# NITROX

IANTD
INTERNATIONAL ASSOCIATION OF NITROX & TECHNICAL DIVERS

## The IANTD Diving Magazine

2026

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

# "Amoco Milford Haven Wreck"

## Arenzano, Italy - Historic Shipwrecks

Arembepe II: The Shipwreck No One Expected

A Cave Diving Expedition in Mato Grosso

Dema Show 2025 Orlando

Nitrox | IANTD Diving Magazine | 2026 | ISSUE 08

08

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The IANTD Diving Magazine

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Diver since 1986 and a diving professional since 1991. Trained a great number of divers, instructors, and instructor trainers. Former IANTD Brazil Licensee, author and contributor on some IANTD training materials and others. Presently IANTD Worldwide Headquarters CEO.

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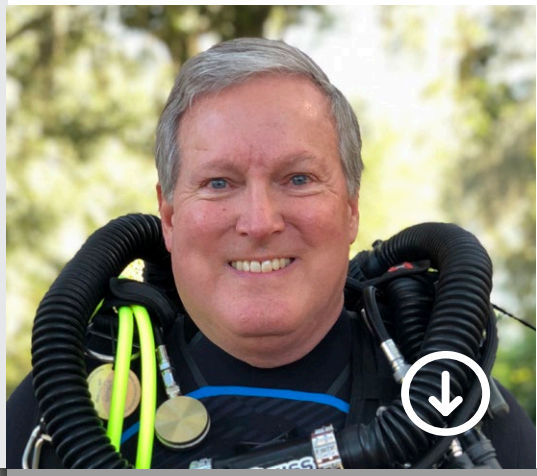

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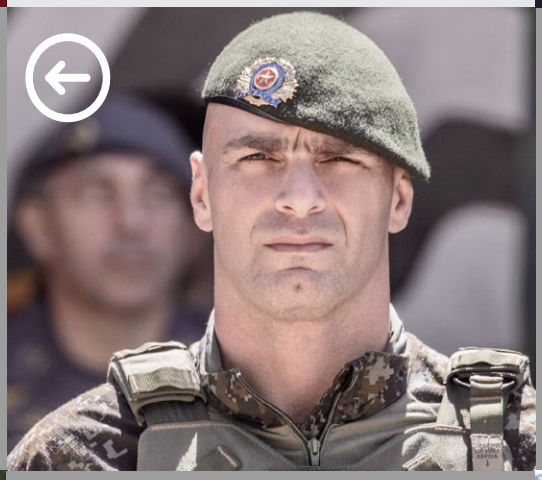

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**JOHN P. JONES** IANTD Instructor Trainer Trainer with over 30 years of diving experience, Cave and rebreathers expert on all levels, active professional engineer.

**JACEK LUBOWIECKI**, scuba diving since 1975 from then he trained a great deal of scuba divers recreationally and technically. Former Supervisor Senior Combat Diver, He leads courses for Polish scuba divers in special forces. IT CCR, IT Cave, favorite dives wrecks and caves.`

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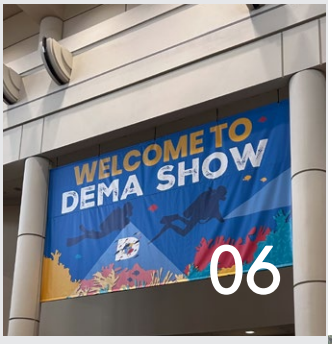






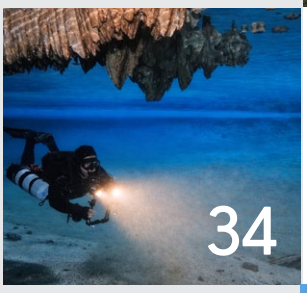



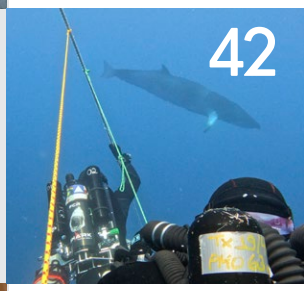






COVER
PHOTO: Kurt Storms

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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.

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

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In this edition, the following contributed:
Kadu Pinheiro, Luis Augusto Pedro, Kurt Storms, László Mocsári, Alexandre Ogusuku

Dear readers,

This issue kicks off with excitement and history: the Amoco Milford Haven Wreck in Arenzano, Italy, explored by Kurt Storms. This historic shipwreck takes us on a deep dive into the past, combining underwater archaeology with the thrill of discovering remnants that still speak to today's divers. A cover story that promises to capture the imagination of anyone passionate about exploring submerged history.

Next, we bring you full coverage of the DEMA Show 2025 in Orlando, by me, Kadu. This global event unites innovation, networking, and tributes, showcasing how diving continues to evolve, connect people, and inspire new generations of underwater adventurers.

Shifting back to Brazil, we present stories that defy expectations: "Arembepe II: The Shipwreck No One Expected" by László Mocsári, revealing a wreck that appeared almost without warning in the charming coastal village of Bahia, fascinating divers and historians alike with its unexpected story.

Rounding out the issue, a cave diving expedition in Mato Grosso led by Alexandre Ogusuku introduces new caves and unprecedented challenges for technical diving, opening the door to truly unique experiences in the heart of Brazil.

In this edition, Nitrox continues to unite adventure, history, and innovation, showing that the underwater world still has much to reveal—whether through historic wrecks, global events, or first-time explorations in national waters.

Stay curious. Dive deeper.
Kadu Pinheiro
Nitrox Editor

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The IANTD Diving Magazine

# DEMA SHOW ORLANDO 2026

## Innovation, Reconnection, and the Legacy Tribute to Dick Rutkowski at the NOGI Awards


Text and Photos by Kadu Pinheiro

The 2025 DEMA Show landed in Orlando with the energy of an event that truly sets the pace for the global dive industry. From November 11th to 14th, the Orange County Convention Center became the meeting point for manufacturers, instructors, photographers, liveaboard operators, training agencies, and dive centers from more than 90 countries. Anyone walking the show floor noticed the same thing immediately: 2025 wasn't just another year — it was a turning point, redefining expectations and highlighting a new cycle of technology, sustainability, and global collaboration.

# AN EVENT THAT PULSES WITH THE INDUSTRY




The numbers speak for themselves. Over 500 exhibitors showcased everything from ultracompact gear systems to fully integrated solutions for operations, travel, and training. But what truly stood out was the convergence between technology and portability: lighter BCDs, brighter and more intuitive dive computers, and hybrid photo/video setups designed for traveling divers who want versatility across recreational and technical diving.

# DIVE GEAR AND INNOVATION

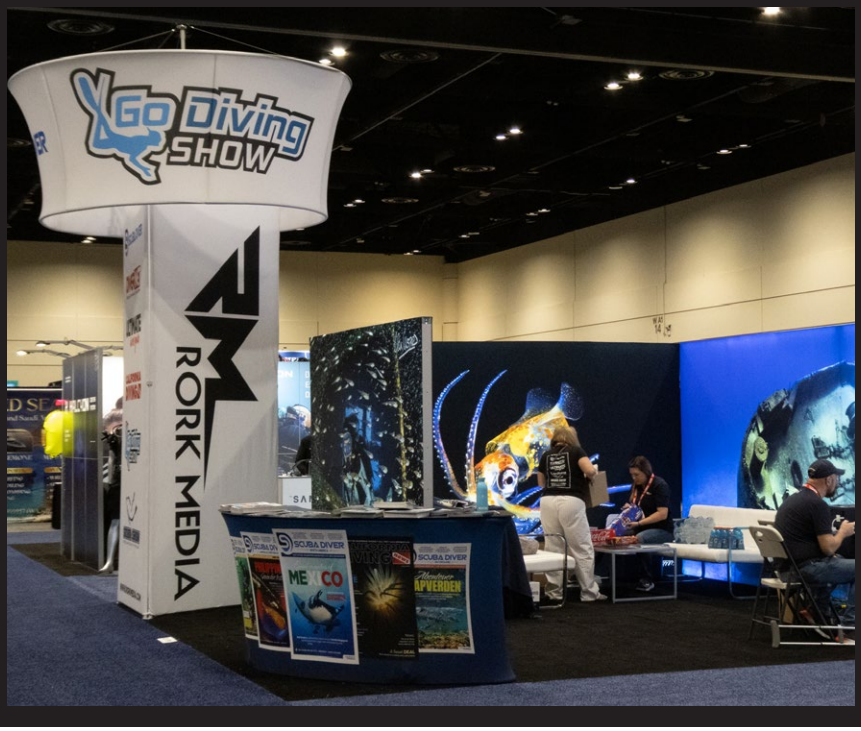



It felt like the industry had finally found its natural rhythm again after years of fluctuation. Exhibitors were energized, dive centers were reporting stronger customer flow, and travel destinations noted steady growth. The overall vibe was one of a mature industry — aligned, confident, and looking forward.

# TRENDS THAT STOLE THE SPOTLIGHT


1. Minimalistic and Smart Equipment

Gear releases followed the "lightweight, compact, customizable" direction. Brands introduced modular systems, advanced connectivity features in dive computers, and vibrant color options that emphasize user-friendly design. Competition is no longer just about performance — it's about experience.




## 2. Sustainability as a Core Value

Sustainability moved from marketing point to measurable action. Manufacturers, resorts, and operators highlighted real environmental initiatives:

material recycling, cleaner production processes, conservation partnerships, and educational campaigns.






### 3. Growing Interest in Technical Diving & Rebreathers

Technical diving made a noticeable comeback. The demand for CCR training continues to rise, and many conversations revolved around updated standards, enhanced safety protocols, and streamlined instruction.

# 4. A STRONG AND ENGAGED COMMUNITY



Outside the show floor, the social events were buzzing. "Breathhold & Brew," for example, became the unofficial networking hotspot — that perfect mix of relaxed atmosphere and productive conversation, spiced with the usual collection of dive stories (always 100% accurate, of course).

# IANTD'S PRESENCE AND THE ROLE OF EDUCATION



Training organizations played a strategic role at this year's show, presenting technical seminars, safety updates, and industry-wide discussions. The IANTD, as always, was recognized for its foundational influence — especially meaningful this year due to the tribute paid to one of its most iconic figures during the event.

# NOGI AWARDS 2025

## WHEN HISTORY RECEIVES ITS DUE RECOGNITION

On November 12th, during the DEMA Show, the Rosen Centre Hotel hosted the annual NOGI Awards, organized by the Academy of Underwater Arts & Sciences. Within the dive community, the NOGIs are regarded as the equivalent of the underwater "Oscars" — a prestigious celebration honoring individuals whose contributions have shaped the industry at a global level.

# AND THIS YEAR CARRIED SPECIAL SIGNIFICANCE.

Among the honorees was Dick Rutkowski, recognized in the Distinguished Service category. Rutkowski has been a pillar of modern diving long before many of today's technologies even existed. The 2025 NOGI Award served as a symbolic culmination of his monumental career: decades dedicated to safety, research, education, and — most famously — the introduction of Nitrox into recreational diving, which forever transformed the sport.


## DICK RUTKOWSKI: DISTINGUISHED SERVICE AWARD

# DICK RUTKOWSKI: "THE FATHER OF NITROX"


Among the honorees was Dick Rutkowski, recognized in the Distinguished Service category. Rutkowski has been a pillar of modern diving long before many of today's technologies even existed. The 2025 NOGI Award served as a symbolic culmination of his monumental career: decades dedicated to safety, research, education, and — most famously — the introduction of Nitrox into recreational diving, which forever transformed the sport.

# THE EVENT ALSO RECOGNIZED:

## THE CEREMONY HIGHLIGHTED:

* his nearly century-long life dedicated to diving,
* his scientific and educational contributions,
* his pioneering role in safety practices,
* and his direct influence on generations of divers, instructors, and industry leaders.

For the IANTD community, seeing Dick Rutkowski receive the NOGI wasn't just emotional — it was historic. A powerful reminder of how visionary minds shape the future and inspire the next wave of explorers.

**A list worthy of the tradition and prestige of the ceremony.**

## OTHER HONOREES

* Dr. Richard Moon — Science
* Becky Kagan Schott — Arts
* LeRoy French — Sports & Education
* Georgienne Bradley — Environment

# TOM MOUNT LEGACY

It is also important to recall that the IANTD's connection to the NOGI Awards dates back decades. The first IANTD member ever to receive a NOGI Award was Tom Mount, honored in the year 2000 in the Sports/Education category.

Tom Mount was a foundational figure in modern technical diving education, a former IANTD CEO, co-founder of the National Association for Cave Diving (NACD), and a driving force behind the global expansion of advanced diver training. His recognition by the Academy of Underwater Arts & Sciences established an early and enduring link between the NOGI Awards and the IANTD's legacy of education, exploration, and safety.

# CONCLUSION: A DEMA TO REMEMBER AND A PROMISING ROAD AHEAD

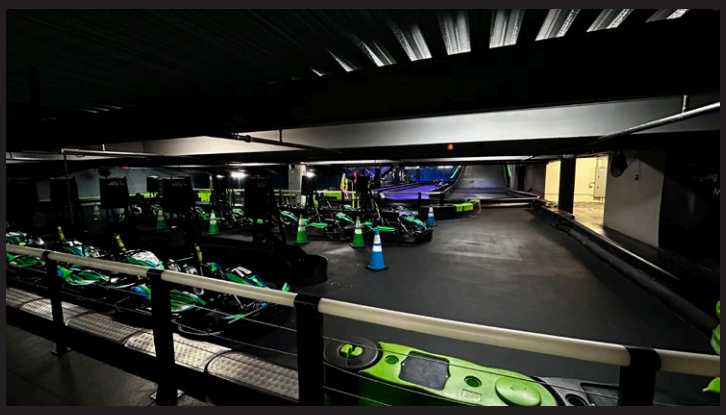

The 2025 DEMA Show marked a moment of reconnection, renewed strength, and strategic collaboration across the dive industry. Between product launches, technical discussions, and unforgettable encounters, the highlight was undoubtedly witnessing the community honor the pioneers who built the foundations of modern diving — and no one deserves that spotlight more than Dick Rutkowski.

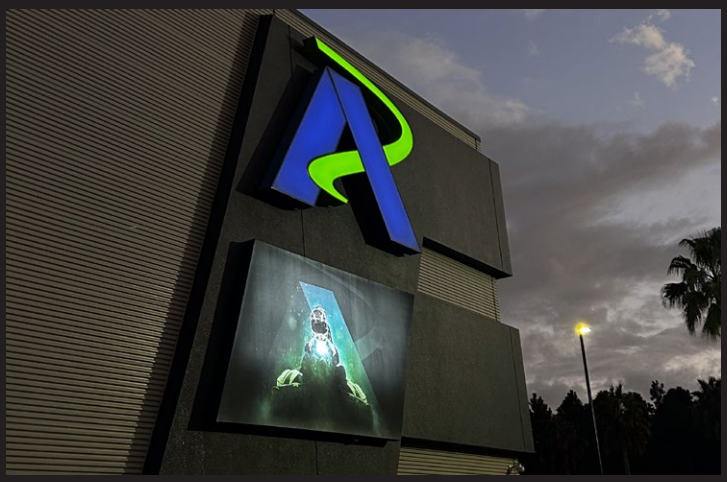
This year's event didn't just present trends; it reaffirmed why diving remains a passionate, innovative, and resilient global community. And as 2026 approaches, it's clear the industry is heading into a new phase of expansion — technically, environmentally, and educationally.

# BEYOND BUSINESS:

## Strengthening Partnerships at DEMA

Beyond being a global business trade show, DEMA is also a unique opportunity to reconnect, strengthen friendships, and celebrate partnerships that go far beyond the show floor. During this year's DEMA, IANTD had the pleasure of sharing an unforgettable evening with our friends and partners from Dive 1st Aid at Andretti Indoor Karting & Games in Orlando.





The night was filled with great conversations, laughter, and friendly competition as we enjoyed multiple indoor kart racing sessions, reinforcing the strong bonds that unite our organizations. Moments like these remind us that the dive industry is built not only on professional collaboration, but also on trust, shared experiences, and genuine camaraderie.

IANTD would like to sincerely thank our partners at Dive 1st Aid, and especially Matt Seibert and John Conway, for the opportunity to spend time together during yet another DEMA — both inside and outside the business environment. These connections are what truly strengthen our industry and our community.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# IANTD POWERED BY DAN EXPERIENCE

by: Don Bailey – IANTD Ambassador

Recently, I was given the opportunity to take part in the very first IANTD powered by DAN instructor development course at DEMA. It was an amazing experience, bridging two great organizations together. With IANTD's ability to create instructors that are always seeking to better themselves through experience and knowledge and DAN's comprehension of dive medicine as well as mechanics of dive injuries and accidents, we have partnered two organizations that are committed to excellence and helping make the dive industry more unified. There were multiple dive agencies at this training, showing that we are all dedicated to the safety and the wellbeing of our divers as a community regardless of what agency is on your certification card.

The skills and techniques that we learned at DEMA make us all safer divers, ready to deal with any situation as it arises, and respond safely. It is always a benefit to see how another organization approaches teaching and learning. I have been able to take some of these teaching techniques and utilize them in my daily instructing and teaching. The biggest benefit for me is that IANTD is now an accredited First Aid, Oxygen Provider, AED, and CPR training agency. I look forward to seeing what develops from the relationship between IANTD and DAN. I truly enjoyed the time I got to spend there learning how to create and develop instructors that can help us grow as an industry and as an organization and hope to see you all at an instructor development course with us very soon.



# AMOCO MILFORD HAVEN WRECK

Location: Arenzano, Italy
Divers: Kurt Storms and Willem Verrycken

Text and Photos by Kurt Storms

Returning to Italy After the vPandemic
After a long period without being able to travel due to the Covid-19 pandemic, we finally made it back to Italy. The first days were spent completing my CCR–OC Trimix Instructor course under the supervision of IANTD ITT Paul Lijnen. After a few exciting and demanding days, I can proudly call myself a fully fledged IANTD CCR/OC Trimix Instructor.

# DIVING ON THE MT HAVEN

I owe this achievement to my dedicated students and to the help and support of two fellow instructors who also obtained this title.

Diving on the MT Haven

The course took place on what is considered the most beautiful wreck in the Mediterranean: the MT Haven.

The MT Haven was a VLCC-Class Oil Tanker (Very Large Crude Carrier), originally built in 1973 as the Amoco Milford Haven.

# THE SHIP WAS ENORMOUS:

- Length: 334 meters
- Beam: 51 meters
- Displacement: 110,000 tons

In 1987, the vessel was hit by a missile in the Persian Gulf during the Iran-Iraq War. After extensive refitting in Singapore, it was sold to ship brokers and leased to Troodos Shipping.

The 1991 Disaster

At around 12:30 pm on April 11, 1991, the Haven was unloading a cargo of 230,000 tons of crude oil on floating platforms seven miles off the coast of Genoa, Italy. After transferring 80,000 tons, the ship disconnected from the platform for a routine internal transfer operation. While still loaded with 144,000 tons of crude oil, the ship suddenly exploded and caught fire, killing five crew members.

# THE SINKING

As flames rose 100 meters high, additional explosions followed, releasing between 30,000 and 40,000 tons of crude oil into the sea.

The Italian authorities reacted quickly. Hundreds of responders battled the inaccessible fire while more than six miles of inflatable barriers—submerged one meter below the surface—were deployed around the vessel to contain the spillage.

The Sinking

On the second day, an attempt was made to tow the MT Haven closer to the coast to reduce the affected area and facilitate intervention. As the bow slipped beneath the surface, a steel cable was passed around the rudder, and towing pressure was applied.

On April 14, the 250-meter-long main body sank a mile and a half from the coast between Arenzano and Varazze, releasing up to 50,000 tons of crude oil into the Mediterranean.

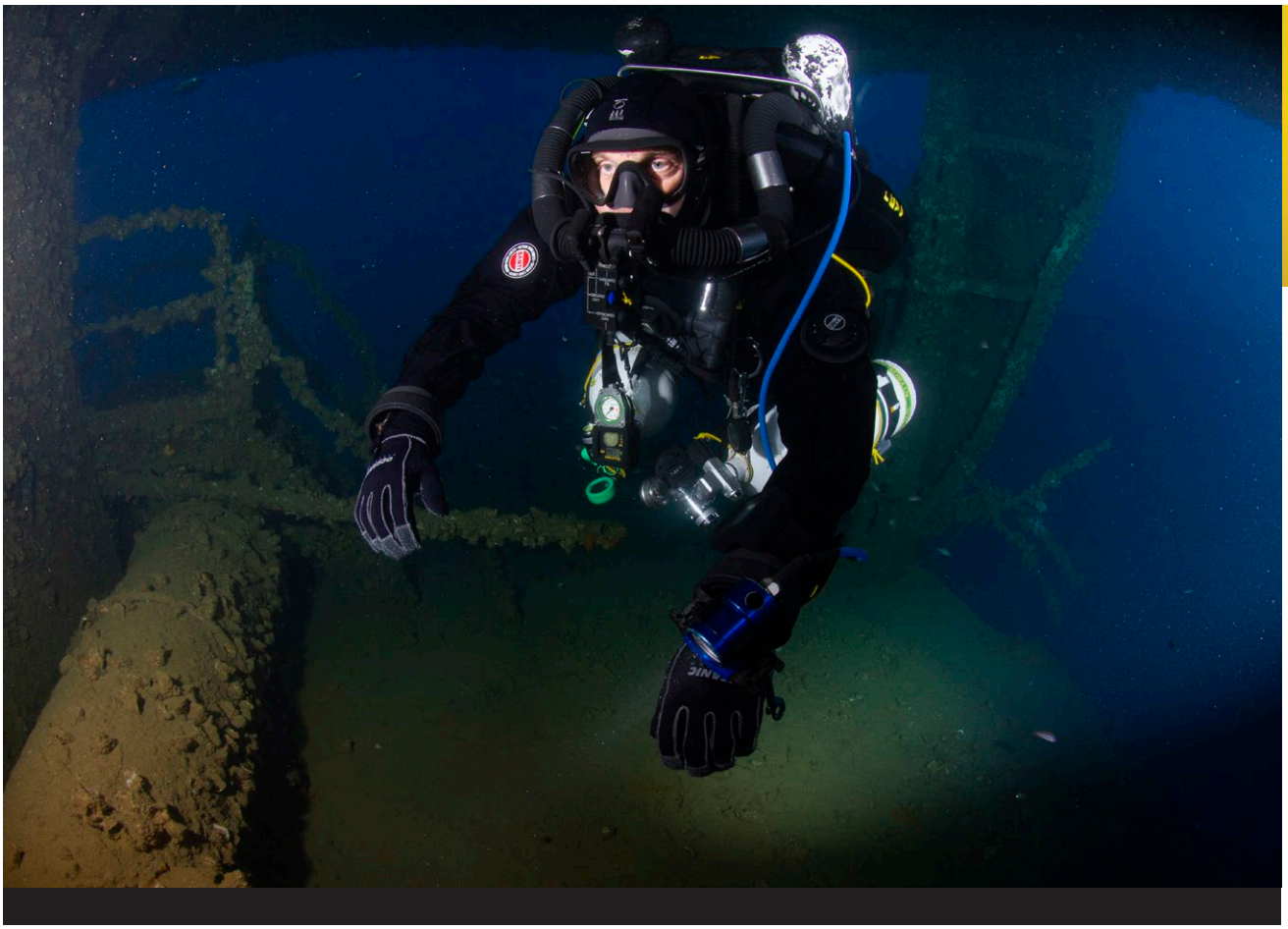
Today, the Haven is the largest shipwreck in the Mediterranean and Europe, resting at depths between 33 and 83 meters off Arenzano (Genoa).

Diving the Giant
I have been diving this impressive wreck for the past three years, and I can confidently say I am in love with this big baby. But before going any further, a warning: this "baby" can be a killer for untrained or inattentive divers.

**CONDITIONS VARY DRAMATICALLY:**

- Currents can go from calm to strong
- Visibility ranges from +30 meters to as low as 5 meters
- The interior is a giant labyrinth resembling a cave system
- Sharp metal, silt, and disorientation are constant threats
- This wreck demands humility, patience, and proper planning. No heroes here—plan your dive and dive your plan.

# EXPLORING THE STRUCTURE



The 250-meter-long main section lies upright. Much of the superstructure that once reached 24 meters depth has been removed, leaving the smokestack as the shallowest point at 33 meters.

## WHEELHOUSE: 40 METERS

At 40 meters you reach the wheelhouse, from where Captain Petros Grigorakakis once maneuvered the tanker. It is now completely empty—everything burned before sinking. On the upper deck, divers will find a memorial plate and statues of the Virgin Mary.

Penetration is possible through:
Interior stairways (up or down)
The central lift shaft that passes through multiple decks

Numerous side windows (many too small to pass through), though each room has a door

## THE BRIDGE SECTION

The bridge is approximately 23 meters high and includes:

- Bedrooms
- The kitchen
- Workrooms

Penetration is possible almost everywhere, but this section is a true labyrinth—guidelines are essential.

**THE AFT SECTION AND THE PROPELLER - 81 METERS**

Technical divers can descend from the bridge toward the rear deck, past massive winches, pipes, and valves. A free-fall descent reveals the colossal propeller at 81 meters, with:

A 20-meter-high rudder

A 7-meter-diameter propeller

The light fades drastically here due to the cant of the hull, creating a dramatic and intimidating atmosphere. Looking up from this depth, the tanker appears truly majestic.

Engine Room – Below 52 meters

The entrance to the engine room lies just below the chimney at –52 meters. Inside, divers find:

A massive 8-cylinder stroke diesel engine

Panels, counters, and components shockingly intact

# REQUIREMENTS FOR DIVING THE HAVEN

## THE EXPLOSION SCAR

On the port side, a huge opening left by one of the explosions exposes twisted metal plates resembling a crushed can. The scale of this hole is difficult to comprehend until you are inside it.

## REQUIREMENTS FOR DIVING THE HAVEN

Diving the MT Haven requires being a certified Technical Diver, using hypoxic gases. This is not a site for recreational divers or for anyone without proper training.

Two dive centers in the Marina of Arenzano provide full support, including:

- Gas fills
- Rebreather support
- Guided dives
- Fixed deco stations at –6 m and –3 m
- Spare tanks
- Permanent descent lines leading directly to the wreck at –33 m
- Safety procedures are strict and non-negotiable.

# GETTING TO ARENZANO

- Arenzano is a municipality in the province of Genoa with 11,624 inhabitants.
- Area: 24 km²
- Population density: 475 inhabitants/km²

By Road: From Brussels, Arenzano is approximately 1200 km by car—an ideal option for transporting rebreathers, tanks, and equipment.

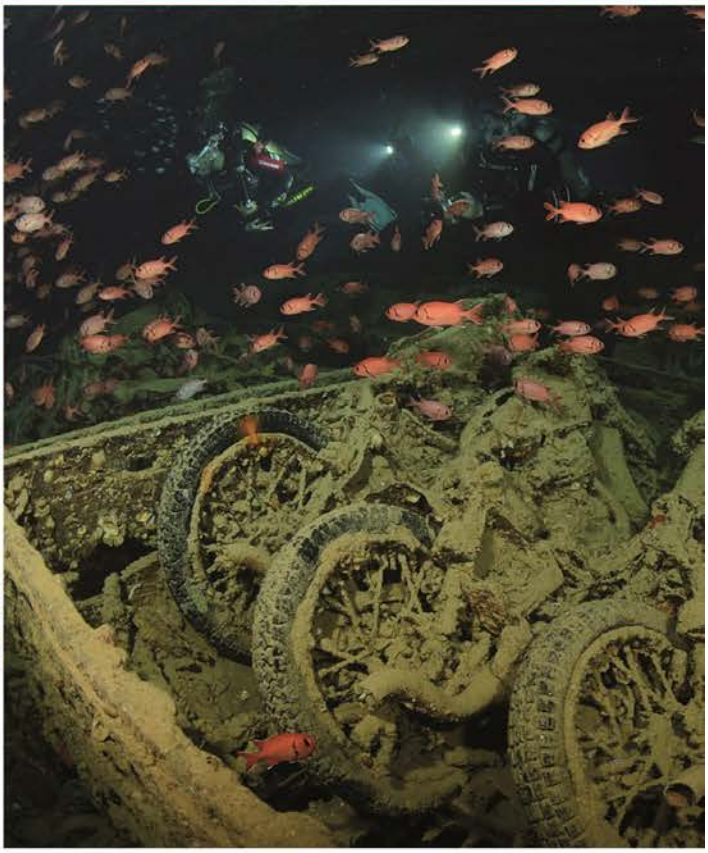
By Air: For divers coming from outside Europe, the closest airport is Genoa Cristoforo Colombo Airport, which also serves as a major hub for cruise passengers embarking in Genoa. Equipment and tanks can be rented directly from one of the two local dive centers.

The MT Haven is a breathtaking but unforgiving wreck. With proper training, planning, and respect for its environment, it offers some of the most extraordinary dives in the Mediterranean.

Enjoy your dive!


# RED SEA

BLUE FORCE FLEET



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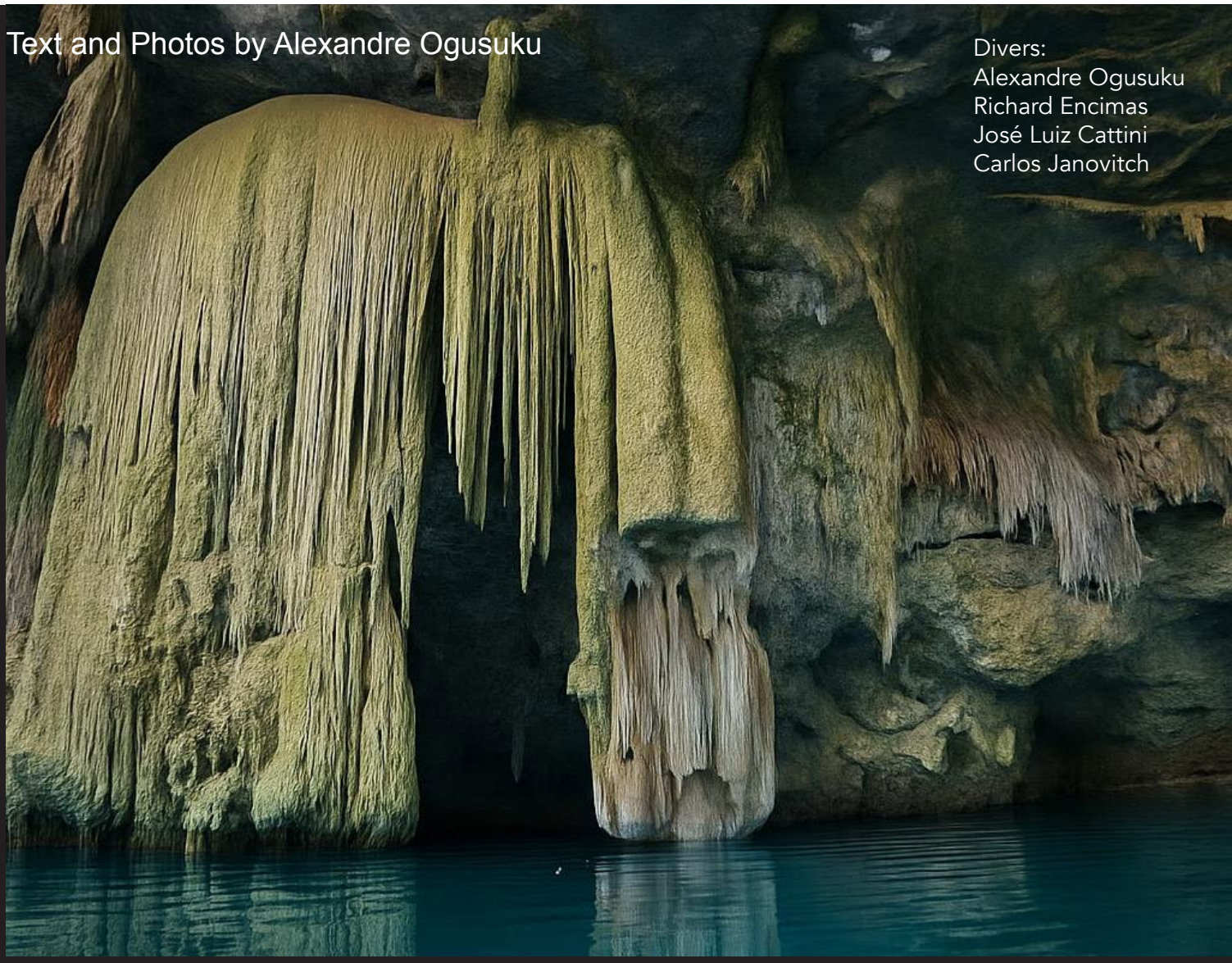
# A CAVE DIVING EXPEDITION IN MATO GROSSO – BRAZIL

Text and Photos by Alexandre Ogusuku



Divers:
Alexandre Ogusuku
Richard Encimas
José Luiz Cattini
Carlos Janovitch

By three IANTD-certified technical divers exploring Brazil's hidden underwater frontier.

In September, with the support of the Subaquática diving school and our friend and instructor Carlos Janovitch, three friends — all IANTD-certified technical divers — set out on a subterranean journey through the state of Mato Grosso, in the heart of Brazil. Our mission was to explore some of the region's most captivating flooded caves, environments that reveal the geology, history, and quiet magic hidden beneath the cerrado. Over the course of several days, we dived four remarkable sites: Nascente do Currupira, Lagoa Azul, Poço 2 de Maio, and Dolina do Pai João.

# NASCENTE DO CURRUPIRA:

Where the Cave Breathes Nascente do Currupira is a gateway to a hypnotic world. Its modest entrance gives no hint of the spectacle that unfolds below. Though compact, the cave is richly ornamented.

A narrow canyon leads to an impressive dry chamber adorned with stalactites. Continuing along the submerged passage, after passing a small restriction, the cave opens into its deepest section, reaching a maximum depth of 24 meters.

Crystal-clear water and intricate geological formations define this dive. The sensation is that of entering a living, ancient structure. We explored the system in a sidemount configuration, with each diver carrying air cylinders equipped with long hoses.

Over the course of two days, we logged approximately three hours and forty minutes underwater — time that seemed suspended in a world untouched by light or sound.

# LAGOA AZUL: THE SUBMERGED CATHEDRAL

The national park where Lagoa Azul is located is closed and can only be accessed with authorization from environmental authorities.

Lagoa Azul is a flooded cave of almost surreal beauty. Sunlight streams through natural openings and refracts into deep shades of blue, creating the impression of a submerged cathedral. As the cave is short and shallow, we conducted the dive using open-circuit equipment.

Visibility is impeccable, and the diver becomes part of the scene rather than merely a visitor. The limestone walls reveal textures and layers shaped over millennia.

True to its name, Lagoa Azul glows in turquoise hues, framed by imposing limestone walls — a scene worthy of a postcard.

The fauna is discreet, but geology takes center stage:

shallow caverns, sculpted rock formations, and submerged textures create a visual experience that captivates divers of all levels.

# SILENCE, SUSPENSION, AND DEPTH

Poço 2 de Maio is a demanding dive — both in terms of geography and depth. Progressing through the cave reveals silent corridors, delicate formations, and an atmosphere that blends serenity with respect. It is a dive that requires calm, precision, and a deep connection with the environment.
The dive begins in a siphon that, at 30 meters, splits into two tunnels forming a "Y." The right branch appears to continue deeper; we ended the dive at 60 meters. As this is a rarely visited cave, the guideline is tangled in several sections, increasing the risk of entanglement and making navigation more challenging.
We conducted this dive using CCR — the KISS Sidewinder — which proved essential for both safety and efficiency.

## DOLINA DO PAI JOÃO: THE SUBTERRANEAN GIANT

Dolina do Pai João is a colossal formation hidden within the cerrado — the highlight of the expedition. The descent along its vertical walls is striking, but it is only upon entering the water that the true scale of the site is revealed. The cave opens into vast flooded chambers where natural light quickly fades, transforming the dive into a dance of shadows and beams of artificial light. Here as well, access to the park requires authorization from environmental authorities.
We spent two days diving here, all using the CCR KISS Sidewinder, exploring the extensive tunnels of Pai João. The first tunnel begins at 30 meters and continues wide, richly decorated, and visually striking. The other two are siphons that descend to 100 meters, opening into a magnificent chamber and new passages believed to connect to Poço 2 de Maio, forming a large underground cave complex. We dived all three tunnels of Pai João.

# EXPEDITION PREPARATION

Permits, Logistics, and Essential Equipment
The entire expedition was carried out with the support of Subaquática Mergulho and our friend and instructor Carlos Janovitch. Together with him, we reviewed all dive protocols and secured the most important piece of equipment for the expedition: the compressed air compressor. Thank you, Jano, for the friendship and for your constant support of divers.

The dive physician, Evandro Airton, was also essential to this expedition, having developed the first-aid and rescue plan in the event of barotrauma. In addition, our doctor — always attentive — remotely followed the daily dive reports, assisting us via videoconference.
Cave diving in Brazil requires legal authorizations, coordination with local guides, and robust logistics for the transport and supply of technical equipment. The caves are located within protected environmental areas, each with specific rules governing visitation and diving. Permits must be obtained in advance from government authorities — a process that is essential not only for legal compliance, but also for the preservation of these fragile environments.

Local guides are indispensable. They arrange the permits, provide guidance on environmental regulations, assist with equipment transport, offer detailed knowledge of the caves, and monitor weather and safety conditions. Early communication with them was crucial to align schedules, entry logistics, penetration limits, and emergency protocols.

# EQUIPMENT OVERVIEW

The complexity of the expedition required a solid structure of both individual and shared equipment.

Rebreathers and Consumables
CCR units configured for cave diving

High-quality soda lime, with consumption planned for the entire expedition
Diluent and bailout cylinders appropriate for each cave

With limited infrastructure in the region, gas planning was carried out well in advance:

- Oxygen for daily refills
- Diluents (air, nitrox, or trimix, depending on the dive)
- Additional bailout cylinders for contingencies
- Compressors and Support
- Portable compressor for air fills
- Transport logistics to remote locations

Designated areas for CCR assembly, checks, and maintenance

Cave Diving Equipment

- Primary and backup lights
- Reels and spools
- Navigation markers
- Full redundancy of instruments
- Repair kits and tools

Each item was checked daily, following rigorous safety protocols.

Above: the team of professionals from the Environmental Secretariat of the State of Mato Grosso.

# FINAL CONSIDERATIONS

Cave diving in Mato Grosso is an immersion into a hidden, silent, and monumental Brazil. Each site offers a unique experience, yet all share the same essence: crystal-clear waters, imposing geology, and the privilege of exploring a world that few will ever see.

With rebreathers, this journey gains even greater depth — both literal and emotional. It is diving in its purest, most technical, and most transformative form.

Rebreathers were fundamental to the success and safety of the expedition. In cave environments — where visibility, silence, and autonomy are critical — closed-circuit systems offer decisive advantages.

Optimizing gas consumption is essential for long dives in overhead environments.

The ability to control the partial pressure of oxygen increases physiological efficiency and reduces the amount of gas that must be carried. The absence of bubbles preserves delicate formations and prevents the suspension of sediments — a crucial factor in fragile cave systems.

Throughout the expedition, we followed rigorous bailout, navigation, marking, and communication protocols, in accordance with international standards for CCR cave diving.


# Don't just dream it, live it!

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# AREMBEPE II: THE SHIPWRECK NO ONE EXPECTED

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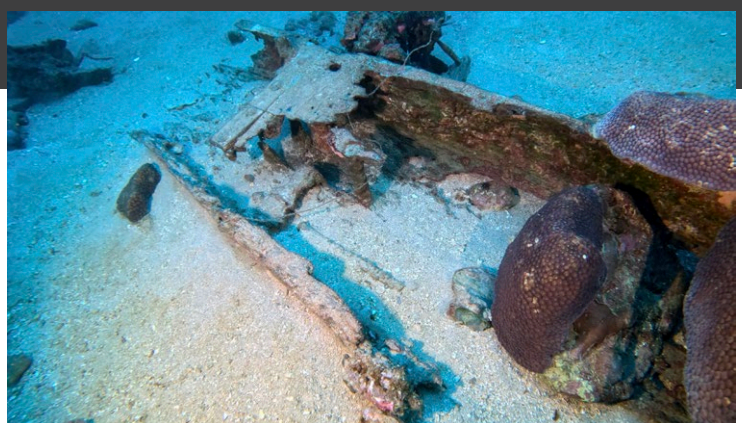
Arembepe is a charming coastal village on the northern shore of Bahia, about 40 km from Salvador. Originally a simple fishing village, it gained worldwide fame in the 1960s with the arrival of the hippies, whose alternative commune still exists today.

In its surroundings, there are two identified shipwrecks: the vessels Paraná and São Salvador (closer to Jauá), the remains of an airplane next to the Tronox outfall, and two wooden shipwrecks that have not yet been officially identified. The first, discovered a few decades ago and known as Arembepe I or "Cetrel Shipwreck," lies near the CETREL outfall.

The second — which we named Arembepe II — was discovered around 2014 by spearfishing fishermen, who referred to it simply as "the tugboat."



In January 2023, after receiving coordinates from local fisherman friends, I made the first dive together with Peter Tofte. Within the first minutes it became clear we were not looking at a modern tugboat, but rather a much older vessel: a wooden, sail-powered ship — virtually untouched since sinking, yet dismantled by the action of the sea and time.
The second dive took place in November 2025, now accompanied by Fagner Rodrigues and underwater photographer Roberto Costa Pinto. Unfortunately, a strong surface current prevented Roberto from bringing his heavy professional camera system. Only Fagner and I descended with video cameras to document what is undoubtedly one of the most beautiful and pristine shipwrecks on the coast of Bahia — home to an exuberant and rare diversity of marine life.

# HISTORICAL BACKGROUND

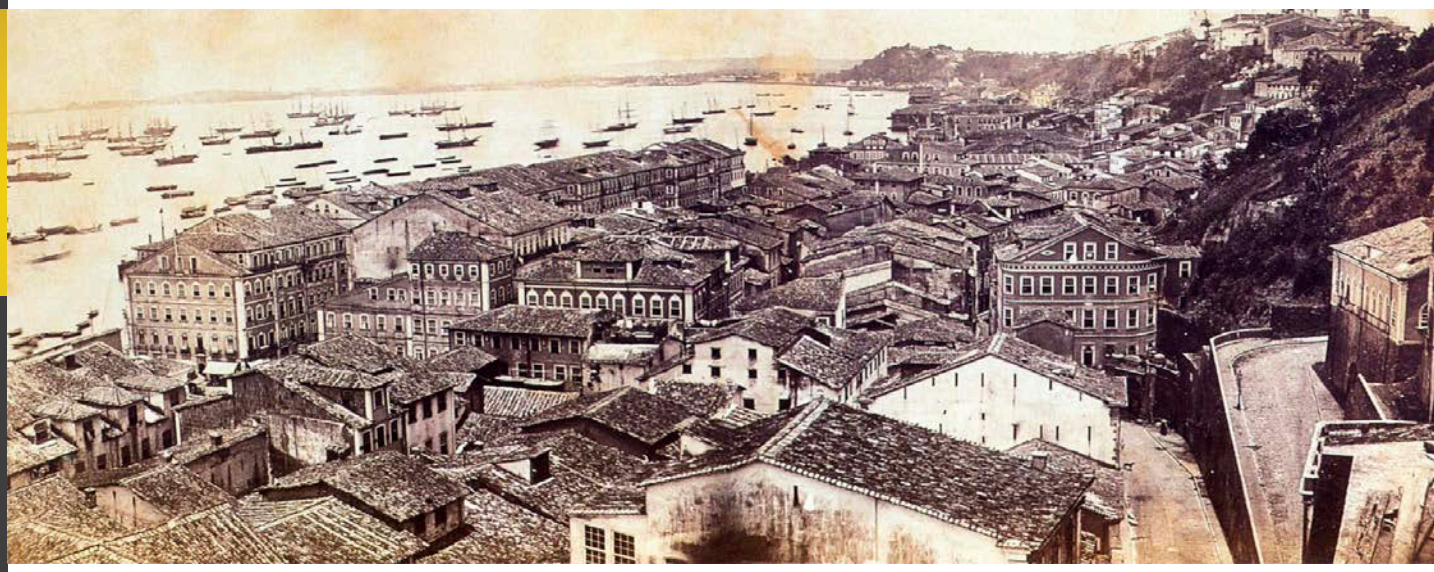
Upon reaching the bottom, we were greeted by a large grouper, followed by schools of scads, squirrelfish, horse-eye jacks, glassy sweepers, blue parrotfish, along with two large bull rays, spotted groupers, dentex, and, to our surprise, two minke whales that circled us curiously throughout the entire decompression.

## HISTORICAL BACKGROUND

In the 19th century, Salvador established itself as one of the main maritime hubs of the South Atlantic. Even after the capital was transferred to Rio de Janeiro in 1763, the city maintained a central role in trade routes connecting Brazil to Europe — especially Portugal, England, and northern European ports such as Hamburg, Bremen, and Bergen.

Wooden sailing ships, predominant before full adoption of steam power, were essential for transporting goods, people, and ideas, connecting the Old and New Worlds.

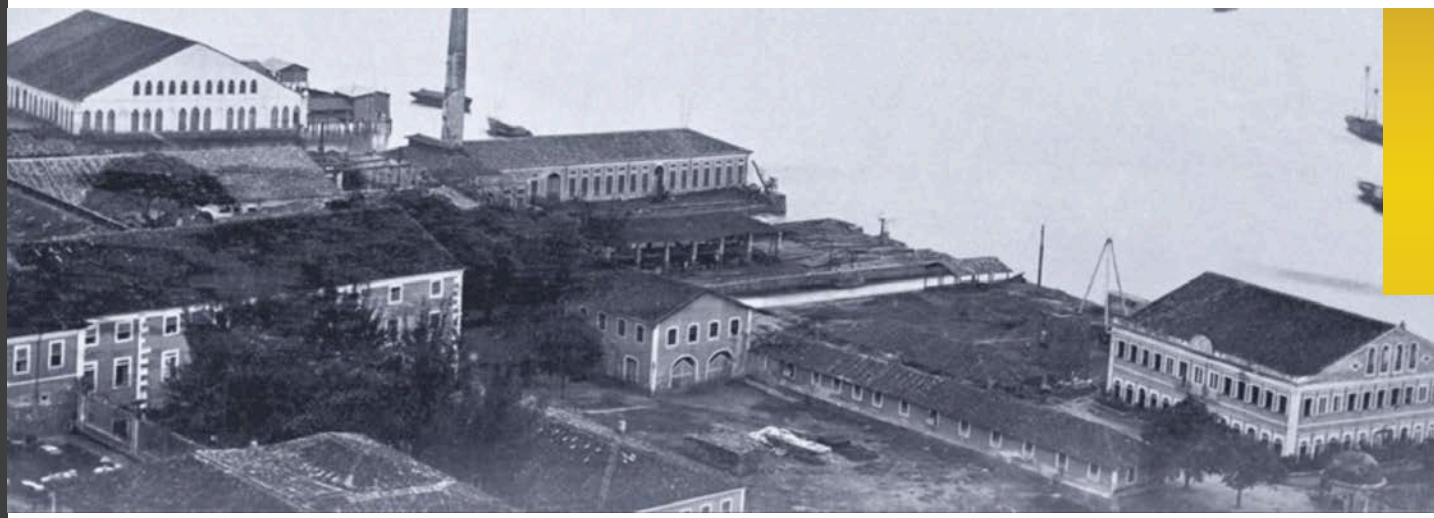
Between 1850 and 1870, these vessels represented about 25% of Brazil's maritime trade, docking regularly in Salvador. They were merchant ships such as clippers (designed to reach up to 20 knots), patachos, barcas, brigs, barquentines and schooners — all made of wood. They transported Port wine, olive oil, textiles, tools, and ceramics to Brazil, returning with sugar, tobacco, cotton, tropical hardwoods, and cacao.



Salvador served as a stopover point for unloading, resupplying, and repairs, taking advantage of the sheltered, deep conditions of the Bay of All Saints (Baía de Todos os Santos).

Naval engineering under sail reached its peak during this period. Two- or three-masted vessels with reinforced wooden hulls measured 35 to 50 meters and displaced 200 to 400 tons. They were robust enough for transoceanic crossings yet economical in crew and maintenance. Scandinavian, German, and British shipowners operated these routes, using Salvador as a redistribution hub for northern and northeastern Brazil, complemented by smaller vessels that supplied mills, wharves, and islands across the bay.

The intense maritime activity resulted in several shipwrecks in the region, caused by storms, groundings, or navigation errors. Many of these wrecks, often belonging to foreign merchant ships, remain scattered around the Bay of All Saints as material witnesses of that era.



## SALVADOR IN THE CONTEXT OF ATLANTIC TRADE

Salvador was Brazil's main slave port until the early 19th century, receiving approximately 1.5 million enslaved Africans, even after the trade was officially prohibited in 1850. In the 19th century, it was the second-largest exporter of sugar and coffee in the world (behind Pernambuco in sugar).

During the "coffee boom" (1830–1880), exports rose from 1,000 to 10,000 tons per year, representing about 40% of Bahia's GDP. Official Imperial records (available in archives such as the Bahia State Public Archive) show that, in the second half of the 19th century, an average of 500 ships per year crossed the South Atlantic and docked in Salvador — peaking in 1875 with 632 ships arriving and departing from the capital.

These ships influenced local culture, bringing rhythms and traditions that helped shape the Bahian Carnival and the architecture of the port area, such as the Mercado Modelo. Their stone ballast — commonly exchanged for sugar, coffee, or cotton — was often used to pave streets in the historical center, where many of these stones remain today.

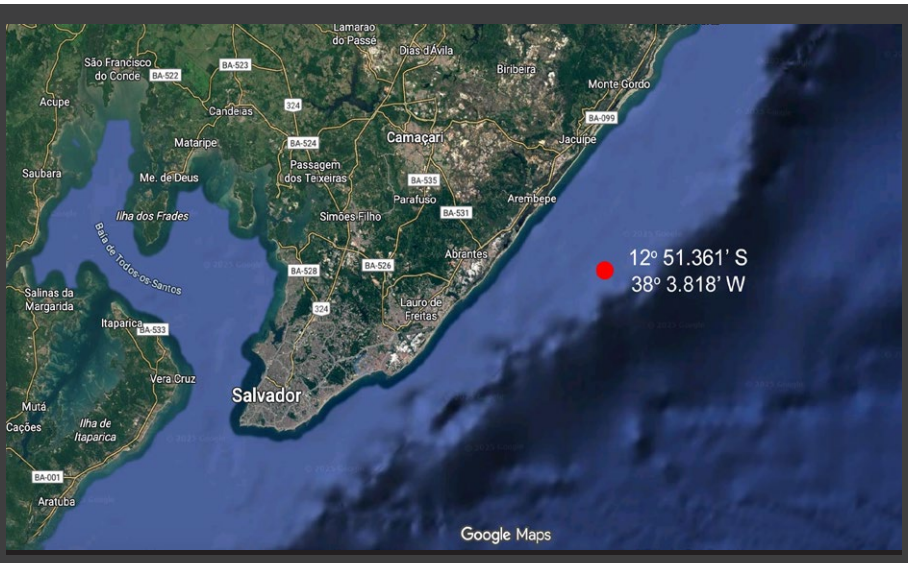



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Photo: Kadu Pinheiro

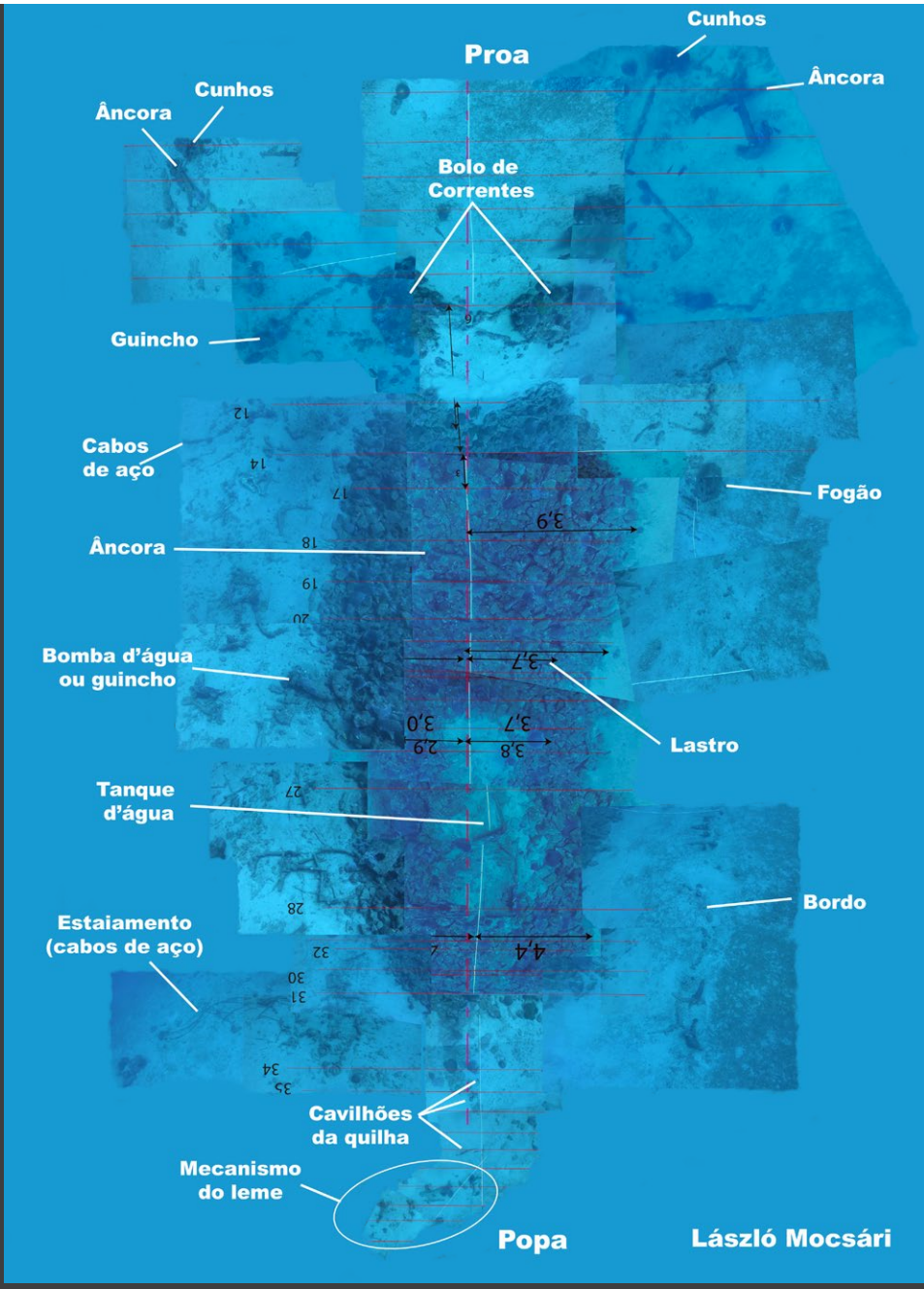
# SHIPWRECK DATA

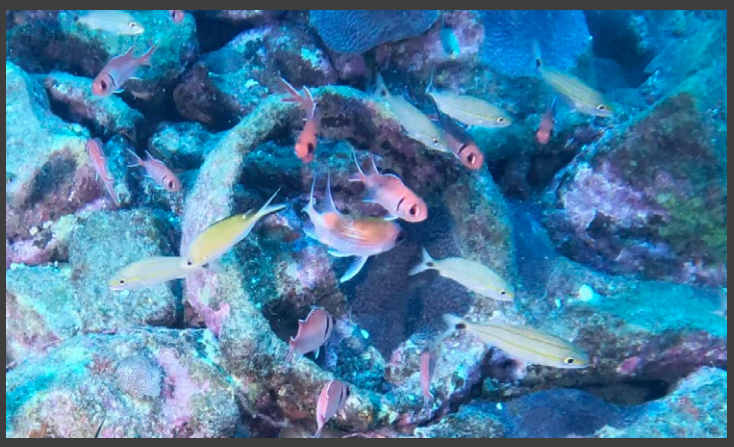
## BASIC INFORMATION

Name: Unknown
Date of Sinking: Late 19th to early 20th century
Nationality: Unknown
Year Built: Unknown
Shipyard: Unknown
Owner: Unknown
Displacement: Estimated 200–400 tons
Length: ~40 meters
Beam: Estimated 9–11 meters
Type: Patacho, barca, barquentine, or schooner
Hull Material: Wood, possibly copper-sheathed
Cargo: Unknown
Propulsion: Sail, 3 masts
Cause of Sinking: Unknown

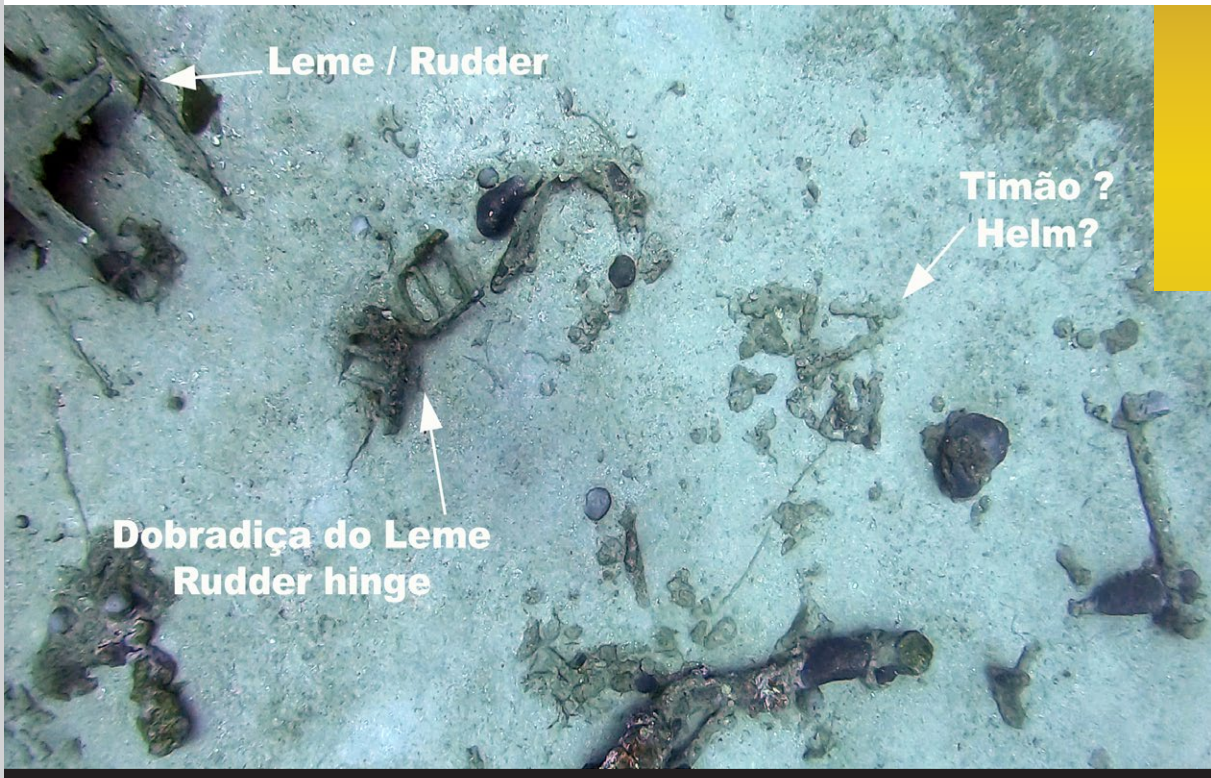
## LOCATION

Region: Northern coast of Salvador (7.5 nautical miles off Arembepe)
State: Bahia
Country: Brazil
Coordinates: 12° 51.361 S, 038° 3.818 W
Depth: 65 meters
Current Condition: Dismantled



# SITE DESCRIPTION




Discovered by fishermen around 2014 and initially mistaken for a tugboat, the wreck presents itself as a wooden sailing vessel about 40 meters long, resting on a sandy bottom at 65 meters deep. With its bow pointing 265°, it appears to have sunk in a navigational attitude, slightly listing to port.

The three masts, consumed by marine life, fell to port, influenced by the predominant southern currents — evidenced by remnants of fixed steel rigging cables.

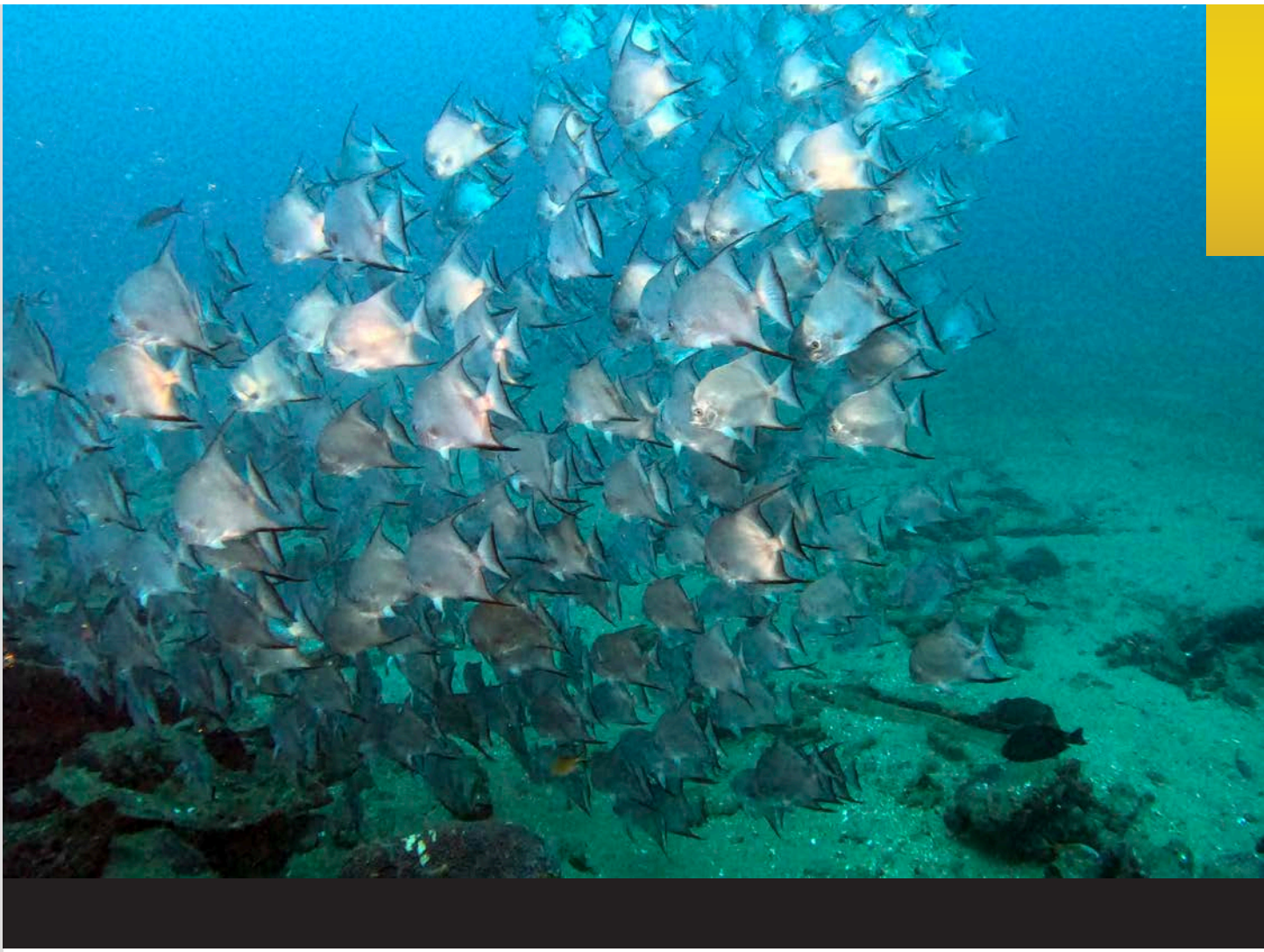
The wide separation between the visible hull edges (14 meters) suggests the hull opened laterally.

There is a large pile of stone ballast rising less than a meter from the seabed, three Admiralty anchors — two at the bow (one mounted on starboard, another dismounted on port) and another dismounted midship atop the ballast pile. At the bow, in addition to the anchors, are two chain concretions, two bollards, a winch, and a capstan.

Little wood is visible; the presence of copper plates suggests the hull was sheathed. Bronze or copper drift pins protrude from the sand and ballast along the ship's centerline, indicating they may remain attached to the buried keel.

At the stern, the steering mechanism is evident: the severely deteriorated wooden rudder, its hinges, and an outline in the sand suggesting the ship's helm. On the starboard side, near the bow shoulder, there is a cast-iron two-burner stove about one meter long — a distinctive feature that stands out clearly from the surrounding wreckage.

Amidships, atop the ballast pile, are four pairs of davits, consistent with maritime safety standards of the era, and a large riveted iron box, badly damaged (approx. 180 × 100 cm; height undetermined). Nearby lies what appears to be the upper section or lid of this box, with two circular openings — likely a freshwater storage tank.



To port are numerous pieces related to the masting. The masts themselves, originally wooden, have completely disappeared, but steel rigging cables, thimbles, shackles, boom components, and reinforcement rings indicate the ship had three masts.

At their distal ends are concretions likely concealing crow's nests, tops, and yard components.

What the Findings May Indicate About the Ship's Identity

Wooden sailing ships around 40 meters long with three masts were common in trade between Brazil and Europe, the United States, Africa, and even between Brazilian states from the 16th century onward.

Several findings — such as the absence of cannons, presence of chains, steel cables, copper plates, and a wine bottle — offer valuable clues for identifying the wreck.

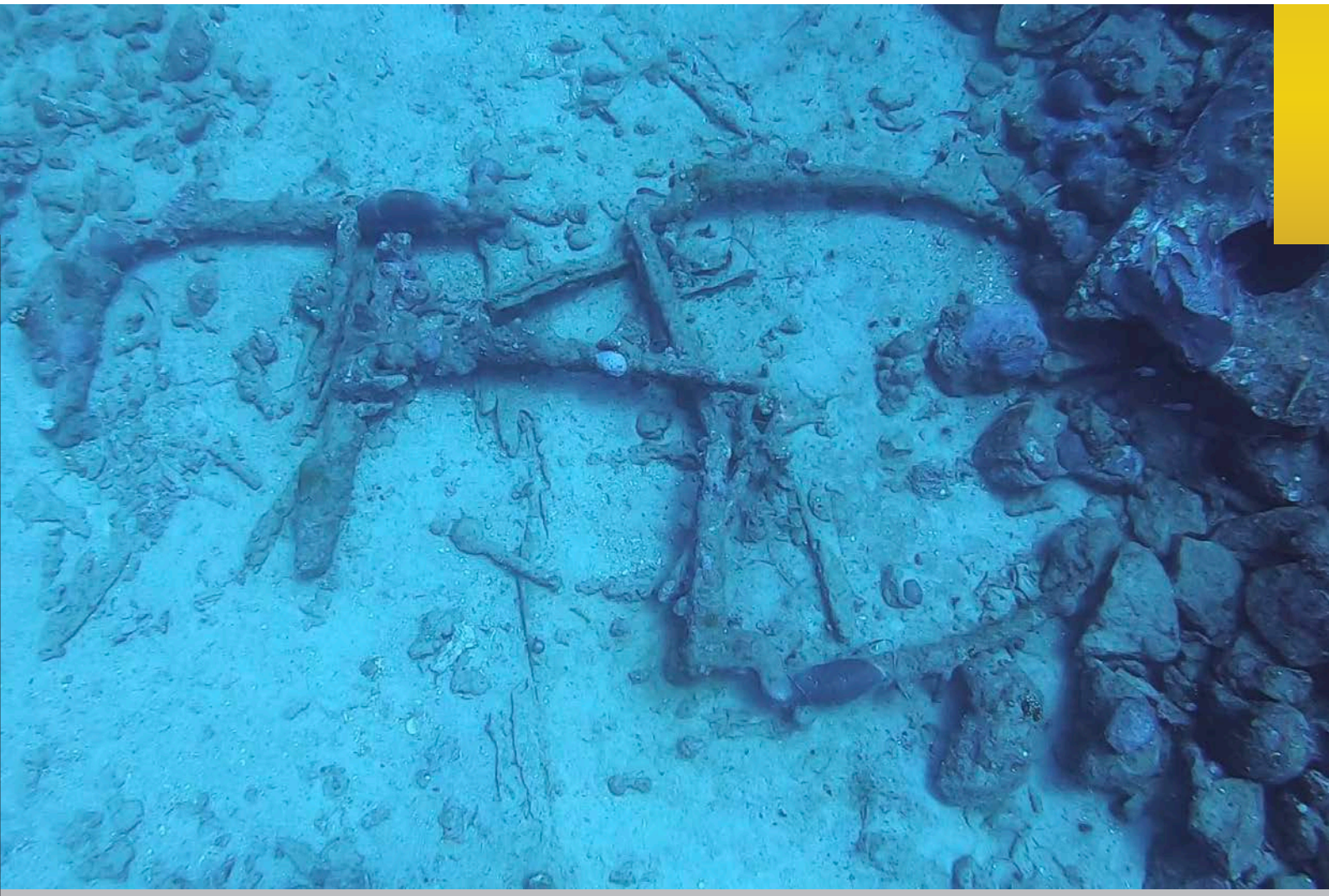
The lack of cannons indicates a vessel from the second half of the 19th century onward. Until 1860, 90–95% of long-distance sailing ships sailed armed with 4–12 cannons (6–18 lbs). After the 1860s, with steam navigation rising, this declined sharply; after 1885, there were virtually no reports of such armament on vessels of this size along the Brazilian coast.


## BALLAST STONES

Stone ballast was common since antiquity. In the early 19th century, iron ballast began replacing stones, but stone remained in use until the early 20th century. Swapping ballast for cargo (coffee, sugar, etc.) in Salvador was standard practice for sailing merchant ships.

## CARGO

No cargo evidence remains. It may have been organic, consumed by marine life — coffee, tobacco, cotton, or cacao. There are no remnants of barrels (whose hoops would remain), bottles, ceramics, or tools that would indicate European imports.



## ANCHORING CHAINS

Iron chains began replacing hemp anchor cables in the 1810s. Full adoption among merchant sailing ships trading with Salvador occurred in the 1830s.

## STEEL RIGGING CABLES

Steel rigging began experimental use in the 1850s and became widespread by the turn of the 20th century.

## COPPER SHEATHING

Copper sheathing against marine borers began in 1761 and became widespread in the 1780s. After 1832, Muntz metal (60% copper, 40% zinc) replaced pure copper on most merchant ships. Both materials remained in use until around 1930.

## THE STOVE

The cast-iron stove indicates a wooden sailing vessel still using wood or coal cooking appliances — typical until 1890–1920, when oil-burning stoves became standard.


# THE WINE BOTTLE

A single dark glass bottle was found with embossed markings “O Porto” and “JH Andresen.” The JH Andresen winery was founded in 1845 in Vila Nova de Gaia, Portugal.

Based on AI analysis (Grock) and comparisons with cataloged examples, the bottle most likely dates from 1900–1925.

## CONCLUSION

Identifying a shipwreck on the Brazilian coast — especially a wooden sailing ship — is often difficult.

The findings were presented to Maurício Carvalho, curator of Naufrágios do Brasil, who has identified more than 40 wrecks along the coast. He searched SINAU records and period newspapers but found no information relating to this event.

This is understandable: Arembepe in the late 19th and early 20th centuries was a humble fishing village. A sailing vessel sinking 7 nautical miles offshore would likely go unnoticed, especially if at night.

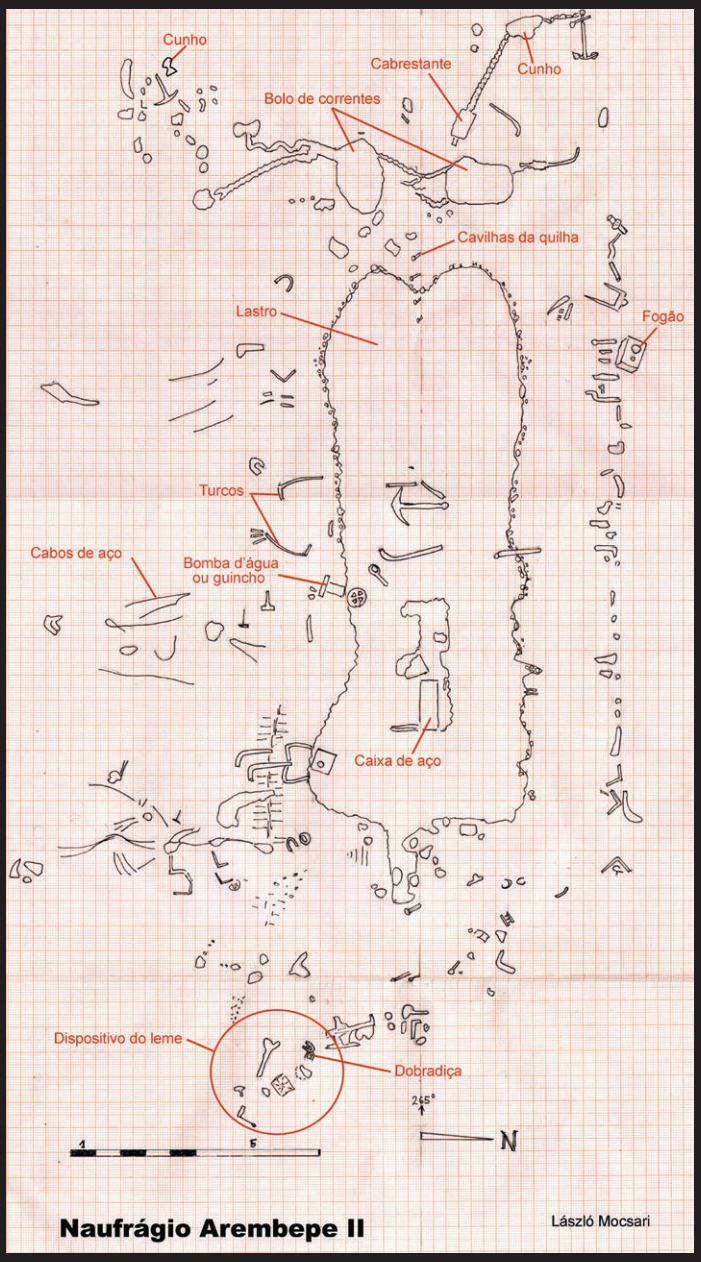
No human remains were found, nor remnants of lifeboats — though the davits show they existed. This strongly suggests the crew and passengers survived using these rescue boats.

The bow points 265°, suggesting the ship may have been sailing toward Salvador, possibly arriving from the north (Europe, the U.S., or Pernambuco). However, since organic cargo leaves little trace, it may also have been outbound from Salvador carrying coffee, sugar, cotton, or cacao.

Technological clues — steel rigging, copper sheathing, ballast stones, cast-iron stove, the wine bottle — narrow the vessel's construction and operational period to the early 20th century, possibly the late 19th century.

Findings and Chronology Table
Finding Chronology
Absence of cannons
After 1885 no longer reported
Stone ballast
Phased out in the early 20th century
Iron chains
Adopted after 1830
Steel rigging cables
Introduced in the 1850s
Copper/Muntz metal sheathing
1780–1930
Cast-iron stove
Used until 1920
JH Andresen wine bottle1900–1925

These findings suggest a ship most likely from the early 20th century, or slightly earlier (late 19th century).




What Type of Vessel Could It Be?

Based on what was observed, it is not possible to determine the precise vessel type. According to Maurício Carvalho, vessels involved in foreign trade with Brazil were not the large first-line ships but smaller, simpler merchant vessels, often commanded by their owners. These included patachos, barcas, barquentines, brigs, and schooners — with clippers being less common.

Arembepe II seems to fit one of the first four categories.

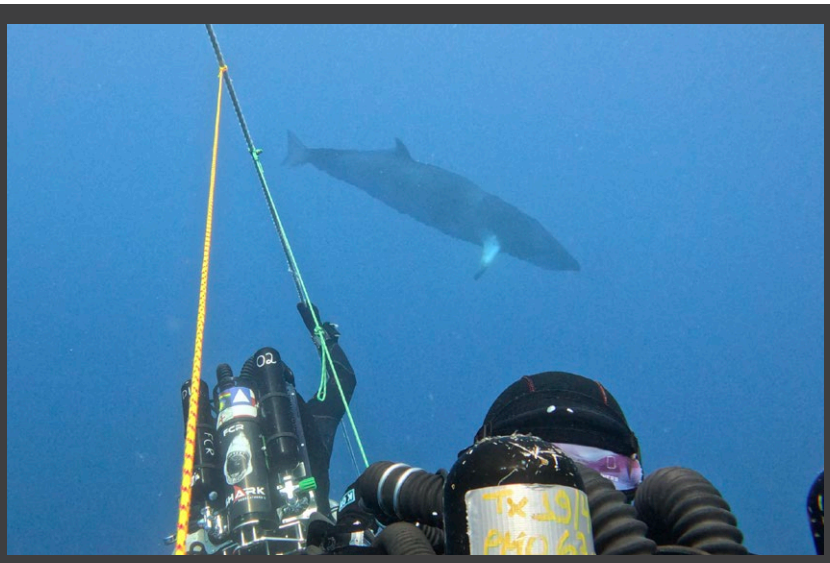
The combination of findings — stone ballast, cast-iron stove, chains, steel rigging, copper/Muntz sheathing, and the Andresen wine bottle — highlights the commercial and cultural interchange between Brazil and Europe, the U.S., or even domestic Brazilian ports during the late 19th and early 20th centuries.

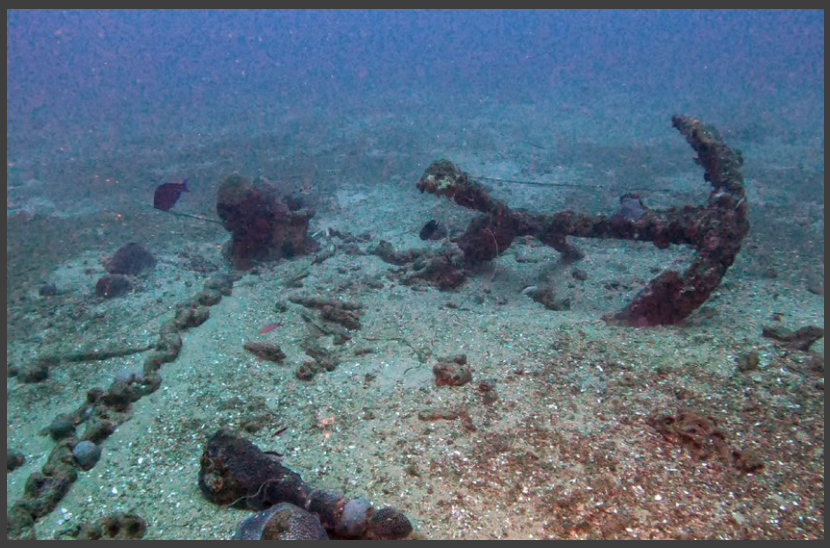
The wreck reflects the daily reality of maritime trade and Salvador's importance as a shipping hub. These sailing ships were vital actors in Bahia's economic history, leaving underwater testimonies from an era when the global economy moved with the wind.

**DISCLAIMER**

Although this text presents several data points and hypotheses regarding the shipwreck, it is purely an amateur work and does not constitute a scientific underwater archaeology study.

No exploration or direct intervention was carried out at the site — no removal of debris, dredging, or displacement of any parts of the wreck during the dives.





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# BOOK REVIEW

Diving Into Dreams is more than just a collection of underwater anecdotes; it is a raw and vibrant adventure memoir by Hall of Fame diver Szilvia Gogh. From escaping communist Hungary to becoming a premier underwater stunt performer in Hollywood, Gogh's journey is a masterclass in relentless determination.

**SUMMARY**

The book follows Gogh's evolution from an "achievement addict" chasing extreme sports and high-risk career moves to a woman finding true contentment. As a professional scuba diver who has worked on over 27 Hollywood productions—including James Cameron's Avatar sequels and stunt doubling for Drew Barrymore—she has navigated the most demanding underwater environments on Earth. However, the narrative takes its most profound turn when a cancer diagnosis forces her to apply the same resilience she used in the deep sea to her own survival and self-discovery.

For the technical diving community, Gogh's story resonates on a unique frequency. She vividly describes the "silent endurance" required on set, where minutes-long breath-holds and 650,000-gallon tanks become an arena of high-stakes responsibility.

What makes this memoir essential reading for pros and enthusiasts alike is its focus on adaptability. Gogh reminds us that the skills we hone underwater—discipline, focus, and risk management—are the same tools we need to navigate life's "unseen currents". It is a soul-searching celebration of perseverance that moves beyond the technicalities of the sport to explore the "price to be paid for personal wisdom".

"A masterfully written memoir... an essential read for anyone seeking courage, clarity, and connection." > — Jill Heinerth, Explorer and Author of Into the Planet
Quick Facts:

- Published: September 2025
- Format: Paperback (320 pages) & eBook
- Price: $18.99 (Paperback) / $9.99 (Kindle)

Contact: www.SzilviaGogh.com

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