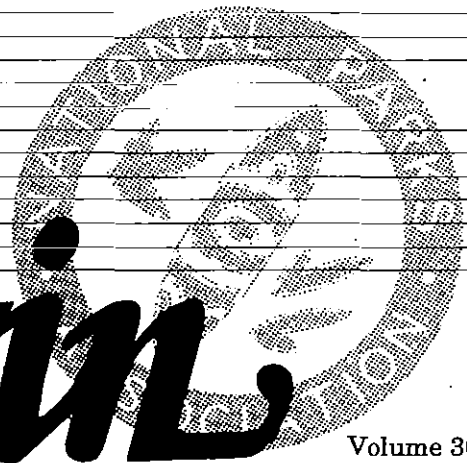


NPA Bulletin



Volume 30 number 2
June 1993

NATIONAL PARKS ASSOCIATION FACT INCORPORATED



Antarctic adventures

No national park is an island

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Cover

Photo: Fiona McDonald Brand

This time last year NPA members were enjoying the sunshine at Bournda National Park. Check the Outings Program to see what's on offer for the 1993 Queen's Birthday long weekend.

National Parks Association (ACT) Incorporated

Inaugurated 1960

Aims and objects of the Association

- Promotion of national parks and of measures for the protection of fauna and flora, scenery and natural features in the Australian Capital Territory and elsewhere, and the reservation of specific areas.
- Interest in the provision of appropriate outdoor recreation areas.
- Stimulation of interest in, and appreciation and enjoyment of, such natural phenomena by organised field outings, meetings or any other means.
- Cooperation with organisations and persons having similar interests and objectives.
- Promotion of, and education for, nature conservation, and the planning of land-use to achieve conservation.

Office-bearers and committee

<i>President</i>	Beverley Hammond 288 6577(h)
<i>Vice-president</i>	Dianne Thompson 288 6084(h); 244 7558(w)
<i>Immediate Past President</i>	Les Pyke 281 2982(h)
<i>Secretary</i>	Len Haskew 281 4268(h)
<i>Treasurer</i>	Mike Smith 286 2984(h); 248 3624(w)

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<i>Outings</i>	Michael Kelly 241 2330(h)
<i>Namadgi</i>	Syd Comfort 286 2578(h)

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Graham Guttridge	231 4330(h)

Subscription rates (1 July to 30 June)

Household members \$20 Single members \$15
Corporate members \$10 Bulletin only \$10
Concession: half above rates

For new subscriptions joining between:

1 January and 31 March—half specified rate
1 April and 30 June—annual subscription

Membership inquiries welcome

Please phone Laraine Frawley at the NPA office.

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Contribute to your *Bulletin*

Contributions of articles (news, description or fiction), black-and-white photographs and line drawings are keenly sought for the *Bulletin*. Please label photographs with the name of the subject, the name of the photographer and the date. Leave contributions at the office or phone the editor, Roger Green, on (06) 247 0059. The editorial fax is (06) 249 7373.

Articles by contributors may not necessarily reflect Association opinion or objectives.

Deadline for September issue: 1 August, 1993.

NPA Bulletin is produced by Green Words for the National Parks Association (ACT) Incorporated. It is produced with the assistance of an ACT Heritage grant.

Printed on recycled paper by Goanna Print, Fyshwick, ACT.

ISSN 0727-8837

Your Association needs you!

The National Parks Association is a well-respected community organisation whose members have pursued our conservation objectives caringly and diligently for the past 33 years. We thank those who have done or are still doing their share. Participation is vital.

The renewal form for 1993-94 invites you to put your special interests, experience or expertise to good effect for the Association. A list of possibilities is included. Our computer is programmed to sort all of the categories you tick so that a member can contact you and get you involved. But don't wait for that—please phone one of the convenors and come to the next subcommittee meeting. Try it out!

We are going to reconvene the marketing and advertising subcommittee—can you think of a better name for it? We want to get together a group of people who can, among other things:

- write or organise advertisements or articles for newspaper and radio
- prepare mobile displays for libraries, foyers or offices to advertise our objectives and activities
- develop strategies for recruiting new members
- help with exhibitions to promote our Association at environment fairs
- distribute our *Tree Guide* and plan for the *Flora Guide* and other publications.

The environment subcommittee has lively discussions at its monthly meeting and small working groups get involved in thrashing out issues for submissions. You don't always have to do the writing—just be there to have your ideas included.

The Namadgi subcommittee deals with matters closer to home—recently as close as North Watson and the Molonglo, as well as our ongoing commitment to Namadgi National Park. Are you worried about feral plants and animals? Are you interested in the park's natural, prehistoric or historical features? Come and contribute your ideas.

So you're more active? The outings subcommittee is just the thing. Which is the best way up the Castle? How many cheeses can you lay in a day? Come and find out, or offer to share a walk you enjoy.

Act today! Telephone any committee member for more information or mark your diary to attend a subcommittee meeting.

We have great speakers at the general meetings. Put a cross in your diary against the third Thursday of each month.

Come on an outing. Volunteer for the general committee by phoning our office for a nomination form. Join the band of members who have worked hard for our NPA in past years. Show that you too care about the environment.

Beverley Hammond

Beverley Hammond and Laraine Frawley admire the computer system in the Association's new office. Photo by Reg Alder

Protect sites sensitively

With regard to the article by Reg Alder 'Aboriginal or European?' published in the last *NPA Bulletin*, volume 30 number 1, March 1993, I would like it to be noted that my observation of the sites mentioned was not so much brought to public notice; rather that it was brought immediately to the notice of the Aboriginal Liaison Officer within the Australian Heritage Commission and, following his advice, to the immediate notice of the Chairperson of the Ngunnawal Land Council.

The question of sites which may have Aboriginal ceremonial significance is necessarily one of particular sensitivity. In spite of the saga of the boulders around Yankee Hat car park, it is hoped that these places—with our care and consideration—will remain quietly protected.

Mrs Joan R. Goodrum

New members

Vince Bagusauska	Isabella Plains
Peter and Kathy Boyland	Torrens
Richard and Amanda Carey	Gilmore
Janine Conway	Dickson
Bill, Dorothy and Michael Coote	Campbell
Lyndon Grimmer	Scullin
David & Robin Large & family	Macarthur
Geoff & Susan Main & family	Queanbeyan
Colin McAlister	Holder
Annabelle Middleton	Reid
Philip & Karen Murray	Weetangera
Peter Sesterka	Kambah
Neil Sloan	Watson
Pauline West	Kaleen
Fae Yeatman	Pearce



Foxes in Namadgi

The Association was fortunate in having Peter Banks as the guest speaker at the general meeting of 18 March. He is undertaking research in Namadgi with funding under the Australian Alps Memorandum of Understanding. The following are some important points from Peter's address.

The spread of foxes throughout the continent was aided by the rabbit surge—there is a correlation. There has been much damage to native fauna; small and medium sized mammals between 35 grams and 5.5 kilograms are the most at risk. It is thought that there are nine species extinct and 30 endangered due to predation by foxes. For example in Namadgi the brush tailed wallaby is extinct; it was last seen in the 1950s at Tharwa.

It is considered that the best solution to reduce the numbers of foxes is to reduce the birth rate rather than increase the death rate. Techniques such as trapping, shooting, poisoning and fencing are expensive, labour intensive, and often cruel; also non-target species can be adversely affected. Consequently a biological control is the objective of current research. It is known as immuno-contraception, a process of preventing fertilisation in foxes by inducing the body's immune system to attack the reproductive cells and prevent the normal recognition between sperm and egg.

Although that approach is the objective, it is not clear how much the fox population needs to be reduced to safeguard native fauna and allow a recovery. Peter is investigating the interaction between foxes and native fauna to assess the extent of the foxes' impact on native mammals.

Rabbits are staple prey, with impact on native fauna coming from opportunistic predation. However, in Namadgi rabbits are uncommon due to control efforts, but foxes persist. The killing of kangaroos by foxes has been observed in Namadgi.

In order to assess the relationship between foxes and the native



*A fox carries off a small native mammal.
Photo by Graham Tidy*

fauna population, Peter will be experimentally removing foxes from two valleys in Namadgi (Brandy Flat and Grassy Creek) and seeing how the kangaroos and small mammal populations respond compared to two other areas where foxes will persist (Orroral and Glendale). However, before foxes can be removed, we need to know their population, social structure, patterns of activity and movement, details of habitat use and characteristics of diet. For the past year Peter has been engaged in acquiring this knowledge.

Spotlighting transects have been taken in each valley to monitor numbers. Radio tracking is being used to get details of habitat use, movements and social structure. To do this work foxes have to be trapped but they are too smart to go into a cage. A 'treadle snare trap' is used which snares the leg of the fox. The trap is set near trails through the bush or near carcasses. Ten foxes (three females and seven males) have been captured 13 times. There were three animals around Glendale, two around Nursery Swamp car park and one at Orroral camping ground.

Namadgi foxes live in pairs with cubs born in November and they move away in June of the following year. The territory of foxes seems to be about 80 per cent in

valleys and low lands. To give an example of distance, one fox from the Orroral camping ground moved beyond the tracking station and returned.

Scats are analysed to determine eating habits. Peter has begun a census of predominant prey species to establish what small mammal and kangaroo numbers are like before the removal of foxes. Some small mammals, including bush rats, are low in numbers in areas used by foxes but are common in forest areas. The census includes counting kangaroos along dawn and dusk transects, counting rabbits while spotlighting, and measuring grasshopper numbers as they constitute important food in summer.

Peter hopes to begin removing foxes early in April by shooting while spotlighting, by using a whistle which mimics a rabbit in distress, and carcass trapping if necessary. For the remainder of this year and the first half of 1994 he will see how the populations of kangaroos and small mammals respond to fox reduction.

The talk and following questions were of keen interest to members, most of whom know the areas under study very well from the Association's outings. A vote of thanks moved by Di Thompson was enthusiastically supported by the meeting.

Les Pyke

The place where the flag lilies grow

*By the creek, still the traces of orchard and yard,
Moulded fence posts still standing, ground eroded and hard.
Grey moss-covered limbs, bent with winds of the years,
As it sighed round the hopes of the first pioneers,
As they toiled in this new land those long years ago.
And the ghost children laugh where the flag lilies grow.*

*On the rise where the home stood, was this the front gate?
Did she gather the children and patiently wait?
For the sound of swift horses or slow wagon wheels?
Was it this quiet, this lonely, as now twilight steals
All the colour and warmth from the sunset's last glow?
Yet in stark desolation these green spears still grow.*

*Great stones formed a chimney, still strangely intact,
Warmth and fuel were good things which they never lacked.
Embedded but traceable paths, edged with rocks,
Did they circle white daisies and pink hollyhocks?
Did she plant all those precious dry bulbs, row on row,
To remind her where faraway flag lilies grow?*

*Were they emigrants stubbornly journeying far,
To leave behind poverty, follow a star?
Or were chain gang and prison still close in the past?
Now the peace of full pardon and freedom at last.
Yes, came gladness and joy just as surely as woe,
To the unknowns who lived where the flag lilies grow.*

*To the grant or selection with horses and dray,
Through forests primeval did he force a new way?
Fell the trees, build a humpy, a yard, dig a well,
Then return to his folks with brave stories to tell,
How no droughts, isolation, even stealthy dark foe,
Could destroy a free life where flag lilies could grow.*

*There's a small square of rotted fence palings that lie
On the rise overlooking the stream that ran by.
Are there really three mounds? Legend tells of a day
When a flash flood swept mother and small ones away.
Father, grandparents vanished, could be haunted, and so,
People seldom go near where the flag lilies grow.*

*Just called Oakey Creek, now it's silted and dry,
And their place in our history, just a sad curlew's cry.
Royal purple, if stunted, gallant blooms in the spring,
Are their only memorial, fit for a king.
Humble folk, lost in time's mists, no one ever will know
Who lived at the place where the flag lilies grow.*

Hazel Ayre

Library additions list

(from May)

Lower Molonglo Water Quality Control Centre Preliminary Assessment—ACTEW

Coastal Zone Inquiry Draft Report, December 1992—RAC

Coastal Zone Inquiry Draft Report, Summary and Interim Conclusions, December 1992, RAC

Biodiversity, the Role of Protected Areas, January 1993, House of Representatives Standing Committee on Environment, Recreation and the Arts

Our Bush Capital: Protecting and Managing the National Capital's Open Spaces, October 1992, A Report of the Joint Committee on the National Capital

ACT Electricity and Water Environment Plan 1992, ACTEW

Coastal Planning and Management in NSW: The Process for the Future, volume 2, October 1992, NSW Legislative Council Standing Committee on State Development

'Australia's Environment: a Natural Asset Statement on the Environment', December 1992

Proposed Plan for West Belconnen—Draft Outline, Implementation Plan and Landscape Outline Plan, draft variation for public comment, draft EIS

National Water Quality Management Strategy, nine publications


City Hill Inquiry, submissions to NCPA and the Committee, January 1993

Towards Healthier Rivers, CEPA, December 1992

Urban Stormwater—a Resource too Valuable to Waste, CEPA, February 1993

'The Water Future of the ACT: A Community Discussion Document on the Major Issues', CSIRO, December 1992

The Territory Plan



Before the introduction of self-government in the ACT in 1989 the responsibility for planning and development was vested in a single authority, the National Capital Development Commission. With the establishment of self government two planning authorities were introduced, one the National Capital Planning Authority (NCPA), a Commonwealth body, and the other the ACT Planning Authority, a Territory body. The NCPA has responsibility for the production of a National Capital Plan which is a broad document aimed to ensure that Canberra and the ACT are planned and developed in accordance with their national significance. This plan was completed in December 1990. The Territory Plan, while being consistent with the National Capital Plan, aims to ensure that the planning and development of the Territory provides 'the people of the territory with an attractive, safe and efficient environment in which to live, work and have their recreation.'

Draft Territory Plan

Preparation of the Territory Plan has been in process for over three years and during this period the planning framework inherited from the NCDC has continued in use. Following the release of discussion papers and the conduct of public seminars and workshops, a draft Territory Plan was issued for public comment in October 1991. Response to this included over 1000 written submissions, including one from the NPA which concentrated on broad environmental and planning principles such as environmentally sustainable development and

the effects of the proposals on open spaces and nature reserves.

Revision of plan

In December 1992 the Planning Authority released a revised draft plan which consists of a Territory Plan map and a Written Statement and is accompanied by a listing of changes made to the draft, summaries of submissions made on the original plan, and responses to these. Each submission has been broken down into components related to the relevant sections of the plan—the NPA's submission is referenced in some 70 places—and the responses indicate how the submissions have been dealt with in the revised draft. Whilst regretting that many more submitted proposals were not adopted, I am of the view that the Territory Plan has been greatly improved by the process of public comment. The layout of the plan is more logical, the drafting tighter, and the language and terminology clearer. There has been an acceptance of a number of fundamental principles absent from the first draft, such as the promotion of ecologically sustainable development and biodiversity, and a statement of the population level (400 000) which the plan aims to accommodate. Many changes in detail have been made and, very importantly, public land has been delineated in the map by category: nature reserve, special reserve, and so on.

Acceptance of the plan

In April 1993 the Legislative Assembly Standing Committee on Planning, Development and Infrastructure con-

ducted public hearings on the plan, specifically targeting those people who considered the substance of their submissions had not been addressed. I understand that there were comparatively few submissions—the NPA did not appear before this committee. It is expected that the draft plan, together with the Assembly Committee report, will be placed before the Assembly in the near future, possibly during May. Without anticipating how the Assembly will deal with the issue, it does appear likely that a Territory Plan will be in place by early in the 1993-94 financial year.

What then? The first long chapter of Territory planning will be over but there will be many more yet to be written. We, the public, will need to be as attentive to these further developments as we have been to the initial formulation of the Territory Plan. These developments may take a number of forms, some of which are described below.

Variations to the National Capital Plan

There are provisions for the National Capital Plan to be varied. These variations will affect the planning and development of the ACT either directly or through the Territory Plan.

Variations to the Territory Plan

Variations to the Territory Plan will be the normal avenue for making direct changes to the plan. Variations will be publicly notified and tabled before the Assembly. Changes to boundaries of nature reserves, for example, could be achieved through this process.

Environmental guidelines

The plan incorporates goals of environmentally sustainable development and biodiversity but does not itself deal exhaustively with all the related issues. These principles can be progressively applied through the adoption of relevant planning guidelines. To achieve this, environmental guidelines are being prepared which will be the basis for assessing proposals. The guidelines cover air, water, flora and fauna, microclimate, energy, land capability, and so on. There are also programs of biophysical data collection and ongoing monitoring to ensure that information is available on which assessment of sustainability can be made.

Public notification

The plan and related legislation require many classes of proposal to be publicly notified at an early stage. The Preliminary Assessment will be an important vehicle in this process and, although containing some shortcomings, will allow the public to raise issues related to a proposal early in the planning process.

Major studies

The ACT government has underway a study of the likely nature of, and requirements for, the ACT to the year 2020 entitled *Canberra 2020*. Clearly this will have an impact on the planning and development of the ACT.

Although the Territory Plan is intended to accommodate growth to a population of about 400 000, the NCPA and the ACTPA have acknowledged the need for further strategic studies to plan for the longer term. A joint study along these lines will be given a high priority once the Territory Plan is in place.

The ACT and Sub Region Planning Committee have already embarked upon preparation of a strategic plan for the sub region.

Specific studies

Documents accompanying the Territory Plan indicate that a study is currently being undertaken of the Lower Molonglo River Corridor and that when it is complete a variation to the plan will be put to the community for comment. Other such studies, probably covering the investigation areas identified in the original draft plan, can be expected.

Role of conservator of wildlife and other agencies

Supporting documents to the Territory Plan make the point that the plan forms only part of the ACT government's role in environmental matters related to planning and development. Other agencies play major parts in any approach to environmental planning and assessment. The Conservator of Wildlife as public land manager is particularly significant. For instance the Land and Environment Act requires the conservator, in consultation with the public, to prepare plans of management for all public lands. This provides an important layer of protection in addition to the policies for the management of open space areas contained in the Territory Plan.

The future

The acceptance of a Territory Plan which we can expect to be achieved in the near future will be a milestone in the planning and development of the ACT. However, planning and related decision-making will be a continuing process in which informed community participation will be necessary if a balanced and environmentally responsible outcome is to be achieved. Organisations such as the NPA can assist this process by keeping abreast of the many and diverse aspects of planning and development which will arise in the future.

Syd Comfort

Return of items submitted for *Bulletin*

Green Words tries to return all floppy discs and photos which are submitted to the *Bulletin*. However, if you submit a story on paper only, *please* keep a copy for yourself as it is unlikely we will keep it in storage. If you do want something returned, mark it clearly and we will keep it aside for you.

Thanks

MALLACOOTA

Victoria's best kept secret!

Need a break? Enjoy fishing, golf, beach rambles, bush walking, sailing, relaxing? Then a mud brick cottage within walking distance of all of that should fill the bill. The cottage sleeps four to six in ski lodge style and backs onto the golf course. Reasonable rates. Contact Barbara de Bruine (06) 258 3531 (ah)

Namadgi brumby yards

Have you ever seen any brumby trapyards during your walks in Namadgi? If you have, I'd like to hear from you. I am doing a survey of these sorts of structures and although I know of a number of sites, I am sure that there are quite a few more, some of which may have been seen by NPA walkers. Any information will be very much appreciated. Please contact Mathew Higgins on 247 7285 (work and home) or at 99 Duffy Street, Ainslie, 2602.

A national park for K2?

The spectacular Karakorum Mountain Range in northern Pakistan is a prime candidate for protection as a national park, according to Jim Thorsell of IUCN (the World Conservation Union). It contains the world's greatest concentration of high mountains and the greatest array of glaciers outside the polar regions. Urial, markhor, ibex and snow leopards still roam the mountain valleys—remnants of once abundant populations decimated by hunting.

'Unfortunately, the beauty of the range is attracting growing numbers of trekkers and mountaineers and the social fabric of the mountain communities is becoming disrupted,' cautions Dr Thorsell who, as IUCN's senior adviser, Natural Heritage, visited and evaluated the site in September with Abdul Latif Rao of the IUCN Pakistan office. 'In addition, they leave garbage, pollute the water and deplete the firewood stock, though so far the central part of the range is largely undisturbed.'

'The Union is urging the Pakistan Government to consider creating a national park in the vicinity of K2, the world's second highest mountain, which would help prevent further deterioration. We understand that they may also nominate the area as a World Heritage site.'

IUCN The World Conservation Union Bulletin, 4/92

Webster's grab for national parks

NSW NPA president, Mr Grahame Douglas, has expressed outrage at a proposal which would effectively hand control of national parks and wilderness management to the National Party minister, Mr Robert Webster.

The proposal is revealed in a letter from Mr Webster, the Minister for Planning, to the Premier, Mr Fahey. The letter discusses the relationship between the Warragamba Dam Flood Protection Programme and plans of management for the Blue Mountains, Kanangra-Boyd and

Nattai National Parks. The letter states that a Cabinet Minute recommends that 'any plans of management for these areas must be given the concurrence of both the minister responsible for the national parks and the minister responsible for the Water Board.'

'The National Parks Association has completely rejected this proposal,' Mr Douglas said. 'Such a move would be contrary to the National Parks and Wildlife Act. If Mr Fahey is to convince the public of the environmental credentials of his government, it is time he put a stop to the continued attacks on national parks by the National Party.'

'There have already been excessive delays by the government in adopting the management plans for Kanangra-Boyd and Blue Mountains National Parks,' Mr Douglas said.

'The Blue Mountains plan was submitted to the then minister's office nearly five years ago. The government's lack of commitment to national park protection in the Blue Mountains is undermining proposals to include the area on the World Heritage list.'

'Mr Webster's letter requests that the management plans be further delayed pending the government's decision on the Flood Protection Programme. The Association understands that the Minister for the Environment, Mr Hartcher, has rejected advice that the plans be considered at the same time as the Flood Protection Programme,' Mr Douglas said.

National Parks Journal, April 1993 Vol. 37 No.2

Forest industry smokescreen

Dr Robert Bain of the National Association of Forest Industries claims, in respect of woodchipping, that 'we're exporting a waste product, we're earning \$500 million a year towards Australia's worsening trade balance and we're employing a lot of people, and there is no scientific evidence that it should stop' (ABC radio

14 December 1992). Since 85 to 90 per cent of trees logged for woodchips come from old growth forests, Dr Bain's claim means that any tree left standing in an old growth forest is waste.

The export woodchip industry employs only 804 people (Australian Bureau of Agricultural and Resource Economics 1990-91). This represents less than 2 per cent of total employment in the forest products industries (RAC report). The gross return from woodchip exports is \$415 million a year. From this must be deducted the expenditure of public funds on infrastructure for the timber industry and a substantial part of the interest on the \$5 billion debt of government forestry agencies.

The RAC reported that 'forestry operations such as logging strongly affect biophysical naturalness'. It recommended a cessation of logging in wilderness areas.

The Colong Bulletin, March 1993

An holistic approach to water management

At a recent recycled water seminar in Wagga Wagga, it was like a breath of fresh air to find out that some local government authorities take a more progressive and open-minded approach to conservation of water resources than we experience closer to home.

The cities of Dubbo and Wagga were able to demonstrate a strong commitment to re-use of waste water in the interests of pollution control and reduction of potable water consumption.

The Wagga Wagga City Council, in particular, has developed a very positive environment of innovation for re-use schemes with the aim of 10 per cent reduction per annum in discharge to the Murrumbidgee River and total off-stream use by the year 2000. This is the outcome of developing an holistic approach to the management of water resources which includes irrigation by industry and Council.

Smoke Signal Journal of the South Coast Conservation Society, February 1993, Vol. 24 No. 2

Protected areas and biodiversity: a revolution in thinking

The Parks Congress held in Caracas early in 1992 made it clear that we need a new approach to conservation. Why are we now aiming to protect biodiversity instead of sticking to our conventional targets—trying to save individual species and convince governments to put five (or ten) per cent of their land under protection?

Basically because the old methods are not working very well. Saving species may have worked for Noah, but judging by the current rate of species loss, it's not working for us. And saving such species as elephants and tigers may give great personal satisfaction to conservationists and members of the public, but very little economic return to the people—be they ranchers, foresters, developers or peasants—who are asked to restrict activities in the habitats of such species. We also now realise the futility of trying to conserve 5 per cent of the planet if the other 95 per cent goes down the drain.

The Biodiversity Strategy argues that, if we are to go beyond the concept of 'fortress parks', economic benefits must flow from protected areas to local communities. Protected areas have global and national value. Government must ensure that a fair share of the benefits accrue to local communities as well. Surrounding lands must include *buffer zones and habitat corridors*—which may be required to contend with the impacts of non-local events such as climatic or other environmental change. And the management objectives of protected areas should be expanded to include 'the full scope of biodiversity conservation', which implies more than maintaining species, populations, communities

and habitats in some categories of protected areas. It allows controlled exploration for and harvest of valuable genetic resources, using techniques that do not degrade the conservation value of the protected area.

Protected areas will always be important for biodiversity conservation, whether they be large areas of wilderness, small sites for particular species or reserves for controlled use. As an important addition to the conservation toolbox, the concept of 'protected landscapes' is *gaining currency* whereby areas of publicly or privately owned lands—farms, forests, lakes and coast, and their associated human settlements—may be subject to resource extraction but still provide conservation benefits. The objective is 'to maintain the quality of the overall landscape, harmonious human interaction with it, and the biological diversity it contains'.

We don't really know how biodiversity can be maintained in such extractive reserves. But given the legitimate and growing demands of surrounding human populations, we have no choice but to try it out.

Smoke Signal Journal of the South Coast Conservation Society, February 1993, Vol. 24 No. 2

Public meeting to launch committee

A public meeting was held on 20 March at Michelago to launch a new committee formed to address and coordinate water quality and conservation issues in the Upper Murrumbidgee catchment, an area which includes the ACT.

The chairman of the Upper Murrumbidgee Catchment Coordinating Committee, Jim Ryan, said the new body would consider issues affecting the Murrumbidgee catchment above Burrinjuck Dam, which is 40 kilometres downstream from Canberra.

Mr Ryan announced that one project was already underway to draw together existing information on water quality in the area, and two other projects were in advanced planning. One would

determine the present state of the Murrumbidgee River corridor, while the other would look at future water supplies and demand in the region.

The ACT is likely to need a new water reservoir within 10 years unless Canberra reduces its water use. Such a dam would probably draw its supply from the upper catchment. The environmentally sensitive Murrumbidgee corridor is known to be home to endangered species. Pollution entering the Murrumbidgee River from the upper catchment has resulted in complaints from all three downstream states.

Mr Ryan said that a major problem in the catchment was getting all the government agencies, community groups and land managers together to consider the pressures on the river. He hoped that all parties would cooperate with the new committee, so it could help coordinate the many different activities affecting the catchment.

Broadcast The bi-monthly newsletter of Greening Australia ACT and SE NSW, April/May 1993

More developer input

The Local Member for the Blue Mountains, Mr Barry Morris, announced the following new members of the Blue Mountains National Park Advisory Committee:

Warwick Armstrong and Barry Land (NSW Farmers Association); Kevin Field (Four-Wheel Drive Clubs Association); Michael Neall (local developer) and Barry Morris (supporter); Peter Mears (local developer); Dr Keith King (local doctor); Jack Tollhurst (Bush Fire Brigade); John Wrigley (Water Board); Dennis Byrne (National Parks Association).

The above line-up has two or three pro-conservation and six anti-conservation members, which is no way to ensure appropriate management of the Blue Mountains National Park.

The Colong Bulletin, March 1993

Conservation in Victoria

Alastair Morrison had given me a copy of his Victorian National Parks Association *Park Watch* to look over and out fell a brochure of a forthcoming conference on Box and Ironbark. Perhaps it would be an opportunity to meet our fellow NPAs across the border, swap problems and meet up again with Stephen Johnson, now president of the VNPA, still a member of our Association and once resident in the ACT as a member of the Parliamentary Press Gallery in the 1970s for the Melbourne *Herald*. Members of that period, if they cannot recollect him for anything else, will remember his deep booming voice and his great interest in learning everything about Namadgi on the numerous walks he undertook whilst here.

The venue was Benalla on 24 August and although the subject matter seemed a little on the high plane and technical from a wide range of professional experts, perhaps something of what was to be said could be understood if the talks were made interesting. The second day was an excursion around the vicinity of the Warby Range, near Wangaratta, with panels of on-site speakers.

The first and only disappointment was that Stephen Johnson was not to be there—he was leading a party of VNPA members to Central Australia—and the organisation of the proceedings was left to Doug Humann, the director of the VNPA, who made a wonderful job of it. There were 260 delegates to the conference, and some applications had to be declined because of space limitations in the Benalla Town Hall.

At each session subject matter was grouped into definitive description or problem matters. The first session dealt with the communities of the forests, conservation and an overview of threats and strategies. This was followed by some excellent papers on rural die-back, ecology and die-back in relation to their conservation and the conservation of fauna. The willingness of two

speakers from Canberra was canvassed for future lectures to our NPA.

After lunch the subject matter turned to the social problems related to forests, the attitudes of farmers, the management of birds and animals and the problems of apiarists in the box and ironbark forests. The afternoon concluded with the problems of conserving vegetation on private lands with the particular problems of a successful project on the superb parrot, the role of Landcare groups and strategies necessary to conserve the forests.

In the evening there was an informal dinner and on the following day four large buses and some cars took delegates to a farm site near Lurg where a farmer, who was the local Landcare co-ordinator, spoke about the organisation of Landcare. Another farmer discussed his problems and techniques in planting trees on his property. This was a three generation project on the joint properties of the farmer and his father. Father, who was now in his seventies, declaimed that he had ring-barked and grubbed all the bloody trees out and now he was replanting them. There must be some justice in that.

The party then went on to Killawarra State Forest which was a site of remnant vegetation, mainly regrowth from ironbark root stock where trees had been cut down during World War Two because of the location of an internment camp in the area. This secondary growth was not being harvested on a strictly controlled basis and there was some discussion on whether the root stock could continue to provide future harvest as there seemed to be few trees growing from seed. For some obscure reason during the war years the forest floor had been raked free of litter.

On the following day there was a tree-planting exercise on a farm near Lima which was part of the Landcare project being adopted so enthusiastically by farmers in Victoria. It is to some extent sub-

sidised but depends a lot on voluntary effort. In this instance a farmer had fenced a strip of land parallel to an old fence some 1200 metres long to enclose an area to take 850 trees of 20 varieties. Leaving the old fence had the advantage of providing a buffer between his stock. This avenue of trees would also provide a corridor between the wooded ridges on each side of the property. The VNPA had provided some money towards the project. The seedlings had been raised in a nursery from seed gathered in the area, very necessary if trees are to survive infestations particular to the area.

Pupils from the local Swanpool primary school had been recruited to participate in the planting. They most enthusiastically proceeded with the task under the supervision of parents and teachers and within two hours all the trees had been planted. The trees were protected by two-litre drink cartons with the flaps opened out at the bottom, which were in turn covered in earth to support them. The planting was followed by a sausage sizzle and other goodies. A most satisfying occasion to see the indoctrination of a coming generation in Landcare as well as the enthusiasm of the present in its implementation.

The whole two days was relatively inexpensive, costing \$30 for the lectures, three morning and afternoon teas, a lunch and the cost of the all-day bus excursion.

The proceedings of the conference have now been published (April 1993) and are available as a supplement to the *Victorian Naturalist* from the VNPA, 10 Parliament Place, East Melbourne Vic 3002 for \$7.00 plus \$1.00 postage. The proceedings provide a base line of information and ideas for future research and management of box and ironbark forests and woodlands. They are essential reading for all biologists, foresters, conservationists and farmers interested in these woodlands.

Reg Alder

Outings program

July to September 1993



Outings guide

Day walks carry lunch, drinks and protective clothing.
Pack walks two or more days, carry all food and camping requirements. CONTACT LEADER BY WEDNESDAY.

Car camps facilities often limited or non-existent. Vehicles taken to site can be used for camping. BOOK EARLY WITH LEADER.

Other activities include nature rambles, environmental and field guide studies and ski tours.

Walks gradings

Distance grading (per day)

- 1 - up to 10 km
- 2 - 10 km to 15 km
- 3 - 15 km to 20 km
- 4 - above 20 km.

Terrain grading

- A - Road, firetrail, track
- B - Open forest
- C - Light scrub
- D - Patches of thick scrub, regrowth
- E - Rock scrambling
- F - Exploratory.

The walks program contains additional information. If necessary, contact the leader.

July 3 Saturday Walk

Isaacs Ridge

Leader: Margaret Aston

Ph: 2887563

Meet at the end of Cabarita St O'Malley at 1.30 pm. A 7 km easy afternoon walk up Isaac's ridge. Good views of our city. Bring a nibble.

(1/A)

July 4 Sunday Walk

Legoland

(2A/C)

Ref: ACT

1:100000

Ph. 2412330

Leader: Mick Kelly

Meet at Kambah Village Shops at 8.30 am. Walk from Honey-suckle Creek tracking station car park along fire trail to ridge overlooking Orroral Valley. Many fascinating rock formations. Depending on weather will return to cars via The Spinnaker (60 km \$12 per car).

7 July Wednesday

Outings Sub-Committee Meeting

Leader: Mick Kelly

Meet at 1 Fitzmaurice St Kaleen at 7.30 pm to prepare outings program for October to December. All are welcome however, if unable to attend but willing to offer an outing, please phone me at home after 6.30 pm (bookings are open from the day you read this notice). For the Oct/Dec program a car camp or two would be a desirable outcome!

11 July Sunday Walk

Emu Flat

(2/A/B)
Ref: Corin 1: 25000

Ph. 2574371 (h)

Leader: Murray Dow

Meet at Kambah Village Shops at 8.30 am. A pleasant and short walk along fire trails and through light scrub to Emu Flat (60 km \$12 per car).

15 July Thursday Walk

Brandy Flat Hut & beyond

(1/A)
Ref: Michelago 1:25000

Ph: 2488774 (h)

Leader: Olive Buckman

Phone leader for meeting time at Kambah Village Shops. A pleasant 10 km walk on fire trails from Glendale depot, with lunch at Brandy Flat Hut (water and fire-place available). Continue on tracks to Old Boboyan Rd. Total climb 430 m. A short car shuffle will be required (90 km \$18 per car).

18 July Sunday Walk

Mt. Arawang

(1/A)

Leader: Margaret Aston

Ph. 2887563 (h)

Meet at the top end of Kather St Chapman at 1.30 pm. An easy 5 km afternoon walk around Cooleman Ridge and up Mt. Arawang. Bring binoculars and a nibble.

25 July Sunday (Devonshire teas) walk.

Bundanoon area

(1/A)

Leader: Steven Forst

Ph. 2516817 (w) 2748426 (h)

Phone leader by the Wednesday for details of a meeting place. Short easy walks will be the order of the day in and around Bundanoon and the Morton NP, together with sampling the

local Devonshire Tea (280 km \$56 per car).

31 July Saturday (forestry outing)

Tallaganda State Forest

Leader: Tom Aldred

Contact for outing: Mick Kelly

Ph. 2412330 (h)

Phone Mick Kelly by the Wednesday for details of this interpretative outing. Tom Aldred from the Forestry Commission of NSW (spoke at the April NPA meeting) has kindly offered to show us the forestry operations in Tallaganda State Forest, including current logging operations and areas cut and now growing back. This outing will very much depend on the weather as roads in the forest are somewhat treacherous after rain.

7 August Saturday Ski Trip

Mt. Selwyn

(2/A)
Ref: Mt Selwyn Ski Touring

Leader: Steven Forst

Ph. 2748426 (w) 2516817 (h)

Contact leader by the Wednesday for details. An easy to medium ski tour in the Mt. Selwyn area. Subject to snow and weather conditions (350 km \$70 per car).

7 August Saturday Walk

Lake George

(1/A)

Leader: Margaret Aston

Ph. 2887563 (h)

Meet at the coast road junction, Bungendore at 10 am. A gentle walk along the edge of Lake George together with some bird-watching. Bring binoculars and some lunch (80 kms \$16 per car).

8 August Sunday Walk

Mt Tennent and Tennent

(2/A/C)

Homestead

Ref: Williamsdale 1:25000

Leader: Syd Comfort

Ph. 2862578 (h)

Meet at Kambah Village Shops at 8.30 am. From Namadgi Visitors Centre a steady climb to Mt. Tennent 1389 m with inspection of Tennent Homestead (recent heritage grant) on return (50 km \$10 per car).

7/8 August

Illawarra Rain Forest.

(1/A/B/C)

Car Camp/motel extended weekend

Leaders: Eric and Pat Pickering

Ph. 2862128 (h)

Contact leader by 1 August for details. Come for two, three or four days, there will be easy day walks in the rain forest area around Macquarie Pass and nearby mountain and coastal areas. A good place to observe high-density forest merging and interacting with suburbia. If time permits we may see how Judds Jungle is progressing after some years of dry conditions.

14 August Saturday Walk

Farrer Ridge

(1/A)

Leader: Margaret Aston

Ph. 2887563

Meet at the corner of Hawkesbury Cr and Wagga St Farrer at 1.30 pm. A 6 km easy afternoon walk along Farrer Ridge and across to Mt. Waniassa. Bring a nibble. Some kangaroos should be around.

15 August Sunday Walk (4A/C)
Sams Creek Ref: Yaouk 1:25000
Leader: Frank Clements Ph. 2317005 (h)
 Meet at Kambah village shops at 8.30 am. A walk of 12 kms on fire trails and 10 kms through bush to Sams Creek, with one steep climb of 150 m. Returning either the same way or via Boggy Ck (100 kms \$20 per car).

19 August Thursday Walk (1/A)
Ginninderra Falls Ref: ACT 1:100000
Leader: Olive Buckman Ph. 2488774 (h)
 Phone leader for details of time and meeting place. A delightful and interesting walk from the top of Ginninderra Falls to Murrumbidgee River and via alternate route. Small charge for entry to falls (60 kms \$12 per car).

22 August Sunday Walk (2/A/B)
Horse Gully Hut Ref: ACT 1:100000
Leader: Len Haskew Ph. 2814268 (h)
 Meet at Kambah Village Shops at 8.30 am. A pleasant walk along a bush road to Horse Gully Hut for lunch (140 kms \$28).

28 August Saturday Walk (2/A/B)
Taylor to Tuggeranong Ref: ACT 1:100000
Leader: Syd Comfort Ph. 2862578 (h)
 Meet at 87 Shackleton Circuit Mawson at 8.30 am. Walk to Mt. Taylor (856 m) then along Farrer Ridge to Mt Wanniasa and beyond. About 15 kms with plenty of ups and downs.

29 August Sunday Walk (1/A)
Middle Creek Area Ref: Rendezvous Ck 1:25000
Leader: Mick Kelly Ph. 2412330 (h)
 Meet at Kambah Village Shops at 8.30 am. From Boboyan Pines across to Yankee Hat paintings return via cascades on Middle Creek for lunch and early return to cars (100kms \$20 per car).

4/5 September Budawangs Work Party (2/A)
Corang Ref: Corang 1:25000
Leader: Di Thompson Ph. 2447558 (w) 2886084 (h)
 Phone leader seven days before so administrative details can be worked out. This is the annual Budawangs track maintenance work party for installation of more cheques and drains around Kora Hill and Corang Peak. Camp at Canowie Brook (300 kms \$60 per car).

11 September Saturday Walk (2/A/B/D)
Bredbo Area Ref: Murray Dow Ph. 2574371 (h)
Leader: Murray Dow
 Meet at Kambah Village shops at 8 am. A 15 km walk on forested countryside (private property). The owners of the property are keen to ascertain what types of fauna and flora exist in the area. Flora should be interesting as it is early spring. The property is located to the south of Bredbo and embraces part of

the Chakola fire trail. An interesting day in a new area (160 kms \$32 per car).

12 September Sunday Ski Trip (2/A)
Perisher Ref: Kosciusko 1:25000
Leader: Mike Smith Ph. 2862984 (h)
 Contact leader by the Wednesday for details. An easy to medium ski tour in the Perisher area, visiting Mt Duncan, the Porcupine, and Betts Camp. Subject to snow and weather conditions (400 kms \$80 per car).

19 September Sunday Walk (2/C)
Nursery Swamp Ref: Rendezvous Ck 1:25000
Leader: Martin Chalk Ph. 2923502 (h)
 Meet at Kambah Village Shops at 8.30 am. A 13 km walk mainly on tracks from Orroral Valley to rock paintings on Nursery Swamp Creek then visit stone axe site on ridge overlooking Rendezvous Creek for lunch (80 kms \$16 per car).

18/19 September Ski Tour (2/A)
Broken Dam Hut Ref: Mt. Selwyn Ski Tour Map
Leader: Steven Forst Ph. 2748426 (w) 2516817 (h)
 Contact leader early for details. A weekend ski touring in Broken Dam Hut area. Good views from Tabletop Mtn. The route from Mt. Selwyn and return is fairly easy and would be OK for those who have never carried a full pack on skis before. Subject to cancellation due to weather or snow conditions (400 kms \$80 per car).

18/19/20 September Pack Walk (1/D/E/F)
Jillicambra Mtn & Myrtle Ck. Ref: Belowra 1:25000
Leader: Eric and Pat Pickering Ph. 2862128
 Contact leaders at least a week in advance for details. Drive to junction of Tuross River and Woila Ck. Follow the Tuross to Myrtle Ck and camp, some wading may be necessary. Second night's camp will be on the upper reaches of Myrtle Ck. Final day involves a 500 m climb to Jillicambra with its splintered rock formations and views. Return to cars some 850 m below via a 5 km long spur (400 kms \$80 per car).

23 September Thursday Walk (2/A/C)
Tidbinbilla Peak and the Camel Hump Ref: Tidbinbilla 1:25000
Leader: Olive Buckman Ph. 2488774 (h)
 Phone leader for time of meeting at Kambah Village Shops. A 14 km walk on fire trails and through light scrub to Tidbinbilla Peak, then along ridge with a few rock scrambles to Camel Hump and return via the fire trail. Total climb of 650 m which will be taken very slowly (60 kms \$12 per car).

26 September Sunday Ski Trip (2/A)
Dead Horse Gap Area Ref: Thredbo 1: 25000
Leader: Damien Brown Ph. 2489948 (h)
 Contact leader by the Wednesday for details of meeting place and times. A day trip in the Dead Horse Gap area. Will as

usual depend on the weather and snow conditions (400 kms \$80 per car).

25/26 September Pack Walk (3/A/D/E)
Mt. Namadgi Ref: Rendezvous Ck and Corin Dam 1:25000
Leader: Mick Kelly Ph. 2412330 (h)
 Contact leader by the Wednesday for details. Probably leave Canberra on the Friday afternoon. Camp at or below Cotter Flat that night. Saturday walk to Big Creamy Flats for camp via Pond Creek Flats and Little Creamy Flats. Climb Namadgi without packs. Return to Nursery Swamp car park via Rendezvous Ck and Nursery Swamp. Short car shuffle required (100 kms \$20 per car).

From Eric and Pat Pickering
 We invite expressions of interest in accompanying us for a 10 day walk in Victoria's Nelson/Portland area. Late October or early November 1993 are the recommended times. Please contact Pat or Eric for further details of their proposed expedition south of the border (Ph. 2862128).



Points to note

New faces to lead, new places to go. Please help keep our outings program alive by volunteering to lead a walk occasionally.

All persons joining an outing of the National Parks Association of the ACT do so as volunteers in all respects and as such accept sole responsibility for any injury howsoever incurred and the National Parks Association of the ACT, its office bearers and appointed leaders are absolved from any liability in respect of any injury or damage suffered whilst engaged in any such outing.

The committee suggests a donation of TWENTY cents per kilometre DIVIDED BY THE NUMBER OF OCCUPANTS in the car, including the driver, (to the nearest dollar) be offered to the driver by each passenger accepting transport. Drive and walk distances quoted in the program are approximate distances for return journeys.

*At right:
NPA members
live it up at the
office warming
party held on
21 April at the
Association's
new office in
Chifley.*



*At left:
An ACT heritage grant of over
\$13 000 has recently been awarded
for a conservation plan for Tennent
Homestead (pictured). The grant
was awarded as the result of a
proposal submitted by the NPA,
the National Trust and the
Kosciusko Huts Association.
Photo by Reg Alder*



Antarctic adventures

In September 1991 I was booked for Antarctica in January 1992 on the freighter *Celtic Kiwi*. To my sorrow the ship, and my adventure, sank in the Pacific a few weeks after booking. Looking for something similar I settled for a 10-day sea trip to the Sub-Antarctic-Auckland Islands, with a day or so on Stewart Island on the way, in early 1992.

At Bluff, south of Invercargill, and at the tip of New Zealand's South Island, I boarded RV *Acheron*, a 23-metre long, five-and-a-half metres wide research vessel built in 1971. It had a history of coastal and deep sea water research, survey work and a spell as the Bluff to Stewart Island ferry.

Unfortunately the only booking available was early March, not the best time for the famous 'roaring forties and raging fifties', nor for the wildflowers and rata blossom. I would recommend December or January.

Our complement was seven passengers, four crew and a Department of Conservation (DOC) officer, obligatory for the Aucklands where Adams Island in the south was declared a nature reserve in 1910 and Auckland Island itself in 1934. Only 600 visitors a year are allowed.

Crossing the notorious Foveaux Strait, the ship did everything bar stand on its head or lie flat on its side and eventually, some two and a half hours later, we moored at the wharf at Oban on Stewart Island. While not true sub-Antarctic, it is a delightful part of New Zealand, full of wild beauty, peace and history and strongly recommended, especially if you have your own sailing boat.

We were there longer than anticipated waiting for the gales to abate, which they didn't, so we headed to our main destination—the Auckland Islands.

Leaving at midnight with everyone in their bunks, we rolled around all the next day, missing the small Snares Islands, and at 11pm the noise of the engines finally stopped. Realising we had

at long last reached our destination, we all went back to sleep.

The Auckland Islands, discovered in 1806, have a wild, magnificent, awesome and fascinating beauty, to say nothing of an interesting history. They rank as the largest oceanic islands in the Pacific Sub Antarctic.

Lying between latitudes 47° and 52°, they are dominated by two volcanoes. The east coastline is cut with at least ten long, deep fiords and high valleys, while the west coast has towering, sometimes two-storeyed, majestic cliffs. There is a great diversity of vegetation in distinct zones: herb turf, tussock land with herbs, masses of southern rata with fascinating twisted and gnarled trunks and bright red flowers, sub-alpine shrub lands, moors of a mixture of dwarfed woody species, ferns and mosses, *Olearia lyallii* in the north, and hard cushions of bright green moss *Oreobolus pectinatus* and *Phyllachne colensoi*.

From an anchorage in Port Ross we zipped ashore in the Zodiac craft to the site of Hardwicke township, a settlement built on false reports and lasting from about 1830 to 1850, in Erebus Cove. A cemetery with graves of shipwreck survivors and a three-month-old baby (1850) and signs of the main road are all that remain.

Further up the coast we landed at Terror Cove, site of a German scientific expedition in 1874. Returning to the ship and sailing past massive basalt cliffs, we anchored off Enderby Island, one of the few areas ever leased, in 1895, for sheep and cattle.

We scrambled onto Sandy Bay through masses of giant kelp and equally large amounts of Hooker's sea lions. These are the rarest, most endangered species and the rookery is the world's third largest. Flopping and grunting all around us, the females were very protective of their young. However, the island sees few humans and the birds and animals were very tame, letting us get quite close. The huge skuas

were fascinating, lumbering down across the higher ground like human gliders trying to take flight.

Introduced blue (*Argente de Champagne*) rabbits were everywhere, scuttling under our feet, their burrows a great threat to sea lion pups. In warm sunshine we wandered the moorland, ablaze with subdued colour mainly from *Cassinia*, *Orebolusk*, *Myrsive* and *Drachophyllum*, dwarfed southern rata, lichens, mosses and herbs. On one of the bright green moss clumps I spotted a small *Geneiana concinna*, almost a bright mauve and endemic to the islands.

Huge royal albatross dominated the bird life. One would hear a slight 'whoosh' as the air moved when they zoomed from behind, a foot above our heads, circled and landed near our feet. Many were nesting in areas of shrub about a metre high with their young and they let us get to within a metre or so.

The whole island was alive with birds: Auckland Island shags, teals and dotterels, storm and 'giant' petrels, bellbirds, terns, snipes, pipits, shearwaters, Dominican gulls, sooty albatross and tomtits, to name but a few. Later we got to within feet of some of the island's rare, red crowned, green parakeets. Many of the above are endemic to the islands. Yellow-eyed penguins were equally close and friendly, although most were away moulting.

Back in the ship again we moved to Ranui Cove, named after one of the ships that serviced the Coastwatcher Service, and here we looked over the remains of their north quarters. The Coastwatcher Service was a small, almost unknown part of New Zealand's war effort with a most interesting history. Briefly, in August 1939 a German fuel-burning freighter, the *Erlangen*, slipped out of Dunedin, went south to a remote area of the Aucklands, spent months stocking up with rata wood and then sailed to South America. After burning



Hooker's sea lion. Photo by Olive Buckman

every spare part of the ship itself, it arrived in Puerto Montt, Chile, to find war declared. Scuttling the ship, the crew became POWs.

Realising how vulnerable the islands were for radar, the Coastwatcher Service was started with two bases in North and South Aucklands and one on Campbell Island. We were lucky to learn all this and more from our DOC officer who had spent a year on research, interviewing ex-members and collecting photographs.

Chugging down the east coast with its rugged high cliffs, pounding seas and distant views of volcanic plugs, we turned into and covered the length of Musgrave Inlet. At the head of the inlet we walked through the rata forest, literally alive with sea lions, to play with their pups on Lake Hinemoa.

We headed south again to visit two more fiords, Hanfield and McLennan Inlets and to view their huge waterfalls. We then anchored in Waterfall Inlet for the night. On the way Hooker's sea lions and yellow-eyed penguins swam alongside us like leaping porpoises, sooty albatross flew overhead and rock-hopper penguins wandered in front of yellow megaherbs and the most southern tree ferns on land.

We then turned into Carnley Harbour which separates the

main island from huge Adams Isle to the south. Enjoying the calmer waters of the harbour, we 'ooed and aahed' at the rugged, majestic coastline and waterfalls. Reaching the western end, the *Acheron* proceeded through the very narrow gap of Victoria Passage between Adams and Monumental Islands. What an experience! We stood on deck, arms around anything for safety, to capture on film the high, black, rugged, weirdly-shaped, tumbled volcanic rocks and the clear, emerald-green seas, while huge, white waves battered both us and the ship.

Returning to calmer waters, we sailed the length of North Arm to gaze at the area denuded by the crew of the *Erlangen* when gathering its rata stock. We then chugged across to the site of the *Grafton* wrecked in 1864.

Auckland Islands have a record for shipwrecks, at least eight with over 100 lives lost, and the stories of survival and ingenuity need to be read to be believed. Going ashore we saw the collapsed remains of a 'house on stilts' built by five survivors who lived there for 20 months.

At Camp Cove we searched for relics of a Castaway Depot. After so many wrecks, these were built on the New Zealand Sub Antarctic islands in the mid 1880s and were serviced by Government steamers until 1927.

Our final anchorage was in Tagua Bay, centre of the southern volcanic activity. Here, on the neck of land that joins the main island to Musgrave Peninsular, our objective was the southern Coastwatchers' hut, our final and most memorable shore excursion.

To visit the hut, dilapidated by weathering, time and seals, was like turning back a page of history. Built near the top of a hill, it comprised three main rooms, a covered way to a kitchen, and various store rooms. On entering the main door, complete with 'pin ups' of the period, my mind flew back to the war years. In the main living area a long bookshelf was full of hard-backed books and magazines of the era. Nearby a cupboard with a large Red Cross still contained bottles and tins of the period, including Kaolin, while below we found tins and bottles of war-time commodities. In one corner were a table and chair and here the radio operator had sat using his Morse key. How did we know? We had seen a war-time photo of him from our DOC officer's collection. The wires were still in the wall. Going outside to a radio mast, which could be lowered if ships were in sight, we followed the wires to the small 'watchers' hut. This was above the seals' reach. DOC has repaired the roof and aim to keep the hut intact as a part of history. The view from the hut was magnificent—the length of Carnley harbour to the east and North Arm to the west.

After an enjoyable last evening meal anchored in Tagua Bay, the Zodiac was lashed to the side as was everything possible both in and out of the *Acheron*, and one and all retired to their bunks, taking stocks of biscuits and cold drinks. Around midnight on the Wednesday we left Carnley harbour to then turn north and hit the rough seas of the South Pacific.

PS I finally achieved my wish to see Antarctica in January 1993 and hope to share the wonderful experience with members via both slides and a future article.

Olive Buckman

No national park is an island

In some ways national parks seem like islands of unspoilt nature in a sea of human development. But all sorts of things pass across the boundaries of national parks—people, feral animals, exotic plants—that means they are not truly isolated from the world around them. Nothing demonstrates this more clearly than a visit to a real island.

Lord Howe Island is a World Heritage area of volcanic mountains, coral reefs, rare plants and animals and even smaller offshore islands covered with seabird colonies 700 kilometres north-east of Sydney. It is not a national park. Farms, settlement and airport are on the lowland between two hilly park preserves. The park preserves are not clearly defined.

The whole island is managed by the Lord Howe Island Board, under considerable environmental constraints from the New South Wales government. The number of visitors is not allowed to exceed the resident population of the island, a few hundred. Most arrive on small aeroplanes. There is the occasional supply boat. Cats have been banned.

Lord Howe Island has a sorry history of invasion and extinction which has left the area, while still beautiful, sadly compromised. The plants and animals have origins in Australia and New Zealand but have developed separately, producing a number of species not found anywhere else. Since the first European visitor in 1788 a number of the island's endemic bird species have been wiped out.

A recent visit to the island showed why. The Lord Howe Island woodhen is quite unafraid of people. The providence petrel is attracted by clapping and yelling, coming to nestle in the dirt at your feet. Hunting rapidly reduced the numbers of these birds but it is the feral pig that nearly finished off the woodhen.

In 1980 the number of woodhens was estimated at about 30 birds living on the top of Mount Gower, where pigs could not climb. The



Mount Lidgbird, left, and Mount Gower across the lagoon at Lord Howe Island. Photo by Monika Binder

species was one of Australia's most endangered. A concerted effort by islanders eliminated the pigs; this is something that could only be done on an oceanic island. A captive breeding program funded by the National Parks and Wildlife Foundation allowed the birds to be reintroduced to new areas. They are now quite common on the mountain tops and in the lowlands; many residents have a pair of woodhens in the backyard.

Though the pigs have been shot out, there are other feral scourges. Despite a shooting program we saw a few goats near a cliff face. All the pet cats remaining on the island have to be desexed and no new ones can be brought in but there are a few wild cats still breeding. A move to restrict the breeding and entry of dogs is being opposed by the islanders. Kikuyu grass is moving into heathland.

Rats—I do not know whether these are introduced or native—are common. The rats eat the seeds of palm trees, the collection and germination of which is one of the few local industries. The islanders, with their dogs, used to hunt rats for a bounty of sixpence

a tail. Now the rats are baited, which is less effective. One old islander advocated a return of the bounty.

Some decades ago, in order to control the rats, someone introduced the masked owl from Tasmania. These owls discovered a taste for young woodhens. The locals started shooting them but this has been stopped, reportedly because of low owl numbers in other parts of Australia. So the woodhen, back from the brink of extinction, will suffer at this misguided attempt at biological control of another species.

Apart from such twists I am optimistic that Lord Howe Island will suffer less than many mainland national parks. Its greatest defence, apart from the wide expanse of water, is economics. It costs \$500 to get there. Accommodation must be booked in advance and is expensive. Food and restaurants are expensive. There is not much to do apart from natural pursuits—walking, climbing, boating, swimming. So the few tourists tend to be fairly well-off nature lovers. This has also turned the tourist-loving residents into nature lovers.

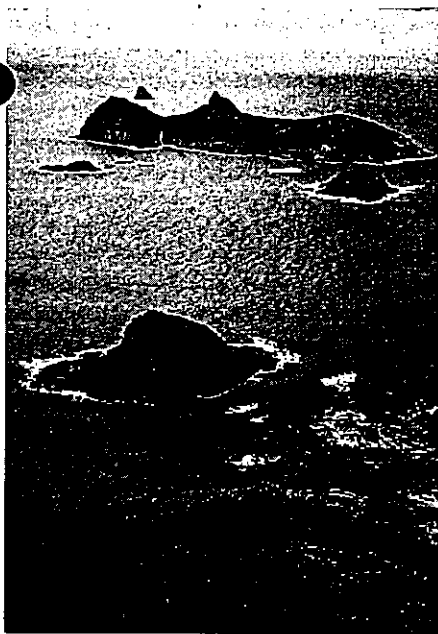
What are the implications for

mainland national parks? Should we build moats around them to keep out feral animals, plants and bushfires? Or to keep in bushfires? This seems rather extreme and condemns the rest of the countryside to life outside the national parks system. It would be better if there were a range of landscapes between fully exploited and natural.

What are the possibilities for eliminating, say, pigs from Namadgi National Park? How could they be kept out?

More importantly, Lord Howe Island shows how communities can live in relative harmony with an outstanding natural environment. They live in a World Heritage area and know that its preservation is their livelihood. They continue with desultory attempts at farming and fishing. But the big cash flow, and support for local services, comes from the visitors. Perhaps this example needs to be shown to the people who live near Shark Bay in Western Australia or along the coast of North Queensland.

Roger Green



The Admiralty Islands viewed from a hilltop on Lord Howe Island.

Photo by Roger Green

Travellers' Tales part IV

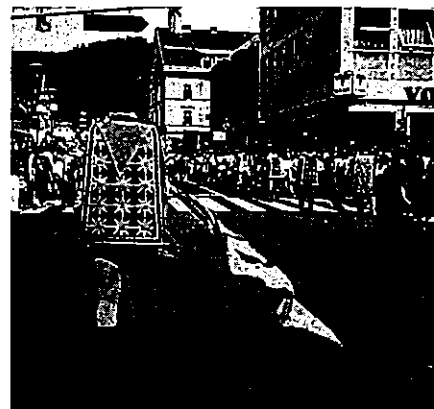
Judith Webster continues the story of her visit to Europe. When we left her last issue she was with Beverley Hammond seeing the sights of Austria.

On the Saturday Beverley and I went into Spittal, which was celebrating its 800th anniversary. There were various groups performing in the streets; a couple of these were international visitors—one was Italian flag wavers. They wore bright costumes of yellow, red and green and carried colourful standard-type flags which they waved in great sweeping manoeuvres and tossed high in the air. A band of trumpets and drums accompanied the flag wavers and the drums rrrrrr-r-r-rolled before they tossed the flags.

The Queen's Own Highlanders were the other visitors to Spittal. Regimental marching tunes had been replaced by a pop singer and swinging Glen Miller jazz. A more traditional element was introduced with a performance by sword dancers and a rendering of 'Scotland the Brave'.

Beer and food stalls (pigs being roasted on spits) were set up in the streets and a festive air prevailed. After lunch there was a grand street parade in which 1200 people participated. It was extremely well done with groups in various costumes representing the history of the area—going back even further than the 800 years of the city itself! This grand procession took about two hours to pass by.

From Millstat we travelled by train to Vienna for three days. We tramped all over the city admiring the splendid architecture. At St Michael Platz, the forecourt had been dug up for re-paving and a rich archaeological site



Italian flag wavers in Spittal. Photo by Judith Webster

uncovered. It is at present on display to the public and contains a whole mass of buildings and remnants of other structures, including drainage gutters, from three main periods—Roman, Mediaeval and the 17th Century.

We persevered with our sight-seeing and took a ride on Vienna's famous huge old ferris wheel and then went in search of the Blue Danube. We found it hiding behind some builders' hoardings and as access to the riverbank seemed difficult, we trudged half way across a bridge to get a better view. I wasn't impressed with my glimpse of this wide, grubby river as it flowed through the unexciting plains of this eastern part of Austria and merged into the smog-hazy horizon. More pleasing was a trip to a lookout point in the famous Vienna Woods and stroll back down through vineyards.

We couldn't afford a night at the opera—\$200 seats or cheaper ones located behind a pillar being all that were left! Instead we enjoyed a concert of waltz and operetta music by Strauss and Lehar, and also some Mozart arias in an impressively ornate concert hall.

Finally it was time to leave Vienna; leave Austria; leave Europe—and return to Australia. So ended a wonderful trip but this traveller was now ready to return home and enjoy the delights of Canberra in springtime.

Judith Webster

Why protect the Deua?

The NPA is one of several conservation organisations that has made submissions to the NSW Wilderness Assessments. Part of its submission recommended that the Deua wilderness, presently outside the national park, be made a part of that park. Parts of the Deua, including old-growth forest, are currently being logged. The Wilderness Society is running a campaign to stop logging in the Deua—this article, courtesy of The Wilderness Society, explains why.

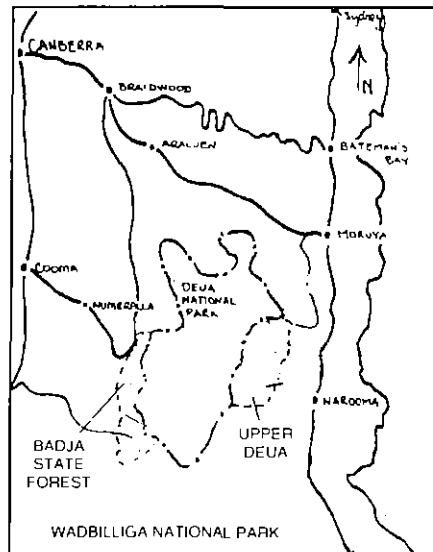
Within 200 kilometres of Canberra the Deua wilderness area is being destroyed by logging, and it is being done with your taxes. This operation isn't even making a profit, and it's happening in a place that government scientists have said should be in a wilderness national park.

The Forestry Commission has generated a nearly \$2 million debt between 1985 and 1991 by its subsidisation of private logging in the Narooma Management Area (which incorporates the eastern part of the Deua), according to 1992 research by Macquarie University economist Dr John Formby.

The Forestry Commission is selling off our forests to the loggers at such low prices that they're not even covering costs. This cheap wood is a direct subsidy to the industry, on top of the subsidy in the form of logging roads and inadequate supervision by the Commission. The bottom line is that we pay the loggers to wreck our forests. This situation has been documented independently by the Resource Assessment Commission.

The NSW government is in breach of the National Forest Policy which it signed last year. It is also in breach of logging conditions imposed as a result of an environmental impact statement for the eastern Deua.

These conditions were required by the Environmental Planning and Assessment Act (NSW). Over in the western Deua (Badja), log-



The Deua wilderness area: 67 700 hectares is protected, 16 700 hectares is not.

ging is occurring without an environmental impact statement ever having been done.

Both the National Forest Policy and the logging conditions require wildlife studies to be conducted before logging in wilderness and high quality old-growth forests.

Despite these requirements, logging and road construction are continuing without pre-logging surveys in both the eastern and western Deua wilderness.

The NSW National Parks Service assessed the Deua wilderness and found it worthy of inclusion in the Deua National Park. Yet the NSW government hasn't made up its mind and the area is being logged while it procrastinates.

Endangered species exist in both the eastern and western Deua wilderness, yet the Forestry Commission is being allowed to log both of these areas. Independent studies of the unprotected catchments in the eastern Deua by a wildlife ecologist have found three endangered species—the powerful owl, the sooty owl, and the tiger quoll. Australia's rarest fish species, the Australian grayling, has also been found in the unprotected catchments.

In the western Deua, similar independent studies have found the squirrel glider, another endangered species. In addition, there have been reports of three other endangered species in nearby forest—the yellow-bellied glider, sooty owl, and glossy black cockatoo. Logging the habitat of endangered fauna is a clear breach of the Endangered Fauna Act.

Logging occurring on the boundaries of the national park is causing damage to the national park itself.

Logging in these areas of the Deua wilderness next to the park is causing silt to flow into the national park, damaging stream ecosystems. Weeds introduced during logging operations will enter the park through these degraded creeks. One of the largest pristine catchment areas in NSW is under threat.

Despite the closeness of this unique area to Canberra and Sydney, its potential as a site for eco-tourism is not being promoted. Carefully monitored tourism would provide a far more sustainable income than logging, which is totally uneconomic in the area.

If you want to help stop logging in the Deua, there are two important steps to take:

- write to the Premier of NSW and tell him that you want him to stop logging in areas that have been nominated and identified as wilderness in NSW—such as the Deua, New England and the Werrikimbe. Ask him to provide protection for these wilderness areas that lie outside national park boundaries. His address is Parliament House, Macquarie St, Sydney NSW 2000.
- contact The Wilderness Society about details of any activities and actions to protect our wilderness forests. The Canberra Branch phone number is (06) 257 5122.

Call for more plantations

'Why aren't we growing more plantation trees to meet the country's need for timber?' was a question put to our speaker at the April meeting. Tom Aldred, District Forester based at Queanbeyan, spoke frankly about forest operations in his area. He is responsible for 80 000 ha of forest in a sector of the Great Dividing Range from Braidwood to Canberra and Nimmitabel with eastern boundaries on the Morton, Deua and Wadbilliga National Parks and a western boundary extending to Young. Protesters were active in the Badja State Forest expressing concern that obligations to protect endangered species of fauna were not being observed. Tom ranged widely in his talk and responded to questions from members over issues of forest management, maintaining the diversity of forest ecosystems, the role of the NSW NPWS in assessing areas before logging commences, the development of sturdier pine tree composite products and the selection of specific trees for retention and for cutting. He stressed the importance of the responsible management of old and regrowth forests and pointed out past and present problems with plantations.

I decided to explore the plantation issue a little further and Laraine helped me to locate three current publications in the NPA library.

The Final Report of the Forest and Timber Inquiry by the Resource Assessment Commission was published in March 1992. The National Plantations Advisory Committee advised the Inquiry that of the one million hectares of marginal agricultural land suitable for plantations, about 460 000 hectares are within a 200 kilometre radius of existing processing facilities. Communities would need to accept a significant dislocation of regional industry and employment if plantations were grown. Problems for private operators include: taxes, the

recent removal of special tax incentives, the need to provide returns to long-term investors, royalty payments, and the underpricing of timber from native forests. The report states that conservation groups which see the benefit of plantation establishment being the reduction of logging of native forests, are not considering the greater environmental impact of the establishment, maintenance and harvesting of both exotic and native plantations. The latter require herbicides, more roads and more attention, and lead to greater decline in soil productivity, increased nutrient levels in streams and prolific weed growth. Catchment protection, soil conservation, lowered water tables and reduced salinity are on the plus side for plantations.

The National Forest Policy Statement developed in 1992 by the Commonwealth, state and territory governments attaches 'utmost importance' to sustainable management of Australia's forests. The statement headed *Plantations* says the governments aim to: increase commercial development on cleared agricultural land; improve productivity by means of improved technology, breeding of genetically improved stock and selection of species; and encourage growers to expand plantations to satisfy specific requirements. The governments will: establish a sound legal basis for separating forest assets from land assets as they relate to private landholders; examine forest investments pertaining to taxation, exports and the attraction of investment capital on what are necessarily long-term projects; review land zoning policies regarding commercial planting on private land; examine the removal of local government disincentives to the establishment of plantations on cleared agricultural land and the provision of technical advice to would-be growers; and give support for Landcare

and other groups which support reforestation programs.

Finally I turned to the CSIRO magazine *ECOS*, no. 74, Summer 1992-93, which points out that timber imports exceed exports by \$2 billion a year. Currently 650 000 hectares are under radiata pine and less than 100 000 hectares are eucalyptus. The best land for plantations is also the most productive for agriculture. Some marginally productive agricultural land has been identified but a 1987 forest industry proposal to increase current plantations by nearly 600 000 ha will be affected by the many economic and social factors relating to their availability.

It is important to increase output from existing plantations.

Research teams have developed complex tree growth models to monitor how trees respond to different growing conditions related to rainfall, soil fertility and topography, with the ultimate aim of increasing productivity. The knowledge that nitrogen is important in boosting tree growth reinforces the value of leaving harvest residues to decay in the forest and of growing nitrogen-fixing legumes between trees. A project in Wagga is currently using sewage effluent to irrigate tree plantations. Researchers will monitor growth deformities and the wood density of fast-growing trees.

I have been highly selective in the extracts used and refer interested readers to the documents in their entirety.

Beverley Hammond

What is ACTEW's future water supply strategy?

Cary Reynolds will speak on Thursday 15 July, 8pm at the Griffin Centre.

Tidbinbilla Pioneers

Over the weekend of 17 and 18 April, the Tidbinbilla Pioneers Association held a tenth anniversary celebration in the Tidbinbilla Valley. Over one hundred descendants and other persons interested in the heritage of the valley attended.

The Saturday program consisted of visiting homes still in occupation or reconstruction and sites of buildings which had long since disappeared. All standing houses have been registered by the National Trust as having heritage significance and as part of the National Estate of Australia. They are also listed in Sites of Significance in the ACT, volume 7, published by the NCDC in 1988.

The first to be visited was Congwarra on the western side of the Cotter-Tharwa road at the lower end of the Tidbinbilla Valley. This home is a good example of a pise. Originally a four-room cottage, it was built in 1910 for George Green and George Hatcliff. Later additions have been a verandah, kitchen, living room and two men's rooms on the western end.

Nildesperandum is on headwaters of Hurdle Creek and can only be reached by road through the pine forest and locked gates. It is of earlier (1892) pise construction and was built for Henry Gillman, an eccentric poet who was the bane in the life of all the occupants of properties through which he passed on the way to Queanbeyan. It was his practice to remove or leave open all the slip rails or gates, said to be about twenty, that he passed through because of his belief in rights-of-way. These activities at times landed him in court.

Gillman had a contemporary in Charlie Carter of Tin Mine fame. Both were compulsive writers and published their own works. Being isolated was no reason for not being literate and capable of extensive writings. Lyall Gillespie has a copy of Gillman's poems, printed in small type of a size that

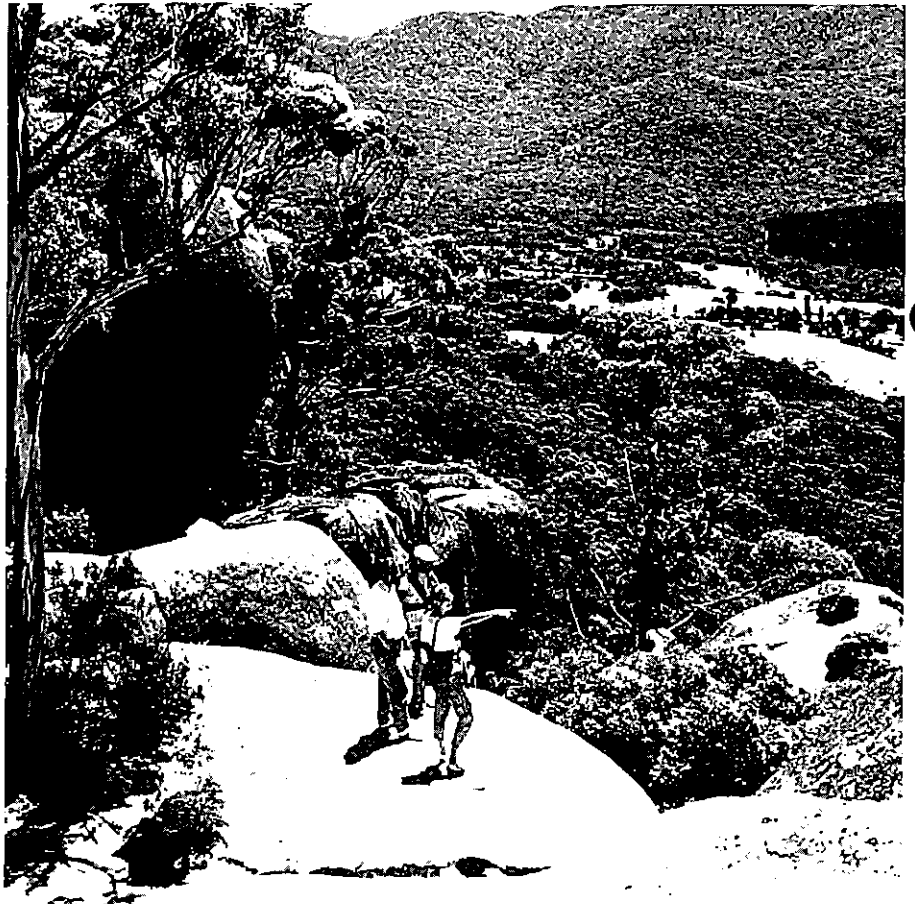
would conveniently fit into a shirt pocket. Lyall's copy was rescued by a friend from a heap of rubbish discarded on a tip.

The house has a lovely peaceful location on a knoll overshadowed by the Tidbinbilla Range. The steel chassis of a cart with four steel wheels was the centrepiece of the front lawn which sloped down to an upper tributary of Hurdle Creek rather than have a view over the valley. No doubt a nicely sheltered position. It is of a four-room construction with weatherboard linings and a verandah addition.

In 1837 Tidbinbilla was the home of Eliza and George Webb, the first known settlers in the Tidbinbilla Valley. A bare paddock is all that remains of the

home. In place of it, and adjoining, is a modern home, shearing shed and outbuildings. Originally this area was considered too wet for sheep, but by 1945 the open grazing land with improvements was able to graze 2000 sheep.

After lunch at the barbecue area of Tidbinbilla, the party moved on to Rock Valley, which was first occupied by the Green family in 1895 when their home of two slab rooms and one pise bedroom was commenced. Extensive additions were made to the home in pise construction and it was occupied by the Green family until the property was resumed for the Tidbinbilla Nature Reserve. Brothers Keith and Eddie Green were both in attendance for the celebrations.



*Looking down over modern-day Tidbinbilla.
Photo courtesy of ACT Tourism Bureau*

In the June 1984 issue of the *NPA Bulletin*, attention was drawn to the run-down and decaying condition of the home and a call was made for activity to arrest the onslaught of decay and erosion of the vulnerable pipe construction. It is pleasing to note that work has been carried out by a service staff member to make a home fit for his occupation. Wall cracks have been stopped, windows and roof repaired and, with some internal painting, it will be fit to live in by the time this *Bulletin* is printed. Work is still required to weatherproof the plaster on the outside walls. All of this no doubt brought a glow of satisfaction to the Green brothers.

A model eucalyptus still, built initially as a Conservation Service exhibit in the Australia Science Show, was demonstrated. Although it was charged with leaves and the water boiled, there was insufficient time to see any eucalyptus oil produced. The outfit will become a regular exhibit in the ranger-guided tours of Tidbinbilla.

Then came the depressing part of the tour when sites of homes long since removed in the guise of tidiness or of maintenance problems were visited. All signs of the previous homes had gone except for some remaining trees, weeds or blackberries. What were the homes of previous generations had disappeared. It was particularly poignant when one lady, in describing how she grew up on the site and trying to describe features, broke down and burst into tears when she realised that all that remained were her memories. Nothing is permanent in this world, decay is inevitable, but to remove all signs of a previous generation's life gives scant regard to our heritage, of which little remains. All objects that have the potential of having some degree of permanence should be retained in our national parks and reserves.

Reg Alder

Conserve remnant grasslands

The NPA has once again been busy making submissions to a variety of inquiries being held by the ACT Legislative Assembly and other bodies.

Submissions since December 1992

- Comments on ACTEW Environment Plan
- Inquiry into Feral Animals and Plants
- ACT Government's Proposed Rural Lease Policy
- Draft Commonwealth Coastal Policy
- Preliminary Assessment of Orroral Valley Recreation Development
- Preliminary Assessment for North Watson

Inquiry into the environment aspects of rural leases

The Rural Lease Policy Discussion Papers developed by the Department of Environment, Land and Planning in response to the Legislative Assembly's inquiry address many of the relevant issues. However, the Association feels that the department does not give adequate emphasis to the need for the identification and appropriate management of remnant native grasslands and woodlands on rural leases.

In our submission to the inquiry, the NPA emphasised the need for the protection and conservation through appropriate management strategies of remnant woodlands and native grasslands on rural leases. We noted, for example, that of the 42 sites of occurrence of low altitude native grassland communities identified within the ACT, 25 are on rural lands.

We put the view that security of tenure must be linked to landcare to ensure that rural leases are managed for both ecological sustainability and for the protection

and enhancement of remnant native vegetation. We envisaged leases of up to 50 years with appropriate whole farm management plans.

The NPA is hoping that these recommendations will be picked up for inclusion in the final version of the policy.

Inquiry into feral animals and plants

The NPA has also made a submission to the Conservation Heritage and Environment Committee of the Legislative Assembly's inquiry into the problem of feral animals and plants. The NPA believes that this is a significant ecological problem, for which suitable control mechanisms are urgently required. The Association believes a coordinated approach to the problem is required, and suggests the following steps:

- identifying areas not yet significantly affected by pest species and ensuring their continued protection
- identifying those areas which are vulnerable to attack—in particular natural habitats which have restricted distribution in the ACT, and ensuring their protection
- moving rapidly to deal with those species which have not yet firmly established themselves
- developing a set of well-targeted control measures which are adequately funded and properly monitored and followed up
- supporting control measures with suitable education programs
- the continued use of existing control methods
- development of alternate control methods, including biological control
- ensuring the ACT coordinates its control efforts with the relevant NSW authorities along borders.

Calendar

JUNE

- Thursday 3 Committee meeting, 7.30 pm, 21 Hyndes Cr, Holder. Beverley Hammond, 288 6577(h).
Thursday 10 Namadgi subcommittee, 7.30 pm, 87 Shackleton Circuit, Mawson. Syd Comfort, 286 2578(h).
Thursday 27 Environment subcommittee, 7.45 pm, 43 Fitchett St, Garran. Tim Walsh, 274 1465(w).

JULY

- Thursday 1 Committee meeting, 7.30 pm, 21 Hyndes Cr, Holder. Beverley Hammond, 288 6577(h).
Thursday 8 Namadgi subcommittee, 7.30 pm, 87 Shackleton Circuit, Mawson. Syd Comfort, 286 2578(h).
Wednesday 7 Outings subcommittee, 7.30 pm, 1 Fitzmaurice St, Kaleen. Mick Kelly, 241 2330(h).
Thursday 22 Environment subcommittee, 7.45 pm, 43 Fitchett St, Garran. Tim Walsh, 274 1465(w).

AUGUST

- Sunday 1 Deadline for September *Bulletin*
Thursday 5 Committee meeting, 7.30 pm, 21 Hyndes Cr, Holder. Beverley Hammond, 288 6577(h).
Thursday 12 Namadgi subcommittee, 7.30 pm, 87 Shackleton Circuit, Mawson. Syd Comfort, 286 2578(h).
Thursday 26 Environment subcommittee, 7.45 pm, 43 Fitchett St, Garran. Tim Walsh, 274 1465(w).

SEPTEMBER

- Thursday 2 Committee meeting, 7.30 pm, 21 Hyndes Cr, Holder. Beverley Hammond, 288 6577(h).
Thursday 9 Namadgi subcommittee, 7.30 pm, 87 Shackleton Circuit, Mawson. Syd Comfort, 286 2578(h).
Thursday 23 Environment subcommittee, 7.45 pm, 43 Fitchett St, Garran. Tim Walsh, 274 1465(w).

NPA Bulletin

National Parks Association of the ACT
PO Box 40 Chifley ACT 2606

Registered Publication No. NBH0857

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General meetings

Held at 8 pm, Room 1, Griffin Centre, Bunda Street, Civic.

Thursday 17 June: Duke of Edinburgh's Award Scheme

An expedition officer from the Duke of Edinburgh's Award Scheme will discuss the philosophy behind the awards and how the organisation fosters environmental awareness in participants.

Thursday 15 July: ACTEW

Cary Reynolds will speak on ACTEW's Future Water Supply Strategy.

Thursday 19 August: Annual General Meeting

At the conclusion of the formalities Olive Buckman will give a slide presentation on her recent trip to Antarctica.

Thursday 16 September: Ducks Unlimited

Tony Sharley will address wetlands and river management issues and the role of Ducks Unlimited (Australia).