



# The Penguin

Newsletter of Phillip Island Conservation Society Fourth  
Quarter,  
December 2007



Newsletter

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## Dates for your Diary

**COMING UP!** An exciting fundraiser for PICS! A group of members will perform "The Rhyme of the Ancient Mariner", led by the Poemteller, Malcolm Brodie - during January. Watch the Advertiser for details.

**Sat Jan 12 2008 - Children's Environment Morning,** Parish Hall, Cowes, 11 a.m.-12 noon. "Orcas". Enquiries: Christine Grayden ph 5956 8501

**Sat Jan 12 - PICS AGM,** Meeting Room, Heritage Centre, Cowes. 8 p.m. Annual reports.

**Sun Jan 13 - Working Bee,** Meet at Red Rocks car park, 10 a.m. Tools and gloves provided.

**Fri Jan 18 - Friends of Koalas AGM,** Enquiries Patsy Hunt 5952 2407

**Sat Feb 2 - Children's Environment Morning,** Robyn Stewart "Lizards". Meeting room, Heritage Centre, Cowes 11 am - 12 noon.

**Sat Feb 16 - Seasonal Walk,** Pyramid Rock. Meet at car park 2 p.m.

**Sat Mar 1 - Children's Environment Morning,** Gillian

Collins "Bandicoots". Meeting room, Heritage Centre,  
Cowes, 11 am - 12 noon

**Mon Mar 3 - Linfox hearing commences**

**Sat Mar 29 - PICS General Meeting, 8 pm** Meeting  
room, Heritage Centre, Cowes. Speaker tba

**Sun Mar 30 - Working Bee, Five Ways. 10 a.m.** Please  
bring weeding tools and gloves.

**Sat Apr 5 - Children's Environment Morning,**  
"Experiments" with Christine & John. Meeting room,  
Heritage Centre, Cowes. 11 am - 12 noon.

**Sat May 17 - Seasonal Walk, (to be confirmed)** Rhyll  
Transfer Station to inspect restoration work. 2pm

**Sat/Sun May 24-25 - PICS 40TH BIRTHDAY  
CELEBRATIONS,** Parish Hall, Cowes. Details TBA in next  
newsletter.

**Sat Jul 5 - PICS General Meeting, 8 pm** Meeting room,  
Heritage Centre, Cowes. Speaker tba

**Sun Jul 6 - Working Bee, Planting at Red Rocks. Meet at**  
car park 10 a.m. Tools and gloves provided.

**Sat Aug 16 - Seasonal Walk, (to be confirmed)** Penguin  
Parade volunteers centre and plans for rehabilitation  
centre. 2pm

**Sat Sep 27 - PICS General Meeting, 8 pm** Meeting  
Room, Heritage Centre, Cowes. Speaker tba

**Sun Sep 28 - Working Bee, Planting at Red Rocks. As for**  
Jul 6.

**Sat Nov 15 - Seasonal Walk, McHaffie's Lagoon. 2 pm.**

**Sat Jan 10 - PICS A.G.M.**

**Sun Jan 11 - Working Bee, Red Rocks.**

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**Barb Martin Bush Bank:** Sales and volunteers - every  
Wednesday plus 1<sup>st</sup> Saturday of each month 10 - 1. Phone  
Anne Davie 5956 8216.

**Friends of Koalas (FOK) Habitat Days:** First Saturday of  
every month at 10 a.m. Contact Patsy Hunt ph 5952 2407

**Koala Count** at the Koala Conservation Centre, second  
Tuesday of every month at 10am. Contact Patsy Hunt ph 5952  
2407

**Biosphere - Bass Coast Round Table** meets at San Remo  
on the third Friday of every month at 8 p.m. Contact Jane  
Jobe, convenor, ph 0409 530 898.

**Friends of Churchill Island (FOCIS):** Phone Sec Jill Allen: 5956 7109, or email: [nellaa32@waterfront.net.au](mailto:nellaa32@waterfront.net.au). Meeting dates: 19.1.08; 29.3;24.5; AGM 26.7 - 1 p.m., Visitors' Centre, Churchill Island.

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## FROM THE PRESIDENT

**Dear Members,**

Mid December! Whatever happened to 2007? We must have been busy for a year to pass so quickly! Of course, we have been busy, we are busy and we will be VERY BUSY next year. For PICS one of the most important issues for 2008 is the VCAT hearing of the Linfox Application for a golf course and club house/hotel/housing development between the Race Track and Pyramid Rock Rd. The Environment Defenders' Office is providing us with a great deal of help and advice on this very involved planning issue. If you can help in any way, please contact Marg Johnson who is doing a great job in co-ordinating our campaign. The Hearing, at VCAT in Melbourne, is set to run for twelve days (four days per week for three weeks) commencing on Monday March 3rd. Hearings usually commence at 10.00 a.m. and run through to about 4.30 p.m. with a break for lunch at about 1.00 p.m. Please come along when you are able - it's always encouraging to have supporters in the gallery - and a pleasure to have lunch with whoever turns up.

One of the most important dates for next year is the weekend of May 24/25, when we celebrate the 40th birthday of PICS: more of that nearer the time, but please, MARK YOUR DIARY.

The ongoing big - VERY BIG - issues are the proposals for the expansion (over expansion?) of the Port of Hastings - shades of Henry Bolte's "Little Ruhr"! Gillian Collins is keeping us well informed about what is happening over there. The Desalination Plant proposal for the beach near Kilcunda is, to my mind, quite irrational, very expensive in both money and energy, and as yet no firm commitment by the Victorian Government to an Environment Effects Statement.

Close to home - no, here, at home - the Structure Plans for Rhyll/Silverleaves/Cowes/Ventnor are in process of preparation, and should be on display at the Cowes Cultural Centre for at least a week in January. This is our chance as individuals to have our say - so make sure you see the Structure Plans and make your WRITTEN COMMENT.

The Phillip Island Nature Parks is proposing what appears to be a "SUPER SIZED" Sustainability Centre at the Koala Conservation Centre. It's hard to understand where the koalas

will fit into this plan, and many of us have misgivings about siting a "Sustainability Centre" in a place which was established for the ongoing protection of the natural environment, not for demonstrating desirable aspects of the BUILT ENVIRONMENT. The idea of a Sustainability Centre is a good idea, we know that the architectural design will be good as Greg Burgess is the chosen architect, BUT is the KCC the right site?

Before we tackle the tasks which lie ahead, let's make the most of the coming holiday time; let's enjoy the Island which is flourishing after the good rain we've enjoyed.

May I wish you a Happy Christmas, and lots of enthusiasm and energy for the coming year.

**Margaret Hancock, President.**

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**PLEASE NOTE THAT MEMBERSHIP RENEWAL IS DUE IN  
JANUARY**

**A MEMBERSHIP FORM IS INCLUDED WITH THIS  
NEWSLETTER**

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## **Children's Environment Mornings**

Our fourth season started in October with Skye Winder showing the fascinated children the contents of both her big pack (carried by a porter) and her day pack for her Kakoda Trail hike. In November Kaye from "Ready, Set, Grow" nursery in Cowes showed the children lots about flowering plants and sent them all home with tomato seedlings. In December Ash Reed from the KCC talked about koalas and showed the children how to draw them. In January I will be telling the children about Orcas, using the life-sized Orca I made for World Environment Day. This will be in the Parish Hall, as the Orca won't fit in the Meeting room! In February Robyn Stewart will bring her stumpy tailed lizard in for the children to hold and teach them lots about lizards. In March Gillian Collins will tell us about Bandicoots, and in April John and I will run an experiment session together with the children, which they always enjoy. Sessions run from 11 am til 12 noon, usually in the Meeting room, heritage centre. You are most welcome to attend.

*Christine Grayden*

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## SEPTEMBER GENERAL MEETING

The September general meeting of the Phillip Island Conservation Society was addressed by two excellent speakers. The first, Tim Bloomfield from the Phillip Island Nature Park, is one of two people employed full-time by the park, with back-up by eight other rangers when needed, specifically to try and eradicate foxes from Phillip Island. This is one of the many unseen costs of running the Nature Park, and is funded by income from the Penguin Parade. This enormous task was first tackled by the Penguin Reserve Committee of Management in the mid 1980s when it was found that simply controlling the foxes within the Summerlands Peninsula reserve was an inadequate approach. Since that time a wide variety of methods of control have been tried so that now the cache of methods used includes baiting, snaring, trapping, fumigating burrows, hunting with hounds and shooters and using terriers on individual dens. Experience has found that many methods must be used simultaneously as foxes are such clever adversaries that they quickly adapt to individual hunting methods.

Tim estimates that there are 60-80 foxes on Phillip Island. Foxes target a wide variety of prey from insects to ground nesting and dwelling birds to rabbits, feral cats and possums, they also do an enormous amount of damage due to their behavior of multiple killings of any animals that move as the fox travels through its range. They can therefore kill and leave five or more penguins on any one visit. Such multiple killings are, however, extremely unpredictable and seemingly unrelated to seasonal events. Should the penguin survive the attack, which targets the back of the head, its sense of balance is so severely affected that it cannot stand.

Amongst many fascinating images shown was footage of a fox easily jumping a two metre fence. Foxes can also dig under ground-level mesh fences. Due to the foxes' adaptability and Phillip Island's human settlements, suitable fencing is not considered to be a practical option here. Members were made aware of the enormity of the task of completely eradicating foxes from Phillip Island, but given the dedication and knowledge of the Park staff, the co-operation of residents and the fact that there does not appear to be any immigration of foxes onto the island, it should eventually be possible.

The second speaker was Gillian Collins, who represents PICS on a community consultative committee of the Port of Hastings and on the Southern Victoria Community Action Group (SVCAG) which was established in March 2007 as a coalition of community and environmental groups throughout the Westernport catchment area. The port is of course the subject of a massive redevelopment proposal which would see the Port of Hastings become an "international container handling facility" plus handling the export of wood chips, brown coal

and more steel within 15-30 years. As well as leading to huge ships carrying millions of containers using Westernport each year, an estimated 7,000 truck movements a day would be needed to disperse the containers, plus a dozen or more freight trains each over a kilometre long per day. The required infrastructure for this would include the development of the Western Port Highway, a proposed East Gippsland rail line, intermodal marshalling yards in Hastings, Tyabb and Dandenong, the creation of the Frankston Bypass to link to Eastlink, the upgrade of Thompson's or Green's Road, and an upgrade of either or both the Frankston and Dandenong rail lines into Melbourne. A four kilometre berth through mangroves and dredging in Westernport will be required to service the huge container ships.

Whilst not denying the need for some port development for Victoria, SVCAG is concerned that no national port policy exists, and that the proposed developments at the Port of Hastings and many other Australian ports seems to be out of proportion to the needs of the projected Australian population. Gillian told the meeting that SVCAG members have met with many government ministers and representatives, and that when they do "we point out that this massive increase in container imports is tied to our future as consumers, that our global warming future demands that we limit our consumption of imported goods and scale back our lifestyles in order to deal with peak oil and natural resources depletion. We also make the case that we have ethical responsibilities to NOT export brown coal and wood chips to China to fuel an economy that is counting on us to import the results of their manufacturing boom into our communities and our landfills.

"We also make the case for the catastrophic environmental damage that will result to Westernport in the event of any oil spill, ship fire, collision or other shipping incident resulting from the huge increase in shipping in the Bay." The conservative cost estimate for the development is \$4.6 billion. Gillian asked those present to think of the many other ways in which such a sum could be spent: hospitals, education, the environment, water recycling, alternative energy, drought relief and farmer resettlement are a few that come to mind that would seem to represent money better spent. Gillian concluded: "The bottom line is that this planned Port expansion is not sustainable. We need to ask our politicians to re-think a new future for Victoria that focuses on sustainable development without turning our back on the rest of the world. We need an innovative and clever economy that uses our natural resources wisely. To continue on with "business as usual" is not an option."

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**Spring Seasonal Walk  
'Bimbadeen', Ventnor, 17.11.07**

Seventeen of us accompanied Anne Davie on an invigorating and informative walk around the award-winning property 'Bimbadeen', owned and run by Anne and her husband, Bob. The walk took us from the house on Back Beach Rd down farm tracks next to planted corridors towards Troutman's Rd. The farm area of approx 360 acres, which is now home to 250 head of cattle, was originally covered in dense Swamp Paperbark scrub (*Melaleuca ericifolia*) which was all ploughed in to make way for pasture. The Davies took on the original 80 acres as a dairy farm in 1955, and gradually added to their acreage. At that stage, total clearance of land was the recommended method, but by 1970 significant salt patches were starting to appear. The Davies started replanting in the mid 70s but these activities accelerated with the commencement of Landcare in 1988. Landcare provided much-needed support in expertise and funding.

The farm is transected by Troutman's Rd, which has been planted out as part of the Wildlife Corridor. Anne took us up to the old Troutman house, which Davies had once used as a dairy. Old Mr Troutman, a German, had been very wary of strangers and Anne showed us the slit in the concrete wall through which he would aim his shotgun when challenging unexpected visitors.

We walked across the dry channel of Saltwater Creek, protected now by a developing plantation, commenced in 2001. Plantations are very extensive on Bimbadeen, serving as shelter from wind for the stock, and as a means of lowering the water table to alleviate salinity problems on low lying areas. Originally, the plantations were 5m wide, but are now 10m wide when new ones are established. Swamp paperbark and boobialla are the main species, with some black wattle, coast wattle, swamp gum, manna gum and sheoaks. Seaberry saltbush, *Poa* tussock and sedges have been used as ground cover.

After a challenging climb up Hurricane Hill, our group was rewarded with a wonderful view across the whole property and to Bass Strait. This is now the second-highest point on Phillip Island after Cape Woolamai now that Quoin Hill has been quarried for 'blue metal'. From there we returned to the farmhouse through improved pasture of ryegrass, white clover, subclover and strawberry clover. Bob and Anne's sustained efforts to manage and improve Bimbadeen were recognized in 2004 when they received a Regional Landcare Award - Primary Producer Caring For Land. We were all most grateful for their hospitality.

*John Eddy*

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## **CEPHALAPODS with Dr Mark Norman**

One of Phillip Island's 'Relay for Life' teams did a novel fundraiser in October when one of their members, Information Centre manager Peter Francis, invited his friend from university days, Dr Mark Norman from the Melbourne Museum, to come along and speak to the Cultural Centre full of families about his area of expertise: cephalopods (squid, octopus, cuttlefish and nautilus). Unfortunately I only learned about this on the afternoon of the evening talk, so was unable to notify PICS members. However, I did take notes and can share some of the amazing facts I learnt about these incredible creatures.

The name comes from 'Cepha' = head, and 'pod' = foot, which is a good description on these animals, since they don't really have a separate body. Since their esophagus runs through their brain food has to be well chewed and so their tongue is covered in teeth. They are entirely made of muscle which is very 'liquid', so they are able to squeeze through a hole as small as a 10cent piece. They are masters of disguise since their skin contains little coloring dots, much like the picture on a TV set, which can change in seconds. The hairy octopus has 3D skin and can change shape by section. There are as many nerves in the eight arms as there are in the brain, making each arm an extremely sensitive organ. Some species develop branching at the ends of the arms, with one specimen having over 32 arm tips. The primitive ancestors of today's cephalopods were like nautiluses, and at 3 metres long were the bosses of the sea at that time.

One small member of these species is the ramshorn squid at 3-4 cm long. Giant cuttlefish grow to 1 m long and have a cuttlebone of 50 cm long. Female cuttlefish lay their eggs under ledges. During mating time the large males fight all the time between mating. Smaller males 'dress up' to look like females and sneak through to mate. They are so successful at this that up to a third of matings have been observed to be by these small trick males. Squid tend to be long, thin and fast, with aero squid being able to fly to escape predators, while firefly squid light up to hide their shadow from below to trick predators. The dumpling squid lives in sand and is nocturnal. It secretes special glue to attach sand onto its body and acid in order to get it to drop off. They make their own light inside using glowing bacteria. The striped pyjama squid is known in the sea for its poisonous 'snot', and protects itself that way. The pygmy squid, at 9 mm long, is so small that it can glue itself onto a piece of seagrass and pretend to be part of the plant.

The Jewell squid has one telescopic eye. The glass squid is transparent, being basically full of 'wee'. It lives in the deep

sea and may not eat for weeks. The ball squid has a trick where it can turn itself inside out so that all of its tentacles tuck inside and it looks just like a floating ball. In the ocean at depths of 1 km lives the giant squid. One baby colossal squid was caught weighing in at 550 kg, but they are not as long as the giant squid; one found was 7m long.

The coconut octopus hides inside coconut shells. It scours the bottom to find one, then carries it until it finds another, then hides inside the two held together. The mimic octopus can pretend to be a lobster, a poisonous flounder, a sea snake and a lion fish to trick predators. The nautilus makes its own shell, and if it gets irreparably damaged the nautilus can make another in 2 hours. Mark showed a slide of one nautilus hitching a ride on a jellyfish. The male is 100 times smaller than the female. In one species of octopus the sperm sack is contained in one of the tentacles, which is detached and lodged inside the female where it lives on for weeks. One female had five such arms inside her. Cephalopods mate once then die, but produce so many young (some species up to 600,000 young) that they can support a substantial fishery. The Victorian squid fishery is considered to be the only really sustainable fishery.

In captivity, octopi are very hard to keep because they can so easily escape and they eat any other species put in with them. They are extremely dexterous and can even unscrew vegemite jar lids. They are a major problem to crayfish fishermen because they get into the pots, eat the bait and get out again. This was a most fascinating talk with fabulous slide illustrations. It was also a good fundraiser for the Relay for Life Team. To view Mark's slides and read much more about these wonderful animals, go to <http://www.environment.gov.au/biodiversity/abrs/online-resources/species-bank/> and do a search for whatever species you want to know about.

*Christine Grayden*

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## **TOUR OF THE NATIONAL HERBARIUM**

Christine and I were fortunate to recently be part of a guided tour of the National Herbarium, arranged by the National Trust, and lead by Matthew from the Royal Botanic Gardens Education Service. The National Herbarium is situated on Birdwood Ave on the southwestern edge of the wonderful Royal Botanic Gardens, and is not open to the public. Originally built in 1934, it replaced the original 1861 herbarium near where the Shrine is today, and was extended in 1988. It houses between one and two million dried specimens of

plants, algae and fungi.

The Botanic Gardens we know and love today owe their existence to two very different men. The present character of the Gardens reflects the contrasting characters of the first two Directors. The stern, scientific and obsessive Ferdinand von Mueller, director from 1857 to 1873, established the Herbarium, amassed a huge range of plant specimens and books and planted species from around the world in a systematic, grid-like fashion. William Guilfoyle, director from 1873 to 1909, developed the Garden's landscape style, with its sweeping lawns, winding paths and lakes. Both are commemorated with sculptures behind the Herbarium; the stern bust of von Mueller and the whimsical sculpture of germinating seeds honouring Guilfoyle.

Entering the Herbarium through security doors, our group of 16 was taken first to the Identification section. To minimize the rise of insect pests the main collection of dried specimens is out of bounds, even to small guided tours like ours. Thus, the ID section houses a small easily accessible collection for specimen comparison. For a small fee the general public can have plants identified 10 am - 1 pm weekdays, with arrangements by phoning. Some research is also undertaken there.

The main collection is protected in a number of ways. To eliminate pests, no chemicals are used but the whole collection is rotated through a freezer set at -17 degrees Celsius. Any new specimens and any returned from loan are subjected to the same treatment. At any time, 70,000 specimens can be on loan throughout the world. The original wooden cabinets have been replaced with metal ones, and there is elaborate protection in the building against fire and water damage.

Most of the specimens are pressed, and housed in folders which are in turn tied in bundles, then stored in cabinets arranged in order of plant families. As well, specimens of fruits and large seeds are housed in boxes, referred to as 'carpelological specimens'. The process of pressing fresh specimens aims to achieve fast drying, with an even pressure. Specimens are laid out between sheets of newspaper which is stacked between layers of cardboard positioned between 2 wooden lattices, with pressure exerted by 2 cords tied around. The newspaper is changed daily until the specimens are properly dry. Drying is accelerated if the room is heated to 40 degrees Celsius. Identification labels, including much information about where the specimen was collected and the date, must accompany each specimen.

Our party was shown Mueller Hall, a handsome meeting space with wood paneling in the style of the 1930s, and still regularly used for events such as garden awards and lectures.

The Mounting Room is where the dried and pressed specimens are mounted onto the sheets of acid free paper. Old specimens often need remounting also. PVA glue is used to secure the dried plant to the mounting sheet, with a minimum border of 1 cm. Some bits of the specimen, particularly flowers, are left free so they can be lifted for detailed examination. Any pieces becoming detached from the specimen are placed in small cellophane bags put inside acid free pockets placed on the sheet. Mounting is time-consuming and exacting work and mostly done by volunteers. At the time of our visit 6 volunteers were seated at tables, each working away at a specimen. One lady had recently celebrated her 5,000th specimen. "That's nothing," she remarked, indicating her neighbor whose tally is over 25,000! Such milestones from 2,500 upwards are acknowledged by affixing a special "milestone" label to the specimen's folder.

We were then shown some examples from the collection. Labels, containing as much information as possible, are always on the bottom right side. A barcode is attached to each specimen, and used in a database. When new species are identified, usually 3 specimens are collected, one being sent to Kew. (The third is a 'spare') Type specimens, used to signify the features of new species, have very special status and are housed in folders with red stripes. The examples we looked at included a variety of flowering plants, seaweed, moss, fungi and lichen, and a grass collected by von Mueller himself. Our tour gave us a fascinating insight into the operations of the National Herbarium. An interesting website where you can learn more is [www.rbq.vic.gov.au](http://www.rbq.vic.gov.au) , the website of the Royal Botanical Gardens.

*John Eddy*

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## **Red Rocks Coast Action**

Thanks to the five workers who did weed control at our last working bee in September. We are still awaiting the outcome of our Envirofund application for \$15,725 for completion of the staircase at the western end of the car parks area, and for protective brush matting, fencing and planting. We have been asked to provide more detail. Our next working bee will be on Sunday January 13, which will be a cleaning up bee. All tools and gloves provided. Meet at Red Rocks car park at 10 a.m. Enquiries phone me on 5956 8501.

*Christine Grayden*

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## PICS HISTORY REPORT

I have almost finished writing the history, with chapters completed being about the start of the Society, Conservation Hill, Swan Lake, the tip, koalas, penguins, the Nobbies, Grand Prix circuit, Isle of Wight hotel, planning generally, the North Shore Position Paper, Phillip Island Foreshore Advisory Committee, Red Rocks, Saltwater Creek, and a chapter about our work in the community called "Spreading the Word". I have also completed an appendix listing all the committee members from 1968-2007, and am working on an extensive bibliography. I also intend writing a chapter about PICS councilors, and have people actually involved writing several paragraphs each about their work regarding Westernport. After that it will be time to find photos and illustrations, format the whole book, proof-read it, then send it off to the printers. My editor, David Bradley, has been a wonderful help. I have also met with some sub-committee members. We are on track for a launch on our celebratory weekend of 24-25th May at the Parish Hall. See you there!

*Christine Grayden*

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## SEAWATER DESALINATION:

### **What it means to our marine ecosystem**

From: *Habitat Australia*, October 2007

By Chris Smyth

Will desalination solve Australia's water crisis or will it simply create a marine one?

Just imagine what Coleridge's ancient mariner would have given for a portable reverse-osmosis seawater desalination plant stowed in his hold 200 years ago. Desalination plants didn't exist in Coleridge's time, but in the past 40 years they have become well-established in Saudi Arabia, the United Arab Emirates, Kuwait, Spain and China. Yet only recently have they emerged as a priority in Australia as our governments look for a quick fix to the water shortages caused by climate change, drought, population growth and the increasing demands of industry and agriculture.

If size, cost and water production were the only measures of success, then Australia's desalination plants would surely be winners. In 2006 the Western Australian government opened Australia's first plant at a cost of \$AU380 million to supply 130 million litres of fresh water to Perth each day - 17% of the

city's needs. Those proposed for NSW, Victoria, Queensland and South Australia's upper Spencer Gulf will each cost from \$AU1 billion up to \$AU3.1 billion. These are big plants and big dollars. Their energy needs are huge, with substantial greenhouse implications where they are not powered by renewable energy, and the coastal land on which they are built could suffer from varying degrees of land disturbance, loss of visual amenity and increased noise. The level of their marine impacts will depend upon plant size and the nature of the marine environment where they are to be located.

The first noticeable impacts will be during construction, when sand, mud and other seabed habitats will be disturbed to lay pipelines and install intake areas. For example, the NSW plant requires an eight-kilometre pipeline across Botany Bay. Desalination plants pump seawater from the ocean. Molluscs, weed, algae, fish and fish eggs, larvae, plankton and other marine life near the intake areas will be sucked into the pipes. Larger marine creatures will be trapped by screens around the intake area - a USA study of power plants revealed that 55,000 invertebrates and 78,000 fish were stuck on the screens each year - while smaller varieties will be carried into the water plant. The loss of these animals will likely alter life cycles and affect those marine animals that normally feed on them.

Salt extracted during the desalination process is discharged in a briny cocktail with toxic metals and chemicals used for equipment de-fouling and water pre-treatment. The discharge could be hotter than, and double the salt concentration of, the receiving waters, and could change local water circulation, oxygen levels, salinity and temperature. Changes to circulation, salinity and temperature could affect fish migration, forcing them away from normal feeding areas and exposing them to other predators. The discharged chemicals could concentrate rather than disperse, especially in shallow areas with limited circulation such as Spencer Gulf, and accumulate in local fish and bottom-dwelling animals and plants.

Impacts on local marine life could also affect the fishing and tourism industries. For example, the prawn and scale fisheries in Spencer Gulf are worth more than \$AU130 million each year, and giant cuttlefish-spawning aggregations, a major draw-card for dive tourism, will be near the discharge area of BHP Billiton's plant. ACF believes that before desalination plants are considered, governments should act to increase the efficiency of water use, support the rollout of rainwater tanks, establish systems for water recycling, storm-water capture and re-use, and institute water restrictions and water education programs.

Desalination plants might be a quick fix for one problem - water shortages - but could lead to an overdose of other environmental, social and economic problems.

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## ANNUAL GENERAL MEETING MINUTES

### Phillip Island Conservation Society Inc.

Following the General Meeting:

1. APOLOGIES and Attendance as at General Meeting
2. A.G.M. Minutes 14.1.06 received. Carried
3. The President's report received: Carried
4. The Treasurer's report received: Carried
5. The Secretary announced that prior nominations received, and that no Election was necessary.

PRESIDENT: Margaret Hancock

SENIOR VICE PRESIDENT: John Jansson

JUNIOR VICE PRESIDENT: Penny Manning

SECRETARY: Marg Johnson

MINUTE SECRETARY: Gaye Cleeland,

TREASURER: Christine Grayden

COMMITTEE: Anne Davie, Greg Johnson, Pauline Taylor

6. Next A.G.M. 12.1.08.

7. Meeting closed at 10.20 p.m.

A [nomination form](#) is available for nominations for the 2008 AGM.

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## MEMBERSHIP AND PUBLIC FUND FORMS

Download the [Membership Renewal Form](#) and send it in today if you have not renewed your subscription, or if you want to become a new member.

The [Public Fund](#) donation form can be downloaded for your contribution to this fund. Feel free to share these with a friend or neighbour.

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## PICS CONTACTS

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