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Issue 14.3, October 2011



Reef Watcher Production
Contributions welcome:
intertidal@conservation.sa.org.au
All contributions are subject to editing.

Reef Watch funding success

Ref Watch has been successful with three out of three State NRM Community Grants— here are some details.

Marine pest research

Reef Watch has partnered with SARDI Aquatic Sciences and Biosecurity SA with funding from a State NRM Community Grant to research marine pest colonisation along the Adelaide metropolitan coast. Alex Gaut, Biodiversity Program Manager says “The lack of knowledge about marine pests in South Australian waters impedes improved management of them”. One of the significant pests of recent times is the European fan worm (*Sabella spallanzanii*), which thrives in sheltered, man-made areas such as marinas, and on jetties, pontoons and boat hulls, on which it gets translocated around the state. A significant gap in the knowledge of this species is about recolonisation after removal. This project is a simple experiment using Reef Watch volunteers, in partnership with SARDI Aquatic Sciences and Biosecurity SA. Reef Watch volunteers will remove this species from a metropolitan jetty and then monitor the jetty pylons monthly for the life of the project for recolonisation. Several jetty pylons will be marked at random for monthly photo monitoring and the rest of the pylons will undergo a monthly visual

inspection by Reef Watch dive and snorkel volunteers.

New temperate reef fact Sheets



Photo: David Muirhead

Reef Watch will develop a range of temperate reef fact sheets to be promoted to dive clubs and shops, schools and university students, as well as being distributed to our wider network of individuals and stakeholders with an interest in marine conservation. They will also be available via the Reef Watch website where everyone will be able to access them, providing a free global resource .

Alex says “The inability to see or engage with marine ecosystems creates a significant psychological barrier to understanding and therefore to caring about these ecosystems. This barrier combined with a relative paucity of easily available information about temperate reefs means that many people are unaware that they exist and that they are quite different from tropical coral reefs”.

The fact sheets would cover a range of topics, including: What is a temperate reef? Threats to temperate reefs, Temperate reef fish, Temperate reefs – mobile invertebrates; Temperate reefs – stationary/sessile invertebrates; and Temperate reefs – seaweeds/ macroalgae.

Data collection and reporting

Community volunteers have been collecting data from South Australia’s intertidal reefs for five years. In order to make this data available and useable to both volunteers and academics Reef Watch has partnered with the Atlas of Living Australia (ALA) to develop an online data collection and reporting system. Alex says “As the intertidal monitoring program gets stronger and demand for the data and citizen science opportunities grows, it is increasingly important that we maximise capture of volunteer data and ensure the information is readily available to volunteers, management agencies and NRM practitioners”. The new system will greatly increase volunteers’ ability to interact with their own data, including being able to look at their own records, edit them and do some basic data mining. The system will also allow volunteers, management agencies and NRM practitioners to analyse the data. It has huge potential.



Funding success continued from page 1:

Feral or in Peril Reporting System

The second part of this project is to use the same system to develop an online field guide and upgraded reporting system for the Feral or In Peril program. It includes a photo upload facility and interactive map to

pinpoint the location of sightings with an automatic latitude/longitude entry system. In addition, when one of our 'red alert' species is reported, the system will generate an automatic email alert to a range of key stakeholders including Biosecurity SA. We are undertaking this project in

conjunction with Reef Watch Victoria, where they are reporting some of the same species. Using this system across both states will be very efficient in allowing us to capture and map anecdotal reports of marine pests and native marine species across a large geographic range.

Come and see Aldinga On Display

A community event called "Aldinga On Display" is being held in the Aldinga Bay area on 29th October 2011.

The event allows community groups and service organisations to showcase their services to residents allowing new (as well as more settled) residents in this rapidly growing area to be aware of the services being offered.

In all 27 groups are involved. Residents will have a timetable and map and can "Follow the Yellow Brick Road" to visit and participate in activities at the various venues.

This year's event occurs during National Children's Week and its emphasis is therefore on families and children.



Photo: © Greg Andrew

Reef Watch is organising tours of the unique Aldinga Reef at low tide under the guidance of Alex Gaut, a marine biologist, and Conservation Council of South Australia's Biodiversity Program Manager, as part of this event, to introduce people to the species that survive on our reef.

A similar activity was held in the last Aldinga On Display event in 2009 and led to some new Intertidal Monitoring volunteers as well as giving people the opportunity to learn more about our marine environment.

Know any eco-warriors or champions for the environment?

The Conservation Council of SA is now seeking nominations for the annual Jill Hudson Award for Environmental Protection.

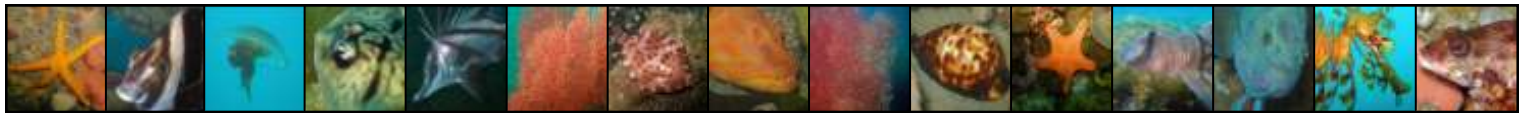
Do you know someone who made an outstanding contribution to environmental protection over the last 12 months, and deserves recognition? Now is the time to nominate them for this prestigious award that recognises individual and/or community effort and achievement in protecting or campaigning for the environment.

The Jill Hudson Award for Environmental Protection began in 1998, and aims to recognise the efforts of South Australians who make a stand for the environment.

The award is in memory of Jillian Hudson (7/09/48 – 9/08/97), a local primary school teacher with strong concerns for the environment. Jill aimed to pass on to her students the important message that: "Life is an opportunity and its purpose is to stand for something and to make a difference".

Past winners range from local activists to 'big-issue' environmental campaigners, a journalist and an indigenous community in Northern SA.

This year's winner will be announced at an Awards Ceremony on 3 November 2011 at Tandanya. The winner will receive a cheque for \$1000. Nominations close 5pm, Friday 14 October. More information and a nomination form is available on the CCSA website's homepage: www.conservation.sa.gov.au



Intertidal monitoring on the Central Coast of NSW

The Central Coast Marine Discovery Centre (MDC) is a community based not-for-profit environmental education and research centre established in partnership with the University of Newcastle, and located at Terrigal, on the Central Coast of NSW. At the beginning of 2009 the MDC received a Community Coastcare grant to run a pilot intertidal monitoring program based on the Reef Watch program in operation in South Australia.

The first task was to reproduce the South Australian Reef Watch Intertidal Monitoring Manual so that it was relevant to the intertidal environment of the NSW Central Coast. The manual was finalised in January 2010.

Ten Reef Watch kits were then developed containing all the equipment needed by groups undertaking the monitoring program, as well as field guides for local species of algae and intertidal



Training: Student from a local school

organisms.

A training workshop for school and community groups was developed, which incorporates a short theory session in the form of a lecture from Dr David Powter from the University of Newcastle. This includes information about the

reasons for monitoring and the scientific methods used, as well as a practical component on a local rock platform where participants gain experience at using the Reef Watch manual and methods.

During 2009 and 2010, the Reef Watch Program held two initial training days for schools, attended by seven teachers and sixty students from five local high schools, and one community training day, attended by 17 local residents. After the initial training day was completed, four schools and two community groups registered with the MDC to undertake regular monitoring of a rock platform. Data from the groups has since been received.

The next step for Reef Watch on the Central Coast is to hold further training days for both school and community groups, and to collate the data collected by the different groups and enter it onto a database. www.ccmdc.org.au

Community Feral or in Peril report wins \$100 tackle voucher



Southern blue devil © Simon Bryars

Fisherman Bruce Lind is the lucky winner of a \$100 tackle voucher donated by Spot on Fishing Tackle. Bruce had a copy of Reef Watch publication 'Boat Owners Guide to Caring for our Coastal Waters' and a set of 'Feral or in Peril' identification cards on his boat and reported the catch and release of a Southern Blue Devil at Wirrina Cove to the Reef Watch website:

www.reefwatch.asn.au/fpreport

The Feral or in Peril Program encourages any boat owner, diver or angler who spots anything unusual or something they haven't seen in that area before to report the sighting to Reef Watch website or Fishwatch on 1800 065 522

A BIG thank you to Bruce Lind for reporting his Southern Blue Devil sighting and to **Spot on Fishing Tackle** for their support with \$100 voucher.



Draft Marine Park management plans due out in December

Draft Marine Park Management Plans including all zonings are expected out in December. This is your opportunity to have your say about Marine Parks generally as well as any specific concerns about particular zones. There is likely to be an extended consultation period of up to 12 weeks.

Marine environments are under pressure like never before. The impacts of coastal development, pollution, fishing and climate change, are combining to create an ever-increasing risk. South Australia boasts well over 6000 marine species; with over 85% found nowhere else in the world yet less than 1% is protected. If you hear that well managed fisheries remove the need for 'no-take' sanctuary zones within our Marine Parks, consider this. Of the 6000+ species in SA, fisheries management is only addressing approximately 6%. What about the rest? Many species have biology, behaviour or habitat requirements characteristics that make them very vulnerable to human activities. A report investigating marine species of conservation concern listed well over 200 species that need investigation.

One such species is the western blue groper. While many divers and fishers recognise blue groper, most would be surprised to find out the oldest recorded blue groper was 70 years old. The longest ever recorded was a massive 1.75 metres. All blue groper begin life as green females, which must be 15-20 years (65cm) before they can reproduce. Many then change into blue males upon reaching



© Vicki Billings

80 cm or 35 years old! Unfortunately the characteristics that make this fish so interesting also make it vulnerable to human activities. Populations of long-lived, slow growing, late maturing species, such as blue groper and blue devils, are unable to quickly recover from fishing impacts. Like many other species, western blue groper are extremely vulnerable to serious physiological damage if brought to the surface by hooks, and most will die even if released. The blue groper is only one of hundreds of species likely to benefit from the protection of no-take sanctuary zones, with scientists at established marine parks recording spectacular increases in the size, abundance and species diversity in the 'no-take' zones with the benefits flowing over into adjacent waters.

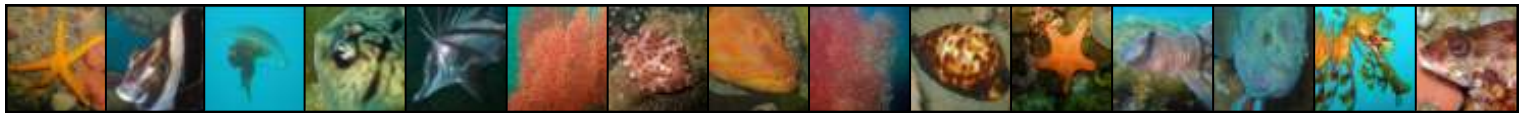
While fishing access will be reduced, the conservation benefits are enormous, and experience with other marine parks around

Australia and internationally shows local community soon realise commercial benefits too. So next time you are down the beach, or wetting a line, have a think about the blue groper and all the other marvels under the surface. Let's make sure they are around into the future for all of us to enjoy.

For further information contact our Community Conservation Officer, Kathryn Warhurst on 8223 5155, or email kathryn.warhurst@conservation.sa.gov.au



© Paul MacDonald



Gaps in planned Marine Protected Areas are worth billions

In a national first, an economic assessment reveals that Australia's oceans provide \$25 billion in value every year to our national economy – billions of dollars that are currently unaccounted for in official statistics.

In a comprehensive review of Australia's Commonwealth marine areas and fisheries, a new report from the Centre for Policy Development, *'Stocking Up: Securing Our Marine Economy'*, shows that Australia's marine life, fish stocks and ecosystems will need to be protected to buffer them from the risks of over-exploitation, rising temperatures, pollution and ocean acidity due to climate change.

Without effective policies to protect our ocean wealth, we risk \$25 billion a year in essential ecosystem services, along with 9,000 direct jobs in commercial fishing and a marine tourism industry worth \$11 billion per year.

As global fish stocks decline and the risk of ecosystem collapse grows worldwide, Australia can still take action to secure the third largest and most diverse marine estate in the world. *Stocking Up* finds that the value of sustainably managed Australian fisheries could increase by 42% over 20 years if global fish stocks collapse.

"Often when decisions are made to protect natural assets, we only count the short-term costs of taking action, not the long-term costs of business as usual or the benefits of action," said Laura Eadie, the report's lead author and the Sustainable Economy Research Director at the Centre for

Policy Development.

"This report shows the clear economic benefits of protecting our marine economy through sensible measures like establishing marine parks and setting targets to increase fish stocks."



© Carl Charter

Stocking Up fills a gap between the scientific knowledge of our oceans and the poor understanding of the economic and social value they provide, showing how we can secure marine jobs today and in the future by maintaining the value of the assets that these jobs rely on. The report measures essential ecosystem services provided 'free of charge' by our oceans, such as:

- \$15.8 billion a year in carbon storage. Seagrasses store 10 to 40 times as much carbon per hectare as forests. Australia's seagrass meadows are the largest in the world.
- \$6.2 billion a year in fish nursery services, pest and disease control. These services are crucial for our commercial fishing industry.
- \$1.85 billion per year in fish and recreation enjoyed by the 1 in 5 Australians who go fishing at least once a year

"Marine resources are essential to many regional economies. Making

their value visible through the best available science and economics can provide governments with the evidence they need to make decisions that maximise long-term social, economic and environmental benefits" said Laura Eadie.

Using the South-West region of WA as one example, the CPD estimates that areas currently proposed for high-level protection provide \$435 million per year more in value than official figures show. Adjusting these areas to meet scientific recommendations for areas of coastal shelf, seagrass and coral reef could protect a further \$1.1 billion per year.

The report recommends the Federal Government implement simple measures to provide secure economic futures for the regional industries and communities that rely on a healthy marine environment.

In a world of increased competition for resources and rapid environmental change, it makes economic sense to protect the asset base of the marine economy. This would support long-term jobs for commercial fishers, secure marine resources for tourism development, and provide better catches for recreational fishers.

For further information: CPD Communications Director Antoinette Abboud: Antoinette.abboud@cpd.org.au 0414 920 801

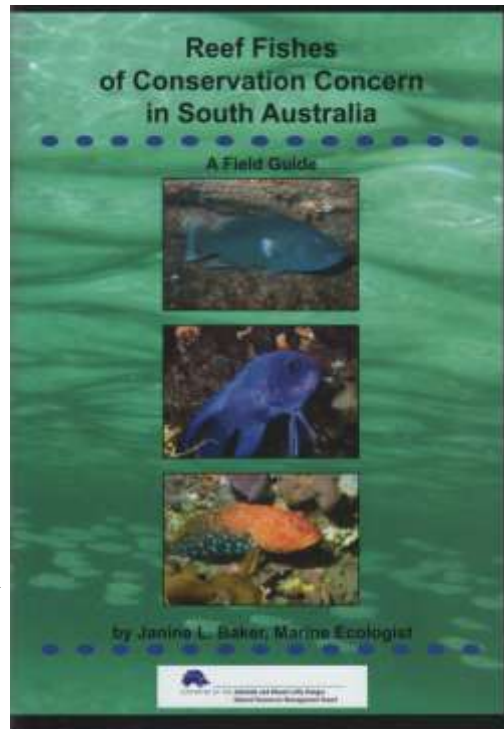
Report lead author Laura Eadie laura.eadie@cpd.com.au 0408 885 079



Reef Fishes of Conservation Concern in South Australia

A full colour field guide on 'Reef Fishes of Conservation Concern in South Australia' has recently been released. The booklet was produced with support of a community grant from the Adelaide & Mt Lofty Ranges (AMLR) NRM Board.

The field guide aims to assist divers and snorkelers, anglers, students, and anyone else with an interest in fishes, to identify South Australia's reef fishes of conservation concern, and learn more about them. For 23 reef fish species, plus one group of related fishes, the guide provides an up-to-date summary of knowledge about those species, and includes: photographs, plus a simple description, including differences in colour and/or markings between males, females and juveniles;



information about the distribution and habitat, and for some species, notes on the diet and behaviour; a brief summary of the fisheries for each species at both Commonwealth and State levels, including targeted fishing and bycatch; and discussion of the vulnerable characteristics of each species.

There is a limited print run, available for schools and marine education workshops, dive clubs and associations, marine businesses, and coastal and marine NGOs. The field guide is being distributed by the AMLR NRM Board, and by the author of the guide, Janine Baker.

The electronic version is available for download from the AMLR NRM Board web site:

www.amlrrnm.sa.gov.au/Portals/2/Coast/ReefFishReports/ReefFishes-FieldGuide-JBaker.pdf

Wanted - harlequin and devil photos



© Simon Bryars

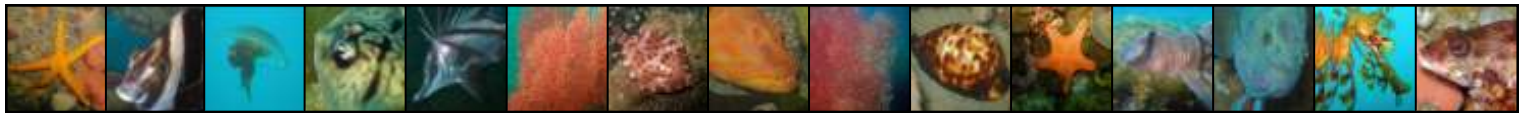
If you have any photographs of harlequin fish or blue devils from the Adelaide Metro coast and you would like to help with research into these species, then please email them to sbryars@bigpond.com

When taking photos it is important to focus on the sides of the head and in particular the gill cover region. It is also useful (but not essential) if both sides of each fish can be photographed as the patterns differ between the left and right hand sides. When you send your photo, details of the location are essential.



© Simon Bryars

Any photos submitted will remain the property of the photographer and will be acknowledged in any reports or presentations that are produced.



Dates for your diary

Reef Watch Marathon Dive
9am Sunday 16th October
Noarlunga Jetty

Lady Bay Intertidal Monitoring
Saturday 26th November 10.30am
Sunday 11th December 10.30am

Yilki Beach Intertidal Monitoring
Saturday 12th November 6-8 pm
Wednesday 15th February 9am
Sunday 26th February 8.15am

Hallett Cove Intertidal Monitoring
Friday 28th October 11.30 am
Saturday 29th October 12 noon
Saturday 10th December 11am
Monday 12th December 12noon

Aldinga Reef Intertidal Monitoring
Friday 25th November 10.30am
Saturday 10th December 10.30am

To register:

Yilki and Hallett Cove sessions
contact: Carl Charter 0466 278 187
intertidal@conservationsa.org.au

Aldinga and Lady Bay sessions
contact: Neville Hudson 0429804100
nhudson105@bigpond.com

Competition Winner

Congratulations to Benjamin Knopke for his winning Science Alive colouring in competition entry. Your prize pack is in the post!



Hyperbaric Unit divers forum and guided tour

Presented by the Hyperbaric Medicine Unit, Royal Adelaide Hospital

Alert Network (DAN) Asia-Pacific Presents: *Australian diving deaths - A 30 year review*

Come and tour the Hyperbaric Unit and hear Brian Kakuk speak about the Bahamas Underground and John Lippmann OAM about Australian diving deaths - A 30 year review. There will be a light supper.

Wednesday 12 October from 6.45pm Robson Lecture Theatre Level 2, Eleanor Harrald Building

(Enter from rear of building)

\$20 per ticket (bookings are essential). To book your seat and for further details contact the Hyperbaric Unit

8222 5116 or 8222 5121

Brian Kakuk is a veteran explorer of nearly 20 years of underwater cave exploration in the Bahamas. He is currently visiting Australia teaching sidemount diving techniques and enjoying some of Australia's caves.

This is a rare opportunity to hear from one of the most respected cave divers in the world, and see some of the extraordinary beauty of the underwater flooded Bahamas Caves.

John Lippmann OAM,
Executive Director - Divers



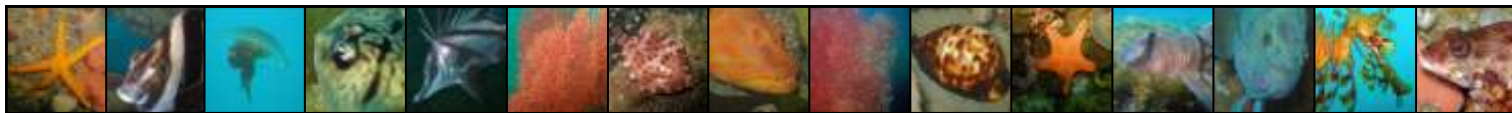
What fish is that?



Gulf Catshark *Asymbolus vincenti*

This cat shark has been reported from depths of 130 m to 220 m in the Great Australian Bight. In the east, off western Tasmania and Bass Strait, it is found mostly at depths less than 100 m and is frequently

found in seagrass beds near the coast in this area. This species reaches at least 56 cm total length (TL) and males mature at 38 cm TL. The species has been recorded as a very minor, incidental catch in the Spencer Gulf prawn trawl fishery.



Many thanks to our generous sponsors and supporters

Reef Watch and Feral or In Peril are managed by the Conservation Council of SA and supported by the South Australian Government.

We also acknowledge the generous support of the recreational diving, boating and fishing industries for Reef Watch and Feral or In Peril.

Supporting organisations include:

- Adelaide and Mount Lofty Ranges Natural Resources Management Board
- Biosecurity SA
- SARDI, Aquatic Sciences
- Department of Environment and Natural Resources
- Environment Protection Authority
- Boating Industry Association of SA



If undeliverable return to:

Conservation Council SA
Reef Watch Program
Level 1/157 Franklin Street
Adelaide SA 5000

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

Reef Watch Marathon Dive/Snorkel— 9am Sunday 16th October at Noarlunga Jetty



Come and try Reef Watch citizen science!
Boat and free air fills provided.
Count fish and search for feral or in peril species.
No experience necessary as training will be provided on the day.
BBQ lunch after 1st dive.

Please let Steve Leske know if you wish to participate: reefwatch@ccsa.asn.au