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OCTOBER 2021  
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# Diving in bubbles

**M**UCH OF WHAT GENUINE reef life once existed on Arabian Gulf coastlines was eradicated in the process of constructing the seaside cities of the United Arab Emirates. That's why divers who live in Dubai will drive over to the Gulf of Oman and places such as Fujairah and Musandam that retain their share of natural attractions.

But if a desert city like Dubai can attract skiers by providing a huge indoor resort complete with real snow and penguins, as it has done for 16 years, it was never going to give up on attracting diving dollars.

So Deep Dive Dubai was born, suddenly making the existing deep artificial pools dotted around Europe look unambitious. You can plunge to 60m there if qualified, though as technical diver Julian Eynon finds when he tries the facility out for us this month, the headlining "pit" is the least interesting aspect of DDD.

It's the urban-chic decor at the higher levels that is likely to make it a winner, and I do like what they've done with the place. I'd like to try it for myself.

So no sooner does DDD land with a splash, offering divers somewhere to play without leaving the city, than a major push begins across town to encourage divers to join the sharks, rays and 65,000 marine animals checked into the Atlantis Hotel.

Half-hour "Atlantis Dive Explorer" underwater sessions in the 11-million-litre tank that is the Ambassador Lagoon were the subject of a promotional week run with the UAE's Ministry of Climate Change & Environment, with the aim of "increasing awareness of sharks".

Prefer treasure-hunting? Down the coast in the UAE capital Abu Dhabi is another tank for divers – Yas Waterworld. Book the Hairat Yas Pearl Diving experience and you can descend, rummage for oyster shells and relive the tradition that once brought cash pouring into the region.

And if you find a pearl, you get to keep it. Scuba isn't allowed, but it sounds like an entertaining enough way to practise breath-holds.

**ALL GOOD CLEAN FUN** (though I haven't checked with the sharks) but what such attractions lack after the first visit is the one thing that makes open-water diving so appealing for most of us – the element of surprise. You know what you'll find every time you go.

It's interesting that senior staff at Deep Dive Dubai should be leading lights from the body that came to prominence through extreme cave-diving, Global Underwater Explorers (GUE).

What the diver habitats of Dubai and cave systems have in common is that they're all enclosed experiences, though the former of course aims to remove any suggestion of jeopardy.

As it happens we also feature the softer end of two world-renowned natural overhead-environment experiences this month – the cenotes in Mexico's Yucatan and the Resurgence du Ressel in France.

Also, lurking in the netherworld between the natural and the artificial, we look at Jason deCaires Taylor's MUSAN underwater sculpture park. This imaginative installation gives Cyprus diving a new dimension and it's a site that *will* alter over time as it becomes colonised.

So how much do you value that element of surprise?

# FIRST



STEVE WEINMAN,  
EDITOR

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the magazine that's straight down the line...

# CONTENTS

## FEATURES

17

### Ths ss Thistlegorm at 80

John Kean celebrates the classic Red Sea wreck

20

### Under Mexico.....

Brandi Mueller tickles a cavern-diving itch

26

### The Joy of Night-Diving.....

Steve Warren goes dark in the first of a two-parter

31

### Breakthrough Biology

How warm blood boosts some sharks

36

### Julian's Adventures.....

...in the Wonderland that is Deep Dive Dubai

42

### A Site Beyond

Farikede in the Maldives really does have it all

48

### The Cyprus Forest.....

Moody installation from Jason deCaires Taylor

52

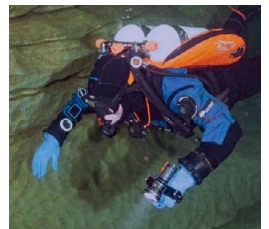
### Let's Ressel.....

Epic French location for serious cave-divers

56

### A Virtual Dive

Another chapter from Mark Harris's *Glass & Water*



COVER IMAGE:  
Divers in the  
Deep Dive Dubai  
library shaft,  
by Jesper Kjølner

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# CONTENTS

## REGULARS

- 2** **First In**  
Editor's view
- 6** **News**.....  
Vital advice for when sex-crazed sea snakes lunge
- 19** **Beachcomber**.....  
How whisky-diving raises the spirits
- 41** **Trewavas**  
What makes a good wreck? Divers differ
- 60** **Review**  
Books on *Britannic*, *Oceanic*, cave rescue and coral
- 63** **Booking Now**  
Plan your next diving holiday now
- 64** **Diver Tests**.....  
Zeagle Bravo BC, TUSA Intega mask – and a bucket
- 69** **Just Surfaced**.....  
New but untested products
- 76** **Deep Breath**  
Impulsive non-diver + spare scuba kit = trouble



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## PLUS

- 72** **Classified Ads**
- 74** **Dive Holiday Directory**
- 75** **Dive Centre Directory**
- 75** **Advertisers' Index**



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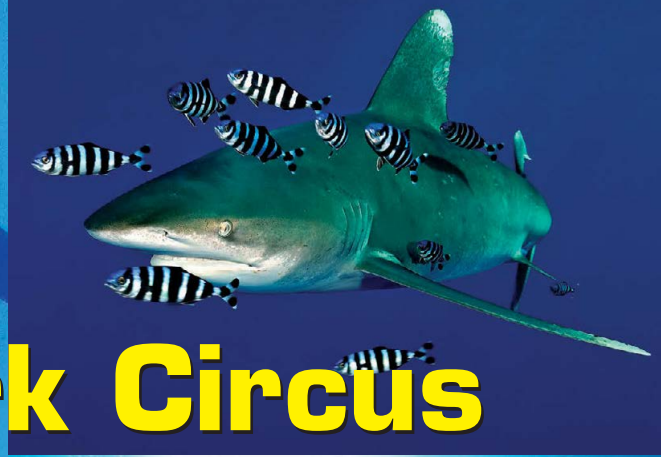
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# Sea-snake strike? It's only passion: divers need to freeze

**UNPROVOKED SEA SNAKE** "attacks" on scuba-divers appear to occur in the heat of passion, say researchers in Australia. They have concluded that it is mostly male snakes that approach divers – straight after a failed pursuit of a female during mating season.

Divers most often report aggressive behaviour from highly venomous olive sea snakes (*Aipysurus laevis*), say the team from Australia's Commonwealth Scientific & Industrial Research Organisation (CSIRO), Macquarie and James Cook Universities.

The species, found on reefs off northern Australia, Papua New Guinea and in the Coral Sea, will swim rapidly towards divers making jerky zig-zag movements, and sometimes wrap themselves around their limbs or fins, flicking their tongues and even biting them.

The team set out to determine why a free-ranging olive sea snake should act in this way towards divers, who were too large to be mistaken for its prey and could easily be evaded if it



Olive sea snakes 'attack' when sexually frustrated.

TCHAM

feared them to be predators.

They also wanted to determine how a diver should best respond to an apparently aggressive approach.

They analysed 27 months of observational data made by one of their number, Tim Lynch of CSIRO, while diving on the southern Great Barrier Reef in 1994-95. The conclusion was that what they call the snakes' "rapid approaches" were in fact "misdirected courtship responses", exacerbated by their poor eyesight.

Incidents occurred mainly during the winter breeding season (May-

August). Sea snakes approached the diver on 74 of 158 encounters, including 13 instances of rapid charging. It was usually males that made repeated approaches, spent more time with the diver and exhibited typical courtship behaviour such as coiling around a limb.

The agitated approaches often occurred after a courting male had lost contact with a female he was pursuing, after an interaction with rival males, or when the diver tried to flee, in the same way a female snake might evade the male's advances.

When the rapid approach was made by a female it usually happened when she was being chased by males, so she might have seen the diver as a place of refuge.

The advice to divers was clear: keep still and avoid retaliation, because if you try to get away you'll be emulating a female's evasion tactics.

"By staying still and allowing a sea snake to investigate them with its tongue, a diver is unlikely to escalate the encounter and be bitten," said Dr Ross Alford of JCU. The study is published in *Scientific Reports*. ■

## UK government confirms shark-fin ban next year

**CAMPAIGNERS HAVE** welcomed the UK's formal announcement that from next year it becomes the first European nation to ban the import and export of shark fins and any products containing them, including shark-fin soup.

Before Brexit, the UK had complied with EU legislation that permitted any individual to carry up to 20kg of dried shark fins across European borders as a personal import.

DIVER reported in July News that the loophole, which had allowed shark-fin traders to operate freely in the UK, was set to be closed.

The new law will require any imported and exported fins to remain attached to the shark's body and to be traded as such.

Bite-Back Shark & Marine Conservation, a prime mover in the campaign to close the loophole, has said that each individual import allowance was worth around £3600 on the black

market, and was enough to make 700 bowls of shark-fin soup.

DEFRA, the Department for Environment, Food & Rural Affairs, issued a call for evidence last December, seeking views on the scale and impact of the trade in the UK.

It has now published a summary of responses including details of the next steps to be taken.

Respondents included Bite-Back, Blue Marine Foundation, Shark Guardian, Sharkproject International, Shark Trust, WildAid and the Wildlife Conservation Society, with no opposition raised to stricter controls.

"Shark-finning is indescribably cruel and causes thousands of sharks to die terrible deaths," said International Ocean Minister Lord Goldsmith. "It is also unforgivably wasteful.

"The practice is rightly banned in UK waters but the trade continues, with serious

implications for the future of these magnificent creatures. Our

action will not only help boost shark numbers, it will send a clear message that we do not support an industry that is forcing many species to the brink of extinction."

"It is encouraging to see the UK addressing the fin trade as an element of overfishing – the principal threat to sharks and rays," said the Shark Trust's director of conservation Ali Hood.

"And we're noting that the UK is ramping up its engagement in domestic and international shark-conservation issues, currently championing the science-based advice for a prohibition on mako in North Atlantic high-seas fisheries." ■



# MALTA SINKS ANOTHER PATROL-BOAT

**PATROL BOAT** P-33, formerly used by the Armed Forces of Malta (AFM), has become the latest attraction to be sunk for scuba-divers in Malta.

The vessel was scuttled off Zonqor Point, a salt-pan area in the south-east of the main island, on 31 July.

The 23m-long wreck now lies at a depth of 20m between two existing dive-sites, those of the tugboats *St Michael* and *Melita*, according to the *Times of Malta*.

The Bremse-class boat was built in Germany for the East German navy in

the early 1970s, but after reunification in 1992 it was sold off to Malta as part of a job-lot of four patrol boats.

P-33 served in the AFM's Maritime Squadron but was decommissioned in 2005. According to the paper the sinking had long been delayed, original proposals to locate the boat off Marsalforn in Gozo nine years ago having been scuppered because of environmental concerns.

Other AFM patrol boats such as the P-29 in Cirkewwa and P-31 in Comino are already familiar to divers in Malta.

The latest sinking was arranged by the Professional Diving Schools Association of Malta, Gozo and Comino and the Malta Tourism Authority (MTA).

As further evidence of its successful courting of divers, the MTA has announced that all 7500 of the 100-euro vouchers in its Diving Voucher Scheme have been successfully allocated. The initiative has now been placed on hold while the 62 approved dive-centres involved catch up with the demand.

The scheme was announced in late April, as reported in **DIVER**, as part of a 2.25-million euro tourism-recovery plan for the Mediterranean islands. The scuba vouchers can be redeemed by visitors until the end of 2021. ■



The P-33 patrol boat in dock.



Restoring seagrass attracts seahorses.

MARK PARRY, OCT

## Divers shift seagrass seeds

**SCUBA-DIVERS** from the Ocean Conservation Trust (OCT) and Project Baseline UK have collected more than half a million seeds from healthy seagrass meadows in the Solent off the Isle of Wight.

The seeds are to be transplanted to other parts of the Solent where the grass has been lost or degraded.

The dives took place around Osborne Bay, Yarmouth and Bouldnor, and further seed-collection dives were set to take place further west in Looe and Falmouth in Cornwall.

The dives form part of the Natural England-led initiative LIFE Recreation ReMEDIES, the country's biggest seagrass-restoration project. Collected seeds are being kept in a cultivation laboratory at Plymouth's National Marine Aquarium and will be returned to the seabed this winter.

Seagrass seeds have already been sown across almost one hectare of seabed in a conservation area in Plymouth Sound, and another four hectares are planned for the Solent.

"Seagrass meadows provide homes for juvenile fish and protected creatures like seahorses and stalked jellyfish," said diver and OCT development officer Mark Parry.

"They also help to stabilise the seabed, reduce coastal erosion, clean surrounding seawater, and capture and store carbon.

"But seagrass is now present in only half of the areas of the UK where it was once recorded, with factors including wasting disease, pollution and physical disturbance contributing to its decline."

Earlier this year **DIVER** reported that Parry had made the rare sighting of a long-snouted seahorse in restored seagrass in Plymouth Sound (*News, August*). ■

# Thailand bans toxic sunscreens in marine parks

**THAILAND HAS** joined other diving destinations in banning the use of sunscreens that contain certain coral-damaging chemicals, in its case from all its marine national parks.

There are some 26 such parks in the country, with four in the Andaman Sea proposed for World Heritage status, including the Surin, Similan and Tarutao islands, all popular scuba-diving locations.

The Thailand ban covers sunscreens that contain Oxybenzone (Benzophenone-3), Octinoxate (Ethylhexyl methoxycinnamate), 4-Methylbenzylidene camphor (4MBC) or Butylparaben.

There are thought to be as many as 3500 brands of sunscreen, and these ingredients are judged particularly harmful as they can kill coral larvae, interfere with corals' reproductive system and cause bleaching.

Under the new legislation anyone found using a product containing these chemicals can be fined 100,000 baht (£2100), though how the ban will be enforced when tourism returns to



POSELIS

previous levels has not been clarified by Thailand's Department of National Parks, Wildlife & Plant Conservation.

Palau was the first nation to ban sunscreen at the start of 2020, with 10 harmful chemicals covered by its exclusion. The US state of Hawaii imposed its own ban at the same time, and similar bans exist in the US Virgin Islands and on a very localised basis in Key West in Florida.

Bonaire, Aruba and Mexico's Riviera Maya have similar bans.

Divers are advised to use mineral-based sunscreens such as zinc oxide and to look for water-resistant products. A list of sunscreen products judged to be environmentally safe is published annually by Haereticus Environmental Laboratory in the USA though there is no equivalent guide in the UK. ■

# Divers spell out 1600s wreck ID

**WORKING AT A DEPTH** of 85m in the Gulf of Finland, technical divers have been able to identify for what is thought to be the first time a 17th-century ship by examining its timber transom.

The rare Dutch *fluyt*-style three-masted merchant ship was found on a seabed survey last summer, as reported in **DIVER** (News, October 2020)

Lying between Finland's Hanko peninsula and the Estonian island of Hiiumaa, the wreck had been well-preserved by the conditions of low salinity, darkness and cold temperatures of the Baltic.

The wreck was subsequently dived by the Finnish group Badewanne. It sat upright with most of its rigging scattered around and its side-planking still in place, but a trawl-net appeared to have damaged the poop-deck and part of the timber transom, which had fallen to the seabed and lay inverted.

The divers, limited to 20-minute bottom times and unwilling to risk causing any damage, were unable at the time to turn the transom over to read the vital information they knew it could contain.

They returned this July, having planned with maritime archaeologists how to flip the transom safely, but saved that operation for the last day of their two-week expedition.

"The carvings had survived hundreds of years on the transom plate, still revealing the identity of the ship," reported the team.

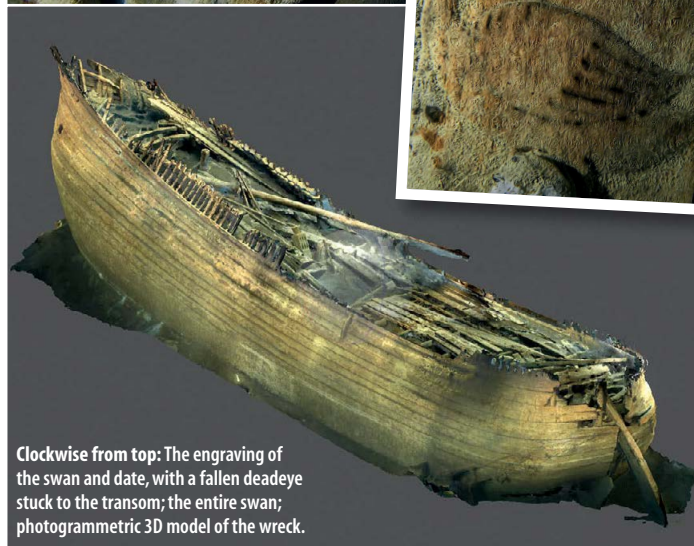
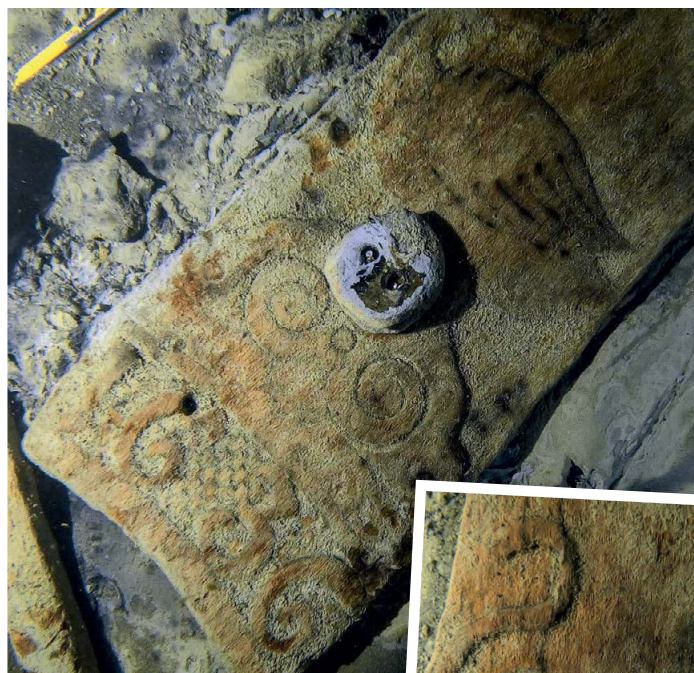
"This ship had been constructed in 1636 and her name was the *Swan*. During those days names were not written. Instead a carving on the transom plate presented the name, because many people were illiterate so could not read it."

The divers also took measurements and from their photographs created a photogrammetric 3D model to calculate its dimensions.

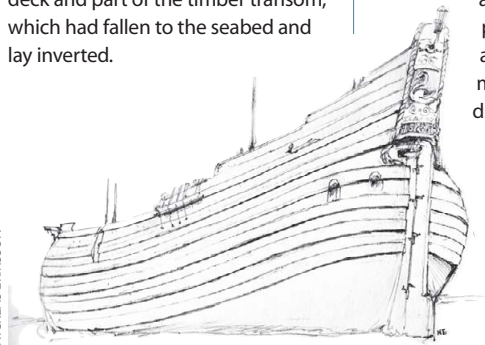
With this data along with the name and year of construction, they are now hoping to trace the vessel in the archives.

There is also a possibility that a coat of arms revealing the ship's home port remains to be found among surviving transom decorations.

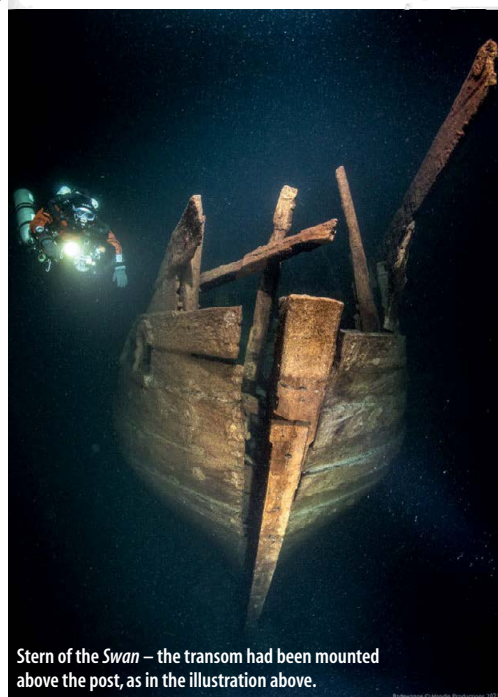
Although *fluyts* were a Dutch design the style was widely imitated, so the



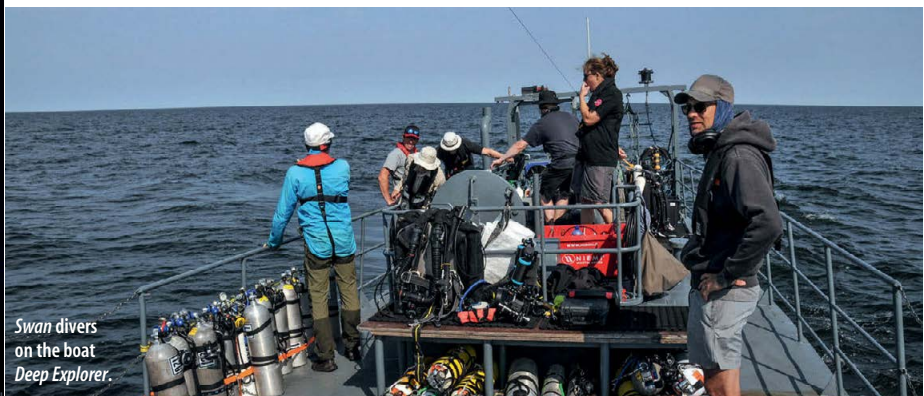
Clockwise from top: The engraving of the swan and date, with a fallen deadeye stuck to the transom; the entire swan; photogrammetric 3D model of the wreck.



NICKLAS ERIKSSON



Stern of the *Swan* – the transom had been mounted above the post, as in the illustration above.



*Swan* divers on the boat *Deep Explorer*.

BADEWANNE / HANDLE PRODUCTIONS

BADEWANNE / HANDLE PRODUCTIONS

*Swan* was not necessarily from the Netherlands.

To maximise cargo capacity, *fluyts* were unarmed and had large holds and small crews, made practical by their advanced rigging systems.

This made the style popular, but few examples have been found, even in the Baltic Sea.

The expedition was carried out in

a collaboration with the Finnish Heritage Agency of Antiquities, Stockholm University and the Cultural Heritage Agency of the Netherlands.

The team stayed aboard the schooner *Joanna Saturna* and dived from the dive-boat *Deep Explorer*.

Badewanne is working with film company Handle Productions on a documentary about the wreck. ■



# Teacher died diving off Lulworth Cove

**THE BODY OF A DIVER** who went missing on Saturday, 7 August off Dorset's Lulworth Cove, was found three days later.

Carvalho Ildelindo da Silveira, from



This photograph of da Silveira entering the sea was circulated by Dorset Police.

Bramdean in Hampshire, had last been seen in the sea at around 4.15pm, though he was not reported missing until four hours later, when the RNLI was informed and an air and sea search commenced.

He had been diving with a friend, who had surfaced alone.

Police had issued an appeal for anyone who might have seen da Silveira on the day to come forward.

Divers from Devon & Cornwall Police and Dorset Police's marine section located his body in Lulworth



Carvalho Ildelindo da Silveira.

Bay on the afternoon 10 August.

da Silveira, 59, was a residential mathematics teacher at Brockwood Park, an international boarding school in Bramdean, Hampshire. He was originally from Brazil.

"Carvalho was a much-loved member of the Brockwood family and touched the lives of a great many international students and colleagues over his 20-year tenure at the school," stated Brockwood Park. "He will be missed dearly."

The wetsuit and cylinder seen in a photograph of da Silveira taken as he entered the water were used to formally identify the body.

A *post mortem* examination found the medical cause of death to be drowning and Dorset Police stated that the death was not being treated as suspicious. An inquest opened in late August in Bournemouth but was adjourned by Dorset senior coroner Rachael Griffin pending a pre-inquest review in December. ■

# Illegal Armada wreck-diving prompts warning

**AN INVESTIGATION WAS** launched in Northern Ireland following reports that scuba-divers had removed artefacts from the protected Spanish Armada shipwreck *La Girona*.

A patrol boat has now been assigned to undertake regular inspections of the dive-site, and that of the WW1 cruiser *HMS Drake*.

And with warm weather and calm seas said to be encouraging more divers into the sea this summer, Stormont's Department of Communities (DFC) issued a warning to them not to disturb either site, the only two of Northern Ireland's 340 known wrecks to have been afforded special protection.

"Over the July holiday period the Department received a report of diving activity within the restricted area around *La Girona* and the removal of potential artefacts from the site," said the DFC, adding that it was investigating this incident.

The Spanish galleass sank off Lacada Point, Co Antrim in October 1588 with the loss of 1400 lives.

In 1967/68 a Belgian dive-team located the wreck and salvaged the largest amount of Spanish Armada treasure to have been recovered at that time. Jewellery, coins, weapons and other artefacts can be seen at Belfast's Ulster Museum.

Access to the wreck is restricted to



Painting of the sinking of *La Girona*.

licence-holders under the UK's Protection of Wrecks Act. Other divers are expected to observe a 300m restriction zone around its position, which is marked on the Historic Environment Record of Northern Ireland map and Admiralty charts.

The armoured cruiser *HMS Drake* was the lead ship of her class and served from 1900 and in various capacities during WW1 before being torpedoed by the U-boat U-79 in Rathlin Bay in 1917, with 28 dead.

The wreck is a scheduled historic monument, so it is an offence to remove artefacts without permission, though no licence is required to dive it. Though largely demolished to make it safe for shipping in the 1970s it is a

popular dive-site, lying no deeper than 19m in usually good visibility.

A Department of Agriculture, Environment & Rural Affairs patrol boat was assigned to keep both wreck-sites under observation, with the DFC urging divers to observe restrictions and to dive all historic wrecks on a look-don't-touch basis.

Anyone witnessing diving going on around *La Girona* was asked to call the police on 101.

The DFC also issued a general request to divers to submit information, images or videos of wrecks they have dived for its records.

Guidance on wreck-diving in Northern Ireland is available at Dive-NI, dive-ni.com ■



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# Massive 16th-century coral discovered

RICHARD WOODGETT



Citizen-scientist freedivers and the *Muga dhambi* coral.

**A** **GIGANTIC** 400-year-old hard coral has been discovered on the Great Barrier Reef – by snorkellers on a citizen-science course.

At 5.3m tall and 10.4m wide, the hemispherical *Porites* coral is 2.4m wider than any other coral ever measured on the GBR, and is reckoned to have originated in the late 16th century.

The finders were participating in a Reef Health Impact Survey course with a group called Reef Ecologic, and the subsequent report involved eminent marine biologist Dr John Veron, who has been credited with discovering more than a fifth of the world's coral species.

The coral was discovered off Goolboodi or Orpheus Island, part of

Queensland's Palm Island group.

It has been named *Muga dhambi* or "Big Coral" by the Manbarra people who are the traditional custodians of the Palm Islands.

"Using calculations based on rock coral growth-rates and annual sea-surface temperatures, we think it's between 421 and 438 years old and



Taking the coral's measurements.

RICHARD WOODGETT

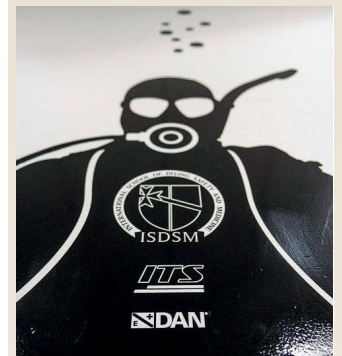
predates European exploration and settlement of Australia," said Dr Adam Smith, an associate professor at James Cook University and MD of Reef Ecologic.

"*Muga dhambi* may have survived up to 80 major cyclones, numerous coral-bleaching events and centuries of exposure to invasive species, low tides and human activity," he said. "Despite this, it's in very good health, with 70% consisting of live coral."

The coral has now been described in the journal *Scientific Reports*, with regular monitoring of its condition recommended.

"Having a publication with Charlie Veron, the godfather of coral, is a once-in-a-lifetime opportunity that I will never forget," said Dr Smith. ■

## Diving safety school opens new doors



**THE INTERNATIONAL** School of Diving Safety & Medicine (ISDSM) has opened new premises at the Institute of Tourism Studies (ITS) campus in Qala, Gozo in the Maltese Islands. The facility cost around 60,000 euros, including dive-kit and dive-safety gear.

The school was launched in 2017 by ITS, DAN Europe and Malta's Professional Diving Schools Association to offer diving safety, research and medicine courses focusing, says DAN, "on the sustainability of the diving industry".

A BSc course in diving safety management began last year, and practical sessions for this will be held at the new premises.

The opening coincided with the signing of a memorandum of understanding with training agency PADI Worldwide. Its diver certification system has been selected for use in awards for the degree-course students.

"Even in a time of much uncertainty like the one we're living in, opening a centre like this adds to the value that the ISDSM holds within the industry," said DAN Europe CEO Prof Alessandro Marroni.

The BSc course was, he said, "a point of reference for all those seeking to become more efficient, safer and customer-friendly diving-centre managers."

The ISDSM was also offering a free course on air quality in dive cylinders and compressors for dive-centres, [info.daneurope.org](http://info.daneurope.org) ■

RICHARD WOODGETT



*Muga dhambi* in its entirety.



Outcrops on the *porites* coral.

RICHARD WOODGETT



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# British tech instructor dies in Sydney

**A BRITISH TECHNICAL-DIVING** instructor who had settled in Australia died during a rebreather dive off Shelly Beach in Manly, New South Wales in early August.

Steve Ho, who had recently qualified as a GUE Tech 1 Instructor, was also a PADI Tec Trimix Instructor and Master Scuba Diver Trainer, a GUE CCR 1 rebreather diver and an Explorers Club Member.

He worked as assistant manager and technical manager at Dive Centre Manly in a suburb of north Sydney.

The incident occurred at around 2pm on 5 August. Ho died after being pulled onto rocks near Deadmans Reef at Manly, and according to press reports was thought to have suffered a possible cardiac arrest.

A local freediver was seen waving for help while Ho, who had been using a rebreather, appeared to be



Steve Ho.

unconscious. Nearby surfers helped to pull him onto a rocky platform at the base of a cliff. Police, ambulance crews and a rescue helicopter, fire & rescue crews and lifeguards responded to an emergency call.

Efforts by paramedics to revive Ho at the site were unsuccessful and he was pronounced dead at the scene. The police were investigating to produce a coroner's report.

GUE described Ho as a full-time instructor and "an active presence in diving in Sydney, including the promotion of and the running of underwater clean-ups and environmental initiatives."

On gaining his most recent qualification he had said: "I am looking forward to continuing to teach students how to safely enjoy and explore what I consider the best part of diving – the technical wrecks and reefs."

Dive Centre Manly owner Richard Nicholls stated the day after Ho's death: "Yesterday afternoon our hearts were broken as we lost our work buddy, friend, husband and for me second son Steve to the sea. We are as wrecked as the ships he loved so much.

"Our first thoughts and condolences go to Stephen and Lizzie's families, who tragically are on the other side of the world. We will take some time out to support Lizzie and look after each other as we deal with an incalculable loss." ■



Angus Hosking with Josephine Bridges.

## Leg recovery a first for helpful Lakes diver

**IT'S NOT THE FIRST** time divers have helped to return a lost prosthetic leg to a distraught owner, but it was a first for Lake District Diving's Angus Hosking – and served to highlight the helpful service he offers.

Josephine Bridges, 31, from Birmingham had her leg amputated as a result of bone cancer three years ago, but recently also lost her artificial replacement, while swimming in Lake Windermere.

Bridges now runs a charity called Positive Bones, which funds specialist services and equipment for people with limb differences.

She had jumped off a jetty at Miller Ground to swim on the east side of the lake, but was not sure when the

prosthetic had become detached. It was only when she got back to shore and tried to stand that she realised it had gone.

Her sister appealed for help to recover the limb on social media. Her post was forwarded to freediver Hosking, who founded his free service partly to carry out underwater rubbish clearances and partly to recover lost personal items.

Over the past four years he and diving partner Declan Turner have found objects such as phones, keys, watches and jewellery – but a prosthetic limb was a first.

He found the leg about 5m out from the jetty and made light of the task: "After a quick look around under and around the end of the jetty, there it was!" he said.

Lake District Diving invites owners of private jetties or tarns in the Lakes to get in touch if they want their waters cleared. "Removing rubbish from our waterways is very important to us, and also the fact that it could hurt anyone that goes into the water," says Hosking.

And if people lose an item of value, have a reasonable idea of its location and think it's in less than 12m depth, the divers will try to find it.

"We run purely on donations and do not charge for what we do," says Hosking, who has used past contributions to fund an underwater metal-detector and diving safety equipment. Lake District Diving has a page at [gofundme.com](http://gofundme.com) ■

# GHOST-DIVING VOLUNTEERS GO TO WORK ON MARS

**VOLUNTEER SCUBA-DIVERS** have cleared more than 125kg of ghost-fishing net, line and abandoned lobster pots that had been endangering marine life on two Tyneside shipwrecks.

The local chapter of Ghost Diving UK divers cleared the net from the 30m-deep wreck of the *Mars* on 15 August. The locally built, Swedish-registered steamer sank early in WW2 in 1939 after striking a German mine.

The net covered an area of around 40sq m.

The 15 pots were removed from the nearby

wreck of another steamer, the *Hanne*. The reclaimed materials were brought back to North Shields for recycling, arranged by the Healthy Seas organisation.



Ghost Diving UK members with some of the net and line.

Technical diver Duncan Simpson of Ghost Diving UK co-ordinated the clearance operation.

"The nets are catching aquatic life, which brings in other aquatic life to feed on it and they get snagged in the net and they then die," he told the *Shields Gazette*.

"Until we break the cycle and remove the net, it will just continue." ■

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# Lifeboat crews earn commendation for divers' rescue

**P**EMBROKESHIRE RNLI lifeboat crews are receiving a special commendation for saving the lives of two scuba divers in especially challenging circumstances during the winter.

The incident was reported in **DIVER** News in January. The man and woman had been swept away from the rest of their group during a dive off Martin's Haven late in the afternoon of 14 November.

Pandemic lockdown restrictions had only recently been relaxed in Wales, though the emergency services had issued pleas for divers to exercise caution. Three lifeboats, the Coastguard helicopter and rescue teams, police and two nearby tankers were caught up in the search.

The lifeboats launched on a high spring tide just before 5pm, with the

light and sea conditions deteriorating rapidly. The Little Haven inshore lifeboat in particular was said by the RNLI to be operating "at the edge of its capability".

After an hour of searching in the darkness, volunteer Thomas Kirby on the St Davids all-weather lifeboat spotted the two divers in a searchlight beam off Skomer Island, 1.5 miles from their original position.

Recovering the pair was hampered because one of them was entangled in their SMB line.

The Little Haven inshore lifeboat delivered the divers uninjured to the Coastguard rescue team at Martin's Haven. The Angle and St Davids all-weather lifeboats then had to assist that boat back to shore, because the sea conditions were now so bad that a different recovery site was needed.

**Right:** RNLI Head of Maritime Delivery Adrian Carey visited St Davids lifeboat station on 5 August to congratulate the crews.



Now the lifeboat crews from Angle, Little and Broad Haven and St Davids are to receive a letter of commendation from RNLI Chairman Stuart Popham, with a formal letter of thanks being sent to the Coastguard for its co-ordination of the rescue.

"Thanks to the professionalism of HM Coastguard and RNLI volunteer lifeboat crews, the two divers were located in time to save their lives," commented RNLI Area Lifesaving Manager Roger Smith.

"I am so proud of the selflessness and determination shown by all

involved, and this recognition is very well-deserved."

"This rescue demonstrated great multi-agency teamwork in some challenging conditions," said HM Coastguard Maritime Commander Nicola Davies.

The RNLI provides a 24-hour search and rescue service around the UK and Ireland and operates more than 238 lifeboat stations and 240 lifeguard units. Since the organisation was founded in 1824, its volunteers are said to have saved more than 142,700 lives. ■

## TWO DOUBLE-DIVER FATALITIES RAISE QUESTIONS

**TWO UNUSUAL FATAL** incidents, each involving two divers, occurred during August.

The first happened on Spain's Mediterranean coast at around mid-day on Sunday, 8 August.

The two male scuba divers died on what was described by local press as their "diving baptism", presumed to be a discover scuba experience.

The men, aged 50 and 56, both lived in Catalonia, where they were diving. They were with a group 200m out from Segur de Calafell port in Tarragona.

The circumstances surrounding their deaths remained unclear but initially the younger man was found unconscious and CPR was administered unsuccessfully while the emergency services were called.

Mossos d'Esquadra maritime police, Calafell police and the Guardia Civil all responded.

It was only after raising the alarm that the group noticed that another diver was missing, and a search began.



RUDIGER STEHN

Maritime police officers eventually found him unconscious, but efforts to resuscitate him also failed.

The Guardia Civil's Special Underwater Activities Group later searched the dive-site in the hope of recovering items that could assist in its investigation of the incidents.

The other incident occurred in the Bahamas on Saturday, 28 August, with two speardivers near Rose Island, east of the island of New Providence.

Local press reported that they were using compressed air and suffered decompression illness (DCI).

It was initially reported that the unnamed divers had been attacked by sharks but then that DCI, caused by rapid ascents and/or repetitive dives, had been the problem.

The men had started diving to catch fish early in the day while a third man minded the 6m boat, but at some point during the morning as the boat was moved between dive-sites one of the divers collapsed aboard.

While the captain stopped to administer

first aid, the other diver, reportedly realising that his buddy was suffering from DCI, re-entered the water with the intention of descending to recompress himself.

Shortly afterwards, however, the captain reported seeing him floating motionless at the surface, and went to retrieve him.

The divers were brought ashore near the Bahamas' capital Nassau on New Providence. Police and paramedics arrived at around 1pm, when the two were pronounced dead.

The police were investigating the incident. It was not confirmed whether the men had been on scuba or were hookah-diving, and whether DCI was the actual cause of their deaths. ■

## Telltale song

**LAST YEAR AN UNSUSPECTED** population of blue whales (*Balaenoptera musculus*) was discovered in the Indian Ocean. Now a scientific team led by UNSW Sydney say they have discovered a fifth population of the smallest *B musculus* subspecies, *brevicauda* or pygmy blue whales, also in the Indian Ocean but near the Chagos archipelago. The species grows to a maximum 24m in length.

As with the earlier discovery it was the whales' singing that gave them away, but it was underwater bomb detectors that picked it up.

The scientists were using data shared by the Comprehensive Nuclear Test Ban Treaty Organisation, which uses hydrophones to detect soundwaves that could indicate undersea weapons testing.

An unusually strong signal indicated pygmy blue whales, but their melodies were slightly different to those of the four other groups previously recorded.

The whales have yet to be seen, but the findings are published in *Scientific Reports*. ■

# Bill the whale's big tour

## surprises researchers...

UNIVERSITY OF AUCKLAND

**THE LONGEST-EVER** observed migration by a southern right whale has been recorded by marine biologists in New Zealand, after a satellite tag that should have lasted six months has carried on working for more than a year.

The whale, dubbed Wiremu or Bill, covered 9300 miles across three oceans and chose a route that defied the researchers' expectations.

It was described by the team as "a friendly whale that hung around the yacht *Evohe*, often resting its head on the seafloor".

Tags were implanted in six whales in their breeding ground in the remote, uninhabited Auckland Islands far south of New Zealand last August, according to a report in the *Guardian*.

The international team led by Dr Emma Carroll of the University of Auckland then monitored them heading west towards Australia. They had expected them to travel north-east towards the historic foraging grounds off New Zealand where whalers had once recorded them.

The breeding population of southern right whales, which are known in New Zealand as *tohora*, was discovered in the 1980s – a small number of survivors left after whale-hunting had stopped.

The population is known to be growing, though the scientists are not

sure to what extent, and the whales' movements outside the breeding season had remained a mystery.

The tagged whales spent a month foraging south of western Australia, where four of the tags stopped transmitting, leaving only Bill and another whale, Tahī, trackable.

They were followed halfway across the Indian Ocean towards Africa, where Tahī turned back, but Bill ranged far south into the Southern Ocean before turning back east through Antarctica, which New Zealand whales had not been known to visit in modern times.

By winter Bill was back in the Auckland Islands, having travelled a third of the way around the world.

His tag was still transmitting this July when the team tagged another 12 whales at the location.

Most of them set off west as they had the previous year – including Bill.

The researchers say that New Zealand's southern right whales are the healthiest population in the world, and think this is because of the flexibility they are prepared to show in following the krill on which they feed, as illustrated by Bill's tour.

They hope that once the whales' feeding grounds have been pinpointed they can be protected.

The whales can be tracked at [tohoravoyages.ac.nz](http://tohoravoyages.ac.nz) ■

# ...as blues return to Spain

**THE WORLD'S BIGGEST** mammal, the blue whale, is returning to the coast of north-west Spain where it was hunted close to extinction until 35 years ago.

Marine biologists are divided about the reasons for its reappearance, some arguing that it is caused by folk memory, others by climate change.

Marine biologist Bruno Diaz, head of the Bottlenose Dolphin Research Institute in O Grove, Galicia, first spotted a 24m blue whale off the Atlantic island of Ons among a pod of fin whales four years ago.

Two more blue whales were then seen by scientists in 2018 and 2019, and both individuals returned to the area last year.

The same specimens had never before been known to return to the continental shelf two years in a row.

This August another, different blue whale turned up near O Grove.

Blue whales grow to 30m long and weigh up to 170 tonnes. They live up to 90 years and feed mostly on krill.

The UN proposed a moratorium on whaling in 1972 but Spain did not ban hunting until 1986. By then most blue whales had been killed in the area.

Diaz believes that the descendants

of the few that survived the whaling era are being drawn back to ancestral seas by a form of folk memory.

"Generally, the whales appear when the north-east wind carries the uppermost layer of water off the coast out to sea, and allows the deep waters to emerge on the shelf," Diaz told *Publico*. He believes there is too little data to suggest that food shortages caused by climate change are driving the blue whales' return, but another biologist, Alfredo Lopez of Galician marine mammal research centre CEMMA, believes that is the case.

He told *Publico* that blue whales "never go south of the Equator, and if that line rises northwards because of the warming of the planet, their habitat is reduced... they're running out of food, and what we are seeing is nothing to be happy about, but a drama.

"Perhaps the fin whale has recovered a bit, but to say that the blue whale has also recovered does not make sense," said Lopez.

He also points out that blue whales are only ever seen in the company of other types of cetaceans, and that they could be interbreeding. ■



Blue whale playing with dolphins off Galicia.

BON

# MOTIVATING MEDITERRANEAN DIVERS FOR LIONFISH REMOVAL

**TARGETED REMOVALS** can suppress the growing number of invasive lionfish on protected Mediterranean coastlines, according to a new study – but only by combining culls by scuba-divers with long-term monitoring.

Scientists from the University of Plymouth and Cyprus's Marine & Environmental Research (MER) Lab produced the study as part of the 1.6m euro EU-funded RELIONMED project.

Specially trained volunteer divers conducted a series of removal events and surveys around the island over a six-month period.

They focused on three of Cyprus's marine protected areas: the *Zenobia* shipwreck off Larnaca and two popular dive-sites in the Cape Greco MPA.



Hunting invasive lionfish in Cyprus.

PANTEIS KRANOS

They were removing between 35 and 119 lionfish daily at each site, after which the operation's effectiveness was monitored through visual-census surveys and citizen-science data.

In some locations, the lionfish population had recovered to previous levels in three months. The fish

reproduce rapidly, and those living beyond recreational diving depths can evade a cull before later moving shallower.

Lionfish moved into the Mediterranean via the Suez Canal in a migration linked to ocean warming. First noted off Cyprus in 2014, they have since been found as far west as Tunisia and Italy.

The first targeted removals occurred in 2019 but the expectation now is only to control numbers, not eradicate the fish.

Surveys showed that divers' involvement boosted their knowledge of lionfish and their motivation to support marine-conservation activities, to the extent that they would pay extra to help remove the fish.

The study is published in *Aquatic Conservation: Marine and Freshwater Ecosystems*. ■

# Dives reveal ancient wine traders

**ROMAN SHIPWRECKS** have been found at two locations to the north of Sicily, reflecting the good reputation earned by the Italian island's wine in ancient times.

The first site was discovered 80m deep off the small island of Ustica, 32 miles north of Sicily, and has been investigated by technical divers.

The operation, co-ordinated by the regional Superintendence of the Sea or SopMare, the equivalent of the Receiver of Wreck, began in May.

The dive-team was led by underwater documentary-maker Riccardo Cingillo and Prof Timmy Gambin of the University of Malta, in collaboration with Ustica's Mare

Nostrum dive-centre and the Coast Guard of the Guardia di Finanza.

Italy's financial crime investigation unit is involved in such surveys because of growing concerns about black-market trade in artefacts illegally salvaged from ancient wrecks.

The site consisted of heavily concreted amphoras concentrated in a small area, with broken ceramics dispersed over a 14m-wide debris field. The main body of jars are thought to lie on top of more compact layers buried in the sand.

Two of the wine-carriers, variants of the Dressel 1 style of amphora, were recovered and dated to between the end of the 2nd and the middle of the

1st century BC.

Dressel 1 amphoras are tall and cylindrical with angular shoulders, long straight handles and a collar rim. The recoveries are being conserved in Palermo on Sicily.

In late July a 2nd-century BC Roman ship was discovered



Amphoras from the Isle of Women wreck.

SOPMARE

at a depth of 92m near the Isola delle Femmine (Isle of Women) just north of Palermo.

It was inspected by an ROV following sonar scanning by SopMare and Arpa Sicilia, which monitors the

marine environment, using the oceanographic vessel *Calypso South*.

Again the wreck was identified by its large cargo of amphoras, thought likely to have held wine and of the earlier Dressel 1A design. ■



Amphoras from the Ustica site.

SOPMARE

## Shaff prepares for two-day dive

**THERE WAS** disappointment for UK divers in late August when it was announced, against predictions, that the Maldives would remain on the government's red list for travel.

However, plans are going ahead to mark the Indian Ocean nation's 50 years in the diving industry next year, centring on a 50-hour scuba-dive to be carried out by Maldivian technical diver Shafraz "Shaff" Naeem.

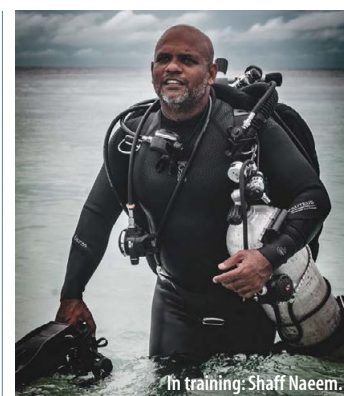
The Ocean 6:50 event is set to take place at the Kuda Giri dive-site in South Male Atoll from 25-27 February, 2022 – by when it is hoped that travel restrictions will have been eased.

The idea is to bring together "the local and international diving community, marine researchers and environmental activists to raise awareness and advocate for meaningful and sustainable solutions to the issues of plastic pollution, climate change, endangered species and the marine ecosystem", according to the organiser, events-management company Unix Sporting.

While under water Naeem will hold a pledge for visiting divers to sign to show solidarity for the cause. The dive will be livestreamed on YouTube and Facebook, with viewing divers invited to sign during the virtual event.

The longest open saltwater scuba-dive world record is held by Egyptian diver Saddam Killany, who managed more than 145 hours in Dahab last year. Naeem's dive, if successful, would be a national and regional record.

For the bid, described as the first of



In training: Shaff Naeem.

its kind in the South Asia region, a support team of technical divers, a doctor and a psychiatrist will be stationed on a vessel at the dive-site.

Beside the central event, dive-training, freediving and marine-conservation camps will be organised, with "dive expeditions" in Huvadhu, Fuvahmulah and Addu atolls.

For divers wishing to visit during Ocean 6:50, nearby Anantara resorts and others are expected to offer packages and discussions are being held with guest-houses on the local island of Maafushi, Naeem told **DIVER**.

The event is supported by local dive-centres, police, National Defence Force and the Ministry of Tourism, and sponsors include Dive Systems UK, Fourth Element, Luminox, Shearwater Research and TSK Zurich. **DIVER** contributor Saeed Rashid is set to be chief underwater photographer.

For updates on attending, email [comornaji@unixsporting.com](mailto:comornaji@unixsporting.com) ■

**'I Scream for Cleaner Seas'** Deftly blending hard liquor with ocean conservation, PADI Aware teamed up with Kraken Rum to produce tasty "Ice Clean" marine pollution-themed ices that sold at £1 a scoop at events around the UK – cool move.



this month DIVER likes...

### Between the Devil and the Deep

Yet another important book for 2021, this tells the story of tech diver Martin Robson's 200m-plus dive in Russia and subsequent battle with the bends. Journalist Mark Cowan digs deep into deco – compelling.

**#ThinkOcean Challenge** The Ocean Conservation Trust has a youthful online quiz designed to reveal whether you're a Head, Heart, Hands or Starter personality type, and how best you can then help to protect the ocean: [thinkocean.org](http://thinkocean.org), [oceanconservationtrust.org](http://oceanconservationtrust.org)

**Sharks & Rays Bundle** Six sets of themed indoor and outdoor activities and resources for children and their families from the Shark Trust and The Great Out-Tours – visit [thegreatout-tours.com](http://thegreatout-tours.com)

# SPOTLIGHT ON ENGLAND'S HISTORIC WRECK-SITES



British men o' war.

## DIVERS HAVE

completed an assessment of the HMS *Northumberland* historic wreck on Goodwin Sands, off Deal in Kent.

The 70-gun warship sank during the Great Storm of November 1703, and a team of five divers led by maritime archaeologist Dan Pascoe and funded by Historic England (HE) spent a week inspecting sections exposed by the shifting sands to assess their condition.

Guns, parts of the ship's structure, rigging and so far well-preserved artefacts are currently reported to be visible, they told *Kent Online*.

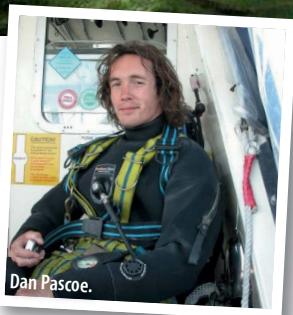
Geophysical surveys carried out last year by Pascoe Archaeology had indicated that the sands were receding from the site, exposing the wreck to the effects of tides and currents and to greater risk of decay.

The *Northumberland* was part of a fleet built in 1679 for King Charles II under Admiralty Commission Secretary Samuel Pepys' 30 Ships programme.

She took part in naval actions including Beachy Head, Barfleur/La Hogue and the bombardment of St Malo, before being lost with all aboard in the devastating storm.

Discovered in 1980, the shipwreck is one of three on HE's Heritage at Risk register, and a licence is required to dive the protected site. A report on its condition is expected in autumn.

As a maritime archaeologist at Bournemouth University, Pascoe has also been involved in another major project involving a team from Bournemouth, Plymouth University and archaeologists from the Mary



Dan Pascoe.

Rose Trust.

They were due to spend a week in August searching for the wreck of a French galley that, like the *Mary Rose*, was lost during the 1545 Battle of the Solent.

Project Solent Warships, match-funded by HE, was inspired by the late Alexander McKee's Solent Ships project, which succeeded in finding the *Mary Rose* in 1971.

Using a multibeam sonar and magnetometer from surveyor Geosight's new 7m catamaran *Taran*, the aim was also to reassess the protected *Mary Rose* site and to search for signs of three other vessels: the *Pelican*, a fourth rate frigate launched in 1650; HMS *Nassau*, a third rate ship of the line launched in 1706; and HMS *Newcastle*, a fourth rate ship of the line sunk in 1703.

No discoveries have so far been reported.

Among England's 54 protected wrecks, HE has supported the creation of six physical dive trails that allow access to divers, while providing a further 18 virtual dive trails for online exploration.

These sites comprise the *Association*, Bartholomew Ledges wreck, Chesil Beach cannon site, *Coronation*, HMS/m *A1*, HMS *Colossus*, HMS *Invincible*, HMT *Arfon*, *Holland No 5*, *Iona II*, *London*, Norman's Bay wreck, *Rooswijk*, SM *U-8*, *Stirling Castle*, Tearing Ledge wreck, Thorness Bay wreck and the *Wheel* wreck.

The trails can all be accessed via an interactive map of the South Coast at [storymaps.arcgis.com](http://storymaps.arcgis.com)

## FREDA'S DIVER DISHES



I wrote this column in August, the week before this year's first trip away to the Channel Islands with a group of 10 divers. The last time we did this trip was in 2019! But this time we went on our day-boat the *Sea Leopard* because, sadly, *Salutay's* liveboard days are now over.

Nevertheless, I was extremely excited to be going and made a selection of cakes to take with us for post-dive snacks each day. I make this recipe from time to time, because the cakes are absolutely delicious and so incredibly moist!

One wreck I was really looking forward to diving again was the *Schokland*, which led to the greatest single loss of life in the Channel Islands during WW2.

However, it is not classified as a war grave because it is understood that no bodies remain on the wreck. Some 370 troops were on board this commandeered merchant steamer when it struck a reef on 4 January, 1943, but only 40 were rescued.

Local reports suggest that the skipper was a last-minute replacement with no knowledge of local waters and this, combined with night manoeuvring and orders to maintain a near black-out, led to the collision with the reef at Grande Grune rocks off Noirmont, and a very swift sinking.

The wreck is upright and almost completely intact, with a nice prop and rudder. At the other end, the bow stands proud. In between are two big boilers, a donkey boiler and the triple-expansion engine. There are two holds to explore, and even the captain's bath is still intact.

## Raspberry and Almond Cupcakes



### Ingredients

60z self-raising flour; 60z soft margarine; 60z dark brown soft sugar; 3 large eggs; 1 large teaspoon baking powder; 24 fresh raspberries; handful of flaked almonds; icing sugar for sprinkling.

### Method

Mix all ingredients except for the raspberries and almonds in one large bowl and use an electric mixer until light and very fluffy.

Divide the mixture between 12 cupcake cases in a large 12-cupcake tin. Place two raspberries on each cake, along with a sprinkling of flaked almonds. Bang the tray on the bench to release any air from the cupcakes.

Place in a pre-heated oven at 180°C / gas mark 4 for 25-30 minutes. Leave to cool for a couple of minutes and then transfer to a cooling rack. Dust with icing sugar once cold.

### Top Tip

Enjoy these either straight out of the oven with a blob of coconut cream, or many days later. They also freeze really well.

\* Freda Wright is a diver and chef on British diving liveboard *mv Salutay*. Find more of her recipes in the book *40 Dives 40 Dishes*. It costs £16 plus £1.95 postage. £1 from every sale goes to Oceans Plastics Greenpeace, [salutay.co.uk](http://salutay.co.uk)



# Wire fish sharpen dive destinations

**A** DIVE-CENTRE in Fujairah, the UAE state on the Gulf of Oman, is creating artificial reefs based on 15 wire sculptures shaped as marine megafauna.

Freestyle Divers at the Radisson Blu Resort sank the first structures based on sting rays and turtles on 7 August, with the next phase in September set to include a 10m whale shark sculpture. Some 20 redundant boat-hulls are also due to be sunk.

The dive-centre challenged school students to design the wire templates

on which to propagate the coral, and 120 schools became involved, with Emirates International School coming up with the winning sting ray design.

The aim is to transform 100sq m of barren, sandy seabed 300m from shore, at a maximum depth of 8m.

Fishing and dredging are banned in the area, and branching corals transplanted onto the structures are expected to grow by up to 20cm a year. The project includes scientific monitoring and measuring of colonisation rates.

British instructor and Freestyle's marine conservation manager James Campbell had previously developed a comparable installation in Thailand's Koh Tao, and an earlier Fujairah project at the Dibba Rock dive-site is said to have been successful and to attract reef sharks, turtles and batfish.

In northern Sardinia, meanwhile, thousands of industrial fishing hooks have been formed into 12 lifesize shark, manta ray and turtle sculptures by Dutch artist and eco-campaigner Vincent Mock. One, a hammerhead



FREESTYLE DIVERS



Setting one of the winning sting-ray sculptures in Fujairah.

GEERT VONS, SEA SHEPHERD



Sculptor Vincent Mock.

MANFRED BORTOLI



Scalped hammerhead shark made from fish-hooks (inset right).



shark, has been installed under water. The word *amo* means both "love" and "hook" in Italian, and Mock's goal with his AMO exhibition is to raise awareness of endangered megafauna.

The biggest piece, a 12m-long whale shark, will later be auctioned to raise funds for marine-conservation activists Sea Shepherd. Mock says that the organisation inspired him 10 years ago to dedicate his life to protecting the ocean by creating art.

Some of the sculptures are displayed in natural areas along the coastline of Costa Smeralda to highlight local efforts to protect Sardinia's coastline

and marine wildlife. Mock says that Porto Cervo was also selected as a location because it is a popular destination for wealthy decision-makers.

"Individual art can be a very powerful means for global conservation," commented Geert Vons, Sea Shepherd's artistic director.

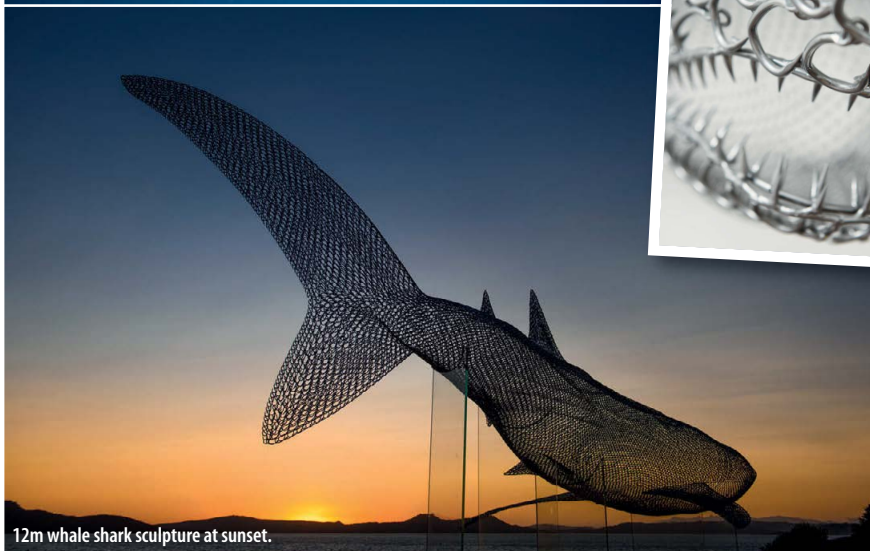
"The work of Vincent Mock is a perfect example. Authentic, simple and direct. These are aspects Sea Shepherd can relate to.

"The work speaks for itself and is impossible to ignore."

The AMO exhibition continues until 30 September – see all the sculptures at [vincentmock.com/amo-expo](http://vincentmock.com/amo-expo)



Leatherback turtle in the surf.



12m whale shark sculpture at sunset.



Giant manta ray.



# The ss Thistlegorm at 80

**M**Y FAVOURITE DIVE ON the ss *Thistlegorm* is easily remembered. It was my first dive on it. In fact, it was my first dive on any shipwreck.

What a debut!

There's another reason. 25 June 1997 was the day Jacques Cousteau died. He discovered the wreck in 1955 and was one of many with a rich story attached to this famous vessel.

I was very edgy on the four-hour boat journey out into the Red Sea that day. Conditions were rough, visibility low and the current strong.

I had logged only 11 dives but I had managed to convince the reluctant dive-centre to let me dive the wreck.

I can safely say that this dive was the most incredible and dangerous thing I'd ever done until then but, once under water, excitement replaced apprehension.

Deep inside the wreck, I paused and took stock of my thoughts: *"You're 30m below the surface inside an iconic WW2 shipwreck packed to the gunwales with military trucks, rifles, motorbikes, live shells, mines and railway engines. All discovered by your childhood hero, Jacques Cousteau... who has just died."*

**There is little contest when it comes to UK divers' favourite wreck-dive – it's the Thistlegorm in the Red Sea. As the 80th anniversary of her sinking looms, JOHN KEAN pays tribute to an 'old friend'**

The murky green and brown water reduced the interior light to that of a dark evening. I was offered a torch, but in 1997 they were the size of a chunky police speedgun, failed regularly and weren't that bright. It was declined.

I continued through the eeriness, following the diver in front and trusting that somewhere up ahead was the guide.

Eventually our train of neoprene-clad aquatic explorers wound its way out of the dark and dropped between the impacting bomb damage that had blown this 126m ship in two.

We stuck close to the wreck to shield ourselves from the howling current. Beside me, I noticed a small debris field of live brass shells.

They were huge. The type designed to travel several miles at ballistic speed and blow a target to smithereens.

Of course, like the hot dinner-plate your parents warned you not to touch... well, I just had to, for reasons I couldn't then explain.

Perhaps staring death in the face was a healthy reminder not to take our safety and freedoms for granted.

The crew of the *Thistlegorm* knew that only too well.

Built in Sunderland in 1940, the

ship was launched by the Albyn Line and soon entered wartime service with the Merchant Navy.

At only 18 months old she began her final journey around Africa before sailing up the Red Sea towards the Suez Canal in September, 1941.

It was here in the Straits of Gubal by the Sinai that Allied ships moored up awaiting safe passage through to the Mediterranean Sea. *Thistlegorm* remained there for 10 days.

**THE SAFE ANCHORAGE** proved anything but. On the night of 6 October the ship was picked off by two German Heinkel long-range bombers stationed in Crete.

The pilots' work was made easier by the full moon. They had another advantage: the ship's cargo. Destined for the British 8th Army, it contained a massive amount of armaments in the shape of sea-mines and heavy shells.

The first bomb scored a direct hit in the middle of the ship, but she steadfastly stayed afloat. The second, an oil bomb, split open all over the cargo-hold containing the bulk of the armaments, starting a huge blaze.

For the crew it was now a race against time – an unknown amount of



time ranging from seconds to short minutes before the whole lot went up.

Amazingly, they were able to continue their escape on rafts, lifeboats or just swimming for another 20 minutes until the inevitable.

"The huge explosion lit up both sides of the Red Sea," said Dennis Gray, a Royal Navy gunner who watched the attack from his nearby escort ship, HMS *Carlisle*.

"Then the ship broke in two like a V-shape and sank. One minute it was there and then the next... it was gone; it was as quick as that."

Ray Gibson, a *Thistlegorm* survivor and radio officer, saw the dramatic sinking from his lifeboat.

"The ammunition was exploding all around us; it was like wasps going through the air. Then came the big bang so that was it, we were all crouching down and when we looked up she was gone, vanished. So we carried on picking the lads up."

There were 43 crew-members on board but only 34 survived.

In the years to come a few got to tell their stories, thanks to Caroline Hawkins who in 1995 produced a BBC TV documentary called *Thistlegorm's Last Voyage*. Later on, more survivors' families came forward with new and interesting news.

Unseen photographs and documents added to a rich tapestry of stories that included British, German, Egyptian, Israeli and French, Bedouin and many other groups and individuals associated with the ship over several decades.



Still incomplete, ss *Thistledown* was launched in 1941.



Sister-ship the ss *Thistledowne* gives the best idea of how *Thistlegorm* looked.

**F**OR 20 YEARS I had the pleasure of guiding thousands of divers around the wreck of the *Thistlegorm*.

Tying in was dangerous work, especially in pre-tech and pre-nitrox days, where I broke every rule in the book. Bounce dives, solo dives, over-exertion, emergency deco and short surface intervals were the norm.

Through refinement and a sense of self-preservation, it later developed into an art form. *Thistlegorm* became an old friend, as did the divers. I'm still in touch with many of them.

Their questions combined with my ever-growing fascination encouraged me to accumulate a vast amount of research material.

In 2002 I had worked with Caroline Hawkins on *Thistlegorm's Last Voyage*, and the mountain of high-quality material we possessed was too good not to see the light of day again.

We co-produced a book that was the first major publication about the *Thistlegorm* and, I believe, remained unrivalled for nearly two decades.

New survivors' family stories came thick and fast along with a wave of unseen photographs, documents and new interviews. The book almost became a victim of its own popularity. It opened the floodgates.

I have written many books since, but the *Thistlegorm* story was my most important. For a new author under the scrutiny of a BBC producer, Britain's Armed Forces, the Merchant Navy, the diving community, the Cousteau Society, the Public Records Office and especially the families of those who served and died on the ship, I felt the pressure.

I knew I had to produce a timeless and accurate record of the people and events that contributed to the story of WW2's greatest shipwreck.

When we came up with a new and improved edition in 2009, the critical review that meant the most came via a simple email from the Merchant Navy. It read: "We approve."

**T**HE SIXTH OF OCTOBER is the *Thistlegorm's* anniversary. She sank 80 years ago.

The last of the survivors has likely died – they would be at least in their

late 90s now, assuming that they had served when 17 or 18 years old.

There were certainly youngsters on board in 1941 and two of the nine casualties, Archibald Gethin and Joseph Munro Rolfe, were under 20.

As a boy attending the world war remembrance services with my parents every November, I never really understood the word "Lest" that appeared on flags, carved into headstones or engraved on plaques in the sentence "Lest We Forget".

It simply means "for fear that". For fear that we might forget.

Many have indeed forgotten; not the heroes or events in which they died but the tyranny against which they fought, which is no longer visible in the form it took in WW1 and 2.

Today's enemy is less visible, yet equally tyrannical and freedom-restricting.

**A**DIVE AROUND *Thistlegorm* today is no less spectacular for the first-timer. It is still steeped in history and there is much to see inside, outside and all around the wreck, such as the two locomotives flanking the port and starboard sides.

The old guard might say: "It isn't what it used to be" but, more than likely, neither are they!

If anyone should complain about deterioration of the wreck it's me, but I don't. The only thing that should improve under water is a diver's buoyancy control, not an 80-year-old ship that is constantly battered by the elements and the hordes that visit it.

The ship's bow still stands proudly upright in the water, as if telling the world: "I'm very much alive."

A dive on *ss Thistlegorm* now is still the best day out in the Red Sea by a country mile, and I can't wait to get back there and see my old friend.

And when I do, I'll spare a thought for the crew and thank them for giving me the foresight and fortitude to handle trouble... wherever that might come from. ■

\* *SS Thistlegorm – WW2's Greatest Shipwreck* by John Kean is available in hardback and Kindle versions, ISBN 9789771707530. Find more on the author at [johnkean.net](http://johnkean.net)

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## THAT'S THE SPIRIT!

Dieter Mueller remembers staying at his family's cottage on Otter Lake in Ontario in 1964, when he was 15. Who could forget?

A neighbour arrived on his boat, having been to collect a case of whisky, rammed the jetty at full speed and the boat went down. Whether the neighbour, who escaped unhurt, had made a headstart on



record price of just under £13,000.

The bottle's late owner



GRAND WHISKY AUCTION

the spirits we can only guess.

The event must have played on Dieter's mind for 57 years because he recently asked Dave Davidson, owner of Barrie Scuba House, to look into it.

Depth was only around 9m but murky conditions in the lake made the search a tough task. Eventually, however, Dave closed in on a single bottle of Gooderham & Worts' finest, from a celebrated Toronto distillery closed in 1990.

The contents looked temptingly clear but Dave and Dieter won't crack the bottle open, and have dismissed four-figure offers for it. They might sample the whisky one day, but only if Dave can find more bottles.

And talking of amber nectar, the Scottish cargo shipwreck the *Politician*, which ran aground in the Hebrides in 1941 and inspired the book and film *Whisky Galore!*, keeps on giving. A bottle recovered from the wreck has just fetched a new

Scott McLaren didn't find it – a diver did that in 1987, again at around 9m – but had won it in a poetry competition. His children put it up for auction, where two mystery bidders forced the price ever higher.

The diver had found 10 intact bottles so, unlike Dave and Dieter, had been relaxed about sampling one. Despite initial sulphur tones it was reported as "smooth, mellow – and still a wonderful taste".

## Titanic legacy

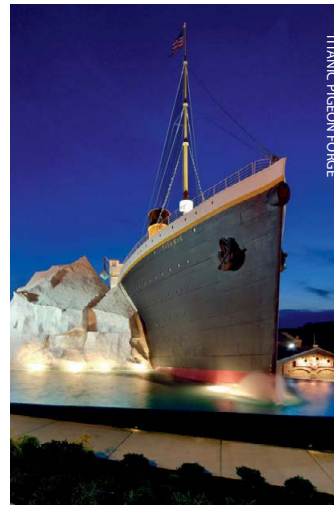
The Oceangate Expeditions people have kindly confirmed what we have long known, that the *Titanic* is deteriorating fast. The scientific research aspect of their submersible dives has been heavily stressed, though we all know this is a commercial venture commanding huge fares from passengers set on going before the wreck is reduced to a heap of rusticles.

If you can't afford the £100 grand or so, you could always visit instead what is claimed to be the world's biggest museum dedicated to the doomed liner, Titanic Pigeon Forge in Tennessee.

Get a feel for what it's like to be a disaster victim by touching a replica of the iceberg, immersing your hand in 2°C water (I can do that at home, mind) and trying to stay upright on a sloping deck.

The experience got a bit too real recently when five people were injured, three needing hospital treatment, after the iceberg collapsed on them. Perhaps they had been over-enthusiastic in their desire to relive the tragedy, I don't know.

"We anticipate it will take at least four weeks for the iceberg to be rebuilt,"



TITANIC PIGEON FORGE

means reported the owners, so thank goodness the 'berg is going to be OK!

Wouldn't the original *Titanic* victims be surprised to know that their ordeal had spawned, among other attractions at the venue, *Titanic* sleepovers, birthdays, weddings, fireworks and a Lego-brick ship?

## RNLI or Farage?

"Imagine being out of sight of land, running out of fuel, coming across incredibly busy shipping lanes when you're frightened and you don't know which direction you're going in. That is by anyone's standards distress."

The words are those of RNLI chief exec Mark Dowie, and he could be talking about any of us, but he was referring to cross-Channel migrants.

The RNLI and its volunteers have always been close to divers' hearts, and it's easy to understand why when reading this month news of a special commendation for a rescue on a wintry night in Wales last year.

So when they come under attack from Nigel Farage for running a "migrant taxi service", we take note.

It was the sort of cheap shot we might expect but the charity was forced to defend itself by explaining that it has a moral and legal duty to save lives by rescuing anyone at risk at sea – which might mean recreational divers or refugees.

It doesn't discriminate according to our worthiness to be saved, fortunately for us. RNLI or Farage – I know which makes me proudest to be British.

## Naked aggression

I hadn't heard of a confrontation between divers and a community quite like that in the US Atlantic coastal town of Rockport in Massachusetts. The *Boston Globe* has been following a group of residents' attempts to get divers banned from its public beach because of alleged rowdiness, nudity etc.

Now the six members of the Back Beach Neighbours Committee claim that Back Beach is not public as popularly believed but private – and they own the lot of it!

The BBNC's previous lawsuits have been rebuffed, but now it's coming back with a claim of obscure historical precedent dating back some 180 years. Most Rockport residents seem to be on the divers' side, with signs outside their houses stating: "All are welcome, including divers."

A rather brilliant quote comes from Beth Renner, the woman who made these signs. Referring to the complaints of divers getting naked in the street while changing, she told the *Globe*: "I've been looking at them through binoculars for 24 years and I've never seen anyone naked." ☐

## Tell the committee

Bureaucracy lurks around every corner but here's a prize example, pointed out by Charles Clover, author of the definitive book on over-fishing *The End of the Line* and director of conservation charity Blue Marine Foundation.

He has highlighted difficulties faced by father and son John and Sam Shucker, who work as scallop-divers from Lyme Regis. With that surname I suppose they had to work with shellfish.



BLUE MARINE FOUNDATION

As an alternative to those indiscriminate bottom-dredgers unloved by those who care about the sea, hand-collecting scallops on scuba is a sustainable occupation that you might expect to be encouraged.

However, the Byelaw and Permitting Sub-Committee of the Devon Inshore Fisheries & Conservation Authority (bureaucrats, us?) has established a July-September scallop close season that refuses to distinguish between dredgers that carve up seabeds year-round and selective divers who can operate only in summer.

So it is forcing the Shuckers further out to sea off Dorset, where they have to take bigger risks to dive in deeper waters.

Where they once dived for an hour twice a day to 24m max to fill six bags, they now need to reach 30m, meaning shorter dives, more risk, longer surface intervals and half the catch.

"If the UK is going to deliver its vision for sustainable fisheries, regulators need to encourage fishermen who use low-impact methods like Sam, not simply regulate them out of business or create unnecessary and additional risks," says Charles. You'd think.

# UNDER MEXICO



She loves diving in overhead environments if that means engine-rooms

but the joys of cave-diving had eluded **BRANDI MUELLER** until she took a recent trip to the Yucatan peninsula

**C**AVE-DIVING HAD NEVER been on my list of things to do. I have always felt that I would not like to be hours into a cave and decide that I was done being there... and have hours to get back out.

My aversion to descending beneath the Earth always seemed a bit strange, given that I love wreck-diving and going deep into dark, rusty engine-rooms.

Swimming through multiple levels of crumbling WW2 ships was how I was making a living pre-Covid... so why could my mind not wrap around the idea of going into something that's likely to be far more stable than a ship that's been deteriorating for 75-plus years?

After spending a week in Cozumel diving with pretty fish, some hardcore cave-diver friends of mine were going to be in cenote country. I thought it would be fun to see them and stick my fins in to test the waters with a few *cenote* dives.

The caverns had always fascinated me and I'd been blown away by the other-worldly images of light-beams and geological structures found in the Yucatan peninsula's underground network.

Signed up for a few dives with Under the Jungle, I started with an informative slide-show covering scientific information about the *cenotes*, history, rules and diver safety.

The "cavern zone" in Mexico is classified as no further than 60m from a surface with breathable air, only open spaces, and a route marked with a continuous guideline to the entrance.

To go any further, cave training is necessary.

After preparing our gear we packed a pickup truck and headed to the Pit.

Driving through a gate with tourist buses, shops selling snacks, snorkel rentals and a ticket booth brought home to me the popularity of these places.

Instagram in particular has spread the word about what used to be less-frequented, sometimes even secret spots.

For Mexico and the land-owners with *cenotes* on private property, this interest has brought generous income.

We paid our entrance fees (plus a camera fee that rises with the size of your camera) and continued down the road.

Dirt roads connect several *cenotes*, making this area almost a *cenote* theme park with Dos Ojos the star and several others in the same area.

We passed Dos Ojos and the majority of the tourists as we headed to the Pit.

Gearing up on a truck's tailgate with the sun shining and a light breeze rustling the surrounding trees, I could only be in awe of our surroundings and what we were about to do, which was jump into a big hole in the middle of the jungle that had been created over millions of years.

An iguana walked past unconcerned, and birdsong formed part of the melodic jungle soundtrack.

Limestone dominates the Yucatan peninsula and it's soft and soluble. Water filters through easily and its movement over millions of years has eroded the

stone to create caves. Sometimes the rocks above such tunnelled-out areas dissolve so much that they collapse and sink-holes open and fill with water – as has happened at the Pit.

**T**HE OPENING WAS smaller than I had expected, and looking down from above was like staring into a black mirror of the surrounding jungle.

The water was perfectly still until a swimmer cannonballed in from a small wooded platform below the steps.

Walking down what seemed like a hundred stairs (a pulley system can be used to hoist tanks up and down but in cave-country, oozing with masculinity and *machismo*, it seemed more appropriate to appear to be tough and carry my gear myself), we reached the platform and entered the water.

The midday sun was bright and the weather waits for no one (especially in the tropics) so I wanted to get under

**'SEE THAT COOL-LOOKING PLACE OVER THERE, YOU CAN'T GO THERE... YET'**



**Pictured:** Diver entering the Pit.

**Below:** The entrance, smaller than expected.



water ASAP so as not to miss the possibility of light-beams.

OK signals given, we headed down into a breath-taking view. Bright blue and white beams danced from the surface down to about 30m, ending in a whimsically foggy-looking hydrogen sulfide cloud and tree branches, like something out of a fairy-tale forest.

Having expected this contrasting scene with bright light-beams and super-dark surrounding area, I had pre-set my camera on settings I thought might work. When I get really excited about something I'm seeing under water I usually start snapping photos like a crazy person, and I did that.

Pausing for a moment, I looked down at my viewfinder to discover that all my images were black. Totally black.

Adrenaline racing with fear of missing this perfect scene I changed my settings, slowing down the shutter, opening the aperture and bumping up the ISO... still pretty dark. Jeez, why did it have to be so dark down here? I guess if it was easy, everyone would do it.

I also quickly discovered that focusing wasn't easy either. My Nikon D850 does pretty well in low light, but these conditions were not ideal.

Trying different camera-settings I kept shooting, not wanting to miss anything but also failing to find the sweet spot.

But the view was still incredible. We were the only divers in the water for about 20 minutes, making it down to the bottom and starting to come back up before another group got in. We slowly circled the Pit while ascending, checking out the formations on the walls.

Nick pointed out the cave entrance, almost as if he was already trying to lure me into this cave-diving thing. "*See that cool-looking place over there, you can't go there... yet.*"

The light-beams dimmed a bit at the end of the dive. Clouds had moved in – it turned out that we had entered during the perfect window of time.

**D**RIVING ONLY A SHORT distance, we moved to the famous Dos Ojos for our second dive.

The popularity of this site meant that we were dodging children in armbands as well as Instagram models dressed to the nines as friends took their photos on their phones.

The "Two Eyes" sinkholes are connected by a 400m passageway and two cavern circuits.

The Pit had not offered a guideline or anywhere for cavern-divers to go other than down and up again, but in Dos Ojos we spent most of the dive away from the opening, swimming past stalactites and stalagmites and other geological



structures. It was like another universe.

That night I went back to my Airbnb and, after reviewing my photos (mostly under-exposed and out of focus), I started searching the Internet for photo tips on diving the *cenotes*, and more information about the caverns themselves.

I read that the ancient Mayans had considered some *cenotes* sacred, and many settlements were built next to them.

It makes sense that they would have held *cenotes* in high regard, because fresh water can be scarce in the jungle, especially because limestone geology leads to water being absorbed into the ground, making rivers and lakes rare.

Some *cenotes* were considered to be entrances to the underworld (they do

look as if they could be.) The Mayans gave them sacrificial offerings including warriors, virgins, jewellery and gold.

Water levels in the Yucatan have varied throughout history, and when the Mayan civilisation was at its height they were probably lower than they are now. Some of the caves explored under water today were likely dry then and evidence remains of fire, bones, pots and other artefacts.

**A**S FOR MY PHOTO research, I realised a few important things. I needed to slow my shutter-speed and increase my ISO, both of which made me uncomfortable.

My D850 could handle pretty high ISOs, but I suddenly really wanted a fancy

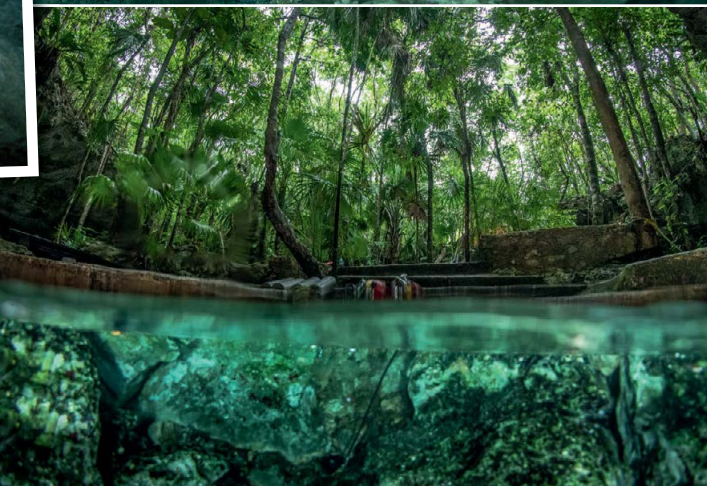
mirrorless camera that would show less grain and noise at higher ISOs.

I was seeing images on the Internet taken with 160,000 ISO. My camera had that capability, though the noise would ruin the photo. But I felt ready to push its ISO and shutter-speeds to the limit.

Unfortunately, the next morning was cloudy, so my hopes of more sunbeam shots were unlikely. We headed to Eden *cenote* (also called Ponderosa), known for what looks like a curtain of beams shimmering down on sunny days.

There was still an eerie light against the darkness. Outside the cavern the open pool area held tons of fish I'd never seen before. I'd like to return with a macro lens to check out these *cenote* fish – so much

**Above, clockwise from top left:** Diver in Dos Ojos; but scuba-divers are not always alone – look at the number of snorkellers; Dos Ojos at the surface.



his fins moved, my eyes acted like a camera out of focus.

My brain couldn't quite comprehend what was occurring until I realised that it was a halocline. The aquifer connects to the ocean, so at deeper depths there can be salt water, which is heavier and denser.

This separates from fresh water derived from rain, which is lighter and less dense, and where they meet creates a line with fresh water on top.

Nick's kicking was stirring up the salt and fresh water, creating an optical illusion of blurriness to my eyes (and to my camera lens.) It was fascinating.

I took some photos and realised that they mostly just looked like an out-of-focus image, for which the photographer would be blamed, not the water.

I switched to video and found it much more pleasing to the eye. Nick would move a fin and a small cloud of blurry water would rise and slowly disappear – it was more cavern magic.

**T**HE DIVE WORLD is small, and my friend Luke, who I had met years ago in Indonesia, was now living and working in Mexico.

A photographer himself, he agreed to take me on a few photo *cenote* tours. He took me to Angelita, similar to the Pit but a bigger and deeper hole in the ground.

The unique features of Angelita are fallen trees that have decomposed at around 30m, creating a huge hydrogen sulfide cloud with branches sticking out.

The white cloud looks unusual, like something from a fairy-tale. It feels as if monsters could emerge from the obscured bottom at any moment.

Escaping unscathed from mythical

**Above, from top:** Light beams in Eden; the halocline effect in Tajma Ha; the surface view at Tajma Ha.

**Above right:** Turtle at Angelita.

new stuff, and I still know almost nothing about Mexico's freshwater fish!

We saw some spectacular formations in Tajma Ha *cenote*. There is something extraordinary about how each *cenote* is so different from any others. In diving we don't usually enjoy that much variety in one location.

Which really got me thinking about how special the Caribbean side of Mexico is: a week earlier I had been diving only about 50 miles away in Cozumel with loggerhead turtles and abundant reef fish.

As we swam, I noticed the visibility changing as Nick kicked, but not because of silt or particles. It was as if each time

monsters, the only other life we saw at Angelita was a turtle on the surface – and a box of adorable kittens at the entrance.

I loved the contradictions of the *cenotes*. One moment you're running into some of the world's top divers, with more tanks and technical gear than one person can carry at a time. Right next to them



are Instagram influencers in flowing, brightly coloured dresses posing (one even had someone throwing flower petals so that they would rain down in the images).

In this world overflowing with testosterone and technical diving, there was also that box of kittens that no one could walk past without petting.

We made our way to Car Wash *cenote* (Aktun Ha), known for its photogenic pink lily-pads. Luke had a photo from the year before of the water turning deep reds and oranges after heavy rainfall had

caused tannin runoff from trees into the water. It was an event that happens only a few times a year.

It had been raining the days before, but it never crossed my mind that we might arrive at Car Wash to see red water.

As we were gearing up, we were hearing reports from people getting out of the water that it was orange (and snorkellers

**Clockwise from top:** Branches protrude from the hydrogen sulfide cloud in Angelita; water-lily pads in Car Wash's red waters; diver beside a rock formation in Angelita.

**Left:** Diver in Taak Bi Ha.





## FACTFILE

**GETTING THERE** ▶ Fly into Cancun (CUN). Most *cenotes* lie between Playa del Carmen and Tulum.

**DIVING & ACCOMMODATION** ▶

Many options for all-inclusive resorts, hotels or Airbnbs. Most dive shops will arrange hotel to *cenotes* transfers.

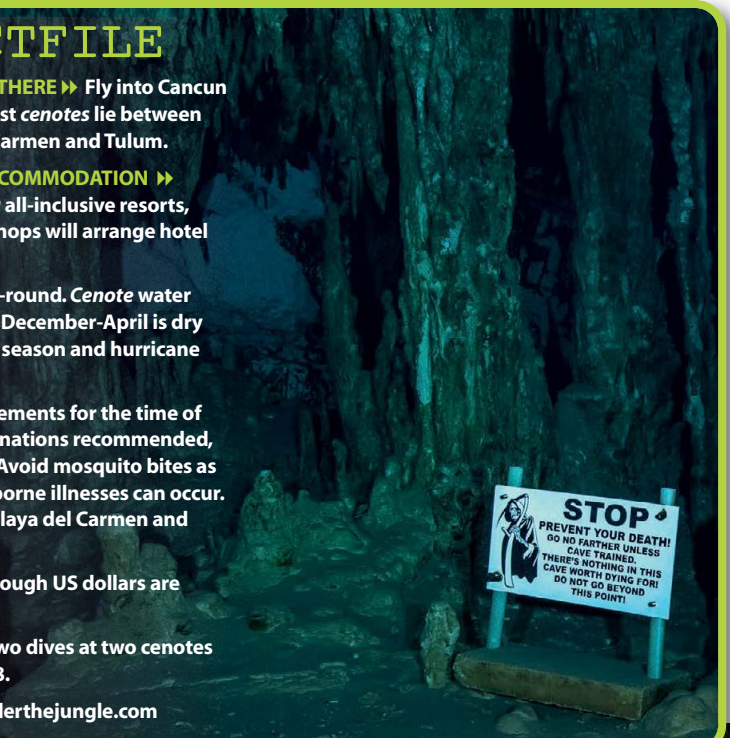
**WHEN TO GO** ▶ Diving is year-round. *Cenote* water temperature stays at 23-24°C. December-April is dry season, May-September rainy season and hurricane season is July-October.

**HEALTH** ▶ Check Covid requirements for the time of travel at gov.uk. Routine vaccinations recommended, tap water is not safe to drink. Avoid mosquito bites as dengue and other mosquito-borne illnesses can occur. Recreational chambers in Playa del Carmen and Cancun.

**MONEY** ▶ Mexican pesos, although US dollars are accepted almost everywhere.

**PRICES** ▶ *Cenote* tours with two dives at two *cenotes* and lunch average about £108.

**VISITOR INFORMATION** ▶ [underthejungle.com](http://underthejungle.com)



**Above, clockwise from top left:** Nichte Ha's entrance; stop sign in Taak Bi Ha; lily pads in Nichte Ha; a diver in Taak Bi Ha.

**Below:** Diver in Car Wash.

and Instagrammers were complaining that the visibility was terrible).

I still wasn't getting my hopes up that it would be as red as I wanted. But when we jumped in, it was.

Descending through an absolute haze

of red water, we got to about 3m and it became transitionally clear.

Above us was red fog, below us clear water and the bottom of the *cenote*.

After taking many, many red photos, we headed into the *cenote*, stopping just inside the entrance to look back and shoot the fiery opening.

Luke did a few circles modelling for me. I was ecstatic.

The cavern was clear and while the sights inside were cool, I couldn't wait to get back to the red water. Shooting the pink lily pads with the orange-red water made them look fake.

I think all the Instagrammers were starting to influence me... I couldn't wait to get back and post my photos online!


This done, the next day we went to the *cenotes* Taak Bi Ha

and Nichte Ha. These two were the most cave-like cavern tours, and they really made me start thinking about returning to do my cave-diving training.

Beautiful speleothems decorated the ceiling and the floor and it was like moving through a delicate chandelier, but a huge one, under water. Shallow areas created mirrors perfectly reflecting and doubling everything we saw.

I managed to sneak back to Eden just before I left Mexico on a sunny day to capture the curtain of sunbeams I'd heard so much about. It was even more beautiful than I had imagined.

I had completely fallen in love with these underwater enchanted forests of white sulfide clouds, pink lily fields, and underground caverns.

I was already making a mental plan of how to return for training so that I could see more of this unique and wild world. 





# THE JOY OF NIGHT- DIVING

Pt 1

LISA COLLINS





The night time is very much the right time for **STEVE WARREN**. In the first of a two-part feature, he talks to other divers about their experiences after dark and recounts some of his own



LISA COLLINS

**A**T NIGHT YOU CAN HEAR the sea breathe. The small waves lapping against the shingle beach inhale and exhale with the softest of sighs as they ebb and flow.

Driven by the wind, they have crossed the Atlantic, sometimes barely ripples becalmed and benign, sometimes as towering whitecaps flung on the insanity of tempests.

They have passed through the narrow Strait of Gibraltar and parted company, some heading east into the Mediterranean, while these have steered north to swirl at my feet below the famous Rock.

In a moment of whimsy, I stand and listen, ignoring the weight of the heavy twin-set digging into my back and the 10kg video camera and lights biting at my fingers. Then I slip into the darkness beneath the water.

I have always loved to night-dive.

In the nook of Gibraltar's Camp Bay northern edge, steep-sided cliffs break the surface, spiked with cacti, unwelcoming and hard to traverse.

Below the water, in 12m, an undercut in the same rockface is enchanting and explored with all the ease of those gifted with weightlessness.

It's adorned by scarlet cup corals. At night, they flay out their tentacles to catch drifting plankton. Look closely, and among the crimson and yellow sea moss, black-headed blennies with safety-orange bodies hide in the crevices.

On the bottom hermit crabs scavenge, toddling about beneath high-rise sponges adorning their stolen shells. Octopuses moonwalk across the sand.

I train my lens on a snipe eel. Only its pointed head, barely the length of my little fingertip, protrudes from the seabed. It too snatches invisible snacks from the gentle current.

On my monitor I see flickering, which I at first assume to be noise from my camera but is actually copepods break-dancing in the beams of my lamps.

In the old days I would solo-dive here, staying down until driven out after 150 minutes by diminishing air and cold that had slowly worked through my drysuit and Thinsulate onesie.

Camp Bay and I are old friends. I moved to Gib in 1970, aged six, and took up skin-diving.

**Left:** Aiming two dive-lights like six-shooters, Nick Balban lights a bream off Gibraltar.

**Inset left:** The darkness beckons on Seven Mile Beach in Grand Cayman.

**Right, from top:** Snake eel, mantis shrimp and bobbit worm, all shot by Lisa Collins on night-dives.

My first attempts at night-snorkelling were hampered by my choice of lights. I'd been given a Pifco rubber armoured torch, clearly marked waterproof.

This, it turned out, meant rain-resistant. Under water it quickly flooded, resulting in a wobbly, yellow and increasingly dulling beam.

Once or twice lacking a light altogether, I'd snorkelled in the glow of streetlamps. A

full moon, a cloudless sky and clear water lets you bask in the subtlest of black light, as soft as a lullaby. Turning off my lights is still part of nearly every night-dive I do.

But my kit and I moved on. Briefly, before I got into underwater photography, I had owned a huge gloom-buster of a lamp, as big as a small pony bottle, that projected 150W of testosterone-powered light through the water.

Inside the upturned, cavernous hull of a steamer one evening, it had lit huge swathes of the wreck. But, for all its *machismo*, the light could burn only for 25 minutes. It copped out.

My back-up was a normal three-cell dive-torch. It suddenly seemed very weak.

We picked our way out of the wreck, guided by snapshots of the route in the dim, narrow beam.

Later a friend joked: "If you want that much light, why not just dive in the daytime?"

Fair question. Lisa Collins, my business partner, underwater photo coach at Cathy Church in Grand Cayman and fellow **DIVER** contributor had an unequivocal answer...

### 'It's the night life, stupid!'

"I absolutely love night-dives, exactly for the creatures that come out at night," Lisa enthuses. "Moving slowly over a reef, scanning with my light, I delight in the many species of crab and shrimp that suddenly appear.

"Octopuses and moray eels come out to feed and a whole host of fish and critters you would never normally see during a day-dive are easily spotted.

"The feeling of mystery, adventure and discovery I get every time I do a night-dive

keeps me coming back for more. You never know what you're going to find!

"Normally when looking for small critters it's good to scan your light out into the blackness every once in a while.

"On a recent dive, I spotted a great hammerhead shark feeding in the sand not more than 10m away!"

As Lisa says, as much as anything night-diving is about encountering wildlife on different terms. And when the marine life is abundant, it's addictive.

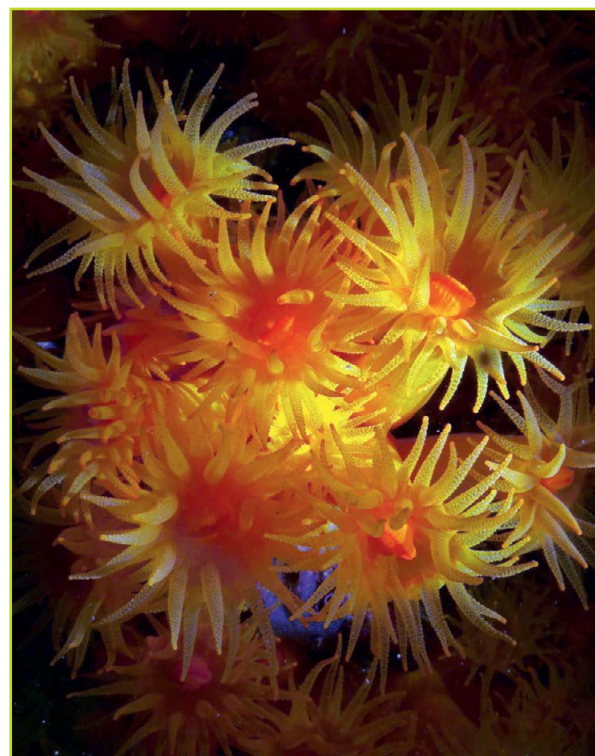
On my first trip to the Maldives aboard *Sea Spirit*, Andrew 'AJ' Pugsley and I had waited on sundown with growing impatience.

Below on a seamount whitetip sharks would be massing to begin hunting through the night.

We had been unable to hold ourselves back until it was fully dark at the surface, choosing to descend the anchorline a little ahead of the others.

Looking back over my shoulder I saw AJ framed against the beautiful blue twilight, while below all was black except for the rope glowing ivory-white under my torch-beam. AJ takes up the story:

"The daytime diving was much as expected: leisurely swimming among reef fish going about their daily business, occasionally glimpsing other spectacles



Above: Cup corals shine.

Left: Nick Balban with a spider crab, a protected species in Gibraltar.



such as a lone shark or turtle in the distance. An eel, if seen, would be poking its head out of a hole and largely retreating if approached.

"The expectation from a night-dive was for it to be similar but viewed through the spotlight of the torch.

"But of course it wasn't – different time of day meant different behaviours.

"Initially, descending through the emptiness there was nothing to see. Then the bright points of light that are the sharks' eyes reflecting the torchlight, then the whole body of the sharks.

"Whitetip sharks, lots of them. Moving rapidly across the top of the reef to feed.

"Wake up, this is exciting! And while my own position in the water is just as leisurely as in the day, the dive no longer feels leisurely. It's engaging.

"Photography isn't really going to work for me tonight – just enjoy the show on the real-life canvas of the reef."

AJ makes a good point – sometimes it's better to leave the camera behind and just exult in the experience. So often, my memories of a dive are displaced by a slavish devotion to taking pictures that separates me from the moment.

That dive is one of which I have little recollection and, ironically, no pictures. The camera deleted them all.

For many divers, however, taking pictures is the main objective, as it was for my good friend the Greek underwater photographer Constantinos Petrinos.

He spent five months on assignment at Kungkungan in Indonesia's Lembah Strait and his resulting book *Realm of the Pygmy Seahorse* is a masterpiece of natural-history photography and storytelling.



## There's a calm surrender to the rush of day

Constantinos fondly recalls exploring those black satin waters. "I think I'm actually more relaxed on a night-dive than when I'm sleeping. Bunaken, fourth dive of the day and most of the team had chosen the bar instead of the dive.

"I just hovered where the reef met the sand, breathed in and rose, breathed out and sank. A little muscular effort to hold my camera, and the odd waft of my fin to nudge myself along. But basically just cruising and watching the reef.

"My torch-beam picked up a slipper lobster scrambling over the reef, not

**Above:** Scorpionfish.

**Below:** Skate by night.

something you get a good look at very often, so I spent a bit of time getting some images. Then a snake-eel, then the real thing – a big, calm sea-krait, cruising for reef fish and not at all bothered by my portrait photography.

"As always, I was an even worse buddy on a night-dive than during the day, just touching base once in a while, avoiding the *faux pas* of messing with each other's torch-beam.

"We just enjoyed our individual small worlds, gently cruising up to spend the last 20 minutes or so around 5m."

True to the traditions of his forbears, the helmet divers of the Aegean, Constantinos was doing some crazy night-dives, often requiring decompression.

It was during this assignment that he became known as Con, which I took to be simply an abbreviation of Constantinos.

I found later that it means "creature of the night", a nickname given him by dive-centre manager Mark Ecenbarger.

"I practically had the whole of Lembeh Strait to myself at night," Con explains.

"I usually did one night boat-dive and then a night shore-dive from the resort, current permitting, but there was an unfortunate night when I overdid it.

"The current conditions were perfect, so I did two night boat-dives back to back. When I returned to the resort's pier, I noticed that there was still no current. '*Tida arus?*' I asked the divemaster.

"Yes, no current". So I kept night-diving from the pier and changing tanks in between. For my bad luck, Mark was at the resort's restaurant and couldn't miss seeing my strobes flashing again and again under the pier. So before going to bed he asked the guard to tell him at what time I had stopped night-diving.

"Well, like I said, conditions were

perfect, so I ended my series of pier night-dives at 2am.

"Next morning, the dive-team received an order from Mark to lock my dive equipment at 11pm each night. Bummer!"

The back-to-back night-dive was something I had done myself in Gibraltar. My buddy Clifford Santos had been grounded after returning home at 3am.

Clifford had school later that morning. He was a teacher. His wife permitted him only single night-dives after that.

## Fright night

As an instructor based in Brighton, I had often night-dived from Newhaven beach.

The outer arm of the port, maxing out at 8 or 9m, would turn up small fish and lobsters, but the weaving rocky crevices away from the jetty rarely revealed much life. Then one night Mark Wild and I entered the water to find the sea literally swarming with eels.

Later Mark told me: "That dive did it. That's why I became an instructor." It was his first night-dive.

Natasha Robinson from Ocean View Diving in nearby Lancing and another **DIVER** contributor remembers her baptism clearly, though with less conviction.

"My first night-dive was part of my Advanced Open Water Diver course in July 2010 – my 16th-ever dive! I was on the annual club liveaboard trip to Egypt and the dive-site was the Barge.


"I wasn't the most confident diver so was really quite nervous (OK, terrified.) Luckily, I was with a group of active UK divers who kindly floodlit the site with their 6 billion lumen umbilical torches!

"Add to that several other liveaboard groups being in the water as well, and the Barge was lit up brighter than Wembley Stadium. The lionfish made the most of the searchlights to hunt (whether other fish or divers).

"Some of the huge morays I had seen only as giant heads in the day now revealed enormous free-swimming bodies as they hunted for their dinner.

"Tree trunks undulating at speed across the reef seemed more like something you'd see in an episode of *Dr Who*.

"I was amazed by how life had changed on the site from the afternoon dive to the night-time, the different variety of critters to be seen and what they were doing.

"'Enjoyed' is too strong a word to describe my feelings when I surfaced but I certainly appreciated why others love night-diving and I knew it was something I had to get more comfortable doing through more practice." 

**NEXT MONTH:** Underwhelming experiences, guides v spotters, overlooked riches, surprising shallows and more...





 PEREGRINE

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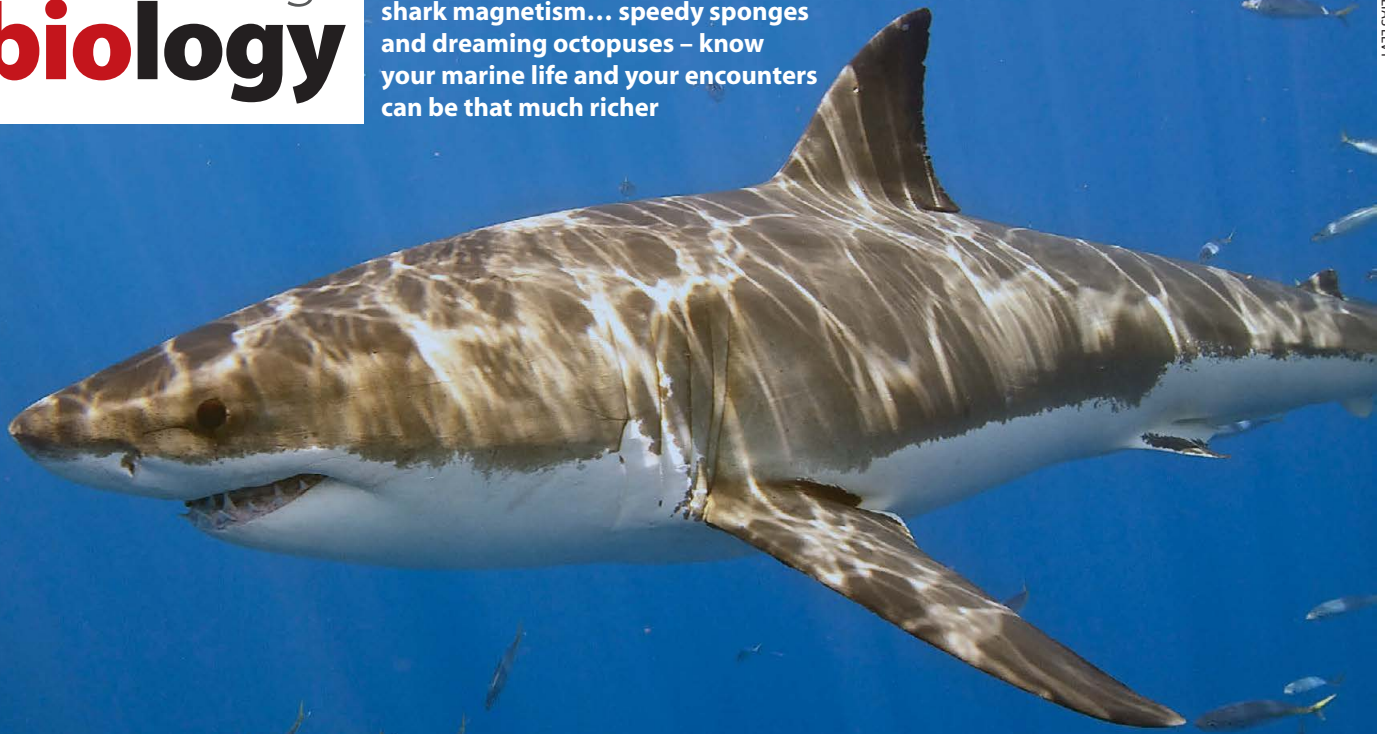
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ELIAS LEVY



# BUILT FOR SPEED, NOT THERMAL COMFORT

**M**OST FISH ARE cold-blooded, but some 35 species have evolved the ability to warm their muscles as well as their eyes and brain.

Being warm-blooded, like the great white shark and Atlantic bluefin tuna, allows these fish to maintain their bodies at higher temperature than the surrounding water – but only now do scientists believe they are in a position to explain with some certainty the reason for this.

It had previously been suggested that because warmer muscles are more powerful they enable the fish to swim faster, while at the same time enabling them to survive a wider range of temperatures – making them less susceptible to ocean warming.

The international team of marine biologists from Ireland, Australia, USA, Tasmania, Hawaii and Japan obtained what they say is the first direct evidence of the evolutionary advantage of being warm-blooded.

They found that the fish could indeed swim up to 1.6 times faster than cold-blooded species – but that they were no better equipped by their warmer blood to cope with climate change.

**Above:** Cold-blooded killer? Not the great white shark.

A variety of sharks and bony fish were caught by hook and line so that biologging devices could be attached to their fins while they were secured beside the boat. They could then be released quickly.

The data, including water temperatures encountered by the fish in their habitats, and their depths and speeds, was combined with data already available.

The extra speed shown was likely to make the animals better hunters and/or travellers, and to help them to process and identify prey, say the team, because the quicker they are able to swim the faster an image moves across their eye.

Many of these warm-blooded species are under threat, with the Atlantic bluefin classed as Endangered and the white shark Vulnerable.

“Our results indicate the ability to warm their bodies doesn’t allow them to occupy a broader temperature or depth ranges,” said one of the team, Lucy Harding, a PhD candidate in fish physiology at Trinity College Dublin.

“This means we may have been overstating the resilience warm-blooded fish have for facing changing ocean temperatures.”

**Study:** *Functional Ecology*

## FRENCH POLYNESIA

# How sharks relax – they go surfing

**N**OT ALL SHARK SPECIES need to keep swimming to breathe – some use buccal muscles to pump water over their gills to extract oxygen.

But others such as great white and grey reef sharks that lack these muscles breathe using “obligate ram ventilation”, which does require perpetual motion. The question of how they manage to rest has long been a mystery.

Now scientists observing sharks in French Polynesia have worked out that they are able to power-nap when required – by “surfing the slope”.

The discovery was made by an international team led by marine scientist Yannis Papatamatiou of the Institute of Environment at Florida International University.



VALERIE HUKALIO

Scuba-diving to study the 500 or so grey reef sharks in the southern channel of the celebrated Fakarava Atoll dive-site, Papatamatiou found that the sharks used the channel to hunt by night but then stayed there during the day simply to float on updrafts from the current.

In this way they were able to resist the flow but to benefit from the oxygen it carried while barely even moving their tails. “During the day, they’re pretty placid and relaxed, swimming with minimal effort,” he said. “It’s interesting, because it’s a pretty strong current.”

He also realised that the sharks had developed a shuttle system, whereby one would reach the end of the channel before allowing the current to carry it back to its starting point, while another shark would take its place and repeat the process.

Combining their diving observations with the use of acoustic tracking tags and shark-borne cameras, the scientists compared the energy expended by sharks while surfing in the channel with those that dropped out of it.

They found that the surfing behaviour enabled them to save at least 15% of the effort they would otherwise have used.

Papatamatiou and Gil Iosilevskii from the Technion-Israel Institute of Technology then used multibeam sonar and tidal-direction data to create a model of where updrafts were likely to appear.

Receivers were placed along the channel to track the sharks, with 40 animals tagged to record their activity and depths.

The data confirmed that the sharks stayed in the updraft areas of the channel during the day and varied their depth for optimal energy savings.

During incoming tides with strong updrafts they went deeper where the current was weaker, while during outgoing tides with more turbulence they enjoyed a smoother ride closer to the surface.

“Ultimately, the energy seascape helps explain why these animals are in this channel hanging out there during the day,” said Papatamatiou.

“Now we have an answer.” The team’s findings could explain why large numbers of sharks assemble and remain in certain other parts of the world.

**Study:** *Journal of Animal Ecology*

## PACIFIC

# Orcas are ‘like kids at a party’...

**UNPRECEDENTED DRONE** footage has revealed that individual orcas form close personal affinities with others – and that their pods tend to be run by the younger and female whales.

Researchers tracked a single pod of 22 southern resident killer whales (*Orcinus orca*) for 10 days in the Pacific, in an aerial monitoring exercise on a scale not attempted before.

The resulting study was based on almost 11 hours of video footage.

Orcas live their entire lives in the pod into which they are born, but the

**Above:** Grey reef sharks, taking it easy at Fakarava.

researchers noted that in the time they were under observation their inter-relationships seemed to ebb and flow.

Most orcas showed a preference for the company of particular individuals, and this could be recorded because they would surface with them and touch them more often than others.

Often they would be of similar age or the same sex, and signs of co-operation they exhibited implied a close bond.

The study, led by the University of Exeter, was built on more than four decades of data collected by the Centre for Whale Research on southern resident killer whales, a Critically Endangered population.

“Until now, research on killer whale social networks has relied on seeing the whales when they surface, and recording which whales are together,” said lead author Dr Michael Weiss.

“Looking down into the water from drone allowed us to see details such as contact between individual whales.

“Our findings show that, even within these tight-knit groups, whales prefer to interact with specific individuals.

“It’s like when your mum takes you to a party as a kid – you didn’t choose the

**Below:** Two orcas: “We’re just good friends.”



MARTIN VISSER



party, but you can still choose who to hang out with once you're there."

Patterns of physical contact suggested that younger orcas and females played a central social role in the group, and that the older the whale, the less central its role became.

"We were amazed to see how much contact there is between whales – how tactile they are," said Prof Darren Croft.

"In many species, including humans, physical contact tends to be a soothing, stress-relieving activity that reinforces social connection. We found fascinating parallels between the behaviour of whales and other mammals."

One of the drones used was bought through a crowd-funding campaign.

**Study: Proceedings of the Royal Society B.**

## FIJI

# ...bull sharks are choosy

**M**EANWHILE ANOTHER newly published study has revealed that individual bull sharks also seem to form affinities with each other, showing a preference for certain sharks while avoiding others.

International researchers led by Dr Thibaut Bouveroux of the Dauphin Island Sea Lab in the USA analysed data based on 3000 shark dives carried out by Beqa Adventure Divers over 13 years on the Shark Reef Marine Reserve off the island of Viti Levu in Fiji.

They were looking for long-term association patterns in the behaviour of



**Above:** Examples of deep-living corals living on crinoids in Japan – behaviour thought to have died out aeons ago.



the 91 individuals that could be identified through fin damage or scarring.

Bouveroux said that while the word "friendship" could be applied only to humans, affinities and avoidances did seem to occur among the bull sharks.

It was however emphasised that because the data all derived from baited shark-feeds at a single site the conclusions should be treated with caution.

Further studies would concentrate on identifying individual sharks' personality traits and establishing their hierarchy.

**Study: Frontiers in Marine Science**

**Below:** Bull sharks show "affinities and avoidances" for each other.



## JAPAN

# Unsuspected cohabitation

**I**T WAS KNOWN from fossilised remains that prehistoric crinoids and corals once enjoyed a symbiotic relationship – until 273 million years ago, when the species involved vanished from the fossil record.

However, it now seems that cohabitating crinoids and corals continued to thrive all along through the aeons – hidden on deep seabeds.

Scientists recently found rare *Abyssoanthus* hexacorals and *Metridioidea* anemones growing from the stems of *Metacrinus rotundus* crinoids, also known as Japanese water lilies.

This symbiotic relationship occurred at sub-100m depths in the Pacific, off Honshu and Shikoku in Japan.

In the Palaeozoic era corals would climb crinoid stems to filter-feed in the stronger currents clear of the seabed – though what the crinoid gained from the relationship remains unclear.

A research team led by paleontologist Miłkołaj Zapalski of Poland's University of Warsaw used stereoscopic microscopy and micro-tomography to study the specimens.

They concluded that because the corals did not climb above the crinoids' feeding fans they didn't compete for food or affect the stems' flexibility.

Palaeozoic crinoids were linked with corals that had a calcite skeleton, but fossils of non-skeletal corals like those found off Japan are rare – which the researchers believe could explain the gap in the fossil record.

**Study:** Palaeogeography, Palaeoclimatology, Palaeoecology

**Right:** These coldwater sponges look static enough, but they like to move about.



AWI

## ARCTIC CIRCLE

# The secret, upwardly mobile life of sponges

**S**EA SPONGES HAVE ALWAYS been regarded as sessile creatures, unable to move independently after the larval stage. Lacking locomotion organs or a nervous system, they were thought simply to settle down attached to a substrate.

But scientists studying deep-dwelling marine life in the Arctic have been surprised to discover sponges leaving trails in the seabed sediment to indicate that they roam about – albeit only a few centimetres a year.

The researchers, led by the Alfred Wegener Institute and Max Planck Institute for Marine Microbiology in Germany, were on an expedition aboard the icebreaker *Polarstern*, using an ROV and the Ocean Floor Observation & Bathymetry System (OFOBS) towed-camera system.

Their high-resolution images were captured at the Karasik Seamount, about 220 miles from the North Pole.

The sponge trails ran in all directions – even uphill. “There are no strong currents in the Arctic deep sea that could explain the structures found on the sea floor,” said expedition-leader Prof Anthe Boetius.

“The seamount’s summit was densely populated with sponges,” said his colleague Autun Purser.

“Sixty-nine per cent of our images showed trails of sponge spicules, many of

## USA

# Sharks use nature’s GPS

**S**CIENTISTS HAVE COME up with what they say is the first solid evidence that sharks use electromagnetic fields to navigate.

Aware that sharks are sensitive to such fields, scientists had long speculated that, like turtles, they relied on them for guidance during their long-distance migrations.

They had however been unable to test their hypothesis.

“This research supports the theory that they use the Earth’s magnetic field to help them find their way – it’s nature’s GPS,” said Save Our Seas Foundation (SOSF) project leader Bryan Keller of Florida State University Coastal & Marine Laboratory.

“To be honest, I’m surprised it worked. The reason this question has been withstanding for 50 years is because sharks are difficult to study.”

The experiments involved 20 juvenile bonnethead sharks (*Sphyrna tiburo*), a species known to return to specific “home” estuaries each year.

Placed in a circular pool, the sharks were exposed to magnetic conditions representing locations hundreds of kilometres from where they had been caught.

This allowed the scientists to predict the direction in which the sharks would orient themselves if they were relying on a “magnetic map” – northward in the southern magnetic field, southward in the northern field and neutral if exposed to the field matching their capture site.

The sharks followed the predicted orientations every time.

“How cool is it that a shark can swim a 20,000km round trip in a three-dimensional ocean and get back to the same site?” said Keller, referring to one great white’s documented migration between South Africa and Australia.

“In a world where people use GPS to navigate almost everywhere, this ability is truly remarkable.”

Keller’s team suggest that responses to Earth’s magnetic field might also affect the location of shark communities, and their genetics.

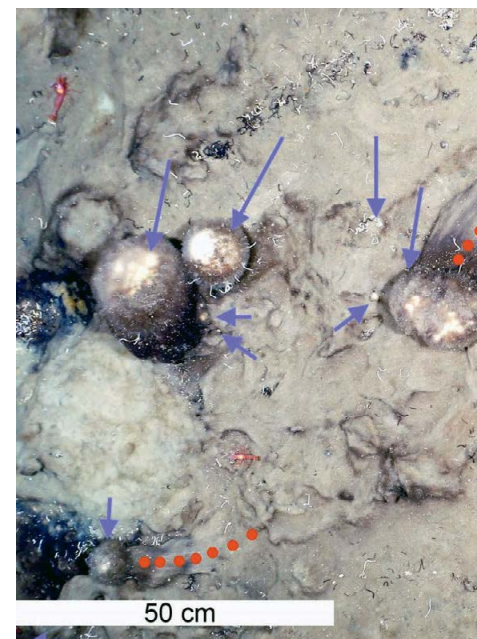
They now hope to explore the effects on sharks of magnetic fields from sources such as undersea cables – and how sharks use magnetic cues in their everyday behaviour.

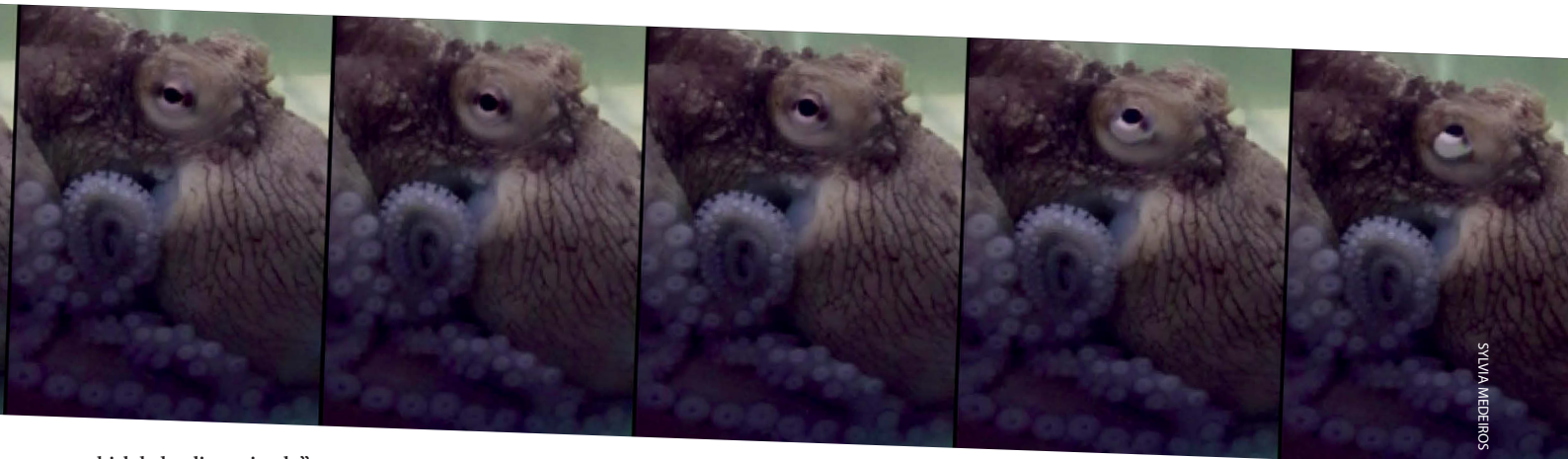
**Study:** Current Biology



SERENA EPSTEIN

**Pictured:** Bonnethead sharks – how do they find their way home?





SYLVIA MEDEIROS

which led to live animals.”

Spicules are small spines that support sponges' bodies, but which appear to be sloughed off when they get moving, leaving the tell-tale tracks.

These could accumulate into mats several centimetres high and many metres long, covering layers of empty worm-tubes and bivalve shells.

Trails of the densely interwoven spicules were observed connected to the undersides of individual live sponges.

“This is the first time abundant sponge trails have been observed *in situ* and attributed to sponge mobility,” said marine biologist Teresa Morganti, lead author of a study on the Arctic sponges.

The expedition took place in 2016 but the researchers' findings were only recently published.

The scientists think it possible that other sponges, especially juveniles, could feed off the spicules, and now want to determine why the filter-feeders move about and how they choose their direction of travel.

Possibilities include foraging in the nutrient-poor ecosystem, seeking better environmental conditions or distribution of offspring.

**Study:** *Current Biology*

**Above:** Octopus going through a quiet sleep sequence, with only one eye movement.

## BRAZIL

# Octopuses dream – but what about?

**THE NEXT TIME YOU SEE** a stationary octopus while scuba-diving and you have time to spare, you might like to keep it under observation to see if it's awake, asleep – or dreaming.

Octopuses were known to change colour while asleep, and it had been suggested that this might be caused by dreaming, but until recently only mammals and birds were thought to exhibit distinct sleep states.

Now research has shown that these colour-changing patterns characterise two alternating sleep states – one “quiet”, the other “active”.

During quiet sleep octopuses remain motionless, their skin pale and their eyes tightly closed slits.

By contrast, the report says that active sleep is characterised by changes in skin colour and texture as well as flickering eye movements, contracting suckers on the arms and muscle twitches on the body.

The research was led by octopus neuroscientist Sylvia Medeiros of the Brain Institute at Brazil's Federal University of Rio Grande do Norte.

She and her team caught four wild octopuses of the species *Octopus insularis*, found only off the Brazilian coast, and transferred them to her laboratory to be closely observed once they had acclimatised.

The octopuses mostly remained pale and still in quiet sleep but transitioned into brief bursts of active sleep, from a few seconds to no more than a minute.

Active sleep states typically occurred after

at least six minutes of quiet sleep, and the alternation between the two sleep states would repeat in cycles at 30-40min intervals.

Various stimulation tests were used to confirm that the octopuses remained asleep. When a live crab was shown moving on a video screen, or vibrations were created in the water by gently hammering on the tank walls, the octopuses showed little to no response compared to when they were in an alert state.

Their behaviour echoes that of humans, where rapid eye movement, elevated heart rate and irregular breathing indicates a vivid dream state.

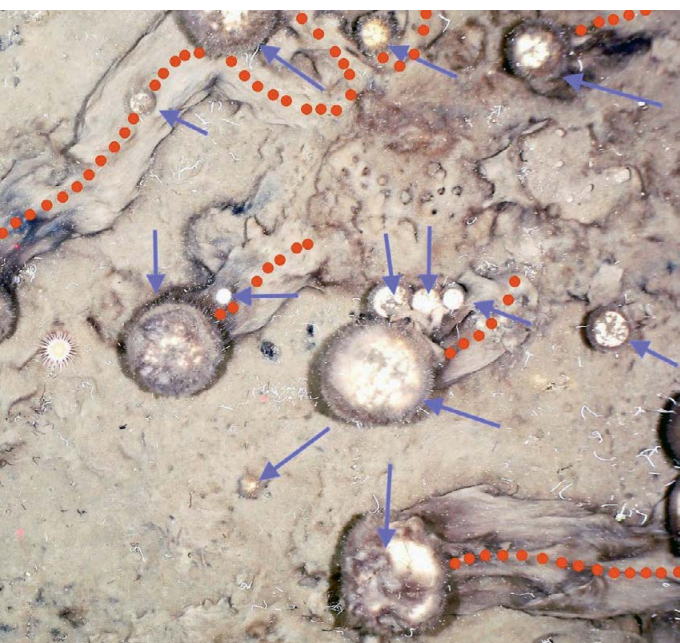
However, their sleep patterns are likely to have evolved independently in vertebrates and cephalopods in response to comparable environmental pressures.

The scientists believe that the behaviour exhibited by octopuses during their active sleep states suggests that they could be experiencing a similar phenomenon to dreaming, albeit very briefly.

Medeiros has likened the experience to watching brief video clips or gifs as opposed to experiencing complex sequences.

Dreaming has been connected to learning in humans, allowing the brain to make vital connections between new data and past experiences, so the scientists would like to know whether the same function might apply in octopuses – although testing that proposition could prove challenging.

**Study:** *iScience*



AWI



STEVE WEINMAN

# JULIAN'S ADVENTURES IN WONDERLAND

**D**EEP POOLS ARE NOTHING NEW. There are a number of them in Europe already. But the recently launched Deep Dive Dubai, confirmed as the world's deepest pool for diving by Guinness World Records, is something different. In fact, it's not a pool at all.

Splashing through the surface, I correct my buoyancy and start to take in my surroundings. Where am I? I seem to have arrived at the corner of a street in some unknown city, complete with the red-brick walls of an apartment building and other recognisable artefacts one would expect to encounter in an urban setting.

A lamp-post here, a billboard there, a phone-box, ATM and fire-escape ladder...

I look down and at once experience the *Vertigo* effect from Hitchcock's classic movie. A gaping shaft drops away sharply beneath me.

Laser beams of sunlight from the dive-deck above penetrate sharply into the water column but the bottom, out of reach from the flood of

sunlight above, remains dark and mysterious. Completing the final checks of our closed-circuit rebreathers, my guide signals for us to begin our descent.

Already home to the world's tallest skyscraper, the world's largest mall, the world's longest urban zipline and a Ferris-wheel larger than the London Eye, Dubai now boasts another record.

With its staggering depth of 60m, Deep Dive Dubai holds a whopping 14 million litres of water – the equivalent of six Olympic-sized swimming pools – and is at least four times bigger than any other diving pool in the world.

A conventional swimming pool with chlorinated water and blue tiles, whatever the depth, would most likely have delivered a somewhat sterile experience, so the design team behind DDD decided to come up with a concept that would provide a unique and surreal diving environment – one to fire the

imagination of visiting divers. It is themed as a sunken city – a metropolis submerged following some unknown post-apocalyptic incident.

It's anybody's guess what happened here and you can't help but speculate. Did it sink like some modern-day Atlantis? Did a natural disaster cause it to be flooded?

An earthquake, perhaps? Or the cataclysmic impact of a meteorite from outer space causing a massive tsunami?



Technical diver **JULIAN EYNON** tries something different – diving in an artificial flooded urban environment in Dubai, where descending to 60m is the most familiar of the experiences.

Underwater photography by **JESPER KJØLLER**



The mystery sparks the imagination, and the possibilities are endless.

Sinking silently through the water column, we descend into the gaping brick shaft.

The tangled roots from an enormous tree stretch down from the surface into the depths, adding to the mystery and implying that nature has started to take over.

Dropping further, we notice that the brick

walls of the shaft are decorated on all sides with strange graffiti depicting a pantheon of weird creatures. The artists were obviously marked when they painted these!

Arriving at the bottom, our lights illuminate a huge map of the world laid out across the floor.

Looking up, we're met with one of DDD's signature sights – the circular shaft towering upwards and far, far above, the bright disc of the surface, with the silhouettes of swimmers like birds in flight across the sun.

**WHILE IT'S INTERESTING** to dive all the way to the bottom, there's not much to see once you get there, because most of the interesting features and attractions are in the shallower sections.

So with a kick of our fins we leave the bottom and ascend slightly to continue our exploration

of the many surprises awaiting us in this mysterious sunken metropolis.

Arriving at 38m, we swim into the first of the "doughnut" tunnels – this one themed as an abandoned garage, where cars, motorbikes and arcade games lie scattered and abandoned.

Swimming past a row of workshop benches, I check to see if any of the drawers are open and pause briefly to observe a pool-table, abandoned mid-game. Round a corner, I come face to face with a full-sized *Star Wars* stormtrooper.

The pool's fresh water is filtered every six hours in one of the largest and fastest filter systems in the region.

First, it is passed through a perlite filter, consisting of naturally occurring siliceous volcanic rock, where larger particles such as dust, debris and organic matter are removed.

Secondly, a NASA-developed ionisation process controls bacteria. Thirdly, two huge UV reactors disinfect the water, terminating



It's reminiscent of the *Mary Celeste*. The occupants apparently had to abandon their living quarters in a hurry, leaving magazines and a box of popcorn on the coffee-table.

I can't resist the urge to dump the air from

any bacteria as the water passes through. Water temperature is then adjusted to a comfortable 30°C and then pumped back into the pool.

Completing our circuit of the flooded garage, we float up through a monumental staircase that leads to a second doughnut tunnel at 28m, and arrive at a flooded apartment.

my wing and settle briefly on the sofa to imagine what was showing on the TV when the occupants were forced to make their rushed departure.

We fin silently through the music-room, where we notice a grand piano, before passing through a kitchen, dining-room, bedroom and art-room, walls decorated with posters of iconic movie stars.

There are so many details to take in, and I realise that it will take many dives to fully explore everything.



**THE MANAGEMENT TEAM** responsible for Deep Dive Dubai is led by world-record-setting explorer and aquatic pioneer Jarrod Jablonski, who leads a multi-national team of hand-picked dive professionals, including instructor-trainers from GUE and PADI. There are other record-holding technical and freedivers on the staff.

There is an evident emphasis on safety, with conservative guide/guest ratios (maximum 1:4), and 56 in-pool surveillance cameras covering all angles and monitored from a control centre, with in-pool sound and announcement systems able to relay messages to divers in the pool.

DDD also provides diving gases to optimise safety, with nitrox for shallow dives and trimix for those going deeper.

The controlled and predictable environment can deliver for people of all experience levels from first-time scuba and freedivers to high-end





technical divers and freediving athletes.

From fun dives to focused training, there is something here for everyone.

Ascending from the apartment, we swim into another of DDD's signature attractions – the underwater habitat.

Surfacing inside the dry airspace, which resembles a commercial diving bell, we remove our masks and breathing loops and spend a few minutes chatting and exchanging jokes with the technician monitoring us from the surface control centre. The display monitors and surface communication devices enhance this unique experience.

Deep Dive Dubai has two underwater habitats – one at 21, the other at 6m – which is something no other deep-diving pool can offer. It gives divers the option of removing equipment and getting completely out of the water should they need to.

Visiting divers can enter these underwater habitats for fun, but they can also be used for training, or real-life decompression.

On the subject of decompression, I'm told that DDD is also set to have the largest hyperbaric chamber in the MENA region.

The unique combination of this with a 60m dive facility under the same roof is intended to provide a platform for medical research in diving



physiology and related areas of interest.

Replacing masks and breathing loops, we exit the underwater habitat and arrive at the so-called "library" shaft, its walls lined with bookshelves. Shakespeare, Joyce, Verne, Wells – all the classics are here. We begin the decompression portion of our dive while browsing the array of titles.

**C**OMPLETING OUR DECOMPRESSION, we finish our exploration of the shallower part of the sunken city.

Parked by a lamp-post, I notice a convertible white Mercedes, and we wave at the passing spectators on the other side of the rows of viewing windows. This is deco with a difference.

Divers who always wished they could share

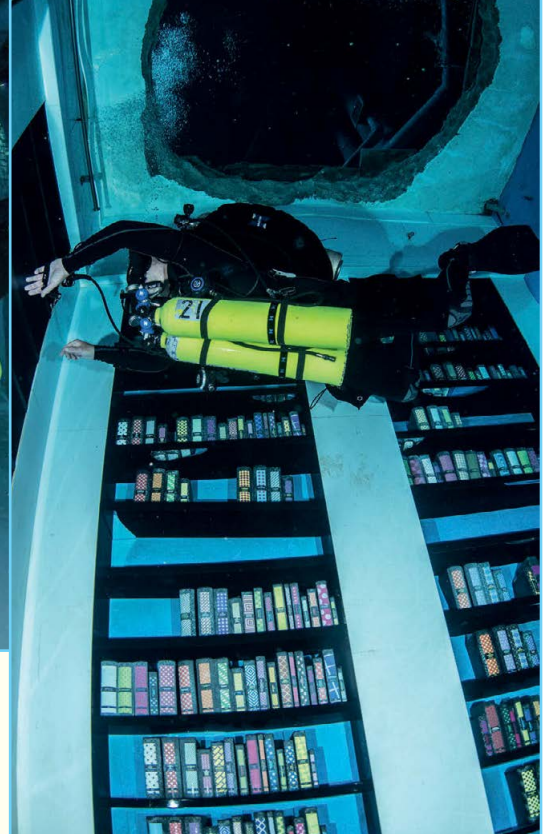
their diving experience with a non-diving friend or loved one have the chance to do just that, because from the surface down to 12m viewers can watch divers traverse the first two floors of their adventure below the dive-deck.

Visiting divers' friends and family can also enjoy a delicious meal or refreshments in the spacious restaurant while they relax and enjoy the view inside the pool through vast glass windows.

Deep Dive Dubai has managed to turn diving into a spectator sport. The 56 cameras that cover the pool serve a threefold purpose.

The video feed can be shared on large monitors that are situated throughout. This feed is also projected to the dive control station, where the dive-supervisor monitors all areas inside the





pool for safety. A video capturing the visitor experience can be edited and shared with the guests after their visit.

We break the surface and are back at the sun-drenched dive-deck. The interior design of the facility is reminiscent of a spaceship from a 1970s science-fiction movie, with flowing organic lines forged in the 3D printed walls, clean white interiors, and open spaces.

The outside of the building – inspired by a giant oyster shell, recalls the role pearl-diving has played in the history of the UAE and the region.

It was an essential trade for Dubai until Japan introduced cultured pearls 100 years or so ago, but even today many Emirati families can trace their ancestry to a time when they were involved in the pearl trade.

Taking off my equipment and heading to the luxurious changing rooms, I reflect on the previous 90 minutes. Deep Dive Dubai must be the most impressive diving facility in the world, but I struggle to decide which was the most remarkable part of the experience, such as the

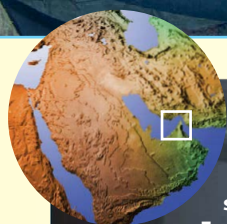
array of surprises on offer.

DDD plans to continually develop and change the theming to ensure that the experience remains interesting for repeat divers, and as I pass one of the vast viewing windows on my way out, I observe a group of divers beginning their descent.

It occurs to me that while this is indeed the deepest pool in the world, that might be its least interesting feature.

The sunken city has many more secrets to reveal, and I know I must come back.

*\* Julian Eynon learnt to dive with BSAC in Cyprus in 1988 and went on to qualify as a technical and cave-diver with GUE. Based in Dubai, he dives regularly in the UAE and travels extensively to dive wrecks and caves.*



## FACTFILE

**GETTING THERE** ▶▶ Daily seven-hour flights with Emirates or BA from London, Birmingham, Manchester or Glasgow.

No visa required for UK citizens.

**DIVING** ▶▶ Deep Dive Dubai, [deepdivedubai.com](http://deepdivedubai.com)

**ACCOMMODATION** ▶▶ Wide range of hotels.

**MONEY** ▶▶ Dirham (AED)

**WHEN TO GO** ▶▶ Year-round for DDD, where the air and water temperatures are controlled. For outside activities summer from May-October means extreme heat (above 40°C) and high humidity. Winter has more pleasant weather (20-30°C) with no rain. The nearest worthwhile sea diving in the UAE is in Fujairah, 66 miles away.

**PRICES** ▶▶ Return flights from London from £340. Budget hotels with 5\* TripAdvisor traveller-rated rooms (two sharing) from £17-82 a night. Deep Dive Dubai experiences and courses start from 800 dirhams (£158).

**VISITOR INFORMATION** ▶▶ [visitdubai.com](http://visitdubai.com)





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# Ship shape

LOUISE  
TREWAVAS



**T**HE SKIPPER PROMISED me a wreck, so it must be down here somewhere. If the vis was better, I might even be able to see it. Maybe the atmospheric gloom adds to my anticipation.

I follow the clues: occasional sticky-up bits, shoals of fish, the torchlight of other divers... OK, I see a boiler. I'm diving on a boiler in a debris field.

It might be a wreck of a wreck, but I'm loving it anyway. The marine life are loving it too, which means there's no shortage of entertainment.

My first wreck-dive was on the Dredger in Portland. It still looks like a mangled piece of agricultural machinery that's been tossed against rocks by an angry giant. I mostly remember the impressive size of the spider crabs.

I generally dislike the trend for "Top 10 Wrecks" listings but I'm as nosy as the next person to find out how many of the "top" wrecks I've dived. I might scorn these lists but they provide clues to what many people like in a wreck-dive:

**Size:** People do seem to love a big fat wreck. Size impresses and bigger ships are often more glamorous and better-known. Plus you can also do your best Kate Winslet impersonation at the bow in photos.

**Largely intact:** How wonderful it would be to find the portholes still in place and the pots, plates and cutlery stacked neatly in the galley. Dream on! The less damaged, salvaged and pillaged the wreck the better. Shipshape wrecks in pristine condition are fleetingly rare. Even without interference, a wreck is constantly deteriorating. Just like humans.

**Upright:** Always helpful. Wrecks have an unfortunate knack of falling over. Any diver visiting Scapa Flow knows that warships with big heavy guns tend to turn upside down as they sink. You'll get a tad bored finning around on an upturned hull, so head straight for the seabed and explore from there. Big wrecks can also get pushed onto their side by currents and storms. Amazingly, the *Spiegelgrove* (Florida Keys) got pushed upright by a hurricane in 2005. Result!

**Back story:** An interesting history or famous connection adds kudos. These days celebrity status is everything. The more "known" the wreck, the more divers it attracts. The more that people dive, photograph, talk and write about it, the more alluring it becomes. It also needs to be...

**Accessible!** Everyone would be diving the *Titanic* if it was in 30m and half-an-hour offshore. The most popular wrecks are always those that divers can reach with relative ease. But not too easy. Or there would be nothing to brag about.

**THAT'S WHY THE** Top 10s are largely meaningless. Most are a list of well-known wrecks that divers name-drop to sound impressive.

But popularity can be problematic. The Dredger isn't ship-shaped, though I suspect people will still enjoy diving that mangled old wreck long after the highly-rated *Thistlegorm* succumbs to the hazards of mass diving. It's at risk of being pulled apart and scavenged into rubble.

"Shipshape and Bristol fashion" used to mean neat and tidy, though these days Bristol fashion conjures images of statues being torn down unceremoniously and dumped in the harbour.

Times may change and meanings alter. But you'll still remember loving those wreck-dives forever.

# Les Illes

HOTEL & DIVING

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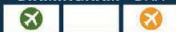
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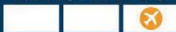
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# ONE SITE BEYOND



Every image here was captured at one incredible dive-site – it's easy to see why **DANIEL BRINCKMANN** loves Farikede

**JUST PICTURE IT.** Less than a 15-minute boat-ride from the harbour, you plunge into the water with nothing but blue in sight, except for a vague image in your mind of the site-map that your guide drew prior to the dive.

It goes without saying that all senses are wide awake, even with only one quick *espresso* in the morning, while a current you do not feel shifts you towards a reef you cannot see.

Bestowed with the superpower of experience that overseas guests will hardly fathom, veteran dive-centre manager Saheed checks the waypoints and options long before anybody in the group sees even a glimpse of the bottom arising from the black depths to the first rim at 50-60m.

Scalloped hammerheads on the corner? Thresher shark on the cleaning station? Sunfish on the plateau? Tiger shark coming up for a meet & greet?

If visibility allows, divers will see whatever Neptune brings to the table this day from 40m away. Enough time to calculate currents, let your guide know,

empty your BC and plunge down where your mum doesn't want you to be, and brace for a sweet seconds' encounter with one of the creatures of the big blue.

Obviously, a quick ascent is appreciated, just like long freediving fins, because the likelihood of deco is always just around the corner, given the average

travel depth of 30m.

And, after all, the ride is over after approximately 15 minutes. This is the usual time-frame in which the current pushes the diver over the reef, from whatever angle it happens to come.

That said, the dive is not over at this point. During the multi-level ascent,



**Above:** Farikede overwhelms the senses – a tiger shark.

**Right:** Turtle on the reef.

**Opposite page, clockwise from centre:** The DivePoint dive-boat; shoaling powder blue surgeonfish; moray eel.



encounters with schools of bonito, whale sharks and solitary predators such as sailfish can happen any time above the edge of the underwater miracle they call Farikede.

**I**N AN INDUSTRY WITH few explorers and many followers keen on reaping others' benefits, the marvels of the far southern end of the Maldives have long been treated as secret.

That goes especially for Fuvahmulah, a large local island just south of the Equator that boasts an impressive six-mile coastline, freshwater lakes, roads and a resident population of more than 100 tiger sharks that quickly gave rise to the place's "Tiger Beach of the East" tag.

With six dive-centres feeding the superpredators just off the harbour entry on a daily basis and all too many diving tourists out for the thrill and their





personal selfie with a striped submarine-turned-fish, the source of their unusual abundance gets hardly any recognition.

Once a mini-atoll in its own right, Fuvahmulah's ring of corals grew over time to become landlocked, and plenty of rain and plants over the centuries created what is an extremely varied island by Maldives standards.

It's an island that has no fringing reef and no barrier from the open ocean (and thus enough fresh cold water to prevent bleaching). There's nothing but outer

**Above from left:** Whitetip reef shark; octopus.

**Below:** Silvertip sharks can be seen in numbers at Farikede.

**Bottom, from left:** Sailfish; healthy hard corals.

atoll walls all around the island.

Except for this one long slope off the island's southern end, which stretches two miles into the open ocean from north to south and west to east, which lent to Fuvahmulah's nickname "Galapagos of the Maldives".

Indeed, Farikede, or "the Plateau" as some call it, is both a resting place, a beacon in the blue for pelagic species, and a hunting ground with such an unusual variety of nine shark species, big game fish and oceanic mantas gathering

that UNESCO declared it a biosphere reserve and the Maldivian government included it in the Environmental Protection and Preservation Act of the Maldives last year.

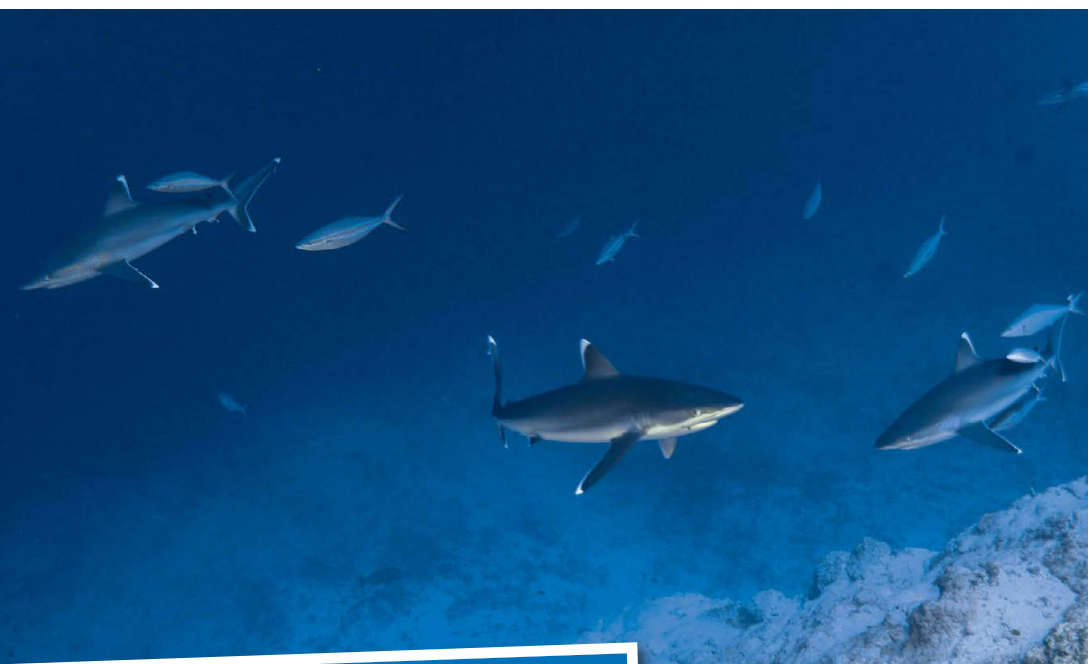
In a few years from now, Farikede is very likely to be mentioned in the same breath as the Brother Islands, Daedalus, Sanganeb, Sha'ab Rumi and the best sites around Komodo, Cocos Island, Socorro, Malpelo, Ningaloo Reef and wherever else is considered the top of the tops in the seven seas.

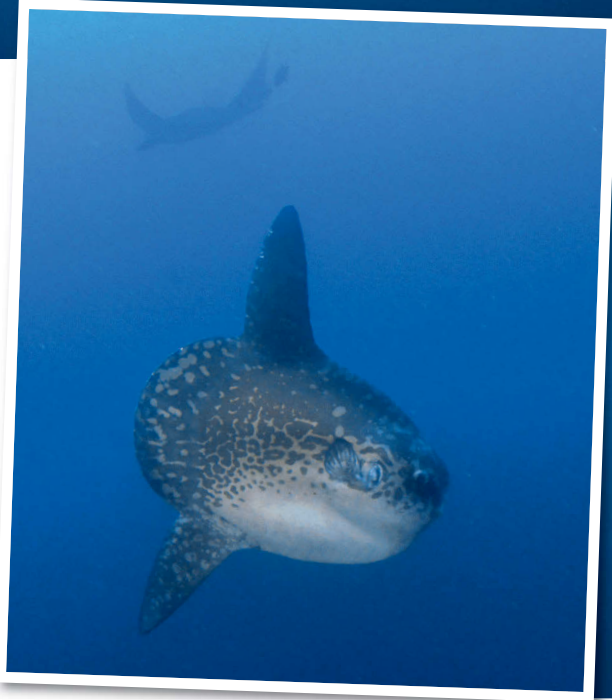
Only the considerable depths could prevent that from happening. Truth be told, among about six dive-sites along Farikede, only a cave studded with whitetip reef sharks and lobsters and another one with a resident armada of curious batfish are really suitable for open-water divers.

Anything else is on the fly-by and no shallower than 30m.

**A FEW METRES BELOW**, where the colourful hard coral reef wall drops onto the coral-rubble bottom, is where the cleaning station for both common thresher and bigeye thresher shark – the only known place in the world where both species might be seen at the same time – is situated.

At the same time, it is the dividing line between the bigger boys and the real big boys. It speaks volumes that the grey reef sharks that are the kings of the reef on





most Maldivian reefs stay rather inshore and give space to the larger silvertips and hunting packs of scalloped hammerheads that roam the rubble grounds from October to April, or even the odd greater hammerhead.

Not to mention the tiger sharks that live there all year round. Sunfish or *Mola mola* usually show up on the plateau between January and March, sometimes accompanied by the huge oceanic mantas

that congregate around the island from March to May.

More than a few lucky divers have indeed spotted whitetips, grey reef, silvertip, thresher, tiger, scalloped hammerhead and whale sharks on a single dive on Farikede.

It's fair to say that shark enthusiasts have a new dream destination, but no doubt it is an environment that is unforgiving of any mistakes.

This point is underlined by Marcus Hauck, manager of the DivePoint brand, who opened a dive-centre on Fuvahmulah

**Above, clockwise from top left:** Scalloped hammerhead shark; bonito shoal; large numbers of hammerheads; a sunfish.

**Below from left:** Manta ray; batfish shoal.

last spring: "Early on, we decided to equip all our guides with ENOS, which allows us to quickly trace divers who have gone astray," he says.

ENOS is an electronic rescue and locating system developed in Germany that reveals a diver's GPS position at the surface.

DivePoint says it is the only centre on the island currently both using the system, along with 24% nitrox mixes to allow for a third dive of the day and a dive-boat considerably more powerful than a standard *dhoni* that takes up to 14 divers. 🇲🇻



“We have heard and seen stories of divers drifting in the open ocean getting rescued by fishermen, and we do everything in our power to prevent anything like this,” Hauck told me.

“It is my new favourite reef after having spent 30 years in the Maldives, but we are only taking Advanced Open Water Divers who can deal with current, depth and big sharks at the same time.”

**ALMOST ALL THE** dives except for the widely publicised Tiger Zoo are one-way drift dives.

That AOWD with nitrox certification, freediving fins and appropriate experience are required and dive-centre staff expect divers to be generally self-reliant and responsible – of course, being at home using surface marker buoys and signalling devices is expected too.

Dives at Farikede are usually conducted as the first and/or second of the three dives offered each day, with the last one usually carried out on nitrox.



The daily transfer to the dive-centre and port takes 10-15 minutes.

Fuvahmulah itself has a plethora of guest-houses from which divers can choose, from very basic backpacker places to boutique-style resorts with private pool suites, so it's a matter of taste and a question of whether or not to invest in more (diving) days on the island or creature comforts.

I found that a nice



**Top:** Tiger shark.

**Left:** Silvertip shark.

**Above:** Divers over the reef.

**Below:** Jetty on Fuvahmulah.

middle-of-the-road place with very friendly staff and a rental option for bikes and scooters – which is useful to get to the beaches – is Veyli Guest House situated in a tropical garden with seating areas and 10 rooms.



**FACTFILE**

**GETTING THERE** ▶ Daily one-stop flights from the UK to Male (MLE). Fuvahmulah is a two-hour flight by the seaplanes that fly three times every day.

**DIVING & ACCOMMODATION** ▶ DivePoint Fuvahmulah, [divepoint-maldives.com](http://divepoint-maldives.com); Veyli Guest House, [veyli.com](http://veyli.com)

**WHEN TO GO** ▶ Year-round, though late summer conditions can be rough. The best are likely to be December-May.

**MONEY** ▶ Rufiyaa.

**HEALTH** ▶ Hyperbaric chambers in the vicinity of Male 300 miles north.

**PRICES** ▶ Return flights from £470. Seven nights' B&B in a double room at Veyli Guest House including domestic flights and six diving days (three dives per day) starts from £1700pp. Dive Worldwide also offers holiday packages on Fuvahmulah, [diveworldwide.com](http://diveworldwide.com)

**VISITOR INFORMATION** ▶ [visitmaldives.com](http://visitmaldives.com)



# Malta: it stands out a mile!

AS THE DIVING WORLD peeped from under the blankets this summer, it's no exaggeration that one candidate for UK travellers' attention stood out a mile.

What made the Maltese islands – Malta, Gozo and Comino – such a clear option was firstly accessibility. Malta was early to declare itself open to double-vaxxed UK visitors, and it's only a three-hour direct flight to this Mediterranean idyll.

So by the time you've read your newspaper on the plane you'll already be entering a welcoming new world of fun and excitement. And all you need is a Covid vaccination certificate dated from at least two weeks before arrival, in print or on the NHS app – simple!

The second compelling reason was, as always, diving quality. Malta is a consistent star turn in the Diver Awards for best diving destination, and the only one a mere hop from home.



It's renowned among divers for its wrecks, from ancient galleys through WW2 warships to the many deliberately sunk attractions. Only this summer army patrol boat *P-33* was scuttled (joining the popular *P-29* and *P-31*) for divers spoil for choice when deciding how to divide up their holiday week. Surely you deserve a fortnight away this time?

Spectacular underwater topography accessible from shore is another attraction. For independent divers, these islands are a dream come true. Hire a 4x4 and do your own thing.



## Malta Gozo & Comino

With protected marine life, reefs, caverns and wrecks at all depths, the diving suits everyone from beginner to demanding tekkie. The 44 approved dive-centres in Malta's Professional Diving Schools Association meet every diver's needs, from entry level through skills training to rebreather adventures. If you're shore-diving they'll provide fills, if not they have the dedicated boats.



Shallow shore-sites abound to welcome in beginners. Established divers can enjoy well-known sites such as the *Rozi* tugboat, *Um el Faroud* tanker; the *Xlendi*, *Cominoland* and *Karwela* ferries; and the *Imperial Eagle*.

Cavern attractions include Gozo's Inland Sea, Comino's Santa Maria caves and Ghar Lapsi on Malta. Ever-popular on Gozo, too, are the Blue Hole, Coral Gardens and the Azure Reef.



Technical divers might make for HMS *Stubborn*, HMS *Southwold*, the Schnellboot *S-31* torpedo boat or the *Polynesian* liner. Malta's Underwater Cultural Heritage Unit has opened up many deep – some very deep – war wrecks in recent two years, including HMS *Russell* and HMS *Nasturtium* and five aircraft. A must before departure is to check out the "Virtual Museum" at [underwatermalta.org](http://underwatermalta.org)

[visitmalta.com](http://visitmalta.com)

MUCH AS YOU WANT TO dive, dive, dive, there's far more to Malta. Also, you might be with family and friends with other interests, whether sporting, cultural, gastronomic or simply sun-worshipping.

That sun shines for ore than 300 days a year – Malta is as warm as its friendly people, and winters are mild. The seas are warm, calm and offer spectacular visibility.



Non-diving activities range from snorkelling, parasailing, kayaking and paddle-boarding at sea to hiking and biking, horse-riding and paragliding or rock-climbing.

Malta's capital Valletta is a UNESCO World Heritage site with an incredible 320 historical locations to visit. The subterranean Hypogeum of Hal Saflieni and Gozo's megalithic temples are World Heritage sites too, while the living history of the Three Cities and the ancient capital Mdina are further highlights for sightseers.



Many budget apartments and hotels await your arrival, although of course luxury options are readily available too. The same applies to restaurants and bars – keen pricing makes eating out easy, though the quality can make choosing tricky. That's the sort of problem we like! Learn more at [visitmalta.com](http://visitmalta.com)

## £229 for a Week with Flights!

This special offer will provide a taste of what's available: for only £229 (including an exclusive £25 discount) you can enjoy a seven-night stay at Gozo's 4\* St Patrick's Hotel – including Ryanair flights! Book to stay during October or November. Flights are from Luton and don't include luggage.

Visit [chevron.co.uk/gozodiving](http://chevron.co.uk/gozodiving) or call 0800 640 9011 and quote discount code **dive25**.



# THE CYPRUS FOREST



**MUSAN, the latest initiative by sculptor Jason deCaires Taylor (right), offers a fresh source of underwater photo-ops**

**Photography:** MUSAN / @JasondeCairesTaylor.  
**Final page:** MUSAN / Costas Constantinou

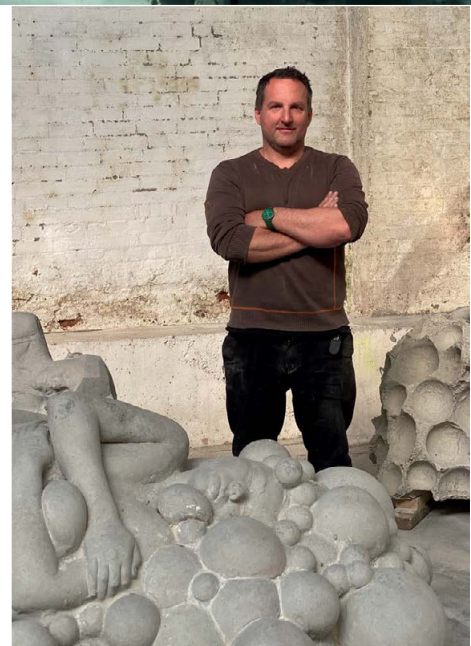
**N**EVER LET IT BE SAID that Cyprus is all about the *Zenobia* for divers, because a very different underwater attraction has just been added – a petrified forest.

The latest underwater installation by eco-artist Jason deCaires Taylor is the Museum of Underwater Sculpture Ayia Napa (MUSAN) on the south-east coast of the Mediterranean island.

Divers can tour a dreamlike seascape containing 93 integrated artworks in the form of stylised trees and human figures.

“It’s a legacy for future generations and contains many symbolisms about the alienation of humans from the environment, the relationship between different generations and climate change,” – that was how the 1 million euro installation was described by Christos Zannettou, mayor of the resort town Ayia Napa, at the opening ceremony at Pernera Beach on 31 July.

“Today, during this difficult time for the world, we raise our Cyprus higher,” he said. “This project marks a new

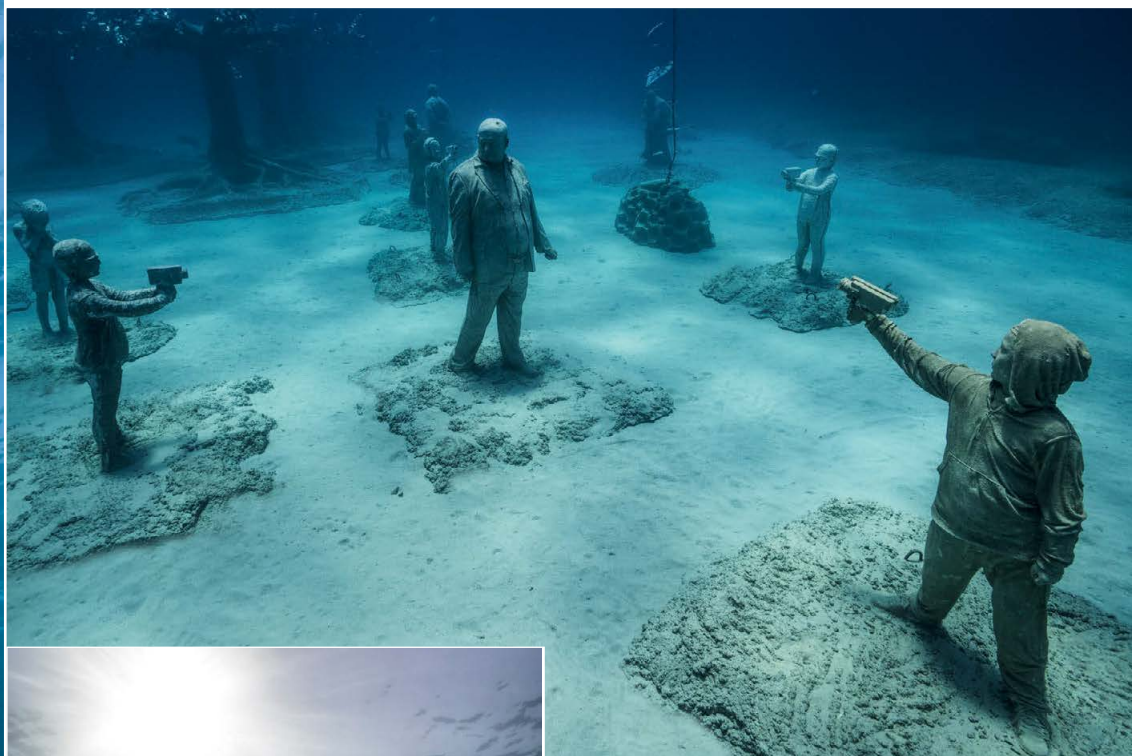
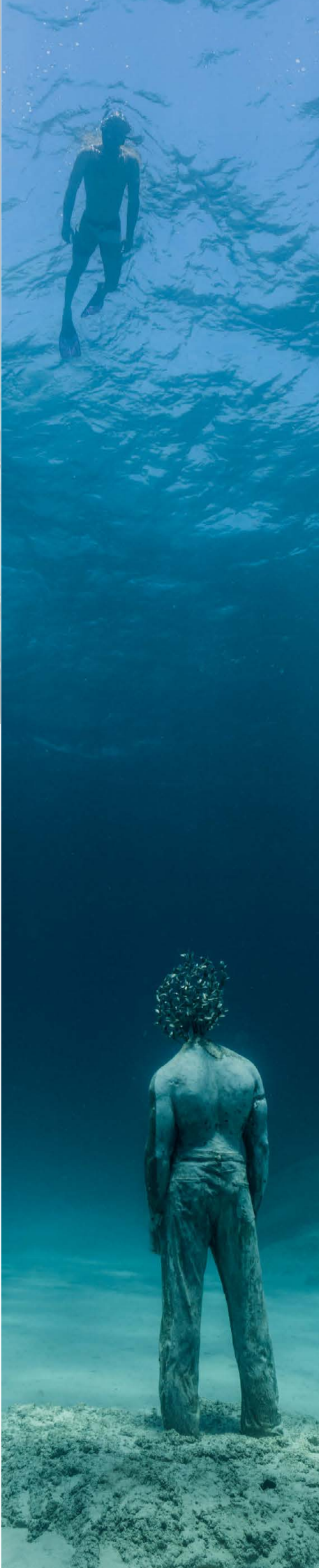


beginning for our country. It enriches our tourist product and is now part of our national treasures... we believe that with this unique diving museum visitors will be able to enjoy an underwater oasis.”

MUSAN, first proposed in 2014 and four years in the making once it got the go-ahead, was a joint initiative for Ayia Napa municipality, Cyprus’s Department of Fisheries & Marine Research and the Tourism Ministry.

“Jason deCaires Taylor is an artist whose concern about the effects of climate change, overfishing and other





of Agriculture, Rural Development & Environment Costas Kadis.

“He succeeded, showing that there are also human interventions with beneficial effects on the marine environment.”

As always with deCaires Taylor’s work, the sculptures are made using concrete and other inert materials with neutral pH to attract marine life. They are placed at a variety of depths to create a suitable substrate for lifeforms at different levels.

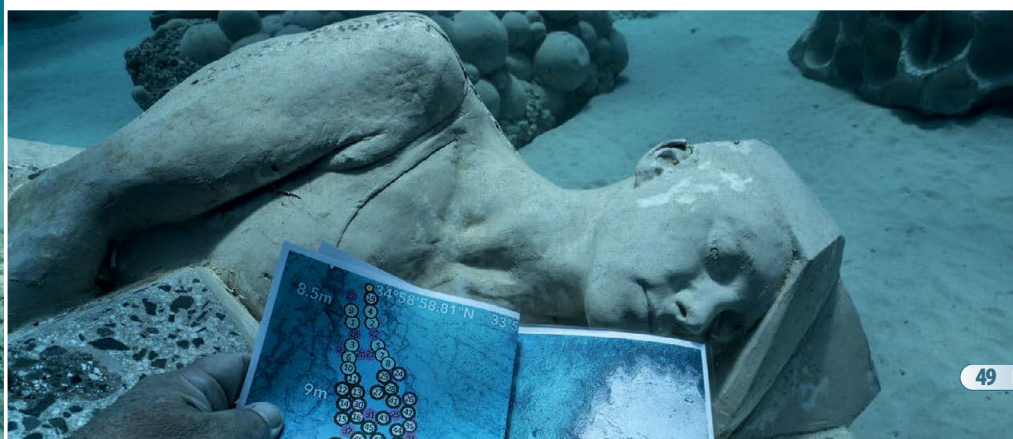
The setting is an otherwise barren sandy area 200m from shore. With the tops of some of the trees just below the surface, the museum is intended to be easily accessible to freedivers and snorkellers as well as scuba-divers.

“Marine life in the Mediterranean Sea has been seriously depleted over the last 20 years,” says deCaires Taylor. Many of the figures depicted are of children. “Over the last 50 years children have become more excluded from the wild places that once existed,” he says.

“The forest children, camera in hand as they play hide-and-seek in the woods, point their lenses at the human race.

“They hope for a future in which the mystery and magic of nature will

human interventions has led him to various areas of the planet where, through his work, he has tried to create ideal conditions for the development of marine life at all levels,” commented Minister





return. The need to re-wild our oceans is as pressing as the need to re-establish our connection to the natural world.

“The sculpted trees and the children that play among them will be consumed and colonised by marine biomass, providing food and shelter for a variety of creatures but importantly reminding us that we are natural ourselves.”

deCaires Taylor, a member of the Royal Society of Sculptors and a DAN Ocean Ambassador, was the subject of a profile in **DIVER** (*The Diver Who Likes To Leave His Mark*, November, 2019).

A London Institute of Arts sculpture graduate, since 2006 he has specialised in creating large-scale underwater “museums” and sculpture parks containing 1000-plus life-size works.

His first, self-funded installation in Grenada was later listed as one of the Top 25 Wonders of the World by *National Geographic*. Other projects now visited by divers include his first commission MUSA in Mexico; Ocean Atlas, the biggest underwater sculpture ever created (Bahamas); Museo Atlantico in the Canary Islands, which was Europe’s first underwater museum; and Asia’s first

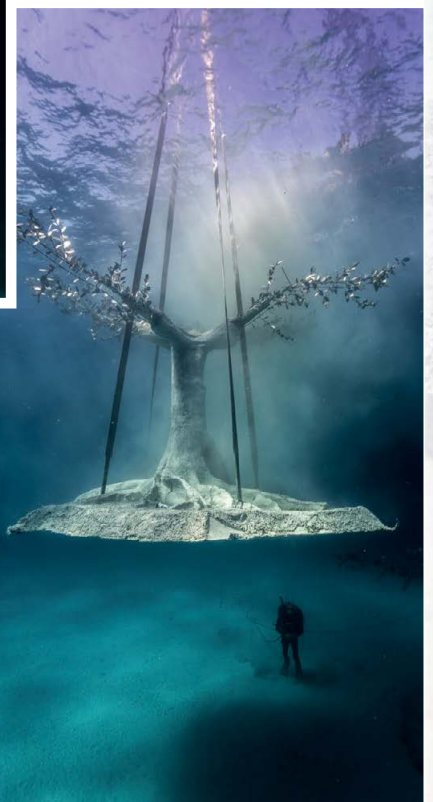


sculpture park Nest in Indonesia.

Nexus (Norway) was a first in being an underwater sculpture sited under winter ice; Coralarium was damaged by Maldives police during politically charged national elections; Ocean Siren and The Coral Greenhouse (Australia) were the first Southern Hemisphere installations; and the Mediterranean gained its first installation in the form of the Cannes Underwater Museum in France.

deCaires Taylor became a professional photographer to capture the changing forms of his underwater works as they evolved over time, and has received many photo as well as sculpture awards.

And the Cyprus tourism authorities now hope that his underwater museum will provide a focal point for efforts to rebuild after the coronavirus hiatus.  **K**





**'THE FOREST CHILDREN,  
CAMERA-IN-HAND...  
POINT THEIR LENSES AT  
THE HUMAN RACE'**

# LET'S RESSSEL



**Emergence du Ressel is a renowned cave in southern France's Lot department, and its furthest reaches have been explored by many noted divers. But you don't need to go 4km in to appreciate its magic. KURT STORMS reports**

**F**INALLY, WE'RE ALL vaccinated and can go to the Lot again, this time for a week of training students and then a week's diving holiday with my wife.

The two students will be kept busy for the next few days. They have already done their theory so that we can get the most out of our dives.

This part of France has become famous because so many European scuba-divers take their cave-diving classes here as a way of avoiding having to travel all the way to Mexico or Florida.

One of the most famous caves in the region is Ressel, and most of the photos you see online, showing huge, dramatic blocks of white rock, flat structures and shafts, are of this cave.

The facilities are good; we have plenty of parking space, toilets and so on. From the car park it's a 100m walk to the entry-point on the River Célé, where we can kit up by the water's edge.

The Ressel was first dived in 1968, by

**Right, from top:** Ready to go in the River Cele; the massive blocks that characterise the location.

**Below:** Entering Ressel.

two divers from the Auvergnat caving club who penetrated to 150m.

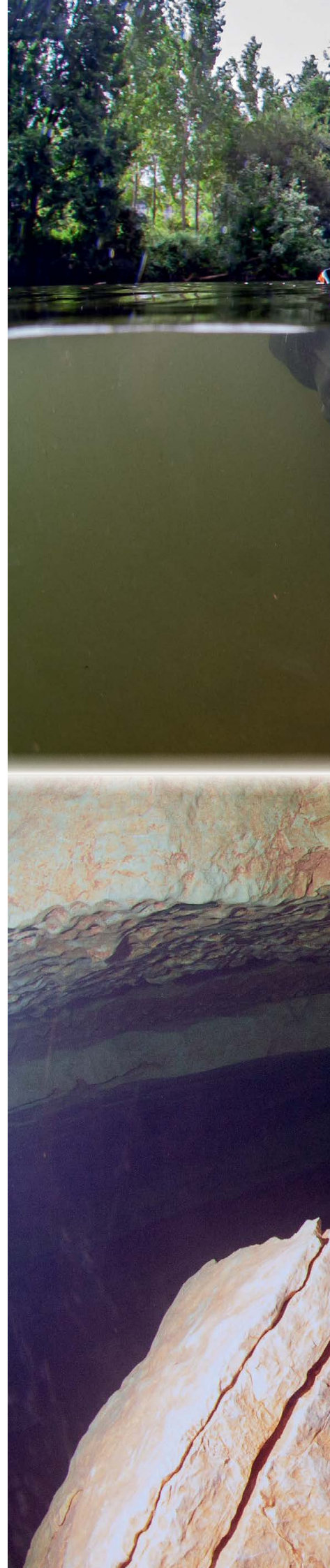
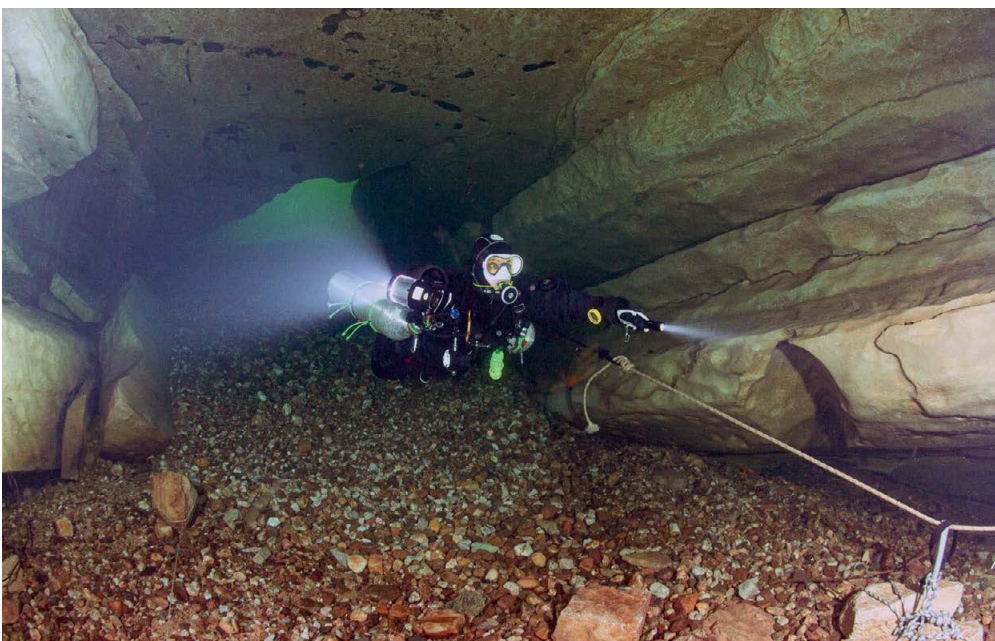
It was another five years before the line was extended to 300m, with a maximum depth of 30m. Then in 1975 Jean-Louis Fantoli and Claude Touloumdoian reached Pit 4 and went as deep as 45m.

Jochen Hasemayer in the early 1980s was 1100m into the system when he planted a knife in the rock to which to attach his line. The knife is still there.

On 12 August 1990 Olivier Isler was the first diver to cross Sump 1, taking 10 hours 35 minutes to make it there and back.

The end of this 1850m sump, which descends to 83m, is named Lac Isler, and from there you can continue to another four shorter and shallower sumps. The deep section starting from Pit 4 can be dived only using trimix.

In the following years the further sumps were explored by divers including Rick Stanton, Martin Farr and Jason Mallison. In 1999 the end of Sump 5







was reached, giving a total length on the main line of 4415m.

One aspect that makes the caves so impressive is the spectacular visibility of more than 10m all round. This contrasts dramatically with the 5cm visibility in the Célé at the start of the experience.

As soon as you reach the entrance to the caves, the water clears like snow in the sun. The first thought that ever crossed my mind here was: how on Earth did they ever find this cave?

How, considering the visibility in the river, did anyone notice that small hole 6m below the surface on one bank?

Talking to local people reveals that when the cave is full of water, you can even see a geyser form in the river – another impressive detail.

If you want to admire this phenomenon, you have to visit after a few days of rain, though there is no way you can go diving in the cave at that time.

**A** ROPE RUNS from the point at which you get into the river all the way into the cave, and it continues to the main line, so you don't need a primary reel there.

It's really easy to find the entrance, at a depth of 6m. Then you find yourself in a huge tunnel, with impressively sized white boulders.

The first dives with the students were only through the first tunnel, allowing the obligatory skills to be practised.



**Above, clockwise from top left:** Diver 30m in; distinctive black marks on one of the blocks; 150m into the first tunnel.

**Below, from left:** 250m in; just before Pit 4.

But the first tunnel is itself a beautiful part of the system, with the many huge blocks lying around. Two of them consist of white rock each marked with a large black spot. You won't find these black spots anywhere else in Ressel.

Now we were ready to start widening the comfort zone by penetrating further into the cave.

On side-mounts we explored the first tunnel on the left, and in the next tunnel went further towards the shaft to take a look to a maximum depth of 30m.

It is so impressive – you feel as if you are descending into the abyss. Now the students were even more curious about the famous Pit 4.

I did the first dive with Jo, who had a side-mount configuration with an extra 7-litre cylinder, while I dived with my Divesoft Liberty SM rebreather.

It took 28 minutes to reach our objective, and along the way I showed Jo

the shunt that goes to the deeper part of the first loop.

Enjoying the ride, we continued until we reached the point of the shaft, where I checked with him that everything was OK before we descended to a depth of about 40m.

I could see in Jo's eyes that he was enjoying himself, but we didn't have too long before we had to set off back again.


If you're into deco, you can do it all on the way back on nitrox 50. Advanced divers can take oxygen to use at 6m and finish any decompression on O<sub>2</sub>.

It's a great dive. The Ressel allows for a wide variety of dives to be planned, choosing different depths in the tunnels to provide a range of perspectives.

**O**NCE WE GOT back to the top, Jo was unstoppable talking about the beauty of the cave, and especially of Pit 4, making my wife want to take a look too.

We did this dive a few days later, when both gentlemen had gone home, and this time we took a scooter, which does make a big difference.

Within 13 minutes we had reached the shaft, and again I enjoyed seeing my buddy's happy face. How nice it is as an instructor to be able to pass on your passion – that's why we do what we do.

Last year, I did the Deep Loop (1160m and 73m deep) with two friends and we still enjoy talking about it. We've promised to come back to do the rest of Sump 1 when we can. Ressel remains one of the most beautiful caves in Europe. 



Diving in Ressel and other caves in the Lot is free. Kurt fills his tanks at Olivier Bertieaux's The Cave To Be cave-diving school and shop in Gramat, a 30-minute drive away, with accommodation available nearby, [thecavetobe.com](http://thecavetobe.com)

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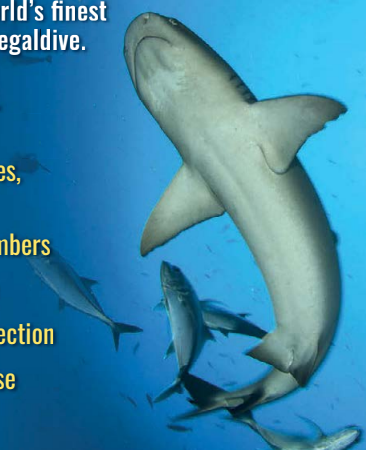
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# A VIRTUAL DIVE



Being able to take photos while freediving is a useful skill for any diver who might need to interact with marine life, because scuba is not always appropriate. But for an exponent like **MARK HARRIS**, it becomes an art. Last month, in an extract from his book *Glass and Water*, he looked at neutral buoyancy. Now he visualises a day in the life of a freediver with a camera



## The Mission

**T**HE SEA OF THE HEBRIDES: part of the north Atlantic Ocean located off the coast of western Scotland, separating the mainland and the northern Inner Hebrides islands (to the east) from the southern Outer Hebrides islands (to the west).

It is July, and marine wildlife is in abundance at this time of year – everything from congregating basking sharks to minke whales and nesting puffins.

Your photographic mission, however, is something quite different. There have been reports of the oceanic sunfish (or *Mola mola*) in the area, which are not typically found here.

You intend to record their presence as a series of underwater digital stills images for a project you are working on.

Aboard a RIB heading out of

Tobermory on the Isle of Mull, you have chosen to photograph with a medium-form camera plus wide-angle lens and no strobes, to maximise your manoeuvrability in the water.

Sunfish can move with surprising speed. Typically you would aim to shoot them from just under the surface, but you have the training and experience to go deeper if need be.

There are four of you: the boat skipper, wildlife-spotter, your dive partner and you. Seas are thankfully flat-calm, but with barely a breath of wind and the sun out in full force.

You decide to leave donning your wetsuit until a little closer to the intended dive area. The sunfish have been sighted previously some three miles to the west of the Isle of Coll, the water will be deep there.

You have your SOUPA [Submersible Optics Underwater Platform Assembly]

**'You cannot depend on your eyes when your imagination is out of focus'** *Mark Twain*





float, which although you doubt you'll need for deploying your camera will still serve a useful purpose for support.

The attached diver's flag and guideline are also of great benefit.

X marks the spot. As the RIB skims across the glassy surface, you visualise the task ahead.

The sun angle, colour of the water and flatness of the ocean will all have a bearing on both the camera settings and the type of image you want to portray.

Will there be an opportunity for a silhouette or "split-level"-type image, or do you want to focus on creative underwater surface reflections? You might capture an image of a basking shark.

## Gearing Up

The wetsuit you will wear today is tailor-made for you, a two-piece hooded suit made from 5mm smoothskin Heiwa neoprene. It is time to prepare it for wearing, so you coat the insides liberally with some lubricant. In just a couple of minutes you have both sections on, as well as your neoprene socks.

Next on is your Marseillaise weight-belt and low-profile lead weights. You make sure it sits low on your hips so that your abdomen has enough room for efficient deep breathing.

This is swiftly followed by your dive-computer on your left wrist and your neoprene wrist strap with D-ring on your right. The D-ring will later secure your camera assembly via a lanyard.

No sunfish have yet been spotted and, after 10 or 15 minutes, you rather feel that suiting up might have been a little

premature. You are gradually warming, and in another 10 to 15 minutes it will start to become uncomfortable.

You gulp a few mouthfuls of water from your bottle and then, suddenly, the ideal solution presents itself.

You have noticed that there are a number of large lion's mane jellyfish in the water and, as the sunfish have not yet appeared, these would make for good photographic subjects. The added benefit would be some cooling down.

The skipper cuts the engines and you and your partner complete the kitting-up process. Your low-volume mask is prepared for defogging, and you are careful to avoid trapping either your hair or wetsuit hood as you put it onto your face.

This is easier to do with ungloved fingers; the 3mm gloves go on afterward.

Last on are your carbon-fibre fins, which are probably the most difficult item to squeeze into.

You want the pockets to be tight but not uncomfortable, so that you maximise the transfer of power from foot to fin.



**Left:** Blue jellyfish rising [Panasonic GF1 with 7-14mm lens, INON housing, f8 @ 1/100, ISO 400]

**Above:** You could capture an image of a basking shark.

**Below:** Stowing the camera on the SOUPA float following a dip test.

**Below right:** The 8m stop.

## Submergence

Your partner has helpfully set up the SOUPA float, so that when you slip into the water alongside it you can put both snorkel and camera inside the main tube.

You have previously dip-tested the camera to check that no bubbles emerge from the casing. The guide-line leads 15m down to the weights.

The pair of you now push yourselves and the float away from the boat. You retrieve your camera, attach the lanyard to your wrist-strap and switch it on.

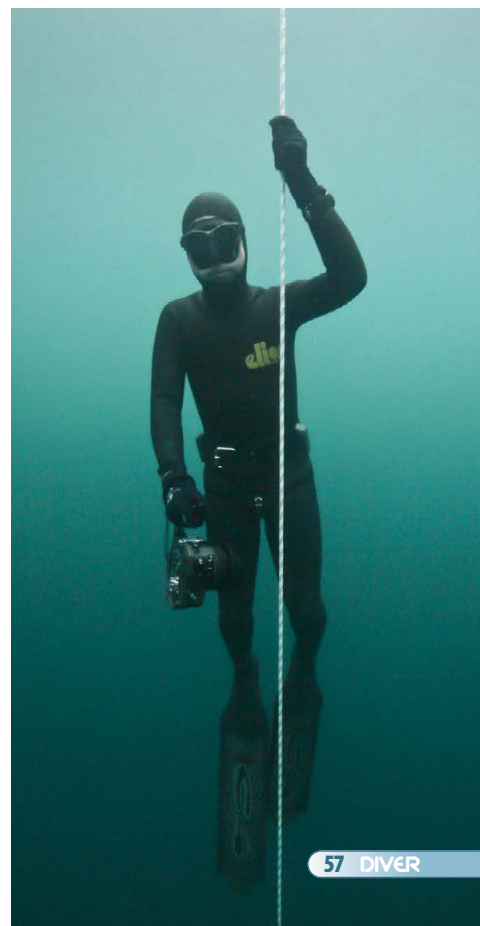
The battery is on full power, the SD card has no images recorded, and all settings are as expected. Now is the right time for a depth-check.

First, however, you take a good couple of minutes to breathe. Face down in the water with your snorkel in place, every breath you take is slow and extends both down into your abdomen as well as the upper lung lobes. A feeling of well-being ensues as you watch the shafts of sunlight dancing their way into the deep.

For your last breath, the water is calm enough for you to remove your snorkel and breathe in with your head up and out of the water. You are also able to make a pre-dive equalisation.

With your camera in one hand, you use the other to pull the guideline toward you. As you do so, the combined weight of the ballast on the line and that you are carrying (both camera and weight-belt) draws you beneath the surface.

You discover that you are equalising under water successfully, so the first check box of your mental list can be ticked. 🐡



You intend to continue your descent using your arm, conserving your leg muscles. As you pull deeper you start to pause now and again to look at the line. This gives you an idea of where you are with your buoyancy.

Eventually you check your dive-computer and you realise that you have reached neutral buoyancy. It reads 8m.

Visibility is good today. In fact it is sensational for these parts – at least 15m – and this means that your partner at the surface is able to monitor you visually.

As you look around, there are one or two blue jellyfish nearby, and at the edge of visibility what appears to be a lion's mane can just be seen.

You will have ample opportunity to find another later, so for now you take

**Below, from top:** The test shot through a 7-14mm lens (f8 @ 1/100, ISO 400, no strobe; partner takes her turn; mission number one accomplished.

**Right:** Almost ready for the duck-dive – the mass of the legs will propel you downward once above your hips.

a test shot of a nearby blue jellyfish.

The image on the LCD display looks acceptable, but viewing the display under water can be deceptive, so you check the histogram.

You can see curves edging to the right, and in fact the image is a little over-exposed. You want the subject to stand out against the background, and therefore increase the shutter-speed by one increment. Another test shot and you are now happy with your camera settings.

After roughly a minute, the urge to breathe is just starting to make its presence felt. This is the signal to surface, and slowly but deliberately you pull yourself back to the fresh air.

As you break the surface, you flop both arms over the SOUPA float and simultaneously gulp in a good lungful of air. You face your partner so that she can clearly see your eyes, as you smile and tell her: "I'm OK!"

Your partner now needs to do her weight and camera checks, so you keep your face down in the water to watch while breathing deeply through your snorkel.

She also takes just over a minute, so while she is recovering from her own breath-hold, you both discuss the dives ahead and your strategy.

## The Shoot

You could surface-swim with the float to the nearest lion's mane jellyfish, and position yourselves above it. This might create a few issues, however.

Firstly, you know that a surface swim will use more energy than an underwater one. Secondly, the guideline might be visible in the image. Thirdly, the float might cast a shadow over the subject.

So no, you will leave the float where it is, and locate the subject by finning horizontally from your neutral depth.

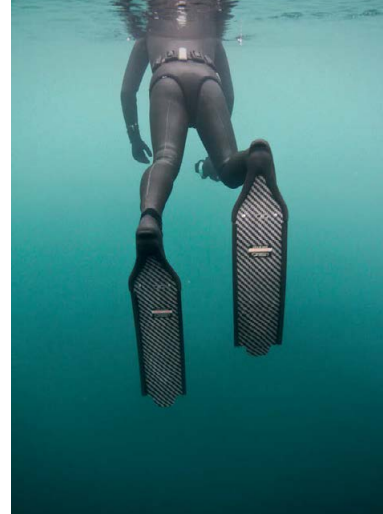
You and your partner have now been at the surface for five and three minutes respectively. The previous breath-holds mean that your bodies are conditioned to expect a further increase of CO<sub>2</sub>, and your haemoglobin has now re-bonded to the oxygen it surrendered earlier. You will dive first.

Your preparation is the same as before but this time, after ditching your snorkel, you crease your abdomen and lower your upper body down into the water.

Simultaneously, your legs rise up in the air and the weight of them serves to push most of your body downwards.

With your free arm you make an outward scoop to propel you further, so that your fin-tips slip beneath the surface without so much as a ripple.

There are five movements to now synchronise in one go (but you have



practised these many times before at your local freediving club's pool sessions):

- ✦ Your hand moves up to your nose for your first submerged equalisation.
- ✦ The elbow of the arm you have just moved, you tuck in close to your body to improve hydrodynamic efficiency.
- ✦ You tuck in your chin for the same reason, and to ease equalisations.
- ✦ The hand carrying your camera is moved down alongside your hip (your medium-form camera is small enough to allow this; a large-form camera or rig with strobe would have meant raising your arm to provide the water-break).
- ✦ Lastly, you deliver two or three forceful kicks, but without a wide separation of your legs. You are on your way down.

## Perspectives

As you descend, you watch the guideline and ensure that it is passing you parallel to your body. You avoid the temptation to look down; this would mean losing sight of the line and your arching neck would impair the slipstream.

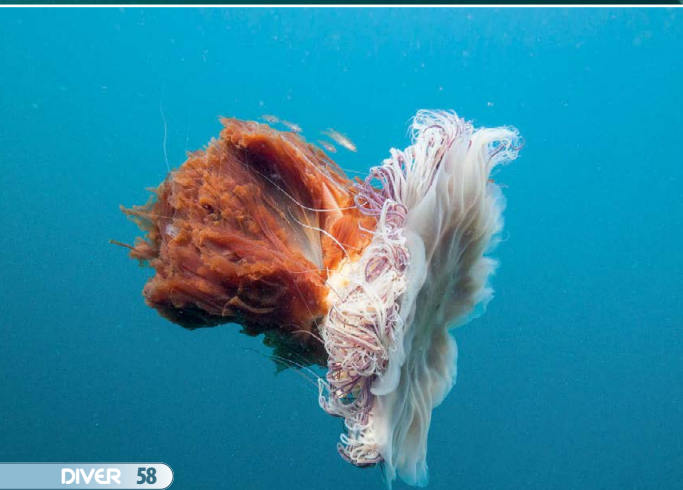
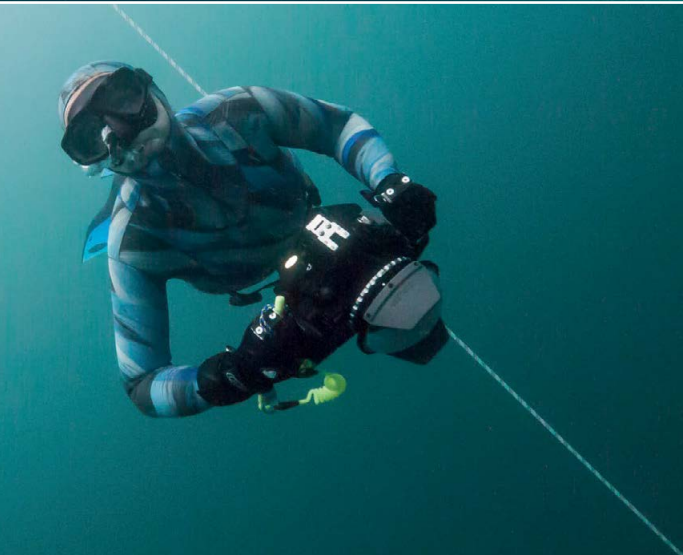
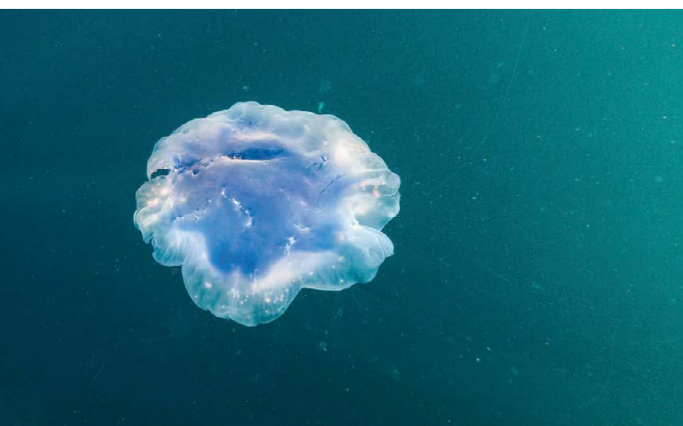
The accelerating speed of the moving guideline tells you that you can ease your fin-kicks. Within a few seconds, your depth alarm warns you that you have reached 7m. By the time you have reacted and grabbed the guideline to halt your descent, another metre has been added.

Attaining a horizontal position, you make a visual radial search around you. Some 12m away and a couple of metres shallower, a lion's mane is clearly visible.

The surrounding water is somewhat lighter and bluer than your previous position, so results should be good.

The challenge is now on. Ascending level to the jellyfish will make you positively buoyant, which means that as you compose and focus you will be moving upwards and away. Also, to maximise your hydrodynamic profile, you want to swim horizontally at precisely the depth where you are located.

This presents a slight issue, in that maintaining a visual reference could prove tricky. You certainly do not want to arch your neck backwards. But you can tilt your head up a little, and roll your



eyes upwards to look through the very top of your mask. This won't spoil your profile too much.

Your profile is similar to that on your descent, but now with your body perpendicular to the previous line of travel. Also, the hand and arm you use to equalise is alongside your body.

Fin-kicks are deliberate, but at about 50% of maximum thrust. Your legs rise and fall with a measured separation; definitely not with deep or wide kicks.

As you move, you know where your subject is and you can see the exact angle of the sun from the direction of the sun's rays below you.

You have time to think about where you want to be positioned so that the sun is behind you and lighting your subject.

You have reached the point where the jellyfish would be at the correct focusing distance if it were level. Now you need to ascend. As you do, you're looking through the LCD and the jellyfish starts to fill the frame, so you compose the subject.

You are still below, and making a judgment on the correct angle at which to fire the shot. Although now slightly positively buoyant, you slow down your ascent by flaring out your legs and fins.

This also helps to stabilise you. The opportunity presents itself, and you depress the shutter.

Now you have a choice. You could bracket the image with further captures using exposure compensation, or trust your judgment and ascend. You choose the latter.

## Surfacing

Fin-kicks to the surface are paced and regular — no need to rush. Your free hand is above you, and you glance up to see your partner overhead.

Although she wasn't able to keep up with you during your distance swim, she caught up while you were taking the photograph.

She has helpfully brought the float closer, but not so much so that it would interfere with your photography.

Your free hand and arm break the surface, and as your head follows you exhale fully and inhale. The float is 2 or 3m away; you need to fin sufficiently to keep your head above water and move toward it.

Your recovery breathing continues as you fin. Only when you have reached it and are fully supported, do you give your partner the OK message.


A humming noise in the background has been a little distracting, but now it is diminishing. This is fortunately not a symptom of hypoxia, but a four-rotor drone that the boat-crew have sent up to film from the air.

The drone will help them to locate fish they cannot otherwise see from the boat.

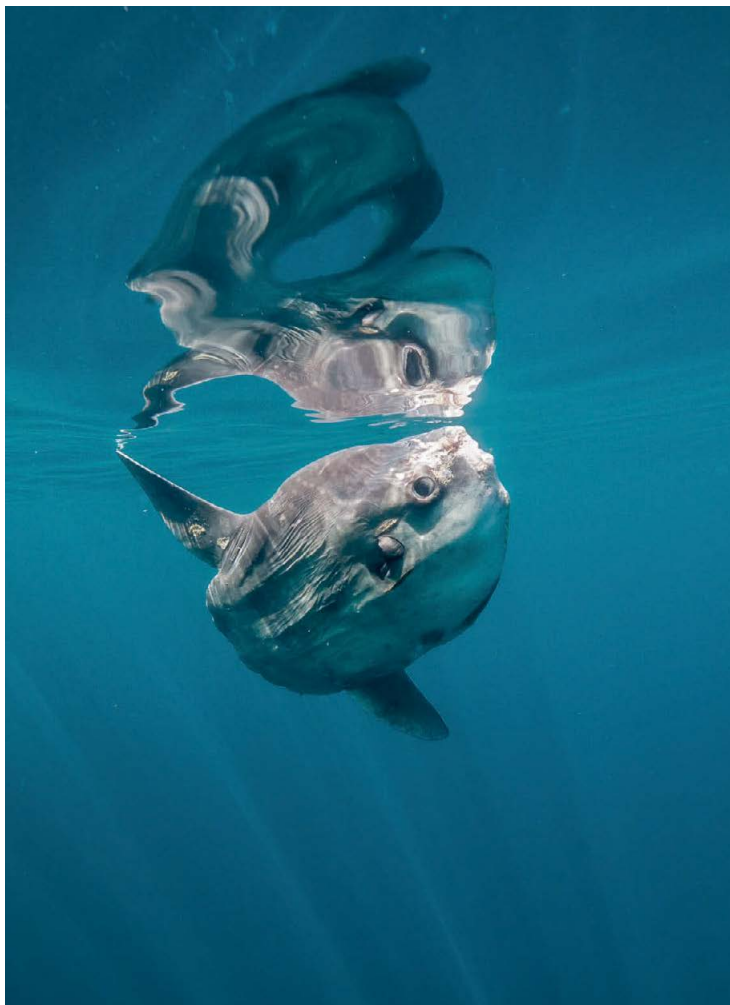
Your partner is ready now for her dive, but just as she prepares to go, there is a cry from the boat twenty metres away: 'Mola mola, Mola mola!'

## Facing reality

If we base our imagination on a thread of reality, then I believe it brings the vision to life. *A Virtual Dive* was borne out of such reality. In the summer of 2014, some of the events visualised took place in the described location.

There were a few more on the boat than the four described, and the objective then was to photograph basking sharks. However the seas were flat calm, the sun was out in force, and we really did see the pictured *Mola mola* in clear blue water. 

**Below:** Neptune reflecting {Panasonic GF1 with 7-14mm lens, INON housing, f8 @ 1/100, ISO 400}.

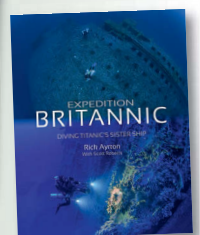
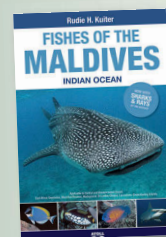


## The Book

*Glass and Water*, by former UK champion Mark Harris, is the first book on underwater photography for freedivers.

With contributions from experts the book teaches the skills, knowledge and equipment necessary to successfully pursue underwater photography without scuba gear. It's available as a paperback (£17.95) or ebook (£9.99) from Dived Up.

Dived Up is a publisher and distributor of books that it says help divers, snorkellers and freedivers get more out of their time under water. Its titles range from dive guides to underwater photography, maritime history, biography and more.



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# WRECK-DIVES DON'T GET MUCH BETTER

**Expedition Britannic: Diving Titanic's Sister Ship** by Rick Ayrton with Scott Roberts

**A SOUND ARGUMENT** can be made that HMHS *Britannic* offers a more complete and potentially satisfying challenge to a technical diver than any other shipwreck in the world.

By the end of this book the divers' stratospheric levels of pleasure at their achievement would seem to support that proposal.

First, it is the *Titanic's* sister-ship, so it's iconic. Second it's enormous, bigger even than *Titanic*, and as an intact wreck it's faring much better than its sister, in the warmer waters off the island of Kea in Greece.

Third, very few divers get to see it because it lies 110m down and cost, weather conditions and bureaucracy have traditionally made expeditions challenging. That depth is on the edge of what's practical for spending sustained time at depth on repeated dives, even on a rebreather.

Fourth, there is so much to explore and still to find on this wreck, which sank in 1916. And fifth, for those who enjoy logistical challenges (and have deep pockets), *Britannic* seems to offer endless possibilities.

*Expedition Britannic* is the story of the May 2019 mission to dive the WW1 hospital-ship mine victim.

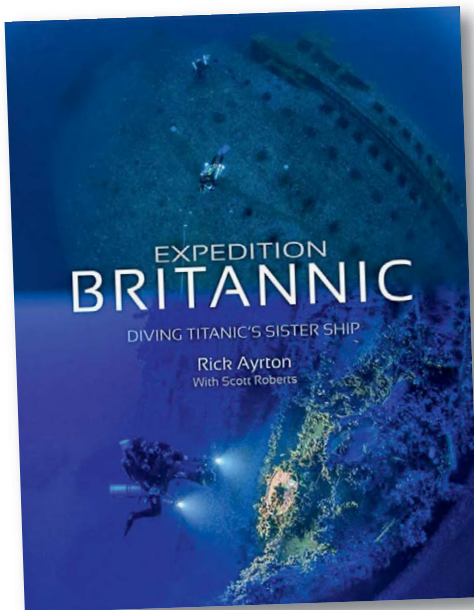
If you have read detailed reports of group technical-diving trips before, this has something in common with those but it is done extremely well.

The writing is crisp, well-organised and doesn't get bogged down in needless detail.

While it doesn't seem to be making concessions, it is readily accessible to any level of diver or even non-divers.

And bringing it further to life, the photography from depth is way beyond what we usually expect, thanks to Ayrton's dedication to his craft, reminiscent of the work of the pioneer of deep-wreck photography in the UK, Leigh Bishop.

We don't really get to know the cast of characters if that's what you look for, but it isn't that sort of book.



It's about what it takes to arrange and carry out an ambitious group diving trip and what it's like to dive the *Britannic*.

With well-publicised deaths having occurred in the past on this wreck, the pressure is on to get everything right, and Rick Ayrton spells out what has to be taken into account. However, I really appreciated the fact that towards the end he also runs through all the things that went wrong.

Luckily there were no disasters, a tribute to the precautions in place.

Expedition leader Scott Roberts cuts into the narrative from time to time and these contributions are welcome, though I have to say it wasn't always clear when he had stopped speaking and Ayrton had resumed (which is just about my only tiny quibble with this book).

It's a quick and easy read because a lot of the 176 pages are taken up by double-page spread photos, along with the many smaller ones.

There is also a fascinating extended account of the warm-up dive on the 70m-deep *Burdigia*, also mined during WW1. In other circumstances this fine well-preserved liner would be worth an expedition in its own right but, as it is, it comes as a package deal on the *Britannic* licence.

Appendices cover the expedition operating procedures and Ayrton's approach to photographing such a deep wreck, and a glossary of technical terms is included.

And for those who didn't follow the expedition at the time, there is a sting in this tale in the form of an

unexpected find, but I'll leave that for you to discover when you read *Expedition Britannic*, something you really should do.

**Dived-Up Publications**  
ISBN 9781909455412  
Softback, 176pp, 17x22cm, £25

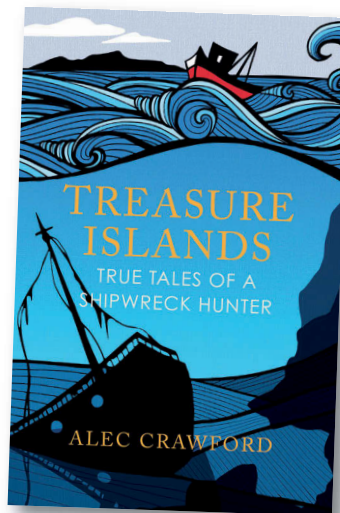
## APPRECIATING THE OTHER SIDE

**Treasure Islands: True Tales of a Shipwreck Hunter** by Alec Crawford

**TREASURE ISLANDS** revolves around diving another White Star liner that was adapted for war service during WW1 – the *Oceanic*. This book could hardly differ more from *Expedition Britannic*, but it's another high-quality offering well worth your attention.

Alec (and his wife Moya) Crawford are very well-known in the world of salvage-diving. The story of their ground-breaking achievements and those of their company Deep Water was told long ago in Moya's book of that name.

But the story of how the couple met comes towards the end of *Treasure Islands*, at a time early in Alec's career when he was labouring to strip the *Oceanic* of as many of its valuable metal parts as he could.



For the first couple of years of its life from 1899, the 215m *Oceanic* had been the world's biggest ship.

Wrecked in 1914, it now lay off the remote little island of Foula, west of the Shetlands.

In terms of assets Crawford had little more than his mate Simon, who was taking time out from journalism; a series of small converted fishing-boats – and sometimes just an inflatable; a supply of explosives and the goodwill of the islanders.

When they had first arrived on Foula no one took seriously the idea of being able to work on the wreck in the challenging Atlantic conditions.

But the young divers had confidence in their ability to exploit the opportunities afforded by slack tides and to wring the most out of their long-suffering vessels.

They succeeded, and *Treasure Islands* reflects those elemental days on Foula, and other wrecking adventures off Fair Isle and elsewhere.

Now I enjoy wreck-diving, working out what remains from a vessel's surface days, relishing the spectacle, the marine life and the photo-ops. Like many recreational divers I resent those who want to tear wrecks apart for their own profit, from souvenir-hunters to professional salvors.

But when Crawford was blowing the props off the *Oceanic* in the early 1970s, such mimsy ideas as taking only photos and memories didn't cut much ice. He dived for a living.

And reading this understated book, steeped in life at sea, perhaps for the first time I appreciated the sense of achievement and artistry involved in his occupation, at least when it was just a few divers against the odds.

This appreciation was helped by the fact that *Treasure Islands* is so beautifully written, by someone who makes clear in his acknowledgments that he takes his writing seriously.

A great read – see what you think.

**Birlinn**  
ISBN: 9781780277400  
Softback, 246pp, 13x20cm, £9.99

## TOP 10 BEST-SELLING SCUBA-DIVING BOOKS

as listed by [amazon.co.uk](http://amazon.co.uk) (25 August, 2021)

- 100 Dives of a Lifetime: World's Ultimate Underwater Destinations, by Carrie Miller & Brian Skerry
- Scuba Diving Hand Signals: Pocket Companion for Recreational Scuba Divers, by Lars Behnke
- Diving Gozo & Comino: The Essential Guide to an Underwater Playground, by Richard Salter
- Deco for Divers: A Diver's Guide to Decompression Theory and Physiology, by Mark Powell
- Under Pressure: Diving Deeper with Human Factors, by Gareth Lock
- Fifty Places to Dive Before You Die, by Chris Santella
- Diver Down: Real-World SCUBA Accidents and How to Avoid Them, by Michael Ange
- Scuba Diving Guide, by Jeffrey Pewitt
- Bonaire: Scuba Dive. Snorkel. Surf, by Peter McDougall, Ian Popple & Otto Wagner
- Pirate Hunters (audiobook), by Robert Kurson

## LOOK & LEARN

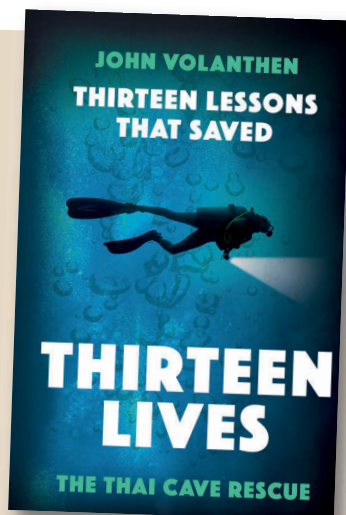
### *Thirteen Lessons That Saved Thirteen Lives: The Thai Cave Rescue*, by John Volanthen

"It'll be all right." How often that has been the shaky foundation of my own "dive plan".

It must also have been part of the thinking that led the Wild Boars to assume that entering the now infamous Tham Luang cave system in Thailand would also be all right.

But, of course, it was not all right. John Volanthen, along with Rick Stanton, braved the water-filled and treacherous tunnel system to find the football team and was one of the point men who brought all of them to safety.

*Thirteen Lessons that Saved Thirteen Lives* is more than just Volanthen's



account of the rescue. It's also partly a motivational or self-help book, as he offers 13 "life lessons" that guide him through both his extraordinary achievements underground, but also in everyday life. He makes his points

by calling on his own life experience. So it's also partly autobiographical.

The inside account of the rescue seen from Volanthen's perspective, keeping in mind that around 10,000 individuals were involved – some positively, some less so – would have got me to buy the book and I would not have been disappointed.

It's smartly interwoven through the 13 chapters. Even though you already know the outcome, it's compelling. And there are insights that you can't glean from TV documentaries.

The bonus, however, was reading Volanthen's coming to maturity as a cave-diver. He has made those "it'll be all right" dives and pushed a little further than he should, learning from the resulting near-misses to be more thoughtful, careful and disciplined next time.

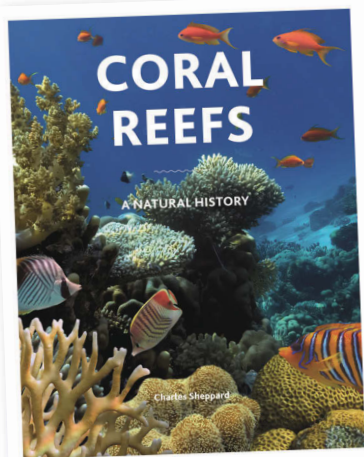
He challenges divers to beware of the "normalisation of deviance" that conditions us to think that because we've always got away with sloppiness under water, we always will. That hit home.

There is much to be learnt from the author's mental approach to coping with stressful problems as they pile on, such as how he survived being at 80m in a cave, ascending into a narrow chimney, jamming his rebreather counterlungs so tightly that he couldn't breathe properly and knocking his dive computers off, corrupting his decompression info.

Here are lessons that might save your own life. Isn't that worth 20 quid?

**Aurum Press**  
ISBN: 9780711266094  
Hardback, 304pp, 16x24cm, £20

Review by Steve Warren



## ENJOY WHILE WE STILL CAN

### *Coral Reefs: A Natural History* by Charles Sheppard

A **HEFTY, COLOURFUL** book called *Coral Reefs*? If that seems familiar, it's true that there must be quite a few around that fit that description. But don't be quick to dismiss this new addition, because it's a masterful piece of work.

Most warmwater divers probably know a fair bit about coral reefs, but if you're like me your knowledge might be quite fragmentary.

This book fills in the gaps painlessly by scoring on three fronts – the writing, the pictures and most of all the sensible way it's organised.

Charles Sheppard is an eminent marine biologist – he was a professor at Warwick University. As consultant editor Russell Kelley says in his

excellent foreword, the book is "written plainly and richly illustrated" and he is spot on with his description.

*Coral Reefs* is user-friendly. It's arranged into sections that cover each aspect of coral in a double-page spread, typically with several hundred words and three or four photos. The sections make up six chapters, from *The Coral Animal to People and Reefs*.

The writing is unforced and easy to follow, while the underwater images (from a wide variety of sources) are excellent and selected to complement and enhance the text rather than just fill space.

So before you know it you're pleasurably knee-deep in everything from aragonite to zooxanthellae, and getting better informed by the minute.

Inevitably, we revel in the coral gardens the way we might do on a dive, only for the outlook to grow distinctly gloomy as we wander into a bleached section of reef.

The comedown comes quite early, from page 152 to be exact, as Sheppard starts guiding us through the many existential threats to coral. The positives might be there but they take a lot of finding.

However, we go on learning, to a manageable level, about aspects of coral reefs that should boost our appreciation on future dives.

I haven't come across a better book for that purpose. This would make a good gift-book too.

**Princeton University Press**  
ISBN: 9780691198682  
Hardback, 240pp, 21x26cm, £28

## LATE ARRIVAL WORTH WAIT

### *At the Heart of the Coral Triangle: Celebrating Biodiversity* by Alan J Powderham & Sancia ET can de Meij

**IT SO HAPPENS** that Charles Sheppard wrote the foreword for this book, and if again it seems familiar that's for good reason. We were so impressed when we first saw it that we ran a six-page extract in **DIVER** earlier this year.

Have a look if you still have a copy of the February edition, because it gives a good feel for the contents.

We didn't run a review at the time because we felt the extract would speak for itself. What I especially liked about the book was that because it celebrates the biodiversity of the Coral Triangle, everything is described from a diver's viewpoint.

It is full of behavioural observations that will stand divers, and especially

underwater photographers, in good stead on future visits to Indonesia, the Philippines, Malaysia, PNG and the rest.

The reason I'm mentioning the book now is that I learnt recently that a series of production problems had meant that copies have been in very short supply.

Now CRC Press has produced a print run to everybody's satisfaction, so with the initial momentum having been lost I'm here to put in a word for a book that deserves divers' attention.

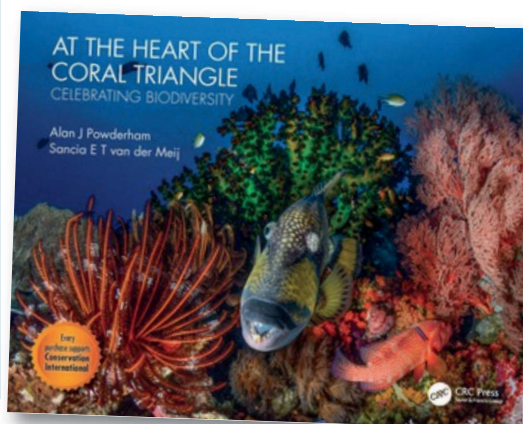
Sometimes books by underwater photographers are plainly based around showing off their best images, and the narrative flow can feel a bit strained or distorted as a result. That doesn't feel like the case here. The chapter headings range from Seascapes and Fish Portraits to Predation and Reproduction. The text and images reflect and complement each other and the effect is enjoyably smooth-flowing for the reader.

This is a generously illustrated book with thoughtful, informative writing by an observant diver/

photographer teamed up with a highly experienced marine biologist.

**CRC Press**  
ISBN: 9780367426167  
Hardback, 242pp, 28x22cm, £39.99

Reviews by Steve Weinman

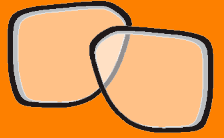


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BOOKING NOW

# Nine-day tour with Atlantis

Atlantis Resorts in the Philippines is planning ahead, and has arranged a special nine-night scientist-led liveboard trip from 8-17 December next year.

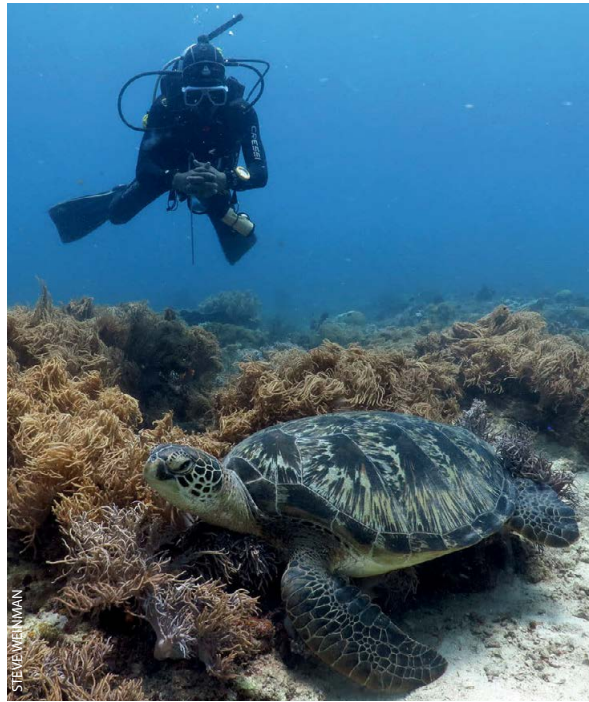
Likely sightings include everything from thresher, whitetip and whale shark through sardine baitballs to a host of "astounding critters".

And you'll know a lot about what you're seeing through the nightly educational sessions led by Dr Gonzalo Araujo, who founded UK-based conservation charity Mareco.

The *Atlantis Azores* liveboard will be following the whale shark migration route in southern Leyte, taking in Malapascua and Moalboal on Cebu and the reefs of Limasawa Island and Balicasag Island.

The sailing is from and to Atlantis Dumaguete, where nights at the resort can be added on for what is promised to be a special rate. The trip costs US \$4595pp, with a portion of the proceeds going to Mareco. Flights are not included.

▶▶ [atlantishotel.com](http://atlantishotel.com)



STEVE WEINMAN



**Good news is that the Azores are back on the green list, and for coldwater divers Denmark and Finland are welcome additions. Canada has been green-listed but entry is largely barred. Croatia is now green-watch-listed and, in a setback, Thailand goes red.**

**WL** Watch-listed (sudden change in classification possible)  
**NE** No entry for most UK travellers  
**QE** Quarantine on entry, even if fully vaccinated

- Antigua (WL)
- Azores
- Australia (NE)
- Barbados (WL)
- Bermuda (WL)
- Canada (NE)
- Cayman Islands (WL, NE)
- Croatia (WL)
- Denmark
- Dominica (WL, QE 14)
- Finland
- Gibraltar
- Grenada (WL)
- Iceland
- Israel (WL, NE)
- Madeira (WL)
- Malta
- Montserrat (WL, NE)
- New Zealand (NE)
- Norway (QE 10)
- St Helena (QE 10)
- Taiwan (WL, NE)
- Turks & Caicos Islands (WL)

**AMBER-LIT** Aruba, Bahamas, Bahrain, Belize, Bonaire, St Eustatius & Saba, British Virgin Is, Canada, Curaçao, Cyprus, Fiji, Finland, France, French Polynesia, Greece, Greenland, Honduras, Italy, Japan, Jordan, Madagascar, Malaysia, Marshall Is, Mauritius, Micronesia, New Caledonia, Palau, Papua New Guinea, Portugal incl Azores, Solomon Is, Spain incl Balearic & Canary Is, St Kitts & Nevis, St Lucia, St Vincent & Grenadines, Sweden, Timor-Leste, UAE, USA, Vanuatu

**RED-LIT** Cape Verde, Costa Rica, Cuba, Dominican Republic, Ecuador, Egypt, Indonesia, Kenya, Maldives, Mexico, Mozambique, Oman, Philippines, Réunion, Seychelles, South Africa, Sri Lanka, Sudan, Thailand, , Tobago, Tunisia, Turkey

## Nevis opens

The Caribbean island of Nevis is still on the amber list but says it is now open to fully vaccinated UK tourists for the first time since early 2020.

You will however be expected to "vacation in place" for at least four days at either the Four Seasons Resort, Golden Rock Inn, Monpelier Plantation & Beach or Paradise Beach resorts. BA was set to resume twice-weekly flights to nearby St Kitts from early October.

▶▶ [stkittstourism.kn](http://stkittstourism.kn)



FOUR SEASONS

## Living it up in Malta



Guests of recently opened 23-room boutique hotel Iniala Harbour House & Residences in Malta are being invited to combine their stay with day-long guided diving experiences with CarBlu Malta, which it says offers "easy and affordable" yacht hire.

Its 26m yacht *Midnight Madness* takes up to six divers and comes complete with crew, diving instructor

and dive-gear, though experienced divers can of course bring their own.

Nightly room-rates at Iniala start from 350 euros and the diving day for four people costs no less than 7075 euros + 18% VAT (that's about £1790 per head). However any additional person up to six costs only about £120

▶▶ [inialamalta.com](http://inialamalta.com), [carblumalta.com](http://carblumalta.com)

## A slice of Madeira

Portugal and the Azores have been on and off the all-clear list but the Portuguese island of Madeira has stayed green-listed for a while now, if we dare to tempt fate.

Portugal Dive calls it "the safe port of the Atlantic" and arranges eight-day diving holidays including 10 dives of your choice there from 909 euros pp.

You'll be based in the capital Funchal or the nearby island of Porto Santo and dive at sites in the Garajau Natural Park and elsewhere, spending seven nights in a 3\* hotel or apartment (two sharing).

Local support during your stay is included. It could be a good way to ease back into warmwater diving.

▶▶ [portugaldive.com](http://portugaldive.com)



STEVE WEINMAN

# WELL AND TRULY TESTED



The Zeagle brand has long struggled for recognition among UK divers but, as its BCs suggest to STEVE WARREN, perhaps this is



our loss. Steve also trials a, *ahem*, bucket, while ZOE AGER sees how many faces a mask can fit

## BC ZEAGLE BRAVO

**A FEW YEARS AGO, ACCOMPANIED** by my business partner, I walked into a dive-shop to sell the owner some of the underwater camera products we distributed. Far from selling, however, we both later walked out of that shop the owners of Zeagle BCs.

Zeagle is one of those brands that lacks the profile it deserves in the UK. Moving from building skydiving harnesses to BCs, the US manufacturer originally specialised in wings with integrated weights.

In the 1980s, when I first became aware of Zeagle, it was definitely swimming against the current. Back-inflation models were largely frowned on, and integrated weights deemed superfluous.

It was a time when neutral buoyancy and, especially, neutral trim, were not big on the skills agenda. Most BC designs reflected that. In the '70s a few specialist wing manufacturers had gone to the wall, and the big recreational brands that had experimented with such systems had seen very poor sales and dropped the idea.

How the tide has turned – as has Zeagle. For many years this outlier had only really made rec and tech back-inflation and special-purpose BCs for public-safety divers and the military.

Today it also offers a wide choice of jacket-style BCs, such as the Bravo reviewed here, for single-cylinder diving.

This is still the most popular style of BC among recreational divers. So what has Zeagle delivered in the Bravo?

### The Design

As is typical of Zeagle BCs, the Bravo feels substantial, and at more than 4kg this is certainly not a lightweight jacket.

This is explained by the emphasis on durability. It's a single-bag design. The air-cell lining is polyurethane, as usual, but its external protective coating is heavy-weave 1000-denier nylon. This is towards the upper end of abrasion-resistant materials for BCs.

Across the five sizes, which range from small to XXL, lift runs from 11.8 to 19kg. You get a direct feed for inflation and a rapid-exhaust valve in the left shoulder operated by pulling

down on the mouthpiece, and additional pull-dumps on the right shoulder and right lower edge of the Bravo.

The harness starts with a semi-rigid backpad rather than a hard plastic backpack, although on its website Zeagle does call it a hard pack.

This is a common choice on travel BCs to save weight, but less usual on coldwater BCs such as the Bravo. It's well-padded across your shoulders, down your spine and into the small of your back.

The shoulder-straps connect with large squeeze-release buckles. Another squeeze-release buckle closes the chest-strap. This has two height positions, so it can be adjusted to ensure that it doesn't interfere with your breathing or conflict with a drysuit inflator.

The cummerbund fastens across your abdomen using Velcro. It is quickly adjusted for length by reaching behind the harness, where the cummerbund is secured with more Velcro.

This allows you to slacken or tighten the cummerbund by your kidneys, so the overlap across your stomach is the recommended 12cm.

Proper sizing is important to wearing any BC and affects how it supports you under and above water. It's a safety feature, not simply a comfort one.

The cummerbund is elasticated to take up the slack that suit-compression causes. A nylon waist-strap lies over this and secures with



another large squeeze-release buckle.

Two nylon bands with the usual thread-through over-centre cams attach your cylinder to the Bravo. Because soft backpads lack the rigidity of hard packs, cylinders can be more prone to yaw if only one band is used. Two stabilise your tank and, of course, counter the problem of a single tank-band loosening, which is why dual bands are standard on technical BCs.

A cylinder-neck loop is fitted to ensure that your tank always sits at the same height on your cylinder when your rig is set up.

The Bravo has weight-pouches to take your main ballast. They sit around your waist and just above your hips. The lead loads into zipped pockets, and simply pulling on the pocket grab-handles jettisons them.

Non-releasable pockets for trim-weights are mounted on the back at shoulder-blade level.

Carrying accessories such as DSMBs, reels and lights and clipping off safe seconds and gauges is catered for by the two zipped side-pockets



Bravo inflator with fast and easy-to-use mouthpiece.



and a selection of D-rings.

Both pockets have grommets for adding a knife. Inside each is a small plastic D-ring, ideal for securing a retractor to hold a torch, for instance. You get a medium pre-bent D-ring on each shoulder, a small D-ring on each lobe just above the pocket and another medium pre-bent D-ring hangs from each hip, all made of stainless steel.

## At the Surface

I've been very satisfied with my Zeagle wing. It's proven extremely comfortable for shore-diving, rugged under hard use and I've been delighted with both surface flotation and underwater stability and trim control. So I was keen to see how I would get on with the Bravo.

Setting up my tank was straightforward. There is a soft nylon strap-handle for carrying it, although I preferred to use the tank-valve.

The weight-pouches can be fitted before you kit up, as I prefer, or afterwards.

A D-ring gives you purchase to help you line up the pouch and insert it in the sleeve. It then clicks into place. You can feel and hear it dock.

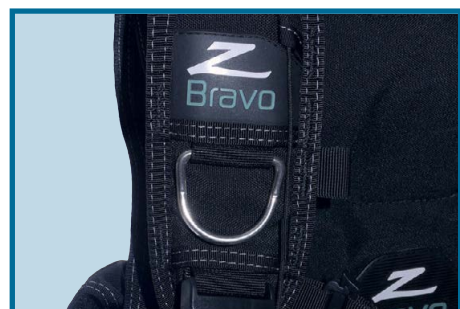
The grab-handles have a yellow trim to make them easier for a rescuer to distinguish.

On the 500m walks to the water and back, carrying approximately 35kg – made up of a 15-litre cylinder, 8kg of lead, reg and odds and ends – the Bravo felt slightly less comfortable than my own Zeagle.

I put this down to it being a little large for me. This meant that the cylinder acted as a fulcrum and pulled away slightly from my back, causing the shoulder-straps to dig in a little.

Get the sizing right and I don't think you'll have a problem.

In-water testing began with a surface flotation test. Divers end up on the surface for a host of routine reasons – waiting for the group to collect at the start of the dive, taking compass-bearings, awaiting pick-up, briefing students and when dealing with a buddy separation.



Pre-bent D-rings make it easy to clip on accessories by feel alone.

A BC that floats you low in the water in a chop or forces you onto your front isn't just uncomfortable, however – it can be dangerous to an out-of-air diver.

With my head upright, the Bravo raised me high enough that the distance from my lower lip to the water was 14cm, well within the normal range for BCs I've so far reviewed.

It also supported me upright, showing no tendency to pitch me forwards or backwards, which is ideal.

So that's a clear pass for the Bravo.

## Beneath the Surface

Under water the harness was snug and I didn't need to retighten it. When testing a BC's buoyancy characteristics, I'm looking for specific qualities. It's important to underline that I test BCs as close to neutrally buoyant as I can, so I start my dive overweighted by 3-4kg because of the air in my cylinder, and no more.

Overweighting beyond this, as so many divers do, will spoil the pitch of many BCs, forcing your feet down and head up.

This leads to silting and environmental damage from your fins, creates drag so that you work harder and burn more gas and, by raising your regulator much higher than your chest, increases work of breathing.



Weight-pouches are easy to fit and the pull-to-ditch handle works well.

The Bravo held me perfectly horizontal. This means that you are streamlined, so exertion is minimised and regulator performance is optimised.

For an underwater photographer or someone myopic like me, it also means that you can safely hang just off the seafloor without contacting it, to take pictures or look at tiny animals.

The Bravo easily supports you inverted, so you can hang head-down to look into crevices near the seabed.

The dual tank-bands prevented shifting of my tank, stopping it from introducing any instability. Overall, the Bravo's stability is excellent, with no tendency to pitch, roll or yaw.

As usual I tested the inflation- and dump-valves. I was using a large Bravo, which has a capacity of 15kg. At 10m, it takes around 10 seconds to fill from the direct-feed.

The direct-feed inflate and deflate buttons are identical, so aren't distinguishable by touch.

They are brightly coloured, however, to assist identification by an assisting diver. If the direct-feed were to jam open because of icing or silt, either the rapid-exhaust or shoulder-dump can

vent air faster than the direct-feed can supply it, as per CE requirements.

Should the diver begin ascending, causing gas expansion within the BC, I also check to see how fast the BC can be "braked" from fully inflated. This simulates an inflator jam causing a rapid ascent to which the diver has not been able to respond instantly, and now has to stop a runaway ascent.

I did this with the Bravo by hanging onto an anchor-block at 10m, fully pumping up the BC and letting go. Either the rapid-exhaust or shoulder-dump could fully vent the Bravo fast enough to stop the ascent after rising about 2m. This means that a competent user can maintain a safe ascent-rate.



Upper dump-valves are fast and efficient, braking a buoyant ascent in about 2m.

All three dumps are easy to use, although the chunky pull-tabs for the shoulder and rear ones are black, like the BC body.

I would prefer to have hi-vis tabs that would be easier for a rescuer to spot.

I was able to force a full-size DSMB and a compact 45m enclosed reel into the pocket, but it was tight. The pocket zips open towards the front and have loops to put your finger or thumb through for purchase, as well as a small pull-tab.

Operating zips and extracting the DSMB worked fine with 5mm gloves. Even with stuffed pockets, the weight-pouches still pull out easily, essential for emergency jettisoning.

## Conclusion

The mid-priced Zeagle Bravo is a solid performer. It provides excellent buoyancy characteristics on the surface and under water.

Accessory management is well catered-for by practical pockets and multiple D-rings. Weights are easily ditched in an emergency and valves work well, so it's very safe. The Bravo is also reassuringly rugged, so you're buying into a BC that should last. Highly recommended. ■

## SPECS

TESTER ▶ Steve Warren

PRICES ▶ £400

SIZES ▶ S-2XL

BUOYANCY ▶ 14-20kg

WEIGHT ▶ 4.5kg (M)

DUMP-VALVES ▶ 3

COLOUR ▶ Black

CONTACT ▶ zeagle.com

# MASK TUSA INTEGA

**TUSA WAS FOUNDED IN 1952** and initially it focused on dive-masks and swimming goggles, so it has had nearly 70 years to develop such offerings. It can also claim to have been the first manufacturer to introduce a vibrant range of colours to diving equipment.

## The Design

The new TUSA Intega is a two-lens mask that offers users the option to have individual prescription lenses, ranging from -1 to -8 in 0.5 dioptres, fitted to the frames.

The manufacturer has also developed a "fitting ring", which is built into the skirt. Called 3D SYNQ, this technology is claimed to enable the skirt to mould to all face shapes and so provide the ideal fit, seal and underwater experience.

A slightly thicker-than-usual silicone is used for



The Intega skirt with built-in fitting ring.

this skirt, though it is flexible enough to bend and fit various faces.

The company also provides its new Swift strap-adjustment buckle with a low profile and light weight to avoid it being too obtrusive.

## In Use

The Intega felt comfortable and provided a good seal around my face. The shape of the lenses provided a clear field of vision and gave a good peripheral view.

The blue mask with clear skirt tested let in a lot of light to reduce any feeling of claustrophobia. However the product is also available with a black skirt, which you might prefer if you're a photographer, so the choice is yours.

To test the claims made for the 3D SYNQ seal, I asked a few members of my dive-club to give the mask a try in the pool and let me know how it moulded to their faces.

Eight divers, a mix of males and females of various ages and with a range of face shapes, tried the mask, and there was only one who didn't find it a perfect fit to her face.

I was particularly interested to receive feedback from my partner Sam, with his facial hair, and he confirmed that the Intega provided a good seal under his nose and was very comfortable.

So the mask worked for most of us in the pool and I tested it further by taking it for a dive off the coast while wearing a hood and 5mm gloves.

Thanks to the good round-edged skirt ring the Intega proved easy to put on and fit securely to my face without interfering with my hood.

The three-dimensional strap is slightly thicker in places, making it easy to hold and slide into place while wearing my gloves, and it was easy to tighten to ensure a firm but comfortable fit.

The last thing you want is for your mask to feel uncomfortable or loose as you jump in.

It was effortless to adjust the straps both above and below the waterline, allowing for minor adjustments to be made as required.

The clips did feel substantial but didn't get in the way, and allow the wearer to optimise the fit.

## Conclusion

This is a well-made, high-quality and comfortable mask. ■



## SPECS

**TESTER** ▶ Zoe Ager

**PRICE** ▶ £85, corrective lenses £36 each

**VOLUME** ▶ 175cc

**WEIGHT** ▶ 205g

**COLOURS** ▶ 6 black skirt, 6 clear skirt

**CONTACT** ▶ tusa.com

# PORTABLE DIP-TANK LOMO BUCKET & BASIN

**HAVE YOU HEARD ABOUT BILL, FRANK** and the Water Torture?

Bill and Frank had, at first, been happy to sit on the boat-deck between dives but, as the day warmed up, Bill and Frank's owners threw towels over them to keep the sun off.

Finally, as it grew ever-hotter, those owners demanded freshwater butts for their precious charges. Because Bill is the nickname given to a big Gates housing for a broadcast video camera, and Frank is short for Frankenstein, a case for a hand-built large-format film-camera that can shoot six frames per load when it can be bothered to work.

## Salty problems

As an underwater photographer, I have



investments in camera equipment running into thousands, but Bill and Frank together are nudging the price of a nice car.



As we know, camera equipment is mostly damaged by salt. Salt particles are sharp enough to cut O-ring seals and will cause corrosion so that control-shafts, the bosses through which they pass, and the housing's body and latches can become pitted, and coatings on ports and wet lenses spoiled.

Salt gets a real foothold on your kit when allowed to dry out. While in water it's diluted and takes much longer to cause problems.

When you lift your camera out of the sea and it drains, it leaves salt behind in a concentrated form.

Depending on the quality of your kit, corrosion can get to work pretty fast. Dip-tanks are offered by most dive-centres and aboard dive-boats for customers to rinse and soak their kit to mitigate these problems but, as each piece of kit goes in, it adds to the salt content.

In hot climes evaporation removes the moisture, leaving ever-more concentrated salt

water behind. Even so, leaving your housing wet is preferable to letting it dry out.

But what you really need to be able to do, as soon as possible after taking your camera kit out of the communal dip tank, is soak it in pure fresh water, and change that water a few times to redissolve and flush out as much remaining salt as possible.

Which is why your camera needs a personal dip-tank.

Such items have rarely featured in **DIVER Tests** over the years but, wouldn't you know it, we had one last month in the shape of the Akona Arizona drybag and, this month, here comes another!

If the Arizona wouldn't work for you, perhaps Lomo has the answer.

## The Design

On location a personal dip-tank is not the easiest thing to have. Dive-boats and some hotels might have only showers. These can help with getting water into hidden areas, but a soak is better. Besides, you might want to keep your camera system immersed between dives, as Bill and Frank's owners do.

Lomo offers two solutions and, while not targeted at underwater photographers, that's the application I immediately saw for them.

And yes, one is just a bucket! The other is a waterproof crate, which Lomo calls a square-folding basin, reflecting that it's more likely to be used for camping purposes.

The bucket holds 11 litres of water and is

wide and deep enough at 26 x 26 x 23cm to take an action cam, compact or small mirrorless or video housing, depending on the size of any ports and grips.

A substantial rope handle helps to make this as comfortable to carry as a bucket containing 11kg of water can probably be.

The 9-litre basin measures 28 x 29 x 18cm, wide and deep enough to immerse a full-sized SLR housing, again depending on the port and grips. For carrying, it has two strap-handles.

What makes this bucket and basin practical, especially for dive-travellers, is that both fold nearly flat at just 3cm high for the basin and 2cm for the bucket. They aren't heavy, either. The bucket weighs 140g and the basin 390g.

Both are made from heavy-duty PVC. The material is quick to air-dry or can be wiped down with a cloth if you're in a hurry. It's also smooth, so it won't scratch your camera.

## In Use

You could certainly fill the bucket or basin from freshwater showers at some beaches, though you might need a bit of hose or to use your snorkel to fill them from a shallow wash-basin in public changing rooms. You could use bottled water, I suppose. But the easiest thing to do between dives is to use water from the dive-site – the one your cameras just spent an hour in.

Just keep it cool. Then perhaps give your kit a final soak and rinse in fresh water before you leave.

## Conclusion

While aimed at campers who want to wash dishes, stow wet kit such as towels and water their dogs, the Lomo basin and bucket, which cost less than most camera O-rings, are genuinely useful to help with preventative maintenance of expensive underwater camera kit. And the bucket also makes a great party hat. Highly recommended. ■



Camera housing in the Lomo bucket (left) and basin.

## SPECS

**YESTER** ▶ Steve Warren

**PRICE** ▶ £9 each

**SIZE** ▶ 11-litre bucket 26 x 26 x 23cm, 9-litre basin 28 x 29 x 18cm

**CONTACT** ▶ lomo.co.uk

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### GEAR

#### Red Original Kids Short Sleeve Pro ...



Young divers and snorkellers can expect some comfort and privacy when changing with this robe, though it's hardly a snip at £110. [Read more...](#)

#### Garmin Descent Mk2s



Garmin has added to its Descent range of dive computers with the Mk2s, priced at £950. [Read more...](#)

#### Nautisport Pro Universal Smartphon...



Claimed to work with nearly all Android and Apple smartphones as a result of its controls design, this mobile phone housing costs £189.

#### Hammond CoreTex Base Pullover



The £15 Hammond CoreTex Base pullover is sold as ideal for wearing under your drysuit on warmer days or as an additional layer when dives turn colder.

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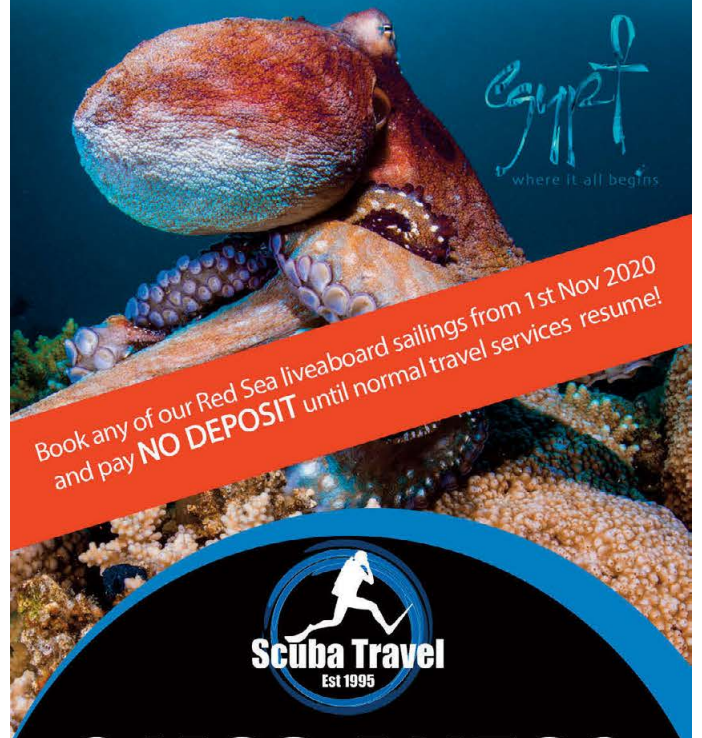
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# NEW BUT UNTESTED

The latest kit to hit the dive shops



## Atomic Aquatics T25 Regulator ▲▲▲▲

To mark a quarter-century in business, Atomic Aquatics has launched what has to be called the luxury limited-edition T25 regulator. Based on the top-of-the-line T3, the T25 features Atomic's easy-breathing flow-through piston first stage and depth-compensating pneumatically balanced AFC second stage. The anniversary edition includes a tough DLC plating over the titanium to give a "burnt" look unique to each T25, signature logos and identifying serial number. Because Atomic expects this reg to become a collectible, it's charging a cool £2579 for it.

►► [atomicaquatics.com](http://atomicaquatics.com)



## Mares Kaila SLS BC ▼▼▼▼

This jacket-style BC is designed for female divers. Said to provide great stability, the Kaila offers integrated quick-release weight-pouches with visual confirmation that they are locked in, trim-weight pockets, Mares Ergo inflator and three dump-valves. The rigid backpack can be used with single or twin cylinders, and five steel D-rings and expanding pockets are intended to enable easy management of accessories. The price is £449.

►► [mares.com](http://mares.com)



## TUSA TA0208 Warmwater Gloves ▲▲▲▲

If you feel the cold more than most, or just want some extra protection in warm waters from stingers, shotlines or getting in and out over rocks, TUSA thinks its TA0208 gloves provide the answer. The 2mm neoprene is designed to be supple to help when handling cameras, while the synthetic suede that lines the palm, fingers and thumb is claimed to make these gloves durable and long-lasting. A pair costs £29.50.

►► [cpspartnetship.co.uk](http://cpspartnetship.co.uk)



## Tissot PRX Automatic Watch ◀◀◀◀

The discreet Tissot PRX Automatic is a dress watch that the manufacturer says you can confidently dive to 100m. Its stainless-steel casing has a satin finish with an optional PVD accent. Hands and indices are treated with Super-LumiNova for easy reading in low light. The self-winding Powermatic movement is visible through the mineral glass back and provides an 80-hour reserve. Prices from £565.

►► [tissotwatches.com](http://tissotwatches.com)

## Lomo Drybag Cooler Bag ▶▶▶▶

For divers operating away from civilisation, this Lomo dual-purpose cooler bag offers 10 litres of capacity. It can be used conventionally to keep clothes dry or wet swimwear from leaking out, but its insulated barrier layer also promises to keep food and drink cold for those long days out at sea or on the beach. With splash-proof pocket and shoulder-strap, it'll set you back £18.50.

►► [lomo.co.uk](http://lomo.co.uk)



**Lungfish Alliance Full Face Mask** ▼▼▼▼

Rebreather manufacturer Lungfish teamed up with full-face-mask specialist Ocean Reef to create the Alliance mask. Available to fit a range of CCRs and SCRs, claimed advantages over using a normal mouthpiece include elimination of jaw fatigue and improved safety from reduced work of breathing and security of gas supply if the diver is incapacitated. The mask includes a built-in bail-out regulator and can be fitted with wireless communications. It costs £1673 complete, or existing Ocean Reef mask owners can pay £905 for a conversion kit.

►► [lungfishdivesystems.com](http://lungfishdivesystems.com)



**Certina DS Powermatic 80 Watch** ◀◀◀◀

Priced from £760, the Certina DS Powermatic 80 is 100m-rated and can be ordered in stainless-steel with an optional rose or yellow gold finish. Five dial colours are available including luminous white, which combines with Super-LumiNova-coated hands for better night-time visibility. The automatic movement has an 80-hour power reserve. A NATO-style strap guards against loss.

►► [certina.com](http://certina.com)



**INON D-200 Type 2 Strobe** ▼▼▼▼

This £550 strobe offers a powerful output of 220 lumen, paired with 110° wide-angle coverage. Exposure is automatic via INON's patented S-TTL system, or you can choose from 13 manual settings. Synchronisation can be changed during the dive, and a modelling light is built in. Beam modifiers include a snoot set, softeners, colour correction and neutral density filters.

►► [inonuk.com](http://inonuk.com)



**FULL CIRCLE**



They travelled around Europe on a grand dive-tour unexpectedly extended by the virus – but now Scandinavian diving looms again!

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## HSE MEDICALS and phone advice - Poole

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**Diving Medicals - Midlands (Rugby)** - HSE, Sports Medicals and advice at Midlands Diving Chamber. Tel: 01788 579555 [www.midlandsdivingchamber.co.uk](http://www.midlandsdivingchamber.co.uk) (72756)

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**Alfreton (Derbys) BSAC 302**. Welcomes new members and qualified divers. A small but active club with own RIB, wreck diving a speciality. Contact Angela on 07866 799364. (68370)

**Appledore Sub-Aqua Club (SAA 35)** Friendly club welcomes experienced divers from all agencies. Regularly dives Lundy island, own hard boat / compressor. Contact Damian 07831 152021.

**Banbury SAC**. Friendly, active club with weekly meetings and training sessions, own boat, compressor and equipment. Welcome divers/non-divers. [www.bansac.org](http://www.bansac.org) or call 07787 097 289. (69308)

**Birmingham Underwater Exploration Club**. Friendly, active dive club. Weekly pool sessions. Regular trips. Own RIB based in south Devon. Training and equipment loan available to members. Tim 07775 580033.

**Bracknell Sub Aqua Club** welcomes new and experienced divers from all agencies. Meets poolside at Bracknell Sports Centre, Thursdays from 8.30pm. Diving, training and social calendar: [www.bracknellscuba.org.uk](http://www.bracknellscuba.org.uk) or tel: 07951 855 725. (65792)

**Braintree Riverside Sub Aqua Club** based in Braintree, Essex. A friendly club, we welcome divers of all abilities and have an active diving and social programme. Come and join us! email: [denise.f.wright2@btinternet.com](mailto:denise.f.wright2@btinternet.com) [www.braintreeriversidesac.co.uk](http://www.braintreeriversidesac.co.uk) (69397)

**Bromley/Lewisham** Active divers required. Full programme of hardboat diving throughout the year. Check out Nektan SAC [www.nektan.org.uk](http://www.nektan.org.uk) or contact Jackie (01689) 850130. (68537)

**Buckingham Dive Centre**. A small friendly club welcoming all divers and those wanting to learn. We dive throughout the year and run trips in the UK and abroad. [www.stowe-subaqua.co.uk](http://www.stowe-subaqua.co.uk) Tel: Roger 07802 765366. (69433)

**Chelmsford and District SAC** meet at 8pm every Friday at Riverside Pool. New and qualified divers are welcome. See our website for details: [www.chelmsforddiveclub.co.uk](http://www.chelmsforddiveclub.co.uk) (68620)

**Cockleshell Divers, Portsmouth, Hants**. Small, friendly club welcomes new and experienced divers from all agencies. Meets at Cockleshell Community Centre, Fridays at 8pm. Email: [cockleshell.divers@aol.co.uk](mailto:cockleshell.divers@aol.co.uk) (64762)

**Colchester Sub-Aqua Club** welcomes experienced divers and beginners. Sub-Aqua Association training. Diving at home and abroad. Meets at Leisure World Friday evenings. Contact Tony (01787) 475803. (68263)

**Chingford, London BSAC 365**. Friendly and active club welcomes divers from all agencies and trainees. Meet Wednesday 8pm, Larkwood Leisure Centre E4 9EY. Information: [www.dive365.co.uk](http://www.dive365.co.uk) Email: [loughtondivers365@gmail.com](mailto:loughtondivers365@gmail.com) (69208)

**Cotswold BSAC**, a friendly club based at Brockworth Pool, Nr Cheltenham, Fridays 8pm. Regular inland diving and coast trips. Tel: 07711 312078. [www.cotswoldbsac332.co.uk](http://www.cotswoldbsac332.co.uk) (68577)

**Darlington Dolphins Sub Aqua Club**, small friendly BSAC/PADI, open to new and experienced divers. Meet Friday night in Dolphin Centre at 8.30. Tel: 07773 075631 or email [robkilday@hotmail.co.uk](mailto:robkilday@hotmail.co.uk) (72665)

**Darwen SAC, in Lancashire**, with an active diving programme. Own RIB. New members welcome regardless of agency/training. We provide BSAC training. Weekly pool sessions. [www.darwensac.org.uk](http://www.darwensac.org.uk) (69161)

**Dream Divers**. Very friendly dive club in Rotherham welcomes divers of any level/club. Meet at the Ring O Bells, Swinton, last Thursday of the month at 19.30. Email: [info@dreamdiversltd.co.uk](mailto:info@dreamdiversltd.co.uk) (69699)

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**Guildford BSAC 53**. Welcomes new and qualified divers. Friendly, active club with 2 RIBs, compressor, Nitrox, meets Tuesday at clubhouse with bar. [www.guildford-bsac.com](http://www.guildford-bsac.com) or call 07787 141857.

**Hartford Scuba BSAC 0522**, based in Northwich, Cheshire. A friendly, active diving club. Compressor for air and Nitrox fills. RIB stored in Anglesey. [www.hartfordscuba.co.uk](http://www.hartfordscuba.co.uk) (67287)

**Hereford Sub Aqua Club**, is looking for new members. Regular diving off the Pembrokeshire coast on own RIBs. Training and social nights. Contact: [rusaqua@goolemail.com](mailto:rusaqua@goolemail.com) (69146)

**HGSAC, South Manchester based** friendly, non-political club welcomes newcomers and qualified divers. Lots of diving and social events. Family. Three RIBs and compressor. [www.hgsac.com](http://www.hgsac.com) (68501)

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**HUGSAC - BSAC 380**. Experienced club, based around Hertfordshire, with RIB on the South coast. Members dive with passion for all underwater exploration. All agencies welcome. [www.hugsac.co.uk](http://www.hugsac.co.uk) (63275)

**Ifield Divers**. Crawley-based club. Twin engine dive boat with stern lift in Brighton Marina. Training for novices, diving for the experienced - all qualifications welcome. [www.ifield-divers.org.uk](http://www.ifield-divers.org.uk) Email: [info@ifield-divers.org.uk](mailto:info@ifield-divers.org.uk) or tel: 01883 731532. (64514)

**Ilkerton & Kimberley SAA 945**, between Nottingham and Derby, welcomes beginners and experienced divers. We meet every Friday night at Kimberley Leisure Centre at 8.30pm. Contact through [www.iksac.co.uk](http://www.iksac.co.uk) (68559)

**K2 Divers**, covering West Sussex/Surrey. A friendly BSAC club, but all qualifications welcome. Training in Crawley, boat at Littlehampton. Email: [k2divers@yahoo.co.uk](mailto:k2divers@yahoo.co.uk) or tel: (01293) 612989. (68335)

**Kingston BSAC, Surrey**. Two RIBs, clubhouse and bar, active dive programme, two compressors, Nitrox, Trimix, full training offered at all levels. All very welcome. [www.kingstonsac.org](http://www.kingstonsac.org) or tel: 07842 622193. (69176)

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**Llantrisant SAC,** two RIBs, towing vehicle, welcomes new and experienced divers. Meet at Llantrisant Leisure Centre 8pm Mondays. Contact Phil: (01443) 227667. www.llantrisantdivers.com (68519)

**Lutterworth Dive Club,** active, social, friendly. Own RIB, regular trips. Welcomes qualified divers, any agency. Training at all levels. Most Tuesdays, Lutterworth Sports Centre. www.lwsc.co.uk (70043)

**Leeds based Rothwell & Stanley SAC** welcomes new and experienced divers, full SAA training given. Purpose built clubhouse with bar, RIB, compressor. Meet Tuesday evenings: 07738 060567 kevin.odd@talktalk.net

**Mansfield and District Scuba Diving Club.** www.scubamad.co.uk. Sub Aqua Association - club 942. 8 Beech Avenue, Mansfield, Notts. NG18 1EY. (71643)

**Manta Divers, Norfolk** wreck & reef diving. Small, friendly, experienced club. All agencies welcome. SAA training. www.mantadivers.org (64088)

**Mercian Divers (BSAC 2463)** Active & Friendly club. New, experienced & junior divers welcome. Own RIB. Based in Bromsgrove, West Midlands. Tel: 01905 773406 www.mercian-divers.org.uk (65391)

**Merseydivers (BSAC5)** Friendly & active club with 2 RIBs & Compressor/Nitrox/Trimix. Meeting every Thursday 7pm till late. All divers welcome. www.merseydivers.com or call Steve on 07570 015685.

**Merseyside training club,** new and active divers from all agencies, weekly pool session. Own Rib towing vehicle Contact www.wapsac.org.uk or wapsacsa@gmail.com

**Millennium Divers.** Active, friendly club for all levels and certifications of diver, based in Portland, Dorset. UK diving and holidays. Club social nights www.millenniumdivers.org (68351)

**Mole Valley Sub Aqua Club.** Surrey based SDI club, own RIB, active diving UK & Abroad, training and social events. Trainees/crossovers welcome. Contact: 07410 949268 or email: info@mvsac.org.uk (68691)

**Monastery Dive Club** (Dunkerton Branch). New divers welcome to join our club. Trips to Plymouth and NDAC. GSOFH is a must. South Wales Area (Crosskeys, Risca.) Text: Flinty 07971 432803 or email: welshflinty@hotmail.com (65305)

**Nekton SAC.** Based in Bromley, we are a friendly and active SAA Club that welcomes experienced and new divers alike. Info@nekton.org.uk or call Steve: 020 8467 4599. (68387)

**Nemo Diving Club.** Small friendly dive club offering dive trips and training for non/experienced divers in Retford and surrounding areas. Contact: www.nemodiver training.co.uk (69640)

**North Wales Sub Aqua Club.** Llandudno based and open to new and experienced divers. Fun, friendly and active SAA affiliated club. Training every weekend. www.nwsac.wales (70688)

**North Glos BSAC 80.** Friendly, active club welcomes new and experienced divers. Own boat and equipment with weekly pool sessions, Thursdays, 8.30pm at GL1 Gloucester, (Gloucester Leisure Centre). www.nglos.co.uk (68483)

**Nuneaton, Marlin BSAC** welcomes experienced divers to Pingles pool every Thursday. Active training, diving, social programme in a flourishing club with no politics allowed. www.marlinsac.com (69322)

**Orkney SAC.** Small, friendly active dive club, based in Kirkwall, welcomes divers of any level or club. Own RIB and compressor. Contact Craig: 07888 690 986 or email: craigbarclay31@hotmail.com (69735)

**Plymouth Sound Dive Club** welcomes qualified and experienced guest divers. See www.plymouthdivers.org.uk for more information/weekly club notices. Contact relevant dive manager or divingofficer@plymouthdivers.org.uk to join a dive. (72219)

**Preston Divers SAA 30.** The friendliest dive club. Come and meet us at Fulwood Leisure Centre, Preston on Monday nights between 8.00pm - 9.00pm. www.prestondivers.co.uk (64198)

**Reading Diving Club.** Experience the best of UK diving with a friendly and active club. All welcome. Tel: 01183 216310 or email: info@thedivingclub.co.uk www.thedivingclub.co.uk (69447)

**Reading Sub-Aqua Club (BSAC 28).** Active, friendly, based Palmer Park. Clubhouse, licenced bar, compressor, 2 RIBs. Club night Thurs, all grades/agencies. Training to Adv Diver +. rbsacinfo@gmail.com www.rbsac.org.uk Tel: Colin 07939 066524. (72402)

**Richmond Sub-Aqua Club** (Surrey) welcomes new and experienced divers. Very active diving, training and social calendar for about 100 members. Contact: contact.rsac@gmail.com, www.richmondsubaqua.club, 07843 959 775.

**Robin Hood Dive Club.** Yorkshire based one of the most active in the country with a full 2019 calendar of trips. All agencies and grades welcome. No training or pool, just a growing bunch of regular divers. www.robinhooddiveclub.com or find us on Facebook. (59245)

**Rochdale Sub-Aqua Club.** Beginners and experienced divers welcome. Full training provided. Pool session every Wednesday. Club has two boats. More info at

www.RochdaleDivers.co.uk or call Mick 07951 834 903. (65103)

**Ruislip & Northwood BSAC.** Friendly, active club, RIB, welcomes new and qualified divers. Meets Highgrove Pool Thursday nights 8.30pm. www.rnbsac.co.uk Tel: 07843 738 646 for details. (69469)

**Scotland Plug Divers.** Small, friendly dive club welcomes newly qualified and experienced divers to join us. Regular hardboat diving around Bass Rock/Firth of Forth/Eyemouth and trips abroad. Tel George: 07793 018 540. Email: plugdivers@btinternet.com (64638)

**Selby Aquanauts SAA 1117.** Family friendly club, welcomes new and qualified divers. Regular trips UK & abroad. Meet every Thursday, Albion Vaults, Selby at 9pm. Contact Mark: 07831 295 655. (69261)

**Sutton Coldfield SAC,** friendly BSAC club, welcomes all divers from trainee to advanced. All agencies. Own RIBs and compressor. Meet every Wednesday, 8.15pm at Wyndley (3.4m pool). For free try dive call Alan: 07970 573638 or Mark: 07787 106191. (64974)

**Sheffield BSAC36.** Friendly, social and active dive club welcomes newcomers or qualified divers. Trips, socials, weekly pool and club/pub meetings, club RIB. See www.bsac36.org.uk (69191)

**Slough 491 BSAC;** small friendly club welcomes divers at all levels. Meet at Beechwood School Fridays 19.30. Diving holidays and South Coast. Email: malcolm@uv.net or tel: Tony (01344) 884 596. (69722)

**SOS Divers (SAA 263), Stourport,** Worcestershire. Founded 1979. Friendly family club welcomes qualified and trainee divers. Own RIB. Contact Althea by email: aranni123@outlook.com (57542)

**South Coast Divers (SAA 1150)** Portsmouth. A friendly and active club welcomes new and experienced divers from all agencies. Email: southcoastdivers@hotmail.co.uk or call Darren: 07449 794 804. (69224)

**Totnes SAC (Devon).** We are an active multi-agency club and welcome new members and qualified divers from all organisations. Two RIBs and own compressor/nitrox, plus club 4WD. Diving all round South Devon and Cornwall. Visit www.totnes-bsac.co.uk for details. (68319)

**South Queensferry SAC,** near Edinburgh. Two RIBs, gear for hire. Pool training during the Winter; trips & expeditions in the Summer. Pub meeting at Hawes Inn. Call Warren: 07980 981 380. www.sqsac.co.uk (64861)

**Steyning Scuba Club,** West Sussex. All divers welcome. Steyning Pool, Monday evenings at 8.30pm. Contact Andy Willett on 07786 243 763. www.seaurchin divers@hotmail.co.uk (63956)

**The Bath Bubble Club SAA777** seeks new members. New and qualified divers of all agencies welcome. Weekly pool training, every Wednesday at 9pm, Culverhay Sport Centre, Rush Hill, Bath. Regular diving programme from club RIB. www.bathbubbleclubuk.co.uk (68434)

**Wells Dive Group.** Friendly, active club in Somerset welcomes new or experienced divers. Meeting/Training at The Little Theatre or the pool on Thursdays, try dives available. Regular RIB diving, trips around the UK and abroad. Visit: www.wellsdivers.co.uk or Tel: Rob, 07832 141250. (69653)

**TridentDivers.co.uk** (find us on Facebook) Cardiff-based SAA club taking on new trainees and crossover members contact us on 07547 398802. (71656)

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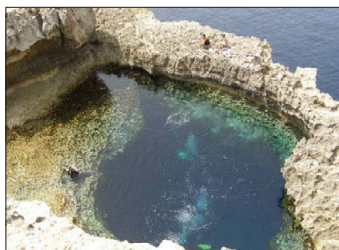
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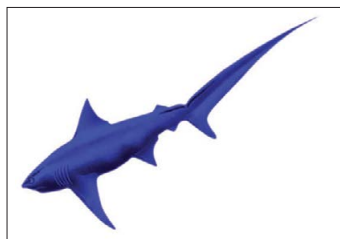
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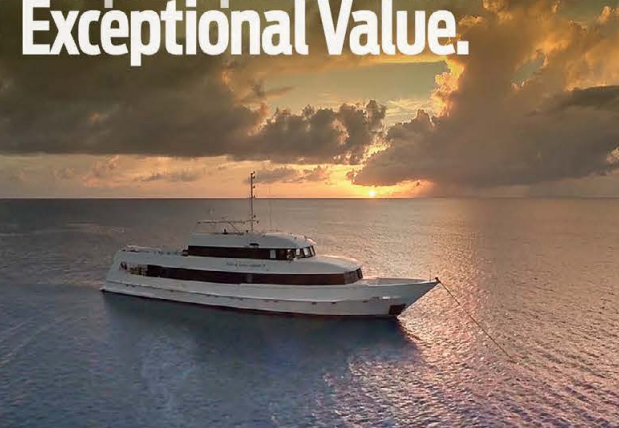
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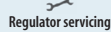
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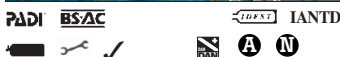
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## ADVERTISERS' INDEX

AGGRESSOR ADVENTURES	5	MALTAQUA	18
ATOMIC AQUATICS	68	O'THREE	71
BEAVER SPORTS	77	OTTER WATERSPORTS	2
CARIBBEAN FUN TRAVEL	55	PRODIVERS MALDIVES	4
DIVE MASTER INSURANCE	10/11 & 72	REGALDIVE	55
DIVE WORLDWIDE	41	SCUBA TRAVEL	68
DIVER APP	73	SHEARWATER	30
EMPEROR DIVERS	55	SILADEN RESORT & SPA	78
EXPLORER VENTURES	74	SPORTIF DIVE	9
HOTEL LES ILLES	41	TUSA	62
MALTA TOURISM AUTHORITY	47	WESTFIELD SUB AQUA & MARINE INSURANCE	72/73



**SAM ROBINSON** wanted to tell us about his first dive, which certainly demonstrated initiative and a sense of adventure. Just one question for you after you've read his account – how would you feel about having him as your buddy?

## It's only breathing

**R**ECENTLY MY PARTNER AND I, keen for a change of scenery, rented a lovely little cottage on the coast. The weather was unfavourable so, having finished reading the only book I had taken, I decided to explore.

In one of the outbuildings I found some old scuba-diving kit and, having seen some pictures, I decided I'd like to give it a bash.

There was an oxygen cylinder with a sort of spigot or tap on top of it, and a bundle of interconnected hoses.

It was pretty clear that the far end of the long hose with the mouthpiece was supposed to connect to the bottle, so I did that.

I was worried that the rest of the hoses, including one leading to a little pressure gauge (though it was so dirty that I couldn't read it), might prove to be a nuisance, so I just bundled them up into a carrier-bag and secured it with some string. Safety first.

There was also a jacket with loads of pockets in it, some of which contained weights, and some weird valves.

It also seemed to be what the air-bottle got attached to, via some straps.

I took the jacket, cylinder and bag of hoses, as well as some damaged flippers (they were split down the middle) with me. I left the mask, just because it was really dusty (I have allergies), and I'd brought swimming goggles with me anyway, so it didn't matter too much.

I arranged for my partner to call for help if I needed it – I reckoned five minutes to get the kit on, another couple of minutes to walk into the sea, maybe an hour or two of scuba-diving (I'm a good swimmer), and then a little more for getting out again.

She agreed to sit on the beach under a brolly with her book, and call for help if I wasn't back within, say, three hours.

**I WASN'T SURE** what I'd find in the water, but I'd read *The Silent World* by Jacques Cousteau as a teenager, so at least I knew what I was doing.

I shrugged the kit on, which wasn't too hard because I didn't have a cumbersome wetsuit to worry about, and approached

the water. The waves were pretty heavy, which – together with the broken flippers – made walking really difficult. Nevertheless, I made my way in until I was knee-deep, and then flopped down onto my belly, with my head under water.

I cleaned the mouthpiece off, tried taking a breath, and – nothing.

I tried again – still nothing. Then I remembered that I had to turn the air on at the tank, so I reached behind my neck and managed to get it turned on – and just in the nick of time, too, because I was starting to feel that I really needed to breathe!



NARIMAN MESHARFA/ON UNSPLASH

I tried again, blew out, tried again, and finally, success! I was diving!

I crawled away from the shore, quickly becoming annoyed that the slope was so shallow – this was taking ages!

Finally, I reached a sudden slope, crawled easily down it, and found myself perhaps 6 or 7m deep, looking at some sand and seaweed.

To be honest, I wasn't enjoying it much: my ears were aching, water kept going up my nose and it felt as though my goggles were being pushed into my face – maybe the current was doing that.

I don't remember seeing James Bond struggling like this in *Thunderball*, but

then, movies are often unrealistic, aren't they? Perhaps I just need to build up my facial muscles.

I wandered around for a while, happily losing track of time, until I felt quite cold. Maybe I could do with a cuppa, I thought.

I didn't really want to crawl back and, besides, I had no idea in which direction to head, so I decided to swim back.

I pushed myself off the bottom, kicked hard and found myself... heading back towards the bottom.

The damaged flippers were useless!

**I TRIED AGAIN**, this time swimming along as well as up, but with the same result.

The vest – of course! It was really heavy but there was no way around it, I couldn't leave it there.

I kicked as hard as I could, managed to get my head above water briefly, and saw the shore.

It was quite a way off, but I crawled gradually towards it, letting my legs rest, and occasionally heading back to the surface for course corrections.

I'll admit that this bit was not fun. In this manner, however, I eventually reached the top of the steep slope.

As I did so, I suddenly couldn't breathe! I decided I must have run out of air.

I crawled forward a little more, then arched my back, lifting my head out of the water. But I forgot about the mouthpiece, and still couldn't breathe!

I spat it out, breathing in deeply as water ran out of my nose. I crawled forwards towards the beach, lifting my head out to breathe every 10 seconds or so, and finally cleared the surf and rolled onto my back on the sand. I had made it!

I was a fully-fledged scuba-diver now, and I was proud of what I had achieved.

I looked at my fitness smartwatch, which gave me an estimated depth of 6.8m (based on a GPS reading where I'd briefly surfaced).

My partner was still there, sleeping quietly under her brolly. Next time, I thought, she can come too. ◻

*Before you write in, Sam Robinson is in fact a freediver with a lively imagination!*

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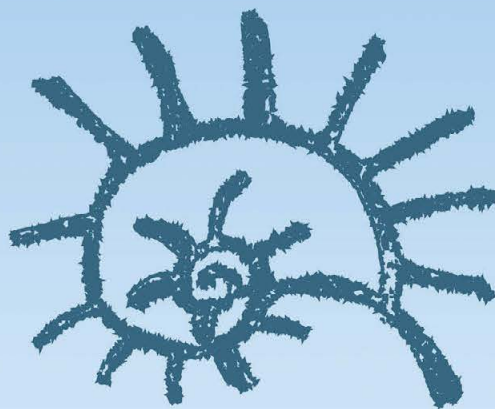


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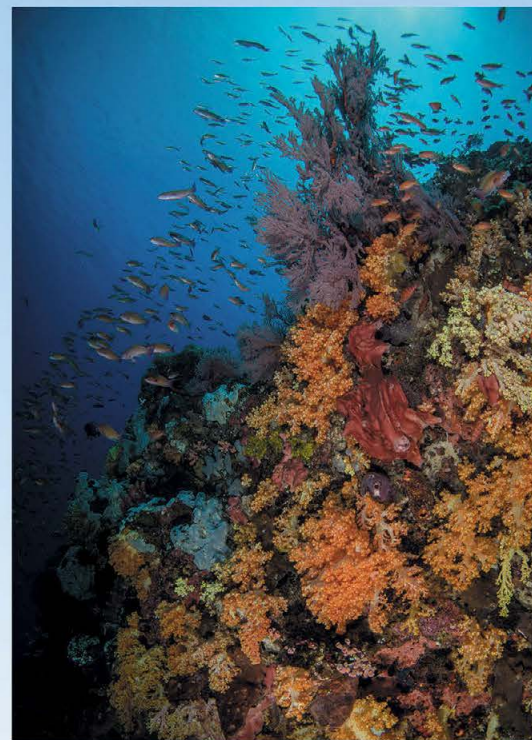


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