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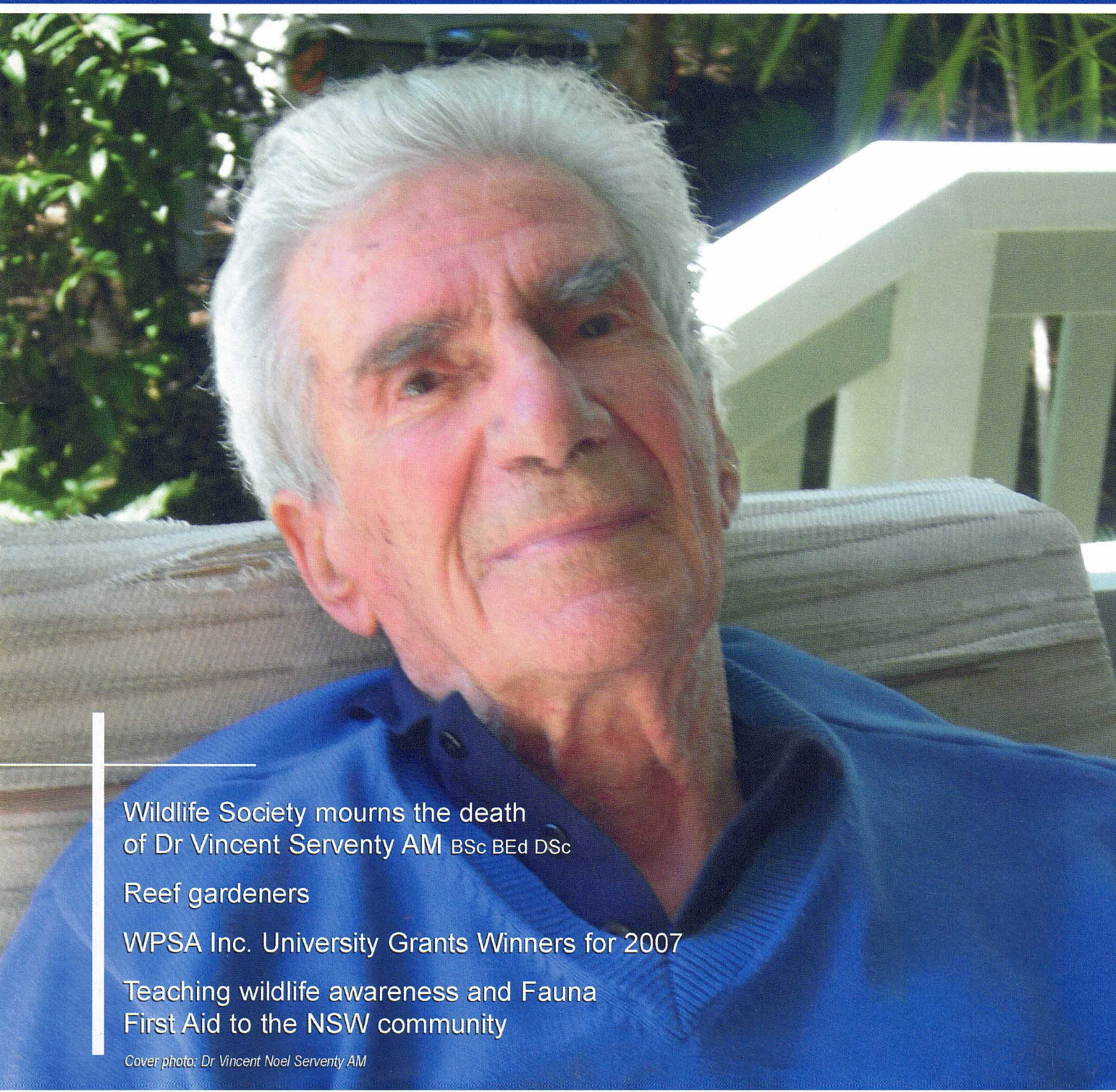


Wildlife Society mourns the death of Dr Vincent Serventy AM BSc BEd DSc

Reef gardeners

WPSA Inc. University Grants Winners for 2007

Teaching wildlife awareness and Fauna First Aid to the NSW community

Cover photo: Dr Vincent Noel Serventy AM

Society members support National Tree Day

National Tree Day is Australia's biggest community tree-planting event and since Tree Day started in 1996 over 10.5 million native trees and shrubs have been planted by more than a million volunteers!

National Tree Day is a day when tens of thousands of Australians get together to plant trees and shrubs that are native to their local area. The aim is to grow a better future for Australia by helping wildlife with more habitats and improving our air quality.

Thanks to the efforts of the volunteers, National Tree Day 2007 was a great success. Planet Ark estimates that more than **290,000 volunteers** planted in excess of **one million native plants** at 3,100 sites across Australia. Over 220,000 of these volunteers were students, planting at 1,900 school sites.

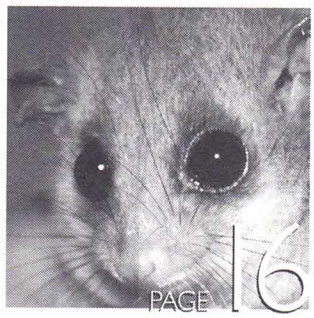
Our Society believes that it's vital to look after the planet for future generations and to teach our children the importance of looking after the environment. What better way to do this than to plant a tree with them! As they grow, so does their tree.

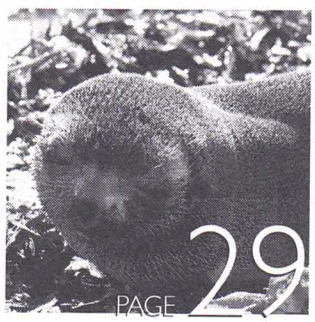
In years to come they'll be able to say 'I planted this tree years ago, and look how it's grown!' That leaves an indelible memory for them. Our Society organised its Sydney members to participate in National Tree Day by getting children to plant trees in the Bicentennial Park in Rockdale, Sydney. By encouraging children to help plant native trees, our Society hoped to inspire them to look after the environment in the future.

Our Society members and volunteers enjoyed a BBQ lunch afterwards.

Our Society has been carrying out annual tree planting days since 1931. The first official tree planting was held on Saturday 23 July 1931. Annual tree plantings by our Society and others continued for many years, and in December 1973 it was reported in *Australian Wildlife* that there were still replacement plantings being carried out with trees grown by members of the Society. November 1978 appears to be the last recorded tree planting ceremony by the Society.

Contents





'Australian Wildlife'

is the official journal of the
Wildlife Preservation Society of Australia Inc.

Founded in 1909, the Society is dedicated to the conservation of our unique Australian Wildlife in all its forms.

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Membership

Ordinary:.....$35
Pensioner/ Student:.....$25
Family:.....$45
Conservation and School Groups:.....$55
Institutions/Overseas Subscription:.....$65

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Councillors 2007

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All articles are written by Suzanne Medway unless stated otherwise.

From the President's Desk...

It is with the deepest regret that we record the passing of our beloved President of Honour, Dr Vincent Noel Serventy AM BSc BEd DSc, at Woy Woy, NSW on Saturday 8 September 2007.

We extend our deepest and heart-felt sympathy to Carol and his family on his passing.

Vincent was a long term Life Member of the Society. He was elected President of the Society in 1973 to save the Society from being wound up. Over the next thirty odd years he steered the Society into a national, influential wildlife conservation organisation, often becoming embroiled in many of the major conservation battles during the 1970s through to 2000.

Vincent had a wide range of very influential friends spread across Australia and around the world. Throughout his life he received many public honours recognising his tremendous contribution to Australian wildlife preservation.

Only last year he received a note from His Royal Highness the Duke of Edinburgh on the Western bristle bird conservation project. Sir David Attenborough wrote to him early this year apologising for his inability to attending the Society's Centenary celebrations in 2009. At a private reception for Society Councillors in Government House Canberra on 11 May 2007, His Excellency the Governor General expressed his admiration for Vincent as a very committed fellow Western Australian and one who had inspired him in his early days to appreciate the natural environment.

Vincent's commitment and dedication to preserving Australia's precious wildlife in all its forms was inspirational and uplifting for all who had the pleasure of knowing and working with him.

The last time I spent some time with Vincent was when he donated his valuable collection of wildlife conservation books, photographs and papers to the Society. We worked together at his home at Pearl Beach to pack up his collection for storage in Sydney. We talked and laughed together and reminisced on a long list of conservation issues and projects we had been involved in as we went through the more than seventy boxes of papers. We finally sat down to lunch with Carol and Suzanne to enjoy a well-earned rest.

We gratefully acknowledge Vincent's generous donation of his books, photographs and papers to the future work of the Society. There are also eleven unpublished manuscripts in this collection. We plan to engage a consultant to sort and catalogue the papers for inclusion in the Serventy Memorial Library as part of the new ECOWORLD GARDENS project at Rockdale.

During one of my many visits, we took time out to plant a Queensland black bean tree in his side garden to help feed the local birds when it matured into flowers. It was one of the last real conservation actions that Vincent was able to make and I was privileged to be part of that experience.

I am often reminded of that great line from '***Clancy of the Overflow***' by Andrew Barton 'Banjo' Paterson:

'And the bush hath friends to meet him, and their kindly voices greet him
In the murmur of the breezes and the river on its bars,
And he sees the vision splendid of the sunlit plains extended,
And at night the wond'rous glory of the everlasting stars.'

He was my friend, colleague, guide and mentor throughout my life.

I thoroughly enjoyed the privilege of working with him on a wide range of projects: I well remember the meetings with him and Professor Max Maddock at the Hunter Wetland Centre, Newcastle when it was being formed in 1985; attending regular meetings with him in the old Environment House in George Street; visiting him at his home at Hunters Hill (he was always bare footed); inspecting the devastation of the Towra Point Nature Reserve in Botany Bay in 1996; driving up to Johnson's Creek Conservation Society campaign site to look at the possible damage to wildlife habitat by a local mining proposal; collaborating on the book *Conservation Victories* in 2003; to the many social visits to Pearl Beach to sit and chat about the work of the Society; the plans for the Bill of Environmental Rights; to the great time we all had when we celebrated his 90th birthday in the Pearl Beach Hall over a long lunch - and the many other wonderful times we had together planning how best to preserve our native wildlife. He was certainly looking forward to helping celebrate the Society's Centenary in 2009 and I know he will continue to watch over the future of the Society.

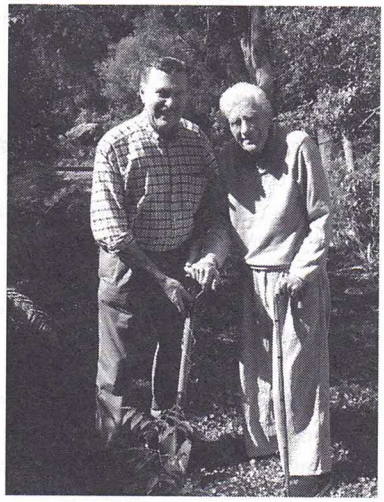
As he often said '*the protection of our native wildlife can only be secured when enshrined in legislation*'. To that end we have all committed ourselves to continue Vincent's struggle to ensure that our native wildlife is fully preserved for future generations of young Australians.

In the words of the renowned African Ecologist, Baba Dioum:

In the end, we will conserve only what we love,
We will love only what we understand,
AND
We will understand only what we are taught.

Vincent taught us all so much and for that we will be forever grateful!

VALE – Vincent Noel Serventy



Patrick W Medway AM
NATIONAL PRESIDENT

Wildlife society mourns the death of Dr Vincent Serventy AM BSc BEd DSc

Patrick W Medway AM, President of the Wildlife Preservation Society of Australia, expressed the great sorrow of Councillors and members of the Society on the death of their beloved President of Honour, Dr Vincent Noel Serventy AM, on Saturday 8 September 2007. He passed away in his sleep in a nursing home at Woy Woy, aged 91 years.

"He will be sadly missed by several generations of Australians who had the pleasure of meeting him, working with him or reading his many conservation publications. He was truly regarded by many of us as the 'Father of Conservation in Australia' and his wit and wisdom will be sadly missed," Patrick Medway stated.

Dr Serventy was born in Perth, Western Australia in 1916 and was one of eight members of the large Serventy family who migrated from Croatia after WWI. Vincent, his brother Dominic and sister Lucy, were all keen naturalists and became active in conservation and wildlife preservation issues. Vincent and Dominic wrote several wildlife conservation and environmental science books together, particularly on sea birds.

Vincent graduated from the University of Western Australia in 1941 with degrees in education and science. He worked initially as a teacher, developing the new natural history curriculum for Western Australian schools, as well as becoming very involved in the conservation of native wildlife.

Vincent and his wife Carol travelled widely around Australia, producing the famous *Wildlife Walkabout* series, which began initially as a wildlife magazine, and later developed into a film and video series for television. Vincent recalls spending many a happy time in a caravan with Carol and their three children touring the outback areas, researching and writing about native wildlife issues.

Vincent moved to Sydney in 1970 with his family at the invitation of Rupert Murdoch, and wrote and published many of his conservation books during this time.

In 1973 he was elected as President of the Wildlife Preservation Society of Australia by popular request after the previous president Thistle Harris, the third wife of the founder of the Society, tried to close it down. Over the next thirty odd years Vincent steered the Society into an influential national wildlife conservation Society, often becoming embroiled in many of the major conservation movements of the time.

Notable campaigns included the battle for the Franklin River, the stopping of logging of old growth forests in various states, increased legal protection for native wildlife and the removal of exotic predators, all with a special emphasis on teaching the next generation of young Australians about our unique native fauna and flora, as well as the constant need to protect its vital habitat.

He later co-authored a major publication, *Conservation Victories and Battles Yet to Win* (2004), with Society President Patrick Medway, highlighting the conservation wins of the period leading up to the current environmental issue of global warming.

Vincent wrote over seventy books on conservation, wildlife preservation and wider environmental issues throughout his lifetime. The most prominent of these include *A Continent in Danger* (1966), *Nature Walkabout* (1967), *Saving Australia* (1988), *Zoo Walkabout* (1979), *Serventy – An Australian Life* (1999) and '*The Flight of the Shearwater*' (1996). A number of his books were reproduced in other languages and his influence spread around the world.

He was presented with the rare honour of a Ritter Award by the Netherlands Government in 1980, the Australian Natural History Award in 1974, and was made a Member of the Order of Australia (AM) in 1975 for his work in conservation and education. He was awarded an honorary Doctorate of Science from the Macquarie University in 1998 in recognition of his service to the advancement of natural history and science.

Vincent was very ably assisted throughout his life by his wife Carol, who co-authored several of his books, and was awarded a Medal of the Order of Australia (OAM) in 1985.

Tributes

Lance Ferris and all members of Australian Seabird Rescue, Ballina NSW
I would be most grateful if you could pass on our thoughts to Vin's relatives and friends and all WPSA members.

A Silent Prayer
I am incredibly saddened by the loss of Vin. He was an inspiration to hundreds of thousands of people, if not millions. I have always treasured my Serventy Award, but it has now become even more of a shining light, than anyone can imagine. It is not for us to question "Why are we here?"... but to ask, "What can we do to make this world a better place, while we are here?"

Vin shall remain an everlasting example of that very philosophy. Sadness, yes... that we have lost someone so precious. But comfort... in the memory of a man who displayed the incredible depth of courage, determination and sacrifice to change the face of Australia and the welfare of its wildlife... and one who showed us the way. My deepest sympathies to all.

Roz and Kev Holme,
Cedar Creek Wombat Rescue
I am so sorry He was a great man, and will be greatly missed.

Michelle Thomas,
President, Australian Wildlife Assistance Rescue & Education
I am deeply saddened by the death of Dr Vincent Serventy, his contribution was & still is astounding and profound for our precious wildlife, we have lost too many conservationists of late with vast knowledge, I am glad he passed peacefully. He will be sadly missed.

Andrew Cox,
Executive Officer, National Parks Association of NSW
NPA is deeply saddened by the passing away of Vincent. His huge contribution to conservation in Australia cannot be overstated. He was a great communicator and tireless advocate. He will also be remembered for his leadership of the Wildlife Preservation Society of Australia over a long period. I will remember my time on the NCC Executive while he was also a member. Please express our sympathy to the Serventy family on our behalf.

Linda Dennis,
Fourth Crossing Wildlife
I am so sorry to hear this news. I know how much Vin meant to you.

Peter Carroll and all at SCRAP (School Communities Recycling All Paper) Ltd
Our deepest sympathy and fond condolences to Dr Serventy's family and all of us who knew him and his great work. He will be remembered as you say: "Father of Conservation in Australia".

Bev Smiles,
Western Woodlands Networker
I am so sorry to hear of Vincent's passing and am pleased to know that it was peaceful. I have a boxful of *Wildlife Walkabout* magazines at home. Vincent was a key motivator in my life and conservation work. My sympathy to family, close friends and Society members.

Lorraine Vass, President,
Friends of the Koala Inc
Members of Friends of the Koala are saddened to learn of the recent death of the Society's President of Honour, Vincent Serventy. For those of us who have grown up in Australia after World War II, Serventy was the household name associated with native wildlife conservation, whether through the *Wildlife Walkabout* magazine and TV series or through Vince and Carol's extensive published output. Vincent's role in re-engineering the Society over the past 35 years is less well known in the community at large. There must be many of your members, particularly those who have served on successive management committees, who are bereft at his passing. We join with you and all those who have worked closely with Vincent over

these good many years in your sorrow and offer our condolences to you all as well as to the family he leaves behind.

Senator Bob Brown,
Australian Greens Senator for Tasmania,
Leader of the Australian Greens
I will move on the next day of sitting that the Senate notes the death of Australia's grand old man of the environment, Vincent Serventy, aged 91.

The Senate express its condolences to Mr Serventy's wife, Carol, family and friends.

The Senate celebrates his life and achievements from his early success in saving the Dryandra Forest in Western Australia, to his early role in helping save the Great Barrier Reef, and his ongoing effort to establish 10 Green Commandments through a global Bill of Rights for the Environment.

Bushman, educator, author, filmmaker, and President of Honour of the Wildlife Preservation Society of Australia, Vincent Serventy made a remarkable contribution to our nation's environmental wellbeing.

Wildlife Preservation Society of Australia Inc - Notice of Extra-ordinary General Meeting

Notice is hereby given that an Extra-ordinary General Meeting of the Wildlife Preservation Society of Australia Inc will be held in the 1st floor meeting room of the NSW Masonic Club, 169 Castlereagh Street, Sydney, commencing at 11.30am on **Wednesday 21 November 2007**.

Preamble:

Following recent changes in Australian Taxation Office rules and regulations, the Society engaged Prolegis Lawyers of North Sydney to advise the Council how the Society should best proceed as an environmental organisation. Their advice was that the Society should review our Constitution and formally adopt an amended Constitution to ensure compliance with the new taxation laws to qualify for certain benefits under these rules, to gain Tax Concession Charity and Deductible Gift Recipient status and gain listing by the Department of Environment and Heritage on the Register of Environmental Organisations.

The benefits to the Society of gaining Tax Concession Charity and Deductible Gift Recipient status are substantial and will put us on equal footing with other major conservation groups who already have these facilities, and will also assist us to be more successful in our conservation work for native wildlife across Australia.

The Council of the Society hereby gives notice of an Extra-ordinary General Meeting of Members is convened for Wednesday 21 November 2007, commencing at 11.30am under the Society's existing Constitution - C.2.

All members are cordially invited to attend.

Business:

1. Welcome and recording of those present.

2. The following motion will be put to the meeting:

   That the Wildlife Preservation Society of Australia Inc's existing Constitution is repealed and replaced by the Constitution set in the Document submitted to the meeting.

3. Closure.

Convened by direction of the Council on 1 August 2007

Suzanne L Medway
EXECUTIVE DIRECTOR

A full copy of the amended Constitution is available via email or post. Please contact the National Office.

A light luncheon will be held afterwards in the Cellos Restaurant on the 4th floor. Please RSVP to the office on 9556 1537.

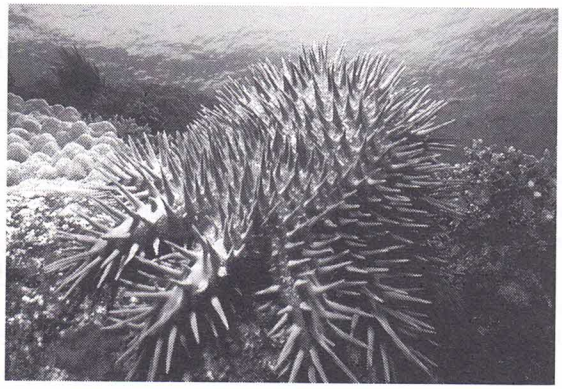
Reef gardeners

In Australia we have Landcare, which is a uniquely Australian partnership between the community, government and business to 'do something practical' about protecting and repairing our environment. All around Australia, Landcare volunteers are proving that together we can repair and viably manage our precious natural resources. There are now more than 4,000 volunteer community landcare groups across Australia.

We also have Coastcare, which is a community of volunteers caring for their coastline. Coastcare and landcare groups tackle problems like dune erosion, loss of native plants and animals, storm water pollution, weeds and control of human access to sensitive areas. Coastcare groups are revegetating dunes, building boardwalks and access paths, removing weeds and fencing dunes, as well as educating visitors and locals. The Coastcare program provides opportunities for governments, community, business and interest groups to become actively involved in on ground works to protect and manage our coastal and marine environments.

We also have Rivercare groups that are improving the condition of Australia's valuable water resources - including rivers, streams, wetlands and groundwater - resulting in improved water quality and environmental condition for all Australians. A key theme of the Government's Natural Heritage Trust, Rivercare is working to protect and maintain Australia's beautiful waterways for generations to come.

Our Society is not aware of any community-based scheme in Australia that directly undertakes restoration work on the ocean floor or reefs, or removes "feral" species such as the crown-of-thorns starfish, and sea snails.



Crown-of-thorns starfish (Acanthaster planci)

Pemuteran Artificial Reef Project, Karang Lestari Pemuteran, Bali, Indonesia

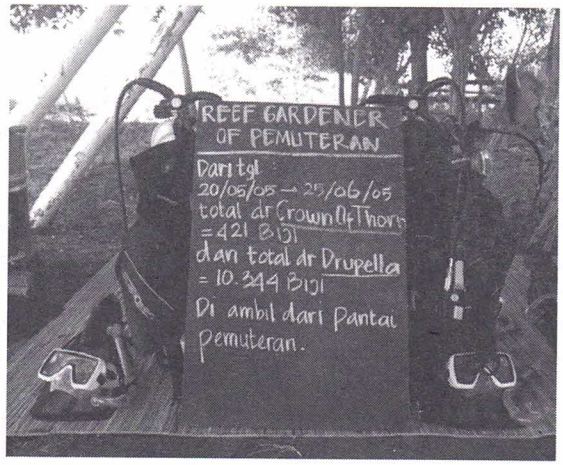
During a recent trip to Indonesia I was fascinated to learn that a similar scheme to Landcare, Coastcare and Rivercare has been started to protect and repair the reefs around the island of Bali.

Overview

The world's largest archipelago nation, with 17,502 islands, Indonesia is an important habitat and eco-balance centre for marine life, including corals. Indonesia possesses the richest assortment of coral species in the world (450 species) from fringe and barrier reefs to atolls and patch reefs. Estimates are that Indonesia's reefs cover 85,700 square kilometres, constituting fourteen percent of the world's coral reefs.

However, today, only six percent of these reefs are in healthy condition. Destruction has come from human activities, such as dynamite and cyanide fishing, pollution, global warming, increased turbidity, over-exploitation and environmentally-unfriendly tourism. Immediate economic gains do not offset the loss and destruction of reefs. A damaged coral reef takes decades to recover naturally. Protected artificial reef regeneration speeds nature's process in restoring coral growth and, in even shorter order, providing a protected environment for fish regeneration.

The Pemuteran Karang Lestari Coral Conservation Project, off West Bali National Park, is Indonesia's first step in this direction.



Introduction

Sustainable eco-tourism requires protection of natural beauty. Yet, conservation often conflicts with traditional resource users. For example, fish, are more valuable when they can be viewed repeatedly by divers and snorkellers, versus their value as a single meal. Pemuteran lies in the shadow of mountains to the south and to the north is Menjangen Island, famous for diving and nature treks. Pemuteran receives less rainfall than other island areas during rainy season and is too dry for rice cultivation. Its people traditionally live from the sea. Pemuteran has the largest area of shallow coral reefs in Bali that are easily accessible, because the area is calm and free of

strong currents and waves that affect most other parts of the Island. The spectacular coral reef growth near land made for a diving and snorkelling paradise. Because the area is furthest from the Island's main tourism centers to the south, it was quiet and unspoiled. Hotels and dive shops were pioneered and they worked closely with the village to protect the area.

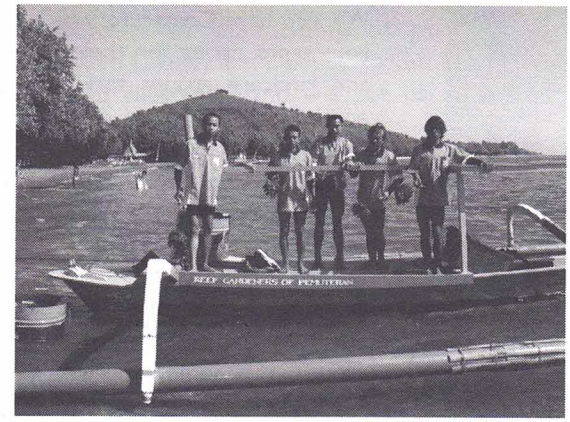
The Pemuteran community declared that the reefs in front of the beach, where most hotels are located, as protected no-fishing zones, for eco-tourism use only. Local fishermen banned bomb and cyanide reef fishing in Pemuteran Bay to preserve what was left of their resources. Through such conservation efforts, the healthy Pemuteran bank reefs drew increasing numbers of divers and snorkellers to view the coral gardens.

As a result of this protection, many other hotels and dive shops followed, making tourism earnings a major contributor to the local economy, in a region which previously had few cash-earning jobs - in one of Bali's economically poorest areas. The community quickly grasped the meaning of eco-tourism income, which had positive effects on lifestyle and health for local villagers.

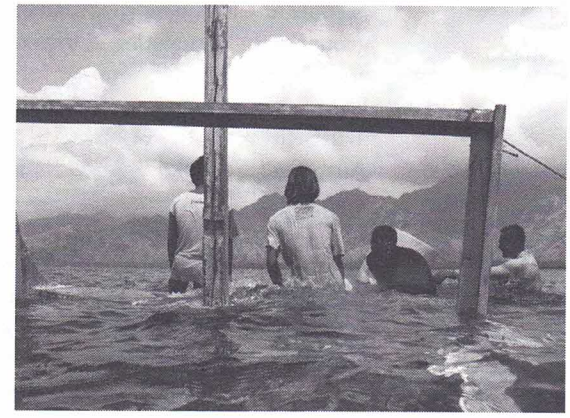
To ensure conservation efforts continued, strong education, protection and regeneration programs were put in place, to sustain and grow tourism, with income flow directly to the villagers. Then the economic crisis befell Indonesia. Vigilance in enforcing fishing bans lapsed during the economic catastrophe of 1998.

Pemuteran's large sheltered bay, once surrounded by reefs teeming with fish was targeted by migration of whole communities of fishermen from neighboring Java and Madura islands, where their own fisheries had been wiped out by destructive over-exploitation. They brought their destructive bomb and cyanide fishing techniques, steadily destroying almost all of Pemuteran's reefs. The bank reefs, once full of coral thickets and fish swarms, became piles of broken rubble, barren of fish. Though several of the reefs that were constantly protected by a couple of the western run dive centres remained excellent with good coral cover and inhabited by a great variety of fish life.

By the time the bombing and cyanide ban was reinstituted, the damage was done. The local fishermen realised that the industry would not recover until the coral reef habitat was restored and thus the Pemuteran Coral Conservation Project was born.



Reef gardener team



BRF wreck

Pemuteran Coral Conservation Project

In the Pemuteran Coral Conservation Project, hotels, dive shops, village fishermen, scientists and conservationists united to protect and restore coral reefs and increase fishery resources, both for tourism and the local fishery economy. The Karang Lestari Project began in June 2000, when the first coral nursery was built. There are now more than fifty separate Biorock® reef structures in Pemuteran with a total length of about half a kilometre.

The project uses the Biorock® method to increase coral growth rates, increasing reef fish density by providing fish with a suitable habitat. All of the nursery structures are located in the Pemuteran Coral Reef Protected Area. Corals transplanted onto the structures attract high densities of all type of fish. As a result of the dense swarms of fish in and around the coral nurseries, they have become the major focus of near shore diving and snorkelling. Spinner dolphins, which vacated the bay due to bomb fishing, last year returned to the site, where they are protected.

All corals used in the projects are broken pieces found on nearby reefs where they were damaged by rolling or falling. They would sooner or later

die if not rescued and attached to the nursery structures, creating attractive snorkelling and diving trails. This has greatly enhanced marine life in the area.

Technology

Low technology Mineral Accretion (Biorock®) methods are used to restore damaged coral reefs and reef fisheries, develop mariculture alternatives, preserve biodiversity and sustain reef-related eco-tourism economies for coastal communities. Steel lattice bases, submerged in the sea and charged with a minimal electrical current, generate natural limestone rock growth on the base, which increases growth rates of corals and other reef organisms. Corals on the mineral accretion structures, because of their higher growth rate and healthier metabolism, reproduce more quickly and prolifically because of healthier metabolism. They become the key to restocking the surrounding reefs. The infrastructure for Mineral Accretion coral regeneration is so simple that it can be replicated with very little skill or training, few materials and direct, alternate, solar or wave-generated electrical current.

The Global Coral Reef Alliance (GCRA)

GCRA, founded in 1990, is a small, non-profit organisation dedicated to growing, protecting and managing the most threatened of all marine ecosystems - coral reefs.

GCRA is a coalition of volunteer scientists, divers, environmentalists and other individuals and organisations committed to coral reef preservation. They primarily focus on coral reef restoration, marine diseases and other issues caused by global climate change, environmental stress and pollution.

They employ a method that allows reefs to survive and recover from damage caused by excessive nutrients, climate change, and physical destruction. Their Mineral Accretion process has been successfully applied to fish and shellfish mariculture as well as to growing limestone breakwaters to protect islands and coastal areas from erosion and rising sea levels. Coral reefs built with their process are now growing in many islands in Indonesia, including Lombok, Flores, Sulawesi, and Java, at three locations in the Philippines, in Palau, at two locations in the Marshall Islands, in French Polynesia, in the Turks and Caicos Islands, St. Maarten, Tobago, the United States, and other countries, with strong interest from dozens more countries. GCRA scientists work with foundations, governments or private firms to build, restore and maintain coral reefs, nurseries and marine sanctuaries. Projects include restoration and construction of coral reefs for mariculture and tourism as well as breakwaters for shore protection.

One unique feature of the Biorock® process is that steel structures of any size and shape can be built, full of holes, nooks, and crannies that fish love much more than steel ship sides without openings, and moreover the process completely prevents all rusting. The steel, that is charged electrically, not only lasts forever, it actually un-rusts, with red iron oxide converting back to grey or black iron. Shipwrecks can be protected from collapsing, and greatly improve them as coral and fish habitat. Biorock are working with other inventors to develop use of tidal energy turbines, solar power buoys, windmills, and other novel energy sources that can be applied in remote places.

The Global Coral Reef Alliance website - www.globalcoral.org – is a source of information on the methods and the results of the coral reef gardeners' project. The patent for the Biorock® process is held by the late Wolf Hilbertz and Thomas Goreau. Wolf Hilbertz, who originally invented the method in the 1970s to grow prefabricated construction material in the sea, died on 11 August 2007. He was a great pioneer and innovator who inspired so many people, and deserves to be memorialised.

I contacted Thomas J Goreau, President of Global Coral Reef Alliance and he said they were looking for reliable partners for coral reef restoration projects everywhere, but have so far never had luck in Australia, although they have trained a number of Australian students in Indonesia. Thomas believes that despite massive denial, Australian coral reefs are in very serious trouble and large scale restoration will be critically needed in the coming years. However, he also believes that any efforts to do so would be controversial and quickly bogged down in politics.

Thomas is keen to keep Australians alerted to dangers to the Great Barrier Reef and Ningaloo Reef so they realise the importance of large scale restoration while there is still a shrinking window of opportunity to do so.

Thomas' personal knowledge of Australian reefs goes back a long time. His grandfather took the first underwater photographs of the Great Barrier Reef and the first aerial photographs all along the length of the Reef in 1950, and his father did a lot of diving and ecological research on the Great Barrier Reef coral reefs in the 1960s, with his colleague Sir Maurice Yonge, who had led the Cambridge University Great Barrier Reef Expedition in the 1920s.

"Unfortunately, since then the Great Barrier Reef Marine Park Authority and AIMS have largely been devoted to ignoring what was known before them in order to pretend to discover it, and by claiming to be the perfect managers and denying the severe deterioration that has taken place from crown-of-thorns starfish, diseases, global warming, and runoff of nutrients from sewage and agriculture. They have made admission of the problems impossible, and hence prevented any efforts to solve them. So I am not optimistic that we would be allowed to work there. Ningaloo on the other hand may be much more progressive and open minded because they are not forced to defend a long record of misrepresentation." said Thomas Goreau.

The reef gardeners program

In 1999 the local community at Pemuteran, on the north-west coast of Bali, declared the shore reefs a marine protected area (MPA), and in 2005 extended the MPA to include an off-shore reef – Tukad Jarang. After winning the 2005 ASEANTA environmental award and the 2005 PATA Gold award, a local dive company, Reef Seen Aquatics, owned and operated by Australian Chris Brown, who was the first dive operator in Pemuteran, secured funding from AusAID/Bali Rehabilitation Fund to develop local area diver skills and to create three new dive sites in Pemuteran Bay.

Reef Seen Aquatics trained a number of local fishermen to PADI Advanced standard divers and employed them as reef gardeners to maintain reef health by collecting crown-of-thorn starfish, parasitic drupella snails and reef refuse. The reef gardeners also maintain the world's largest Biorock® installation located in front of Taman Sari Resort. This program was started with a grant from AusAid, but has now become self supporting, with around twenty gardeners that have now been trained. They are village kids from poor fishing families who would not have had much chance for education to learn the English language skills needed for jobs in the tourism sector.

The program trained them as divers, taught them basic marine biology, business skills, and English, so that several of them have been lured away by dive shops, indicating that the program is successful in social mobility. The gardeners have a boat that they use to grow Biorock® reefs on the outer bank reefs that were devastated by blast fishing, cyanide, and bleaching in 1998. These areas are used for diving tourism, and entry fees sustain the program. Divers buy a tag to certify that they are supporters. In addition the gardeners collect broken coral that would die from rolling around, to attach and grow into new colonies and remove coral eating pests like crown-of-thorns starfish and snails that eat coral: they have removed hundreds of thousands of them! The village children are highly motivated and proud of what they do to restore the village's marine resources.

This program has made it clear that restoring coral growth can bring fish back. Local fishermen see the schools of many kinds of fish attracted to the coral nurseries, as they pass over them enroute to their fishing grounds miles off shore. There they spend the day searching for the few fish in a barren wasteland.

The fishermen are eager to see the coral nurseries expanded and fish habitat constructed in areas near their fishing grounds. They protect the projects and keep records of the fish caught in areas nearby as part of an experiment to improve the fisheries. They want fishermen from other areas to know what they are doing and why, and that they could do the same thing in their areas so they wouldn't have to fish at Pemuteran.

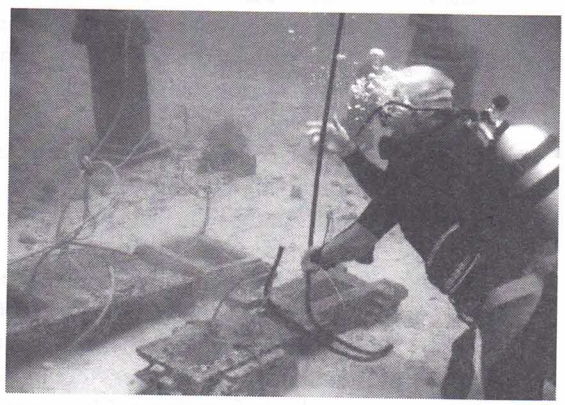
With coral regeneration and fishing bans in the bay, spinner dolphins have returned in significant numbers. The village also retains rights to all snorkelling income from tourists. Both of these income alternatives, in a traditional fishing community, serve to reinforce their basic understanding that each fish has more value in the sea than in a net or on the end of a fishing line. Thus, they have become avid proponents of conservation and eco-tourism, for economic and environmental benefits.

The nursery structures already attract dense populations of juvenile reef fish, resting fish schools and fish that only shelter in live coral, as well as other marine organisms. Young fish of many species are attracted to the sites to metamorphose from larval stages into juveniles. Snappers use the structure to hide in the daytime, forming schools so dense that it is impossible to see the other side of the structure. Batfish are regular habitants. Damselfish and cleaning fish quickly establish territories.

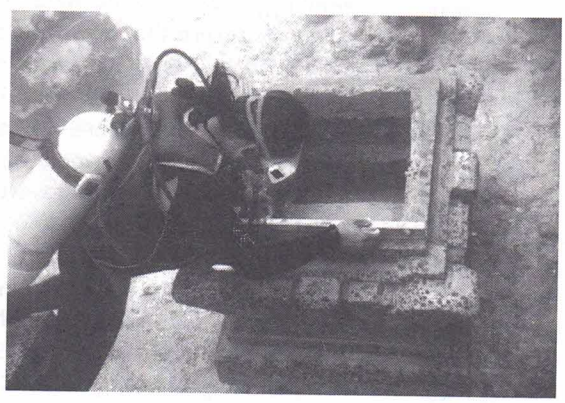
These unusual underwater stations already are major tourist attractions. The Pemuteran pilot projects, the largest of their kind in the world, exceed the size of all other mineral accretion projects worldwide, combined.

To date the reef gardeners have removed over 5,000 crown-of-thorn starfish and 53,000 *drupella* snails from Pemuteran Bay. The reef gardeners have also scuttled six 'wrecks' close to one of the offshore reefs, plus constructed and sunk a bio-wreck - a boat shaped steel structure at the same site. They have also constructed Bali's first underwater Hindu temple garden, complete with stone statues thirty metres below the surface.

The AusAID funding also allowed Reef Seen Aquatics to purchase over a dozen local wooden ships and scuttle them on two sites on an off-shore reef. These combined projects were the brainchild of Chris Brown, the owner of Reef Seen Aquatics and pioneer of diving in Pemuteran as well as the Reef Gardeners program. The success of the project is due to his tireless energy and the hard work of his well-trained staff.



Construction of The Underwater Balinese Temple Garden

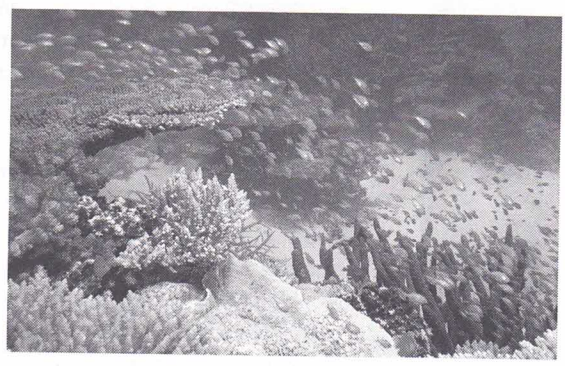


Construction of Underwater Temple Garden

All photos kindly donated by Chris Brown of Reef Seen Aquatics, Bali

Great Barrier Reef Marine Park Authority

Our Society wrote to the Great Barrier Reef Marine Park Authority (GBRMPA) asking whether they would consider implementing a "reef care" or "reef gardeners" scheme to assist in restoring parts of the Great Barrier Reef that have been damaged by the crown-of-thorns starfish and other natural and man-made damage to the coral reef habitats. The Chairman of GBRMPA replied stating: "The Great Barrier Reef Marine Park Authority is committed to working with communities and industries to protect the Great Barrier Reef. We have a network of community advisory committees in all major population centres along the Reef coast. Members of these committees are closely involved in all aspects of the management and protection of the Reef. In addition to our head office in Townsville, we have regional offices in Cairns, Mackay and Rockhampton to give local communities direct and personal lines of communication with us. We run community monitoring programmes looking at coral reef health, especially coral bleaching, and support other community-based programmes such as Cap Reef, Reef Check and Seagrass Watch. These programmes involve communities and industries in protecting the Reef and increase stewardship for the Reef. We run a Reef Guardian programme, involving schools and local councils, to encourage local communities to take part in Reef protection. As you can see, we already have a significant series of programmes that involve communities in the protection of the Great Barrier Reef.



Great Barrier Reef – photos kindly supplied by the Great Barrier Reef Marine Park Authority

"On the specific issue of coral reef restoration, the situation of the Great Barrier Reef is quite different to that of many other reef systems around the world. Reef systems that are subject to destructive activities, such as blast fishing, may well need significant restoration activities in some circumstances. However, the Great Barrier Reef faces different pressure: climate change, degraded water quality and fishing. Our Reef protection programme focuses on protecting biodiversity through zoning, improving water quality, and promoting sustainable fishing practices. There is strong scientific consensus that such an approach promotes the natural resilence of a coral reef ecosystem and aliviates the need for significant restoration activities.

"In summary, while some reef "restoration" does occur on the Great Barrier Reef, it is my view that community efforts are best focussed on key pressures facing the Reef."

Ron and Val Taylor

In 2001 our Society presented the Serventy Conservation Medal to popular divers, Ron and Valerie Taylor, who have done so much to save the wildlife of the Great Barrier Reef. 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.

Ron and Val Taylor worked with Thomas' father on the Great Barrier Reef in the 1960s. I contacted Val for a comment on the possibility of introducing a "reef gardening" scheme to Australia and whether such a scheme would be viable.

She wrote back saying: "I know exactly what you are talking about. The richest marine spot we know of in Australia is a wreck called *The Yongala* out of Townsville. Divers come from all over the world to see it. Ron and I are all for artificial reefs, especially on sand where they become a settlement plate bringing new animals both static and pelagic into what was originally a poor area. We made a film about twenty eight years ago called *The Wreck of the Yongala*. It is a good demonstration of how an artificial reef can benefit the surrounding waters.

"We were with Tom Goreau and Sir Maurice Yonge when they were together on the Great Barrier Reef in the mid 60s. We spent six months with Tom; he was a great man and a lover of all wildlife.

"You may possibly know that in Western Australia and Queensland, wrecks have been put down by divers to make new dive sites and this has been very successful in creating marine habitats. Back in the 70s we were instrumental in capturing a bunch of clam poachers and their mother ship. We tried very hard to have the poachers junk sunk as a dive site in twenty eight metres of sand off the northern side of Lizard Island. At the time we had found a forty four gallon drum lying on this sand and the large marine life that lived in and around that drum was amazing. Here was this rather boring plain of sand with a tiny man made reef supporting an abundance of life that has to be seen to be believed. We felt that the clam poachers vessel sunk in the same place would make an incredible, well protected dive site and bring diving tourists into the area. The Cairns Council and the Maritime people were against it. They seemed to think we were crazy, though the same request today could bring a different end result. Later, for a film, we had to put down a complete DC3 that in the time we worked on the set became an amazing habitat for marine life. Small growths attached themselves and a grouper moved into the cabin along with a school of cardinal fish. We wanted to leave it there as an attraction to divers but the Great Barrier Reef Marine Park Authority made us remove it. The reason they said it had to be removed was because it could break up and become a shipping hazard. It was metal and I believed it wouldn't and couldn't break up (it would sink beneath the sand first). World War II planes that were shot down and are now sitting on sand in Papau New Guinea are still intact and are great tourist attractions. Had it been left there, sitting on the sand where we had placed it, today the dive tourist boats would be lined up wanting to dive it. After that we gave up on the idea of artificial habitats.

"The protected areas of Bali are amazing. The villages have done a great job. Many villages have built their own artificial reefs. Some are planned reefs like huge steel igloos, while poorer villages with no proper coral reef but rather rubble and sand just erect a wire wall or dump an old car which quickly becomes overgrown. I know because I think I have dived them all and believe me they make a huge difference to the abundance of marine life around where they stand. Some villages such as in Tulumben have grown rich on

the thousands of divers who come just to dive the old but very large wreck of a Liberty ship that lies on the rubble near their shore. It seems any solid structure left on the ocean floor quickly become a habitat.

"Some of the islands with resorts in Australia such as Heron and Lady Elliot have had the adjacent coral reef areas protected for some time and the fish life in the protected areas is still excellent but these places are far too few. If given the chance I am sure the Reef will recover. It may not be quite the same but in time the large life could return. Actually GBRMPA and World Wild Life Fund are putting a fair bit of effort into having some areas banned to harvesting and left to regenerate. Places for tourists to visit and enjoy, not take and destroy. A few well placed wrecks could help the process. Unfortunately, in the past, the Great Barrier Reef has been over harvested and under protected.

"Even off Sydney, any large foreign object lying on or near the sand quickly becomes a home for marine life and an attraction to divers, especially underwater photographers like me."

President of Honour wins award

Councillors of our Society attended The Nature Conservation Council second World Environment Day Conservation Awards on Thursday 7 June 2007 at Leichhardt Town Hall. This gala event honoured the many wonderful contributions by environment groups and individuals active in NSW.

The awards honour the campaigning, education, lobbying and advocacy work carried out by groups and individuals across NSW to protect the environment.

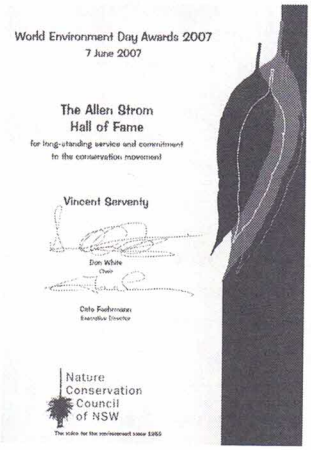
We were delighted that Dr Vincent Serventy AM, our Society's President of Honour, entered the Allen Strom Hall of Fame for his lifelong commitment to conservation. Winners of The Allen Strom Hall of Fame are selected for their long standing service and commitment to the conservation movement, and the courage to challenge Government and Non-Government decision-makers. Vin received a Certificate of Appreciation and had his name inscribed on the Hall of Fame shield, which will remain on permanent display at the Nature Conservation Council. The late Allen Strom devoted over forty years of service to conservation and education, and served as Secretary of our Society for many years.

For more than sixty years of environmental work in Australia and internationally, Vincent Serventy worked to realise his vision of a world whose people understand that we do not own this earth, but are trustees for the future, and that we should live in harmony with nature. He has justifiably been called the 'father of conservation in Australia.'

Unfortunately, due to ill health, Vin was unable to attend the dinner and receive his award. Patrick Medway (National President), accepted the award on his behalf.

A few days later Professor Don White of the NCC took the award to show Vin in the nursing home at Gosford.

Professor Don White presents Vin with his shield



The Allen Strom Hall of Fame shield

Wildlife Preservation Society of Australia Inc University Grants Winners for 2007

Graeme Armstrong

– School for Environmental Research, Charles Darwin University, Darwin

Project Title: Environmental factors affecting the seed availability for granivorous birds in tropical savannas of Australia

The aim of this project is to disentangle the effects of fire, rainfall and geology on the seed set of spinifex, in order to improve the management goals of this important resource for seed-eating birds. The specific objectives are:

1. to measure annual seed yields in Triodia with different fire and rainfall histories, on different geological units

2. to examine the long–term effects of fire (controlling for rainfall and geology) on the reproductive strategies of *Triodia*, and the effect this has on the population genetic structure. Populations experiencing fire histories that stimulate seed set will show higher levels of sexual reproduction, and thus greater heterozygosity, than populations that reproduce vegetatively.

Understanding the short and long term effects of fire on seed production will allow us to recommend fire management programs that optimise seed availability for seed-eating birds.

This will be achieved by intensive phenological sampling over three seasons to develop an hypothesis of the typical asexual and sexual response to fire and rainfall events. If the hypothesis is correct repeated fire and rainfall events would impose a genetic structure on the population related to the ratio of asexual to sexual reproduction. This can be tested by molecular analysis of populations with known fire and rainfall histories derived from NAFI[1] and BOM[2] data.

Population genetic structure is determined by analysing non-coding DNA extracted from chloroplasts. Referred to as microsatellites these genetic markers mutate relatively rapidly and are therefore suitable for detection of closely related individuals.

To measure vegetation coverage in areas of regrowth after fire aerial photographs are taken and analysed with software capable of extracting the plants from the background image and measuring the area of plant cover. This was originally done using a remote camera lifted with helium balloons but has been superseded by a helicopter.

[1] North Australian Fire Information
[2] Bureau of Meteorology radar data

Graeme Armstrong

James Turner

– Behaviour and Physiological Ecology Research Centre, Zoology, University of New England, Armidale, NSW

Project Title: Thermal biology and physiological ecology of pygmy-possums

Pygmy-possums are small (6-80g) marsupials that are found along much of the east and south coast of Australia. They inhabit various vegetation types, from coastal heath to semi-arid mallee, and are omnivorous, nocturnal and largely arboreal. While the distribution of pygmy-possums is well established, little is known about their biology and functional ecology, especially in the wild.

The aim of my PhD project therefore is to examine the ecology, behaviour, thermal biology and energetics of two species of pygmy-possum: the eastern pygmy-possum (*Cercartetus nanus*) and the western pygmy-possum (*C. concinnus*). I am studying torpor, which is a controlled reduction in metabolic rate and body temperature employed by small mammals. It is an essential survival tool used to decrease energy expenditure and water loss when food is in short supply due to adverse environmental conditions, low ambient temperature or seasonal decline. My project is focused on gaining free-ranging data, and comparing it to information obtained from captive animals. It is important to study wild animals so that we can learn as much as possible about how they successfully function in their natural habitat.

In New South Wales the western pygmy-possum is listed as Endangered on the *Threatened Species Conservation Act* 1995 and the eastern pygmy-possum's status is Vulnerable. Both species are threatened by the clearing of vegetation, predation by introduced carnivores such as the feral cat and changed fire regimes. I hope to add to the limited knowledge that exists about pygmy-possums, and ultimately increase understanding of how we can help them persist in perpetuity.

James Turner

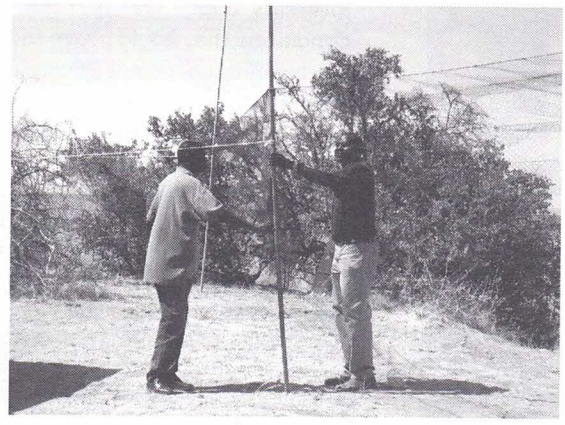
Eastern pygmy-possum

Paul W Webala

- School of Biological Sciences, Murdoch University, Murdoch, Western Australia

Project title: Bat community structure and habitat use across disturbance regimes in jarrah forests, South-western Australia

Bats are the second most diverse group of mammals after rodents comprising around 25% of all mammals on earth, and they represent over 30% of the mammal fauna at both at Jarrah forests and in Australia. Due to their nocturnal behaviour, small size and high mobility, bats are often under-represented in studies because they require specialist survey approaches, and thus we have a poor understanding of their requirements and responses to disturbances. Forest bats are particularly poorly known. The aim of this study is to investigate effects of logging on the bat species assemblages at both the community and individual species levels in terms of their foraging and roosting ecology in the Jarrah forest of south-western Australia. We hope to test the hypothesis that logging reduces the diversity of the bats, especially of more specialised ones. To predict if bats prefer certain ages of Jarrah forest, and to help predict the impacts of logging on bats, we will use Anabat SD1 Bat Detectors and harp traps to compare the relative use and foraging activity (herein referred to as bat activity) by bats in recently logged forests (<6 years ago), regrowth forest (15–30 years ago) and mature forest (>50 years). The relationships between bat species assemblages and various variables that define the structure of vegetation on the one hand, and the relationship between bats and the insect biomass on the other will be examined in order to identify the effects of historical logging in the area on the bat fauna. Roost site selection will be assessed by tracking radio-tagged adult males, non-breeding females and lactating females of Southern forest bat *Vespadelus regulus* and Gould's wattled bat *Chalinolobus gouldii* to roost trees, which will be measured and compared to a random sample of available (non-roost) trees. The foraging areas of radio-tagged bats will be described and where possible their foraging ranges will be calculated. The expected outputs for this study include, among others, to reveal information about the habitat requirements and biology of forest bats (in terms of their roosting and foraging), which can be used to test and refine forestry management practices, especially with regard to timber harvesting areas. The information is necessary to strengthen the scientific basis for ecologically sustainable forest management of native State Forests in Western Australia and other parts of Australia.



Setting misting nets

Jennifer Firn

- Spatial Ecology Lab, School of Integrative Biology, University of Queensland

Project title: Investigation of the competitive nature (passive or aggressive) of Eragrostis curvula (African lovegrass)

Native grasses are at the forefront of a new battle to improve pastures by eradicating an invasive grass species. I am investigating whether two native species, pitted bluegrass and kangaroo grass, can out-compete an exotic grass species, African lovegrass, for soil nutrients and water.

Over fifty years of research has gone into the development and introduction of exotic grass species to improve pastures within Australia. Some introduced exotic grass species like African lovegrass have proven unpalatable, low in nutritional value, very difficult to get rid of and almost impossible to stop from spreading. The spread of African lovegrass is believed to be favoured by selective grazing, sandy soils and climates characterised by pulsed rainfall including long periods with little or no rainfall. Today, African lovegrass is found in every state and territory within Australia and is a declared weed in twenty two council areas of NSW, the ACT and Tasmania, and in Victoria it is a regionally prohibited weed in five out of eleven regions. In Queensland, it has yet to be declared a weed species, but much rural community concern has been expressed over its spread.

If native grasses are found to out-compete African lovegrass under low nutrient and low moisture conditions, they could prove to be valuable options for building up competitive pasture communities that are able to slow down invasion while at the same time help to maintain local biodiversity.

Jennifer Firn

Jennifer Firn measuring grass species composition and abundance in a pasture community dominated by African lovegrass

Danielle Shanahan

- School of Integrative Biology, University of Queensland.

Project title: Understanding fragmentation for improved conservation: landscape genetics of a rainforest specialist, the yellow-throated scrub wren

South East Queensland is Australia's fastest developing region, with the human population set to almost double over the next twenty years (South East Queensland Regional plan 2005-2026). The resulting development of the region poses a serious threat to the avian wildlife. Dispersal is considered one of the key population processes affected by landscape change, ensuring long term persistence of a species through maximising genetic variability within a population. To ensure effective conservation planning in developing landscapes, it is critical managers have access to specific information on how changes in the patterns of habitat influences dispersal patterns of wildlife species.

My PhD project primarily aims to understand how habitat fragmentation, landscape characteristics and structure influence dispersal of a rainforest specialist species, the yellow-throated scrubwren (*Sericornis citreogularis*). Genetic techniques are primarily being used to investigate this. The information gathered within this study will then be incorporated into a framework, which will allow managers to plan landscapes to maximise connectivity between populations. Effects of fragmentation on this relatively common species should provide a benchmark from which fragmentation effects on other species can be gauged.

The Award from the Wildlife Preservation Society contributes towards the genetic analysis that is being carried out within this study. Many thanks for your support and encouragement.

Danielle Shanahan

Brendan Taylor

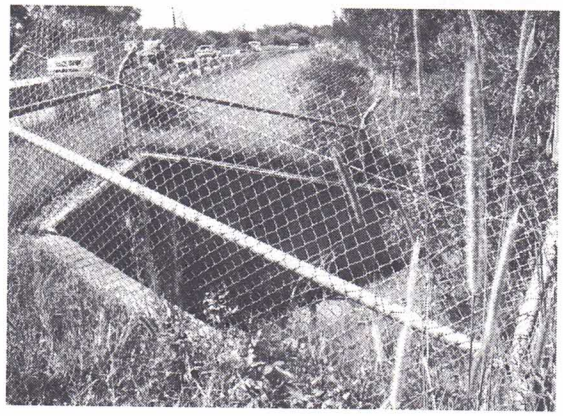
– School of Environment, Griffith University

Project title: Understanding and mitigating the impact of roads on wildlife

Roads and traffic have enormous impact on wildlife. Roads cut across landscape features and divide wildlife habitats. Consequently, they are regarded as one of the main obstacles to the movement of land vertebrates. Barriers tend to disrupt dispersal and create metapopulations that may be more prone to extinctions. Roads also result in vehicle collisions with wildlife (road-kill) and can represent a significant source of mortality for declining populations of some wildlife species. Wildlife road mortality in Australia is estimated to exceed ten million vertebrates per year.

Foremost in efforts to mitigate both wildlife road mortality and the barrier effects of roads and traffic, has been the installation of crossing structures. These include under-road structures, such as culverts and tunnels, and above–road structures, such as land bridges, rope bridges and gliding poles. Crossing structures increase the permeability of roads and may improve habitat connectivity. A number of Australian road authorities have installed mitigation infrastructure as part of new road projects. These include underpasses below the Pacific Highway at Brunswick Heads in north-east NSW (Fig 1) and rope bridges, gliding poles and a land bridge on Compton Road at Kuraby in Brisbane (Fig 2).

Despite the installation of these very costly pieces of infrastructure, we still know very little in Australia on the effectiveness of crossing structures for increasing wildlife population viability and the impact of road-kill on wildlife populations. My research endeavours to address some of these knowledge gaps and derive sound management applications from the results. In particular, I will be investigating the usefulness of some of these structures for improving the population viability of bandicoots and squirrel gliders.



(Fig 1) Under-road wildlife culvert, Pacific Highway, Brunswick Heads, NSW

(Fig 2) Land bridge with poles designed for gliders to use at Compton Road, Brisbane

Alejandro Ortega-Argueta

- School of Natural and Rural Systems Management, University of Queensland

Project title: Evaluating the conservation strategies for threatened species in Australia

The management of threatened species is mainly a responsibility of government agencies. Management in this case involves a series of interventions to protect, conserve, manipulate or restore important populations and habitats of species that have been diminished by natural and human causes. Currently, over 1600 species are considered threatened by extinction according to the Federal Government. In order to deal with this problem, government agencies have designed and planned the implementation of several strategies and programs funded by millions of dollars of investment each year. The complexity of these management plans is significant because several national, state and territory agencies are involved in the design and implementation of these projects, along with cooperation from many

academic institutions, conservation organizations and groups of volunteers. Some of the issues that result from this complexity are the inconsistency of schemes across government jurisdictions, compartmentalization in management, weak scientific involvement in planning, and poor community involvement. These challenges are negatively influencing the effectiveness of the planned strategies. Unfortunately, research into the complexity of the management system for threatened species is limited. Only through analysis and evaluation of the different elements that collectively define the threatened species management system, is it possible to understand the adequacy and effectiveness of these strategies, and to assess the success of the efforts undertaken by diverse agencies and organizations towards recovering imperiled biodiversity.

This study addresses the management of threatened species in Australia, by evaluating some of the strategies that exist across federal and state government jurisdictions, and the interconnection of these with non-governmental organizations. The main objectives are to evaluate the adequacy of recovery plans as primary instruments that govern restoration of threatened species and identify the factors affecting their implementation.

Funding from the Wildlife Preservation Society of Australia will support research visits to collect relevant information from related government agencies in Brisbane and Sydney and also to fund the attendance of a conference on wildlife management later in the year. I hope that findings from this study will contribute to a better understanding of the issues related to management and recommendations may be implemented to improve the recovery strategies of threatened species.

Alejandro Ortega-Argueta

Jamie Voyles

– Amphibian Disease Ecology Group, James Cook University, Townsville

Project title: Amphibian declines and extinctions occurring in Australia that are attributed to the disease chytridiomycosis

Why are frogs dying?

Amphibians are currently undergoing the fastest rate of extinction of any vertebrate group. In some cases there is an obvious primary cause such as habitat destruction. However, explaining why frogs are experiencing catastrophic declines in protected areas has been more challenging. Mounting evidence implicates the disease chytridiomycosis, caused by the fungus *Batrachochytrium dendrobatidis* (*Bd*), in Australian amphibian declines and extinctions. Mass-mortality events have coincided with the appearance of Bd in wild amphibian communities and laboratory experiments have proven its virulence in many species of frogs. Yet there is no explanation for why infected frogs die.

The answer to this mystery has largely evaded scientists because pathological changes are minimal and limited to small areas of the body. *Bd* infects the outer layers of skin and no other organs appear affected on post-mortem exams. The skin, however, is an important physiological organ for amphibians; it is the site of regulated transport of water, electrolytes and respiratory gases. It has been suggested that by attacking frog skin, *Bd* disrupts normal functioning and causes osmotic imbalance. Preliminary evidence supports this hypothesis because blood samples from diseased frogs have extremely low electrolyte levels. Such conditions are potentially dangerous for the functioning of heart tissues and other organs but it is undetermined if this is the true cause of death.

One research project supported by the WPSA will investigate this hypothesis in Australian amphibians with chytridiomycosis. This research will combine information collected from blood samples and implanted biotransmitters that will monitor cardiac function in diseased frogs. In doing so this study will provide information on the biology of this devastating disease. Resolving the cause of death may explain species differences in susceptibility to the disease, a key question for amphibian conservation. This information will be critical for researchers, wildlife managers and veterinary clinicians in treating captive frogs and facilitating the recovery of Australian frog populations that are currently affected by the disease.

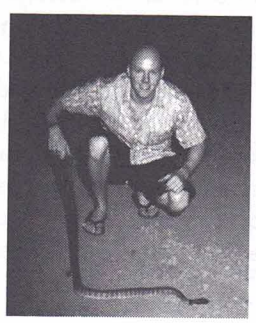
Common green tree frog (Litoria caerulea)

Mattias Hagman

– School of Biological Sciences, University of Sydney

Project Title: Does the co-occurrence of multiple colour variants promote the ecological success of Australian frog populations?

Understanding the ways in which morphology promotes species distributions is of interest not simply in terms of biogeographic theory, but in providing insight that may help us predict how changing environments will affect faunal populations. Frogs provide an exceptional opportunity in this respect, because many species exhibit striking colour or dorsal pattern polymorphisms (ie, the co-occurrence within a population of two or more colour variants). In collaboration with Professor Anders Forsman at The University of Kalmar, I use Australian frogs to test the hypothesis that colour polymorphism entails selective advantages that promote the ecological success of polymorphic species. The project is based on synthesizing and analysing existing information. We have gathered extensive data on conservation status and biological and ecological attributes for the majority of the frogs occurring in Australia (211 species). We will use this data plus existing phylogenetic hypotheses for Australian frogs to explore to what extent colour polymorphism might promote colonization success, population persistence and range expansions.



Mattias Hagman

Teaching wildlife awareness and Fauna First Aid to the NSW community

By Linda Dennis, Regional Councillor

My passion for Australian native animals started ten years ago with my very first raptor experience at Eagle Heritage near Margaret River in Western Australia. After an up-close and personal experience with a black kite perching on my gloved hand, I vowed that I would soon work closely with these magnificent creatures.

Some years later I held true to the vow and I became licensed to raise and rehabilitate native animals that had been injured, were sick or were orphaned. With the help of my husband Todd, I have now been experiencing the joy of wildlife care for around seven years.

I have cared for many Australian native animals, including several species of macropod and possum, various reptiles and many species of bird including my beloved birds of prey, which I specialised in for nearly three years. I have had the immense pleasure of successfully rehabilitating and releasing many birds of prey including the awesome wedge-tailed eagle, nankeen kestrel, collared sparrowhawk, peregrine falcon, black-shouldered kite and more.

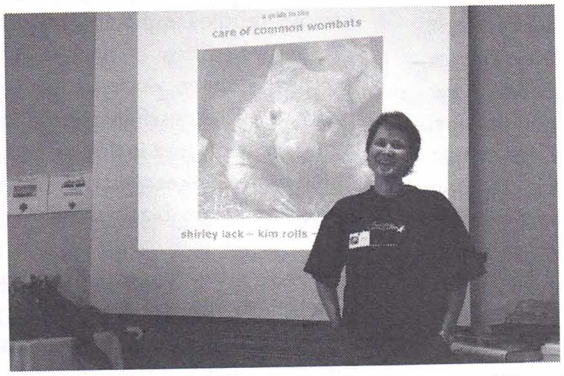
In the last few years I have had the enormous delight of raising bare-nosed wombats (also known as the common wombat, hill wombat or forest wombat). These short and stocky bundles of energy and bravado have become my ultimate passion in life! Our first wombat Tici - with very little effort - took over a large part of my heart and I have been hooked on wombats ever since.

In 2004 I recognised that there was a gaping hole in my region in wildlife carer and public education relating to Australian wildlife and so I established **Fauna First Aid**. The program's début was to teach veterinary nurse students and TVET students (HSC) at Orange TAFE how to care properly for native animals while in veterinary care. The lectures have also been presented at Bathurst TAFE and I have been asked to teach at Dubbo, Mudgee and surrounding areas.

In 2005 I extended the program to include school-age students and pre-schoolers. I created the wildlife resource ***What to do with a Wiggling Wombat*** which highlights the dangers involved in handling wild animals but also shows what anyone could do to rescue a native animal and to provide short term care.

Presenting What to do with a Wiggling Wombat

In June 2005 Fauna First Aid became a project sponsored by the ***Australian Geographic Society*** – a very humbling and proud moment. With such high profile backing I decided to take the plunge and moved my wildlife seminars to the next level and so ***A Guide to the Care of Bare-Nosed Wombats*** was born. The in-depth one day course is presented with co-host Shirley Lack who also specialises in wombat care and has done so for over twenty years. The course is a road show, so to speak, and we will travel anywhere to present the course to any willing audience!



Presenting A Guide to the Care of Bare-Nosed Wombats

In 2006 my work was acknowledged by TAFE NSW (Western Institute) and I was hired as a part-time teacher to present courses on wildlife. After completing the Victorian University of Technology's Wildlife Rehabilitation and Husbandry course, my lecturer, Greg Gordon, asked me to assist in teaching the on-line students, which I do every Thursday night on a volunteer basis. I also mentor students who are now completing the course.

In 2007 I hosted my first public TAFE course, Wildlife Awareness, the first of its kind in NSW. The one day short course includes a wide range of information including Taxonomy and Identification, Spot the Difference, Rescue, Short Term Care and Living with Wildlife. Equipped with knowledge, vet nurses and members of the public gain the confidence to handle wild native animals and provide quality short term care for any species. Educating the public is one of the most important aspects of wildlife care as the first stages of car are often the most important, but unfortunatel quite often they are where most damage is don Teaching those that have first contact with rescue animals is immensely satisfying and will result i even more wildlife being successfully rehabilitate and returned to the wild. You can't ask for a bette result than that.

For more information on the Fauna First A lecture program please feel free to contact me linda@fourthcrossingwildlife.com or visit Four Crossing Wildlife at www.fourthcrossingwildlif com

Echidna Care

An echidna, whom I named Snuffles, came in care after a rather nasty mishap on a main road A friend of mine was travelling home when he sa a ball in the middle of the road. As cars drove pa - at high speeds and without stopping - he saw t ball roll from one side of the road to another a then back again. The ball turned out to be Snuffl who had curled herself into a tight ball to try a protect herself. Her spines were no competiti for the cars that sped past, but the gods mu have been on her side - she was lucky to ha survived. She was also lucky that a kind heart bloke happened to drive by at that moment a rescue her.

Snuffles didn't come away unharmed however. S had sustained injuries to her beak. When I s her my heart sank - beak injuries in an echidna rarely repairable as damage usually compromi the strength of the beak, which is used to br into termite mounds. Sadly, this kind of inj usually means euthanasia.

I wasn't entirely sure just how much damage done, so I decided to wait and see what the thought and the next morning I took her off to local vet. Judith x-rayed Snuffles' beak and fou that the bone underneath was only chipped she advised me that the damage would heal gi some TLC. There was a pretty nasty looking on the tip of the beak (hence her name; the inj made her snuffle as she breathed). The wo was slightly infected and required a short cou of antibiotics. Todd, my husband, was away at time, so my neighbours Rob and Jen helped out as did my trusty wildlife aid, Murray, (god his heart and soul) who travelled down to Fou Crossing (my property) to help me admini the antibiotics. This was no easy task, howe as whenever Snuffles was handled she would herself up to protect her soft underbelly - the place I needed to put the needle!

Linda and Snuffles

The first few days of Snuffles' care were inside a heated crate. Echidnas can't tolerate high temperatures so a thermometer was placed inside the crate to ensure the temperature didn't rise excessively. To keep Snuffles' wounds clean the crate was lined with soft towels and not her preferred dirt and leaf litter, as this may have caused further infection in the wound.

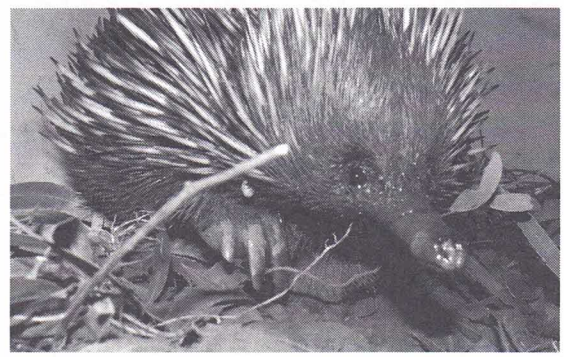
Snuffles slept soundly for the first few days after her ordeal. But, as she grew stronger, so did her desire to get out of that crate! To keep the lid firmly in place I used packaging tape to secure it. This was no obstacle for an escaping echidna! With all her might she pushed through the gap that was left to allow air into the crate and was on her way to freedom. Unfortunately for Snuffles, I was close by and her escape was thwarted. The escapee echidna was then moved into a bigger crate - one where she couldn't reach the top. As her beak wound had healed nicely, Snuffles was given the luxury of dirt, leaf litter and bush furniture in her new home. A heat pad was placed under the dirt in one corner on which she loved to sleep at night. During the day she would shuffle around and the bush-like setting kept her occupied as she searched for food and dug to her heart's content.

Collecting Snuffles' natural food was a daily task. Luckily we have a couple of termite mounds on Fourth Crossing and we cut the top off one to access the tiny termites inside. After collecting the termites and dirt we would put the lid back on to keep it closed to the weather. After Snuffles had gone it was amazing to see that the termites had completely sealed the lid to the rest of the mound as if a cut had never been there.

Snuffles loved her termite slurry that had other yummy goodies in it like lean mince meat, egg and calcium. Her long tongue would slurp up the delicious meal quite quickly. She was getting it pretty good at the Fourth Crossing diner and during her time in care she put on one kilogram.

Once Snuffles' beak had healed and the bone inside was strong again, she was ready to be released back into the wild. We chose a great site down the back in the bushy area of our property. Snuffles quickly shuffled to a hollow log on the ground and squeezed in with only her spiky rump exposed. She didn't move from there for such a long time and we grew bored of watching her backside. Feeling rather chuffed we went back home to return later to check on her progress.

She was gone.... back to bush. Sadly we see so many echidnas laying by roadsides whose experiences have not led to the same happy ending as occurred in Snuffles' case.



Snuffles

The first few days of Snuffles' care was inside a heated crate

Feral fox

The feral fox is a major pest in Australia, costing $227.5 million annually in stock and biodiversity losses as well as money spent trying to control them.

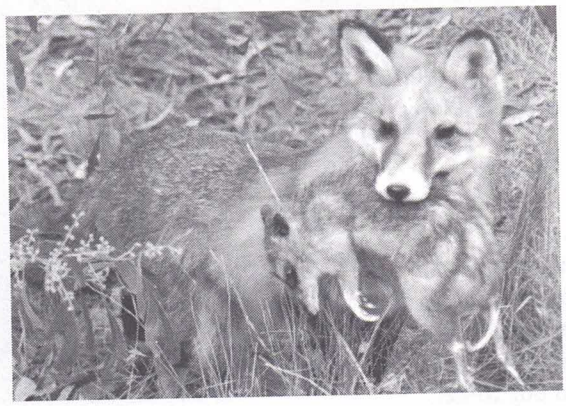
A long-standing goal of land managers is to find the most efficient and cost-effective way to control foxes. An important question is – at what scale should control take place so that controlled areas are not immediately re-invaded by foxes from surrounding regions?

A key to this is to determine how far foxes move. The problem is that measuring movement patterns in foxes is very difficult.

The Fox DNA Project is an Australia-wide study of the genetics of feral foxes. The project's goal is to improve our understanding of fox movement patterns, so that control operations can take them into account and be made more effective.

New DNA-based methods can provide excellent information on fox movements, while requiring much less effort than other techniques. They work by measuring how the relatedness of foxes decreases with distance.

The project is attempting to generate a genetic map of foxes throughout Australia and to identify precisely the relevant scale at which fox control should take place, region-by-region, Australia-wide. The use of such 'biologically meaningful' management units is similar in concept to catchment-based management for water resources, and similar "genetic mapping" projects conducted on feral pigs and feral rats have been highly effective.



Fox with eastern barred bandicoot

It's an ambitious plan, and to be successful the Fox DNA Project is asking members of the public, sporting shooters, landcare groups, local councils, and government agencies to provide samples of foxes they shoot, trap, or find as roadkill.

To make it easy, they have developed some easy-to-use kits that fit into a small padded envelope that contains all the information and equipment required to take samples. They easily fit into a glove box or toolkit. Once a sample is taken, it is put into a reply paid envelope and sent for analysis at the University of Western Australia.

There is a website (www.foxDNA.animals.uv edu.au) where the results will be published as th become available – enabling participants to s how their samples have contributed to the ove project and to find out about the manageme implications of the results.

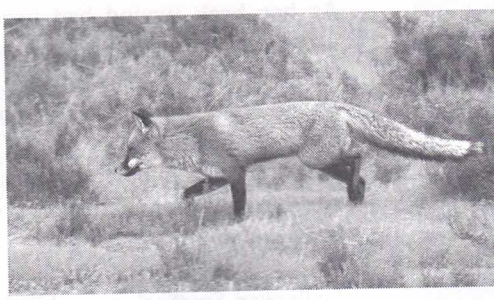
The Fox DNA Project is funded by the Invas Animals Co-operative Research Centre and National Feral Animal Control Program (Bur of Rural Sciences).

Foxes in Tasmania

From growing amounts of hard evidence, i regrettably apparent that the red fox (*Vu vulpes*) is present in low numbers in Tasma This efficient, adaptable predator is recogni nationally as the single most devastating introdu pest and threat to Australia's native land anin and it would be an unmitigated disaster if it allowed to establish in Tasmania.

The discovery of the fox carcass is a warning call every effort must be made to eradicate foxes f the State. Our Society fully endorses the eff of the Fox Free Task Force in eradicating fo from Tasmania, and welcomes the announcem that the Australian Government will provid extra $1.04 million over the next two year assist in the eradication of foxes from Tasman

Foxes have a major impact on native biodive and on agricultural production. At least ten n species listed as threatened in Tasmania wi pushed to extinction if foxes continue to sp and increase in numbers throughout the S These include iconic species such as the eas barred bandicoot.



uropean red fox (Vulpes vulpes). The Europe red fox was deliberately introduced to Austra for recreational hunting in 1855 and fox populations became established in the wild i early 1870s. Within 100 years the fox had sp across most of Australia, though it currently not occur in the tropical north and some off-shore islands remain fox free. In 2001, evide began to emerge suggesting that foxes had b introduced into Tasmania, which was previo fox free.

The Tasmanian agricultural industry will also suffer heavy economic impacts, because foxes prey on poultry, sheep and lambs, and can carry diseases that affect both native wildlife and domestic stock.

Islands like Tasmania provide the last strongholds for unique species of native wildlife. Introduced predators such as foxes pose a major threat to the biosecurity of these important island assemblages. A commitment to the successful eradication of foxes from Tasmania will also provide valuable experience in keeping out or eradicating invasive predators from islands such as Kangaroo Island and King Island.

Eradication of foxes from Tasmania is still achievable, according to a recent report on foxes in Tasmania commissioned by the Invasive Animals CRC in Canberra. This is because foxes have not yet reached the densities they have on mainland Australia. However, the necessary resources must be made available immediately to implement a successful eradication programme.

Near extinct frog in Kosciuszko National Park

The NSW Department of Environment and Conservation (DEC) and the Amphibian Research Centre (ARC) are celebrating the first year of survival in the wild for a group of about forty captive bred spotted tree frogs whose original population in Kosciuszko National Park had been almost completely wiped out by disease almost ten years ago.

The last male spotted tree frog in NSW was rescued from a Kosciuszko National Park creek by a team of DEC scientists in 1998, after a spectacular population crash that saw the colony, which once numbered in the thousands, dwindle to a single animal.

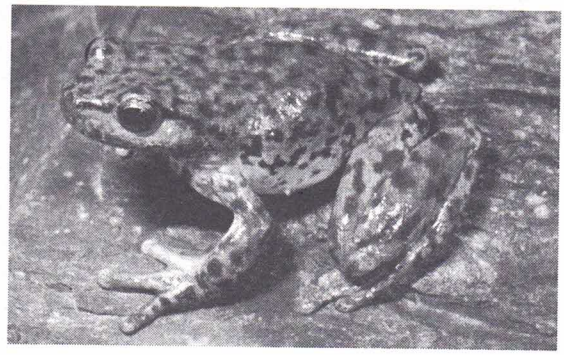
Research since then has convinced DEC scientists that the amphibian chytrid fungus, believed to be responsible for the demise of many frog species worldwide, was also the culprit in this case.

The lone NSW male nicknamed "Dirk Diggler" was mated with a number of females from a nearby Victorian colony and their offspring, which were released back to Kosciuszko National Park, have survived in numbers far exceeding expectations.

The success of this reintroduction has encouraged DEC and ARC to try another release.

Monitoring has shown that as many as twenty percent of the one year olds released last summer survived. The release of captive bred frogs into the wild has been tried many, many times in other parts of the world with extremely limited success. DEC and ARC are optimistic about the potential for re-establishing a healthy breeding population.

There is much international interest in this project because the captive breeding and reintroduction of amphibians is currently being recommended as a technique to combat the increasing rate of amphibian extinctions throughout the world.

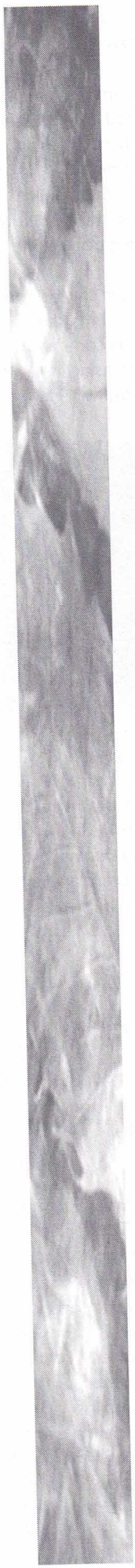


Spotted tree frog (itoria spenceri). The spotted tree frog is a distinctive frog, growing up to six centimetres in length. Skin colour is grey to olive green above, sometimes with irregular dark blotches. The belly is whitish, and both surfaces are warty or granular. The groin and back of the legs are orange. The tadpole is generally brown to black; with an elongated body and moderately thick tail that has a rounded tip. The call is a harsh "warrrk...cruk...cruk...cruk"

Kingbilli Wildlife Rescue

by Georgina Beach

In Victoria alone, 25,000 native animals become sick, injured or orphaned every year. These unique little Australians deserve a second chance ... that's why we're here. Kingbilli Wildlife Rescue is on call twenty four hours a day, seven days a week, covering 3,889 square kilometres of the central highlands of Victoria. In addition, we support carers across the State by providing advice, extensive facilities and a safe, monitored release site for those more complicated cases requiring extra-special care and experience. At Kingbilli, all manner of furred and feathered critters receive the care they need to get them back on track. In return, we have the great pleasure of sharing our lives with a range of unique characters offering love, entertainment and



inspiration. Is are released back into the wild to enjoy the lives they evolved to lead... and it's there, in the depths of the Aussie bush, where this story first began...

Folk often ask me how I became interested in wildlife. The answer is simple: I was born.

Growing up on Kingbilli, in the depths of the Great Dividing Range, my childhood comprised more time with various animals than humans. The usual farm critters and pets abounded, and even a couple of little native furries joined us for a time when I was small. Since first I could walk, I spent hours roaming the remnant patches of bushland on and surrounding Kingbilli, as well as the magnificent forests of the Cathedral Range State Park, just across the road. Naturally, this tendency to 'go walkabout', invariably without warning, caused my poor parents some concern during those first few years ... two decades on, family and friends have grown accustomed to my disappearing acts. So, for a self-confessed, raving greenie reaching adulthood, there were three obvious options: become a biologist, an activist or a wildlife carer. Filled with youthful enthusiasm, I chose all three. I mean ... who needs sleep, right? After all ... I was going to save the planet! Okay, so I'm still working on that part.

Some years later, I'm older and remain predominantly sleepless, but have discovered my chosen paths run parallel. Environmental activism is all very well, but limited in its effectiveness without a substantial element of practicality. To be practical, one requires relevant biological and ecological knowledge, which can be acquired only through studying the critters in question. Running a wildlife shelter allows me the opportunity to learn facets of wildlife biology and behaviour almost impossible to observe in the wild. Furthermore, coming full circle, there's nothing like a cute, furry baby with pink feet to instill in one's fellow man the "urge to conserve".

Two Lives

by Georgina Beach

Two lives were lost this evening, a mother and
her child
No cameras rolled upon the scene and no rep
was filed
Two hearts grew still in darkness: and slowly
they die
No grieving crowd was standing near to hear
baby cry.

Victims of their innocence, theirs was a harm
life
No knowledge of malevolence nor worldly w
and strife
Naïve and pure of purpose, with no concept
wrong
The mother filled with caring and her baby
growing strong.

Living representatives of lives we'll never kno
Descendants of the souls who helped this wi
brown land to grow
Two little true Australians, two symbols of th
past,
Two minds who'll never understand why this
was their last.

Yet who shall mourn their passing? Who'll as
justice, done?
Why were their deaths unpunished and thei
praises left unsung?
When human life is taken there is no lack o
tears,
But those outside our species aren't held so
close or dear.

Why should they not make the news at sev
or five?
And where is their apology, their inquest, th
'goodbye'?
Murder of a criminal - a killer or a thief:
That still receives attention and is seen as
for grief.

If this careless hit and run had harmed a hu
pair
It would have caused an outrage ... yes; in th
case you would care
But mothers with furry ears and babies wit
feet
Are easily forgotten, lying bleeding in the st

The gift of life is given to creatures great a
small
They are not ranked in worthiness: but equ
one and all
Those outside our species possess no less
than we
Sometimes I think the only human graspin
is me.

If I had been there in time to ease that mo
pain

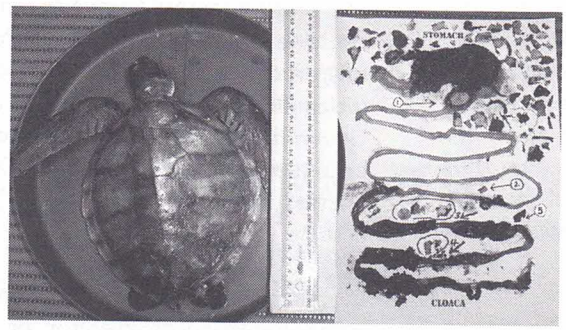
I would have told her not to think her child had died in vain
For I will spend my gift of life teaching humans why
Upon this day I knelt beside a dead Wombat and cried.

Balloons

by Lance Ferris, Australian Seabird Rescue

Assisted by the Wildlife Preservation Society of Australia, we are hoping to address the issue of mass helium balloon releases nationally. We were successful in lobbying the NSW Government in 2000 to have the mass release of balloons banned in this State.

At Australian Seabird Rescue we rescue sick sea turtles on the North Coast of NSW. Tragically, around fifty percent of sea turtles that we rescue die. Of those that die, most have swallowed pieces of plastic. 107 pieces of plastic were retrieved from one turtle alone. Those that recover from other conditions are released. However, last year, of seven that were released, three sea turtles were again rescued and returned to our facility for treatment, and subsequently died. The post mortem results indicated that probably on the first day of their release they swallowed pieces of plastic that blocked their stomachs. Our concern now is where to release these turtles as the proliferation of plastic in the ocean is so great there is no safe place. In a study conducted by researchers in the United States, some parts of the ocean have so much plastic that the pieces outnumber plankton five to one.



A very young nineteen centimetre sea turtle swallowed 76 pieces of plastic

Lobbying Queensland Government

It would appear that there is still confusion in Queensland Government departments over whether balloons that are released into the air are litter and, as such, this point has been described as a 'grey area'. The fact is the NSW Government agreed in 2000, when litter is released skywards or thrown on the ground, *it is still litter.*

The other so-called 'grey area' is alleged to be the fact that if balloons are found, the identity of the person/s releasing such balloons cannot be established. This too is a far cry from a rational argument. As stated, litter is litter, whether it goes up or down, and the organisations or individuals mass-releasing balloons can readily be identified at the point of release. This litter comes down somewhere and, in the case of balloons, presents a threat to marine wildlife. In brief, mass releases of helium balloons present a serious hazard to marine life, especially endangered sea turtles and seabirds, which mistake these items for food.

Queensland hosts the most prolific populations of nesting sea turtles in Australia. Each and every species of the six species of turtles in Australian waters are either endangered, threatened, or vulnerable.

Australian Seabird Rescue and the Wildlife Preservation Society of Australia have joined in a campaign to lobby the Queensland Government. We emailed everyone on our contact list asking them to address an email to Queensland MPs. In a very short space of time, I received emails/letters from concerned members of the Australian public, which were then forwarded to the Queensland Government asking them to consider banning the mass releases of helium balloons in Queensland. I anticipate receiving hundreds more similar letters and emails, and these too will be forwarded to the Queensland Government.

On 15 August 2007, several balloons were found tied together on South Ballina beach, NSW. One of the balloons originated from Mingara Recreation Club on the Central Coast of NSW, 660 kilometres south of Ballina. After informing Mingara of the find, the Club explained helium balloons are used internally for promotional activities. However, balloons are given to members for their children, if requested. Previously unaware of the impacts of helium balloons, the Club is now implementing a safe use policy for balloons and educating their staff on the impact of helium balloons on the environment. Whilst these few balloons were accidentally released, it demonstrated the distance some of these balloons can travel. The balloons had not only travelled 660 kilometres, but they had not 'fractured into small harmless pieces' (as suggested by the balloon companies). Ironically,

even if balloons did fracture into small pieces, according to our studies and autopsies of marine turtles, each piece of balloon would present a significant threat to small, hatchling turtles.

According to Dr Colin Limpus of the Environmental Protection Agency of Queensland, the statistics indicate that only one in one thousand sea turtles survive to maturity. The balloon (pictures below) travelled 400 kilometres from The University of Southern Queensland, Toowoomba, to Angourie, NSW. Whilst it did have a string attached, it was completely intact, showing that these balloons can travel long distances and not burst into fragments.

This balloon travelled 200 kilometres from Brisbane to a beach at Lennox Head on the North Coast of NSW. This balloon did not fragment into small pieces, and in fact the 'USQ' balloon was fully intact and still contained some air

Latex, which is used in the manufacture of balloons, is biodegradable. However, there are many marine creatures constantly searching for food sources. A floating balloon, or a piece thereof, represents a food source, whether it is biodegradable, deflated, blue, green, orange, or in small, so-called 'harmless' pieces... it continues to be a significant threat to our precious wildlife, irrespective of the size, colour, texture or shape of the pollutant.
In worldwide studies, (US Fisheries and Wildlife, UK Marine Conservation Society) it is estimated that a latex balloon may take as long as twelve months to biodegrade. Meanwhile, as they degrade, thousands more are released into the environment at balloon releases... to 'top up' the constant threat to our wildlife.

In early 2007, Kathy Townsend PhD, of Queensland University, found balloons in the stomach of a dead sea turtle. Dumping of balloons into the environment, whether it is on the ground or in the air, is not only littering, but presents a hazard to marine creatures who mistake these items for food. The 'jet-stream' air-flow across the continent is from west to east. Helium balloons are thus likely to reach the height of the jet-stream, and eventually find their way into the ocean. Whether it goes up, or down, it is litter, and can contrib to the deaths of marine creatures.

At the closing ceremony of the Paralymp (2000), thousands of balloons were u in the display. Not one was filled w helium, and not one ended up in the oce There are many ways to celebrate w balloons, without recklessly endanger our wildlife. Ask the children this: "Wo you like a balloon to take home... or wo you rather we just throw them away i the ocean?"

A sample of forty balloons collected in one h on one kilometre of beach. Angourie, New S Wales. 26 August 2007

World's largest green turtle rookery given highest protectio status

The world's largest known green turtle ro at Raine Island off Cape York Peninsula, safeguarded following an historic Nationa (Scientific) agreement between the Quee Government and traditional owners. Raine becomes just the eighth area in Queensland granted National Park (Scientific) status a first for six years.

In practical terms that means only those with permission to monitor or study th turtle rookery will now have access fragile Island. This status is only granted t to protect species or habitats of exce scientific value. Other areas declared as N Park (Scientific) include the Epping Forest N Park, which is the only known location northern hairy nose wombat and the National Park, which is home to the brid tailed wallaby.

Not only does Raine Island have the largest known green turtle rookery in the world with tens of thousands of turtles coming to lay their eggs each year, it is home to the endangered herald petrel bird and the vulnerable red-tailed tropic bird and is arguably the most significant seabird rookery on the Great Barrier Reef.

The Queensland Government has signed an historic new Indigenous Land Use Agreement (ILUA) with Aboriginal and Torres Strait Islander traditional owners - the Wuthathi people from Shelbourne Bay who identify as native title holders and the traditional owners of the area, and the Erubam Le of Darnley Island, the Ugarem Le of Stephen Island and Meriam Le of Murray Island, who identify as the Torres Strait native title holders of the area.

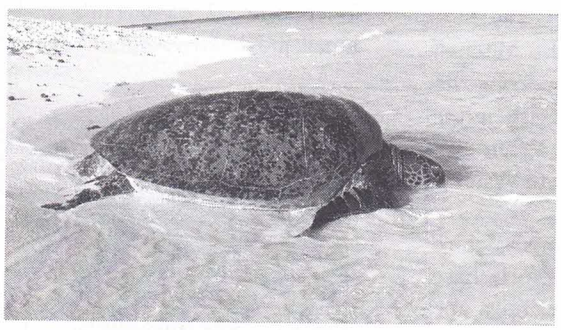
The agreement recognises the Traditional Owners connection to the place and respects the need to jointly manage and conserve Raine Island and its surrounds.

The Traditional Owners will work with the Queensland Government to manage and conserve the Island's values and they have agreed not to take any flora or fauna from the national park, while allowing for a limited take of fish and invertebrates from the surrounding three nautical mile zone.

The EPA will be able to continue its successful monitoring and conservation of the tens of thousands of green turtles that come ashore on the Island each year to nest.

The Island's previous status as a Nature Refuge did not afford the highest available protection under Queensland law, or restrict the level of visitation from passing boats and ships or film crews.

Because all forms of human activity on Raine Island disturb the breeding colonies of seabirds and turtles, it was vital that access be limited to scientific and essential management purposes and only then on a permit basis.



Chelonia mydas, commonly known as the green sea turtle or green turtle, is a large sea turtle belonging to the family Cheloniidae. It is the only species in the genus Chelonia

Cape Solander whale migration study

by Wayne Reynolds, Cape Solander Whale Migration Study - Volunteer

Maryrose Gulesserian from Macquarie University is using a theodolite to measure and track the path and distances of both whales and boats and record whale interaction and behaviours. All paths and tracking is automatically recorded on a laptop computer using a tracking program called Cyclops

The Cape Solander Whale Migration study has completed its tenth season observing and recording the Northern migration of the humpback whale (*Megaptera novaeangliae*).

From 24 May through to 31 July, 1,295 individuals (some with young calves) were recorded along with twenty seven minke whales (*Balaenoptera bonaerensis*) (some with newborns calves), 350 common and bottlenose dolphins (*Delphinus delphis and Tursiops truncatus*) and four Australian\New Zealand fur seals (*Arctocephalus pusillus\forsteri*).

The number of sightings was down on 2006 figures (1,600), due to the atrocious weather conditions throughout June and July that affected the visual conditions for the volunteers and the hours spent at the observation deck. Whales are not affected by adverse conditions and still continue the migration; therefore it is not a case of a decline in the whale population.

Observations of distance, time and all behaviours were recorded including volunteer hours. Identifying photographs of the tail flukes are taken when the opportunity arises. Volunteers also give educational talks to whale watching visitors and tourists during lulls in the migration, some were also kept busy assisting in the rescue of a stranded common dolphin (*Delphinus delphis*) at Boat Harbour, two hauled out sub Antarctic fur seals (*Arctocephalus tropicalis*) at Cronulla and Kurnell and a New Zealand fur seal (*Arctocephalus forsteri*) at Kurnell.

Cape Solander volunteers would like to thank the Wildlife Preservation Society of Australia for the use of the caravan, which again proved a saviour with the bad weather and as a little "get away" for a break when needed.

Hopefully the 2008 season will prove to be a little more volunteer friendly.

This is the young Sub Antarctic fur seal prior to capture, we observed this same seal at Cronulla. It appeared to be weak and lethargic and was quite approachable. It stayed on the same rock and in the same position for two days over a weekend and plans were made to keep observing until it showed obvious signs of deterioration or was rested enough to leave of its own accord (which was the latter). It was captured at Kurnell the following week and is now in veterinary care. These seals are usually only found in Antarctic waters but show up occasionally

Book Review

by Vincent and Carol Serventy

The Art of Collecting, National Heritage, The Letters of Henry Luke White, 1910-1913

Dr Judy White recently launched at the Mitchell Library her latest book – a selection from the 54,000 letters of the great ornithologist, letter writer, and pastoralist Henry Luke White, of Belltrees in the Hunter Valley, New South Wales.

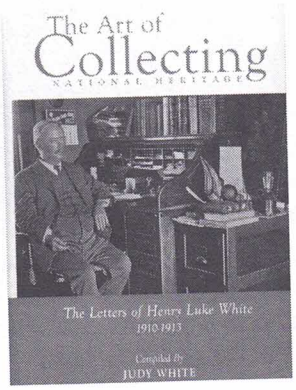
The thoroughly documented collections of bird skins and eggs he gave to Museum Victoria have long been of great scientific value. A philatelist and collector of books (with a very fine natural history collection), he also donated his extremely valuable book and stamp collections to public institutions - all are treasures for Australia.

The book itself is a treasure. Beautifully d by Sophie Bettington, it is gorgeously illu with full pages in colour and black and of paintings and photographs of birds o nests with eggs, birds in their cabinets, of grasses, and tall trees showing the difficultie collecting. Photographs of stamps, the titl of rare books, historic portraits, artifa hand drawn maps transport us back in t space to the late nineteenth and early tw centuries. A favourite has to be the doul colour photograph of H L White's boyhoo collection of eggs and nests with an ol COO-EE matchbox to show their size.

Alec Chisholm wrote of H L White tha more than anyone else to endow the natural history in Australia.' Dr White's of letters shows both his passion for colle his dedication to science. The detailed inf on the data labels of Museum Victoria's col now of great help to environmentalists; no return birds to their native habitats, but to the rehabilitation of natural grasslands, s undergrowth. These days, with the use of D are even providing information that can fundamental evolutionary questions, mea variation in pollution in the atmosphere 1910 and 2007 and assist in the con management of declining species.

The letters themselves? They are writt friends, acquaintances, collectors and ma packed with ornithological information and also very amusing, frank and even g had a neat way of insulting people wh please him. White also has a wry sense o – to The Hon. Charles Rothschild, September 1910 – 'I shall be very glad t I can to assist in your study of fleas .... son aged nine who is a very good sho no doubt be very glad of the excuse marsupials in search of fleas for you. I an faithfully, H L White.'

The book is published in a limited edit copies and is available from THE SEV Telephone: 02 6546 1119 or fax: 02 6 email: judybelltrees@hunterlink.net.au



Wildlife Preservation Society of Australia
Serventy Conservation Medal
Nomination Form

The Serventy Conservation Medal is named in honour of our late President of Honour, Dr Vincent Serventy AM, his broth the late Dr Dominic Serventy, an international ornithologist, and his older sister Lucy Serventy, who was our oldest Li Member.

This Award is intended to honour conservation work that has not been done as part of a professional career for whi the person will have been well paid and honoured. It is given to those who labour in the conservation field for a love nature and a determination that it should be conserved. Often these have been non-scientists who have earned the conservation skills through sheer hard work. Our Society will present a plaque and cash award of $1,000 to the winnir person that is helping to save our precious wildlife.

Persons may nominate themselves or they may choose to nominate a third party who they believe should recei recognition. All nominations must be supported by a referee (see below).

Name of nominee: _____

Address: _____

_____

Telephone: _____ Fax: _____ E-mail: _____

Summary of achievements: (*Please summarise in less than two hundred words why this nomination should be considere for the Serventy Conservation Award*).

_____

_____

_____

_____

Press clippings, testimonials and photographs can be attached to support nominations - do not send books or videos.

The Wildlife Preservation Society will accept nominations for the Serventy Conservation Award via e-mail to wildlifepreservation@optusnet.com.au or mail to PO Box 42 Brighton Le Sands NSW 2216 or fax 02 9599 0000.

Deadline for submission: 31 December.

Name of nominator: _____

Address: _____

_____

Telephone: _____ Fax: _____ E-mail: _____

Name of referee: _____

Address: _____

_____

Telephone: _____ Fax: _____ E-mail: _____

Wildlife Preservation Society of Australia
Community Wildlife Conservation Award
Nomination Form

The Wildlife Preservation Society of Australia Community Wildlife Conservation Award will be awarded to a community conservation group that is making a major contribution to wildlife preservation in Australia.

Our Society knows that many organisations and thousands of volunteers are already working tirelessly to save our threatened species as well as the humble and more common Australian species and the precious wildlife habitat in which they live. We are all aware of the wonderful work being carried out by volunteers across the country in saving our sick and injured wildlife. They spend many hours and days caring for a single animal that has been injured by a car, savaged by a feral animal or hurt in bush fires. We want to recognise and help these conservation groups continue with their good work on behalf of the whole community. Our Society will present a plaque and a cash award of $2,500 to the winning conservation group that is helping to save our precious Australian wildlife.

Persons may nominate their own organisation or they may choose to nominate a third party who they believe should receive recognition. All nominations must be supported by a referee (see below).

Name of nominee: _____

Address: _____

_____

Telephone: _____ Fax: _____ E-mail: _____

Summary of achievements: (*Please summarise in less than two hundred words why this nomination should be considered for the Wildlife Preservation Society of Australia Community Wildlife Conservation Award*).

_____

_____

_____

_____

Press clippings, testimonials and photographs can be attached to support nominations - do not send books or videos.

The Wildlife Preservation Society will accept nominations for the Wildlife Preservation Society of Australia Community Wildlife Conservation Award via e-mail to wildlifepreservation@optusnet.com.au or mail to PO Box 42 Brighton Le Sands NSW 2216 or fax to 02 9599 0000.

Deadline for submission 31 December.

Name of nominator: _____

Address: _____

_____

Telephone: _____ Fax: _____ E-mail: _____

Name of referee: _____

Address: _____

_____

Telephone: _____ Fax: _____ E-mail: _____

WPSA MERCHANDISE

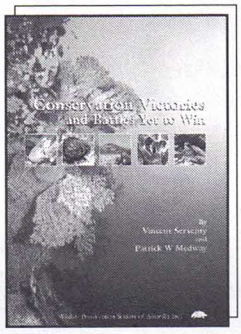
Many of our members have expressed interest in purchasing gift merchandise for friends and family (or even themselves)! This is a great way to support WPS, so we have responded below with a mail order system. Simply send your cheque or credit card details (with expiry date) and we will post your order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

Polo shirts: $25.00
(white with navy logo)

Kids T'shirts: $10.00
(navy with white logo/ white with navy logo)

Cap: $10.00
(navy with white logo)

Drink bottle bag: $10.00
(navy with white logo, bottle not included)



Conservation Victories and Battles Yet to Win
By Vincent Serventy and Patrick W Medway
Price: $20.00

Conserving Australia's Wildlife
By Dr Joan Webb
Price: $15.00

Product	Quantity	Size	Cost per item	Total
Polo shirts	_____	M, L	$25.00	_____
Children's T shirts	_____	4-6, 8, 10	$10.00	_____
Caps	_____	n/a	$10.00	_____
Drink bottle bag	_____	n/a	$10.00	_____
Conservation Victories	_____	n/a	$20.00	_____
Conserving Australia	_____	n/a	$15.00	_____

Add $5 Postage & Handling within Australia : _____
Please allow 14 days for delivery **TOTAL:** _____

Delivery Details

Name: _____

Phone: _____ Email: _____

Address: _____

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

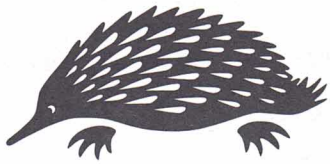
Card Number: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Name on Card: _____ Expiry: _____

Signature: _____

Send this order by MAIL:
PO Box 42,
Brighton Le Sands NSW 2216
or for CREDIT CARD payments
by fax to: 02 9599 0000

Membership Form...



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.

Name:.....

Address:.....

City/ Suburb:..... Postcode: .....

Telephone:..... Fax: .....

Email: .....

Membership category (please circle)
Individual: $35 Family: $45 Concession (pensioner/student/child): $25
Associate (library, school, conservation groups): $55 Corporate: $65
(Includes GST and postage within Australia. Add $10 for overseas postage)

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

Card Number: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Amount $ .....

Name on Card: _____ Expiry: _____

Donation $ .....

Signature: _____

Total $ .....

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.

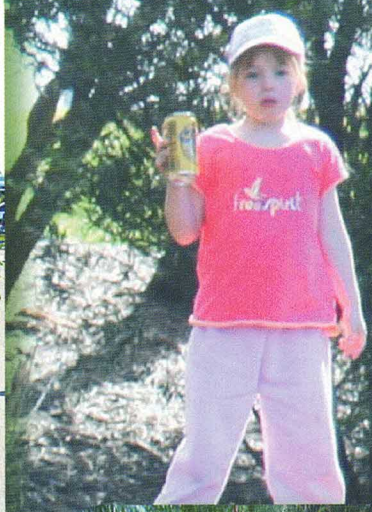
If you would like to make a bequest to the Wildlife Preservation Society of Australia Inc., add the following codicil to your Will:

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 W MEDWAY AM
National President



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