

SDFSFA Bulletin, October 2006

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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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A NEW JETTY TO BE BUILT AT RAPID BAY, SA

At great risk of repeating our report from last month, we advise that the hard work of stakeholder groups such as the Friends of Rapid Bay Jetty, SARFAC (the SA Recreational Fishing Advisory Committee) and the Scuba Divers Federation of SA has finally paid off. The SA State Government's announcement regarding its plans for the building of a new jetty at Rapid Bay was made on 8th September. Premier Mike Rann made the announcement down at Rapid Bay in front of the media and stakeholders. A Government news release which was on-forwarded to our members has now been posted to our website at www.sdfsfa.net . Christopher Deane's "South Aussie Snippets" column on page 71 in the September issue of Dive Log described in detail the plan to build a new jetty adjacent to the old jetty. Now the waiting begins for the work to actually start on the new jetty next year. Our best hope at this stage is that the new jetty will be ready to use by the end of 2007. For further information visit the Friends of Rapid Bay Jetty web site at www.rapidbayjetty.org .

(The above details have been posted to our website. They have also been submitted to Dive Log. Both versions are accompanied by photos taken by our president, Hank van der Wijngaart. The photos show Premier Rann talking to the media, Mike Rann & Transport Minister Pat Conlon looking at the plans for the new jetty with one of the stakeholders, and the condition of the old jetty. Visit our website at www.sdfsa.net or check the next issue of Dive Log to see these three photos.)

NEW SHARK EXPEDITION VESSEL

The Fox Shark Research Foundation now has a new expedition vessel. With their previous vessel the *Falie* under repair (and her future uncertain) they had to look for a new expedition vessel which was capable of comfortably operating throughout the season out at the Neptune Islands. It also needed to be equipped with the same facilities that they were used to onboard the *Falie*. The Foundation found this and more with the *Princess II*. Her gross tonnage is 169 tonnes. She has a 3m draught and is surveyed to operate 200nm from Australian Coastline. She has a 4000nm range and there is a 5500 litre per day water maker on board with 20 days endurance. She has 6 air-conditioned twin/double en-suite cabins for up to 12 passengers. She also has state of the art seabed mapping technology, the latest satellite Furuno navigation systems (Satellite communication systems). There is a 1.5 tonne deck crane for lifting & lowering diving and research equipment. Power is provided by an 80Kw & a 32 Kw generator, with power outlets 110/240V 50Hz. There is a commercial galley for catering to every need. There are two onboard air compressors for filling scuba tanks. Other facilities include a deck shower and a large dive platform/deck. For photographers there are camera tables and a camera rinse tank. Underwater cameras and videos are available for rent. There is a large upper sundeck with lazy boys. There are two dive tenders, one 5.8m and one a 4m RIB. Diving equipment is available for hire. All meals are provided, served in the large air-conditioned saloon with bar. Visit

http://www.sharkfoundation.net/index.php?option=com_content&task=view&id=71&Itemid=94&PHPSESSID=e216c95c1d86ed2a401781a0c1ed165f for more details.

OIL LEAK FROM WRECK

The 7245-ton freighter *Eleni K* (Elini K?*) sank after being beached at Goat Island, 15km off of Ceduna, on the far west coast on 17th November 1966 after breaking her back. The US built ship was carrying a cargo of wheat. The 134m-long steamer also carried 245 tonnes/>150,000litres of heavy furnace oil which is now said to be leaking in to the sea. The wreck is 1km from a seal breeding colony and 2kms from proposed abalone farm sites. The seal colony comprises of up to 50 Australian Sea Lions. It seems that the *Eleni K* broke up 40 years ago on 29th September 1966. She was then refloated and towed to Goat Island where she sank. It has been reported that the oil on board the ship has been leaking intermittently. A team from the Department of Transport has already investigated the situation. A full diving survey is expected to be completed soon. Greg Sleep from Denial Bay says that the heavy furnace oil is of a high viscosity that needed to be heated just to enable it to be pumped to the ship's boiler. He says that the oil is very dense and would only sink in the sea. He is planning to write a book about the rusting ship, which he says is now in a very poor and dangerous condition.

*Spelled as *Eleni K* in “South Australian Shipwrecks - A Data Base 1802-1989” by Peter Christopher and “South Australia’s Waters – An Atlas & Guide” by the Boating Industry Association of SA. It seems that ‘Eleni’ is a female Greek name.

“South Australia’s Waters – An Atlas & Guide” shows the wreck of the *Eleni K* as being situated on the NE coast of Goat Island. The island is SW of St Peter Island in the Great Australian Bight. It is part of the Nuyts Archipelago Conservation Park.

DREDGE DUMP SITE INVESTIGATION

Are any diving groups interested in looking at the dredge dump site (off of Outer Harbor?)? The Friends of Gulf St Vincent wish to get truly independent verification of the condition of that site. It would not be the most exciting dive ever, but a worthy one for those interested. The official position is that everything was dumped at least beyond 30 metres depth; the preferred spot was supposed to be at something like 38 metres. The prawn fishers have found what seems unquestionably the clay taken up by the cutter suction dredge in assorted places other than the supposedly 'approved' dump sites. It looked like a giant version of that spiral pasta. If your group is willing and able to handle such an assignment, please let Ian Kirkegaard know at ianrk@iprimus.com.au . If you do decide to check out the dredge dump site, please take photos and look out for remnants of the alga *Caulerpa taxifolia**. Trevor Watts would be keen to join you for your dives. Please send details to Trevor at trevor@sarfac.com .

* According to The Advertiser issue of 20th September, *caulerpa taxifolia* (sic) is a seagrass (it isn't) and dredging off of Outer Harbor has spread it in to Spencer Gulf (our western-most gulf). These are said to be the claims of David Ridgway, environment spokesman for the Opposition. He had been informed of these facts when he attended a public meeting re marine parks legislation.

52 NEW MARINE SPECIES DISCOVERED OFF PAPUA

According to the ABC’s website (“Sharks among 52 New Species Found Off Indonesia”, 19th September 2006), “Scientists say they have found two types of shark, exotic "flasher" fish and corals among 52 new species in seas off Indonesia, confirming the western Pacific as the richest marine habitat on earth. They urged more protection for seas around the Bird's Head peninsula at the western end of New Guinea Island from threats including mining and dynamite fishing that can smash coral reefs. "We feel very confident that this is the epicentre of marine biodiversity" in the world, said Mark Erdmann, a US scientist at Conservation International who led two surveys this year. The scientists found 24 new species of fish, including two types of epaulette shark, slim and spotty, growing up to about 1.2 metres long. Among other finds were 20 new species of coral and eight previously unknown types of shrimp. "It's especially stunning to find sharks - these are higher level creatures, not bacteria or worms," Dr Erdmann said...

Source & full text: <http://www.abc.net.au/news/newsitems/200609/s1743965.htm> .

Reports about this topic featured in The Advertiser on both 19th & 20th September. It was reported that the area of the discovery (Bird’s Head Seascape) is “the size of two football fields” and that it has “more biodiversity than the whole of the Caribbean”. Channel 9’s 6pm news service showed underwater footage on the 19th September. A shark was shown ‘walking’ on its pectoral fins. The Advertiser of 20th September featured photos of one of the (Epaulette) sharks and three different fish species. The shark was said to “walk on its

fins across the ocean floor”. The caption for the photo of the shark was more conservative, saying that the shark “uses its pectoral fins to crawl”. The text said that “two small epaulette sharks were spotted (which they were) crawling on the seabed, using pectoral fins to move around to find food. . . They spend a lot of time on the bottom and they’re hunting for mussels and crabs and the things that live in the sand or on the sand. The sharks grow up to 1.2m long and are believed to walk on the sand to avoid predators and to crawl through tight spaces. They were named epaulette sharks because of two large round spots near the head which look like the shoulder ornaments on military uniforms.” The ‘Tiser article featured photos of tropical fish species *Cirrhilabrus cenderawash*, *Pseudochromis* species and *Pterocaesio* species. These are three of the 24 new species of fish found at Bird’s Head Seascape. The UEC’s October newsletter features a copy of the shark photo, plus a map of the survey area, on page 7. The address for the UEC’s website is www.geocities.com/uecofsa . The survey was done around Bird’s Head peninsula at the western end of New Guinea Island over a five-year period.

NEW SUHR BOOKS

David Cowan, Project Leader for the Society for Underwater Historical Research’s Publication Digitisation Project, says that the SUHR is very pleased to announce the availability of the following 3 new books on the maritime archaeology of South Australia:

1. South Australian Shipwrecks: A Database 1802-1989 by Peter Christopher
2. The Morgan Project Volume 1 by Brian Marfleet
3. The Morgan Project Volume 2 by Brian Marfleet

Here are some details about these books: -

'SOUTH AUSTRALIAN SHIPWRECKS: A DATABASE 1802-1989' (242 pages) is a facsimile of the classic 1990 SUHR book recreated in Adobe Acrobat PDF format. Its content consists of a series of indices that list shipwrecks in alphabetical order, date of wrecking, location, construction, size, loss of life and so on. There is no difference with the original 1990 hardcopy edition apart from the correction of spelling errors and the substitution of several photographs where reuse has been complicated by copyright and other issues. Please note that no change has been made to the content of the publication despite the availability of new information about a number of shipwreck sites, the discovery of new shipwreck sites, the creation of new 'artificial reef' sites and changes in legislation to protect shipwreck sites.

THE MORGAN PROJECT was carried out in the River Murray at the South Australian river town of Morgan from January 1978 to May 1983. The initial aim was to collect material from the riverbed adjoining the town's wharf in response to local community interest and to prepare this material for display at the Morgan centenary celebration in April 1978. The scope was subsequently enlarged to collect artefacts from a number of sites for display in a future museum. The Morgan Project is unique as it is probably the first and possibly the only underwater archaeological project to be carried in conditions of absolute zero visibility.

'THE MORGAN PROJECT VOLUME 1' (120 pages) is a collection of reports prepared during the project's fieldwork phase for inclusion in newsletters, annual reports and progress reports to government authorities. These contain an insight in the day-to-day running of a complex underwater archaeological project including description of

events and activities such as the difficulties associated with compressed air diving in adverse conditions (i.e. cold flowing freshwater with zero visibility, total darkness and other hazards), the tedium of fieldwork, the occasional 'high' of discovery, problem solving including the development of new tools & techniques and the evolution of interim conclusions about the findings.

'THE MORGAN PROJECT VOLUME 2' (74 pages) is the project's final report brought to completion in 2006 from a draft prepared in 1989. This publication reports on the achievement of the project's aims. Its content has been supplemented with material sourced from the Project's files.

All of the above publications have been created in Adobe Acrobat Version 5 PDF format and have been formatted to allow double sided printing. Copies of the above publications can be ordered by email to suhrpublications@hotmail.com and will be distributed on CD-ROM by post in an Australia Post CD/DVD Mailer. A small fee will be charged for each CD-ROM to cover cost of postage, the CD/DVD Mailer & blank CD-ROMs. All three publications on 1 CD-ROM sent by post will cost of Five Australian Dollars (\$AUD5.00). Phone David Cowan on 8242 0987 or 0417 290 455 to place your order. You can send a cheque or Australian Money Order (available from Australia Post) made out to 'David Cowan' to PO Box 7341, West Lakes SA 5021. If you have any other questions, please phone David (at 8242 0987 or 0417 290 455).

(The Society for Underwater Historical Research was formed in South Australia in 1974 by experienced recreational scuba divers and other interested persons. Its purpose is to promote public interest in, and the systematic study of, Australia's maritime archaeology and history. It is the oldest such group in Australia. The work of the SUHR covers the full range of archaeological activities, including planning, research, exploration, logistics, photography and presentation of a report on all projects. Activities such as recovery and conservation of artefacts, while significant in the past, are no longer carried out except where permitted by cultural heritage authorities or justified by contemporary archaeological practice.)

MORE ON CAPE SIZE BULK CARRIERS

As reported in our September news sheet, huge bulk carriers (Cape Size) will soon be sailing up a new deep-water channel in Spencer Gulf. The installation of navigation buoys for the channel should be completed by March 2007. Nick Cundell sent us the following information about Bulk Cargo Ship Classes after reading our news sheet: -
"Bulk Cargo Ship Classes

Handy is the name for bulk carriers of less than 60,000 tons deadweight capacity. In many cases, the carrier itself may be equipped with cranes to handle all sorts of cargo. The type of handy bulk carrier of 40,000 tons or more of deadweight capacity is called the "handy-max" type. Handysize-vessels up to 30,000 dwt, which carry exclusively minor bulk cargoes. Historically, the Handysize drybulk carrier sector was seen as the most versatile. Increasingly, however, this has become more of a regional trading, niche sector. The vessels are well suited for small ports with length and draft restrictions and also lacking infrastructure.

Handymax-vessels between 30,000 dwt and 60,000 dwt. The Handymax sector operates in a large number of geographically dispersed global trades, mainly carrying grains and

minor bulks including steel products, forest products and fertilizers. Vessels less than 60,000 dwt are built with on-board cranes that enable them to load and discharge cargo in countries and ports with limited infrastructure.

Panamax refers to the maximum size that can navigate the Panama Canal. This type can be up to 32.2m wide. Panamax bulk carriers are usually of 60,000 to 80,000 tons of deadweight capacity, and are suitable for carrying bulk cargo of industrial commodities like as salt, grain, coal and/or iron ore. Panamax vessels, defined as those with the maximum beam (width) of 32.2 metres permitted to transit the Panama Canal, carry coal, grain and, to a lesser extent, minor bulks, including steel products, forest products and fertilizers.

Cape is the type of large-scale bulk carrier primarily used for transporting raw materials for making steel (coal and iron ore). This type is considered to be at least 100,000 tons of deadweight capacity, and there are currently super-large ships in excess of 200,000 tons of deadweight capacity. Vessels over 80,000 dwt is the traditional definition of a Capesize bulk carrier, in terms of deadweight, the sector is changing. As per the orderbook detailed below, there have been a number of new super-Panamaxes ordered, which are 82,000 dwt to 85,000 dwt, but which are able to transit the Panama Canal with a full cargo. Thus, a more modern definition of Capesize would be based on vessels over 100,000 dwt. The Capesize sector is focused on long haul iron ore and coal trade routes. Due to the size of the vessels there are only a comparatively small number of ports around the world with the infrastructure to accommodate them.”

Thanks for this information Nick.

According to the original report in The Advertiser in August, “A new deep-water channel has been defined up Spencer Gulf to Whyalla to cope with the mighty Cape Size bulk carriers which will be used by OneSteel from early next year. The AMSA is positioning 8 navigation buoys in the gulf to identify the route and guide the huge ships. . . . Final hydrographic surveys are being carried out to confirm the new deep-water channel and the installation of the navigation buoys should be completed for the first of the big ships in March (2007).” The report went on to describe Cape Size bulk carriers as “up to 290m long, 45m wide and fully loaded weigh nearly 180,000 tonnes*. They cannot fit through the Suez or Panama canals and must, instead, travel via the capes.” So, it seems that these huge ships will soon be traveling up Spencer Gulf to Whyalla.

*The *Titanic* was smaller. Its length was 270m and its width was just 30m. It had a displacement of 66,000 tonnes. There are plans to build a *Titanic* museum (in Belfast?) in the next six years. It is hoped that the museum will be open for the centenary of the sinking of the ship which sank in 1912.

The newly dredged channel at Adelaide’s Outer Harbor is 14.2m deep and able to handle the next generation of Panamax-sized container ships (see above). Victoria has also deepened its channel in a bid to continue its considered position as Australia’s best deep-water port. The Advertiser of 9th August said that Port Melbourne “was still years away from deepening its main shipping facilities”. The very next day the paper reported that Melbourne had officially opened its deeper channel that week.

NAVY TO ACQUIRE AN UNDERWATER ROBOT FOR SUB RESCUES

The following report featured on the front page of The Australian newspaper this month:-
“Robot to rescue in sub disasters

by Cameron Stewart, October 5th 2006

The navy has moved to avoid a Kursk-style submarine disaster by acquiring an underwater robot to rescue stricken sailors trapped on the seabed. The decision follows a damning report last year, revealed in *The Australian*, which found the navy's submarine rescue strategy was in disarray, with faulty and obsolete equipment and poor training creating "intolerable" risks to sailors stranded under the ocean. This comes more than three years after the navy came within 20 seconds of losing the Collins-class submarine HMAS Dechaineux and its 55 crew in a catastrophic onboard flood under the Indian Ocean. The new robot will reduce the chances of the navy having a similar disaster to that of the doomed Russian submarine, the Kursk, whose crew died trapped in their vessel on the seabed before a rescue crew could reach them in August 2000. Of the 118 Russian sailors who lost their lives in the tragedy, those not killed in an initial explosion suffocated when the submarine ran out of air. With the navy plan, the service is looking to acquire a remote-operated underwater vehicle (ROV) that can be quickly deployed in emergency to reach a stricken submarine. The ROV's role is to help keep the submariners alive until the navy's larger rescue vehicle, the Remora, can be deployed. The 16.5-tonne Remora attaches to the sunken sub and allows six survivors at a time to be brought to the surface. But it could take days for Remora to be loaded on to a ship and transported to the scene of an accident - a period that could be critical for the survival of a crew. Therefore the navy wants a smaller unit it can despatch more quickly. "The aim of the ROV is to deliver additional emergency life-support stores, clear debris from and establish communications with a stricken submarine" ahead of the arrival of the Remora, a defence spokesman said yesterday. "While submarines carry emergency life-saving stores, the ability to deliver additional stores ahead of deploying Remora is a prudent contingency for an unpredictable event such as adverse weather that might delay commencement of the rescue." The navy's six Collins-class submarines carry five days worth of emergency reserves on top of their regular stores. The navy's six Collins-class submarines carry five days worth of emergency reserves on top of their regular stores. The navy's move to acquire an ROV is part of efforts to improve its much-criticised submarine rescue unit, which has been subject to derision among submariners for years. A navy-commissioned report last year found the submarine rescue system suffered from "a significant number of high risks". These "intolerable or unacceptable risks" included "failure of critical equipment during testing and operation, competence of submarine rescue personnel and the integration of emergency procedures". A Defence Department spokesman said yesterday the issues identified in the report were being "actively managed" and that Defence "remains satisfied with the ability to conduct submarine escape and rescue". The navy successfully tested its rescue systems earlier this year during its annual escape and rescue exercise, Black Carillon, off the West Australian coast. But in many cases the submarine fleet operates in waters too deep for any rescue. In the case of the Dechaineux flood in 2003, the submarine was in deep ocean and would have been crushed by water pressure before it reached the seabed. "It would have been like crushing an empty Coke can in your hand," said crewmember Geordie Bunting, who almost lost his life in the accident.

Source: <http://www.theaustralian.news.com.au/story/0,20867,20527265-2702,00.html>

SURPRISE ARTIFACTS TURN UP

“Unexpected USS *Monitor* artifacts turn up during cleanup
by Mark St. John Erickson, Daily Press (Newport News, Va.)

Four years after Navy divers pulled the USS *Monitor* gun turret from the ocean's grasp, the historic Civil War artifact has compiled a long record of surprising conservators with its secrets. But few revelations have been more unexpected than the artifacts that turned up during seemingly routine excavations inside the new conservation facility at The Mariners' Museum this summer. Probing through some of the last deposits that remain after the removal of tons of sediment, concretion and sand, conservators David Krop and Susanne Grieve knew their chances of coming across any overlooked finds were slim. Yet hidden under layers of accumulated grit that now measure as little as 2 inches thick was an assortment of unanticipated artifacts, including a trio of buttons, a mysterious iron crank and a piece of chalk that once stroked messages to the ill-fated vessel's sailors. Perhaps the biggest surprise was a quartet of brass-jacketed bullets that seemed to come out of nowhere. Not only were they the first examples of ammunition found on the famous warship but they also emerged in an entirely unsuspected location. "I must have had my nose pressed against that exact spot on at least a dozen different occasions," says Jeff Johnston, the historian for Monitor National Marine Sanctuary, describing a familiar site on the turret's interior wall. "But it just shows you why we don't want to go in there and start chipping away until we hit bottom. You never know what's in there under the surface - or what you're going to expose when you remove the next layer." Recovered from the ocean floor off Cape Hatteras, N.C., in August 2004, the famous iron cylinder has required a lengthy and often complex series of conservation steps as the Newport News museum and sanctuary office - which is part of the National Oceanic and Atmospheric Administration - have labored to preserve it. Immersed in the Atlantic for more than 140 years, its chloride-contaminated iron plates will spall (?) and rupture disastrously if allowed to dry out. That means constant interruptions from a system of overhead water sprinklers whenever the conservators drain the turret's immense, 95,000-gallon tank in order to carry out their work. Despite such obstacles, the museum and the sanctuary - with the help of engineers and riggers from Northrop Grumman Newport News shipyard - have successfully removed the heavy but fragile iron beams that braced the bottom of the turret and supported its pair of 9-ton Dahlgren guns. They also have hoisted both of the historic cannon as well as their ponderous carriages, completing the delicate move from the turret to individual conservation tanks without causing any damage to the inscribed surfaces on the 13-foot-long barrels. Since completing that task in late 2004, much of the conservators' efforts have focused on documenting the turret's newly cleared and stabilized interior, which they mapped with the aid of digital laser scanners. In August, they began a new excavation campaign aimed at clearing some of the last bits of sediment and concretion from the walls and ceiling - which now forms the floor of the upside-down cylinder. Using their hands to probe the softer deposits and pneumatic air chisels to peel off the concretions, Krop and Grieve - joined by three East Carolina University students working as NOAA interns - spent four weeks removing and then sifting through the seemingly unpromising accumulations. But it didn't take long for the first discovery to galvanize their attention. "We were looking at areas that had been gone over before," Krop says. "And then, all of a sudden, there was a button - and then this piece of chalk in the remaining sediment. "It's always great when you find things like

this - and this was really unexpected." Krop's surprise was intensified by the personal nature of some of the objects that emerged. The buttons, in particular, provide a concrete link to the stormy Dec. 31, 1862 night when the *Monitor* sank - and many of its crewmen struggled to remove their heavy winter coats before leaping to the deck and attempting to reach the lifeboats. "You can just imagine them standing there inside the turret - tearing things off before they jumped into the water," Krop says. "These guys really were scrambling for their lives - and some of them didn't make it." Almost as evocative is a chunk of chalk once used to scribble out messages to the officers and crew on a slate board. According to accounts of the sinking, the captain used one such board to communicate to an escort ship alongside the ironclad, saying that he'd hang a red lantern as a distress signal if the *Monitor* started to go down. Other artifacts, including a simple wooden handle, may have great historic value because of their use during the *Monitor's* pioneering clash with the CSS *Virginia* - also known as the *Merrimack* - in the March 1862 Battle of Hampton Roads. "We've found lots of handles," Krop says. "Some are bone and were parts of silverware. Some are iron wrapped in canvas - and they were parts of the gun tools. But the lanyards for the *Monitor's* guns had a simple handle that looked a lot like this." Even such seemingly nondescript finds as the brass-jacketed bullets can have important documentary value, Johnston says. In an era when most small firearms still used percussion caps - and required their users to ram Minie balls and paper gunpowder cartridges down the muzzle into the barrel - these self-contained breech-loading projectiles represented unusually advanced technology. "Breech-loaders were state-of-the-art - so it's just the sort of thing that you'd expect on the *Monitor*," he says. "They were taking state-of-the-art firearms and putting them on their state-of-the-art vessel. There wasn't much that was old-fashioned about this ship."

Source: <http://www.kentucky.com/mld/kentucky/news/nation/15542705.htm>

DEH COAST AND MARINE SEMINAR PROGRAM – 2006

The final two Department of Environment Coast and Marine Seminars to be held this year are as follows: -

Wed 25th October - Michael Breen (Coast and Marine Conservation Branch) – Mammal Interaction Policy.

Wed 29th November - Liz Barnett (Senior Project Officer, Estuaries Policy, Coast and Marine Conservation Branch) – Estuaries Action Plan.

These will be held from 12.30pm - 1.30pm in the Coorong Boardroom at 1 Richmond Road, Keswick. All welcome.

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

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