



REEF WATCHER

Issue 8.3 - September 2005

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If you currently receive this newsletter in the post and would prefer to receive it by email then let us know at info@reefwatch.asn.au. If you do not have access to the internet and need help obtaining any on-line reports or other information we refer to in this newsletter, call us on 8223 5155 and we'll mail you a hard copy.



Jarrold Stehbens

The Reef Watch Steering Committee and the staff of the Conservation Council wish to express their deepest condolences to the family and friends of Jarrod Stehbens.

Jarrold was a participant in Marathon Dives and helped the program in many other ways. He touched everyone he met with his sense of humour, wonderfully positive nature and "can do" attitude.

The events of last month have naturally evoked many feelings, but what emerges most strongly for us is gratitude for having had the chance to know Jarrold and to share some of his passion for the sea and for marine ecology.





Identification Workshop

Many of SA's leading marine biologists and educators have volunteered their time to teach you more about and improve your ability to identify algae, fish and invertebrates.

- When?** Sunday, 13th November, 10am – 4pm.
- Where?** SARDI Aquatic Sciences Laboratories,
2 Hamra Ave, West Beach (next to the minigolf course).
- What?**
- Hear a short talk on reef ecology then gain identification skills through “hands on” experience in small groups guided by experts.
 - Lunch and refreshments included.
 - Crèche provided on request (with touch tank and videos)
- How much?** \$15 waged, \$7 unwaged, children under twelve free when accompanied by an adult.
- RSVP?** Essential please, info@reefwatch.asn.au, 8223 5155
-

Reef Watch Member Questionnaire Results

In June, Reef Watch distributed a questionnaire in printed form to 160 recipients, and electronically to several hundred. In total, there were 71 responses. This has certainly provided some useful information, but we would like more responses and have therefore kept the survey open. So if you still have your last Reef Watcher handy, please consider digging out the enclosed questionnaire and send it on if you haven't already done so. If you do have access to the web, you can complete it online at:

<http://www.reefwatch.asn.au/cgi-bin/database/survey2.pl>

Here is a summary of the responses for a few of the topics covered. We will cover the rest in the next edition.

Training & Monitoring

The Reef Watch course has been running for two and a half seasons now, with 61 divers completing the course and twice that number part of the way through the course. Key findings include:

- all 71 respondents agreed or strongly agreed that the community had a role to play in monitoring reefs and other marine environments. All but five respondents agreed or strongly agreed that community divers/snorkelers are capable of collecting data that is valid for monitoring reef changes.
- of the 61 divers who have completed the course, 28 of them responded to the questionnaire, as did another 7 divers who had undertaken training during the early days of Reef Watch. This group had completed on average more than 6 monitoring dives each (one respondent had done 80 monitoring dives), and planned to do an average of just under two dives per season – slightly more in summer and slightly less in winter. Five divers did not intend to do any further monitoring dives.
- the respondents included 11 divers who were planning to start the course and 18 that had started already. It was noticeable that those who have started or completed the course indicated that they would be prepared to do a greater number of monitoring dives per year than those who were planning to do it but had not yet started.

Marathon Dives

All of the 31 respondents who had attended a previous Marathon Dive were interested in participating in future Marathon Dives. In total, 56 divers were interested in attending one or more Marathon Dives per year.

Only five of these divers thought the name of the event was not appropriate, although fifteen were undecided.

Here are some of the comments respondents made about what they find attractive about the Marathon Dive in comparison with other dives:

- *Variety of dives, combined with the social aspect. Oh... AND the BBQ!*
- *The company of more divers*
- *The amount of people which attend, signifies the communities enthusiasm for marine conservation*
- *Power of numbers, party atmosphere, more variety (boat dives).*
- *Opportunities to socialise, network & learn.*
- *Meet more like-minded divers, lunch, free air fills*
- *Lots of other people - good to get a snapshot*
- *I like the marathon dives because I usually get to dive with different people every time*
- *Got to see different parts of the reef than normally, i.e. outer reef and reef further south*
- *Doing something for the environment and biodiversity in an area you feel comfortable and excited about. Time to meet other divers and time to understand different levels of the commitment and understanding others have in relation to yourself.*
- *Big community event which feels as though something of importance is being achieved, also fun and great to meet others like-minded.*

But on the other hand:

- *Prefer other dives, am not sure how much a marathon dive really achieves, personally prefer small groups on monitoring dives, less messy, more time!*

Some important feedback about how to improve the event was also gained:

- *Pre sell dives so you know how many people are coming*
- *Need a faster way to get data into the system. Didn't like having to wait - no time to do everything else between dives.*
- *Maybe some live music, touch tanks.*
- *Attract wider community by placing a greater emphasis on snorkelling and fish identification with on-land briefings*
- *public on the jetty needs to be properly controlled arresting jetty jumpers may help control problem if not change the site !!*

About half of the 56 respondents who are interested in attending future Marathon Dives indicated that they would attend a Marathon Dive if it were held at Second Valley. One respondent raised some interesting issues:

I wouldn't like to see a Marathon dive at Second Valley as the impact on the area and on Lasseter's Reef could be significant. Also there are many shellfish in the area which I have noticed others divers pick up and take with them and I am sad to see others picking up Volute shells and placing them in their BCDs. I feel that could occur and by spotlighting the region, the impact on the reefs could be quite significant. Already it is a popular dive site and car parking facilities are very limited.

There does seem to be sufficient interest to hold a Marathon Dive at Second Valley early this summer (see below) and we are confident we can manage most of the above concerns – although a lot will depend on individual divers!

The “Feral or In Peril” section of the questionnaire did cover some of these issues and the responses may to some extent ease the above concerns:

Only half of the respondents have a set of *Feral or In Peril* slates or otherwise know what species to look out for. Of these 31 respondents, half had seen one or more *Feral or In Peril* species in the last year, and ten of them had reported at least some of them. For those that didn't report, two indicated that it was because they didn't know where to start.

When asked what divers would do if they saw a black cowry, divers gave the responses shown in the table on the right.
(continued overleaf)

Action	Number of respondents
Just take it and not report it	0
Take it but report the sighting	1
Undecided	8
Just leave it and not report it	16
Leave it and report the sighting	34
Total	59

Reef Watch December Marathon Dive
Saturday, 3rd December, 2005
Second Valley

Further information will be available on the website from October. If you do not have internet access, contact Reef Watch (8223 5155) to express your interest and we will keep you up to date.



Comments about the Feral or In Peril program included:

- *It is evolving - it's come a long way and because of anthropogenic influences, needs to go another long way. It is difficult to make people "aware". Programs like this help.*
- *Education can save our environment, and should be a greater part of dive courses, even my little daughter learns so much in the school about the marine life, a diver should be more informed from the start to know what is endangered, it is in our interest to keep and protect what we can see tomorrow*
- *Do we have any clean ups planned? North haven is shocking. (fan worm).*
- *In the latter case, Reef Watch is not planning any clean ups but any fan worms collected could go to a good cause – see the next section.*

Help Wanted for Study on European Fan Worms

Most of you would be aware of the European Fan Worm that has invaded our waters in the last decade, via Port Adelaide. Jodie Haig from Adelaide University is doing a study that will help detect the presence of this species in ballast water, to help prevent it from invading other ports.

To complete this study she needs help to collect some fan worms.

Three cautions:

1. Don't collect any if you are not absolutely sure how to identify them!

Sabella spallanzanii **European Fan Worm**

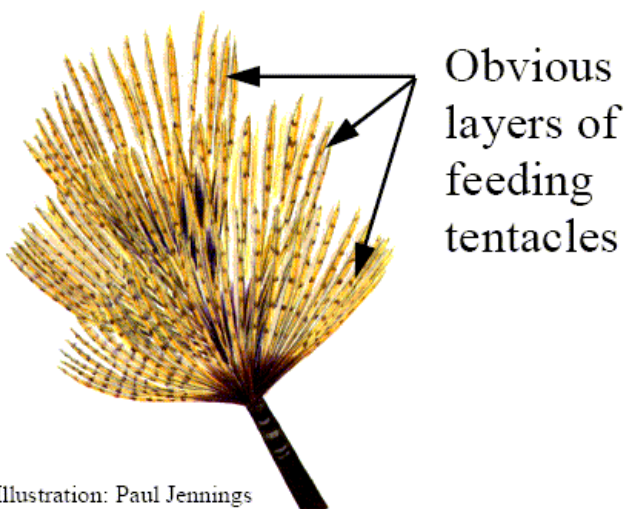


Illustration: Paul Jennings

- Feeding tentacles in distinctly layered spiral - locals never have this
- Flexible semi-transparent tube up to 50 cm long
- Feeding tentacles extend from tube up to 20 cm
- Forms large meadows but may be found individually
- Feeding tentacles range from orange to red-brown
- Outer layer of tube often covered in saltish clay, mud and small organisms

2. Don't collect anything from a restricted area, including:

- Any intertidal rocky reefs to a depth of 2 m
- Marine protected areas
- Aquatic reserves
- National parks
- Any area closed to fishing (e.g. *HMAS Hobart* wreck)

3. Please note that Reef Watch is not involved in any way in the organisation of this activity and therefore takes no responsibility for people who take part. You do so at your own risk.

Other than that:

- Get ones with the fans out - this shows they are in decent health
- Collect at least ten if you can - this gives a good chance of getting some males and females
- Collect from as close to the base of the tube as possible to conserve the entire tube - bring whatever they are attached to if its non-living and if possible
- Keep them in a large container or bucket of seawater (with plenty of water from the area they were found in). If they can't be brought into uni within a few hours then keep the water aerated and away from direct sunlight (so not to over heat the water and kill them).
- You can contact Jodie at any time with questions or if you have collected some fan worms:

University of Adelaide
North Terrace, Darling Bld, DP418
Adelaide 5005
(08) 8303 6587
0416 350 188
jodie.haig@student.adelaide.edu.au

Jodie intends to use the samples to get some larvae when they spawn. The larvae will in turn be used for genetic analysis and a range of other tests to enable a way of detecting ballast waters for this invasive species and preventing the spread of this species.

“Reef Watch” not “Reefwatch”

Just a short reminder that Reef Watch is two words, not one. We can understand the confusion that may arise, with names such as Fishwatch and Waterwatch. For us however, the only place to use “reefwatch” as one word is in our domain name, reefwatch.asn.au

Friends of Gulf St Vincent Forum

You are invited to a community forum, supported by the Adelaide Coastal Waters Study and sponsored by the Environmental Protection Authority. Expert speakers will talk about:

- their new understanding of Adelaide's Coastal Waters
- the long-term effects of European settlement on the quality of those waters
- how this knowledge can guide management of Gulf St Vincent

The forum will be held at SARDI Aquatic Sciences, Hamra Ave, West Beach, on Saturday, October 22nd, 10am to 4pm. Lunch will be provided.

Inquiries or registration - by October 15th at latest please to Pat Harbison (phone 8522 4714, pharbison@adelaide.on.net or Ian Kirkegaard (ianrk@iprimus.com.au))

Symposium on Marine Science in South Australia

A new SA branch of the Australian Marine Sciences Association will be launched with a range of presentations on Friday, 14 October 2005, from 8:30 am to 5:00 pm at the SARDI Aquatic Sciences Lecture Theatre, 2 Hamra Ave, West Beach. Contact Reef Watch for more details and a registration form.

Topics include:

- Review of oceanographic research in SA - Matt Tomczak
- One approach to marine education – Mike Bosley
- Marine research at the South Australian Museum - Greg Rouse
- Untangling ecological processes and biodiversity in our seas - Peter Fairweather
- Subtidal ecology of SA: like nothing on earth - Sean Connell
- Environmental & ecological research at SARDI – Simon Bryars
- Water quality assessment - Dennis Steffensen
- The Adelaide Coastal Waters Study - Linking science and management - David Ellis
- Public Health issues in coastal waters - Nancy Cromar
- Remarkable journeys in the life of fishes - Bronwyn Gillanders
- Fisheries management and research in SA - Alice Fistr
- Marine Bioprospecting: Medicines from slugs & snails - Kirsten Benkendorff
- Marine Conservation: Program Initiatives of the DEH - Bryan McDonald
- Environmental monitoring - Sam Gaylard
- Programmes of the National Oceans Office - Patricia Von Baumgarten

Adopt a Reef – Club Notes

It hasn't been a great time for diving lately, but most clubs have Reef Watch dives booked between now and next Easter, so sooner or later we will get some diving in and collect some data.

British Sub Aqua Club (BSAC Adelaide)

BSAC have a new committee and a full dive calendar. President Mark Young has allocated many of his share of the organised dives to Reef Watch activities. BSAC will be taking the main running for monitoring Lassiter's Reef, with the help of some of Mark's former fellow members of Scuba Divers Club.

Adelaide University Scuba Club

The club has been twice thwarted by the weather in their valiant attempts to train up members ("Ahalalalaaaa", said their Chief Marine Biologist Olivier Fahy). The time out of the water has been well spent however, with some major fundraising efforts to purchase a second inflatable that will certainly help them get the numbers out to their adopted Northern Outer Reef.

Southern Oceans Divers Social Club

The SODS have also been frustrated by the weather in recent times, with all three winter monitoring dives being cancelled by bad weather. That hasn't stopped them from being active out of the water, with a table at the Reef Watch Quiz Night and a photo competition where Michael Matthewson won most prizes but most won something!

In recent years, SODS have collected most of the monitoring data from Port Noarlunga (outside the Marathon Dive), and continue to schedule regular monthly dives. The next edition will have a strong focus on both the Noarlunga Data since the beginning of Reef Watch, and the contribution of the SODS.

Marine Life Society of SA

Good news for monitoring at Hallett Cove! Marion Council have agreed to allow us limited 4WD access to ferry dive equipment to the shoreline adjacent to the reef, saving a long walk! Meanwhile, President Philip Hall recently met with the Premier and some of his ministers at an afternoon tea, where the Premier, after hearing his concerns, announced to the gathering that the Weedy Seadragon would be given the same protection as the Leafy. He has followed up and been told that protection legislation is being prepared.

Underwater Explorers Club

Their latest newsletter states: "we must re-ignite our work for Reef Watch and Adopt-a-Reef; we have fallen down in this area". They have already taken steps to do this, with a talk and dive on Broken Bottom planned for October and a follow-up dive scheduled for next year.



Community-based intertidal monitoring

By Agnès Cantin

In the few months between newsletters, Reef Watch has been involved in expanding its repertoire of monitoring programs to include the long awaited rocky-reef intertidal program. This program has been assisted by the guidance and expertise of a committee including Peter Fairweather and Kirsten Benkendorff (Flinders University), David 'Squid' Turner (SARDI), Sarah Bignell (Adelaide and Mount Lofty Ranges Natural Resource Management Board – Coastcare) and James Brook and Chris Ball (Reef Watch/CCSA). Myself, I am the project worker for this new program and my main role is to develop protocols and assist in its implementation through community groups.

The first stage was a literature review of community-based intertidal programs from around Australia and overseas and to highlight any of their advantages and disadvantages. Another part of the review was to assess commonly used methods for the monitoring of intertidal rocky reefs. The review gave us an idea of what methods might work on SA reefs and how to proceed with our own ideas. This review will be available by the end of the year to those interested, it has been reviewed and now needs to be refined and polished.

The next stage was a workshop which was held on Sunday September 18th at Snapper Point, Aldinga reef, in generally fine conditions despite a bit of wind. The purpose of this workshop was to evaluate some possible methods that can be used on rocky reefs while introducing some people to intertidal monitoring. To minimise the impact on the reef, the workshop was limited to 30 participants, but there will be many more opportunities for the increasing number of interested people to become involved!

The participants divided their time between three stations, each with a different method to either determine the size and abundance of mobile organisms or to obtain environmental characteristics of the reef. The stations included the following methods:

1. Line intercept transects (LIT) to determine the percent cover and depth of macroalgae, sessile organism and sediment;



Shirley Sorokin and Megan Schwartz conduct a line intercept transect with guidance from Professor Peter Fairweather

2. Quadrats to also estimate the percent cover of macroalgae and sessile organisms as well as the size and abundance of selected mobile molluscs; and

3. Timed-searches for the size and abundance of selected mobile organisms.

The workshop reinforced that there are several possible methods for monitoring rocky reefs, each with different strengths and weaknesses, depending on what species or questions a group are interested in.



Agnès Cantin discusses the use of quadrats for intertidal surveys

The day concluded with a well received opportunity to mingle over lunch. Questionnaires were filled out which will help our decision making during the next stage of this program. Among the participants there was a good balance between people with a strong scientific background and community members who are seeking to monitor their reef of interest, allowing us to gain useful feedback from a few different perspectives.



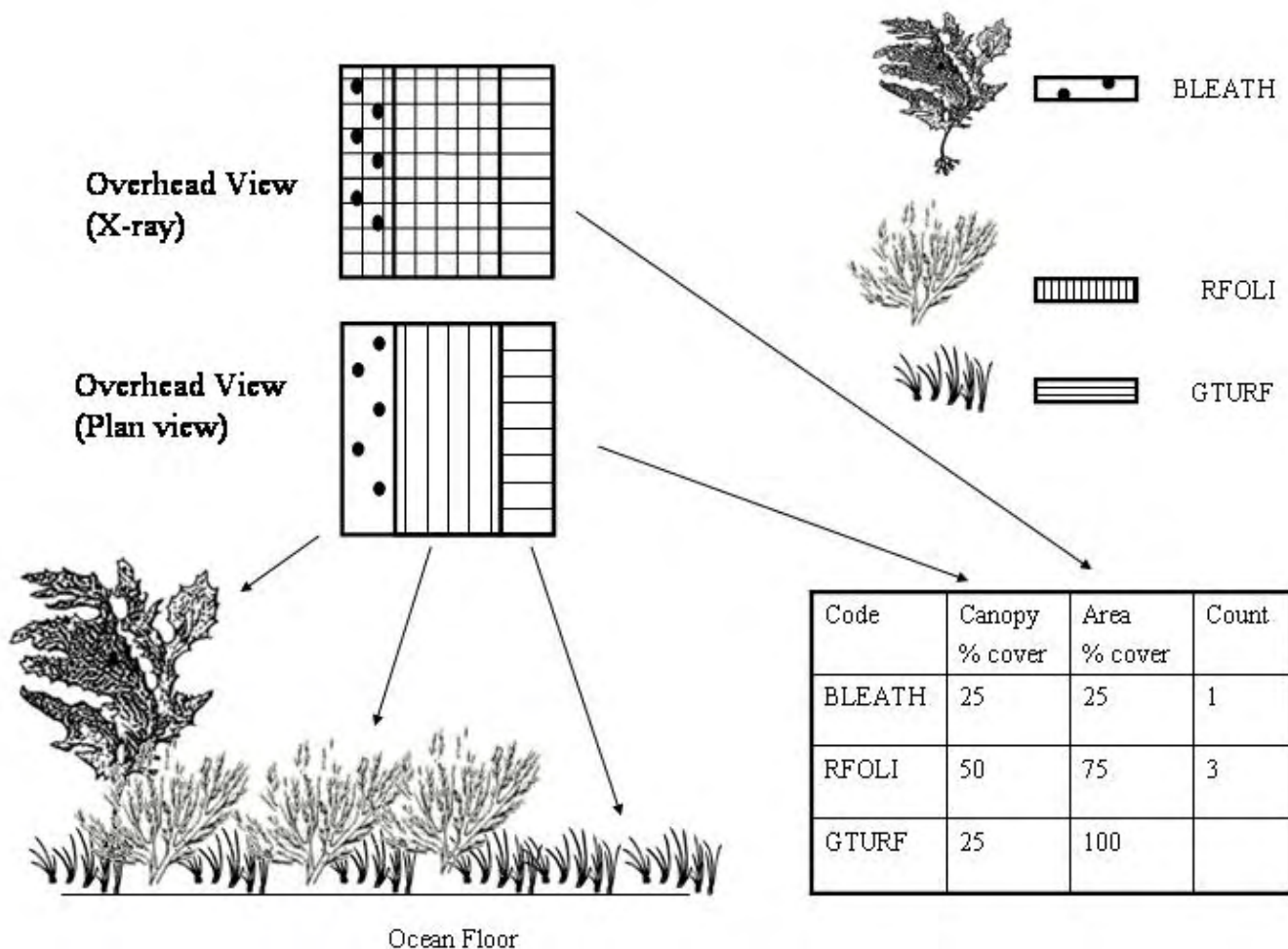
The overall consensus was that everyone enjoyed and learnt a lot from the morning and are eagerly anticipating future events. I would like to thank all those that came out on Sunday, your time and feedback will be important in the future of this program.

So what is the next stage? If you have a reef of interest or if you are part of a group that is interested in intertidal monitoring, then please let myself or Sarah Bignell know (details below). We can come and have a chat, make suggestions on what you can monitor, or help you to build a program around the species or issues that interest you. Our first piece of advice is to not be too ambitious with what you want to achieve, often the simplest questions can tell you a lot.

I am away until November 26th, so if you have any queries you can either email me (cant0023@flinders.edu.au) and I will get back to you when I return, or in the interim, contact Sarah Bignell (8226 1756, Bignell.Sarah@saugov.sa.gov.au)

Quadrat surveys and data entry

More than 70 divers have returned data for the Reef Watch quadrat survey since the program began in 1997. The method was expanded a couple of years ago and there has been a bit of confusion about the “canopy” and “area” columns, so here are some tips that should clarify the method.



The “canopy” cover is the area that has always been collected by Reef Watch divers from the inception of the program. It refers to the overhead view or plan view – i.e. the view from a jellyfish hovering directly above the quadrat. Not everything seen from this view will necessarily be a canopy forming plant – there might be gaps through to “understorey” lifeform or substrate – but we do count everything that we can see that is at least as big as the palm of our hand (about 1%). The total percentage for the “canopy” column should of course be 100%.

This is very important information, and is similar to that gathered using the line intercept transect (LIT) method. However, we were not gathering any data about the lifeforms underneath canopy forming plants, so the method was expanded a couple of years ago to include the “area” covered by all lifeforms present.

The “area” cover might be better expressed as “Total area”. For each lifeform, this is the view the hovering jellyfish would have if it had X-ray vision. Another way to think of it is the area seen to be covered by each lifeform if none of the other lifeforms were not present.

Note that the “area” value should always be at least as great as the “canopy” value for any lifeform. The “area” values likely to add up to more than 100%, unless there are no canopy forming plants within the quadrat.

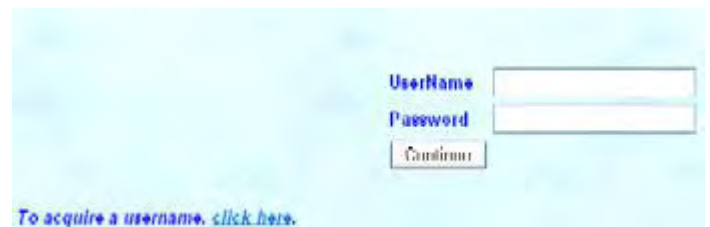
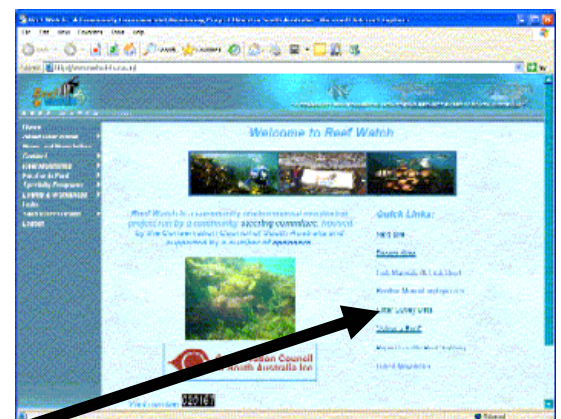
The datasheets have been improved with definitions of “area” and “canopy” and an example quadrat.

You will notice in the diagram above that the BLEATH and RFOLI lifeforms also have a count recorded. This is the number of plants present. For the GTURF lifeform, this would be too hard to count, so we don’t bother. The count column is also used to report any invertebrates (e.g. lifeforms SNAIL, CRAB, STAR) that do not really form a cover.

Data entry

Entering your data is fairly straightforward, you just need to follow these steps:

1. From the Reef Watch home page, choose the “Enter survey data” quick link.
2. Enter your username and password. If you don’t have one, click on the link shown and you will be asked for your name and email address. You will then be sent an email that will enable you to choose a username and password.
3. Once you have entered your username and password, a list of all the Reef Watch surveys you have ever done will appear. Let us know if this list is not correct! You can then double-click to edit an existing survey or press the “New survey” button to open up a new fish, quadrat or LIT survey.



Remember that your efforts to collect data are not effective until you have entered that data!

Thanks to suggestions and advice from users, especially Adam Langman and Val Spalding, some improvements have been made to the on-line data entry forms:

1. When entering multiple quadrats you can reuse the survey details for the first quadrat. After entering the data for your first quadrat, reopen it from your list of surveys by double-clicking and then use the “Copy survey” button shown below.

Hi Adam Langman, here are your survey details for survey 875:

Type: QUADRAT (dropdown) Diver: Langman, Adam (dropdown)

Date: 10 (dropdown) / July (dropdown) / 2005 (dropdown) Time: 12 (dropdown) : 00 (dropdown)

Site: Second Valley Point (dropdown) Depth: 8 (dropdown)

Aspect: Horizontal (dropdown) Exposure: Seaward (dropdown)

Visibility: 8 (dropdown) Water movement: Moderate (dropdown)

Method: SCUBA (dropdown) Event: Monitoring (dropdown)

Comments:

View/edit survey data Copy survey

2. There is an easier way to enter the lifeform codes. You can just type the first few letters of the code in the left column and the second column will automatically complete. You can still use the drop down box in the second column if you prefer.

Quadrat Data submission for survey 906

Lifeform	Canopy (%)	Area (%)	Count	Notes
bl BLEATH (dropdown)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Check and submit data

3. The value entered for the “canopy” column is now copied to the “area” column as a default which you can change if required, and when you submit your data there is a check whether any of the “area” percentages are less than any of the “canopy” percentages.

Quadrat Data submission for survey 906

Lifeform	Canopy (%)	Area (%)	Count	Notes
bl BLEATH (dropdown)	60	60	<input type="text"/>	<input type="text"/>

Check and submit data

Want to get involved in Reef Watch?

For diving or snorkeling activities, visit our website and follow the quick link to “Next dive”. For photos and stories, see “Recent dives”.

If you want to get involved as a volunteer in our committee, administration or development work, contact Reef Watch at the Conservation Council, 8223 5155, info@reefwatch.asn.au.

Particular thanks this month to all contributors to this newsletter and to Pamela Newland for her ongoing help putting the newsletters together.



Quiz Night Report

The Reef Watch Quiz Night was the first such event by the program. There were 140 attendees (15 tables), making it the biggest event we have held. The event was supported by the Friends of Gulf St Vincent and was well sponsored by Divers Delight, Adelaide Scuba, Glenelg Scuba Diving, Southern Diving, Underwater Sports, Aquanaut and Port Noarlunga/Divers Service who collectively provided a fantastic set of prizes.



Feedback from the night was in all cases constructive and generally positive. The overall message was that it should definitely be an annual event, and there are plenty of good ideas for improving the format and enhancing the night for all tables – whether new to Reef Watch or not. With a year to plan and some new blood to bolster the Events Committee, we are confident of doing exactly that.

Details of the tables, sponsors and prize winners; photos from the night; the answers to the “CSI Under the Microscope” section and the chance to make a comment are all available on the Reef Watch website under the Events & Workshops section, Illustrated Journal

(<http://www.reefwatch.asn.au/workshopReports.html>).



Three Reef Watch committee members (two of them recruited since the night) have written a short summary of their experience on the night.

From new Events Committee member Talitha Mascarenhas:

The Reef Watch Quiz Night was held on the 29th July at the cosy Reedbeds Community Centre hidden away in Fulham. The Quiz was one with a difference as all questions were delivered electronically through a marine slide show, together with quiz games and some general knowledge questions – and extra bonus points were offered if you could name the Reef Watch codes for the pictured organism (I will be studying them hard for next years quiz!). The Quizmasters James Brook & Squid (David Turner) kept the night rolling along smoothly with lots of laughs thrown in between. About 150 keen participants attended and combined with lots of drinks, food, some more drinks and some really fantastic prizes (including a dive bag), a great night was had by all! There was even the auctioning of a wetsuit! It was a good opportunity to catch up and meet fellow Reef Watch divers and even non-divers at our table had a great night. I think a few were even inspired to join Reef Watch! Definitely one annual event to book into your Calendars!



From new Events Committee member Tim Cuthbertson:

A very enjoyable evening. Talking as an individual with little marine knowledge, and who sat on Scoresby's table, I had a great night. The table enjoyably came up with some obscure answers to some of the marine questions, but were totally out of their depth when it came to recognising 'Linkin Park' or any contemporary music when I think about it. The people on our table, as with other tables, loved recognizing local coastal landmarks in the questions. All round it was a good evening to have a chat.

From Scientific Committee member Adrian Brown

I must admit to not knowing what to expect from the quiz night, but it was a wonderful, fun surprise. Quite a grim night outside, and stuck at the end of a long, dark working week, fighting off a cold, it was almost a chore to turn out. But I'm glad I did. The sight that greeted me when I entered the door was young Squid and James, resplendent in penguin suits (rather apt I thought), beginning proceedings. It looked so incongruous, having never seen them dressed beyond wetsuit or weekend clothes at best. What should I expect? Would my knowledge of things wet and salty be tested? Or would I need to know tennis and film star statistics, or literature...or who won the Grand Prix in 1955?

The room seemed so full of people, and had a rather nice buzz about it. Slides with strange images flashed up on the wall, blobs and green wavy things...which was the odd one out? It rather sounded like a game my young daughter plays. But the questions came, and from all angles, out of stage right and left, and around some really odd corners. From all weird forms of music, and from literature. What is John Howard's middle name? Does it really matter? Who was Alfredo Dominico Jones? There was a poem by William Blake, of all things. By good luck we had an odd cross section at our table, who were able to answer some very cryptic questions.

Answers were bolstered by people's creative interpretation of the question. So when "what is the difference" visited four images, including one of Squid in a state of undress, the obvious difference (pointed out by a table other than us) was that Squid was the odd one out, as the others all had fashion sense. Creative answers, such as this, gave the opportunity to gain "bonus points". There was lots of laughter, smiles and fun.

Upon reflection it was a very enjoyable evening, from one who has a two year old and doesn't get out much anymore. It made me promise that I would try.

There are a number of people who have given long standing and excellent service as volunteers for the Reef Watch program. Three such people present on the night were presented with certificates of appreciation:

- Dr Sue Murray-Jones has organised all of the identification workshops, acted as Project Coordinator during a very important time for the project and gives ongoing support to all aspects of the project.
- Kevin Smith has regularly assisted as a divemaster on Reef Watch dives and scientific expeditions and made important contributions to the organisation and risk management of dives. Kevin has also become something of an expert on pipefish and other small fish and has made some very significant discoveries that are contributing towards better classification of pipefish in South Australia.
- Dr Scoresby Shepherd has given scientific advice to the program since its inception, has led five scientific expeditions for the program (see next section) and been a regular contributor at Reef Watch events.



Blue Groper Expedition

Dr Scoresby Shepherd will be leading the fifth annual expedition to survey Blue Groper populations, from the 6th to 12th of October. This year the destination is the eastern Eyre Peninsula, from Port Lincoln to Whyalla. If you are interested in joining the expedition, contact Reef Watch.



Blue Groper Recommended for Protection

Many South Australian fisheries have a Fishery Management Committee which advises the Minister on the management of the fishery. These committees have representation from scientists and commercial and recreational fishers, but unlike similar committees across Australia, there are no conservation representatives. The Marine Scale Fishery Management Committee does however have a “Community” representative, currently filled by well known diving identity Christopher Deane. More information about this committee can be found at:



http://www.pir.sa.gov.au/pages/fisheries/comm_fishing/web_marine_scale_fmc.htm

The committee’s latest newsletter states that:

Issues such as the wastage of Blue Groper by-catch that die on release, a reported significant increase in recreational catch and belief from some that it should be designated as a vulnerable species, have led to the Fishery Management Committee calling for an information paper on stock status and sustainability, the impact of introducing a by-catch limit for commercial fishers and the identification of other possible management interventions to ensure stock sustainability. Discussion of Fisheries Manager Craig Noell’s information paper led to the conclusion that there was a potential sustainability problem. As a result, the following recommendations were made:

- 1. Access to the Blue Groper should be removed from all sectors of the Marine Scale Fishery and this action should be incorporated on the forthcoming recreational fishing review.*
- 2. Blue Groper should be designated as a protected species in all South Australian waters under the Fisheries Act.*

This is welcome news, particularly for a number of people who have pushed for this species to be protected for a number of years. The information paper described above is not publicly available, but a comprehensive report on marine and estuarine fishes and elasmobranchs of conservation concern in SA should be ready for publication early next year. The summarised rationale for greater protection of Blue Groper is reproduced on the next page.

DRAFT Extract from: Baker, J. (2005). *Marine and Estuarine Fishes and Elasmobranchs of Conservation Concern in South Australia*. Report and CD prepared for Coast and Marine Branch, S.A. Department for Environment and Heritage (DEH), and Marine and Coastal Community Network of S.A. (MCCN), for the South Australian Working Group for Marine Species of Conservation Concern. 870p.

Western Blue Groper

Family Name:	Labridae
Scientific Name:	<i>Achoerodus gouldii</i> (Richardson, 1843)
Recommended Conservation Status in SA:	At least <i>Near Threatened</i> , prob. <i>Vulnerable (A4)</i>
Rationale:	Western Blue Groper (WBG) is long-lived, slow-growing, late-maturing, site-associated, nearshore reef fish species that has a strong population structure. The large adults are slow-moving and inquisitive, and in some areas are known to approach divers and fishing boats. It is widely recognised that fish with such population dynamics and behaviour traits are vulnerable to over-exploitation and population decline. WBG are fished across most parts of the known range by both commercial (State and Commonwealth) and recreational fishers, using a variety of methods, and WBG is also a bycatch species on hook and line, and in nets and lobster pots. Fishers find it easy to locate large groper (particularly over clear-water offshore reefs, around islands, and off rocky headlands). Increased fishing technology during recent years has enabled more fishers to locate and target large adult WBG on offshore reefs and around islands, and such fishing has been heavily promoted within the charter boat industry during the past decade. Bag limits and boat limits exist across South Australia, but it is not known how effective these are in maintaining population structure and abundance. No stock assessments or fisheries assessments have been undertaken, and thus there is no firm knowledge of the population sizes and recruitment levels over time, or the total numbers taken per annum by commercial and recreational fishers, or of the sustainability of fishing under the current regulations. It is recognised that a low level of fishing mortality may be enough to keep a slow-growing, recruitment-limited species such as WBG in very low densities, even in the absence of intense fishing pressure from any source. Although there is a closure to WBG fishing in S.A. Gulfs and Investigator Strait waters, and the species is also protected in a number of small Aquatic Reserves, it appears that this is insufficient as a means of protecting WBG in South Australia, because (i) the species does not occur in the upper and most of the central parts of either gulf due to lack of suitable habitat and oceanographic conditions, and therefore only a small part of the species range in S.A. is formally protected; (ii) some fishers appear not to adhere to the prohibition of fishing for WBG in Investigator Strait; (iii) there has been increased targeting of this species in offshore areas during the past decade, particularly by charter boats operating off the central and western coasts of S.A.; and (iv) some reef fishers do not recognise juvenile WBG, when they are caught as bycatch, and thus some fishers use the juveniles for bait. A considerable number of reports (spanning three decades) have alluded to the decline of populations of this species in South Australia, and consequently, there have been various calls for the complete protection of WBG for at least 25 years. Recent surveys across much of the central and western coastal waters of South Australia have shown that (i) juvenile WBG abundance appears to be highest in a limited type of habitat (i.e. sheltered nearshore reef lagoon habitats adjacent to exposed coasts); (ii) densities of adult fish are low, and (iii) both adults and juveniles exist over a small depth range. Also, given its longevity and diet, WBG may be a “keystone” species in the reef habitats where it occurs. It is possible that the species qualifies for VU (A4) listing, <i>if it can be inferred or suspected that a population size reduction of at least 30% has occurred over a 3 generation period (and considering the long life span of 1 generation of WBG), and where the reduction or its causes may not have ceased, based on an index of abundance appropriate to the taxon, a decline in the area of occupancy, and/or the actual or potential levels of exploitation.</i> It is recommended that WBG be fully protected under the <i>South Australian Fisheries Act</i> . Pending a consensus statement by various experts, it is recommended that WBG be listed under the <i>South Australian National Parks and Wildlife Act</i> , as a <i>Vulnerable</i> species.

Reef Watch currently receives most of its funding from the Mt Lofty Ranges and Greater Adelaide Integrated Natural Resource Management Group through the Natural Heritage Trust



Mount Lofty Ranges & Greater Adelaide INRM Group



Natural Heritage Trust
Welfare Commissioner
Brisbane Australia
07 5520 0000

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

DEH



PADI Project Aware



PIRSA



SARDI



City of Onkaparinga



The diving industry has also given support to Reef Watchers for the annual Marathon Dive, Quiz Night and in some cases for dives throughout the year. Details are listed on the website.

The Reef Watch website is www.reefwatch.asn.au

If undeliverable return to:

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