NITROX

IANTD
INTERNATIONAL ASSOCIATION OF NITROX & TECHNICAL DIVERS

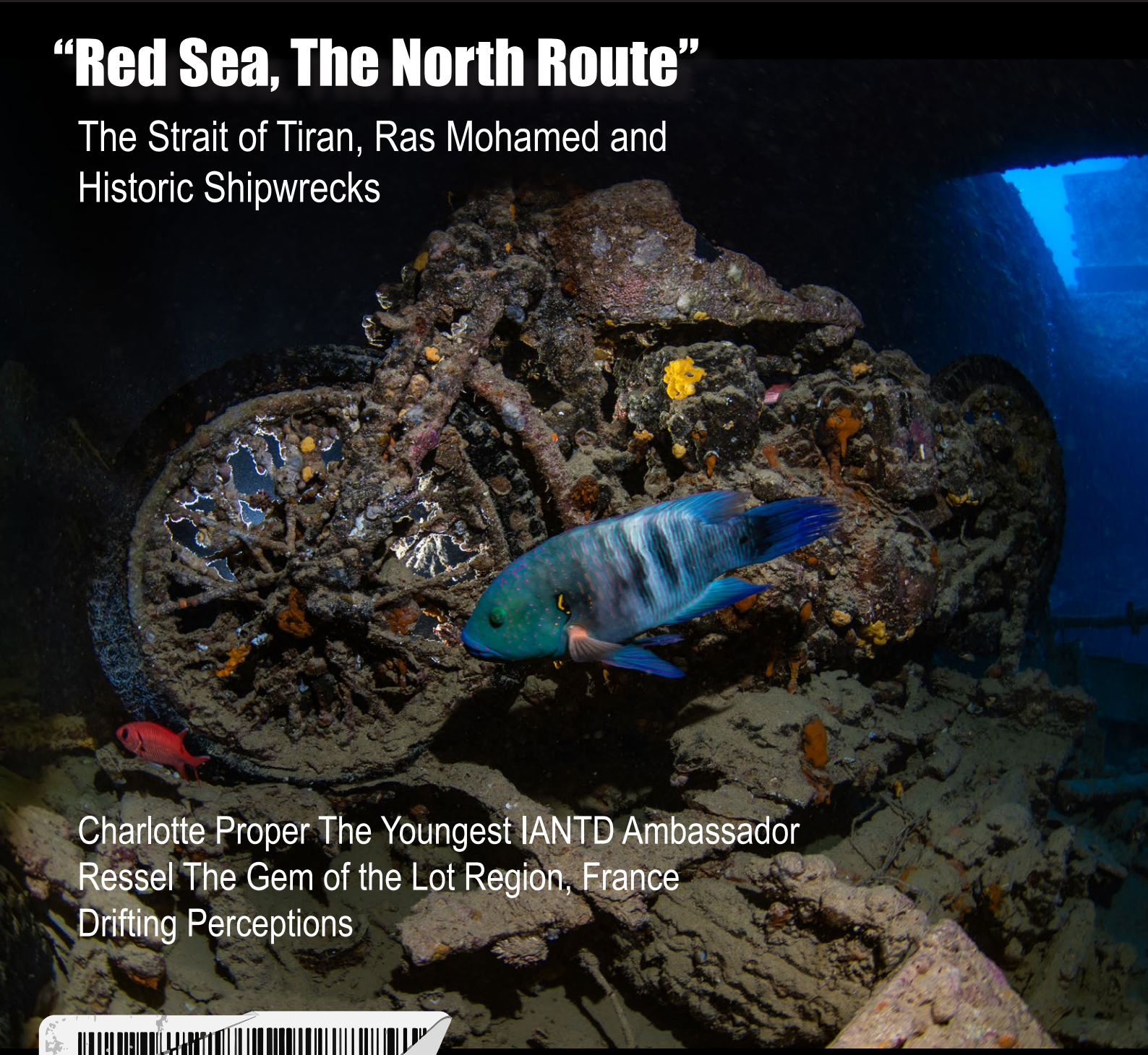
The IANTD Diving Magazine

2025

Travel | Recreational | Technical Dive | Gear | Photography | News

“Red Sea, The North Route”

The Strait of Tiran, Ras Mohamed and Historic Shipwrecks



Charlotte Proper The Youngest IANTD Ambassador

Ressel The Gem of the Lot Region, France

Drifting Perceptions

Nitrox | IANTD Diving Magazine | 2025 | ISSUE 07

07

NITROX IANTD
The IANTD Diving Magazine

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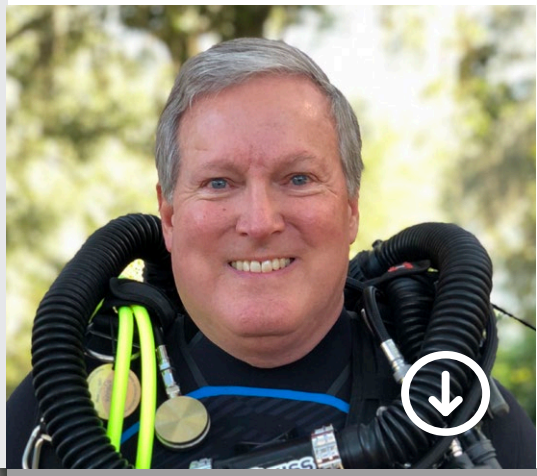

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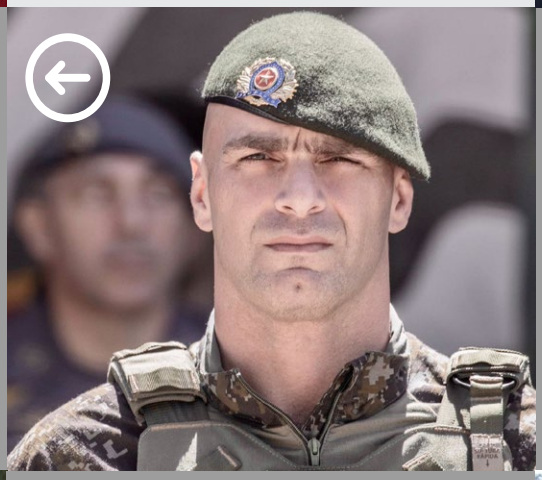

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NITROX IANTD
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COVER
PHOTO:Kadu Pinheiro

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KADU PINHEIRO | NITROX IANTD EDITOR

IANTD UWP Instructor Trainer, Creator and editor-in-chief of several diving magazines in Brazil over the past 15 years, extensive knowledge of the diving market worldwide, also collaborated with the world's largest dive magazines, besides contributing with several others diving and tourism publications.

NITROX is a IANTD publication that covers topics about diving, equipment, photography and lifestyle activities.

Year 2 | No. 07 | November | 2025

Editorial coordination:
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Collaborators:

In this edition, the following contributed:
Kadu Pinheiro, Luis Augusto Pedro, Kurt Storms, Jon Bernot, Kristi Bernot, Charlotte Proper

Exploration, Youth & Reflections Beneath the Surface

Every dive begins with a story — sometimes written in coral, sometimes carved into steel, and often, simply felt in the silence of the deep. This edition of Nitrox Magazine celebrates that unshakable spirit of exploration that keeps us descending, learning, and discovering.

Our main feature takes us to one of the most legendary dive destinations on Earth — the Red Sea. In "Red Sea: The North Route", photographer and explorer Kadu Pinheiro captures the magic of The Strait of Tiran, Ras Mohammed, and the timeless wrecks scattered across these turquoise waters. Expect vibrant reefs, schools of anthias swirling in sunlight, and the haunting beauty of the Thistlegorm, where history and marine life coexist in perfect stillness.

From the sun-drenched Red Sea, we plunge into the cool, mysterious waters of southern France. In "Ressel: The Gem of the Lot Region", we follow a team of divers through one of Europe's most iconic cave systems — a realm of white limestone, deep silence, and pure exploration.

In this issue, we also introduce one of the brightest new faces in diving — Charlotte Proper, the youngest IANTD Ambassador. At just nine years old, Charlotte embodies the next generation of ocean advocates. Her enthusiasm is a reminder that the passion for the underwater world doesn't wait for age or experience — it begins with curiosity and courage.

And rounding out our journey, Jon Bernot invites us to reflect on the mental drift that connects divers worldwide in "Drifting Perceptions" — a thoughtful piece about perspective, mindfulness, and the way diving shapes our inner world as much as it does our surroundings.

Each story in this issue carries a shared current: the desire to explore, protect, and understand. Whether it's the vibrant reefs of the Red Sea, the timeless stillness of Ressel, or the fresh perspective of a young diver taking her first breaths underwater — we are reminded that the ocean continues to offer both mystery and meaning to those who listen.

Stay curious. Dive deeper.
Kadu Pinheiro
Nitrox Editor

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The IANTD Diving Magazine

RED SEA, THE NORTH ROUTE

The Strait of Tiran, Ras Mohamed and Historic Shipwrecks

Text and Photos by Kadu Pinheiro

As a professional photographer and working for Blue Force, I had the opportunity to take part in and document several dive expeditions in the Red Sea, in Egypt, aboard the liveaboard Blue Force 2. These trips, run from Sharm El Sheikh, focused on the Strait of Tiran, Ras Mohamed National Park, and the wrecks of the Dunraven, Kingston and Thistlegorm.

We carried out a variety of dives, including deep dives, with four immersions on the Thistlegorm — one of them at night — and a sunset snorkeling session with dolphins near the wreck. Below I present a detailed narrative of that experience, organized by themes, with emphasis on the dive sites, the marine life observed and the lessons captured by my lens. This piece is based on personal observations and integrates insights from previous expeditions, prioritizing precise descriptions and appropriate technical terms.

DIVES IN THE STRAIT OF TIRAN: THE NORTHERN REEFS

The Strait of Tiran, at the entrance of the Gulf of Aqaba, is a region marked by aligned reefs that offer impressive coral formations and abundant marine life, thanks to the currents that nourish the ecosystem. The four main reefs — Jackson, Thomas, Woodhouse and Gordon — form an iconic cluster, with varied topographies ranging from vertical walls to shallow plateaus, ideal for visual explorations and encounters with colorful species.

JACKSON REEF

Jackson Reef, the most famous and colorful of the area, stands out for its exuberant gardens of soft corals in shades of purple and yellow, where tall gorgonians shelter schools of anthias in pink clouds. The southern plateau reveals pulsating brain corals and the wreck of the Lara, a listing cargo ship covered in algae that serves as a hideout for yellow-eyed moray eels, while parrotfish nip at the edges and green turtles glide lazily, reflecting filtered sun rays. Barracudas patrol the deep blue, adding a touch of predatory dynamism.

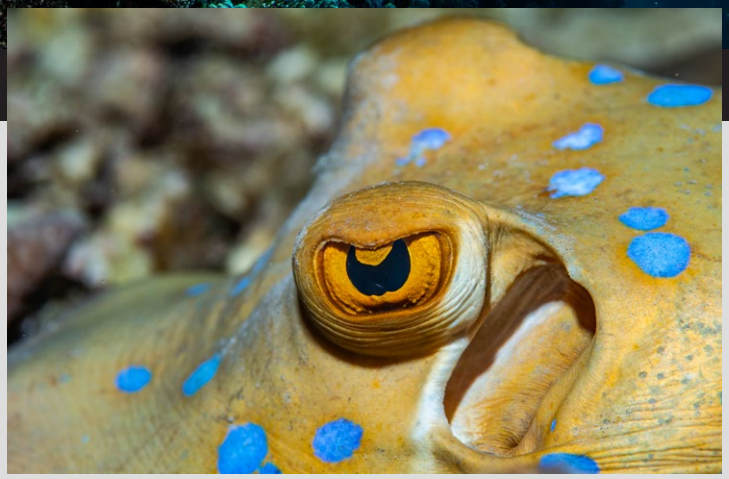
THOMAS REEF

Thomas Reef, compact and dramatic, impresses with vertical walls adorned with red and vibrant yellow soft corals, leading to a canyon pierced by the Three Arches — natural rock arches that filter beams of light like theatrical portals. Nudibranchs and other small-life attractions are easily spotted on the colorful walls, and the southeast plateau mixes white sand with schools of silvery fusiliers, often crossed by broad-winged eagle rays and lionfish hiding in rocky crevices.

WOODHOUSE REEF

Woodhouse Reef, elongated and narrow, invites a gentle drift that reveals walls with pulsating anemones and giant gorgonians stretching out like welcoming structures. Black coral colonies add somber contrast to the blue, and a central canyon unfolds sandy corridors inhabited by giant morays emerging from the shadows, with curious Napoleon wrasse approaching and turtles frequenting the shallow zones.

GORDON REEF



Gordon Reef, the most accessible, features a sunlit shallow plateau covered in brain and leather corals that cast luminous patterns on the white sand. The wreck of the Loullia shelters morays in rocky refuges, while the southern drop-off challenges with depth and the north displays iridescent schools of snappers and butterflyfish, occasionally interrupted by spinner dolphins slicing the surface and passing eagle rays.

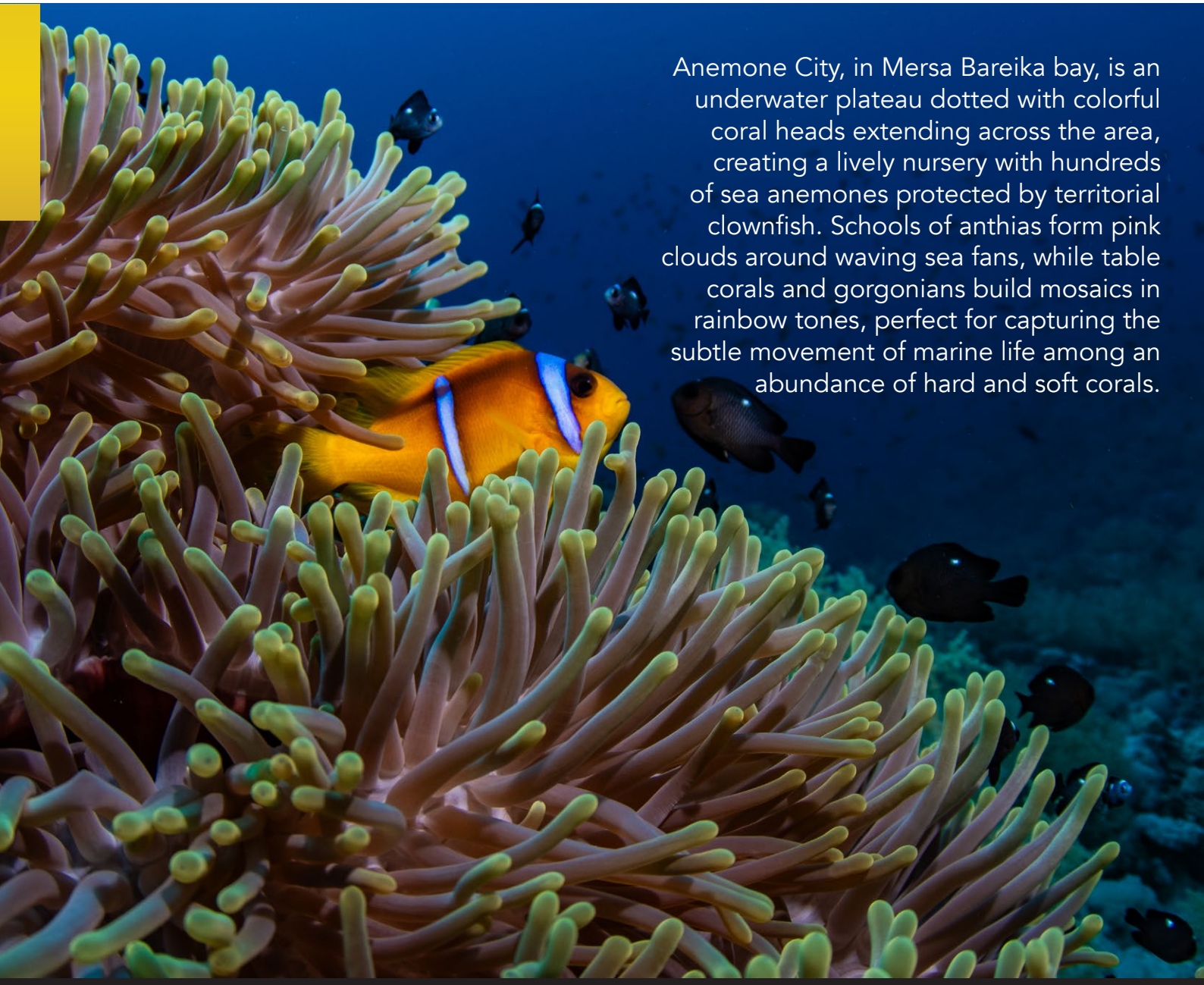
RAS MOHAMED

Exploration in Ras Mohamed National Park: Iconic Reefs and Biodiversity

Ras Mohamed National Park, at the southern tip of Sinai since 1983, is a sanctuary where vibrant reefs meet the desert, creating scenes of steep walls and colorful plateaus that harbor an impressive diversity of corals and marine species. The sites explored — Anemone City, Small Crack, Shag Rock, Ras Ghozlani, Shark Reef and Yolanda Reef — offer smooth drifts and varied encounters, with formations that bloom between high and low tides.

ANEMONE CITY

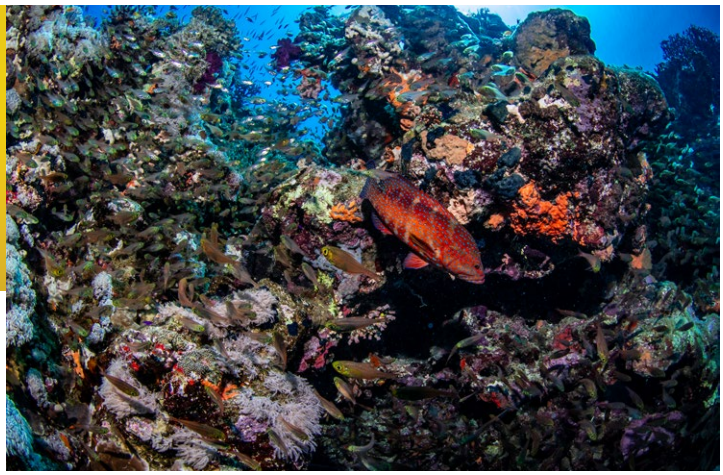
Anemone City, in Mersa Bareika bay, is an underwater plateau dotted with colorful coral heads extending across the area, creating a lively nursery with hundreds of sea anemones protected by territorial clownfish. Schools of anthias form pink clouds around waving sea fans, while table corals and gorgonians build mosaics in rainbow tones, perfect for capturing the subtle movement of marine life among an abundance of hard and soft corals.



SMALL CRACK AND SHAG ROCK

Small Crack and Shag Rock provide dramatic topographies with fissures and rock formations that reveal dense gardens of dazzling corals. In Small Crack, the entrance called “Bells” drops like a narrow chimney, where clownfish defend territories among branching staghorn corals, with rough textures and patterns of filtered light. Shag Rock, lined by fissures and small accessible caves, displays shaded alcoves inhabited by damselfish and morays peeking from crevices, adding an element of discovery.

JACKFISH ALLEY



A stunning dive site known for its dramatic coral walls, blue caverns, and abundant marine life. Divers often encounter jackfish, barracudas, turtles, and schools of colorful reef fish cruising along the reef's edge. A mix of tunnels, drop-offs, and crystal-clear waters make it one of Ras Mohammed's signature dives.

SHARK REEF

Shark Reef is a vertical wall that plunges to impressive depths, covered by fantastic hard and soft corals, including gorgonians and table corals that shelter vibrant microscopic life. The shallow plateau with isolated pinnacles leads to drifts that reveal schools of barracuda and jacks in formation, damselfish defending anemones, and occasional sightings of grey reef sharks or whitetip reef sharks.

YOLANDA REEF

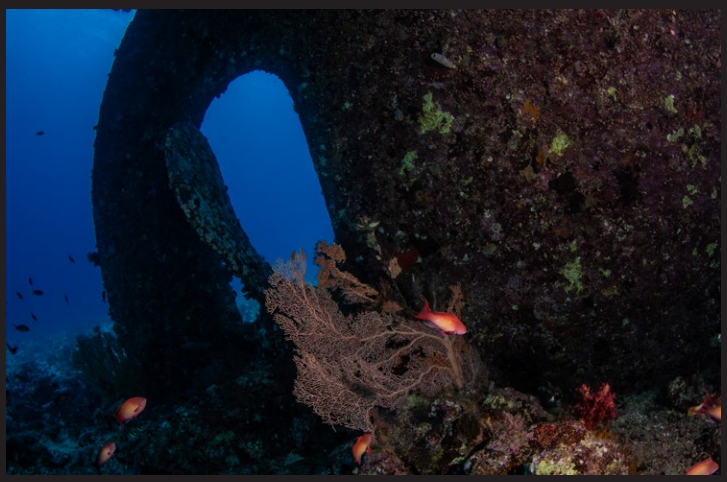
Yolanda Reef, adjacent, presents a wide plateau with coral gardens and elevated pinnacles, famous for the wreck of the cargo ship Yolanda from 1981, whose remnants — like bathtubs and toilets strewn about — create a surreal scene covered by soft corals. Morays, crocodilefish and nudibranchs inhabit the structures, while green turtles graze, snappers and butterflyfish form schools, and tunas migrate in pelagic transitions.

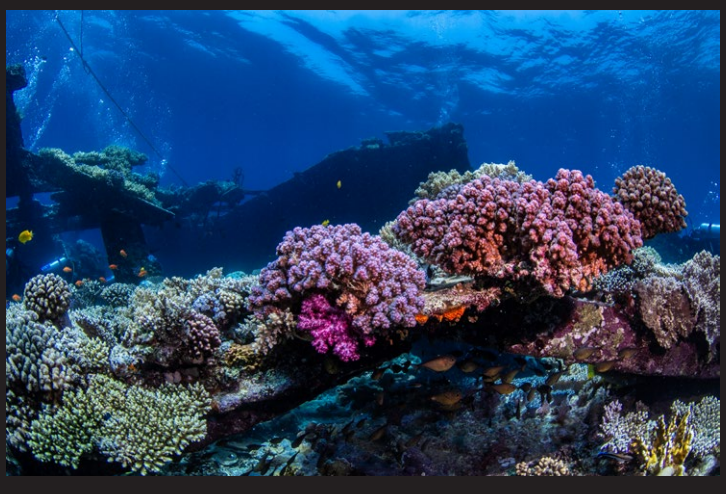
THE WRECKS OF THE DUNRAVEN AND KINGSTON: SUBMERGED HISTORIES

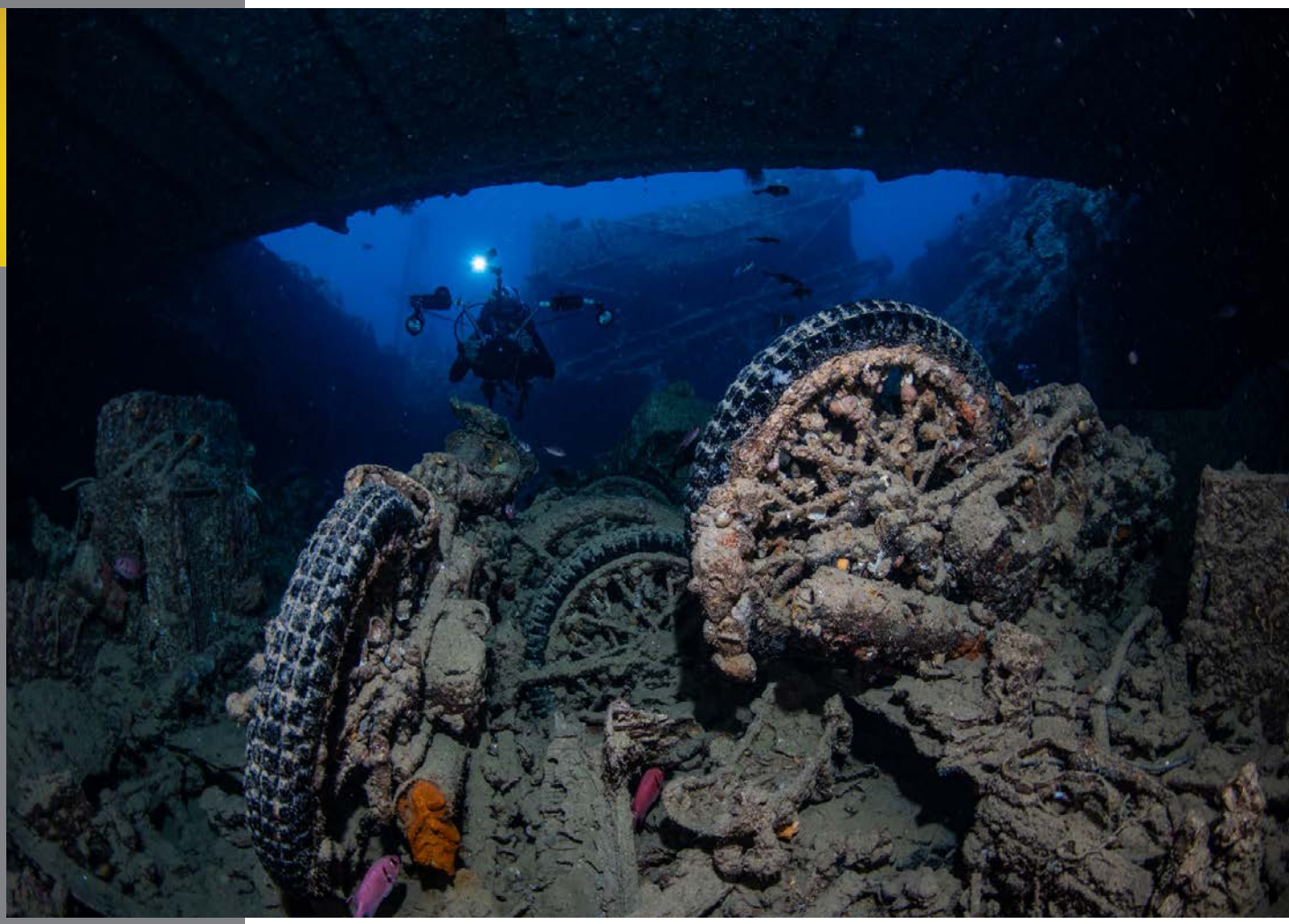
The wrecks added historical layers to the expedition. The Dunraven, a British wooden steamer from 1873 that sank in 1876 after colliding with a reef at Shaab Mahmoud, lies upside down at 30 meters. Accessible to all levels, its stern shelters colorful nudibranchs and camouflaged crocodilefish (Caracanthus spp.), while the main deck, covered in soft corals, reveals sinuous morays. Light penetrations explore the aged wooden structure, where the tactile touch of metal and coral creates a tactile narrative of the Victorian era.

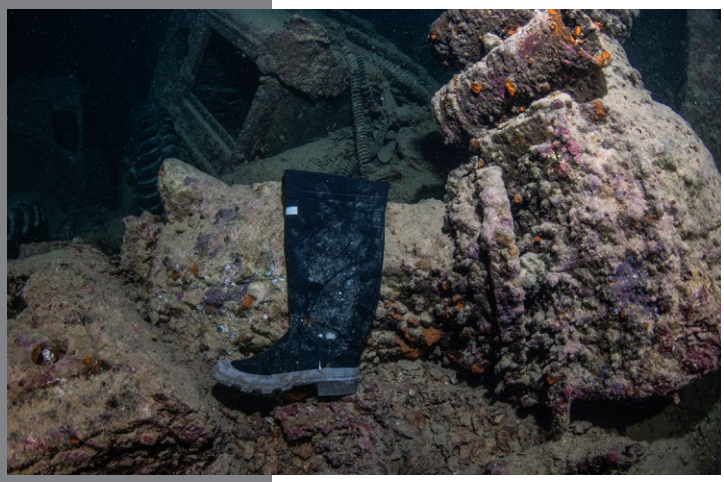
THE KINGSTON

The Kingston, an Italian cargo ship from 1943 sunk accidentally in shallow waters, blends into vibrant reefs. Its rusted silhouette contrasts with snappers and butterflyfish that enliven it, allowing penetrations where morays peek from the shadows. Surrounded by a colorful ecosystem, it offers glimpses of mystery, with debris that tell the story of 20th-century maritime trade.









THE THISTLEGORM

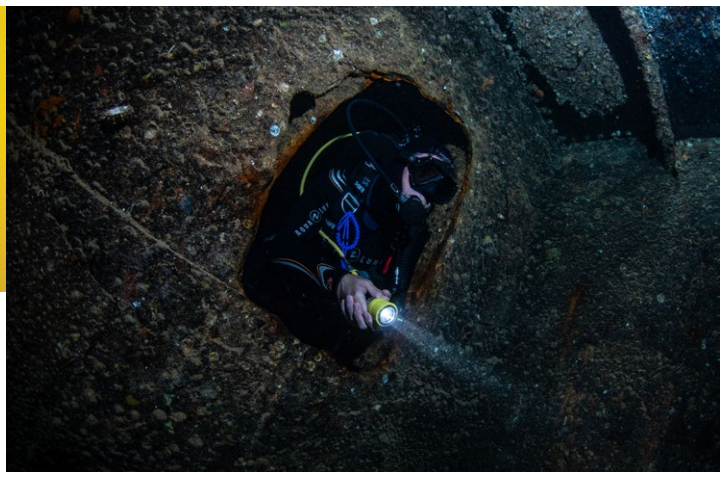
Four Dives in the World War II Underwater Museum

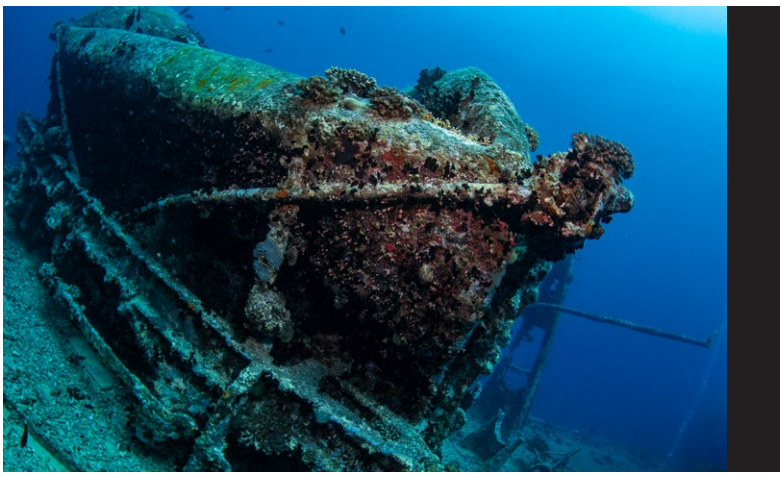
The SS Thistlegorm is one of the most emblematic wrecks in the world for divers and historians, representing a dramatic chapter of World War II. As a British cargo ship sunk in the Red Sea in 1941, it preserves intact artifacts from an era of global conflict, becoming a living underwater museum. Built in 1940 at the J.L. Thompson & Sons shipyards in Sunderland, in the northeast of England, as part of the British war effort, it measured 125 meters in length, with a draft of 6.5 meters and a cargo capacity of around 9,000 tons.

Its name, "Thistlegorm," derived from the Scottish emblem of the thistle, reflecting its origin in Glasgow, where it was adapted for naval service by the Royal Navy. Equipped with triple-expansion steam engines capable of propelling it at 15 knots, the ship had reinforced decks to carry heavy vehicles and ammunition, as well as anti-aircraft guns for limited defense against air attacks. This configuration made it ideal for supply missions in remote war theaters, but also vulnerable in contested waters.

THISTLEGORM

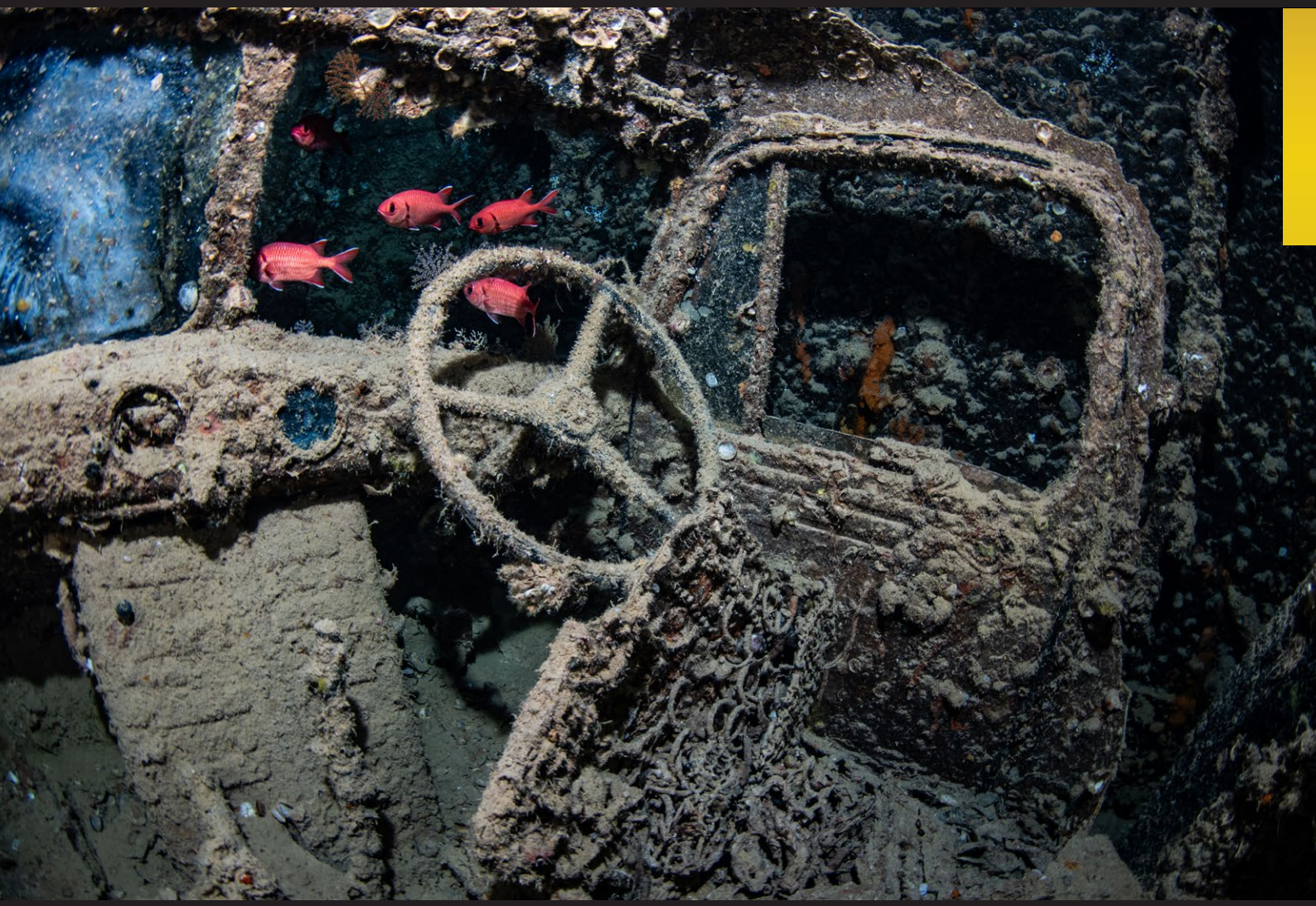
Loaded in Glasgow in the summer of 1941 with vital supplies for Allied forces in the North Africa Campaign, under the command of Captain William Ellis, its cargo included an impressive mixture of military equipment: around 50 Bedford trucks, BSA motorcycles, light tanks, jeeps, spare aircraft parts, Lee-Enfield rifles, boxes of ammunition, dynamite, soldiers' boots, radios and even two narrow-gauge steam locomotives destined for Egyptian railways.





These items, packed in deep holds and protected against moisture, represented a logistical treasure for the British 8th Army, which faced Rommel's Afrika Korps in the desert. The mission was critical: with the Mediterranean controlled by Axis submarines and aircraft, the ship was part of "Operation Pedestal," an alternative route via the Cape of Good Hope to deliver supplies to Alexandria, Egypt.

THISTLEGORM



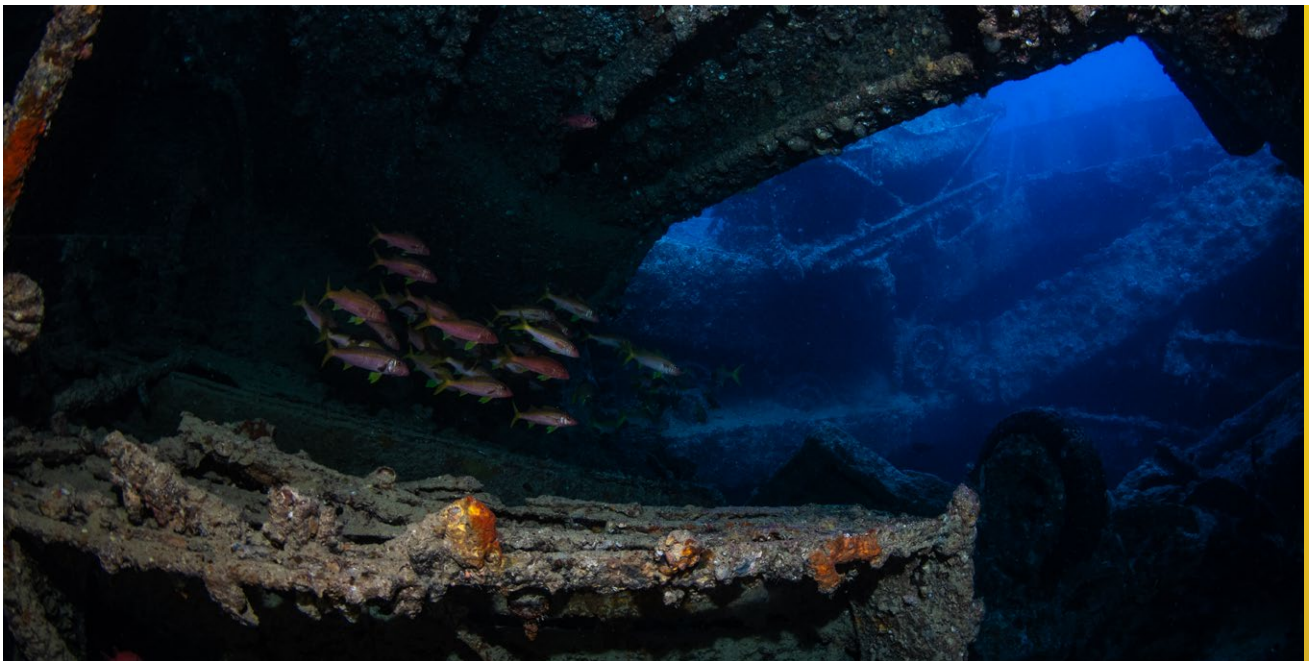
In June 1941, the Thistlegorm sailed from Glasgow as part of a convoy of 20 ships, escorted by Royal Navy cruisers and destroyers. To avoid the danger of the Mediterranean, infested by German and Italian U-boats, the route circumnavigated Africa: passing through the English Channel, down the Atlantic to the Cape of Good Hope, up the Indian Ocean and entering the Red Sea via Aden. This 13,000-mile journey took months, with stops at neutral ports such as Cape Town, where the crew of 48 sailors and engineers faced boredom and the constant fear of attacks.

THISTLEGORM

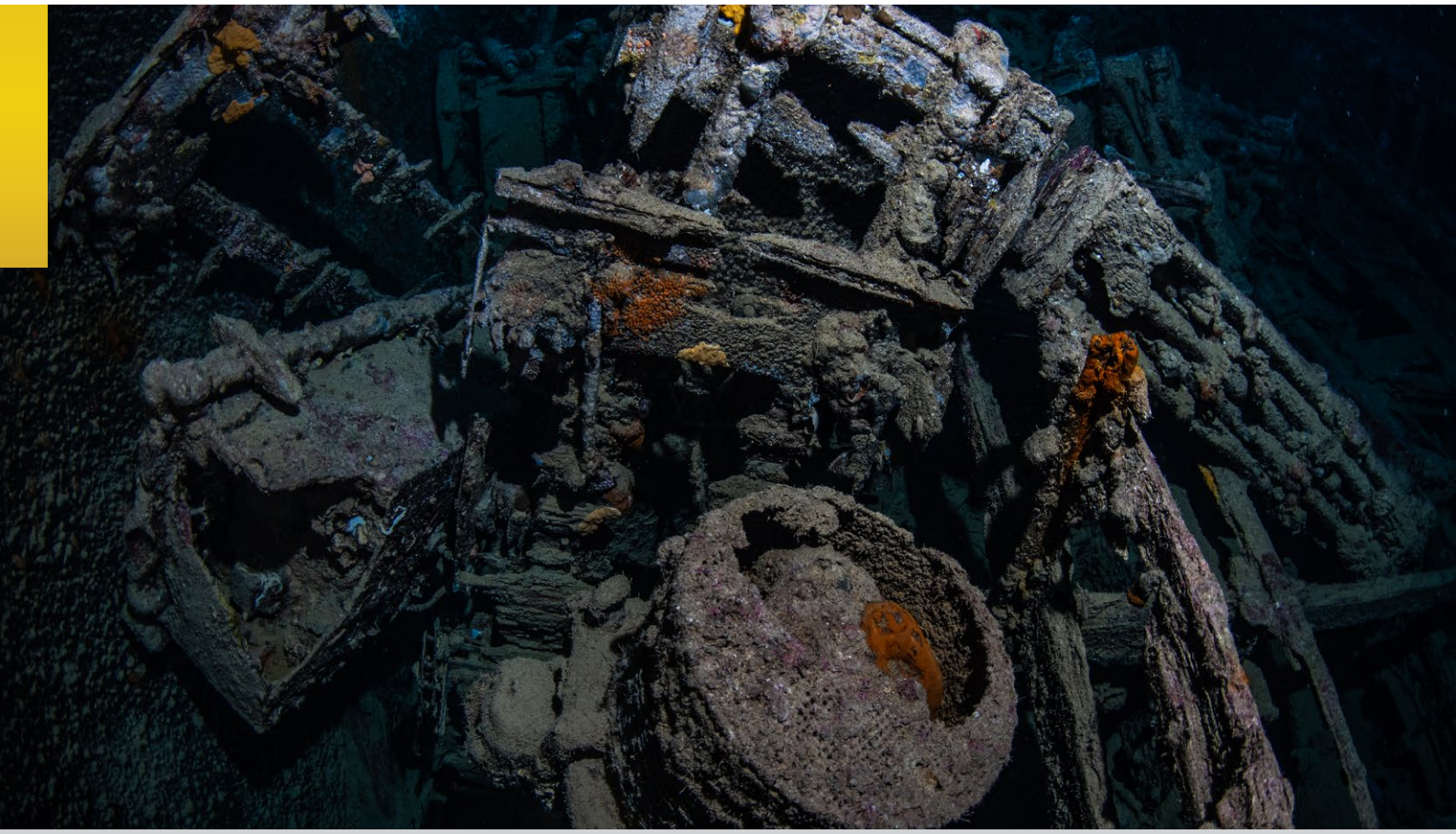
In the context of the war, the Red Sea was a vital route but underestimated by the Allies; the Germans, operating from the base in Crete, sent Heinkel He 111 bombers to intercept convoys, prioritizing targets like the RMS Queen Mary, which carried troops. The Thistlegorm arrived at the Gubal Strait, north of the Red Sea, in September 1941, anchoring at 30 meters depth to await authorization to proceed to Alexandria, without immediate escort due to logistical delays. That fatal stop left it exposed, isolated in calm waters but visible to Axis aerial patrols.

In the early hours of 6 October 1941, around 00:30, two Heinkel He 111 bombers from the 2nd Dive-Bombing Unit of the Luftwaffe, based in Crete, sighted the Thistlegorm during a reconnaissance mission. The planes, flown by experienced crews, dropped four 500-pound bombs aimed at the cargo deck.

THISTLEGORM



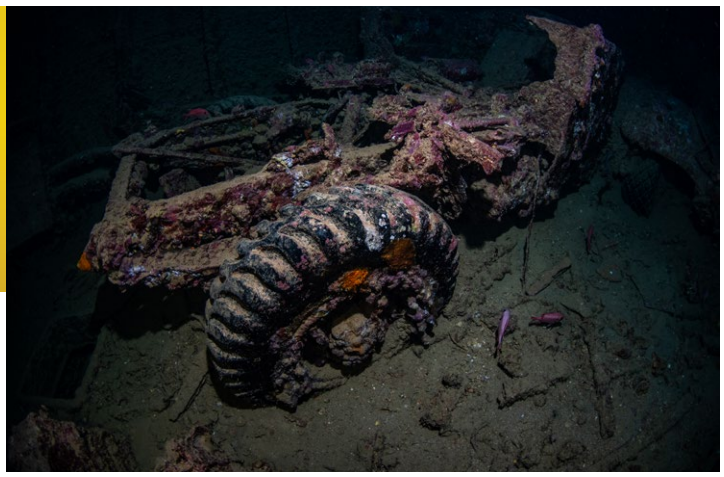
Two bombs missed, falling into the water and creating columns of spray, but the other two struck the fourth ammunition hold, triggering a catastrophic explosion that broke the ship in half. The detonation was so violent that it lit the horizon like a second sunrise, scattering debris for hundreds of meters and sinking the Thistlegorm in less than 12 minutes. Of the 48 crew members on board (including sailors and gunners), nine lost their lives — four British sailors and five Royal Navy members — while survivors were rescued by a local fishing dhow, the "Aida," and taken to Suez. Captain Ellis later reported that the ship "disappeared in a ball of fire," highlighting the total surprise of the night attack. This incident, part of the German air campaign in the Red Sea, delayed Allied supplies but did not change the course of the war in North Africa.



The Thistlegorm remained forgotten for more than a decade, until it was rediscovered in the 1950s by Jacques-Yves Cousteau during expeditions with the ship Calypso. Cousteau, using primitive sonar, located the intact wreck at 30 meters depth in the Gubal Strait, filming its holds full of rusting vehicles in his documentary The Silent World (1956), which popularized the site for divers. Since then, the wreck has evolved into one of the world's top 10 dive sites, protected by Egyptian laws that prohibit artifact removal. Today, three nautical miles from Ras Mohamed, it shelters rich biodiversity — from barracudas to turtles — but its historical value lies in the "ghosts" of the war: Bedford trucks still with wheels, sealed ammunition boxes and petrified uniforms. Projects like the Thistlegorm Project document its conservation, using photogrammetry to map the structure deteriorated by corrosion. In 2025, with increased underwater tourism, the site reinforces debates about ethical preservation, balancing access with protection against anthropogenic damage.

THISTLEGORM

Our first daytime dive focused on the bow: the broken prow emerged, patrolled by batfish (Platax spp.) and barracudas with 30 meters visibility. Trucks in the open holds evoked the chaos of 1941, photographed in detail. The second dive penetrated the holds: fallen locomotives and scattered ammunition boxes, with crocodilefish in the shadows and red snappers (Lutjanus spp.) in schools. The third explored the stern: anti-aircraft guns, a propeller wrapped in soft corals and feeding turtles, stern holds with cargo including rifles and petrified boots. Lionfish (Pterois volitans) hunted in groups, transforming the wreck into a living aquarium.



The fourth dive, at night, revealed an inverted world: torches sliced the darkness, illuminating giant morays hunting, octopuses changing color in ambush, and squids with flashing chromatophores. Shrimps crawled over surfaces, nudibranchs colored the debris in the holds.

THISTLEGORM

AN ENCOUNTER AT SUNSET

SNORKELING WITH DOLPHINS:

At the end of the day at the Thistlegorm, we snorkeled at Sha'ab El Erg, where a pod of bottlenose dolphins (Tursiops truncatus) surrounded us. In shallow waters with coral heads and white sand, they dove and leapt, staying close enough to hear their sounds. Their intelligent eyes fixed on ours, turning the sunset into a harmonious and magical interaction with marine life.

THE BLUE FORCE 2 LIVEABOARD

The Blue Force 2 is a 32-meter yacht designed specifically for advanced divers, with capacity for up to 18 guests distributed in nine comfortable cabins. Five cabins on the lower deck offer portholes that provide an indirect view of the marine environment, while the four on the upper deck have panoramic windows for horizon observation. Each cabin is equipped with air conditioning, en-suite bathrooms with hot showers and adjustable twin beds, ensuring adequate rest after intense dives. The main salon integrates a large dining area, bathed in natural light through side windows, where meals are prepared with fresh ingredients: grilled local fish, salads with regional herbs and seasonal fruits. The adjacent lounge includes ergonomic sofas and a library of educational materials about the Red Sea. On the upper deck, an outdoor bar facilitates informal interactions, and the dive deck is the focal point: spacious, with dedicated stations for photographic equipment — essential for professionals like me — and two zodiacs for quick launches. Unlimited nitrox is available for certified divers, allowing extended dive profiles without compromising safety. The crew, composed of experienced guides and Egyptian staff, manages detailed daily briefings, emphasizing currents, visibility (generally above 25 meters) and water temperatures around 26°C. This setup enabled smooth operation, with focus on sustainability and reef preservation.

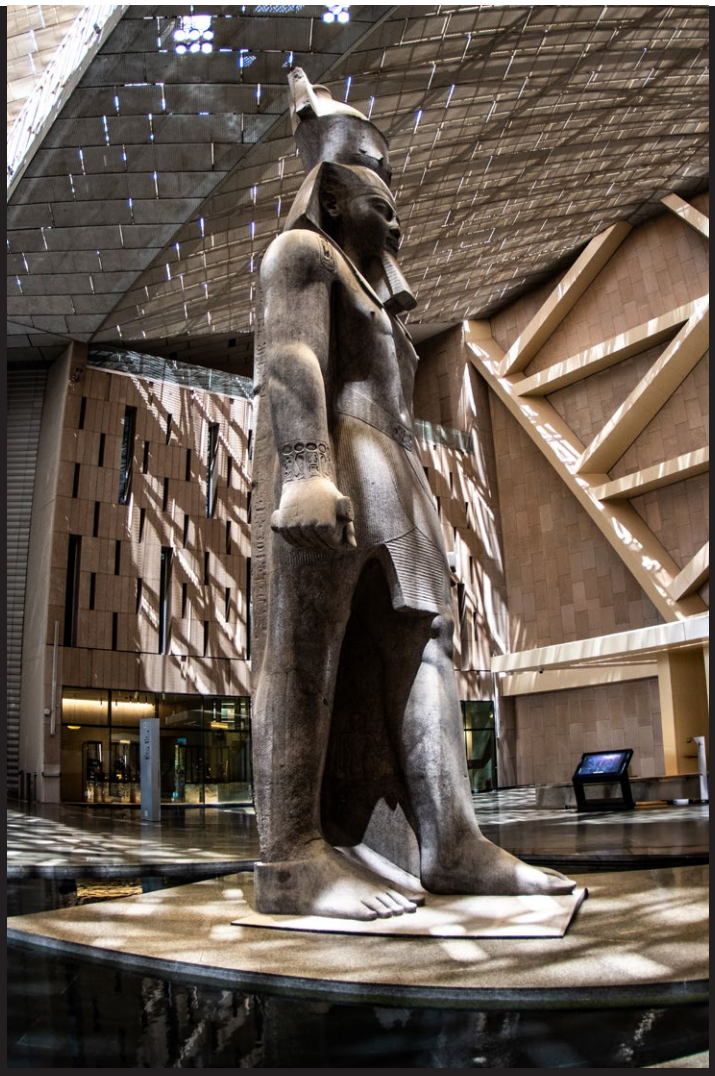
EXTENSION TO CAIRO: MAIN CULTURAL AND HISTORICAL ATTRACTIONS

Many divers extend the trip to Cairo for 2–3 days, exploring its heritage. Here, I highlight key attractions, with detailed historical context.

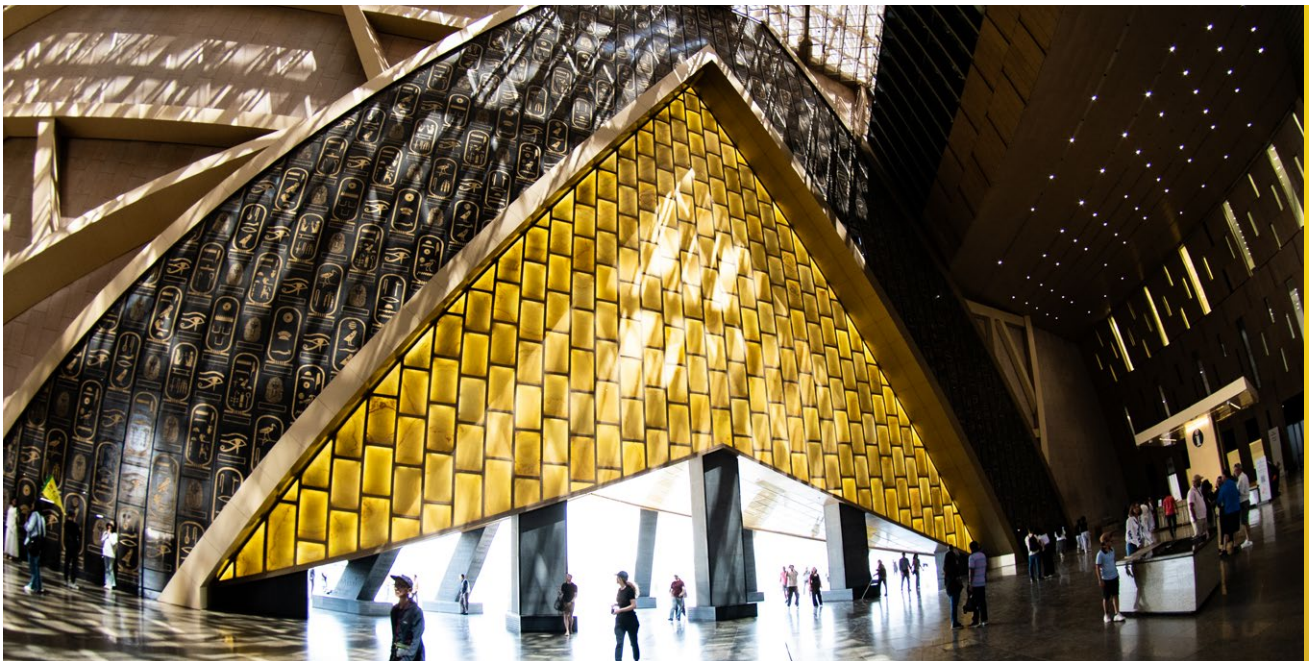
PYRAMIDS OF GIZA AND THE SPHINX

Located 15 km from downtown Cairo, the Pyramids of Giza were built during the 4th Dynasty (c. 2580–2565 BCE) as royal tombs in the Old Kingdom. The Great Pyramid of Khufu (Cheops), the largest, originally measured 146 meters in height with 2.3 million blocks of up to 80 tons, aligned to the cardinal points with a precision of 3/60 degrees. Built by skilled workers using ramps and levers, it symbolized pharaonic power and beliefs in the afterlife. Khafre's Pyramid preserves casing stones, and Menkaure's completes the trio, with funerary temples. The Sphinx, carved c. 2500 BCE from a rock outcrop, represents the pharaoh as guardian, its leonine body measuring 73 meters. Visit at sunrise to avoid crowds, opting for camel or balloon tours for panoramic views of the plateau and the Nile.

GRAND EGYPTIAN MUSEUM (GEM)

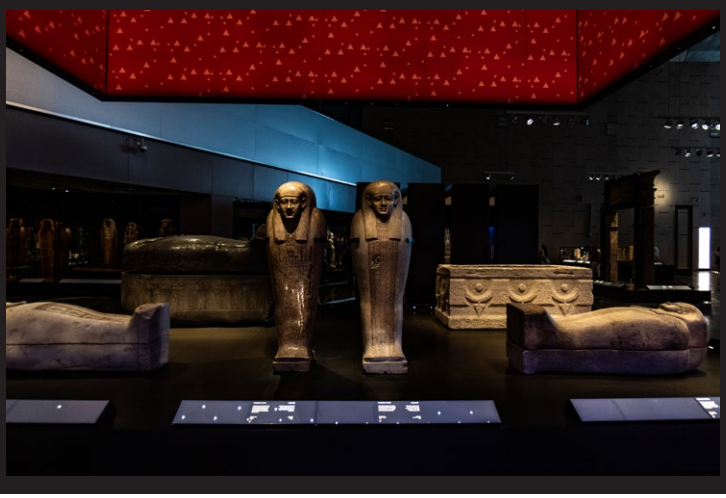


The Grand Egyptian Museum (GEM), located just 2 km from the Pyramids of Giza, represents a new era for the treasures of Ancient Egypt. Designed to be the largest archaeological museum in the world, with an area of 490,000 square meters and an investment exceeding US$1 billion, the GEM was partially inaugurated in October 2024, with the official opening scheduled for July 3, 2025. During my visit in May 2025, the imposing entrance, dominated by the 83-ton statue of Ramses II, radiated timeless majesty under natural light. My photographs captured everything from intricately carved sarcophagi to delicate gold ornaments, each image a testament to the museum's unparalleled collection.



The GEM's 12 main galleries, organized by dynasty, house about 15,000 artifacts, many on display for the first time. The chronological layout guides visitors from Prehistoric times to the Greco-Roman period, with the upcoming Tutankhamun exhibition — featuring over 5,000 items, including his iconic golden mask — as centerpiece. Cutting-edge technology elevates the experience: interactive screens, QR codes with detailed information, and a virtual reality gallery on funerary rituals create an immersive journey. The Grand Staircase, flanked by colossal statues and offering panoramic views of the pyramids, was a highlight for my photography, linking the museum to the ancient legacy of the Giza Plateau.

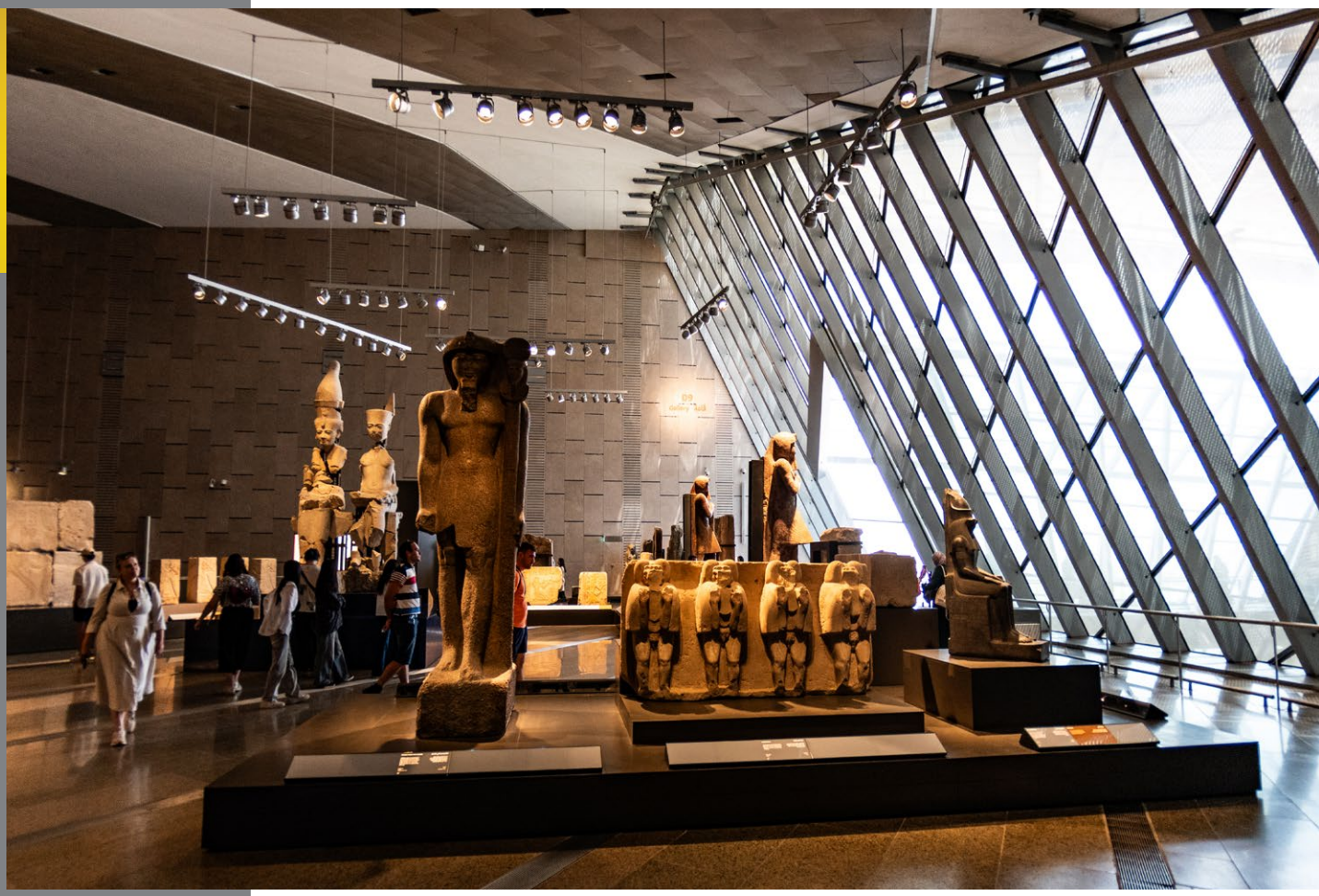
In addition to galleries, the GEM includes a children's museum, a library, restoration laboratories and commercial areas, reinforcing its role as a cultural and educational hub. The spacious, air-conditioned design ensures comfort even in the Egyptian heat, allowing for hours-long explorations.

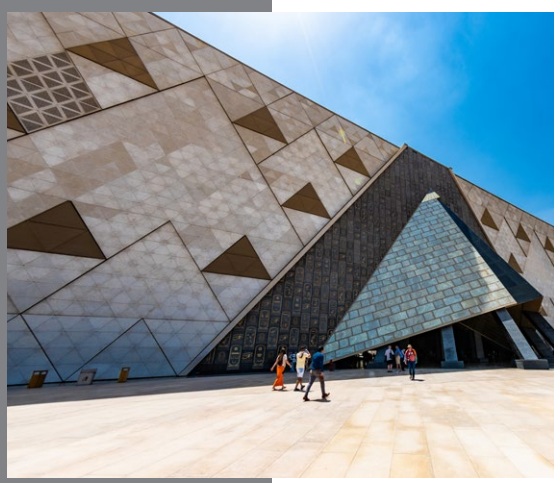


Historical Context and Significance

Conceived in 1992 and with construction beginning in 2005, the GEM was designed by architects Heneghan Peng, winners of an international competition. Its translucent alabaster façade and triangular shape, aligned with the Khufu and Menkaure pyramids, pay homage to Egyptian heritage.

The museum succeeds the Egyptian Museum in Tahrir Square, founded in 1902, which long served as the main repository of pharaonic artifacts. Items such as Khufu's Solar Boat were transferred to the GEM, consolidating its status as the new epicenter of Egyptology.





The GEM goes beyond a tourist destination; it is a global landmark for the preservation and study of Ancient Egypt. With capacity for up to 15,000 visitors per day, the museum reflects Egypt's commitment to cultural tourism, supported by international partnerships such as funding from the Japan International Cooperation Agency (JICA).

Final Considerations

My visit to the Grand Egyptian Museum in May 2025 was a profound celebration of the legacy of Ancient Egypt, elevated by modern infrastructure and innovative technology. The hundreds of photos I took — from imposing statues to intricately detailed pharaonic jewels — capture the grandeur of a space that honors the past while embracing the future. The wonder I felt at the Egyptian Museum in 2000 found a new expression at the GEM, offering a more accessible and immersive experience. For travelers, whether arriving from a dive cruise or not, the Grand Egyptian Museum is unmissable — a gateway to the pharaohs' secrets.

CITADEL OF SALADIN AND MUHAMMAD ALI MOSQUE

Built by Salah ad-Din between 1176–1183 on the Mokattam hill to defend against the Crusaders, the Citadel expanded as an Ottoman seat, with basalt walls offering views over the city. The Muhammad Ali Mosque (Alabaster), completed in 1857, follows Ottoman style with alabaster domes filtering golden light, marble columns and arabesques. Commissioned by Muhammad Ali Pasha, founder of the modern dynasty, it symbolizes the Islamic transition; its mausoleum houses the sultan. Explore adjacent mosques like Al-Nasir Muhammad with Iznik tiles. Dedicate two hours, wearing modest clothing, to appreciate the contrast between medieval fortifications and spirituality.

A VISIT TO COPTIC CAIRO

On the southern part of Roda Island along the Nile, it is compact and engaging, ideal for 3–4 hours on a walking itinerary within the walls of the ancient Babylon Fortress. Avoid Fridays and Sundays for fewer crowds. Wear modest clothing and consider a local guide for historical insights.

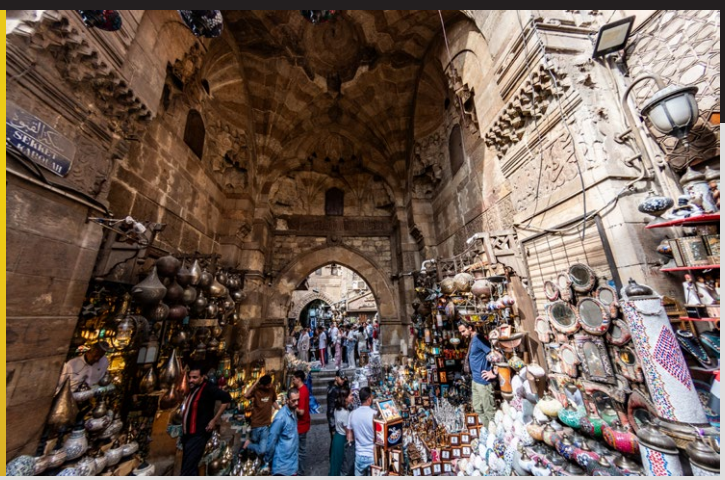
Start at the Hanging Church (Al-Muallaqa), built in the 7th century atop raised Roman gates against flooding. Its 13 granite pillars symbolize the apostles, with carved cedar ceilings and 12th-century golden icons; descend to the crypts for martyrs' relics, capturing light filtered by stained glass. Proceed to Saint Sergius and Bacchus Church (Abu Serga), from the 4th century, one of the oldest in the world. Dedicated to Roman martyrs, it houses an underground crypt 3 meters deep — the supposed hiding place of the Holy Family during their flight to Egypt — with pink granite pillars and frescoes narrating persecutions.

Next, visit Saint George Church (Mar Girgis), rebuilt in the 10th century, with vivid frescoes of the saint slaying the dragon and twin bell towers. Its vaulted interior and 19th-century stained glass illuminate silver icons, highlighting the Byzantine and Coptic fusion.

Finish at the Ben Ezra Synagogue (9th century, rebuilt in the 19th), legendary for the "finding" of Moses in the Nile and its genizah of sacred manuscripts, and the Coptic Museum (1910), with 16,000 artifacts such as 5th-century tapestries and processional crosses, arranged chronologically in air-conditioned rooms.

This circuit reveals Coptic resilience from the 1st century to the present, complementing Cairo explorations with a touch of ancient spirituality.

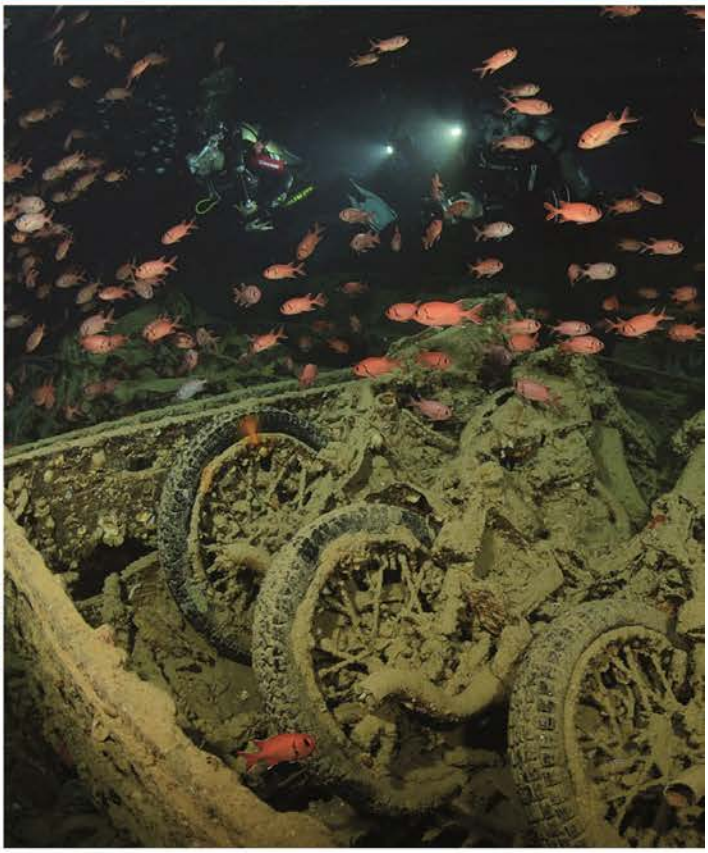
KHAN EL-KHALILI BAZAAR



Founded in the 14th century as a caravan market and expanded in the 15th century by the Mamluks, this labyrinth in Islamic Cairo pulses with 600 years of commerce. Narrow streets exhale scents of oud, cumin and saffron; brass lanterns hang, and vibrant fabrics brush passersby. Purchase silver jewelry with evil-eye motifs, geometric Persian rugs or glass hookahs. Artisans hammer copper in workshops, and cafés serve mint tea under awnings. Visit at dusk, bargaining courteously (offer half the initial price), and discover mosques such as Hussein with marble courtyards.

RED SEA

BLUE FORCE FLEET



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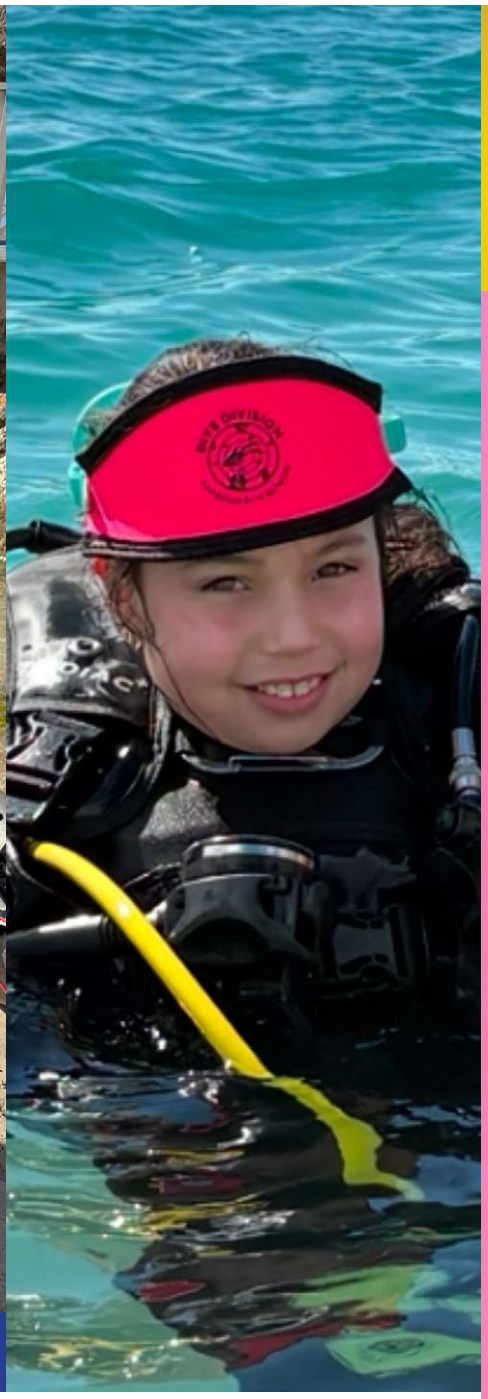
INTERVIEW WITH CHARLOTTE PROPER

The Youngest IANTD Diving Ambassador

by IANTD Team

At just 9 years old, Charlotte Proper is already making waves in the diving world as the youngest IANTD Diving Ambassador. Growing up surrounded by a family of divers and spending countless hours in her parents' dive shop, she developed a love for the ocean from an early age. Charlotte's enthusiasm for exploring underwater life is contagious, and she's here to share her experiences, favorite sea creatures, and dreams for the future. From her first breath underwater to unforgettable adventures in Curaçao, Charlotte proves that diving isn't just for adults—it's for anyone curious enough to take the plunge.



From a very young age, Charlotte has been fully immersed in the world of diving. Her parents, both accomplished cave, technical, and rebreather instructors and instructor trainers, also run their own dive shop, giving Charlotte a unique opportunity to meet dive professionals from all over the globe. Learning to swim almost as soon as she could walk, her curiosity about the underwater world was sparked early and has only grown stronger with time. Now, as a young ambassador, Charlotte inspires other kids to discover the joy and adventure that diving can bring.

1. CHARLOTTE, YOU'RE ONLY 9 YEARS OLD AND ALREADY A DIVER! HOW DID YOU FIRST GET INTO SCUBA DIVING?

When I was younger, I watched my parents and grandparents go diving as well as spending time in our family dive shop. This got me excited about diving.

2. WHAT'S YOUR FAVORITE THING TO SEE UNDERWATER? DO YOU HAVE A FAVORITE SEA ANIMAL?

My favourite thing to see is Marine life. My favourite marine animal is the Ray.

3. DO YOU REMEMBER YOUR VERY FIRST TIME BREATHING FROM A SCUBA TANK? HOW DID IT FEEL?

My first time breathing from a Scuba tank was in the bathtub. It felt scary at first for the first couple of breaths but then the scariness turned into excitement.

4. MANY PEOPLE THINK DIVING IS ONLY FOR ADULTS. WHAT WOULD YOU TELL OTHER KIDS WHO ARE CURIOUS ABOUT DIVING?

Diving is an activity for everyone and extremely fun especially for kids.

5. WHO INSPIRES YOU IN DIVING? IS IT AN INSTRUCTOR, A FAMOUS DIVER, OR MAYBE SOMEONE IN YOUR FAMILY?

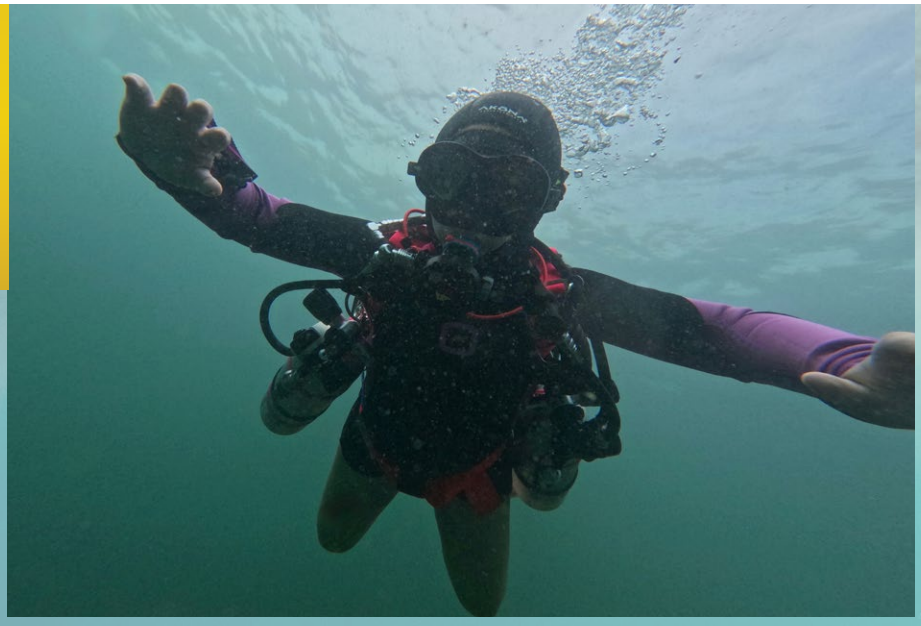
The people that inspired me were my mother Gabi, my dad Dustin and my grandpa Bruce.

6. DO YOU ALREADY HAVE AN UNFORGETTABLE DIVING ADVENTURE YOU'D LIKE TO SHARE?

My unforgettable diving adventure so far is Curaçao swimming amongst the fish and coral.

7. IF YOU COULD CHOOSE ANY PLACE IN THE WORLD TO DIVE RIGHT NOW, WHERE WOULD IT BE?

If I could choose any place in the world right now I would pick Malta.



8. HOW DOES IT FEEL TO BE THE YOUNGEST IANTD AMBASSADOR?

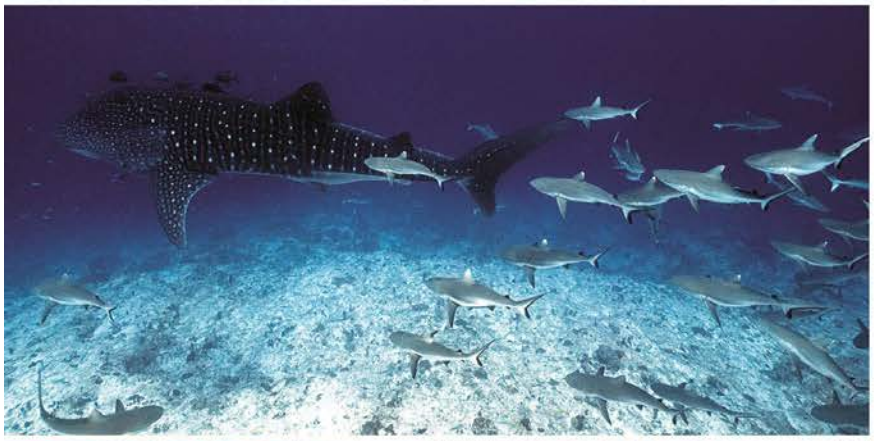
It feels great to be the youngest IANTD Ambassador because I can show other kids that diving is for everyone.

9. WHAT'S YOUR BIGGEST DREAM AS A DIVER?

My biggest dream as a diver is to get 200 dives before turning 12.

10. AND FINALLY... DO YOU PREFER TURTLES OR DOLPHINS?

I would pick dolphins but I really like turtles too.



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RESSEL THE GEM OF THE LOT REGION, FRANCE

Text & Photo by Kurt Storms

BACK TO THE LOT

Finally! After years of restrictions, we can return to the Lot in France. COVID had thrown quite a wrench into our plans, but now, with everyone vaccinated, it's time to dive again.
This time, it's a two-week trip: one week of training followed by a week of pure diving holiday with my wife, Caroline Massie. I have two students with me for the course — Jo Croimans and Bram Van Gorp — who will spend the next few days refining skills and doing dry runs. All theory lessons were completed back in Belgium so we can make the most of our dives here.

WHY THE LOT?

The Lot region is Europe's cave diving mecca. Many divers come here to take their cave training instead of traveling all the way to Mexico or Florida.

Among the many systems in the area, Ressel stands out as one of the most famous. It's located in Marcilhac-sur-Célé, right in the heart of the Lot. The cave is known for its dramatic white limestone formations, massive boulders, and impressive tunnels.

The facilities are great — a large parking area, a proper setup zone, and even toilets. From the parking lot, it's a short 100-meter walk to the entry point on the Célé River, where we prep our gear and get ready to submerge.

A BIT OF HISTORY

Ressel was first explored in 1968 by two divers from the Spéléo Club Auvergnat, Martin and Debras, who reached 150 meters.
In 1973, the line was extended to 300 meters at a depth of 30 meters.
Two years later, Fantoli and Touloumdoian reached Pit 4 at -45m.

Further exploration continued throughout the years, especially by Jochem Hasemayer in the early 1980s, who penetrated 1100 meters into the system and famously left his knife in the rock to tie off the line — the knife is still there today.

On August 12th, 1990, Olivier Isler became the first diver to cross Sump 1, completing a 10-hour and 35-minute round trip.
Sump 1 ends at Lac Isler, leading to subsequent sumps. Ressel consists of five sumps, with the first being the longest (1850 m) and deepest (-83 m). From Pit 4 onward, the deep section begins, requiring Trimix gases.
Over the following years, explorers like Rick Stanton, Martin Farr, and Mallinson extended the line all the way to the end of Sump 5, achieving a total penetration of 4415 meters along the main line.

SPECTACULAR VIEWS FROM THE START

Visibility here is simply spectacular — over 10 meters inside the cave, compared to barely 5 cm in the murky Célé River. As soon as you reach the entrance, the water clears up as if by magic.

My first thought upon seeing it was: How on earth did they even find this cave? The entrance sits about six meters below the surface and isn't exactly obvious. Local divers told us that when the cave is full, you can sometimes see a small geyser forming in the river — impressive!

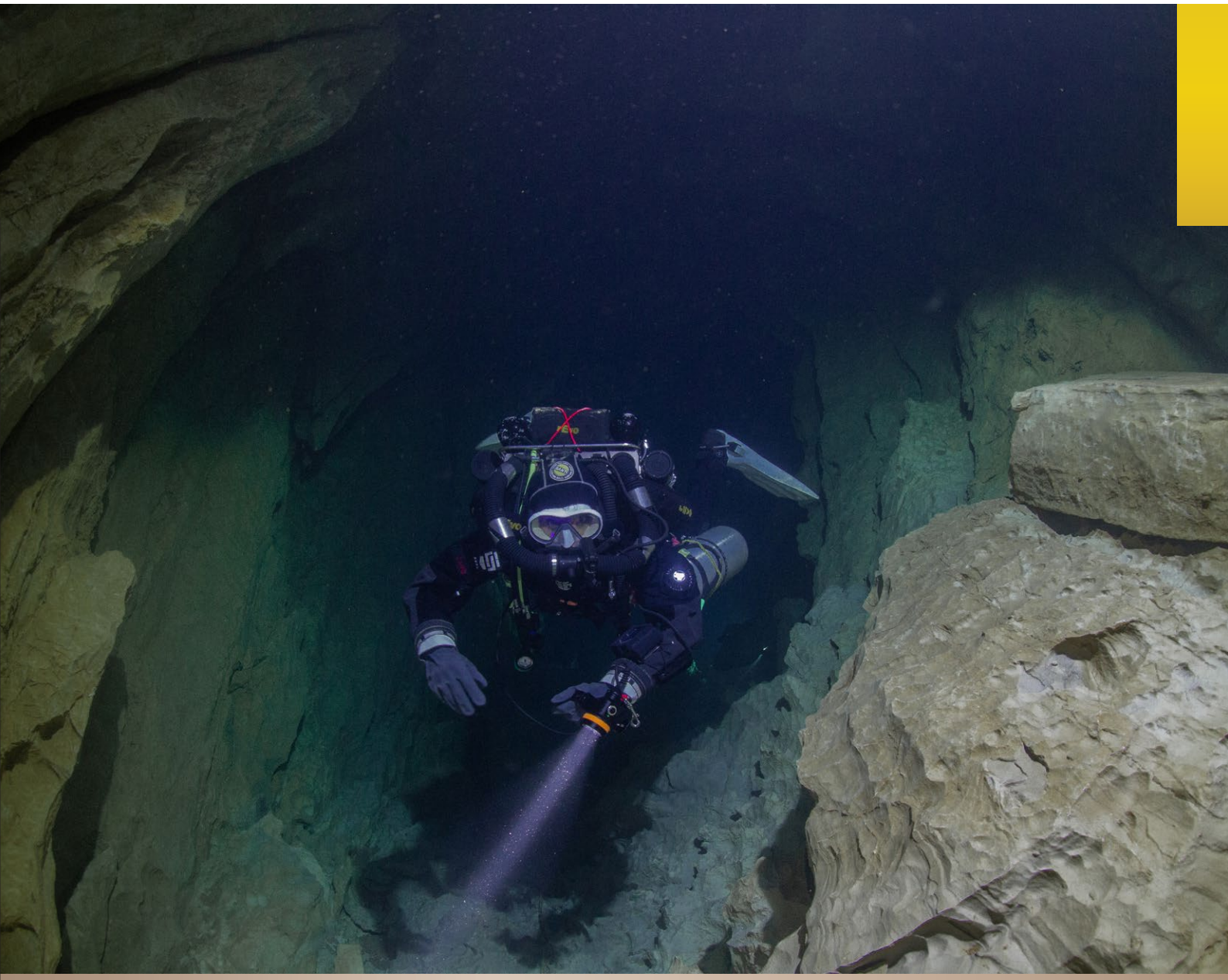
A rope runs from the entry point all the way into the cave, connecting to the main line — no primary reel needed. The entrance at 6 meters opens into a vast tunnel lined with giant white boulders, a breathtaking sight.

Our initial dives went only up to the first T (about 180 meters) to practice the required skills and build comfort. This section alone is stunning, featuring enormous limestone blocks — including two unique ones with black inclusions that you won't find anywhere else. Nature at its finest.

JOURNEY TO PIT 4

Our first dives were done in sidemount configuration with twin 80cf cylinders. After the first T, we followed the left corridor and continued at the next junction toward the shaft, reaching a maximum depth of 30 meters.

It's an overwhelming feeling — like descending into an underwater abyss below the earth.



To reach Pit 4, we needed careful gas planning. The dive was with Jo, who carried an additional 7L stage, while I used my Divesoft Liberty SM rebreather. The swim to the shaft takes around 28 minutes. Along the way, I showed Jo the shunt leading to the deeper part of the first loop. Once at the shaft, I checked if everything was okay, and we descended together to about 40 meters. Jo's eyes said it all — pure joy.

On the way back, decompression can be done using NX50, or, for advanced divers, pure oxygen at 6 meters to clean up any residual deco.

Ressel truly offers endless dive variations — simply change depth or direction and you'll experience the system in an entirely new way.

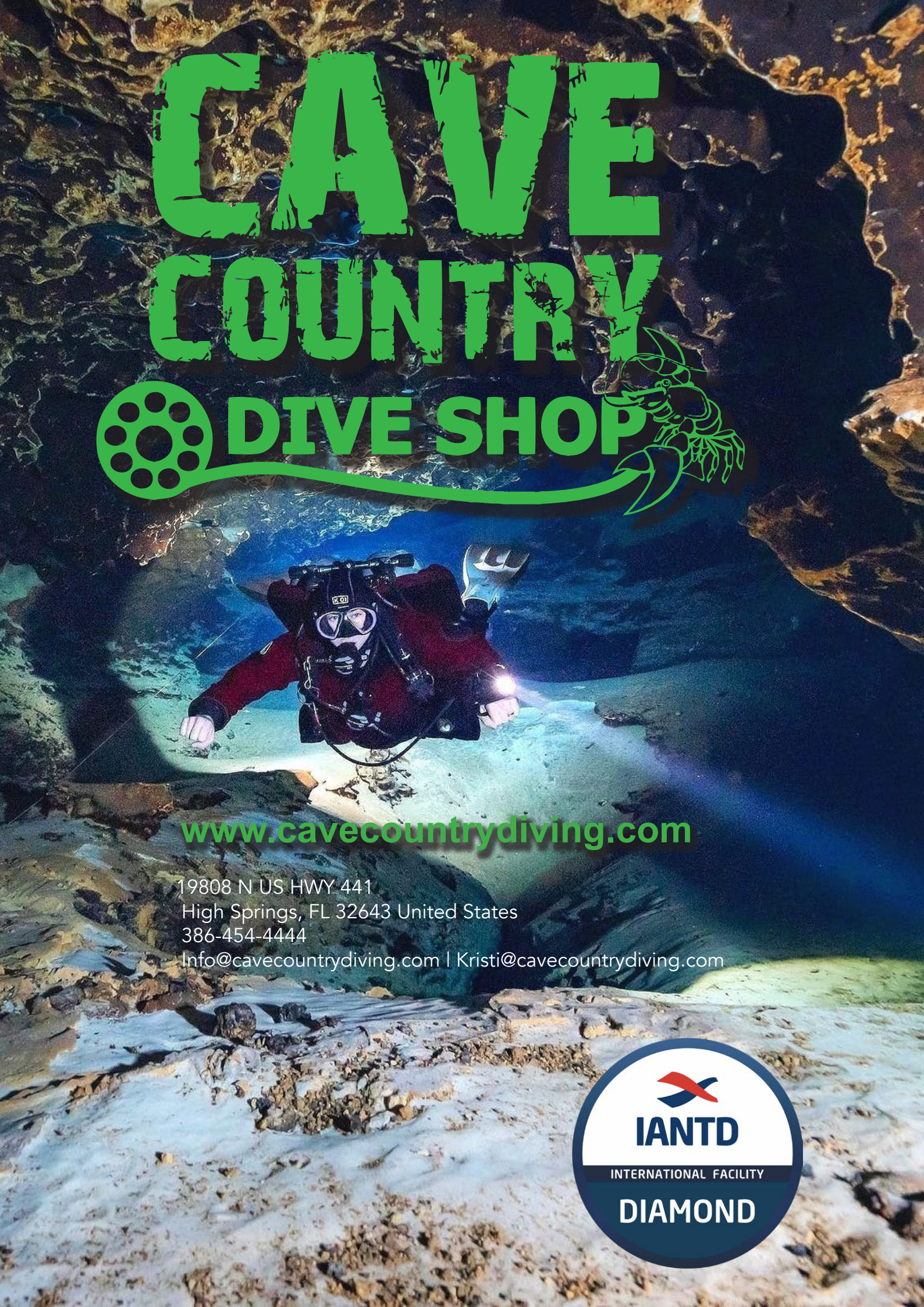
SCOOTERS, SMILES, AND SHARED PASSION

Once back on the surface, Jo couldn't stop talking about the beauty of Pit 4, which naturally made Caroline curious.

A few days later, after the guys had left, she and I went back — this time on scooters. The difference was huge: we reached the shaft in just 13 minutes. Once again, that unmistakable look of wonder appeared on her face.

As an instructor, moments like these are everything. Sharing this passion and seeing it light up in someone else's eyes — that's why we dive.

Ressel remains one of the most beautiful and accessible cave systems in Europe. Last year, I completed the Deep Loop here — 1160 meters in and 73 meters deep — with two friends, and I still smile whenever I think about it.
We'll definitely be back to finish the rest of Sump 1. Ressel always leaves you wanting more.



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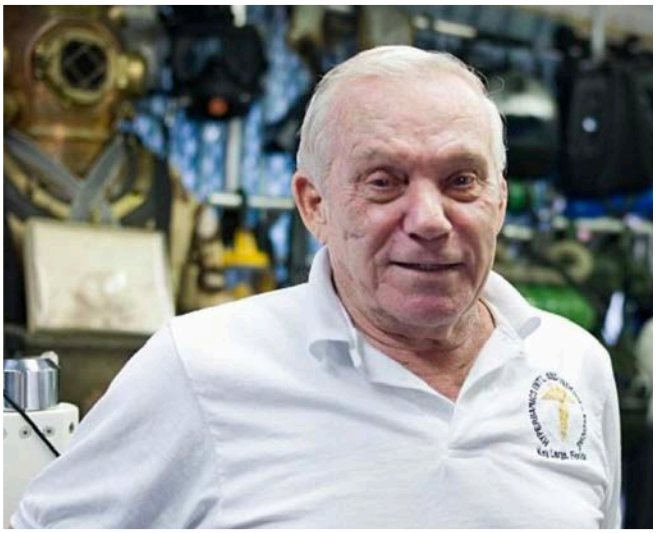
CELEBRATING EXCELLENCE – DR DICK RUTKOWSKI HONOURED WITH NOGI AWARD FOR DISTINGUISHED SERVICE

We are proud to announce that Dr. Dick Rutkowski has received the prestigious NOGI Award in the Distinguished Service category, presented by the Academy of Underwater Arts & Sciences (AUAS).

This accolade recognises his lifetime of contribution to diving safety, education and innovation — a fitting tribute from one of the diving world's most respected honours.



As a pioneer in underwater physiological research, hyperbaric medicine and enriched-gas training, Dr. Rutkowski's career spans decades of service at the National Oceanic and Atmospheric Administration (NOAA), where he served as Deputy Diving Coordinator and founded the NOAA Diving/Hyperbaric Training & Diver Treatment Facility.

He is also the founder of International Associations of Nitrox Divers (IAND) and a co-founder of IANTD — organisations that helped introduce nitrox and advanced gas-mixture training into the recreational diving community.

Importantly, Dr. Rutkowski is the second IANTD member to receive a NOGI Award — the first being Tom Mount, who earned the award in the Sports/Education category in 2000.

This places Rutkowski among the elite ranks of diving education and exploration, alongside one of the most respected figures in technical and cave diving.

This award highlights not only Dr. Rutkowski's direct influence on diver training and safety standards, but also his role as a mentor and catalyst for innovation across the global diving community.

On behalf of our community, we extend heartfelt congratulations — your legacy continues to inspire.

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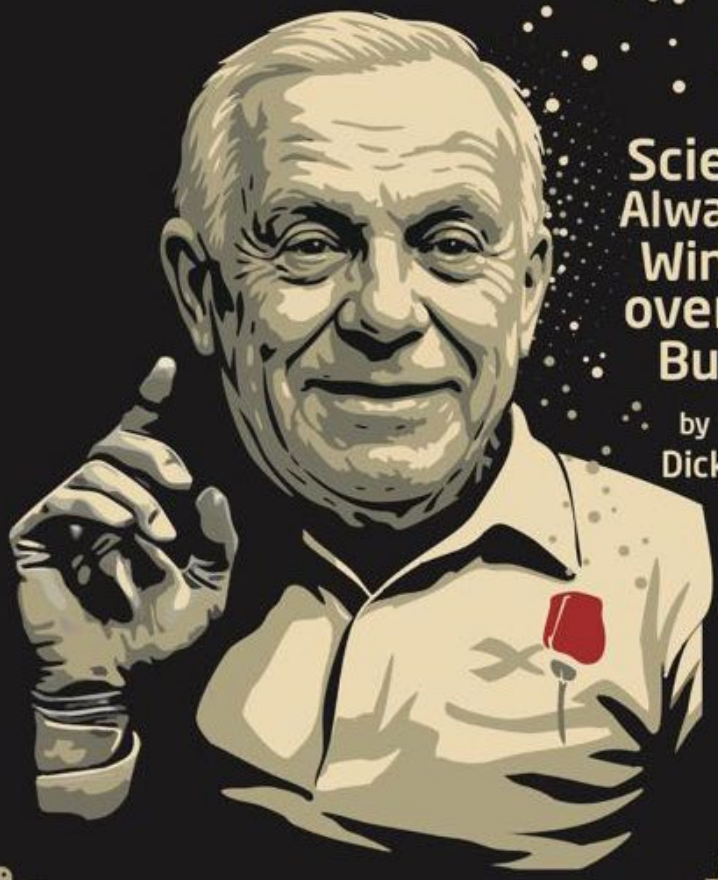

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The entirety of the funds will be donated to support the legacy and pioneering work of Dick Rutkowski.

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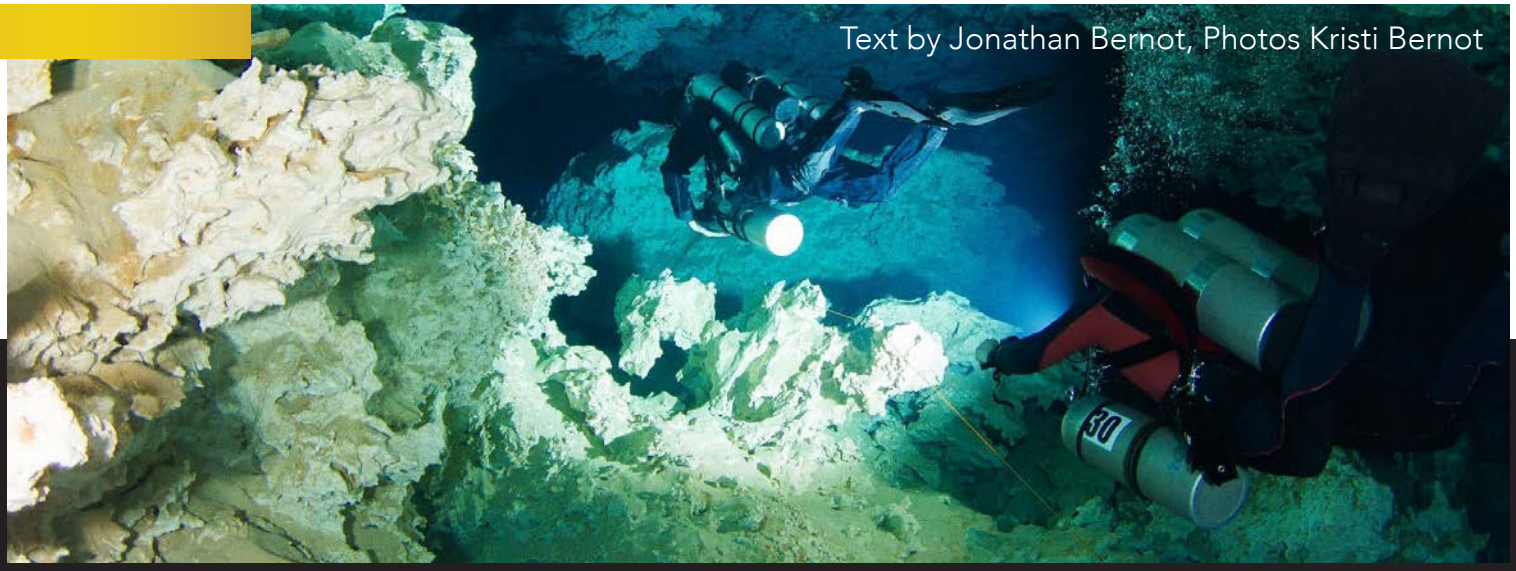
DRIFTING PERCEPTIONS

Text by Jonathan Bernot, Photos Kristi Bernot



The technical dive community is quickly becoming a commonly accepted group within the broader recreational diving arena. Technical divers are looked at with less suspicion on dive boats and even rebreathers are gaining a place of acceptance within what were once recreational training agencies. In certain ways the technical dive community has grown in leaps and bounds over the past few years and nowhere is this more evident than in North Florida Cave Country.
I believe it is time however for some to stop for a brief period and look back on their experiences and the experiences of the community as a whole and reevaluate the level of diving which is taking place.
Without a doubt the technological advances that have occurred in terms of lighting, diver propulsion vehicles, and rebreathers have allowed dives to become more complex with much less effort.

Take as an example a triple stage dive in the 50 meter range. In addition to 104's and 3 bottom stages a diver would most likely also need an Aluminum 80 of Oxygen and an Aluminum 80 of 50 percent nitrox, all of which would be actually utilized on the dive itself.

Each diver would not only need to be comfortable handling 5 stages but the logistics of filling these cylinders with an appropriate gas (18/45 for instance) would be noticeable in the pocket book. A dive of this magnitude could quite easily reach the 4 to 5 hour mark and would be looked at as a complex dive.

Scroll forward to our current dive environment and we that are active CCR divers most likely already have all the gas and equipment ready for such a dive because it was not utilized (the gas is still intact) from a previous dive. What we have lost is the planning and respect that used to go into such an excursion.

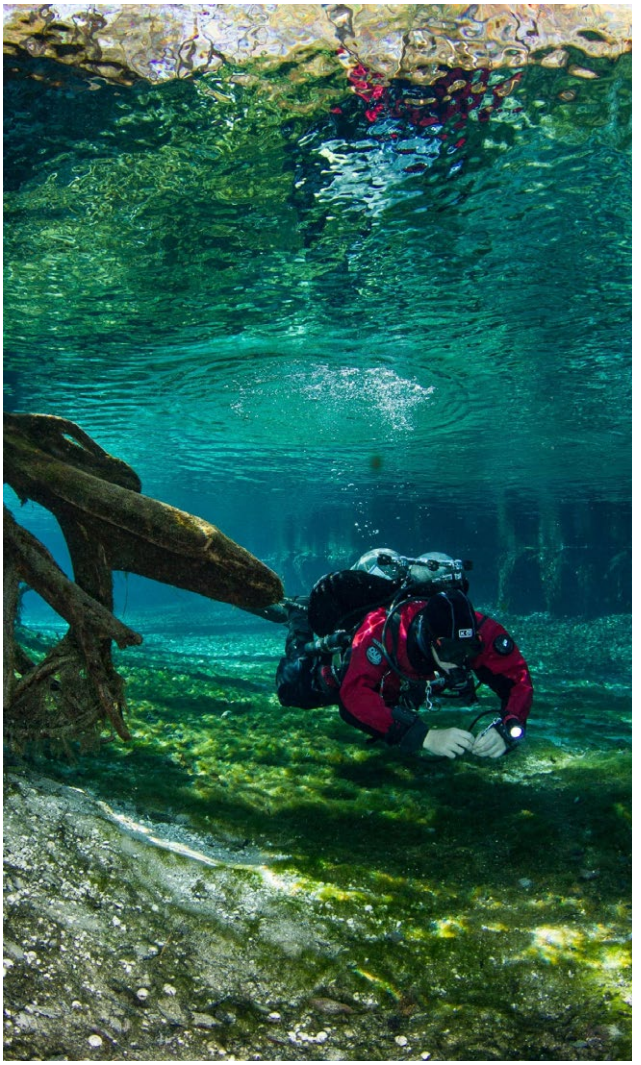
With advanced technology this cave community is also seeing an increase in regular exploration dives that are exceeding previous dive lengths and durations on a regular basis. Exploration however is not recreational diving. This IS NOT to say that divers should not look at exploration as an end goal in their diving life, and in fact beginning and training with that end in sight is not necessarily an improper approach. The additional risks that are accepted by the divers with the exploration mindset should not be dismissed however, and the experience and muscle memory gained must be attained. The fear of some is that that risk is not truly being understood by many who believe they want to be at this level of the sport. Also quite often, while the general dive plan can be garnered from a computer screenshot or brief paragraphs in articles written by divers following exploration attempts, many of the nuances are not included or are not readily visible to the reader or cave diver that sees these dives as an end goal. I will give a few examples of these types of occurances.

In all new rebreather courses I caution my students to not begin doing extended dives right upon exiting the course. I have seen numerous divers sustain significant decompression injuries shortly after beginning to dive rebreathers. In many cases this is in part due to the fact that these divers had previously been performing 60 to 90 minute dives on open circuit. The rebreather now has provided them with a tool that allows them to accumulate a much greater decompression obligation without the time constraint of bottom gas limitations.

This greater decompression obligation then allows medical or physiological limitations to manifest themselves. PFO issues that were never an issue now become known as an example. Physical exertion and cold tolerance now impacts effective off gassing. In short the level of decompression stress has instantly been bumped to a new level without the diver easing themselves to that level and allowing themselves the ability to monitor their body following progressively more aggressive dives.

Oxygen exposure and oxygen exposure issues are fast becoming my number one concern for the advanceing technical cave diver. The odds of a recreational diver sustaining an oxygen toxicity hit diving air, within recreational depths is very low. When that diver begins to dive Nitrox this concern becomes more realistic, especially in terms of properly analyzing cylinders and then ensuring they stay within the maximum operating depth of the gas they are diving. The technical diver who then incurs intentional decompression obligations and begins utilizing pure oxygen and other high PO2 gasses enters a realm where oxygen toxicity becomes a very real concern on most dives and gives the diver the true possibility of reaching accepted limits. We should take a step back though.

We need to examine what is and is not an "extreme" dive. Even within the realms of the "technical" dive boats on the East Coast of the United States a standard run time is usually in the 60 to 90 minute range. The dive boat that allows for dives exceeding this range, especially outside of "friends" or "regular" customers is very rare. What we are left with is a technical dive industry that recognizes that dives exceeding these times are extreme dives. In Cave Country there are no boat captains with schedules to keep. There are no other customers in many cases who want to pull the anchor and go to the next site.



We did some dives in Peacock, Ginnie Springs, and Little River, and quickly got the hang of the machine.
As a result there is nothing stopping a technical diver doing as long a dive as they want. What is missing though more and more is a complete understanding of the level of decompression exertion and oxygen loading that is taking place on these dives. Just because the dive can be done in a certain manner does not mean it should be. In particular the diver at this level may not fully understand the level of oxygen exposure that they are sustaining on a dive at this level of duration.

How did we get to this point? Human nature pushes us to continue to explore the boundaries of our own abilities. Unfortunately when we reach these boundaries in water the outcome is often final. The digital nature of our world has also allowed for the advertisement and spread of information. What once had to be sought out in person or via journals and personal correspondence is now read about on Facebook even before the divers have left the dive site.

Often a picture shows only half the story that goes into a dive. A 8 to 10 hour dive, deep or shallow, warm or cold water, is an extreme dive. In an underwater cave with significant decompression obligation it is on the far side of extreme. A dive of this nature in my opinion requires excessive risk management, in water and above water support, a degree of acceptance of risk beyond that already accepted by participants in a high risk activity, and a very real understanding of that risk.

Dives of this level need not be looked upon as another Saturday dive on the rebreather. A dive even approaching this duration WILL exceed the CNS limits and OTU limits in most cases. These are limits reached and published for a reason. If we are going to be flippant with these limits it is only a matter of time before we see fatalities as a result of this mindset. A good friend suffered a neurological decompression hit after a neck seal tore on decompression. The several hours of decompression were of limited effectiveness due to the hypothermia he sustained.

Had the decompression been greater he very likely would have not survived. These are the types of risks that are not covered in cave class, nor trimix class. These classes are not designed to set someone up for these types of dives. No course can and until recently very few people saw dives of this duration as a reasonable goal outside of significant and organized exploration projects.

There are a number of very deep caves that are readily accessible at the current time. A discussion with a good friend and teammate eventually led to the question of what is an appropriate first or second dive for people at these site? The unfortunate truth of the matter is that what we would consider reasonable is based upon our experience working up to these sites from our open circuit background. A rebreather diver going to these sites often now feels they are on a different set of rules. In many ways they are. With team decompression bailout they have automatically dropped the number of decompression cylinders requires from 5 or 6 to 2 or 3. Scooters now have the duration to reach the end of the line in a few minutes and virtually every scooter on the market is now capable of depths that previously required swimming by most cave divers even if they owned a scooter because their motor wouldn't take the depth. This all leads us to a situation that has developed at an unprecedented pace and one which has put the emerging advanced diver into a perilous situation. Fortunately as technology has evolved so has the quality of the products produced. Unfortunately what cannot be replaced by technology is the time and experience in the water. What this means is for many who are only able to participate in this side of the sport overy 3, 6, 9 months or so, that level to truly be capable of performing the most advanced dives will never be achieved. I caution all divers to be leary of taking expedition diving at face value as advertised without knowing the intricate details and logistics that go into those levels of dives.

I also caution the entire community to not mistake progress and the ability to perform ever more aggressive dives, with a lack of the continued need for steady, methodical progression into this realm.. An 8 hour dive was an extreme dive 20 years ago and it still is. Just because it may physically be easier to pull off, if everything goes right, does not make it less complex or taxing on us as divers. As perceptions drift we should from time to time reevaluate how we got to where we are and ensure we are not taking the logistics of the dive we are undertaking for granted. Safe Diving.

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Photo: Kadu Pinheiro

FRESH LOOKS AT THE IANTD STORE: NEW DESIGNS FOR DIVE ENTHUSIASTS

Gear up in style with the IANTD Store's new designs! From sleek apparel to must-have dive accessories, the latest collection celebrates the spirit of adventure that defines IANTD divers. Whether you're flaunting your nitrox certification or showcasing your love for technical diving, these fresh designs are perfect for the dive deck or the shore. Crafted with the global diving community in mind, they blend functionality with flair. Check out the new collection at IANTD Store and wear your passion for the underwater world with pride!

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