



# REEF WATCHER

## Issue 9.2 - June 2006

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### **Introduction**

The arrival of winter has not seen quite the same decline in diving activity as previous years, with SODS, BSAC, MLSSA and AUSC all conducting training or monitoring dives. The dive calendar for the rest of winter is still being finalised, but there is an important dive date on Sunday 9<sup>th</sup> July. On this dive we want to cover as much of Noarlunga Reef as possible to search for Harlequin Fish.

If your preference at this time of year is to stay above water, there are plenty of interesting talks and seminars on offer as you will see from this newsletter. The main event for Reef Watch for this quarter is the evening of talks on Intertidal Monitoring (see enclosed flyer). We are planning the Quiz night for late September. We would welcome contributions of interesting photos that we can include in visual quiz questions.

This edition also has some stories about other organisations that are involved in marine education and conservation.



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](mailto: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.

## **Reef Watch AGM Postponed**

The Reef Watch AGM was originally proposed for the 8<sup>th</sup> June.

However, a Strategic Planning Day was held in early May, and attended by most members of the Steering Committee and its sub-committees (Scientific, Events and Operations).

This meeting was extremely productive, with a number of areas being identified for further work. It is therefore likely to be a few months before we will be in a position to convene the AGM to present proposals for the way forward, and seek further input from interested members of the community.

Areas that we are looking at include:

- improving the effectiveness of the monitoring program;
- making the monitoring program easier for people to get started on, and more enjoyable to do;
- ensuring that there is timely analysis and feedback of the data collected;
- advance planning for the next peak diving season; and
- development of a communication strategy

Details of the AGM will be in the next issue of Reef Watcher.

## **Noarlunga Harlequin Fish Search**

Reef Watch will be running a survey at Noarlunga dedicated primarily to a search for Harlequin Fish and other species on the “In Peril” slates.

Noarlunga Reef  
Sunday 9th July  
Meet at 9.00am on lawn  
adjacent to car park



Divers will be issued with a free set of identification slates depicting a number of species of particular interest to the program, including the Harlequin Fish, Western Blue Devil, Black Cowry, the stony reef coral *Plesiastrea*, and the invasive European fan worm. There will be a BBQ brunch provided for divers after the dive. We are endeavouring to organise boats to facilitate access to the southern part of the reef.

Please contact us if you wish to attend (8223 5155 or [info@reefwatch.asn.au](mailto:info@reefwatch.asn.au)), and as always, check the information line 0418 898 302 prior to departing on the day.

There have been half a dozen Harlequin Fish recorded on Reef Watch surveys at Port Noarlunga over the past few years – but none of the divers involved

have been completely sure of their sighting. However, Noarlunga mermaid Mary-Anne Stacey recently spotted a Harlequin Fish for the first time in two years of diving/snorkelling on a near daily basis between October and May. Mary-Anne stated:

*It is my belief that they have been extinct from that area in that time. I was very excited as this reef has the terrain, the territory and available food source to support these ambush feeding fish. I have noticed female and male are often found together, I understand the greener of the two is the female.*

Mary-Anne will also be providing information about the distribution of Harlequin Fish on the north coast of Kangaroo Island, where she considers them to be prolific based on her experience of ten years free diving.

Also in response to our call for information in the last newsletter, we have received a model response from David Cowan, who recorded Harlequin Fish in his log book for 18 dives over the last 25 years – up to four such fish in a single dive. David made it clear that other sightings may have occurred without logbook entries being made, due to other events of greater significance occurring during dives (David's interest in diving is not restricted to recording details of marine life sightings). I have summarised the information provided by David in the table below.

<b>Location</b>	<b>Number of dives at that location</b>	<b>Number of dives where Harlequin Fish were sighted</b>
Althorpe Island	10	1
Emmes Reef	1	1
Haystack Island	15	3
Kangaroo Gully	6	2
Kangaroo Head, KI	3	1
Seal Island, YP	2	1
Snapper Point, KI	4	3
Thistle Island (Waterhouse Pt)	2	1
Waldegrave Island	6	3
Wedge Island (West Bay)	4	1

David's assessment of the distribution of Harlequin Fish is that it appears to favour moderate to high energy coastlines such as Backstairs Passage, Investigator Strait, southern Spencer Gulf and the west coast of Eyre Peninsula.

## **Reef Watch Notes**

### *Steve Leske's Austrian "Landchange"*

Where do dive instructors go for a break? A land-locked country, of course. We temporarily farewell Reef Watch dive instructor Steve Leske, who has returned to Austria with his wife Petra and four month old daughter Iluka for our winter/their summer. A big thanks to Steve for his efforts last summer, in particular the organisation of the Marathon Dive and the expansion of the program to Kangaroo Island and Yorke Peninsula. We look forward to their return in mid September.



### *Farewell to Dolphin Dive*

Dolphin Dive at Normanville recently closed its doors for the last time. Reef Watch would like to express their sincere gratitude to Greg Perry for his support over the past four years. Greg has provide regular discounts for participants, air for one of the Reef Watch instructors, and has participated in Reef Watch courses. During the past year he has arranged for the Open Water courses that he runs at secondary schools to be supplemented with Reef Watch training. We wish Greg all the best for the future.



### *Yorke Peninsula*

After a number of snorkels and dives over the autumn months, Reef Watch on Yorke Peninsula has gone into recess for the winter. The website [www.reefwatch.asn.au/yorkes](http://www.reefwatch.asn.au/yorkes) and the next edition of *Reef Watcher* will include a comprehensive summary of the autumn events along with a plan for diving, snorkelling and intertidal monitoring in the spring and summer.

### *Training update*

Gary Perkins, Andrea Gordon and Brett Human recently completed their PADI Reef Watch Survey Diver course; Stephen Putland, Peta Straiton and Tex completed Fish ID; Martyn Day, Troy Walker & Tony Shirley completed both Fish ID and Fish Survey components; and Rissa Williams, Dave Fielder, and Steve Reynolds have completed their quadrat training.

Steve Reynolds, the secretary of the Scuba Divers Federation (SDF), has been reassured that wobbegongs usually represent less than 1% of area despite his findings. Steve's monthly update from the SDF included the following note about MLSSA member and nudibranch enthusiast Dennis Hutson.

### *Cuttlefish attacks*

Prior to Dennis Hutson's enforced layoff from diving, he was harassed by cuttlefish. In the latest incident, a small female enlisted the assistance of a large male. Dennis wants to know whether or not anyone else has witnessed this kind of cuttlefish behaviour, where one cuttle will seek the assistance of another (bigger) cuttle to attack a diver. More details about this cuttlefish attack on Dennis can be read in the MLSSA June Newsletter at [www.mlssa.asn.au](http://www.mlssa.asn.au). Please send any information to [info@sdfs.net](mailto:info@sdfs.net).

## **Scientific Expedition to the Investigator Group**

*By Dr Sue Murray-Jones*

With strong support from the SA Research and Development Institute, Aquatic Sciences Division, and the SA Department for Environment and Heritage, there was an expedition in May to explore the terrestrial and marine habitats of the Investigator Group of Islands, offshore from Elliston. More than fifty scientists and support staff were involved at various times over a two week period. This kind of basic, fundamental natural history is rarely funded these days, and is critical in understanding and protecting little known and fragile habitats.

Of the 150+ islands off the SA coast, those in the Investigator Group (comprising the Waldegrave and Pearson Is, Topgallant I., Flinders I., and Ward I.), have especial interest and significance. They are located in the richest waters of the Great Australian Bight (which support the largest pilchard fishery in Australia), and have substantial colonies of seals and sea birds which feed in surrounding waters.



Results will be published in a forthcoming special edition of the Transactions of the Royal Society of SA (as for the previous trips to Nuyts Archipelago and Althorpe Islands).

In addition to a number of terrestrial studies, studies included:

- Soft sediments: an examination of the biodiversity and biogeography of soft sediments around the islands, inter- and sub-tidally (Flinders Uni and SARDI);
- Subtidal habitats: an examination of macroalgal subtidal habitats, related to fish and invertebrate abundance (part of a broad-scale study of these habitats across southern Australia; Adelaide University);
- Zoogeography of pycnogonids (sea spiders; Museum Vic);
- Habitat mapping: using U/W video systems and sonar techniques around the major islands to determine habitat type and diversity (DEH);
- Sponge survey: sponges were collected from various rocky bottom habitats. (SARDI and SA Museum);
- Reef assessments: surveys of the algal flora and fauna of shallow reefs using transects, quadrats and fish counts, building on studies conducted elsewhere. (SARDI);
- Seagrass: an examination of the seagrass communities around the islands. Seagrasses of the region are almost unknown, and have special interest because of the clear water and the fact that they extend to 50 m depth (SARDI);



Reef Watch chair David Turner with ID workshop demonstrators Tim Kildea and Yvette Eglinton, and Chris Small from Ngerin

- Ascidian survey: an examination of ascidian diversity and biogeography in the region, known to be the richest in the world (SARDI);
- General marine collections (SA Museum);
- Fish behaviour: an examination of foraging behaviour of some reef species of fishes (eg moonlighter, scalyfin, and herring cale) for comparison with similar studies elsewhere (SARDI).

Here is an account of that last study:

*By Dr Scoresby Shepherd, AO*

On this expedition I was stranded (by design) on Flinders I. for two weeks, and had the opportunity to continue studies on the scalyfin, which I and a colleague, Mick Clarke, had started 20 years earlier at West I. and at The Bluff, Encounter Bay. In the 1986 study we found that the scalyfin feeds on red algae, but the red algae doesn't grow well under the kelp where the scalyfin lives in caves. So the scalyfin weeds its little territory of kelps and other brown algae, and tends a garden in which to grow red algae. The scalyfin behaves like this in Victoria too. But at Flinders Island I was astonished to find that the scalyfin doesn't tend a garden at all.



Juvenile Scalyfin

What it does is to expand its territory, and swim around it feeding on red algae growing on the numerous species of *Cystophora* and *Sargassum* [Reef Watch code: BBRANCH] that are common there. Because zebra fish also like to feed on the same red algae, our neurotic little scalyfin has to spend an enormous amount of time chasing zebra fish out of its territory (photos – David Muirhead).

I also looked at the feeding of the herring cale. Normally this fish feeds only on kelp. But here at Flinders Island, in the absence of kelp, it feeds on the fertile tips of *Cystophora* and *Sargassum* (interestingly, when I transplanted some kelp from another part of the island, the herring cale devoured it over the course of a few days). The brown branching algae are loaded with tannins, which are quite indigestible, so how, you might ask, does the herring cale cope? It happens to have a rich flora of bacteria in its long gut, which can break down these substances and extract the nutrients from them - very like the marine iguana which is armed with a similar gut flora in the Galapagos (photo: Kevin Smith).



## **Queens Birthday Honours**

Scoresby Arthur Shepherd, who has been a major supporter of Reef Watch activities throughout the history of the program, received the award of Officer of the Order of Australia for service to marine science, particularly in the fields of abalone biology and ecology through research, education and international collaboration, and to the conservation of coastal areas.



Other awards included:

- Mike Bossley (Member of the Order of Australia), for service to the protection of marine mammals as a biologist, academic and conservationist and through involvement with a range of organisations that aim to protect these species.
- Mike McKelvey (Medal of the Order of Australia), for service to science through the Pelican Lagoon Research and Wildlife Centre [Kangaroo Island].

## **The Amazing Adventures of Gavin, a Leafy Seadragon**

The Minister for Environment and Heritage launched The Amazing Adventures of Gavin, a Leafy Seadragon, a 16 minutes animated VHS/DVD film. The film is about a leafy seadragon called Gavin and his adventures/discoveries travelling through South Australian marine bioregions whilst maturing to become an adult and ready to breed. It is designed to engage 8-12 year olds to highlight the diversity of South Australia's marine environment.

The Amazing Adventures of Gavin, a Leafy Seadragon is a Coast Protection Board initiative developed with support from the Department for Environment and Heritage, South Australian Film Corporation, Marine Discovery Centre and Waterline Productions. Greg Holfeld, the Director, worked together with the People's Republic of Animation (PRA) and Jessica Wallace, script writer, and Judi Oehme, producer, from Waterline Productions to produce the film. PRA has received a Best Film award at the Bradford Animation Festival (UK) 2005 - best film for children with its production Fritz Gets Rich, and more recently the SA Short Screen Awards - best film with Carnivore Reflux.

The Leafy Seadragon (*Phycodurus eques*) is South Australia's marine emblem. It belongs to the Syngnathidae family together with the seahorse and pipefish. The Syngnathidae family was given full protection under the *Fisheries Act 1982* as per Gazette of 25 January 2006.

For further information contact Patricia von Baumgarten, DEH, on 8124 4809

## **Nature Conservation Society Meeting**

**Aaron Machado**  
*Project Dolphin Safe  
and SA Seabird Rescue*

Thursday 6th July, 7.00pm  
Conservation Centre  
120 Wakefield St, Adelaide 5000

The July meeting of the Nature Conservation Society is featuring Aaron Machado, from Project Dolphin Safe and SA Seabird Rescue. Aaron will be talking about both projects and bringing along Denise, a cormorant.

Wine and cheese will be provided.

## **Reedbeds Curry Night**

**Professor Anthony Cheshire**  
*Healthy seas: a vision for Adelaide's  
coastal waters and environments in 2020*

Saturday, 15th July, 6:30pm  
Reedbeds Community Centre  
corner of Fitch & Halsey Roads, Fulham  
Costs: Meal \$15 (Concession or Friends of Reedbeds \$10;  
Attendance at talk only is free)

For those who have not attended a Curry & Casserole Night at the Reedbeds Community Centre, it is an event combining good food and renowned speakers talking about environmental issues in a relaxed and social atmosphere.

Proceeds go towards the Reedbeds Environment Resource Centre and Friends of Patawalonga Creek (a member group of Friends of Gulf St Vincent) making it an even more rewarding night.

The next guest speaker will be Dr Anthony Cheshire who is a founding member of Reef Watch in SA, a consultant in marine ecology and member of the Adelaide & Mt Lofty Ranges NRM Board, to name but a few of his credentials.

To assist us with catering, or to let you know about any changes, please book by email or by contacting the Reedbeds (Ph: 8235 1644).



## **Marine Life Society Meeting**

**Dr Scoresby Shepherd, AO**

**David Muirhead**

### ***Underwater imagery from the Investigator Group Scientific Expedition***

Wednesday 19th July, 7.30pm  
Conservation Centre  
120 Wakefield St, Adelaide 5000

Scoresby will give a brief introduction about the expedition (see article in this newsletter for more information).

Following this, David will show only his 'very best of trip' marine life images, taken at depths from 0.5m to 18m, depicting very pretty critters, grouped and single, very sparingly spiced with equally specky marine plant images.

Quoth David,

....Oh to behold again that Silver Spot amongst Golden Brown...while all around me reds greens and blues compete for my eye....

## **Information Evening - Environment Parliamentary Secretary**

You are invited to attend an information evening with the Hon Greg Hunt MP, Parliamentary Secretary to the Minister for Environment and Heritage.

Kym Richardson MP has been able to secure the Parliamentary Secretary to visit the Southern Suburbs and provide a briefing to local environmental and interest groups on the Federal Government's ongoing commitment to environment and heritage.

Friday 21 July, 2006  
Willunga Football Club.  
7.15pm (for a 7.30pm start)

The evening is FREE of charge and Federal grants will be discussed.

Also, Kym Richardson and Hon. Greg Hunt MP will also be travelling within the Southern Area to be briefed by various people on issues such as:

- The Maslin Quarry
- Christies Creek and the Noarlunga Reef
- Aldinga Scrub and the Wetlands
- Waterproofing the South

They will also be at Willunga Markets on the Saturday morning and then to the official opening of the Willunga Environment Centre at 10.30am

For enquiries please contact Kym Richardson's office on 8186 4544.

## **DEH Coast and Marine Seminar Program – 2006**

**Wednesday 12.30 - 1.30pm:** Department for Environment & Heritage, Coorong Boardroom, Level 1, 1 Richmond Road, Keswick (just west of Anzac Highway).

**26<sup>th</sup> July**

**Sue Gibbs/Alison Wright** (Macquarie University – SA Museum/ Senior GIS Officer, Coast and Marine Conservation Branch) – *Aerial dolphin survey in Spencer Gulf.*

**30<sup>th</sup> August**

**Rosemary Paxinos** (Project Officer, Marine Planning, Coast and Marine Conservation Branch) – *Marine Planning update.*

**(Friday) 15<sup>th</sup> September**

**Patricia von Baumgarten** (Marine Advisor, Coast and Marine Conservation Branch) – *A National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan*

**27<sup>th</sup> September**

**Brett Pendlebury** (Senior Ranger/Adelaide Dolphin Sanctuary) – *Adelaide Dolphin Sanctuary.*

**25<sup>th</sup> October**

**Michael Breen** (Coast and Marine Conservation Branch) – *Mammal Interaction Policy.*

**29<sup>th</sup> November**

**Liz Barnett** (Senior Project Officer, Estuaries Policy, Coast and Marine Conservation Branch) – *Estuaries Action Plan*

### **New Fisheries Management Newsletter - FishFacts**

PIRSA Fisheries have introduced *FishFacts*, an electronic newsletter that can be emailed to you on a regular basis. It is designed to keep you informed of the latest news and issues relating to fisheries management in South Australia.

You can subscribe to the regular emails or access FishFacts directly from [www.pir.sa.gov.au/fishfacts](http://www.pir.sa.gov.au/fishfacts)

### **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](mailto:info@reefwatch.asn.au).

## **Marine Debris**

*By Louise Smith, SeaNet*

Marine Debris is a threat to our oceans and coasts, and can result in injury or death of marine mammals, turtles, fish and seabirds through entanglements & ingestion. Debris also presents a hazard to navigation and pollutes the waters to the detriment of ecosystems and resources users.

A concern in South Australia is the vast amount of debris present in our unique and endemic gulfs, in many forms, from car bodies to create artificial reefs, to ropes, plastics and other rubbish. This all ends up in the ocean and out on beaches through accidental or careless boating practices and indirectly via rivers, streams & storm water drains.



In order to identify some key issues and problem areas regarding Marine Debris in SA, a series of “Marine Debris Information Afternoons” were held throughout the State, in association with Coast Care and Envirofund.

The sessions were open to all, and were quite successful, with a range of stakeholders attending, from recreational and commercial fishers, to tourism operators, Keep SA Beautiful, Transport SA Marine Safety and The Department of Environment & Heritage.

As a result we have been able to recognise what different community, government and non-government groups have done and are doing to combat marine debris. From here we can see areas that need more work, as well as identifying ways that we can work together, united, to tackle the problem.

Some ideas considered include the education & awareness to the dangers of marine debris, not only to the environment but also to the safety of people who utilise the ocean, as well as ensuring stakeholders are aware of the consequences of sea dumping, as it is illegal and can result in fines of up to \$250, 000 and/or a term of imprisonment.

Another area that was considered was to look at the actual sources of the debris, and ways to reduce the need for them. Some successful initiatives that have already reduced the amount of marine debris include the Rock Lobster Fishery reducing the need and use for blue packing straps, and reducing & reusing plastic shopping bags, something that we can all do, and it does make a difference!!

For more information contact Louise Smith, [seanet@safic.com.au](mailto:seanet@safic.com.au)

Reef Watch currently receives most of its funding from the Adelaide and Mt Lofty Ranges Natural Resources Management Board through the Natural Heritage Trust, with support also coming from the KI and Northern and Yorke NRM Boards.



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

Primary Industries and Resources SA

SA Research and Development Institute



Department for Environment & Heritage

PADI Project Aware



City of Onkaparinga



The diving industry has also given considerable 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](http://www.reefwatch.asn.au)

If undeliverable return to:

Reef Watch

Conservation Council of SA Inc.

120 Wakefield St

Adelaide 5000

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