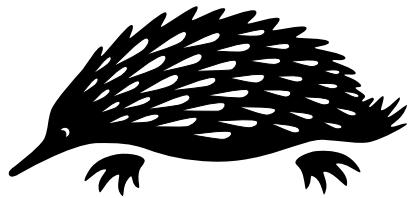


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REGIONAL COUNCILLORS

We would like to hear from our country members,
anywhere in Australia, who would like to become regional
councillors. The value to us is we would have a more
intimate relationship with women and men who have a
knowledge which could be valuable for conservation.

Such Regional Councillors would be sent the minutes of our
Council meetings so they would know more about what we
are doing. They could also submit motions for
consideration and so play a part in Society decisions. By
being listed in our newsletter State members could contact
them in emergencies.

*All articles are written by
Vincent Serventy, Patrick Medway and
Suzanne Medway unless stated otherwise.*

From the President's Desk...

Congratulations to the new Councillors on the way in which they are carrying out their special duties for this year. The Society is advancing forward with a new vision because of their efforts and involvement. Of note was the large increase in membership following out last Annual Luncheon and Annual General Meeting at Parliament House Sydney. We hope to have another VIP guest of honour for next year.

Strategic planning day

Ten councillors attended a special strategic planning day on 12 May 2003 in the Board Room of the Taronga Centre, Mosman. After listening to an interesting presentation on what the Zoological Parks Board of NSW is doing for wildlife conservation, the councillors reviewed the Society's work over the past twelve months. By and large we were very pleased with the results and the Annual Luncheon continues to be one of the best ways to promote the conservation work of the Society. John and Cicely Fenton were the proud recipients of the Seventy Conservation Award and have since agreed to become our new Regional Councillors for Western Victoria. Their home is one of the last refuges for the Eastern barred bandicoot. We look forward to hearing from John and Cicely soon.

Education - the key to conservation

This was the theme for the recent national conference held in Adelaide during April. Delegates from all over Australia and New Zealand attended to hear the latest educational programs to create greater public awareness to the special conservation needs of our native wildlife and its habitat. A full report on the conference is included in the magazine.

Raptor seminar a great success

Our Society sponsored the Birds Australia Raptor Seminar at the Macquarie University in April. A capacity crowd booked to hear what the experts were doing to save our eagles, hawks and owls. Interesting research is being carried out and some of the results are published in this edition.

Prevention of roadkill of native animals - fauna sensitive roads

I was pleased to hear what is happening across Australia to prevent further roadkill of our native animals when I attended the special AUSROADS seminar at the Stamford Hotel, Sydney. Road authorities in every state are now working very hard to design new roadways that will allow motorists free movement without risking accidents with animals on the roadway. New designs are being trialed in every state to prevent the terrible slaughter of wildlife on our roads. Special culverts and overpasses are being used to enable the wildlife to move freely throughout their range without having to necessarily cross over a busy roadway and risk being hit by a motor car. The Editor has included an article on what is being done to reduce the tragic road toll of our native fauna.

Patrick W Medway AM

NATIONAL PRESIDENT



Patrick W Medway AM, National President

Australia's marine environment in danger

by Suzanne Medway

Background

The marine environment of Australia contains an outstanding diversity of ecosystems, habitats and species. This is partly due to the mixing of subtropical waters, warm-temperate waters and cool-temperate waters along our coastline. Over time, the prevailing environmental conditions have created unique coastal and offshore seascapes, resulting in a rich natural and cultural resource that is enjoyed by millions of people.

Human activities, however, have the potential to degrade marine environments and threaten the survival of all marine species. In comparison with the rest of Australia, the New South Wales coast is highly developed with many threats and pressures on our marine environment. Large parts of the coastline and most estuaries have already suffered through ad hoc planning and development. Only a very small number of lagoons, catchments and estuaries remain relatively pristine and loss of marine habitat is still occurring.

The importance of invertebrates

Invertebrates are an integral part of marine ecosystems, and play a number of roles that help to support the function and stability of the food chains and ecosystems upon which we, and other animals, rely. For instance, they play an important role in the cycling of nutrients, are essential for the breakdown of plant matter and other detritus, form the basis of many food chains (including those supporting commercial fisheries), provide habitat for other species (eg coral reefs), regulate populations of other organisms (plant and animal) through predation, parasitism and herbivory, and help maintain water quality by filtering large amounts of water during feeding. The natural fauna of invertebrates is diminishing continually and many species have either disappeared or are in the process of disappearance because of man's action, without man even having been aware of their existence or having studied their characteristics and possible uses.

Protecting the marine environment

Nationally, the marine environment is protected under the Environment Protection and Biodiversity Conservation 1999 Act through Environment Australia.

There are five declared marine parks and three marine reserves (as well as nature reserves) covered under this Act.

- Ashmore Reef National Nature Reserve (Environment Australia)
- Cartier Island Marine Reserve (Environment Australia)
- Coringa-Herald National Nature Reserve (Environment Australia)
- Elizabeth and Middleton Reefs Marine National Nature Reserve (Environment Australia)
- Great Australian Bight Marine Park (Environment Australia)
- Great Barrier Reef Marine Park (<http://www.gbrmpa.gov.au/> Great Barrier Reef Marine Park Authority)
- Heard Island and McDonald Islands Marine Reserve
- Lihou Reef National Nature Reserve (Coral Sea Island Territory) (Environment Australia)
- Lord Howe Island Marine Park (Environment Australia)
- Macquarie Island Marine Park (Environment Australia)
- Mermaid Reef Marine National Nature Reserve (Environment Australia)
- Ningaloo Marine Park (Commonwealth Waters) (Environment Australia)
- Solitary Islands Marine Reserve (Environment Australia)
- Tasmanian Seamounts Marine Reserve (Environment Australia)

Marine protected areas can be declared under Commonwealth, State or Northern Territory legislation in seas within each government's jurisdiction.

The State and Northern Territory governments have primary responsibility for marine environments up to three nautical miles from the territorial sea baseline. Along most of our coastline, the territorial sea baseline is the low water mark, but in some areas is up to 60 nautical miles offshore.

In general, the Commonwealth Government manages our oceans from the three nautical mile mark to the limit of our Exclusive Economic Zone (EEZ).

Through cooperative arrangements, marine protected areas can be proclaimed in adjacent State or Territory and Commonwealth waters.

Activities allowed in marine protected areas

What you can and cannot do in a marine protected area depends on the purpose for which the area was set aside and how it is managed.

In some cases, virtually all human activity is excluded. Some marine sanctuaries do not allow fishing or the removal of sea life. Other areas have seasonal restrictions on activities, for example, changes to shipping routes to reduce any impact on migrating whales.

In multiple use marine protected areas recreational and commercial activities such as fishing and tourism may occur and are managed sensitively to prevent adverse disturbance to the natural attributes of the marine protected area.

National cooperation

Liaison and close cooperation between the agencies responsible for marine protected areas are critical to achieving protection of Australia's marine habitat. An integrated system of marine parks, aquatic reserves, national parks and nature reserves is needed to achieve the optimum conservation of biodiversity and habitat protection. Research has shown that marine protected areas can have positive effects on the ecosystems, habitats and species under protection and may also have other benefits including improved fish stocks as a result of the protection of habitats critical for commercially and recreationally important species; dispersal of larval recruits and genetic diversity to surrounding areas; sites for education; increasing community awareness and understanding of marine conservation issues and provision of scientific reference sites for research and long-term monitoring.

Not all of these benefits will necessarily be experienced at every marine protected area. The primary goal of a marine protected area is to protect a full range of marine biodiversity at ecosystem levels (eg estuaries, coastal lakes, islands, rocky reefs), habitat levels (eg sponge gardens, mudflats and coral communities), and species levels (eg seabirds, fish, corals and turtles).

Managing marine protected areas

Effective management of marine protected areas requires that those who use them are aware of and understand the values of the areas, comply with the protection measures, and help ensure visitor enjoyment and safety. Management can be grouped into two broad categories - protection of

conservation values and ecological processes and sustainable use and public appreciation, understanding and enjoyment.

There is a range of tools used to plan and manage activities in marine protected areas. These include zoning and operational plans, permits and licences to regulate permitted activities, temporary closures and other relevant legislation that operate in conjunction with marine protected areas legislation.

Zoning

A Zoning Plan or Regulation is used within marine parks as a guide to management and use of an area, and Operational Plans detail the way the Marine Parks Authority manages each marine park and implements the zoning plan. There are four zones used to manage, protect and conserve marine parks.

Marine Sanctuary zones allow for total protection of marine animals and plants and their habitat. Activities that involve harming any animal, plant or habitat are prohibited.

Habitat protection zones give protection to habitat, but allow limited taking of specified fish and plants. Only activities that do not have a significant impact on fish populations and have a negligible impact on other animals, plants and habitat are permitted. Line fishing, spearfishing and hand gathering are all permitted within a habitat protection zone.

General use zones allow multiple use, as long as these are ecologically sustainable. Activities in general use zones are subject to generic regulations that apply across the whole park, including permits.

Special purpose zones are used when special management systems are required, including protection of Aboriginal and other cultural features, marine facilities, or for specific park management reasons.

Parks and sanctuaries

There is a difference between marine parks and marine sanctuaries. Most people think that because an area is classified as a marine park, then it must be highly protected and safe from over-exploitation. This is completely false. The vast majority of areas with marine parks are currently zoned 'general use' which means in many circumstances there is very little difference in the activities permitted inside the marine park and those permitted outside.



Marine sanctuaries are coastal, estuarine or oceanic areas managed to conserve biodiversity. They range from small, highly protected areas that focus on species or community protection, to large multiple use areas that include complex linkages of ecosystems and habitats. Marine sanctuaries may include reefs, sea grass beds, rocky platforms, mangroves, estuarine waters, mudflats, salt marshes, shipwrecks, archaeological sites, and coastal and offshore areas of airspace, seabed and water.

Our Society considers marine sanctuaries to be an important tool for achieving conservation objectives in the marine environment. Marine sanctuaries should become one of the primary tools used, within a broader integrated coastal and marine management framework, for the conservation of biodiversity. Other tools used include fishery management strategies, fishing closure notifications, estuary and catchment management plans, conservation agreements, threatened species recovery plans, threat abatement plans and habitat protection plans.

We believe an integrated system of marine sanctuaries will manage processes that may affect biodiversity within marine or estuarine environments.

No-take zones Marine sanctuaries in marine parks in Australia comprise as little as 3% to 6%. The only way that long term conservation of marine life and habitat can be protected is by having fully protected reserves. Our Society advocates that all states have a comprehensive marine parks sanctuaries system to protect all marine creatures, based on their biophysical regions and designed to protect all significant habitat types. The vast majority of marine parks are zoned 'general use' which means in many circumstances there is very little difference in the activities permitted inside the marine park and those permitted outside.

We believe that all no-take zones marine sanctuaries within Australian marine parks should give at least 50% total protection for all marine creatures in that sanctuary. There can be no room for 'any take' of any kind in a marine sanctuary no-take zone, if we are going to protect our marine creatures and their habitat.

No-take Marine sanctuaries zones have many conservation benefits, such as protecting species that have been overfished and protecting vulnerable habitats such as corals. They may also benefit fisheries through the 'spillover' of fish, eggs and larvae to fished areas and hence provide some insurance against fishery collapse. Success of no-take zones marine sanctuaries depends on the

response of fishermen. For no-take zones marine sanctuaries to work as a fishery management tool they have to reduce overall fishing mortality. Better supervision is essential. More fishing inspectors or wardens must be appointed if we are going to protect and preserve our marine environment from exploitation.

There is little doubt that no-take zones marine sanctuaries will have an important role in marine environmental management. They are, for example, one of the most effective ways of protecting vulnerable habitats from the effects of fishing disturbance.

Studies from around the world show that when you declare 30-50% of a marine area as a marine sanctuary not only do the benefits to biodiversity abound, but fisheries and tourism also reap the rewards as there is a large increase in the numbers of big, more productive fish (that spill-over into fishing grounds) and healthier ecosystems to support them. Fishermen along the coastline protest about 'closures' to their fisheries. This is a very common phenomenon and in areas overseas where large marine sanctuaries have been established, a similar response occurred. However, after a few years (usually less than five) many commercial and recreational fishers have become strong advocates of marine sanctuaries when they see the benefits that occur as a result.

Plans of management

The planning process for managing marine protected areas should be flexible to suit local needs and conditions. Management plans usually detail the management of the area over a given period, generally five years, and provide a framework for the development of work programs that meet the objectives of the area. They include procedures that link management, research and compliance. Management plans are also important in developing community understanding about management intent.

Permits and licences

Permits and licences can be used to manage human use of the park and activities that have the potential to impact on marine life. The regulation of allowable activities within marine protected areas may require permits or licences.

There should be opportunities for community participation, and input into management and education on the benefits of marine protected areas to generate a sense of stewardship in the local community that will contribute to the success of the marine protected area.



To ensure effective management of marine protected areas, people who use them must be aware of and understand the values of the areas and comply with the management controls that protect those values. Therefore, there is a need for an education strategy that highlights the impact of human activity on the marine environment, the role of marine protected areas and the reason for management plans and special management arrangements.

Ongoing community and stakeholder participation in marine protected areas management would be enhanced through advisory bodies representing key stakeholder groups and the community. These committees can advise the relevant Ministers and marine protected areas agencies on proposals for marine protected areas; conservation of marine biodiversity and ecologically sustainable use within marine protected areas; matters relating to the application of marine protected areas legislation and planning and management of marine protected areas.

Indigenous participation and support is essential to effectively create, plan and manage marine protected areas.

Pollution

Pollution comes from visible sources such as oil spills, but many little known sources have big impacts, as well. These include polluted runoff, invasive species, marine debris and others. Even fertilisers and pesticides used on lawns and farms contribute greatly to the pollution of oceans.

Urban polluted runoff

As rain washes over roads, parking lots, construction sites, and industrial or commercial sites, it becomes contaminated with oil and grease, heavy metals, pesticides, litter, fecal matter, and pollutants from vehicle exhaust. This polluted runoff flows into storm drains along roadsides and often ends up in local streams, rivers and coastal waters.

Rural polluted runoff

In rural and even suburban areas, rainwater flows over farmland, roads, golf courses, and lawns into waterways. The rainwater can then become a toxic mix, carrying animal waste, fertilisers, and pesticides.

Sewage treatment plant malfunctions

When too many homes and businesses are hooked up to a sewage treatment plant, it cannot treat the sewage adequately. Moreover, treatment

plants can, and often do, malfunction as the result of human error, old equipment, or unusual conditions such as flooding. Under these circumstances, wastewater is released into local waterways and can pollute the oceans.

Septic systems

Dwellings built near the coast may be equipped with underground septic systems, which can leach wastewater into coastal recreational areas. Fecal matter from malfunctioning or overloaded septic systems can contaminate bathing beaches causing sickness. Local governments rarely inspect septic systems sufficiently to prevent such failures.

Boating waste

Improperly handled boating wastes can also affect bathing beaches. Elevated concentrations of fecal coliform have been found in areas with high boating density, such as the Hawkesbury River, Sydney Harbour and the George's River system.

Marine debris

Floating debris regularly washes up on the shores of places as remote as Antarctica, and plastic bottles and bags are routinely seen floating out in mid-ocean. In a single day in 2000, some 850,000 people removed 13.6 million pounds of debris from the world's beach and coastal waters. On that same day, volunteers discovered nearly 13,000 syringes on the world's beaches, and found 373 marine animals entangled in debris.

Entanglement

From dolphins to whales, sea turtles to sea lions, thousands of animals die each year entangled in commercial fishing gear or marine debris. Fishing line and nets, rope and other rubbish can wrap around fins, flippers and limbs - causing drowning, infection, or amputation.

Thousands of marine animals die each year entangled in actively fished commercial fishing gear or in abandoned fishing nets and lines. Several species of dolphins, porpoises and whales are particularly vulnerable to entanglement. Often, these species feed on the same fish that nearby humans are fishing. Other times, they swim with, feed near, or inhabit the same area as those fish.

A Marine Mammal Protection Act is the defence for these species. It requires that teams of specialists develop mechanisms to reduce entanglements and to ensure the continued growth of marine mammal populations.

Invasive species

Hitching rides in the ballast water of ships, invasive species from around the world pour into harbours, bays, estuaries and lakes when cargo is loaded and ballast is dumped. These alien animals and plants threaten native species by competing for food and spreading diseases in new habitats.

Protection of juvenile fish

In an area where juvenile fish tend to gather, restriction of trawling would ensure a reduction in the mortality of younger fish and hence boost adult stock. The banning of commercial fishing and trawling in Botany Bay, Sydney, Lake Illawarra and Lake Macquarie are good examples of attempts to protect the breeding grounds of local fish species.

Threatened species

A major problem for threatened species management is the lack of knowledge on the conservation status of species and the required management actions to take. There is a need to develop appropriate criteria for assessing vulnerability to risk among the majority of marine species that are currently unassessed.

A major issue is the lack of knowledge of the conservation status of some species, the threats to their survival and the management actions that should occur to ensure the survival and, if in decline, the recovery of species. Most information relevant to threatened species management has been acquired by relatively slow discovery and analysis, sometimes boosted by a particular study of a species or issue. With notable exceptions, the management of threatened marine species currently occurs virtually in a vacuum of information which requires reliance upon best practice methodologies and the precautionary and ecological sustainability principles.

Because of large differences between the marine and terrestrial environment and species characteristics, it is not possible to establish the rarity of most marine species in a similar manner to terrestrial species that is according to the degree of threat to them. There is a need to develop new criteria for use in assessing the great majority of marine species in terms of their vulnerability to risk, and to develop and implement management strategies for identified species as a precautionary measure.

In Australia some of the species which are considered to be threatened include the dugong, marine turtles, some whales and dolphins, fur seals and sea lions, sharks and whale sharks.

Current status of threatened species

Dugongs

Once mistaken for mermaids by lonely sailors, slow-moving dugongs roam and feed on the sea-grass beds of Queensland and Western Australia's northern coastal waterways.

So too do ships and fast-moving recreational boats, which injure and kill dozens of these endangered animals annually. In fact, most dugongs bear scars or deformities from being run over by boats and cut by boat propellers.

Dugongs are listed as endangered under the Endangered Species Act. Although they used to be hunted for their meat, oil and their tough hide, other current human-related threats include entanglement and ingestion of marine debris.

We need to educate residents, visitors, industries and governments to spread the word about dugongs and the need for their protection. We also stress the need to protect and preserve quality habitat so dugongs have places to rest, feed, and mate.

The establishment of the Dugong Protection Areas was a milestone in efforts to save the dugong in the southern Great Barrier Reef and Hervey Bay regions. The areas chosen as Dugong Protection Areas were those with the most dugongs and/ or extensive sea grass habitat. In response to declining dugong numbers south of Cooktown, indigenous groups agreed to voluntarily cease traditional hunting in the region. Concern over catch of dugongs in shark nets has led to many nets being replaced with baited hooks. Given the importance of seagrasses as food for the dugong, the management measures taken to protect sea grass habitat will support the dugong conservation program.



Dugong.

In response to declining dugong numbers south of Cooktown, the Great Barrier Reef Marine Park Authority recently introduced a dugong conservation program. Sixteen Dugong Protection Areas have been established together with restrictions on fish netting and boating, and greater management focus on protection of the critical sea grass habitat.

A positive result in terms of a rise in numbers from actions to date is likely to be unclear for a decade or more, because the dugong is a long-lived, slow-breeding animal

Marine turtles



Green sea turtle. Photo by Dr. Nicole Duplaix.

The marine turtle is a powerful and mysterious creature in many cultures throughout the world. It symbolises longevity, wisdom, tenacity, fertility, strength and protection from harm. In some creation stories it is believed to be the animal on whose back the world was created.

All six species of marine turtles that occur in Australia are listed on Schedule I of the Australian Endangered Species Protection Act 1992 as either endangered or vulnerable

The capture and drowning of marine turtles in trawl nets is one of the notable, but manageable, threats to some Australian turtle populations. Fisheries action and management plans have been designed to mitigate marine turtle by catch, and substantial progress has been made towards resolving the issue.

Marine turtles in Australia generally have a tropical and subtropical distribution, with the exception of the leatherback, which can be found in temperate waters.

Under the Australian Constitution, the States and Territories have responsibility for wildlife and land management. As marine turtles are protected in State and Territory jurisdictions, the development of a national recovery plan for marine turtles in Australia requires the Commonwealth Government to work in close collaboration and cooperation with representatives of the States and the Northern Territory.

The following threats were identified as having, or were suspected as having, an unacceptable impact on turtle populations: marine debris, indigenous harvesting, trawl fisheries interactions, non-trawl fisheries and boating interactions, shark control activities, predation by feral animals on eggs and loss of habitat.

The mitigation and management of threats to marine turtles in Australia has had several activities occurring in parallel. These include the national recovery plan and plans by various fishing management agencies to address sea turtle by catch in trawl fisheries off northern Australia. The national recovery plan has taken advantage of this opportunity upon which to build a coordinated and planned approach to dealing with the complex array of threats to marine turtles, across several jurisdictions and with a diverse range of interest groups.



Baby turtle crawling to the ocean shore.

Whales and dolphins

The Whale Protection Act 1980 prohibits killing, capturing, injuring, harassing, chasing and herding whales, dolphins and porpoises in the Australian Fishing Zone (between approximately 3 and 200 nautical miles from the Australian Coastline). The Whale Protection Act gave effect to the growing concern by Australians that the large whale species were being hunted to extinction and needed protection. To further implement the conservation of whales and dolphins, importing whale products and goods containing whale products was banned from January 1981.

The moratorium on commercial whaling has removed a major threat to the whale populations of the world. Many nations have also enacted legislation to protect whales. However, a number of nations still continue to commercially harvest small whales and dolphins, and others have high incidental cetacean mortalities in fishing and netting operations. Japan and Norway continue to resist legislation banning commercial whaling.

Currently the largest killer of dolphins is the incidental catch of dolphins in the eastern tropical Pacific region. In 1987, the fishing industry in this region killed an estimated 115,000 dolphins, with over 6 million being killed since extensive pelagic fishing began almost 30 years ago. Tuna are the main target of this industry, but dolphins become entangled in the purse-seine nets because of their close association with tuna (tuna shadow schools of dolphins). After entanglement, dolphins may drown or receive severe injuries when being drawn through the net hauling mechanisms on the boats. Despite the use of techniques designed to reduce the kill, it remains unacceptably high.

Pollution, particularly from plastics is having an increasingly adverse affect on whales and dolphins. In April 1987, a killer whale stranded on the Australian coast was found to have starved because of the mass of plastic debris in its stomach. Other pollution threats include heavy metals (cadmium, mercury and lead), organochlorines (chlorinated hydrocarbons such as PCBs, DDTs and others), and sewage from coastal communities, oil spills, nuclear waste and fertilisers. Some pollution has an indirect affect on whales and dolphins by changing the marine environment. As the top of the marine food chain, whales and dolphins may be found to contain higher concentrations of heavy metal and chemical pollutants than other species in the ecosystem. They are particularly susceptible to accumulation of heavy metals and organochlorides because of their high blubber content, and their lack of metabolic enzymes to break down these substances.

Other potential threats include over-fishing of krill in the Southern Ocean and interaction with shipping. Urban and industrial development on coasts and estuaries has a detrimental impact on dolphins living in coastal waters.

Our Society opposes the killing of whales, dolphins, and porpoises for commercial and scientific purposes. At the same time, we acknowledge the needs of indigenous, aboriginal and native people involved in subsistence hunting for survival.



Humpback whale.

In spite of more than fifty years of management by the International Whaling Commission (IWC) most whale species have yet to fully recover from the devastating effects of the commercial whaling industry. There is a loophole for countries, such as Japan, to undertake commercial whaling under the guise of unregulated, and potentially unsustainable, scientific whaling. Scientific experts have repeatedly expressed concern over the research programs conducted under this loophole. There is also a need to address the taking of small whales and dolphins, because whaling nations have started hunting, taking more than 20,000 of these creatures annually.

Fur seals and sea lions

The main distinction between fur seals and sea lions is that fur seals have two layers of hair; an inner fine fur and an outer coarse hair. Sea lions have only one layer, which is why they weren't hunted as much.

The fur seal colonies extend from Kangaroo Island to Flinders Island (near Cape Leeuwin) in Western Australia, although 70 per cent of the population is in the central South Australian waters from Kangaroo Island to the southern tip of Eyre Peninsula.

Factors causing the precipitous decline of sea lions are still under debate. Scientists and managers have evaluated numerous potential causes, including disease, pollution, entanglement in marine debris, commercial and subsistence harvests, predation by whales and sharks, illegal killing, natural environmental changes in carrying capacity, and interactions with commercial fisheries. The leading hypothesis explaining the decline is that the sea lions are nutritionally stressed, either from a natural ecosystem change or from competition with commercial groundfish fisheries. It is likely that multiple factors have contributed to the decline.



Fur seal pup.

Studies are being carried out to identify the interaction between fur seals, sea lions and the fishing industry, in the hope of reducing the number of marine mammals caught in nets. Often the seals caught in nets have been attracted to the area by unwanted fish discarded by trawler crews. It is a big problem, although one answer may be the addition of a steel grid to stop seals being drawn into the bottom of the net with the fish.

Legislation is needed to protect sea lions. We need to ensure that governments use the best available science when allowing fishing in sea lion critical habitat and that it isn't allowing localised depletion of important prey species when allocating allowable catch each year.

Establishing marine sanctuaries will keep sea lions out of deadly fishing nets and protect over fishing.

The changing fortunes of Australia's rare fur seals and sea lions highlight the precarious juggling act required of biologists when they try to protect different species occupying the same habitat.

Over the past few decades marine biologists have managed to pull fur seals back from the brink of extinction, but now have to balance the success of this operation with its possible impact on the equally rare Australian sea lions.

Fur seal numbers are increasing at a time when the food supply they share with sea lions - fish and squid - appears to be diminishing and sea lion numbers have mysteriously stalled. Australian sea lions are unique and only found off South Australia and Western Australia and at last count in the mid-1990s totalled a mere 2,000.

Small, stationary, populations are always the most vulnerable. We urgently need to find out why sea lion numbers have levelled off. Data collected

suggest that too many pups are dying and we don't really know why. Possible causes of death include parasites, such as hookworm, environmental disturbance causing a food shortage for lactating female sea lions, high rates of aggression by adult males, direct human harassment or by entanglement in fishing gear.

But the most worrying possibility is that sea lions may be facing stronger competition for food from the fur seals, whose numbers have been increasing at an annual rate of around 10 per cent. The Australian sea lion is an endemic species that we need to take care of. It is a tourist icon, up there with the koala, and attracts tens of thousands of visitors to the sea lion colonies every year. If we don't find out why their numbers are not increasing, we may face more serious problems later on.

Conflicts with fisheries still pose a great threat, however, and there are concerns that these will increase as the population recovers. Australian fur seals are attracted to fish in static and, less commonly, trawl fishing nets and many are drowned in nets and traps or shot by fishermen and fish farmers. Fishermen in Victoria also claim that fur seals are drastically reducing commercial fish stocks but this is not substantiated by scientific evidence. Increased disturbance and increased pollution of Australian fur seal habitat with pesticides and heavy metals are additional threats to the population.

The attraction of mainly subadult and adult male fur seals to fish farms in southern Tasmania has caused particular problems. In October 2000 it was revealed that, despite their protected status, the Tasmanian Government allowed the killing of Australian fur seals that were deemed to be a hazard to fish farms and commercial fishermen. The decision came after strong pressure from the fishing community following events in which increasingly bold male fur seals were said to have been aggressive towards fishermen and fish farmers. A new "three strikes" protocol resulted in offending fur seals being tagged and transported to waters on the other side of the island but euthanased by a vet if caught twice more.

A commercial fisherman in New South Wales applied for a licence in January 2000 to shoot Australian fur seals and New Zealand fur seals sharing his fishing grounds around Montague Island. Officials said however that there was very little chance of the licence being granted due to the seals' worth to the local economy through ecotourism, the ineffectiveness of such killing and the danger to the public of any shooting.

In December 1998 authorities investigated the killing of at least 16 decapitated Australian fur seals, mostly pups, found on King Island in Bass Strait, and a further 6 dead fur seals found on Tasmanian beaches, some of which were decapitated. A local police source said that they believed that the number of seals found was only a fraction of those killed, and that someone had gone ashore at the nearby Reid Rocks colony, which was in the midst of its pupping season, and shot the seals before decapitating them.

It was revealed in June 2000 that the Federal Government allowed two ships trawling for blue grenadier in western Bass Strait off Tasmania to kill up to 30 Australian fur seals and New Zealand fur seals each in their nets, a measure taken in response to the two ships together killing 87 fur seals in 1999.

We believe the killing of fur seals in trawl nets is unacceptable and we urge the development of effective marine mammal exclusion devices in the trawl nets. Some testing of seal exclusion devices was carried out by the blue grenadier fishery during the 2000 season.

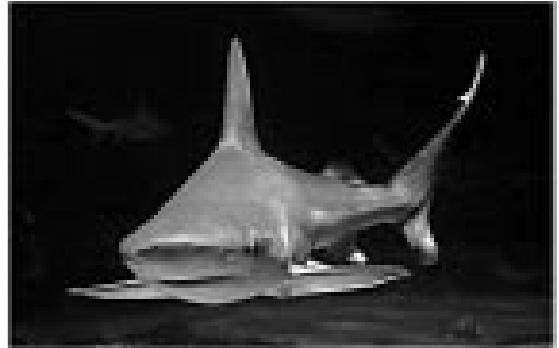
Fears have recently been raised that Australian fur seals could be harassed, or swimmers could be injured, as a result of the growing commercial seal swim industry. The additional problem of swimmers being attacked by hungry sharks that are attracted to the seals has also been highlighted.



Sea lion. Photo by Dr. Ellen K. Rudolph.

Sharks

Sharks have ruled the seas since long before the time of the dinosaurs. Often mislabeled as "man-eaters," these apex predators have been feared for centuries. Today, they face their first real threat - humans. Sharks live in oceans around Australia - from warm shallows to the cold, deep sea and even fresh water lakes.



Shark.

Shark diets vary by species. The largest sharks (such as whale sharks) feed on tiny fish and plankton. White sharks prey upon sea lions and tiger sharks feed on sea turtles. Most sharks, however, eat a variety of fish and invertebrates. Humans are not part of any shark's natural diet. On the other hand, people eat a variety of sharks. Australians fish for school and gummy sharks. Worldwide commercial fishermen target more than 100 different shark species and catch and destroy many more unintentionally.

Despite their fierce image, sharks are among the most vulnerable creatures in the ocean. Sharks grow slowly, mature late, and bear few young. These traits hamper sharks' ability to recoup losses incurred from commercial fishing. Too often, shark fisheries expand quickly without limit only to end in rapid collapse. Today, few if any shark fisheries are adequately controlled and many species around the world are seriously overfished or even in danger of extinction. Depleted shark populations often require decades, even centuries, to rebuild.

Sharks have been hunted for thousands of years. Today they are sought for their meat, fins, oil, teeth, hides and even their cartilaginous skeletons. In recent decades, many shark populations worldwide have suffered severe declines due to overfishing. In addition to intentional catch, millions of sharks are killed each year as "by catch", caught "incidentally" in fisheries targeting other species. Sharks also fall victim to finning, the abhorrent practice of slicing off a shark's fins and tossing its carcass back into the water. Dried fins fetch a high price and are used to make the Asian delicacy shark fin soup. The degradation of nearshore habitat, which many sharks use as safe places to give birth and grow up, also poses a threat to coastal shark populations. Overall, sharks still have relatively low economic value and are often regarded as menaces, pests or trash, making them a low priority for fishery managers. Despite the highly migratory nature of most sharks, there is currently no international management for sharks. Scientific knowledge of



sharks and their population status is limited and yet an essential part of effective conservation.

Sharks are in dire need of management, but shark conservation programs will not proceed without public support. Our voice for long-term conservation is vital to balance short-term interests. There are many things we can do to help the sharks, such as contacting environmental ministers to ask them to support shark research and management programs on state, national and international levels. Please write now.

Grey nurse shark

The grey nurse shark, estimated to number less than 300 off the east coast, is the most critically endangered fish species in New South Wales - and their numbers appear to be declining. It is a harmless shark, which has never been responsible for a shark-related death. It has narrow, inward pointing teeth that are only suited to catching fish. The New South Wales Government has banned some practices such as moored fishing with wire trace, but has left the critical habitats open to a considerable range of both recreational and commercial fishing, ignoring recommendations from scientific experts, professional divers and conservationists that called for 1,000m marine sanctuaries. In doing so, they have failed to adequately protect the grey nurse, their young and food from the major threat to their survival - fishing. Accidental hookings are killing grey nurse sharks. Fishing activity, particularly recreational line fishing is thought to be impacting severely on the existing shark population.

Whale shark - the largest living shark

This species is rare. Prior to the mid 1980s there had been less than 350 confirmed reports of whale sharks worldwide. Since this time, consistent sightings have been recorded in Australia. A lucrative ecotourism industry revolving around their annual appearance at Ningaloo Marine Park on the Western Australian northwest coast is now well established. Australia is one of the most reliable locations to find whale sharks. The most significant threat to the species appears to be humans. Their habit of swimming at the surface makes the whale shark particularly susceptible to fishing pressure. At the present level, it is feared that the kill of whale sharks is unsustainable.

In Western Australian waters the whale shark is fully protected under the Wildlife Conservation Act 1996 and the Fish Resources Management Act 1994. The whale shark is listed on the Bonn Convention for the Conservation of Migratory Species. This identifies the whale shark as a species

whose conservation status would benefit from the implementation of international cooperative agreements. As a species protected in Australian waters, international cooperation is needed to limit trade in whale shark products.

Sustainable fishing

For millenia, humans have drawn a rich bounty from the oceans. Seafood provides vital protein to millions of people, and important health and nutritional products are derived from kelp and other sea plants.

Fish has been a mainstay in the diet of many cultures and fishing is a skill passed down through generations. Generally, small-scale fisheries that provide sustenance for a family or community are the most sustainable. Problems arose with the advent of large, industrialised commercial fishing fleets around the world that take more than the oceans can sustain.

Today, globally, we are fishing so hard that stocks are becoming depleted and in some cases whole populations of fish are disappearing. Overfishing, pollution and habitat loss have driven many ocean species to the edge of extinction.

Too often, scientific advice, and at times traditional and local ecological knowledge, has been ignored in order to maintain large-scale unsustainable fisheries. In many cases, the fisheries themselves and the long-term sustainability of a particular fishing industry have fallen victim to such short-sightedness. Tuna fishing along the east coast of Australia is such an example.

Through scientific understanding and research that acknowledges social and ecological issues; we can learn how to better manage fisheries so that fish stocks and fishing communities are healthier and sustainable for generations to come. The efforts of governments, business, communities and concerned individuals are essential if we are to maintain and enhance fish stocks and conserve vital ocean habitats and ecosystems.

A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted; the fishery must be conducted in a manner that demonstrably leads to their recovery. It is imperative that the productive capacities of resources are maintained at high levels and are not sacrificed in favour of short term interests.

The western rock lobster - an example of sustainable fishery

The western rock lobster fishery centered around Geraldton in Western Australia is the most valuable single-species fishery in Australia and usually represents about twenty per cent of the total value of Australia's fisheries. It was also one of the first fisheries in the world to be certified as ecologically sustainable by the Marine Stewardship Council.

Also called "crayfish" or "spiny lobsters", rock lobsters are exported mainly to South East Asia, USA and Europe, commanding high prices.

The heavy exploitation rate in the fishery requires a continuous intensive research and management program to maintain the lobster population.

As one of the first managed fisheries in Western Australia, data has been kept on the western rock lobster fishery since the early 1960s. This powerful database enables fisheries scientists to predict catches accurately and fisheries managers to ensure controls are adequate to protect breeding stocks and the sustainability of the fishery.

Eight species of rock lobster are found off the Western Australia coast. However, virtually the entire catch consists of the western rock lobster *Panulirus cygnus*, caught up to 60km off the coast between Augusta and Shark Bay.

There are three major zones in the fishery, with fishing controls attuned to the annual lobster population, environmental factors and migration patterns.

The western rock lobster fishery was declared limited entry in March 1963 when licence and pot numbers were frozen. The sustainable catch is estimated at between 10,000 and 15,000 tonnes per year, although the size of the actual catch has varied between 8,000 tonnes and 14,500 tonnes.

During the open season between 15 November and 30 June each year, lobsters are fished using baited pots (commercial diving for lobsters is banned) although the Abrolhos Islands area stays closed until 15 March.

The aim of fishing controls is to ensure that the numbers of breeding lobsters are maintained to support this valuable fishery. Fisheries managers, industry and researchers work together to achieve this.

It is illegal to take mature females which are setose (having distinct hairs on the swimmerets

under their tails, indicating breeding condition) or carrying eggs or tar spots (sperm packets).

Despite increasing coastal development and resulting pollution, Western Australia's coastal waters (including nursery grounds), remain clean, ensuring western rock lobsters of extremely high quality.

Mangroves

Mangrove forests are one of the most productive and biodiverse wetlands on earth. Yet, these unique coastal tropical forests are among the most threatened habitats in the world. They may be disappearing more quickly than inland tropical rainforests and, so far, with little public notice.

Growing in the intertidal areas and estuary mouths between land and sea, mangroves provide critical habitat for a diverse marine and terrestrial flora and fauna. Healthy mangrove forests are key to a healthy marine ecology.



Aerial roots of the mangrove trees.

Towra Point Nature Reserve

Towra Point Nature Reserve in Botany Bay, Sydney is a system of sandspits, bars, mudflats, dunes and beaches, with sea grass, mangrove and saltmarsh communities, as well as terrestrial habitats outside of tidal influence. There are extensive areas of undisturbed mangroves representing approximately half of the mangroves remaining in the Sydney area. As one of the few remaining areas of estuarine wetlands near Sydney, it is important for the regional survival of many bird species, supporting numerous feeding and roosting migratory wading birds. Human activities in the area consist of recreation fishing and water sports, with surrounding areas developed for industrial and recreational use.

Our Society adopted Towra Point Nature Reserve as a major project in 1996 and since then has continued to actively support the rehabilitation of this important ecological and environmentally sensitive site. "Friends of Towra Point Nature Reserve" serve as volunteers on the second Saturday of each month to weed, remove rubbish, plant trees and attempt to restore the natural habitat. If you would like to join us, please ring Patrick Medway on 02 9556 1537 or the National Parks Ranger, Georgina Eldershaw, on 02 9668 9111 for more details.

Report on the impact of recreational fishing on estuarine birdlife in Central and North Coast districts of New South Wales compiled by Lance Ferris, Co-coordinator of Australian Seabird Rescue Inc., and Rochelle Ferris BSc (Marine Biology)

The impact of recreational fishing on estuarine wildlife, particularly seabirds, shorebirds and water birds, has been generally ignored until 1992. Prior to 1992, the number of birds injured by fishing tackle along the coast of New South Wales was considered to be minimal and therefore the impact of fishing activities posed no cause for concern, nor did the number of reported incidents prompt investigation by management agencies.

Since 1992, Australian Seabird Rescue (ASR) has documented the impacts of fishing on the local estuarine birdlife. NSW Fisheries has also shown a keen interest in the study and has indicated a desire to produce a brochure for fisher folk, based on ASR's findings. The ten-year study by ASR focused on estuaries between the Central Coast and North Coast of New South Wales. During that study period, rescue and rehabilitation of seabirds, shorebirds and water birds, revealed an alarmingly high number of injured birds. This study exposed inappropriate fishing practices which directly affected birdlife, established the risk factor across various species, quantified the rates of injuries and demonstrated high-risk areas within estuaries where birds gathered. The report recommends several solutions, which include public awareness campaigns, advice on more appropriate fishing tackle/practices and the establishment of specialist rescue personnel.

The Wildlife Preservation Society has published this report in conjunction with Australian Seabird Rescue. Members can obtain a free copy of this report by contacting the National Office. Additional copies are available at a cost of \$10 (this includes postage and handling).



Towra Point Nature Reserve.

National Parks and Wildlife Service - changing times

By an order published in the Government Gazette on 2 April 2003, the National Parks and Wildlife Service ceased to exist. It has been split into two departments. Although there are a number of technical flaws in the published list of responsibilities, the intention is that most of the licensing functions (including research, animal keepers and traders, rehab etc) under the National Parks and Wildlife Act and the Threatened Species Conservation Act, among other functions, and about 250 former NPWS staff, have been transferred to the new Department of Sustainable Natural Resources (DSNR). The park management functions of the former NPWS will alone be the responsibility of the new National Parks Service (note: reference to "Wildlife" is gone). The DSNR will report to the Hon Craig Knowles MP, Minister for Natural Resources, while the NPS will report to Bob Debus MP, Minister for the Environment".

So wildlife is now a "natural resource"?

Regional roundup - Ballina region

by Lance Ferris of Australian Seabird Rescue

Due to circumstance beyond our control, we have been given marching orders from our current site. We approached the Ballina Shire Council for some land and were met with a unanimous vote of approval.

The land is virtually in town and a short distance from the estuary. They also have donated us a house to be relocated to the new site. Stage 1 will include the bird and sea turtle rehab centre and the house. The house will be used as an education centre for workshops and will be our interpretive centre, prior to stage 2 of the development. It will also be my residence as caretaker of the centre. Stage 2 and 3 will include housing for our three vessels, the larger interpretive centre, a rehab clinic, intensive care facilities, a gift/souvenir shop and other infrastructure. Zodiac recently donated an inflatable boat and have approved a donation of \$13,000 for the relocation expenses of the donated house from its present site to the new centre site. I forwarded a report of my ten-year study on the impact of recreational fishing on estuarine birdlife, to NSW Fisheries. In the covering letter, I applied for a motor to replace our blown 140 HP motor on our offshore vessel. They must have been impressed to some degree, insomuch as they gave us an ex-Fisheries 5.5metre Savage boat with a 150HP motor. ABC's Australian Story have already done some filming of us, and will be doing a 7-day filming stint in April. I have no doubt they will include the story of the new site. We are embarking on a major fund-raising program to complete all stages. We are pursuing as many avenues for funding, as we can find.



Release Lenny.



Savage & rapid response team.

Penguin poop scoopers scooping loads of poop

Since arriving at Casey on Voyage 3, Dr. Steve Emslie (University of North Carolina at Wilmington), undergraduate student Rodney Hayward, and field assistant Michele Thums have been conducting a study of abandoned penguin colonies in the Windmill Islands region. By locating and excavating into these abandoned sites, characterised by small to large pebble mounds, it is possible to recover well-preserved remains of penguins (including bones and eggshell fragments) in addition to organic remains of some of their prey (fish bones, otoliths, and squid beaks). Radiocarbon dates of these remains will provide an occupation history for Adélie penguins in this region and insight into how populations have changed over millennia, especially in relation to climate change.

In addition, the research will provide minimal ages for glacial retreat in the Casey Station area, an event that had to occur before the penguins could establish colonies on the ice-free terrain surrounding the station today. The photo below shows the stratigraphy exposed at one site near the station. The reddish, pebbly soils, known as ornithogenic or bird-caused soils, are typical in these sites. Here, the strata reveal a thick layer of loose pebbles on the top, with the reddish brown soils below. More details on this project, including updates on the research, photos, and short video clips, can be viewed at: www.uncwil.edu/tc/AntarcticaLive.



Casey Site..

Eagle-Hawk Wildlife Shelter and Raptor Track – Who are we?

Eagle-Hawk and raptor Track joined forces in 2002. Raptor Track is a new organisation that is privately run and funded through the Judith Eardley Save Wildlife Trust in Healesville, while Eagle-Hawk Wildlife Shelter has been running as a self funded rehabilitation Centre for Raptors for the past 6 years.

We have comparatively simple objectives. The primary objective is to try and shed some light on the fate of rehabilitated raptors via the use of telemetry (transmitters). It is all too simple to care for and release raptors that have been in care for varying periods of time but it is vitally important to know the outcome. We look at foraging strategies and prey selection ranging over 5 species but concentrating on 3 and these include the peregrine falcon, the brown goshawk and the Australian hobby. We have tracked a total of 169 individual raptors and have over 2000 hours of field time.

Michelle, who runs the Eagle-Hawk Wildlife Shelter, is also a part of the Victorian Peregrine Project, which was a winner in the Banksia Environmental Awards in 1999. I was a runner up in the Banksia awards in 2001.

One of the key things with our work is to establish viable release methods and to establish a database of potential environmental threats to Australia's raptors. Urbanisation is one threat but many species can adapt and may benefit from the introduction of pest bird species but all at a cost. The fast flying raptors often run the risk of early demise through collision with fences and power lines.

We intend to use our accumulated knowledge to improve the outcome of raptors that have been rehabilitated and to educate for the future via an interactive medium which we like to call "Learning through Discovery".

Richard Naisbitt and Michelle Manhal

The boobook owl

by Cecilia Crosby of Sydney Wildlife

The Boobook is one of our more common owls. It is nocturnal and if you are lucky you have seen one hunting for prey in your garden. Boobooks feed on small birds, nocturnal lizards such as geckos, house mice and other small mammals as well as nocturnal beetles and moths.

An adult bird is about 30cm high and therefore is our smallest owl. Its large eyes range in colour from orange-yellow to pale greenish-owl and its plumage is typically light brown with heavily spotted cream areas. Its legs and toes are pale grey.

The Boobook is also known as the Mopoke, Morepork, Spotted Owl or Marbled Owl. It is found throughout Australia including many offshore islands. However, it is more often heard than seen - at night it emits a brief but continuous double hoot. If disturbed, it will become quiet and stay still in the hope of becoming invisible.

Recently, Sydney Wildlife received a call to pick up a boobook owl from a home in Burwood. The owner had come home to discover the owl in his living room and after recovering from his surprise had managed to place the bird into a budgie cage. He then called Sydney Wildlife to collect the bird.

Upon initial examination, the bird appeared to be in good health apart from its right eye that was slightly off centre, as though it had been concussed. There was also some slight damage to the primary flight feathers, presumably from being in a budgie cage. (Birds of prey, such as owls and hawks, should never be placed in a normal bird cage or aviary. This is because their flight feathers are very delicate and these feathers can be severely damaged by the cage bars or mesh. Cages and aviaries for such birds are always lined with a soft netting to ensure that the primary flight feathers are not damaged whilst the bird is in care. It can take many months for damaged flight feathers to recover.)

The boobook was taken to the Taronga Wildlife Clinic the next day for examination by a vet. Zoo staff advised that the bird was female (as females are slightly larger than males) and that it was not injured. It was surmised that the owl probably found its way into the living room while it had been chasing some sort of prey - possibly a microbat/moth - and had accidentally flown in through the open window.

Zoo staff advised us to observe the bird for a few more days and so it remained in care. The wildlife

carer attempted to feed it mealworms and pinkie mice (day old mice) that were placed on the perch of its cage, but the owl wasn't very interested. So, the carer placed a large plate of warm (and therefore very wiggly) mealworms in the cage, and placed the pinkie mice on the top. The wiggling worms gave the illusion that the mice were moving - and amazingly the owl swooped down almost immediately and scoffed them up.

After six days in care, the owl was assessed as ready to be released. She was released one evening in a park close to where she had been found. If you do find an injured or distressed owl or bird of prey, be careful of their powerful claws and snapping beak. If you are comfortable in handling the bird then throw a towel or blanket over the bird and then pop it into a box. Please do not place them into a cage or aviary. Their feathers can be damaged getting them into and out of cages. If you do not want to handle the bird, then call Sydney Wildlife and we will send a member to capture and collect the bird.

If you are interested in becoming involved in caring for wildlife or working in our office, please contact Sydney Wildlife on 9413 4300. Remember that our phone is always answered and we are here to help our native wildlife every day of the year.



Boobook.

Orphaned or injured native animals

by Cecilia Crosby of Sydney Wildlife

Unfortunately, native animals are often found injured or separated from their parents. Each day hundreds of native animals in NSW are killed, injured or become orphans due to attacks by dogs and cats, interaction with lawn mowers or whipper snippers or from being hit by cars. However, how many of us know the steps we should follow should we come across an injured or orphaned native animal?

In NSW, only people licensed through the National Parks and Wildlife Service can care or raise native animals. This means, unless you belong to a recognised wildlife organisation such as Sydney Wildlife, you cannot keep a native animal.

Injured animals will often require veterinarian assistance. Vets generally do not charge for treating native animals and so if you can, scoop the animal up with a towel and place it in a box or carry cage and take it to your local vet. Drape a towel over the box or cage as this will calm the animal by removing any light and reducing noise. Try and reduce noise by not having the car radio turned on- this all assists in calming the animal. Upon examination the vet will ascertain if the animal can recover from its injuries. The vet will call a wildlife organisation to collect and care for the animal or alternatively you can ask the vet to call Sydney Wildlife.

If you cannot transport the animal to a vet or you are not comfortable handling the animal, then you can call Sydney Wildlife and we will arrange for a member to collect the animal. However, we will ask you to try and protect the animal until a rescuer arrives. Sometimes, pets or other native animals may try and attack the injured or orphaned animal or their presence may cause it severe stress. The animal will also need protection from the sun (on hot days) or rain. If you can, cover the animal with a box, towel or the laundry basket, this will provide protection and also ensure that it does not crawl/fly away before a rescuer arrives. Keep children and pets away.

If you find a baby possum or baby bird then it is best to gently pick it up and place it in a box. Place the box (or carry cage) in a quiet location in the house. Again, you can either take it to your local veterinarian or call Sydney Wildlife and we will organise for a member to collect it. Under no circumstance should baby birds or possums be fed milk or bread. We also ask people not to feed water to birds, as it is very easy to drown a bird

by getting water into its lungs. Most baby animals cannot thermo regulate and so rely on their parents for warmth. You can use a hot water bottle to provide some warmth to the baby animal or fill a plastic bottle with warm water and place it near the animal. Take care not to burn the baby so never place it in direct contact with the heat source. It is usually best to place the baby on a piece of cloth/hand towel.

There have been instances where untrained people have tried to raise baby native animals. Often, the baby animal dies from malnutrition because it has not been fed correctly. Baby animals require multiple feeds per day and the amount and number of these feeds changes as the animal grows. The best course of action is to surrender the baby to a wildlife group where it will be given the specialist care it requires.

If you are interested in becoming involved in caring for wildlife or working in our office, please contact Sydney Wildlife on 9413 4300. Remember that our phone is always answered and we are here to help our native wildlife every day of the year.



Three possums.

Fergus, the diamond python

by Cecilia Crosby of Sydney Wildlife

Recently, two Sydney Wildlife members attended a rescue on the roof of a two-storey house. We had been called because a very large snake had been found in the roof guttering and it appeared to be trapped.

The snake (now called Fergus) was a 2 metre diamond python a non-venomous reptile that eats frogs, rats, mice and lizards. Fergus appeared to be stuck as he had managed to get himself caught under a gutter support bracket. After using some tools to gently lever open the support bracket, Fergus was easily placed into a snake bag and removed off the roof.



Injured Python.

Fergus had two large lumps on his body one was correctly assumed to be last evenings meal but the other had his rescuers perplexed. So, Fergus was transported to the home of a more experienced snake handler and carer. However, the events of the rescue had affected Fergus, he had regurgitated his last meal (a full-grown ringtail possum) and was continually opening and closing his mouth both signs of severe stress in snakes.

Fergus was quickly inspected and it was decided that the second lump on his body was in fact swelling. His wound was indeed bad, it was located approximately one third of the way down the body, thankfully missing the lungs and heart, but had undoubtedly bruised the liver. The muscles were floppy and soft, lacking their usual firmness. A visit to the vet confirmed that an operation was likely. The muscles had split, resulting in a hernia, and would have to be sewn back together. It was not a pretty sight. (If you look closely, you can see the hernia in the accompanying photograph.)

So what had caused this injury? Putting together the information we had lead us to believe that Fergus had been sharply prodded by a stick or similar blunt instrument just above the point where the ringtail possum resided (and this prodding occurred while Fergus was trapped and before Sydney Wildlife arrived to rescue him). The stick had not been sharp enough to cut the skin, but had probably caused some internal bleeding. It was going to be a long process of recuperation as reptiles generally do not heal quickly. Hopefully, he will fully recover.



Snakes instill a sense of fear into many of us. However, we need to remember that they are part of the ecological balance that we as humans are so ready to disrupt and destroy. It wasn't Fergus' fault that he found himself upon the roof that morning, it was a great place to soak up the sun to help the digestion process.

If you do find a snake in your garden or in your home and you are not happy with it being there, then call Sydney Wildlife on 9413 4300. We will send a trained member to collect the animal and relocate it for you. You do not need to go near the snake, just keep an eye on it from a distance so that the member will know where to find it. Remember that it is an offence to kill or injure any native animals, this includes all snakes. We can all do something for the environment, and protecting our native wildlife is one small part of that. So do the right thing and give us a call.

Honours List

Our president Patrick Medway has been awarded an Australian honour of AM for his work in conservation. He was one of twenty folk made a member while the title of officer was awarded to Edward McCalister for his work on endangered species.

The honours were begun by the Whitlam government and our President of Honour was among the first recipients because of the work done by our Society to develop an environmental concern in Australia.

This government was an environmental watershed for our country, this work being added to improved by Malcolm Fraser who with our president at the time, being co-founders of the Australian section of WWF, today the world's largest non-government conservation group.

Eight members are in the section devoted to animals but the last name should have been in the conservation group. Donald Trounson in retirement from the English civil service, almost single handed created Australia's Photographic Index of Australian Birds, later expanded to all wildlife.

Donald was interested in conservation, keeping in continual contact with our work since photography was an essential tool in spreading our message.

The Australian Museum also played a major part in this work through the interest of the then

director, Professor Frank Talbot, who later created the first chair in environmental science at Macquarie University.

We used the index facilities for our history.

A letter from the Premier

"I wish to convey my warmest congratulations to your appointment as a member of the Order of Australia.

The honour is conferred on citizens who have made a significant contribution to the well being of the community.

This appointment is a fitting recognition of your outstanding contribution to the community.

On behalf of the people and government of NSW please accept my congratulations on your appointment".

Bob Carr premier.

Our Society thanks the premier for his contributions to our environment.

History of the Serventy Conservation Award

In 1997 the Council of the Society decided to perpetuate the memory of the Serventy family for their outstanding contribution to wildlife preservation in Australia by establishing the Serventy Conservation Award and Medal.

The Serventy Conservation Award, named in honour of our President of Honour, Dr Vincent Serventy AM, his brother, the late Dr Dominic Serventy, an international ornithologist, and his older sister Lucy Serventy, who is now our oldest Life Member.

Dr Vincent Serventy has been a member of the Society for more than 50 years and served as its President until 2000. His work for conservation and the environment is well known. His sister Lucy, who has been a member of the Society for even longer, is also famous in Western Australia for her work in nature conservation, particularly among young people and for her bush walking exploits.



*Dr Vincent Serventy AM,
President of Honour.*



Lucy Serventy (aged 97).

This Award is intended to honour conservation work that has not been done as part of a professional career for which the person will have been well paid and honoured. It is given to those who labour in the conservation field for a love of nature and a determination that it should be conserved.

Often these have been non-scientists who have earned their conservation skills through sheer hard work. In the past names like Alec Chisholm, Keith Hindwood, Arnold McGill, Milo Dunphy all come to mind. In the last century there were even greater figures like the artist and ornithologists John Gould and John Gilbert.

Medal design

Australia's foremost sculptor, Stephen Walker, was born in Victoria in 1927 and now lives in Tasmania. At the request of Vincent Serventy, Stephen designed the special conservation medallion in brass. The medal depicts our national icon, the Australian koala (*Phascolarctos cinereus*), on one side and our Society's special emblem, the short-beaked echidna (*Tachyglossus aculeatus*), on the other with suitable wording.

Stephen Walker's empathy and affection for Australian wildlife is embedded in the creation of the Serventy Conservation medal. His achievement of excellence in design and construction of this superb artwork is a complement to our unique Australian wildlife.

In addition to the medal a cheque for \$1,000 is awarded annually. Many conservationists in the past have suffered financially for their devotion to the cause of conservation. This monetary award is a tribute to their dedication. The bronze medal is designed to be a constant reminder that the conservation movement has remembered their work in the past, just as history will remember the same achievements in the future.

Selection procedure

The decision on the granting of each year's medal will be decided by a full meeting of the Council, in November each year. Nominations should be received by the Society by the end of October each year. The nomination should contain sufficient details of the work of the nominated person for the Council to be able to verify the good work of the individual.

Nominations

To spread our choice more widely we ask all those interested in conservation to send us names of folk deserving of the honour and, if possible, details of his or her life history in conservation and environmental protection, with an emphasis on wildlife preservation.

1998

Margaret Thorsborne of Caldwell in Queensland received the inaugural Serventy Conservation Medal for her work in the conservation of local fruit pigeons and cassowaries and environmental conservation at Mission Beach, Queensland. Margaret Thorsborne has a lifelong interest in nature conservation that included monitoring of Torresian imperial-pigeons that migrate to nest on local islands off the Queensland shores in summer of each year.



Margaret Thorsborne, environmental activist at Meunga Creek, Queensland.

Margaret Thorsborne wrote "Hinchinbrook Island - The Land that Time Forgot". She was very active in the fight to stop development of Hinchinbrook Island by Keith Williams. When the bulldozers started work on a proposed marina development, opponents had a secret weapon, a 71-year-old woman named Margaret Thorsborne. She was convinced Williams was bulldozing some of the area's most beautiful coastline. And it seemed that every time the construction workers wanted to remove a tree, they had to remove her first. "I think it's time older people didn't leave it for the young," she says. "We aren't the last generation on Earth, but sometimes we act as if we are,...with no thought for the future." Margaret Thorsborne believed governments have let down Australia. Other conservation organisations declared they would fight the project right to the bitter end, pointing out that authorising development in a World Heritage area makes governments an international "laughing stock".

1999

Bernie Clarke OAM of Oyster Bay, Sydney received the second nomination and Award. A strong Botany Bay conservationist and environmentalist he received the Award in 1999 for his lifetime devotion as a local environmentalist and long-time Towra/Botany Bay campaigner.

Bernie also became Patron of the George's River Keeper program in 1997, which aims to keep the river and bay free from pollution.

Clarke has been working and fighting to protect the Kurnell peninsula for decades. "My first time in a police paddy wagon was after I set up a roadblock in the 1950s to try and stop the oil refinery being built" he said. While campaigning to improve the Kurnell Peninsula, Bernie became President of the Botany Bay Planning and Protection Council, a residents' action group.

Bernie stated, "Countries around the world revere their birthplace [while] Australia has buried its under a local oil refinery!"

Bernie Clarke is quick to point out the special character of Towra Point, which hosts some 34 species of migratory wading birds each year. "The International Wetlands Body, RAMSAR, has listed Towra Point as an internationally significant site. Australia is a signatory to three international ornithological agreements to preserve and look after these sites in perpetuity. More needs to be done to protect these special areas", said Bernie Clarke OAM.

He was recognised and awarded the Medal of the Order of Australia for service to conservation on 12 June 1989.

Bernie Clarke.

2000

In 2000 the Award was presented to Dr Judy Messer, Vice-Chair of the Nature Conservation Council of New South Wales, for her outstanding contribution to conservation and environmental protection work. She has been, and still is, a tireless worker for biodiversity conservation and environment protection generally. Judy has been involved in many local, national and international conservation campaigns; especially those associated with coastal policy, inland rivers, arid land ecosystems and urban bushland.

She was Chairperson of the Nature Conservation Council of NSW from 1984 until 2000, with only a two-year break, and is currently the Vice-Chairperson. Dr Judy Messer has labored long and hard to protect our environment from pollution, inappropriate exploitation and over-development. In many cases Judy endeavored to act as a catalyst in her efforts to arouse community action, eg she initiated the Jervis Bay Coalition, co-sponsored

the Coalition for Urban Transport Sanity, and convinced Bob Carr as Planning Minister to create SEPP 19 Bushland in Urban Areas in 1986.

Judy is currently a non-Executive Director of Sydney Water and has served as an expert adviser on many government and inter-agency committees to protect our environment, such as the Murray Darling Ministerial Council Community Advisory Committee, NSW State Wetlands Action Group, Menindee Lakes Advisory Committee, Barwon-Darling River Management Committee, the Kangaroo Management Advisory Committee, Rural Fires Advisory Council, and the Aboriginal Ownership legislation working group.

Judy has represented the NCC at all of the triennial meetings of the International Union for the Conservation of Nature (IUCN) since 1990, including the recent World Conservation Congress in Jordan. Her particular interests are the promotion of an understanding of how to implement the principles of ecologically sustainable development (ESD), the development of innovative natural resource management policies and strategies, and an ongoing commitment to community empowerment. She has been very supportive of the work of the Wildlife Preservation Society of Australia and has a long association with our President of Honour, Dr Vincent Serventy AM, who also served for many years on the Nature Conservation Council of NSW.

Dr Judy Messer.

2001

Popular divers, Ron and Valerie Taylor who have done so much to save the wildlife of the Great Barrier Reef were awarded the Serventy Conservation Medal and Award for 2001. They have been tireless workers promoting a greater understanding of the wonders of the Great

Barrier Reef and the urgent need to protect and preserve the unique wildlife found on this world heritage coral Reef.

Shadow Over The Reef , an adventure film about swimming with WHALE SHARKS at Ningaloo Reef, in Western Australia, was co-produced by the Taylor's in 1993. This film was used to successfully stop the drilling for oil inside the Ningaloo Marine National Park.

In April 1997 Valerie won the prestigious American Nature Photographer of the Year Award for a picture of a Whale Shark swimming with a boy in Ningaloo Marine Park. This annual award is sponsored by National Geographic, Kodak and The American Press Club.



Dr Vincent Serventy AM presenting the Serventy Conservation Award to Ron and Valerie Taylor.

The Taylor's latest book, 'Blue Wilderness' written by Valerie and photographed by Valerie and Ron won the 1998 Gold Palm Award for images at the 25th World Festival of Underwater pictures in Antibes, France.

The Taylor's latest series of three, one-hour films 'In the Shadow of the Shark' is the story of their diving lives.

On Australia Day 2003 Ron Taylor was appointed a Member of the Order of Australia AM for service to conservation and cinematography.

2002

John and Cicely Fenton of Lanark at Branxholme, Hamilton in south western Victoria were presented with the Serventy Conservation Award for their outstanding contribution to wildlife habitat restoration on their farm. John and Cicely Fenton of Lanark property at Branxholme near

Hamilton in south western Victoria and his family have transformed their property Lanark "from three windswept paddocks to the complex ecosystem it is today". When they took over the property it was bare and comparatively waterless. It wasn't easy. "When I was reinstating wetlands, for example, the government was funding the draining of wetlands", said John. Since that time they have planted more than 80,000 native trees and associated understorey and reclaimed some 67 ha of wetlands. As the Birds Australia expert Graeme O'Neill said, "The return of almost all the birds that once inhabited the region to the Fenton's grazing property in Victoria's western district is perhaps the greatest of Lanark's many miracles". The number of birds that can be found on Lanark has risen from 40 species in 1956 to more than 155 species in the last few years. The Eastern Barred Bandicoot is Victoria's most endangered native mammal. Once wide spread across the basalt plains of Western Victoria, their numbers declined to near extinction. Today this small bandicoot has been released on the Lanark Station because the farm proved to be a safe haven for this small mammal. The careful replanting of native trees and the removal of feral animals such as the fox enabled the bandicoot to be re-established in a recreated natural environment. The Fenton's went beyond drought proofing their property but sought to 'recreate the balance' between the farming enterprise and the natural environment.

John and Cicely were clearly delighted to receive the Award. John spoke on his love of the land and his commitment to a balanced approach to farming. Cicely Fenton spoke of her involvement with the local Total Catchment Management program for the District and outlined her long experience in conservation matters, especially her work for the eastern barred bandicoot. Cicely proudly wears a small silver image of an eastern barred bandicoot as a neck pendant to show her commitment to this little animal.

Snail bait threatens lizards

by Lance Ferris, Australian Seabird Rescue

Blue-tongue lizards are surrounded by legends, one of which is that they are said to be poisonous. Among the other urban myths is that a bite from one can cause a re-occurring sore, every five years.

Almost all four-legged creatures on the planet are non-venomous and the recurring sore syndrome, can be found in the same x-files as the pelicans eating chihuahuas, stories.

These lizards are regular inhabitants of urban areas, and thrive on bugs, beetles, grubs, snails and even pet food. The inherent fear of slow-moving, slithery creatures has not endeared them to most people, however, Bluey, can be an asset in and around your house and garden, ridding the vegetable patch of unwanted pests.

Hazards facing this harmless native include poisoning from snail pellets, and cat and dog attacks.

Unlike most lizards, the Blue-tongue gives birth to live young, rather than lay eggs.



Blue-tongue lizards can make a meal of many unwanted pests in urban areas (Photo courtesy of Kodak Express, River Street, Ballina).

Blue-tongue lizard facts

Blue-tongue lizards are found in just about every part of Australia: on the coastal plains; in the mountains; in rainforest; deserts and at least one species is found in every Australian capital city. So, whether you live in Kakadu or Melbourne, just about everyone should be able to see one in their neighbourhood.

Blue-tongues are amazing survivors of urbanisation. A lizard may stay in the same backyard for years, conveniently consuming slugs and snails and sunning itself each morning by the backdoor, or out under the clothesline. They're large and slow moving with a reputation for stealing dogfood.

Australian cities are the only major cities in the world that have resident lizards this size - adults grow up to 60 cms in length. Herpetologists, though, are now concerned that blue-tongue numbers, in some locations, may be in decline.

Why are their tongues blue? - the bright blue tongue is a threat display, a way to deter predators. But in fact, not all blue tongues have blue tongues. Some have pink tongues.

Blue-tongues will only bite under extreme provocation. Their cobalt blue-tongue set against a bright pink mouth might look poisonous but their bite is non-venomous and mostly non-piercing. Blue-tongues teeth are like pegs and even though their strong jaws can grip hard, they rarely break the skin. It's more a bruise than a cut.

Without much effort it's possible to make your garden friendlier for any local wandering blueys. While they're there they'll consume a lot of snails and the odd spider or two.

Lizards are fully protected in all Australian states. It's against the law to take them from the wild.

Enviroscene

Birdwatchers paradise

by Bernie Clarke, Regional Councillor

The environs of two lake systems approximately 200 km south of Sydney and 20 km apart are a birdwatchers paradise.

Lake Wollumboola boasts a population of 15,000 birds and is located near Culburra, a quiet seaside town on the shores of Jervis Bay. Landlocked most of the time, a breach can occur in times of big seas and heavy rain. The Lake's irregular shoreline extends to about 30 kms north to south and 3 kms east to west. These waters provide food and shelter for about 9,000 black swans and several thousand chestnut teal.

They are attracted to the Lake to feed on the aquatic plant ruppia maritime, the grass-like plant that thrives in the Lake's shallow waters. Other birds that seek refuge on the Lake's foreshores include bar-tailed godwits, terns, greenshanks, black-winged stilts, double-banded plovers and pelicans.



Gang gang cockatoo.

St Georges Basin, 20 kms to the south, is renowned for the parrot species that inhabit the heavily wooded bushland that surrounds the tidal estuary. Claimed to host more species of parrots than any similar area in the world; birdwatchers have recorded 15 parrot species, which include 6 species of cockatoos; gang gang, yellow-tailed black, glossy, little corella, sulphur crested and galah.

Other known species include; scaly breasted lorikeet, rainbow lorikeet, king parrot, red rumped parrot, little lorikeet, eastern rosella, swift parrot, ground parrot and crimson rosella.

The Basin is stained with brown runoff from the surrounding pristine forest during heavy rain and not from sewage and storm water discharge found in most coastal estuaries.

Well worth a visit.



Black-winged stilts.

Conservation and zoos

Conservation, along with Education and Research form some of the driving forces behind the Zoo and Aquarium Industry.

As stated in the World Zoo Conservation Strategy, "the future of humankind greatly depends on extensive and effective environmental and conservation education. The zoos of the world have a unique role to play in the global efforts to educate people."

Education is a central goal for most modern zoos. Public Programs increases environmental awareness for all zoo visitors and hopefully encourages environmental action. People are fascinated by animals and public programs within zoos aim to highlight the important conservation and research work of zoos while offering visitors meaningful and memorable experiences.

Taronga Zoo is an important resource when learning about Environmental Education. It gives students the opportunity to deepen their awareness of and develop positive attitudes towards animals and the environment. Once informed, students are empowered to take positive action in their local environment.

The Zoological Parks Board of NSW is responsible for the management of the Taronga and Western Plains Zoos and each has developed a busy conservation program to conserve Australian wildlife. The main thrust of the program is the development of exsitu conservation programs leading to insitu conservation programs and to release back into the wild when possible.

The development of extensive research and successful animal husbandry/keeping programs to save and breed rare and endangered species recovery plans will lead to the knowledge necessary to save and protect many of our threatened species. Much research has already been done on species like the Regent Honeyeater, the Bilby and the Mallee fowl where research has enabled the conservation strategies to be developed to save these species from extinction.



WPSA councillors at Taronga Zoo.

Ten councillors attended the Strategic Planning Day and listened to an address by Curator Paul Andrew about the Conservation Program of the Zoological Parks Board. Background details of many of the recovery plans and programs being developed to save our precious native wildlife from extinction were explained by Paul Andrew.

The Zoological Parks Board is implementing the World Zoo Conservation Strategy Plan (1991) to save Australian wildlife through a worldwide cooperative program linking research and conservation plans around the world and making more spaces available for threatened species of wildlife. They believe that every animal in their collection should have a function within the framework of the objectives of the zoo to ensure that conservation goals are an important part of these objectives.

The main reason for zoological parks and aquaria collections is to provide support to public awareness of conservation of wildlife through education, recreation, research and conservation programs. In this way they believe much of Australian wildlife can be preserved.

Research indicates that some 600,000,000 people visit zoological parks around the world each year. In Australia people throughout their lifetime normally visit zoos firstly as children, then as parents and again as grandparents with their grandchildren. It is important then that during these visits the zoo management takes the opportunity to present to the visitors with a strong conservation and environmental education message on the importance of preserving the native habitat and the wildlife living in their natural habitat.

The unfortunate degree of land clearing in Australia has devastated much of the habitat of our Australian wildlife in all its forms, but especially the mammal and bird populations across the country. We fear that much of our wildlife will become extinct before governments take the necessary action to stop further land clearing and prevent this tragic loss of essential habitat for our wildlife.

Zoos and zoological societies across Australia are cooperating under the Australasian Regional Association of Zoological Parks and Aquaria and the Australasia Species Management Program to save our precious wildlife from extinction.

John Wamsley - Prime Minister's Environmentalist of the Year 2003

Wildlife crusader, Dr John Wamsley has been named the Prime Minister's Environmentalist of the Year for 2003 in the Banksia Environmental Foundation Awards. The Banksia Environmental Foundation rewards those who rise to the challenge of finding a more environmentally sustainable future.

Dr Wamsley has made a 30-year contribution to the conservation of Australia's unique wildlife, campaigning tirelessly on behalf of our threatened species and has helped raise public awareness of the devastation caused by feral animals to our unique Australian wildlife.

His network of wildlife sanctuaries helped bring some species back from the brink of extinction.

Woylies, numbats, wombats, boodies, bilbies and Stick-nest rats are among the animals reintroduced to the sanctuaries. Dr Wamsley has challenged conventional wisdom and been uncompromising but passionate in his campaign to protect native species from introduced pests and predators.

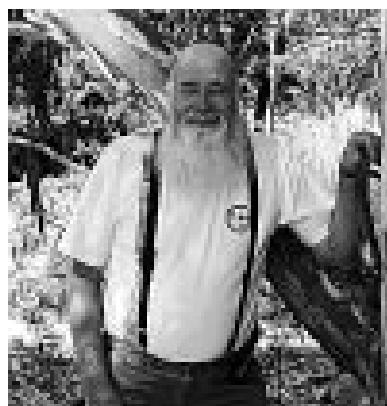
Conservationists and Governments have not always agreed with some of his ideas and his ventures have weathered financial difficulties. Dr Wamsley founded the conservation company, Earth Sanctuaries Ltd (ESL), in the 1980s to extend and consolidate his network of sanctuaries fenced off from such pests and predators as cats, dogs, rabbits and foxes.

Our Society supported Dr Wamsley's effort to preserve Australian wildlife and purchased a number of shares in Earth Sanctuaries Ltd to support his work. Members have visited many of his sanctuaries including his original efforts at Warrawong Sanctuary in the Adelaide hills, South Australia.

The new ESL Sanctuary is called Little Rivers and is just south of Melbourne on the Geelong highway. This sanctuary was used as a set for the recent Ned Kelly bushranger movie and some of the set has been left in place for visitors to see.

The recognition by the Banksia Foundation of Dr John Wamsley added credit to this untiring work to save our Australian wildlife from extinction.

We extend our congratulations to John and his staff for their commitment and great effort.



Dr John Wamsley.

World News

The plastic bag problem solved

A worrying cause of plastic pollution may have been removed, Sainsbury in England are to launch this April a bio-degradable bag which when composted can decay in twenty eight days. No more wildlife killed by the old style plastic which never decayed.

Global warming

Most scientists, conservationists and Developed nations agree this is a problem. Only the United States and Australia disagree.

Most scientists and most conservationists agree the world faces many environmental problems. Some economists and statisticians disagree.

Most scientists, most conservationists and most nations agree we must plan for a world which will run out of oil and gas for energy. The United States plans to drill the Alaska wilderness for oil. Australia plans to explore the Great Barrier Reef for its oil and gas potential.

A solution for wildlife

By accident our Society offered environmental assistance to counter the effects of this by pioneering koala corridors. Later we expanded this idea to link all reserves, lakes, estuaries etc by greenways. Now the New Scientist points out the need of a great web over the whole earth, so plants and animals can move north or south depending on their survival needs, as the earth grows warmer.

So once again Australia led the world!

Europe

Naturopa has a special issue devoted to heritage and sustainable development. It shows how across the whole of Europe there are conventions to deal with all these topics.

GM wars

New Scientist points out while Australia is researching this new technology to solve our rabbit problem, Spain is working on countermeasures because in their country the

rabbits, are a prime target with sporting shooters. In Spain it is an endangered species. We wish it were in Australia!

New Zealand is researching a method to exterminate brushtail possums. Very close to Australia. How tragic if a new disease should jump the Tasman!

TRAFFIC advises the burgeoning trade in cacti is endangering the fascinating ones of Mexico and the United States. We have problems in Australia of people stealing orchids from rainforests though so far it has only been a minor problem.

United States

This country like Australia refuses to sign the Kyoto Protocol which hopes to lessen global warming. The New Scientist warns that America is trying to circumvent an international ban on the use of methyl bromide which is damaging the world's ozone layer.

This is to be outlawed by 2005. The United States explains it is the most economical control of weeds on golf courses and farms. Possibly as a nation of golfers it is the first use which is the most important!

Bushmen in retreat

A diamond miner is being allowed to search for these stones in the Kalahari desert. The miner Billiton, which has affiliations in Australia, also friends in the World Bank, providing some of the money according to an article in the Sydney Morning Herald.

Tall planteaters

A member sent us an article from Swara, a magazine about Kenya and its wildlife. A naturalist there is making a study of the effects of giraffe grazing on bird life. His first findings are worrying.

We do not have giraffes though we have wild camels, almost as tall, which feed on mulga and other arid land trees.

In our last issue we described how they are now in tens of thousands. It is time the government made a study of the ecological effect of this large plant eater.

Underground water

All Australians know of the freshwater treasure we have in our artesian basins. This is a water wealth we share with many other countries. Perhaps it is time the United Nations took control where one nation may tap the wells which are being replenished by its neighbour.

National

WWF newsletter points out weeds cost farmers over \$3.3 billion dollars a year.

Over fifteen million hectares of grazing land are already affected with damage to ecosystems.



Prickly pear was an obvious problem easier to fight. We had clever scientists who found the insect enemy to destroy it.



This hall in Queensland honours the insect friend.

Frigatebirds those supreme masters of flight found across the whole of northern Australian islands. They are as safe as we can make them since all those islands are sanctuaries.

Now from France comes results of a study showing these birds can remain in the air for as long as four days without ever coming to land.

The birds fly as gliders do, finding thermals near mountains but the birds being at sea have to use the weak thermals under cumulus clouds, or those over their nesting islands.

Their feathers do not allow them to rest on water. Their food either comes from pirating other food laden birds, or scooping fish from the surface like noddies and sooty terns, or even crabs from a beach.



Frigate birds in flight over the Coral Sea.

Tasmania

Lyrebirds

Many years ago naturalists were alarmed lyrebirds would become extinct on the mainland, through land clearing; new enemies hunting them for plumes. In 1934 the first pair were released in Mount Field national park near Hobart. Over the next fifteen years twenty two were released in the same place with the birds spreading. Now some naturalist's calculations put their total number at 8,200.

Since lyrebirds shift tonnes of soil in their search for food, so may harm the forests. Since Tasmania was joined to Australia until about ten thousand years go, it would seem likely they were also in Tasmania. Possibly dying out due to climatic change in similar fashion to the koala which fossils show once lived in southwestern Australia.

The birds do not hurt mainland forests so no need to worry.



A bird roosting in a tree at night to escape attack by foxes dogs and cats.

South Australia

The imaginative Pratt scheme to pipe irrigation water is to have a five million boost in the Murrumbidgee Valley for a feasibility study.

Our Society knew that ten years ago ,when we were invited to a South Australian vineyard, where the owner had all his irrigation water direct to each vine by 'drip feed'. This not only saved water but gave great control over the plants. Since then it has become common over many vineyards and orchards in Australia.

Old fashioned farmers still use the wasteful overhead sprinklers fed by open canals. Such water is cheap and wasteful. We hope the Pratt scheme proves to governments we must conserve our most precious asset, freshwater. Australia is taking tentative steps to conserve our equally precious soils from soil degradation. Again our Society led the way.

Stormwater

On the radio we heard the SA government is taking steps to reuse stormwater, at present being wasted in the ocean. With treatment it can be used for a number of purposes. The same is being done with sewage water.

We consider the time will come when humans, as well as their farm stock, will be drinking it!

Victoria

We received a wonderful wildlife calendar. The artist was Dawn Stubbs of East Gippsland. As a child in Chelsea she was a carer for injured wildlife brought home by her timber worker father. She is committed to the environment, sketching her bird friends around her studio. The calendar features blue wrens, kookaburras, king parrots, rosellas, sacred kingfishers, all among our most popular birds.



The kookaburra was voted as our most popular bird in a poll conducted by our Society many years ago. Pictured is the world's first sketch of the species in 1774.

A letter from the premier's office, we sent on the subject of clearfelling.

'Your letter was read with interest, as the issues you raised are important to the premier and the government. The premier will work on the various departments on these issues'.

We pointed out NSW had banned clearfelling. One of the many good decisions made to conserve our natural heritage. Changing from clearfelling to selective logging will conserve our native forests bio-diversity.



Clearfelled native forest near Nadgee. Forests viewed as only a timber crop like wheat or oats.



elective logging where the fellers work on a tree, selected by forestry officials leaving most of the native forest in the background unharmed.

Queensland

The Great Barrier Reef

We were right more than twenty years ago. Sir Maurice Yonge who headed the British Royal Society team at Low Isles in 1926-27, told us that sediments were ruining the coral.

Our Conservation Medal winners, the Taylors, told us water visibility had dropped considerably in the Capricorn group. Our Council members also wondered if nutrient run off from cane farms was feeding the phytoplankton, allowing the crown of thorns seastar larvae to multiply.

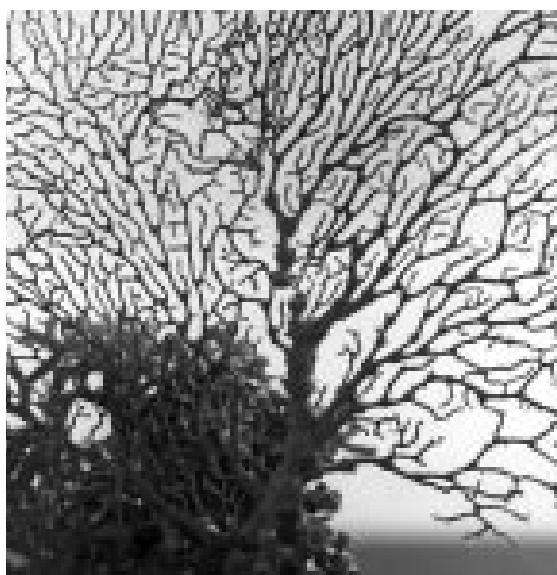
We also asked that only double hulled tankers be allowed in the inner passage. Now the media shows we were right. Peter Beattie is also recommending new controls on cane farms and graziers.

Labour and the Democrats are sponsoring a new Bill to extend the GBR Marine authority powers out to the edge of our territorial waters.

Also prohibiting oil and gas exploration in reef waters.

Constant dripping wears away the hardest political stones. Our method is through letters to Ministers which remain on file, warning all involved in future work on the Reef.

New Scientist points out our Reef is in good shape compared to others around the world, though local experts warn our reef is showing the first warning signs, so action needs to be taken now.



Gorgonian coral.

New South Wales

Tim Low in his book *Feral Future* claimed gardeners did more environmental harm than mining. Now another fact has arrived to bolster his theory.

Lazy gardeners, tired of mowing lawns, decided to import a new lawn plant which did not require cutting. So lippia a lawn creeper was introduced. It now covers 800,000 hectares according to the NSW Department of Agriculture. The CSIRO estimates weeds cost Australia 3 billion dollars each year.

Lippia is also known as frog fruit, carpet weed and condamine curse. How many pest plants and animals have come to Australia for often the most stupid reasons? The AQS must get more funding so they can check potential disasters before they become one!

The Central Coast Environmental Network also warns of invasions, recommends 'A field guide for SE Australia' by Kate Blood for guidelines.

The Kurnell Dunes

To be protected at last. The premier said the dunes had been mined for sand for the last seven years but no longer. I think of the small Dutch Regional Park sand dune which has half a million visitors, to use both as a playground while certain sections kept as an original dune.

Noisy Miners

Harry Recher wanted pied currawongs culled. Now there has come a clamour to cull miners because they drive out smaller species from their territory. We have miners and a few small birds, in our own garden.

From experience at Hunters Hill and as a trustee of the Botanic Gardens we did have blue wrens, We are, our president of honour did see blue wrens. He is not certain but consider domestic cats may be one of the reasons. Certainly Sherbrooke Council demands a night curfew on cats which all responsible owners applaud.

What of bell miners which also force other species out of their territory? We cannot interfere too much with our native species preferring one to another. Certainly on small islands currawongs can be a problem but their care is another matter of preferring to keep a rare species of petrel endangered by currawong predation.

Curbing pollution

Gosford Council has installed booms and other devices on all stormwater outlets in their district so the beaches will be cleaner. Other councils all over Australia should do the same.

Parramatta Council

The Environmental Protection Authority has given \$30,000 to the council to study how best to curb pollution from the tens of thousands of lawnmowers and other small garden machines

Bushfires

A media columnist blames our gumtrees for the cause of the recent bushfires. Not arsonists, the major reason, or lightning strikes, or arsonists! Ken Senior, Research Scientist at the NSW Botanic Gardens sent in a rebuttal. We congratulated him as well as mentioning the international expert Professor Pyne of Colorado who wrote the classic 'Burning Bush' which should be required reading for any columnist before he rushes into print with such ideas.

Ken Hill wrote in part "...The most severe of the Canberra fires developed their intensity in pine plantations....and the fires propagated through grasslands as well as woodlands..." The author went on to write, "the eucalypts are seeking to create a drier climate. This is anthropomorphism-the attribution of human qualities to a vegetable..."

We know some years ago there was a craze for talking to your garden plants, fortunately it died quickly.

Burnt pines

Forest Log describes how NSW are salvaging forest logs from burned plantations. Also they list eight nurseries around the State which offer native plants for sale. A perfect gift which can be shipped anywhere in the State and beyond. A phone call to the Forests Department will indicate the nearest to your home place.

Don't get angry, get elected

A woman farmer after battling wild dogs for years at Brindabella, has at last been elected as director of the local Rural Lands Protection Board. We recommend all conservationists to become active on local problems.

Farmers as conservationists

We are now starting a new partnership with farmers who control sixty percent of our land, to work with nature, rather than against it. We are also preparing a new book 'Bushland on Farms' which will be devoted to showing how farms which go this way, are not only more pleasant but also more profitable.

We would like to hear from members of any farmers they know who are showing the new way to a greener Australia.

Bob Carr's election promise was he would ban GM crops from the State for the next three years. Gives us more time to decide.

Population

The premier and the national minister quarrelled about Sydney's bulging population. Mr Ruddock wanted methods to discourage new migrants from going to Sydney, Mr Carr wanted the yearly migrant intake cut from 100,000 to 80,000.

They are both wrong. The solution is to decentralise, making all government departments that can, move their offices to regional centres.

Also fund to buy environmentally sensitive land along the coast, with a bike track to run the length of our coastline.

Election victory

In NSW the Labour victory is also a win for our Society. We know Bob Carr's concern for the environment but heard nothing from the Liberals. In the past they also showed concern. We remember Tom Lewis with some affection. He gave the State its modern national park system.

Political analyst Paola Totaro say Carr plans a super ministry along Victorian lines which will attempt "...to reconcile the farming agenda with that of conservationists, encompassing native vegetation, threatened species, water, bio-diversity, coastal management, catchment management, and environmental performance..."

All our Society's aims. We are already on the way to forming a partnership with farmers, awarding our conservation medal to the Fentons, our president and president of honour working on a book 'Bushland on Farms.' Our members could assist if they know any case histories for this venture.



Agroforestry is a sure way to make more money for farmers, as well as helping the environment.

Three of NSW's noisy species are in danger, according to Amanda Hodges, environment reporter for The Weekend Australian. She also reports the NP and WL Service is working on recovery plans. Our Society suggests there are easy solutions.

Koala

Translocate animals from Kangaroo and other islands where they cause problems to NSW. Do not sterilise them as happened with the last such project.



Koala closeup.

Powerful Owl

These birds need hollows for nesting. After World War 2 most States except Queensland, clearfelled their native forests. This meant most surviving trees were too young to develop suitable holes, seventy years at least being needed. Now NSW has banned clearfelling the position will improve with time.

Bush curlews

Being ground nesters these birds are vulnerable to introduced predators such as foxes, feral cats and feral dogs. Western Australia began a State-wide campaign to bait for these pests.

The theory. If they were reduced by eighty percent the native animals could outbreed them. It worked. Today numbats, woylies, rock wallabies, western quolls, ringtail possums are flourishing.



Powerful owl in forest tree in Victoria.



Bush curlew near nest.

Western Australia

Birds Australia has an article on the endangered Carnaby's black cockatoo. Ivan Carnaby was a conservation friend of our President of Honour. It is good to know steps are being taken for this bird, related to the white-tailed black cockatoo of Western Australia, very similar to the yellow-tailed of the eastern States.

These birds are magnificent creatures whose wailing voices weeloo-weeloo are part of our bush magic. All species feed on introduced pine plantations.



A pair coming in to land showing the white tail.

Rock wallabies, from being endangered, have become a problem for a few farmers. CALM'S Western Shield programme by eradicating foxes, feral cats and goats has been so successful, farmers are complaining rock wallabies are using farm machinery as 'rocks' and 'crops' instead of native grasses.

CALM are translocating some problem animals into suitable national parks and other reserves. Our Society helped this method of restoring endangered species, the koala being our most significant success story.



Koala catching.



The release with the koala scaling the tree.

Marine conservation areas

The Leeuwin-Naturaliste coast is being considered as such an area. Our Society considers the whole of coast and adjacent mainland would make a perfect Regional Park. Woodman's Point to the north is already a successful such park.

Pathway through the forest

CALM has created Mundi-Biddi Trail, together with other groups, to add to the first section already made from Mundaring to Dwellingup. It is good to see so many local groups assisting in the conservation and use of the fascinating southwest. Our congratulations.

Threatened plant communities

The Lotteries Commission has provided funds for 45 kilometres of fencing to assist six farming families to enclose 200 hectares of bushland containing rare plants.

It is great to see farmers assisting wildlife. This in line with our own Society's new partnership with farmers. Since they control sixty percent of our land, their assistance is welcomed.

Quokkas

These charming marsupials had a conservation message in an issue of New Scientist. Thought to be a kind of large rat, Dutch explorer Vlaming called the island on which he found them Rottnest.

There is a myth the early Dutch navigators found the west coast so sandy and dry. Here are the words of Vlaming on Rottnest.

"...I felt great pleasure in admiring this island, which is a very pleasant place. Here it seems nature has spared nothing to render this island beautiful above all others that I have ever seen...a terrestrial paradise..."

He noted in this place, "there were very few birds and no animals except a kind of rat as big as a common cat..."

Today it is the most loved of holiday places, strictly conserved.

The small wallabies are also found in a few places on the mainland. They must be trained how to avoid dangers from predators.

Ian MacLean of the University of Western Australia is teaching quokkas, before release on the mainland, that the world is not a friendly place, exposing them to potential enemies. I am not sure how he deals with human thugs who occasionally kick the small animals to death though heavy fines may help.



Friendly quokka.

From the New Scientist

Farming the sea is becoming big business. It produces 29 percent of all fish and molluscs by 2001. Not all good conservation news. Conserving seas and estuaries as sources of food and employment also assists conservationists.

A solution to the old dirty energy producers

England has produced a green energy strategy by using sustainable methods, reducing carbon emissions by sixty percent by 2050. They want every developed country to do the same. Perhaps even North Korea might be able to leave their nuclear station not working!

Floating marine life comes home

This new discovery means 'small marine reserves will be sustainable as some larvae will stay in the reserve, rather than being swept away to unprotected areas.' We have always asked for mangroves to be conserved as the most valuable of our marine areas.

Nature's best buys

This article details ways of spending money to conserve nature. In Holland for example in 1980 farmers were paid to use less intensive farming methods to protect lapwings and godwits. Now in 1993 they reward a farmer for every clutch on his land. This costs \$40 per clutch compared to the old way which cost between \$100 and \$400 per clutch.

The farmers are also keen to work out better ways to encourage the birds to breed, since they are now a source of income. Strange to us but Holland has a deep concern for its wildlife.

In Kenya they have tried a new method to conserve the wildlife corridors for migrating wildbeest and zebra. Cattle farmers were fencing the land to grow crops which brought in more money. Now the African Wildlife Foundation and the Friends of Nairobi's National Parks are paying farmers not to fence by paying them at a cost of \$4 per acre per year. This brings an income of between \$400 and \$800 a year for a typical farmer, about half his normal income though more reliable than crops.

By the way Friends groups are also involved with parks around the world. Our own President of Honour's wife is President of Honour of the World Federation of Friends, a considerably larger group than our own!

Bushfires

Ian Lowe mentions the recent fires in the ACT burned about 160,000 hectares of which the lion's share was on reserves. However fires are a part of our bush. Fires too often, or not enough, may be equally disastrous. A national park manager must know how best to treat the reserve for the purpose it was set aside.

Platypus

The venom in the spur of the male animal is being studied by scientists, hopeful it may offer a cure for chronic pain. We know our rainforests may hold important medicines as do our seas. Recently studies have been made on our kangaroos. So the fact that wildlife has value may help convince even the most avaricious developers!

The Murray

At an ABC Press Club meeting Mike Rann, the SA premier and Tim Flannery, the director of the SA Museum, were both brilliant, in saying what should be done and also at question time. Pointing to the lights Tim explained how much energy was being wasted.

He explained the museum had a huge area of solar panels on the roof to serve their own needs, while the rest was fed into the grid to earn money for the museum. At the entrance was a panel showing how much energy was being saved. Also how much they were earning from the grid.

Mike Rann added that all government departments were moving the same way to save energy, also make money. We trust museums and government departments all over Australia are doing the same. Members can help by phoning or writing to their own museums and government departments asking them to follow the South Australian example.

Their solution for the Murray, not a Commonwealth but a National plan with the nation and the States working together for the common good!

Fruit bats

Reported was the first death from a rabies like disease caught from a bat. Australia has had two deaths since 1996. Our Department of health recommends those who handle bats should get a rabies vaccination. If bitten, wash the wound and see a doctor for a course of shots.



A fruit bat.

King of the outback

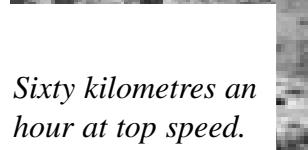
Neither the red kangaroo nor the emu are regarded as mental giants yet both are great winners among animals of the outback,

Both can reach top speeds of sixty kilometres an hour. Both eat a fraction of the fodder needed for sheep while water intake is low. On days when humans need 20 litres a day to survive, both need only slightly more than a litre. Both as runners are among the most efficient of the animal kingdom. This was the topic of a conference held by the Australian Museum and the Australian Mammal Society.

Professor Terry Dawson provided these facts with his last point; the emu wins on the heat stakes. When the kangaroo has to rest in the shade, the emu forages in 70 degrees Celsius temperatures shielded by its environmental umbrella of shiny black feathers which stop the heat from reaching the body.



Red kangaroo top outback mammal.



Sixty kilometres an hour at top speed.



Emus foraging at 70 degrees Celsius.

Oil spills

Is it such an environmental disaster? It has been with us for thousands of years according to some scientists. Certainly it kills oceanic wildlife as well as making life unpleasant for humans.

We urged the national government decades ago only double hulled oil tankers should be allowed to make passage through the Great Barrier Reef with no success. At least they made such ships use pilots to avoid any more disasters.

Why giants

New Scientist has a paper claiming it was extra oxygen which bred giants. In our opinion it was safety from humans either attacking or bringing dangerous predators. The dodo became extinct not because of humans eating them. The taste of their flesh was vile, the Dutch name dodo meaning 'nauseous'. It was feral pigs which ended the dodo's life.

Also the world's largest animal in the past or the present was the blue whale, still with us even if only a few still surviving in our oceans. The giant moa of New Zealand was destroyed by the Maoris eating it, the same fate suffered by many of our fossil giants eaten thousands of years ago thought by the arrival of the Aborigines.

From our scientific panel

David Murray, our plant expert, has produced another magnificent book. It is highly technical titled 'Seeds of concern', dealing with genetically modified plants.

We liked his 'loose ends' section. 'The best food is the food you grow yourself... it is usually possible to grow something - a lemon tree plus some herbs make a good start. Parsley, oregano, garlic, chives and mint may be available all year round.'

Congratulations David. A worthy addition to those already in print, fourteen of them though we have only read 'Carbon dioxide and plant responses' and 'Growing peas and beans.' The rest will be familiar to professional botanists.

From the National Parks Association.

A leaflet on saving our beaches and dunes from the four-wheel drive road menace. Such vehicles have their place but not for destroying nature. The animals under the surface of the sand have a right to live while other humans have the right to enjoy the beach without such noisy and dangerous interference.

Cypress pines

Florence is having trouble with pollen from these trees which gave character to Provence in the south of France. The official explanation 'we have been concerned for some time about the rise in allergies, particularly among young children. The only solution is to cut down the trees.'

Our suggestion, plant eucalypts whose pollen is large, causing no allergic reactions, even more beautiful than cypress. We also have other groups of plants just as effective as street or garden trees.

David Attenborough

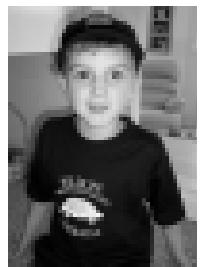
Most have admired this television speaker on great wildlife programmes. A few excerpts from an interview in New Scientist.

'...if you want to achieve conservation the first thing you have to do is persuade people the natural world is precious, beautiful, worth saving and complex...there is no doubt the fundamental problem the planet faces is the enormous increase of the world population...'

David has been the world's greatest communicator of natural values. May he long continue.

W P S M E R C H A N D I S E

Many of our members have expressed interest in purchasing gift merchandise for friends and family (or even themselves)! This is a great way to support WPS, so we have responded below with a mail order system. Simply send your cheque or credit card details (with expiry date) and we will post your order out to you. All prices include GST and 20% member's discount. All proceeds go towards our conservation projects.



Polo shirts: \$35.00
(navy with white logo/ white with navy logo)



Cap: \$13.00
(navy with white logo)



WPS ceramic mug: \$6.00
(white with blue logo)



Kids T'shirts: \$15.00
(navy with white logo/ white with navy logo)



Drink bottle bag: \$15.00
(navy with white logo, bottle not included)

Product	Quantity	Size	Cost per item	Total
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Drink bottle bag	_____	n/a	\$15.00	_____

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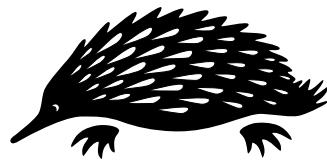
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Name on Card: _____ Expiry: _____

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WILDLIFE PRESERVATION SOCIETY OF AUSTRALIA, INC.

Wildlife Preservation Society of Australia, Inc. (Founded 1909)
PO Box 42 Brighton Le Sands NSW 2216

Membership

Why not become a member of the Wildlife Preservation Society of Australia Inc?
Simply fill out this form.

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Membership category (please circle)

Ordinary: \$20.00 Pensioner & Students: \$10.00 Corporate: \$35.00
(Corporate membership is open to Schools, Associations and Institutions.)

Payment Details (please tick) Cheque Money order Mastercard Visa Bankcard

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**Mail to the: Wildlife Preservation Society of Australia Inc.,
PO Box 42, Brighton Le Sands NSW 2216.**

Consider - A Bequest

Another way which you can support the work of the Wildlife Preservation Society of Australia Inc. is to remember us in your will.

If you would like to make a bequest to the Wildlife Preservation Society of Australia Inc., add the following codicil to your Will:

I bequeath the sum of \$ to the Wildlife Preservation Society of Australia Inc. for its general purposes and declare that the receipt of the Treasurer for the time being of the Wildlife Preservation Society of Australia Inc. shall be complete discharge to my Executors in respect of any sum paid to the Wildlife Preservation Society of Australia Inc.

“The challenge to the present adult generation is to reduce the increasing pressures on the Earth and its resources - and to provide youth with an education that will prepare them emotionally and intellectually for the task ahead.”

VINCENT SERVENTY AM
President of Honour

PATRICK MEDWAY AM
National President