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Island of Vis

Denmark's
Bubbling
Corals

Profile

Pascal
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Fitness
for Divers

Ecology

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Explorers

we can all be

Editorial

This past Saturday evening, I made myself very comfortable.

Equipped with a remote control, an ample supply of snacks and soft drinks, and with a soft couch mounted on my back plate, I was all kitted up for a marathon viewing of science fiction movies on TV.

In these fictitious universes, we can boldly go where no one has gone before, experience other worlds of a different physical nature and appearance and encounter alien

creatures of sometimes bewildering structure and form.

Since childhood, I have often daydreamed, or pondered, what it would be like to be a future captain of the Starship Enterprise or some explorer donning his sophisticated survival suit enabling him to survive in an otherwise strange and hostile environment.

In fiction and our fantasy, we can travel anywhere at the speed of thought, but how about places that lie beyond our imagination?

I can explore worlds that are more diverse, more surprising and more astonishing than anything science fiction or virtual reality can produce—and I can do it in the real world.

Actually, it was only last week that I found myself face to face with a multi-legged creature with lots of antennae, composite eyes and weird appendages. I also saw creatures that started their lifecycles as stalks with tentacles before morphing into hovering pulsating discs with intricate patterns. And I watched an



Alien from the deep?

MARK WEBSTER

Event Organiser



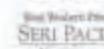
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amorphous sausage-shaped body with odd filaments and psychedelic patterns slide across the substrate in front of me. I was in another strange world where I needed special equipment and suits to venture.

I wasn't light years away however. I was just a short drive away, outside the city, and the above mentioned creatures were crustaceans, jellyfish and nudibranchs. The nearby beaches outside Copenhagen can't compete with those in the tropics or the great green water sites in Canada or Norway, but I can

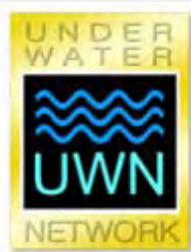
always find something new I haven't seen before—a creature that I had not come across before.

I do have a lot of fancy equipment—it comes with the territory in this line of work—and training that could take me pretty deep, but perhaps the thing I fancy most is lying very relaxed in a bank of marine grass in the shallows and just spot the life there. Hidden among stalks, a bewildering array of macrolife is taking refuge, and the top layer of sediment is home to weirder creatures still.

Here, in our own inner space, we can all be explorers. We need not belong to an elite few or be excessively fit. Almost anyone who wants to do so can dive—and regularly, divers find new species. Going over past issues of this magazine is a testament to new discoveries constantly being made and new species being found—also by common people like you and me.

Diving is your direct access to the last true frontier.

— Peter Symes



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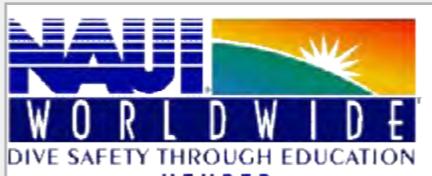
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News edited
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NEWS

Throw the big ones back

Contrary to conventional wisdom, it is not the young fish that should be thrown back to sea but the larger older ones.

"The type of regulation, which we see in many commercial and sport fisheries, is exactly wrong," George Sugihara of the Scripps Institution of Oceanography at the University of California San Diego said in a statement.

Writing in the journal *Nature*, Sugihara said conventional fishing practices that targets the biggest and oldest fish effectively destabilize fish populations by leaving younger fish to proliferate too wildly. A single large fish will simply grow a little when it gets more food, or lose a little weight when food is scarce. A population of many young, small fish, however, may explode in number or collapse depending on food availability.

Imagine a container of water with a 500-pound fish. With food, it grows a little bigger. Without food it gets a bit smaller. Imagine the same container with 500 one-pound fish. They eat, reproduce, and the resulting thousands of fish boom, quickly outstripping the resources, and the population crashes. These many smaller fish—with the same initial "biomass" as the larger fish—

can't average out the environmental fluctuations, and in fact, amplify them through higher turnover rates that promote boom and bust cycles.

Not only do the older fish provide stability to the population, they provide more and better quality offspring. Nils Stenseth of the University of Oslo said fishing practices that stress taking only the oldest and biggest fish can actually force quick evolutionary changes in the fish populations.

Fishing can alter the "age pyramid" by lopping off the few large, older fish that make up the top of the pyramid, leaving a broad base of faster-growing small younglings. The team found that this rapidly growing and transitory base is dynamically unstable—a finding having profound implications for the ecosystem and the fishing industries built upon it.

"The data show that fished species appear to be significantly more nonlinear and less stable than unfished species," The US researchers said fisheries should in fact encourage the taking of smaller, younger fish instead of requiring that they be thrown back. This is especially important to know when trying to rebuild fish stocks, Sugihara said.

■

Explaining the Mystic Metallic Sheen of Fish

The bright, mirror-like metallic sheen of fish skin is due to a sophisticated system of guanine crystals in the skin underneath the scales of fish.

This silvery reflectance acts as a form of camouflage that helps protect fish from predators as fish swim near the water's surface. However, the exact shape of these guanine crystals and how they work remained a mystery.

Researchers extracted guanine crystals from the skin of the Japanese Koi fish and analyzed the crystals using X-ray diffraction and an electron microscope. They compared the results to guanine crystals made in the laboratory. The researchers found that the biogenic crystals develop in an unexpected direction that differs from the lab-made crystals, and that their unique shape improves light reflectivity, which may help fish hide from predators in the wild, scientists in Israel are reporting. ■

The study, *Biogenic Guanine Crystals from the Skin of Fish May Be Designed to Enhance Light Reflectance* is scheduled for publication in ACS' *Crystal Growth & Design*



The Amazon molly, *Poecilia formosa*, is a freshwater fish, which reproduces through gynogenesis, where genetic material from the male is not incorporated into the already diploid egg cells that the mother is carrying resulting in identical clones of the mother being produced en masse. This unusual characteristic has led to the Amazon molly becoming an all female species. The common name acknowledges this trait as a reference to the Amazon warriors, a female run society in Greek mythology



No sex for 70,000 years

A fish species, which is all female, has survived for 70,000 years without reproducing sexually, experts believe. The species, found in Texas and Mexico, interacts with males of other species to trigger its reproduction process. The offspring are clones of their mother and do not inherit any of the male's DNA.



One theory is that the fish may occasionally be taking some of the DNA

Typically, when creatures reproduce asexually, harmful changes creep into their genes over many generations. The species will eventually have problems reproducing and can often fall victim to extinction. Scientists from the University of Edinburgh think the Amazon Molly may be employing special genetic survival "tricks" to avoid becoming extinct. The fish ought to have become extinct within the past 70,000 years,

from the males that trigger reproduction, in order to refresh their gene pool. Dr Laurence Loewe, of the university's School of Biological Sciences, said: "Maybe there is still occasional sex with strangers that keeps the species alive. Future research may give us some answers. I think one of the interesting things is that we are learning more about how other species might use these tricks as well," he said. "It might have a more general importance." ■

SOURCE: BMC EVOLUTIONARY BIOLOGY

Microbes could be the key to coral death

Coral reefs could be dying out not just because of the direct rise in temperature caused by global warming but just as much as from changes to the microbes that live in them.

"Many of the deaths we see in the coral reefs, which occur following coral bleaching events, can be put down to changes in the microbes which live in and around the reefs," says Dr John Bythell, a biologist from Newcastle University. When the water warms up, some disease-causing bacteria are more successful and can attack the corals that have reduced defences from suffering from the heat. Also, some of the friendly bacteria that normally live in the corals' guts become weakened, allowing other harmful bacteria to multiply and cause diseases or other problems.

A key factor newly identified by the Newcastle team is the role of surface mucus secreted by corals. This seems to act as a shield, preventing disease-causing pathogens such as bacteria and some viruses from penetrating their tissues. "The reefs' defensive mucus or slime is also at risk from stresses brought on by climate change. This seems to happen just at a time when some of the key functional microbe groups are changing, reducing the corals' other defences and boosting some disease-causing bacteria, making them more virulent," said Dr Bythell.

Another research team led by San Diego State University biology professor Forest Rohwer have recently found how overfishing can also endanger coral reefs at four Pacific islands. As fish popu-

lations decline, algae, which is usually eaten by fish, flourishes and potentially leaches organic matter that feeds the excess microbes that kill off coral.

Ten times as many microbial cells and virus-like particles than normal was found in the water surrounding the island of Kiritimati. The Kiritimati microbial community was dominated by micro-organisms that feed off of organic matter, many of which were disease-causing organisms. The fact that Kiritimati also had the highest prevalence of coral disease and the lowest coral cover led the researchers to believe that the microbes were likely related to declining coral health." ■





If the vegetation on a reef is a problem, the rabbit fish could be the answer

Japan Plants Coral on Disputed Island

Japan is mounting a US \$7 million coral transplanting operation in the Pacific to bolster its claim in a territorial dispute with China and cement Tokyo's right to exploit a wide expanse of ocean.

Over the next year, scientists intend to plant more than 50,000 fast-growing *Acropora* coral fragments on Okinotorishima, two uninhabited rocky outcroppings about 1,060 miles southwest of Tokyo, project officials say. The aim is to protect the islets from further erosion and maintain Japan's claim that they are bona fide islands and can be used to map its exclusive economic zone in the Pacific. "We hope the corals will grow larger and eventually preserve the islets and their environment," said Mayumi Tamura, of the Fisheries Agency. "We see corals as an important marine resource, not as a mere tool of territorial claims."

In a sometimes heated dispute, China has challenged Japan's claim, arguing the outcroppings are too small to be defined as islands under international law, meaning the waters around them are open to use by other nations. Tokyo uses the islet "as the basis of their claim for vast ocean areas, and it is not keeping with recognized international law," the Chinese Foreign Ministry said in a statement faxed to The Associated Press. ■



Rabbitfish Comes to the Rescue of Reefs

While rabbits continue to ravage Australia's native landscapes, their submarine counterpart, the rabbit fish (*Siganus canaliculatus*) may help save large areas of the Great Barrier Reef from destruction.

In a study to be published in the journal, *Coral Reefs*, Rebecca Fox and David Bellwood of James Cook University, shows that the rabbit fish is an efficient herbivore, capable of stripping an area

of vegetation. Just like its counterpart on land. However, in the case of the Reef, it is the vegetation that is the problem—and the rabbit fish, is the answer.

The rabbit fish were caught on underwater videocams, in schools of up to 15 fish, grazing the crest, slopes and outer flats of the reef, and chomping away at more than ten times the rate of other weed-eaters such as parrot and surgeon fish. However, the rabbit fish appeared to be most effective on clearing algae from reef crests, and were significantly less effective in clearing the reef flats and slopes of macro algal growth. The reasons for this preference

remain unclear.

Still, these findings have important ramifications for the rehabilitation of coral reef habitats. The main problem is that for a few years now, the fish that used to feed on these weeds have been diminished largely due to human having fished them out. With the result that these weeds have nothing to keep them in check and are thus taking over the corals. Thus the chances of surviving and redeveloping again is little next to nothing.

The 28 species of rabbit fishes are found in shallow lagoons in the Indo-Pacific and eastern Mediterranean. ■

EU to prioritize fish over fisheries

The fishing industry has lost out in a Brussels policy battle that now seems certain to favour interests of the marine environment over the interests of fishermen. A major reorganisation of the fisheries directorate has come about because Commissioners were embarrassed by the management of the Common Fisheries Policy—which often doles out fish quotas in defiance of scientific advice. They were also concerned by DG Fish's defence of the interests of the fishing industry over the interests of other EU citizens, for example divers.

José Manuel Barroso, the president of the EU commission stated: "The new set-up highlights the Commission's determination to conduct an integrated and tailor-made maritime policy." A senior

Commission official said: "This will get fisheries out of its ghetto and make it more sensitive to sustainable development and ecosystem management."

The reorganisation is expected to allow greater focus on the Mediterranean, where fishing for the bluefin tuna remains out of control, and on control of illegal fishing by EU vessels in international waters. DG Fish's existing directorates for external policy and legal affairs will remain unchanged.

Under the changes, it is intended that fishermen would have to be consulted more on the siting of wind farms in the North Sea, but environmental groups would have to be consulted more on where a new network of marine reserves would go. ■ SOURCE: TELEGRAPH

José Manuel Barroso, president of the EU commission

They were also concerned by DG Fish's defence of the interests of the fishing industry over the interests of other EU citizens, for example divers



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Edited by
Peter Symes



This newly discovered Osedax worm will be named in honor of a supporter of the Scripps Oceanographic Collections

Scripps Oceanography Invites Donors to Name an Ocean Species

Several of the most important libraries of ocean specimens in the world are housed at Scripps Institution of Oceanography at UC San Diego. Known as the Scripps Oceanographic Collections, and referenced by scientists all over the world, these holdings of biological and geological marine specimens tell a unique and evolving story of life on Earth, and provide answers to questions about Earth's future.

In response to severe budget cuts to the collections over the past several years, Scripps is introducing a novel way for donors to show their support for these valuable and irreplaceable science and teaching resources: by naming a newly discovered marine species.

Every year collections staff and researchers discover new species of marine creatures. Some specimens set new records, such as the stout infantfish (*Schindleria brevipinguis*), co-described by Scripps as the world's smallest fish in 2004.

Traditionally, the person who first describes a newfound plant or animal is entitled to name it, but now, Scripps is inviting the public to share in the process by naming select newly discovered species acquired by the institution. The names can be selected by a donor for themselves or a friend or family member, and are then introduced in scientific publications that establishes the new species name permanently.



This newly discovered nudibranch, housed in the Scripps Oceanographic Collections, is available to be named by a donor

Currently, the Scripps Oceanographic Collections hold several new marine species that are available for naming. They include a rare hydrothermal vent worm (\$50,000), two types of worms found living on deep-sea whale bones (\$25,000), an orange, speckled nudibranch (\$15,000), and a spiny worm found in the kelp forests of La Jolla cove (\$10,000). Several fishes from the Gulf of California as well as several new species discovered in local La Jolla waters are also available to be named. ■



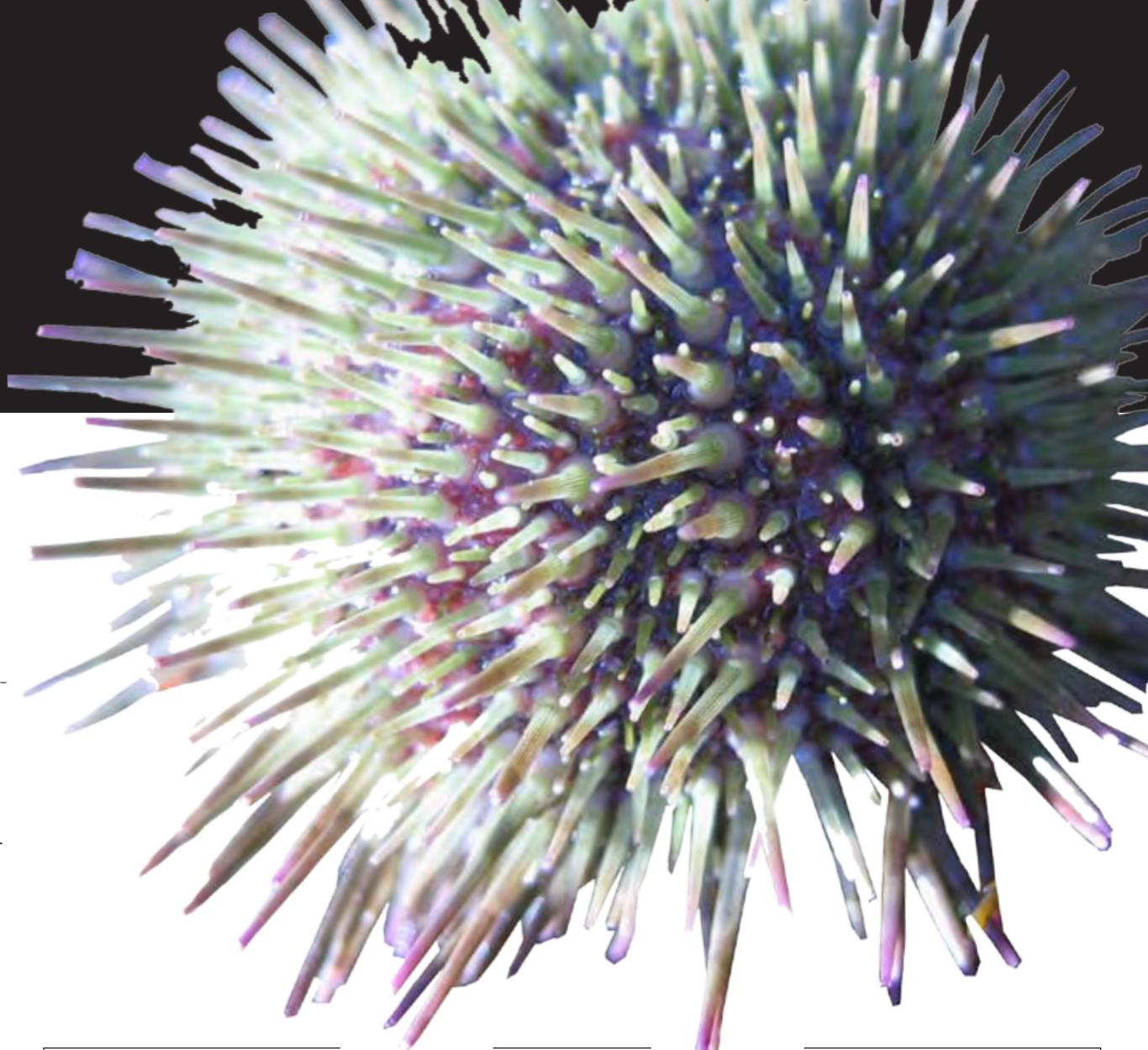
Ocean acidification seem to benefit some plankton

Most life in the ocean will suffer as carbon dioxide levels increase and the water becomes more acidic. Some plankton will buck the trend, however, thriving and putting on weight as carbon dioxide levels rise.

Coccolithophores are single-celled algae, phytoplankton, which are found in large numbers throughout the surface euphotic zone of the ocean. Coccolithophores have long been thought to respond to increased ocean acidity, caused by increasing CO₂ levels, by becoming less calcified. However, the opposite happens. The species *E. huxleyi*

has been becoming 40 percent heavier, and more abundant, in more acidic waters. The extra carbon dioxide aids photosynthesis, while the more acidic waters increase the concentration of bicarbonate. "Increased bicarbonate appears to stimulate an increase in mass of calcium carbonate produced by each coccolithophore cell," says Paul Halloran, from the University of Oxford.

The team's result is not confined to the lab. By studying fossil coccolithophores from a deep ocean core, they found that there has been a 40 percent increase in average coccolith mass over the last 220 years, mirroring the rise in carbon dioxide levels. ■



Sea Urchins help Us Understand Diseases

Although they are invertebrates, sea urchins share a common ancestor with humans sharing more genes with us than fruit flies and worms. In fact, we have more than 7,000 of the same genes.

Indeed, there are several genes in the sea urchin involving Alzheimer's, Parkinson's disease, muscular dystrophy and many other cancer-related genes. With a complete map of their urchin's DNA, scientists can better understand how genes work and hopefully unlock the mysteries of these human diseases. Maybe someday doctors will know exactly how to treat and even prevent them. ■

And infertility may be another problem the sea urchin helps solve. No wonder—each urchin can produce 20 million eggs. This also means they can be reproduced for research faster than other animals. That means researchers can produce large amount, practically unlimited amount of material. ■

Sea urchins don't have eyes, ears or a nose, but they have the genes humans have for vision, hearing and smelling.

Why don't we just train fish to catch themselves?

At least that is what researchers with the Researchers at the Marine Biological Laboratory at Wood's Hole in Massachusetts hope to achieve if fish can be taught to associate certain sounds with feeding.

They plan to put thousands of fish in a dome-shaped structure at the bottom of Buzzards Bay and feed them pellets after playing a tone underwater. After they are released to supplement their diet with natural forage, the hope is they will return to the dome for recapture. The process is called "acoustic ranching".

If it works, the system could eventually allow black sea bass to be released into the open ocean, where they would grow to market size, then swim into an underwater cage to be harvested when they hear the signal.

"It sounds crazy, but it's real"

We could call them "Pavlov's fish". They respond to a tone that signals feeding time, not by salivating as the dogs in Pavlov's classical experiment, but by swimming into a net essentially catching themselves.

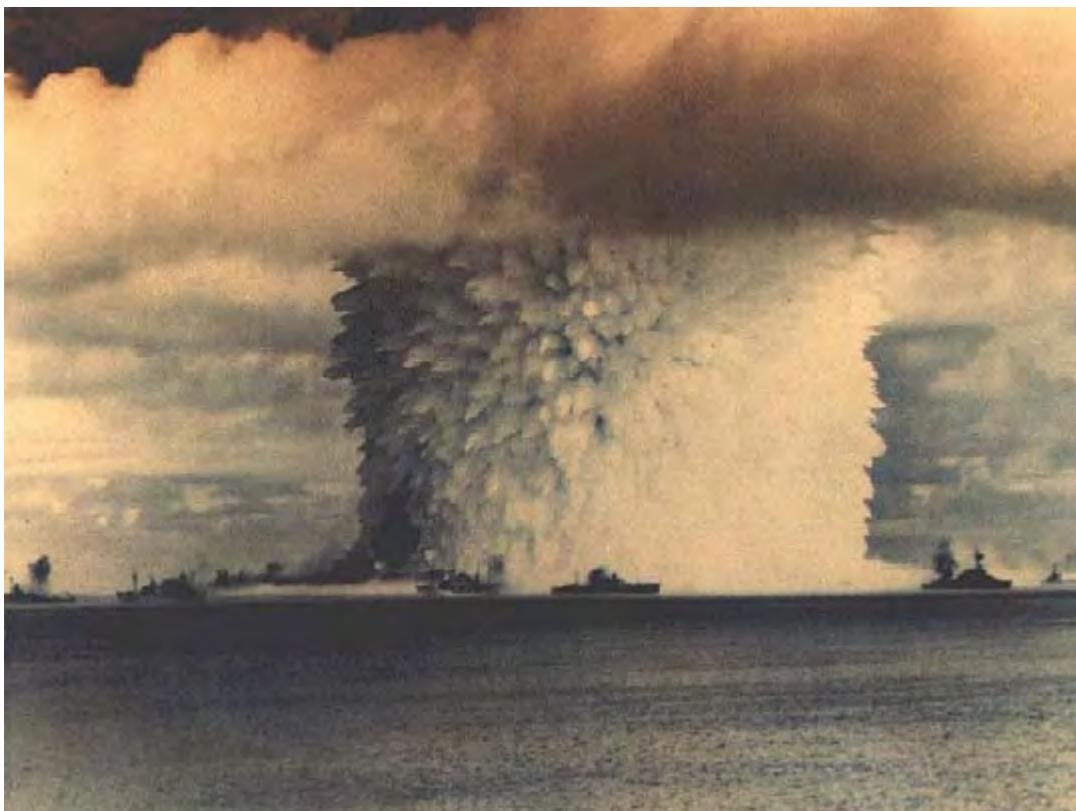
The project began last summer using 6,500 black sea bass, a stout, bottom-dwelling fish found between Florida and Cape Cod that migrates south of New Jersey in the winter. The species grows up to three pounds and 20 inches long and has a thick, white flesh that can be filleted for broiling or cut into nuggets for frying.

"It sounds crazy, but it's real," said Simon Miner, a research assistant at the Marine Biological Laboratory at Wood's Hole, which received a US \$270,000 grant for the project from the National Oceanic and Atmospheric Administration. Miner said



the specially trained fish could someday be used to bolster the depleted black sea bass stock. Farmed fish might become better acclimated to the wild if they can be called back for food every few days. "Basically the whole concept is: what if you can go out in the ocean and call only the fish you want into the net?" said Simon Miner.

The bigger goal is to defray the costs of fish farming, an increasingly important source of the world's seafood. If fish can be trained to return to the farmer after feeding in the open ocean for several days, farms could save money on feed and reduce the amount of fish waste released in concentrated areas. The key question for fish farmers: How many fish will actually return, and how many will be lost to predators or simply swim away? ■



The nuclear blast at Bikini Atoll in 1954. Between 1946 and 1958, the United States government detonated 23 nuclear devices (with a total yield of 76.3 megatons) on the reef, in the sea, in the air and underwater in the vicinity of Bikini Atoll.

Nuked coral reef has recovered well

Scientists have found out that coral reefs recover surprisingly well 50 years after being bombed to smithereens with an nuclear weapon

Fifty years after being blasted with atom bombs Bikini Atoll boast a diverse coral reef community and presents a convincing example of resilience of coral biodiversity to "non-chronic disturbance events", the authors of a study recently published in the journal *Marine Pollution Bulletin* have found.

During their survey of Bikini Atoll the researchers were able to find no less than 183 species of hard (scleractinian) corall. That compares to an astonishing 70 percent of the coral species that were present at surveys conducted prior to the nuclear tests.

A possible explanation for this remarkable recovery is that modern Bikini Atoll community may have been replenished by self-seeding from brooded larvae from surviving adults and survival of fragments of branching corals. The patchy nature of

impacts may have mitigated the overall effect of disturbance at Bikini Atoll, with some patches surviving after each impact. Corals living on deep exposed reefs on Bikini Atoll may also have escaped some of the direct impacts, and thus have played an integral role in mitigating the overall effect of the disturbance event.

It is also likely that the extremely large and highly diverse neighbouring Rongelap Atoll has contributed a significant proportion of new propagules to enable recovery of the Bikini coral community, as Bikini Atoll lies downstream of the prevailing surface current from Rongelap.

The authors conclude that "...in a twist of fate, the radioactive contamination of northern Marshall Island Atolls has enabled the recovery of the reefs of Bikini Atoll to take place in the absence of further anthropogenic pressure.■

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Tailgating the lone dugong, KAT, on Cocos (Keeling) Islands.
Photographed by Karen Willshaw ~ underwater.com.au member



Antoine de
Saint-Exupery as
featured on a
French note



Wartime author mystery solved

A former Luftwaffe fighter pilot may have ended the 64-year-old mystery surrounding the death of a French writer and aviator. The author of *The Little Prince* disappeared during a wartime aerial reconnaissance mission in July 1944.

His disappearance became one of the most enduring mysteries in post-war France. Eventually, a bracelet belonging to him washed up in a fishing net off Marseille in 2004, wreckage from his plane was found off the coast of Marseilles by French diver Luc Vanrell, but there was no indication of how he died.

Now former German pilot Horst Rippert says he fears he may have shot down the author—though he cannot be sure. The former Messerschmitt pilot describes spotting a twin-tailed Lightning P-38 plane flying below him. He went in pursuit and shot him down. "I didn't see the pilot and even so, it would have been impossible for me to know that it was Saint-Exupery. I hoped and I still hope it wasn't him," he said.

After his finds Mr. Vanrell set to work with Lino von Gartzen of the Bavarian Society for Underwater Archaeology. Mr. von Gartzen

told the BBC News website that he made 1,200 phone calls to former Luftwaffe pilots and their families in search of the man who shot down the French writer.

Finally, he was told about a man who had a clear memory of the events of 31 July 1944, the date Antoine de Saint-Exupery disappeared. "I presented myself as doing research and he said: 'You can stop researching now because I shot down Saint-Exupery'." Lino von Gartzen said it came as a big shock: "I never thought I would find who shot him down. I was quiet for some minutes as this was too much for me".

"He feels guilty and very, very sorry about it. He was very scared that the cheap press would massacre him." Mr. Rippert describes being a fan of de Saint-Exupery's work. "In our youth, at school, we had all read him. We loved his books," he said. ■ SOURCE: BBC

Families of killed North Sea divers sue Norway

Relatives of British deep-sea divers killed in the North Sea during the boom years of oil exploration seek compensation from the Norwegian government, which is expected to run to millions of pounds.

In the early 1970's, the North Sea was a watery Wild West. The North Sea oil rush of the 1970's offered big rewards for high-risk work and claimed several lives. Now families of British workers who died in Norwegian waters want to understand what happened to their loved ones. The families also hope to join a class action lawsuit against the government by 24 former divers who claim that

they were treated as "human guinea-pigs" and sent to extreme and dangerous depths. Tempted by the high rewards—some would say greed—hundreds of British deep-sea divers took part in the exploration of the North Sea oil fields in British and Norwegian territorial waters.

According to a 1975 article in the *Times*, a North Sea deep-sea diver could earn as much as GB£2,000 a month—the equivalent of GB£14,000 (USD 28,000) today. But according to retired divers on both sides of the North Sea, a disproportionate number of British divers perished in Norwegian hands because safety was routinely and knowingly compromised in the interests of profits.

The Norwegian government's response is clear: "The Norwegian government has taken responsibility for the pioneer divers at a moral and political basis, but has not acknowledged any legal responsibilities for the damage that has been inflicted upon the pioneer divers." ■



BYRON UNDERWATER FESTIVAL 08

BYRON BAY, 30 APRIL – 4 MAY 2008

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- Attend a photo clinic with Matthieu Meur
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- Marine Visions art competition & exhibition
- Olympus underwater camera try-outs
- Introduction to SCUBA - Snorkel tours
- Dolphin kayaking - Guided seabird walks
- Marine wildlife and underwater photography presentations
- Festival Finale featuring the Underwater Village
- Kids events including the Byron ArtiFishal Reef Project

For more info and booking go to www.underwaterfestival.com.au



Wyland coral reef mural to decorate hospital

This year is the International Year of the Reef. In celebration, environmental organizations have invited environmental artist Robert Wyland to paint a mural of a coral reef on the exterior wall of a local hospital.

An informational meeting hosted by Marianis Dive was held in April to provide more information regarding the project. MINA sponsored Wyland's visit to the event.



Artist Robert Wyland

Wyland is well-known for painting marine life in life size murals. His murals are displayed in 12 countries and viewed by approximately one billion people per year, writes the artist on his website. Wyland's work has been recognized by the United Nations, the Underwater Academy of the Arts and Sciences and the Sierra Club. ■

New Record: World's Longest Open Salt Water Dive

Will Goodman of Borehamwood, UK, has set a new world record for the longest open salt water scuba dive at a location off the coast of Gili Trawangan, Lombok, Indonesia. He broke his previous world record of 24 hours and 3 minutes set in 2005. The 31-year-old diver's goal for his last attempt was 100 hours, but he reached a respectable 33.5 hours at a depth of 12 meters, which won him a place in the *Guinness Book of World Records*. Challenges of the dive included loss of oxygen pressure, skin loss and cold, the last of which forced him to the surface in the end.

With no contact with the surface, the dive was made using a combination of open circuit and rebreather systems. Support teams for this dive included divers from dive shops on the islands as well as experienced international divers. Equipment and surface logistics were organized by Blue Marlin and Trawangan Dive supported by members of the Trawangan-based Gili Eco Trust.

The event was aimed at raising funds and awareness for children's charities in Indonesia that help parents—earning an average of US\$25 per week on the smaller islands—who struggle to provide education and clothing for their children.

A professional in the technical diving industry, Goodman is an advanced Trimix Instructor and currently works for Blue Marlin Dive on Gili Trawangan as a technical instructor. He also manages Trawangan Dive's live-aboard charter trip to the Komodo islands and Balikpapan Wreck Safari. ■

New Record: World's Longest Underwater Painting

In April, Singapore and Malaysia broke the record for the world's longest underwater painting. On a 56.4-meter long canvas, members of Coral Malaysia, the National Arts Gallery and Pelukis Aneka Daya Singapura (APAD) carried out their record-breaking feat, which took 44 artists and divers three dives to complete at a depth of 12 meters off Air Batang Beach. The event took place to commemorate World Earth Day and won the participants a place



Malaysian artists who took part included the country's first underwater painter, Ajis Mohamad, Fauzan Omar, Young Jefri and Fauziah Latif—the ambassador of Coral Malaysia and one of Malaysia's most popular singers. From Singapore were artists Suhaimi Sukiyar, Rosman Shahid, Victor Goh and Dominique Chin. The painting will be on display at the National Arts Gallery in Kuala Lumpur according to Haned Masjak, Director of Exhibition and Services, who told Bernama: "We look forward to exhibit the painting in other public places to educate the public on the marine ecosystem. We also hope to make this collaboration with Coral Malaysia an annual event."

■ SOURCE: BERNAMA.COM

Watson DeVore takes helm at SSI

Watson DeVore is the new National Director of Education at Scuba Schools International (SSI). He brings a wealth of experience and industry knowledge to the position.

After a careful review of numerous candidates for the job, SSI chose DeVore because his experience in sales and diver education matched the goals the organization has set for their Dive Leader Training Program. DeVore's primary goal will be raising the numbers of SSI Dive Leaders to serve the US and resort markets, which currently have high levels of demand. DeVore said, "I am looking forward to the new direction of SSI and being able to streamline many of the old processes to better serve our dealers and dive leaders."

Active in the SSI/NASDS organization for over ten years, DeVore has been an SSI Business Consultant for the Midwest region since 2001. Prior to his work with SSI, DeVore owned and operated a successful dive store and hydrostatic testing facility for 12 years in Oregon, USA. Fresh out of college, DeVore became an instructor in 1990 and later became an Instructor Certifier and Master Instructor for First Aid/CPR, O₂, AED, and Bloodborne Pathogens. In 2002, DeVore received the Platinum Pro 5000 Diver award.

In the past, DeVore was a field technician with Ingersol-Rand where he serviced compressors. A new father and enthusiastic underwater photographer and videographer, DeVore has an acute understanding of the mechanical aspect of dive business and enjoys the daily hands-on operations of the occupation. ■ SOURCE: SSI

An advertisement for Aquata featuring two divers in black wetsuits with orange and white accents. They are performing a dynamic pose, one with arms outstretched and the other with legs spread wide. The background is white. To the right, the text "2008|2009 collection" is written vertically, followed by the Aquata logo and website "www.aquata.com | info@aquata.com".

Vatican adds degrading environment to list of sins

This year, there are more sins to worry about including degrading the environment, according to the Vatican, which upgraded its list of sins with seven new ones. Bishop Gianfranco Girotti, head of the Apostolic Penitentiary—the body of the Vatican that oversees confessions and plenary indulgences—told the Vatican's newspaper, *L'Osservatore Romano*: "You offend God not only by stealing, blaspheming or coveting your neighbour's wife, but also by ruining the environment, carrying out morally debatable scientific experiments, or allowing genetic manipulations which alter DNA or compromise embryos." Additional new sins joining old sins such as greed, sloth, and envy include paedophilia, abortion, taking or dealing drugs and excessive accumulation of riches by a few. ■



Modern meets old,
Europe meets Asia, tall
meets low—everything
blends in Singapore

Meet Kevin
Deacon,
Seacam's
new regional
representative



Show review

ADEX is back *in Singapore*

Text and photos
by Peter Symes

It was not without some trepidation with which I attended this year's ADEX. Last year's instalment held in Bangkok was—let us call a spade a spade—pretty disastrous. There, the choice of a new but remotely located venue was a bad mistake, and the attendance was miserable.

The return to Singapore and a change of organiser could only mean a change for the better. And indeed it was. The city-state of Singapore is much smaller than Bangkok and its surroundings, but as an international hub and gateway it stands far above. It is vibrant, colourful and intense—

and it is truly the point where Asia and Europe meet and mix, blending almost seamlessly. The city is always exciting to visit.

ADEX was held once again at the conveniently located Suntec exposition and business complex, which can be reached by foot

from many of the international hotels or by a short metro or taxi ride. Despite the lack of a high profile photo competition, compelling presentations or famous speakers to lure in the crowds—a point I recommend the new management look into for future shows, especially as there was

an admittance fee—attendance turned out to be pretty good. Friday was predictably on the slow side during usual working hours enabling the attending businesses to flesh out deals with one another, but Saturday and Sunday, the general audience flooded the floors, and it



Saturday and
Sunday were
busy in the expo-
sition halls of the
Suntec complex



Joe Moreira and Emily Chan from Ocean Geographic

new items and products there. Korean S-Sun and Taiwanese Wookang Tech, both lamp manufacturers, were new to me. I also made my first acquaintance with Red Army Watches showcasing the Nauticfish line of massive diving time pieces. Poseidon of Sweden displayed one of the first production models of their Discovery recreational rebreather, which has undergone further improvements since we presented the early pre-production models last fall. Fellow Swedes from Waterproof, the suit manufacturer and UK-based Delta P was also there to offer their wares to an inquisitive audience. On the travel side of matters a string of new or upgraded resorts competed to woo the holiday makers. Most notably, it seems that the fabled Sangalaki (off the eastern coast of Borneo) is back on offer after a prolonged period of uncertainty or lack of operators. Now both Odyssea Divers and Rainbow Divers are putting it back on the map.

got pretty busy. ADEX is not known as the venue where new equipment is presented—that honour mostly falls on DEMA in the USA—but I saw quite a good deal of



Michael Wallentin, manager of Kon-Tiki in Thailand, seems happy being awarded the Project Aware Marine Environmental Award

The future

After years of alternating between Bangkok and Singapore, ADEX will now stay put in Singapore until further notice. A wise choice in my humble opinion. Asia Dive Expo used to be the Asian dive show, an institution that once pretty much covered the whole region. However, as the later years have seen how national dive shows shoot up and establish themselves in Thailand, Malaysia, Indonesia, Philippines, Taiwan and China, the roles and impor-

tance have definitely changed for the better. While it is certainly a positive development that the recreational diving industry seems to be growing in the region, the market for dive expos has certainly become far more crowded. The audiences are certainly there, but it is clear that the international exhibitors now have some tough choices to make and the show organisers have a new challenge to stay in front of the lot. It will be interesting to see how it all unfolds in the upcoming years. ■



LEFT: Joaquin Krass of Minahasa Lagoon resort with Cassandra Dragon who is also ADEX's marketing manager



ABOVE: "Headlamps" from Taiwanese S-Sun is a good example of products or brands not seen on display on European or US dive shows



FAR LEFT: DEMA's president Tom Imgram gave a refreshingly blunt and direct opening talk about ocean awareness, the responsibilities of the diving industry and each one of us

Training bulletin

Edited by
Peter Symes

PADI X

This year will see the first stage of an exciting new program that will eventually spread to many US universities. PADI Americas's new PADI X campaign is aimed at providing scuba diving internships to college students across the United States. The new program allows students to complete internships with local dive businesses learning not only to dive, but also the business of diving.

Students gain valuable real world experience and become PADI X representatives, marketing diving to their classmates as part of their training. This means that it's a real win-win situation for the students who can gain credit for something that feels more like fun than your average course and for the diving industry who benefit by creating new interest in diving in the key 18-24 demographic.

The program will be offered widely in the future, but will begin this year at the following universities:

Indiana University
University of Central Florida
Arizona State University
University of Oregon
University of San Diego ■



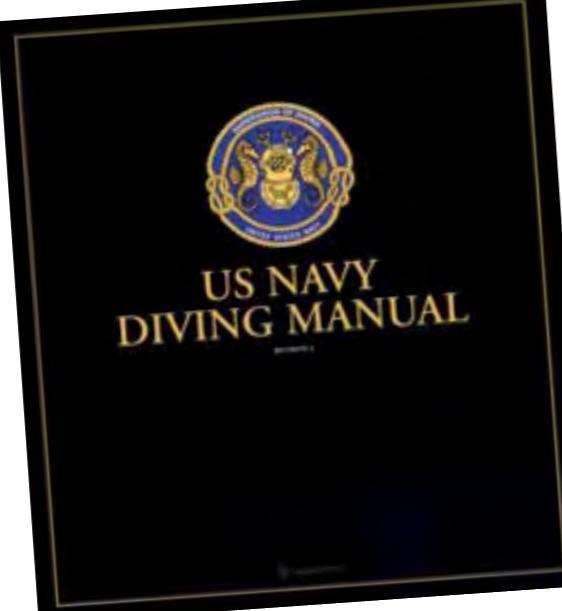
www.larescue.com

New Emergency Oxygen Provider Specialty course

The Professional Association of Diving Instructors (PADI) is launching a new Emergency Oxygen Provider Specialty course with the goal of improving diver accident preparedness by teaching how and when to give oxygen to an injured diver and the recognition of dive illnesses treatable by emergency oxygen.

Drew Richardson, President and Chief Operating Officer, PADI Worldwide says. "Only 50 percent of all injured divers receive emergency oxygen in the field. This new specialty course will improve the percentage of injured

divers receiving appropriate and effective emergency oxygen treatment." Though suited for divers, the new course has no prerequisites and doesn't include dives, which means it is equally applicable to those who are around divers—boat crew, non-diving buddies, lifeguards, and shore staff. No previous CPR or first aid training is required to take the course. ■ SOURCE: DIVENEWSWIRE



US Navy diving manual gets major overhaul

The US Navy has just released sweeping revisions to its Dive Manual, a set of procedures, diving equipment and safety guidelines used widely by military and commercial divers. The changes, which the service said are the most significant in 52 years, aim to make diving safer and more efficient for those who work underwater. Driven by decades of research and advances in technology, the Navy's new guidelines will allow divers to spend more time underwater and decompress more safely and with fewer complications, said Capt. John G. Gray, supervisor

of the Navy's salvage and diving sector. "It includes many updates that make things more efficient for the Navy and more efficient to the taxpayer," Gray said. Commercial divers who have long used the Navy's Dive Manual and its dive tables as a base for their own guidelines, will take a close look at the new manual to update their own operations. "Typically, commercial diving almost mirrors what the Navy does, so we pay attention any time there's a change," says a Portsmouth-based commercial diving company. ■ SOURCE: DAILYPRESS.COM



NAUI offers sporty new cards



SOURCE: WWW.NAUIWW.ORG

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WWW.2DIVE.DK

Want to be better and safer rebreather diver?

What is DIRrebreather?

Since its implementation a few years ago, the Doing It Right (DIR) philosophy has gained in popularity not only in the cave diving community and amongst technical divers, but it has also spread to the recreational diving community across the world.

Until recently, it was only open circuit scuba divers and a handful of semi-closed circuit rebreather divers who could apply these good principles to their equipment configuration and dive procedures. In this context Closed-Circuit Rebreather divers have been the black sheep of the family, as their units were dangerous and their procedures dodgy.

However, almost clandestinely, some CCR divers and Instructors decided to found what is now called DIRrebreather and to set up logical and simple rules, so we could apply the DIR principles to CCR diving. We just dreamt about bringing together the best of both worlds!

The DIRrebreather team is made of experienced and active rebreather explorers and instructors who share the

same goal: implementing the DIR Philosophy into rebreather diving.

But why use DIR with a rebreather? Well, ask yourself the following: How many times have you seen rebreather divers with poor diving skills,

bad propulsion techniques and inefficient buoyancy control? How many times have you seen rebreather divers with gear configurations that could easily be improved? How many times did you observe rebreather divers following complex procedures that were dif-

ferent for each diver even within the same team?

We strongly believe that with proper training, thorough planning, team procedures, equipment selection and adaptation, the rebreather diver can also be a DIR diver.

Standardization should make for simpler and safer dives, avoid confusion and improve team work and communication, especially when problems occur.

Why another Training Agency?

DIRrebreather is not a training agency. We don't sell certification cards. We inform rebreather divers about what we do and how we do it. All DIRrebreather members and instructors work on CCR gear and procedures

standardization. Based on some extensive cave and wreck explorations, and physiological studies, we try to adapt the most current thoughts in decompression into rebreather diving.

We also have the goal to help rebreather divers to improve their personal skills and techniques through articles, DVDs, manuals and specific workshops. To that end, we have set up a forum to discuss how to improve the standards and the equipment.

We also have a newsletter to keep our members informed about current expeditions and how to participate. We set up

DIRrebreather is not a training agency.

What does DIR mean anyway?

DIR, "Doing It Right", is a holistic approach to scuba diving originally developed by members of the Woodville Karst Plain Project, who also gained fame for their explorations of the extensive underwater cave systems in Florida and elsewhere.

One of the tenets of the DIR approach is to improve safety by standardizing equipment configuration and procedures for preventing and dealing with emergencies, in particular handling out-of-air scenarios. This is achieved by placing emphasis on fundamental skills, teamwork, environmental awareness, and the use of highly optimized and streamlined, yet simple and versatile, equipment configuration. DIR is often perceived as being an equipment system, but it also encompasses a general philosophy or attitude of how to approach scuba diving including aspects of diving procedures and techniques as well as diver fitness and preparedness.

DIR has often been the source of heated debates in the diving community. Many feel that the name itself "Doing it Right" implies that if they are not utilizing DIR, then they are "doing it wrong". One of the rules of DIR diving is to not dive with anyone with a poor or unsafe attitude, sometimes referred to by overly enthusiastic DIR proponents with the derogatory term "strokes", which has been perceived by others as an antagonizing elitist attitude.

While many people see the advantages of the DIR philosophy others have in particular challenged the requirement that divers must go all-DIR and cannot use other equipment.

Proponents counter that the whole point of standardisation is to allow DIR divers to very easily dive with alternative buddies, swap damaged equipment and have less equipment stress. Those who disagree argue that the lack of choice and customization means being forced to use equipment that might not be optimal for some environments.

These days DIR diving is less controversial and many of the ideas suggested by DIR have become mainstream and adopted by various other training agencies. ■

10 Q & A's About

DIR Rebreather

By Cedric Verdier
Chairman, DIRrebreather





workshops and seminars to educate already certified rebreather divers.

What about the name?

DIRrebreather is exactly what it means: DIR diving with a rebreather. Some people already found the name a bit provocative. It is as some people don't see the irony if combining of DIR and rebreathers!

We could have chosen to name it "Association for the Promotion of Safe Rebreather Practices in the DIR Way". But how clumsy and unsexy does that sound?

Are DIRrebreather and GUE*) related?

No. DIR is not a trademark or a diving group. It's a mindset. Many people want to dive DIR worldwide. They try to learn new techniques and improve their equipment through articles, discussions with friends or on Internet forums.

The most efficient way to become a DIR diver is obviously to participate in a GUE-sanctioned course. They benefit

from the experience of members of the WKPP or other DIR-related projects in Mexico, Europe, etc.

Unfortunately, such an opportunity has not been possible for CCR divers. Consequently, we are not in competition with GUE. As a matter of fact, some of the DIRrebreather team members have also done GUE courses for OC or SCR divers. From our viewpoint, we just adapt the techniques and the concept to CCRs and develop procedures specifically for Closed Circuits.

If I could learn techniques that make my dives safer and more efficient, I would not hesitate to spend the equivalent of the price of a taxi ride in London

Why become a member?

DIRrebreather is a private group. Most of our members have spent a lot of time discussing the standards, trying out dif-

ferent techniques and procedures, and adapting the skills to most of the commercially available rebreathers. Some of our members are extremely experienced instructors who teach rebreathers diving on a daily basis, encountering all kind of problems, including stupid procedures and poor techniques. We just try to change that, but it's a big job.

So, only people who are really motivated to improve the way they dive a rebreather become members. And we don't waste time to convince the others.

If I could learn techniques that make my dives safer and more efficient, I would not hesitate to spend the equivalent of the price of a taxi ride in London or a standard hotel room in Manhattan. That's the price of our membership. For the same membership fees, I can also participate in expeditions, seminars and

In case of emergency, if everyone uses similar equipment, you will know their gear as well as your own

workshops, buy some goodies and get some discount on specific products.

What are the standards regarding the equipment?

Most of the ideas are a direct application of the Hogarthian configuration*. They have just been adapted to CCR diving in a formal way. We expect the equipment to be safe, simple, logical, robust and streamlined. We also need a rig that is adaptable and modular. But more importantly, we want to use a consistent system within the team. It gives us the ability to interchange/swap equipment.

For instance, having the same fitting on all your low pressure hoses allows you to deal with an empty tank or to help another diver in case of emergency. In case of emergency, if everyone uses similar equipment, you will know their

More important, we want to use a consistent system within the team.

"It also makes the transition from open circuit to closed circuit rebreathers, or the integration of CCR divers in a team of OC divers easier."

gear as well as your own. It also makes the transition from open circuit to closed circuit rebreathers, or the integration of CCR divers in a team of OC divers easier.

Are you affiliated with a diving equipment manufacturer?

Not at all. We don't work exclusively with any rebreather manufacturer. As a matter of fact, a lot of the rebreathers on the market can be adapted (more or less easily) to the DIR configuration. Some pieces of equipment are more adaptable than others, and some others are not adapted at all. The principles apply to any piece of equipment, from the fins to the rebreather.

What are the standards regarding procedures?

Effective dive planning means reducing the variables. The most important part of that is the equipment, mixes and procedures. When divers use standard equipment and mixes, and follow the same procedures (deco tables, emergency procedures, etc), they become team members who actually add to each other's safety. Remember that having the right equipment won't make anyone a great diver unless they also apply the right procedures in the right team and have the right skills and experience in the water.

So, we set up standards on normal diving procedures (separated in three different parts depending on when they are followed: before, during or after the dive) and about Emergency Procedures. All these procedures are extensively taught

KEY: *) The Hogarthian configuration is named after Bill 'Hogarth' Main where two sets of regulators are connected to both valves of a twin-set's manifold. It is based on cutting equipment to a minimum streamlined configuration that nevertheless includes sufficient redundancy for extended decompression dives



in the DIRbreather Fundamentals workshops, discussed in details on our forum and applied during expeditions.

Local groups of rebreather divers (in Australia, in the UK, etc) have also successfully set up some standards for their exploration. We try to have stand-

ards that can be applied in any kind of diving environment. Now we have members in Asia, Australia, Scandinavian countries, Europe and the US. It will help us to fully understand all the diving practices and how to adapt our procedures.

What are the DIRbreather workshops?

Training is definitely one of the most important aspects of what we do. DIRbreather is here to help all the

rebreather divers to improve their skills, techniques, knowledge and equipment. DIRbreather Instructors propose highly specialized workshops to rebreather divers around the world. These workshops are focused mainly on areas specific to rebreather diving, and their goal is to

help any rebreather diver acquire the skills and knowledge required to safely dive according to DIRbreather diving procedures and standards.

Fundamentals workshop

All the basics that rebreather courses don't teach: how to properly configure a streamlined and easy to use rebreather, how to work on your trim and buoyancy control, how to improve your environmental and team awareness, etc. This workshop normally lasts at least three days and is open to any certified rebreather diver.

Expedition / Mixed-Gas workshop

Fine-tuning the skills and team/individual procedures for safe decompression, and giving the tools to participate in expeditions in remote locations are the goal of this workshop. It's very intensive and only for experienced rebreather divers who have already successfully completed the DIRbreather Fundamentals workshop and who have an in-depth knowledge of their rebreather. This workshop normally lasts three to four days.

DPV / Scooter workshop

Depending on the participant's previous experience and qualifications, this very specialized workshop teaches all the necessary skills to properly use a Diver Propulsion Vehicle (scooter) for Team cave, wreck or reef diving with a rebreather. This workshop usually lasts one or two days.

Rescue workshop

No one can expect to be an efficient team member without having the proper training in case of emergency. This unique workshop is directly aimed at the rebreather divers who wish to learn all the advanced techniques for self-assistance, assistance and rescue you can't find



anywhere else. This workshop usually lasts two days.

Overhead Environment workshop

Wrecks and Caves are very specific environments. Even if divers have been trained to safely do these types of dives on Open Circuit, it doesn't mean they are able to do that on a rebreather. This workshop is designed to give them all the specific techniques for safe team rebreather diving in wrecks or caves. This workshop usually lasts three and a half days depending on the environment where it's been taught.

To better train the participants, all these workshops have a companion workbook and some slide presentations. We are also working on videos and DVDs

What is a DIRbreather-sponsored expedition?

A DIRbreather-sponsored expedition is simply a project launched by some of our members in which other members can also participate. They know that we will all follow the same procedures to make the exploration, either in caves or wrecks, as safe as possible.

In 2008 for example, we have wreck expeditions in Cyprus, Lebanon, Spain, Malaysia and Norway. We also have some deep cave expeditions in Greece and Thailand.

Does it work?

- How to safely dive with a rebreather?
- Could we be a DIR diver and a rebreather diver at the same time?
- How to improve CCR diving techniques?
- How to effectively mix rebreather divers and open circuit divers in the same team?

Rebreather divers ask these questions every day, all over the world, in virtually all kind of environments. Even if the rebreather principle is quite old, proper units were not commercially available until the last few years. The technology

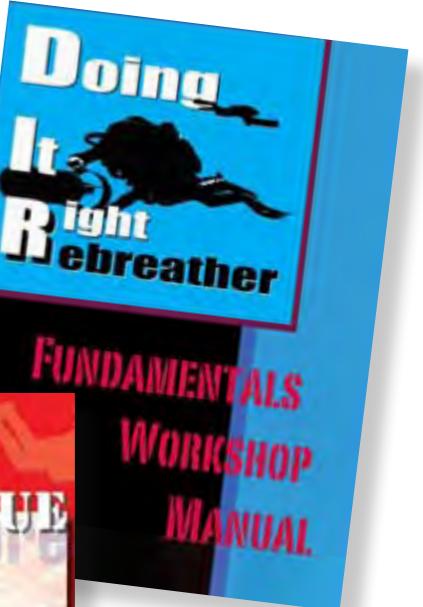
Check out the DIRbreather books by Cedric Verdier



(electronics, O₂ sensors, etc) was simply not available. So it is not surprising that closed-circuit rebreathers might be considered unsafe and unreliable. However, recent diving explorations have been safely achieved using the basic concept designed and tested by the DIRbreather Team. Impressive shallow and deep cave diving surveys and deep wreck explorations were based on these guidelines.

So yes, it works!

For any in-depth question, don't hesitate to contact DIRbreather at DIRbreather@yahoo.com and visit us at www.DIRbreather.com ■



Edited by
Peter Symes



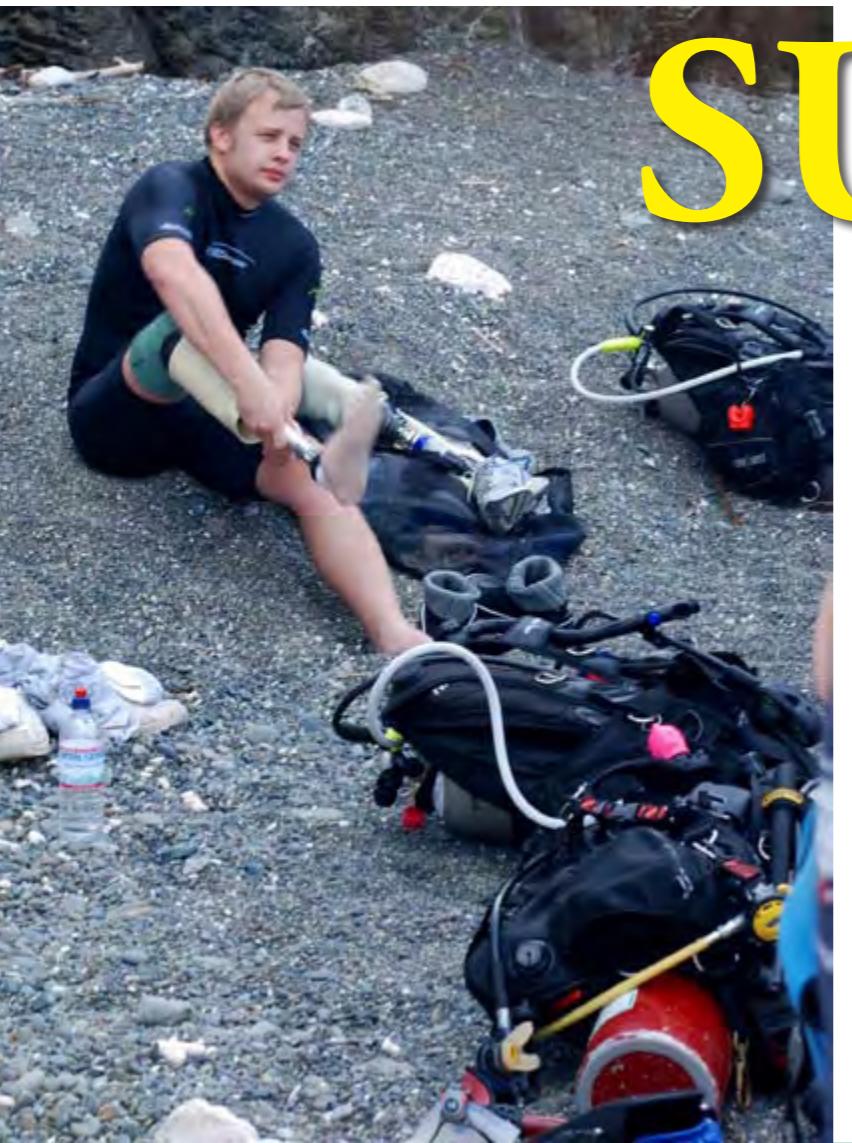
Guantanamo Hosts Wounded Warriors for SCUBA Program

SUDS

Text by CPT Kevin Cowan
Photos courtesy of SUDS

In February, the base at Guantanamo Bay, Cuba, hosted six wounded service members, all amputees, helping them complete their dive certification as part of the Soldiers Undertaking Disabled Scuba program.

SUDS, in coordination with the Wounded Warriors program, Ocean Enterprises, the Reef Raiders Dive Club and Joint Task Force Guantanamo, coordinated the efforts to bring the divers to Cuba. The divers, two Marines and four Soldiers, got involved in the SUDS program at the Walter Reed



Medical Center. According to SUDS founder John Thompson, "SUDS is designed to help improve the lives of injured soldiers. By training the soldiers in a challenging and rewarding activity, it can help facilitate the rehabilitation process and promote mobility."

Although these divers have some physical limitations, they had the same issues that most beginning divers have. But they all seemed to have that initial interest in diving. Nick Paupore, a Soldier injured while serving in Kirkuk, was always interested in diving. Now, because of his injury and these programs, he is now able to enjoy it.

"I had problems with clearing and removing my mask and clearing my ears," said Paupore. "But SUDS understands disabilities and has patience. They work with you until you get it [right]."

The divers completed the first part

of their certification at Walter Reed and needed to complete the required open-water dives before they could be certified. What better place to do it than in Guantanamo Bay, Cuba?

"It's been awesome seeing all of the sea life and beautiful beaches," says Josh Bleill, a double-leg amputee Marine injured while serving in Fallujah. "I plan on coming back." While he was here, he said he enjoyed the diving immensely, and it was an incredible experience. Describing that first open-water dive, "It hit every nerve in my body when I entered the water. It was a feeling I've never had before," he said. And that is what SUDS is trying to achieve.

"It's the most rewarding project I have ever been involved in," Thompson said, calling water the great equalizer. "Many things are just easier to do in the water with these types of injuries," he added. "It's part rehabilitation, part con-

fidence building, part adventure for these wounded warriors."

That adventure, as far as Cuba goes, could not have been realized without the coordination between all the organizations involved. "When the JTF got involved, things took off," said Thompson. "They took the bull by the horns and made it happen."

While coordination from the JTF and other organizations was vital to the trip, it was donations through Wounded Warriors, Disabled Sports USA and SUDS that helped pay for expenses like airfare and lodging. Thanks to donations, charitable organizations and volunteers, this trip turned out to be a memorable experience. Although this was only the first group of divers to travel to get their certification, everyone hopes this will be continued, so we can try to give back to those who have sacrificed so much. ■



Edited by
Peter Symes



Underwater Habitat Being Constructed In Germany

On April 26 an underwater habitat will be placed in the deep old stone quarry at Diving School Buder in Wildschütz, Germany.

Sponsored by renowned German suit manufacturer Aquata, the underwater stations will, first of all, allow commercial divers to test their equipment under realistic scenarios. The new facility will also be opened to recreational divers, who can rent dry suits on location.

The heaviest segment of what is probably going to be the only habitat of its kind in Europe weighs in at five tonnes. The placements of the two first units to go down—the RI and RII is a delicate operation which requires

the utmost precision.

The total of three segments will be placed at respectively three, six and nine meters enabling them to act as decompression stations for dives up to 74 meters. The underwater station will be supplied with fresh air and energy from a land operated basic station, which remains connected to the habitat via a permanent video and voice link.

The quarry at Wildschütz is renowned for its good visibility, which can reach 25 meters. On the bottom,

there is an old ammunition depot, a block house and a telephone switchboard, which was connected to the old pump house now found at a depth of 74 meters.

The project is the brainchild of Aquata's CEO, Dr Wolfgang Dressler and Mr Volker Buder who have been working on the restoration of the underwater station for over ten years. It was built by the old East German Regime out of old disused cement tanks and used for 25 years. ■

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Edited by
Peter Symes



The APS consists of one or more naval vessels providing a persistent presence in the Gulf of Guinea and Western Africa, led by a multi-national staff. The current staff is made up of officers from Cameroon, France, Germany, Ghana, Portugal, the UK and the US, embarked on the *USS Fort McHenry LSD-43*. High Speed Vessel Swift (above) is the other current APS ship.

Western Naval Leaders Seeks to Expand African Sea Police

Western and African naval leaders have met in Dakar to expand a multi-national programme to protect and police Africa's coast and maritime resources.

The Africa Partnership Station (APS) was set up by the United States in November 2007 to bring the latest training and techniques to maritime professionals in west and central African countries, to address common threats of illegal fishing, smuggling and human trafficking. Topping the list of problems affecting west and central African countries on the Atlantic and Gulf of Guinea coasts is illegal fishing, which, according to some estimates costs the local economies over a billion dollars (650 million euros) each year.

"We are trying to get more European allies involved in APS, in its staff, by providing ships or

training teams. We want to internationalise this initiative," said Admiral Anthony Kurta, head of politics, resources and strategy for American naval forces in Europe. To date, it has brought 13 countries into the maritime alliance. Those in Africa are Cameroon, Gabon, Ghana, Equatorial Guinea, Liberia, Nigeria, Senegal and the state of Sao Tome and Principe islands, while Germany, Denmark, Spain, France and Portugal are participating from Europe.

Kurta also expressed hopes of extending the initiative to Africa's eastern seaboard on the Indian Ocean. ■

APS activities consist of joint exercise, port visits, professional training and community outreach with the nations of West and Central Africa. The focus is on building maritime capacity of the nations in the region and increasing the level of cooperation between them to improve maritime safety and security and to address common threats such as illegal fishing



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wreck rap



By Arnold Weisz

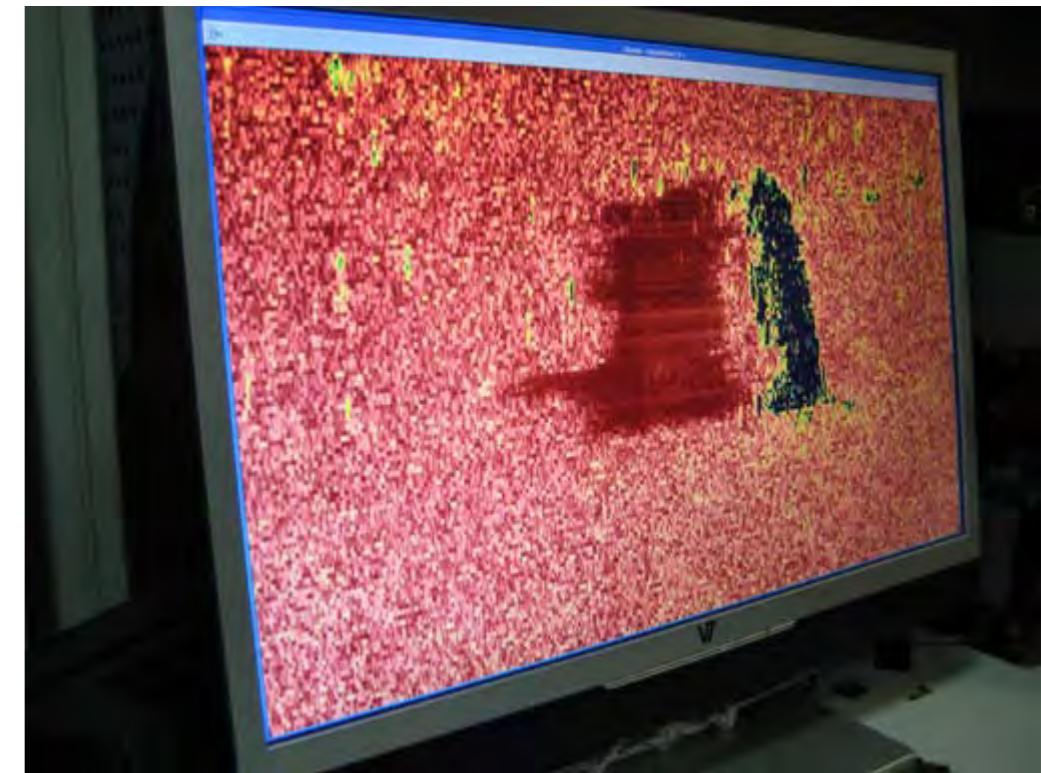


The *HMAS Sydney* tragedy was Australia's largest loss of life in a naval battle, with all the crew of 645 following the ship to the bottom of the sea. On 16 March 2008, it was finally confirmed that the wreck of the *Sydney* was found. Many had hoped that this would shed some light on the controversy that has surrounded the loss of *HMAS Sydney* since it went down in 1941.

More than six decades after the war, closure was finally found

Bingo. The sonar image that unequivocally established the location of the *HMAS Sydney*

In Australia, it has since been a controversy as to how a converted freighter could sink a well-armed battle ship in the midst of war. In 1941, *HMAS Sydney II* was the pride of the Royal Australian Navy fleet. After engagements in the Mediterranean during 1940 when she famously sank the Italian battle cruiser *Bartolomeo Colleoni*, *HMAS Sydney* returned to Australian waters. In late 1941, she was carrying out troop ship escort duties between Australia and south east Asia. On 19 November 1941, after handing over escort of the troop ship *Zealandia* in the Sunda Strait,



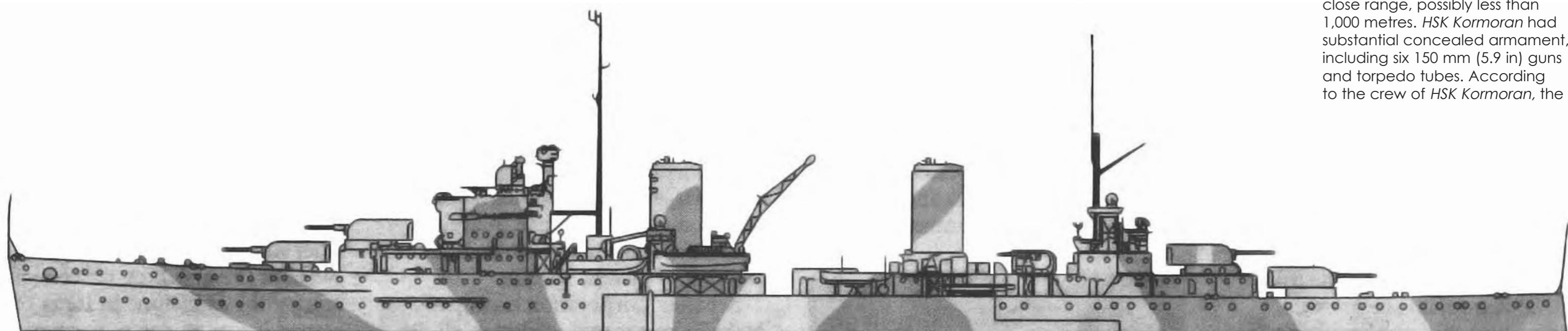
HMAS Sydney was en route back to port in Fremantle, Western Australia. The German raider, *HSK Kormoran*, which was first located on 12 March 2008 approximately 112 nautical miles off Steep Point, Western Australia, lies in 2,560 metres of water. Four days later the *HMAS Sydney* was found under 2,470 metres of water, approximately 12 nautical miles from the *Kormoran*.

The battle

On 19 November 1941, the German auxiliary cruiser *HSK Kormoran* was detected by the Australian *HMAS Sydney*. In open ocean southwest of Carnarvon, *HMAS Sydney* spotted an unidentified merchant vessel and closed requesting identification. Unaware that the *HSK Kormoran* was armed, the *HMAS Sydney* came close-up to the German ship, which opened fire from very close range, possibly less than 1,000 metres. *HSK Kormoran* had substantial concealed armament, including six 150 mm (5.9 in) guns and torpedo tubes. According to the crew of *HSK Kormoran*, the

Found at Last

Finding the Australian and German WWII wrecks raises old questions





HMAS Sydney was hit 50 times by the raider's 150 mm (5.9 in) heavy guns in addition to further hits with smaller guns. Even though the Australians answered the fire from the German ship almost immediately, their capability was reduced as the HMAS Sydney's gunnery direction tower was one of the first things the German hit. HSK Kormoran, which suffered from engine problems already before the battle started, took hits in the engine room and funnel. HMAS Sydney received further fire and left the battle scene. Some time later the Germans had to abandon their ship. Explosive charges were placed, and the surviving crew took to the boats.

All hands lost

The HMAS Sydney was badly damaged and on fire when it was last seen by the German ship and sunk after the battle. The HSK

Kormoran was so heavily damaged in this battle that it had to be abandoned and blown up.

Whilst the HMAS Sydney was lost with all hands (645 young men), 317 of the German were rescued. At least 20 of HSK Kormoran's crew died onboard, and a further 40 men lost their lives when their lifeboat capsized. The 320 Germans were later rescued by merchant ships.

The fate of the two or three Chinese prisoners of war on board is uncertain. Different sources state that they were survivors or were lost in the battle.

Nearly all of the Germans spent the rest of the war in POW Camps in Victoria, Australia, from which they were not released until January 1947.

The only eyewitness accounts of the battle are from the crew of HSK Kormoran, and as the two ships were separated after the

battle, the exact reason why HMAS Sydney sank is unknown.

The recent finding of the two wrecks is raising hopes of getting some answers. Theodor Detmers, the commanding officer of HSK Kormoran returned to Germany in 1947, and was released from British captivity in Munster. He lived the last three decades of his life with his nephew in Hamburg-Rahlstedt and died there in 1976. He wrote a book about his Kormoran experiences, which was published in 1959.

Speculations

The speculations into what happened to the most famous ship in Australian history began almost immediately after the sinking. The fate of the Sydney has fascinated Australia and has been the subject of a range of television programs, articles and books.

Some of the theories sparked



Before (above) and after (left)—the forward gun turret

be speculation was that a Japanese submarine was involved. But none of the many theories have been proved. In 1997, a joint standing committee held a parliamentary inquiry into the circumstances surrounding the sinking of Sydney. The enquiry was the largest in Australia's history, receiving submissions from hundreds of parties.

The Australian Government hopes that the discovery of HMAS Sydney brings some closure to the families of the 645 Australian Defence Force personnel who lost their lives bravely in this naval action in World War II, said Kevin Rudd Australia's prime minister. Even with the remains of both ships involved in the battle on 19 November 1941 being found, and the families of the lost receiving some closure, the debate over what happened will continue.

Australian government sponsors search

Searches for the wrecks of the two ships have been ongoing for a long time, both as historical research projects and, with increasing capability to detect





Gas mask laying in the sediment



submersed wrecks, as actual expeditions into the supposed sinking area. After the turn of the millenium, the Australian government also invested substantial funds into the search. The Howard Government granted \$2.9 million to assist HMAS Sydney Search Pty Ltd to locate missing Royal Australian Navy cruiser HMAS Sydney II. This grant is in addition to an initial Commonwealth grant of \$1.3 million approved in August 2005 to assist the Western Australian-based nonprofit search group. Also, the state of New South Wales

contributed AUS 250,000 for the search.

Formed in 2001, the non-profit organisation HMAS Sydney Search Pty Ltd planned an attempt to locate the wrecks since receiving a government grant in August 2005. It had a memorandum of understanding with shipwreck hunter David Mearns, who believed that he could find the wrecks using the latest sonar technology and recently-revealed details recorded by the commander of the Kormoran, Theodor Detmers.

Handelsstörkreuzer 8 (HSK-8 Kormoran)

Kormoran was built by Germaniawerft of Kiel and launched on 15 September 1938 as the merchant ship *Steiermark* of HAPAG, the Hamburg-America Line. Renamed *HSK Kormoran* (German for "Cormorant"), she entered service as a Kriegsmarine auxiliary cruiser on 9 October 1940, commanded by Korvettenkapitän (Lieutenant Commander) Theodor Detmers. The *HSK Kormoran* was the biggest auxiliary cruiser used by the Kriegsmarine in World War II. Besides this, it was the only one that was able to sink a major warship in a direct battle.

The ship left Germany on 3 December 1940 and entered the North Atlantic through the Denmark Strait. Until April of the following year, the ship operated in the Atlantic, before it sailed into the Indian Ocean. During its 352 days at sea, the *HSK Kormoran* sank ten merchant ships, comprising a total of 56,965 tons, in addition to one captured and sent to France. ■

SOURCES:

FINDINGSYDNEY.COM

GERMAN-NAVY.DE

BISMARCK-CLASS.DK/HILFSKREUZER/KORMORAN.HTML

New Convention on Wrecks

Estonia has become the first country to sign, subject to ratification, the Nairobi International Convention on the Removal of Wrecks. The Nairobi Wreck Removal Convention was adopted in May 2007 and will provide the legal basis for States to remove, or have removed, shipwrecks that may have the potential to affect adversely the safety of lives, goods and property at sea, as well as the marine environment. The Convention is open for signature until 18 November 2008 and, thereafter, will be open for ratification, accession or acceptance. ■

Secretary General of the IMO, Efthimios E. Mitropoulos, welcomed the signature by Estonia and urged other states to follow suit, at the earliest opportunity, so that, "as intended, the Nairobi Wreck Removal Convention, once in force, can fill a gap in the existing international legal framework by providing the first set of uniform international rules aimed at ensuring the prompt and effective removal of wrecks beyond the territorial sea, thereby also contributing to the IMO goals of safe navigation and marine environmental protection." ■



The last watch
is finally over

HMAS Sydney shipwreck hunter offers to find Centaur remains

David Mearns, the world-renowned shipwreck hunter and the man responsible for finding *HMAS Sydney* has offered to help find the lost Australian hospital ship *Centaur*, saying the vessel would be easier to find than the *Sydney* and the *Kormoran* and is feasible so long as there is funding.

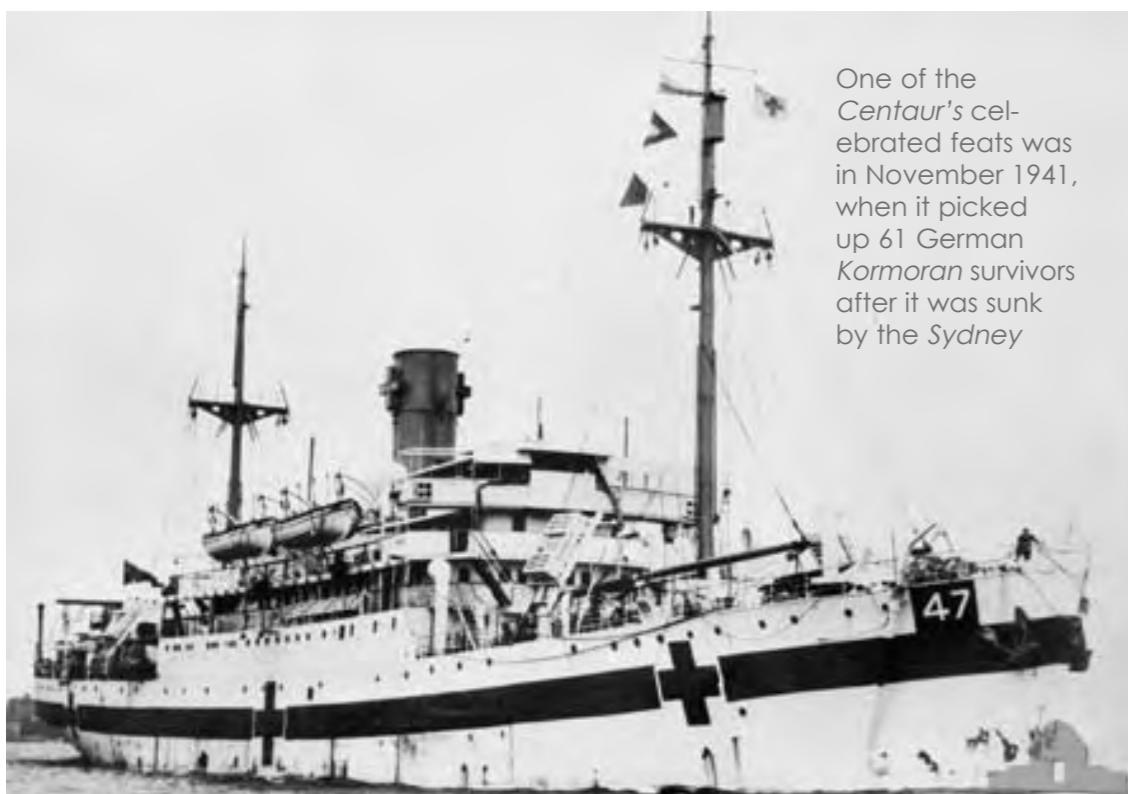
The Scottish-built Australian Hospital Ship (AHS) *Centaur* was launched in 1924 as a combination passenger liner/freighter. In 1943, she was converted to a hospital ship, and served with the Second Australian Imperial Force.

Before dawn on 14 May 1943, while on her second voyage, *Centaur* was torpedoed and sunk by a Japanese submarine off North Stradbroke Island, Queensland. Of the 332 medical personnel and crew aboard, 268 died. The attack resulted in public outrage, as it was considered to be a war crime. The ship displayed the red cross—the international symbol for a hospital ship—meaning that under international law, it should have been immune to attack.

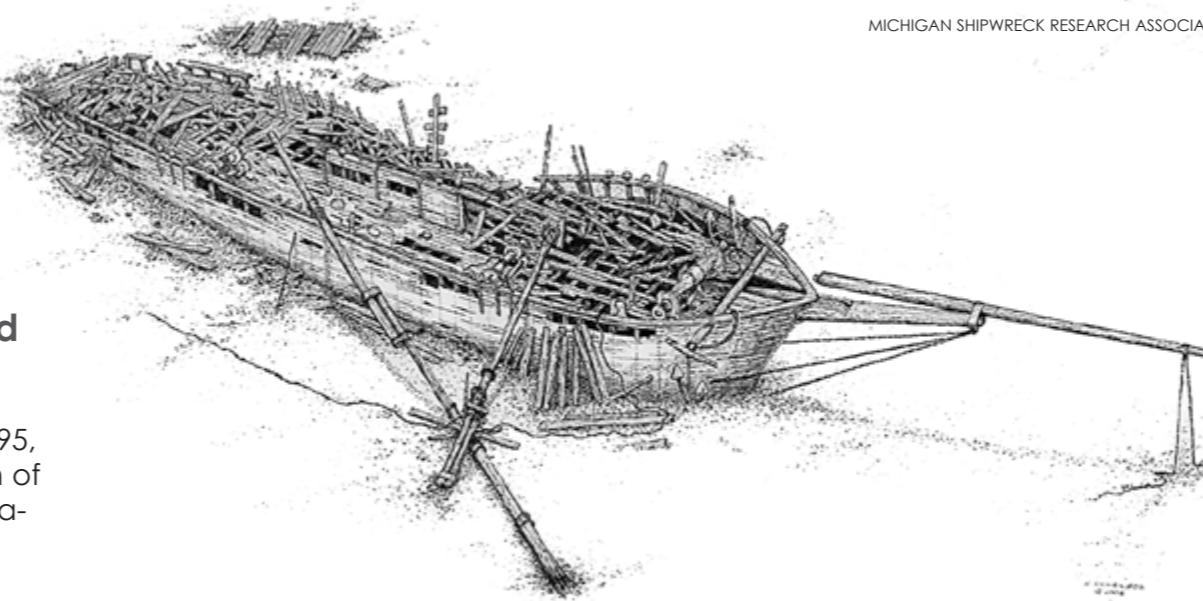
Efforts to locate the final resting place of the ship have been made but in spite

of a false identification made in 1995, which stood until 2003, the location of *Centaur* is still unknown, as is the reason for the attack.

One of the last remaining survivors from the *Centaur*, Martin Pash, renewed calls for the wreck to be found in the Herald last month, saying: "It's time the arguments over the exact location can be settled and protected." Mr Mearns said the only barriers to finding the *Centaur* was a lack of money and political will. "On the basis of what I've seen of her, I believe she's findable," he said. "The information, even at this preliminary stage, is better than what I had to deal with in locating *Kormoran* and *Sydney*." ■



One of the *Centaur*'s celebrated feats was in November 1941, when it picked up 61 German *Kormoran* survivors after it was sunk by the *Sydney*.



MICHIGAN SHIPWRECK RESEARCH ASSOCIATES

Two-masted schooner in Lake Michigan identified as the *Hamilton*

Michigan Shipwreck Research Associates said it has located the *Hamilton*, a two-masted schooner that sank in Lake Michigan in 1873 during a November gale.

The identification of the wreck, which sits upright in 85m (275 ft) of water off Saugatuck, took over a year and was facilitated by technical scuba divers Todd White of Saugatuck, Bob Underhill of Kalamazoo and Jeff Vos of Holland working in conjunction with Michigan Shipwreck Research Associates (MSRA). These three divers comprise the premiere deep technical dive team in West Michigan.

The 113-foot long *Hamilton* was built in 1847 in Oswego, New York, for the Red Bird Line and plied the Great Lakes for a quarter century before foundering between the lumber port of Muskegon and Chicago. Capt. Harvey L. Burch and his six-man crew left Muskegon on a cold November morning in 1873 with a cargo of 117,000 board feet of lumber bound for the ongoing rebuilding effort in Chicago, which

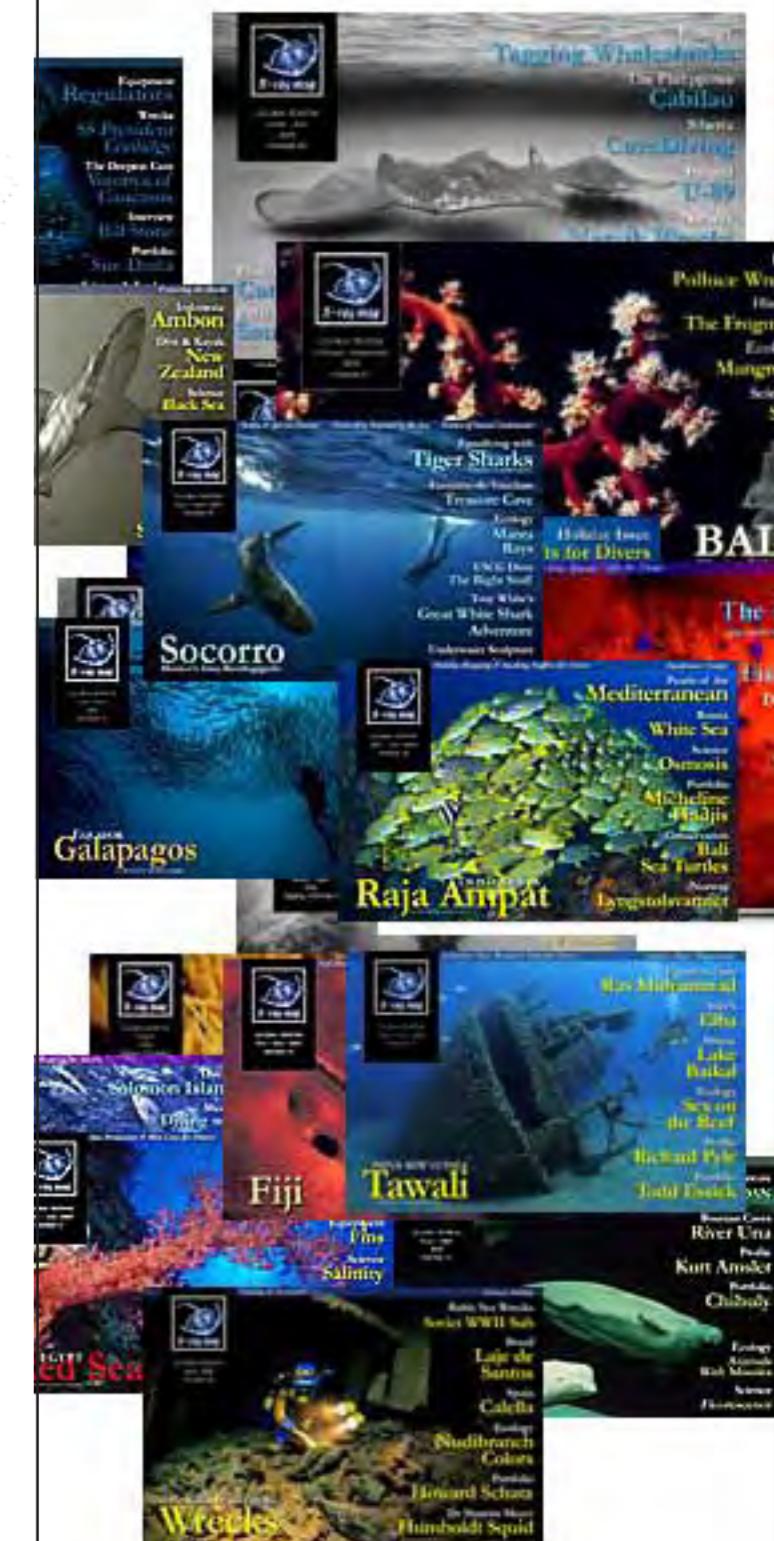
had only recently been devastated by the Great Fire of 1871. By noon the southbound vessel encountered heavy seas and began to take on water.

The crew manned the hand-operated pumps for three hours before taking to the 17-foot yawl boat. They stayed alongside their waterlogged vessel until midnight, when she finally sank beneath the waves in 270 feet of water, leaving the men storm-tossed in an open boat. Prevailing winds pushed the little boat, now covered with ice, ashore near South Haven the next day.

Michigan Shipwreck Research Associates is partially funded through a grant and private contributions. Click on the following link if you want to become a member and support the ongoing work of MSRA www.michiganshipwrecks.org ■

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Maryland Eyes USS Radford as Artificial Reef



2008 could turn out to be a really big year for the Maryland Artificial Reef Initiative

The Ocean City Reef Foundation is currently raising funds to sink New York City subway cars off the coast. "We have got about two barge loads or close to that," said Greg Hall, the foundation's president. "We've raised \$40,000 and the people have been wonderful about dona-

tions."

The Ocean City Reef Foundation is also hopeful that funds can be raised in time so the state can acquire the *Radford*, a 600-foot Navy destroyer, while they are busy with their subway car endeavor.

According to Marty Gary, a member of the Maryland Department of Natural Resources Fisheries Service, more than \$1 million has already been invested into artificial reefs in the

Chesapeake Bay last year, and two developments are currently on the horizon for Maryland's Atlantic coastline.

The project is being billed as a multi-state effort, combining funding from Maryland, Delaware and New Jersey to sink the ship in the Delaware Bay in an area designated "Deljerseyland." The location is 30 nautical miles from the Ocean City inlet, 28 from the Indian River inlet and 32 from Cape May, New Jersey.

The total cost has been

estimated at \$600,000, split between three states. It is hoped the state will receive large corporate donations to fund the project, but even individual donations can be made by visiting www.marylandreefs.org. ■



Sinking of the Vandenberg Postponed

Artificial reef project organizers coordinating the cleanup and sinking of the former United States Air Force missile tracking ship *Hoyt S. Vandenberg* off Key West,

Florida, announced a postponement of the scuttling, which was scheduled for May 15. A new date will be announced in the future.

Although most of the clean-

up has been completed, unanticipated cost overruns are keeping the ship in a Norfolk, Virginia, shipyard until the yard bill can be satisfied. The yard filed a federal maritime lien on the ship to ensure payment is made on the remaining balance of \$1.6 million.

Key West City Commissioner Bill Verge said he, the city attorney and city manager have

actively been engaged in discussions with shipyard management and local, state and federal officials as well as lending institutions endeavoring to arrange a financial solution.

"Right now everyone is trying to work towards the goal of sinking this ship off Key West," said Verge. "No one wants to see the ship sent to the scrap yard."

The cleanup has been intensive. Begun a year ago, more than 50,000 hours of labour have been invested to rid the vessel of all environmental hazards.

The ship is destined to be sunk about six miles south of Key West in 140 feet of water in the Florida Keys National Marine Sanctuary. ■



Coral Reef Squadron

Phuket will soon boast a new dive site after ten decommissioned aircraft of the Royal Thai Air Force were recently towed to Bangtao Bay in Thalang district and allowed to sink to the bottom of the sea to form an artificial reef

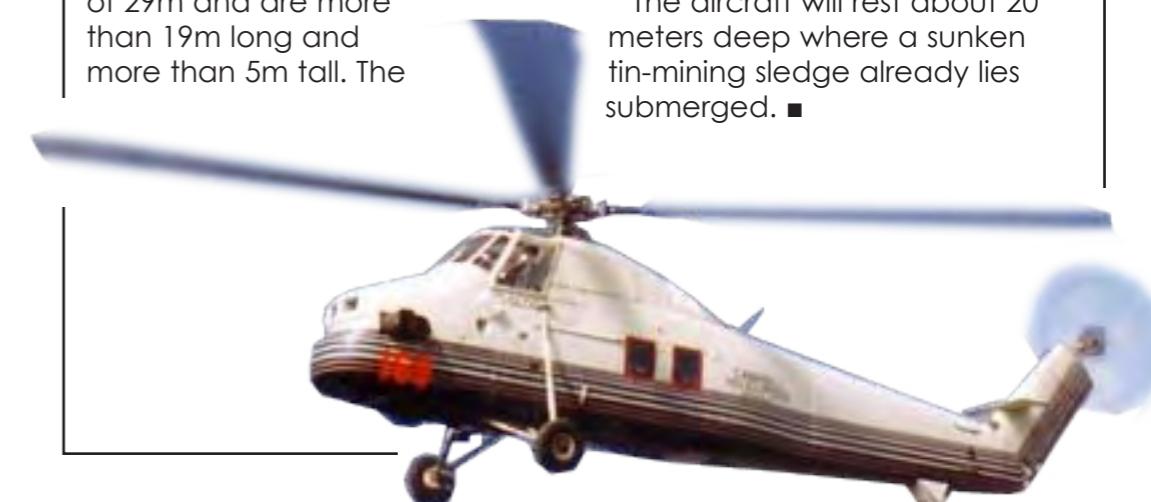
The new tourism attraction will draw at least 3,000 visitors a year, according to Phuket deputy governor Vorapot Rathasima. The artificial reef is a joint effort of the provincial administration, Thailand Diving Association (TDA), the Department of Marine and Coastal Resources, For Sea Foundation, and the Royal Thai Air Force.

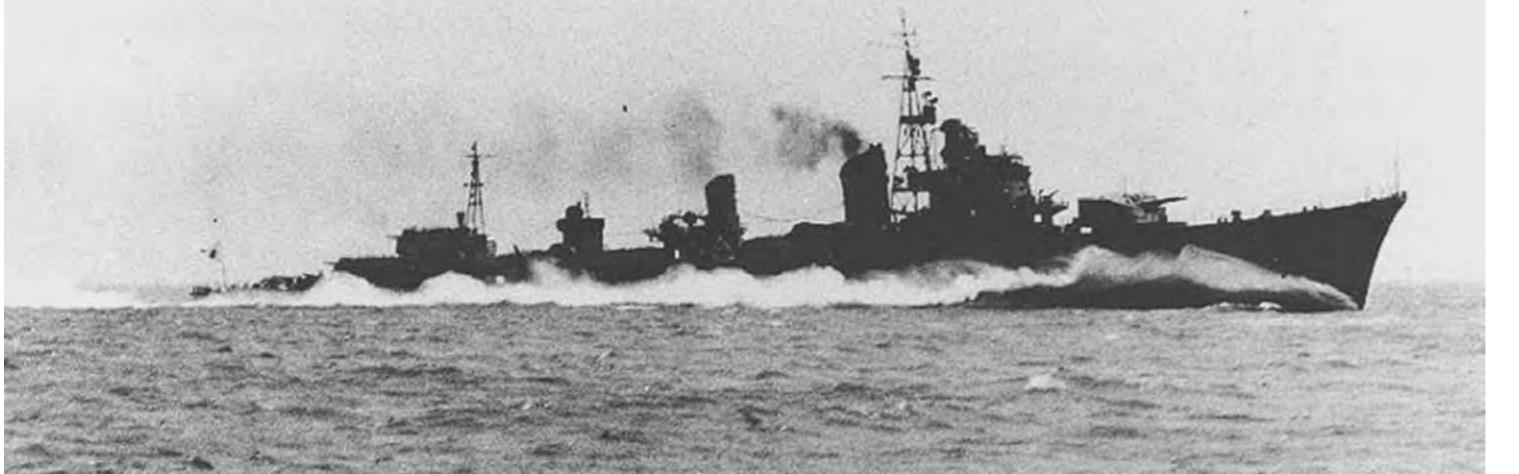
The air force donated four Douglas C-47s and six helicopters that saw action during Vietnam and Korean wars. The Douglas C-47 Skytrains, commonly called "Dakotas", have a wingspan of 29m and are more than 19m long and more than 5m tall. The

Sikorsky S-58T is a large helicopter built for a crew of two and 12 passengers. It is more than 14m long and 4m tall. All the aircraft were thoroughly sanitised, towed about a kilometre offshore to a point where the sea is 15-20 metres deep, and allowed to sink to the bottom—their final resting place.

For Sea Foundation secretary Vittayen Muttamura said his organization was established by a group of Bangkok-based divers in April 2005 to survey and restore coral reefs damaged by the tsunami.

The aircraft will rest about 20 meters deep where a sunken tin-mining sledge already lies submerged. ■





Lalumiere to dive the Shimakaze (at 250m)

On May 17, Rob Lalumiere will attempt his second world record dive to a sunken WWII ship by diving to the wreck of the Japanese destroyer Shimakaze, which rests at a depth of 250 meters in the waters off Ormoc Bay, Philippines.

The dive will be the deepest wreck dive conducted by a scuba diver, and Lalumiere will be breaking his own record of 193m he made while diving to the *USS Cooper*, also resting in Olmoc Bay, on May 29, 2005.

The *Shimakaze* was the fastest destroyer built for the Imperial

Japanese Navy during World War II, capable of reaching a speed of 40 knots. The ship was a test-bed for an enormously powerful high-temperature, high-pressure steam engine that was able to develop nearly 80,000 shaft horsepower. At 127 meters she was almost the size of a cruiser, and

armed with six 127mm dual purpose guns, conventional anti-aircraft and anti-submarine weaponry—and 15 torpedoes. She was a formidable opponent.

The Battle of Ormoc Bay was a series of air-sea battles between Imperial Japan and the United States in the Camotes Sea in the Philippines between 11 November 1944 and 21 December 1944, part of the Battle of Leyte in the Pacific campaign of World War II. The battles resulted from Japanese operations to reinforce and resupply their forces on Leyte and US attempts to interdict them. While flagship of Destroyer Squadron 2, she was sunk by American aircraft on 8 November 1944 during the Battle of Ormoc Bay with an unconfirmed complement of 267 officers and crew. ■



Rob Lalumiere made a world record 633 foot dive to the sunken wreck of the *USS Cooper* (DD-695) on May 29, 2005

US court orders federal jurisdiction over possible Griffin shipwreck

A federal appeals court says the federal government should have authority over a Lake Michigan shipwreck that could be the *Griffin*, a 17th century vessel built by the French explorer La Salle.

The *Griffin* (also spelled "Griffon") disappeared on its maiden voyage in 1679 after setting sail from an island near Green Bay, Wisconsin, with a crew of six and a cargo of furs and other goods. It's believed to have sunk in northern Lake Michigan.

The company, which found the wreck six years ago—the Great Lakes Exploration Group LLC—has, however refused to tell the state where the wreckage is until it gets assurances that it'll have a say over what is done with the shipwreck if proves to be the *Griffin*. It wants the federal government to have jurisdiction but to appoint the company as custodian until the courts determine who has ownership and salvage rights. The company says the French government may want to submit a claim.

The state is seeking title, saying federal law gives it ownership of all abandoned vessels "embedded in the state's submerged lands." state archaeologist, John Halsey, said he was still waiting for evidence that the shipwreck is the *Griffin*. ■



Ongoing legal spat between Wreckhunters Odyssea and Spain goes into overtime

Spain has rejected as "preposterous" recent claims by Florida treasure hunters about the origin of a US\$500 million haul of silver and gold from the disputed shipwreck code-named *Black Swan*.

Spain suspects the 17 metric tons of silver coins and gold recovered by Odyssey came from a sunken colonial-era Spanish galleon and is suing Odyssey on grounds that Madrid is the rightful owner. Odyssey, which has shipped most of the treasure recovered to the United States, has countered it was found outside any country's territorial waters.

Lawyers for Odyssey Marine Exploration have stated the *Nuestra Senora de las Mercedes y las Animas*, a Spanish vessel that sank in the Atlantic Ocean in 1804, was possibly linked to the site where the trove was found last year. But in its court papers, filed under seal on April 14 and later made public, Odyssey said it was unable to conclusively identify the vessel and was reviewing information that may be inconsistent with the hypothesis that the wreck site, was that of the *Mercedes*.

"Just because Spain files a claim against a particular wreck site does not mean it has a valid basis, or as in this case, any evidence whatsoever to support that claim"

ODYSSEY GENERAL COUNSEL MELINDA MACCONNELL

Lawyer James Goold, who represents Spain, disparaged Odyssey's contention that it could only offer a working hypothesis as to the identity of the shipwreck. "The answer Odyssey provided to the court included preposterous claims such as that 17 metric tons of silver coins and hundreds of other artifacts may have (been) thrown overboard from a mystery ship," Goold said in a statement to Reuters.

In October a Spanish warship intercepted the company's treasure-hunting ship, *Odyssey Explorer*, after it left the British territory of Gibraltar and escorted it to a Spanish port. Police arrested the ship's captain but released him soon after. ■

Travel News



Edited by
Scott Bennett

Mike Ball Offers Discount Combo Vacation Packages

Get great discounts by combining one of Mike Ball's Great Barrier Reef live-aboard vacations aboard *Spoilsport* with one of Tawali Adventures' PNG holidays at Tawali Resort and/or aboard MV *Chertan* or M/Y *Spirit of Niugini*.

When you combine these world class properties on your dive vacation, you will receive a \$100AU discount from Mike Ball for a 4-6 night stay or a \$200AU discount for a stay of 7 or more nights. In addition, you will receive a \$100US discount from Tawali Adventures on a 3-6 night stay or a \$200US discount

for a stay of 7 or more nights. Your total discount will be between \$200 and \$400, so the longer you stay the greater the saving. While either holiday can be first on your itinerary, both operators must be combined in order to receive the discounts. Cairns, Australia is only a 90-minute flight from PNG's capitol of Port Moresby. With 7 flights weekly, it's the most convenient international gateway city for most travelers. For more information or reservations, contact Tawali Adventures at reservations@tawali.com or Mike Ball Dive Expeditions at resv@mikeball.com ■

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Rebreather Event: Inner Space Comes to Grand Cayman

Inner Space, the world's largest Closed Circuit Rebreather event, is coming to Grand Cayman

From May 17-24th 2008, Divetech will be hosting the fifth anniversary of Inner Space at the Cobalt Coast Dive Resort. More than 60 Closed Circuit Rebreather divers from around the world will attend an action-packed week of diving and events.

Grand Cayman offers some of the world's most spectacular wall diving, with a proliferation of healthy corals and copious marine life. From shallow reefs to

Peter Hughes Liveaboards Visit Kimbe Bay

On a recent visit to Papua New Guinea's Kimbe Bay, renowned coral reef researcher Professor Charles Vernon enthused, "The coral reefs of Kimbe Bay take me back 40 years, to a time when corals grew in lush profusion, untroubled by all the problems that beset them today. A short boat ride from Walindi Resort, and I am diving on reefs that have half of the coral species of the world, all awaiting those rare photo opportunities that come only with the clearest water. I am hard pressed to think of anywhere on earth that has this combination of vibrant health, diversity and beauty."

Situated on the island of New Britain in the Bismarck Sea, Kimbe Bay is a world-

class dive destination. In a mere two days of diving, Professor Vernon recorded a total of 410 coral species, which is over half of the known world total. For the past 30 years, these bountiful waters have been explored by Max Benjamin and Capt. Alan Raabe, the Dancer Fleet's local partners. Their extensive explorations have charted a wealth of dive sites throughout the entire area. The M/V *Star Dancer*, along with her sister operations the Walindi Plantation Resort and the M/V *Febrina*, allows guests to explore the incredible diversity that Kimbe Bay has to offer. On board the M/V *Star Dancer*, Kimbe Bay is visited on the North Coast itinerary, which also includes the Witu Islands and Fathers

Reef. It is also featured in the Walindi/Rabaul itineraries, which include Fathers Reef and the historic Rabaul area, where relics from the Second World War can be seen both above and below the surface.

Part of the renowned Peter Hughes Dancer Fleet, the M/V *Star Dancer* offers a combination of superb diving coupled with luxurious accommodation. Other Dancer Fleet destinations include Tobago, Grenada, Belize, the Galapagos, Komodo, the Alor Islands and the Maldives. In 2008, the new *Paradise Dancer* will feature itineraries to North Sulawesi and Raja Ampat, Indonesia.

For additional enquires or to make a reservation, visit www.peterhughes.com ■



ly, where they can hobnob with industry leaders, pick up a weekly schedule or even try out a Rebreather in one of the pool demos. Jim Kozmik and Ralph Hoskins from Sport Diver TV will be filming the event for the National Geographic TV series, *Ship Sinkers*.

To find out more about Inner Space, visit: www.divetech.com/Innerspace.htm or contact Nancy Easterbrook, at divetech@candw.ky ■

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Edited by
Scott Bennett

Emirates Launches In-Flight Mobile Phone Service

In a move that will delight some and irritate others, Dubai-based Emirates Airlines has become the first commercial airline to allow passengers to make mobile phone calls during flights. The first mobile phone call was made on a recent Airbus A340 flight between Dubai and Casablanca. The decision was reached after experiencing high demand for the phones previously installed in aircraft seats.

Designed by the AeroMobile

Company, the aircraft is fitted with a system that prevents mobiles from interfering with a plane's electronics. The service will only be activated when the aircraft attains cruising altitude, and the cabin crew will be able to monitor the system. Passengers will be able to receive and send text messages, but voice messages will be prevented during night flights. In addition, passengers will be requested to set their phones on "silent" mode. ■

Prior to utilizing the system, it was necessary for the airline to attain approval from international air safety organizations. "We have gone to considerable lengths to ensure that all safety and regulatory issues have been fully addressed," said AeroMobile Chief Executive Bjorn-Taale Sandberg. Emirates plans to extend the system to more aircraft later this year, as well as adding BlackBerry and other data services. ■

De-valved Compressed Gas Cylinders Permitted on Airplanes



According to the United States Transportation Security Administration, air travelers are permitted compressed gas cylinders as checked baggage or as carry-ons provided that the regulator valve is completely disconnected from the cylinder. The seal must be removed in order to allow a visual inspection. This must be done prior to check-in, as security officers will not remove the seal or regulator valve from the cylinder at the checkpoint. Sealed cylinders will not be allowed to pass through security regardless of the reading on the pressure gauge indicator. However, once the valve is opened, contamination may enter the tank. Cleaning would be required upon arrival, which may not be possible. To avoid this potential problem, it is recommended that passengers ship compressed gas cylinders to their final destination via a parcel service prior to their departure. ■

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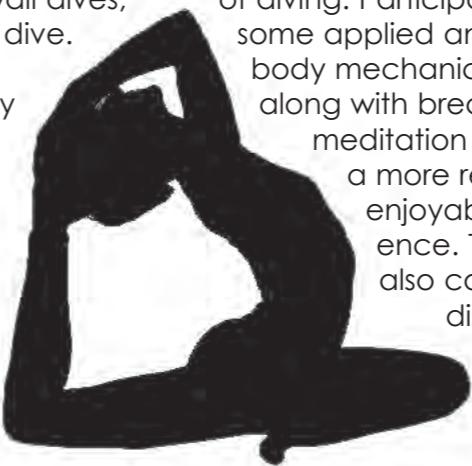
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Scuba & Yoga Trip in Dominica

Kimberlee and Todd Stedl, authors of *Yoga for Scuba Divers*, are offering a special Scuba Diving & Yoga Adventure from March 7 - 14, 2009, on the island of Dominica in the Caribbean. Participants will experience the pristine reefs and spectacular 1,000-foot walls of the Scotts Head Marine Reserve. Dives will be a combination of wall dives, drift dives, and a night dive. Included in the trip is a Project AWARE ecology course for all participants.

Accommodation will be at Jungle Bay, voted one of the world's top ten luxury eco resorts by Forbes



magazine in 2007. Dominica was the first country to be Green Globe benchmarked, and the resort's owners are leaders in ecologically and culturally sustainable tourism.

On this unique trip, the Stedls will offer yoga routines specifically designed to help strengthen and restore the body after a day of diving. Participants will learn some applied anatomy and body mechanics of diving along with breathing and meditation exercises for a more relaxed and enjoyable dive experience. The Stedls will also conduct group discussions about yoga

philosophy and its relevance on diver ethics and underwater ecology.

A number of options are available to divers and non-divers alike. A wide selection of hikes is offered by the resort to experience the island's lush pristine environment or guests can indulge in the resort's range of amenities including yoga studio, outdoor pool, and spa treatments. A number of group activities, including whale watching, are also planned. Spaces are limited, so an early sign-up is strongly recommended. For prices, package options, and registration deadlines, please visit: www.8thElementDiving.com/retreat or contact GoDive@8thElementDiving.com ■

Edited by
Scott Bennett

Dubai Diving Sites Threatened

According to a local tour operator, Dubai's ever-burgeoning construction boom is threatening the existence of the Emirate's dive sites. Stephanie Davies, owner of Scuba Dubai, asserts that few sites remain near Dubai itself, with the majority to be found far off shore. "Dubai never had too many natural dive sites, but the ongoing construction has meant that many existing wrecks have also been removed," she said. "While construction is important for the future of Dubai, developers should create artificial reefs in surrounding areas to recreate a habitat for marine life," Davies said.

Although the creation of artificial reefs is a viable alternative, John Burt, a marine biologist and lecturer at Zayed University, said it could never replicate the same marine organisms and fish. Another alternative would be to relocate existing reefs away from the construction. However, Burt said, "A coral should be moved only when the construction will directly impact the dive site, and there is no other alternative." ■



IMRE SOLT/GETTY

The Marina Promenade of Dubai under construction



Dogenpalast in Venedig, by Francesco Guardi, painted in the second half of the 18th century

Diving in Venice?

The mere mention of this historic city conjures up images of gondoliers in striped jerseys, the Rialto Bridge, St. Mark's Square and a captivating pageant of watercraft plying the extensive labyrinth of canals. Now, it can add a new attraction to its myriad of attractions: diving.

Biologists have discovered that the new sea barrier being erected to protect the city from rising waters has attracted a plethora of marine life. Known as The Moses Project, a series of mobile barriers, are currently under construction across the three channels accessing Venice Lagoon. Two of the barriers are protected by breakwa-

ters, which have inadvertently provided Venice with an instant barrier reef.

"There are people already showing up to dive, and I envisage tourists coming to Venice to see the canals before indulging in a spot of scuba diving," said marine biologist Andrea Rismondo.

Extending for nearly 2km at depths up to 14m deep, the rocky breakwater is home to numerous sponges and tree-like Cystoseira algae, which grow up to 1.5m in height. In turn, these provide homes for cuttlefish, starfish, crabs, jellyfish, molluscs and up to 50 species of fish.

"It is mostly sandy around here, so the breakwaters were a real chance for sea life to set up, but we were still surprised by the numbers," said Rismondo. "One hypothesis is that warmer water here due to climate change has helped." The project has drawn the ire of environmentalists, concerned that the lagoon's fragile ecosystem could be turned into a marine park. ■

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