



Edited by
Gunild Pak Symes

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Man-Eating-Shark Costume >>>



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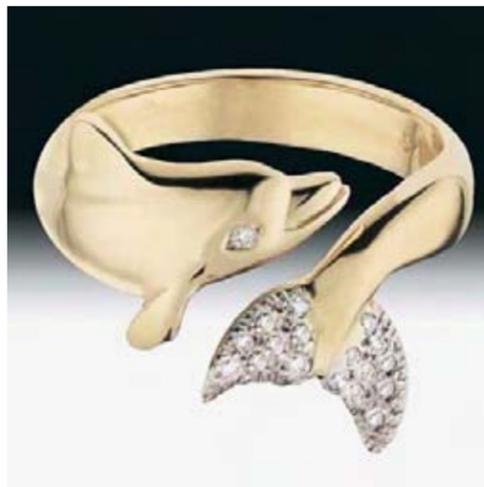
Diving Designs is a line of fine jewelry for everyone who loves diving, the ocean, and all of its wonderful sea life. Each piece is an original design and is individually hand made ranging from \$289 and up. Their motto: "Embrace the spirit of the ocean. Express your passion.™" Seen here, Diamond and Ruby Dive Flag Pendant with 14 karat gold, diamonds, rubies and 16-inch wheat chain. Price: US\$1699.00 www.DIVINGDESIGNS.com



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www.whalesdirect.com



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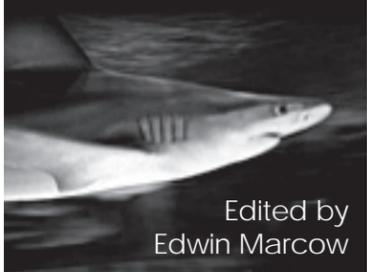


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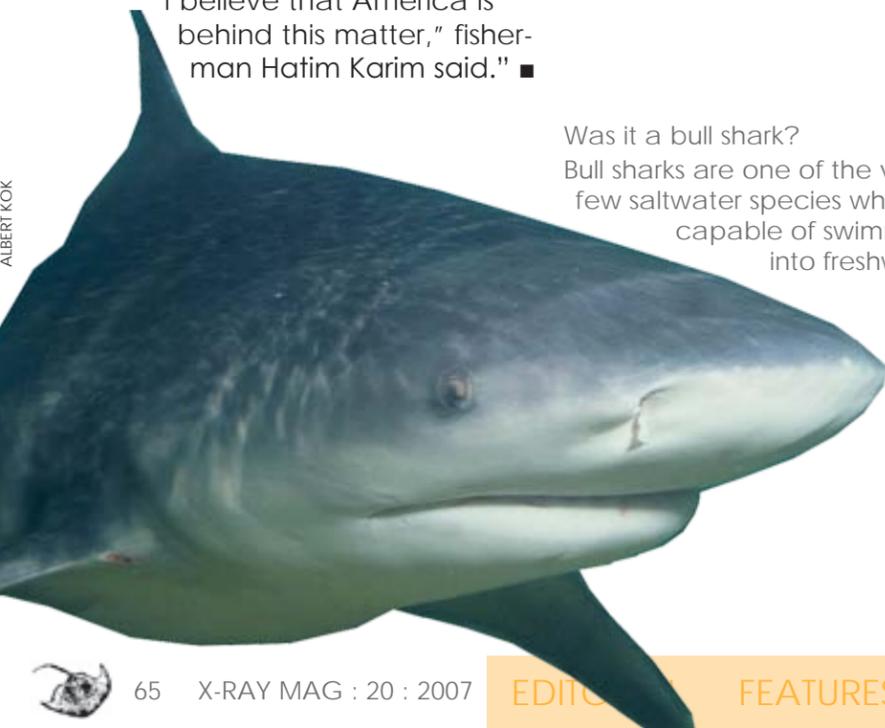
Edited by Edwin Marcow

Shark caught 150km upriver in Iraq. Locals blame the Americans

On October 30, Reuters reported from Nassiria in Iraq that a man and his two sons were fishing in the river and discovered they had caught a two-meter-long shark in their net. According to Reuters, locals blamed the US military for the shark's presence.

Tahseen Ali, a teacher, told Reuters that there was a "75 percent chance" Americans had put the shark in the water. "This is very frightening for us. Our children always swim in the river and I believe that there are more sharks.

I believe that America is behind this matter," fisherman Hatim Karim said." ■



Was it a bull shark? Bull sharks are one of the very few saltwater species who are capable of swimming into freshwater

Sharks pursue bloody victims using gel

Sharks and rays use a gel-like substance on their heads to help pick out and follow the trail of a bleeding prey, a new scientific study has found

It has been widely known that sharks have a special sensory organ on their heads, called the ampullae of Lorenzini, which enable them to detect the very weak electrical fields that prey emit when they swim or bleed.

But now scientists have found that a gel-like substance plays a big role in this process known as electroreception, explaining why sharks pursue bloody victims, even when other "easy target" prey is around, and the gushing blood obscures the shark's vision and smell.

The gel, which sits in the skin pores that are the openings to the sensory ampullae of Lorenzini, contains various proteins and salts similar to mucus only with a jello-like consistency," said R. Douglas

Fields, lead author of the new report.

"With this gel, sharks can detect the strong electrical field produced by bloody salts," explains Fields.

Skin membrane cells sense electricity, causing positively charged calcium ions to rush in. The charge moves through the gel before reaching nerves that send the electrical signals to the fish's brain.

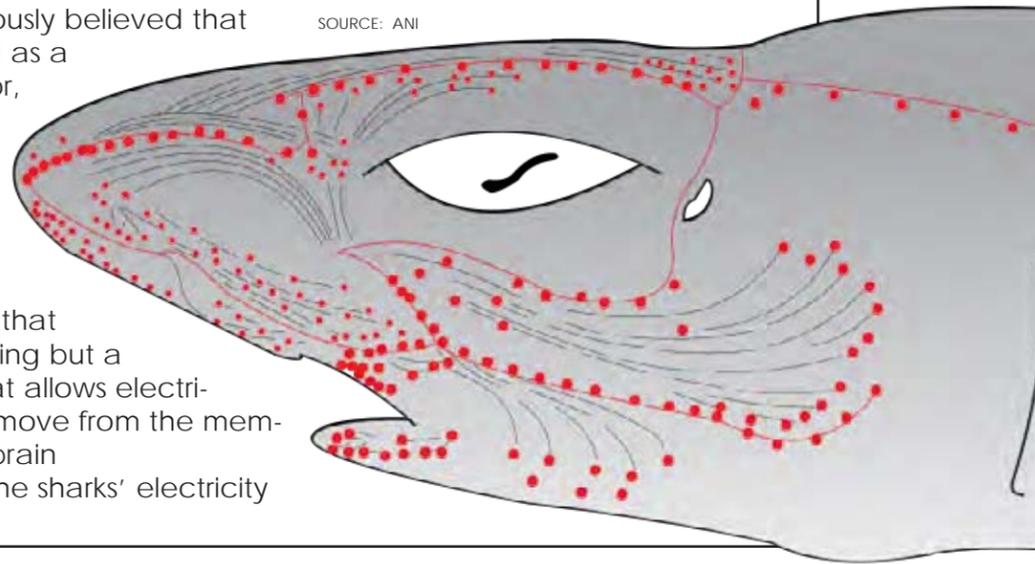
It was previously believed that the gel served as a semiconductor, generating electricity in response to temperature changes, but the new study demonstrates that the gel is nothing but a conductor that allows electrical signals to move from the membrane to the brain

"Now that the sharks' electricity

detection process is better understood, the information may one day lead to better shark repellent devices that can decoy sharks away from swimmers," said Harold Zakon, a professor of neurobiology at the University of Texas.

This new study is based on reports of swimmers towing wounded buddies to shore, with the shark still going after the injured person instead of the rescuer. ■

SOURCE: ANI



CHRIS HUH

Shark's n Bars

Three sharks dead and one more critically ill are being treated with antibiotics. PETA, People for the Ethical Treatment of Animals, is taking aim at Qua Bottle Lounge, a bar in downtown Austin, Texas. The newly opened bar has a 19,000 gallon aquarium situated underneath the dance floor. This aquarium is home to reef sharks and stingrays.

"The pounding vibrations of a club's music, and the noise from the dancers on the top of the tank as well as the bright lights and all the other things that go on in a night club, will cause unrelieved suffering to these very sensitive animals," said PETA spokesman Daniel Hauff. Sharks are highly sensitive to noise, light and vibrations and they need to hunt and swim unhindered.

Qua Bar responded that the shark tank has a three-inch acrylic barrier that is both soundproof and vibration-proof, and they only lost one shark during transportation. which PETA disputes.

It is rare that I give a personal opinion on any written article; I always give the full story without bias, though always championing conservational causes. This story only confirms to me how cruel man can be, indifferent to the world around him. I only wish there were laws in the USA to protect these sharks from this cruelty. —ed ■



PETER SYMES

File photo: Black tip Shark in an aquarium in an exhibition hall

Great Whites in the Mediterranean are disappearing

One of the better-kept secrets is that there is, or was, a large and thriving Great White shark population in the Mediterranean. First identified by Greek mariners at the time of Aristotle, the population appears to live within a triangle shape stretching as far as Gibraltar to Sicily and Greece.

Though, sadly, this population, too, appears to be under threat. A recent study found a population fall of 50 to 60 percent. Over-fishing declines in bluefin tuna, habitat degradation due to tourism, and the development of coastal areas has put tre-

mendous pressure on the Mediterranean Great White population.

Richard Pierce Director of the Shark Trust, a non-profit marine conservation charity based in the UK, was part of a research team in 2005 that spent several months at sea searching for Great Whites.

"We chummed (put out shark bait) around the clock at all depths, but we didn't see a sign of a Great White," Pierce said. "In fact, we saw very little evidence of sharks in general. It was both terrifying and depressing." ■

"It was both terrifying and depressing"

Call for action

With only an estimated 500 Grey Nurse sharks remaining along Australia's East coast, the phrase *situation critical* coined by National Geographic sums up this impending environmental disaster.

As precisely reported in Sharktales, The Nature Conservation Council of New South Wales has been pushing for the establishment of marine sanctuaries around key Grey Nurse shark habitats. It is hoped that the New South Wales Government will close off critical coastal areas to fishing to protect the sharks.

Mark Spencer, an underwater photographer has been championing the cause of the Grey Nurse Sharks by raising the plight that both commercial and recreational fishing has had on the shark population.

"Almost every second Grey Nurse shark I see has a hook hanging out it's mouth, with a bit of trailing line following it, and in the worst case scenario, you see things like ropes tied around a tail and things like that."

Giselle Firme from The Nature

Conservation Council added: "The greatest traps for the Grey Nurse sharks are fishing practices, that they get caught in fishing lines, and they swallow the hooks, and they die from infections, as well as shark nets".

Bill Litchfield, a local commercial fisherman and campaigner for the fishing industry has acknowledged that these closures are necessary in key habitats, though doubts the effectiveness of fishing closures in protecting this shark. Lets hope common sense prevails.

On the other side of the globe in Florida, an 11 foot Mako shark was caught at the Destin Fishing Rodeo. Weighing in at 844.4 pounds the fisherman who were there fishing for grouper got lucky and caught this mako instead.

The fisherman ignoring their own catch-and-release policy, instead had this magnificent animal presented as a trophy. This negative Jaws stereotype only reinforces the message that the only good

shark is a dead shark, something I had hoped died out in the early 80's, and though the fisherman have expressed their respect for the shark then why kill it and present it as a trophy?

In Inhambane Mozambique illegal fishing is on the rise. The practice of shark finning to supply the Far East market is fueling this. With a kilo of shark fins fetching around 6,000 to 7,000 meticais \$240 to \$280 USD sold directly to Chinese buyers, this shark finning mainly concentrated around Pomene and the coastal districts of Morrumbene and Inhassoro reports of more than 20 sharks being killed per day.

The Chinese traders then illegally export the shark fins to Asia!

It is obvious that if these traders were not within Mozambique. Local fisherman would not be fishing for sharks but following their traditional fishing practises. ■

"Almost every second Grey Nurse shark I see has a hook hanging out it's mouth, with a bit of trailing line following it"

White Ratfish

A rare—and probably the only known—specimen of albino ratfish has been caught off Whidbey Island in Washington state. The fish was almost pure white with a

crystalline layer near the surface of its skin that gave it a silvery sheen. Ratfish usually hang out in places with soft, muddy bottoms, so they are typically brown or black with a smattering of white spots to blend in with the sediments.

"It must have been like a beacon," says Ted Pietsch, a professor of fisheries and aquatic sciences

with the University of Washington. The foot-long female is estimated to be between two and three years old.

"Why didn't it get eaten, long before this, by some predator, for example, by a spiny dogfish so common in the Puget Sound and that love to devour ratfish?" Pietsch pondered. ■



No more shark's fin soup

Shark's fin soup is off the menu at all functions and events organised by Malaysia's Environment Ministry and agencies under it. Natural Resources and Environment Minister Datuk Seri Azmi Khalid hopes to encourage individuals and organisations to stop serving the delicacy at corporate functions. "Ultimately by refraining from the consumption of shark's fin soup it is hoped that the ministry could contribute in one way or another towards current shark conservation efforts," said a statement from the ministry. ■

When faking it is good!

From Cairo to Cape Town, San Francisco to Sydney Harbour, most of us have come across fake or counterfeit goods. For the first time, a fake item for legal sale will be good for business, the environment and the consumer!

Nikko Yuba Seizo Co, a Japanese food-processing company has developed artificial (fake) shark fins made from pork gelatin. The fake shark fins costs the consumer about one-tenth—only 1,500 yen or \$15 dollars—of the price of the real shark fin. A spokesman reported that the company had long queues of customers when it first presented its product in China at a recent trade fair in Guangzhou. With greater pressure within China to boycott the trade in shark fins, in part thanks to it's most famous sports personality basketball star Yao Ming, and with this cheaper alternative now being marketed it is hoped that this could be the start of a fall in shark finning. ■

A Letter From The Editor

A Call for Action

Just as in war torn parts of the globe decimated by death and destruction, it is often a UN peacekeeping force brought in to bring peace and stability to this ravaged part of the world.

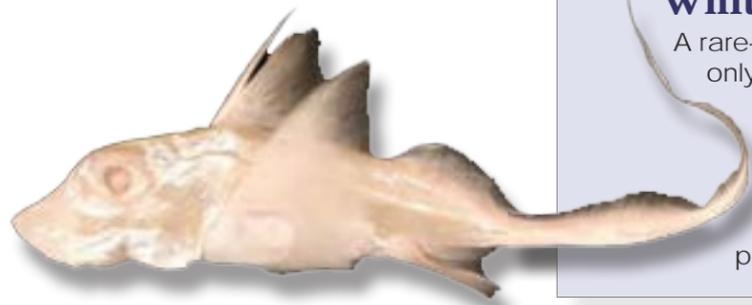
Could the protection of the oceans be given over to the UN? Navies from around the world could be seconded under UN colours to protect the marine environment from illegal fishing no matter were in the world.

Could this force be given the powers to act in all territorial waters otherwise from Australia, the US and Mozambique we will witness and be impendent to the slow death of the shark populations around the World?

Can it be argued that the protection of the marine environment across the Globe has reached such a critical point, that no country, regardless of it's place in the international community can be trusted to safeguard what after all does not belong to them but to mother earth?

Can an international force with no ties to the machinery of politics, both national and international, be the only body trusted to take both immediate and lasting change, otherwise we face an environmental time bomb that will leave it's mark on the world for generations to come? ■

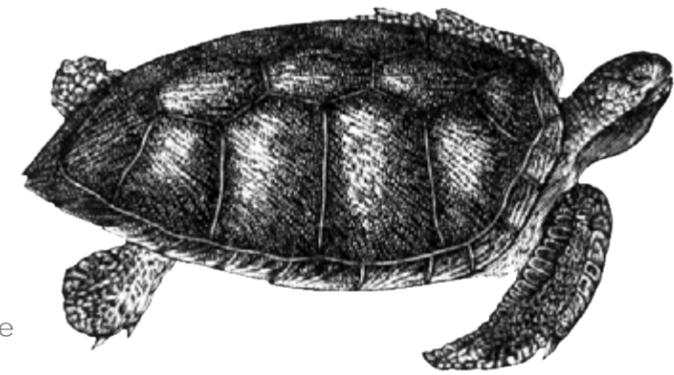
—Edwin Marcow





In these squalid conditions the sea turtles were kept before we rescued them

Your support made the difference.
Your support is still needed.
This is why...



With a little help from friends, the sea turtles were soon on their way back to the ocean

The phone call

It was in still in the wee hours of an early morning when Wayan Wiradnayana, the director of the Pro-fauna office on Bali received a call from an Austrian tourist. Whilst walking on Sanur beach, the man had witnessed two large turtles being loaded into a boat and hidden in a nearby hut. What happened next sounds unbelievable, but it is true. Thanks to www.sos-seaturtles.ch and media coverage, the man was fully aware of the plight of the sea turtle on Bali and the name Profauna was stuck in his mind. The owner of a nearby restaurant helped him look up the correct telephone numbers, and Wayan wasted no time in informing the chief of police, the forestry department and the Bali marine police.

Time was of the essence because there was a strong possibility that the sea turtles might be moved on. Indeed, when the

Freedom at last!

Turtle Week Bali

A phone call is all it takes!



We have reported on the plight of the sea turtles before. We have reported how they were being butchered by the thousands. And we have asked for your support and signatures on a petition to stop the slaughter of these ancient ocean citizens.

It is now time to report back that your support has made a real difference. But the fight is not quite over yet.

Text and photos by Kurt Amsler

Make sure you visit www.sos-seaturtles.ch





"I still found it challenging to keep my cool when confronted with this man who has, in his lifetime, been responsible for the deaths of hundreds of thousands of sea turtles."

police arrived on site, the animals had already disappeared, and unfortunately, so had the determined tourist.

However, the marine police, not being easily deterred and being officers of the law, soon discovered where the sea turtles had been taken. They moved in to find both the green turtles, which were of a good size, and seized them. They were measured and tagged by the forestry department and set for release. The

release took place a little time later as the tide was going out on Kuta Beach. As always, the spectacle attracted many residents and tourists, and provided a great opportunity for Profauna to distribute information leaflets about the endangered sea turtles.

In the Lion's Den

The trade in sea turtles in Tanjung Benoa lies in the hands of two men, Pak Tami

The hiding place

Tied with a rign through its flipper

and Pak Hassan. One man who knows what is going on, is the Swiss-born Heinz von Holzen. He has lived on Bali for the past 12 years and owns the famous Bumbu-Bali Restaurant and Ruma-Bali Village. Understandably, he has mostly to work behind the scenes, but he has a number of people working undercover to keep him directly informed on what is happening on the sea turtle scene.

Instead of turning up at markets, as they did in the past, sea turtle eggs now come to Heinz's place, where he incubates them in his many turtle rearing plants, and then releases them. Heinz literally buys the freedom of illegally caught turtles, so that they are spared the horrific end of being cut out of their shells alive.

The news that five sea turtles were being kept for a buyer in a hiding place on Pak Kami was brought to him by an informer from Tanjung Benoa. The main priority was to free the turtles as soon as possible and also to photograph the proceedings in order to provide material for the media and evidence for the Balinese authorities. How the trader would react to the camera was the least of my worries at that moment. The only thing that gave away our arrival was the Bumbu Bali Restaurant truck that was driven by Pak Madi, Heinz Von Holzen's specialist for this sort of tricky business.

Although quite hardened to these sorts of things, I still found it challenging to keep my cool when confronted with this man—who has, in his lifetime, been responsible for the deaths of hundreds of thousands of sea turtles—to haggle with him over their price, as if they were bananas or coconuts!

Better to see him in a different light, such as through the viewfinder of my Nikon! The noise of the camera produced no reaction from him whatsoever, but the same could not be said for his side-kick, a stocky, sly looking man who was evidently Chinese. One word from Pak Madi put him in his place. Evidently,

How many seaturtles get to ride in a police van?

Bali Turtles





Before the turtles were released at Kuta beach they were measured and tagged by the Forestry Department.

"Last one in is a"

he was keen not to bungle the sale over a small disagreement.

With exaggerated politeness, he encouraged us to follow him, and after 15 minutes of insane driving, we arrived at the shed where the creatures were being kept. Both concrete basins measured around 5 x 5 metres and were filled with around 40cm of water. Here, our four adult green turtles were to be found, each one weighing more than 100 kilos, alongside a small hawksbill turtle.

The transporting and preparation for the release carried out by Heinz's men is a procedure that has seen many years of practice. Late afternoon, as the tide was going out, the turtles were taken to the

Holiday Inn Hotel beach and released back into the sea—a very moving moment! Back to their own environment, where up until their capture, they had been living for the past 30-40 years! It is highly possible that the turtles could live to double this age. See balifoods.com

Kuta Beach Demonstration

The backdrop was like the set of a TV commercial. White sand, blue sea, and in the foreground, dressed in white, the Profauna activists holding their banner. With rigid expressions, motionless and straight-faced, they picketed for the endangered sea turtles. Here, on the most famous of the Bali beaches, young

Recognized as endangered species by the IUCN and CITES, sea turtles are protected from exploitation in most countries worldwide. It is illegal to collect, harm or kill individual turtles. In addition, many countries have

implemented various laws and ordinances to protect individual turtles and turtle nesting areas within their jurisdiction. However, the turtles' populations are still in danger because of several human practices. In some

countries, the turtles are still hunted for their flesh, and their eggs are collected from nests and eaten as a delicacy. Pollution indirectly harms the turtle populations both on the population and the individual scale. (WIKIPEDIA)

women with the same look distributed leaflets amongst inhabitants and tourists alike.

Profauna demonstrations always cause a big stir in the media. This occasion was not any different. Cameras flashed, TV cameras filmed, and even an ARD cameraman used the opportunity to build the demonstration into a production he was already filming. Naturally, the place was

In Indonesia demonstrations and information campaigns are closely watched and taken very seriously.



Visit Profauna.or.id
Profauna.org



also teeming with uniforms: the chief of police, the forestry department and other officials were all over the place.

In Indonesia, demonstrations and information campaigns are closely watched and taken very seriously. Profauna takes advantage of this, for in this country, it is the only way to get a strong grip on the protec-

Thanks to the sponsors

Turtle Week was only made possible thanks to the generous support of the firms Seemann-Sub, Seacam and Schoener-Tauchen, De / Ch.

seemann



tion of animals species. This is why the organisation also works closely alongside schools and universities. Profana is however not only concerned with the protection of sea turtles, but with all endangered species throughout Indonesia.

Visiting the Governor

The meeting with the governor was scheduled for 10am. On our way to the government buildings we noticed a giant cloud of smoke. Fire engines with flashing lights and sirens blaring headed for the town centre. A large fire had broken out in Denpasar city centre. Therefore, it was understandable that the governor had to be excused from our meeting, and that instead, we were to meet with the Minister for the Environment, Ir.Ni Wayan Sudjj. Even knowing the extent of the Governor's influence, we were not disappointed by the way things turned out. It soon became clear that the minister was fully informed of the sea turtle plight and spoke perfect English. Our

position was clear: According to Indonesian Law, (article 764-98 / April 1997) killing of sea turtles is forbidden, and trade over the border is seen as a violation of CITES convention, the international commission for the protection of endangered species.

Media matters

This is where image and perception matters. There is no clearer language than the more than 20,000 letters of protest sent all over the world and even more petition signatures. Hundreds of publications and the world-wide link www.sos-seaturtles.ch have drawn people's attention to the murder of sea turtles on Bali.

And as Bali is currently struggling to keep every tourist it can, the Balinese have no other option but to take such issues very seriously. ▶

When we began the first sea turtle campaign shortly after the fall of the Suharto regime around the turn of the millenium, around



"See you out there!"

Author Kurt Amsler getting a friend for life

IYOR 2008

INTERNATIONAL YEAR OF THE REEF

What is the International Year of the Reef?

"Recognizing that ten years after the first International Year of the Reef (1997) there continues to be an urgent need to increase awareness and understanding of coral reefs, and to further conserve and manage valuable coral reef and associated ecosystems, the International Coral Reef Initiative designated 2008 as the International Year of the Reef (IYOR 2008)." — International Coral Reef Initiative (ICRI), October 2006. IYOR 2008 will consist of a year-long campaign of events and initiatives hosted by governments and non-governmental organizations around the world. For more on the goals of IYOR 2008, see www.iyor.org.

Why is the IYOR 2008 important?

Coral reefs are some of the oldest and most diverse ecosystems on the planet. They provide resources and services worth an estimated 375 billion dollars each year, a staggering amount for ecosystems that cover less than one percent of the earth's surface. Millions of people and thousands of communities all over the world depend on coral reefs for food, storm protection, jobs, medicines, and recreational opportunities.

Unfortunately, many of the world's coral reefs (including the associated seagrass beds and mangrove habitats) have been damaged or destroyed due to increasing human impacts, climate change, and other factors. According to the Status of Coral Reefs of the World: 2004, 70% of the world's coral reefs are threatened or destroyed, 20% of those are damaged beyond repair, and within the Caribbean alone, many coral reefs have lost 80% of coral species. The decline and loss of coral reef ecosystems has significant social, economic, and ecological impacts on people and communities in the U.S. and around the world.

When will IYOR 2008 take place?

The calendar year of 2008 — January 1 through December 31.

If I choose to do something to celebrate IYOR, is it important to network with others?

You're not required to work with others in order to participate in IYOR 2008. All U.S. based individuals, corporations, schools and organizations are welcome and actively encouraged to participate in the IYOR. That said, networking helps ensure that we get the maximum return for our collective IYOR 2008 investments. Follow the steps below to network at whatever level (or all levels) you are most interested: international, national, regional, or local.

How do I get involved with IYOR 2008?

- Check out www.iyor.org for more information on the IYOR 2008 effort. Here you can register your interest with the international IYOR coordinator, sign up for the international email list by emailing info@iyor.org, and download basic IYOR 2008 information and key documents.
- Get involved with the U.S. campaign by contacting the non-profit organization Reef Check — iyor2008@reefcheck.org — to find out who in the U.S. may be involved in your geographic area or field of interest. Reef Check is serving as a facilitator for the U.S. IYOR effort in the non-government community.
- Then, if you'd like to brainstorm and network at the national level, contact the National Oceanic and Atmospheric Administration — iyor@noaa.gov — to get added to the U.S. Coral Reef Task Force Education and Outreach Working Group, a network that encourages information-sharing, collaboration, and collective brainstorming for coral reef outreach and education across the government, non-government, research and private sectors. The USCRTF Education and Outreach Working Group is acting as a platform for anyone interested in sharing information about their U.S. IYOR plans with other organizations, and provides a forum for potential collaborative planning and action.
- Finally, with the aid of the information resources and coordinators above, determine how you or your organization can make a unique IYOR 2008 contribution, and get started!

www.iyor.org FOR MORE INFORMATION



◀ A nice little innocent tourist attraction in favour of turtle protection? Wrong! Turtle Island is nothing but a front and a cover-up for the trade in sea turtles

What the tourists see out front ▶

south coast of Tanjung Bena. Tourists are herded out there on little boats to gawk and paw at the 30 sea turtles eeking out their miserable existence in the dirty waters of the lagoon and a concrete basin. Alongside them are cages containing birds, giant lizards not to mention a large python with tape wrapped round its mouth, the front part of which, incidentally, is missing, as it was crudely removed along with its fangs. The icing on the cake is that souvenirs made out of turtle shells are being sold there. It was an exhibition that would take the joy out of the day of any person—the few visitors present were nearly exclusively tourists from Asian countries.



Bali Turtles



What is really happening in the back... Piles of empty shells and bones tell their own tale



Turtles are discretely being transferred out of the back door

What kind of zoo treats its animals like this?

25,000 animals were being massacred in the slaughter houses of Tanjung Bena. Currently, around 3,000 are being killed in secret.

Of course, we refer to the positive direction in these developments, but stressed that police action must be continued and even increased so that an end is brought to all killings. Once this happens, we can show the more beautiful side of the dream island of Bali in the media, and not more of the bloody images from Tanjung Bena.

The Cover-Up

Alibi-Island. This "turtle island" is located not far off the



Souvenirs made out of turtle shells are being sold at the "Turtle Island"

By researching and closely observing the island, Pro-fauna members and the journalist Daniel Peterlunger was able to gather clear evidence that "turtle island" was nothing more than a front and cover-up for the trade in sea turtles. Through the back doors of the compound, we were able to get some pictures of creatures stored on a small boat transferred to a hut lying directly opposite of a water basin. The shells and bones lying in the waste outside were further proof that slaughter was taking place here. As of this is writing, the photos taken of these proceedings are lying on the desk of the Minister of the Environment and are being channelled through all levels of government by the Profauna team.

In conclusion

The developments on Bali since we began our campaign in March 2006, shows very clearly that our "public relation" strategy with emphasis on obtaining media coverage is working. However, in order to remain the front line and support the actions of our comrades-in-arms on Bali, we are heavily dependent on sponsorship and donations. In the end, putting an end to the murder and trade of sea turtles on Bali comes down to who is the most determined to succeed!

Please visit www.sos-seaturtles.ch. We appreciate your support ■





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Edited by Peter Symes & Michael Symes

POINT & CLICK ON BOLD LINKS

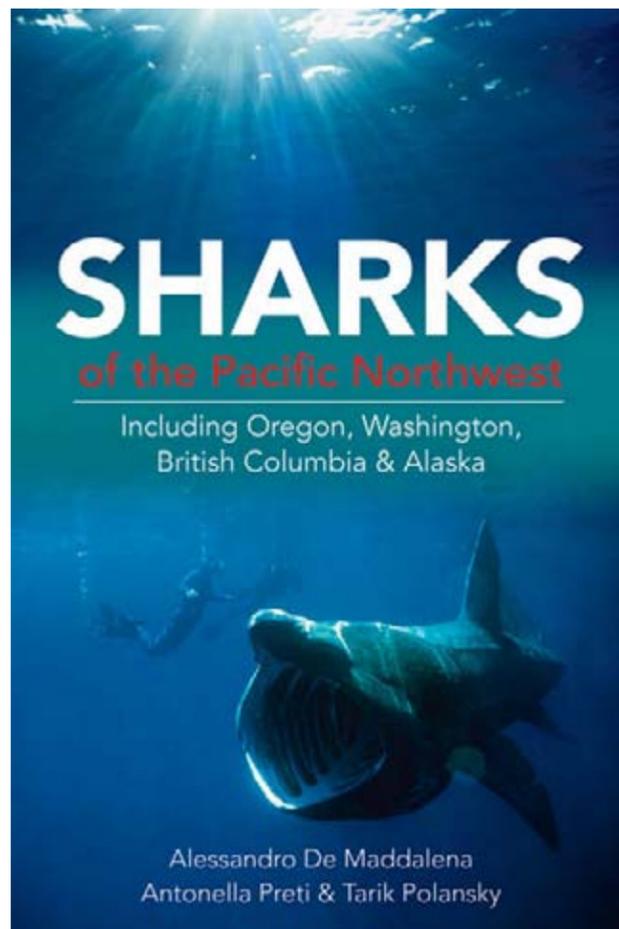


Sharks of the Pacific Northwest!

Harbour Publishing Sharks that inhabit the Pacific Northwest are the stars of this new book by shark expert Alessandro de Maddalena, biologist Antonella Preti and director Tarik Polansky. Simply entitled, *Sharks of the Pacific Northwest*, this book focuses on the region's 18 species of sharks, as well as those in Oregon, Washington, British Columbia and Alaska. Readers learn about each species' classification, morphology, distribution, habitat, diet, reproduction and behaviour. Included is also a write-up of

the general evolution, anatomy and physiology of sharks in general. Although written for the general public, zoologists and marine scientists would find this book a stimulating read, due to its spectacular photographs, paintings and illustrations.

ISBN: 978-1-55017-418-2
 ISBN: 1-55017-418-5
 Paperback, 144 pp
 Published in May 2007



This Christmas, why not pay a visit to Christmas Island?

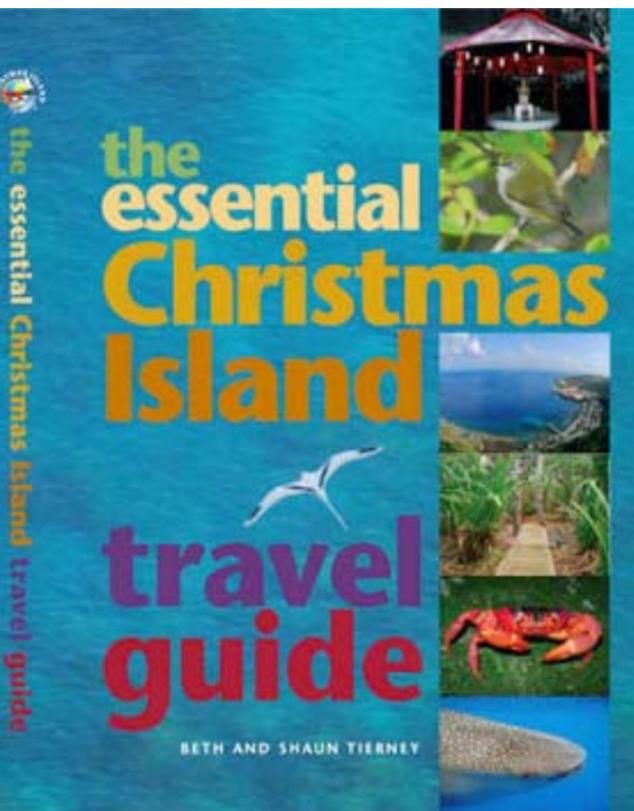
Think Christmas Island, and little red crabs come to mind. Well, this book, *The Essential Christmas Island Travel Guide*, aims to add more variety to that stereotypical image. While there is no doubt that Christmas Island is famed for its annual migration of the red crabs, this charming island is also renowned for its rich variety of endemic animal and plant species, pristine beaches, fascinating cultures and exciting dive sites.

Even if you were to quickly flip through the pages, you would be captivated by the stunning images captured in print by photo-journalists Beth and Shaun Tierney. Backed by extensive onsite research, this book is a comprehensive guide to every that is quaint and exciting in Christmas Island. As you read

the commentary, it soon becomes obvious that this is a book that has been created out of a love for the island and its numerous charming facets.

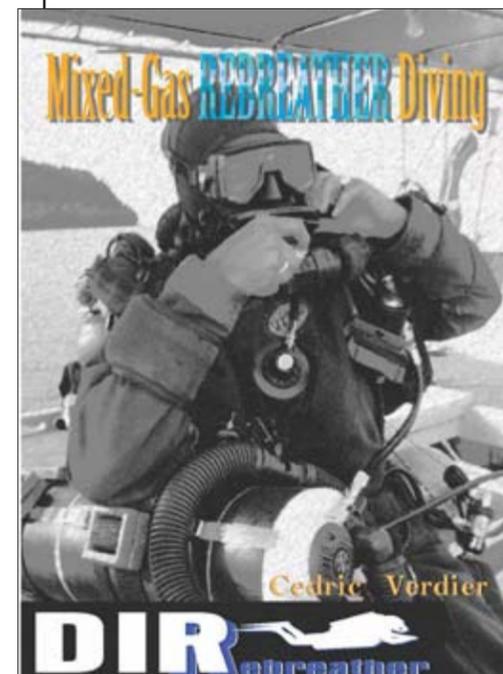
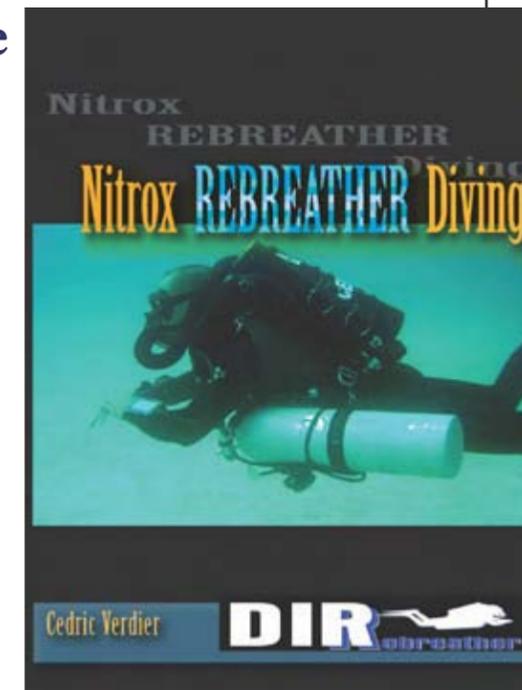
This is more of a general travel guide than a book that focuses on diving, so you'll get to learn about the island's history, culture, towns, flora and fauna, etc. There are also suggested itineraries, listings of accommodations and restaurants, as well as information about the weather and airlines.

200mm x 140mm
 ISBN: 978-0-646-47591-2
 Published by Christmas Island Tourism Association

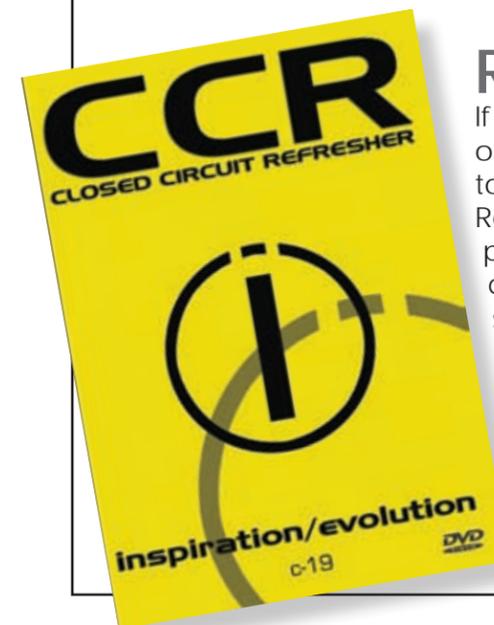


Rebreather literature

Cedric Verdier needs no further introduction than that he is X-RAY MAG's regular rebreather contributor. He has written two manuals in PDF format for rebreathers with all the principles, benefits and risks of Semi-Closed and Closed Circuit Rebreathers. The first full color 70 page manual gives the proper procedures for planning and diving with a rebreather including advice on



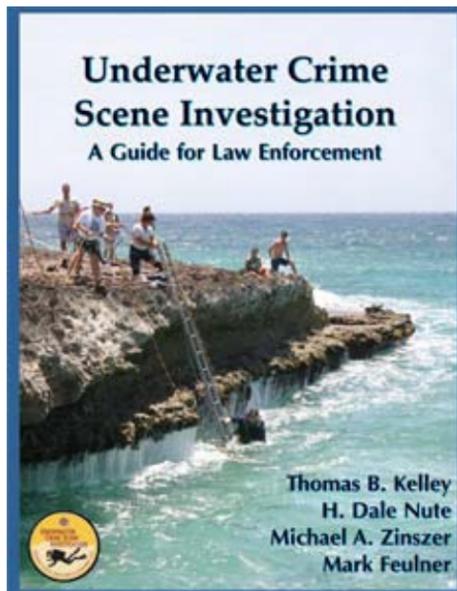
how to minimize the risks of Nitrox rebreather diving. The second full color 70-page manual is a comprehensive guide about Mixed-gas Rebreather Diving, which covers everything from in-depth mixed-gas dive planning to Accident Analysis. A third manual covering Diving Expeditions and extreme rebreather diving including is coming out soon. Price for each manual for DIR members is US\$21; non-members pay US\$32.00. www.dirrebreather.com



Refresher DVD

If you got a little rusty using your Inspiration or Evolution rebreather, this DVD will come to your rescue. This CCR, Closed Circuit Refresher DVD, refreshes the pre-dive procedures, assembly and disassembly, dive skills, rinsing and post-dive care and storage. Filmed in the clear waters of the Red Sea, there is even an optional multilingual commentary—specifically in English, Dutch, French and German. Written by qualified rebreather instructors, this footage is aimed at improving the viewer's diving abilities and safety in the water.

CSI The Underwater Edition



No, it's not about Grissom, Cathrine and Warrick from the TV series. It's about the real thing.

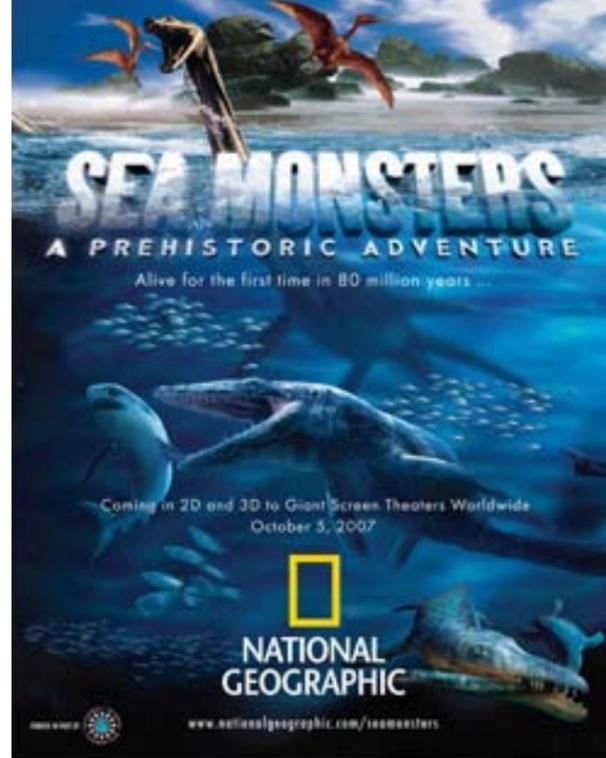
Written by four experts in the field of criminology and crime scene investigation (known as CSI), *Underwater Crime Scene Investigation: A Guide for Law Enforcement* is essentially a how-

to guide for investigators faced with an aquatic-related crime scene or recovery operation.

While clearly an instructional volume, this book is palatable and not excessively technical. Examples, photographs, and forms illustrate a variety of topics that run the gauntlet of organising, evaluating and effective crime scene reporting and procedures of professional crime inquiry. A systematic breakdown of the investigation process, from initial response and pre-search organisation all the way to post-search evaluation and protocols, is featured.

Although clearly written for those in law enforcement, individuals like rescue divers, educators in underwater investigation and lawyers—as well as all you CSI-wannabes—are bound to find this book a fascinating read.

Paperback
Spiral bound, 90 pages
ISBN: 9781930536371



Diving into Prehistory
Diving with Dinosaurs
Swim with the Dinosaurs

Sea Monsters 3D

Sea Monsters: A Prehistoric Adventure allows you to come face to face with a young Dolichorhynchops (known colloquially as "Dolly"). Born into a Late Cretaceous world that

existed more than 82 million years ago, this gentle creature would soon grow into a fast-swimming, dolphin-sized adult, but not yet. Not until your knowledge and fascination of the prehistoric marine world grows alongside her, as she encounters long-necked plesiosaurs, giant turtles, flippered crocodiles, sharks and mosasaurs.

Possibly intended as an educational treat for students, this information-packed IMAX dramatisation also contains re-

enactments of archaeologists discovering fossils in the central plains of the United States. This is all well and good, but hey, we all know that the true stars of this IMAX film are the computer-generated prehistoric creatures and the fascinating world they inhabit.

Running time: 40 minutes.
Directed by Sean Phillips
Written by Mose Richards
Narrated by Liev Schreiber

Shell-Seeking Game for Your Cellphone

As I write this review, the song from *The Little Mermaid*, "Under the Sea", keeps playing in my mind. Don't ask me why. Perhaps, it's the premise of mobile game *Underwater 3D*—a small animated fish swims around looking for shells. This rather quaint scenario is quickly shattered when the fish comes face to face with adversaries like giant crabs, sharks and piranhas. This is when some deft fingerwork is needed to save the day—and the life of this peaceful fish that just wants to build up a shell collection.

Developed by DS Effects.
www.dseffects.com

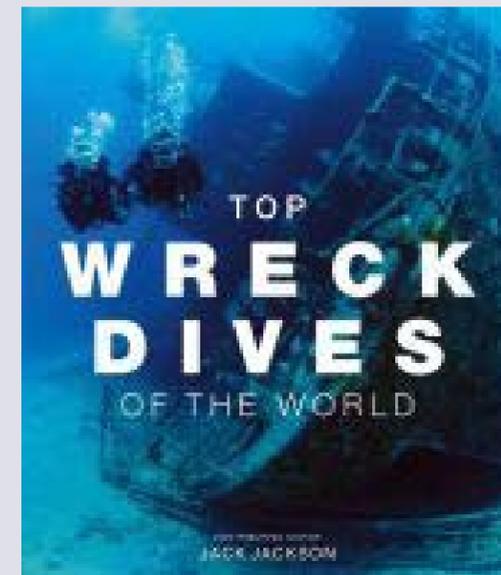


REVIEW

Reviewed by Peter Collings

Top Wreck Dives of the World

General Editor: Jack Jackson



Jack Jackson has had—over the last 35 years—an incredible diving career, notwithstanding his work in the Sudan with Hans Hass, Jackson has now written and edited some 18 books. In his latest offering, Jackson not only shares his own experience, but also enlists that of Bob Halstead, Jason Martin and Rochelle Mutton. However, it is the contribution of Lawson Wood, which stands out along with Jackson's own work. A touch of irony as the front cover features the *Giannis D*, which Lawson and I found together with the *Lady Jenny's* crew back in 1983.

The book is divided into five sections: The Atlantic, Mediterranean, Red Sea, Indian Ocean and Pacific. Many of the choices therein are predictable such as the *Thistlegorm*, *Umbria*, *Fujikawa Maru*, *Zenobia*, *President Coolidge* and *Yongala*.

On the other hand, I was very pleased to see that the *Antilla* in Abuba had not been overlooked, and likewise, to see more of Lawson

Woods work, who in his section on wrecks in Scapa Flow details three of the blockships. Sadly, the *Fran*, *James Barrie*, *Breda* and *Port Napier* did not make the grade.

But then again, with so much material, it's not a case of what to put in, more what has to be left out. However, some glaring omissions lends a strong argument for making a volume two, with the Maldives, (*Maldivian Victory*, *British Loyalty*, *Al Karim*) Palau (*USS Perry*, *Iro*, *Tiesho Maru*) and Bikini Atoll (*Saratoga* et al) as some examples that immediately springs to mind.

Jason Martin adds his contribution by covering South Africa featuring the *Maori Bay*, *Smitswinkel Bay* and *Robben Island*. Andy Bletcher covers New Zealand with the *Rainbow Warrior*, *Mikhail Lermontov* and the *Taioma*—and the Solomon Islands with the *Kinagawa Maru*.

Jackson, himself, also does justice to the Philippines, highlighting the wrecks of *Busuanga* and *Coron*, and has selected no less than nine wrecks from Chuuk or Truk Lagoon.

The format and layout of the book is excellent, clear underwater images complimented with equally clear maps for each section over 160 pages. Historical and diving information is provided for each wreck.

Front cover honours go to Charles Hood.

Bottom line: *Top Wreck Dives of the World* would grace any collection of wreck books, and I, for one, hope there will be a volume two.

Published by New Holland
ISBN 978-1-84537-466-2
£29.99 (Hardback)



technical matters

Column by Cedric Verdier

Images courtesy of Jan Jørgensen jj-technique.com

How to Rescue a rebreather diver

By Cedric Verdier
Photos courtesy of Jan Jørgensen

How to deal with an unconscious rebreather diver?

The title of this article was originally: "What to do if a convulsion happens". Based on a lot of discussion, private or on various forums, the protocol being presented here can actually be used for any kind of situation where an unconscious rebreather diver is found underwater.



This diver seems to be unconscious. Now what?

The purpose of this article is to provide some guidelines on how to safely and efficiently deal with an unconscious diver. These guidelines are meant to be:

Simple and easy to remember. In a real life emergencies rescue techniques are always more complex to perform and more difficult to remember, even if the rescuer practises it on a regular basis.

Flexible enough to be used in most of the circumstances: Dry suit or wet suit, overhead environment or open water, deep Trimix or shallow Nitrox dive—and with all the rebreathers available (back-mounted/OTS CLs, SCR/CCR, FFM, etc).

The most important action will be to bring the victim to the surface safely and as quickly as reasonable.

In any rescue-scenario, not just diving, it is paramount to first consider the two following important factors before taking any action:

- 1. The safety of the rescuer.** The victim is already in trouble. Make sure that the rescuer doesn't get into trouble, too, and turn one accident into two.
- 2. What is the most life-threatening problem for the victim.** In most of the cases regarding diving, drowning should be considered the major threat. People can recover from DCS or even from AGE, but not from complete drowning. Hypoxia is also a very important issue.

The most important action will be to bring the victim to the surface safely and as quickly as reasonable. Establishing what initially caused

the unconsciousness is not really crucial, and the rescuer shouldn't waste precious time trying to determine whether the root problem is hypercapnia, hypoxia or hyperoxia.

Hyperoxia is a *special case*, which requires observation as a convulsion could appear. Susceptibility to a high level of oxygen varies both between individuals and within the same person from day to day. A grand mal convulsion generally occurs in three phases:

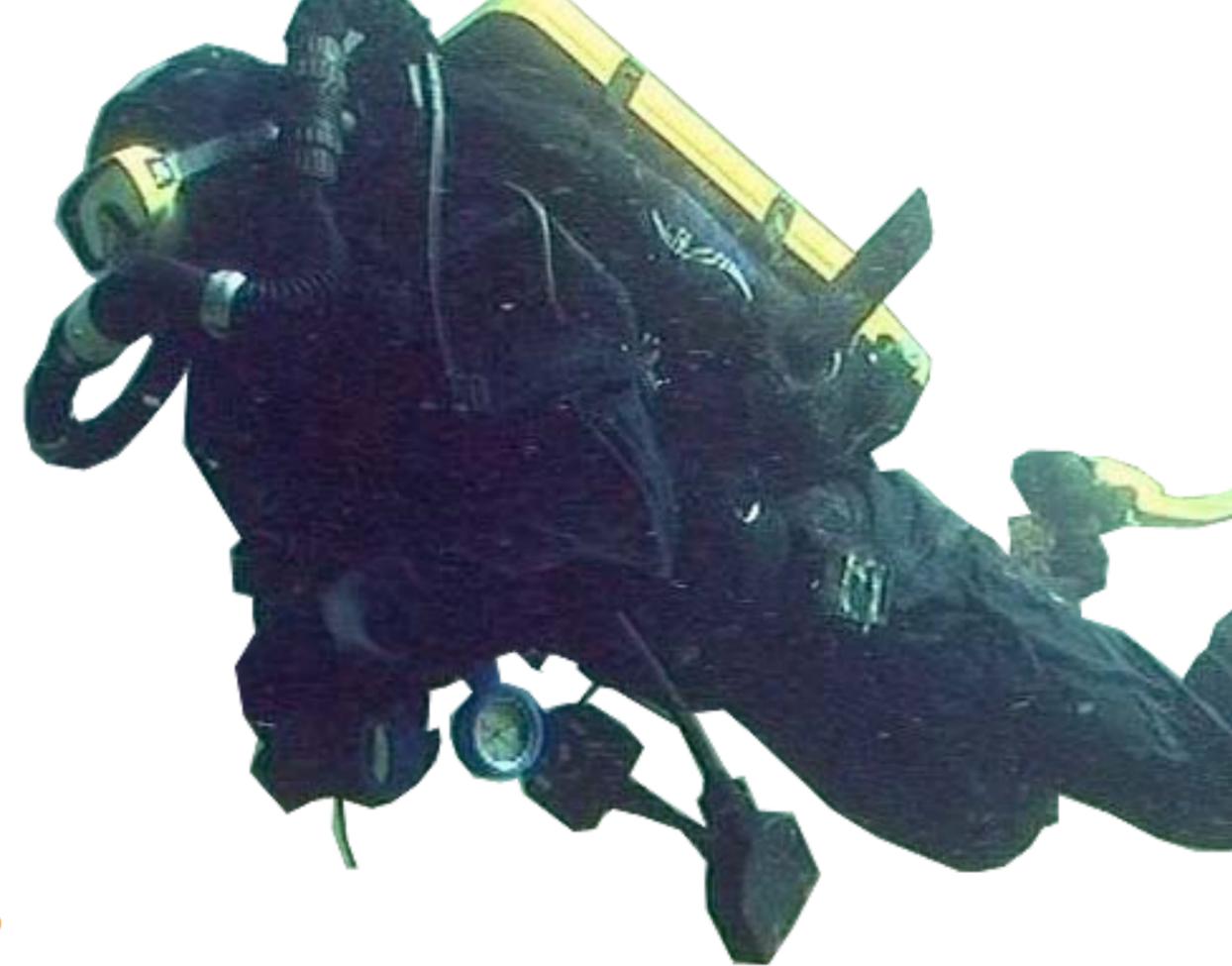
- 1. The 'Tonic' phase** – a period characterised by body rigidity. In this phase, it is dangerous to attempt to surface the casualty because spasms of the glottis and respiratory muscles will cause inadequate exhalation that in turn may result in pulmonary barotrauma. Fortunately, this phase doesn't last

more than a minute.

2. The 'Clonic' phase during which the casualty undergoes true convulsions. This can last for widely varying periods of time. Based on some studies and discussions with medical experts (see reference), it looks like the airway is not blocked at this stage.

3. The 'Post-Ictal' phase during which the victim rests and actually resumes breathing. Depending on the circumstances, the victim can "wake-up" and be confused, disoriented or even combative for quite a long time, or simply stay unconscious. Other convulsions may follow the first one, sooner or later.

So, what to do?



Step 1: Stabilize the victim in the water column.

If the diver is found unconscious close to the bottom, find a stable position on the bottom or a shot line. If the diver is found unconscious in mid-water or during deco, try to maintain the depth by catching the ascent line.

If the rescuer can attract attention and get some help, a second diver can be very handy to assist the rescuer in doing the following:

- In open water, to send up an emergency SMB to alert the surface support team
- In a cave, to aid going through restrictions or simply to take care of the navigation
- At the surface, to help removing the victim's gear and to provide first aid
- In general, to control buoyancy on the bottom and during the ascent



Step 2: Assess the situation

The rescuer has to assess the victim, the equipment and the environment in order to determine the best course of action, and if the ascent has to be immediate or slightly delayed. In any case, this assessment should be quick and shouldn't delay the rescue, but make it more efficient. The rescuer has to deal with a high level of stress as time is crucial.

Assessing the victim

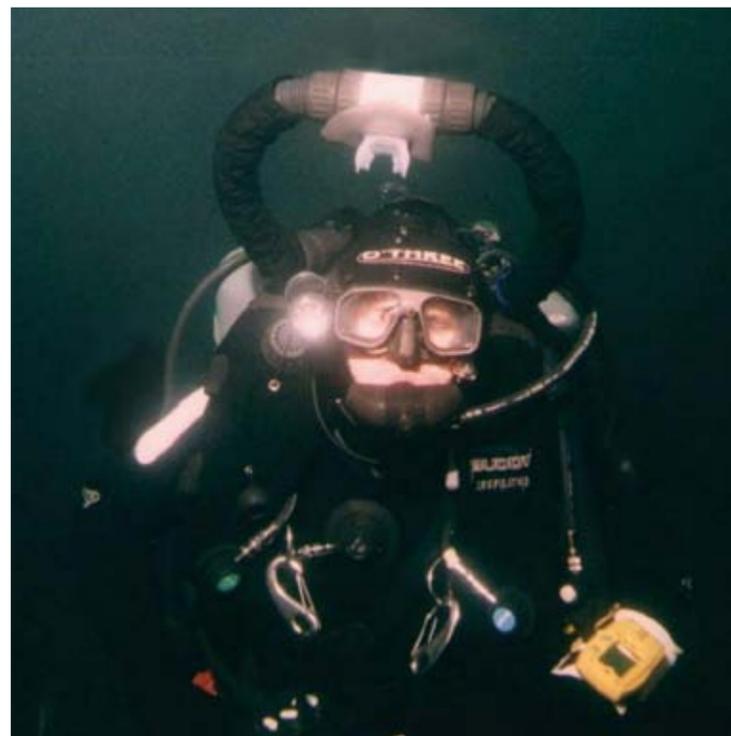
Is it an oxygen toxicity seizure? In case of a convulsion underwater, the dangerous part being the Tonic phase that doesn't last very long, the diver's depth has only to be kept constant at the very beginning (a few seconds up to one minute). If drowning is the major concern (as it should be if the rebreather diver does not wear a FFM or a neckstrap that efficiently protects their airway), the main priority is to bring the victim as soon as safely possible.

Is the victim breathing? If there is no obvious sign of breathing (no bubble, no chest movement, no movement of the counterlungs), it is of the utmost importance to bring the victim to surface to administer artificial respiration/ CPR.

Assessing the equipment

Does the diver wear a full face mask or a neckstrap that efficiently protects the airway? If it is not the case, even if the diver still has the mouthpiece in place, drowning is a major concern and any delay in the ascent should be avoided.

Is the mouthpiece still in the mouth? If not, do not attempt to replace it but ensure that the mouthpiece is switched to the surface position. Try to seal the mouth and ascend immediately.



Is the mouthpiece still in the mouth?

Note: Opening the mouth to put in a regulator might only achieve water introduction/drowning.

Some rescuers feel confident in attempting to seal a second stage with the lips in the hope that if breathing resumes air will be inspired instead of water. None of these actions should delay the ascent or compromise the efficiency of the rescue.

Is there any water in the mask?

A partially or completely flooded mask could be a major problem for the victim's airway. If it is the case, try to pinch the nose

during the ascent. *Is the loop content safe to breathe?* This is only a concern if the diver breathes, and the airway is protected. The rescuer can check the pO₂ readings to make

sure that the victim will be able to breathe a safe mix during the ascent.

Hypoxia: It is crucial to check the loop content, as the pO₂ will drop when ascending to the shallows.

Hyperoxia: Flushing the loop with diluent or switching to an integrated OC second stage (BOV) could be an option to consider.

(Remember that breathing a high O₂ content in the loop could also be beneficial on a decompression standpoint).



Is there any water in the mask?

sion standpoint).

In case of Mixed-gas diving, the Open Circuit mix has to be breathable all the way up to the surface, and the amount of gas in the tank has to be sufficient (and the valve open).

Hypercapnia: Without a proper scrubber monitor, it will be difficult for the rescuer to assess the CO₂ level in the loop, and it's not a major issue anyway. A diluent flush will help in any case, as it could also help in case of a partial loop flood.

Note: To efficiently flush the loop on most of the units, the rescuer has to open the over-pressure valve first.

If the victim doesn't breathe or doesn't have a properly protected airway, the ascent to the surface should be immediate.

Assessing the environment

Is there any physical problem that could delay the ascent?

A strong current could make the rescuer consider swimming to an ascent line rather than drifting far from the boat. An overhead environment (cave, ice, wreck penetration) could delay the ascent as the rescuer will have to swim to the exit point.

Is there any physiological concern that could delay the ascent?

If a breathing victim with a properly protected airway (Full face mask, neck strap) has a significant decompression obligation, the rescuer has to consider the possibility of performing the required stops to minimize the risks of DCS.

If the victim does not breathe or does not have a properly protected airway, the ascent to the surface should be immediate. Nevertheless, the rescuer could have a significant decompression obligation as well.

In this case, three main options are available:

1. Ascending with the victim at the surface, provide first aid or hand over the victim to the surface support, then eventually follow a missed deco procedure
2. Handing the victim over to another diver with no/less decompression obligation
3. Sending the victim to the surface on their own, hoping that the surface support will be efficient and fast enough

Note: This is a *personal decision*, based on a lot of factors that have to be quickly considered by a highly stressed rescuer:

- The apparent state of the vic-

tim (not breathing for a very long time, etc.)

- The amount of decompression obligation and the perceived risk of DCS
- The accepted risk (that could depend on the relationship with the victim)
- The efficiency and the availability of the surface support
- The surface condition (rough sea where the victim will not be seen, etc)

Step 3: Ascending to the surface

Opening the airway

Ensure that the victim's airway is open by keeping the neck slightly extended.

Controlling the ascent

It is often very difficult to keep control of the buoyancy of two divers at the same time, particularly in the shallows:

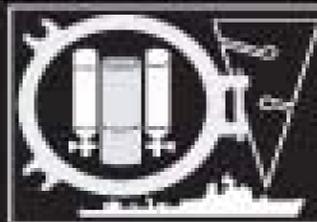
- Slowly inflate the victim's BC to start ascending.
- Open the victim's loop OPV (and the dry suit purge if appropriate).
- Control the victim's BCD purge.
- Control the rescuer's own buoyancy.

Note: In case of a malfunctioning unit (leaking solenoid, ADV, manual injector, BCD inflator, etc), it may be difficult for the rescuer to quickly find out if there is a leak, where it comes from and how to stop it. The rescuer has to be aware that the rescue could end up in an uncontrolled ascent.

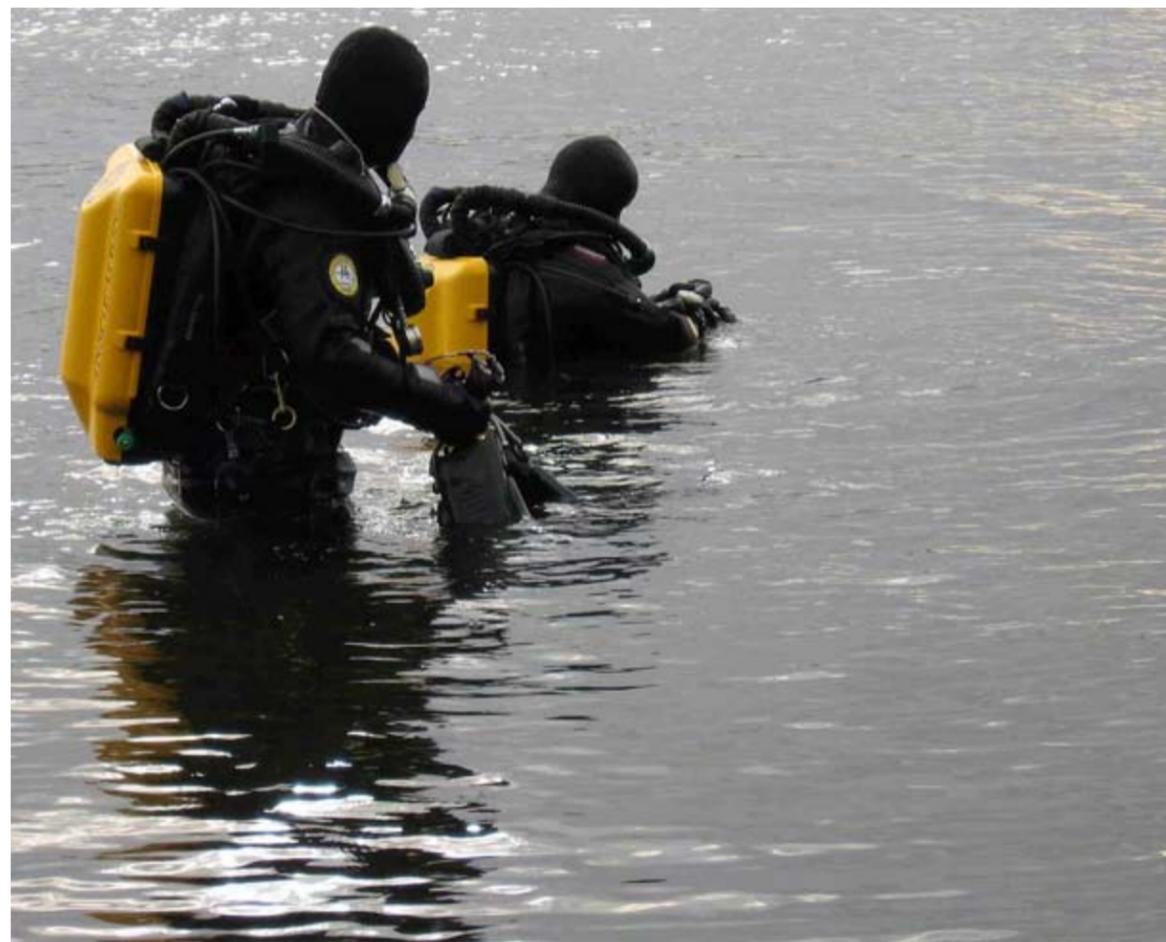
Establishing positive buoyancy at the surface

If the loop is not flooded, simply fully inflate the victim's BC should provide enough buoyancy to maintain the diver at the surface. Make sure that the DSV is closed when removed from the mouth. Depending on the equipment or if the loop is flooded, it may be necessary to release some weight or accessories (candle light, sling tank, etc).

It is a challenge to control the ascent rate of two divers



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Step 4: Providing first aid

This means first care for the victim **and** the rescuer:

- **Call for help.** If no help is available, it may be necessary for the rescuer to stop for a few seconds to keep the stress level reasonable and assess the victim and the resources available at the surface.
- Ensure the victim is breathing or initiate artificial ventilation (as taught in all the basic Rescue Diver courses).
- Hand over the victim to the surface

support or swim to the nearest platform available (boat, shore, etc) in order to provide better care (CPR/first aid/O₂).

- Arrange for evacuation (nearest chamber/ diving physician).
- The rescuer may perform missed deco procedures if appropriate (without delaying evacuation). ■

References:

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This document is only a guideline to help developing a widely accepted standard for rebreather rescue. Such a standard doesn't exist in the sport diving industry and may never exist.