



Issue 7.1 - February 2004

1. Introduction
2. Marathon Dive
3. Reef Health Monitoring
4. Adopt A Reef Program
5. Feral Or In Peril
6. Estuary Monitoring Program
7. Brief News
8. Letter from a Reef Watch diver

INTRODUCTION

It's been a long time between newsletters, but not between dives! Most of our limited resources have been focussed on getting back into the water and training divers in Reef Watch methods and identification skills, and in the office most attention has been placed on developing both the monitoring and the *Feral or In Peril* kits.

We do expect to post more regular updates during 2004 to better inform those of you who don't have internet access, but if you want to get the news at the speed of electrons rather than the postie's bike, and save us the postage at the same time, then email info@reefwatch.asn.au (and tell us your name), and we'll email any important news or future editions of this newsletter.

Information about Reef Watch also often appears in the following publications:

- Waves/Ripples (Marine and Coastal Community Network)
- Ecovoice
- Briefs (Conservation Council of SA)
- Dive Log (SA Snippets section)

MARATHON DIVE

Reef Watch is planning to bring Sea Week to an exciting conclusion with the return of the "marathon" reef monitoring day on Sunday, 14th March, at Noarlunga Reef, commencing at 8.15am. The "marathon" is held underwater, with dives and snorkels at 9am, 11am, 1pm and 3pm. The marathon part refers to the number of divers in the water, not the number of hours people will stay down!

This event has proved to be popular in the past, with up to 100 divers and snorkelers participating in each of the previous Marathons in 1999, 2000 & 2001, helping to collect monitoring data for Reef Watch.

It is expected that this year's event will continue the festive tradition from previous years, with a BBQ being provided for divers, snorkelers and helpers, and there will be several displays.

With the support of a number of volunteer PADI divemasters and instructors, Reef Watch will provide appropriate supervision and/or training at the event, overcoming the insurance issues that have forced the event to be abandoned in recent years. Divers who have already completed the Reef Watch training course will be able to get stuck into some surveys, while for the others there will be opportunities to progress their "Reef Watch" qualifications.

Apart from having fun and learning more about life on the reef, participants will make a sound contribution in terms of the information gained about Noarlunga Reef. Analysis of the data gathered by community participants in past years shows a strong correlation with that gathered by trained scientists, and is a significant component of the baseline data collected to date on the ecology of our unique reefs.

Information will also be available throughout the day about Reef Watch's *Feral or In Peril* program, as well as the new estuary monitoring program which is an interesting way for the non-diving community to become involved in environmental monitoring.

Divers and snorkelers are encouraged to contact Reef Watch by signing up on the web site (Events section), emailing info@reefwatch.asn.au or by phoning Reef Watch at the Conservation Council of SA, 8223 5155.

Comparison of the five most visually dominant species recorded by recreational divers as part of the 2000 Marathon Dive, compared with data collected by scientific divers as part of a report to the EPA (1998).

Marathon Dive Data (2000)		Scientific Data (1996)	
Fish Species	Max. abundance (per 50m transect)	Fish species	Max. abundance (per 50m transect)
Hula	11.9	Hula fish	19.8
Leather Jacket	7.9	Leather Jacket	6.9
Talma	2.4	Silver Drummer	3.4
Old Wife	1.8	Talma	1.5
Magpie Perch	1.5	Wrasse	1.2

*scientific data can be viewed as part of a report to the EPA: Cheshire *et al.* (1998) *Assessing the status of temperate reefs in Gulf St Vincent II: Survey results.*

Want to get involved in Reef Watch?

For diving or snorkeling activities, visit our website, follow the quick link to "next dive".

To help with our administration and development, contact Reef Watch at the Conservation Council, 8223 5155, info@reefwatch.asn.au.

REEF HEALTH MONITORING

Since the last newsletter there have been a number of developments.

(a) In-water training is again being provided through a PADI approved dive course designed and taught by Reef Watch. There are four dives in the course:

- Fish identification (also counts towards a PADI Advanced Open Water certification)
- Benthic Quadrat
- Fish count
- Line Intercept Transect

The following people have now completed the course:

Ali Bloomfield

Bobby Rice

Gerry Butler

Nick Turich

David Cowan

Ben Brayford

Kevin Smith

Julia Murrie

Steve Cally

Janis Chippendale

Dave "Dingo" Deane

Alan Charlton

Mike Tokley

Heather Bird

Rona Spicer

Pat Manno

Stephen Forrest

A further 70 people are some part of the way through the course.

Course graduates are given a Reef Watch monitoring kit to allow them to continue monitoring the reefs in independent groups. Funding for these kits has been provided by a grant of \$1800 from the PADI Project Aware Foundation.



(b) The survey manuals have been updated. They can be downloaded from the web, or we can send them to you. The fish survey method has changed slightly – divers now do a second pass across the 50m transect as they wind in the line, checking for fish under ledges and canopy plants. A set of web pages with identification notes and other information about each of the Reef Watch fish species has also been completed and will have more information added as it becomes available (e.g. on the conservation status of each fish species) – thanks to Ali Bloomfield, Jane Savage and Brad Shaw for their work in this area.

The benthic (sea floor) identification manual is nearing completion. This manual will complement both the existing quadrat and line intercept transect (LIT) manuals. A set of web pages will also be produced with identification notes and other information about marine plants and invertebrates. Thanks to Julia Murrie for her thorough work in compiling the relevant information.

(c) New versions of the Reef Watch slates have been produced. Importantly, all the design and artwork is now maintained in digital format, which will enable them to evolve in response to feedback from Reef Watchers. Those of you with the old slates need only to contact us and we will send out adhesive stickers with the new design.

Features revised on the new fish slate include:

- the ability to tally survey details and fish counts directly onto the slate - fish data sheets no longer need to be attached with rubber bands.
- addition of commonly sighted fish such the Magpie Perch, Zebra Fish and Long-finned Pike as well as the "In Peril" species and some others.
- simplification of many families so that it is only necessary to recognise that it is, for example, a sweep, weedfish, cowfish or hulafish without having to distinguish the actual species. There are also less wrasse and leatherjacket species, and a few other species have been removed.



- fish in the same family are grouped together.
- maximum sizes shown as numbers rather than bar graphs.
- double ended pencils attached to the slate by non-tangling tubing.

Feedback received so far indicates that the new slates make it much easier to do fish surveys!

The benthic slate has changed very little for the benthic flora but the benthic fauna codes have been significantly overhauled.

Thanks to Brad Shaw for his dedication and tradesmanship in preparing the kits.

THE “ADOPT A REEF” PROGRAM

Dive clubs are rapidly signing up to our Adopt a Reef program. The idea is for a club to schedule at least four monitoring dives (one per season) on their adopted reef. Reef Watch will provide any training required. The reefs that have been adopted so far are:

- Port Noarlunga Reef - SODS (regular players whose efforts over recent years were rewarded with a grant from Onkaparinga Council to progress this monitoring)
- Lassiter's Reef, Second Valley - Scuba Divers Club
- Oliver's Reef (and others), Victor Harbor - Fleurieu Dive Club
- Hallett Cove - Marine Life Society of SA
- Seacliff Reef - Adelaide University Scuba Club
- Carrickalinga Reef - Dingo Diving
- Golf Course Reef, Port Vincent - Port Vincent Marine Team/Primary School
- Nick's Folly (reef near Marion) - Wet Spot Dive Club

The SODS deserve a special mention not only for their monthly club monitoring sessions with a regular average of 15-20 divers, but also because their efforts over recent years were rewarded with a grant from Onkaparinga Council to progress this monitoring.

Significantly, three of the reefs (Olivers, Lassiters, Carrickalinga) lie within the developing Encounter Marine Protected Area (MPA). Baseline information will be vital to the future management of this area. The Department for Environment & Heritage and Primary Industries SA have provided Reef Watch with significant funding in recognition of its role in helping the community to get involved in monitoring within and outside of MPAs.

FERAL OR IN PERIL

The Reef Watch *Feral or In Peril* program has been designed to enable recreational divers to help keep track of a number of marine organisms that are of special concern. As its name implies, *Feral or In Peril* has been designed to identify introduced species that are a potential threat to the marine ecosystem as well as local species that may be in danger of disappearing from our reefs.

Feral Species

Over the last couple of hundred years, many plants and animals have been introduced into Australia, and of these several have become major problems. Introduced species have entered our marine environment in a number of ways both accidentally and deliberately.

Unfortunately we know comparatively little about the way that the marine environment functions and hence it is difficult for us to know exactly what effect these introductions will have. However, experience from areas with similar marine environments (e.g. Victoria, Tasmania, New Zealand) suggests that the effects can be quite devastating.

Once a pest becomes established in the marine environment, it is almost impossible to eradicate it because of the difficulties in operating underwater. Until now most work has focused on monitoring the rate of spread and attempting to understand the effects of these introductions.

However, recent experience has shown that it is possible to eradicate a 'pest' species, providing the population is discovered early enough, and as relatively few people ever see the underwater environment, it is important that every diver and snorkeler keep a look out for these species, and report them promptly.

In Peril Species

Many marine species in Australian waters are virtually unknown. For those that have at least been identified, there is precious little information regarding life history, ecology or population. The species included in this kit are some of the South Australian natives that are considered to be of conservation concern. They are labelled as 'in peril' because scientists do not have enough data to assess whether or not they are threatened or vulnerable.

Monitoring Kits

To aid divers in identifying species of concern, Reef Watch produced a kit that consists of two waterproof cards containing photos and basic information on how to spot these organisms. The slates are supplemented by an information brochure and manual that goes into greater detail about the individual species and the program in general. Many people have worked on this project and are listed in the manual "acknowledgements" page. More recently, thanks to Pamela Newland and Joyce for their efforts in laminating and finishing off the cards. The cards and brochure can be obtained through dive outlets or by contacting Reef Watch. The manual can be downloaded as a PDF:

[www.reefwatch.asn.au/PDF/ Feral or In Peril Manual v2_0.pdf](http://www.reefwatch.asn.au/PDF/Feral%20or%20In%20Peril%20Manual%20v2_0.pdf)

If you are unable to access the internet to display or print this manual then Reef Watch can provide one for a small charge to cover photocopying and postage.

Reporting Sightings

The best way to report sightings of *Feral or In Peril* species is via the on-line database (there is a quick link on the home page), but sighting sheets are available from Reef Watch which can be returned by fax on (08) 8232 4782.

Onkaparinga Estuary Monitoring Program

Reef Watch has recently expanded its activities into estuary monitoring. This will provide information which complements the data gathered by divers, as well as providing an opportunity for non-divers to get involved. We are currently completing a series of identification sheets for seagrass, macro-invertebrates, shorebirds, and surrounding vegetation. Monitoring methodologies for these groups are also being established.

We are also developing materials for use in community education sessions, and for the Reef Watch and Onkaparinga Catchment Water Management Board websites. Regular education sessions will be conducted in the Port Noarlunga area on an ongoing basis.

Anyone interested in getting involved in this program should contact Chris Ball on 8223 5155 or at coastal@ccsa.asn.au.

BRIEF NEWS

Hobart monitoring

Reef Watch will be undertaking monitoring of the HMAS Hobart, sunk in 30m, 5km offshore from Wirrina. Much of the monitoring will take place on the top deck (<18m), but there will be some deeper work. This will be a task for seasoned Reef Watch divers who have completed the PADI Reef Watch Survey Diver course and have appropriate levels of deep and wreck diving experience.

Search for Seagrass Seeds

David Miller from SARDI (8200 2429, Miller.David2@saugov.sa.gov.au), and Sue Murray-Jones (8124 4895, murray-jones.sue@saugov.sa.gov.au) are asking divers/snorkellers to please keep a look out for seagrass flowering or seeds. They just need to know when, where and whether there were lots or just a few. They also want to get records of when seeds start turning up on beaches, so also let them know when and where this happens.



Brochures

Mingy on Bird has put together an excellent illustrated brochure to advertise Reef Watch activities. The brochures are being distributed to dive shops and other appropriate outlets.

Farewell to Shane Penny

Shane Penny was on the Reef Watch staff for several months last year following some lengthy stints as a volunteer in recent years. Shane worked on the *Feral or In Peril* kits, fish slate and report, but his most notable work was with the Onkaparinga Estuary Monitoring Program. Shane heads north to Queensland to complete his marine biology studies, but we look forward to his return.

Fish cleaning stations

Scoresby Shepherd and David Muirhead are putting together observations on fish cleaning behaviour which is common in the tropics but has seldom been recorded in temperate waters including South Australia. This behaviour usually involves a small "cleaner" species such as the moonlighter and large fish such as zebra fish which periodically stop outside the moonlighter's hole, stand on their tail, and wait for the moonlighter to nip external parasites which attach themselves to the fish's scales. Information sought includes the sites at which it occurs, time of day and time of year, and any photographs. Scoresby can be contacted at 8200 2411, or on Shepherd.Scoresby@saugov.sa.gov.au.

Port Vincent Primary School sweep the awards

The Port Vincent Primary School Marine Team recently accepted the 2003 "Coastal Care State award for Excellence", completing a unique quadrella. They are now recognised as the winner of KESAB, Landcare, Coastcare and SA Great major awards! Their trophy cabinet is almost as diverse as the marine life in their aquariums, on their posters and in their other displays and projects. They have been monitoring "Golf Course" reef using the Reef Watch fish survey method over the last five years, and have recently commenced monitoring the new marina at Port Vincent.

Blue Groper Expeditions

The third of a series of scientific expeditions to survey western blue groper populations was completed in early December last year. Dr Scoresby Shepherd led a group of ten Reef Watchers to the West Coast between Streaky Bay and Elliston. The latest report can be downloaded from the web site, but if you don't have internet access then please contact Reef Watch for a hard copy.

LETTER FROM A REEF WATCH DIVER

Happy New Year!

As part of the build up to Christmas I have found myself reflecting on the past year and considering what may be sensible and achievable New Year's resolutions. This year I want to avoid resolving to stick to a budget, get fitter, keep the garden under control or other mundane and previously attempted ideas. What I really want to do this year is to get regular with some survey work, not just think about it.



I get a lot more enjoyment and satisfaction from diving than I do from running and while it was an achievement to run 100 miles in January in 1997 I don't feel as though I need to do it again!

I enjoy the fish counts most at the moment because I find them easier. I've always been a bit of a fish head. It will be good to return to the same places and to compare results. My problem with quadrant and LIT is that I just haven't done enough of them to be quick and confident.

So.... there's an achievable and rewarding challenge. I'll pick a spot that I'm happy to return to and get stuck into some quadrants. As well as getting some good data I'll have developed my skills and be better able to appreciate the differences between sites and perhaps seasonal changes too. I may do some gardening while my gear is drying.

Best wishes to other reef watchers for Xmas and New Year,

Kevin Smith.

Reef Watch currently receives most of its funding from the SA Department for Environment & Heritage.



The majority of future funding is anticipated to come through Integrated Natural Resource Management funding.

A number of other organizations have provided some funding or in-kind support, including:

PADI Project Aware



PIRSA



SARDI



City of Onkaparinga



SA Dive Supplies

Dolphin Diving

Underwater Sports



Conservation Council
of South Australia Inc

If undeliverable return to:

Reef Watch
Conservation Council of SA Inc.
120 Wakefield St
Adelaide 5000

POSTAGE
PAID
AUSTRALIA