

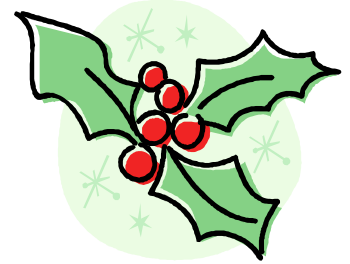


Reef Watcher Production Team

Editor & layout: [Alex Gaut](#)
Contributions welcome: info@reefwatch.asn.au
All contributions are subject to editing.

Deadline for next issue: 15th February, 2008

*Merry
Christmas!*



Reef Watch scoops more awards!

Reef Watch is doing very well in its tenth year with another two awards to bring the total up to four.

In mid-November, Project Officers, Steve Leske and Alex Gaut, dressed up for a gala awards evening attended by the Premier, Mike Rann, Minister for Environment and Heritage, Gail Gago, and Minister for the River Murray, Karlene Maywald.

Reef Watch had been invited because it was a finalist in two categories but it was not until the first, second and third winners' names were called out did we discover that Reef Watch had won first in both categories: 2007/08 Coastcare Award (for South Australia), and the inaugural Premier's NRM Award for Outstanding Integrated Volunteer Project. Reef Watch was the only project to win first in more than one category.

Once again we would like to recognise that these awards are not for us, but for you. They recognise all the hard work and support that hundreds of people have put into the program over the last decade. We hope that these awards will motivate

all of you to continue working with us, and especially continuing to monitor our temperate reefs - they still need your time and energy.

"Reef Watch winning the Coastcare Award is a wonderful tribute to a program that has contributed to a significantly greater understanding of SA's coastal and marine environments" said CCSA CEO, Julie Pettett. The Reef Watch data has been used by the state government in the marine planning process. This is a valuable testament to the quality of the data collected by all of our volunteers.

"Reef Watch's success in the Outstanding Integrated Volunteer Project category was a testament to the superb integration of the project with the larger NRM program for marine protection. It demonstrated both the power and value of volunteer effort in making a difference in integrated NRM

action" said Mr Leske.

"Reef Watch is keen to further expand its programs and is always looking to involve and train new volunteers to develop its work to better understand and protect SA's unique marine heritage" Steve added.

In particular the Intertidal Program needs lots of support and we hope that families and non-divers will embrace this program to help protect intertidal reefs. See page 4 for more information about the Intertidal Program.



From left: Alex Gaut, and Steve Leske, receive the two awards.

Reef Watch 10 Year Celebration and Report

As you are probably all aware this year is ten years since the inception of Reef Watch in 1997. This is a significant achievement, so we had a celebration.

The event was hosted by SARDI Aquatic Sciences, with Rob Morisson, OAM, as MC. Professor Anthony Cheshire was invited to be the keynote speaker. He has given a large amount of time, energy and professional skills to Reef Watch for many years and is credited with being its main founder.

This celebration also saw Reef Watch Chair, Dr David Turner (aka 'Squid') give a short potted history of Reef Watch. He also mentioned the long-awaited ten year report, 'Reef Watch: The first decade of community

reef monitoring'. This important document will have several functions: it serves as an archive documenting the history and background of Reef Watch; it will serve as a model for other community groups around the world; it summarises the results of ten years of volunteer data; and it documents the changes in survey techniques over the last decade. The document is currently in draft form and will be available on the Reef Watch website in the near future.

Conservation Council of SA CEO, Julie Pettett, contributed to the evening by thanking our generous funding supporters and other sponsors, as well as looking to the future of the program.

During the party, Squid

mentioned several volunteers by name who had nominated as making outstanding contributions during the last ten years: Daryl Metters, David Cowan, Neville Hudson, and Tim Kildea. Unfortunately only one of them actually turned up on the night but we will be forwarding their certificates of appreciation.

There was also a competition to win a beautiful picture of a leafy seadragon, donated by Stuart Hutchinson. The image clearly showed a male leafy tail covered in many eggs - to win the prize you had to guess the number of eggs. By sheer coincidence, one of the early Reef Watch Project Officers, Sheralee Cox, won the picture with a guess of 106 eggs.

Can you help?

We have had two requests for assistance from marine ecologist, and long-time Reef Watch supporter, Janine Baker:

1. A good photograph of a skate (Family Rajidae) to be used as the frontispiece of a chapter in an electronic book on bony and cartilaginous fishes in SA (with acknowledgement of course, but no payment, unfortunately). Ideally the picture would be from SA waters, or at least of a skate that occurs in SA.
2. Janine, along with Scoresby Shepherd and other divers are working on a project to survey the distribution of uncommonly recorded and cryptic reef fishes at various locations in SA, starting with the GSV and KI area. Some of these are very small and extremely hard to find. The project is aiming to increase knowledge of the distribution within SA and also provide habitat notes for about 50 species, including some of the weedfishes, clingfishes, eel-blennies and snake-blennies, less common syngnathids, anglers, prowlfishes and velvetfishes, amongst others. A few of the less common wrasses and leatherjackets are also included. If you would like to be part of this project, by providing location data and/or photos of these species from your dives anywhere in SA, please contact Reef Watch, who will put you in touch with Janine.

Please pass on your photos or expressions of interest to Alex and she will forward them on to Janine.

We're moving!

After more than twenty years, the Conservation Council of South Australia is leaving Wakefield Street.

Reef Watch is a program of the Conservation Council and therefore, we'll be moving too. As of Friday 14th December the Conservation Council will cease trading. During the following week we will be packing and moving to **157 Franklin Street** (1st floor).

We will be open for business again as of **Monday 7th January**. So, if you are thinking about popping in to pick up t-shirts, leaflets or other Reef Watch gear please take note of these details.

Reef Watch gifts

New **t-shirts** are finally available again! This time we have women's as well as men's sizes and in two colours: navy and teal. The t-shirts have a white Reef Watch logo on the left front 'pocket' area and a large Reef Watch logo and the website on the back.

Only \$15 each!!

Other Reef Watch gear still available includes mask straps (\$10) and 'Beyond the Coast' pair of DVDs (\$5).

Marathon Dive 2008 - Sunday, 6th April

Get out your diaries - next year the Marathon Dive is on Sunday 6th April.

Almost every major event that this state hosts, and Easter, have been crammed into March for 2008, so to let you all have as many weekends as possible during March, we have decided to move the Marathon Dive to the first Sunday in April.

We are now putting out the call for volunteers for the day. We will need all sorts of help, so whether you can dive, snorkel, drive a boat, or cook the BBQ your help will be greatly appreciated. We will need boats, boat operators, dive supporters and many other supporting roles as well as **LOTS of divers and snorkelers**. If you would like to be involved please let us know soon so that we can start preparing well in advance. Reef Watch needs you!

Once again, we ask that you give a day or even half a day to monitoring the fish at Port Noarlunga Reef - a significant reef on the Adelaide metropolitan coastline.

This growing data set is becoming more and more valuable as volunteers continue to monitor the reef. Please pass this information around you dive club and your dive buddies. Make sure your club puts it in their dive calendar for 2008!



Reef Watch and the 'Butterfish' people



Last summer, Reef Watch Project Officer, Steve Leske, spent a weekend training the Narrunga people of Point Pearce, who call themselves the butterfish people. The butterfish is an important Dreamtime ancestor for the Narrunga people.

Steve said it *'was a pleasure'* to train and dive with the Narrunga men. The group undertook some indoor training as well as two snorkelling sessions off Point Pearce. They laid out survey lines and identified fish.

According to Steve, the Narrunga men were excellent at identifying the fish and needed little training in this aspect. Steve also noticed that the butterfish people were *'like fish in the water - natural divers'*.

Some of these Reef Watch trainees may now train for their scuba certificate, providing them with career opportunities in tourism and survey work. Hopefully, they will continue to undertake monitoring surveys for Reef Watch too. Steve intends to return to Point Pearce this summer and continue the connection with the butterfish people.



Normanville Intertidal Info Night



Residents of Normanville and further afield were entertained with an information night about the Reef Watch Intertidal Monitoring Program on November 8th. Twenty people attended the talk, which was held at the Normanville Resource Catchment Centre. A sausage sizzle was kindly provided by the Centre prior to the talk starting.

The talk not only promoted the program but gave insight into intertidal reefs and their importance and what we can do to further protect them. Many were amazed to learn that of 33% SA's coastline is intertidal rocky platforms, about which there is minimal historical baseline data on the species abundances and distributions. This fact highlights the importance of the program, which aims to gather the baseline data and assess the health of these

reefs.

The information session was followed up by a beautiful morning at Lady Bay on Saturday 10th. Many attendees from the talk came for a hands-on experience with the program. All of the methods were taught to the group and they will be happy to know that the data gathered will be stored in the database and will provide a baseline from which to work.

I would like to thank Sophie Piron, Co-ordinator of the Centre, for providing the space, promotion and assistance with the evening. Also, thank you to Maryann Theel, volunteer at the Centre. Similar information sessions can be held for your group and/or region please contact Agnes (details below) if you are interested.

Intertidal Calendar 2008

The following dates have been scheduled for intertidal monitoring/training. If you wish to participate please **register** with contact details. There is on occasions last minute changes to scheduled dates (especially weather influenced changes) which I would need to contact you about. Please note dates are not set in stone so if too many from the group can not attend I am happy to re-schedule to a weekend before or after, providing the tide is suitable.

Snapper Point, Aldinga

Date	Meeting Time	Tide height & time
Sat. Dec. 8 th	9:30 am	0.28 m @ 11:24 am
Sun. Jan. 13 th	12:00 pm	0.21 m @ 2:46 pm
Sat. Feb. 9 th	10:30 am	0.09 m @ 12:21 pm
Sun. March 9 th	10:30 am	0.17 m @ 12:47 pm
Sat. April 12 th	9:30 am	0.45 m @ 11:58 am

Where to meet: Snapper Point car park, Esplanade, Aldinga Beach. It is opposite a group of shops.

Lady Bay, Normanville

Date	Meeting Time	Tide time & height
Sun. Dec. 9 th	9:30 am	0.14 m @ 11:45 am
Sun. Jan. 12 th	12:00 pm	0.16 @ 2:00 pm
Sun. Feb. 10 th	10:30 am	0.11 m @ 12:35 pm
Sat. March 8 th	10:30 am	0.15 m @ 12:30 pm
Sun. April 13 th	10:30 am	0.54 m @ 12:10 pm



Volunteers at Lady Bay undertaking a timed intertidal survey.

Where to meet: If coming from Normanville turn right at the Lady Bay sign on Main South Road. It is not far after the bridge. The Reef Watch logo will be placed on the turn off sign.

Yilki Beach, Victor Harbor

Date	Meeting Time	Tide time & height
Sun. Jan. 20 th	10:30 am	0.19 m @ 12:33 pm
Sat. Feb. 16 th	9:00 am	0.09 m @ 10:42 am
Sun. March 2 nd	8:30 am	0.24 m @ 9:53 am

Where to meet: Franklin Parade, Victor Harbour. We will meet near the shops.

To register or for further information, please contact: Agnès Cantin, Reef Watch Intertidal Project Officer.

Agnes: intertidal@ccsa.asn.au

Adelaide's Reef Health

A recent report co-authored by Reef Watch chair, David Turner, has provided in-depth detail about the health of subtidal reefs in South Australia.

The report provides a useful summary for Adelaide metropolitan sites:

- status of reef health;
- The establishment of baseline information for reefs in non-metropolitan areas (specifically Fleurieu and Yorke Peninsulas); and
- A comparison of metropolitan with non-metropolitan reefs.

Site	Score (from 0-100)	Status
Semaphore Reef	20	Poor
Broken Bottom	31	Poor
Glenelg Barge	29	Poor
Glenelg Dredge	35	Caution
Glenelg Blocks	38	Caution
Seacliff Reef	48	Caution
Hallett Cove	76	Good
Horseshoe Inside	15	Poor
Horseshoe Outside	24	Poor
Noarlunga North Inside	45	Caution
Noarlunga North Outside	76	Good
Noarlunga South Inside	34	Poor
Noarlunga South Outside	38	Caution
Noarlunga Deep	46	Caution
Southport	51	Caution
Moana Inside	53	Caution
Moana Outside	66	Good
Aldinga Shallow	62	Caution
Aldinga Deep	35	Caution

These data were collected in 2005 and are far more extensive than previous monitoring years, the first being 1996 with an expanded program in 1999. The 2005 survey program aimed to achieve a number of objectives including:

- An up-to-date assessment of the condition of reefs along Adelaide's metropolitan coast;
- A comparison of the condition of reefs in 2005 with past observations (1996 & 1999) to determine whether there was any shift in the structure of the biological communities associated with the metropolitan reefs;
- The development and interpretation of a number of indices to assist in determining the

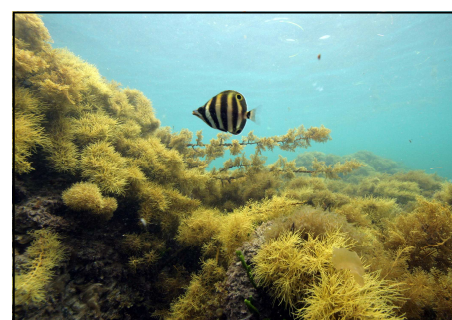
status of reef health; (Seacliff to Southport), in particular those at Horseshoe Reef and some sites on Noarlunga Reef, with a loss of robust brown macroalgae, establishment of mussel mats, and in some instances, the development of large areas of bare substrate. Southern reefs (Moana to Aldinga) have remained much the same and appear healthy, retaining most of their robust macroalgal canopy. Similar analyses of sites surveyed during 2005 on the Yorke and Fleurieu Peninsulas found reefs were generally healthy, particularly when compared to metropolitan reefs. Some sites (notably Point Souttar and Point Riley) had a relatively low cover of canopy macroalgal species, but this cannot necessarily be interpreted as poor condition without further information.

Generally, the north to south gradient in reef health observed across metropolitan reefs in 1996 and 1999 was also observed in 2005. Based on macroalgal functional group composition and cover, northern metropolitan reefs (Semaphore to Broken Bottom) appear to be in poor condition, with red foliaceous and turfing macroalgae dominating. There are signs of further declines (compared to previous surveys) on central metropolitan reefs

In order to obtain a more robust indication of reef status, the team of scientists, from SARDI Aquatic Sciences, developed ten additional health indices. These indices were averaged to obtain an overall score for each reef and then grouped into one of three 'stoplight' categories: poor condition, caution recommended and good condition. This approach indicated a more complex picture than simply scoring on the macroalgal functional group cover. A large number of sites across the metropolitan region fell into the 'caution recommended' category, even within the generally healthier southern zone. Similarly, a few sites on the Fleurieu Peninsula coast rated caution, while four sites on Yorke Peninsula rated either caution or poor. None of the non-metropolitan sites scored as low as northern sites on the Adelaide metropolitan coast.

This method has drawbacks. For example, Point Souttar is in an area of naturally low current flow and high sedimentation, and may never have supported large canopy macroalgal species. Invertebrate diversity was high at this site; however, the nature of the indices used has meant that this reef has ranked low. It is important to remember, for all sites, particularly those sampled for the first time, that the data provide a snapshot of the system. The real value of this type of survey is that it will act as a baseline and enable comparisons over time.

The use of a range of indices targeting different ecological aspects of reef ecosystems has led to a better understanding of the nature and complexity of these communities.



Juvenile moonlighter at Second Valley by Alison Eaton.

Dive & snorkel calendar Dec 2007-08

Date	Club	Details
Sunday 2nd December	Southern Ocean Divers (SODS)	Hallet Cove. Meet in SLSC car park, 9 am.
Monday 3rd December	Adelaide Uni Scuba Club	Training dive, Port Noarlunga. Meet at jetty car park, 6 pm.
Saturday 8th December		Hardwicke Bay, Yorke Peninsula . Meet in BBQ shelter at 12 for BBQ lunch followed by snorkel session.
Sunday 9th December	Adelaide Uni Scuba Club	Northern Outer (by boat). Meet at club rooms, 9 am. Dive will be followed by BBQ supplied by Reef Watch.

Steve has got a busy season coming up with a visit to **Port Lincoln** in progress as we go to press and dives with the **Fleurieu Dive Club** and SODS planned for later in

December and January.

He is planning a trip to the **South-East** region during February for both intertidal and subtidal training and monitoring sessions.

Please contact Steve if you would like him to speak to your club about Reef Watch or to organise some training.

Steve: info@reefwatch.asn.au

Medical marvel a head turner

A pile of rotting lobster heads is turning into a valuable resource as chemists discover the amazing properties and applications of chitin—the starch-like material in the hard exoskeletons of crustaceans.

Chitin is turning out to be remarkably versatile. When formed into membranes, it is used in high-definition speakers and in water filters.

Chitin can be further processed into chitosan, a derivative with antibacterial and blood-clotting properties, which is already being used in new trauma bandages that can cope with extreme bleeding. The same compound is also being worked into dental fillings, and as an additive in mouthwash.

More than 600 patents have been lodged for chitin-based products between 1996 and 2002, and demand for the raw material is on the rise, especially for the high-purity grade that comes from the more sophisticated extraction technologies. Globally, there are about 20 major producers. However, it is estimated that 90% of the world's 17,000 tonne capacity is based on 'dirty' extraction technology, which uses hydrochloric acid and caustic soda, and this is said



Photo: David Muirhead

to be holding back market potential.

Given this developing market, it is surprising that in Western Australia the lobster heads from the state's catch are either dumped in landfill, which is a cost to the industry, or shipped for a pittance to Japan, where they are turned into broth powder.

Using funds provided by the Fisheries Research and Development Corporation, two researchers from the University of Western Australia have developed a new clean and green chitin extraction method. Using this

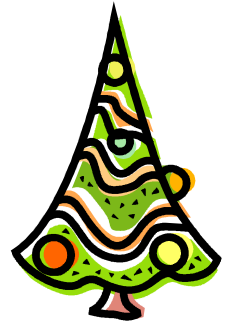
new method they can produce chitin, chitosan and glucosamine.

The two chemists are in the final stages of securing patents for their procedure and are about to look for an industry partner to fund a pilot plant.

This research provides a potentially lucrative solution to dealing with waste.

Source: Fisheries Research and Development Corporation News, June 2007, page 9.

Reef Watch Quiz Night 2007—the results!



Team	Score
Dept of Environment & Heritage	37.5
Australian Marine Sciences Association	37
The Incredibles	34.5
Walk Against Warming	34
Coastal Waters	34
Friends of Gulf St Vincent	31
Coastal Waters 2	30
Oceans 9	28.5
Flinders 1	27.5
Seas the Day	27
Eva	27
Diver's Delight	26
Underwater Explorers Club	25.5
Quo Vadis	25
Wooden Spooners	21.5
Urban Forest	21

Here's what you've all been waiting for! How did you go? This year's Quiz Night was fantastic fun and lots of people won all sorts of prizes from air fill cards and a dive on the Hobart to chocolates and wine. We even auctioned off some 'Discover Scuba' experiences, which were very popular.

We estimate about 150 people attended the night and got some very positive feedback along with some really useful feedback about how to improve for next year. See you there!



One of the teams examining the species image chart for a prize.

Marine Discovery Centre celebrates 10 years

The Marine Discovery Centre, part of Star of the Sea School, has developed an amazing learning centre with temperate marine life and unique interactive models. This has taken ten years of whole school projects and has been rewarded with 36 International, National and State Community, Environmental and Education awards. This school based community project not only serves its 491 students but over 6,000 annual visitors.

The Centre is very well served by a dynamic group of 42 volunteers who were also acknowledged as South Australia's best volunteer group in the Environment/Education category for the SAMDBNRM Awards. The volunteers provide 8,400 volunteer hours annually.

The MDC has gone from

strength to strength to become widely acclaimed as Adelaide's most popular school excursion and community visit site (Adelaide Matters magazine). The Centre, which is booked out 2 years in advance, is extending its facilities to cater for the demand. The new Centre will be completed by mid-2008.

Like Reef Watch, the MDC is also 10 years old this year and celebrated on Friday November 16th with a presentation highlighting the past 10 years, with instrumentals and songs by its brilliant School Band and an Award presentation to the Yr 7 MDC leaders by Paul Caica MP.

The year 2007 has been an outstanding year of growth, with major highlights including:

- the website being the **world's** best "Marine Centre" site (Google &

Yahoo)

- new interactive models – "Good Fishing Practices"
- SALA festival coastal signs project with 4 coastal councils
- "Alphabet Chart" designed by Artist-in-Residence, Alison Harvey
- Virtual Tour for coastal signs – on our website – featuring 27 signs
- developing a curriculum package for schools
- 2 new Awards – Big Picture Innovation and Coastcare
- the fourth Meeting of the National MDC network in Perth/Bunbury

MDC Director: Tim Hoile: phone/fax (08) 8356 8943 or thoile@star.adl.catholic.edu.au

Many thanks to our generous sponsors and supporters

CCSA acknowledges that Reef Watch currently receives most of its funding from the Adelaide and Mount Lofty Ranges Natural Resources Management Board through the Natural Heritage Trust.

Additional support is provided by the Eyre Peninsula, and Northern and Yorke NRM Boards.

Other supporting organisations include:

- Primary Industries and Resources SA via SARDI Aquatic Sciences
- Department for Environment and Heritage

Reef Watch also acknowledges the generous support of the diving industry for Reef Watch events.



Government
of South Australia



Australian Government



Conservation Council
of South Australia Inc

If undeliverable return to:

Conservation Council of SA
120 Wakefield Street
Adelaide 5000
SA

Postage
Paid
Australia



Help save time, money and the environment! Please send me Reef Watcher via email only. Email your details: info@reefwatch.asn.au

Merry Christmas to all Reef Watchers!!

Have a fabulous holiday season. Remember to be responsible:

- **Don't drink and dive!**
- **Do not take anything out of the water;**
- **Watch your buoyancy so you don't hit anything with your gear.**

If you are diving in South Australia during the holidays, remember to take your Feral or In Peril slates. Tell us about what you see and what you

DON'T see. We have been advised by our scientific committee that it is just as important to tell us where you **don't** see the 'In Peril' species on your slates. This 'negative' reporting is extremely important to mapping out existing distributions. We will be altering our online reporting account for this kind of report and we will let you know as soon as it's ready.

Keep on monitoring at every opportunity and keep on providing us with data.

