of Zayed University, Atlantis the Palm, F3 Marine and Dubai Municipality.

This past year, despite the “unfriendly” weather, the research team managed to conduct a total of 40 surveys from February 2022 until February 2023, totalling 180 hours of positive navigation and covering 3,315km. We added a few areas to our transect design, expanding towards the border with Sharjah and focussing more on the very coastal waters. We also visited the offshore waters around Moon Island a couple of times. Throughout the year, we recorded 10 sightings of cetaceans: eight

sightings of Indo-Pacific bottlenose dolphins and excitedly, two sightings of Indian Ocean humpback dolphins, a species that was not recorded in the first year of surveys, but frequently reported in the 2013-2014 surveys. Even more thrilling was recording the first sighting of dugongs in Dubai waters!

The data gathered from this second year of surveying highlighted the importance for continuous monitoring in waters that show low population density. In year one, only two of the three regular species confirmed in previous surveys were sighted, Indo-Pacific bottlenose dolphins and Indo-Pacific finless porpoises. The third species, the Indian Ocean humpback dolphin, was only sighted in the second year. On the other hand, in this second year we did not record any sightings of finless porpoises. However, thanks to the reports from the public, we know that finless

porpoises were visiting our waters at least two times. Please keep reporting to us at sightings@uaedolphinproject.org!

The sighting of Dugongs was an unexpected one! Two individuals were sighted about 8.5km from shore in the Jebel Ali area, a mother and calf. They were observed for 25 minutes, diving for 3-4 minutes each time and surfacing only for a few breaths between dives. Upon diving, they stuck their tails up out of the water. This along with the images of their nose, enabled the identification of the species. Dugongs were occasionally reported from the public but never recently and with images, that enabled us to confirm the species.

We were so happy to record the presence of humpback dolphins! Both encounters occurred in the same area close to the Jebel Ali Marine Sanctuary, nearly a year apart, interestingly



TOP: For the first time since the 2021 survey began, a new-born Indo-Pacific bottlenose dolphin was sighted! **BOTTOM LEFT & CENTRE:** Sea snakes observed during the survey. From February to April, they can also be observed mating at the surface. **RIGHT:** A sea turtle observed in March with barnacles on its carapace. The team checked on the turtle and made sure it was still able to swim. Call 800-TURTLE if you find any injured turtles.

in the same area where the dugongs were sighted. The first encounter was with a group of 6-8 individuals, with at least one juvenile. They were observed travelling very slowly and socialising with each other. Behavioural events observed in the almost two and a half hours the team was with the group, included many tail ups, back flips, and tail slaps. The second encounter, almost a year later, was with a group of 8-10 individuals, also including at least one juvenile. This group was mainly observed socialising and possibly even mating! This group was observed for just over an hour before the weather picked up and the team had to turn back. The photo-identification for these two sightings is still ongoing with hopes to match these individuals with both photos from the 2014 catalogue, and data from Abu Dhabi.

Bottlenose dolphins, as in the first year, were the most frequently sighted species

with 8 sightings recorded. Comparing their distribution recorded in the first year of surveys with this second year, it appears that they favour more offshore waters across the whole survey area up to Jebel Ali where they were not sighted in the first year. Bottlenose dolphins were observed with calves and once with a new-born.

Our passive acoustic monitoring devices, deployed in two different areas of Dubai waters (see Sounds under the Sea: A glimpse into the secret lives of dolphins, December 2022 issue), have successfully recorded the presence of both dolphins and porpoises! The data also shows that these animals are utilising the inshore area in the calmer times during the night, when boat traffic is minimal. These preliminary data confirm the effectiveness of this monitoring system, especially since the surveys can only be conducted during the

day. It also suggests that the boat disturbance and the sonar utilisation may influence the behaviour of the dolphins in utilising an area, since the detections have mainly been during less busy times of day, and in less trafficked areas offshore.

Exciting information on this species comes from the photo-identification data! The final group size was finalised for 12 sightings and a total of 218 individuals were counted. Cross matching between sightings has been completed for 11 sightings which yielded to the identification of a total of 185 different individuals. The average group size from the analysed sightings is 19.81 individuals, of these individuals 47 were re-sighted at least twice, representing 25.4% of the total number. Nine individuals were re-sighted three times, and three individuals were re-sighted four times. From the photo-identification analysis, a total

of 18 calves and juveniles were identified, these are difficult to determine if they were the same individuals across the sightings since their marks and nicks are minimal.

Preliminary cross analysis with the Photo ID catalogue compiled during the 2013-2014 surveys provided a match of 16 individuals from the 2021-2022 surveys to the individuals identified in 2013-2014, but this number is likely to increase after the photo-identification analysis is complete. Data is still being analysed as this is a long process going through thousands of photos meticulously, but with the help of Environmental Science students at Zayed University, we are making

great progress! We've had a very dedicated student recently graduate conducting her final senior project on photo-identification on these animals. She has presented her work at multiple forums and recently won an award for best senior project poster at the Zayed University World Environment Day!

We would also like to thank the many dedicated volunteers who have gone out on surveys, without the help from the public, the information gathered would not have been possible. We have had a total of 41 volunteers participate in surveys, with two people coming 15 times each! A few companies have joined the surveys as part of their Corporate Social

Responsibility (CSR) days, including seven people from the Dubai Talabat office, and two people from Western Union Dubai. If you or your company is interested in assisting on the surveys, please don't hesitate to reach out to team@uaedolphinproject.org.

A database of sightings received by the public has been updated with 89 new sightings reported in the last year. All records have been validated by two experts to confirm the species and reliability of the data reported, 64 of the sightings were confirmed and a total of six different species have been recorded since 2019. These include the three most regular species, Indo Pacific bottlenose dolphins,



Socotra cormorants seen in a large group resting on the surface of the water. These large groups are often seen in coastal areas throughout the entire survey area.

Indian Ocean humpback dolphins, and finless porpoises, but also rare species such as Killer whales, Bryde's whale, and false killer whales. This reiterates the importance of citizen science data in understanding rare marine species and in regions where little information is available. Overall, the citizen science data gathered since June 2019 totals: 76 sightings of Indo Pacific bottlenose dolphins, 46 of Indian Ocean humpback dolphins, 13 of finless porpoises, 1 killer whale, 1 false killer whale, and 2 Bryde's whales were confirmed.

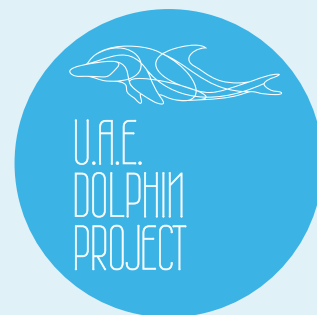
Now in year three of the surveys, with continuous collection of citizen science data, there has been two confirmed sightings of

Killer Whales in Abu Dhabi and Dubai! These reports happened last week on May 9th and 10th, and the team is hard at work gathering all information they can about the sightings of these rare species in the Gulf. If you have any photos/videos that have not been shared on social media, please send them to sightings@uaedolphinproject.org!

Sightings of other important marine megafauna, such as sea turtles, sea snakes and cormorants, were also recorded during the surveys. Sea snakes were observed mating in the area three times. They appeared to be more frequent in the offshore area above Palm Jumeirah, between Palm Jebel Ali and the

World Islands, whereas sea turtles appear to utilise the whole area. Cormorants appear to frequent more coastal waters in larger groups with smaller flocks observed offshore.

After another very successful year, the UAE Dolphin Project Initiative continues to survey the area with hopes of gathering even more information to better understand the population dynamics of these important marine mammals and inform the authorities with the best information to protect these species and sustainably manage Dubai waters. We hope that you continue to support the project in any capacity that you can!



REPORT YOUR SIGHTINGS! WHAT TO DO TO HELP:

If you encounter whales or dolphins, collecting information is extremely useful to us.

- 1) Take videos or photos (if you can). You are there in that moment so you are the scientist. Only you can make a difference. Every image of any quality is better than nothing and will help experts to confirm the species. If you can take photographs and videos when you are on the side of whales or dolphins when fins are clearly visible, it can help scientists track the individuals, but please keep a safe distance!
- 2) CALL as soon as possible if you are witnessing a special sighting, or you encounter a dead animal so experts can hopefully reach the site and gather more information.
- 3) Take note of the date, time, and approximate location – if GPS is not available, a dot on google maps works great! Also report how many individuals you see.
- 4) Report your data to us:
 -  sightings@uaedolphinproject.org
 -  www.uaedolphinproject.org
 -  www.facebook.com/UAEDolphinProject
 -  www.instagram.com/uaedolphinproject
 -  +971 56 671 7164
 -  +971 50 955 1742 or +971 56 671 7164





A NEW INVASIVE SPECIES

IS THREATENING ECOSYSTEMS IN NORTHERN MOROCCO

FEATURE AND PHOTOGRAPHY **MOHAMMED TAFRAOUTI**

This invasive species is being monitored by researchers to study their settlement dynamics in the region. The basic data to date have allowed many conclusions to be drawn, including their prevalence, size structure and socioeconomic impact.





There is an unwelcome guest in the seas of northern Morocco. It migrated from its native strip of the American continent to enjoy the Mediterranean coast. It threatens ecosystems, is gluttonous, predatory, dominant and exerts strong pressure on various fish and shellfish. It consumes living and dead organisms. It is the blue crab, or *Callinectes sapidus*.

The date of its first appearance in Moroccan coastal waters is unknown, but researchers at the regional centre of the National Institute for Research in Marine Fisheries in the city of Nador, northern Morocco, confirmed that it was first observed in August 2017 in Marchika (Nador Lagoon). Local fishermen said that it has been caught in their nets since 2018, and that it was also found on the coasts of the city of Tangier in 2020. Since then, it has been fished daily, with daily catches reaching around 30 kilograms in the city of Larache. Each crab can weigh up to 1,000 grams in the Mulay Bouselham Lagoon. It is sold in the fish markets of Larache, Tangier, Rabat and Casablanca.

A study revealed that the first gathering of blue crabs was recorded in February 2021 in the western coasts of Morocco. It was also found at the mouth of the river Kert and the Moulouya river, west and east of Nador Lagoon, respectively. Afterwards, it spread widely in the Larache region of the Loukous valley on the Atlantic coast, where it found favourable conditions for its rapid reproduction.

Dr Hisham Chairi of the Abdelmalek Essaadi University in Tétouan, said that a total of 110 of them were taken as study samples, with only two males. All the ones collected in the coastal waters of the Loukous River, northern Morocco (a river that originates in the vicinity

of the Chefchaouen region and flows into the Atlantic Ocean north of the city of Larache), in the months of June and July were females. Most blue crabs taken in November were males. The width of the shell of females varies between 80 and 150 millimetres, while males have shells that measure between 82 and 160 millimetres. Specimens have also been recorded near the Mediterranean port of Tangier; in the rivers "Tahadart" and "Greifa", Moulay Bouselham Lagoon and El Jadida.

The post-larval stage settles on the Mediterranean bank in low-salinity nurseries, in late summer and autumn. Its young overwinter in nursery areas and quickly grow to sexual maturity before mating.

Invasive alien species constitute one of the main threats to almost all species at risk of extinction, changing the functioning of key ecosystems and the biological richness of the Mediterranean Sea. This new species negatively affects the ecosystem of indigenous communities. It also threatens its existence and ecological balance.

After the jellyfish infested some Moroccan coasts, the blue crab arrived with the help of commercial ships crossing the sea, with its larvae being transported by the water that vessels suck up to stabilise their load (also known as ballast water) and emptied out when they reach their destination. Or, as other versions say, it is possible that the larvae spread by sea currents, or were intentionally introduced for commercial purposes.

The blue crab has physiological peculiarities that make it dominant. It is very strong, has powerful claws and uses its hind legs as oars. It is a decapod crustacean, having five pairs of

blue legs and it has sharp front and side teeth. It also has a dark green colour and its body is covered with a solid, polygonal, round-shaped exoskeleton with a soft belly.

It usually breeds in shallow waters of coasts, lakes and upper estuaries, that is, in waters with low salinity. After mating the females migrate seaward to a higher salinity, where they release larval incubators. The larvae re-enter and settlement occurs in the lower bays or estuaries, after which the juveniles migrate to the upper reaches in low-salinity habitats.

Dr Hicham Chairi has confirmed that the blue crab is not an isolated organism, but often lives in communities of 100 or more individuals. It causes many problems, as it feeds on various types of fish in the area, gets stuck in fishermen's nets and is difficult to remove. It causes losses to fishing gear and tears nets.

Professional fishermen working in the Marchika lagoon and the rest of the regions are increasingly concerned about the repercussions that these crabs have on the quality of their catch, especially as it devours small fish and other species, and causes the deterioration of nets.

Blue crabs cause a loss of biodiversity and must be dealt with through the application of a preventive or therapeutic principle that repels the factors contributing to the invasion of the Mediterranean basin.

From here, scientific research intervenes, and a study is being conducted targeting 110 male and female blue crabs. They were collected from the coastal waters of Morocco using bait traps between February and December 2021.



The seizure comes in support of previous research on hundreds of blue crabs, mostly females, collected from various locations along the Moroccan coast.

Chairi reported that he was informed of the first appearance of this species of crustaceans in the Tangier and Tangier Mediterranean ports of the Strait of Gibraltar.

The study concluded that this expansion and spread is natural, following the previous arrival of blue crab groups to the "Mediterranean port", which is the largest port in Africa. However, a genetic study of these populations is needed to further clarify the questions surrounding its continued spread along the northwest coast of Africa.

Local fishermen stated that there is a demand for the acquisition of this type of crustacean and the price reaches between 35 to 50 dirhams per kilogram. Crab is sold at fish auctions in Larache, Tangier and Rabat.

To find out whether this widespread is the result of a single entry that led in biological reproduction or several migrations, Chairi said that a genetic and chronological overview of its recent expansion in the West and east of the Strait of Gibraltar was conducted. A joint study was completed with Moroccan and Spanish researchers that traced the process of significant blue crab spread along the Gulf of Cadiz and the Moroccan coasts in the north-east Atlantic Ocean, to know the possibility of genetic differences that can be detected within the Mediterranean blue crab. The study assessed the genetic makeup of crabs from the Gulf of Cadiz and Alboran Sea.

Chairi reported that the testing process

included the gene sequence of the Cytochrome oxidase subunit I (COI), with a full length of approximately 1,511 base pairs, of 149 individuals from three sites along the Spanish Mediterranean coast, two in the Alboran Sea, and two in the Gulf of Cadiz. The study data revealed low genetic variation, with only two haplotypes, compared to the high genetic diversity known in its native range, indicating a strong influence in the study area.

"Here we document an inversion of haplotype predominance between regions, haplotype CSWM2 being dominant in most of the Spanish Mediterranean coast, but less frequent in the Gulf of Cadiz and Alboran Sea which includes the coasts of Spain in the north, Morocco and Algeria in the south and connects the Mediterranean Sea with the Atlantic Ocean," he explained.

Only two haplotypes were identified in the seven Atlantic blue crab populations analyzed in this study, herein referred to as CSWM1 and CSWM2. Reference samples for the crustacean decapod group were deposited at the Spanish Institute of Oceanography in Cadiz, Spain (IEO-CSIC).

The Spanish Mediterranean coast witnessed a predominance of the CSWM2 haplotype with a range of 53 to 80%, while the Gulf of Cadiz and the Alboran Sea were dominated by the CSWM1 haplotype with a range of 67 to 78%.

This suggests a secondary introduction of propagules into the investigated area, rather than a new introduction from the native area, nor a natural westward expansion. Additional studies will help to better reveal the history of other invasive species in the Gulf of Cadiz. The study concluded that populations of Atlantic

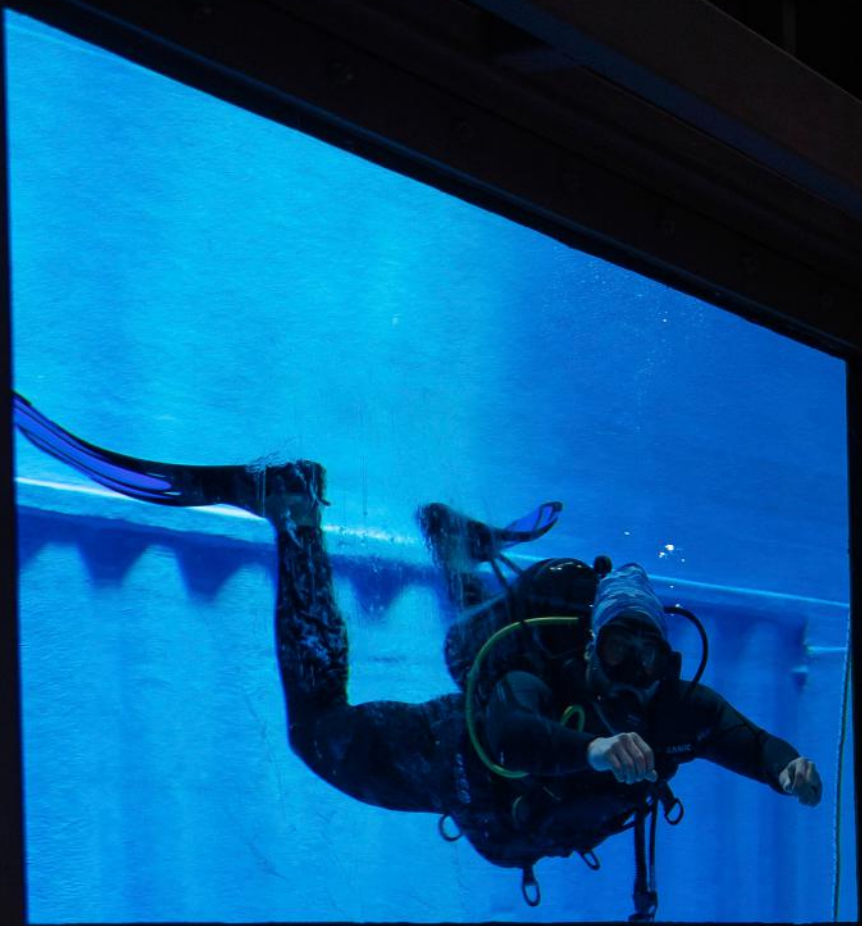
blue crabs were found in the east and west of the Strait of Gibraltar. It currently consists of two individual patterns in the Gulf of Cadiz and the Alboran Sea.

It is necessary to provide incentives to fishermen to increase the catch of this species of crustaceans, especially during the breeding season. A fisherman, Hassan, explains how to catch these crabs through cages placed in the depths of the water. The crabs are sold to restaurants in Casablanca and also in public markets in some Mediterranean cities where it is in abundance in the summer period (June, July).

Mohamed Rais, an expert in cooking fish and a former employee of the most famous fish restaurants in Casablanca, said that the method of cooking blue crab applies to the rest of the crustaceans, eaten by Moroccans in several ways. Its meat, located behind his hard shell, is chunky and appetising. They are also delicious by steaming them, boiling them in water, or grilling them. "I therefore call for providing this type of crustaceans, rich in beneficial nutrients, to the Moroccan consumer, with a Large Offer in public markets, instead of being limited to restaurants and major hotels," he said.

This invasive species is being monitored by researchers to study their settlement dynamics in the region. The basic data to date have allowed many conclusions to be drawn, including their prevalence, size structure and socioeconomic impact. Studies indicate the abundance of this species continue to increase at the level of Moroccan Mediterranean lagoons and coasts.

This story was produced with support from Internews' Earth Journalism Network.



TAKE THE PLUNGE AT DIVECAMPUS: THE REGION'S LARGEST INDOOR "DIVE TANK"

FEATURE **SNEHA SHETTY** PHOTOGRAPHY **DIVECAMPUS**

Made with upcycled shipping containers, the "Dive Tank" measures 4-metres deep, 12-metres long and 5-metres wide, and is perfect for scuba diving and free diving.

DIVE
IN





L-R: Located in the heart of Dubai, within 15-20mins from Dubai Marina, Dubai Hills, Jumeirah, Barsha, Business Bay, and Nad el Sheba; DiveCampus' Co-founder, Islam with PADI EMEA's Regional Manager, Firas Jundi; UAE's first PADI Pro Night was conducted at the Grand Opening with over 80+ participants.

DiveCampus unveils its first concept store in Dubai, UAE, which holds the region's largest indoor "Dive Tank" engineered by DiveCampus and designed specifically for scuba and free diving training with 220,000 litres of fresh water, measuring 4-metres deep, 12-metres long, and 5-metres wide. The UAE-born concept venue welcomes aspiring, and seasoned divers to try recreational scuba diving, technical diving, free diving and mermaid experiences, or get PADI certified.

Having started in 2021 as an online shop, now an academy, DiveCampus offers access to the widest range of diving and water sports gear from the best brands around the world. It will now serve as a home to the burgeoning community of diving enthusiasts, adventure seekers, ocean lovers and those that wish to try diving. Over the past few years, there has been a growing interest in pursuing diving, it is a skill that can be enjoyed around the world.

Located in Al Quoz, Dubai's new hub for

creative studios, the Dive Tank and the concept venue of DiveCampus was designed through the meticulous minds of two diving instructors and includes everything a diver could possibly need or want before, during, and after a dive.

- Every individual has access to high-quality gear to rent or buy.
- There is an in-built splash area for training young divers.
- Underwater cameras for individuals to monitor their progress during training.
- Aesthetically pleasing and Instagrammable spaces to capture memories.
- Plexiglass windows have been installed for friends and family to watch in during training.
- A high-end water purification system that uses less water than any normal household.
- A healthy cafe with drinks, snacks, and coffee for replenishment.
- Fully equipped changing rooms with showers.
- An amphitheatre for gatherings and workshops on oceanography, ocean conservation, marine

life education, diving, and sustainability.

- Ample seating areas and spaces to gather and socialise with like-minded divers and ocean enthusiasts.
- Scuba Van fully equipped with Scuba gear and equipment for dive site hopping.
- The venue is open from 9am to 9pm, offering ample opportunity for anyone to enjoy the experience during the hours that are most convenient.

Co-founders Islam and Sneha created the concept store as a way to encourage individuals to try and learn diving in a way that is safe and un intimidating, as well as to help avid divers develop their existing skillset.

"I've always loved the ocean, and always gravitated towards the sea as a toddler. However, for the longest time, I didn't know how to swim. Thankfully Dubai changed that for me. When I tried diving for the first time, I knew there was no going back. I love to teach swimming and diving, especially to individuals



TOP: An amphitheatre for gatherings and workshops on oceanography, ocean conservation, marine life education, diving, and sustainability; **BOTTOM L-R:** DiveCampus unveils its first concept store in Dubai, UAE, which holds the region's largest indoor 'Dive Tank' engineered by DiveCampus and designed specifically for scuba and free diving training.

like myself who have spent the majority of their life not knowing how to swim or dive. It is so fulfilling to see a non-swimmer become a full-fledged diver" said Sneha.

Given the size and depth of the Dive Tank, DiveCampus provides an array of courses from beginner to professional level. Beginners are invited to do a Try Dive, where they can enjoy a one-hour scuba diving experience, whereas certified divers can book the Dive Tank or diving trips at their leisure.

Also, to put theory into practice, the academy arranges frequent day trips to the best diving spots in the UAE, from Fujairah to Ras Al Khaimah. "The mastery behind scuba diving and free diving all comes down to safety and the preparation that has gone in during the training. DiveCampus serves as a venue where you can solidify your foundation in an environment that eliminates all variables, so you are able to focus on your skills, gear, and form. Our focus is to give individuals of all skill

levels an opportunity to pursue diving through quality and bespoke training, with the goal of helping them to become good, safe divers whilst having fun" said Islam.

With a combined experience of over 20 years, the team at DiveCampus consists of a Course Director, Master Scuba Instructor, Specialty Instructors, and Swim Instructors, all accredited by PADI. Doors are also open for independent instructors that are looking to utilise the Dive Tank and DiveCampus facilities to host their private clients. "UAE has become a hub for both recreational and technical diving enthusiasts and Instructor Development Programmes. It's exciting to see concepts like DiveCampus that are focused on encouraging more people to adopt and train for this exciting sport," said Firas Jundi, PADI EMEA's Regional Manager.

PADI is the world's leading scuba diver training organisation. DiveCampus always provides clear guidance on what to expect

during the dive, along with bespoke training to each individual's comfort level and promising comprehensive safety precautions. Each class has an optimum Student to Instructor Ratio, to ensure maximum attention on each individual to make them the best diver they can be. Most importantly, it is a place where you can dive right in, make incredible memories, and have fun.

DIVECAMPUS

Have questions about a product, diving courses, or trips?



050 770 DIVE (3483)

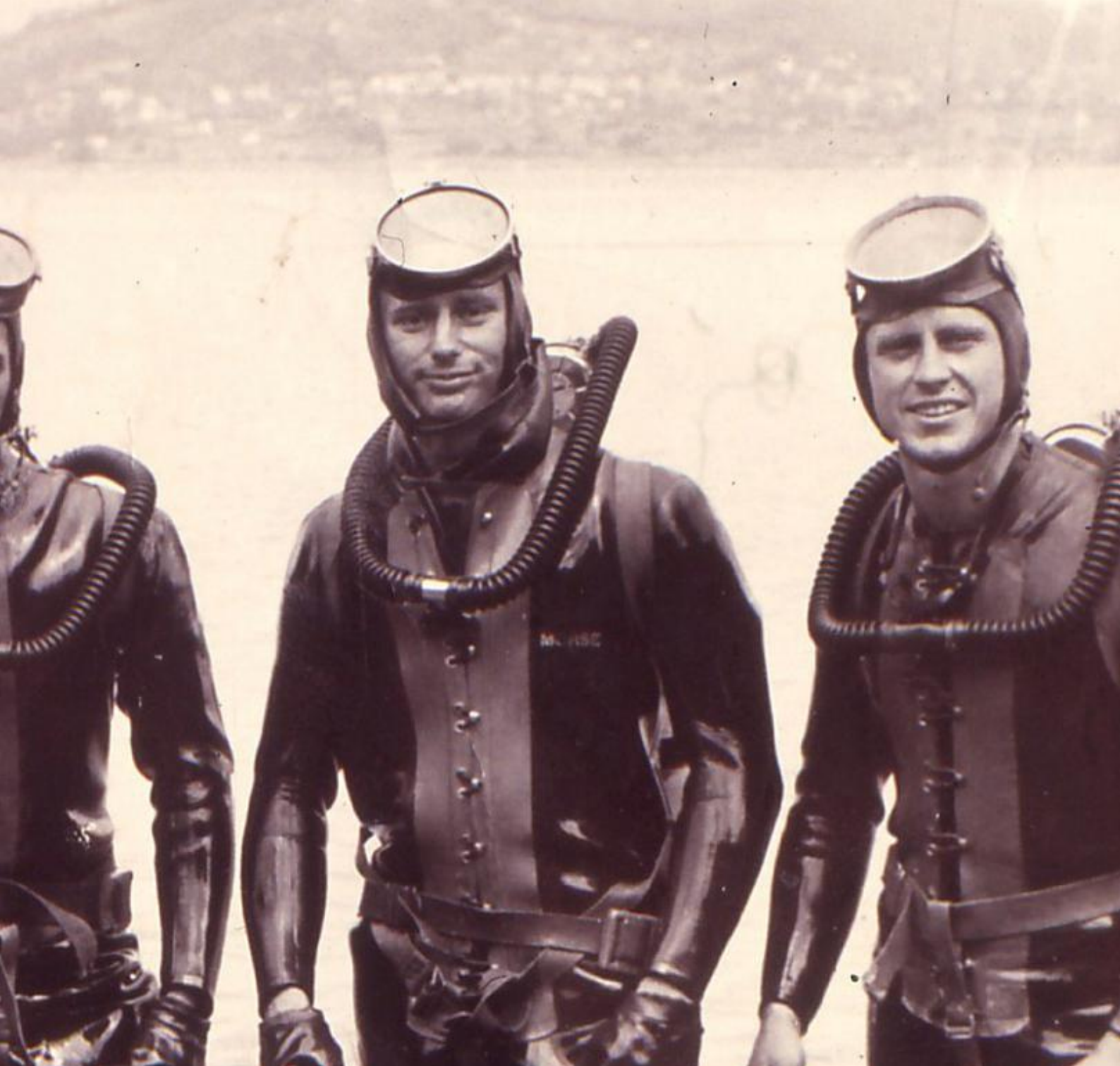
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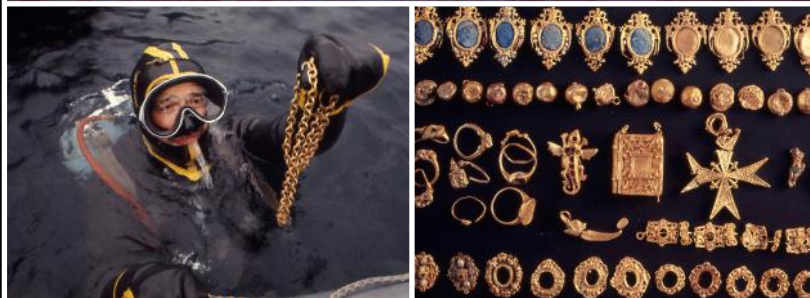
ROBERT STÉNUIT

THE FIRST SATURATION DIVER

FEATURE **PATRICK VAN HOESERLANDE** PHOTOGRAPHY ©**ROBERT STÉNUIT/GRASP**

“I started doing underwater archaeology at a time when this science had yet to be invented. As a diver, I had a long way to go to become an experienced and responsible archaeologist.”

COVER PHOTO: Second expedition to Vigo, 1958. With the support of John Potter's American diving team, Robert Sténuit is the second from the left.



LEFT: Robert cave diving at Han-sur-Lesse in 1952-54. **RIGHT:** The SPID 1964, the inflatable house designed by Edwin Link in which Robert spent 49 hours at 130 metres in the waters of the Bahamas. He became the “deepest diver”; Northern Ireland in 1967-1969. The Girona wreck, a galley ship of the Spanish armada of 1588, sunk on the north coast of Ulster. Robert with one of the many gold chains found on the Girona site, and some jewellery from the wreck.

When we look for diving pioneers, we tend to look abroad for scientists, inventors or people who explored at frontiers of diving. In doing so, we forget to look closer to home. This is also my mistake, because my nation, Belgium, is also home to some world-famous diving enthusiasts. Do you know any of them? Right. If I had used the title, ‘An Interview with Robert Sténuît’ for this article, you would probably have wondered who this man was and where he came from. You might not have even started reading this article. Fortunately, you did.

Saturation diving is a special form of professional diving where decompression is not performed at the end of each dive, but only after a long time. During this extended period, when not at depth in the water, the diver is kept “pressurised” in a compression chamber to prevent the gas dissolved in the body from forming bubbles.

Within offshore diving, which involves working at great depths, saturation diving is a common method. After all, there is no need to wait after each deep dive to collect the diver and sail to the next location. At depth, the diver steps into a pressurised dry diving bell and can be hoisted immediately to the safety of the ship deck. On board, the diver transfers

to a more comfortable habitat and can sail to another location. Once there, work can begin immediately. Besides increasing safety, it is also more economical and allows longer work at greater depths. This technology has therefore revolutionised the diving industry. So, the first saturation diver certainly wrote history.

I had heard about Sténuît and his first saturation dive. After a few weeks of searching, I was lucky to find and order a second-hand copy of the book, ‘The Deepest Days’. In no time, I had devoured the book and the thought of interviewing this Belgian diver took shape. But this person was hard to find. Every trail I followed led to nothing.

At a conference, by chance, I got a hold of his details and soon after, a contact through his daughter was made. The interview, however, promised to be challenging. Robert will turn 90 in 2023 and with this advanced age comes a few ailments. For instance, not unexpectedly for an avid diver, his hearing is poor and his memory is no longer optimal. The interview will be in French with me having to write down the questions. Fortunately, his daughter, Marie-Eve, promised me to mediate the interview.

When I arrive at the venue after a drive through

our capital, I find myself in front of a simple apartment building. Not the stately home I had mentally assigned him. As his daughter prepares tea, she explains my presence to her father: Driven by curiosity, I walk through the living room which looks more like a collection of piles of books and documents. When I visit people, I always check out their library – an observation that, since the introduction of e-books, yields little useful info – to get an idea of local resident’s interests. This room screams loudly an interest in underwater archaeology. It is a place I could spend days in without realising it. However, I will have to focus on the unique opportunity and time I have tonight.

The interview below is a poor reflection of the laborious conversation between a humble explorer, an enthusiastic journalist, and a patient mediator.

THE INTERVIEW

Patrick Van Hoeseerlande: I know you from the book ‘The Deepest Days’, but after reading your biography, I know that this is a limited view of your achievements. I fear that most sport divers have absolutely no idea of who you are. Can you tell us why they should know you?

Robert Sténuît: I have written almost twenty



TOP LEFT: Robert in 1971 at the Lastdrager wreck, sunk in 1653 on the Isle of Yell, Shetland, with a surgical bit, musket balls, a navigational compass, and various artefacts. **TOP RIGHT:** 1972, at the Amsterdam Admiralty escort ship Curaçao wreck, sunk in 1729 on the east coast of the island of Unst, Shetland, with some of the cannons. **BOTTOM ROW:** 1973, at the Royal Navy cutter Sprightly wreck, sunk in 1777 on the west coast of Guernsey, Channel Islands, with a musket and a Clarkson pistol found at the site.

books and some 150 articles. I have also collaborated on numerous TV programmes for the BBC, ARTE and/or several foreign television channels. Some of these reports dealt with my excavations, others with the history of diving.

Between 1977 and 87, I rebuilt a replica of the English inventor John Lethbridge's 1715 "diving machine". With this replica, I demonstrated the efficient operation of the barrel and Lethbridge's tools in real diving conditions. I also dived with an authentic specimen of a Rouquayrol-Denayrouze diving apparatus from 1864-65, the first modern SCUBA equipment. This test proved that the regulator did work.

I am not surprised that few people know me, after all, I do not feel at home in the spotlight and so have put little effort into publicity. If I have any notoriety at all, that is thanks to other people's efforts.

Patrick: What is the source of your passion for diving? Why did you start diving?

Robert: In 1953, as an adventurous young man, I started exploring the caves in the Han-sur-Lesse area, Belgium, with some friends. Soon we

were stopped by sections that were flooded. The only solution to overcome this obstacle was to dive. In the permanently flooded part of this huge cave complex, I made the very first dive of my life. This was with an Aqualung. At the time, I was part of a team that, after a succession of shafts, discovered a whole net of huge underground chambers. These chambers had been beautifully decorated by nature.

Later, in the period from 1957 to 1966, I returned to these caves for excavations in a prehistoric/historic site as part of a team led by Marc Jasinski and Professor M. Mariën of the Belgian 'Musées Royaux d'Art et d'Histoire'.

In 1955, I started working as a professional diver for the Autonomous Diving Association in Antwerp. Several other inshore companies followed later.

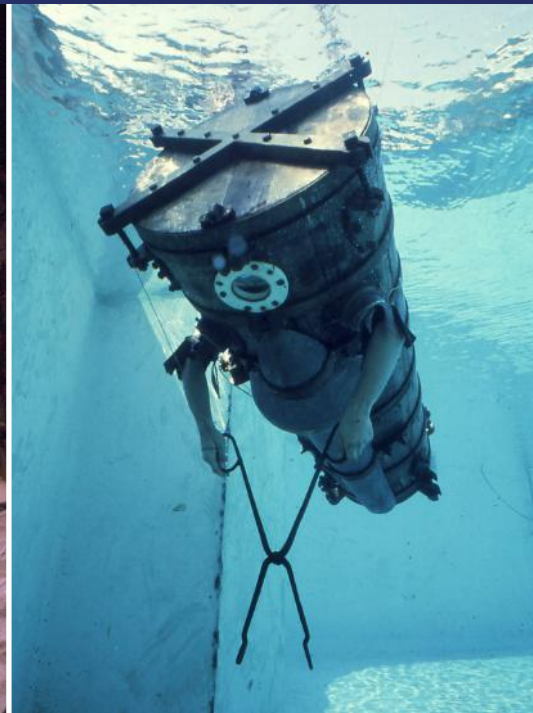
Patrick: How did you roll from cave diving into underwater archaeology?

Robert: Around this time, I realised that the subject that most appealed to me at university was history. Fortunately, I got many hours in this subject. The result was simple: diving plus history equals hunting for treasure and the history of old, sunken ships.

My hunt for wrecks got a boost by chance when I got my hands on the book, 'I Dive for Treasure' by the American author; the so-called "Lieutenant" Harry Reiseberg at a second-hand book stand. Even as a complete beginner, it was immediately clear to me that the book was pure fiction. But it was what I needed and I knew very well that over the centuries a large number of very richly-laden ships had sunk in the world's seas.

The author Reiseberg had appended a list of four hundred and sixty-three fabulously rich, guaranteed sunken treasures to his book. Most of these wrecks, of course, had never existed. I knew that. But a few had. So, based on what I then considered "my research" as a novice and naive underwater archaeologist, I made the wrecks of galleons in Vigo Bay on this list my first expedition goal. The advantages of this place was its easy accessibility by road, and the cargoes of gold and silver on this Spanish flota.

In 1702, this flota returned to Spain escorted by French warships and was crushed in a naval battle with an Anglo-Dutch fleet. The entire cargo consisted of three years of the accumulated production of the Americas, of which only the gold and the silver belonged to his majesty.



TOP ROW: 1974, the Slot ter Hooge wreck of the Dutch East India Company lost in 1724 at Porto Santo Island, with some of the objects found on site. Much of the cargo was recovered in the years following the shipwreck by the famous "silver fisherman" John Lethbridge, using a diving barrel of his own invention. Robert Sténuit had this barrel reproduced exactly according to the plans of the time, and demonstrated its effectiveness after testing it at a depth of 10 metres seen above. **BOTTOM ROW:** 1976, at the Witte Leeuw wreck, sunk after an explosion at the anchorage of St. Helena in 1613. The expedition's compressor installed in Jamestown Bay; raising one of the bronze cannons; some of the Ming porcelain objects that survived the explosion.

So, in the summer of 1954, a small expedition – if you could call this an expedition – arrived in the bay off Galicia as two very inexperienced and young Belgian divers (my companion was Jacques Theodor) with three dive tanks that had to be filled daily at the local 'fabrica de oxígeno'. Our expedition ship was a folding kayak made of rubber fabric. To cut a long story short, we found four wrecks, but they were all buried in mud up to deck level.

I started doing underwater archaeology at a time when this science had yet to be invented. As a diver, I had a long way to go to become an experienced and responsible archaeologist.

Patrick: From novice underwater archaeologist to first-ever saturation diver. How did that happen?

Robert: Just as chance led me to dive for wrecks, it also led me to the beginning of saturation diving. During my two expeditions in Vigo, I was lucky to meet a friendly colleague on visit there: the American inventor, wreck hunter and oceanologist Edwin Link (note: Link was the inventor of, among other things, the Link trainer used in pilot training). I had the opportunity to work on some ancient wrecks in Sicily with Edwin, and he suggested that I

should join him in doing something completely different: an unprecedented experience. The idea was no longer to dive from the surface to the bottom and back again, but to dive, live and work in an underwater house on the bottom of the sea. This way, the body of the diver or aquanaut remains completely saturated with the inert gas.

As a result of this encounter, in 1962, as part of the Man in Sea project, I made the very first 26-hour saturation dive at 230 feet in Villefranche Bay, France, in and out of the 'Link Cylinder'. Two years later, off the Bahamas and with support from the US Navy, Jon Lindbergh and I spent 48 hours at 430 feet in a bottom-anchored 'Submersible, Portable, Inflatable Dwelling' or S.P.I.D.

Patrick: In your book 'The Deepest Days', you motivate your participation as a test diver by your vision of human exploitation of the oceans for the benefit of all humanity. In 2023, I do not think that much has been achieved towards that vision. Do you agree with that? Why not? What do you think about that? Could and should we still realise that vision?

Robert: I took part in this project as a test diver not only because it had never been

done before, but also because I was full of illusions that the techniques of saturation diving would open the doors to deep waters for underwater archaeology. I was wrong of course, firstly because the cost and technical difficulties of keeping people at the bottom of the sea are disproportionate to the budget for archaeology, and secondly because, as my first experiences in Vigo Bay had shown, excavating wrecks is not just a matter of being in the vicinity, but mainly a matter of moving and sifting through several thousand cubic metres of mud or sand.

That high cost of saturation diving also prevents sustainable, economic exploitation of the oceans. Unless we develop other techniques that allow people to spend time on the seabed in a affordable manner, exploitation of the deep for the benefit of all humanity is not for tomorrow.

When it was clear to me that saturation diving would not, as I had hoped, lead me to excavate very deep wrecks, I took a leave of absence from the Union Carbide company where I was then working. I began, with the financial support of the Marseille-based Comex company, the search for the galleon Girona off the north coast of Northern Ireland, one of



TOP ROW: The expedition's support ship in 1984 at the Winterton wreck, an East India Company, sunk in 1792 on the west coast of Madagascar; Robert in 1995 seen with the collection of the Cham statues (8th-14th century) collected by Dr Morice from the "kalans" in the Bin Dinh region (now Vietnam), found in the wreck of the Mei-Kong lost on the Somali coast in 1887. **BOTTOM ROW:** 1999 at Vele Orjule, Croatia in collaboration with the Department of Underwater Archaeology and the Ministry of Culture of Zagreb at the site of the Apoxyomene, this statue was discovered under sponges and marine concretions by chance by Belgian diver René Wouters (life-size Greek bronze statue from the 4th century BC); After restoration; The Man-in-Sea project in 1962, recovering in the Edwin Link's cylinder for 26 hours at 60 metres depths.

the 130 ships of the famous Spanish armada of 1588. From 1967 to 1969, we recovered more than twelve thousand artefacts, including thirteen hundred gold, silver and copper coins, a hundred or so of the mostly regal jewels, and bronze cannons, from the wreck of the Girona. Above all, this find was an important sample of everything the ship contained on the day it sank.

That first find of ours, which I still consider one of the most beautiful discoveries, caused a lot of controversies in the press and on television at the time. It was also the subject of one of my early books. It resulted in the filling of three specially converted rooms at the Ulster Museum in Belfast to house our discoveries.

It also gave rise to the birth of the "group for post-medieval, underwater archaeological research", in French 'Groupe de Recherche Archéologique Sous-marine Post-médiévale' (G.R.A.S.P.). In English, the verb "to grasp" means two different things: to physically grasp an object and to intellectually understand the information it contains. So, it pretty well describes what we are trying to do, which is to recover tangible objects at the bottom of the sea to understand why they were on board at the time and to frame this historically.

The discovery of the Girona was followed by the discovery of dozens of wrecks.

Patrick: The water can be unforgiving. Were there any moments when you were scared?

Robert: There must certainly have been moments when I was scared, but I do not remember them. A sense of adventure sometimes puts you in precarious situations. However, my experiences with cave diving – we did very dangerous (irresponsible?) things – taught me to keep my composure in dangerous situations. Also, I feel comfortable in the water. Being scared is not a bad thing, if you do not panic.

Patrick: Do you sometimes go pleasure diving for fun?

Robert: For me, diving is a means of discovering things and doing archaeology. I do not go diving for fun, but once I have a goal, I can enjoy diving.

Separately, I am less interested in diving and history, but the combination of the two is a powerful mix. That combination is my passion.

Patrick: What message would you give to divers

or people just starting to dive?

Robert: Enjoy diving and follow your passion.

Patrick: Thank you very much for having this conversation.

AFTERTHOUGHTS

At the end of our talk, I ask him to sign my copy of his book, 'The Deepest Days'. Hesitantly, he accepts through modesty, not quite sure why I am asking this of him.

With a sense of melancholy, lots of written notes and questions in French clutched in my hands, and a load of extra information, I say goodbye to this Belgian diving pioneer.

The complex communication made this my most difficult interview to date, but every minute was worth it. Robert did not understand why I looked up to him, and I did not understand how he could remain so humble with having had such an adventurous life. I walk back to the car determined to write an article that pays tribute to this first saturation diver and important underwater archaeologist.

Hopefully, I can make good on my intentions.



An aerial photograph of a coastal region, likely in the Middle East, showing a large body of water with several small, vegetated islands and a larger, sandy peninsula. The water is a deep blue-green, and the sky is a pale, hazy blue. The foreground shows the intricate patterns of the mangrove forest and the small islands.

[MENA OCEANS SUMMIT]

NATURE-BASED SOLUTIONS

FOR CLIMATE, BIODIVERSITY, AND PEOPLE

FEATURE **LAILA MOSTAFA ABDULLATIF, DIRECTOR GENERAL – EMIRATES NATURE-WWF**

Nature can become our biggest ally in restoring the health of the planet while also contributing to job creation, sustainable economic growth, food and water security, and climate resilience of vulnerable areas.



Blue carbon accounting in Khor Beidah lagoon in Umm Al Quwain. Photo by Jack Leonardo.

Nature can become our biggest ally in restoring the health of the planet while also contributing to job creation, sustainable economic growth, food and water security, and climate resilience of vulnerable areas. A recent WWF report, *Our Climate's Secret Ally*, revealed that nature has absorbed 54% of humanity's carbon dioxide emissions over the past 10 years, slowing global warming.

We can unlock the regenerative potential of nature in two ways. First, by continuing and expanding upon efforts to reduce our collective negative impact on the planet. As a civil society organisation, we work with all facets of society – government agencies, businesses, organisations and individuals – and support them in reducing their environmental footprint.

Second, by advocating, designing and implementing projects that place nature at the front and centre of economic development. Our Nature-based Solutions (NbS) project with our partners, restores coastal ecosystems in the UAE and enhances natural barriers

to mitigate the impacts of climate change. Through this flagship NbS project, we aspire to demonstrate the real, measurable and lasting gains that science-based solutions can offer for climate, biodiversity and people.

Globally, it is estimated that NbS can provide one-third of the climate mitigation needed until 2030 to achieve the targets of the Paris Agreement – they make up an integral component of national and global responses to climate change.

NATURE-BASED SOLUTIONS IN THE UAE

Emirates Nature-WWF's NbS project focuses on the protection, restoration, and management of priority coastal ecosystems. Instead of looking at one particular ecosystem, the project adopts what we call a "Seascape approach" which recognises that the value and provisioning of ecosystem services is influenced by connectivity across multiple habitat types. It is particularly relevant for the UAE where mangroves, seagrass, saltmarshes and coral communities co-occur in coastal lagoons.

The project is funded by HSBC through the global philanthropic fund. It is led by Emirates Nature-WWF and implemented together with the Environment Agency – Abu Dhabi, the Ministry of Climate Change and Environment, the Minister of Economy (MoE), the Government of Umm Al Quwain, and the International Center for Biosaline Agriculture.

It aims to bring measurable outcomes, serving to strengthen climate change mitigation, enhance biodiversity, and open up benefits for people and the economy alike through sustainable blue economy business opportunities and more specifically by:

1. Demonstrating greenhouse gas (GHG) emissions avoidance and additional carbon sequestration achieved linked with ecosystem protection
2. Opening up new benefits for people through opportunities that unlock blended finance towards ecosystem protection, Blue Carbon, ecotourism, and food security



L-R: Nature-based Solutions being implemented in collaboration with community members. **BOTTOM RIGHT:** Engaging with stakeholders at the UNFCCC MENA Climate Week 2022.

3. Creating a pipeline of commercially viable projects focusing on ecotourism and food security to promote business innovation related NbS

A SCIENCE-BASED APPROACH FOR LONG-TERM SUCCESS

Nature-based Solutions are already at play at two initial demonstration sites: at Abu Dhabi's large coastal lagoon Khor Faridah, and Umm Al Quwain's Khor Beidah.

In collaboration with project partners, collaborators and students from local universities, our team has collected valuable baseline data from both sites to enable robust decision making and better inform the long-term protection and restoration actions at these coastal lagoons. Nearly 200 Baited Remote Underwater Video Surveys (BRUVs) have been deployed in 7 habitats to observe marine megafauna and 250+ samples of soil have been analysed. Through additional climate vulnerability assessments and vegetation surveys, we aim to better understand the

potential of harvesting halophytes – plants that are adapted to growing in saline conditions like salt marshes.

ADVANCING SUSTAINABLE FARMING

Sustainable farming is a key aspect of our NbS project with our partners, with the potential to build sustainable and resilient communities. Through the integration of agroecological principles, NbS can serve as climate adaptation measures while also reducing climate associated risks on food systems, thereby strengthening food and water in local rural communities across the Emirates.

We are currently working closely with traditional rural farmers to develop model farms across villages in the UAE that encourage sustainable agriculture and support farms in staying competitive. The long-term vision for this project is to create nature-positive labels and commercial mechanisms for farm products that have incorporated NbS.

This work around NbS will provide lessons and

viable pathways that will be important in the lead up to COP28 to be able to share with the world our local and regional insights into how these projects can deliver strong outcomes for nature and people. Simultaneously, this opens up opportunities to garner increased support and funding to scale up nature-positive projects and impacts in the region.

Emirates Nature-WWF is delighted to be speaking at the inaugural MENA Oceans Summit at Hilton Dubai Palm Jumeirah on 8th-9th June 2023. The summit is bringing together global leaders, policy makers, researchers and the private sector to drive discussions on comprehensive ocean action to conserve and restore ocean ecosystems, tackle climate change and ensure development of blue economies within sustainable frameworks.

REGISTER FOR THE EVENT HERE:

<https://goumbook.com/mena-oceans-summit/register-to-attend/>



FINS & TRAVEL

FEATURE **GORDON T. SMITH**

There are lots of excellent fins available here in the UAE from all of the main dive shops. Some of them new designs from the past few years, such as the ScubaPro Seawing Nova, and some very much older Mares Avanti Quattro. They are all good when it comes down to performance.



10113 F2

excel | *



LEFT TO RIGHT: Hollis F2, Exotech Folding Fins, Mares Quattro.

Fins are one of the first three basic items a diver will purchase along with a mask and snorkel. Depending on the type of fin you choose you may have to add a fourth item, dive boots, because if you ever plan to do any shore diving especially on the Red Sea coast, or places like Indonesia, Philippines and other South East Asian destinations, it makes sense to have some protective footwear.

Therefore, I will not be discussing full foot fins and those used for free diving, or the best performing fin. There are plenty of reviews on design and what fin can propel the diver faster etc., in many magazines, as well as on YouTube and online forums such as ScubaBoard. But at the end of the day, if you do not know how to fin properly, they will not solve a skills problem if you have one!

There are lots of excellent fins available here in the UAE from all of the main dive shops. Some of them new designs from the past few years, such as the ScubaPro Seawing Nova, and some very much older Mares Avanti Quattro. They are all good when it comes down to performance.

If you have recently been bitten by the dive bug, then you are probably going to plan a dive trip outside of the UAE, which inevitably means getting on an aeroplane and heading somewhere with nice warm water, and crystal clear visibility.

Packing your fins may now present some issues depending on your choice of luggage. Let's face it, they are not exactly small and light, and considering you may also be packing other dive equipment, weight and size does matter.

In the past 30 years, I've used a combination of many different types of luggage, and unfortunately not every country is as safe as the UAE. For that reason, I avoid dive branded luggage, which although well designed to accommodate the larger fins, it does tend to advertise that it contains dive gear! You really don't want to be advertising to opportunistic thieves that your luggage contains expensive dive gear.

Another reason for not using dive branded luggage is that for most of the time it is

made from soft material and provides less protection for certain items such as regulators if not packed correctly, and because of this my personal preference is to use a normal lockable suitcase, no zippers, and provides a bit more protection for the contents. You've seen how baggage handlers at airports deal with luggage.

Now, here comes a possible dilemma, do your fins fit into your suitcase?

My Mares fins are 65cm (just under 26in) long, and my Hollis fins are 50cm (just under 20in) long. Guess which one I travel with?

It's a no brainer to be honest and there is a weight difference too, especially if using "Jet" fins, which while shorter than the new style fins, they generally weigh significantly more too.

The table is a list of fins available in the UAE with their various lengths and weights as well as where to buy them in Dubai. My thanks to the staff at Al Boom, Bermuda, Dive Garage, and ScubaPro for allowing me to weigh and measure some of the fins listed.

One company, Exotech, have however come up with a design for a folding fin specifically for travel purposes, which seems like a good idea.

Bermuda Diving Center, (Al Wasl Road, Dubai), allowed me to test their sample set of "Folding Fins" as I was a bit skeptical of the design when I first saw them in the dive shop. The idea of this fin is obviously to reduce the volume in your luggage, but they are also adjustable to fit different foot sizes too, which is another first.

I couldn't wait to try them out, but my dive plans to use them changed due to weather conditions and it was two weeks after I picked them up before I actually used them over on the east coast diving at Gunther's Wreck with Divers Down.

The fins come in a box 69cm (22in) long in a folded position, held by a thick rubber band along with the foot pockets, various clips and two sets of bungees. Each fin is then unfolded after removing the rubber band and locked in place with a plastic clip close to the heel. The separate foot pocket has four tabs which are then slotted into four holes in the base of the fin and locked into place with four plastic tabs. The best way to set this up is to put on your dive boot first and partially slot the fin pocket in place ensuring a good fit before locking it into place with the retainer clips.

Once that is done use whatever bungee strap fits best, you have a choice of two sets, one is shorter for smaller feet. Now you are good to go.

The fin design lacks any channeling for water flow when finning in flutter mode, especially on the surface, and I found that it did not give me any decent propulsion when I was on my back swimming from the boat to the mooring line.

Underwater, it performed reasonably well with a frog kick, and I was also able to back kick without any major issues. However, the bungee heel straps were a bit of a fiddle to get off to remove my foot when I returned back to the boat after the dive.

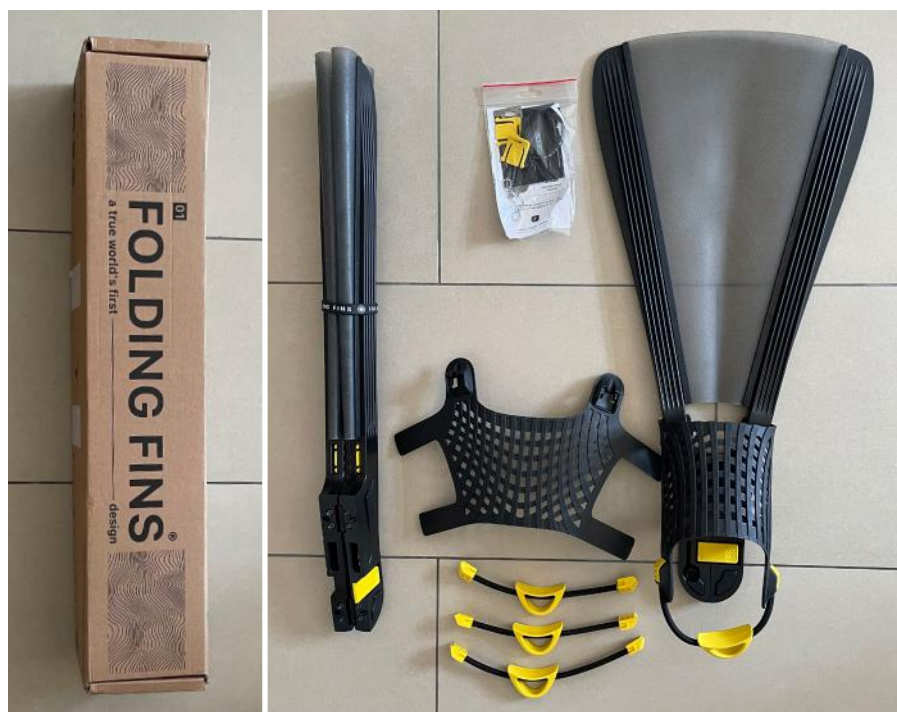
The outside of the fin "blade" is comprised of a hard plastic, which has a softer material inbetween to allow the folding capability, and where the soft material joins the hard material may be a weak point, only time will tell I guess, but my first pair of Mares Quattros lasted a couple of decades before I decided to replace them with Mares Excel+ fins.

Anyway, the whole point of this fin is to use it while travelling and you may have already

noticed from the chart that this fin is neither the lightest, nor the shortest fin in the market. But where it scores is probably the easiest to pack, assuming you don't forget the bungees, the clips or the separate foot pockets. I wouldn't be bringing the original packaging with me.

My personal feeling is that there are too many bits and pieces compared to a normal set of fins, and forgetting or losing a part would put an end to using them. As for the performance compared to other fins I am used to using, they didn't quite meet the grade overall and I'm not sure of how well the thin bungee will last with regular use.

My thanks again to Bermuda Diving Center for allowing me test their demo pair.



FIN MAKE / MODEL	LENGTH CM	LENGTH IN	WEIGHT KG	WEIGHT LBS	STRAP	AVAILABLE FROM
Mares Excel +	65.0	25.6	2.19	4.83	SS Spring	AMIT / Bermuda
Mares Avanti Quattro	65.0	25.6	2.02	4.45	Bungee	AMIT / Bermuda
Mares X Stream	59.0	23.2	1.3	2.87	Bungee	AMIT / Bermuda
Hollis F2	50.5	19.9	1.77	3.90	SS Spring	AMIT / Bermuda
UTD Jet Fin	48.5	19.1	2.23	4.92	SS Spring	Freestyle Divers
Beuchat Jet Fin	47.0	18.5	2.42	5.34	SS Spring	Dive Garage
Dive Rite XT (Adj)	57.5	22.6	2.07	4.56	SS Spring	Dive Garage
Dive Rite XT	57.5	22.6	2.22	4.89	SS Spring	Dive Garage
ScubaPro Seawing	60.5	23.8	1.79	3.95	SS Spring	ScubaPro
ScubaPro Go Fins	52.5	20.7	1.46	3.22	Bungee	ScubaPro
ScubaPro Jet fin	47.0	18.5	2.49	5.49	SS Spring	ScubaPro
Apeks RK3	48.5	19.1	1.96	4.32	SS Spring	Al Boom Diving
Exotech	60.0	23.6	1.61	3.55	Bungee	Bermuda



AN EVENT BY



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Photo by Khalid Alrazooqi – Digital Online 2023

WWW.EMIRATESDIVING.COM

DIGITAL ONLINE RESULTS

EDA'S UNDERWATER PHOTOGRAPHY
AND FILM COMPETITION 2023



DIGITAL ONLINE

جمعية الإمارات للغوص
EMIRATES DIVING ASSOCIATION
PHOTOGRAPHY AND FILM COMPETITION

DIGITAL ONLINE 2009-2023

Digital Online – EDA's Underwater Photography and Film Competition, celebrates its 14th year! 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 sees continuous and steady growth

	PHOTOGRAPHY	BEHAVIOUR	UAE	BW	CREATIVE	MACRO	WA	TOTAL
1	Michael Rall	357	435	458	472	509	440	2671
2	Ahmed Al Ali	193	472	496	418	436	436	2451
3	Khalid Alrazooqi	531	498		512	459	389	2389
4	Marwa El-Agroudy	411	417	394	343	393	422	2380
5	Shijo Skaria Jose	378	425	405	392	339	365	2304
6	Philippe Lecomte	488	461	425		416	497	2287
7	Gordon T. Smith	454	484	297	280	415	339	2269
8	Fakhruddin Dabhoiwala	350	370	414	328	400	356	2218
9	Yuriy Rakhmatullin	362	285	387	340	391	344	2109
10	Oliver Farrell	423	406	420		416	398	2063
11	Suretta Venter	384	349	400	407		291	1831
12	Nassim Miri	290	235	285	250	367	340	1767
13	Sarah Kelly	310	301	355		324	364	1654
14	Levente Rozsahegyi	351	374		406		462	1593
15	Ahmad Afyouni		286	443		393	364	1486
16	Sabrina Rau	434	360	333	291			1418
17	Hesma Fivaz		366	367		374	309	1416
18	Lynette Ferreira	268	265	310		320	251	1414
19	Lara El Lakkis	407	441			420		1268
20	Miguel Brito	316	305	340	270			1231
21	Mishaal Ashok	402			380		382	1164
22	Franco Germondari	332	252			275	257	1116
23	Yevheniia Rehush		317	323	395			1035
24	Naima Amari		392			393		785
25	Saud Al Rashed					298	335	633
26	Alba Rodriguez Vallejo		339					339
27	Colt Antipuesto		306					306
28	Nasser Bakkar	234						234
	VIDEO	UNDERWATER DIMENSIONS						
29	Mohamed Abdulla AlQubaisi	492						
30	Oliver Farrell	477						
31	Shijo Skaria Jose	438						
32	Mishaal Ashok	435						
33	Sarah Kelly	416						
34	Ahmed Ramadan	402						
35	Yevheniia Rehush	373						
36	Azra Thabassum	362						
37	Gordon T. Smith	351						
38	Anthony Tudor Cox	317						

with new underwater photographers taking part and joining our regular annual participants. The enthusiasm and passion strives on, and the drive to bring our underwater world's conservation to the forefront increases even more so. 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 non-divers who come to support the participating photographers and videographers at the annual Awards & Exhibition Opening Night. Whether it's through discussions, or articles published for our readers through our free quarterly magazine, Divers for the Environment, the inspiration the event brings, is a success in its own right.



THE DIGITAL ONLINE WINNERS, THE SPONSORS AND PRIZES

1. **WINNER:** Mohamed Abdulla AlQubaisi | 1st Place Video (492)

SPONSOR: GRAND STORES | www.grandstores.com
SEALIFE ReefMaster SL350 RM-4K Underwater Camera

2. **WINNER:** Khalid Alrazooqi | 1st Place Behaviour (532)

SPONSOR: BERMUDA DIVING CENTER | www.scubadiving.ae
Garmin G1 dive computer

3. **WINNER:** Michael Rall | 1st Place Macro (509)

SPONSOR: GRAND STORES | www.grandstores.com
SEALIFE SportDiver SL400-U Underwater Smartphone Housing

4. **WINNER:** Philippe Lecomte | 1st Place Wide Angle (497)

SPONSOR: DIVERS DOWN | www.diversdownuae.com
6 Dives on East Coast, including tank and weights.

5. **WINNER:** Ahmed Al Ali | 1st Place Black & White (496)

SPONSOR: CREST DIVING | www.crestdiving.com
CREST Dive Computer CR-5 (Silver)

6. **WINNER:** Gordon T. Smith | 1st Place Best of the UAE (484)

SPONSOR: XR HUB | www.xrdiving.com
Issotta Housing for GoPro with tray and handles

7. **WINNER:** Suretta Venter | 1st Place Creative Photography (407)

SPONSOR: CREST DIVING | www.crestdiving.com
CREST Dive Computer CR-5 (Black)

8. **WINNER:** Oliver Farrell | 2nd Place Video (477)

SPONSOR: GOBLIN DIVE CENTER | www.facebook.com/GoblinDC
5 Dives on East Coast, including tank and weights.

9. **WINNER:** Levente Rozsahegyi | 2nd Place Wide Angle (462)

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

10. **WINNER:** Ahmad Afyouni | 2nd Place Black & White (443)

SPONSOR: FOLDING FINNS | www.foldingfins.com
A pair of folding fins with cutting-edge SeLock® folding system

11. **WINNER:** Sabrina Rau | 2nd Place Behaviour (434)

SPONSOR: EDA | www.emiratesdiving.com
Reef Check Course

12. **WINNER:** Lara El Lakkis | 2nd Place Macro (420)

SPONSOR: FOLDING FINNS | www.foldingfins.com
A pair of folding fins with cutting-edge SeLock® folding system

13. **WINNER:** Yevheniia Rehush | 2nd Place Creative Photography (395)

SPONSOR: FREESTYLE DIVERS | www.freestyledivers.me
Online Core Marine Conservation Course (E-Learning)

14. **WINNER:** Naima Amari | 2nd Place Best of the UAE (392)

SPONSOR: PADI | www.padi.com

PADI Digital Underwater Photography Course eLearning

13. **WINNER:** Shijo Skaria Jose | 3rd Place Video (438)

SPONSORS: AL MAHARA DIVING CENTER & ROYAL M HOTEL & RESORT | www.emiratesdiving.com | www.royalmhotels.com

Two tank boat dive in Abu Dhabi with kayak tour of the Eastern Mangroves for two people, with one night stay, bed & breakfast double occupancy at the Royal M Hotel & Resort.

14. **WINNER:** Oliver Farrell | 3rd Place Behaviour (423)

SPONSOR: SANDY BEACH DIVE CENTRE | www.divesandybeach.com
2 Dives on East Coast, including tank and weights.

15. **WINNER:** MARWA EL-AGROUDY | 3rd Place Wide Angle (422)

SPONSOR: PADI | www.padi.com
PADI Digital Underwater Photography Course eLearning

16. **WINNER:** SHIJO SKARIA JOSE | 3rd Place Black & White (405)

SPONSOR: PADI | www.padi.com
PADI Digital Underwater Photography Course eLearning

17. **WINNER:** Fakhruddin Dabhoiwala | 3rd Place Macro (400)

SPONSOR: DIBBA BAY | www.dibbabay.com
AED 200 Dining Voucher to Dibba Bay Fishing Harbour, Dubai.

18. **WINNER:** Mishal Ashok | 3rd Place Creative Photography (380)

SPONSOR: AL BOOM DIVING | www.alboomdiving.com
2 Dives on East Coast, including tank and weights.

18. **WINNER:** Hesma Fivaz | 3rd Place Best of the UAE (366)

SPONSOR: NEMO DIVING CENTER | www.nemodivingcenter.com
2 Dives on East Coast, including tank and weights.

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.

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

HIGHLY COMMENDED

Photographers who have won multiple photo entries, win a prize for their highest score and receive honourable mentions for all others.

1. Khalid Alrazooqi | 1st Place Creative Photography (512)

2. Khalid Alrazooqi | 1st Place Best of the UAE (498)

3. Philippe Lecomte | 2nd Place Behaviour (488)

4. Michael Rall | 2nd Place Creative Photography (472)

5. Khalid Alrazooqi | 2nd Place Macro (459)

6. Michael Rall | 2nd Place Black & White (458)

7. Ahmed Al Ali | 3rd Place Best of the UAE (472)

8. Gordon Smith | 3rd Place Behaviour (454)

9. Michael Rall | 3rd Place Wide Angle (440)

10. Ahmed Al Ali | 3rd Place Macro (436)

11. Ahmed Al Ali | 3rd Place Creative Photography (418)

DIGITAL ONLINE OVERALL PHOTOGRAPHER AND VIDEOGRAPHER WINNERS 2023

This year's overall winners for Digital Online's Photographer 2023 is Michael Rall, and Digital Online's Videographer 2023 is Mohamed Abdulla AlQubaisi who have both received this year's trophies. Congratulations to all our participants for taking part and sharing their work with us, and thank you to all our guests who came to support the event. It was a great evening at the Awards Night at Deep Dive Dubai.

THE DIGITAL ONLINE JUDGES

DAVID SERRADELL

Underwater Photographer and Veterinarian



With an eternal love for the sea and all its creatures, David grew up in Barcelona next to the shores of the Mediterranean Sea, where he spent more hours underwater than at the surface.

He practiced as a veterinarian in Spain while being in the water as much as he could, but soon moved to Baja California Sur, Mexico to follow

his dream of working in ocean conservation and capturing it with his camera.

It was here that he further explored the path of underwater photography and videography. David wants to further promote the messages of marine conservation to protect the oceans that give life to us all.

YOUTUBE: www.youtube.com/@davidherradell

INSTAGRAM: www.instagram.com/dserradell_photo

DAVID DILEY | SCARLET VIEW MEDIA

Filmmaker, Underwater Cinematographer and Digital Colourist



David is a multi-award winning Filmmaker, 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: www.facebook.com/daviddileyfilmmaker

WILSON MCCOURTNEY

Underwater Cinematographer, Filmmaker & Wildlife Conservationist



Wilson McCartney is an underwater cinematographer, documentary filmmaker, and a wildlife conservationist.

Having grown up in Florida, he developed a connection with the natural world at an early age that has fuelled his creative career and solidified his mission in life which is to protect our oceans and save wildlife.

In 2020 he played an instrumental role in passing the Kristin Jacobs Ocean Conservation Act which outlawed the import and export of shark fins in Florida. He directed a feature film called "Fighting For Sunshine" which is about saving sharks in Florida, minimising the horrific effects of Red Tide, and rescuing pelicans from fishing line entanglement which is slated to be released in 2024. When he's not underwater or fighting for the planet, Wilson spends his time in Portland, Maine with friends and family hiking in the woods and exploring the vast wilderness of the NorthEast.

YOUTUBE: www.youtube.com/wilsonmccourtney

FACEBOOK: www.facebook.com/wilson.mccourtney

INSTAGRAM: [@dreamreefwilson](https://www.instagram.com/dreamreefwilson) | [@dreamreefcinema](https://www.instagram.com/dreamreefcinema) | [@fightingforsunshinefilm](https://www.instagram.com/fightingforsunshinefilm)

MOHAMED ALMUSALLAMI

Underwater Photographer and Marine Biologist



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. He started his passion as a freediver 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, a PhD candidate at UAE University, and an affiliate at Mohammed bin Rashid Academy of Scientists (MBRAS).

INSTAGRAM: www.instagram.com/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 moved to Australia where he 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

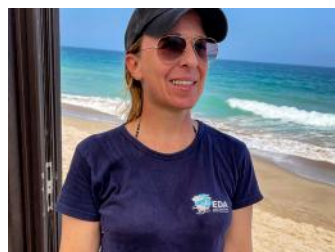
diving destinations worldwide, he also runs expeditions with Sundive to help others experience and photograph his favourite ones such as the Sardinia Run and Djibouti. Simone was the Overall Winner of Digital Online for two consecutive years until he became a judge for the competition and has been a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

FACEBOOK: www.facebook.com/SimoneCaprodossiPhotography

INSTAGRAM: www.instagram.com/scaprodossi

ALLY LANDES | EMIRATES DIVING ASSOCIATION

Project Manager, Editor, Graphic Designer, Photographer & Videographer



Ally joined EDA in December 2004 when she created and introduced the organisation's quarterly magazine, "Divers for the Environment".

She played a central role in the development of Digital Online – EDA's Underwater Photography and Film Competition from its launch in 2009, as well as introducing the film category as an extension in 2012 to

share our underwater world through motion pictures, and has managed the event since inception. Today, Ally continues to oversee the EDA team and develop the brand, manages design and production of the magazine, handles photography and videography, and runs the organisation's events and social media, all in the name of ocean conservation.

WEBSITE: www.emiratesdiving.com

INSTAGRAM: [@emiratesdivingassociation](https://www.instagram.com/emiratesdivingassociation) | [@eda_uae](https://www.instagram.com/eda_uae)



1st PLACE: Khalid Alrazooqi | Behaviour – 532 pts
Indonesia

1st PLACE: Philippe Lecomte | Wide Angle – 497 pts
Bimini, Bahamas

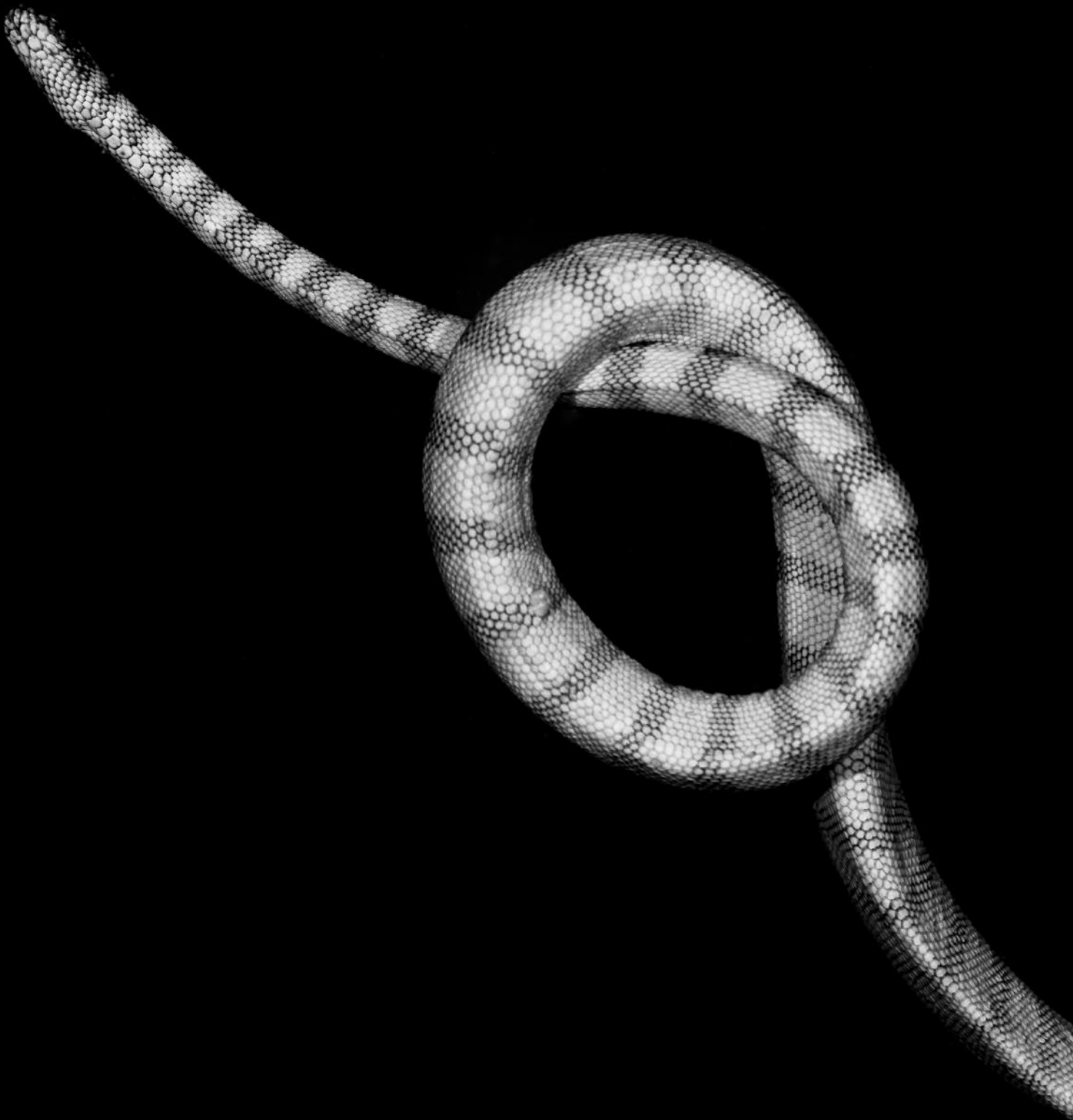


UNDERWATER PHOTOGRAPHY

1st **PLACE:** Michael Rall | Macro – 509 pts
Anilao, Philippines



1st **PLACE:** Ahmed Al Ali | Black & White – 496 pts
Fujairah, UAE

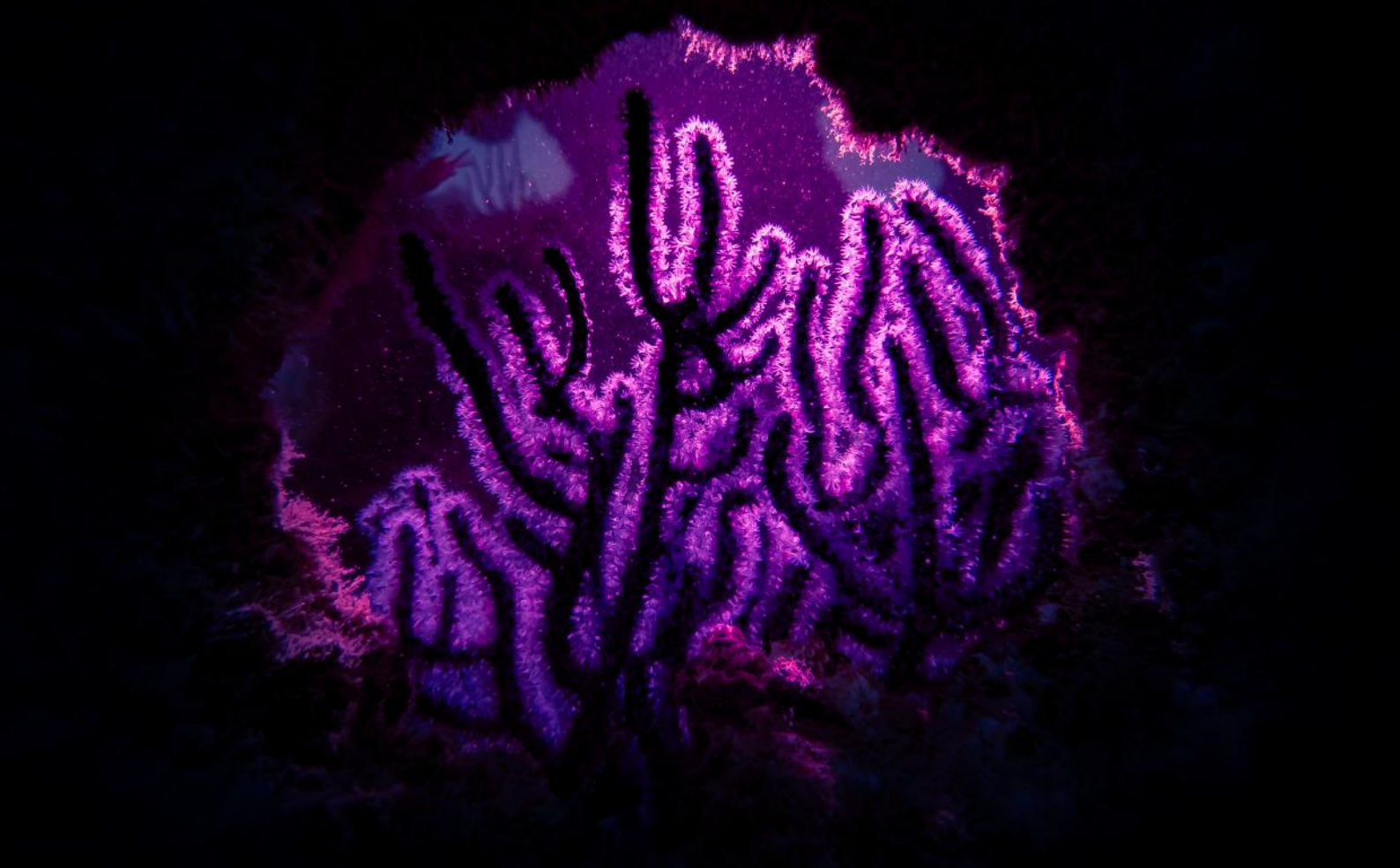


UNDERWATER PHOTOGRAPHY

1st PLACE: Gordon T. Smith | Best of the UAE – 484 pts
Inchcape 10, Fujairah, UAE



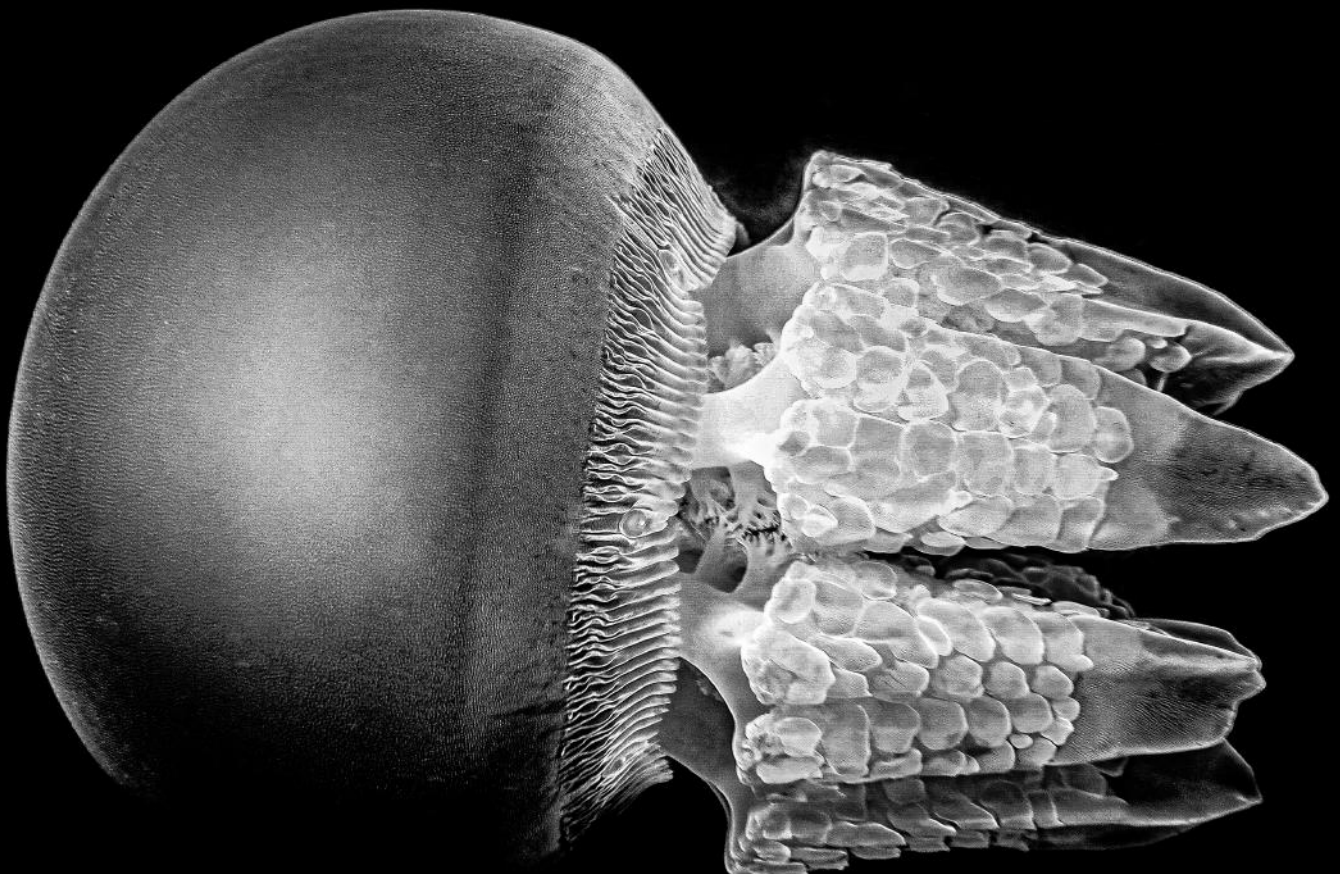
1st PLACE: Suretta Venter | Creative Underwater Photography – 407 pts
Artificial Reef, Dibba, UAE



2nd PLACE: Levente Rozsahegyi | Wide Angle – 462 pts
Carwash Cenote, Mexico



2nd PLACE: Ahmad Afyouni | Black & White – 443 pts
Khorfakkan



UNDERWATER PHOTOGRAPHY

2nd PLACE: Sabrina Rau | Behaviour – 434 pts
Daymaniyat Islands, Oman



2nd PLACE: Lara El Lakkis | Macro – 420 pts
Bali



2nd PLACE: Yevheniia Rehush | Creative Underwater Photography – 395 pts
Dubai, UAE

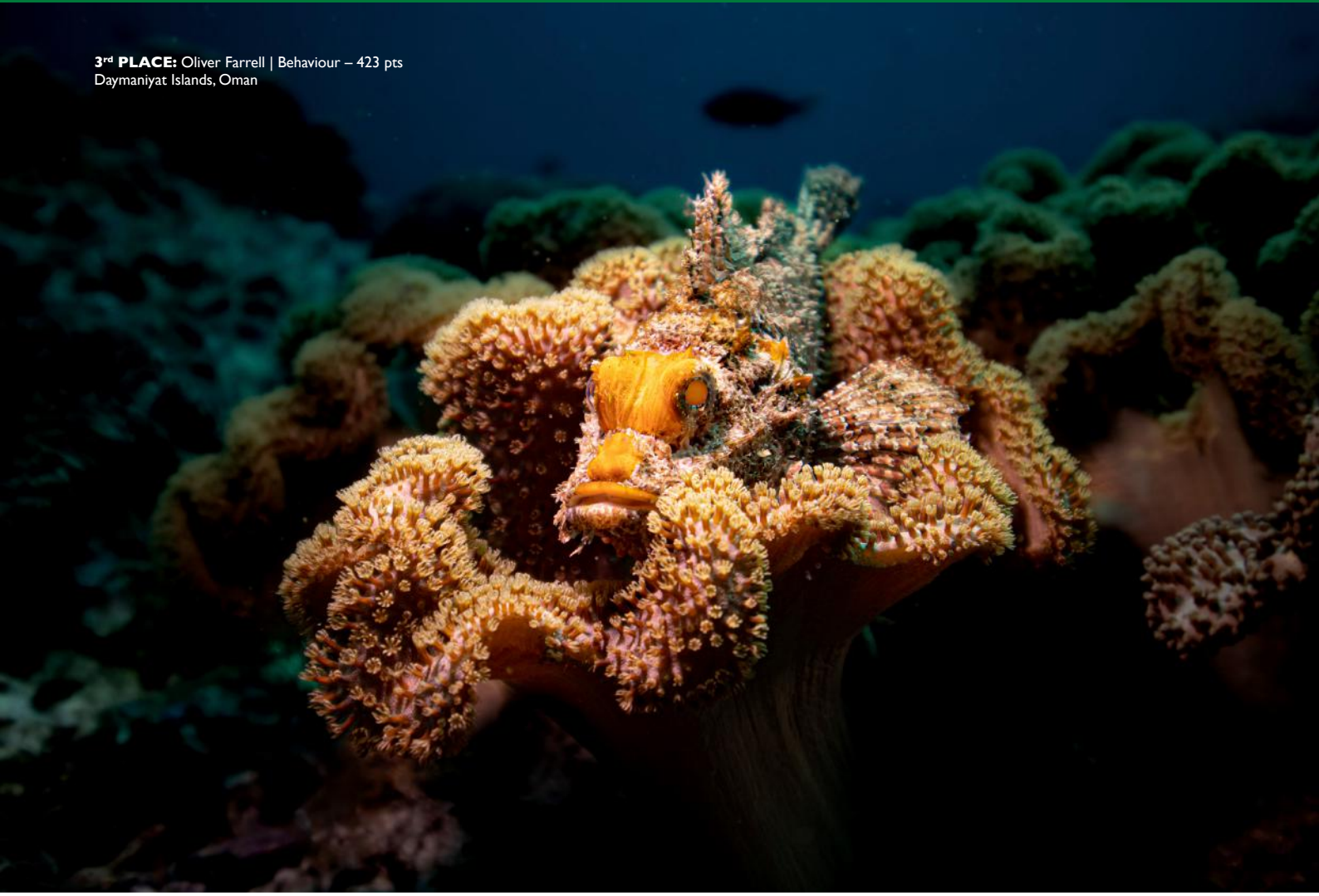


UNDERWATER PHOTOGRAPHY

2nd PLACE: Naima Amari | Best of the UAE – 392 pts
Fujairah, UAE



3rd PLACE: Oliver Farrell | Behaviour – 423 pts
Daymaniyat Islands, Oman

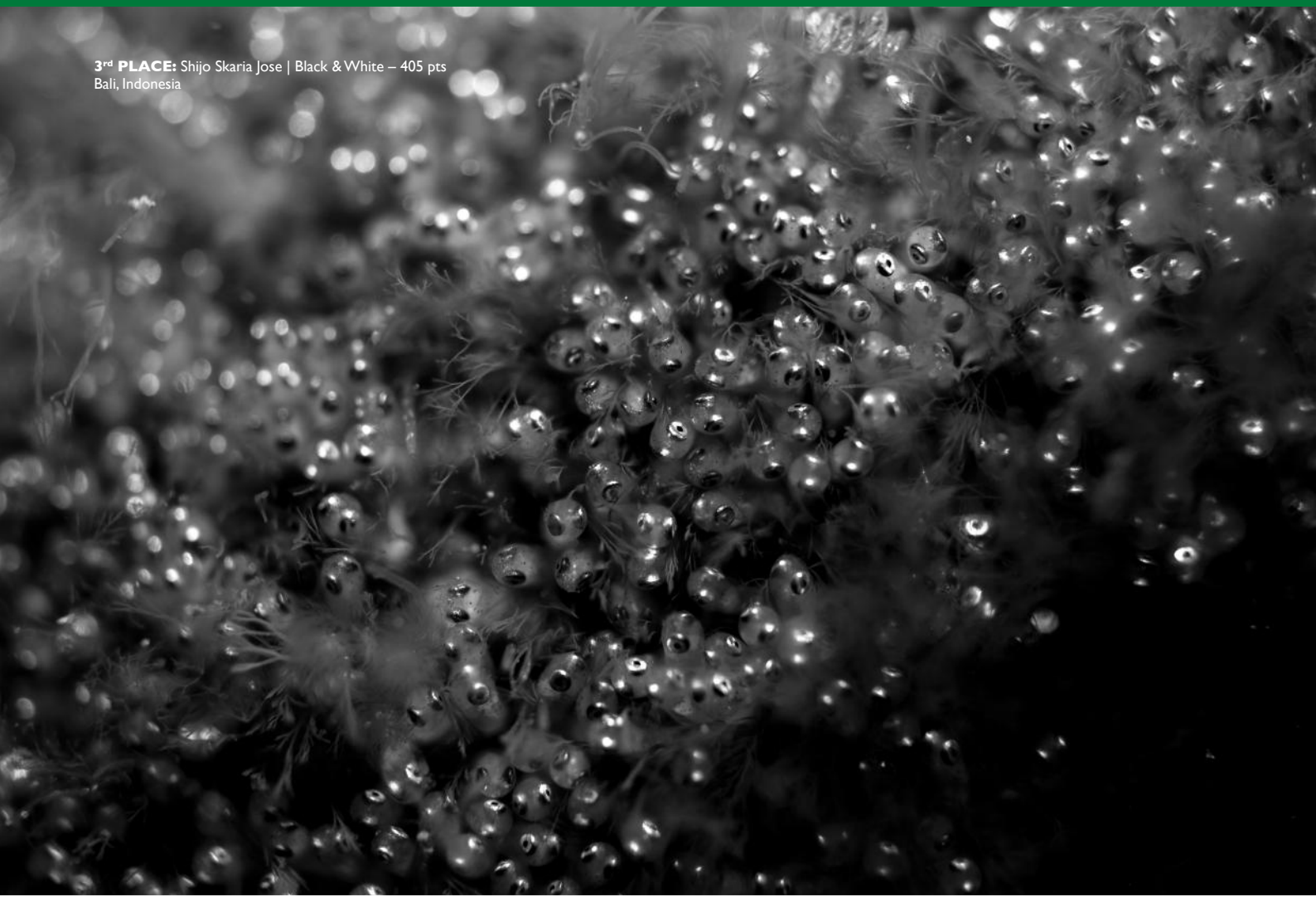


3rd PLACE: Marwa El-Agroudy | Wide Angle – 422 pts
Aqaba, Jordan



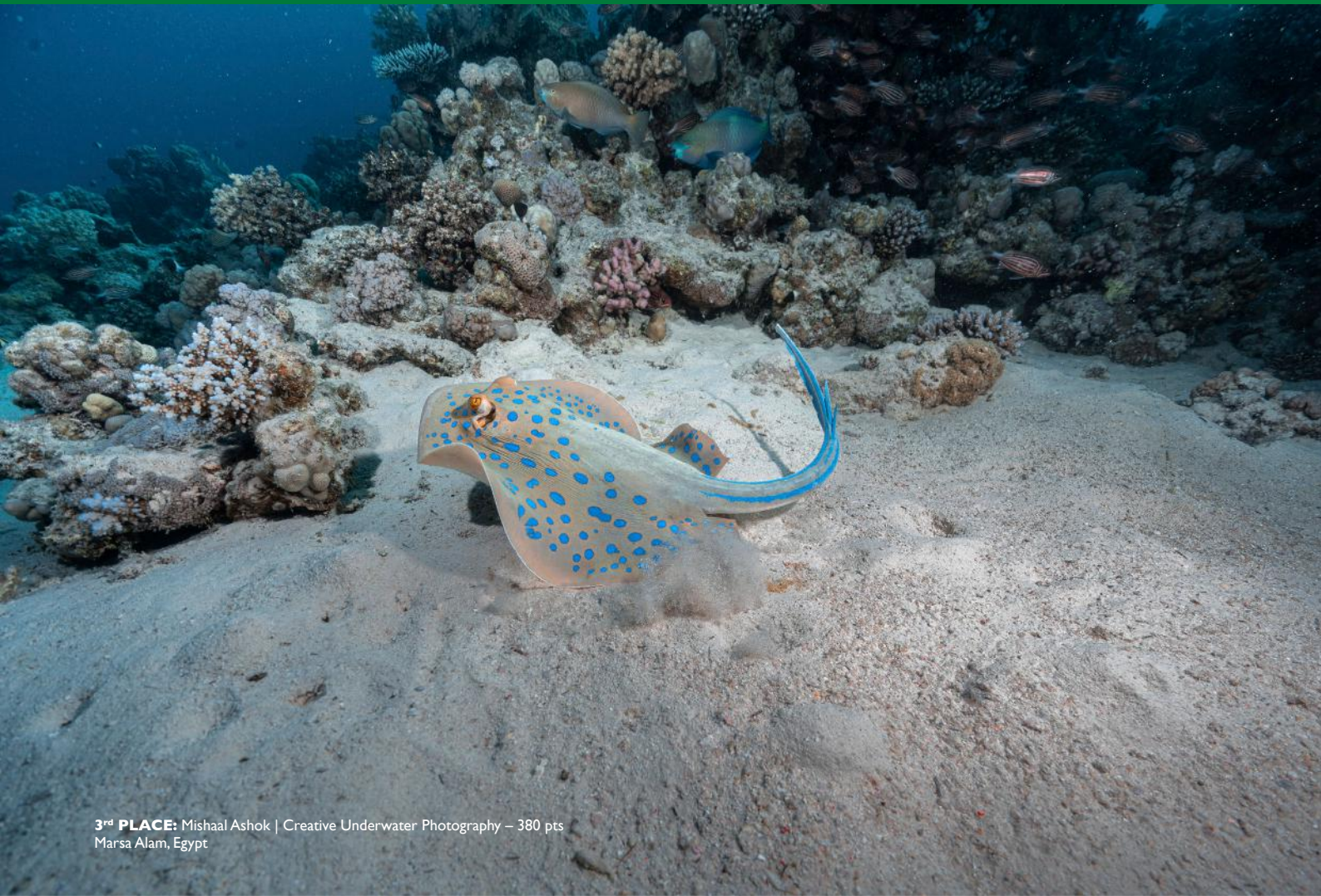
UNDERWATER PHOTOGRAPHY

3rd PLACE: Shijo Skaria Jose | Black & White – 405 pts
Bali, Indonesia

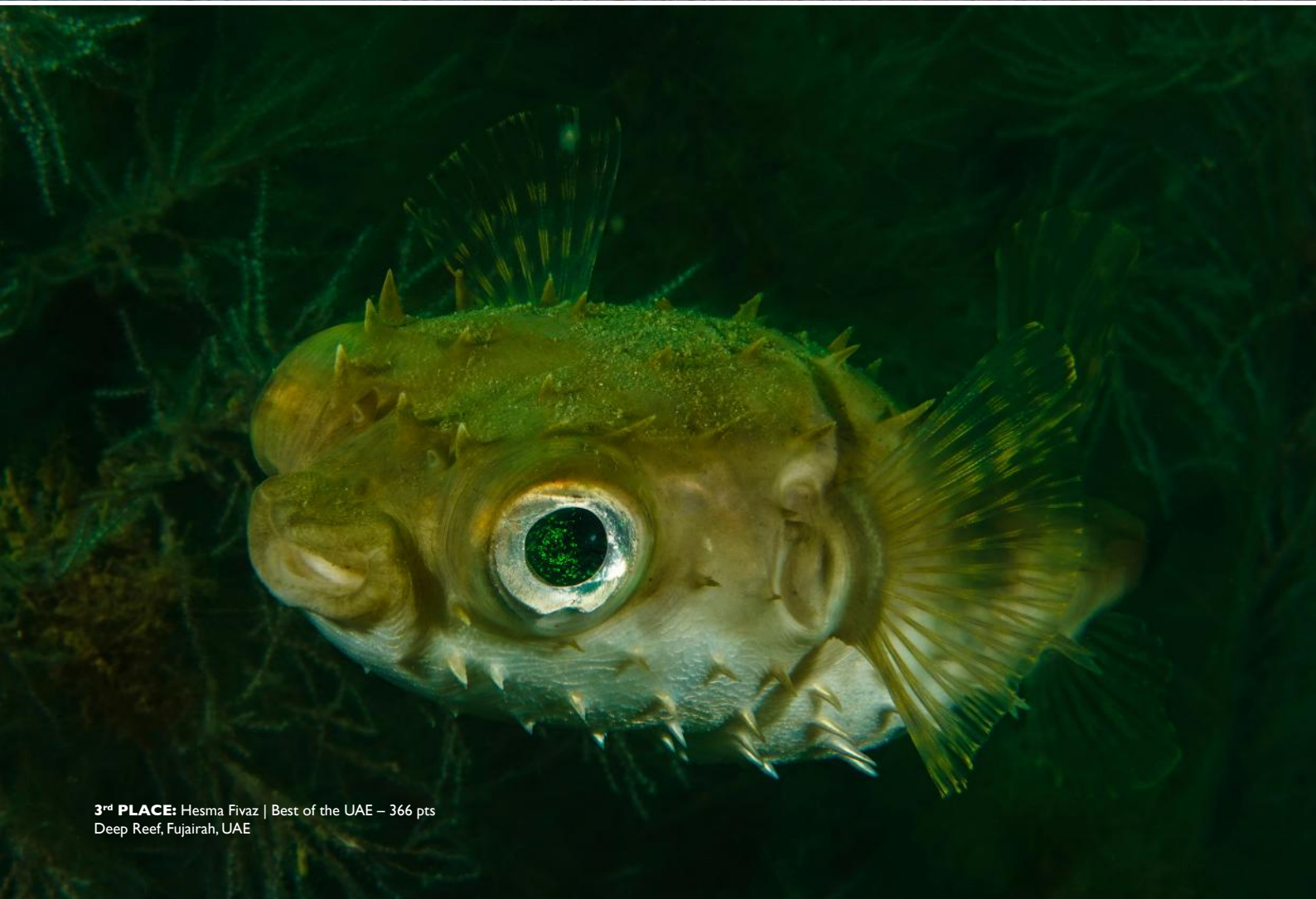


3rd PLACE: Fakhruddin Dabhoiwala | Macro – 400 pts
Fujairah, UAE





3rd PLACE: Mishaal Ashok | Creative Underwater Photography – 380 pts
Marsa Alam, Egypt



3rd PLACE: Hesma Fivaz | Best of the UAE – 366 pts
Deep Reef, Fujairah, UAE

UNDERWATER PHOTOGRAPHY



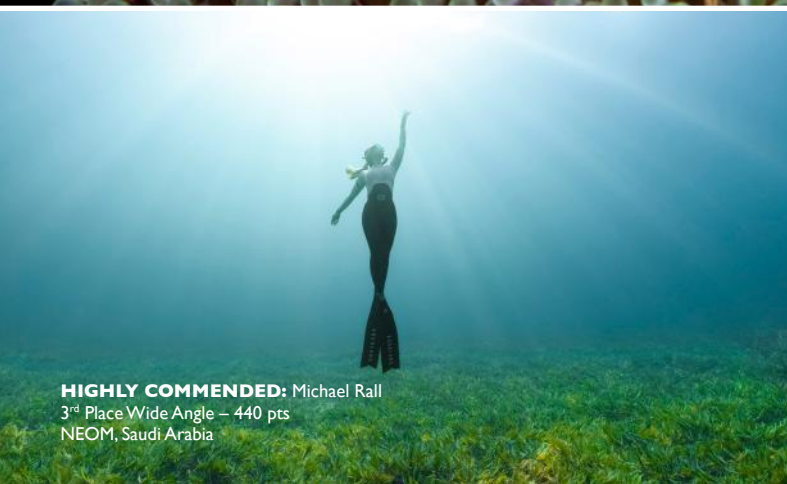
HIGHLY COMMENDED: Khalid Alrazooqi
1st Place Creative Underwater Photography – 512 pts
Musandam, Oman



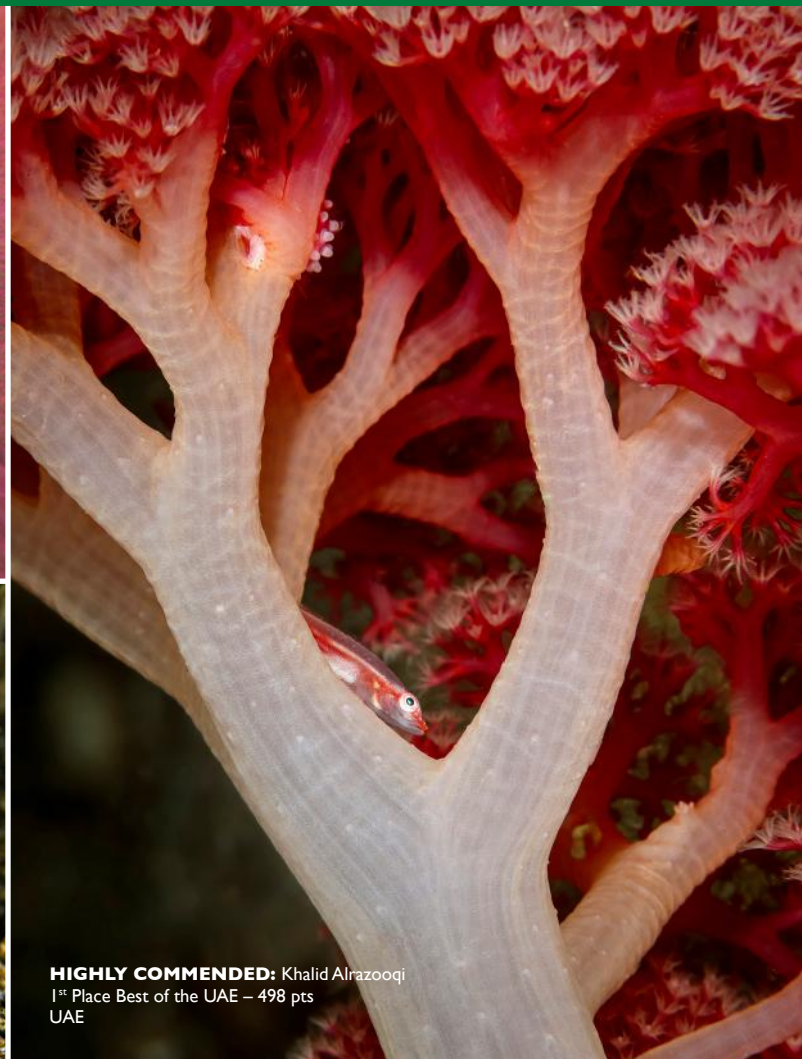
HIGHLY COMMENDED: Philippe Lecomte
2nd Place Behaviour – 488 pts
Anilao, Philippines



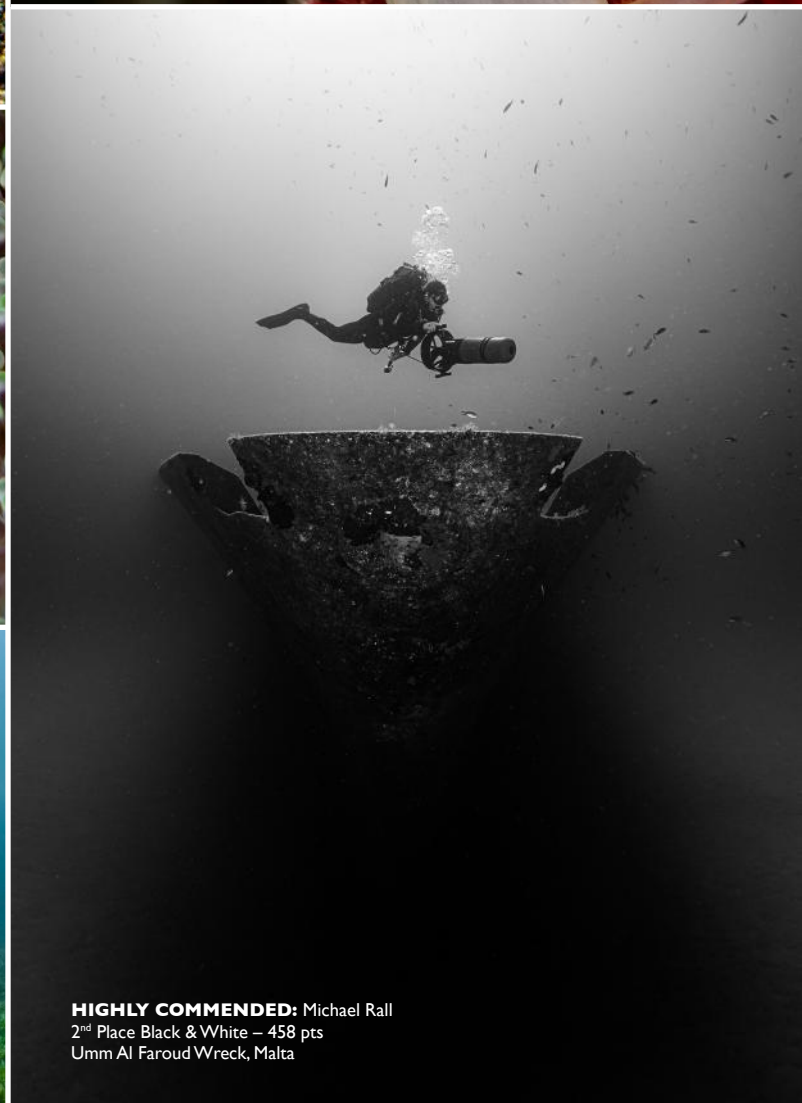
HIGHLY COMMENDED: Khalid Alrazooqi
2nd Place Macro – 459 pts
Indonesia



HIGHLY COMMENDED: Michael Rall
3rd Place Wide Angle – 440 pts
NEOM, Saudi Arabia



HIGHLY COMMENDED: Khalid Alrazooqi
1st Place Best of the UAE – 498 pts
UAE



HIGHLY COMMENDED: Michael Rall
2nd Place Black & White – 458 pts
Umm Al Faroud Wreck, Malta



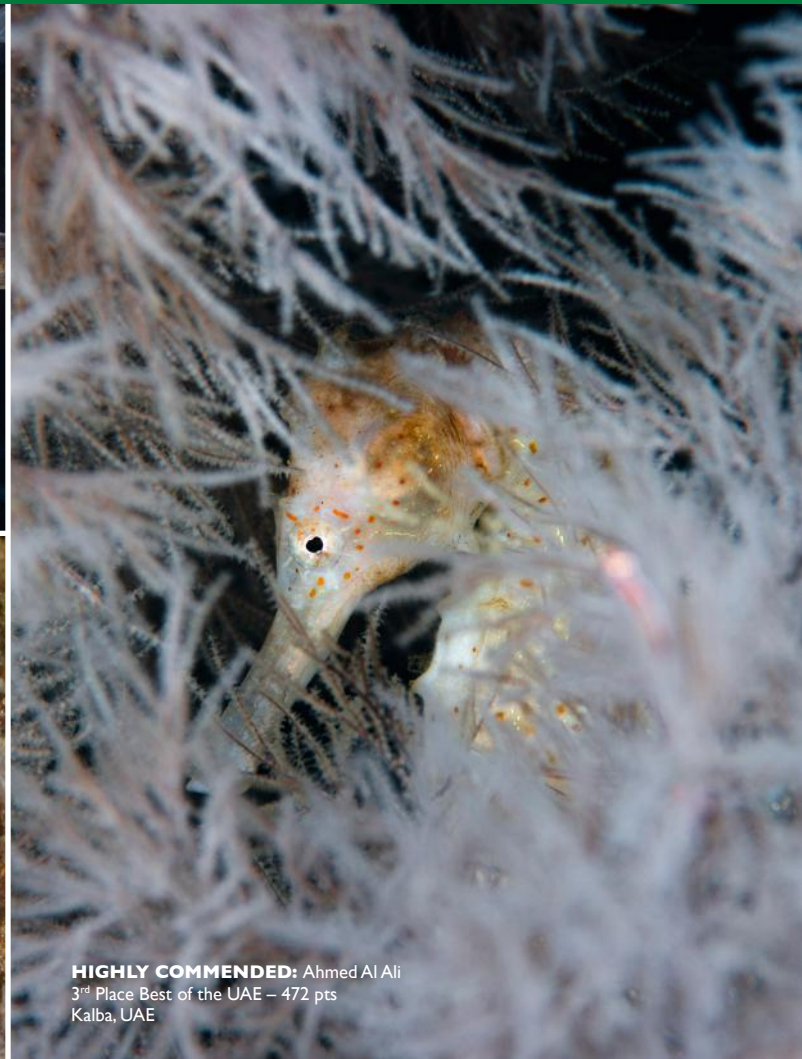
HIGHLY COMMENDED: Michael Rall
2nd Place Creative Underwater Photography – 472 pts
Dubai, UAE



HIGHLY COMMENDED: Gordon T. Smith
3rd Place Behaviour – 454 pts
Lembeh Straits, North Sulawesi, Indonesia



HIGHLY COMMENDED: Ahmed Al Ali
3rd Place Macro – 436 pts
Fujairah, UAE



HIGHLY COMMENDED: Ahmed Al Ali
3rd Place Best of the UAE – 472 pts
Kalba, UAE

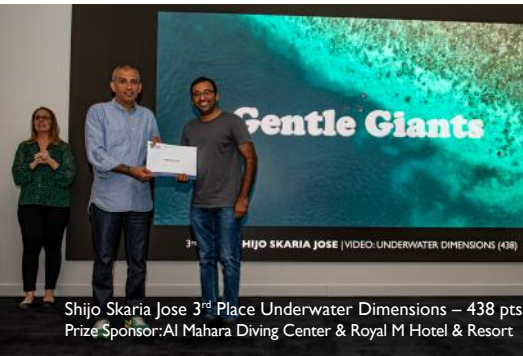


HIGHLY COMMENDED: Ahmed Al Ali
3rd Place Creative Underwater Photography – 418 pts
Anilao, Philippines

UNDERWATER PHOTOGRAPHY



UNDERWATER PHOTOGRAPHY



UNDERWATER PHOTOGRAPHY



UNDERWATER PHOTOGRAPHY

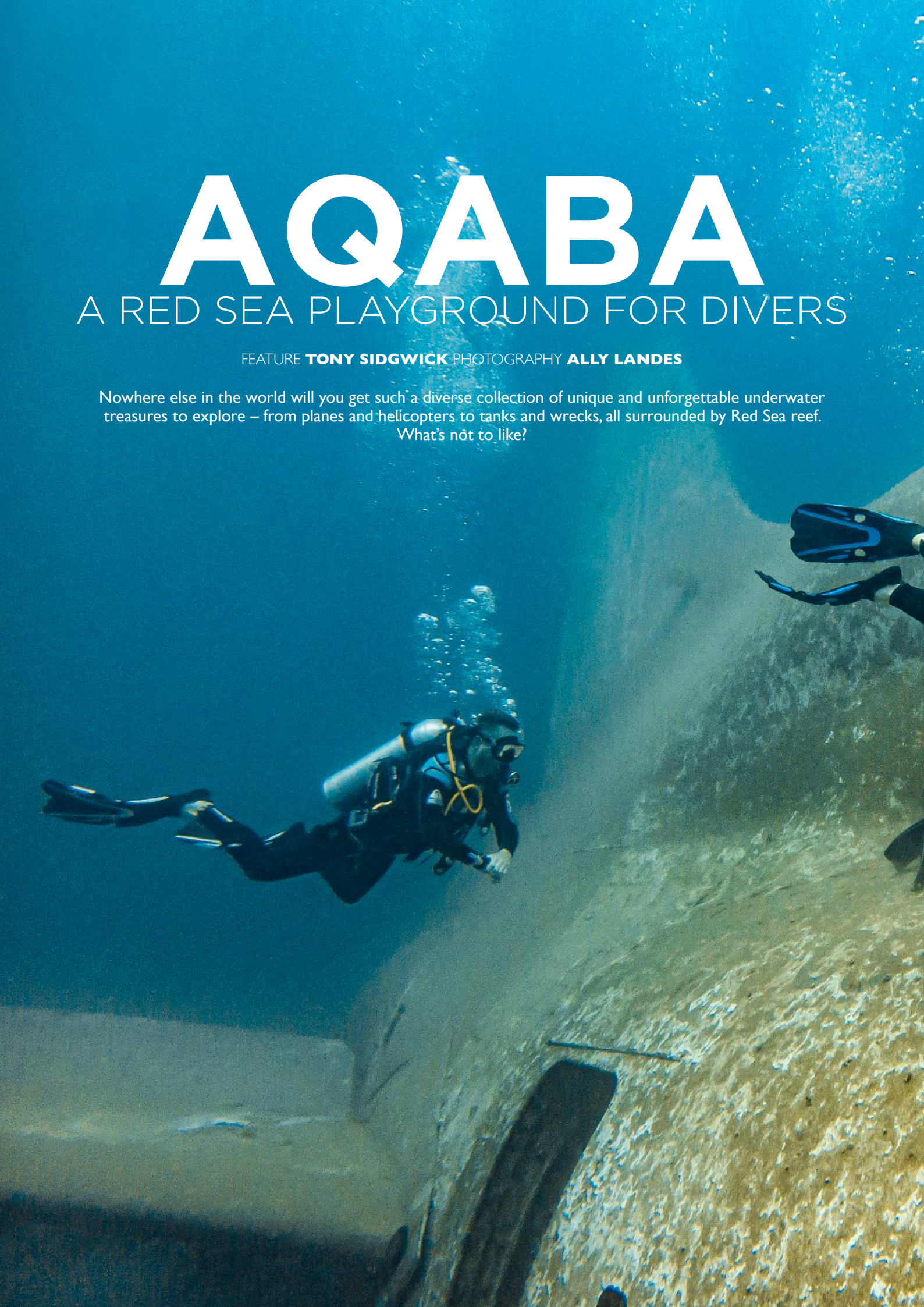


AQABA

A RED SEA PLAYGROUND FOR DIVERS

FEATURE **TONY SIDGWICK** PHOTOGRAPHY **ALLY LANDES**

Nowhere else in the world will you get such a diverse collection of unique and unforgettable underwater treasures to explore – from planes and helicopters to tanks and wrecks, all surrounded by Red Sea reef. What's not to like?







ABOVE: Lounge deck of the Ultra Diversity, photo by Diverse Divers. **BELOW L-R:** Coming back into Ayla Oasis Marina Village; Diverse Divers Club, and a view of our Cloud 7 apartment on the first floor; taking in the view leaving the marina from the starboard side.

On the very south-western corner of Jordan, and only a three-and-a-half-hour direct flight from Abu Dhabi, lies the picturesque resort and port city of Aqaba.

Aqaba sits on Jordan's only coastal region (not counting the Dead Sea, which is actually a lake), a 27km stretch of Red Sea coastline at the northernmost tip of the Gulf of Aqaba on the Sinai Peninsula's Eastern flank.

While Jordan's stretch of the Red Sea is similar to any other in terms of great reefs, marine life and visibility, what makes this particular patch of ocean special is the fact that Jordan's ruler, HM King Abdullah II, also happens to be an avid diver.

As a result, he has spearheaded a project managed by the Aqaba Special Economic Zone Authority (ASEZA) to boost tourism to the city through the introduction of resorts, activities and a marine park along its short stretch of coastline.

Aside from regulations to protect the marine park, various initiatives have turned its waters into a veritable playground for divers, with some dive sites that are completely unique in the world, from a large cargo ship wreck, sunken military equipment and aircraft, and even a passenger jet for divers to explore, in addition to some lovely reefs.

Another benefit is that most of the sites are

within just a few minutes' boat ride of each other, so it's entirely possible to take in several great dives and be home in time for a few sundowners before dinner!

DIVERSE DIVERS AT AYLA OASIS

Highly recommended to us for diving excursions by a Jordanian friend who has dived in Aqaba before was Omar Madain, and his outfit Diverse Divers in Cloud 7 resort in Ayla Oasis. They offer what can only be described as a premium experience – the shop is staffed by highly qualified and friendly professionals, with well-equipped excursions run off two luxurious and spacious tri-deck yachts, the Diversity, and flagship Ultra Diversity. A tasty buffet lunch is provided



ABOVE L-R: The Diversity; The Ultra Diversity, photo by Diverse Divers. **CENTRE L-R:** The Ultra Diversity's salon where the lunches are served, and the back deck complete with the diving gear setup. **BELOW:** Views of Aqaba's Red Sea coastline.

on each trip, along with tea, coffee and soft drinks between dives.

By sheer fluke (the resort had no idea we'd come to dive), the apartment we checked into happened to be directly above the dive shop, so once we settled in, it was just a short walk downstairs to go and see Omar.

After an introduction and a good chat about what the next two days of diving had in store, it was time to go out and explore the many F&B offerings of the resort. Ayla Oasis itself is a picturesque leisure destination comprising luxurious holiday apartments, a Hyatt Regency, a relaxed and inviting beach club and a recreational marina, not to mention some

superb restaurants and bars for an evening bite and tipple.

Highly recommended for some local flavours is Deeritna restaurant, where the lamb Mansaf is excellent, and the Agbawi Sayyadie is a traditional fish dish from Aqaba that won't disappoint. Also worth a visit is the Ankyra Greek restaurant, which is a great place to grab a bite as the sun sets. After sundown, check out Bar Thirteen for decent pub food and a friendly atmosphere, though it's just one of several lively looking venues along the resort's bar street.

DAY 1:

Downstairs at the dive centre, Omar is thankfully aware that people on holiday usually

like to have a lie in. Given the chilly water temperatures in April, and the fact that the dive sites are only a short jaunt away, the trips normally depart around 11am, which is a far cry from the 7am starts you'll usually get on your average liveaboard...

On our trip in April, the water temperatures were around 21°C, so a 5mm wetsuit was preferable, though the water was still a shock when we took the giant stride off the boat's dive platform. If you suffer in chilly water, a hoodie and/or 7mm might be advised at this time of year. Also, the Red Sea is saltier than other bodies of water, so you might want to add an extra kilo of weight to account for the added buoyancy.



The Japanese Garden coral reef.

Our boat for the first day was the lovely Diversity, the slightly smaller of the two pleasure yachts run by Diverse Divers, but that's not to say cramped in any way. There are plenty of lounge and sun decks to chill out on when cruising, and a spacious equipment deck to gear up in at the rear, before heading down to the dive platform for the giant stride.

JAPANESE GARDEN

Our first dive site was the Japanese Garden, one of the more colourful and abundant natural reefs in Aqaba. Upon descending,

you're treated to a beautiful flat reef of colourful soft and hard corals as far as your 25 metres of visibility will show you, from a shallow depth of about 10m up to a maximum depth of 20m. We spotted a scorpionfish almost instantly, and throughout the dive we saw a few Yellowmouth moray eels, some lionfish and the huge Red Sea pufferfish that are common to the area.

It was a relaxed and enjoyable dive to kick things off with, and then it was back to the boat and a ten-minute jaunt over to our next site.

THE CEDAR PRIDE

Our second dive brought us to the first of the King's underwater playgrounds we were to experience, the Cedar Pride wreck. The Cedar Pride is the name of the site, rather than the wreck, as the ship was actually called the San Bruno when it was scuttled. Owned by the Lebanese shipping company Cedar Pride, the 80m long cargo ship suffered a serious fire in 1982 which crippled the vessel, and it remained as a floating hulk off the coast of Aqaba until King Abdullah stepped in. He had as much of the harmful substances removed



The Cedar Pride.



from the ship as possible, before scuttling it to create an artificial reef and dive site.

It now rests on its port side at 27m, with the starboard side sitting at around 10m, making it a superb site for recreational divers. Upon descending, you can swim down around the big propeller at the stern, before exploring the ship's top deck and superstructures, including a prominent crow's nest. There is also a big cargo bay with an air pocket you can surface in, though it's recommended to keep your regulator in place, as the pocket has high levels of CO₂.

One of the most thrilling parts is a swim-through underneath the ship, as it lies perched across two reefs. Swimming underneath the massive hull, with over a thousand tonnes of steel above you, is quite the experience!

Then back up over the starboard side of the hull you can take in the two large holes caused by the explosions that sunk the ship, before swimming along the top of the wreck to take in the variety of hard corals and small animals that have made their home on the hull, including anemones, table corals, pipefish and

the odd barracuda. We were treated to the sight of a baby lionfish swimming along the hull. With a body only about an inch-long you could only spot it because of absurdly large spines for its size! Very cute...

Then it was back to the Diversity for the half-hour cruise back to port.

DAY 2:

Today we were out on the flagship of the Diverse Divers fleet, the beautiful Ultra Diversity. By a lucky twist of fate, us divers had



The Military Museum.

the boat mostly to ourselves, so it was a very peaceful and pleasurable cruise to the first of our sites for the day.

THE MILITARY MUSEUM

The Military Museum is the world's first underwater museum of military hardware, created in 2019 by ASEZA. This initiative saw a fleet of 19 pieces of hardware including tanks, helicopters, armoured vehicles, ambulances and personnel carriers, anti-aircraft guns and more sunk to rest on the seabed. They sit in formation at a depth of between 15 and 28 metres, so there is something accessible for all diver levels.

Upon first descending we immediately bumped into the two Royal Jordanian Air Force AH-1F Cobra attack helicopters, followed by a couple of Chieftain battle tanks, M42 Duster anti-

aircraft guns and FV701 Ferret armoured cars, and a South African Ratel (Honey Badger) 6x6 wheeled infantry fighting vehicle.

There are too many vehicles to cover them all in one dive, especially as some are deeper which will shorten down time for recreational divers. However, it is a truly unforgettable experience with the opportunity for some great underwater selfies, so make sure you pack a GoPro at least for the trip.

The Military Museum was deliberately placed in an area devoid of reef to have minimal impact on the natural ecosystem, so there isn't a huge amount of sea life to be seen, but let's face it, that's not why you're there really, is it?

Then it's on to the next site for what was undoubtedly the grand finale of the trip.



TRISTAR

And here we come to the last of King Abdullah's undersea marvels, and the highlight of our trip. This site is Tristar, so named because what awaits divers as soon as their mask dips below the surface is the eerie sight of a colossal Lockheed Martin L-1011 Tristar passenger jet sitting below them on the seabed!

Resting at a depth of about 15m at its nose, and 28m at its tail, the widebody aircraft was sunk in 2019 by ASEZA to create a truly unforgettable diving experience. This particular diver used to fly from Muscat, Oman to London Heathrow on the glamorous Gulf Air Tristars of the 80s and early 90s, making it a real nostalgia trip to explore one of these aircrafts again, even if underwater. With a length of 54m and a wingspan of 47m, and a cabin almost 6m wide, there is plenty to explore!



The Tristar really was a fitting finale to a fantastic trip!

We initially descended at the nose to peer in through the plane's windscreens, which have had the glass removed, to see a large pufferfish swimming around in the cockpit. After the obligatory photos around the nose, we penetrated through the front door on the plane's starboard side to discover a skeleton in cabin crew uniform sitting in the lavatory looking rather unamused at our rude interruption.

We turned right to swim around the crew area past the cockpit, keeping a careful eye out for the occasional lionfish. Then it was into the main passenger cabin, which has had the middle seats removed to allow for easy passage by divers.

Swimming right down to the rear, you exit out of the aft service door in the shadow of the colossal tailfin and its massive engine air intake

— another great spot for selfies. Then around the rear of the tail (more selfies!), onto a cool swim-through under the huge main wing, dodging a cluster of Upside-down jellyfish (*Cassiopea*), before once again penetrating the aircraft for a last look inside. That'll be about time for your safety stop, which you'll undoubtedly spend having a last, three-minute-long look down at the unforgettable sight of this once mighty jetliner resting in the depths. A fitting finale for a fantastic trip!

Only a short flight away for travellers from the UAE, Aqaba's excellent dive sites and hospitality offerings make it a superb diving destination for a long weekend trip. It's somewhere you need to dive at least once in your life, especially when you live close by the in Gulf. We highly recommend Diverse Divers; you won't find a better experience in Aqaba!

FOR INFO:

WHERE WE STAYED:

Cloud 7 Residence Ayla Aqaba

www.cloud7hotels.com/hotel/ayla-aqaba



WHO WE DIVED WITH:

Diverse Divers Aqaba

www.diversediversaqaba.com



ANTARTICA

A VOYAGE TO THE END OF THE WORLD

FEATURE & PHOTOGRAPHY **DOROTA CZERNY** UNDERWATER PHOTOGRAPHY **KIRILL EGOROV**

I am still in awe of the power and the magnificence of this place, as well as the peacefulness and tranquillity. I felt spellbound by the pristine white slopes and the brilliant aquamarine icebergs, as well as the sound of ice-shelf calving. I was mesmerised by white clouds atop snowy white mountains making it impossible to tell where the land ended and the sky began!

The silence was broken only by whales surfacing to breathe in the distance and the soft rippling of water rushing along the ship's bow as we glided calmly along the shores of the last continent: Antarctica.





Embark on a thrilling expedition to the southernmost continent of Antarctica with GUE Vice President Dorota Czerny as your guide. This awe-inspiring adventure aboard the expedition vessel *Ortelius*, promises to take you to the end of the world where the spirit of exploration still thrives and human impact is minimised.

The journey to Antarctica involves crossing the treacherous Drake Passage, which can be challenging. However, with rigorous safety protocols in place, passengers can rest assured that their safety is a top priority.

As tourism in Antarctica becomes increasingly popular, tour operators are implementing strict policies and regulations to preserve the environment. This pristine wilderness is a unique destination where travellers can

witness the beauty of untouched nature, but it is also a fragile ecosystem that requires responsible exploration.

The tall bow of the expedition vessel *Ortelius* towers above the pier. In the late afternoon, as the sun slowly sets, the sky becomes a brilliant gold and a cold wind is picking up. It finally hits me, "This is actually happening! I am going on an adventure far, far away." We are in Ushuaia, at the end of the world in Argentina's Tierra Del Fuego, an archipelago shared by Chile and Argentina at South America's southernmost tip. It's known for its dramatic landscapes of snowy mountains, glaciers, tundra, and wind-sculpted trees. Its main island, Isla Grande, is home to the Argentine resort town of Ushuaia. Sometimes called "the End of the World," Ushuaia is a gateway to the region and Antarctica to the south.

The sturdy ship will soon leave port to bring us to the most faraway place on the planet: Antarctica.

Antarctica is breathtakingly magnificent and is the only remaining continent where human impact is minimised, even though the spirit of exploration is alive and well. It is no one's land – or everyone's land – as the nations decided it would be an international land. As such, it is kept in the most pristine condition possible. The Antarctic Treaty of 1959 aimed to demilitarise Antarctica; to establish it as a zone free of nuclear tests or radioactive waste; to ensure that it was used for peaceful purposes only; to promote international scientific cooperation; and to set aside disputes over territorial sovereignty.

Despite its desolation, Antarctica is becoming





a trendy tourist destination. More and bigger cruise ships are travelling across the Drake Passage, ferrying hundreds of passengers who want to experience the last frontier. Luckily, the tour operators who run trips and expeditions to Antarctica have agreed on a set of policies and rules that all operators must abide by. They seek to protect the continent from human impact, and they make every effort to prevent any activity that could influence the pristine and sensitive balance of the Antarctic environment. Both the International Association of Antarctica Tour Operators (IAATO) and the Association of Arctic Expedition Cruise Operators (AECO) cooperate with the United Nations to create awareness campaigns, inform all visitors about the fragility of this environment, and bring attention to the importance of safeguarding it. All visits to Antarctica should follow the Antarctic Treaty, its protocol on environmental protection, and relevant measures and resolutions adopted at Antarctic Treaty Consultative Meetings (ATCM). Any visitors who intend to set foot on the continent must first disinfect and decontaminate all items that may come in direct physical contact with the environment, e.g., boots, gloves, all external layers of clothing, tripods, camera bags, backpacks, hiking gear, and dive gear. Every particle, tiny seed, clump of soil, piece of plant, or any other substance is brushed off, vacuumed away, and meticulously cleaned. Contamination and the introduction

of invasive species to the fragile continent must be rigorously guarded against in order to protect the sensitive balance in Antarctica.

TAKING THE TRIP WITH OCEANWIDE

Oceanwide Expeditions specialises in polar trips and was recently awarded the honour of the best polar expedition tour operator. Having originated in the Netherlands with a home harbour in Vlissingen, they own four sturdy ice-rated vessels deployed in both polar regions (Arctic and Antarctic) depending on the season, i.e., wherever it is currently summer. The ships all bear the names of Dutch polar explorers – Hondius, Plancius, Janssonius, and Ortelius.

Oceanwide prides itself on organising expeditions with elements of exploration, discovery, and learning. Visitors can enjoy landings, kayaking, overnight camping, trekking, rigid inflatable boat (RIB) cruises, snorkelling, and scuba diving. The Oceanwide experience is quite the opposite from those on big cruises, where visitors only experience the beauty of Antarctica while staying on board throughout the journey, protected from the polar elements and separated from the direct experience of its uniqueness.

On board the Oceanwide ships, there is always an international crew of experienced expedition leaders and guides who are knowledgeable

about the environment, including the wildlife encountered, not only in Antarctica, but also while crossing the Drake Passage. But what is exceptional and notable is their fervid regard for the polar continents. They dedicate their lives to sharing knowledge, building awareness, educating, providing safe experiences, and protecting this environment. They come from all backgrounds and countries, have unique expertise, and are so eager to share their knowledge that questions always lead to long conversations and discussions. The guides range from a young generation of enthusiastic scientists in their 20s to well-seasoned experts in their 70s.

CROSSING THE DRAKE

The two-day crossing of the Drake Passage can be cool (smooth as a lake) or cool (rough as hell). But with every hour sailing south, we are travelling farther away from not only everyday conveniences but also the safety net of the modern world – mobile connections, hospitals, pharmacies, and emergency services. Before the engines even start, the first briefing on the ship is about safety. Any breach that results in an accident, will mean turning the ship around and sailing back – immediately and without negotiations. This briefing produces the profound realisation that any twisted ankle on the stairs or any accidental fall – either on the outdoor decks or in a cabin – resulting in injury, will mean the end of the trip for all 120



passengers on-board. Everyone is personally responsible for their own safety and for following the protocols. Boring? Not at all – just responsible.

As the crossing continues, the days are filled with lectures on wildlife, icebergs, the environment, and the history of Antarctic exploration. Each day ends with a daily recap before dinner, summarising all we have done, learned, and achieved, and, most importantly, reviewing the weather forecast for the next twelve hours. If the weather allows, passengers can enjoy venturing to the outside decks to take in the magnificent views of the sunset, albatrosses gracefully flying past the ship, and the vastness of the horizon. But, the most unforgettable moment is when you hear an excited announcement on the intercom, "We have our first iceberg on the port side. Tomorrow we wake up in Antarctica."

A DAY IN THE ANTARCTIC

"Good morning, good morning, good morning." The soft voice of our expedition leader, Sara Jenner, woke everyone up over the intercom. "Today is Saturday, the 7th of January, and we are just arriving in Orne Harbour. It is a chilly 3°C/37°F outside, with overcast skies and rain. Breakfast will be served in 30 minutes. Stand by for the announcement of our first landing of the day." The wake-up announcement was a daily routine. And no one really minded

that the wake-up time was at 6am, 5am, or 4:30am, as the sun was nearly always up. Sarah taught us the most important thing about each day's expedition, and her guidance was often applicable to life beyond the Antarctic. "We take the days here one by one, even half day by half day. We never know what will happen next – weather can change, the wind might pick up, and ice may float into the bay on the landing side. If something breaks, or an accident happens, we will need to turn around. Therefore we use the time now in the best way we can. Never assume you will have the same opportunity tomorrow; it is now or maybe never."

The whole passenger group was divided into different activities – people who did only landings, a group of kayakers, snorkellers, and scuba divers. Each group could participate in their activities twice daily if (and only if) the conditions were favourable. The landings usually lasted two to three hours, and everyone was reminded that every activity could be called off due to weather conditions. Before each landing, the expedition crew got into zodiacs, checked the landing sites, and reported whether it was safe to proceed. Then, whoever wanted to go ashore was prompted to make their way to the gangways, board the zodiacs, and head off for adventures on land. Divers, however, had a different schedule, since we could both dive and do landings afterwards,

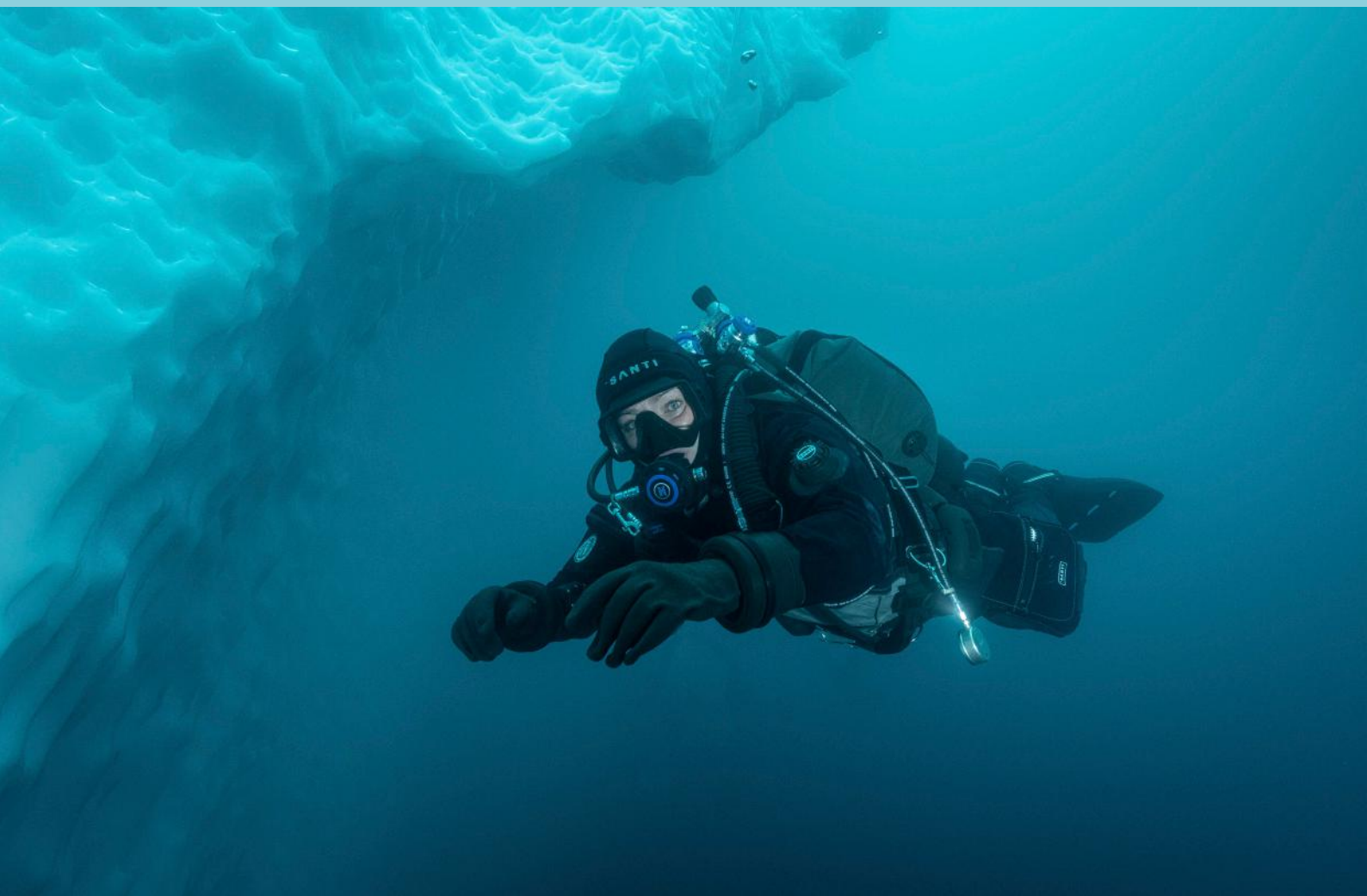
being conveniently dressed in a drysuit and warm undergarments.

DIVING THE ANTARCTIC

The expedition's diving team was led by Henrik Enckell, an experienced dive instructor and rebreather instructor trainer. He was one of the first to bring tourists diving in Antarctica. He has not only tremendous experience diving in the polar regions, but is also cool-headed, realistic, safe, and open to adventures. His team consisted of three additional guides – Roman, Peter, and Arne. Their main job was not actually guiding divers in the water but making sure we were dropped in good spots and, most importantly, picked up! No one wanted to drift in 2°C/35°F water for longer than absolutely necessary or be cut off from the group by a floating iceberg.

None of the Oceanwide vessels is specifically designed for diving, so gear and setup are arranged trip-by-trip if divers are on board. The changing area was in a helicopter hangar on the top deck, where all the drysuits and undergarments had a chance to dry and the divers were protected from the environment. After being assembled, the dive gear was stored in the dive zodiacs.

At the beginning of each day, the expedition leader evaluated conditions for the planned expedition; Sara always had the last word.



Once she gave everyone the final “go,” we dressed (careful not to forget any of our precious thermal layers), waited to lower our four diving zodiacs into the water (with the gear already in them), then boarded and cruised to the dive site. Those sites were not set in stone, as the exact location depended on the weather and ice conditions on the surface.

The maximum recommended depth for dives was 18m/60ft, and the dive time at around 30 minutes, and all were done on single 12L tanks. While one may think these dives are short, we were limited by a few factors. The water temperature is an obvious limitation, and hypothermia is a realistic concern. But the main risks were associated with Antarctica’s very dynamic surface conditions: a massive ice floe could unexpectedly drift over the divers (obstructing their ascent without warning), or icebergs and ice blocks could drift and separate the divers from the zodiacs. The remoteness of the area also played a role in conservatism – any dive injury (like DCS) would mean turning the ship around and at least a three-day trip back to Ushuaia (in the best case scenario).

The underwater scenery was ever-changing – from kelp fields teeming with colours to sponge and kelp-covered walls and whale skeletons in Whalers Bay at Deception Island. The most spectacular were the iceberg dives, where the brilliant aquamarine blue of the

dense ice is captivating; the shapes and oddly structured surfaces create an unforgettable experience. We also managed to dive twice in Foyen Harbour. On this site, the whaling-processing shipwreck of the *Governoren* lies at rest, mainly submerged, but with some of the ship visible above the surface.

HOW ARE THE POLAR BEARS?

While there are no polar bears in Antarctica (polar bears live in Arctic polar regions), the Antarctic has another symbolic creature – the penguin. In the areas we visited, we mainly saw Chinstrap, Gentoo, and Adelie penguins. They are cute, funny birds, but the trip busted some myths about penguins. The penguin colonies are vast, loud, and... smelly. Penguins may have white bellies, but only after they take the plunge and wash off the colony residues.

In terms of marine mammals, we encountered Weddell seals, young elephant seals, many Antarctic minke whales, and humpbacks. Our experiences with the whales are unforgettable, as we could hear them breathing from afar, which allowed us to spot them not by sight but by hearing them breathe, especially in the silence and calm of the Antarctic, which are profound.

All of those encounters were above water. Only a few lucky divers saw a leopard seal briefly (very briefly!) underwater and then

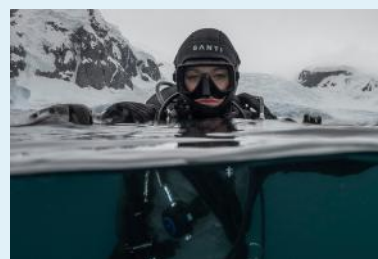
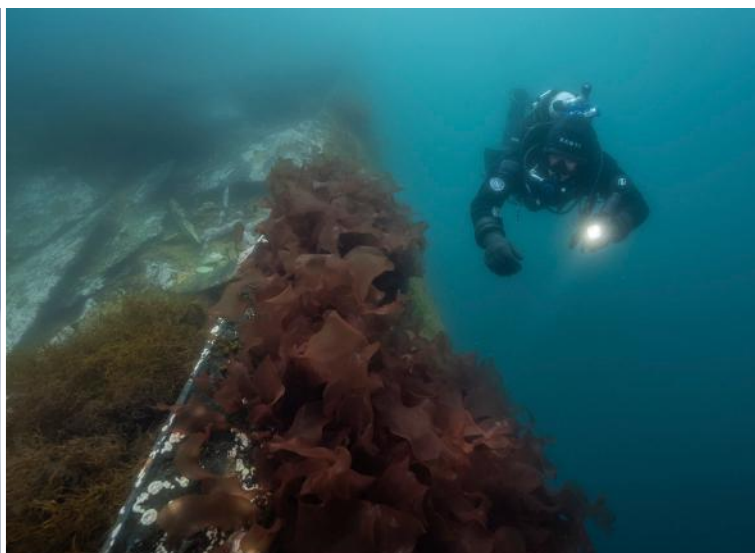
just a glimpse of diving penguins (as they are extremely quick and rare to catch underwater).

ARE YOU BIPOLAR?

The adventure in Antarctica slowly came to an end as the shores of the Beagle Channel closed in and the setting sun painted pale pinks, violets, and oranges in the sky. The port of Ushuaia grew closer. Faith Ortins, the founder of BlueGreen Expeditions, says, “After visiting one of the Earth’s Poles, you become unbalanced. The other Pole is calling you in, and you feel that you are incomplete. And when you get to the other Pole, then you become “bi-Polar.” You are at peace – balanced again. Until the call of polar adventures returns. And then you just have to go.”

Am I “bipolar”? Not yet. But I am still in awe of the power and the magnificence of this place, as well as the peacefulness and tranquillity. I felt spellbound by the pristine white slopes and the brilliant aquamarine icebergs, as well as the sound of ice-shelf calving. I was mesmerised by white clouds atop snowy white mountains making it impossible to tell where the land ended and the sky began!

The silence was broken only by whales surfacing to breathe in the distance and the soft rippling of water rushing along the ship’s bow as we glided calmly along the shores of the last continent: Antarctica.



DOROTA CZERNY

Dorota Czerny is a highly experienced diver who fell in love with the ocean in 1996. She transitioned from teaching at a university to teaching scuba diving due to her passion for the sport.

As Vice President of Global Underwater Explorers, she is highly skilled in technical, cave, and rebreather diving, and is dedicated to developing the organisation's educational component.

Her focus is on creating a new generation of explorers and young scientists with GUE's NextGen Scholarship programme. Dorota's dedication to diving education extends beyond her work with GUE as she actively explores caves and wrecks around the world.

www.instagram.com/dorotaczerny
www.facebook.com/dorota.czerny



ANILAO

THE PROMISED LAND FOR MACRO

FEATURE AND PHOTOGRAPHY **PHILIPPE LECOMTE** TRANSLATED FROM FRENCH **ALLY LANDES**

Once again, the Philippines continues to amaze me. The Anilao reefs that were recommended to me by friends, did not disappoint. I am in constant awe at what the underwater world shows us.







My first dive trip to the Philippines was back in 2019 to Puerto Gallera where I spent an unforgettable week. A few months after my return to the UAE, I was already starting to think about my next destination and took the advice from some of my photographer friends into consideration. Not having forgotten my last experience in the Philippines, I decided to go back and this time dive in Anilao, the "Macro Paradise".

Everything was ready for my departure in March 2020, but unfortunately COVID put a stop to the world of travel, and in February, I was forced to cancel all of my plans. My trip remained a constant reminder for 2 years while waiting for the next possibility of travel to reopen, until April 2022 when the world finally began opening up again. My plan to head to Anilao was finally back on, and I booked to leave at the end of November 2022.

I decided to spend my week's stay of diving at the Buceo Anilao Resort. This resort is located

at the extreme south of Anilao, at the end of the peninsula. My hotel enquiry to them was made easy and the response was professional. Once I had my flight and transfers organised, I was ready to leave as scheduled.

My flight from Abu Dhabi landed in Manila by the end of the evening. After a well-deserved night in a hotel near the airport, the hotel shuttle picked me up first thing the following morning. After a little over 2 hours on the road, the driver dropped me off on a beach where a boat was waiting to take me to the resort. The resort is located at the extreme south of Anilao, at the end of the peninsula. There are 2 solutions to get there: 5 minutes on foot, or 3 minutes by boat.

My resort arrival was very pleasant. The staff is always at your service and very helpful. This was something I had remembered from my previous trip to Puerto Gallera, and that was one of the reasons why I wanted to come back to the Philippines.

The resort is on a small hillside on the edge of the beach surrounded by forest and far from any busy roads which is wonderful. Boats, more commonly called canoes are parked just in front of the hotel. The bungalows are superimposed one above the other overlooking the swimming pool, the beach, the strait, and the islands directly opposite.

The resort has all the required facilities for photographer and video lovers. There is a kit room dedicated for all the camera equipment, the assemblage, the cleaning and maintenance. There is another room dedicated for dive equipment storage.

A massage spa and a gym are also available. A large semi-open dining room gives a full on view to the sea, perfect for buffets and other meals served by the hotel. In addition, there is a bar with sea view.

After a good shower and a restorative nap, I was finally able to dedicate myself to







assembling my photography equipment. The camera room has everything required to help you make things easier: Compressed air, a personal workshop space, light and power outlets are at your disposal.

After having taken out my diving equipment and assembled my camera, I was able to enjoy my first sunset overlooking the neighbouring islands while enjoying a well-deserved cocktail on the terrace.

DAY 1

With a 7am wake up followed by breakfast, I headed to the camera room for a final check of my housing setup for the first planned dive at 8:15am. We were 3 divers on-board with 2 dive guides.

The staff takes care of everything for you. They prep your dive gear, analyse your NITROX in your presence, and carry your camera onto the boat. All you have to do is don your wetsuit and take your mask and fins over.

THE DIVES

1. **COCONUT POINT:** Muck Dive between 4-22m with some rock.

Marine Life: Hairy shrimp, mimic octopus, several nudibranchs, thorny seahorse.

2. **SECRET BAY:** Muck Dive

Marine Life: Ray, crinoid white shrimp.

3. **MAINNIT CORNER:** Reef Dive to 22m.

Marine Life: Stonefish, nudibranchs, moray eel, crinoid green shrimp.

4. **SAIMSIM:** Night Muck Dive

Marine Life: Plenty of tiny shrimps, small fish and other juveniles swimming in every direction. Seahorse, cockatoo fish, mantis shrimp in behavioural action catching all the small prey flying around, nudibranchs, box crab.

DAY 2 DIVES

1. **RED PALM:** Muck & Coral Reef Dive

Marine Life: Harlequin shrimp, orangutan crab.

2. **TALAHIB:** Reef Dive with lots of sponges.

Marine Life: Seamoat, crinoid black shrimp.

3. **SUN VIEW:** Muck Dive

Marine Life: Coral cat shark, yellow and purple pygmy seahorses, turtle with 2 remoras, nudibranchs.

4. **SECRET BAY:** Night Dive

Marine Life: Coconut octopus, red octopus, razor shrimp, squid, cuttlefish, decorator crab.

DAY 3 DIVES

1. **GASANG:** Muck Dive

Marine Life: Zebra crab, cockatoo fish, coconut octopus, blue ring octopus, lionfish.

2. **GASANG:** Muck Dive

Marine Life: Mimic octopus, seahorse, nudibranchs.

3. **COCONUT:** Muck Dive

Marine Life: Flounder, shortfin lionfish.



4. NIGHT DIVE: Blackwater Dive

Marine Life: Juvenile barracuda, lionfish, jellyfish, juvenile flounder.

BLACKWATER DIVING

I experienced my first "Blackwater" dive on this trip, and the team organises 6 divers max in order to make 2 groups of 3. The site chosen is generally an offshore area with a lot of bottom. The moon must be small so that the lights work as efficiently as possible underwater.

After a 20 minute boat ride, the boat stops in the middle of the bay of Anilao and the 2 Divemasters prepare the 20 metre line with LED lights hung every 5 metres apart.

In all, 4 groups of 5-6 LEDs light up the depth down to 20 metres. The goal of the dive is to stay between 5 and 15 metres of them and to turn around the line equipped with the LEDs. For safety reasons, we were asked not to go over 20 metres in order to avoid a wall, ledge or other landing. The goal is to keep good buoyancy and not to stray too far from the light zone.

I advise photographers to equip yourselves with good lights in order to properly illuminate

the subject to be photographed. Having no landmarks and being suspended in the midst of black water is difficult to stabilise while trying to take photos of subjects that are constantly moving in all directions.

Luckily the current was not strong that day and the moon was in a new phase. My first blackwater experience was really interesting. I wouldn't hesitate to do it again.

DAY 4 DIVES

1. DARYL LAOUT: Casino Wreck Dive

Marine Life: Panda goby, nudibranchs, frogfish, Lembeh seadragon, jawfish.

2. MAILING: Sandy Sloped Reef Dive

Marine Life: Frogfish, anemone shrimp, nudibranchs, helmet gurnard, pink eye goby.

3. SUN VIEW: Muck Dive

Marine Life: Yellow and purple pygmy seahorses, nudibranchs.

4. ANILAO PIER: Muck Night Dive

Marine Life: Bobby worm, yellow seahorse, coconut octopus, longarm octopus, pygmy cuttlefish, cockatoo fish, nudibranchs, juvenile crocodile fish.

DAY 5 DIVES

1. SOMBRERO: Reef Dive

Marine Life: Hawksbill turtle, ribbon eel, big scorpionfish, nudibranchs, lionfish, blue spotted stingray.

2. LAYANG LAYANG: Reef Dive

Marine Life: Big octopus, honeycomb moray eel, stingray.

3. EL PINOY: Muck + Rubble Dive

Marine Life: Group of stingrays in behavioural hunt for food within the sand, sea pen with shrimp and crab hidden on it, Donald Duck shrimp, nudibranchs.

DAY 6 DIVES

1. SECRET BAY: Muck Dive

Marine Life: Razor shrimp, nudibranchs, mantis with eggs, cryptic shrimp.

2. HOUSE REEF: The Resort's Muck Dive

Marine Life: Commensal shrimp in fire sea urchin, pink frogfish, black frogfish.

3. EL PINOY: Muck + Rubble Dive

Marine Life: Donald Duck shrimp, nudibranchs.

The array of marine life is spectacular.



FANTASTIC TRIP FROM START TO FINISH

Once again, the Philippines continues to amaze me. The Anilao reefs that were recommended to me by friends, did not disappoint. I am in constant awe at what the underwater world shows us. The Buceo Anilao Resort is really pleasant and very well located. The staff is very professional and they are always there to assist you, and make your trip as memorable as possible.

FOR MORE INFO

If you would like to learn more about organising your own dive trip to Anilao, check out their website:
www.buceoanilao.com



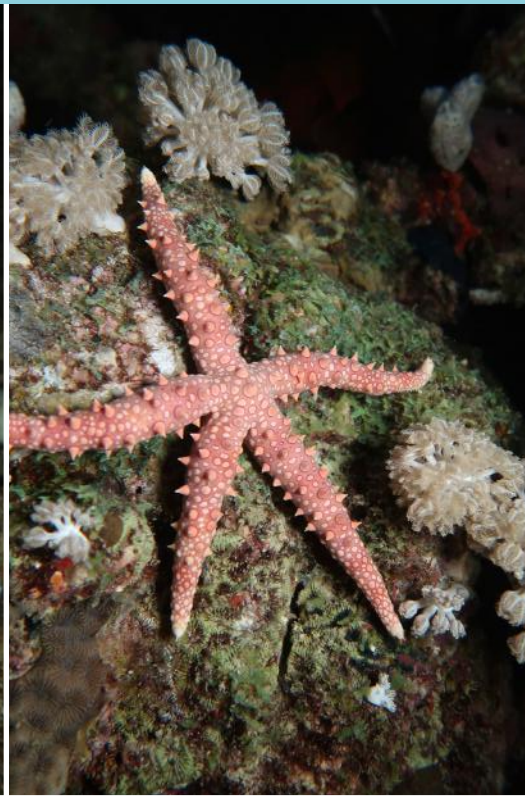
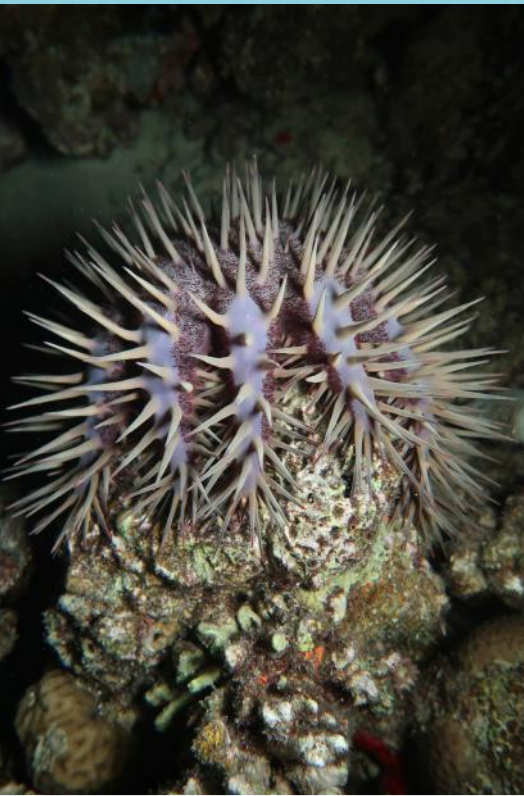


WHY GO FAR, IF YOU CAN GO DEEP?

FEATURE **AHMED NABIL** PHOTOGRAPHY **AHMED EL GOHARY**

As a big fan of the Red Sea, I always look for new dive sites and destinations to try. I had agreed a while back with a couple of my instructor friends in Saudi Arabia to organise a dive trip to Yanbu, the hidden gem of Saudi. The visibility and richness of the marine life was guaranteed.





As a big fan of the Red Sea, I always look for new dive sites and destinations to try. I had agreed a while back with a couple of my instructor friends in Saudi Arabia to organise a dive trip to Yanbu, the hidden gem of Saudi. The visibility and richness of the marine life was guaranteed.

When the plan was set and dates were confirmed, we could not hold our excitement to head for new diving adventures. We were fully equipped with our dive gear, cameras, extra memory cards and batteries, housings, various items for the boat, and supplements. Everything was in order and we were set. The day before heading to Yanbu, my phone rang and I took the call, "Hey Ahmed, tomorrow's trip has to be postponed due to the sea conditions, the weather forecast is not really in our favour." These were the slowest seconds of my last 10 years. While it

is totally understandable and common to have weather forecasts mess with dive trips, I have to admit, my heart sank. I believe the tone of my voice gave away my disappointment. He carried on to say, "if you cannot go far, why don't you go deep?" I had to ask him what he meant. He said, "Well, if Yanbu is not possible to dive tomorrow, let's go to Jeddah and dive somewhere new. We have explored different beach dive sites in Jeddah, what if we go out by boat and explore the deeper sites?" My brain started to digest the idea and I felt my enthusiasm come back.

PADI says anything from 18 to 30 metres (60 to 100ft) is a "deep dive" in the context of recreational diving. If you're ready to expand your boundaries, a PADI Instructor will help you gain the skills and confidence to explore to a maximum depth of 40 metres (130 feet) with a Deep Dive Speciality course.

I have dived Jeddah many times at various depths and locations, but this time we would go to the maximum allowable depth, exploring new areas deeper and further. We started with the deepest dive of the day, and mistakenly reached 42.4m before we ascended back to our maximum limit of 40m. The water was so clear it was easy to make the mistake and go deeper. It's thanks to setting our dive computers' maximum depth alarm that we could make the correction.

On our descent, we were greeted by a hawksbill turtle roving in the blue. What a nice welcome and start to the dive. The site was full of corals, sponges, sea fans and all kinds of anemones. We spotted a complete marine pictograph during our descent with triggers, wrasses, groupers, sergeants, damsels, octopuses and squids just to name a few. What captured our attention was not only the



variety, but also the large sizes of the fish.

At 40m, we were impressed seeing all the colours and the crystal clear visibility, it restored peace and tranquillity. A few minutes before we needed to start our ascent, we could easily see a large blue spotted stingray laying at the bottom, next to the largest porcupinefish I have ever seen. A few metres away, a titan triggerfish family guarded their nest. They were as large as their names! I'm not sure if we were lucky or if it's this site's norm to be so rich in life. The dive did not miss in action, a one metre large stonefish lay next to us in perfect camouflage next to the rocks.

We started our slow ascent. To pass the time, we paid attention to the smaller details, looking in the crevices and spotting the micro fauna. It was a nudibranch heaven. We spotted so many species such as the *Chromodoris*

magnifica, *Goniobranchus geminus*, Red Sea *Opisthobranchia* and many more!) I was surprised by the large variety of starfish at the site – pencil, soft, collectors, Crown-of-thorn, – just name it. Their large sizes and strong colours were impressive.

It was nice to also be greeted by a giant moray eel, it came out of nowhere. We slowly ascended to the next safety stop. The sea was so generous with us this day that we discovered a crevice full of banded coral shrimps. While my buddy was enjoying taking macro shots, I carried on looking around, and my curiosity was awarded a large crocodile fish. It was laying down on the benthic, resting beside the rocks and corals. The fun was quickly interrupted by the beeps of our dive computers' transmitters indicating we were very low on air. Sadly, we were forced to end the dive.

We thoroughly enjoyed this discovery and returned with a wealth of photos. It was almost too good to be true having spotted all the marine life we saw just in that one dive. Our cameras were our tool documenting all that beauty and generosity of the sea. We spent our long surface interval chatting about our rich observations while drinking hot Adani style tea.

The day passed incredibly fast. Our friends invited us to an awesome seafood restaurant at the Jeddah corniche in the evening. After the banquet, we enjoyed the excellent company and Arabic vibes along with sipping hot mint tea. What else could we ask for?

I was happy to return home full of incredible memories (the dive, the friends, the food, just everything.) It was indeed excellent advice from my friend – why go far, if you can go deep?

COULD OPTIMISING A DIVER'S HYDRATION & TEMPERATURE IMPROVE THEIR DECOMPRESSION SAFETY?

FEATURE **MICHAEL MENDUNO**



DAN | AlertDiver

Over the last two decades, hyperbaric researchers, and subsequently divers, have come to understand that proper hydration is important in reducing the risk of decompression sickness (DCS). Though it began as an anecdotal belief – it was common to find that “bent” divers were dehydrated – recent studies have demonstrated that dehydration is not only compatible with greater bubble formation, but that pre-dive hydration actually decreases circulatory bubbles.

“More water, fewer bubbles,” DAN Europe founder and president Dr Alessandro Marroni explained with a grin. “Hydration increases blood flow and therefore the transport of oxygen (O₂) and inert gases during on gassing

and off gassing. The differential pressures drive the gases.” Hydration, pressure, and of course, oxygen, have long been the pillars of DCS treatment.

What’s not precisely known however, is how much fluid, and when, and at what frequency divers should hydrate to maximise its positive effects. It’s important to note that overhydration can also be a problem and can increase the risk of immersion pulmonary edema (IPE). This is why the ‘stay hydrated’ message must be implemented thoughtfully.

While researchers appreciate the role of hydration they have also come to recognise that a diver’s thermal status over the course

of a dive can also significantly impact their decompression risk. Interestingly, this finding was brought to light following the search and recovery of the TWA Flight 800, which exploded and crashed into the Atlantic Ocean shortly after takeoff from John F. Kennedy Airport, New York on July 17, 1996

An astute researcher noticed that there was a slightly higher incident rate of DCS that would otherwise have been expected for those US Navy divers, who were involved in the salvage and recovery of the cockpit voice and flight data recorders. The divers wore hot water suits, which actively kept the divers warm.

Of 752 dives to depths of about 36 metres,

10 divers required recompression treatment for mainly Type 2 (neurological) DCS. The resulting 1997 paper, "Recompression treatments during the recovery of TWA flight 800," by C.T. Leffler and J.C. White, concluded that there was an increase in the DCS incident rate for the actively-heated divers, consistent with earlier observations of commercial divers in the North Sea. The TWA paper led to heightened interest in active diver heating systems and their impact on decompression.

What's not precisely known however, is how much fluid, and when, and at what frequency divers should hydrate to maximise its positive effects.

In 2007, the US Navy Experimental Diving Unit (NEDU) issued its report on a study conducted by noted decompression physiologist Wayne A. Gerth and his team, titled, 'The Influence of Thermal Exposure on Diver Susceptibility to Decompression Sickness,' NEDU TR 06-07, November 2007. According to the report, "Diver thermal status during different phases of a dive can greatly influence diver susceptibility to DCS. Cold conditions during BT (bottom time) and warm conditions during decompression are optimal for minimising DCS risk and maximising BT. Divers should be kept cool during dive BT and warm during subsequent decompression." In fact, Gerth and his team found that adding a 10°C increase in temperature during deco, was equivalent to reducing bottom time by 50%! Even so, as some researchers have pointed out, the physiological impacts of a diver's thermal status are complicated.

These evolving findings on hydration and temperature raise the obvious question, could divers take advantage of these factors to minimise their decompression risk? That's exactly what DAN Europe researchers hope to find out in a new research study that is underway.

THE CIRCULATORY SYSTEM AS CONVEYOR BELT

Dr Marroni and his colleagues are conducting a "hydro-thermal gradients" study to examine the combined factors of hydration and temperature, as a part of their 2022 research plan. The question they hope to answer, "Can we condition a divers' blood flow to affect on and off gassing by carefully regulating fluid and temperature, which affect blood flow and vasoconstriction." The team will measure bubbling in response to varying these two parameters and their interaction. In doing so, they will be using DAN Europe's new diver biometric system, now known as DANA-Health, to monitor the divers during their dives as well as conducting underwater doppler monitoring and blood sampling.

While fluid and temperature may seem to be disparate decompression factors, both are directly connected to perfusion. As Marroni

explained, "Think of the circulatory system as a conveyor belt to move gases in and out of the tissues. When there is more fluid, there is more oxygenation, and greater and greater transport of gases. When there is less flow, there is less oxygen, and less transport of inert gas in or out."

This means, for example, if a diver is dehydrated when starting a dive, it will slow inert gas transport and uptake. In fact, researchers demonstrated this in a 2008 paper, titled, "Predictive Sauna and Venous Gas Bubbles Upon Decompression from 400 kPa," by J.E. Blatteau et al. including DAN researchers Costantino Balestra and Peter Germonpré. In the study, divers were exposed to a dry-sauna an hour before a chamber dive to the equivalent of 30 metres of seawater (msw) for 25 minutes and then decompressed. The result? The single predictive sauna decreased circulating bubbles after the dive. Researchers hypothesised that the heat-induced dehydration resulted in reducing divers' inert gas loading and therefore bubble production.

In the same way, warming a diver, for example with an active heating system, causes vasodilation thus increasing blood flow and therefore gas exchange. This can be undesirable during the on-gassing portion of the dive, as the examples cited above showed. Conversely lowering a diver's skin temperature causes vasoconstriction reducing the flow. Marroni's conveyor belt analogy also explains why mild exercise during decompression has been shown to reduce DCS risk: it acts to increase blood flow, and therefore increase inert gas transport and off gassing.

Taken together, these results suggest a potential strategy that divers may one day employ to minimise their DCS risk or said another way, improve their decompression efficiency. For example, a diver might begin their dive with a specified level of dehydration and active heating system turned off. This would act to minimise inert gas loading during the descent and working portion of the dive. Upon ascent, the diver would switch on, and or dial up their active heating system, and commence hydrating either in situ (IV ports anyone?), and or in a deco habitat, and perhaps perform some light exercise during decompression.¹

The devil of course is in the details. They're exactly what Marroni and fellow researchers hope to tease out. Stay thirsty my friends.

¹. Care in implementation will almost certainly be important. Any increase in active warming should be gradual to reduce the likelihood of bubble formation near the skin since gas solubility decreases as temperature rises. Rapid warming of the skin can lead to skin bends. Similarly, any exercise should be mild, with low joint forces, to avoid the promotion of bubble formation that is a negative effect of exercise.

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ADDITIONAL RESOURCES:

- **InDEPTH:** The Making of the Biometric Diver: DAN Europe's Alessandro Marroni is Realising a 50-year old Dream by Michael Menduno
- **InDEPTH:** In Hot Water: Do Active Heating Systems Increase The Risk of DCI? by Reilly Fogarty
- **GUE.tv:** New Decompression Findings: Simon Mitchell Presents Cold Water Effects on DCS.

FOR THE OCEANS

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EDA
جمعية الإمارات للغوص
Emirates Diving Association

Tel: +971 4 393 9390 | Email: projects@emiratesdiving.com | Website: www.emiratesdiving.com
EDA is a non-profit NGO accredited by UNEP as an International Environmental Organisation.

UPCOMING EVENTS

MENA OCEANS SUMMIT & EXHIBITION

BLUE ECONOMY | BLUE GOVERNANCE | BLUE SCIENCE | BLUE COLLECTIVE
8-9 June 2023 | Hilton Dubai Palm Jumeirah



The MENA Oceans Summit is the first dedicated forum in the MENA region focused on accelerating the pace of comprehensive ocean action, to conserve and restore ocean ecosystems, tackle climate change and ensure development of blue economies within sustainable frameworks.

Convening on World Oceans Day and engaging under four key streams – Blue Economy, Blue Governance, Blue Research, and Blue Collective, the forum brings together a diverse range of stakeholders:

Day 1, 8th June: Global leaders, policy makers, researchers and the private sector who work at the forefront of ocean action will engage the audience through panel discussions and intense fireside chats on challenges, developments, and opportunities.

Day 2, 9th June: The Blue Collective will be activated as an educational, awareness, and engagement platform; encouraging the youth and the wider community to be a part of critical dialogues and envision themselves as ocean ambassadors.

FIND MORE INFORMATION HERE: <https://goumbook.com/mena-oceans-summit>

REEF CHECK ECODIVER TRAINING

BECOME A CERTIFIED REEF CHECK DIVER

EMAIL: reefcheck@emiratesdiving.com if you would like to receive the next available training dates. Places are limited and on a first come, first served basis.



Reef Check
UNITED ARAB EMIRATES

When you join a Reef Check EcoDiver training, you will learn about our local ecosystems and you will be able to participate in our regular survey dives which will help us to understand the threats our corals are facing by providing important data. This 4-day course includes both classroom, fieldwork, and an exam.

Upon completion of this course, you will be able to join the EDA Reef Check team and assist in our regular underwater surveys in the UAE, as well as other underwater surveys in the Indo-Pacific region.



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MISSION STATEMENT

Our mission is to conserve, protect and restore the UAE's marine resources by emphasising and promoting the underwater environment and environmental diving.

LEGISLATION

EDA is a non-profit NGO registered with the Ministry of Community Development as per the Ministerial Decree No. 149.

The Decree stipulates the following responsibilities for EDA:

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

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DO YOU KNOW? THE OCEAN GENERATION



WHO WE ARE

We exist to restore a healthy relationship between humanity and the Ocean.

WHAT WE DO

We translate complex Ocean science into engaging content and practical actions.

JOIN THE OCEAN GENERATION

As the first generation to understand ocean issues, we are also the last generation who can stop them. We are all the Ocean Generation. Join the movement.

www.oceangeneration.org



MENA Oceans

SUMMIT & EXHIBITION

Blue Economy | Blue Governance | Blue Science | Blue Collective

📅 June 8 - 9 2023

To mark the occasion of World Oceans Day

📍 Hilton Dubai Palm Jumeirah, UAE

Under the patronage of

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