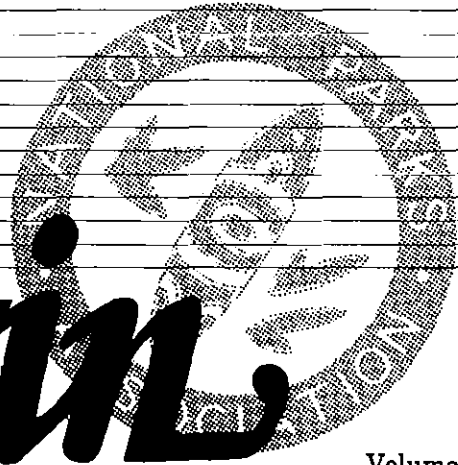
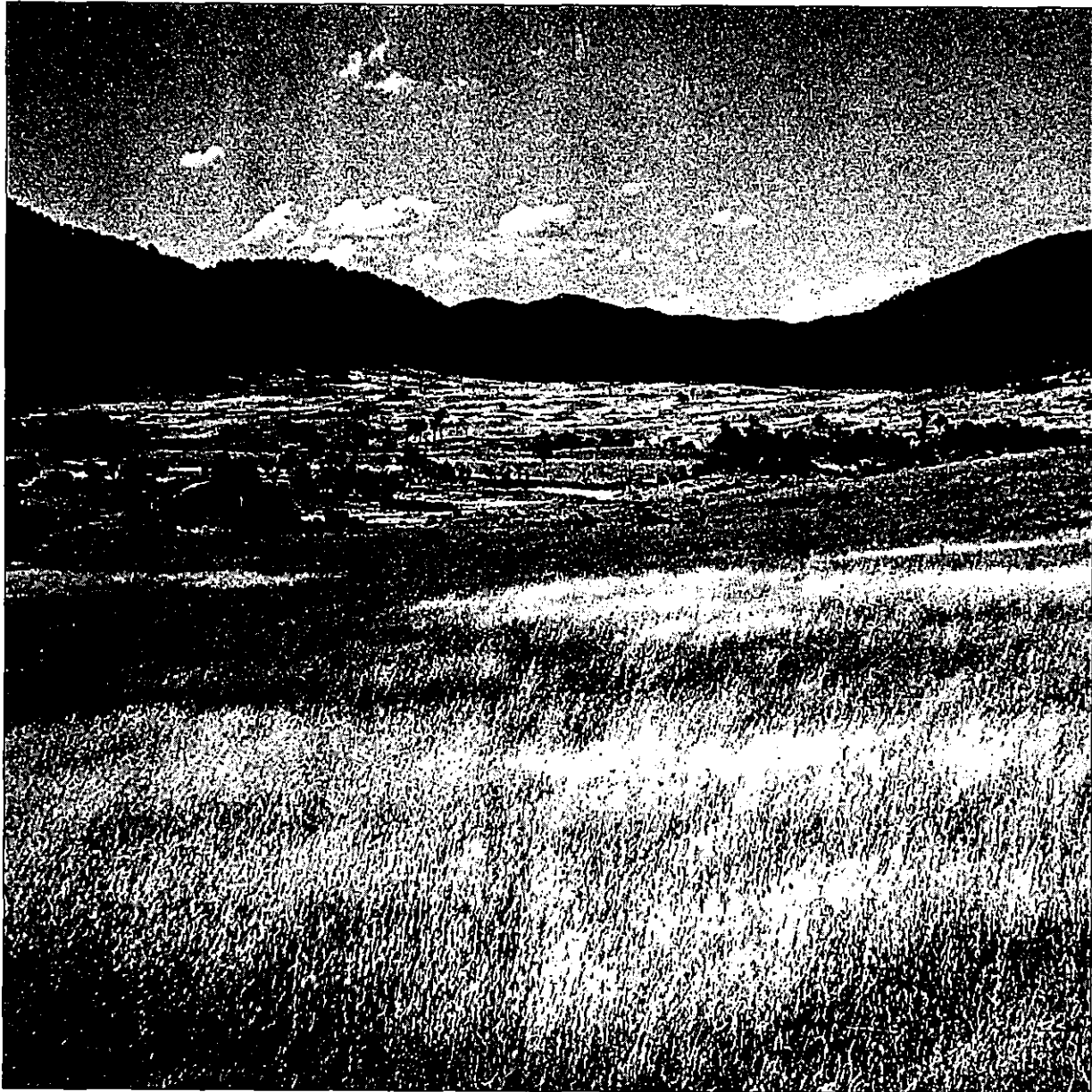


NPA Bulletin



Volume 27 number 1
March 1990

NATIONAL PARKS ASSOCIATION FACT INCORPORATED



What's up at Gudgenby station

Rescue on Clemes Peak

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Cover

Photo: Reg Alder

Kangaroos have taken over the fields of Gudgenby station since the removal of cattle in 1989. A view towards the wilds of Namadgi National Park.

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.
- Co-operation 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.

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Subscription rates (1 July - 30 June)

Household members \$20 Single members \$15

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Concession: half above rates

For new subscriptions joining between:

1 January and 31 March - half specified rate

1 April and 30 June - annual subscription

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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.

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

Deadline for June issue: 1 May, 1989.

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

Printed on recycled paper by Union Offset Co Pty Ltd, Fyshwick, ACT.

ISSN 0727-8837

President's foreword

Friday, 15th December 1989 was an important day for Australia's environment because it saw the first public hearing of the Resource Assessment Commission. The RAC was established by the Australian Government last year to help resolve questions about the future of Australia's natural resources and its first reference is to examine options for the use of Australia's forest and timber resources. In his opening address the chairperson, Mr Justice D G Stewart, explained that the Commission is an independent body which will listen to all points of view and that its assessment of material, where absolute standards cannot be established, must



reflect a balanced appreciation of current information and opinion. He said that the Commission was unique, without equivalents overseas and if the outcome of this inquiry is considered a success it may well affect the style of future

decision making by governments.

There remains, however, the concern that conservation values may not be adequately represented in the proceedings of the Commission and that proponents of environmental viewpoints may not be adequately resourced for the task. Anyone concerned about the environment should take an active interest in the progress of this inquiry.

Syd Comfort

Planning a natural capital

The National Capital Planning Authority is required to prepare a broad plan for the whole of the ACT in time for it to be approved by the Commonwealth Parliament by the anniversary of ACT self-government on 11 May 1990. This process was initiated by the publication of a draft plan towards the end of 1989. Public comment was invited and the NPA responded to this and to a Parliamentary Joint Committee inquiry on the proposed plan which was conducted concurrently.

In its submission, the Association focused on areas set aside as open space in the draft plan. These areas largely followed earlier plans so included the land that could reasonably be nominated as open space. The focus of attention is then, whether or not the significance of this open space is adequately recognised, whether it is properly protected for the long term and whether the permitted uses and management requirements are satisfactorily specified.

The Association has submitted that the natural setting of Canberra is fundamental to its role as national capital and that, indeed, it may be as a capital

placed in natural surroundings that the unique and distinctive standing of Canberra will be found. The submission proposed that this important principle be recognised as an essential part of Canberra's national significance.

The Association has expressed particular concern for the long term protection of the open space areas to ensure their retention and non availability for other used. A significant issue in this regard is whether control of these areas should reside with Commonwealth or Territory authorities. While recognising the value of resident opinion acting through territory processes as a strong force acting to protect open areas especially those located near urban areas, the submission concludes that in open areas of national significance the best protection is afforded by vesting control in the Commonwealth Government. In the future, after Territory legislative and administrative processes have matured, experience may indicate the desirability of moving towards greater Territory control. This is, after all, only the first step in what will be a continuing process of planning.

The submission canvasses other issues: the need to protect the whole of the Murrumbidgee corridor; the desirability of identifying Namadgi National Park and Canberra Nature Park in the plan; the need to place greater stress on management plans for open space areas; the need to spell out permitted land uses in open space areas more precisely; the need to limit extension of walking tracks in some areas, particularly wilderness, and the desirability of requiring proposed works in open space areas to be publicly notified.

The National Capital Planning Authority has, bearing in mind the tight schedule placed on it, sought wide consultation. In resolving the many issues so raised, the authority will face its first major test.

Syd Comfort

MEETINGS

Con Council at Braidwood

The Conservation Council, of which the NPA is a member, met at Braidwood in December with morning and afternoon sessions covering a wide range of issues.

Organisational issues considered included proposed changes to the constitution relating to the position of working groups, the desirability of introducing the category of individual member and funding of Council activities.

The Forest Working Group has been pressing for Commonwealth action to protect the south east forests including use of its corporation powers. The group co-ordinator, AJ Brown, has produced an excellent media kit on forest issues.

In response to concern about NSW Government actions to dispose of crown lands, the Conservation Council has developed a policy which it will pursue in an effort to protect these lands. A Public Assets Working Group has been established and would welcome new members.

The Urban Working Group has been concentrating on preparing comment on the draft National Capital Plan and is now shifting its emphasis to a consideration of the Territory Government's proposals for legislation on planning, leasing, heritage and the environment. Particular concern was expressed during the meeting about heritage provisions in the Government's discussion paper on the legislation.

The Council will express its concern about the environmental impact of a number of development proposals in Kosciusko National Park including a Snowy Mountains effluent/sewerage scheme and development of resort accommodation at Bullock's Flat.

The Council is reviewing its Policy Statement which was developed early last year and seeks comment from member groups.

The Council's new director, Rodney Falconer, has taken up duties.

Syd Comfort

Association supports a natural Canberra Nature Park

The National Parks Association (ACT) has said that the management philosophy of Canberra Nature Park should be to preserve the landscape and bushland rather than permitting the park to become an urban park with formal conditions and developments. The entire area of the park should be protected under the Nature Conservation Ordinance or equivalent new legislation.

In its submission to the ACT Parks and Conservation Service the Association suggested that internal zoning in the park should allow for a variety of land uses - flora and fauna reserves, areas where horse-riding is allowed and so on. In some areas a return to pre-settlement conditions could be attempted. The whole area should be protected from development and governed by a management plan which should be prepared as a matter of urgency. An inventory of natural and cultural resources would assist in this.

The Association wrote that management tracks and controlled burning should be kept to a minimum. No grazing should be allowed in nature conservation areas. Commercial activities and motor vehicles should be excluded from the park. Programs for the control of weeds and regeneration of native flora should be developed with community groups.

For education purposes, audio-visual materials, databases, reading material and project activities could be run through the Canberra library system or resource centres built near the park.

Parks & Conservation Cmte

Appointments to the newly revised ACT Parks and Conservation Consultative Committee were finalised in November 1989, during the last days of the Follett Government. The NPA is again represented on the now eight-member committee. The committee's terms of reference are to: '... advise the Minister responsible for the ACT Parks and Conservation Service on issues relating to park management, nature conservation, and outdoor recreation in the ACT, and to provide a point of liaison and communication with community interests'.

The committee convened on 14 December 1989. The chair, Professor Peter Cullen from the University of Canberra, was interviewed on WIN news that evening. Major items to be dealt with over the next few months are:

- February - ACT planning
- Very fast train

March - Murrumbidgee River corridor and/or Jerrabomberra wetlands management plan

April - Canberra Nature Park.

During January the committee considered the NPA proposal to add the northern Cotter catchment area to Namadgi National Park. The committee's advice to the minister is currently being prepared.

A subcommittee has been formed to investigate the suitability of the Mount Tennant and Blue Gum Creek areas for addition to the park, and it will report its findings to the committee in the next couple of months.

If any NPA members have information or advice relating to any of the topics which they think the committee should know about, please contact me or a member of the NPA committee soon.

Anne Taylor

NPA Administrative Assistant

Interpretation at Namadgi

How do you interpret a 94,000 hectare national park, the existence of which a booming nearby urban population is hardly aware?

Gudgenby Nature Reserve was declared in 1979 after approximately 20 years of community group proposals and departmental investigations. The reserve incorporated pastoral valleys and rugged ranges in the southern portion of the Australian Capital Territory. A small visitor centre was built just inside the reserve some 50 kilometres south of central Canberra.

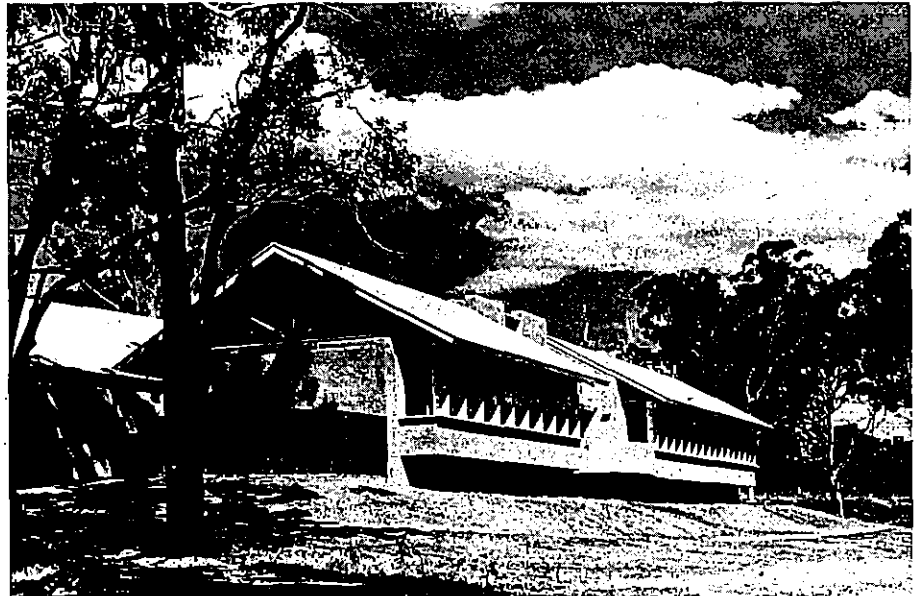
In 1984 Namadgi National Park was declared incorporating the Gudgenby Nature Reserve and much of the Cotter River Catchment. The new park covered 40 per cent of the ACT and included subalpine peaks over 1800 metres - the northernmost extension of the Australian Alps.

Namadgi, Kosciusko National Park and the Victorian alpine parks come under the Australian Alps National Parks Memorandum of Understanding, a cooperative management agreement signed by State, Territory and Commonwealth ministers in 1986.

The problem

The transition from Gudgenby Nature Reserve to Namadgi National Park was accompanied by an increased interpretative effort at the site-specific level, especially the establishment of walking tracks. There was also an increase in ranger-guided interpretative activities. However, it soon became clear that the printed materials and the visitor centre were inadequate for the new park.

Whereas access to Gudgenby Nature Reserve was from the south side of Canberra, the much larger Namadgi National Park could be reached by exiting Canberra on its western side as well - in fact there are six widely dispersed ways that a motorist could enter the park from the ACT. The location of the visitor centre no longer made sense.



*The new Namadgi visitor centre.
Photo: Reg Alder.*

Similarly, the Gudgenby Nature Reserve brochure went out of date and was replaced by three A4 handouts designed as temporary measures. They were not very visitor-friendly and, due to the location of most facilities in the park, they tended to carry a Gudgenby bias.

In 1986 a management plan for Namadgi was released with an accompanying community information campaign. This was perhaps the first community-wide media exposure for Namadgi. While it is an exaggeration to say that nobody in Canberra knew about Namadgi before 1989, it is fair to say that many Canberrans went further afield for their national park visits.

The solution

In 1989, park management saw the inevitable increase in park visitation as an opportunity to interpret the park in such a way as to set appropriate visitor expectations and standards of behaviour.

Map and guide

Firstly a colourful map and guide to Namadgi National Park was produced featuring original artwork by Bev Bruen and photos by Rob Blakers and Henry Gold. The text covers natural and cultu-

ral topics and brings together the park rules and regulations in a way that emphasises minimum impact techniques.

The high quality colour map is based on copyrighted artwork from the AUSLIG 1:100,000 Australian Capital Territory topographic map. The overlays were modified to highlight the features and facilities of Namadgi National Park. The map is bordered by descriptions of the 18 signposted walking tracks and 6 access roads. This publication has been selling well (price \$2) from ACT Parks & Conservation Service outlets.

The new visitor centre

Early in 1989 construction was commenced on the new Namadgi National Park visitor centre located just south of Tharwa village. The new building is many times larger than the old and includes large display areas and a 66 seat theatre as well as office space. The location is as central as possible to all the park access roads, is 'on the beaten track' as far as the standard ACT tourist drive is concerned, and is only 8 kilometres from the edge of the urban area.

continued overleaf

Namadgi interpretation

continued from previous page

Two briefs covering interpretation were put out to tender in May 1989 - one relating to the design of displays and the other to the production of an audiovisual. The briefs identified aims including orientation to Namadgi and the southern ACT in general, and environmental education. The chief objective for the audiovisual was to inspire viewers to visit the park. The successful contractors are designing their productions based on detailed storylines developed by park staff and interested community groups. The visitor centre is scheduled to open in mid-1990.

Staff involvement

One hallmark of the major projects for 1989 has been the commitment on the part of management to involve staff at ranger level. A large amount of staff time has been allocated to the preparation of text and map specifications for the map and guide and to the development of briefs and storylines, and liaison with contractors for the visitor centre projects.

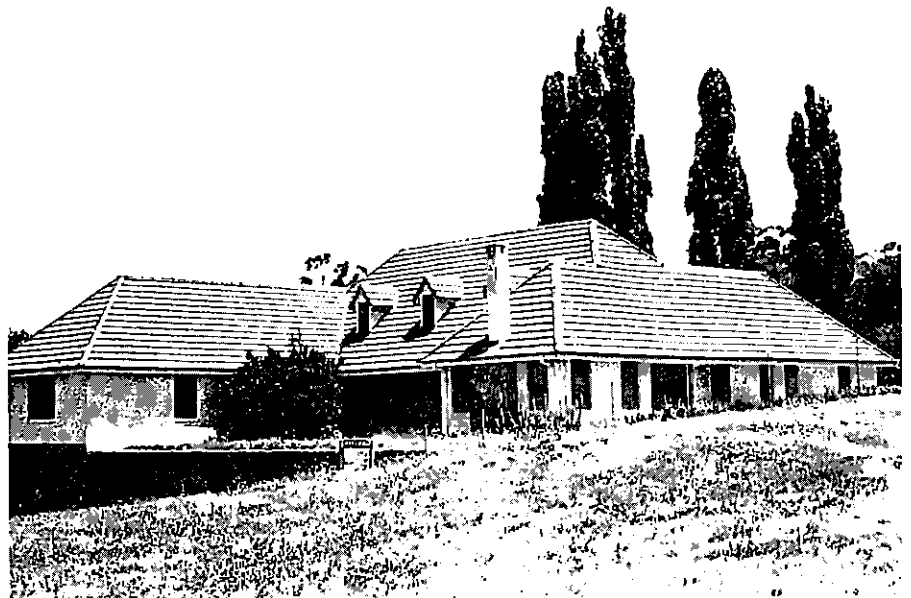
Evaluation

There is an expectation that these efforts will raise local awareness of Namadgi National Park. This is being tested by a telephone survey.

In a situation such as faces Namadgi, a 'keep quiet' approach could only invite all the management problems associated with visitors who are unaware of rules, regulations and appropriate behaviour. To get these things across in an informative and enjoyable (even inspirational!) way, and to be able to do it in advance of large-scale visitation, is a golden opportunity to establish a high standard of care for the park for years to come.

Joss Haiblen

Joss is a ranger in Namadgi National Park. Reprinted from the Australian Ranger Bulletin.



Gudgenby homestead: cultural heritage?

Gudgenby report proposes compromise

Consultants to the ACT Parks and Conservation Service have recommended a mixture of open paddocks and revegetation with native species for Gudgenby station in Namadgi National Park. The recommendations are contained in a report on the cultural and natural values of the old station, prepared by Scenic Spectrums in 1989 and released to *NPA Bulletin* in February.

The report is presently being considered by advisory committees on parks and heritage and by planning and conservation agencies. A decision will be made eventually by the ACT Government.

As the pages of *NPA Bulletin* have witnessed, the future of Gudgenby station has been subject to considerable controversy. This controversy demonstrated the potential for conflict between the conservation of cultural and natural heritage in a national park. The report puts forward a compromise.

Cattle grazing on the property ceased last year; now kangaroos

jump through the long grass and over deteriorating fences. The buildings are deserted; some people fear vandalism may occur. The ACT Parks and Conservation Service is thinking of moving a ranger into the main building.

The consultants have assessed the significance of the cultural and natural qualities of Gudgenby and made recommendations for management of the landscape. Their 189-page report examines the natural history of the area, Aboriginal prehistory and surviving sites, European settlement and the history of reservation including the recent development of cooperative management for Australia's alpine national parks.

On the natural significance of the area, the report states that the station is not of national or regional significance. The bogs and fens of Bogong and Middle Creeks could be of local significance. Even though the station is part of Namadgi National Park which is listed on the Register of the National Estate primarily for its

natural heritage values, 'it cannot be said the the highly altered station automatically exhibits a similar degree of natural heritage significance'.

'It would be in the best interests of Australian heritage for the various management and conservation proponents to come together in the spirit of cooperation and national pride to achieve a practical and appropriate solution.'

By way of contrast, the Aboriginal rock paintings at Yankee Hat and Rendezvous Creek, listed separately on the Register of the National Estate, are of national significance. The other Aboriginal sites are important potential sources of archaeological information.

The European artefacts at Gudgenby are rated high on four of seven National Estate criteria, with this significance depending on the station being accepted as an uncommon example of a montane valley grazing station. The

report states that the significance is to a lesser degree dependent on reconstruction of the 1850 homestead and the maintenance of grazed paddocks. 'In order to adequately convey the full evolution of the area's significance, a major program of historic reconstruction or stabilisation and interpretation would be required and would likely need to be tied to a similar program for the Orroral station and environs.'

The report states the importance of the station to the conservation of natural resources, providing wilderness access routes and a wilderness buffer area, is not particularly great. 'However, Gudgenby station and environs have high significance in terms of the relationship to the non-grazing principles of wilderness areas and national park management held by many environmental and recreation interest groups.'

After discussing the scenic value of the paddocks the consultants concluded that the cultural significance of the site was greater than the natural significance. They proposed four options for management: continued commercial grazing, retaining existing paddocks without grazing, retaining homestead paddocks and other settlement clearings and revegetating other areas, removing cultural features and revegetating to a natural state.



Many bushwalkers have crossed the paddocks of Gudgenby station at the start and finish of walks in the wilderness.

All photos: Reg Alder.

They recommended the third option. This suggests the maintenance of open paddocks near the homestead and around 1885 settlement clearings, the replacement of the pine plantation with native plants, the accommodation of staff or voluntary groups in the 1964 homestead, the retention of the 1927 Hudson ready-cut home, cattle yards, fences, period power lines for interpretation, the reconstruction of the 1850 homestead, the establishment of walking tracks to the Aboriginal art sites and to the wilderness areas, and the provision of camping facilities near the existing carpark on old Boboyan road.

The report acknowledges that compromises are not always the best answer to conflicting values and concludes, 'it would be in the best interests of Australian heritage for the various management and conservation proponents to come together in the spirit of cooperation and national pride to achieve a practical and appropriate solution.'

Roger Green

Some of the older buildings on Gudgenby station.



Jervis Bay Marine Park Proposal

The Association has supported the production of a proposal for a national park and marine reserve around Jervis Bay on the east coast. The Australian Conservation Foundation, which prepared the proposal, recently presented it to the Federal Government.

The marine park proposal is an attempt to ensure that the clear waters of the bay remain unsullied by industrial, military or excessive residential development. It is a response to recent naval proposals to build an armaments depot and fleet base in the bay and the continuing destruction of the bay's hinterlands by creeping residential development. The latter threat, which has been a persistent threat over 20 years, leads to land clearing, the filling of wetlands, sewerage disposal difficulties, quarrying, four-wheel-driving and other effects on sensitive areas around the bay. Aboriginal sites on the Beecroft Peninsula, the northern headland of the bay featuring dramatic ocean cliffs, are still being bombarded in target practice by the Australian navy.

The main obstacle to the immediate declaration of a national park around Jervis Bay is the fact that large tracts of natural bushland are in private hands. The pockets of naturally vegetated crown land around the bay would not form an integrated national park if the private land between these fragments was subdivided for housing. The park proposal aims to overcome this problem by setting up a federal-state-local authority to manage the entire catchment of the bay.

The bay, with its profusion of fish and seagrasses in the water and remnants of rainforest on the land, needs some scheme to ensure the survival of its natural qualities. Every year about a million people travel to Jervis Bay to enjoy these qualities.

Earlier proposals for protection of parts of the bay have come from the National Parks and Primitive



Pied oystercatchers. Photo: Jervis Bay Protection Committee.

Areas Council, New South Wales (of which Myles Dunphy was secretary) in 1944, the Australian Littoral Society in 1973, the National Parks Association of NSW in 1974 and the National Trust of Australia (NSW) in 1984. In 1971 much of the Commonwealth territory at the southern end of the bay was declared Jervis Bay Nature Reserve. In 1988 the Australian Heritage Commission placed 30,000 hectares of Jervis Bay and surrounds on the Interim Register of the National Estate.

The current proposal, of about 40,000 hectares, includes all the areas previously suggested, waters to the 50-metre bathometric contour and the part of the Currumbene Creek catchment that surrounds upper Parma Creek.

Copies of the proposal are available from the Association for a few dollars.

Extensions for Gurumbi Nature Reserve

Gurumbi Nature Reserve is a tiny reserve behind Hyams Beach on Jervis Bay. The NSW National Parks and Wildlife Service has proposed adding 920 hectares of vacant crown land to the reserve. This would link the reserve to Jervis Bay Nature Reserve in the Commonwealth territory.

Gurumbi is a place of sedges, heath and woodland with great botanical diversity. The proposed additions would include four rare plant species - *Acacia subtiliner-vis*, *Grevillea barklyana*, *Leptospermum epacriodoideum*, and *Platysace stephensonni*. The sand dunes, heath and wetlands in the addition are also habitats for many mammals and birds. Rare birds sighted in the heathlands include the eastern bristlebird (*Dasyornis brachypterus*) and the ground parrot (*Pezoporus wallicus*).

The New Bush Telegraph,
Nowra, November 1989.

New park for Tasmania

The Douglas-Apsley area, scene of conservation struggles over many years, has finally been protected from woodchipping and mineral exploration. On 18 December the Tasmanian Government declared a national park covering the catchments of the Douglas and Apsley Rivers near Bicheno in eastern Tasmania. Botanical study of the area had earlier found a number of rare plants. In 1984 the area was listed on the Register of the National Estate. The park is the only major dry sclerophyll reserve in Tasmania with gorges, waterfalls and delightful swimming holes.

The Tasmanian Conservationist,
January/February 1990

New campaigns in Victoria

The Victorian National Parks Association has begun two new campaigns over the summer. One is looking at poor management and planning practices in alpine resorts, the other concerns the problems with conserving grasslands.

Both of these issues are developing rapidly. On the subject of grasslands, the Victorian Government has introduced planning controls for clearing more than 0.4 hectares of native vegetation including grasses. VNPA hopes that this will help protect flora and fauna and combat salinity and soil erosion. But on the other hand, the Victorian Government has not indicated that it will eliminate grazing from parks proposed for the Mallee region. Continued grazing could threaten this fragile environment as well as the grasses and wetlands of the alps.

In the Victorian alps, logging is planned for Mount Murray, home of the rare spotted tree frog. The Land Conservation Council has identified the area as one of the few catchments of high conservation value left in the alps.

VNPA Newsletter,
December 1989

New hope for Queensland

The new Queensland Government plans to double the state's area of national parkland. It has already frozen the freeholding of land on Cape York Peninsula, dropped its High Court challenge to world heritage listing of the wet tropics and banned logging in unspoilt rainforests. It will examine ways of closing the road north of Cape Tribulation, buying back the freehold rainforest near the Daintree River and reducing the 252 proposals for development along the Queensland coast.

The Colong Bulletin,
January 1990

New directors in Canberra and Sydney

The Australian and New South Wales National Parks and Wildlife Services both have new directors. Dr Peter Bridgewater has succeeded Professor Derrick Ovington as director of the Australian service. Dr Bridgewater, 44, is a botanist who has been director of the Commonwealth Bureau of Flora and Fauna, head of the natural environment division of the Department of the Arts, Sport, the Environment, Tourism and Territories and, since July 1989, head of Britain's Nature Conservancy Council. Dr Bridgewater will be responsible for implementing the findings of a recent review of the service.

After a long search following the sacking of John Whitehouse, the NSW Government has appointed Bill Gillooly to head the NSW National Parks and Wildlife Service. Mr Gillooly was formerly in the Department of Consumer Affairs and the Zoological Parks Board. In an ABC radio interview he promised to make more money from national parks in New South Wales.

Movement at the station

Meanwhile, closer to New South Wales, some old cattlemen and women associated with Tom Groggin station (now confined to the Victorian side of the Murray River) have pulled the leg of another city-slick reporter. *The Bulletin* magazine (9 January 1990) carried a long article combining barely credible reminiscences about Banjo Patterson with suggestions that grazing should be allowed back into Kosciusko National Park.

As usual the cattlemen blamed the National Parks and Wildlife Service for their problems - blackberries, rabbits and other feral animals. Grazing, combined with some good old-fashioned burning, would soon fix the place up, they asserted.

Unfortunately, *The Bulletin*, which usually has a lively sense of humour, did not detect the joke behind cattlepeople's campfire yarn, delivered no doubt with the great Australian deadpan.

Blue Mountains book launch

Geoff Mosley book, *Blue Mountains for World Heritage*, was launched by the Colong Foundation in Sydney in December 1989. The book outlines the case for world heritage listing of the Blue Mountains west of Sydney. It includes photographs by Henry Gold.

After the launch, the NSW Minister for the Environment, Tim Moore, announced that the NSW Government support the concept of world heritage listing for the area and would investigate the proposal. Local politicians also supported the idea.

The attractively illustrated book is available from the Colong Foundation, 18 Argyle Street, Sydney 2000, for \$14.95. Posters are \$7.95.

The Colong Bulletin,
January 1990

Weeds in urban bushland

Urban bushland is land adjoining urban areas containing elements of the natural landscape of which indigenous native vegetation is an essential component.

This definition was provided by Judith Rawlings, the National Trust bushland manager based in Sydney, to a recent meeting on Weeds in the Bush hosted by the ACT Council of the Australian Institute of Horticulture. The meeting was given a disturbing account of the decline of natural bushland in and around Sydney, caused primarily by the reduction in the area of bushland by land development and, in the remaining bushland, by the secondary effects of settlement and development.

Significant changes to drainage patterns and water-table levels, nutrient and mineral levels, particularly phosphorus, have produced conditions in which some important native species, certain eucalyptus for example, do not survive whilst others spread from their natural locations to areas previously unsuitable but now conducive for their growth. Add to these influences the more visible interference caused by land disturbance for service lines, dumping of rubbish, pollution of waterways and lagoons, the spread of invasive weeds and the destruction of the native plants which provide the seed stock for regeneration and it is clear that protection and maintenance of remaining urban bushland presents a problem of significant proportions.

Fortunately there is a brighter side to this picture which is to be found in the work being done to stem the degradation of bushland. Two principles come through very strongly: the necessity for community support and involvement if regeneration is to be successful, and the rapidly escalating cost of restoration, the longer this undertaking is deferred.

That briefly is the Sydney scene, but what of Canberra? Michael Mulvaney, whose PhD studies at the Australian National

University are directed in this area, outlined the problem to the meeting and cited a number of specific examples. Much of Red Hill was planted in Weston's time with *Grevillea rosmaniflora* in order to achieve a match between the colour of the hill and its name. This species was not from this locality but hybridised with the native *Grevillea juniperina* to produce a form similar to *Grevillea* Canberra Gem. Mount Ainslie has been planted with kurrajongs which are not a local form and there is widespread planting of the introduced Cootamundra wattle. The effect is that the local identity of Canberra flora is being lost.

But the main cause of the spread of weeds in the Canberra bushland is the escape of cultivated plants ranging from the briar rose of the early settlers to the introduced Australian natives popular today. It is estimated that some 6000 species are planted in Canberra's gardens but only about twenty pose serious weed problems with perhaps an equal number of lesser significance. So it would not seem too great a penalty to avoid planting the problem species and use alternatives. Yet many of these serious weeds are still sold in Canberra's nurseries as shown in the attached table.

The spread of weeds into bushland can lead to the displacement of local species by introduced plants and thus result in a reduction of local plant diversity. In extreme cases local endangered species are threatened. The weeds may also harbour rabbits and pose problems for native fauna. The legless lizard is one such animal in this situation. And, of course, the aesthetic and recreational values of the bushland are degraded by the presence of weeds.

Weeds in urban bushland in Canberra are primarily a problem of the Canberra Nature Park, that 4500 hectares of bush ridges and mountains which girdle our suburbs. Park management identifies garden escapees and the local phenomenon of extended backyards as

the main sources of weeds. Current policy is directed towards weed removal with priority being given to areas of endangered species. Another aspect always considered is the availability of the right species for regrowth, but in this regard Canberra is generally well placed due to the presence of native seed sources.

Weed removal is, however, an expensive procedure and to be effective needs to be undertaken in a carefully planned manner and followed up by maintenance over an extended period. Clearly, funding to undertake this in Canberra will continue to be limited. In this context, Tony Brownlie, the Canberra Nature Park manager, sought the involvement of voluntary groups in the removal of weeds and replanting of cleared areas. He looked forward to working with community groups in addressing the problem.

When the management plan for the Canberra Nature Park is formulated it is likely that weed control will have a prominent place in it and that voluntary assistance in the implementation of a weed control program may well be given recognition and acceptance.

Syd Comfort

Weeds of Canberra bushland still sold in some nurseries

Acacia baileyana - Cootamundra Wattle

Acacia decurrens - Sydney Green Wattle

Celtis australis - Nettle Tree

Cotoneaster glaucophyllus

Cotoneaster pannosus

Cortaderia selloana - Pampass Grass

Lonicera japonica - Japanese Honeysuckle

Prunus cerasifera - Cherry Plum

All *Pyracantha* (Firethorn) species including *Pyracantha angustifolia*, *P. fortuneana*, *P. crenulata* and *P. coccinea*

Sorbus domestica - Rowan

Vinca major - Periwinkle

List prepared by Michael Mulvaney

Early bushwalks in the Canberra region

Recently I was asked by a friend who has been resident in London for the past 19 years to gather up his bushwalking records, maps, slides and photographs from his former home in Sydney and place them where they could eventually be of some archival interest. I selected the National Library and now this rare record of bushwalking over a period of 30 years to 1970 is in a place where it can be properly preserved.

The collection consisted of about 280 maps, many first edition 1":1 mile, plus a large selection of sketch maps prepared by fellow bushwalkers. All of his overnight walks required the preparation of food lists and these are recorded in fine detail with the chosen menu. These are complemented with a detailed record of the country traversed, observations of the route and times taken.

Many of the walks undertaken by Frank Leyden were truly exploratory as he and his companions ranged over routes which have become classic walks in New South Wales, Victoria and Tasmania. One particularly interesting map to us is a 1929 feature map of the Federal Capital Territory showing the stock routes between the homesteads in Namadgi (part shown overleaf).

Public transport was the norm as cars were not commonly owned until the late 1950s-early 1960s. Many letters show the organisation needed before setting out, and the camaraderie established between bushwalkers and the hire and mail car operators in country areas. There are three records of walks in our area at a time when our mountain regions were still occupied by graziers living in homes and huts which are now deserted or fallen down.

The earliest record of Frank's walks in our area is during Easter 1944 when the overnight paper train was caught to Williamsdale

from where they left at 6.20am to have breakfast on the Murrumbidgee and lunch at a mile beyond the junction of the Naas and Gudgenby rivers. Going back to report on a calf delayed them a half hour until they finally camped beside Rendezvous Creek at 7pm. They called into and checked the route at Glendale station. On Saturday they broke camp at 8.20, called into Gudgenby station, had lunch high up on Middle Creek at noon, climbed Mt Kelly, called into the Cotter homestead at 6pm and camped near Pond Creek at 6.30.

On Sunday camp was left at 8.10 and via Long and Kangaroo Creeks, reached the top of Mt McKeahnie at 4pm, to camp on the saddle near the top of Kangaroo Creek at seven. Camp was left at 7.20 to pass a cattleman's camp site and dog-proof fence to the head of Gibraltar creek, passing a farm near the lower section of it to Paddy's River and then over the Bullen Range to Kambah Pool. Here a hire car took them to Canberra station at 2.30.

Another Easter walk in 1949 involved train to Cooma and hire car to Yaouk bridge over the Murrumbidgee. From there they walked towards Mt Morgan via Bung Harris Creek. The next day Mt Morgan summit was reached at 9.55, Mt Murray at 3.45 to camp at Murray Gap at 4.52. Bimberi was surmounted by 11.15 and camp made east of Gingera at 6 pm. Gingera was climbed by 8.25, Ginini at 10.20 and Mt Franklin chalet reached at 11.35 to meet the car at 2 pm to take them to the railway at Canberra.

Christmas in 1954 found him with a 20 kilogram pack for a four-day walk in the Brindabellas. A taxi took them beyond Piccadilly Circus from where they left it to walk down to Flea Creek and up and down the Goodradigbee. In 'striking hot' weather they climbed back to Piccadilly Circus to have their evening meal at Lee Springs

and then to walk on in the cool of the evening along the Coree road to make camp at 9.40. Next day they rose at 5.30 to climb Coree by 9 and sidle through 'rough scratchy scrub' to reach a fire break and the main road near Blundell's Flat. After five miles they met their car at 2.15 to take them back to Canberra.

There were many walks in the Ettrema, Shoalhaven and Deua areas together with walks along the south coast. An immediate post-war-time experience at Christmas 1945 vividly describes travel conditions then. His party arrived at Sydney station at 12.30 midnight for the 2.25 paper train to Nowra to find it hopelessly overcrowded with no hope of getting on board. There were four people in each lavatory compartment of the then prevalent box carriages. Police were evicting people from the luggage vans. They slept on the platform seats until the platform was announced for the 6.30am to Nowra; they transferred themselves to sleep on the luggage trolleys until awakened by crowing roosters at 4.30.

A bus took them to Termeil from where they walked along the coast to Batemans Bay, water being difficult to find. Just north of Batemans Bay they caught a bus which was hopelessly overcrowded. They rode on the roof luggage rack until they managed to squeeze inside on the punt crossing over the Clyde. For the remainder of their eleven days, they walked various sections of the coast to finally reach Kioh and climb Mt Imlay.

Frank's memorabilia provide a very nostalgic experience into the early bushwalking movement which in many ways provided the incentive for the interest in and care of the environment which is such an issue today.

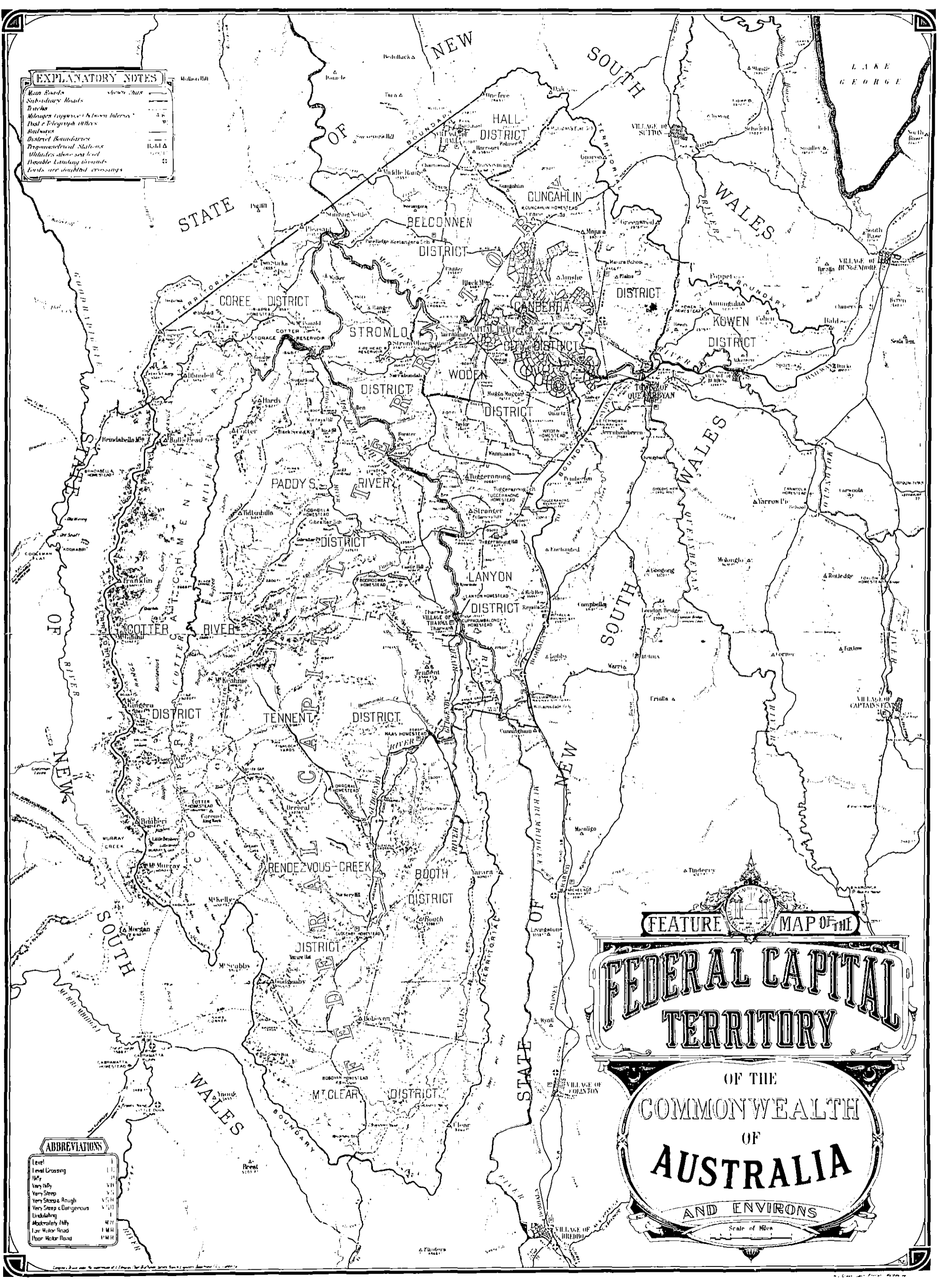
Reg Alder

Pages 12 and 13

The Namadgi section of the 1929 Feature Map of the Federal Capital Territory from the collection of Frank Leyden now in the National Library.

EXPLANATORY NOTES

Main Roads *shows blue*
 Subsidary Roads *shows blue*
 Tracks *shows blue*
 Mileages (approximate) between stations *shows blue*
 Post & Telegraph Offices *shows blue*
 Railways *shows blue*
 District Boundaries *shows blue*
 Triangulation Stations *shows blue*
 Altitudes above sea level *shows blue*
 Possible Landmark Crossings *shows blue*
 Levels are doubtful crossings *shows blue*



ABBREVIATIONS

Level	1:1
Level Crossing	1:1
1/2	1:1
Very Mild	1:1
Very Steep	1:1
Very Steep & Rough	1:1
Very Steep & Dangerous	1:1
Undulating	1:1
Moderately Hilly	1:1
Low Mule Road	1:1
High Mule Road	1:1

FEATURE MAP OF THE

FEDERAL CAPITAL TERRITORY

OF THE COMMONWEALTH OF AUSTRALIA

AND ENVIRONS

Scale of Miles

Copyright, 1910, by the Surveyor-General, New South Wales, Sydney, Australia.

TRIPS

During a planned one-day walk in March from Waterfall Bay to Fortescue Bay on Tasmania's Tasman Peninsula, Syd Comfort and I became involved in an emergency which dictated our actions for the next seven hours. We thought that readers who walk in rough isolated places may be interested in what happened.

Clemes Peak (438 metres) is a sharp rocky prominence a kilometre or so off the main walker's track between the two bays and reached by a rough and steep scrambly pad. Tough, dwarfed shrubs provide much appreciated hand-holds; rock cliffs and outcrop add to the interest. The weather that day was mild but brooding with cloud settling on broader ranges nearby. It was very doubtful if we would see anything from the top but we decided to try it. Our doubts about views proved well-founded, but we did find four young persons on top. After saying 'Hello', we moved to the southern face for a drink and a rest. Shortly after we heard a substantial rock-fall from behind us.

On investigating, we found a girl lying on her back, head and shoulders down, on rocks, some sharp, below a vertical summit cliff about 5 metres high; her legs were entangled amongst the several stems of a shrub growing out of the rock ledge which probably had stopped her from falling further or even partially cushioned the impact. She had evidently been standing close to the edge on the summit and the rocks had split away, taking her down with them. She was conscious but dazed. Her companions were aware of the risks of moving her and asked for our assistance; it was obvious that her condition would deteriorate unless we moved her to a more comfortable spot or position.

Syd tested the ability of her eyes to focus on his moving finger - no problem. She was then asked to gently move her head and arms while we supported her - satisfactory in the circumstances. We then eased some folded sweaters under her to cushion the rocks. I examined her legs to check for breaks; one knee was injured but the knee-

Rescue on Clemes Peak



*The victim and her rescuers.
Photo: Syd Comfort*

cap seemed sound. I was able to straighten both legs gently to make disentanglement possible. Her name was Jane and she brightened as she realised she was not paralysed. We let her rest for a few minutes and then, with her agreement, assisted her to sit up. This was achieved and after a further rest, we all lifted her out of the entangled position and onto her feet. This showed up pain in the knee and the lower back, which had abrasions along each side, but not over the spine itself. Syd took her weight over his shoulders and assisted her to walk but this proved painful and difficult on a relatively level spot and obviously impossible without risk of further injury on the rough, steep slopes below us. Help was

needed!

We talked it over. Jane was an 18-year-old from the USA travelling alone; two sisters were from Switzerland; Ray was an Australian male. They had met casually only the night before in the Port Arthur Youth Hostel and had decided to do the cross-country walk as a group to be able to obtain transport to the track-start and to be picked up in the late afternoon at the track-end. With a small-scale sketch map they had become confused and gone bush to try and find the main track. They had no clear idea where they were or the best way to the nearest help.

We agreed that Ray would go with me to get help and Syd would stay with the two sisters to look after Jane. I took a note of the full name of Jane's Australian contact who lived in Melbourne. I also went over with Syd our assessment of how far she had fallen, her condition and injuries for relaying to the emergency authorities. Ray left his sweater and lunch and I left my sweater, groundsheet, lightweight space blanket, bandages etc; together with the kit Syd carried we felt Jane could be looked after if the cloudy weather deteriorated, if reaction and shock set in, and to treat a few cuts. Syd made sure Jane and the others realised that help could not arrive in less than two and a half hours.

I noted it was midday as we left - we had been with Jane about 45 minutes to this stage. Ray and I agreed to move as fast as prudent with safety as first priority. I led with this in mind, nevertheless we managed to keep up a good pace. There were no vehicles or people at the track start - not unexpected, as Barbara and Audrey would have returned to our delightful camp site at the other end of the walking track. We pushed on by the coastal track to the Devil's Kitchen, a popular tourist spot. Hearing an engine, Ray finished at the double but too late! A parked car and motor-bike were there and the bike rider returned as we pondered. I explained the situation and hopped on behind him. It did not take long to get to the Blowhole where I had seen a kiosk

the day before (a public holiday). It was closed and there was no telephone. However, there was a Volkswagen beetle and a driver and his mate nearby. I again explained our need; Ray by this time had arrived after getting a lift too. We all hopped into the Volkswagen and found some houses in "Do Town" and a telephone. I got no answer from the local police station and then rang the hospital in the small town of Nubeena. To my delight the lady who answered, after questioning me, said she would organise an ambulance and the emergency services and asked me to meet them at the track-start parking area in 15 minutes.

The Volkswagen young men said they would help with the carry-out of Jane and they drove Ray and me to the sheer cliff grandeur and austere isolation of Waterfall Bay.

Meanwhile on Clemes Peak Jane was showing her resilience by suggesting that she may be able to walk down with some assistance if she took pain-deadening tablets she carried. Syd and the Swiss girls convinced her that there was a high risk of exacerbated injury if she did this.

At Waterfall Bay we had a little longer to wait than forecast, understandable as the ambulance and emergency services were staffed mainly by part-time or volunteer persons who had to be called from their diverse work-a-day tasks. The ambulance driver remarked to me later that she had been making jam when the call came. Nevertheless it was not long before an ambulance and emergency vehicle swept into the parking area. I was asked many questions on Jane's injuries and the difficulties of the route, directed to ensuring the right equipment was carried up; blood transfusion equipment and a neck brace were not needed but a lower back brace (size specified) and an air splint for a leg may be needed. Jane was lightly clad so extra blankets were taken as was a small but heavy cylinder of nitrous oxide gas to relieve the pain and distress. I doubt if any of the team had been up

Clemes Peak but after my description, the ambulance stretcher was left behind and a lightweight carry cradle with a long length of stout rope was used.

A communications base was set up in the parking area and several transceivers were carried. All the items were distributed amongst the group going to the summit and I set off in the lead at a reasonable pace. As the climb became steeper some dropped behind but the stronger men were going well so I kept on until I put them on the final steep pad up the peak. I then returned to the slower ones with whom Ray had stayed. He asked me if I had seen the ambulance ladies. On my negative reply he ran along the Waterfall Bluff track and soon brought them back. That junction with its bias away from the main track proved a problem and I stayed there until all persons were pointed along the main track and given directions for the next turn-off.

On returning to the summit, the situation was that Jane had been given preliminary treatment and placed in the cradle. The emergency services leader and the ambulance officer had decided that the terrain down to the main track made the risk of additional injury to Jane and the carriers a real possibility and by radio requested a lift-out by helicopter. Messages went back and forth exploring alternatives but the only helicopter available had no winching capability; landing anywhere nearby was impossible so Jane had to be carried down. The leader radioed for six more men to lessen the injury risk and asked me to go down again to ensure these men did not go astray on the way up; this was done.

Carrying down the steep rough route was achieved slowly with care and some difficulty. It was necessary to belay the cradle with the rope in many places. One of the Volkswagen helpers performed this belaying task very well and it transpired that he was an experienced tug-o-war anchorman. Jane's relatively light weight was a big help and there was some speculation about how difficult the task would be if the victim had

been a heavy male. Once on the main track the going was easier and normal carrying methods were used. The carriers gave a cheer when they rounded a corner to see the ambulance right in front of them. The ambulance team took half an hour to settle Jane into the ambulance and give minor treatment for the rigours of the journey. They rendezvoused with the only doctor in the district where the forestry road joins the main road. He examined Jane, found full diagnosis was beyond local equipment and directed the ambulance to Hobart Hospital, over an hour's drive away.

The emergency services had arranged for a carton of hot meat pies to be available for the carrying team on arrival and these were much appreciated. It had taken 7 hours from the time of Jane's fall until she was settled into the ambulance.

At our request the emergency services had transmitted a message to the forestry dwelling near our camp and Barbara and Audrey had been told we would be late. The leader drove Syd and me to our camp and another vehicle took Jane's three companions to the Port Arthur Youth Hostel.

I was impressed with the good-humoured competence and dedication of both the ambulance and the emergency services teams. We certainly learnt from this experience and were thankful that after the fall, actions we took or initiated went as well as could be expected. Reports next day were that Jane was in a satisfactory condition and being treated for minor back and leg injuries.

I hope that readers of this account may gain some helpful insight into what anyone can be faced with at any time on a bushwalk.

We still have to finish that walk!

Charles Hill

Cycling Kangaroo Island

Recently I was talked into making a trip to Kangaroo Island, South Australia, the attraction being a different mode of getting around, that is, mountain bikes. With the chance also of visiting previously unexplored territory around the mouth of the Murray River and perhaps some bird-watching along the famous Coorong, the temptation was succumbed to.

The country around Murray Mouth and Lake Alexandrina proved unexciting, although a day cruise to the river mouth had some added interest when the captain managed to get the boat sideways on and windblown against the lock in the barrage. It wouldn't fit through that way and much manoeuvring had to take place before we slotted in and finally emerged on the salt water side minus some paint.

Despite the earlier flooding of the Murrumbidgee and other tributaries of the Murray, the actual mouth was unspectacular, with many low sandbanks and not much obvious flow out to sea.

From here we managed to get up into the start of the Coorong, but apart from a few pelicans and black swans, not much birdlife was evident. Apparently the whole of the Coorong is very shallow and access by boat is somewhat limited, unless you have a very shallow draft.

Following the stay at Goolwa we proceeded to Cape Brett to catch the ferry to Kangaroo Island and the start of the mountain bike trek. The island is about 160 kilometres long and the plan was to ride in stages to finish up in Flinders Chase National Park at the far western end.

On route we planned to visit Seal Bay, the Remarkable Rocks and a lagoon known for its abundant bird life, camping on the way, with a support vehicle in attendance.

The first night, however, was spent in a lighthouse keeper's cottage at Cape Willoughby. The comfortable accommodation was

welcome because the cycling was proving harder than expected. This was mostly due to the gravel roads and their extremely corrugated surface. The going was slow and rough and it was not often one could admire the scenery without first stopping to do so.

However, we did get to see the seals. At Seal Bay there is the last remaining colony of sea lions. The area is managed by the South Australian National Parks and Wildlife Service whose rangers take parties down to the beach in groups, where one can wander among the indolent creatures, mostly sleeping, on the sand. A separate area is kept visitor-free, so that breeding and raising of young can go on undisturbed.

Further along the southern coast we saw another colony, this time of New Zealand fur seals, but these had to be viewed by binoculars as they were on an offshore rock.

The Remarkable Rocks proved of similar 'construction' to many of the large outcrops we find in the bush in the ACT, but were perched on the top of a cliff, and wind and water-worn to some incredible shapes.

Our main disappointment was Murray's Lagoon and the birdlife - no water and no birds! We had realised there was a drought, but didn't appreciate its extent, this part of Australia having received none of the autumn rains of Victoria and NSW.

We eventually reached Flinders Chase to camp at Rocky River in one of the official sites amongst some trees. These weren't too prolific on Kangaroo Island, as a lot of the vegetation is of the low scrub typical of much of South Australia's drier regions.

The stay at Rocky River gave us the opportunity to visit Cape du Couedic, go searching for platypus in a local lagoon and learn a bit about the national park. Currently, the facilities there are very limited - one shower and a couple of toilets for the whole camping area. There are proposals

to have a tourist complex built, which would include accommodation and a shop. Needless to say there is a lot of local opposition to this project which in fact has been proposed by the National Parks and Wildlife Service under pressure from the tourist minister.

Apparently tourist promotion activities have resulted in a lot more visitors to the park and hence the need for more facilities. Is commercial development the answer or should visitor numbers be restricted? How strange it is that national parks usually have to be fought for by conservation groups against commercial interests, and when they are won the pressures for development start again! For those interested in the current status of Flinders Chase and other parks in South Australia, I have copies of legislation covering their management if anyone would like to study it.

After an enjoyable stay we loaded up the vehicle and set off for pastures new, only to be turned back after failing to make a particularly steep hill which the van and trailer, even without the bikes, were unable to negotiate. So we turned back and headed for Kingscote where showers, a meal at the pub and comfortable beds were laid on by the organisers.

Next day we rode a good part of the way on sealed roads to Penneshaw - a ride which turned into a bit of a race, although there was plenty of time to catch the ferry. I wasn't last! Thus ended an enjoyable visit which I would happily make again, but preferably in a hired car!

John Webster



Walking in Weddin wildflowers. Photo: Barbara Comfort.

Weddin Mountain camping

By early lunchtime on Saturday 21 October most of the party of 17 NPA members had arrived at Weddin Mountain National Park about 15 kilometres beyond Grenfell for a weekend car camp to be led by Reg Alder. People soon had their tents erected, taking care to avoid putting them on the orchids which were growing in the vicinity.

In the afternoon Reg led us up to the amphitheatre where there were magnificent views over the surrounding countryside, then after a short stop for photos it was to the top of the range where everybody again admired the view and listened to the beautiful songbirds.

Back in camp it was time for relaxing before the camp fire was lit and evening meals were prepared; our president was given much advice on the cooking of his rice. About 10 pm there was a magnificent display of Aurora Australis lasting for about 15 minutes which most of the members saw, some having already retired.

Sunday morning we set off for a leisurely walk to look at the birds

and wildflowers, all of which were quite prolific, then back to camp where most people decided on an early lunch. Towards the end of lunch the owners of the property adjoining the national park, Mr and Mrs Armstrong, visited us and chatted for about half an hour which we all found very interesting.

Some of the fauna and flora seen over the weekend were rainbow bee-eater, dusky wood swallow, babbler, rufous whistler, yellow robin, white plumed honey eater, noisy miner, hooded, spider and caladenia orchids, stackhousiaceae, stypantra, helichrysum, phebalium, fringe lily, wahlenbergia, ericas, pimelea, daviesia, iron bark, native cypress and quandong trees.

The journey back to Canberra was made with people making various stops en route to the antique shops at Murrumburrah, the plant nursery at Harden and two members to the Wombat Hotel in Wombat 'hamlet'. A most enjoyable weekend - many thanks Reg.

Barbara Comfort

Shooting the Shoalhaven

On the last weekend in October 1989, six Canadian canoes and three kayaks canoed the Shoalhaven River roughly between the Warri bridge on the Kings Highway on the Canberra side of Braidwood, and Oallen Ford near Nerriga. Faced with low water for spring, the actual launching points were the ford near Larbert off the Mayfield road, from whence we paddled to the ford on the Shoalhaven near Charleyong. The other launching point was the Mongarlowe River bridge at Charleyong, near its confluence with the Shoalhaven River, from whence we paddled to Oallen Ford. With no rain for two months but for the previous week, we paddled in relatively low water. The paddling time taken for the first section was five hours, covering about 17 kilometres. The lower section to Oallen Ford was paddled in 6.5 hours covering about 22 kilometres. Both times included a leisurely lunch.

The Shoalhaven River flows along a wide sandy bed and for the most part the water is very clear. So if there are fish and turtles to be seen beneath you. We encountered a lot of shallow sections where we had to push off sandbanks occasionally. We also encountered a lot of easy grade-two rapids as well and all of us enjoyed the thrill of whitewater. Being mostly beginners, we found a large grade-three rapid on the lower section such that we had to walk around it. A large part of the trip was through some attractive gorges. With slower water flow we might have been able to trail some fishing lines, but we were moving too quickly for all but the fastest trout. Closer to Oallen Ford we passed some ancient relics of the gold era including a very large gold battery, now sitting abandoned in a river gorge.

Overall, our party much enjoyed the trip.

Chris Bellamy

Why national parks have to be big

The creation of parks and reserves free from human interference has long been considered the key to conserving plants and animals.

If this were so, then why has Yosemite National Park lost 25 per cent of its original large animal species since it was declared? And why has the koala vanished from the eastern part of Kosciusko National Park, even though it had been a reserve for more than 25 years when the last koala was recorded there in 1972?

Different animals are found in different habitats, such as water rats in water, koalas in trees and frilled necked lizards in deserts. However, perhaps less obvious are the differences within these broad habitat types - not all forests are the same, even on a very local scale, and even different individuals of the same species of tree may appear totally different to a koala. Let us examine these differences more closely.

Part of the problem lies in the fact that declines and extinction can happen so slowly as to go unnoticed by park managers. In the absence of good systems for surveying the range of wildlife species and communities in an area, it is difficult to monitor status over very long periods of time. Alerts may not be given until numbers are so low as to be difficult and expensive to study, and therefore less likely to be tackled by students with strict time limits.

Animals in trouble

Relatively few Australian birds or reptiles have become extinct or contracted in range since European settlement, but about 8 per cent of mammals are extinct and another 10 per cent have contracted enormously in range in that time. About 17 per cent of the remaining mammal species are threatened with extinction. Some bird and reptile groups and many mammals have become considerably less common throughout their range.

Types of birds most affected in-

clude tree hollow nesting species (for example, half the parrot species are considered at risk), which are affected by removal of the old trees that can provide the large hollows required, and ground foragers and breeders (for example, mallee fowl, babbler, some robins), affected by predation by introduced species such as foxes and by soil degradation which affects the invertebrate food resources. Few reptile species have declined; only the python group appears to have declined as a result of collector pressure.

The surviving mammal groups most affected include the middle-sized ground herbivores and omnivores (including a wide variety of small wallabies), the arboreal leaf-eating species (for example, gliding possums) and the larger native carnivores, (for example, eastern quolls).

Other individual species in low numbers are usually those with the most restricted distributions because of their extremely specific requirements in habitats which are now and may always have been very limited, for example, mountain pygmy possums.

Mammals and birds are more vulnerable than reptiles because of their need to maintain a constant body temperature. Birds have the advantage over most mammals in their ability to move more freely from one area to another by air.

Individual species vary in their ability to exploit their environment. Brush tailed possums can tolerate a wide range of diets and types of shelter, whilst leaf-eater possums require a combination of a limited range of food trees and specific nesting needs.

Patchy habitats

One geographic area can be seen to provide resources on an increasingly patchy basis when one examines it from the extreme perspectives of a tolerant species and a species with very specific needs. A species' ability to survive in patchy habitats depends on the size of the patch, the degree of dis-

turbance affecting the species, the ability of the animal to disperse to other patches, and the animal's speed of breeding.

Patch quality affects the energy constraints for particular groups. Small ground herbivores need higher quality leaves to maintain their higher metabolic rate than larger herbivores. The herbivores have similar sized guts but the smaller animals cannot forage as far. Similarly, koalas are using a low-energy food and therefore need to eat high nutrient leaves to be able to reproduce.

Humans take the best land

Australia is a very old continent characterised by heavily leached low-fertility soils and irregular rainfall with periodic droughts. Higher fertility patches, either geologically determined (basalt or calcareous areas) or topographically determined (low-lying areas, river valleys), occur where nutrient-containing soils accumulate. These deeper fertile soils can support a more complex structure of higher nutrient containing vegetation and dependant fauna in greater abundance and diversity.

Vegetation found on lower fertility soils and in drier areas where water supply is uncertain is low in nutrients. In addition, plant species in these situations often possess structural defences (such as thicker woody stems or thorns) or chemical defences (such as the ability of many eucalypts to produce leaf toxins as a response to insect attack) to make them even less able to support other animal species, particularly in times of drought.

Productive, better watered vegetation patches are very important sites in maintaining the distribution and abundance of many species. In times of drought these sites provide refuges in which species can persist and from which populations can spread out in better times.

This pattern of productive sites has been seriously disrupted

2/3 June-Pack Walk (3/F)

Nattai River Ref: Hilltop 1:25 000

Leader: Phillip Gatenby Ph 54 3094

Contact leader by Wednesday for details. An expository walk, partly on tracks in the gorges and plateaux north of Mittagong. Steep climbs likely and possibly some wading. 400 km drive.

2 June-Saturday Walk (1/A)

Orroral Valley Ref: Corin Dam 1:25 000

Leader: Beverley Hammond Ph 88 6577

Meet at Kambah Village Shops at 10:00 am. An 8 km walk on tracks and firetrails over fairly flat terrain, from Orroral Tracking Station to the hut and yards. 80 km drive.

16 June-Saturday Walk (4/A/B)

Cotter Rocks Ref: ACT 1:100 000

Leader: Steven Forst Ph 51 6817 h 56 2426 w

Meet at Kambah Village Shops at 8.00 am. A 23 km walk from Orroral Valley up the old bridle track to Cotter Gap and up to Cotter Rocks. This spectacular pile of giant boulders give great views of Namadgi and one has a dog leg fracture to walk through. This is a long walk mostly on trails however the final climb to the rocks is through open bush. 100 km drive.

17 June-Sunday Walk (2/A)

Booroomba Rocks Ref: ACT 1:100 000

Leader: Olive Buckman Ph 48 8774

Meet at Kambah Village Shops at 9.00 am. A 9 km walk along fire-trails, tracks and some scrub to a high point with extensive views from a granite outcrop area. Total climb of 300 metres. 65 km drive.

21 June-Mid week Walk (1/A)

Molonglo Gorge Ref: ACT 1:100 000

Leader: Olive Buckman Ph 48 8774

Meet at the first barbeque (picnic) area on the right (east) on Morshead Drive after the main gate to Duntroon Military College at 10.00 am. A 6 km return walk on tracks with some rocks and a short climb. 10 km drive.

23/24 June-Pack walk (3/A)

Mt Owen Ref: CMW Budawangs

Leader: Steven Forst Ph 51 6817 h 56 2426 w

Contact leader by Wednesday for details. A walk to visit Mt Owen, Monolith Valley, Seven Gods Pinnacles and Natural Arch. 300 km drive.

1 July-Sunday Walk (2/A)

Googong Reservoir / Hell Hole Ref: Hoskinstown 1:25 000

Leader: Peter Roe Ph 91 9535

Meet at the Woolworths Car Park Queanbeyan at 8.30 am. A 14 km walk with panoramic views of Canberra, Queanbeyan and Googong, then continuing down a deep cutting into Hell Hole on Bradley's Creek. 25 km drive.



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. Telephone the walks convenor, Steven Forst, on 2516817 (h).

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 TEN cents per kilometre (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.

Outings program

April to July 1990



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.

1 April-Sunday Walk (4/A/D)**Rock Flats Ref: Rendezvous Creek 1:25 000****Leader: Frank Clements Ph 31 7005**

Meet at the Kambah Village Shops at 8.00 am. A longer walk half on fire trails and half through bush, some of it rough. There are two steep climbs of about 200 metres each. 80 km drive.

7/8 April-Pack Walk (2/A)**Wog Wog, Corang Peak Ref: CMW Budawangs****Leader: Phil Bubb Ph 46 6134 w 81 4929 h**

Contact leader by Wednesday for details. A two day walk from Wog Wog to Corang Peak then via the Corang River back to the Wog Wog entrance to Morton National Park. Mostly on tracks. 300 km drive.

8 April-Sunday Walk (1/A-E)**Bungonia Gorge Ref: Caoura 1:25 000****Leader: Mike Smith Ph 86 2984**

Meet at the Drive-in on Northbourne Avenue at 8.00 am. A steep walk down on the track from Bungonia Lookdown to Bungonia Creek, then following the creek up into the gorge through some spectacular rock formations. Lunch at the pool in the gorge. Finally a steeper climb out of the gorge via the 'Efflux'. 220 km drive

13/14/15/16 April-Pack Walk (2/B or not 2/B)**The Chimneys and Cascades Ref: Thredbo 1:50 000****Leader: John Hutton Ph 58 7334**

Contact leader on Tuesday for details. Exact route not finalised before publication. The intention is to explore this area by visiting the Chimneys, Cascades Hut and hopefully Mt Terrible. This is a remarkable area, with fine views to Victoria. All participants must have a sleeping bag rated for sub zero temperatures and a tent. 400 km drive.

13-16 April Canoe trip (1/A)**Morton National Park Ref: Moss Vale, Kiama 1:100 000****Leader: Chris Bellamy 497167 h**

Contact leader by 8 April for details. A canoe trip in Kangaroo Valley on the Kangaroo and Shoalhaven Rivers exploring the rainforest-clad verges of Morton NP, enjoying the wildlife. Car-based camping. Easy paddling, suit beginners. Hire canoes or byo. 400km drive.

16 April-Monday Walk (2/A)**Brindabella Range Rambler Ref: Cotter 1:25 000****Leader: Steven Forst Ph 51 6817 h 74 8426 w**

Meet at the corner of Eucumbene Drive and the Cotter Road at 8.30 am. A walk of about 14 km in the Brindabella Range mainly on fire-trails, exploring lesser visited areas. 100 km drive.

21/22 April-Pack Walk (2/A)**Ginini Area Ref: ACT 1:100 000****Leader: Bob Story Ph 81 2174**

Contact leader by Wednesday for details. 150 km drive

22 April-Sunday Walk (2/A)**Historic Walk Ref: Yaouk / Shannons Flat 1:25 000****Leader: Syd Comfort Ph 86 2578**

Meet at Kambah Village Shops at 9.00 am. This is a shorter variation of the Brayshaws Hut walk. A 12 km walk from the junction of the Boboyan and Old Boboyan roads visiting the hut and yards of the Naas Creek area, the Boboyan Homestead ruin and the site of James Brayshaw's house. 135 km drive

26 April-Mid week Walk (1/A)**Lake George Ref: ACT 1:100 000****Leader: Betty Campbell Ph 81 1771**

Meet at the Coast Road junction at Bungendore at 9.00 am. A gentle local walk along the Lake George foothills with bird watching. Bring your lunch and binoculars. 80 km drive.

28/29 April-Pack Walk (4/A/B)**Namadgi Ref: Rendezvous Creek 1:25 000****Leader: Frank Clements Ph 31 7005**

Contact leader by Wednesday for details. A walk to Namadgi with its Aboriginal stone arrangements, camping high on Middle Creek. An overall climb of 500 metres with packs. 100 km drive.

29 April-Sunday Walk (2/A)**Joint KHA / NPA walk: Huts of Mt Clear- High Forest****Leader: Andrew Lyne Ph 88 6632**

Meet at Kambah Village Shops at 8:30am. An easy 11 km walk from Mt Clear Homestead area along Grassy Creek then up the fire trail to the High Forest area through open grassy country to Naas Creek and finally along track to the start. Visit six huts. 170km drive.

5/6 May-Pack Walk (2/A/D)**Pond Creek (Namadgi) Ref: Rendezvous Creek 1:25 000****Leader: Gary Thompson Ph 88 6084 h 85 8701 w**

Contact leader by Wednesday for details. Follow the old bridle trail to Cotter Hut, climb Coronet Peak in Namadgi National Park. Total climb 1200 metres. 100 km drive.

5/6 May-Weekend Away (1/A)**Braidwood History Tour****Leader: Kevin Frawley Ph 82 3080**

Contact leader early as numbers are limited. The Braidwood district retains strong elements of 19th century European settlement, agricultural experimentation and development. The landscape today reflects a settlement pattern and economy largely established by World War 1. During the weekend we will look at the history of the district in the course of visiting some of the remnants of 19th century settlement. Little walking involved. Families welcome. Possibly staying at the Doncaster Inn. Numbers limited. NPA members only. 120 km drive.

5 May-Saturday Walk (2/A)**The Hardie Range Ref: ACT 1:100 000****Leader: Bob Story Ph 81 2174**

Contact leader by Friday for details. 40 km drive.

12 May-Saturday Walk (2/A/E)**The Big Hole and Marble Arch Ref: Kain 1:25 000****Leader: Phil Bubb Ph 81 4929**

Meet at Canberra Railway Station at 8.30am. A 12 km walk mainly on tracks near the Shoalhaven River. The Big Hole is a spectacular formation caused by the collapse of underground caves. The spectacular gorge at Marble Arch can be slippery in wet weather. Bring a small towel and / or some dry socks for crossing the Shoalhaven River. 180 km drive.

13 May-Sunday Walk (2/A)**Gigerline Gorge Ref: ACT 1:100 000****Leader: Dugald Monro Ph 31 8776**

Meet at Kambah Village Shops at 8.30 am. A walk of about 10 km along the Murrumbidgee River from Tharwa through the rugged Gigerline Gorge possibly through to Angle Crossing. Lots of rock hopping and some scrub. A visit to a lesser known area of the Murrumbidgee corridor. Possible car shuffle. 30km drive

16 May-Mid week Walk (2/A/B)**Point Hut Crossing Ref: ACT 1:100 000****Leader: Syd Comfort Ph 86 2578**

Meet at the Kambah Village Shops at 9.00 am. A 10 km walk along the Murrumbidgee River on tracks. Possible car shuffle. 25 km drive.

19/20 May-Car Camp (1/A/B)**Meroo Point State Forest Ref: Tabourle 1:25 000****Leader: Syd Comfort Ph 86 2578**

Contact leader by Wednesday for details. No facilities are available at the camp site. A weekend of walks and swimming along the coast and lake. Turn off 6km north of Termeil. 300 km drive.

26/27 May-Work Party (1/B)**Gudgenby Work Party****Leader: Dugald Monro Ph 31 8776**

Contact leader by Wednesday for details. This operation in cooperation with the ACT Parks and Conservation Service is designed to prevent the degradation of our local bushland due to infestation of wild Pinus radiatas which have escaped from the Boboyan Pine Forest. Come for a day or the weekend. 100 km drive.

27 May-Sunday Walk (2/A/B)**Billy Billy Rocks Ref: Tidbinbilla 1:25 000****Leader: Lyle Mark Ph 86 2801**

Meet at Kambah Village Shops at 9.00 am. A 10 km round walk with magnificent views of Tidbinbilla Nature Reserve. Suitable for beginners as I take a route which minimises the "dreaded" fallen timber problem. 50 km drive

throughout the continent by human influence. It is these higher fertility 'hot spot' patches that have been preferentially selected by humans, for a wide variety of uses. These areas are not only the most productive for wildlife, but also provide the best quality agricultural land, timber resources and urban settlement sites.

Clearing of habitat in nutrient 'hot spots' can have devastating effects on a native species abundance in any one area. For example, the Bega Valley used to be covered in red gum, *Eucalyptus tereticornis*, which supported such an enormous population of koalas that hundreds of thousands of koala skins were exported from the area in the 1930s. Since those times, the Bega valley has been entirely cleared, and koalas no longer occur in the valley.

These areas are also the core areas in which feral animals persist in times of drought, often competing with native species for food as well as preying on them. Between droughts, feral herbivores such as rabbits may modify this refuge habitat to the extent that it is no longer able to provide refuge in future droughts.

Other less direct influences can assist in the decline of vulnerable herbivore species when they are under stress through loss of their core areas. These include predation by feral predators such as cats and foxes, and changes to nutrient availability and soil invertebrate populations through changes in fire regimes. Weakened populations are also vulnerable to outbreaks of diseases which usually lie largely dormant within the population.

The decline of all the larger native carnivores, and loss of several species from the mainland, may partly be due to human-induced changes to the nutrient hot spots in particular. Because these animals are higher up in trophic level, they will need a greater territory from which to collect their nutritional requirements. If they are unable to use the specially concentrated resources of the hot spots because of clearing or direct competition with

other feral predators, the animal may no longer be energetically efficient enough to survive and reproduce. Because the habitat is of lower quality, the prey items are more geographically dispersed, and it may take the native carnivores too much energy to be able to collect sufficient food from within their foraging limit. A population weakened in this way will be particularly vulnerable to disease or to poisoning by baits intended for its feral competitors.

Most other parks or reserves in the state are in rugged areas which... rarely include extensive rich wildlife habitat.

The distribution of species within an area is therefore governed intimately by the suitability of habitat and the balance between extinction and recolonisation in the component patches.

The role of reserves

To come back to our original problem of loss of species within parks and reserves, and the long-term role such reserves play in wildlife conservation.

The size of the reserve is important in maintaining the full range of species originally present. If a reserve is very large, it has a better chance of combining sufficient patches of each type of habitat required by each species than does a small area. Thus in the USA, although 43 per cent of original species have been lost from the 426 square kilometre Lassen Volcano Park, and 25 per cent have gone from the 2083 square kilometre Yosemite National Park, no species are known to have been lost from the 20,736 square kilometre Kootenay-Banff-Jasper-Yoho reserve complex.

The larger the area, the more likely it is to contain representative samples of the region's habitats, including the rich patches.

In New South Wales, although 4.3 per cent of the state is contained in parks or reserves, a large percentage of this area comprises low fertility Sydney Basin sandstone or low fertility coastal heaths that contain few high-nutrient wildlife-rich habitats. Reservation is very unrepresentative, for example, only 4 per cent of the southwest slopes remains naturally vegetated, less than 0.2% is reserved.

Most of the richest land has already been cleared for agriculture or urban development. Much of the rest is contained within state forests, which are managed primarily to exploit their timber resource, the best of which tends to be in areas of highest wildlife abundance and diversity.

Most other parks or reserves in the state are in rugged areas, which are spectacular and often support interesting plant associations but rarely include extensive rich wildlife habitat. These areas have usually remained crown lands after the higher fertility lands have been converted to freehold or state forests.

The need to identify, and then cooperatively and actively manage the lands that provide the main remnant reservoirs for our wildlife species, particularly mammal species, is now urgent. There are fewer and fewer unalienated lands available to add to the reserve system to make it more representative. Impacts upon vegetated lands of all tenures are many, and include forest clearing, isolation of remnants, land degradation, encroachment of feral plants and animal species, increased recreation and development demands, fire regime modification, rural subdivision, and climate change. How we tackle these problems now will determine how many of our declining species will still be around for our children to observe.

Liz Dovey

Liz Dovey is a naturalist with the southeast region of the NSW National Parks and Wildlife Service. A shorter form of this article first appeared in the Australian Ranger Bulletin, vol 5 no 2, 1989.

Bleak Booth Banishes Bushwalkers!

An exploratory walk from Shanahans Mountain to Mount Booth along Booth Range

A cold august morning
Not frosty, but a trifle bleak
The ground shone wet
and one would rightly guess
it had been raining overnight.

The prospect did not seem too bad
Clouds, and some sun, might be
the pattern for the day
Thus, optimistically disposed, we
headed south

But as we drew closer to the hills
their tops, we saw, were masked
in cloud
Our ridge-crest walk might not (as
we were hoping)
Afford us splendid views.
Thus it was to be; for this reason -
and another.

'Another' was the regrowth;
In clumps eight metres high
Encountered soon on leaving
Shanahan's -
from where the views had
fortunately been good.
Where too, a full-throated lyrebird
had sung
To thrill us
on that still, chill morn.

Undaunted by the coolness of the
season
David and Len wore shorts; bare
legs exposed.
At first, I must confess, I thought
this rather 'Macho'
But later Phil and I did envy them
as wading through wet wattles
sodden trousers slapped our legs.

Keeping to the ridge
our route zigged left
and zagged then to right
Up a little;
Down a little;
up again.
From knoll to knoll -
at metres - one four two six; one
four five six and
one four eight nought.

'Til two hours on; longer in fact,
Of plod and push
We took a break.
We had a snack, took stock and
realised, realistically,

We might not make it to Mt Booth
if similar conditions continued to
prevail.

And while three did sit, Phil chose
instead to stand
complaining that his legs were
cold.
Goosepimply evidence of this he
then displayed
by dropping sopping trousers to
his ankles!

In comical pose but with
expression grave
He pondered what to do;
whether to walk 'with?'
or 'without?'
this wet encumbrance!

Finally, the matter he resolved;
he dragged those sodden trousers
off but
pulled on a rainproof jacket and,
with characteristic tilt of head,
observed
"I think it's going to rain".

It had indeed gone very dark
A faint stirring in the trees
Gave brief forewarning of A
CHANGE.

A shiver of chill, and perhaps of
apprehension too
Caused all to hastily rug up
In jackets, hats and gloves.

My shirt pressed damply 'gainst
my back and chest
and belatedly I did recall
A singlet warm and light
was stowed inside my pack.

Now 'twas my turn to act the
clown
Unbuttoning my jacket and
disrobing
With haste (most certainly not
'undue')
I thankfully donned that woolly
vest
Just in the nick of time

A roar of wind
and swirl of snow
with simultaneous suddenness
heralded a bone-marrow Freeze.

With vague uneasiness we
onwards pressed
The snow a shawl upon our
shoulders laid
And Dave's black curls
that peeped from neath his hood
turned 'Father Christmas' white

Snow settled underfoot
And gloom, like twilight,
contracted our horizon.
With these unfriendly elements
encircling
Phil called a halt.
Consensus was to leave the ridge
Beat a retreat.

We slipped and slid
On snow and scree
In hot pursuit (more aptly cold) -
of bounding Phil (of Boolijah fame)
to valley floor below.

Here 'Dry Creek' belied its name
and strongly flowing channel
meandered through a swamp.

Below the snowline now
in relative shelter
We lit a fire
with help from Firelighter
- carried for just such an occasion
(and how I wished I'd packed the
billy, too)

We knelt and blew
and kept that flame alight
With dedication (and with
smarting eyes!)
Such a lot of smoke
For such a little fire.
But at last it gathered strength
and offered warmth and comfort
To the quiet four who huddled
near.

Then Len began to thaw
and fondly reminisced of happy
times
the smell a smoked jumper could
invoke.

And while we munched our lunch
Our clothes steamed gently dry.
My boot began to smoulder too
And, not surprisingly, my toes
began to warm.

Is herping a dirty word?

The fierceness of the Front had passed
Wind eased, and showers gone
A wan sun did weakly try to shine.

Too late now to re-assault Mt Booth.
Instead, towards the valley head we turned
Along the creek
And leaping, criss crossed its curly course

Then chose a ridge, and long climb began
Through spacious forest
Which had escaped the fire of '83
This bush, unscathed and lovely
Joy to our hearts did give
and spring to our leader's step -
though mine still lagged a bit.

But in good time we reached the road
and squelched along the greasy dirt
avoiding, best we could,
spatter of mud from the passing cars
returning from The Snow.

Still very cold and raw
the day was past its best
(which never had been very good!)
We were not sorry when
a little ere the hour of four
We reached Phil's car.

Here the thermos I had promised
welcome hot drinks did provide.
And there were biscuits too:
Their deliciousness I had extolled
and with slip of tongue declared
'they've got ice on them'
Though probably appropriate.
this wasn't quite what I had
meant!

And so Phil's walk 'Booth Range -
not for beginners'
Became 'Booth Range - Begun and
never finished'
Next time Phil says he'll start the
other end -
Then the Finish will at least have
been begun!

Judith E. Webster

No, herping is not a dirty word! The Greek word, *herpes*, meaning scales, has not only bestowed its name on *Herpes simplex*, the accursed cold sore and other diseases, it is also the origin of *herpetology*, the study of animals with scales, namely reptiles.

Somehow reptiles have never managed to attract the sympathy and interest accorded to their furred and feathered fellow creatures. Snakes in particular have suffered an appalling public image for the last two thousand years, thanks to Adam and Eve.

Despite the fact that a mere glimpse of even the shyest, most inoffensive of serpents can conjure up an instant hysteria and hatred accorded no other creature, a small but steadily increasing number of Australians are beginning to realise not only that reptiles are actually the most maligned and neglected of our creatures, but also that Australia has one of the most astonishing and fascinating set of reptiles in the world, animals which have evolved the most brilliant and ingenious mechanisms to enable them to survive in the most arid and unpredictable of continents.

Take for example that gentle inhabitant of our arid areas, the thorny devil. Well thorny is a reasonably accurate description but what has it done to deserve the epithet *devil*? Far from being the active epitome of evil, it quietly meanders along or more often simply stands in one spot diligently licking up its sole food, ants.

I can still recall my astonishment and delight when, having ground to a shattering halt, I leapt out of my four-wheel-drive to see if it really could be . . . I recall my incredulity - the thorny devil had looked so large and unlovely on the poster but this was tiny and unbelievably exquisite. It was so still that it wasn't until I had photographed it several times and, mourning its demise, plucked it gently from the road, that I discovered it was actually alive! I resolved immediately to write to the

nomenclature committee to demand that its scientific name be changed from *Moluch horridus* to *Moloch amandus*, 'deserving of being loved'.

Of course it was only comparatively recently discovered that those extraordinary thorn-like protuberances are not simply to persuade potential predators that it is palpably unpalatable, but also an ingenious device to increase the surface area of the skin to collect any precious dew available in the desert night and funnel it along tiny capillary canals to the corner of its mouth. Each morning when the devil opens its mouth and swallows once or twice, it uses the only source of moisture apart from the water in the ants it devours. Such ingenuity deserves a better fate than being flattened on the roads or carted off to school in the stuffy pockets of school children.

The ACT cannot boast any reptiles quite as bizarre as *Moloch amandus*. Yet despite our rotten climate (from a reptile's viewpoint) which necessitates hibernating for a third of the year (a very sensible strategy for energy conservation we might well consider) the ACT does have remarkable reptiles. Some, like the corroboree frog and a legless lizard recently named the pink-tailed worm lizard are rare. Others, like water dragons, tree goannas and brown snakes are common but poorly researched.

There is a group of people in Canberra concerned both to learn more about our local and not-so-local reptiles and to improve the public image of reptiles. The ACT Herpetological Association meets on the third Monday of each month, usually downstairs in the Zoology Department (car park entrance) of the Australian National University at 7.30pm. Field trips are conducted from time to time.

Membership is \$10 for adults and \$5 for students. Inquiries may be directed to me on 247 7963.

Jo Vandermark

Jo Vandermark is president of the ACT Herpetological Association

BRIEFS

Merimbula dunes threatened

Bega Valley Shire Council has exhibited a development strategy that would allow residential and tourist development and highway relocation on 42 hectares of sand dunes east of Merimbula airport. This low coastal land would be in the front line if the sea level changed. Green councillor Jack Miller says the land should be gazetted as public reserve.

The Council proposes to move the Princes Highway 130 metres to the east to allow the development of an air and bus terminal with food, fuel and accommodation beside the airport. The study noted that land within 200 metres of the beach escarpment was 'potentially subject to coastal hazard within a 100 year period'. The proposed developments are within 200 metres of the beach.

Bogong, October-December 1989

Sacred site or retirement village

An Aboriginal burial site on the outskirts of Queanbeyan may be developed into apartments and a retirement village. A spokesman for the Ngunawal Land Council, Mr Arnold Williams, said the 8-hectare site was a meeting place and burial site during the 19th century. The NSW National Parks and Wildlife Service has listed the site and is considering protection under the National Parks and Wildlife Act.

The Sydney Morning Herald, 21 October 1989

Protecting the National Estate

The Australian Heritage Commission has produced a booklet which outlines the powers and roles of federal, state and territory governments and voluntary organisations in heritage conservation. The booklet, titled *Protecting Australia's National Estate*, is available from the Publications Editor, Australian Heritage Commission, GPO Box 1567, Canberra ACT 2601.

Environment rivals economics

More than any other issues, the greenhouse effect and to a lesser extent the depletion of the ozone layer have brought home to the public the seriousness of our situation and so pushed the environment into the mainstream of politics. Their emergence as major concerns has also changed completely community perceptions of more local environmental issues such as the protection of wilderness areas, the logging of native forests and pollution. Until recently, these were generally regarded as isolated single issues, political sideshows. Now they have become components of a much larger issue which is challenging the economy in its political significance.

CSIRO submission to the Australian Science and Technology Council - Review of the state of environmental research.

Clean up Australia

NPA members supported Clean Up Australia Day 1990 by coordinating work in the Point Hut Crossing area which included the river corridor about 1.5 kilometres downstream from the crossing itself. Members and other volunteers were generally pleased to find that the area was not heavily littered but nevertheless yielded a substantial haul of bottles, cans and other waste. The level of responsibility, concern for proper

disposal of waste and awareness of recycling possibilities shown by members of the public who participated was most encouraging.

Archivist for NPA

Sheila Kruse, who served the Association as secretary for some ten years, has agreed to become the Association's first archivist. At a meeting recently called by Sheila and attended by Thea Exley and Reg Alder, plans were developed to build on the work already done by a number of Association members to preserve significant records of our various activities.

Papers passed on

Former NPA President, Julie Henry, has passed on to the Association a substantial collection of papers, notes and publications which will be of considerable value to our archives. Association life member, Robert Story, has listed the collection so as to make it more accessible for sorting and cataloguing.

A better 'ole

The classic, 'If you know a better 'ole go to it', could well have been applied to two Association members who recently embarked on five days' walking in the Budawangs but, beset by rain and fog, were grateful for three nights' shelter in one of the park's well located and thoughtfully planned and appointed camping caves.

RED CENTRE DAY WALKS, CAMPING & FLORA TOUR

On our minibus and 4WD tour we use guided walks of up to a day to get beyond the normal tourist trail and give an **in-depth Red Centre experience**. We visit all the best known features plus many lesser known but spectacular ones. **Two leaders** allows **leisurely and longer walks**. **There is ample time for photography, wildflowers, birdwatching, etc.**

14 days ex Alice Springs \$1245

3 tours July 9-22, July 29-Aug 11, Aug 18-31

For information **HAPPY WALKER ADVENTURE TOURS**

PO Box 886 Croydon Vic 3136

Phone **(03) 725 2723**

A fair environment

This year, Canberra's environment fair is on April Fools Day, Sunday 1 April, starting at 11am. As usual, Weston Park is the setting with stalls and entertainments of all kinds. Once again NPA will have a stall under the trees, with a display, publications and information about activities. The fair is always a pleasant outing so come along and say hello to the members at the NPA stall and to find out about some of the other environmental activities going on around Canberra.

Corroboree frog search

The much talked-about but seldom seen corroboree frog was the focus of a fascinating January walk to Ginini Flats led by Will Osborne, and attended by nearly forty enthusiasts. Yes, we did see both adult and immature specimens and found their colorful body patterns beyond expectations. The number of frogs found was less than expected so that a planned census was not undertaken. Features of the walk were Will's patient, encyclopedic and drily witty commentary and the enthusiasm, interest and knowledge displayed by many younger members of the party. (This is not to say that the older members did not also display these admirable qualities).

Xmas 1989

The 1989 Association Christmas Picnic was the most harmonious, or should I say melodious, for some years thanks to Frank Clements and his clarinet and Beverley Hammond's song sheets. The weather, too, added character by first threatening rain and then, realising that the participants were not to be cowed, relenting to provide a perfect setting.

New members

R and M Chalk, Wanniasa
Leigh Crocker, Dickson
Dr Tony Gallagher, Chapman
Joan Kearns, Isaacs
Jillian and Larissa McArdle, Kingston.

Bulletin editor

Roger Green has been reappointed as editor of *NPA Bulletin* for a further twelve-month period.

Advertising rates

Black-and-white camera-ready artwork:

\$140 full page

\$75 half page

\$50 one-third page

\$2 per column centimetre

Add 50 per cent for typesetting and design.

Subtract 10 per cent for annual bookings.

Inserts supplied: \$120 for 10 grams or less.

For further information telephone Laraine Frawley on (06) 2571063 before 2pm on Monday, Tuesday or Thursday, or Roger Green on 2470059.



The Observatory is situated in the magnificent Barren Grounds Nature Reserve. It's just 2 hours north-east of Canberra, between Jamberoo and Robertson, on the edge of the Illawarra Escarpment.

Barren Grounds is NSW's only bird observatory and was established by the RAOU in 1982. It is totally self-funding and non-profit based. Residential visitor fees and donations provide the means for modest Wardens' salaries, maintenance and valuable ecological research.

SO why not join a small, friendly group for a fully-catered, residential weekend with an expert leader. Coming soon:-

BIRD PHOTOGRAPHY 23-25 March \$106
Learn the techniques from an expert photographer -
Graeme Chapman

BIRDS FOR BEGINNERS 6-8 April \$106
For those who want to make a start at birdwatching

OBSERVING, SKETCHING & PAINTING WILDLIFE
12-16 April \$180

Spend Easter with Nicolas Day, illustrator of *Birds of Australia*, suitable for all levels of ability

ALL ABOUT FUNGI 11-13 May \$106
Learn about their biology and how to identify them

BIRDS, BEES AND BANKSIAS 25-27 May \$106
Help with research into the sex life of Banksias

TIGER QUOLLS AND POTOROOS 8-11 June \$128
Participate in a major mammal survey of the Reserve to establish the abundance of these rare species

NAMES: LATIN, COMMON AND BYO! 22-24 June \$106
Lively discussion about how and why species are named, including Latin derivatives

Other weekends available for group bookings (up to 16 persons). We are happy to develop a program to suit your group's interest. Cost between \$88 and \$106 per weekend - includes all meals, accommodation and tuition.

Enquiries, brochure and bookings:-

**The Wardens, P.O. Box 3,
Jamberoo, 2533 Ph (042) 360195**

Calendar

Publicity and education subcommittee meetings: contact Jill Roberts 2491390 (h) 2724192 (w).

MARCH

Thursday 8 Outings subcommittee meeting 7.30pm, 46 Wybalena Grove, Cook,
Steven Forst 2516817 (h) 2748426 (w)
Sunday 11 Canberra Alive: NPA stall
Tuesday 13 Environment Centre general meeting 7pm

APRIL

Sunday 1 Environment Fair: NPA stall
Thursday 5 Committee meeting 7.30pm 87 Shackleton Circt, Mawson
Wednesday 11 Namadgi subcommittee meeting 7.30pm 45 Starke St, Higgins, Dugald Monro 2318776 (h)
Thursday 26 Environment subcommittee meeting 7.30pm 43 Fitchett St, Garran,
Tim Walsh 2851112 (h) 2741465 (w)
Sat 21-Sun 29 Heritage Week - NPA participation

MAY

Thursday 3 Committee meeting 7.30pm 22 Tambo St , Kaleen, Judith Webster 2414646 (h) 2484141 (w)
Weekend 26-27 Boboyan Pine Forest Work Party (see Outings Program for details)

NPA Bulletin

National Parks Association of the ACT
GPO Box 457 Canberra 2601
Registered by Australia Post
Publication number NBH0857

POSTAGE
PAID
AUSTRALIA

General meetings

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

March 15

Paul Butler, who has recently returned from Antarctica, will talk about conservation in the deep south.

April 19

Canberra & Region Very Fast Train Action Group will explain environmental concerns about the VFT.

May 17

Ian Taylor, of Canberra Ornithologists Group, will report on work on the atlas of birds in the ACT.

June 21

Professor Ken Taylor, of the University of Canberra, will talk about the landscape of Canberra.