

# Blue Swimmer

Newsletter of the Friends of Gulf St Vincent  
Pt Vincent Forum Issue – July 2006

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## Welcome to the Blue Swimmer

Welcome to a special supplementary edition of the Blue Swimmer covering the recent community forum held at Pt Vincent.

During this forum people got to learn "More about their Gulf" through the captivating discussions held by expert speakers. Some of the speakers talked about the chapters they are contributing to a book for the Royal Society's Natural History Series, entitled *The Natural History of Gulf St Vincent*.

For those who missed the event, the abridgement below provides some insight into the day's proceedings, but if you would like more information on some of these topics be sure to look out for *The Natural History of Gulf St Vincent* when it is released later this year.

## Welcome Aboard

A warm welcome to our newest members:

Rod Sawford (Federal member for Port Adelaide), Neville Hudson, Linda-Marie McDowell, Janine Baker, Indianna and Linda James, James and Julie

Wells, Lee & Garry Grigg, Michael Walker, Denise Tzumli and Peter Close.

If you are not a financial member and would like to become one please contact the treasurer Nick Crouch on [Nick.Crouch@tafesa.edu.au](mailto:Nick.Crouch@tafesa.edu.au) or (08) 8372 6887. Membership fees are only \$10 for individuals and groups.

## Pt Vincent Forum Digest

It was a disconcerting start to the forum with car accidents that involved two of our speakers, Ian and Jane. Though neither was seriously hurt we wish them a speedy recovery.

Over 35 people braved the cold morning to hear more about Gulf St Vincent at the aptly named "More about our Gulf" forum.

Pat welcomed the attendees and acknowledged that we were meeting on Narungga lands.

As an introduction to proceedings, the audience were able to get a sneak preview of two short documentaries produced by SARDI and Flinders University Natural History Film-Making students covering marine issues. The first film was entitled "The Unique South" and was a beautiful insight into the species, habitats and features of southern Australian waters. The second, "Reef Watch Fish Survey", was an instructional film covering the methodology of the reef watch fish survey program, which James Brook elaborated on later in the day.

These films are part of a much larger series which SARDI is producing called "Beyond the Coast". As

many of the attendees pointed out these have potential to be a great resource for students of all ages as well as the wider community. The films are yet to be officially released with another film in postproduction to complement the three films viewed during the forum. The Friends of Gulf St Vincent will advertise the release of these films in subsequent Blue Swimmers and let you know how you can obtain a copy.

With brains now awake and inspired by the sea life of the deep shown in these films, the audience were ready to hear some of the specific information about why our gulf is so unique and diverse.

Keith Jones kicked off formal proceedings discussing findings from SARDI research into how seagrasses benefit fish in the gulf and how much of their life history depends upon our seagrass meadows.

Keith provided a quick introduction to the most common seagrass genera of the gulf, flagging their diversity and productivity, including: -

Gar Weed, Eelgrass (*Heterozostera* spp)

Wireweed (*Amphibolus* spp)

Paddleweed (*Halophila* spp)

Ribbonweed (*Posidonia* spp)

Seagrass habitats make up almost 17% of the 14,420km<sup>2</sup> of the Gulf. High silt levels and low wave action determine their distribution and extent.

Keith presented results of a relative seagrass residency index (SRI) which calculated how much time a subset of fish species spent undertaking various parts of their life cycles (eg juvenile feeding, nursery grounds, spawning, adult feeding) in seagrass habitat.

Of the species surveyed Garfish came out as the species most dependent upon this habitat followed closely by Calamari, Leather Jackets and King George Whiting. Species such as Yellow Fin Whiting, Australian Salmon and Tommies had a relatively medium level of life history dependent upon seagrasses and at the lower end were species such as Pilchards, Western King Prawns and Mulloway.

Based on surveys of Gar fish at Price Creek, Barker Inlet and Coobowie Bay, they found that the predominant use of seagrass habitat was as nursery grounds followed by adult feeding and spawning. Other species such as Tommy ruffs

journeyed to seagrasses in the gulf in the latter part of their life cycle for foraging.

Protecting our seagrass beds is vitally important as it is one of the largest vegetation communities in South Australia, essential for many of the economically important commercial species mentioned above and because it is predominately found in the sheltered coastal waters of the Gulf, is subject to a number of land and marine based threats.

Kirsten Benkendorff took us away from the more discernible and well-known species to another type of vital habitat and animal in the Gulf. At the very edge of the gulf Kirsten increased our familiarity with intertidal rocky reefs and their importance as habitat for a range of species, in particular molluscs.

Whilst the term molluscs may conjure up images of slugs and snails she showed us that they can be just as fascinating and glamorous as any of the fish species (as the nudibranchs below clearly shows) and just as important in economical and social terms.



Nudibranchs from Jervis Bay  
BlueBeyond



Nudibranchs (*Jorunna* species) from Jervis Bay  
BlueBeyond

Molluscs include species such as scallops, squid, chiton, cuttlefish, abalone, snails and nudibranchs. There are very few marine molluscs that are pests and almost 95% of known species in the state are endemic (i.e. occur nowhere else in the world).

Besides the primary resources of food, shells, pearls and shell grit they also have potential to provide adhesives for binding internal wounds, as they will stick in moisture and have huge medicinal potential as anticancer agents, antibiotics (such as tyriverdin) and neurotoxins for pain killers. Whilst bioprospecting of molluscs has potential to advance medical and other sciences, it is important to understand their diversity and preferred habitats so that they are not over harvested and threats to the species and their habitats can be abated.

Kirsten's work looked at molluscs as an indicator of the biodiversity in these rocky reefs. Eighty-two mollusc species were found and most species were classed as rare and locally endemic (with many only found at one site).

She investigated different types of rocky reef systems and found there were quite distinct groupings between rocky reefs based on their geomorphology (i.e. reefs with large boulders such as the systems at Gym's Beach and flatter rock platforms like the limestone reefs at Stenhouse Bay). She also found clear distinctions between reefs on mainland and offshore islands and those on Yorke Peninsula versus the Fleurieu Peninsula.

The Bouldery systems tended to be sites of high mollusc diversity and limestone habitats had fewer numbers of molluscs, but typically had a good diversity of algae and the mollusc species found in these systems were quite unique.

In Gulf St Vincent, intertidal rocky reefs contribute only a small proportion of the habitat and very little of this habitat type is preserved, with the exception of places such as Troubridge Island and Aldinga Aquatic reserve. Not only are rocky intertidal reefs poorly conserved they are also vulnerable to disturbance, therefore there is a need to ensure that protection of these intertidal rocky reef systems is comprehensive, covering both rocky platforms and systems dominated by boulders, mainland and offshore reefs and protection of these on both Yorke and Fleurieu Peninsula.

Claire van der Geest took up the theme of diversity, focusing upon the diversity that exists within one type of animal, the Prawn.

There are many families of Prawns but Claire looked at one of the more commercial families, Penaeidae.

Prawns are a tropical species typically occurring from Madagascar to Japan and the populations in South Australia are remnants from a time when the waters were much warmer.

Claire delved into a vernacular analysis of prawns versus shrimps and we also had a quick sex ed course learning that boy prawns' legs are joined whereas those of females are not. Something to check out at the next Christmas Barbeque.

She then delved into a detailed biography, of the Penaeidae family in particular the western king prawn.

The species spawn in deep water, typically during November to February in SA waters when the waters are warmer. Larval stages look nothing like the prawns we know and are quite frilly and intricate. After a couple of weeks they move inshore to the sheltered mangroves and seagrass meadows where they spend their childhood and head offshore again as adolescents moving out to sea on the ebb tides to a deeper waters where they bury themselves in the substrate for protection. Prawns forage mostly by the dark of the moon to avoid predation by fishes who are more active on the full moon. This is why prawn fishers work on the new moon, this also means they are likely to take less by-catch.

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Last year's forum touched on indigenous history and exploration of the gulf, including the history of shipwrecks. This year the historical accounts of the gulf were presented by Dr Neville Alley who unravelled its geological history. He reminded us that the Gulf has been in existence for only a few million years (a snippet of time in geological terms).

He focused upon the Gulf St Vincent Basin as distinct from the area we refer to as the Gulf.

His walk through geological history provided an explanation for the many features we see on our beaches and around the Gulf today. For example the large boulders of Granite found poking through

the water at low tide at Hallett Cove and Port Vincent are in fact boulders carried by the Permian glaciers to the area and eroded from the sediments onto the beach by more recent processes.

About 42-45 million yrs ago marine records start in the basin and during the Eocene to Oligocene period (30M years ago) the marine environment extended as far as Redhill and into the Barossa Valley. At times Yorke Peninsula hardly existed except for higher parts that formed low islands.

It was not until the last few million years that the gulf really began to take on the form that we now know today.

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With minds now warmed to the value of the diverse habitats and species of the Gulf, it was time to warm our bellies with hot soup and other food assortments. Gavin the leafy sea dragon kept the crowd company over lunch, as did the third SARDI film, which aired over the lunch break.

For those who have not seen the film starring Gavin and his escapades along the Gulf it is somewhat in the style of Finding Nemo combining wonderful cartoon critters that take us on an educational journey. A must see for the young and young at heart. Contact the Department for Environment and Heritage's Coast and Marine Branch to find out how you can obtain a copy.

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Linda-Marie McDowell introduced us to some of the planning documentation and conservation efforts being undertaken to protect the gulf, including the Living Coast Strategy, Marine Parks and Marine Planning.

Linda-Marie walked us through the various documents and what it means for community groups and protecting Gulf St Vincent. A full write up on these are detailed in the "Protecting Marine Ecosystems Integrity" article.

The pilot marine plan for Northern Spencer Gulf has been completed and is out for public comment.

The marine plan for Gulf St Vincent will begin shortly. A regional consultative committee will be established to provide input into the planning process. Anyone interested in this committee should contact Linda-Marie for more information.

There are 19 areas that have been flagged as potential marine park sites plus the Encounter Marine Park, which sits between Cape Jervis and Kangaroo Island. The aim is to protect a representative proportion of the marine systems that exist and therefore hopefully also protect much of the biodiversity within our waters. These will be similar to terrestrial parks in which there will be areas suitable for various levels of activities (i.e. there will be 'no take' areas and 'restricted areas'). In Gulf St Vincent the upper part of the gulf and heel of Yorke Peninsula have been identified as possible locations for marine parks.

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Those who have perused recent editions of the Blue Swimmer will be aware of our concerns both prior to and following dredging operations at Port Adelaide. These concerns were also raised by Claire (SAFIC) who presented a fisheries' perspective on the damage which has occurred.

Turbidity is a major issue for the biodiversity in the gulf. The sediment dredged during the Port River operations was a very fine particulate matter and therefore very susceptible to being resuspended.

Issues with increased turbidity include the smothering or burial of benthic organisms, reduced light penetration for algae/seagrass, reduced primary production and re-suspension of heavy metals and other nutrients.

The issue with dredging in this area was one that the Friends group had raised prior to its approval due mostly to the risk of *Caulerpa racemosa*, known to exist in the dredged area, spreading into the Gulf and onto sensitive areas such as the Orontes Bank. After many submissions to the Development Assessment Commission (DAC) and other relevant bodies the EPA and DAC recommended the dredging be undertaken in Winter in order to reduce the risk to recreational beachgoers associated with visibility. Dissolved oxygen levels also increase in winter so there would be minimal impact to fauna due to the reduction in O<sub>2</sub> levels from dredging operations. Curiously enough the operations were undertaken during Summer. The Friends were also informed a condition was set by the DAC specifying that the surface layer of dredged materia containing the Caulerpa would be brought ashore so it would die before being dumped and that curtains or bunds should be used to reduce the spread of the dredge plume. Anecdotal reports suggest nothing of this kind was used.

Correspondence has been sent to the EPA from the Friends group to ascertain whether such conditions were adhered to and if not what measures will be undertaken to remedy the breach.

It is interesting to note that for safe swimming, people should be able to see the bottom of the water at a depth of 1.2m. In the water subject to the dredging operations one would have been lucky to see anything, which brings up grave concerns for the safety of beach users following such procedures. Curiously enough no shark sightings were observed over summer north of Brighton in the area affected by the plume.

Claire informed us that following on from the dredge operations E coli counts in cockles rose substantially compared to levels reported earlier this year (for which the fishers have not been compensated). The amount of Cabbage Weed (*Ulva* sp) also increased which is often indicative of an increase in nutrient levels. There was also a thick mud on the surface a few inches deep and unusual "fuzzy" algae in the vicinity that previously had not been noticed.

Whilst there is no hard evidence to suggest causality the resulting damage is clearly evident in the photos Claire showed us (some of these are also contained within issue 5 of the Blue Swimmer).

Such activities have severe connotations for future dredge operations and the need for relevant authorities to closely scrutinise major projects and ensure adherence to recommended procedures to avoid the environmental, economical and social consequences which have surfaced.

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James Brook introduced us to Reef Watch, which is supported by the Conservation Council of SA (CCSA) and involves recreational divers, snorklers (and possibly beachcombers in the not so distant future) in monitoring of our reefs, training and education.

On Yorke Peninsula dives are currently undertaken at Edithburgh, Pt Rickaby and may soon begin at either Pt Vincent or Pt Julia.

There are presently 250 divers involved in the reef watch training course and 8 dive clubs who have adopted a reef.

James spoke to us about the "Feral or in Peril" program which, as the name suggests, aims to record incursions of introduced marine pests and species of conservation significance.

Many of the feral species such as Northern Pacific Seastar and Asian Mussel do not yet inhabit state waters; hence sightings of these species are vital so that control attempts be made as soon as they reach our gulf. Species in peril include the well known but seldom seen Leafy and Weedy Seadragons and Black Cowry.

Sightings to date have included 1 red alert species (*Caulerpa taxifolia*) outside the Port River system and eight others including European Shore Crab and Fan Worms.

On a more positive note 34 Western Blue Groper, 40 Western Blue Devils, 40 Reef Corals, 7 Striped Pyjama Squid and over 5 Harlequin fish have been observed.

More information on Reef Watch can be obtained at the CCSA on 8223 5155 or at [www.reefwatch.asn.au](http://www.reefwatch.asn.au)

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Given Jane Corin's unfortunate predicament Jim gave a quick spiel on the Conservation Council of SA and their involvement with coastal and marine issues.

The Conservation Council is made up of 60 member groups as well as Friends of the CCSA and is a peak body for conservation issues in the state.

After a rough struggle with legal issues relating to Hindmarsh Island, which almost broke the Council financially, Michelle Grady and Jane Corin have provided direction for the organisation and have sought to influence grass-root action and work more cooperatively at tackling higher level issues.

This is similar to the philosophy of the Friends of Gulf St Vincent who aim to take a holistic approach through education, advocacy and increasing the capacity to implement change through events, such as the Pt Vincent forums.

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Jim summarised the information we had at hand regarding the gulf and asked the vital question, 'what can we do as a community'?

As the morning speakers suggested, the Gulf is certainly a unique place with a high degree of endemism and diversity of habitats and species.

Jim highlighted that while governments commit to undertake plans for action there is a lack of "real" community consultation. Quite often when the community are consulted decisions have already been made about proposals and developments and Jim exemplified this by discussing the West Beach Boat Harbour.

The Barcoo debacle as it has become more widely known was the result of a government decision in 1996 to dredge the Patawalonga Basin to stop black water entering the gulf, although beneath this facade were plans for the towering monstrosities that now grace the Glenelg foreshore and an L shaped groyne for a boat harbour to the north. There were also hidden plans to divert stormwater from the Patawalonga through the Barcoo outlet.

Over 600 people were actively involved in the campaign including many scientific experts who risked more than their jobs to speak out against such actions. In this case, as has been observed in other environmental stances, many were penalised for having a democratic voice and there was a push to alter legislation to suit developmental pursuits.

The question is how we can prevent future Barcoo debacles from occurring as the community does tend to get worn out from saying, "I told you so" after events such as the Barcoo outlet at West Beach and the recent Pt Adelaide dredging.

Such is the questions with stormwater management in the western suburbs with recent flushing of the River Torrens (if you can call it a river or a stream of sludge may be more apt) straight into the gulf rather than treating it on land through wetlands or other processes such as integrated catchment management.

No longer can we rely on just approaching the state ministers and more often than not the issue is merely referred to another department. Part of the answer may lie in lobbying with peak bodies (such as the CCSA) and continuing grass roots activism, as ultimately it is the people who decide on the level of ignorance that governs us. This means that whenever the opportunity arises people should air their opinions whether it be on talk back radio, newspapers or providing others with the information to progress and advocate for

these issues. The Pt Vincent forums and activities with the SA Living Artists committee to educate children and the wider community through positive activities such as the arts, aims to achieve this.

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Stay tuned for future Gulf St Vincent forums in which you may learn "Even more about your Gulf".

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### **Protecting Marine Ecosystem Integrity: the Marine Planning Framework for South Australia.**

The *Marine Planning Framework for South Australia* heralds a new era in conserving, protecting and utilising the state's marine environment and its resources. The Framework establishes the policy direction for a network of six individual marine plans spanning the whole of South Australia's state waters and is built on a foundation of ecologically sustainable development, ecosystem-based management and adaptive management principles.

Regional marine planning offers a mechanism to achieve strategic, integrated planning and management of human activities in the marine environment. Recognising this, non-government environment groups and industry have been among the chief advocates of marine planning. Environment groups have long recognised that marine planning offers the basis for a 'whole of ecosystem' approach to both protection and ecologically sustainable use of the commonly owned marine environment. Marine industry groups too, have called for planning and management certainty to maintain investment confidence.

The Marine Planning Program of the Coast and Marine Conservation Branch, Department for Environment and Heritage (SA) has worked towards developing an appropriate model for a state-based Marine Planning strategy. There are few successful models worldwide to guide the development of a marine planning framework at the scale of South Australia's state waters. However, the Government believes it has developed a model that is a world first in ecosystem-based marine planning, which will deliver the following objectives:

1. Provide for integrated, and ecologically sustainable development and use of South Australia's marine environments.

2. Further the conservation and protection of the ecological processes, biodiversity and intrinsic values of the marine environment.
3. Promote effective partnerships between community, industry and government.
4. Facilitate adaptive management, addressing the dynamic nature of the marine environment and uses of it.
5. Identify and facilitate the reduction of threatening processes in the marine environment.
6. Facilitate informed decision-making based on continually improving knowledge and understanding of the ecological processes of the South Australian marine environment.

The principles of ecologically sustainable development, ecosystem-based management and adaptive management are evident in the design of all key features of the Framework and its individual marine plans. Marine plan boundaries, for example, are primarily based on the state's marine bioregions, while zoning within each marine plan will be based on ecosystem and species diversity. A Performance Assessment System (PAS) will integrate multi-agency monitoring of key indicators of ecosystem integrity to determine whether marine plans are meeting the objectives of the Framework.

The draft *Spencer Gulf Marine Plan* is the first of the State's marine plans. The aim of the plan is to guide development and use for the purpose of maintaining a healthy and productive Spencer Gulf marine environment. The draft *Spencer Gulf Marine Plan* has been developed with the assistance of the Spencer Gulf Regional Consultative Committee and in consultation with interested stakeholders, NRM Boards, Government agencies and councils.

The public consultation phase for the draft *Spencer Gulf Marine Plan* is underway with the closing date for submissions 29<sup>th</sup> September 2006. This will give everyone an opportunity to comment on the plan and prepare submissions.

The *Living Coast Strategy for South Australia* also provides for other key marine initiatives of the South Australian Government which include: the establishment of Marine Protected Areas (MPA's) including the proposed system of 19 multiple-use marine parks, the Estuaries Policy and Action Plan for South Australia, the Adelaide Dolphin Sanctuary and protection of threatened and rare species. These programs compliment the Framework and

together, they provide a comprehensive, ecosystem-based approach to ensuring the conservation of South Australia's marine environment and guidance for appropriate planning and management of its use.

Further information on the *Marine Planning Framework for South Australia* can be found at <http://www.environment.sa.gov.au/coasts/planning.html>.

Or contact the Marine Planning Team,  
Coast and Marine Conservation Branch,  
Department for Environment and Heritage  
GPO Box 1047  
ADELAIDE SA 5001  
Phone (08) 8124 4900  
Fax (08) 8124 4920

Email: [marineDEH@saugov.sa.gov.au](mailto:marineDEH@saugov.sa.gov.au)

By Linda-Marie McDowell

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## Gulf Views

Do you want to express your views about the Gulf or certain coastal and marine issue?

Want to share your photos, art or poems about the gulf or our wonderful sea life to the Gulf St Vincent community?

If so then we welcome submissions and letters to the editor for publication in the Blue Swimmer in our "Gulf Views" section.

Send your submissions and pics to the editor at [melanie-rees@lycos.com](mailto:melanie-rees@lycos.com)

## MARINE PLANNING FRAMEWORK RELEASED (Thursday, 13 July 2006)

The state government today released a Marine Planning Framework for all state waters, heralding a new era in protection for South Australia's marine environment and its valuable resources.

Environment and Conservation Minister, Gail Gago said the framework would operate much like planning guidelines on land.

"The framework is essentially a science based guide for decision makers who oversee activity or development that could impact on the marine environment," Minister Gago said.

"The framework provides for the development of six regional marine plans which will guide development and use within the state's waters.

"The first plan— the draft Spencer Gulf Marine Plan – has been developed as a pilot to trial the ground breaking methodology and principles of the overall framework. The draft plan was developed in conjunction with a regional consultative committee, comprising community and industry members from the Spencer Gulf region.

"There are very few successful models in the world to guide the development of a marine planning framework for an area as large as South Australia's waters," Minister Gago said.

"However, we believe we have developed a robust model that is world-leading in ecosystem based marine planning, and we are confident the Spencer Gulf trial will demonstrate that our state is at the forefront of marine environment management internationally".

'South Australia's Strategic Plan and the *Living Coast Strategy* provide details on other marine protection initiatives that will be developed by the state government. This includes the development of a system of 19 Marine Parks to be established by 2010," Minister Gago said.

The Draft Spencer Gulf Marine Plan is out for public comment for the next three months. Public information sessions will be held in regional locations to ensure the community has an opportunity to become involved in marine planning.

Copies of the draft plan and submission forms are available online at [www.environment.sa.gov.au/coasts/planning.html](http://www.environment.sa.gov.au/coasts/planning.html) or by contacting the Department for Environment and Heritage on 8124 4900.

Further information contact: Leah Young (DEH Communications) on 8226 5724

## Josephine's Journal: upcoming events around the Gulf

For more information about Friends of Gulf St Vincent please contact the secretary; Ian ([ianrk@iprimus.com.au](mailto:ianrk@iprimus.com.au)).

To add your event or workday to Josephine's Journal, contribute an article, photo or snippets of information contact Mel (0418 802 816, [melanie-rees@lycos.com](mailto:melanie-rees@lycos.com)).

### Future events:

When	What	Further Details
<b>August</b>		
Frid 4 <sup>th</sup>	Tide Lines – Port Adelaide (photo competition) Launch	6pm at Kafé Dom, 61 Semaphore Rd, Semaphore
Sat 5 <sup>th</sup>	The Living Coast (the Sea Eagle & Sea of Flags) Launch	1pm on the Esplanade, end of Grange Road
Sun 6 <sup>th</sup>	Beyond Red Launch – (photographic competition)	3:30pm at Henley Hotel, Esplanade, Henley Beach
Mon 7 <sup>th</sup>	Fishing Boxes/ Jetty Culture (local school art/ craft) Launch	6pm at Henley Community Centre, 196 Military Rd, Henley Beach
Sat 12 <sup>th</sup>	Tide Lines – Onkaparinga (photo competition) Launch	11:30pm at Aldinga Library, Aldinga Rd

