

SDFSFA Bulletin June 2007

This bulletin is provided as a service to members of the
SCUBA DIVERS FEDERATION OF SA

Working to develop the sport of Scuba diving in SA
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We are publishing this electronic bulletin as a separate publication to our normal monthly SDF News Sheet. Future issues of this “SDFSFA Bulletin” will include lengthy articles about matters of interest to recreational divers. We welcome contributions from our readers.

If you don't have the time to read through everything in this bulletin, take advantage of the following table of contents. Click on any item of interest to proceed straight to that section.

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YET ANOTHER PRESENTATION RE THE PROPOSED DESALINATION PLANT AT PORT BONYTHON

As mentioned in our June news sheet, Anita Poddar and Darren Niejalke from BHP Billiton are giving another PowerPoint presentation regarding the proposed desalination plant at Port Bonython at MLSSA's meeting on Wednesday 20th June at 8pm at the Conservation Centre, 120 Wakefield St, Adelaide. The presentation will again detail BHP Billiton's proposal for a significant expansion of its operations at Olympic Dam in South Australia's north. As part of this expansion project, the company has proposed building a desalination plant at Port Bonython. As described in our last two news sheets, BHP Billiton and the State Government signed a memorandum of understanding that the proposed plant would not only supply water for BHP Billiton's operations but would also provide water for the towns of the Upper Spencer Gulf and Eyre Peninsula in an effort to reduce their reliance on the dwindling waters of the River Murray. BHP Billiton is now

significantly advanced in the preparation of its environmental impact statement and has commissioned significant tidal movement monitoring and biological studies to understand the potential impacts of reinjecting brine from the desalination plant into Spencer Gulf. The proposed plant will also have to meet EPA requirements that brine levels fall to 10% of background levels within 100m of discharge to the Gulf. (According to MCCN's "Wetstuff News" 23rd May 2007, "The delivery of energy efficient water desalination . . . received a boost today with the establishment of a new collaboration between the . . . CSIRO and 9 Australian universities. The research aims to advance water desalination as an alternative water supply option for Australia by increasing efficiency, and reducing the financial and environmental costs of producing desalinated water. Source & full text: <http://www.ens-newswire.com/ens/may2007/2007-05-18-03.asp>)

NEW DEEPWATER RESCUE SYSTEM FOR EUROPEAN NAVAL FORCES

"Deepwater rescue system ready to surface (UK)

Final factory testing is underway on a multi-million pound deepwater rescue system for European naval forces. Aimed at holding up to 72 submariners at once and able to be deployed anywhere in the world within 72 hours, the £47m NATO Submarine Rescue System (NSRS) is one of the world's most advanced submarine rapid rescue solutions. Designed to be flown by military aircraft to an optimal dockside location and mounted to the deck of a suitable ship – of which 170 have been identified worldwide – the system will replace existing submarine rescue systems as they near the end of their design life. The multinational project is managed by the UK Defence Procurement Agency on behalf of its three participants – France, Norway and the UK – and is designed to complement a planned new US rescue system, both capable of world-wide deployment.

Source & full text:

http://www.businessweekly.co.uk/news/view_article.asp?article_id=11987

DEEP-SEA SPONGE GARDENS

As stated in our May news sheet, 1000 new marine habitat areas, including reefs, sandy bottoms and seagrass beds were recently discovered in SA with the help of satellites (plus acoustic & underwater video technology). A new form of algae of interest to medical researchers was found in one of the newly discovered habitat areas. Two deep-sea trenches containing sponge gardens were discovered in Backstairs Passage at a depth of almost 90m. According to Tim Lloyd's article "Gardens of delight off our coast" in The Advertiser last month, "Marine conservation surveyors have mapped two underwater sponge gardens in Backstairs Passage. They lie in water nearly 90m down in two deep-sea trenches. The gardens are among mysteries uncovered by a survey conducted by the Department of Environment and Heritage, funded by Natural Resource Management. Using satellite acoustic and underwater video technology, the survey has been able to map 1000 new habitat areas off the SA coast. These include previously unknown reefs, sandy bottoms and seagrass beds. Senior marine scientist Bryan McDonald said sponges depend on water currents to feed. The strong currents running through Backstairs Passage are an ideal habitat. "From what we can see there is a huge range of shapes and designs and colours and it would be quite a spectacular garden," he said. The site is too deep for divers. Scientists sent down a video camera and GPS mapping device on a sled. Scientists

found two trenches, thought to be old glacial beds. One runs near the NW end of Cape Jervis. The other deeper trench is along the NE coast of KI. Sponges support a wide range of marine life including cowries and queen fish (?). Mr McDonald hopes to be able to investigate them.” (We don’t know what species these ‘queen fish’ (Queenfish?) are. According to “Coastal Fishes of South-eastern Australia” by Rudie Kuitert, Queenfish, *Scomberoides lysan*, are large trevallies which occur on Australia’s “east coast south to Sydney”. Our best guess is that the fish being referred to are Queen Snapper, also known as Southern Blue Morwong.)

SPIDER CRAB GATHERINGS

As reported in our June news sheet, now is the time to start keeping an eye out for spider crab gatherings. It was in June last year that a large crab-gathering event was witnessed at Rapid Bay. Three divers were diving at the right (eastward) end of the ‘T’ section, out from Rapid Bay jetty on 25th June (2006), towards the open sea. They saw a huge gathering of spider crabs. They say that the area must have been at least 50 by 50 metres, possibly 100sq.m, and covered in spider crabs. They say that there must have been tens of thousands, maybe more. They say that in that area, there was hardly any sea floor between the individual crabs. None of them had seen anything like that before. They thought that the crabs were probably mating. Some of the bigger ones had a lighter shell colour and were soft. Was this an isolated incident? Probably not! We reported the very same thing happening in Port Phillip Bay in Victoria at the same time last year (2005). According to our June 2005 news sheet, underwater footage of about 50,000 spider crabs congregating was shown on TV. The reason for the gathering crabs was not known at the time. The exact location of the crabs was kept secret to protect them. If you’re game, visit <http://www.justusboys.com/members/blogs/6977/3660/> for more details, including photos. It also seems from the following report that spider crabs have congregated off Tasmania: - “Liz Turner also facilitated the BBC’s acquisition of video footage of the giant spider crab aggregations in Tasmania. This footage and information will be used in the documentary *Planet Earth*, which is the follow up to *The Blue Planet* series.”

Source:

http://72.14.235.104/search?q=cache:Fg67iAJ0EZgJ:www.tmag.tas.gov.au/AboutUs/downloads/AnnRep0304_2.pdf+spider+crabs%2Bcongregation%2BAustralia&hl=en&gl=au&ct=clnk&cd=1 . According to “Marine Decapod Crustacea of Southern Australia – A Guide to Identification” by Gary C B Poore, the species *Leptomithrax gaimardii* is “often reported by divers (as occurring) in large numbers in a few metres depth along the Victorian and Tasmanian coasts”. SARFAC’s Trevor Watts says that he had the same experience on a dive-training course about 15 years ago in American River. He says that crabs were “balled up in the thousands.” Meanwhile, it seems that North Atlantic spider crabs, *Hyas araneus*, have been found in waters off the Antarctic Peninsula. Dr Neil Gilbert, environmental manager at Antarctica New Zealand, says the species could not have migrated such a great distance by its own accord.

(Taken from our July 2006 SDFS Bulletin.)

B-25 MITCHELL BOMBER

The “Madang B 25 gunship” mentioned in Bob & Dinah Halstead’s “adult section” column (“The Wreck Hunters”) in the March 2007 issue of “Dive Log” is the aircraft

referred to in Michael Mcfadyen's "Wreck Diving in the Pacific" column ("North American B-25D Mitchell") in the May 2007 issue of "Dive Log". It is also the same aircraft referred to in the May 2006 issue of our news sheet under the heading of "Bomber Reef". The report in that news sheet said that "An American B-25 Mitchell Bomber plunged into the sea off of Papua New Guinea in August 1943 after being hit by ground fire. It now lies at a depth of 25m* and it has become a diver's dream. The site is now known as "Bomber Reef" and it features in a DVD titled "The Bomber Reef - War In The Pacific". The B-25 had recently been on a mission over Madang to destroy a fleet of Japanese supply barges. It was all ablaze when it plunged into the sea. Five of the surviving crew swam to safety and were captured by the Japanese. Four of the crew were soon bayoneted to death along with another B-25 crewman. The lone survivor was shipped to Tokyo and remained in captivity until the end of the war."

*Mcfadyen's article states the depth as "15 to 25m". It also says that the aircraft "was reported to have crashed on 4th August 1943." Although Mcfadyen's Dive Log article gives a great deal of details about the B-25, there is much more information on his web page at http://www.michaelmcfadyenscuba.info/viewpage.php?page_id=369 .

"The Bomber Reef - War In The Pacific" DVD (by Walt & Jean Deas) was awarded a Certificate of Merit in the category of "Educational - Adult Audience" at the 42nd INTERCOM Competition. The following details about "The Bomber Reef - War In The Pacific" DVD are taken from the websites at <http://www.seawestproductions.com/> <http://www.seawestproductions.com/the-bomber-reef.html> and <http://www.seawestproductions.com/the-bomber-reef-reviews.html>

"The Bomber Reef" DVD

"The Bomber Reef" DVD is now out in both PAL and NTSC (approx. 52 minutes). The location of "The Bomber Reef" production is in New Guinea during WW11 and takes the viewer on a voyage of historic discovery. This revealing story is about a North American B-25 Mitchell bomber, which was downed in 1943 on a mission over Madang to destroy a fleet of Japanese barges. Hit by ground fire, the blazing bomber plunged into the sea. Five of the crew survived and swam to a nearby Wongat Island and were eventually captured by the Japanese. After days of maltreatment, four (including another B-25 crewman) were bayoneted to death. The lone survivor, (Command Officer) Major (Williston M.) Cox, was shipped to Japan and remained in captivity until the end of the war. Today, the B-25, lying in 20 metres below the surface, is a diver's dream and has become an integrated part of the ecosystem. The underwater exploration is interwoven with the history of how the B-25 came to rest on the sea floor and who discovered it."

The Bomber Reef - Reviews and Comments

"It is an amazing & huge story you have documented... congratulations and good work. You have made a valuable contribution to WWII Pacific history, PNG tourism and wrecks. Great intro.... you should really send this around the PNG tourism circles... they will love it, as the first 5 min really functions as a great PR piece... for both national tourism and specific to Madang, Hansa and so forth." - Justin Taylan, New York.

"I really like your Bomber Reef DVD. It proves to be surprisingly moving - I think it is a great human story, so meticulously researched, it is excellent. It also provides an insight into the role of the Mitchell Bomber during the Pacific War which gives the DVD a much broader scope than the "Bomber Reef" title would suggest." - Peter Ludlow, Historian, Brisbane.

"Wow - What an accomplishment. I am so impressed and feel honored by the story covered." - Robert Herry (nephew of the downed pilot, 1st Lt. Robert L. Herry) Texas.

"I received the DVD's last Friday. They are wonderful, the time and effort that was put into this is unbelievable. What a great story you have told." Sharon Spakausky (niece of co-pilot Lt. Robert Koscelnack of the downed B-25), Chicago.

"I watched it with my father, who is a WWII veteran and we both enjoyed it. It was professionally done and informative and unique in that it combined history with natural history. I thought the Ritacco pictures were well integrated into the film and I got a kick out of seeing them." - Tania Colmat-Donabedian, Researcher/Librarian, New Jersey.

"It is amazing! The shots you have are terrific and it is beautifully edited. What a story." - Celia Stevenson, Head of Inward Investment & Communications, Scottish Screen, Glasgow.

"38th Bomb Group's Newsletter "The Sun Setters" – "Walt (Deas) and his wife, Jean have independently produced a DVD that should interest a wide audience. There are beautiful scenes of the people and their celebrations and of the places we flew over as they appear today. The story of 7 December, 1942, and the Doolittle raid is there. The narrative of Capt. Robert Herry's ditching off Madang is told. The following capture and brutal end of the survivors, except for Col. Madison Cox, is covered. If you don't let the beauty of it all throw you into a trance, it is easy to see what a nightmare of a place to wage war New Guinea really was. The story leads up to several minutes of undersea photography of the ditched plane and its discovery. Many scenes of its coral encrusted form as it has become a colorful coral reef are there. The underwater photography of corals and fish is fascinating, with fluid beauty. Walt and Jean have woven together historic archival film with their own beautiful landscape and under sea film to bring the viewer not only a pleasurable time, but one of remembrance for us. For everyone, it is a record of historical significance. This couple (has) received much recognition and many awards for their excellent underwater photography. Their ground and aerial photography is also meritorious. Their various works have (been) shown on worldwide television." - David J. Gunn, Editor, California.

October 2006 Award.

Congratulations, the results are in! The juries for the 42nd INTERCOM Competition have announced the award winners for this year's competition. It gives me great pleasure to inform you our jury has awarded a Certificate of Merit to your submission The Bomber Reef, in the category of Educational - Adult Audience. This work has been singled-out in a competition filled with hundreds of entrants from around the world. We are honored to include The Bomber Reef on the list of award winners. This list will be distributed to all entrants in this year's competition and it will appear in select publications, including the official program book of the 42nd Chicago International Film Festival. Congratulations once again (on) your success in the competition this year. - Philip Bajorat, Cinema/Chicago."

HANS HASS

The pioneer diver Hans Hass took up underwater fishing back in 1937. He and his friends just used a pair of goggles and a harpoon to catch fish. Hass was only 18 years old at the time, having been born in January 1919. He soon took up underwater photography and strived to learn more about life in the sea. By 1938, he was using a pair of flippers to

swim with. Louis de Corlieu had first exhibited flippers at the 1937 World Exposition in Paris. Hass purchased a pair of them. By 1939 he had modified the flippers and these were being manufactured in his homeland of Vienna by the Seemperit company. Hass was also using breathing equipment such as open diving helmets by this time. He also made "Pirsch unter Wasser" (Stalking beneath the Sea), his first underwater film, about this time. It was a 15-minute film showing coral reefs and underwater fishing. He had bought a circular diving mask that enclosed the eyes and nose by 1940. He also started using an oxygen rebreather by this time. In 1942 he made an 80-minute film titled "Menschen unter Haien" (Man Amongst Sharks). It was shown in German cinemas in 1948. His book "Diving To Adventure" covers his very early years in diving and a trip that he (along with Alfred von Wurzian and Jorg Bohleer) took to the Caribbean shortly before the beginning of World War II. The Hans Hass Institute for Submarine Research and Diving Technology was founded on 1st December 2000. It is a non-profit-making association, created by the amalgamation of the International Institute for Submarine Research with the Forschungsstelle fuer Tauchgeschichte (Research Centre for Diving History). Hass had founded the International Institute for Submarine Research in 1947. According to the web page at <http://www.hist-net.de/>, the purpose of the Hans Hass Institute for Submarine Research and Diving Technology is "to conduct and to promote research into the underwater sciences for the benefit of the general public. In particular, the association will embrace new and promising areas of research which currently have little, or no place, in universities, or which, because of their interdisciplinary character, do not fit into the organisational structure of universities. The results of the association's researches will be circulated, and will be made available for science, teaching, and practical use. In this way the association will complement the work of universities in important fields of research. In addition, the association sees itself as a federal association, and the central forum for the scientific exchange of diving history in Germany. It will maintain contacts with neighbouring disciplines, as well as with experts and organisations abroad. In order to promote the exchange of ideas in Europe, the association will have a particular interest in joint, intergovernmental research projects. A principal function of the association will be to preserve and continue the "underwater inheritance" of Hans Hass, from whom the association takes its name. A Hans Hass archive for biographical and historical research will therefore be formed and conserved." Hans and his wife Lotte were both inducted in to the International Scuba Divers Hall of Fame, along with Jacques Cousteau, Emile Gagnan, Lloyd Bridges, Sylvia Earle, Al Giddings, Ben Cropp, Ron and Valerie Taylor, and Jack McKenney (to name a few).

Some "Hans Hass" websites of interest are: -

http://www.therebreathersite.nl/Zuurstofrebreathers/German/hans_hass.htm ,

<http://www.hds.org/hass.html> and http://en.wikipedia.org/wiki/Hans_Hass

An article titled "Hans Hass – Pioneer of Swimdiving" by Michael Jung was published in the February 2001 issue of Dive Log (p.34).

BARRY ANDREWARTHA - RECIPIENT OF THE 2007 OZTEK INDUSTRY RECOGNITION AWARD

The final event at OZTeK'07 was the Gala Awards dinner. It was held at Dockside, Darling Harbour on Sunday 18th March. In previous years, recipients of the OZTeK

Industry Recognition Award have included Rob Cason, Dr Simon Mitchell, Richard Nicholls, Barry Hallett and Tony Davis. The recipients for 2007 were two people whose contribution to recreational diving and encouragement of technical exploration diving has “had a profound impact on the development and growth of the activity”. They were PADI’s Terry Cummins and Barry Andrewartha. Barry has, for more than four decades, chronicled the changing face of diving and, in the process, given the Asia Pacific diving community an established and respected 'voice' in which to share adventures, discoveries and concerns, Barry's commitment towards the development of recreational and technical diving is evidenced in the pages of the diving publications that he, (together with his wife and business partner, Belinda Barnes) produces. With an interest in diving initially sparked by the television documentaries, books and films of Hans Hass; a growing passion that was further fuelled by the exploits of Jacques-Yves Cousteau, Barry began writing for the Australian Skindiving and Spearfishing Digest in 1960. Between 1966 - 1970 he authored and co-wrote five books on diving and in 1970, in response to a growing interest in diving, he launched “Skindiving in Australia”, a publication that underwent several minor name changes to reflect its growing circulation and sphere of influence throughout the Asia Pacific region and the forerunner of today's “Sportdiving Magazine”. Maintaining an interest in all aspects of diving, Barry is a co-director of, Mountain, Ocean & Travel Publications Pty Ltd, a company that – together with, Belinda Barnes - he founded in 1987. As the 'hands-on' co-publisher and co-editor of, “Sportdiving Magazine”, “Dive Log Australasia” and “International Freediving and Spearfishing News”, he continues to actively support and promote an activity that has dominated his life. Congratulations on your well deserved award Barry.

JAPANESE MIDGET SUBMARINE

As reported in our June news sheet, 31st May was the 65th anniversary of the Japanese midget submarine attack on Sydney Harbour during WWII on 31st May 1942. The site of the long-missing Japanese midget submarine M-24 was discovered by a group of divers last November. The location is 5km off of Sydney’s northern beaches at Bungan Head in 54m of water, (between Long Reef and Barrenjoey Headland). It was reported on Channel 9 TV’s 6pm news on 21st May that the wreck of the sub was in too flimsy a condition to consider raising or moving it. The bodies of the two Japanese crew trapped inside the wrecked sub will remain there. Further details were reported on page 11 of The Advertiser on 22nd May. Remember that a 500m-protection zone has been established around the wreck and a buoy with an alarm system has been installed at the site. Any one caught at the ‘off limits’ site will be fined up to \$1.1m (incl. GST?) and also risk confiscation of their boating equipment and diving gear. A NSW State Government media release from MP Frank Sartor, a NSW Minister, was issued on 1st December 2006 regarding the level of fines and the protection zone. Ann-Marie Wilcock is the Media Contact. Her phone numbers are 02 9228 4748 and 0413 872 275. Divers from the navy clearance diving team one took some footage of the wreck of the sub during May. It showed the submarine sitting upright and largely intact on the ocean floor. There was, however, damage to the exterior of the sub, said to have been caused by commercial trawling operations over the past 65 years. Details are included in the following article from AAP: -

“JAPANESE WWII SUB LARGELY INTACT

by Max Blenkin, 21st May 2007

The wreckage of a Japanese midget submarine lost off Sydney during World War II is largely intact but showing signs of damage from fishing nets, navy divers discovered today. Federal Environment Minister Malcolm Turnbull, who observed the dive from aboard a navy ship 5km off Bungan Head on Sydney's northern beaches today, said the vessel's discovery last year solved one of Australia's most baffling maritime mysteries. Mr Turnbull said the submarine, M24, most likely still contained the remains of its crew, Sub-Lieutenant Katsuhisa Ban and Petty Officer Memoru Ashibe. He said the divers' footage of the wreck showed the submarine sitting upright and largely intact on the ocean floor but with damage to the exterior from commercial trawling operations over the past 65 years. "The inspection, which was conducted by navy clearance diving team one, will allow archaeologists to analyse the physical and chemical condition of the hull and associated relics, assess any possible battle damage and the status of the undetonated scuttling charges and provide further clues as to whether the remains of the submariners are still aboard," he said. M24 was one of three Japanese midget submarines which penetrated Sydney Harbour on the evening of May 31, 1942. M24 fired two torpedoes at the cruiser *USS Chicago* but missed. However, one torpedo sank the depot ship *HMAS Kuttabul*, killing 19 Australian and two British personnel. Both of the other submarines were sunk in the harbour and their crews killed. A composite of the two vessels now enjoys pride of place in the Australian War Memorial in Canberra. M24 managed to escape the harbour but never made a rendezvous with parent submarines. It was found last year by amateur divers. Mr Turnbull said the Government had sought to protect the wreck, declaring a protected zone to ensure it remained undisturbed. He said the navy divers had collected some sand from the seabed near M24 to be presented to relatives of the two submariners later this year. "We are committed to ensuring this internationally significant wreck is protected and treated with honour and respect," he said."

http://www.news.com.au/story/0,23599,21769231-29277,00.html?from=public_rss

COSTS DELAY CANBERRA PLAN

“COMMONWEALTH RENEGED ON DEAL: HOLDING

by Martin Watters, Thursday, 31 May 2007

A \$3m plan to sink HMAS *Canberra* off Barwon Heads as a diving attraction has blown out after the Federal Government passed on costs to defit the frigate, Tourism Minister Tim Holding said. The project would create one of the world's best cold-water dive spots. Federal Member for Corangamite Stewart McArthur said the State Government ran into problems while negotiating a quote with defence contractor Tenix. But Mr Holding rejected the criticism, saying the Federal Government reneged on its side of the deal.

"We were promised a fully decommissioned vessel in the bid documentation. This commitment has not been honoured and has significantly increased the cost of the project," he said. "I have written to the Minister for Defence seeking his urgent advice as to how this can be rectified. I have also offered further Victorian Government financial support provided the Commonwealth also increases its contribution proportionately."

Mr Holding said the State Government was committed to divers' safety when creating the reef. Last October, both state and federal politicians claimed victory in securing the 138m decommissioned, guided-missile frigate. The ship was now expected by spring this year

after it was defitted and towed from Perth. Mr McArthur said any delay was not the Commonwealth's problem. "All parties were fully aware of the protocols — I'm not being critical of the State Government but I think they have run into some costing issues," he said. "I'm just concerned that some of these issues have affected the timeline but we're on the case and we're constantly in touch to ensure progress is made."

Source: <http://www.hmascanberra.com.au/itn-20070531.htm> (Taken from The Bellarine Echo)

NUESTRA SEÑORA DE ATOCHA AND SANTA MARGARITA

As mentioned in our June news sheet, this year is the 385th anniversary of the sinking of the Spanish galleon *Santa Margarita* (sister ship to the *Nuestra Señora de Atocha*) which sank in 1622. The *Nuestra Señora de Atocha* and *Santa Margarita* were both ships from the Spanish 1622 treasure fleet, sunk off the Florida Keys. In 1969 Mel Fisher started searching for the *Nuestra Señora de Atocha*, a 20-gun guard ship. In 1980, the *Santa Margarita* was found, and in 1985 the scattered remains of the *Nuestra Señora de Atocha* were found. On the wrecksite, three astrolabes and a wooden cross-staff were recovered. Two of the astrolabes were displayed in the Naval Museum of Lisbon (1999). Some silver bars are displayed in the Historical Museum of Southern Florida, Miami. Other objects are in the [Mel Fisher Maritime Museum](#), Key West, Florida. *National Geographic* made a film about the *Nuestra Señora de Atocha*. Visit <http://www.abc.se/~m10354/uwa/wreck-am.htm> .

PENGUINS' CRUEL END

According to the following report, at least 23 little penguins won't be able to attend the 6th International Penguin Conference which is being held in Hobart, Tasmania from 3rd – 7th September 2007: -

“Penguins die agonising deaths in shark net trap

by Kelvin Healey (13th May 2007, Sunday Herald Sun)

Victoria's little penguins - an attraction for thousands of tourists - have been devastated by an apparently abandoned shark net. Twenty-three of the birds suffered agonising deaths when they were caught in the massive net. They drowned in the trap, which was floating in Port Phillip Bay off Queenscliff. Shocked wildlife officials yesterday revealed the 150m net could have wiped out entire penguin colonies and dolphins. More deaths were averted only when an Australian Coastguard vessel made the disturbing discovery by chance, 15km from land yesterday. A hunt was launched last night for those responsible for the net. They will face serious animal cruelty charges. The penguins are believed to have been members of the Phillip Island or St Kilda breakwater colonies. Department of Sustainability and Environment senior wildlife officer Glenn Sharp said the net might have been negligently cut loose by commercial shark fishermen in the ocean outside the bay's heads, but brought inside the bay by tides. Or it could have been deliberately cast inside the bay by rogue fishermen, he said. Mr Sharp said the penguins, which appeared to have been in the net for a couple days, would have suffered slow, painful deaths. "It is not pleasant," he said. "They are fairly strong little animals and they would have had the ability to fight for a little bit." The department has asked volunteer groups that monitor the colonies to look out for penguin chicks that have been orphaned by the incident. The coastguard boat hauled the net ashore at Queenscliff yesterday

afternoon, where department officers examined the bodies. Mr Sharp pleaded for public help to capture the culprits. "We have got very little to go on," he said. "We want to know who cut the net free or who put it in place." St Kilda's 1200-strong colony has suffered a series of ugly setbacks in the past 18 months, including two brutal attacks by human thugs and a food shortage. In December, five of the tiny penguins were stabbed to death or had their necks broken in what researchers declared one of the most sickening attacks they had ever seen. Earthcare St Kilda penguin research group co-ordinator Zoe Hogg described yesterday's incident as disturbing. "It is awful," she said. Anyone with information on the incident is asked to call the DSE on 136 186."

Source: <http://www.news.com.au/adelaidenow/story/0,22606,21721807-911,00.html>

(A report was also published in Sunday Mail on 13th May 2007.)

COLD CORALS SHINE LIGHT ON OCEAN HISTORY

Further to the article "Climate Clues in SA Coral" which featured in the February 2007 issue of our SDFS Bulletin (see

<http://www.news.com.au/adelaidenow/story/0,22606,21141499-2682,00.html>), we now present this report: -

"Cold corals shine light on ocean history

The corals of South Australia are throwing new light on the history of Australia's southern oceans, revealing details of past climates and human impact on the seas. Sam Burgess of The Australian National University and the ARC Centre of Excellence for Coral Reef Studies, is completing a PhD on these little-known South Australian corals, proving their importance to issues of climate change and ocean health. "Most people are surprised to learn that there are large corals in these colder waters," says Ms. Burgess. "They think corals only occur in the warmer waters of the tropics," she says. Although most are amazed that corals exist in southern Australia, Sam has treated the areas off the coast of Adelaide and the Spencer Gulf as her workplace for the past 4 years. Dealing with these corals along with sea lions, a blue-ringed octopus and an over-protective cuttlefish are all in a day's work for the young scientist. "There is a lot more diversity in temperate reefs and cold water corals than people expect," says Burgess. "This coral species occur sporadically as an encrusting growth form on the Great Barrier Reef but in the temperate waters [of southern Australia] they are the dominant coral species," she says. The stony corals studied in Ms. Burgess' research occur in large boulders, known as "bommies". Despite being up to 2m high, these bommies are rarely seen due to poor water visibility in temperate waters. The corals' location in temperate and cooler waters is helping scientists to build a clearer picture of the whole of the world's oceans as they were in the past. With most coral studies focused on tropical waters and areas such as the Great Barrier Reef, there are abundant records of the ocean's history in these areas, leaving a gaping hole in the record for the cooler waters. Thanks to Ms. Burgess' PhD study these corals can be studied to provide information on the history of these previously unstudied colder waters. By drilling out small samples of the coral bommies and studying their chemical content Ms. Burgess' has found ways to read the temperature and contamination of the waters back hundreds of years. So far, the corals have shown signs of increases in the ocean's temperature, confirming a 1.5 degree rise in water temperatures over the last 130 years, which has been shown in other coral reef studies of the tropics. "[The study] helps add to the knowledge gained from research

conducted in the tropics by filling in the holes in our understanding of the ocean's chemistry in the past," says Burgess. The corals also show signs of contamination from human activities, with traces of some chemicals and heavy metals increasing since industrial development in the area. These findings, from Ms. Burgess' PhD study, will be published in scientific journals in the future. In the meantime, Sam Burgess hopes that her study can help "highlight how diverse Australia's marine environment is and the range of species that can tell us important things about our past". Sam's research was partly funded by the SA R&D Institute."

Source: http://www.coralcoe.org.au/news_stories/sacorals.html

CORAL DISEASE LINKED TO OCEAN WARMING

"An international team of scientists working on Australia's Great Barrier Reef (GBR) has found a clear link between coral disease and warmer ocean temperatures. Worldfirst research at 48 reefs spread along 1500 kilometres of the GBR combined with 6 years of satellite data on sea temperatures has revealed "a highly significant relationship" between ocean warming and the emergence of a disease known as white syndrome. White syndrome is one of a number of unexplained coral diseases which scientists have observed to be on the increase globally in recent years. The team led by Dr John Bruno of the University of North Carolina, Dr Bette Willis of the ARC Centre of Excellence for Coral Reef Studies and James Cook University and Dr Hugh Sweatman of the Australian Institute of Marine Science has published an open access report on their findings in the Public Library of Science (PLoS) Biology on the internet. "Coral reefs have been decimated over the last several decades on a global scale. Infectious diseases are thought to contribute to this mass coral mortality in reef regions like the Caribbean, and many reef ecologists suspected that high ocean temperatures were a key factor in the increased incidence and severity of disease outbreaks, Dr Willis says. "This hypothesis was supported by local observations—for example, that some coral diseases become more prevalent in the summertime—but had never been tested before at large spatial scales or over relatively long periods. The team decided to test the temperature/disease theory by combining 6 years of disease survey data from reefs across 1,500 kilometers of Australia's Great Barrier Reef with new ocean temperature records from satellite measurements. Counts of diseased corals are a part of AIMS' long-term program to monitor the state of the GBR. The program surveys sites on inshore, mid-lagoon and outer barrier reefs from Cooktown and Lizard Island in the far north to the Capricorn-Bunker group of islands at the southern end of the GBR. "Our results indicate that major outbreaks of the coral disease white syndrome only occurred on reefs with high coral cover after especially warm years. The disease was usually absent on reefs with lower coral cover or in cooler years," Dr Willis says. In 2002, when sea temperatures were especially warm and a major bleaching event affected up to half the area of the GBR, there was a 20-fold upsurge in coral disease, notably on reefs with high coral cover. The researchers speculate the disease may be due to a combination of the corals becoming stressed by high water temperatures, and an increase in virulence in the organisms which attack them. "Our results suggest that climate change could be increasing the severity of disease in the ocean, leading to a decline in the health of marine ecosystems and the loss of the resources and services humans derive from them," the

team says. The GBR is estimated to contribute \$5.4 billion and 68,000 local jobs to the Australian economy, while worldwide coral reefs support more than 200 million people. “Understanding the causes of disease outbreaks will help in the development of strategies to protect reef-building corals,” Dr Willis says. “In the past, apparently pristine reefs with high coral cover were thought to be the most resilient reefs. Knowing that they may be particularly vulnerable to disease outbreaks highlights the need for caution when it comes to permitting activities that add additional stress, especially during times of high temperatures. Dr Sweatman adds ”While we become aware of more diseases of reef organisms each year, their impact on reefs of the GBR has been limited so far. The crown-of-thorns starfish has had a much greater impact than coral diseases in recent years, but the new finding shows the need for research into diseases and monitoring of their effects.” “More diseases are infecting more coral species every year, leading to the global loss of reef-building corals and the decline of other important species dependent on reefs” says lead author Dr John Bruno. “We’ve long suspected climate change is driving disease outbreaks. Our results suggest that warmer temperatures are increasing the severity of disease in the ocean.” Co-authors include Elizabeth Selig, University of North Carolina; Kenneth Casey, NOAA National Oceanographic Data Center; Cathie Page, ARC Centre of Excellence for Coral Reef Studies and the School of Marine and Tropical Biology, James Cook University in Townsville, Australia; C. Drew Harvell, Cornell University; Amy M Melendy, UNC Department of Epidemiology. The original news release can be found at <http://www.coralcoe.org.au/news.html> .

Related Stories:

[Coral pandemic](#)

[GBR safe from crown-of-thorns](#)

[Climate change strikes fish](#)

[Suicide: unexpected coral killer](#)

[Reef 'at risk in climate change'](#)

Source: <http://www.sciencealert.com.au/news/20070805-15731-2.html>

(For more information about coral reefs and global warming (or climate change) read page 52 of the May 2007 issue of Dive Log. Firstly, there is Rod Fujita’s article titled “Can Coral Reefs Survive Global Warming? The Prognosis is grim”. Then there is Ben Davison’s article titled “Turn Up The Heat On Climate Change”. There is also a list of websites of suggested organisations to contact for more information about saving the reefs. Rod Fujita’s article “Can Coral Reefs Survive Global Warming? The Prognosis is grim” can be seen at

<http://www.undercurrent.org/UCnow/articles/GlobalWarming200701.shtml> . Visit

<http://www.undercurrent.org/UCnow/bookpicks2.shtml> for details about Rod Fujita’s book titled “Heal the Ocean: Solutions for Saving Our Seas”. Visit

<http://www.undercurrent.org/UCnow/bookpicks.shtml> to view lots of diving related books. Steve Jones has written a book titled “Coral: A Pessimist in Paradise”. This \$35 book says that we are not taking care of the Great Barrier Reef or other coral reefs worldwide. He describes the fundamental biological and geological processes of coral reefs and the many threats that they face.)

TWO 1860s CLIPPER SHIPS

The 1869 tea clipper *Cutty Sark* was damaged by fire on 21st May. It has been in dry dock in Greenwich since 1954 and was undergoing a \$28m restoration. Many crucial artefacts were not on board the clipper at the time. It is hoped that the 137-year old ship can still be restored. (*Cutty Sark* apparently means '(a?) short shirt'. It is said to be a name derived from the Robert Burns poem 'Tam O'Shanter'. Visit <http://www.abc.net.au/news/newsitems/200705/s1928827.htm> for more details about the *Cutty Sark*.

The 1864 clipper *City of Adelaide* is now under a "deconstruction/demolition order" in Scotland. With the demise of the *Cutty Sark*, there is now a greater need to save the *City of Adelaide*. There have been suggestions that the ship could be cut in to major portions so that the ship can be moved and rejoined. Failing that, it is still hoped that significant sections of the ship could be salvaged and brought to Adelaide for permanent display. If there is just one funny thing about the two clipper ships *Cutty Sark* and *City of Adelaide*, it is that the one built in Scotland (*Cutty Sark*) is located in England, and the one built in England (*City of Adelaide*) is located in Scotland. The *Cutty Sark* was built in 1869 by Scott and Linton at Dumbarton, Scotland. It is now in dry dock at Greenwich (SE of London) on the River Thames. The 800-tonne *City of Adelaide* was built at Sunderland, England in 1864. It is now at a slipway near Glasgow in Scotland. Visit www.cityofadelaide.org.au for more information.

A conference to discuss the future of the *City of Adelaide* is to be held in Glasgow on 19th September. It will be attended by HRH The Duke of Edinburgh, the President of the Maritime Trust. The speakers at the conference will include representatives of the National Historic Ships Committee, Scottish Maritime Museum, Sunderland Maritime Trust and the Adelaide Action Group. Organisations attending include The Maritime Trust, Australian High Commission, State of South Australia, City of Sunderland, Historic Scotland and Officials from the Scottish Executive and U.K. Government. The conference will be chaired by Sir Julian Oswald, the Admiral of the Fleet, Chairman of the National Historic Ships Committee and the Maritime Trust.

Source: <http://www.scottishmaritimemuseum.org/oldnews.htm>

Here is some more information about the *City of Adelaide*: -

The *City of Adelaide* became known as HMS *Carrick* in 1923. She is now officially SV *Carrick*. She is the oldest surviving clipper ship in the world, and one of only a few to exist. She is listed by the National Historic Ships Committee as part of the "Core Collection" of ships of the United Kingdom. Her decrepit hulk is presently in the possession of the Scottish Maritime Museum. She was built by William Pile, Hay & Co. of Sunderland, and launched in 1864. She is a composite hull vessel like the *Cutty Sark*, which was built several years later. The *Cutty Sark* was a cargo ship though, whereas the *City of Adelaide* was designed to carry both passengers and cargo between England and Australia. She had 1st-class and 2nd-class passenger quarters, and the hold could also be filled with emigrants. She spent many years making annual runs to and from South Australia, playing an important role in the development of the colony. Researchers have estimated that 60% of South Australians can trace their origins to passengers on the *City of Adelaide*. She was sold in 1887 for use in bulk cargo transport, first carrying coal from Tyne to Dover, and then carrying timber in the North Atlantic. Her sailing days ended in 1893 when she was bought to serve as a floating hospital in Southampton. She

was brought into the Royal Navy as HMS *Carrick* in 1923 and used as a Royal Naval Reserve drill ship at Greenock. She was moved to the River Clyde, in central Glasgow in 1956 and used by the local RNVR club. Her hull had seriously deteriorated by 1990 and she sank at her moorings. The Scottish Maritime Museum salvaged her remains and moved them to Irvine, North Ayrshire with the plan to preserve them and eventually restore the vessel. By 2001, the museum applied to the local council to demolish the ship so as to make the maintenance expenses available for other projects but this was rejected. Various organisations offered to support restoration at a conference later that year but no funds materialised until 2003 when Mike Edwards, a businessman from the Midlands, donated funds for her preservation and a feasibility study for her restoration. It was hoped that the vessel could be returned home for permanent exhibition in Sunderland, but in February 2006 it was announced that, as the hull was in worse condition than anticipated, an application would be put forward for recorded deconstruction. The proposals for demolition were due to be discussed at the end of May 2007, but plans may have been put on hold due to the fire on the *Cutty Sark*.

Source: <http://www.scottishmaritimemuseum.org/oldnews.htm>.

The following information about the *Cutty Sark* comes from the same source: - “The *Cutty Sark* was commissioned by John Wills, a Scots born businessman, in the late 1860s. The firm of Scott and Linton contracted to build the ship for a price of £17 per ton, a very low price even in those days. Scott and Linton were bankrupted due to the low contract price but not before they had completed and launched the hull and named it *Cutty Sark*, a name derived from the Robert Burns poem 'Tam O'Shanter' meaning 'short shirt'. The hull was towed across the river Leven to William Denny and Bros, and was rigged ready to sail in only 12 weeks. *Cutty Sark* set sail from London on her maiden voyage to Shanghai on the 16th February 1870 under the command of Captain George Moodie. Neither Captain Moodie or John Wills could have known the fame she would win with her exploits or that she would be immortalised by her preservation as the only survivor of the mid 19th century clippers which are considered by many as the finest and fastest sailing ships ever built. Clippers were built for use transporting tea from China. The first tea from a new seasons crop gained the highest price therefore speed was of the utmost importance. About the time *Cutty Sark* was built, the Suez Canal opened allowing steamships to reduce their journey by several hundred miles. As a result, *Cutty Sark* was used to transport wool and other products from Australia.”

The June issue of the UEC's newsletter includes an article about old & new clipper ships, including the *Cutty Sark* and the *City of Adelaide*.

GREY NURSE SHARK NUMBERS

Samantha Williams wrote the following article titled “Dispute over 'endangered' shark” which was published in the “Daily Telegraph” on 25th May: -

“This stunning photograph makes a lie of the State Government and green groups' dire warnings over grey nurse shark numbers, according to recreational fishers and divers. Claims there are fewer than 500 grey nurse sharks on the east coast have been used by the State Government to justify locking anglers out of reefs along NSW. But this photograph, taken recently at Seal Rocks on the Mid-North Coast, is of a congregation of at least 60 grey nurses. This would mean a large percentage of the entire NSW population of sharks was in the one small reef. "To have about 20% of the population in one place is not

mathematical or logical, especially when we claim we don't know where their habitats are," a NSW Fisheries source told *The Daily Telegraph* yesterday. "It does show there are much more than 500 . . . (the Government) have to admit they have made a mistake." *The Daily Telegraph* understands there is internal disquiet within NSW Fisheries at the policies of the Government over grey nurses. The Nature Conservation Council (NCC) is pushing for more exclusion zones in NSW fishing areas on the grounds the species is nearly extinct. But anglers and divers say the breed is thriving in reefs not checked by scientists. The NCC is taking action in the Administrative Appeals Tribunal in a bid to order the Government to set up sanctuaries in areas including Sydney's Maroubra Beach, Montague Island off the South Coast, and South West Rocks on the Mid-North Coast. Today seven groups including the Fishing Party, EcoFishers NSW and RecFish Australia will be applying to join the case at an interlocutory hearing before the case resumes on June 4. Underwater Spearfishermen's Association secretary Mel Brown, who has kept records of shark numbers for 10 years, believes they have grown to 6000. The grey nurse has been protected in NSW since 1984. It was upgraded from vulnerable to endangered in 2000, which has helped boost numbers. Mr Brown said: "The Government have not admitted there are more (sharks) despite anecdotal evidence and photos showing otherwise. "People claim we are bringing this to light because we want to fish them. That is not the case, we are for conservation. We just don't want to be locked out of our favourite fishing spots." Primary Industries Minister Ian Macdonald said claims the grey nurse shark was no longer an endangered species were based on pure speculation and not science."

Source: <http://www.news.com.au/sundaytelegraph/story/0,,21788906-5006009,00.html>

When the UEC's Nick Cundell brought the above article to our attention, we queried it with Nicky Hammond, Marine Program Manager for the National Parks Association of NSW. Here is Nicky's reply: -

"There were 60 sharks at Seal Rocks a couple of weeks back. Although the sharks do predominantly reside at their key habitat sites, they do move between these sites during the year. At different times of the year, they'll be different numbers at each of the sites. The photo was taken when a huge congregation were at Seal Rocks and goes to show how important it is to protect this site as at certain times it can be home to a large portion of this critically endangered species. Research on the shark (which has involved tagging experiments and population modelling) has shown their numbers are so low that they are on the brink of extinction. Reports to the contrary are based on anecdotal evidence such as this photo coupled with misled assumptions (e.g. that there are always 60 sharks at this site). They are not supported by the ongoing scientific research that has been done on these sharks. The Grey Nurse Shark being listed as 'protected' in 1984 only prevented people purposely fishing and killing the shark. The key threat to the sharks, that of accidental hooking from fishing, remained, with at least 12 sharks dying per year due to this. With less than 500 sharks thought to remain along the Australian east coast, and a slow reproductive rate, these deaths are significant. Their listing from vulnerable to endangered, again, does little to actually protect the sharks from accidental fishing deaths. Whilst some small protection was afforded to the sharks in the form of 'critical habitat site' creation at some of their key sites, this only prevented some forms of fishing and subsequently has done little to stop the hooking of these sharks. The recommendation from scientists is for 1500m fully protected sanctuaries at Grey Nurse Shark key habitat

areas which not only will help protect the sharks but will also help protect the other marine life in this area.” Thanks Nicky.

The Scuba Divers Federation of SA is a member of the following: -

Rapid Bay Jetty Design Group

SARFAC (SA Recreational Fishing Advisory Council)

Fleurieu Reef Management Committee (Ex-HMAS *Hobart*)

TRAIL COMMITTEES - SA Trails Coordinating Committee (Office of Recreation & Sport) and Port Noarlunga Reef Underwater Trail South Australian Trails

Contact the Federation’s Secretary on sdfs@adam.com.au to be included on the mailing list for this electronic bulletin.

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