RED SEA NIGHTS
RICHARD ASPINALL EXPLAINS WHY HIS LOVE OF NIGHT DIVING REMAINS

Q&A: JAKE DAVIES
WE CHAT ABOUT ANGEL SHARKS, UK DIVING AND FILMING

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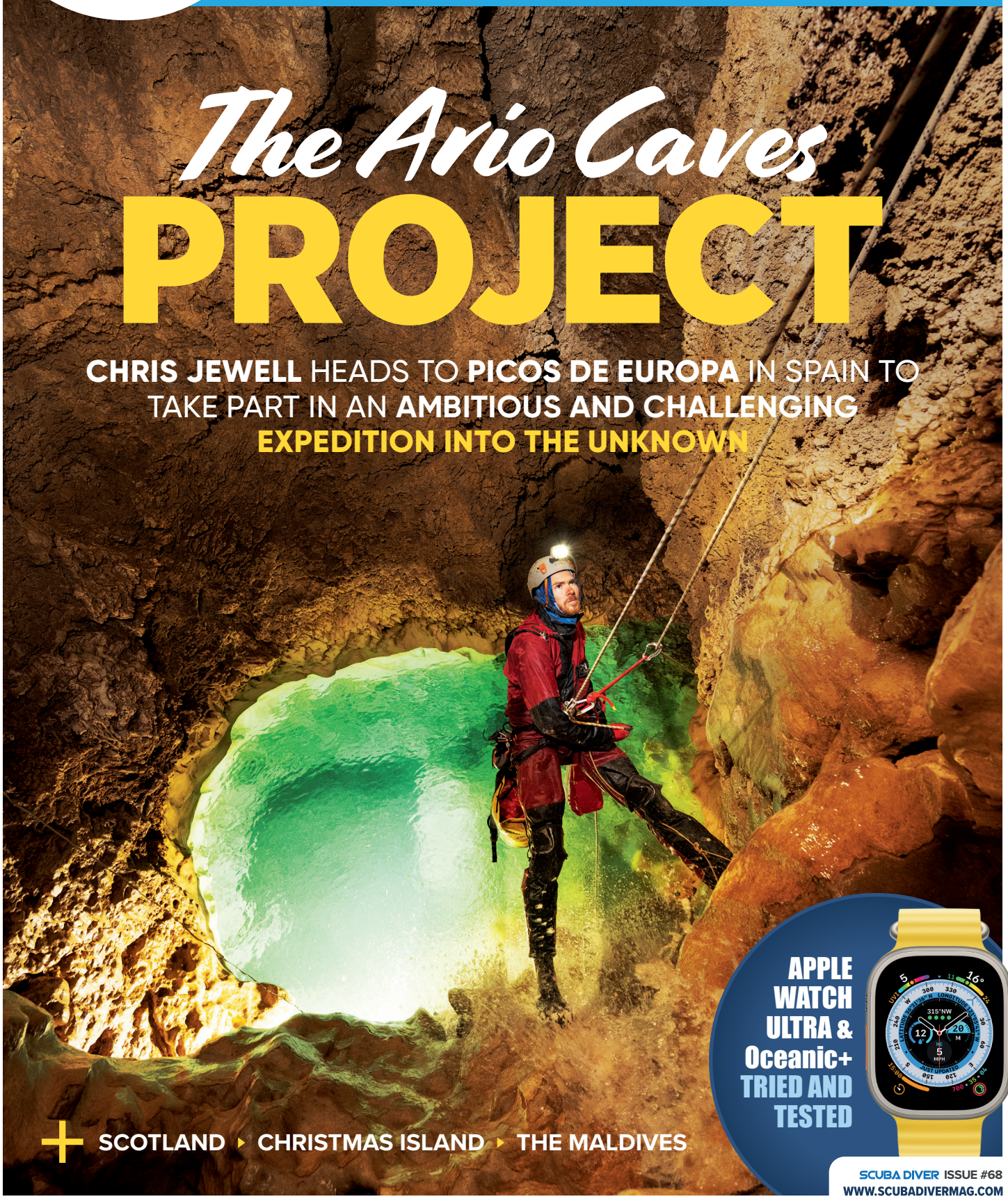

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PUBLISHERS
Rork Media Limited
71-75 Shelton Street, Covent Garden, London, England, WC2H 9JQ

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Times are changing and to keep the magazines free, we're asking dive stores to cover their own postage costs. If you enjoy reading the magazine, think about helping out your centre with a small donation to help cover their costs. Your continued support is most appreciated.

A NOTE FROM THE EDITOR



Apple take a bite of the dive computer market

The news that the mighty Apple had made their latest smartwatch, the Apple Watch Ultra, a dive computer via an app (through a strategic partnership with dive powerhouse Huish Outdoors) is certainly amongst the biggest developments in diving in a long time.

Oddly, the announcement was met with some extremely negative comments on social media. Many railed against the fact that the dive computer app only operates to 40m, but it is firmly aimed at the recreational diver, and many of these don't pass 30m, never mind getting close to 40m. Others commented on how the digital crown and buttons wouldn't work with gloves on when they hadn't even seen the Ultra in the flesh (for your info, they do work with thick neoprene gloves and even drygloves with no issue).

I am of the opinion that the fact Apple has included dive computer functionality into something they sell upwards of 35 million units per year is a major plus for the global diving industry.

Turn to page 72 for our take on the Apple Watch Ultra and the Oceanic+ app. I was among a select few who got to dive the new app before it went on general release on 28 November, and I took it for several dives to see how it stacked up as a dive computer, and how it faired against established rivals.

Have a Merry Christmas and a prosperous New Year, and what better present to get the diver in your life (or maybe drop a big hint for yourself...) than a subscription to Scuba Diver? Have the UK edition delivered straight to your door 12 times a year for just £30! Just head to the website - **www.scubadivermag.com** - and look for 'print subscriptions' under SHOP.

Mark Evans, Editorial Director

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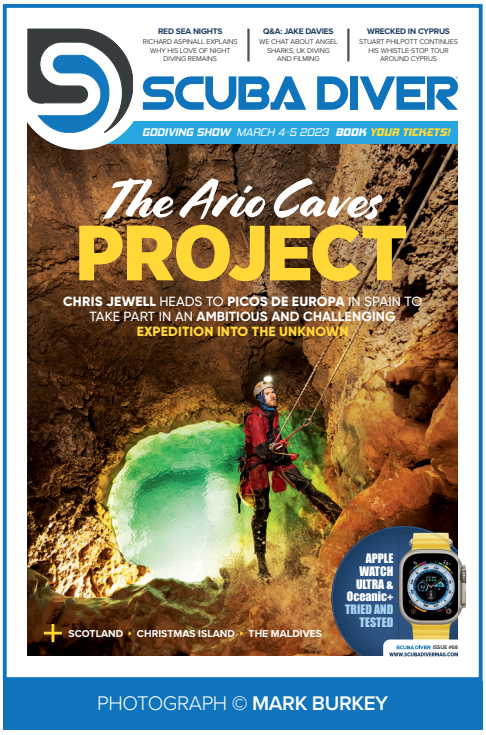

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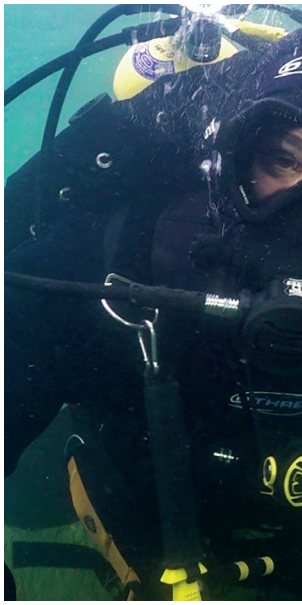



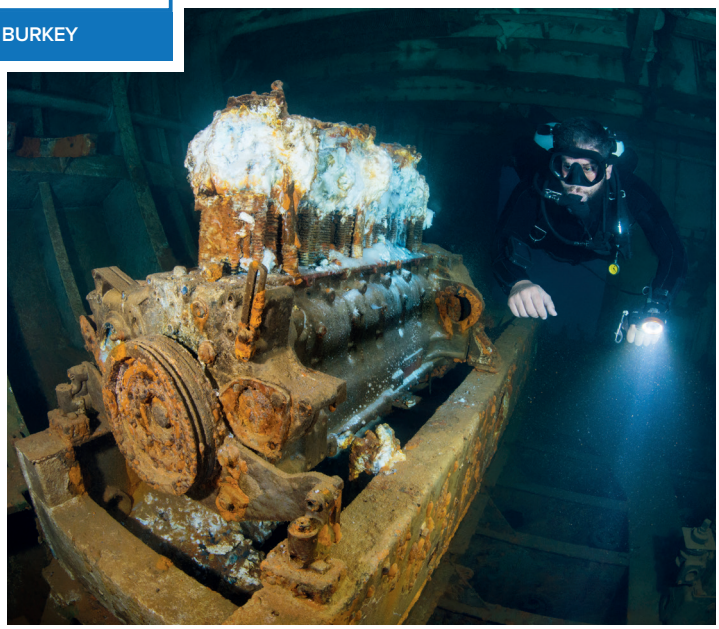



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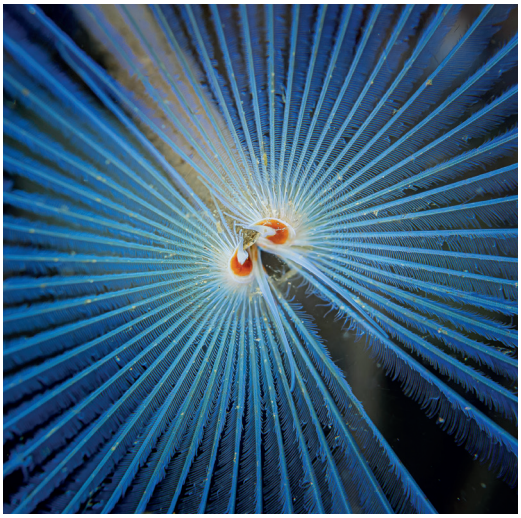





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CORNWALL CONSERVATION HEROES WIN NATIONAL AWARDS

Two marine conservationists from Cornwall have been recognised for their achievements in a national awards ceremony

Matt Slater, a marine conservation officer for Cornwall Wildlife Trust, was announced as the winner of the 2022 National Biodiversity Network (NBN) Award for marine wildlife recording. Kate Williams, a volunteer for one of Cornwall Wildlife Trust's marine projects, was also named as runner-up in the same category.

Both were presented with their prizes at the Natural History Museum in London on Wednesday 9 November, following the culmination of the annual NBN Conference.

Matt Slater

Matt, who began working at Cornwall Wildlife Trust in 2012, is the Seasearch co-ordinator for Cornwall and the Isles of Scilly. The nationwide project, led by the Marine Conservation Society, was set up to train recreational divers and snorkellers to record the marine life and habitats they encounter.

To date, Matt has overseen the collection of over 30,000 records – all of which are submitted to the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS). Matt is also an active recorder, personally contributing over 5,000 Seasearch records over eight years.





In 2019, he pioneered the national #HandsOffOurCrawfish campaign on behalf of Cornwall Wildlife Trust, which calls on divers to pledge not to catch crawfish – also known as the European spiny lobster – following their dramatic comeback after being overfished in the 1960s and 1970s.

In addition to Seasearch, Matt also runs Shoresearch Cornwall, which has carried out hundreds of rockpool surveys and has trained over 200 volunteers in its ten-year history, as well as the Cornwall Good Seafood Guide.

Reflecting on his achievements, Matt said: "I have been fascinated with marine life all my life and recording is something that comes naturally. I love how every dive, snorkel or rockpooling session still yields animals and seaweeds that I haven't seen before, despite having been doing this for so many years!

"I was completely shocked when I heard the news! I must thank the many people I've worked with along the way – volunteers, colleagues, funders and partners who have made a huge difference in helping us to monitor changes in our seas and fight for better protections."





© Cornwall Wildlife Trust, NBN Trust and Sue Sayer / Seal Research Trust

Kate Williams

Kate Williams, who lives in Illogan, was named as runner-up in the NBN Award's marine category for her volunteering efforts with Cornwall Wildlife Trust. She was honoured for her outstanding contribution to Seaquest Southwest – a land-based citizen science project which supports over 150 trained volunteers to record marine megafauna, such as dolphins and whales, around the county.

Since 2013, Kate has carried out over 400 surveys for the project, equating to 829 hours of effort and over 50% of the records in the project's database.

Kate's records of a rare, inshore pod of bottlenose dolphins have enabled Cornwall Wildlife Trust to build up a picture of their population status and key breeding and feeding sites in the South West. As a dedicated recorder, Kate is also a key volunteer and Photo ID Co-ordinator with the Seal Research Trust, monitoring regional grey seal movements.

Kate said: "The Seaquest Southwest project gives me the opportunity to share my love of wildlife with people of all ages which is great fun. Everyone always wants to talk about the first time they saw dolphins!

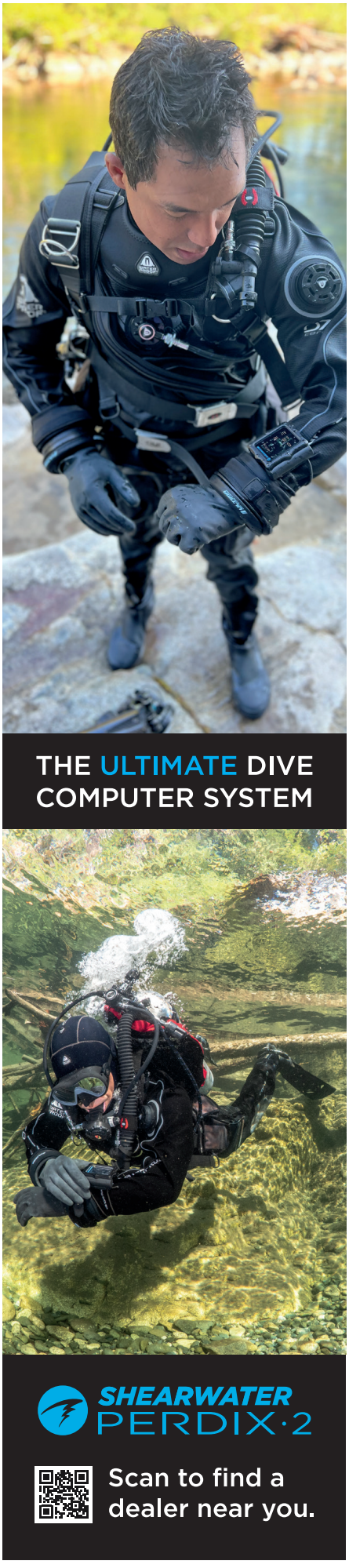
"Collecting data on our wildlife is the only way we will be able to understand, conserve and protect it."

Lisa Chilton, Chief Executive Officer of the NBN Trust, said: "Well-deserved congratulations to both Matt Slater and Kate Williams, the winner and the runner-up of the 2022 NBN Award for Wildlife Recording – Marine.

"As Seasearch coordinator for Cornwall for over eight years, Matt has overseen the collection of over 30,000 marine records that have made their way to our data portal, the NBN Atlas. With his boundless enthusiasm, he has established successful initiatives for recording all marine species, and especially crawfish – a species of particular concern in Cornwall.

"Kate, who has been volunteering for nine years with Seaquest Southwest, has carried out over 400 land-based surveys of seals, dolphins, sharks and whales at 35 different sites around Cornwall, generating over half the wildlife records in the project's database!

"They have both made a huge contribution to our knowledge of UK marine species and we are delighted to be recognising their exceptional work with these Awards."



GHOST FISHING UK GOES 'POTTY' FOR PLASTIC

The ocean conservation charity Ghost Fishing UK has teamed up with award-winning innovation Ocean Plastic Pots, in the first recycling initiative of its kind in the UK.

The charity consists entirely of volunteers, most of whom are scuba divers who give up their free time to survey and recover lost fishing gear. Despite several initiatives on the continent, meaning shipping filthy fishing gear across Europe for sorting, cleaning and recycling, the charity were keen to find a solution on their home soil.

In a stroke of luck, charity trustee Christine Grosart came across Ally Mitchell at work and the idea grew. Glasgow-based Ally had been involved in the salvage of tonnes of plastic pieces from a grounded vessel off the coast of Scotland. He wanted to see if he could make something from the plastic waste. After a few experiments, Ocean Plastic Pots was born.

Ocean Plastic Pots has since won awards at the Chelsea Flower Show and were also recipients of a Prime Minister's Points of Light Award for Sustainability and innovation.

Christine explains; "Ally was a saturation diver – a deep sea diver working in the North Sea. I was the medic on board the same dive vessel and to me, he was just another diver. That was until everything changed when one day he asked to speak to me – in his high-pitched, Mickey Mouse voice caused by all the helium he was breathing at 150m!

Luckily I speak 'helium' and he was insanely excited to tell me all about this new idea he had about turning fishing nets into plant pots.

"His business was still in its infancy, but we were super keen to send some of our polypropylene nets his way.







They had been recovered from the ocean by the volunteer divers of Ghost Fishing UK and stored, awaiting a recycling pathway.

"No such pathway existed in the UK at the time and only specific types of material were being accepted for upcycling – and that had to be shipped across Europe. This meant that the large majority of our nets could not be recycled. Until now."

Polypropylene was the waste material from lost fishing nets that nobody wanted. But to Ally, it was extremely valuable and his plant pots are made entirely from polypropylene. He took the lion's share of the haul of ghost nets that Ghost Fishing UK recovered from 2021, which comprised 16 survey and 19 recovery dives, resulting in 180 individual dives by the volunteers.

Approximately 1,000kg of ghost gear was recovered by the team in 2021 and a staggering 1,840kg this year.

The Ghost Fishing Uk volunteers are poised to undergo another mammoth effort sorting and cleaning the nets they recovered this year, ready for recycling and transformation into yet more award-winning plant pots.

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NEW CAVE DIVING RECORD FOR **KAREN VAN DEN OEVER**

South African Karen van den Oever has extended her previous Guinness World Record for women›s cave diving, descending on open circuit to a monster 246.65m in the depths of Boesmansgat Cave.

She broke her previous cave diving record, set back in 2021, by more than 10m during the dive on Thursday 27 October.

South Africa's Boesmansgat Cave is a legendary deep-diving site, with Nuno Gomes setting his own world record when he descended to the very bottom – a whopping 283m – back in 1996.

RECORD-BREAKER RAY WOOLLEY **DIES AGED 99**

Ray Woolley, the inspirational diver who held the record for being the world's oldest active scuba diver multiple times, has died aged 99.

The great-grandfather, who in 2019 broke his own world record as the world's oldest active diver for the third year running when he dived to 42.4m on the Zenobia wreck in Cyprus, had clocked up an impressive 62 years of scuba diving in his lifetime.

Ray was a World War Two radio operator originally from Port Sunlight in the northwest of England, who settled on the Mediterranean island for many years. He only started diving shortly before turning 40, so it just proves there is no such thing as being too old to get into scuba diving!



RED SEA AGGRESSOR III **SETS SAIL IN EGYPT**

The Aggressor Adventures fleet has expanded in the Egyptian Red Sea with the arrival of the luxurious Red Sea Aggressor III.

The Red Sea Aggressor III – aka the well-regarded Hammerhead II – is a spacious 42 metre long by nine metre beam motor yacht. Diesel powered, she can cruise at 10-12 knots comfortably, has 220-volt power, and was built with safety and stability in mind.

The vessel has accommodations for 24 guests, including 12 large staterooms each with independent air-conditioning, ensuite head and shower, porthole view window, mirrored cabinet, 32-inch flatscreen (with a selection of 400 movies) and hairdryer.

The Red Sea Aggressor III has three master staterooms each with a queen bed, eight deluxe staterooms each with two twin beds, and one suite with a full bed.

There is also a spacious salon, large sundeck with plenty of shade from the Egyptian sun, hot tub, chaise lounges and deck chairs, and a bar for apres-dive refreshment.

It has no less than three tenders, two 6.5 metre and one five metre.







The Red Sea Aggressor III operates from the Port Ghalib yacht marina and resort, and trips run from Saturday to Saturday. Itineraries include the Brothers and Daedalous, and a trip incorporating Daedalous with St Johns.

You can, of course, combine the trip with a sail down the Nile with Aggressor River Cruises, which goes from Luxor to Aswan.

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MISSING FARNES DIVER'S BODY **FOUND OFF NORWAY**

A body wearing a drysuit recovered from the sea off Norway this summer has been identified as a British diver who went missing off the Farne Islands in October 2021.

According to Dykking Magazine, investigation manager Kjell Arne Sandal from Mandal Police Station said that the man, who was recovered from the sea near Lindesnes Lighthouse – several hundred miles from the UK – was identified after using DNA, which was matched against missing persons cases in other countries via Interpol.

The DNA matched exactly with the diver in his 60s who was reported missing at 12.45pm on Sunday 17 October 2021 after a dive at Longstone Lighthouse on the Farne Islands off the coast of Northumberland. As reported by Scuba Diver at the time, the missing diver report initiated a multi-agency search involving lifeboats from Amble, Craster, Seahouses and Berwick, Coastguard helicopters from Prestwick and Hull, Maritime Coastguard Rescue, the police and local charter vessels and dive boats. The massive operation was stood down at 1pm on the Monday after a fruitless search. Sandal said that the man's relatives in England have been notified by British police.

CLARE DUTTON 'ONE OF 100 FEMALE ENTREPRENEURS TO WATCH'

Clare Dutton, the innovative and energetic Director of Duttons Divers, has been voted as one of the 'top 100 female entrepreneurs to watch' in the UK – a huge achievement, emphasising her dedication and commitment to the dive industry and growth of the business.

Clare Dutton started to dive at the age of 18, and once qualified as an instructor, decided to start her own business. Having no funds to do so, she took out a business loan to purchase three sets of equipment and a trailer to travel the UK and teach. With a garden shed as a storage unit and bathroom as a drying room, Duttons Divers was born! Since then, Clare became the youngest PADI Course Director at the time, and has developed the business into a well-established and renowned UK dive chain.

With two dive centres – Vivian Quarry, Llanberis and Hafan Marina, Pwllheli – and two dive boats, Little Viv and Sea Quest, the business offers high-quality equipment and facilities to offer bespoke training and guided dives. Clare Dutton has now been flagged in 'The Commended' ranks of the 100 Female Entrepreneurs to Watch list, collated by Telegraph Media Group and NatWest.

Clare Dutton says: "I am extremely honoured to be selected as one of 100 top female entrepreneurs in the UK. I have devoted a lot of time to develop the business since starting, and have always striven to ensure that it is at the highest level it can be, whether that be acquiring top quality equipment, having our own facilities or to just showcase North Wales. It's great for this to be recognised and fuel the passion to develop this even further."

"Its definitely not been easy, and I am sure it never will be because, as I will always want it to develop and not just settle. The ridiculously late finishing, working out accounts, marketing, and every other element of a business is massively stressful at times... but then stepping back and seeing what it has all achieved makes it worthwhile."

NEW NORTH WALES DIVE BOAT FOR 2023 SEASON



Duttons Divers has now added a second dive boat to their 'fleet' – Sea Quest.

Duttons already offer guided shore and boat dives around the North Wales area, with their current dive boat, a 7-8-metre Ballistic RIB named Little Viv, taking divers around the Llyn Peninsula. The area offers an array of marine life and a variety of dive sites, including wrecks, caverns, scenic wall dives and, of course, the colony of curious seals at the Tudwals Islands. New hard boat Sea Quest has a diver capacity of ten, which can be booked as a single diver or as a group charter booking. The boat has toilet facilities, a kitchen for refreshments between dives, and dedicated storage areas for kit.

Clare says: "We are extremely excited for the addition of Sea Quest. Little Viv is a great asset to our activities, but now being able to offer dive space only trips too for divers to explore the stunning area around here will make it even better. "The dive sites within this location offer something for all levels of diver interest, from shallow interactions with the seals to deeper wrecks with tonnes of history. We are all very excited for the 2023 season!"
Duttons are now taking bookings for the 2023 season.
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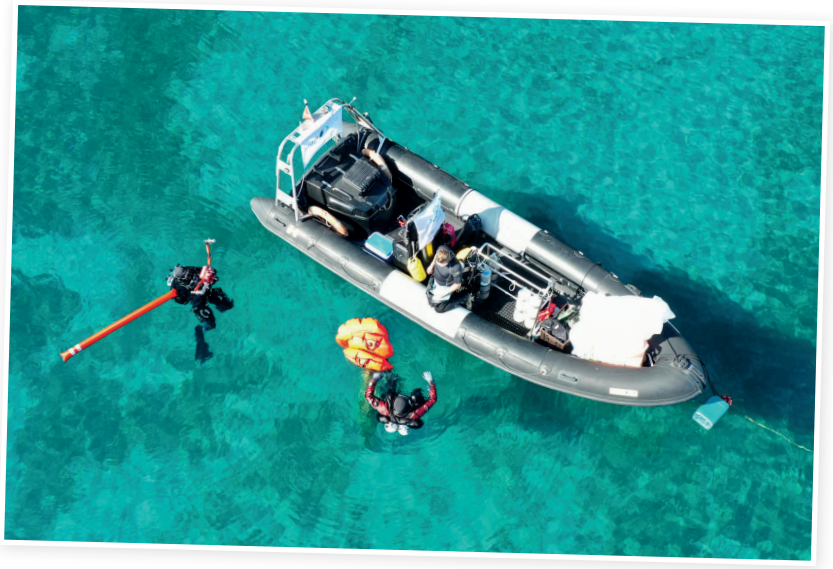
DRONES TARGET **GHOST NETS**



Led by conservation biologist Dr Sol Milne and Ghost Diving Greece Co-ordinator Nikos Vardakas, the research project 'Coasts Untangled' aims at developing aerial surveying methods to better see into water with rugged and complex bottom topography – coupled with scuba-diving transect surveys – in order to locate ghost nets, ultimately aiding their removal.

The project is supported by Ocean Conservancy's Small Grants Programme – Global Ghost Gear Initiative.

In October 2022, the first ghost net, a gill net measuring 10 metres, was retrieved with the use of this methodology, in Greece's Attica region. gill nets are designed to hang in the water, with weights on the bottom and small floats on the top, suspending it in the water column. When they are lost in the seas and oceans, they indiscriminately catch all kinds of marine life, condemning them to a slow and painful death.

This is a first of its kind achievement not only in Greece, but worldwide for Ocean Conservancy's Global Ghost Gear Initiative, as well as for Ghost Diving, the 'Coasts Untangled' main partner.



© Dr Sol Milne and Nikos Vardakas



"Great to see a plan come full circle. We found this gill net during a drone survey on Patroklos Island. It was lost or discarded by fishers and caught on the rocks where it could cause entanglement of wildlife. Using co-ordinates from the drone image, we went out and collected it," says Dr Milne.

The effects of lost fishing gear are wide-reaching and notoriously difficult to quantify. It is estimated almost 200,000 tonnes of fishing gear are currently moving freely in subtropical gyres alone, threatening marine wildlife and the ecosystems where they accumulate.

Fishing nets are usually made of plastic and do not biodegrade, accumulating in the sea for hundreds of years all the while losing tiny particles called microplastics that end up in the stomachs of fish and our own food chain.

In the first phase of the project, the team surveyed a total area covering 15 square km of coastline across 17 sites, collecting 25,790 images, which are being analyzed for the presence of nets and plastic debris. Once images were collected, divers conducted underwater transects, traveling up to 2km along sites that had been surveyed by drone, recording all the way along in search of lost fishing nets.

With the introduction of more data, the methodology that surprisingly enough has its roots in orangutan research, is continuously being further developed. The research team hopes to expand this effort into new regions, exploring how aerial monitoring can be used to combat marine pollution globally in the upcoming years.

Once the ghost net was brought back to land, the weights and floats were removed so that the plastic material can be recycled. The Healthy Seas organisation ensures that ghost nets recovered by Ghost Diving teams around the world become a new resource. Nylon nets are regenerated together with other nylon waste to produce ECONYL yarn, the basis for new products such as socks, swimwear, accessories, carpets and more.

DIVE & DIG RETURNS FOR **SECOND SERIES**







Podcast series Dive & Dig returns for a second series, and will be exploring more maritime archaeology of the ancient world, from the Stone Age to the Roman period, over its five episodes.

Presented by historian Professor Bettany Hughes, and maritime archaeologist Dr Lucy Blue, join the duo on Dive & Dig as they journey across the Mediterranean and the Red Sea to explore one of the world's largest archaeological digs, in Yenikapi, Turkey, the oldest underwater settlement in the Aegean off Greece, the world's oldest artificial harbour at Wadi El Jarf in Egypt, ancient shipwrecks lost beneath the waves off Cyprus, and a sunken Roman city lying off Baia in Italy.

Each episode focuses on a key site, from submerged prehistoric settlements to ancient shipwrecks, telling the stories of how people interacted with the sea, and what the archaeological remains can reveal about our ancient past.

This podcast has been developed by the Honor Frost Foundation, a charity that promotes and funds maritime archaeological research, with a focus on the eastern Mediterranean.

The Foundation was founded with a major bequest from the late Honor Frost, a pioneer in the world of maritime archaeology and the first female underwater archaeologist. Whilst diving on shipwrecks in France in the very early days of scuba, Honor came to realise that these archaeological sites could be recorded and investigated to the same standard as archaeological sites on land.

Over the next 50 years, she played a pivotal role in the development of the field of maritime archaeology, researching shipwrecks, harbour sites and landscapes now lost to the sea. The Foundation continues her legacy by supporting research, training and education in the field.

Dive & Dig is available now on all major podcast platforms, including Spotify, Apple Podcasts, Google Podcasts and the Honor Frost Foundation.

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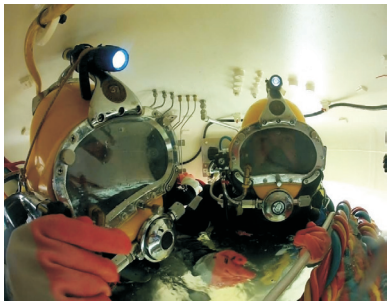

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Ask DAN

DAN medical specialists and researchers answer your dive medicine questions



In-water recompression

Q: In the absence of a recompression chamber, does DAN recommend treating a "bent" diver with in-water recompression?

A: DAN does not recommend that symptomatic divers be recompressed while breathing standard air in the water. In some areas of the world, divers are treated with in-water recompression because of a lack of chamber facilities.

At one time, divers were treated in recompression chambers using the U.S. Navy treatment tables and breathing air instead of oxygen. The failure rate was high. It is unlikely that in-water recompression using air is more effective than those old treatment tables. In-water recompression with the diver breathing oxygen instead of standard air has been used successfully in some areas.

However, in-water recompression has its own dangers and should not be attempted without the necessary training and equipment, or in the absence of someone who can assess the diver medically. The resources required for in-water recompression usually exceed the ability of those at the scene to properly assist the injured diver.

In-water recompression of any type is not currently recommended by DAN.

Raynaud's Syndrome

Q: I've recently been diagnosed with Raynaud's Syndrome. I'm an avid diver. Can I continue diving?

A: Raynaud's Syndrome decreases effective blood flow to the extremities, most significantly fingers and toes; this results in cold, pale fingers and toes, followed by pain and redness in these areas as blood flow returns. The underlying problem is constriction of the blood vessels in response to cold, stress or some other phenomenon supplying these areas. Symptoms are often mild.

Raynaud's phenomenon may occur as an isolated problem, but it is more often associated with autoimmune and connective tissue disorders such as scleroderma, rheumatoid arthritis and lupus. Raynaud's Syndrome poses a threat to a diver who is so severely affected that he/she may lose function or dexterity in the hands and fingers during the dive. If coldness is a trigger that causes symptoms in the individual, immersion in cold water will likely do the same. These individuals should avoid diving in water cold enough to elicit symptoms in an ungloved hand.

The pain may be sufficiently significant that, for all practical purposes, the diver will not be able to use his/her hands. Less severely affected individuals may be able to function adequately in the water. Calcium channel blockers may be prescribed for individuals with severe symptoms; lightheadedness when going from a sitting or supine position to standing may be a significant side effect.

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Did you know?

A diver propulsion vehicle (DPV) course will teach you how to properly and safely pilot a DPV in the water.

After four days I left Dhigali bound for neighbouring resort island, Alila Kothaifaru. I was looking forward to seeing dolphins during my 20-minute speedboat transfer but hadn't accounted for the unpredictable weather at this time of year. We sped towards a dark unsettled sky and moments later hit the incoming squall.

Heavy rain reduced surface visibility to near-on zero and the smooth sea instantaneously whipped up into giant rollers. It really was one of those 'glad to be back on land' moments as I stepped onto the jetty.

Alila Kothaifaru five-star resort opened in May 2022. They offer 80 rooms all with private pools on a half- and full-board basis. Seaplane transfers from Malé take around 45 minutes each way. I met up with Swiss GM Alex and he explained that they had tried to keep the island as natural as possible and 'merged' the resort into the surroundings. Alex is very keen on promoting environmental sustainability.

I was booked into a sunset water villa located ten minute's walk from the main reception area. Alila operate what they call a 'butler' service whereby a member of staff plus buggy is assigned to each room for the duration. This was a new experience for me as I am usually left to wander the resort at my own devices. If I needed to be picked up, had any questions about the resort, even checking out and paying the bill, Alla via Whatsapp was my first point of contact. I didn't visit reception at all during my stay.

Alla drove me through the dense undergrowth to the water villas located on the opposite side of the island. I have to concede my room had the most-spectacular view. Through the double-width full-size glass windows I could see waves breaking over the shallow reef on the left-hand side, an uninhabited palm-fringed island directly in front of me and Alila's white sandy beach stretching out on the right-hand side. This really was a picture-perfect view to die for.

> "Even though it wasn't manta season, Egor suggested a visit to the local cleaning station Solar Corner, just so I could see how spectacular the site looked"

The villa came equipped with a plunge pool and wooden deck area complete with sofa and sun loungers. There was also a set of steps leading down to the sea for swimming or snorkelling. Alla said the rooms had only recently been finished so I was one of the very first guests to take it for a 'test drive'. I did find a few minor issues with the fixtures and fittings, but they were quickly resolved by the attentive staff. On my last day there was a power cut and I got moved to a beach villa. Even though the room spec was very similar, I can honestly say the view didn't have the same 'wow' factor.

Alila has two on-site restaurants and two bars. Seasalt is the main restaurant which serves a la carte breakfast, lunch and dinner. I spoke to the F & B Manager and they may change to a buffet-style breakfast sometime in the future.

There was already an area set aside in the restaurant, I think they were just waiting for occupancy numbers to increase. Outside the restaurant is a huge Olympic-length swimming pool surrounded by loungers and sun shades. This looks out onto a small uninhabited island which is used for afternoon picnic excursions.

MEGA MALDIVES TOUR

Stuart Philpott is never one to shy away from a challenge, and bouncing between four different resorts and three atolls in the Maldives in just 16 days was right up his alley. Here he continues his adventure with a visit to Alila Kothaifaru

Photographs by Stuart Philpott





Did you know?

The Maldivian archipelago is home to five of the seven species of sea turtles; green, hawksbill, loggerhead, olive ridley and leatherback.

Umami located on the other side of the island served up Japanese cuisine. The Yakitori bar sits right next door. This was the go-to bar for pre-dinner drinks. I discovered an exciting selection of sake-based cocktails on the menu. It was a tough job but I managed to work my way through a good number during my stay! Every day between 3-4pm, the Pibati café serves up a unique tea-making/tasting experience. I got to pick a number of different ingredients from the trolley and make my own special brew.

Egor Sidorov manages the Euro-Divers Dive Centre. I briefly met Egor at Vilamendhoo last year. This was his first commission as dive centre manager. As well as being a top rate PADI instructor, Egor is a true film buff and knows everything there is to know about movies. The main dive centre is located on the beach and there's an equipment storage area with dunk tanks, etc, on the jetty. The dive boat is a classic-looking Dhoni and can comfortably carry 12 divers. Egor said they also have two speedboats that can be used for private hire. There are around 30 dive sites on offer. Boat journey times are between ten minutes and an hour. As standard they use 11-litre aluminium cylinders. Nitrox is free of charge. Special sites include Lundufushi Thila for leopard shark encounters and Vadhoo Corner for green turtles. There is also a world-famous manta cleaning station called Solar Corner ten minutes boat ride away. The resort doesn't have a proper house reef but they do offer regular snorkelling trips, including visits to UNESCO site Hanifaru Bay for manta encounters.



Massive shoal of snapper

> "We did a full 360-degree circumnavigation of the Thila and then cut through the steep-sided canyons colonised with sea fans and soft corals"

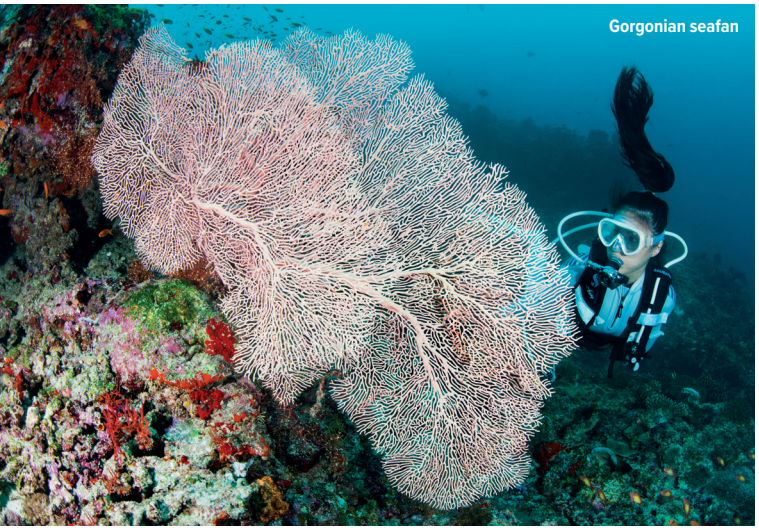


Dhoni dive boat





The reefs teem with life



Gorgonian seafan



Expect to be enveloped by fish

The brand-new dive centre was still finding its feet during my visit, but Egor said they would soon have a resident marine biologist/instructor offering courses on coral reconstruction, mantas and marine life in general. They would also be giving presentations at the resort during the evening. It was great to see Jennifer Foo helping out at the dive centre. I met Jenny on my three-resort extravaganza last year. She is usually based on Meeru and looks after media operations for Euro-Divers Maldives. Jenny had brought along her famous white suit, BCD and fins and just to add to the effect, we fired up the SUEX scooters for a day which also happened to be white! Put Jenny's long dark hair into the mix ae well and I had the makings of some great-looking underwater pictures.

On our first outing we were joined by a couple from New York who had booked onto a PADI Advanced course. Egor took us to a site called Goboshi, which was about 30 minute's boat ride from the jetty. This may have been a good spot for navigation exercises but not for photography. We finned along the reef for an hour and saw a few solitary sweetlips, snapper and a passing turtle, but not much else to write home about.

There was an absolute ripping current at the second site, Miyaru Giri. Again, not so good for photography as I was hanging on for dear life most of the time. We finned into the current for as long as possible and then drifted back. We managed to duck into a few overhangs that were occupied by grouper, snapper, sweetlips and a moray eel. Ironically the best spot happened to be back where we entered the water at the beginning of the dive. We found some deep gullies at 20m full of yellow snapper and a number of patrolling reef sharks.

The Raa Atoll still has many undiscovered Thilas. Egor said that during an exploratory expedition with Alex, the GM, he had found an untouched Thila at a max depth of around 30m. He named this site 'the secret place'. We quite often encountered strong currents on our dives so negative entries and fast descents are a necessity otherwise there's a chance of drifting past the dive site. When we reached the Thila I could see plenty of marine life action, including sharks, eagle rays and turtles. There were so many schooling fish and the seabed was alive with vibrantly coloured soft corals.

Crinoid on the vibrant reef

Even though it wasn't manta season, Egor suggested a visit to the local cleaning station Solar Corner, just so I could see how spectacular the site looked. I thought this was a little sadistic to taunt me with one of the best-known cleaning stations and have a near-on zero percent chance of seeing mantas, but went along with his plan. Both Jenny and I were using the SUEX scooters. They are a little tricky to use when holding a camera but the benefits definitely outweigh the pain. I came up behind a turtle and I'm sure it did a double take when it realised I was still following. We sped off towards the corner and on the plateau, where the mantas would normally be cleaned, there were thousands upon thousands of blue stripped snapper and goatfish circling. We stayed here for at least 15 minutes sweeping in and out of the shoals. In front of the plateau at around 30m, I found around 40 or more sweetlips. They were a little agitated by the scooters, so I had to approach using fin power alone. I must confess Egor was right, watching the mantas flying over the shoaling fish must be an amazing sight.

For my last dive we planned a return visit to Labyrinth. Unfortunately, Jennifer had fallen ill so I had to make do with Egor in my pictures. The current was really racing so I was glad we were using the scooters again. We did a full 360-degree circumnavigation of the Thila and then cut through the steep-sided canyons colonised with sea fans and soft corals. Schools of snapper hugged the reef top while a huge ball of fusiliers was being picked off by a number of fast-moving trevally. We found 20 or more batfish taking refuge behind a coral head. While Egor was whizzing backwards and forwards, I managed to get a few close up pictures and some video footage.

Throughout my brief stay at Alila I was constantly dodging rain showers so didn't feel as though I had experienced its true potential. Everything looks much better in the sunshine and this had unfortunately been in very short supply. The Hyatt-owned resort had only been open a month so there were still a few finishing touches on the go as well as some minor repair work. The Euro-Divers Dive Centre was up to the brand's usual high standard. Having a manta station just ten minutes boat ride away was a massive attraction and there were so many underwater Thilas still waiting to be discovered. I was extremely impressed with what I did see during my brief stay.

I packed my bags and prepared for the journey ahead. Finally, the weather forecast was looking more favourable. Fingers crossed my visit to the LUX resort in the South Ari Atoll would yield better results. I might even get a suntan! ■



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SCUBA DIVER Q&A

JAKE DAVIES

We chat to North Wales-based marine biologist, freelance underwater videographer and HSE pro diver about the challenges of filming in UK waters, and his work with angel sharks in Wales

Photographs courtesy of Jake Davies

Q: As we always do with these conversations, how did you first get into diving?

A: My diving started back in 2015, where for years I had spent summers snorkelling the bays of the Llŷn Peninsula but longed to head below the surface to experience the underwater world for prolonged periods of time as seen on many TV programmes. I wasn't sure where to start and what was required, but I then came across a local BSAC dive club on the Llŷn Peninsula, which was the Llŷn Sub Aqua Club. I got in contact and booked a try dive during a club evening at the local pool.

I clearly remember the exciting moment of donning the gear and taking that first breath from the regulator below the surface. It was a sense that I had never felt before, a feeling that I wanted to continue to enjoy more and more and this was just in the pool with nothing except for tiles to be seen. The thought of completing the sheltered session training and heading out into the sea became more exciting.



Jake in work mode



Spider crab aggregation

Q: When did you decide to make diving your full-time career?

A: As a full-time role I'm a marine biologist working as the Project Co-ordinator for Project SIARC (Sharks Inspiring Action and Research with Communities), where Angel Shark Project: Wales continues within the umbrella of the project. I then do freelance diving around this. The journey of becoming a freelance diver started two years after my first experience of diving. I thought that my diving career would be mainly based as a scientific diver due to the ambition of becoming a marine biologist, however, it took a slightly different route than expected.

This started by taking a GoPro underwater and after a few dives then showcasing them on social media. The clips got a lot of attention as many didn't believe the footage was from the Welsh coast, with colourful marine life and clear blue waters. This motivated me to film more and reveal more from my local area and engaging people with the marine environment. This then is where my underwater videography journey started, where previously I had never really picked up a camera or had much interest in videoing and photography. This led to the name 'JDScuba' being established and the associated social media accounts.

But this passion of showcasing the marine environment took over and shortly after I bought my first compact camera that allowed for better images and videos. A few months later I was diving at a site that I had dived many times and ended up filming footage of lesser-spotted cat sharks (Scyliorhinus canicula) mating. Knowing how rare this was to

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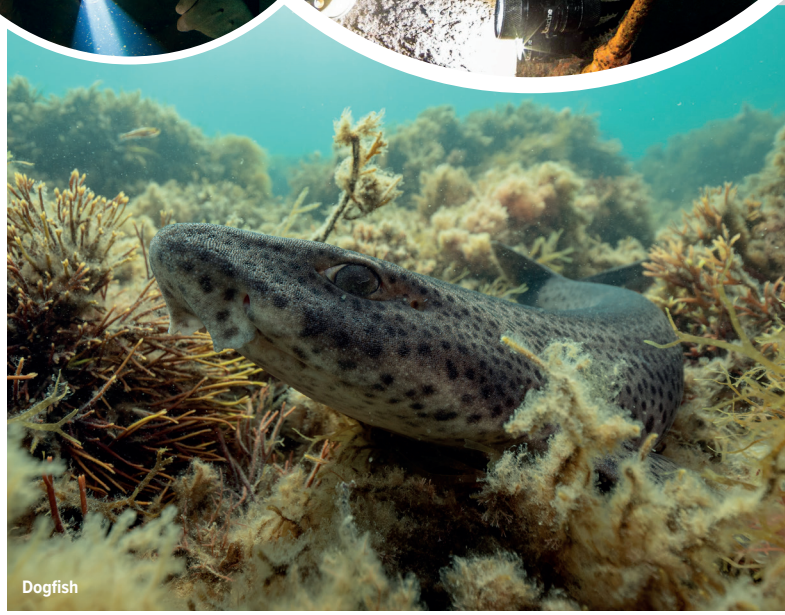
Dogfish

see, let alone film, I put it on social media and within a short time it went viral. Following this, I had my first enquiry of licensing video stock, which happened to be for an episode during Discovery Channel's Shark Week. And from there I continued to shoot and grow, and over the years it's lead to footage being filmed and featured on a range of TV shows from BBC to Disney.

Videography though was only part of the journey, in 2017, I completed my HSE Part IV (Professional Scuba) in Plymouth in January, just to make it more challenging. A course that challenged me as a diver and to this day is one the courses that I have enjoyed the most. Qualifying as HSE Diver has meant that over the years I've been fortunate to dive with many great teams in a range of different roles from media dive teams to commercial teams completing maintenance tasks in near-zero visibility. Most of the freelance diving though is done for media or scientific purposes. The variation is one of the things that I really enjoy about being a freelance diver, always keen to take on different jobs along with diving with so many great people.


Jake gets involved in all lines of work


Compass jellyfish

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> "I'm the project co-ordinator for Angel Shark Project: Wales and helped in starting the project back in 2018"

Q: You are a freelance underwater videographer – what are some of the biggest challenges of shooting in UK waters?

A: Diving in UK waters comes with its challenges, as they often say during the early days of training 'if you can dive in the UK, then you can dive anywhere in the world'. However, add a camera in the mix then there are more challenges to overcome. The first big one is the visibility. I'm fortunate to live in an incredible part of Wales on the Llŷn Peninsula however, it doesn't take much for the shallow water around the coast to churn up and become turbid, making it difficult to see marine life yet to try and film.

Q: You are heavily involved in the Angel Shark Project – tell us more about this intriguing project.

A: I'm the project co-ordinator for Angel Shark Project: Wales and helped in starting the project back in 2018. The aim of the project aims to better understand the critically endangered angel shark (Squatina squatina) off the Welsh coast. Where we work closely with fishers and coastal communities along the coast, through the engagement ▸

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over 2,200 records have been shared with the project dating back to 1812, along with many photos and incredible memories of the species. Many of these records were shared by fishers however, a handful of them have come from divers and snorkellers who have been fortunate to see this incredible species.

Q: Who would have thought that you could find angel sharks off North Wales – I've always associated them with the Canary Islands. What is it about these sharks that captures your imagination?

A: For sure, the Welsh coast isn't the first location that comes to mind when you think about angel sharks. But angel sharks have always been found along the Welsh coast as well as the wider UK. Over the last 50 years, the range of the angel shark has declined, where they were once found throughout the North East Atlantic and Mediterranean. Now they have a unique stronghold in the Canary Islands, along with populations around the Mediterranean, Wales and Ireland.

Personally, I think angel sharks are just a remarkable species and so unique in their biology and appearance. They aren't your typical shark due to their flat body and camouflage that allow them to hide within sand or mud. Then, they have this uniquely lightning-fast strike to capture prey such as fish and crabs. Seeing this strike in person is remarkable - if you blink you will miss it.

Q: What is your most-memorable diving moment?

A: I've been fortunate to dive in many locations around the world, however, by far the most memorable diving moment was seeing and filming an angel shark off the Welsh coast. Many times I had said it was impossible to film an angel shark off the Welsh coast due to their rarity and very few encounters in the water. But a bank holiday in August 2021 changed this, I had the choice to go for a dive or do some housework so I chose to go for a dive.



Jake in his element



Ready to hit the water

Hoping to see a thornback ray (Raja clavata), ten minutes into the dive I saw a tail, a tail that I had only seen in the Canary Islands. It was an incredible and shocking moment when I realised that in front of me was an angel shark, but this was made more special as it was a juvenile at around 30cm in length. After the initial shock, I then got my composure back and ensured that I got the footage that I had only dreamed of getting. It just goes to show how every dive can be different and am fortunate to have some incredible species that are found on my doorstep beneath the Welsh seas.

Q: On the flipside, what is your worst experience underwater?

A: Diving the Welsh coast brings lots of exciting dives with some pleasant conditions however, there are many dives that are dark, cold and very poor vis with less than 50cm in some cases. But, parts of the coastline also have strong currents and it's being in these locations when the strong currents pick up that provides some of those more-uncomfortable dives.

This is particularly the case for some sites on the North Llŷn Peninsula and Bardsey Island, where these currents occur and some of those locations where you get the yo yo moments that make ascending challenging, and in some cases, quite scary.



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Jake doing a piece to camera

“I’ve been fortunate to dive in many locations around the world, however, by far the most memorable diving moment was seeing and filming an angel shark off the Welsh coast”



Reviewing footage

Q: What does the future hold for Jake Davies?

A: The last few years have been amazing with so many different experiences and opportunities, many that bridge my passion of marine biology, communicating the science and wildlife. Looking ahead there are lots of exciting plans in the pipeline to continue the work as a videographer, working on a range of underwater media-based projects along with gaining more experiences in the different diving disciplines, from safety diving to light commercial work.

For the filming list, I’m aiming to continue to tick off plenty more shark, skate and ray encounters around the UK and hopefully capturing some more exciting marine animal behaviours. For training, I’m continuing in building my diving experience and am planning on moving into rebreather diving to further filming opportunities both in the UK and further afield.

Rebreather diving is something that I’ve been keen on doing for years and is the right natural progression in expanding my diving skillset and opening new opportunities.

There are also plans of doing more in front of the camera to showcase what we have around the UK coast, particularly along the Welsh coast. There’s a lot going on, but all are exciting and it’s great having the variety as it’s always nice to network and dive with new people, it’s something that I am always keen to do when heading to new locations. Equally, I am always open for divers to get in contact to come for a dive when up in North Wales. So, if you are in North Wales and fancy a dip, feel free to reach out. ■


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Red Sea NIGHTS

Richard Aspinall is a long-time visitor to the Red Sea, and while his interests have changed over the years, his love of night dives remains – and here he explains why he loves the dark

Photographs by Richard Aspinall



The Red Sea is much-loved destination for divers of all skill levels and all interests. Relaxed shore diving, exhilarating drift dives, deep wreck exploration, friendly dolphins on occasion and with luck, a shark passing by in the blue – it is an amazing destination within easy reach of the UK. No wonder many of us return year after year.

I've been on plenty of Red Sea trips over nearly 20 years, each with a slightly different focus. I'm now less interested in wrecks and more interested in shark encounters. Some photographic subjects don't interest me as much as they once did and I'm now more willing to spend a little more travelling to the remoter reefs of the south. Yet one thing remains - my absolute love of fitting a macro lens, and as the sun goes down, slipping beneath calm sheltered water for a night dive.

It's worth thinking about what is going on during the transition from day to night. The day shift is ending and many fish species that eat coral polyps – such as butterflyfish with their delicate mouths and parrotfish with their tough 'beaks' - are retiring into crevices and cracks in the reef. Individual coral polyps are safe to unfurl their tentacles into the current to feed on plankton. Animals such as small crabs - more easily picked off in the day - are climbing into the coral branches to capture food and across the entire reef, a whole host of softer, more delicate, and occasionally bizarre-looking animals are waking. Some species such as squid are emerging from the depths and some specialist hunters are seeking out prey. A reef at night is a very different place to one during the day – the scenery is the same, but the cast and crew are very different.

"Some photographic subjects don't interest me as much as they once did and I'm now more willing to spend a little more travelling to the remoter reefs of the south. Yet one thing remains - my absolute love of fitting a macro lens, and as the sun goes down, slipping beneath calm sheltered water for a night dive"



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Most fish are tucked up and resting – some like parrotfish sleep within a cocoon of their own mucous to mask their scent, while others just dive into a crack and hope for the best. Night-time is when lionfish are most active and seemingly, they enjoy our presence. Shy during the day and reluctant to do anything other than keep their dorsal spines between you and a good photograph, lionfish on many popular night-time dive sites welcome divers. It can be common to have one or even more follow you, hoping your presence and torch will spook a slumbering fish. Some divers illuminate small prey items for the lionfish to help them. This is either fun or just plain wrong, depending on your point of view.

Morays are a common feature of night dives. Much has been written of the Barge at Gubal. It's a remarkable site and if you only do one night dive on a northern itinerary, this is the one you absolutely must do! It is shallow, easy and full of life, including some very large giant morays. I love a good moray, but over the years I've become more interested in the rarer species.

There are several I've never managed to spot such as the dragon moray, but I think the honeycomb is a striking beast and capable of reaching over two metres. Smaller species such as the grey might be seen hunting during the day in shallow waters, but it's a great fish for a portrait as is the yellowhead, which has quite a 'manic' look about it.

Morays roam the reef hunting for crustaceans, fish and often octopus and if my reef guide is correct there are eight octopus species in the Red Sea. An encounter with any one of them is magical. I use my spotting light on my camera rig as my primary illumination (I have a spare torch in my BCD, just in case). I sometimes think divers choose lights which are far too bright, with the effect that all life in the area is stressed, in retreat or both. My personal experience is that a gentle light makes for better encounters with wary animals like octopus and cuttlefish. I'll also leave them be without 'zapping' them too many times with my strobes.

I usually I have a macro lens fitted at night, so I have to take a portrait rather than a 'whole animal' shot.

Cuttlefish are a great animal to encounter on a night. Often, they'll be hanging over the reef, but on occasion they will display some fascinating behaviour. Being soft bodied and on the menu of morays, they are great mimics and will 'hunker down,' holding in their arms and doing a fine job of pretending to be a hermit crab. They will even draw in their central arms and wiggle them about like a hermit crab's ever-moving mouthparts. It really is quite a performance.



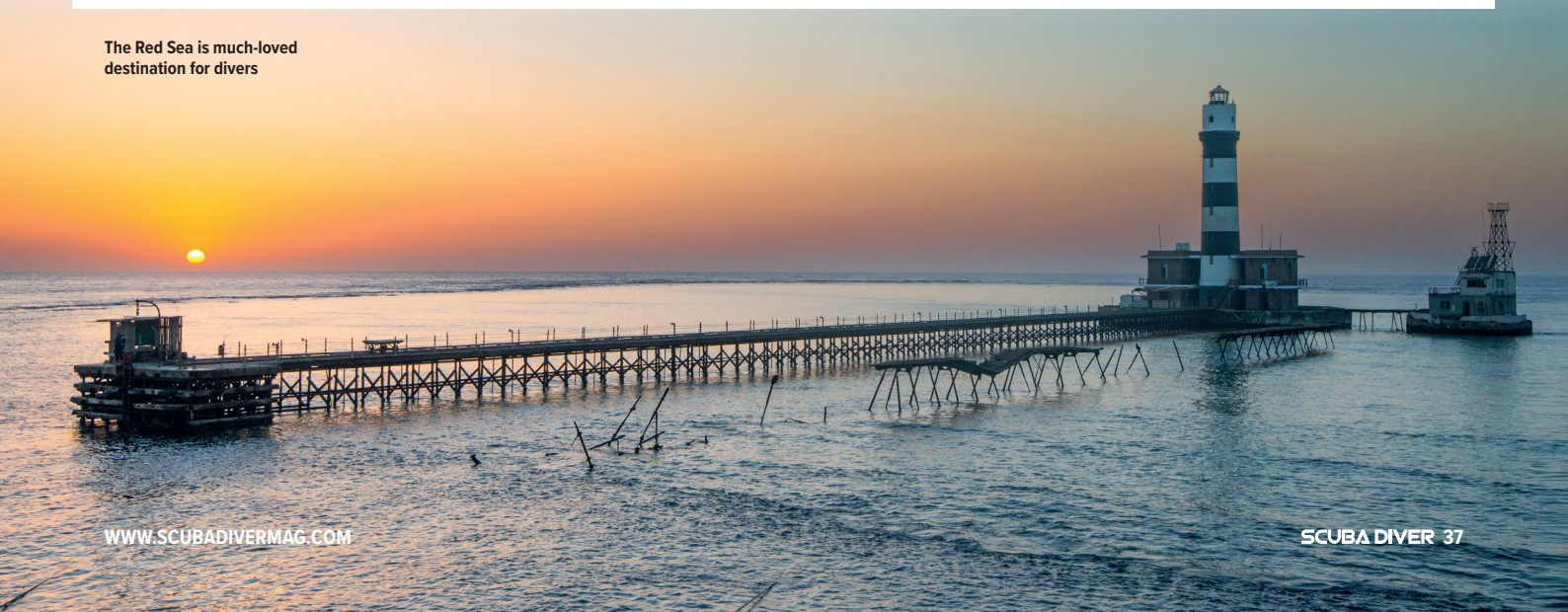
Moray roaming the reef hunting



These large hermits make great macro photography subjects with a wealth of detail

Cuttlefish mimic hermits for a very good reason. They are largely indestructible and some of them, especially the large Red Sea anemone hermit crab come with their own stinging anemones. Each time it upgrades its home – moving from one shell to another - the anemones are plucked off and repositioned. It is quite a formidable beast. The anemones feed on scraps from the crabs' scavenging and the crab has a 'cloak' of stinging cells to keep predators away.

Night-time brings many crab species out into the open. Some are scavengers roaming the reef, while others are actually fishing for their supper. Researchers have shown that some crab species choose tiny hydrozoans to grow on their carapace. They then climb into the coral where the currents are strongest and use their hydroid covering to ▸



The Red Sea is much-loved destination for divers

catch food. The hydroids have stinging tentacles that can capture plankton. It's quite a unique form of mutualism only discovered in the last few years.

The 'fuzzy' bits on this crab are hydroids which capture passing food. The crab then picks off the captured morsels.

Look closely and you can find other crabs hiding within the coral branches. While you can see coral guard crabs during the day, they do seem more easily spotted at night. They spend their lives within the branches of the coral and will defend their homes making for good macro subjects. Clearly getting so close to live coral means you absolutely must maintain excellent buoyancy and never damage the reef for an image.

While fish and crustaceans are all very well, for many people the real goal of a night-time 'critter hunt' is a nudibranch. These colourful bags of gloop with their fascinating biology and mating habits inspire and frustrate in equal measure. There is nothing worse than a nudi you've never seen before with its head tucked into the reef and only its back end on display. If you're taking photos of nudis you need the front end and the delicate chemo-sensory organs known as rhinophores or 'bunny ears' – take your pick - to be visible.

I find the commonest nudi in the Red Sea to be the Pajama Chromodoris, they're easily spotted with those bold colours that advertise their unpalatability to potential predators. The toxins are stored up in their bodies and derive from the flesh of the sponges they eat. Wart slugs, which have some of the most unpleasant names in marine biology – varicose wart slug is surely an insult? - are another common group. They're also quite large at around four centimetres so again an easy photography subject.

Clearly though, the real monarch of the Red Sea collection of nudis is the blood red Spanish dancer which revels in the wondrous scientific name of Hexabranchus sanguineus, the latter part of the binomial referring to blood of course. There is nothing quite like the first time you spot one of these.

> "Each time it upgrades its home – moving from one shell to another - the anemones are plucked off and repositioned"



Yellow Sun Coral polyps emerge at night



If you're taking macro shots – make sure to get the detail of the rhinophores in focus



A young lionfish prowls across the Thistlegorm

Your torch is flicking across the reef seeing greys, blues and muted colours, then all of a sudden – red! Not a common colour underwater! Spanish dancers as everyone knows are named after the swirling skirts worn by flamenco dancers – specifically when the animal is swimming. As I understand it a swimming Hexabranchus is a stressed and vulnerable animal, so do not make one swim! It may not find its way back to its daytime shelter.

I particularly enjoy the detail within the animal's six gills – hence Hexabranchus – if you're lucky you'll find tiny Periclemenes shrimp hiding among these feathery structures. I have yet to find these, which is just one of the many reasons why I always relish a Red Sea night dive, I'm still a long way from spotting anywhere close to the number of animals in the night shift. ■





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Mustard's MASTERCLASS

Alex Mustard turns his attention to the discipline of Close-Focus Wide Angle

Photographs by Alex Mustard

If there is one essential piece of advice in underwater photography, it is 'get close, then get closer'. It is such an essential mantra that I know several photographers who have written it on a sticker on the back of their housings.

Getting close rewards us with pictures that have more colour, contrast and clarity. Getting close with a wide-angle lens brings another benefit. The short camera-to-subject distance forces the perspective of the picture, so that the subject appears larger and it seems to pop out of the background creating an almost 3D effect. The resulting photos have high impact, especially when the foreground subject is colourful or a charismatic creature.

This technique is known as Close-Focus Wide Angle, or CFWA to its friends. And it is well worth getting full acquainted with all the details of CFWA because, for me, it is the most-important technique in underwater photography. Once we're on top of CFWA, we can produce eye-catching wide-angle shots, of most subjects, in any conditions. CFWA is a sub-division of wide angle, for pictures taken within touching distance of the subject (although we should not reach out and check). This close working distance creates unique challenges, particularly for lighting, but the extreme perspective creates big impact.

CFWA is best shot with fisheye lenses because they focus close and their unmatched, ultra-wide coverage creates the most-dramatic images. Rectilinear, aka non-fisheye, wide-angle lenses can be used for CFWA, but cannot force perspective as much. Many people think that big strobes are essential for all wide angle, but CFWA actually does not demand that much strobe power because of the close working distance. But a pleasingly soft quality of light is essential, which is hard to achieve, because the strobe light simply doesn't have the space to spread. Good quality strobes really make a difference, and we invariably need good diffusers too. The quality of light is also really improved by pulling strobes backwards, to maximise the space for it to soften. At the least, strobes should be behind the handles of the housing, if not being completely behind the line of the back of the housing. And importantly the powers and positions of the strobes need to be adjusted to ensure the subject is evenly illuminated.

If our foreground subject is parallel to camera and in the centre of our picture, then two strobes set to the same power will light it evenly. However, this would be a very boring composition. So in most attractive frames, the foreground subject will be off centre, left or right, bottom or top halves of the frame, and therefore our strobes are invariably set to different powers. The strobe that is closer to the subject needs to be set to a lower power, while the strobe that is further away must be turned up. And the closer to the subject we are, the larger this difference needs to be. In standard CFWA, our strobes usually end up with between three and five clicks difference on the power settings. This is why TTL strobe control doesn't work well for CFWA, because TTL tells both strobes to give the same amount of light, giving a poor quality of light, unless the subject is central.

For exposures we should think of CFWA images in two layers: a flash-lit foreground, and a background illuminated by ambient light. Since aperture affects both it is simplest to leave this alone much of the time. Especially because aperture also controls corner sharpness and depth of field. I usually set aperture pre-dive and change it little. Then it is just a case of adjusting flash power to alter foreground exposure, and shutter speed to alter background exposure independently. We should not be afraid of using long exposures, if necessary, in deep or darker water, and it is easy to shoot sharp images down to at least 1/20th and slower, as the foreground will remain pin sharp because of the flash.

CFWA compositions are usually most powerful as verticals, because most marine life grows upwards and the background varies much more so in the vertical than horizonal, making the picture more visually interesting. When shooting verticals, it is important to try and avoid uplighting the subject, or frying the foreground sand, which is an easy trap ▸



CFWA is the most powerful technique in underwater photography

> “This technique is known as Close-Focus Wide Angle, or CFWA to its friends. And it is well worth getting full acquainted with all the details of CFWA because, for me, it is the most-important technique in underwater photography”



Fisheye lenses are best for CFWA

> “CFWA also requires us to manoeuvre very close to subjects, and before going in to take any CFWA image we must be certain that we can do so without damaging the environment”

because these are usually the closest part of the picture to our lighting. The solution is being aware of the problem, and making sure we adjust our lighting accordingly, usually by turning down the power of the lower strobe.

CFWA also requires us to manoeuvre very close to subjects, and before going in to take any CFWA image we must be certain that we can do so without damaging the environment. It is important to accept that some subjects will always remain inaccessible and the best images come from subjects that give us space to work, so we can find the perfect angle for the composition. Small changes in the position of the camera will make big changes in the relative positions of the foreground and background in the frame.

When building a CFWA photograph we must find both an interesting subject and also an attractive background. The challenge is finding these in the same place! When I spot the potential for an interesting background, like a jetty, kelp forest, coral outcrop, etc, I will focus my dive on that area and hunt for foregrounds in the vicinity. A good background gives the image depth leading the eye through the frame, creating a CFWA image that truly looks three dimensional. ■



Non-fisheye shots work, but have lower impact

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I think it's fair to say Scotland's beauty is well documented, but there's a whole part of our wee country that I believe has been overlooked by the public, and sometimes even divers.

Ok, let's be fair, Scotland isn't exactly the diving capital of the world. When you think of places to visit, I'm not sure it would appear in many peoples top ten, (ok, maybe Scapa Flow, if you like a lot of rust), but you might be surprised to find there is some spectacular diving to be found in Bonnie Scotland.

At 20 miles long, Loch Long doesn't get its name from its length. Actually, Loch Long in Gaelic translates to 'Ship Lake' and the name dates back to 1263, when the Vikings saw Arrochar, at the top of the loch, as a key target from which they could drag their ships across land to attack the unprotected settlements of Tarbet.

Did you know?

Hermit crabs are crustaceans that have adapted to occupy empty scavenged mollusc shells to protect their fragile exoskeletons.

Loch LONG

When you think of Scotland, what comes to mind? Epic mountain ranges? Beautiful forests? Majestic lochs? Maybe even her rugged coastline? But what about what lies beneath the waves? Ross McLaren reveals what lies under the water in Loch Long

Photographs by Ross McLaren

Anyway... brief history lesson over, back to diving. If you do a quick check of Finstrokes you'll see that there's no less than 13 dive sites in Loch Long - that's a staggering number in one body of water and all within an hour's drive from Glasgow City Centre. I'll be honest, until I started researching this piece, I didn't actually realise there were so many. I'll hold my hands up, I'm no expert by any stretch of the imagination and I've certainly not dived all 13!

Of the sites, in my opinion, there are three that stand out for their incredible underwater scenery, ease of access and are definitely worth a visit if you are up this way. As with sites around the country, every club/organisation/dive school seem to have their own names for each one, but I'll try and give as many names as possible for each site.



Finnart/A-Frames

Finnart (sometimes referred to as A-Frames) is probably the most-popular site in Loch Long, is probably the most-popular site in Scotland, and if not the number one, it's definitely up there. Finnart was built by the Americans during World War Two to offer a deep water oil terminal within the defensive ring of the Clyde. Chances are if you've taken part in any training or courses here, you'll have at least done one dive at the ever-popular A-Frames, but it's not just for trainees.

At A-Frames you're met with an excellent carpark (which gets very busy in the summer weekends) and an entry that's pretty good by many respects, though the small scramble down to the beach does require a little bit of care. Once you dive beneath the surface you're met with an extremely diverse site that has enough to satisfy the newest recruits taking their first breaths underwater, right the way up to the most hardcore experienced divers.

With wreckage from the old pier to be found around 8m to 12m, there is a huge amount of life clinging to it giving first-time divers a superb introduction to the site. If depth isn't really your thing, then you could spend a full dive in and around this debris field zig-zagging the slope and exploring all the nooks and crannies that are home to squat lobster, edible crabs, velvet swimming crabs, the list goes on.

Diving a little deeper (below 20m) you come across the great A-Frames, remnants of the old pier that lend their name to the site. Out of the gloom these huge structures very often suddenly appear (may have swam into them on one or two occasions...) and you are welcomed by a vibrant cacophony of life. The frames are covered in anemones, starfish, dead mans fingers and if you're really lucky, the odd nudibranch! A dive around them never fails to disappoint and if you get a day with particularly good visibility, the view from the seabed up to the top of them is truly spectacular. If you are particularly keen to log some deeper dives, there is the option to head out further into the loch from the shore here and it's easy enough to get +40m and its been known to see some pretty spectacular fireworks anemones at these depths.

> "Zig zag up the reef and then once you've reached the time for a return, simply retrace your steps... or should that be finstrokes?"

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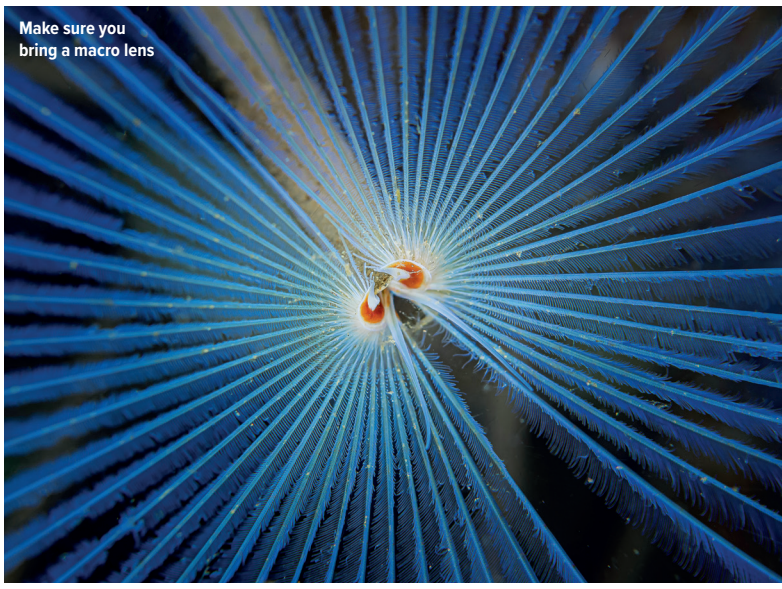
The scenic shores of Loch Long



Exploring the pier supports



Make sure you bring a macro lens

Twin Piers

Heading to the top of the loch and round onto the west side, you eventually come to the dive site Twin Piers. Once you arrive it's pretty obvious where the name comes from. Sitting just off the beach is the remains of, funnily enough, two piers. Lying in the shadow of one of Scotland's most-popular hill walks the Cobbler, both Twin Piers (and Conger Alley) can very often offer sights just as spectacular beneath the waves as you can expect from the mountain that towers over it.

Parking for Twin Piers can be a little bit tricky if you happen to turn up on a particularly busy day. This requires driving ever so slightly past the actual entry point and onto the grass verge on the side. This also leads to one of the main hazards of Twin Piers - the extremely busy, and fast, road it sits on. There is an excellent path which leads back to the entry, but I would still strongly advise care be taken when walking to the site with heavy gear as both lorries and coaches often travel at speed along the road.

The beach itself actually sits on a lower level to the road/parking area and so the second main hazard of the site is found. A ladder has been placed and secured from the original 'entrance' of the pier and a handle has also been drilled into the wall to help with the climb down. In all honesty, it is not a major issue, but is still worth mentioning.

Ok, so onto the diving! Twin Piers is an excellent site for divers of all abilities and navigation is pretty straightforward. From the beach head straight out between the two piers and drop down. On the slope you'll be met with a carpet of discarded bivalve shells which is pretty impressive in its own right. Continue down the slope to anywhere between 10m to 15m or so and then bear left perpendicular to the slope. If you are lucky you will eventually hit the chassis and axles of an old truck which fell off the pier.

From here I'd suggest heading down to between 15 and 20m and continue to swim perpendicular to the slope until you eventually reach a rather excellent rocky reef. The boulders here are huge and offer a fantastic habitat to a whole array of life from the usual crabs, squat lobster, anemone, starfish, dead man's fingers, etc. But really, the attraction of Twin Piers is the possibility of seeing conger eels and even the odd lobster. These make their homes in the larger cracks in, around and under the huge boulders.

Zig zag up the reef and then once you've reached the time for a return, simply retrace your steps... or should that be finstrokes? Depending on the tide state, if you come up to around 6m and swim back along, you can't fail to hit the legs of the piers, which offer a rather nice final exploration of the site during your safety stop.

On a nice day (both above and below the water), with the sun breaking through the water around them, the piers themselves are absolutely spectacular. The legs are awash with vibrant colourful life ranging from starfish to anemones and even the odd nudibranch, if you're lucky!



The Twin Piers


You can find various nudibranchs


Edible crab


Conger eel


Anemone

> “There’s obviously the usual crabs, starfish, anemones, etc, but as the name might suggest there is a really good number of congers, and lobster, to be found in the larger holes”

Conger Alley

Wonder what we might find here? Heading just a couple of minutes south down the road from Twin Piers along the west side of Loch Long you eventually come to my favourite dive site in the loch. Now blink here and you could very well miss the entry and although I did mention the road as a hazard at Twin Piers, on the grand scheme of things it wasn’t a huge concern, however here at Conger Alley you do need to really be careful.

Parking for the dive site is actually on the opposite side of the road to the loch in what can only be loosely described as a small muddy layby. Now at this particular spot there is only really enough room for three cars at a push, but on the way to the site you’ll have passed a bigger, ‘proper’ layby that can be used instead, however parking here will involve a wee bit of a longer walk back to the site, but it is worth it! Crossing the busy road does require care though so I would strongly suggest carrying your kit down to the beach and getting kitted up here as opposed to at the car and then crossing the road with hood, etc, on. Thankfully the beach itself offers some rather strategically place rocks that can be used to prop gear on and even a very handy seawall that helps ‘step into’ a twinset.

Again, like all the sites I’ve discussed, the entry is really easy here. Simply walk into the water, drop down and follow the slope to, I would suggest, about 12m to 15m and swim left for around four minutes. You eventually come to the edge of a rather large rocky reef and from here it is totally up to yourself how deep you want to go. If your certification allows it, I would recommend dropping down the reef to around 26m to 30m and then slowly zigzagging your way back up, taking your time to look in all the cracks and crevices. I genuinely don’t think I’ve ever had a bad dive at Conger Alley and the life on the reef is unbelievable!

There’s obviously the usual crabs, starfish, anemones, etc, but as the name might suggest there is a really good number of congers, and lobster, to be found in the larger holes. Take your time to search each as they can be a little shy, but they are there. It’s also not uncommon to find the odd octopus lurking around on the rocks, so look carefully. There’s also an abundance of fish as well from flatfish to sometimes rather colourful wrasse.

Again, like at Twin Piers, gradually come up the reef and then once you’ve reached the end head back along the slope in the opposite direction you came and you’ll eventually reach the exit. ■

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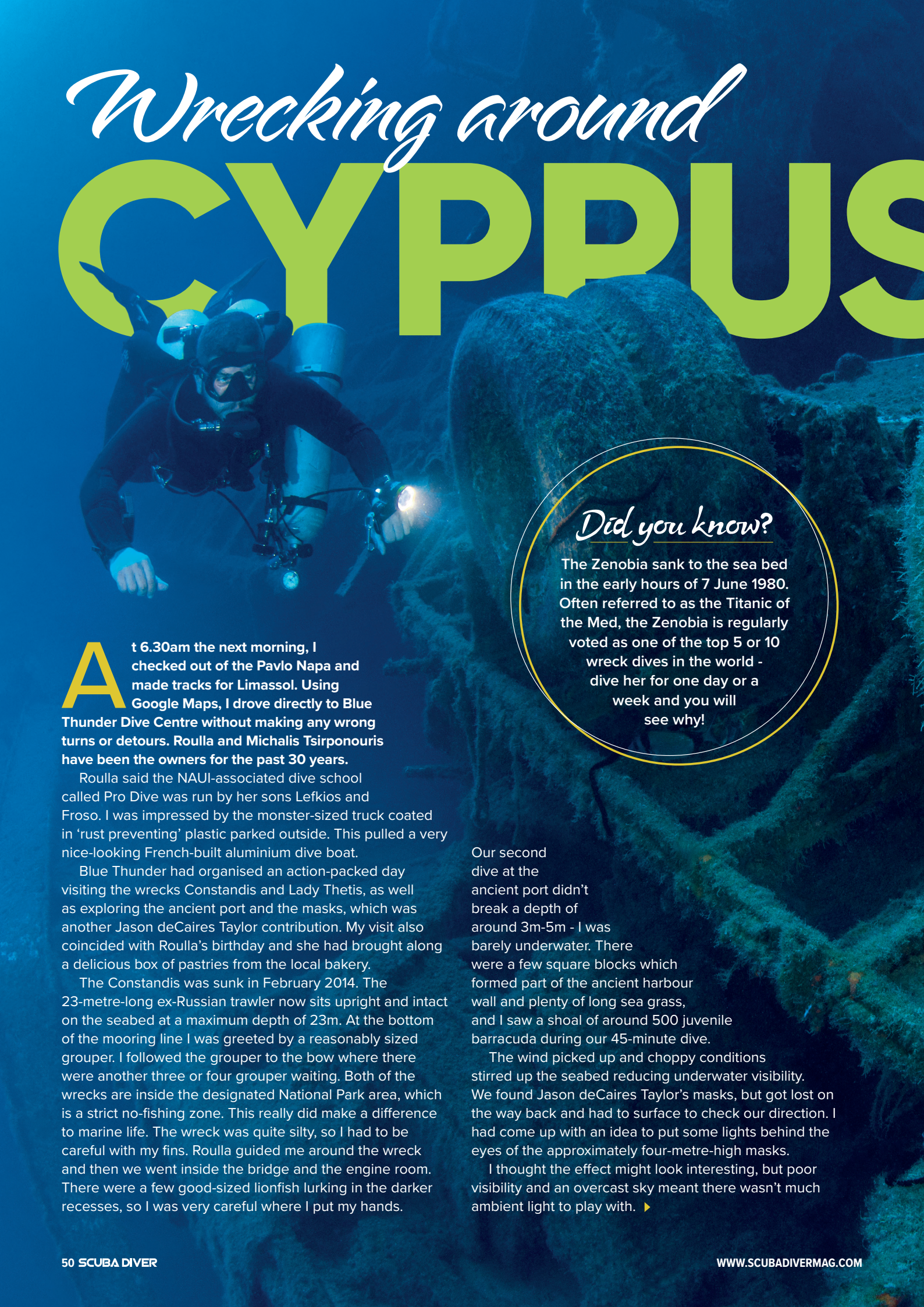

Did you know?

The Zenobia sank to the sea bed in the early hours of 7 June 1980. Often referred to as the Titanic of the Med, the Zenobia is regularly voted as one of the top 5 or 10 wreck dives in the world - dive her for one day or a week and you will see why!

At 6.30am the next morning, I checked out of the Pavlo Napa and made tracks for Limassol. Using Google Maps, I drove directly to Blue Thunder Dive Centre without making any wrong turns or detours. Roulla and Michalis Tsirponouris have been the owners for the past 30 years.

Roulla said the NAUI-associated dive school called Pro Dive was run by her sons Lefkios and Froso. I was impressed by the monster-sized truck coated in 'rust preventing' plastic parked outside. This pulled a very nice-looking French-built aluminium dive boat.

Blue Thunder had organised an action-packed day visiting the wrecks Constandis and Lady Thetis, as well as exploring the ancient port and the masks, which was another Jason deCaires Taylor contribution. My visit also coincided with Roulla's birthday and she had brought along a delicious box of pastries from the local bakery.

The Constandis was sunk in February 2014. The 23-metre-long ex-Russian trawler now sits upright and intact on the seabed at a maximum depth of 23m. At the bottom of the mooring line I was greeted by a reasonably sized grouper. I followed the grouper to the bow where there were another three or four grouper waiting. Both of the wrecks are inside the designated National Park area, which is a strict no-fishing zone. This really did make a difference to marine life. The wreck was quite silty, so I had to be careful with my fins. Roulla guided me around the wreck and then we went inside the bridge and the engine room. There were a few good-sized lionfish lurking in the darker recesses, so I was very careful where I put my hands.

Our second dive at the ancient port didn't break a depth of around 3m-5m - I was barely underwater. There were a few square blocks which formed part of the ancient harbour wall and plenty of long sea grass, and I saw a shoal of around 500 juvenile barracuda during our 45-minute dive.

The wind picked up and choppy conditions stirred up the seabed reducing underwater visibility. We found Jason deCaires Taylor's masks, but got lost on the way back and had to surface to check our direction. I had come up with an idea to put some lights behind the eyes of the approximately four-metre-high masks.

I thought the effect might look interesting, but poor visibility and an overcast sky meant there wasn't much ambient light to play with.

Stuart Philpott continues his whistlestop tour of Cyprus, exploring several new or lesser-known shipwrecks as well as the jewel in the crown, the mightly Zenobia

Photographs by Stuart Philpott



PART TWO



The bow of the Laboe

> “Our first wreck, the Laboe, was built in Germany during World War Two”

The 30-metre-long passenger vessel Lady Thetis was also sunk in February 2014 and sits upright at a maximum depth of 18m. I started my tour at the stern. Visibility was a milky ten metres or less. The wreck was even siltier than the Constandis! The prop was still attached but the conditions didn't warrant a picture. There is a central stairway leading up to the roof where a number of bolted-down circular tables are still attached.

The inside has been cleared of any obstacles. It was basically an open area with a hatchway in the middle leading down to the engine bay. Again, there was plenty of marine life to see including grouper, squirrelfish and sea bream. Just to finish off the dive we watched a number of jacks sweeping through a shoal of silversides.

I left Blue Thunder in the late afternoon and drove to the classy five-star St Raphael Hotel and resort located on the outskirts of town. Sadly, there was no time for partying. After a swift bite to eat at the in-house restaurant, I retired to the bedroom and was soon fast asleep. At 6am the next morning I would be travelling to Larnaca for the mighty Zenobia and another new wreck called the Elpida.

Dawn was breaking when I left the resort. Most of the roads aren't signposted, so I really would have been lost without Sat Nav. The app said it would take me 60 minutes to reach Larnaca fishing harbour and I arrived just in time to grab the last parking space.

The CTO (Cyprus Tourist Organisation) had arranged for me to dive with Andreas Lardas from Scubaholics, based in the



The bridge of the Vera K



Ship's wheel on the Elpida





The Laboe stern



Elpida engine room

capital city, Nicosia. I had briefly met Andreas two days earlier when I was diving with Taba Dive Centre. Quite a few of the island's 80 or more dive centres don't own a boat, so it's not uncommon to share. Andreas was being hailed as one of the island's up-and-coming technical gurus.

Andreas was also on the cards as a commercial diver, so used to swap hats as and when workloads required. Most of his training had been with local tech legend Chris Demetriou from Dive-in at Larnaca. I had also completed a fair proportion of my TDI tech training with Chris many years ago. It didn't feel right to hear he had almost retired from the diving industry after so many years. I wouldn't like to guess how many thousands of dives Chris has logged inside the MS Zenobia wreck.

Andreas had geared us up for two dives, starting with a new wreck called the Elpida and then after a short surface interval, a second dive on the mighty Zen. Andreas had brought along twin 12s and stages, but this was a slight overkill for my requirements. The CTO's action-packed schedule only allowed for one dive on each wreck, so I just wanted to get a few shots of the more-prominent features.

The Elpida was sunk as a diver attraction in December 2019, and the 63-metre-long cargo ship now sits upright at a max depth of 28m. Andreas explained that the new wreck didn't seem to be very popular due to the fact that most divers preferred to visit the Zen, and being located further away from the harbour meant more fuel and higher running costs for charter boats.

We were the only two divers at the wreck site, but as soon as I jumped into the water I knew there was going to be trouble. The visibility was a milky ten metres or less. I started finning towards the bridge. When I turned around Andreas had disappeared somewhere in the fog. I went back to the bow and found Andreas moving slowly around the deck winch. One of my pet hates with tech divers (apart from wearing black from hood to fin) is they move very slowly and methodically, whereas a photographer who only has one dive to get pictures flies about like a lunatic. At times, the two extremes can make a tricky combination.

I followed Andreas through the cargo hold and up into the bridge. The ship's wheel has been left attached and makes a great composition, but just as I was lining up for a shot a dense cloud of particles rained down from above. Our exhaled bubbles had dislodged a snowstorm. With my picture possibilities trashed, we went down the stairway and into the engine room. The top of the engines were coated in a fine white powder. Andreas got slightly too close and spoodoosh, a plume ▸



One of Pro Dive's boats

of sediment obscured his face. I had a strange feeling today wasn't going to be my day!

Being a new wreck there wasn't much marine life on show. I did find a few lionfish but nothing more substantial. Way too quickly, my computer went into deco. We slowly made our way back up the mast to the surface. I really enjoyed exploring the Elpida. Back at the fishing harbour we swapped boats and headed out to the MS Zenobia.

The MS Zenobia is one of the top wreck dives in the world and Cyprus' most-popular dive site by far. Her demise was probably due to a software error, but there are also stories of insurance scams and sabotage. One thing is for certain, excess water pumped into her ballast tanks caused her to list and eventually capsize. The 172-metre-long by 28-metre-beam RO-RO ferry now lies on her port side at a max depth of 42m with a full cargo of 104 articulated trucks and other machinery. The starboard rail is the shallowest point at around 16m, making the wreck ideal for both recreational and tech divers - a full article just on the Zen will appear in a future issue.

The next morning I checked out of the St Raphael Resort and made tracks for Pathos, my last port of call. Cydive Dive Centre managed by Pascal and Sophie had arranged two wreck dives on the Laboe and the Vera K. I was really impressed with Cydive's facilities. I don't think there could be a more perfect training centre complete with onsite pool, classrooms, changing rooms and shop.

Sophie explained that a Polish magazine called Perfect Diver would be joining us. I was nowhere near the perfect diver, but was looking forward to diving with some fellow professionals. The entourage was made up of two men equipped with video and stills cameras and two women who would obviously be modelling. Add a load of recreational divers to the mix and we definitely had a full boat load.

Our first wreck, the Laboe, was built in Germany during World War Two. She was originally brought to Cyprus in 2006 and used as a liveaboard. In 2014, the 21.5-metre-long by five-metre-beam boat was sunk as an artificial reef project and now lies upright at a maximum depth of 28m.

Conditions were quite lumpy on the ten-minute boat journey out to the dive site. I even fell over putting on my BCD. I had been warned that the wreck was quite silty so arranged with Sophie to spend the first 15 minutes on our own before the Polish contingent rocked up. This would hopefully give me enough time to get a few sediment-free pictures. We started off at the bow and then went into the engine room. When I reached the saloon area I could see the Polish foursome at the doorway eagerly waiting to get inside.



The mast on the Zenobia



The staff at Cydive

Surface conditions had deteriorated by the time we reached the second dive site. One of the Polish women threw up over the side, which seemed to initiate a chain reaction. Sophie's plan was to get everybody into the water as quick as possible to avoid a mass puking session!

The second wreck, Vera K, was a Lebanese freighter that ran aground in 1972. The ship was used as target practice for many years and then blown up in 1974 as it was creating a shipping hazard. The remains of the wreck are sitting inside a bowl-shaped crater caused by the massive explosion. Maximum depth inside the crater is about 12m and on the outside 6m. There are basically three main areas of interest. An archway, the engine and the bridge.

Conclusion

The additional wrecks and Jason deCaires Taylor's MUSAN has definitely given divers some exciting new attractions. Creating marine parks will hopefully allow fish stocks to recover and there are even guaranteed grouper and turtle encounters. All in all, this makes Cyprus a pretty good option for a Mediterranean diving destination. And the CTO hasn't finished yet. There may well be more new wrecks coming soon.

To check out all of the dive sites in one go, it would be wise to hire a car and use a Sat Nav or Google maps to avoid getting lost. On the tech side, I still didn't see anything that could rival the Zen. But I have been assured there are more sites available, so will hopefully be returning to do a special tech report sometime next year. ■



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CHRISTM ISLAND

The Isle of Morays

Christmas Island is well known in diving circles for its bigger visitors, but as Nigel Marsh explains, it should also be renowned for the variety of moray eels that call the island home

Photographs by Nigel Marsh / www.nigelmarshphotography.com

Did you know?

Moray eels have few predators. Their predators are usually the apex predator in their ecosystem. Grouper, barracuda, sharks and humans are common predators of moray eels. However, moray eels and grouper have been found to work together at times to hunt!

> “Morays might not be a big attraction for some divers, but I have always found them fascinating creatures, with interesting personalities and a wonderful range of colour patterns”

MAS

Did you know?

Moray eels reproduce by fertilization that is oviparous, when eggs and sperm are fertilized in the water outside the womb, also known as spawning. On average, female moray eels can release 10,000 eggs at a time.

Christmas Island is famous for many things. It is famous for millions of red crabs that migrate each year across the island to spawn in the sea. And among divers, it is famous for its incredible diving on walls, sea caves and the chance of encountering whalesharks, spinner dolphins and silky sharks. But it should also be famous for its moray eels.

I have wanted to visit Christmas Island for ages, having heard wonderful things about the diving at this remote island paradise. While exploring coral walls and sea caves is exciting, the thing that most enticed me to dive Christmas Island was the chance of seeing some rare moray eels. Morays might not be a big attraction for some divers, but I have always found them fascinating creatures, with interesting personalities and a wonderful range of colour patterns. I had heard that a dozen species could be seen at Christmas Island, including the most-spectacular member of the family – the dragon moray.

Located south of Java in the Indian Ocean, Christmas Island is an Australian Territory. However, it shares more in common with Asia than Australia in both its population and wildlife, above and below the water line. This especially applies to morays, with many of the species seen here not found around the Australian mainland.

Getting to Christmas Island is time consuming, involving a long flight from Perth, via Cocos (Keeling) Islands. However, the two-day journey from the east coast is well worth the effort when you get that first view of the harbour at Flying Fish Cove being lapped by blue waters.

Our first stop, after checking into our motel, was to visit Extra Divers and get a rundown of our diving for the next week. David Watchorn, the manager of Extra Divers, ran through the briefing and explained that we would be doing a double boat dive in the morning and then have the afternoon free to explore the island and also do as many shore dives as we wanted in Flying Fish Cove. As part of our package with Extra Divers, we got a RAV4 hire car between four people, giving us the freedom to explore and shore dive.



Flying Fish Cove



Snowflake moray



> “The morays are split into two different families, the true morays which most divers are familiar with, and the rarer snake-morays”

My hunt for moray eels started on the first dive at Lost Lake Cave. A giant stride into the water found me surrounded by 40 metre visibility and in balmy 29°C water. We descended on a sloping wall packed with healthy hard corals and the first thing I spotted was a whitemouth moray hanging out of a hole. After a few images of this pretty moray, we followed our guide Joanne (Jo) on a gentle drift dive.

I kept an eye out for morays, but soon found myself astounded by the amazing variety of fishes that I had never seen before. This surprised me as I had dived may spots across the Indian Ocean, but Christmas Island seemed to have a whole population of fishes I had never encountered before. There were wrasses, surgeonfish and triggerfish, but the two that most impressed me were the cheeky ornate hawkfish and the small endemic Cocos angelfish.

On this dive we also spotted grey reef sharks, trevally, rock cods, fusiliers and a good variety of butterflyfish. The next dive at West White Beach was similar, but with lots of sea anemones populated with anemonefish. On the moray front I found another whitemouth moray, but that was it. Whitemouth morays are also seen on the mainland, so I was starting to wonder where were all the unique morays?

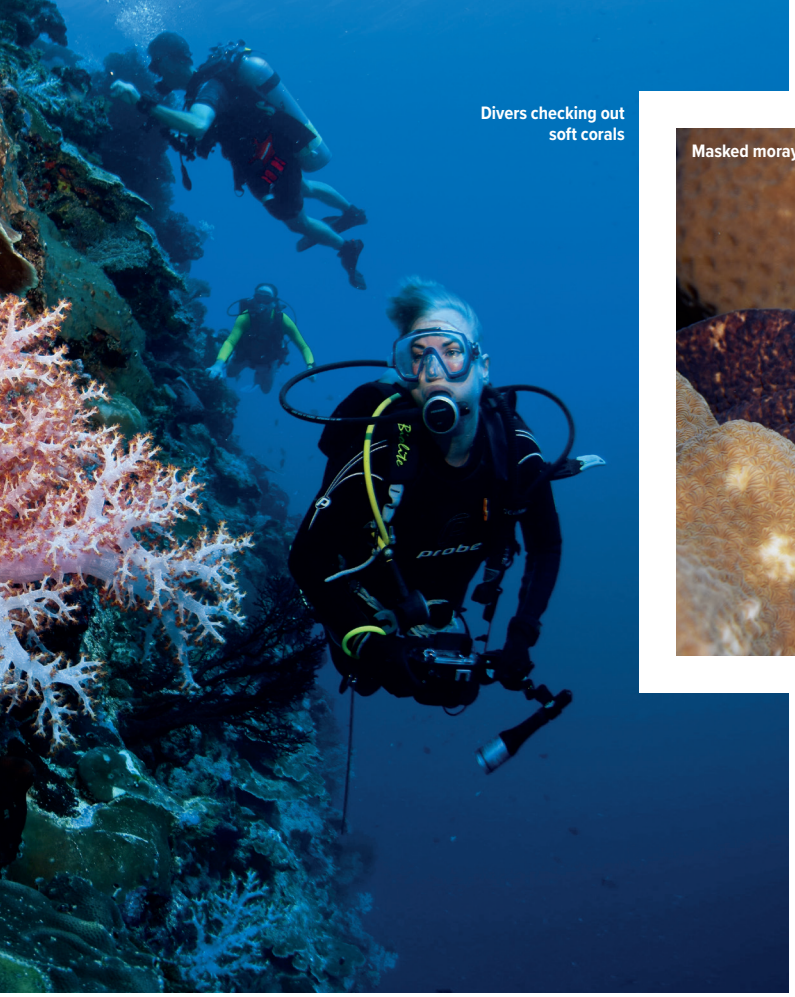
David and Jo then gave me the tip that Flying Fish Cove was the best spot for morays, so after a quick lunch this is where we headed for our first shore dive. You can enter from the shore or via the large jetty in the middle of the bay, either way you end up in a shallow bay covered in lovely coral gardens. We explored the coral garden and the drop-off, which plummets to 400m, but again no morays. Instead, I was stunned by the incredible fish life.

Many friends had told me that Flying Fish Cove is one of the best shore dives they had ever done, and I could see why as there were reef fishes everywhere. Parrotfish, butterflyfish, angelfish, wrasse, pufferfish, hawkfish, grubfish, triggerfish, surgeonfish, lionfish, scorpionfish and boxfish. I must have spotted 20 fishes I had never seen before, with this list including a leopard toby, blackpatch triggerfish, cocopeel angelfish and a guineafowl puffer.

Going back to the dive shop for more tanks I said to David that I didn’t see any morays. He informed me there is a patch of nobby coral at 20m where they always see lots of morays, including the dragon moray in the past. But he also added that the last time they saw a dragon moray was two years ago!



Divers exploring Thundercliff Cave



Divers checking out soft corals



Masked moray



Famous red crab



Pyramid butterflyfish

Undeterred, we headed back in for a late-afternoon dive, and swam straight to the drop-off and this nobby coral. Arriving at the coral I spotted the first moray in seconds, a masked moray. This species is not seen on the mainland, so I was very happy to see one. I shot dozens of photos of it hanging out of its hole, and I was a bit surprised at how agro it was, shooting back and forth and snapping at passing fish. I then looked up and realised that this coral was seething with morays, as popping out of every hole were masked morays. I counted six, but there could have been more as they kept popping up and down, and they were all just as agro as the first moray.

I then looked around hoping the dragon moray had miraculously reappeared. I investigated every nook and cranny, but there was no sign of this rare and elusive moray. I did spot what I thought was a giant moray, but a review of my images later showed me it had an unusual pattern. I still don't know what species it is?

The next day we visited one of Christmas Island's premier dive sites, Perpendicular Wall. We started this dive in a large overhang full of gorgonians and it just got better from there. The wall at this site is covered in spectacular corals – colourful soft corals, gorgonians, whip corals and sponges and also masses of fish. We spotted batfish, rainbow runners and whitetip reef sharks, but missed the scalloped hammerhead that Jo spotted. This was also a great spot for masked morays, with groups of them hanging out of every hole.

We quickly got into a routine, two wonderful boat dives

each morning, then back for lunch before spending the afternoon at Flying Fish Cove. I kept looking for the dragon moray, and on the way spotted many other wonderful fishes.

The next day we dived pretty coral gardens at Chicken Farm and explored our first sea cave at Daniel Roux Cave. With the island made of basalt and limestone, there are dozens of sea caves cutting into the cliffs. Daniel Roux Cave was large enough to contain our entire dive group with room to spare. Exiting the cave we could hear dolphins. A resident pod of spinner dolphins often join divers at Christmas Island, but they eluded us. We surfaced to be informed by David that a whaleshark had swam near the boat while we were exploring the cave!

After another wonderful afternoon dive at Flying Fish Cove I thought it was time to do a night dive and really have a serious look for morays, as most are more active after dark. We started under the jetty, finding octopus, flounders and a pair of false stonefish. Moving over to the coral gardens we found lionfish, many crustaceans and finally an impressive giant moray. Heading back to the jetty I played my torched over a coral head and saw a very unexpected sight, a tiger snake-moray.

The morays are split into two different families, the true morays which most divers are familiar with, and the rarer snake-morays. The easiest way to tell the difference between them is by their fins, with true morays having a long dorsal fin running the length of their body and merging with the anal fin. Snake-morays lack this fin, so are more snake-like, and they are also shy and rarely seen.

Seeing this tiger snake-moray was a huge bonus. As we watched, it slowly slid across the coral head looking for prey. But wary of our lights it gradually disappeared into a hole.

Thundercliff Cave left us spellbound the next day. This massive sea cave was home to soldierfish, bullseyes and small shrimps. But upon surfacing in this cave we could see a ceiling dotted with stalactites, some even continued underwater. The reef adjacent to this cave was also very pretty and home to a yellow-margin moray.

We then dived the only shipwreck at Christmas Island, the Eidsvoid. This 116-metre-long cargo ship was torpedoed by a Japanese submarine in World War Two and now lies broken up on the reef in depths from 6m to 20m. It was an interesting dive, and the wreckage was home to a good variety of fishes.

Another night dive at Flying Fish Cove and I was hoping for some more moray action. This time we spotted a snowflake moray and a rarely seen yellowheaded moray. Snowflake morays are a common species, but also one of the few morays that have blunt teeth, designed to smash the shells of crabs. The yellowheaded moray is much rarer and generally only seen in Asia. This one was unfortunately shy and decided to hide under a boulder.


Tiger snake-moray


Flying Fish Cove wharf

Another moray species was spotted the next day at The Morgue. Unfortunately, I had my wide-angle lens on my camera so couldn't get a photo of the two beautiful ribbon eels at this site. But I was grateful I had on this lens for a snorkel with a pack of giant trevally. These giant trevally gather in a cove where the fishers clean their catch and are great fun to snorkel with. David brought some bait to feed them which got them really moving. Silky sharks also gather in this cove, but they were absent during our stay.

Our finally night dive at Flying Fish Cove produced a few more morays, but I was after another type of eel, as snake eels also live in the sand between coral heads. I took almost 30 minutes to find, but it was worth the hunt to see a crocodile snake eel. And you can understand why it took so long, as all I could see was its sandy coloured head, which was barely 2cm long!

I had a fabulous time at Christmas Island, seeing a vast array of unique marine life. And even though I didn't see that dragon moray, the species I did see were reward enough. ■


Surfacing in Thundercliff Cave



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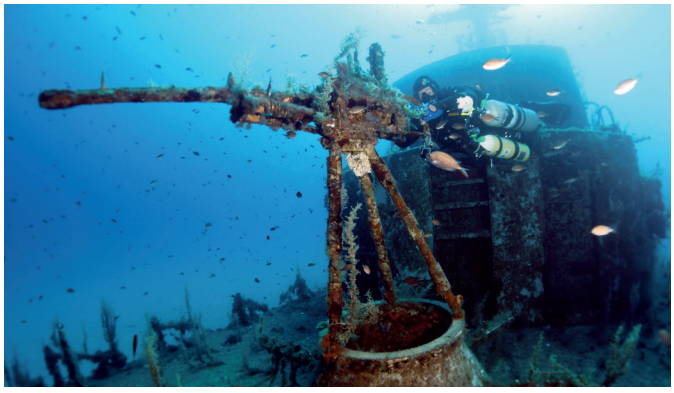

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DIVING ETIQUETTE: THE MARINE ENVIRONMENT

Claudio Di Manao continues his series on diving etiquette, this time focusing on the marine environment and how we, as divers, interact with it

Imagine you are giving a party at home, a wonderful house fitted with paintings, carpets, fine porcelains, and antique furniture. Imagine some of your guests, in the middle of the party, start displaying an odd behaviour - one is feeding chocolate to your cat, one is playing Tarzan on your curtains, one is riding your dog, one is harassing aunty Minnie, and another one stumbles into your precious vases, scattering sharp sprinkles all over your precious carpets.

Before you realise that you are not on the set of a John Belushi movie, your cat gets badly sick, your dog will get shocked for a week or longer (and so will aunty Minnie), and no one on Earth will be able to buy your wrecked belongings anew because they are unique pieces. To be frank, some of the underwater behaviour that I've witnessed reminded me of Animal House. The marine environment, unfortunately, was not laughing. We can harm marine environments in hundreds of ways, and sometimes the marine life strikes back! Marine creatures belong to sorts of collective divinities. In order to dive safely, and sleep well, you don't want to upset them.

Like a bull in a china shop

This is how hard corals see certain divers. Hard corals are afraid of dangling gears and jerky movements, they feel comfortable with coral-human distancing of a metre or more. All corals, soft and hard corals, hate suntan lotions, and their revenge can be so worrying that a whole lot of companies have begun to produce coral-friendly sunscreens. Do not mess with the hard corals. The Ghost of Dead Corals can deplete 80% of the oceanic species, turn the blue of the water into greyish-green, and flood UW cameras. Corals demand respect as they influence the oceans.

Seagrass and sandy bottoms

The oldest divers would remember old documentaries in which Jurassic divers were riding Jurassic scooters and shaving the seagrass off the seafloor. We don't do it anymore. We drop anchors, instead, and let them drag. If we do that, we are acting like King Herod: a lot of pups and juveniles could get killed by lack of shelter. The revenge of the marine vegetables (alga and plants fall in this group) is breathtaking: our atmosphere will get less oxygen. Note: sea cucumbers are not plants, they are invertebrates.

Collecting shells

Let's put it this way: would you steal the house of a tiny, little homeless creature? Of course, you won't. Even if shells do look and perform quite well as ashtrays, they are not ashtrays. And the marine environment is not a hotel.

Riding fishes, reptiles, and mammals

Divers of old would ride any creature of appropriate size. If seahorses were a bit larger, they would have ridden them. After a solid record of nasty bites, and some heart attacks suffered by marine turtles, divers of old eventually desisted. There is no point to restore this impolite and dangerous habit nowadays. If the marine environment is not a hotel, it is not an amusement park either.

Old brasses fascination

Yes, I know: the pub beneath the lighthouse is packed with bells, figureheads, binnacles, portholes, wheels and even propellers. They are behind the bar, overlooking the patrons from long ago, since the times when accountants, hairdressers, architects, schoolteachers (and bankers too) could not get easy access to the underwater world. Back then, diving with heavy helmets and lead boots was a weirdo's occupation.

Since philosophers and archaeologists are now listed among the most-skilled divers, the museums now offer underwater landscapes. Stealing from a wreck is an act of selfishness and disregard toward the next generations of divers. Be nice to the next divers.

Feeding

When offered food, even your dog behaves as if he is starving; you know he is not. According to his age, size and breed, your dog follows a precise diet. His menu does not

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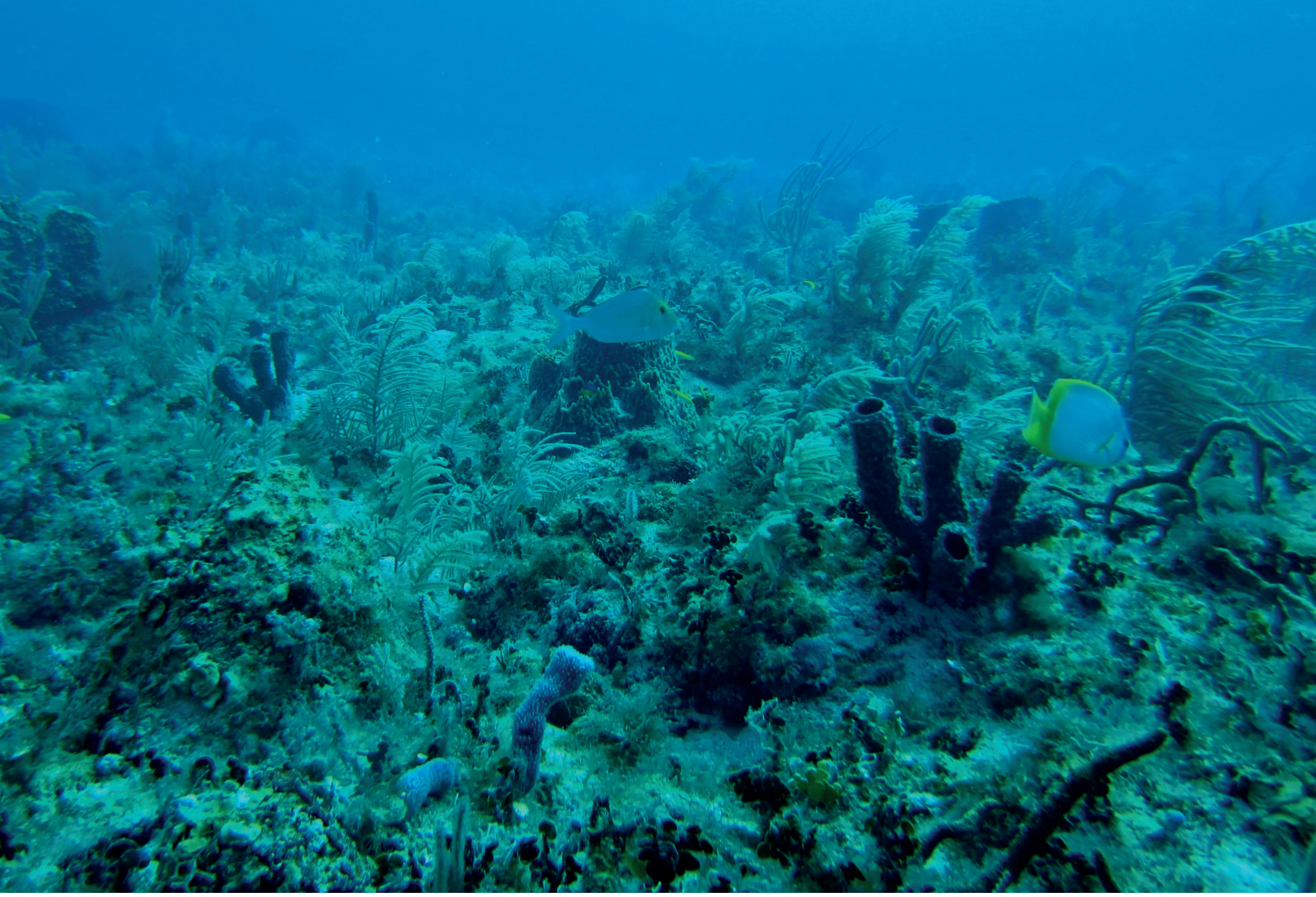

> “The oldest divers would remember old documentaries in which Jurassic divers were riding Jurassic scooters and shaving the seagrass off the seafloor”

include refined sugars and his food is handled to him in a precise amount at the right time. Your dog would probably not survive without you providing him food. Fishes can manage marvellously on their own, really.

Without your effort they will be healthier and will follow their natural behaviour as it was originally intended. Irresponsible shark feeding can lead to serious injuries and even death. Carnivores in general are not a grateful bunch: also, moray eels, wrasses and grouper are likely to bite the hand that feeds them. Herbivores would get sick from junk food. Not feeding them is a kind of respect.

Polymers are forever

I am confident that you won’t ever throw cigarette filters, plastic bags nor bottles overboard. The wind and a rolling deck will do it for you. Plastic’s most-secret lust is that of reaching the ocean, and it is fatally attracted to any body of water. Fishes, molluscs, reptiles, larvae and mammals are fatally attracted to plastic waste and debris: marine creatures mistake it for food. You can stem this sick routine by locking down plastic items into safe containers.

And, of course, at a minimum, limiting the use of disposable plastic to what you need for your very survival. Use a flask and fill it with tap water—avoid plastic.

The origin of bon-ton is an everlasting insight

Greek myths, there are different versions - say that the scorpion was created by the goddess Artemis in order to kill Orion, the giant hunter, after he boasted he could kill all animals on Earth. Not surprisingly stonefish and other poisonous relatives belong to the Scorpaenidae family. If there was one human attitude that ancient gods could not forgive it was the hubris, being arrogance. Respect is the opposite of hubris, and its expression is a good way to spread, and receive back, some kindness. ■

About the author

DAN Member since 1997, Claudio Di Manao is a PADI and IANTD diving instructor. He’s the author of a series of books and novels about diving, including Shamandura Generation, an exhilarating portrait of Sharm el Sheikh’s diving community. He collaborates with magazines, radios and newspapers, talking and writing about diving safety, marine life and travels.

The Picos de Europa in Northern Spain is a 20km-long mountain range with peaks reaching over 2,600 metres. The mountains are mostly comprised of limestone which means they contain many caves. Where there are caves, there is usually water, and for me that means cave diving exploration. This summer presented me with the change to take part in two significant cave diving expeditions in the Picos.

Ario Caves Project

The first objective was a sump (water-filled passage) at the bottom of a 900 metre deep cave called Cabeza Muxa, which was located high up on the Ario plateau (1,630 metres altitude) in the western massif of the Picos. That meant that in order to dive the sump, we needed to get everything up a mountain, then down a vertical distance of 900 metres, as well as along a 2km cave passage following a fast-flowing river. Oh... and we also needed to install all the ropes (totalling about 1,300 metres) along with new rock anchors (150 stainless steel bolts) and set-up an underground camp! You can tell I like a challenge...

Cabeza Muxa was last visited by a UK team in 1988, when the downstream sump was dived by Rick Stanton to a depth of 33m using open-circuit scuba gear. It has remained unexplored since then and offers the potential for a significant hydrological connection to other caves in the area.

Given the logistical challenges involved in this project, I was going to have to make some some smart choices about equipment. Firstly, I own some nine-litre carbon composite cylinders which weigh about 9kg out of the water. The problem, of course, is that these require around 6kg of weight to make them negatively buoyant. That weight would need to be carried down the cave, but at least it could be separated from the cylinders and then staged for future expeditions. The weight of everything else would also need to be examined and reduced where possible. At the same time, I'd need sufficient spares and tools to deal with most dive kit eventualities. Finally, everything would need to be dismantled and packed in robust bags and containers for the long trip down the cave.

When I first decided that it would make a good objective for summer 2022, I knew that it would be hard work. We'd need a strong team and anything we could do to make it easier would really help. I couldn't do much about the cave, but we could get a helicopter to fly the gear into base camp at the mountain 'refugio'. After the long drive down through France with a fully loaded van, we arrived in the Picos. The next day we drove up into the mountains as far as the track would take us. From here a helicopter did the rest of the work, lifting 900kg of kit into the sky and off to the refugio while we made the two-hour hike up.

The caving began straight away with a sense of urgency and purpose. After five days of hard tiring caving, including three nights where we camped underground, we had the cave 'rigged' to the sump so that transporting diving kit was possible. Two days later re-enforcements had arrived on the expedition so a team of six fresh cavers entered the cave with heavy bags of diving equipment each. Then the following day myself and three others (Lisa Wooton, Stu Weston and Mark Burkey) went underground for the main event - to dive the sump.

After descending the 600-metre-deep shaft series we reached underground camp before heading off along the 2km stream way which drops 300 metres via 26 roped pitches to the sump, where I would dive.

Unfortunately, just over halfway down this section of cave, disaster struck. Our expedition photographer Mark Burkey was approaching one of the roped drops when the rock he was holding on to broke. Mark fell forward on to his face, with his nose taking the impact.

A lot of blood followed, and it was clear he'd broken his nose. Everyone fully expected the trip to be turned then and there, but Mark was determined that the dive would go ahead and that he'd be there to document it.

Several hours later we arrived at the sump. I prepped my dive gear aided by Stu and Lisa while Mark prepared to photograph the effort. However, when he unpacked his camera he discovered to his horror that his fall had damaged the case and caused it to leak. The precious camera was flooded, and no more photos would be possible!

I expected the dive to be deep and possibly lengthy, so in the chilly 6 degree C water I would certainly be using a drysuit and it also made sense to take a rebreather for this project.

Did you know?

The Picos de Europa National Park contains meadows, lakes, mountains such as the Naranjo de Bulnes, gorges and impressive forests which host large mammals like rod deer, along with grouse and Egyptian vulture.

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> “Given the potential for depth, I elected to take a nine-litre cylinder of trimix as my offboard diluent and deep bailout plus another nine litre of EANx 30 to feed my drysuit and for shallow bailout”

Underground ADVENTURES IN SPAIN PART ONE

Cave diver Chris Jewell heads to the Picos de Europa in Spain to take part in two very-different projects, beginning with the ambitious and challenging Ario Caves Project

Photographs by Chris Jewell, Mark Burkey and Bartek Biela



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I've been diving a KISS Sidewinder for a couple of years with good results and so that was the obvious choice. Given the potential for depth, I elected to take a nine-litre cylinder of trimix as my offboard diluent and deep bailout plus another nine litre of EANx 30 to feed my drysuit and for shallow bailout. A two-litre bottle of oxygen to run the rebreather and a seven-litre bottle of oxygen staged at 6m depth in the sump completed the setup.

In most cave diving I do, I almost always use a large cylinder as offboard diluent and bailout combined, then a second cylinder acting as suit/wing inflation and further bailout. As a streamlined rebreather, the KISS Sidewinder tends to be dived like this. By contrast, most other conventional rebreather configurations and therefore training, separate diluent from bailout gas, while separate suit inflation cylinders are also very popular.


The team discussing the forthcoming dive


Helicopter to deliver supplies

For me there are several advantages to combining the cylinders. Primarily it allows me to take fewer cylinders into the cave. Most onboard diluent or suit inflation cylinders will be small, making them suitable for one single dive. If cylinders are being carried a long way into a cave, then a single large cylinder being used for multiple purposes makes sense. Similarly, I would rather dive with two large cylinders than several smaller ones, as it makes kitting up and diving much more comfortable and streamlined.

These advantages, of course, need to be balanced against the downsides. A mix suitable for diluent and bailout has to be selected, there is less redundancy in the system (partially mitigated with the inclusion of a Y-valve) and gas safety calculations need to factor in that bailout gas is being consumed as diluent or for buoyancy.

Once these considerations are understood then hose routing and a system for plugging in the offboard diluent needs to be worked out. Ideally a single offboard connection to the rebreather should feed both the ADV and the MAV simultaneously. Many rebreathers boast the capability to plug in offboard diluent, but very few do so without needing the diver to disable the ADV and only add diluent manually.

While the team kept warm in a storm shelter making hot drinks, I entered the water and began my underwater exploration. The excellent visibility that I had expected was reduced by the sediment that my kitting up had disturbed, however, I could still easily see a good five metres. At 6m depth, I dropped off the bailout oxygen and began spooling out dive line. The 2.5mm thin white cord was marked every ten metres with a small piece of yellow tape featuring a handwritten distance number. I'd carefully prepared the line weeks ago at home and wound all 600 metres of line on to one of my 'homemade' line reels. As I progressed further into the cave, the visibility improved. Large calcite mineral deposits hung to the walls in lumps and with little else to attach the dive line to, I wrapped the string around these, sending little puffs of sediment into the water.

> "Taking it nice and slow, I reached the surface where a never-seen-before tall slim passage led away from a circular sump pool"

The winter floods in the Picos are known to be ferocious and I'd not expected to find Rick's line from 1988 in good condition. Preferably the line would have been completely washed away, but instead the floor and walls of the sump were strewn with old dive line, creating a hazard if I was unwary. In places I cut the old line free and elsewhere dodged around it.

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Prepping for the dive

At 30m depth I pushed into new territory. Visibility got better again but the way on wasn't obvious as the passage twisted and turned, going up then back down again. There were now precious few places to belay the line in the clean, washed passage. After about 150 metres total distance, the sump then began to trend upwards. After passing under an arch I found myself at 15m depth in the bottom of a steeply ascending shaft. With nothing to secure the line to, I spooled out while rising upwards. At 8m depth, the reflective surface above became visible. Taking it nice and slow, I reached the surface where a never-seen-before tall slim passage led away from a circular sump pool.

I've been lucky enough to successfully pass sumps and find dry passage on a number of occasions, but the thrill is still just as great. There is excitement at the unknown and relief at the respite a dry chamber represents, all tinged with the apprehension and doubt about the return journey.

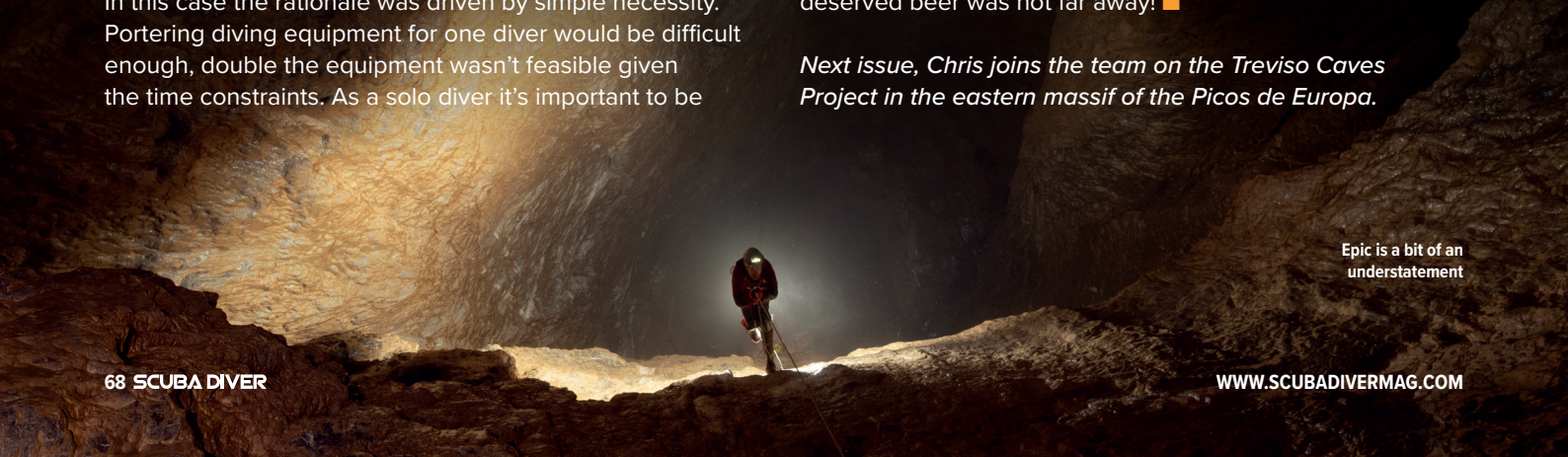
My first priority was to secure the dive line which represented my safe route home. Then after dekitting, I headed along the newly discovered cave passage. However only 15 metres from the sump pool, the next obstacle was found. A short vertical drop with the whole streamway crashing down filled the passage. Although the drop wasn't more than two metres, the floor and walls were smooth and slippery with a calcite deposit and there were absolutely no foot or hand holds.

I was diving solo, something I'm very used to doing. In this case the rationale was driven by simple necessity. Portering diving equipment for one diver would be difficult enough, double the equipment wasn't feasible given the time constraints. As a solo diver it's important to be completely self-sufficient and all of your equipment, configuration and gas planning choices take this into consideration. While this made sense underwater, back in the dry cave being on my own was much less ideal. If I climbed down the drop and couldn't get back up, I would be waiting a very long time for rescue without anyone to help me up. There were other divers on the expedition but there was no other diving kit in the cave and it would be many days before anyone could come to look for me. Knowing there was no safe way down and that the risks couldn't be justified, I turned back.

Now I had one final but vital task - to survey the new cave passage I had found. Although new technology has introduced more options of cave mapping, the basic principle remains unchanged. To produce an underwater survey requires measuring the distance between two points connected by a straight line. At each point the diver needs to record the depth and the compass bearing to the next point. For manual surveying, a well-tagged dive line provides the distance between the two points, a compass the bearing and dive computer the depth. With this data entered into a surveying programme, trigonometry calculations can provide a map of the underwater passage. So, swimming slowly back through the sump I took careful measurements at each belay and every corner where the line changed direction. Back on the surface, my scrawled wet notes and the video of the dive were now my most-precious possessions! It had taken many months of planning and organising as well as the physical effort to enable this dive. Now the results of all that effort and the entire record of my exploration was contained on some sheets of paper and a memory card.

While I'd been diving, the rest of the team had kept warm and well fed but everyone was getting tired at the end of a long day. After packing everything away, the team finally left the bottom of the cave at midnight. A very, very slow return to camp with heavy bags was made, with myself and Mark reaching camp at 4.30am, and Stu and Lisa at 6.30am. The following day no one wanted to get up early, but by midday we were awake and eating breakfast in our sleeping bags. The underground radio link we had with the surface meant we knew that that four cavers were coming in and so we planned our exit. Many slow hours of prusikking up ropes later, the surface was reached. Food and, of course, a well-deserved beer was not far away! ■

Next issue, Chris joins the team on the Treviso Caves Project in the eastern massif of the Picos de Europa.


Epic is a bit of an understatement





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CREST CR5 | SRP: £625



Crest might be a new name to the UK diving market, but the creative minds behind the company have a long history in diving, and were behind the innovative Cosmiq dive computer which was praised for its vivid screen display.

The CR5 is their latest product, and it is firmly aimed at the diving and sports enthusiast, being a full-featured dive computer as well as a smart sports watch – and it comes in at a sterling price for all of its functionality. The user interface is also very intuitive and simple to use.

On the diving side of things, it is waterproof to 100m, can handle nitrox from 21 to 99 percent, and has a freediving and gauge mode alongside the scuba mode, which operates a Buhlmann ZH-L16C algorithm.

On the sports watch front, it has built-in modes for hiking, biking, running, swimming, triathlon and workout. It also features GPS positioning, compass and heart rate monitor.

The CR5 has a bright colour MIP LCD display, which is surrounded by a stainless steel bezel, and it is protected by a Corning Gorilla glass lens. It is very lightweight – tipping the scales at just 80g – and the strap is made from anti-allergenic medical-grade silicone rubber.

The bezel comes in two colourways – polished silver, or matt black – on the black-body version, the new white variant has a choice of three bezel colours – gold, silver or metallic blue.

The battery is rechargeable, and it can be almost fully charged in just one hour. Battery life is excellent – up to 14 days in standby mode, 40 hours in sports mode, and up to 25 dives in dive mode.
www.crestdiving.com

MARES SMARTY MINI | SRP: £24

The Smarty Mini Multi-tool is the perfect compact tool for basic operations. It measures less than 100mm, is just 4mm thick, and is made from stainless steel with a PVD coating.

It features a 4mm allen key, line cutter, screwdriver, 4-6-8-13-14mm spanners, plus the all-important bottle opener.
www.mares.com



FOURTH ELEMENT ATLANTIC | SRP: £350



Fourth Element's Cyclone waterproof jacket was a fantastic product, and mine kept me nice and dry in even the worst downpours. Now the company is back with a new waterproof coat, but this time it is a three-in-one that can be worn three ways – as a waterproof shell (a la Cyclone), insulated jacket, or zipped together for ultimate protection.

The Atlantic has been designed slightly longer than the norm, with clean, minimal lines, meaning it is just as at home in the city as it is out on a blustery coastal path.

Made from recycled polyester throughout, each fabric and component has been considered for its function and recyclability. By using monofilament fabrics and recycled materials where possible, this coat is more-easily recycled at the end of its life without compromising on performance.

The outer is made from recycled polyester with a fluorocarbon-free DWR treatment, meaning it is waterproof and breathable. It features fully taped seams throughout, hand-warmer pockets with storm-flap protection, an adjustable peaked hood with hidden toggles, adjustable snap cuffs, and a zip interface to combine with the inner jacket.

The inner is made from recycled polyester and down-free insulation, and has hand-warmer pockets, high-neck protective collar, and a handy chest pocket.

The Atlantic comes in male and female variants, in sizes from XS to XXXL (mens) and XXS to XXL (womens).

www.fourthelement.com

TECLINE MILITARY LINE





The current trend is to add a splash of colour here and there to brighten up equipment, but Tecline's Military Line goes the completely opposite direction and adopts the Henry Ford thought process – 'any colour as long as it is black'.

Techies and wannabe techies are going to lap up this range of equipment, which covers everything from umbilical torches (TecLight), backplates and harnesses (DIR), wings (Peanut 16 and 21, Donut 22) and regulators (R5, V1 ICE, TEC2) to pillar valves, tanks, masks (Frameless Super View), hoses, gauges and even bolt snaps.

www.teclinediving.eu

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APPLE WATCH ULTRA | SRP: £849

Mark Evans: One of the biggest developments in the world of diving this year was the news that Apple had added recreational scuba diving to its latest product, the Apple Watch Ultra, via the Oceanic+ app.

The Apple Watch Ultra is the most-rugged and capable Apple Watch yet, specifically designed for the outdoor adventurer and watersports enthusiast. It has a 49mm case made from aerospace-grade titanium, a sapphire front crystal which showcases a stunningly-bright always-on retina display, and three easily interchangeable bands, including the robust Ocean band as fitted to our unit, which is designed for use in the water. The bands can be swapped out in seconds, and you can get – as we did – an extended Ocean strap for use with drysuits, which is £49.

Being an Apple Watch, the Ultra has a seemingly endless array of features, from walking, running, cycling, swimming, triathlon, rowing, yoga, pilates, tai chi, to blood oxygen sensor, ECG app and even fall detection. It also has a nifty compass, an extremely loud siren, and dual-frequency GPS, and straight out of the box it has a 'depth' mode, which will show your depth, time, etc, while freediving or diving. There is so much this thing is able to do, your best bet is going on to the Apple website and seeing for yourself all of its above-water features.

So, the Apple Watch Ultra is an extremely capable smart and fitness watch, but we are here for the diving. So, what





is the Oceanic+ app like, which unlocks all of the dive computer features? Well, as you'd expect from anything involved with Apple, it is very user-friendly and intuitive, and as Huish Outdoors know a thing or two about diving, it uses the tried-and-tested Buhlmann decompression algorithm. You can choose between snorkelling and scuba mode, done by a simple tap of the screen in Dive Settings.

In snorkelling mode, on the screen you get your maximum depth, the number of snorkelling sessions you have done, your last 'dive', the number of dives, and the water temperature. Scroll up on the digital crown on the side and you get your compass, but you can't set any headings. In scuba, which is what we are more interested in, you have the actual dive mode, No Deco Planner, Logbook, and Settings.

Let's jump into Settings first. Again, all very user-friendly – you navigate around by tapping the screen and scrolling the digital crown. You can see and edit your account, and in General Settings, you can choose between Metric (Centigrade, Metres and Kilogrammes) and Imperial (Fahrenheit, Feet and Pounds).

In Dive Settings, once into Scuba Settings, you can go into Conservatism - select the gradient factors conservatism level, from default (70/85), to more conservative (65/80), to most conservative (60/75), or even add your own custom level. You can also select the PPO2 percentage – it is 1.4 as default, and you can go lower than this but cannot go higher – so no setting your PPO2 to 1.6 to gain a few extra metres on your nitrox MOD!



Then there is your Gas Setting, where you can choose between air or nitrox. The Apple Watch Ultra will handle nitrox from 22-40 percent, perfect for recreational divers with their nitrox ticket.

Finally, you have your Alarms settings, where you can set alarms for target dive time, target depth, low no deco, and minimum temperature. It is a simple matter to toggle these on or off. If you exceed or reach any of your target settings, the bottom half of the screen clearly shows this, be that vivid yellow for reaching your target depth, for example, or bright blue for when the water temp drops below your minimum temperature.

Right, so that's the computer all set up – let's go diving! When you hit the Dive Now on the app, you get a screen with the statement I'm Fit and Ready to Dive. You have to press the Action Button on the left-hand side to instigate being ready to dive.



This brings you on to the dive screen, and it is very clear and easy to navigate. Your current depth is at the top, your no deco time is next, with a green dotted line beneath – this will go down and turn yellow as your no deco approaches its limit, giving you a great visual cue as well as the countdown of the numbers.

Below this on the home screen you have your dive time, your minutes to surface, and finally the temperature. One scroll up on the digital crown and you replace these bottom three with your maximum depth, your ascent rate and your battery percentage.

Scroll again and these three are replaced by your digital compass. You press the Action Button to set a heading, and press it again to remove it. A final scroll displays your gradient factor settings, whether you are on air or nitrox, and your maximum PPO2 level. The dive screen is very legible even in low-visibility or night-time conditions, and I had no difficulty pressing the Action Button or scrolling the digital crown when wearing both drygloves and thick neoprene gloves in single-digit temperatures.

I liked the fact that if you do start to ascend too fast, for instance, the computer does all that it can to alert you to your violation, including the bottom half of the screen having a red warning with 'slow down' on it, as well as the Ultra vibrating, which can be felt through a drysuit. Likewise, when you arrive at your safety stop, the bottom half of the screen goes yellow, it states 'safety stop', and you get the strong vibration along with your usual three-minute countdown.

All this just adds to the simple-to-use and intuitive nature of the Oceanic+ app on the Apple Watch Ultra. Recreational

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APPLE WATCH ULTRA | SRP: £849





© Apple

divers want a computer that is easy to get used to, clear in its warnings, and with all of the features they will need. It handles recreational nitrox mixes, so that is covered, and if you do stray into decompression, it will give you all the necessary stops to get you safely to the surface. We pushed the Ultra into decompression, and as we went past our NDL, the bottom-half of the screen flashed up with a deco warning as well as vibrating, so there was no way you would miss it. It then showed what depth we would need to stop at, and for how long. We ran it up to five minutes of deco, but by the time we had made a slow ascent up to 6m, it had cleared and was back in 'normal' no-deco mode.

Battery life is not bad at all, especially given that always-on display. It can last for up to 36 hours in normal use, but you will still get over 12 hours even utilising more of the features. I did two 50-minute dives in a day with a fully charged Ultra and it still had more than 74% battery life remaining when I surfaced from the second dive. Regardless of battery usage, it isn't an issue, as the Apple Watch Ultra's lithium ion battery charges extremely quickly on its supplied charging station.



So how does the Apple Watch Ultra with the Oceanic+ app stack up against the competition?

Well, in terms of the diver it is aimed at, its obvious rival is the Suunto D5. This has a colour screen and can handle all that the Ultra can diving-wise, but it doesn't have any of the smart and fitness watch functionality, and the Ultra screen display is far brighter and easier to read.

Next up is the Shearwater Research Teric. This well-regarded dive computer can handle anything you throw at it, right up to sidemount, open-circuit tech and CCR. It has an insanely bright OLED display, and is priced in the vicinity of the Ultra. Now, the Teric display is far brighter than the Ultra, but this comes at a price – battery life is not as good as the Apple. And again, it may have far more dive features, but it is not a fitness/smart watch. It does have air-integration, though.

Finally, there is its nearest rival in terms of functionality – the Garmin MK2S/MK2/MK2i. Both are smart/fitness watches, both have colour screens, both are rechargeable, and both are full-function dive computers, however, they are aimed at different people. The Garmin wins on the diving

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front because it can handle multiple gas mixes, OC tech and CCR, thus appealing to more-experienced divers, but the Ultra screen is far brighter, clearer and easier to read, and the menu and navigation on the Ultra is superior and more user-friendly than the MK2, which is all great for newer divers. The impressive battery life of the Garmins is hard to beat, though.

I heard some negative remarks across the internet when the news of the Ultra – and the Oceanic+ app – first broke. There were lots of 'but it doesn't work beyond 40m', etc, but at the end of the day, I bet many of the naysayers rarely break 30m, never mind 40m! And if a recreational diver has by some chance headed off below 40m, they have far more issues to deal with than their computer not working. The vast majority of recreational divers out there never stray beyond 30m, so this would cater to them perfectly. However, the Ultra itself is depth-rated to 100m, so who knows down the line what the future holds in terms of potential new app developments.

Being an app of this calibre, you have to pay for it – you can get a one-day pass for £4.99, monthly plans start at around £8.99, and an annual plan is £76.99. Again, there was much negativity regarding this app-based dive computer approach, but many people are used to downloading and paying for decent apps in this day and age, so I can't see the issue – £76.99 is not exactly the end of the world in expenditure, and being an app, new features will be added all the time, adding to the functionality of the Ultra as a dive computer alongside its already-impressive smart/fitness watch applications.

This app is already far more than just something which makes the Apple Watch Ultra into a dive computer. Using the app on your phone, you can go into the dive planner, drop a pin on a particular location you are set to go diving, and this produces a huge amount of information, including surface temperature, water temperature, wind, UV and tides. And you can see this info for up to three days in advance – ideal for when you are looking at the coming weekend for your next diving jaunt.

For those that log their dives – I vaguely remember back when I used to do that! – the Apple Watch Ultra syncs all your dive data with your phone, where you can see a map of your entry and exit locations, and graphs of your depth, water temperature, ascent rate and no deco limit. You can then add additional details into this logbook.

It is going to be interesting to see what an impact the Apple Watch Ultra and the Oceanic+ app have in the coming year and beyond. Considering the company sells in excess of 35 million Apple Watches annually, getting scuba diving in front of even a small percentage of that epic number is huge for the dive industry.
www.apple.com

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MARES ATLAS ADJ 62X | SRP: £587





Mark Evans: Mares are renowned for their robust, high-performance regulators, and the Atlas Adj 62X definitely fits the bill to join its predecessors.

It is a good-looking bit of kit, with the eye-catching pearl chrome finish on the first stage, and a burnished, almost matt finish on the all-metal second stage.

The tried-and-tested 62X is a compact diaphragm first stage, which is environmentally sealed for better performance on cold-water dives, and to give even-better cold-water protection, it is the first reg from Mares to be equipped with TBP, or Twin Balanced Piston - a dual piston, anti-freeze kit which completely isolates the first stage, guaranteeing reliability at extreme depths – it meets the requirements of NORSOK U-101 at a depth of 200m, so the depths that the vast majority of us will go to is well within its capabilities!

It also features Mares' AST first-stage dry system, which prevents water entering the first stage if it is dunked in the rinse tank with no cover in place. AST is an internal component that is automatically activated by air pressure, thus requiring no action from the diver - it simply opens when the first stage is pressurized, and closes when it is depressurized.

The 62X has Mares' 'Natural DFC' – or Dynamic Flow







Control - on all of the low-pressure ports ensures high air flow regardless of depth, by ensuring a consistent, elevated air flow to the second stage.

Talking of ports, despite its small size, it has pre-orientated low-pressure and high-pressure ports, which feed your regulator, octopus, BCD inflator hose, drysuit whip and pressure gauge around your body or over your shoulders perfectly to avoid any unnecessary loops and snag hazards.

The Atlas Adj second stage is, as mentioned before, all metal, to reduce the risk of freeflow in coldwaters, and it features several Mares innovations, including VAD, or Vortex Assisted Design, which is, according to them, 'a bypass tube delivers gas to the mouthpiece, creating a swirling vortex with a low-pressure area in the centre that pushes the diaphragm down during inhalation, for sensitive, natural breathing at all depths'.

It also has the PAD, or Pneumatically Assisted Design, which ensure the same pressure on both sides of the second stage valve, meaning the spring tension required to close the valve is greatly reduced, and this lower spring tension results in greater comfort during inhalation.

What I do know is that the reg provided a very easy, smooth breathe in all orientations underwater, and even when I started rapidly breathing through it to simulate a panicked situation, it never missed a beat and positively threw air at me, so I'd say all those design elements do their job.

The cracking resistance control knob on the side of the regulator is a decent size and shape, with the mouldings meaning it was easy to grip and operate even with 5mm neoprene gloves on. Tweaking this allows the user to get the regulator breathing how they like, or dependent on conditions. The wide, pivoting purge button is similarly easy to find and depress while wearing thick gloves, and it is very effective. A braided Superflex hose completes the set-up. A matching octopus is available for £279.

The Atlas Adj 62X is a fine addition to the Mares regulator line-up. It handles cold-water diving with aplomb, and was never phased even when I simulated a panicking diver situation and really breathed heavily through it. It just calmly delivered the air I needed. The cracking resistance control and the large purge are both easy to use with gloves on, and the mouthpiece was comfortable.

The great thing about the Atlas Adj 62X is the compact size of that first stage, which makes – especially in DIN variant – the whole thing quite light, as far as regs go, so it is ideal for the travelling diver as well.

It is available in DIN and A-clamp variants.

www.mares.com

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NEXT MONTH'S ISSUE



THE LURE OF LOCH LONG
Ross McLaren presents a handy guide to some of Loch Long's most-popular dive sites.

Q&A: KIRK KRACK & JOHN GARVIN
We go behind the scenes of Avatar: The Way of Water as we chat with the experts who made the ambitious in-water sequences happen.

THE MALDIVES MARATHON, PT 3
Stuart Philpott continues his epic four-island adventure around the Maldives.

LAND OF FIRE AND ICE
The Evans clan explores the wonders of Iceland above and below the waterline.

TECH: SPAIN, PT 2
Chris Jewell joins the team on the Treviso Caves Project in Picos de Europa.

GEAR GUIDE: TEST EXTRA
Editorial Director Mark Evans dives the Crest CR-5 dive computer and Mares EOS torch line.



SCHOLARSHIP DIARY

The Our World-Underwater Scholarship Society is a non-profit, educational organisation whose mission is to promote educational activities associated with the underwater world. It has offered scholarships for over 35 years.
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GOING COMMERCIAL



At the end of September, I finished my scientific diving training in Finland and headed back home to Ireland. I travelled to a small town in the far south of the country called Castletownbere in County Cork. It is a fishing port village, backed by beautiful mountains, facing onto the Atlantic Ocean, sheltered by the headland of the Beara Peninsula and Bere Island.

I had come here to take part in commercial diver training, this training is the first step that many divers take into the professional diving industry. It is a legal requirement in Ireland, the UK and many other countries around the world to have commercial diver training in order to be employed by someone to carry out any diving work such as engineering, construction or maintenance and, in many cases, this also includes scientific, media or even military diving. Essentially for anyone that is planning a career in the underwater world in a further capacity than the recreational or technical diving industry, commercial diving training is pretty much essential. I was joined in Castletownbere by a group of equally enthusiastic candidates from various industries and diving backgrounds - engineers, fish farmers, construction workers or like myself, planning a career in scientific diving. It was eyeopening for me to meet people with such different motivations to train as commercial divers and drawn to the sea.

We began on Monday morning bright and early in the classroom for diving briefings and dive theory. In our first few days we practised basic dive skills, getting everyone onto the same level and then cracked on with swim tests, fullface mask training and rescue drills. The rescue drills began with assessing an unconscious buddy on the surface and carried through towing with rescue breaths, shore egress, shoreside scene management with CPR and O2 administration.

After a week of shore diving and training in various navigation and search and recovery training, we headed out to the 'Sandfisher' a purpose-built barge, moored off Bere Island as the perfect training platform for the course. Out on the barge we had a high-pressure compressor for filling tanks after each dive, a surface-supplied diving station and low pressure compressor, a hyperbaric recompression chamber, galley, head and mess. It was an ideal set up for the course and meant that as a team of students and instructors, we could run a full day of diving incredibly efficiently.

We began most mornings with classroom sessions covering everything from diving physics equations to rope splicing and equipment servicing. I found it fascinating to learn more about the world of commercial diving and also it was great to learn from instructors with such incredible depth of knowledge on each specialist topic.

Our course director Brian Murphy led most of our classroom sessions with a wealth of knowledge from over 40 years of experience in the diving industry as a commercial diver and instructor having worked in the North Sea and around the world as a mixed gas saturation diver and dive supervisor. He covered every aspect of diving physiology, physics and legislation with us.

Our instructor for all things equipment was Cillian Gray, who is one of the leading dive equipment technicians in the country, also with a wealth of experience as a commercial diver in the inshore aquaculture, civil engineering and scientific industries. We were also joined by Tiernan Gray, who is a life support and diving supervisor and instructor having worked at sea for many years both offshore and inshore. He taught us about first aid and diver rescue as well as how to run a dive team smoothly and without opportunity for accidents or injuries.

After theory and dry skills, we would head out to the barge for our day's diving. Normally it would be two dives a day and when you weren't diving, you were the surface support of 'tender' to a diver's comms line, deck watch or fully dressed in and ready as a 'standby diver' able to hit the water at a moment's notice.

By the end of the five-week commercial diver course, we had covered everything from diving physics and physiology, the ins wand outs of a commercial scuba set up and its repair to communication systems, working underwater, chartwork and hyperbaric chamber operations. It was an intensive and challenging few weeks but at the end we each had been given a wealth of knowledge and had grown as divers and as a team. I am so glad to have been trained by the calibre of diving instructors at BIM but also with the friendship and joy of working with a great team. ■

Hannah



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