



GLOBAL EDITION
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Number 47

Diving
Timor Leste

Communing with
Cuttlefish

Equador
**Manta
Rays**

Israel
Dead Sea

Newfoundland
**Bell Island
Wrecks**

Papua New Guinea
Zero Wreck

BROTHERS ISLANDS & ELPHINSTONE

The Red Sea

DIRECTORY

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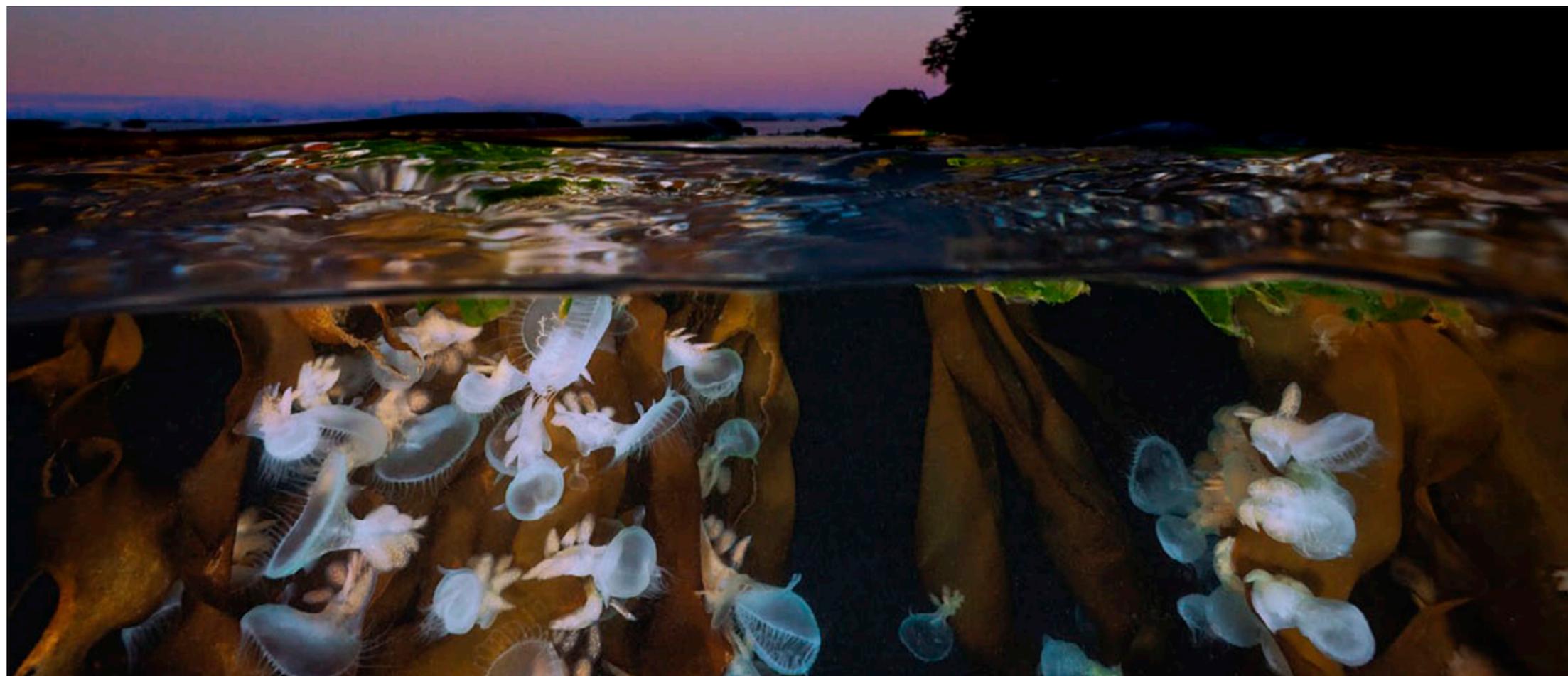
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COVER PHOTO: Australian giant cuttlefish (*Sepia apama*)
Stony Point, Whyalla, South Australia. Photo by Seanna Cronin

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Hooded nudibranch. Photo by David Hall



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Holy Sidemount!

Judging from the recent spate of PADI ads, we're in the midst of a new "Tec Revolution". The last one was reportedly when the training behemoth launched its TecRec program 2000, or so the blog said. This of course makes for good copy for the uninitiated—diving companies have long used tech sizzle to sell gear and training to recreationalists—but the fact is, it's a bit of marketing hyperbole.

Full disclosure: I was there for the original stage bottle toting, trimix breathing, nitrox and oxygen decompressing, deep diving technical revolution in the late 80's early 90's. In fact, my magazine *aqua-CORPS Journal* covered the revolt—from the first shots fired in places like Wakulla Springs and Key Largo, Florida, to later developments that enabled explorers to splash down on wrecks like the *U-Who* or *HMHS Britannic*, and PADI was not in the mix!

But don't get me wrong. Privately held PADI Inc., the self-proclaimed "Way the World Learns to Dive", is indeed fomenting a revolution! But it's not about tech diving. It's aimed at PADI's traditional base of recreational divers and instructors, so call it what it is: a "Rec Revolution". Furthermore, 2012 may well represent the tipping point.

Historically, PADI has been slow to adapt to technology innovations. While enriched air nitrox (EAN) diving was introduced to sport divers in the late 1980s, PADI waited until 1995 to introduce its own EAN program. Similarly, throughout the 90's the company watched the development of tech diving from the sidelines, but didn't launch its TecRec program until a decade later, and then only after several tech-training agencies launched competing recreational courses. PADI was also one of the sponsors of Rebreather Forum 2.0, which I organized with Tracy Robinette in 1996, but essentially has remained out of the

loop on rebreather technology, which until recently, had been for the most part an exclusive tool for high end technical divers.

But now the marketing juggernaut, which boasts nearly 6,000 affiliated dive centres and more than 135,000 members, is taking the lead in helping to create a market and aggressively promote rebreather diving recreational divers. Granted, PADI is also offering a tech diving program, but it does not represent a notable change from what's already available. Conversely, the coming of recreational rebreathers has been prophesied for nearly 50 years—ever since Walter Stark invented the "Electrolung" in the late 60's. Judging from history, it's a task far easier said than done, and not without controversy!

Proponents like James Roberton, executive VP of sales at Poseidon Diving Systems AB which manufactures a recreational rebreather, says that offering well-heeled divers the ability to dive in silence while doubling or more their no-stop bottom times will revolutionize sport diving market and reverse its declining numbers. He compares recreational rebreathers to the introduction of snowboards in the late 70's, which reinvigorated the then stagnant skiing industry and helped it grow by a factor of 60 times over the following 25 years.

However, critics like Jarrod Jablonski, CEO of Global Underwater Explorers, and Halcyon Inc., which makes a rebreather for tech divers, are concerned that with their complexity, main-

tenance requirements, and a fatality rate that may be as high as 5-10 times that of open circuit scuba (no one knows for sure), the benefits of closed circuit rebreathers, which are statistically 20 times more likely to fail than a twin set, simply don't justify the risks for recreational divers who lack the necessary skills and experience. They worry that a rash of recreational rebreather deaths would hurt the diving business as a whole.

At the heart of the issue is whether manufacturers, like Poseidon and others can successfully build a new generation of easier-to-use, fault tolerant rebreathers—Type R machines in PADI parlance—that can monitor and analyse the user's breathing gas and other on-board systems better than a well-trained diver, and in case of a problem, alert the diver and act to keep her alive.

The ultimate test will likely be whether rebreather fatality rates can be kept at levels approaching that of open-circuit diving. PADI and others believe this is achievable by standardizing on smarter, "idiot-resistant" machines and limiting their use to the traditional recreational envelope i.e. no-stop diving to 40m or less.

Viva la Rec Revolution? My hope is that these issues and others will be vigorously debated, and at some length, at the upcoming Rebreather Forum 3.0 conference, which PADI is organizing with Divers Alert Network and the American Academy of Underwater Scientists (AAUS), 18-20 May 2012 in Orlando, Florida. Clearly, the 'breather' is in their court!

—Michael Menduno



Poseidon MKIV Rebreather

Diver using sidemount configuration



News edited
by Peter Symes

NEWS *from the deep*

Mobile marine reserves may be a better solution

Some of the world's most endangered marine life could be saved from extinction by establishing mobile nature reserves that would protect vulnerable species as they moved around the oceans, scientists say.

The idea that only fixed areas of ocean can be designated as no-catch zones is out-dated, and does not reflect the very dynamic behaviour of some ocean creatures, delegates at the recent science festival in Vancouver, Canada, held by the American Association for the Advancement of Science, were told.

Marine experts said the huge volumes of data from animal tracking studies demand new approaches to conservation in our seas. All manner of creatures are being tracked over vast distances, using increasingly sophisticated devices. These devices not only record where the animals go, but they also return information about

the ocean state. Making marine reserves mobile could provide safe havens for endangered loggerhead and leatherback turtles, albatrosses, sharks and other travelling species, and sea life that is abandoning its historic territories in response to climate change.

Under the proposals, trawlers would agree to avoid certain stretches of the sea at set times of the year when endangered species are mating, spawning or passing through. Those ocean regions might move with the seasons, ocean currents and long-term environmental events like El Niño, the researchers said.

Yelloweye rockfish are one of two rockfish species considered overfished in Oregon



ANDY MURCH

Madagascar plans new marine reserve

A road map for preserving marine life around the famously biologically rich island of Madagascar has been proposed in a new study, setting aside 10,000 square kilometers of protected marine areas around the Island.

Madagascar has proposed to create more than one million hectares of protected areas to provide for the long-term conservation of its marine resources, including coral reefs and mangroves. A new study conducted by the U.S. University of California-Berkeley, the Wildlife Conservation Society and others, used what is called a "diversified portfolio" approach, to identify what areas need protection and use a variety of strategies to protect them. These options include implementing strict no-take zones (where fishing is completely banned) to areas that would allow fishing. ■ SOURCE: DISCOVERY NEWS

Oregon to get new marine reserve

The legislature of the U.S. state of Oregon appears poised to add three no-fishing marine reserves off the coast, designating what amounts to 38-square-miles of ocean wilderness despite continued concerns from fishing groups.

Oregon's territorial sea covers a roughly three-mile strip off its coast and is home to kelp forests, pinnacles and rocky reefs hosting hundreds of species. If approved, the three new reserves would cover about four percent of the territorial sea. About five percent would be placed in "marine protected areas," including 52-square-miles of new areas. The new reserves would join two smaller reserves: Redfish Rocks, near Port Orford, and Otter Rocks near Depoe Bay. ■ SOURCE: OREGONLIVE.COM

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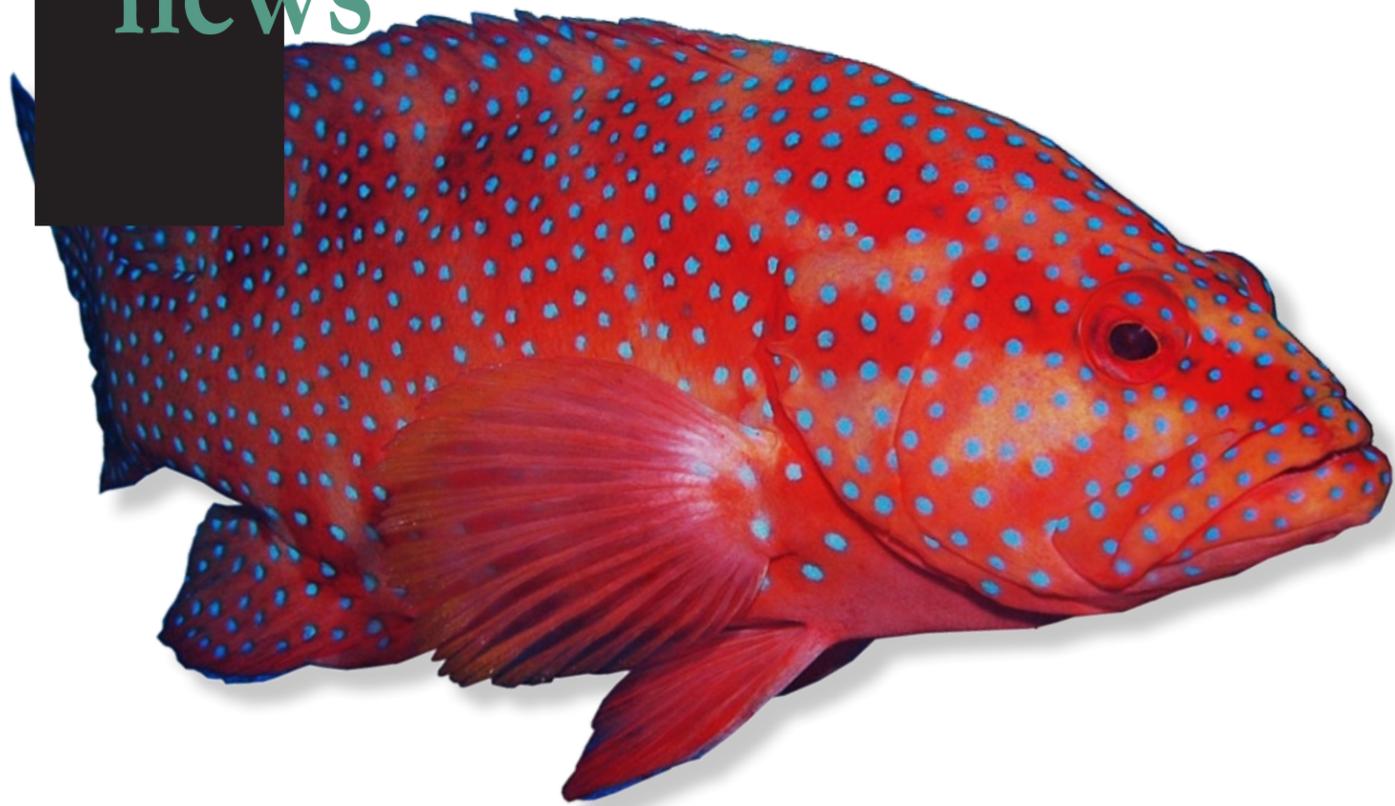
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Half of Bahamian territory to become MPA

The Bahamas National Trust (BNT) is expected to designate half of the 100,000 square miles of Bahamian territory as Marine Protected Areas.

A recent coral reef research expedition, involving nine Bahamian scientists, revealed that Bahamian coral reefs are threatened with extinction due to overfishing and climate change conditions. The Bahamas National Trust Act was amended, and the government recently passed a Planning and Subdivision Act and a Forestry Act. A declared policy will set aside 20 percent of the land and water of the Bahamas in permanently protected areas. "We are likely to have, under permanent protection, based on the regulatory environment, as much as 50 percent of the Bahamas," said Minister of the Environment, Earl Deveaux. ■ SOURCE: THEBAHAMASWEEKLY.COM



Fish have favorite hangouts

Big fish show a marked preference for sheltering under large, flat table corals, as opposed to branching corals or massive corals, Australian scientists have found.

In a study that covered 17 separate locations round Lizard Island in far North Queensland, researchers from the ARC Centre of Excellence for Coral Reef Studies at James Cook University videoed the behaviour of large reef fish, allowing them to identify the kind of habitat they most preferred and depended on.

"The reason for the fishes' preference is not yet clear—but possibilities include hiding from predators such as sharks, shading themselves from ultraviolet sunlight, or lying in ambush for prey. The importance of this finding is that table corals are among the types most vulnerable to climate change," Profes-

or David Bellwood explained. "In shallow waters and on the tops of reefs, they are often the main source of cover for these big fish. If they die back as a result of bleaching or disease, or are destroyed by storm surges, this would strip the reef of one of its main attractions, from a coral trout's viewpoint."

While the team is planning further experiments to clarify the reasons for the fishes' shelter preferences, their early findings may provide a useful insight to reef managers, about the importance of trying to maintain a range of structures and shelters as climate change bears down on the Great Barrier Reef, including the highly susceptible tabular corals. ■

"Like human beings, fish have strong preferences on where they like to hang out—and it appears that they much prefer to shelter under overhanging table corals."

This tells us quite a bit about how important these corals are to the overall structure of the reef and the large reef fish that live there.



Division remains over proposal for a Coral Sea conservation zone off Queensland

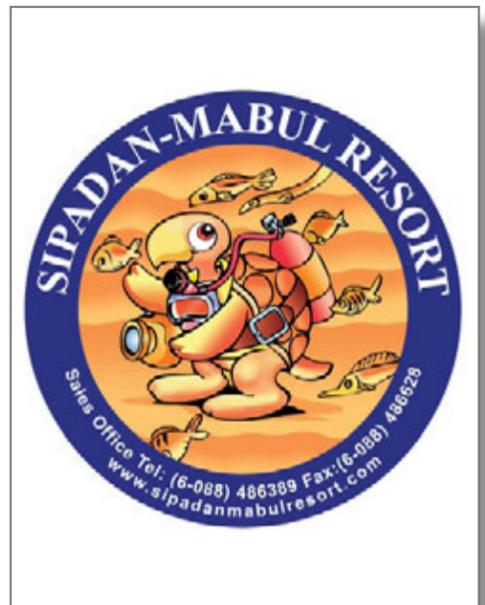
Located adjacent to the Great Barrier Reef off Australia, the reserve would encompass approximately one million square kilometres. The government is proposing to designate 51 percent of the area as a no-take zone and enforcing a seabed trawling ban.

The Australian Marine Conservation Society (AMCS) is already concerned the existing proposal will not offer enough protection. AMCS spokeswoman, Daisy Barham, stated that the organization desires to see the boundary extended further west and south. "We're asking the Minister to include all of the coral reefs and underwater volcanoes, as well as the Queensland and Townsville troughs in the marine national park zone," she said.

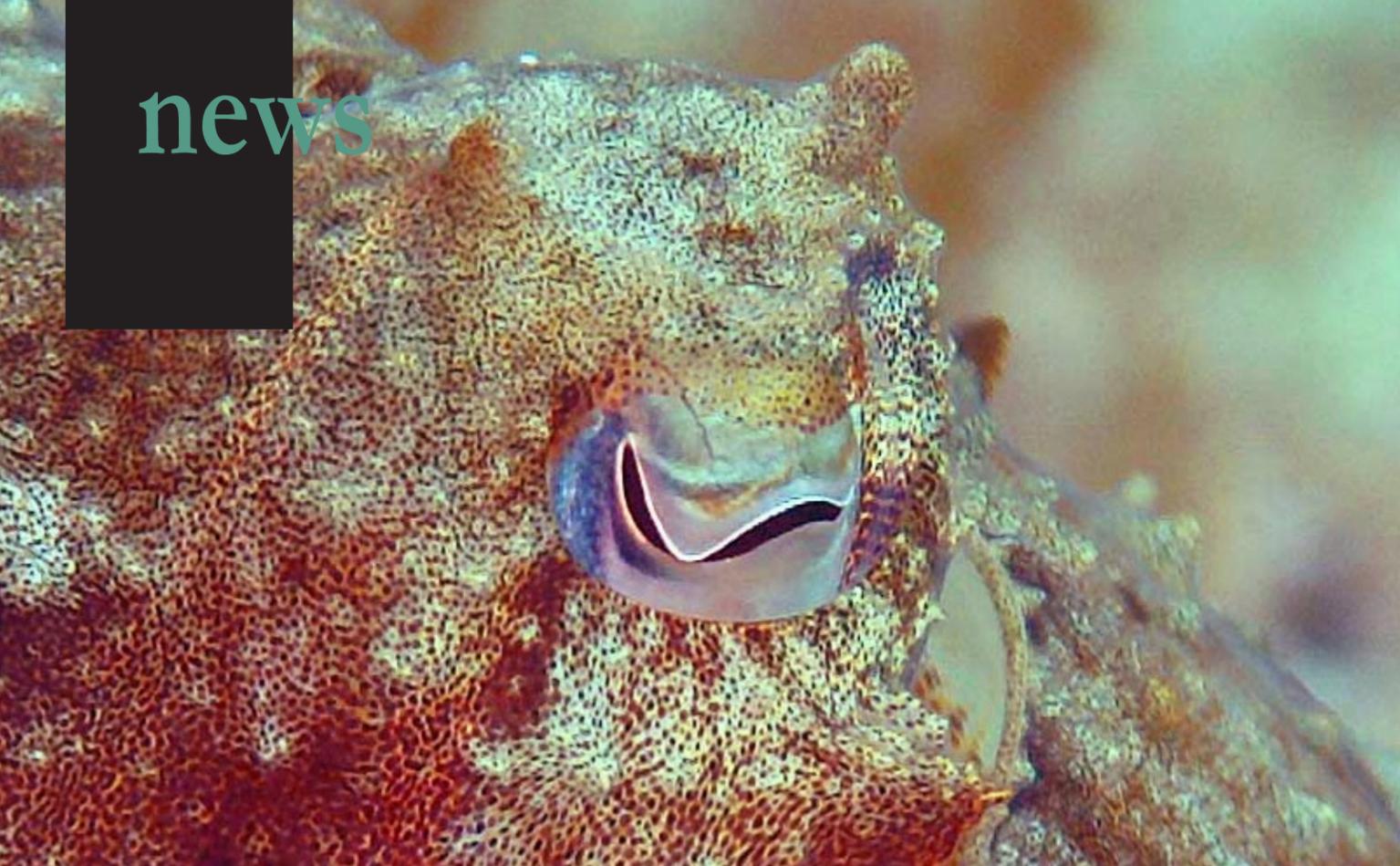
However, Queensland Seafood Industry Association president, Geoff Tilton, is worried the concerns of trawler operators will not be taken into account. "From the time they came with the original

maps to the time they came with the consultation maps, there's absolutely no change in their attitudes towards bottom trawling," he said. "As I said before, we're talking about potentially less than 1,000 square kilometres out of one million—put it in the calculator."

If the proposal goes ahead in its current form, Tilton believes commercial fishers will be worse off. "They've done a risk assessment on the trawling within the Great Barrier Reef Marine Park, and it's acceptable practice," he said. "All of a sudden the conservationists are saying, 'oh, we crossed this line here and it's not acceptable in this new bigger, much, much bigger marine park.' It defies logic to be quite honest about it—stupidity in the highest order." ■



WIKIMEDIA COMMONS



Curiously, for all their colourful display and skills at camouflage cephalopods are actually colourblind

Cuttlefish see polarized light

Polarization vision is used to break the countershading camouflage of light reflecting silvery fish researchers suggest.

Cephalopods are sensitive to the linear polarization characteristics of light. To examine if this polarization sensitivity plays a role in the predatory behavior of cuttlefish, scientists from the University of Bristol, England, examined the preference of cuttlefish *Sepia officinalis* when presented with fish whose polarization reflection was greatly reduced versus fish whose polarization reflection was not affected.

Reflections

Cuttlefish preyed preferably on fish with normal polarization reflection over fish that did not

reflect linearly polarized light implying that polarization sensitivity is used during predation.

In addition to measuring the limits of polarization vision in the cuttlefish, the team also modelled how underwater scenes might look to an animal that has such high-resolution polarization vision. Using colours instead of changes in polarization



How does a cuttlefish see the world?

angle, they created images of the polarized world that humans can see and showed that there is much more information available in the polarization dimension than was previously known. ■

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Fish & hot water

Australian scientists have discovered that some tropical fish have a greater capacity to cope with rising sea temperatures than previously thought—by adjusting over several generations.

The discovery, by researchers at the ARC Centre of Excellence for Coral Reef Studies, James Cook University and CSIRO (Commonwealth Scientific and Industrial Research Organisation) sheds a ray of hope amid the rising concern over the future of coral reefs and their fish under the levels of global warming expected to occur by the end of the 21st century.

"When we exposed damselfish to water temperatures 1.5 degrees and three degrees above today's, there was a

marked decline in their aerobic capacity, as we'd expected," explained lead researcher, Jennifer Donelson. "This affects their ability to swim fast and avoid predators ... However, when we bred the fish for several generations at higher temperatures, we found that the second generation offspring had almost completely adjusted to the higher temperatures. We were amazed—stunned, even," she said. "It shows that some species can adjust faster than the rate of climate change." ■

Line Arrow Necklace
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- Szilvia Gogh





One of the "supergiant" specimens caught in the Kermadec oceanic trench near New Zealand

Giant amphipod discovered

An expedition to one of the deepest places in the ocean—the Kermadec Trench, north of New Zealand—has discovered one of the most enigmatic creatures in the deep sea—the ‘supergiant’ amphipod.

tem and a large trap. At depths of approximately 7,000 meters, the team were hoping to recover specimens of deep sea snailfish, which they have photographed before but have not captured since the early 1950s.

Voyage leader, Dr Alan Jamieson from the University of Aberdeen’s Oceanlab, said: “The moment the traps came on

deck, we were elated at the sight of the snailfish, as we have been after these fish for years. However, seconds later, I stopped and thought ‘what on earth is that?’ whilst catching a glimpse of an amphipod far bigger than I ever thought possible. It’s a bit like finding a foot long cockroach.” ■

SOURCE: OCEANLAB, UNIVERSITY OF ABERDEEN, UK

New species of velvetfish



© COPYRIGHT 2010 THE WESTERN AUSTRALIAN MUSEUM

Fish curators Sue Morrison from the Western Australian Museum and Jeff Johnson from the Queensland Museum have identified a new species of fish as a result of the recent field work they undertook in the far north Kimberley. Over both locations, they found a total of nine specimens of the previously unidentified bearded velvetfish. This species had not been found before due to the remoteness of the region and the fish’s ability to camouflage itself within its surroundings. Using its sinuous body and fins, the bearded velvetfish camouflages itself in shallow rock pools amongst the weedy surrounds of the brown macroalgae, *Padina* species.

The discovery was made during a joint U.K. and New Zealand expedition. Using specially designed ultra-deep submergence technology designed by the University of Aberdeen’s Oceanlab, the team deployed a camera sys-

Coral inflate to free itself from sand

New time-lapse footage shows how a mushroom coral inflates itself to escape a sandy burial.

Many mushroom corals live on the sand bed and have quite a unique lifestyle. Most corals are attached to the limestone substrate that makes up the reef, but mushroom corals can actively move around and find themselves better habitats.

To move around, the corals “inflate and deflate” parts of their body. And, as the footage that Dr Pim Bongaerts from the University of Queensland, captured showed, they use

a similar technique to free themselves from a covering of sand.

“The corals inflate and deflate their entire body in a series of rhythmic pulses, which allows them to effectively shed the sediment in a

matter of hours, Bongaerts told BBC Nature. ■



Mushroom coral, *fungia scutaria*

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DEMA comments on national ocean policy draft implementation plan

Association recommends having sound, peer-reviewed and unbiased science and economic research prior to implementation of the National Ocean Policy.

...the plan, as presented, could harm individuals and communities that depend on economic contributions from aquatic-oriented activities...

DEMA submitted comments on the National Ocean Policy draft Implementation Plan on 27 February 2012. As part of President Obama's National Ocean Policy impacting all U.S. federal waters and the Great Lakes, the National Ocean Council (NOC) released this draft Implementation Plan as a means by which the NOC intends to implement nine separate and over-arching objectives of the policy. The comments were submitted by Tom Ingram, DEMA's executive director, who sits on the National Ocean Council's panel of recreational users, on behalf of the diving industry.

In the submitted comments, the dive industry expressed concern that the plan, as presented, could harm individuals and communities that depend on economic contributions from aquatic-oriented activities and that more harm could come to environmental resources if collecting the necessary scientific information is not made the first priority. The plan currently calls for first creating new layers of bureaucracy.

"While noting the administrative buildup, the plan incorporates inadequate congressional oversight," commented Ingram.

"There is scant incorporation of coastal, lake and ocean user groups. The plan calls for establishing federal 'zoning' boards and regulations, which will likely hamper the growth of commercial and recreational interests, while excluding many of these groups from discussion.

"In addition, the plan itself acknowledges that there are already conflicts with existing federal laws, which must be resolved before moving forward. These issues are likely to undo productive legislative efforts of the past and create legislative and bureaucratic conflicts, which delay implementation and create additional economic uncertainty." Ingram concluded,



The public comment period on the National Ocean Policy Implementation Plan is extended to 28 March 2012.

"The dive industry recommends a balanced approach to preserving the health of aquatic resources, and to maintaining the public's right to access to aquatic and submerged cultural resources. DEMA also advocates the need for having sound, peer-reviewed and unbiased science and economic research prior to implementation of the National Ocean Policy. As the National Ocean Policy was created by Executive Order (13547), we strongly suggest that the Policy and this Implementation Plan should have considerable Congressional oversight."

The dive industry looks forward to constructively engaging with the present Administration in helping to create a balanced perspective and policy, which acknowledges the needs to all user groups as well as the need to protect aquatic resources.

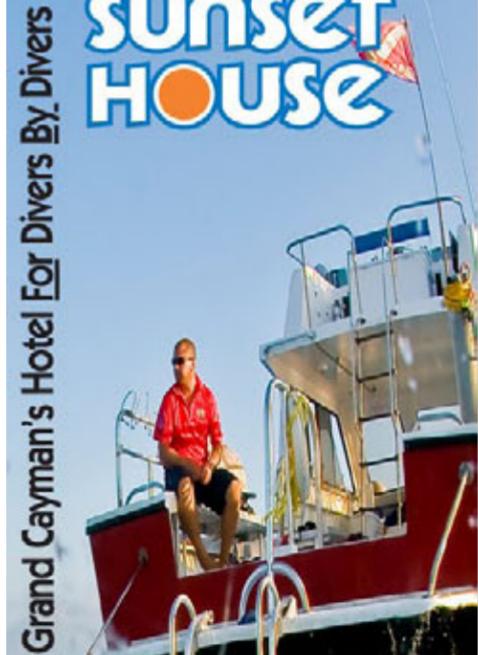
On February 27, the National Ocean Council extended the public comment period on the National Ocean Policy Implementation Plan through 28 March 2012. To submit your comments visit www.whitehouse.gov/webform/submit-comments-draft-implementation-plan. ■



Left to right: Jeff Nadler, Vice President, Stephen Ashmore, President, Jenny Collister, Tim Webb, Treasurer, Darcy Keiran, Bonnie Borkin Filippi, Vice President, William Cline, Scott Daley, Tom Leaird, Werner Kurn, secretary

DEMA's new board of directors convenes in San Diego

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The Zero wreck sits serenely in its final resting place in Kimbe Bay, Papua New Guinea

Text and photos by Don Silcock

As the story is told around the bar at Walindi, the day the wreck of the Zero fighter was found was soon after a small plane had crashed on take-off from Hoskins Airport at Kimbe Bay. So, when local villager, William Nui, saw the wreck laying on the sandy sea floor, he thought he had found the wreckage of the recent crash—not that of a WWII Japanese fighter plane that had remain undisturbed for nearly 60 years!

That the wreck was actually spotted in the first place is an interesting story in itself, because William was freediving for sea cucumbers at the time and noticed what seemed to be a large shadow on the sea bed.

Like many people in Papua New Guinea (PNG), William is very superstitious and thought that he was looking at a ghost lying face up with its arms outstretched, soaking up the sun. Terrified he shot to the surface and to the relative safety of his canoe, eventually summoning up enough courage to go back down to take a closer look, realizing that it was actually the wreck of a plane rather than some demon of the deep.

William took his story to the local authorities, and word of the discovery made it to Max Benjamin, the owner

of Walindi Plantation Dive Resort, who was rather dubious but felt that the story should be checked out, and the rest, as they say, is history...

A legendary aircraft

The Mitsubishi Zero fighter was to the Japanese military during WWII what the

Spitfire, or Hurricane, was to the British, or the Grumman F4 Wildcats and F6 Hellcats were to the United States, a remarkable fighting machine.

It achieved legendary status initially because of its role during the Japanese surprise attack on Pearl Harbour on 7 December 1941. At that time, the

United States had nothing that could out-fight it because of the Zero's exceptional speed and manoeuvrability. But it was the Zero's eventual role as the transport of choice for the infamous Kamikaze (Divine Wind) suicide pilots that ingrained it into the psyche of a generation.

More than 3,000 volunteer pilots, some

as young as 17, gave their lives in what they believed were divine missions to protect Japan. It was a devastating and demoralizing strategy, but one that eventually failed due to the rapidly declining manufacturing capability of Japan compared to the overwhelming capacity developed by the United States.

Kimbe Bay's Zero Wreck





Zero

A fully restored Mitsubishi Zero in flight (left). The location of the Zero Wreck in Kimbe Bay (below)

IMAGE COURTESY OF THE AVIATION HISTORY MUSEUM



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Front end of Zero wreck; Koreans drafted into service as Kamikaze suicide pilots (below)

Initially, the Kamikaze attacks were on an ad-hoc basis when Japanese planes were hit and then deliberately crashed into Allied ships in a final attempt by the pilot to inflict as much damage as possible. But in October 1944, the Japanese Naval Air Force deployed specially modified Zeros from Air Group 201 in the Philippines in the Battle of Leyte. Before the war ended, a total of 49 Allied ships had been sunk by Kamikaze attacks.

History

When Max Benjamin first dived the Zero, he found it in quite remarkable condition, especially since it had

been underwater for almost 60 years at that point in time. There were no signs of bullet holes or other combat damage that would have indicated the plane having been shot down, rather the 'off' position of the throttle lever and the pitch control set to reduce air speed clearly pointed to a controlled landing in the sea.

The probability being that the pilot had got lost and ran out of fuel—a relatively common occurrence as WWII progressed—a fact

confirmed by Japanese records showing that in 1942 only ten Zero pilots had been shot down in air combat, while 16 had disappeared due to "unknown causes".

Max and his wife, Cecilie, are both very knowledgeable about the history of WWII in PNG and were fascinated by the newly found wreck in their backyard. So, they tried to piece together the history of the plane using a combination of factual Japanese military war time records and anecdotal stories from local villagers.

The aircraft's serial number and date were still visible on the wreck,



WIKIPEDIA / PUBLIC DOMAIN



WIKIPEDIA / PUBLIC DOMAIN

A Kamikaze Zero about to crash into an Allied vessel in WWII



and military records showed that the plane went missing during the battle of Cape Gloucester on West New Britain on 26 December 1944. The pilot on that day was Tomiharu Honda, but his fate remains a mystery, although a local story suggests that the native people helped get him to the nearby village of Talasea. What happened after that remains a mystery.

Given the sacrifices made by the Kamikaze Zero pilots and the way the Japanese military venerated them, losing a plane due to navigational errors would have been a very significant loss of honour, and one theory is that the pilot could not face this and spent the rest of his life in the jungles of New Britain. An alternative, but slightly more gruesome theory is that he ended up as the main course of a ceremonial feast for a head hunting tribe—a practice still common in those days.

Either way, while Tomiharu Honda's navigation skills may not have been per-

fect, there is no doubt that he could certainly fly the Zero well and performed a flawless ditching, which inflicted virtually no damage to the plane and brought it to rest just 50m from the shoreline. As divers, we can be thankful for those skills because the Kimbe Bay Zero wreck is a superb example of the genre.

Diving

The Zero wreck is located off the northern end of the Willaumez Peninsular—which affords much of Kimbe Bay its protection from the elements—in a small bay close to the popular South Emma's dive site. Laying in just 17m of water, the wreck is easily dived, and bottom time is not a big issue, although its location close to the shore means that it is best dived when there have been several days of no rain, as run-off can make the visibility fairly limited.

The plane sits serenely on the sandy bottom and is covered with a light marine growth with numerous small

barnacle-like hard coral growth on the wings and fuselage. The three blades of the single propeller are still very much intact and have a rich covering of sponges and some colourful coral. The fish life is concentrated around the open cockpit, which hosts a large anemone and a small colony of nemos just behind the pilot's seat.

The total length of the fuselage is just less than 10m, and the tip to tip wing-span is 12m. So, it's not a particularly big wreck.

The Zero is dived regularly by Walindi's day boats and the resort's liveaboard, *Febrina*, also visits the wreck from time to time.

Photography

If you are only going to dive the Zero wreck once, make it a fish-eye lens day, and if you don't have one, take your widest lens. The day I dived the wreck was four days after the last rain, so the water was quite clear. The very nice

ABOVE: Front and side views of the Zero wreck in Kimbe Bay, Papua New Guinea

American divers with whom I shared the boat that day kindly let me have 15 minutes on the site by myself before they entered the water. While other divers add a sense of scale to the wreck and an additional touch of drama, they are also highly likely to kick up the soft sand around the wreck as they explore it, and you can quickly see your National Geographic cover shot disappearing in the resulting gloom.

Good buoyancy control and no finning is the order of the day if you do get in first and head for the front of the plane near the propeller, get low (carefully) and fill the frame. I shot at ISO 500 on my D700 to allow me to use a small f stop for good depth of field with a reasonable shutter speed. ■

For more information, contact Don Silcock at: www.indopacificimages.com

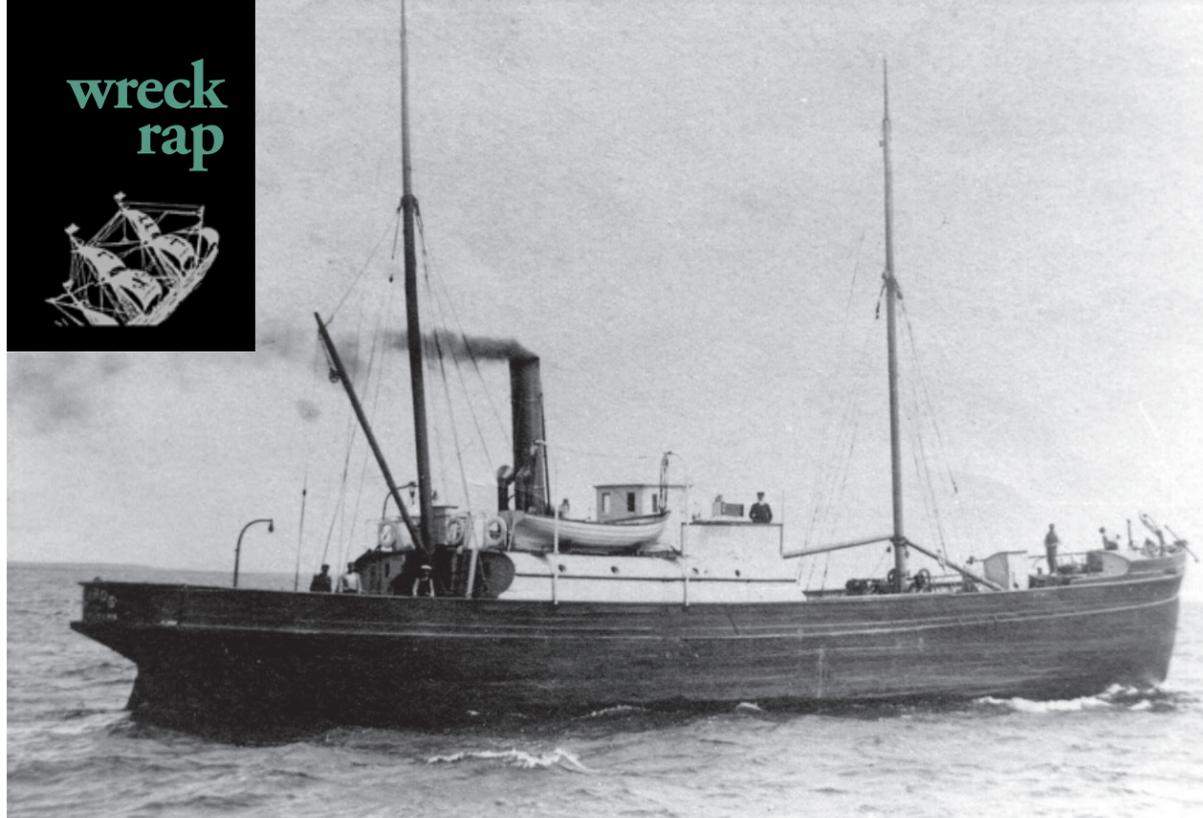
THE MITSUBISHI ZERO

The Mitsubishi A6M Zero-Sen was a very well designed aircraft that initially appeared to be almost invincible because of its tight turning radius and ability to outmanoeuvre Allied fighter planes.

As early as 1937, Claire Chennault, who later became the leader of the Flying Tigers warned the U.S. Air Force about the capability of the Zero and later told his wartime pilots, "Never try to turn with a Zero. Always get above the enemy and try to hit him with the first pass."

However, the Zero actually possessed many shortcomings, which were only to be revealed in mid-1942 when a virtually intact specimen was obtained by the U.S. military. A detailed analysis of that plane led to multiple improvements to the American planes the Grumman F4 Wildcat and the F6 Hellcat, which eventually meant that the Zeros were no longer the dominant plane in air combat.

More Mitsubishi Zeros were produced than any other wartime Japanese aircraft, with a total 10,094 fighter planes being built together with the 844 trainer and floatplane variants. ■



A German U-boat sank the Swedish steamship *SS Kyros* in 1917 while she was transporting a precious cargo of cognac

Wreck with cargo of precious cognac located in the Baltic

The 220-tonne Swedish steamship, *Kyros*, that was carrying hundreds of bottles of cognac and liqueurs when it was torpedoed by a German U-boat in 1917 has been located by Finnish divers.



The vessel rests at a depth of 80 meters and appears to be free of sediment. According to some reports, it was carrying a mixed cargo including steel products and as many as 1,000 bottles of cognac and 300 bottles of liqueur.

The wreck was located by divers from the Finnish group, Raumanmeren Hylky-Team, who say the vessel has remained quite intact. They will decide whether to try to raise the contents after closer examination. "The conditions down there

are extremely difficult," said diver Pasi Rytkönen, quoted in the Norwegian dive magazine, *Dykking*. "The ship is quite intact, but has slowly begun to collapse, and there is also much silt. In other words, it is not a simple matter retrieving any artefacts."

According to information on the Finnish Wikipedia, the wreck was already located in 1996 by a team led by Rytkönen, but the find was not publicised until February 2012. So far, the wreck has only been examined by a Remote Controlled Vehicle (ROV) ■

Does WWII wreck contain \$3 billion worth of platinum and whose is it?

Treasure hunter Greg Brooks of Maine is confident that he has located the shipwreck of the *Port Nicholson*, a British freighter, which secretly carried 71 tons of platinum when it was torpedoed by a German U-boat in 1942 off the coast of Cape Cod.

American treasure hunter Greg Brooks of Sub Sea Research in Gorham, Maine, announced that a wreck found sitting in 213 meters (700 feet) of water 80 kilometers (50 miles) offshore is that of the *S.S. Port Nicholson*, and said that a U.S. Treasury Department ledger shows that a huge fortune of platinum bars were on board, as part of a payment from the Soviet Union to the United States for war supplies when it was sunk by a German U-boat during WWII.

Doubts

However, some doubt his claim. Anthony Shusta, an attorney representing the British government, said it is unclear if the

ship carried platinum. "We're still researching what was on the vessel," Shusta told the Associated Press news agency. "Our initial research indicated it was mostly machinery and military stores." And if it was laden with precious metals, he said, who owns it could become a matter of international dispute.

Others believe that if it was indeed carrying such a fortune, it was most likely salvaged a long time ago. But Brooks said he has underwater footage, which he said shows a platinum bar surrounded by 30 boxes that he believes hold platinum ingots.

Maritime law on ownership are complicated and owner-

ship rights are still unsettled. Sub Sea Research filed an admiralty claim in Portland and was named custodian of the wreck by the U.S. Marshal Service. In early 2009, the treasure hunters fulfilled their obligation to buy legal notices in newspapers across the country announcing that they'd found the *Port Nicholson* and offering a 30-day window for anyone with a legitimate claim to the ship to step forward, Brooks said.

To the BBC, Shusta has stated that the United Kingdom will wait until salvage operations begin before deciding whether to file a claim on the cargo. ■



File photo of the *SS Port Nicholson*, sunk in 1942, which Greg Brooks of Sub Sea Research believes he has now found, sitting 50 miles (80km) off the U.S. Atlantic coast



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File photo of the now former Portuguese corvette *Oliveira e Carmo*, which is one of four decommissioned Navy vessels to be sunk off the Algarve coast

Four warships destined as artificial reefs wrecks off Southern Portugal

The four decommissioned Portuguese warships will form the largest single artificial reef structure in the world and provide an ideal substrate for new marine life.

The Ocean Project Revival has created with two main objectives: to promote biodiversity and to create an exceptional diving destination. To this end and for the first time, four vessels connected by a common history will be deliberately sunk in the same place.

Marked by buoys, the Ocean Revival reef will consist of four decommissioned vessels from the Portuguese Navy.

- The 45-meter-long ocean patrol vessel *Zambeze*
- The 85-meter corvette *Oliveira e Carmo*
- The 64-meter hydrographic survey vessel *Almeida Carvalho*
- The 102-meter long frigate *Hermenegildo Capelo*

The artificial reef will be situated approximately one mile off the coastal town of Portimao in southern Portugal at depth between 26 and 32 meters. This location has been selected because the diving conditions are usually very good with good diving more than 300 days a year.

In addition, the local infrastructure is well suited to support diving including a hyperbaric chamber. Portimão's harbour and marina offer excellent facilities and lies close to a number of other prime diving sites such as shipwrecks of the 18th century, or WWI and WWII wrecks, natural reefs and walls.

The vessels are scheduled to be sunk over a period of 14 months period, with a sinking every three to four months. Each

sinking will be an attraction in itself and will be accompanied by a show of fireworks.

The area will also feature an exhibition center, where the history of the sunken fleet will be documented with drawings, photos and films of the ships, the chronology of its career and documents about its historical context.

Southern Portugal is reached from most of Europe in less than three hours by plane and well connected by motorways, so the organisers have high hopes that the new artificial wrecks will make the region a new highlight for diving enthusiasts from all over the world. ■

Sixteenth century wreck discovered off Brazil

A team of Brazilian archaeologists and divers who discovered the remains of a Spanish vessel off the southern state of Santa Catarina say the recovered fragments correspond to a shipwreck that occurred in 1583, the *Latin American Herald Tribune* reports.

The first recovered fragment from this latest find was a stone with a high-relief shield of two lions and two castles with a Portuguese symbol in the center. That shield dates back to the kingdoms of Leon and Castile and the 1580-1640 Iberian Union, when the monarchies of Spain and Portugal

were unified. The divers also recovered a triangular plaque dated 1582 and containing the name of Spain's King Phillip II. According to investigators, the plaque may have been an emblem that navigators used to lay claim to territories they had explored for the first time. ■

SOURCE: THE LATIN AMERICAN HERALD TRIBUNE

Half-billion dollar treasure makes it to Spain—after 300 years

After five years of legal wrangling, the treasure is finally going back—treasure that the Florida-based Odyssey Marine Exploration salvaged from the wreck of the Spanish frigate *Nuestra Señora de las Mercedes*, which was sunk by British warships near the port of Cadiz in 1804 killing 249 people and taking a treasure with

an estimated value of half a billion dollars with it to the seabed. Spain had argued in court that it, not the salvage company, was the rightful owner of the cargo and the ship. On February 17, a U.S. judge ordered that the coins be returned to Spain from Florida.

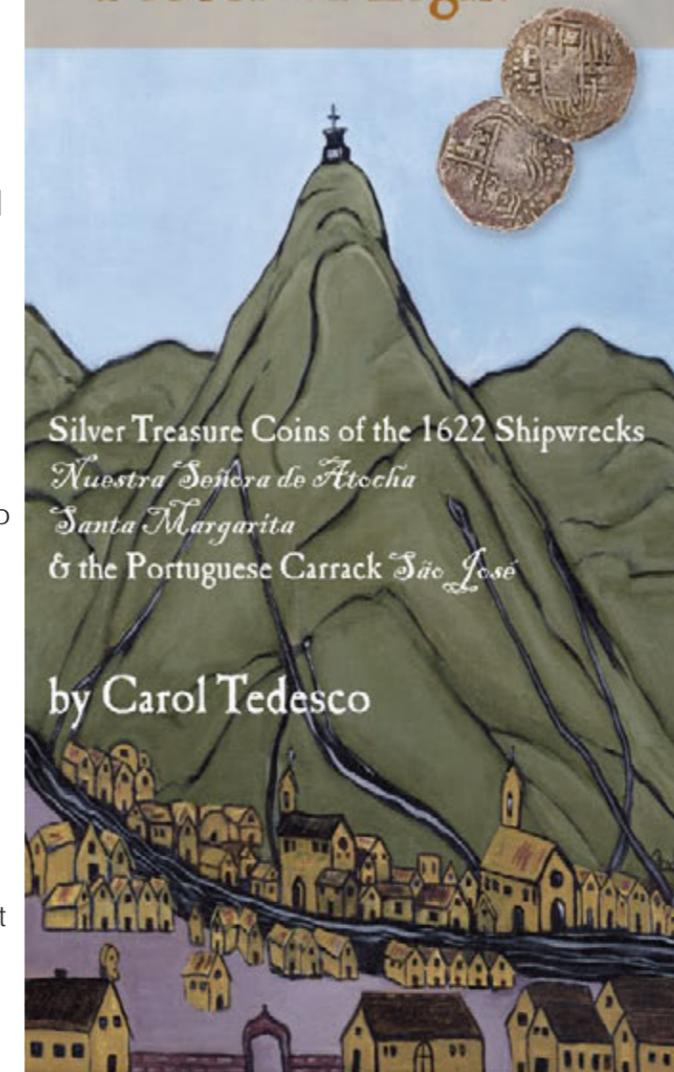
■ **Full story**

First HMS Victory to be raised—after 300 years

This is another treasure wreck that was discovered by Odyssey Marine Exploration four years ago. The vessel, predecessor of Nelson's famous flagship, which some believe was carrying £500m of gold coins, went down in a storm off the Channel Islands in 1744, tak-

ing more than 1,000 sailors to their deaths. According to the *Sunday Times*, the wreck is to be handed over to the Maritime Heritage Foundation, which is expected to employ Odyssey Marine Exploration to carry out the recovery. ■

Pieces of Eight



Fully illustrated with hundreds of finely detailed photographs, *Pieces of Eight* is more than just a reference book. Carol Tedesco not only explains the subtle nuances of the coins themselves, but places them in the context of their moment in history, explaining where they were coming from, where they were going and why.

To be released in 2010 by SeaStory Press, Key West Florida. To be on our availability e-mail alert list, please inquire at lostgalleons@aol.com.



New flights link Borneo's best dive attractions

New Tawau-Kalimantan air link opens up expansion of eastern Borneo dive industry.

According to Sabah Tourism Board (STB) chairman, Tengku Zainal Adlin Mahmood, divers from around the world frequent both Sabah and Indonesia's East Kalimantan province. STB has drawn up plans with its East Kalimantan counterpart to promote the two dive regions.

With such renowned locations as Mabul and Sipadan islands, Eastern Sabah encompass more than 100 dive sites featuring barracuda, hammerhead sharks and a wealth of macro species such as nudibranchs. East Kalimantan is popular for its Sangalaki, Derawan, Kakaban and Maratua islands famed for manta rays and non-stinging jellyfish.

With MASwings now flying between Tawau and Tarakan three times weekly, dive operators can now package sites in both eastern Sabah and East Kalimantan, making it easier for divers to experience the region's multitude of attractions. Some 46,000 divers visited Sabah in 2011. ■

Zenobia diving ban revoked



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In what was seen as a devastating blow to the local dive industry, diving on Cyprus' famous Zenobia wreck was banned by port authorities citing liability issues only to be recanted few days later citing 'miscommunications'.

The Cyprus Ports Authority (CPA) lifted the diving ban following a massive negative reaction from the diving community, the Larnaca Municipality and the Cyprus Tourism Organisation (CTO). *Zenobia* in one of Lanarcas

main attractions, and the dive centres and schools were extremely angry and alarmed by the ban announcement, which directly affected their livelihoods. It is now understood that the CPA will issue temporary licenses to diving

schools (also organised bodies and individuals) for the rest of 2012.

The 12,000 tonne 178-metre-long RO-RO ferry, *MS Zenobia* capsized and sank near Larnaca, Cyprus, in June 1980 while on her maiden voyage, taking with it €250 million worth of lorries, industrial machinery and other cargo. Since then, the vessel has become popular, the country's premier dive site and frequently named one of the world's top wreck dives. The *Zenobia* provides a range of dive options, from the ship's 16-metre-long starboard side for newly qualified divers, to a more advanced dive inside the upper car deck and accommodation block, right up to extremely adventurous dives within the lower car deck or the engine room. Although everyone was evacuated from the ship before she sank, four divers have since lost their lives on the wreck.

One of these divers was Catherine Vicar, 33, who was found unconscious in the engine room in October 2010. According to port authority's general director, Yiannakis Kokkinos, her family was "considering legal

action against port authorities, because they consider us responsible for her death".

Larnaca Mayor Andreas Louroudjiadis called the port authority's decision "rushed and arbitrary". Meanwhile, head of the Cyprus Tourism Organisation (CTO), Alecos Orountiotis, said that port authorities had not actually consulted them, and that he had been "informed by the press".

The CTO had also paid around €50,000 for four ships to be sunk in other spots, including Paphos, Paralimni and Limassol in order to promote marine tourism such as diving, Orountiotis said. He is now unsure what would happen to those plans. "Sea sports bring in some €150 million in tourist revenue each year." ■



MS Zenobia listing in June 1980 prior to her sinking

Airfare Junkie's Guide

Figuring out how to accrue the most air miles is like solving a puzzle. First, head to FlyerTalk to learn the basic jargon (Flyertalk.com/glossary). Then pick the airline frequent-flyer-miles program you're going to use. Once you're ready, search for cheap flights from your home city. Next, check out the forum, "Miles Buzz on FlyerTalk". There you'll find over 250,000 posts about promotions available, all updated by airfare junkies in real time. ■

Unlogged

Going diving to Egypt and want to hear what others have to say about your planned destination beforehand? A new website called, Unlogged, may provide the answer. The diver's equivalent of Tripadvisor, the site provides detailed coverage of each diving destination in Egypt. Covering everything from dive sites to nightlife, the website encompasses the Red Sea from Hamata and El Gouna to Sharm el-Sheikh to Taba. In addition, browsers can check out videos showcasing a day's diving in each destination as well as useful tips for making the most of your journey. www.unlogged.co.uk.

Smart Traveler App

Smart Traveler, the official U.S. State Department app for travelers, provides easy access to frequently updated official country information, travel alerts, travel warnings, maps and other info that is also useful for other than just U.S. citizens. **Smart Traveler on iTunes**





'Elite' passengers allowed to bypass screening in U.S. airports

U.S. Transportation Security Administration announces expansion of streamlined screening program.

Super-size airline passengers beware

Airline passengers may soon have to endure an additional queue prior to check-in—the weigh-in queue. Former Qantas group chief economist, Tony Webber, has proposed a 'weight surcharge' to help airlines cover rising costs.

Airline costs have increased since 2000 not only due to higher fuel prices, but because "passengers are carrying a bit more heft". An associate professor at the University of Sydney Business School, Tony Webber, calculated that the increase in average weight of passengers means 3.72 extra barrels of jet fuel are burnt on the average Sydney to London flight. "When you add it up over all flights for a year, the extra cost can all but wipe out an airline's profits," added Webber.

Although Australia's Qantas and Tiger Airlines were quick to state they had no immediate 'fat tax' plans, KLM and Air France are considering a proposal to oblige larger passengers to pay for not just one seat, but 75 percent of the adjacent seat. However, there was no mention as to whether thin passengers would be offered the rest of the seat for a quarter of the price. ■

A select few of us may keep our shoes and belts on next time we transfer through a U.S. airport. By the end of March, select passengers departing from Kennedy, O'Hare and Reagan National airports in the United States will be able to breeze through security checkpoints without having to remove shoes, outer coats or laptops from their cases. Highest-status elite customers chosen by the airlines will qualify to participate in the PreCheck expedited security program. Since initial testing by the Transportation Security Administration (TSA) in the fall of 2011, eight airports are now participating in the PreCheck program, with an additional 27 planned by year's end.

There are two ways travelers can take part. The first is to be invited by one of the participating airlines. Routine personal background information on their elite fliers will be sent to TSA, which will determine on a trip-by-trip basis which passengers will receive boarding passes, allowing them to use PreCheck lanes.

The other way is through the Global Entry program operated

by the Customs and Border Protection agency. After passing background checks, enrolled international travelers designated as low-risk passengers will be given expedited entry.

Highest-status elite customers chosen by the airlines will qualify to participate in the PreCheck expedited security program.

According to TSA's administrator John S. Pistole, select passengers are still subject to random full-security checks. "We've had nearly 350,000 people go through by now," stated Pistole.

"There is clear public support for moving away from the one-size-fits-all concept in checkpoint

security, toward a multilayered approach partly based on intelligence," Pistole said. "Just from a policy standpoint, we wanted to validate that," he added. ■



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Having the area (almost) to yourself. Red Sea operators are reeling from the effects of the recent changes as travellers opt for other destinations

ing for the CDWS [Chamber of Diving and Watersports] in Egypt directly after the revolution and the subsequent jail term of the then Minister of Tourism—Zuhair Garranah. (Read article here >>>). The scene was set for dwindling quality in and supervision of the scuba industry in Egypt.

Out of control

One year later, the situation is spinning out of control. A recent example of this is that scuba introductory courses are being performed on the wreck of the *Thistlegorm* (at +40m depth) with only the so-called “instructor” wearing scuba gear!

The CDWS still has a mandate—checking diving operators for conformity and subsequently, with approval, an operation receives its license from the Ministry of Tourism—but how can the CDWS adequately perform their duties if we are now talking about one lonesome inspector serving the

entire Egyptian coastline, which houses approximately 700 scuba operations? Even if this lone ranger would interdict an unsafe scuba operation, there is no police force to enforce any decisions, at present.

Generally, there has been a big drop in tourist income for Egypt in 2011, from EG£12 billion the previous year to £9 billion; and this is expected to drop even more in 2012. There are less flights, and in recent decisions by some European foreign affairs agencies, negative travel advisories have resulted after several reported kidnappings in Sinai and a surge of criminal activity all over the country.

Although this kind of criminality is nothing out of the ordinary in western countries, here in Egypt, with the current situation of the media looking for stories to tell, every news article spins out of control—again impacting the tourism and scuba industries. ■

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Impact of revolution on Egyptian scuba industry

Text by Henri Hemmerechts

One could start by saying, *same-same-but-different*, when talking about the diving industry in Egypt—*same-same* as previous periods like the '97 Luxor assassination, the 2004 bombing and the shark attacks in Sharm el Sheikh in 2010. Each of the above events brought subsequent periods of drought in customers and tourism. Prices dropped and people went out of business. The professional and long-established businesses survived. The new and not so professional businesses did not.

So, why is it different this time around? Besides the fact that,

politically, the country is generally divided into pro-Mubarak military regime proponents and the obviously growing number of anti-military regime adepts, there is a political vacuum that has led to lawlessness and a dramatic increase of criminality never before experienced in the tourist areas. There's still an unknown end point for the Egyptian tourism industry, in general.

Wave of nationalism

One thing is sure—a wave of nationalism has swept the coun-

Same-same-but-different

try, including the diving industry. A gradual evolution has been accelerated by anti-ghawaga (anti-foreigner) sentiments to a point that even some of the old, weathered scuba professionals hesitate to come out of their houses for fear of their personal safety. The general outlook is that the Egyptian dive professionals should reclaim the scuba industry, which has been dominated by foreigners.

In a previous article that I wrote for IADP members [International Association of Dive Professionals], I addressed the loss of fund-

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