



NPA Bulletin

National Parks Association A.C.T.

Vol. 21 No. 4 June 1984

\$1.30



PRESIDENT'S FOREWORD

With increasing membership, more detailed submissions to be researched and written on more conservation issues, more contact with department and more involvement in conservation and recreation in the A.C.T., the Association work-load has become heavier each year.

A special meeting of the committee was held recently to discuss among other things means of increasing participation by members in routine duties, and seeking grants to finance part or full time secretarial services.

At present we have an acting secretary who must leave the position in May and one volunteer to act from August.

So: may I ask anyone with any ability to make an effort and contact any committee member so that the Association may continue to function efficiently in all its activities. Please join us and help us and yourselves.

COTTER CATCHMENT STUDIES

Fluctuating Government interest in the Cotter Catchment, and uncertain responsibilities, had been causing disquiet to responsible NCDC officers over a number of years until in August 1982 the *Interdepartmental Committee on Environment Quality* requested the NCDC to establish a *Working Party* to prepare a policy plan for the Catchment. I was invited to be a member of it, representing the community groups who use the Catchment. Other members are three from the NCDC, and one each from Conservation and Agriculture (Department of Territories and Local Government), Forests Section (DTLG), Forest Research (CSIRO), and the Water Supply and Quality Section of the Department of Housing and Construction.

The Study Group has collected just on 90 publications on the natural features of the Catchment and with supporting maps at a scale of 1:100,000 has reviewed them under nine headings. The authorities probably now have enough hard facts to formulate a common-sense policy for the Catchment, with Canberra's water supply as a first consideration, except for information on fire, community wishes, and present public use.

The effects of fire on the environment and run-off are being studied by the CSIRO Division of Water and Land Resources in co-operation with the Commonwealth Government in comprehensive experiments on tributary catchments, which one hopes will put an end to unfounded arguments on the question.

In terms of the first of my terms of reference 'to act as spokesperson for all community groups who use the Cotter Catchment', I canvassed 14 societies and many individuals, and was a little put out when our Chairman told me that he had wanted facts, and that their submissions were matters of opinion. Well, of course, what else? A spokesman is 'one deputed to voice the opinions of a body etc.' (ref. the *Shorter Oxford*), besides, the facts are extremely well documented as it is. These opinions will however be considered when the Working Party formulates its policy. I have urged that community views should be sought by advertisement and this will probably be done, to give an opportunity for those societies I may have missed to present their views and for others to make amendments.

The second term of reference is 'to provide information on the existing community uses in the Cotter Catchment, using both personal knowledge and information provided by community groups'. The Working Party wished to know what people or groups (formally constituted or not) enter the Catchment regularly or casually, why they do (enjoyment, education, amusement, scientific purposes, exercise), where they go, the routes they take, how long they stay, and how they regard the area. Most societies canvassed enter the Catchment primarily for open air enjoyment, with spin-offs from nature study in its broadest sense, e.g. the Canberra Bushwalking Club, the National Parks Association, the Family Bushwalkers, the Canberra Alpine Club. Records over the past three years showed that the NPA had two pack and 25 day walks, 12 with some objective besides

simple enjoyment. None of the other clubs mentioned any specific objectives.

The next biggest group comprises those with specialized interests, namely orienteering, scientific work (animals and plants mainly), motor rallying, angling and archaeology. In addition there are independently organized activities and occasions when clubs co-operate for events such as search and rescue.

All this information is for the use of the NCDC Working Party who will formulate a policy plan for the use of the area, with particular reference to public access. It will be open for public comment.

Robert Story

ORRORAL VALLEY GRAZING LEASES ADDED TO GUDGENBY

The Minister for Territories and Local Government, Mr Uren announced a number of additions to the Gudgenby Nature Reserve last December and among these were the grazing leases of the Orroral Valley.

The NPA has been lobbying successive ministers for over five years on this issue. The NPA would like to congratulate Mr Uren for his initiative and the additions to the Reserve, many of which were foreshadowed when the Reserve was declared in 1978.

All the major upland valleys in the Reserve, Orroral, Gudgenby and Naas have been used for grazing since the nineteenth century with changes to the natural ecosystems reflecting this use. It is important for the integrity of the Reserve as a conservation area that all these areas be incorporated into the Reserve and be allowed to regenerate to natural conditions. This would add to the diversity of the ecosystems represented and thus become more representative of the systems typical of this area.

The other major man-made feature remaining in the Orroral Valley is the Tracking Station complex with its associated outstations on the slopes of Mt Orroral. When the station closes next year, the NPA would like to see all this removed so that the valley once again becomes a totally natural area. We are certainly lobbying for this to occur.

Of the other valleys mentioned, Gudgenby is still used for grazing although the Minister's announcement said that this too would be added to the Reserve. When and how this will occur is as yet unclear. Naas Valley still contains freehold land. Mr Uren said that this would be progressively acquired; not a very reassuring statement as successive ministers have been making similar statements since 1968, and to date only a small portion of the freehold land within the then planned boundaries has been subsequently acquired.

The NPA will continue to lobby on this point as indeed on many other issues affecting the Reserve. I appeal to members to write to Mr Uren expressing their concern at the continued use of leasehold and freehold land within the Reserve for grazing and that this land be restored to the Reserve as soon as possible.

Neville Esau



The Association's work in seeding and arresting erosion on the Nursery Swamp firetrail has been well worthwhile. There has also been good regeneration of native species and in places it is now difficult to see, as the photo shows, the line of the bulldozed trail. — Photo Reg Alder

THE MURRUMBIDGEE RIVER CORRIDOR

For more than three years now, the National Parks Association has been concerned about the conservation status of the Murrumbidgee River in the ACT.

In July 1981 NPA prepared a submission for the Inquiry on the Murrumbidgee River conducted by the Joint Parliamentary Committee on the ACT. The submission called for the declaration of a Murrumbidgee River Corridor, legal protection for this corridor as a nature reserve under the ACT Nature Conservation Ordinance and for a halt to further urban developments in the Tuggeranong and West Murrumbidgee area. NPA representatives elaborated on these proposals at a hearing of the Joint Committee in November 1982. To date, the findings of this inquiry have not been made public.

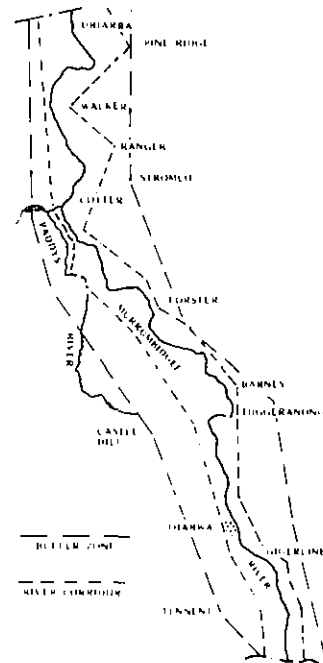
Towards the end of last year, the NCDC called for comments on its recently published draft policy and development plan for the Murrumbidgee River Corridor. With the aim of ensuring that all interested individuals and organisations had the best available knowledge on which to comment, the NPA, in conjunction with the Molonglo Chapter of the Australian Conservation Foundation, convened a symposium on 25 February. The symposium, arranged by Neville Esau, was funded out of a grant for community educational activities received by NPA through the Community Development Fund.

About 80 people attended the symposium and key speakers included local politicians and representatives from government departments, CCAE and the conservation movement. The four-hour session provided a wealth of information about the natural and cultural value of the Murrumbidgee River, the threats to it, plus an outline of NCDC's plans.

The submission subsequently prepared by an NPA working group stresses that the Murrumbidgee River is first and foremost a natural asset. It is important for the continuity of habitat of several species of migratory birds and fish, for other fauna and flora and for its scenic qualities.

THE COVER — Snow gum, Bimberi

— Photo Pieter Arriens



N.P.A. Murrumbidgee River Corridor and Buffer Zone Proposal.

In brief, the submission calls for:

1. The declaration of a continuous corridor through the entire length of the river in the ACT, in accordance with a submitted map (drawn up by Garth Abercrombie)
2. Legislative protection under the ACT Nature Conservation Ordinance for this corridor
3. The development of special policies for management of the area
4. The declaration of a wider buffer zone to provide added protection to the Murrumbidgee Nature Reserve and to preserve the visual values of the corridor
5. These measures to be implemented immediately, and certainly before any further development takes place within the delineated areas.

The submission also commented in detail on various development proposals for the area. Copies of the full submission are held by the Committee.

Denise Robin

JUST



BRIEFLY-

Margaret Ashton attended the Bird Observers Club Christmas Camp at Nariel, Corryong, Victoria. Penny and Dale Hebbard rafted the Nymboida River, and the Haynes family attended the Summer School at Jindabyne covering the history of the Snowy Mountains.

The mid-January weekend found a large group dwelling between two ski lodges in Perisher and Jindabyne. Meeting at Charlottes Pass on the Saturday in perfect weather, they were soon scattered far and wide between Mt Carruthers and Twynam, to the Blue Lake and all areas between... each group 'doing their own thing' including two members identifying over 90 plants and flowers.

January and February short walks with many swims proved extremely popular, and would be well worth repeating.

January long weekend saw a happy group enjoying the beauties of Bombala State Forest in the Tawangaloo area, during which time our President and Jean celebrated their 34th wedding anniversary and Jean her birthday!

In March, Garth kept his promise to join in one of Betty Campbell's 'easy' walks and found himself among the (unusual) turnout of a complete female group! Scribbly Gum understands the challenge is now out for Betty to join one of Garth's walks!

Some 60 to 70 members and friends of all ages spent Canberra Day weekend at Edrom Lodge, Eden, in perfect weather. Apart from the chatty, close chaos at culinary and catering times, each went their own way and a wealth of activities were enjoyed: visits to Boyd Town and the lighthouse, walks to Boyd Tower, masses of swimming and sunbathing, and a few hardy souls climbed Mt Inlay. In the evenings, more chatting, table tennis and carpet bowls before a mosquito disturbed sleep. Without any thunder, there were (so I hear) a number of 'Hashes' in dormitory one as the ladies prepared for bed one night - oh to see the photographs or to steal the negatives.

Once more The Onion in the Lunderly Ranges got the better of a group, who, never the less enjoyed a good climb and rock scramble. However, in all honesty, they could not have reached the outer peelings of The Onion! - better luck next time perhaps.



SUMMER WALK THROUGH GUDGENBY NATURE RESERVE - SOUTH TO NORTH

I started at the road border with New South Wales at midday, 2 January. In the previous thirty-six hours plenty of rain had fallen. I walked beside Grassy Creek for forty-five minutes until the valley widened and there I had lunch. A 4W.D. track east of the creek offered an easier path to the north than the lush grass I had been walking in. I surprised two foxes. One barked before they ran away. In the distance was Shanahans Mountain.

I headed a little east past a stockyard to approach the southern end of the Shanahans Mountain ridge. Grassy Creek joins with Naas Creek here and by crossing below the confluence I made things difficult. I had to carry my rucksack over my head, and the flow was rather fast.

At 3.00p.m. I entered the southernmost part of the burnt area (Grid Ref. 82:29 ACT 1:100,000). An hour later I set up camp. Water was obtained at a creek running parallel to the ridge five minutes walk to the west.

A cool change came through during the night. The next day began at 8.15 when I started the haul up Shanahan. The bush was thin and on the long summit area the wildflowers were various and in abundance. I was to find thistles here and in other locations on the walk.

As I walked north the damage to the eucalypt woodland became worse. At lunchtime I heard a tree or bough crash to the ground. There were large holes in the ground where tree trunks and fence posts had burned away. I saw many eucalypt seedlings. Most of this growth resembled that of *hardenbergias*. My trousers became stained by charcoal. The eucalypts certainly are regenerating along this somewhat stony ridge, but most of the bigger trees are charred skeletons.

In breezy weather I continued until about five kilometres south of Booth Hill. I found a pleasant unburned patch and stopped for the day at 4.00p.m. Late that night the sound of kangaroos breaking curled-up eucalypt bark woke me. These things go bang.

Early Wednesday the air was still and I donned warm clothes for breakfast. The fallen fence I had walked beside all the previous day continued. Walking north I had beautiful views of Mount Gudgenby to the west covered by rising fog. After an hour I took some photographs and headed down a westerly spur, disturbing large grey kangaroos. I stopped to look and photograph the valley of Rendezvous Creek and Yankee Hat.

The descent from the Booth Range was steepish but safe and I expected it would lead me to a 4 W.D. trail. But I had left the main ridge early and I came out further south and lower in altitude than expected. I refilled my flask near the bottom and relaxed. As I walked north through bush I saw four owls overhead. They stared, but then became camera shy when my Minolta was brought out.

A short but very steep easterly trail section followed. It became easier and then gently downhill and led me to Brandy Flat Hut. There was no company unfortunately, but there was a clear day and a light breeze. The water tank was full. It had been three years since I had visited the hut.

My N.S.W. 1:25,000 map showed the track I had followed headed toward Glendale. But long grass had covered the track. I inadvertently headed down a new fire trail which continued on from the trail to the south of Brandy Flat Hut. After forty minutes I realised I was headed for Naas. I bush-bashed westwards toward Glendale. Later that afternoon I took up the matter with a Ranger at Gudgenby, Pauline Watchorn. She agreed that it would be an easy mistake to make. The new fire trail was built during the summer 1983 fires.

Wild pigs live in the Glendale area where cattle used to graze. They are foraging "ploughing" in the drainage lines and causing plenty of damage. Nearer Glendale Crossing I passed the new Depot. The buildings house construction and maintenance vehicles and equipment. I called in at the Information Centre, rested and talked and collected food left there previously. The Gudgenby River was high and



The shelter hut at Brandy Flat in the Reserve is now fully enclosed against the weather. Some of the participants on a recent N.P.A. Sunday Outing. — Photo Reg Alder

with the heavy pack it took care, patience and considerable time to cross. I camped and washed some clothes. It rained in Canberra that evening, but not further south in Gudgenby.

I made a later start next morning and then entered the Orroral Valley. The leases used for cattle grazing have been resumed very recently, but I chose to walk in the easy way along the road. Small stands of dark-leaved eucalypts on the north side stand out.

I entered the guardhouse at Orroral Tracking Station and telephoned my location to friends in Canberra. A worker there warned me of copperhead, brown, black and tiger snakes. From this point, one dirt road runs up the valley. Two 4W.D. trails run through the paddocks. One commences at a gate a hundred metres before the tracking station. My adviser on snakes suggested I take this route.

But after a kilometre in too long grass I walked to the adjacent dirt road. I was not wearing gaiters, and the grass seeds in my socks were ring barking me at the ankles. Water from the range above me flowed across the road in places. A turn to the right led me through a very attractive stand of eucalypts and into the valley toward a hut. It has been getting slept in regularly and was locked. The location is beautiful, and the views include granite boulders on the northerly side. The Booth Range can be seen in profile. Its summit of 1,585 metres exceeds the highest point on the Tidbinbilla Range.

The hut's immediate surrounds included trees containing sheep carcasses, a wrecked supermarket trolley and other metallic junk including cans. This site needs a big clean-up. Next morning I breakfasted and then headed west past a stockyard. There were many drainlines running across the valley, and damage to them has been done by the grazier's vehicle.

I passed twenty cattle in a paddock and the small flies became a nuisance. I arrived at the valley's top end, which is surrounded by hills on three sides. It is boggy in this

area and I just got across the ford without getting wet socks. A spectacular sight was two startled kangaroos jumping about grass clumps near the dirt cutting which girts the western end of the valley.

Now on the Smokers Trail I found a ford missing and hopped across the upper Orroral. The day was warm. I knelt and put my head deep into the water. Then I began walking up the steep trail. Nearing the top, large mossy boulders appeared in the thick bush. Around lunchtime I heard a waterfall but did not have energy to explore the creek two hundred or so metres away.

After lunch I ascended two hundred metres more vertically on the track. I had frequent rests. Where the trail turned east after Smokers Flat I diverged north across an alpine bog. It was slow going, and I photographed a patch of wildflowers. I saw a wild pig and then stopped and rested on a ridge top at 4.00p.m. I had to go north to the Corin Dam road. The descent to it was tiring as I dodged holes, logs and small leafless trees. Then the pines appeared and I arrived at Smokers Gap after nine hours walking.

During the evening I saw numerous horses and kangaroos. Next morning the tent, ground and washed clothing was wet from a heavy dew. I had been the only camper here.

I headed north-west. The further one goes into the High Range the more difficult walking becomes. One scrambles over, around and along fallen trees. The Alpine Ash trees are tall and straight, with few if any branches before their crowns. But here these rough-barked trees seem insufficiently rooted and fall down. Further west a bushwalker is like a small ant trying to walk through matches emptied from a matchbox. The area I was walking was near the recently built ski run, not far from that spectacular group of monoliths, Billy Billy Rocks.

I walked too far to the north and could not get across the summit of a hill decorated with boulders. My goal, Fishing Gap, became unreachable. I headed down toward

the Fishing Gap road. Here I saw the only snakes for the whole trip. It was steep, similar to the previous late afternoon's walking. Bush-bashing downhill with a heavy pack in steep, rocky country with holes while looking to avoid snakes is hazardous. The hills north and south of Smokers Gap present the most difficult walking in the A.C.T. I know.

I reached the Fishing Gap road at 3.45p.m. and walked down to the ring road of the Tidbinbilla Nature Reserve. My five and a half days walking had been enjoyable and educational. The weather had been cool to warm only and my provisioning and planning adequate. At no stage did I need to carry more than a litre of water (however, I did carry extra at certain points).

The Booth Range is badly burned, particularly the centre section. Bushwalkers walking in the former grazing areas of Gudgenby Nature Reserve should wear gaiters in long grass. Every day I saw damage caused by wild pigs, even on the eastern side of the High Range in Tidbinbilla Nature Reserve. Action is needed to eliminate the pigs and protect the drainage lines and bogs they forage in.

Nicholas Blandford



SOUND ADVICE

In 1882 George Ernest ('Chinese') Morrison set out to walk from the Gulf of Carpentaria to Melbourne alone to prove that exploratory parties had a greater chance of success if they were small. He covered the 2043 miles in 123 days and set down the following hints for the would-be transcontinental walker.

Drink well before starting. Drink only at long intervals.

Soap the inside of the stockings before setting out making a thick lather all over. A raw egg broken into a boot before putting it on greatly softens the leather. Thirst is fever of the palate. Excite the saliva – moisten with olive oil.



THE BARRINGTON TOPS

I expect that the Barrington Tops are well known to some of our members but those who lack familiarity with the area may care to have a brief account for possible future reference. The area is a most interesting one, well worth a visit, and is easily accessible. My wife and I cannot claim to have walked all over the Tops but we saw enough on a recent campervan tour to gain a useful impression.

The Barrington Tops consist of a rugged mountain mass running up to heights of 1500 metres and located between Scone and Gloucester. These mountains have a high rainfall and this, coupled with the altitude of the Tops and a variety of soil types, has produced an unusual diversity of vegetation. There are considerable areas of rain forest but at high altitudes there are patches of open alpine grassland. These latter areas are sometimes found in close proximity to stands of Antarctic Beech.

The Tops have long been recognised as an area of exceptional interest for nature lovers and bush walkers though initially its main use was as a source of timber. It has been extensively logged. The Barrington Tops National Park consists of three disconnected areas forming islands within forests controlled by the Forestry Commission. This rather curious situation has stimulated the Forestry Commission into providing an impressive array of visitor facilities in the areas remaining under its control. The Commission has developed a remarkably large number of attractive and well laid out and well maintained camping grounds, forest parks and picnic areas. Another curious feature is that both the N.P.W.S. and the Commission adopt a relaxed attitude towards 4WD and motor cycle activities. Whether this is a good thing is open to question but the situation is quite

different to that found in southern N.S.W.

Access to the Barrington Tops can be gained from several directions. Coming from Canberra the nearest route is probably along the excellent Forest Road which runs between Scone and Gloucester. A good jumping off point at which to overnight en route is the State Recreation Area at the Glenhawn Dam near Scone. The forest road passes along the northern edge of one section of the National Park. A number of admirable camping grounds and fine lookouts have been established in the forest through which the road passes. From one of these camping grounds at Polblue Swamp, beautifully situated overlooking a shallow valley of alpine meadowland, a track leads off to the main National Park section of the Tops. This is trafficable by 4WD vehicles.

From Gloucester there is good access to the small, first proclaimed section of the National Park on the Gloucester River. There is a fine and extensive N.P.W.S. camping area here. In October we found it remarkable for the almost deafening uproar at night created by two kinds of mating frog, a large green tree frog and a smaller brown frog.

The road past the camping area soon leaves the National Park to ascend through State Forest and then re-enter part of the main National Park section to reach the Gloucester Tops. Here on the western side of the road is alpine meadow and some 200 metres or so to the east a splendid stand of Antarctic Beech. The meadow land is the source of the Gloucester River and the beautiful Gloucester Falls are nearby. This area is accessible to conventional vehicles but further on the track is for walkers and 4WD only.

To reach the remaining areas of the Barrington Tops you must, if you have a conventional car, make a considerable detour to Dungog from where you take the Chichester Dam road. Before you reach the dam you branch off to the right along the Telegraphy Forest Road to the charming Telegraphy Forest Park. A large camping area adjoins the Forest Park. A little further on is the even more spacious Frying Pan camping ground. To the west there is a loop road between these two camping areas. It passes through rain forest and the Mountaineer Reserve.

From Telegraphy one has to make yet another detour westward through agricultural land to the Chichester State Forest. Adjoining the entrance to this forest is the substantial and privately owned Barrington House guesthouse. The area is drained by the Williams and Allyn Rivers and contains several forest parks. From one of these, the small Lagoon Pinch Forest Park, a very steep 4WD track takes off to Carey's Peak and the Barrington Tops proper. We did not get there but by all accounts it must be an exceptionally fine piece of country.

We can strongly recommend a visit to the Barrington Tops. But some points should be borne in mind. The Tops have a severe winter climate. The area is close to Newcastle and the Hunter Valley and at holiday times may be crowded. The access roads to the Gloucester and Allyn Rivers cross a number of fords which quickly become impassable after heavy rain. Polblue Swamp would be a good starting point for walkers especially if they could arrange to be picked up later at the Gloucester River camping ground or the Barrington House guesthouse. And watch out for recreational 4WD vehicles. Some of their drivers are an unmitigated curse.

The area is too complex to be presented intelligibly on a small sketch map in our Association Bulletin. The NPWS has some useful leaflets but the maps are poor. I would advise intending visitors to obtain the Forestry Commission 1:125,000 map which shows where all the Commission's facilities are to be found. It is available from the Forestry Commission's Queanbeyan office. This would best be supplemented by the National Mapping 1:100,000 map. Unfortunately the area of interest is found in the corners of 3 maps so you really need Sheets 9133 (Camberwell), 9134 (Elberston) and 9233 (Dungog). They may be obtained from the National Mapping Office, Unit 3, Cameron Offices, Belconnen.

Alastair Morrison



The wet weather since planting together with the skills and diligence of Charles Hill and his helpers have combined to ensure that our tree planting project at Gudgenby has been given a good start. At the February work party, guards were removed or their height was adjusted. — Photo Reg Alder

A BULBINE IS A BULBINE IS A BULBINE OR IS IT?

"See one gum tree and you've seen the lot." Thus speaks the critical newcomer who is still unaware of all the subtle differences which enable eucalypts to be separated into some five hundred species. Those who know the fleshy-leaved perennial "Native Onion", *Bulbine bulbosa*, may be excused for seeing these apparently invariant yellow lilies in much the same light.

Of course, anyone who is also acquainted with the little annual *Bulbine*, the "Native Leek", *B. semibarbata*, knows that the Australian bulbines come in at least two kinds. But even though *B. bulbosa* and *B. semibarbata* are easily distinguished by their petal length — more than 8 mm (*B. bulbosa*) or less than 8 mm (*B. semibarbata*) — even these two species are not so very different. Both have fleshy, onion-like leaves. Both send up a bare flowering stem with buds clustered at the top in a compact cylindrical or pyramidal head (raceme) which gradually elongates, separating the flowers as they open, one or two per day, from the bottom upwards. Both have yellow flowers which, in bud, display prominent green midribs on the petals.

Most current Floras attribute all the Australian bulbines to either the perennial, *B. bulbosa*, or to the annual, *B. semibarbata*, group, though current research indicates that the number of recognised species will have to be extended. Any *Bulbine* you find growing in the A.C.T. will almost certainly be a perennial and will key out, according to the Floras, and on the petal measurements given above, as *B. bulbosa*. At first glance you may think, as our critic did of the genus *Eucalyptus*, that it is a very uniform and uninteresting species. But as a distinguished former President of our Association would have said, this is a case of "eyes or no eyes".

Next Spring have a really good look, first of all, at the *Bulbine* plants growing in and around Canberra itself. You will find them, amongst other places, on the south-western and southern slopes of Mt Majura, around the northern boundaries of the Federal Golf Course, along Narrabundah Lane and on the roadside just past Mt Tennant as you drive towards Gudgenby. You will see that the leaves on these plants are dull green, probably slightly rough to the touch, and few in number. Then look at the stamens. They are strongly bunched together on one side of the flower. The oblong anthers remain more or less erect after they have shed their pollen, and the little beards of club-shaped yellow hairs at the tops of the stamens are fixed so close to the bases of the anthers that the latter are partly hidden.

Then, when you have a chance, compare these with the *Bulbine* plants you will find growing on the slopes above the Cotter Dam, on top of the ridge at Adam's Tank, on the western slopes of Mt Clear or by the side of the Mt Franklin road on the Brindabellas. The leaves of these "mountain" plants are smooth and glaucous (grey-green) and more succulent and more numerous than those of their Canberra counterparts. The stamens are less strongly bunched than in the Canberra plants. The anthers do not remain erect after shedding their pollen, but tip backwards to form tiny horizontal arches. In addition, each little beard of yellow hairs is attached a little distance below the anther instead of directly underneath. The result is that you can see a short length of bare stamen filament between beard and anther.

As you will have realised by now, these are really two distinct species. If you tried to cross them you would find that they are mutually incompatible. Over the nearly two hundred years of Australian botany, several attempts have been made to establish them as separate species, but because of the difficulty of telling them apart, especially in dried

herbarium specimens where floral features are hard to distinguish, later taxonomists have lumped them together again.

An examination of the underground parts of each type provides further evidence that we are dealing with two distinct entities. *B. bulbosa* has the bulb-shaped tuber indicated by its name, while the mountain form has not. If you were to go still further, and count their chromosomes under a microscope, you would find that *B. bulbosa* has 24, or the doubled (polyploid) number of 48 chromosomes, while the mountain group has the rather odd number of 46. In future Floras these two groups will probably be treated as separate species once again.

So, even in this one small geographic region, our apparently uniform perennial in fact comprises two distinct species. But that is just the beginning of the variation to be found once one starts investigating. Even within the lowland "bulbed" forms, there are, as indicated above, both 24- and 48-chromosome populations. Moreover, while some populations flower as early as September, others do not flower until January or February. Different populations can vary also in petal colouration, in the time of day at which their flowers open and close, in the way flowering is affected by periods of cloud cover, in the dormancy characteristics of the seeds, in some of the chemical constituents of the leaves, and in the number and shape of the leaf hairs. In some populations the six stamens are almost equal in length, in others they are quite unequal. The ratio of style length to stamen length is variable. Indeed, if you were to examine the species throughout its distribution range, you would find interesting variation in almost any attribute you liked to study. The same is true of the annual, *B. semibarbata* group.

When we think that all *Bulbine* plants are much the same, we are looking only at the basic general form, which has apparently continued to serve the genus well throughout its evolution: the fleshy leaves, the yellow flowers, the elongating raceme atop a bare stem. We are missing the wealth of more subtle variation and diversification which underlies the apparent uniformity and which has clearly evolved in the course of *Bulbine's* adaptation to a wide range of habitats throughout temperate and arid Australia.

In Africa, several *Bulbine* species have been used by native tribes for medicinal purposes. Queensland aborigines are reputed to have used *Bulbine* tubers as food. Who knows what interesting therapeutic or other properties may still remain to be discovered in some as yet unstudied population or species of the Australian *Bulbine*? As our areas of native vegetation continue to dwindle, it would be a pity if the relevant populations disappear before we find out what they have to offer. Some proposed strategies aim to preserve genetic diversity by conserving a single representative population of each species. In view of the *Bulbine* story, one wonders whether this will be enough.

Edna Watson

NEW MEMBERS

The following new members are welcomed to the Association:—

Winnifred Abornethy, Hughes; Karl Butz, Curtin; Sue Beams, Deakin; Dugald Brown, Macquarie; Maureen Bremner, Yarralumla; Andrea Borsay, Ainslie; Dr P. and Gillian Bridgewater, Curtin; Cathy and Peter Blunt, Kaleen; Sheila Calvert, Rivett; R. Campbell, Flynn; R. and J. Chorley, Torrens; Robert and Margorie Cruthwell, Curtin; Mavis and Geoff Cook, Lyshwick, Fr. David Cowley, Dickson; Dr Paul and Elizabeth Edwards, Hawker; John and Nathalie Anne Gascoigne, Weetangerra; Dr M.G. Gratton, Scullin; Edel and Harry Hede, Yarralumla; Peter Henry, Garran; Valerie and Donald Honey, Weston; Janice Harper, Flynn; Gwen Jackson, Narrabundah; Jennifer and Ralph Jeffress, Curtin; Stephen Kunz, Ainslie; Jan Kiek, Wararamanga; Carolyn Lucas, Chiffley; Malcolm and Celia Lawrie, O'Connor; Marilyn Lincoln, Kaleen; Jan and John Moore, Weetangerra; Malcolm and Janice Murray, Wannassa; Jude Maxwell, Aranda; Richard and Leslie Outridge, Flynn; Noble and Gerda Payne, Ainslie; Mrs D. Bewes Pearson, Page; David and Kaye Ramey, Kambah; Narelle Radford, Yarralumla; Sandra von Suedern, Stringer; Ross Stewart, O'Connor; Jennifer Sher, O'Connor; Walli Tetz, Narrabundah; Timothy Walsh, Pearce

ABORIGINAL OCCUPATION AT NURSERY SWAMP, A.C.T.

One of the aims of the Gudgenby Nature Reserve is 'to protect sites of prehistoric significance for present and future generations of Australians. For many years, bushwalkers using the reserve have noticed stone artefact scatters and other signs of Aboriginal occupation such as stone arrangements. It is obvious that the area that is now the Gudgenby Nature Reserve was once inhabited by Aborigines. We know from early historical accounts that the Ngunawal people of the southern uplands gathered at Gudgenby prior to travelling to the mountain peaks to hunt Bogong moths.² Other tribal groups from as far afield as Gippsland also travelled long distances to take part in moth feasts. What we don't know is whether the apparently friendly inter-tribal relations which facilitated these gatherings were a post-European phenomenon or whether they go far back into prehistory. It is difficult to extract this type of cultural detail from the archaeological record, but the data retrieved through excavation and field survey provide the basis from which we can piece together a picture of past lifestyles.

Previous research by Dr J. Flood³ revealed several painted rockshelters in the Reserve, at Yankee Hat and Rendezvous Creek with cultural deposits going back several hundred years. A survey of the proposed park area by Winston Gregson⁴ added another eighteen to the list of small open sites, rockshelters and stone arrangements. Recent excavations at a painting site in Nursery Swamp by Dr A. Rosenfeld of A.N.U.⁵ gave a radiocarbon date of 3,700 years B.P. making it the earliest date so far recorded in the A.C.T.

Because of the small size, shallow depth and low frequency of archaeological sites in the southern uplands, Dr Flood suggests that the area could not or did not support large permanent Aboriginal populations in the past. It has come to be accepted that the evidence reflects short term, seasonal occupation, with valleys like Nursery and Rendezvous functioning primarily as corridors to the mountain peaks above. However, my recent field studies at Nursery Swamp have shown that there are several hundred stone tool scatters, some covering many square metres, as well as more painting sites and an axe quarry. It is apparent that the frequency and variety of archaeological sites in the area is much greater than originally thought, and this is probably the case for other montane valleys. It may be necessary to rethink our theories on how and why these valleys were used by Aborigines in the past. The questions that my studies are directed towards are:— how long has Nursery Swamp been occupied and at what times of the year; what food resources were available and how they were exploited; where were the sources of raw materials for making stone artefacts and what were the techniques used in their manufacture?

The radiocarbon dates point to an occupation beginning at least 4,000 years ago and we have to ask what caused this relatively late movement to the uplands when Aborigines had been dwelling on the coast of N.S.W. for some 20,000 years.⁶ The reasons could be tied up in a population expansion forcing people to move into previously unoccupied areas. Or it could be to do with changes in artefact technologies which enabled the exploitation of resources previously denied to the Aborigines. The proliferation of simple quartz tools in Late Prehistoric assemblages in South East Australia indicates that this may be the case but further research is necessary on this problem.

On the other hand further excavations may reveal older dates, perhaps back to 10,000 years ago. At this time climatic changes may have triggered population mobility into 'marginal areas' although the concept of a 'marginal area' is a tricky one, particularly since we now know that Aborigines were living at Kutikina cave in Southwest Tasmania 20,000 years ago at the height of the last glaciation.⁸

Under present climatic conditions there are sufficient resources and shelter to enable year round occupation at

Nursery Swamp. Perhaps this and similar montane valleys should be considered as complete resource zones that could have been exploited in their own right and not just as places to be passed through on the way to the mountain peaks. In addition it is unlikely that aboriginal groups would rely entirely on a single, potentially unreliable resource like moths which can, for example, be blown off course during their migration to the mountain peaks. Although present in high numbers, they constitute small food packages and so many would be needed for a meal that they could be virtually wiped out by a season's hunting, perhaps taking several years to recover. Situated below the mountain tops, the montane valleys offer a variety of reliable resources which are easily obtainable. Today there are large populations of kangaroos and wallabies on the swamplands and patches of open country. Possums, wombats, birds, snakes, lizards, rats and yabbies abound, while *Liliaceae* and *Orchidaceae* provide plentiful edible roots and tubers. The most common plant food is the daisy yam, which could have been an alternative food source in the absence of moths.⁹ Organic remains in an archaeological context provide the best evidence for prehistoric diets, but the acid soils derived from the granitic rocks in the upland are not good for their preservation. However the Nursery Swamp excavation contained the remains of possums, yabbies, birds and freshwater mussels¹⁰ and my excavation currently in progress near the Nursery Swamp saddle contains numerous fragments of marsupial bone.

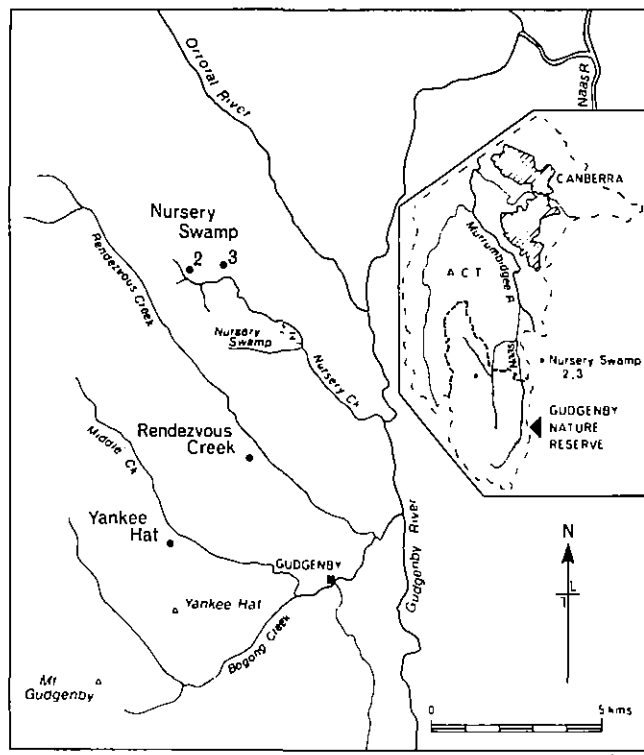
Most of the artefact assemblages collected from the valley are characterized by small, unretouched flakes made from quartz, chert, quartzite, silcrete and fine grained volcanic rock. A few of the flakes are finely made with signs of retouch or resharpening along their working edges. The only formal tools are *backed blades*. These are made by applying blunting retouch to the margin opposite the sharp working edge producing two distinctive forms, the geometric microlith and the asymmetric (Bondi) point. We can only speculate as to the function of these tools. Those too small to be hand held may have been hafted onto wooden shafts as spear points or barbs. The naturally sharp edges of other flakes, particularly quartz flakes may have been used in the manufacture and maintenance of wooden implements, butchering and skinning animals and processing plant foods. The cores from which the blades and flakes were removed are rare in the assemblages and if present are very small. A scarcity of good quality rock for flaking in the area may have meant that the cores were valued and kept until too small to be of any further use.¹¹ While the uplands tool kit does not have the beautifully stylised examples that are found in other parts of Australia, this does not mean that their makers were not craftsmen. The techniques of manufacture were those best suited to the environment and the available raw materials.

The theories and ideas I have discussed above are being tested through my current field work at Nursery Swamp. Research towards an MA began in 1982 in a study area of approximately 12 sq.km, covering most of the Nursery Creek catchment. For the purposes of establishing archaeological site type in terms of environmental setting, I divided the region into three major environmental zones:—ridge tops, valley slopes and valley floor. Several weeks of field survey by an enthusiastic crew of A.N.U. prehistory students showed that most sites are small surface scatters of artefacts which occur predominantly on the lower valley slopes. This zone may have been preferred by Aborigines because it is above the frost hollow and provides ready access to both forest foods and grazing macropods on the open areas. These open areas of grassy alluvial fans occur around the swamp at the southern end of the valley and the name of the valley derives from their historical use as a lambing and calving ground.¹² We don't know if they are a natural feature, a result of European clearance, or due to prolonged Aboriginal burning in the past. An analysis of pollen and charcoal in cores taken from the swamp last year will produce a record of any changes in the burning regimes and vegetation patterns since swamp deposits began

to accumulate 8,000 years ago.¹³ If it can be demonstrated that Aboriginal burning did occur, presumably to open up vegetation and stimulate grass growth for grazing animals, it could indicate that game was an important part of the Aboriginal diet.

The most impressive site recorded so far is on an 'island' in the swamp. Chipped stone artefacts are scattered over about 900 sq.m. and there is evidence that tools were manufactured at the site. The artefacts were recovered for further analysis by laying out a grid of 5 metre squares and collecting all surface stone in each square.

There is also a small stone axe quarry not far from the Island site on the western arm of the swamp. No completed axes were found during the survey but there are numerous axe roughouts and flakes of a fine grained volcanic rock called metadolerite around the bases of some large granite boulders at the quarry site. The source of the metadolerite is confined to a few small outcrops near the axe flaking floors. The close proximity of a large site to the quarry suggests that it may have been an important source of raw material for the making of axes subsequently used in trading.



Judging by the high density of artefacts and their extent, the Nursery Swamp saddle may have been another focus of Aboriginal activity. Many artefacts were found on the bridge path between the Orroral Road and the saddle and on the scarp to the north as well as the previously mentioned painting site. Some of these are large, flaked pebbles carried from the river bed. They are not found in sites further down the valley and this suggests that sites in the upper valley were a focus of different activities to those in the lower valley. This is not surprising since the northern end is steep, narrow and heavily forested while the southern end is wider, has a swamp and patches of open country.

Archaeological field work in forested areas like Nursery Swamp is very interesting and lots of fun but is made difficult by the extremely poor ground visibility and the rugged terrain particularly on the ridge tops. It is almost impossible to crash through the bush and look closely on the ground at the same time. The more data that is collected in a controlled manner, the better the final interpretation but there is little that can be done to improve ground visibility and there are no doubt many more sites waiting to be discovered.

Even though the January '83 fires were a disaster, leading to large scale destruction of native fauna and flora, they offered several advantages to archaeological survey by removing forest floor litter and thus improving ground

PARK PERSONALITY PROFILES – MILO KANANGRA DUNPHY



A general view of the paintings in a rock shelter from which a detail was printed in the March issue of the Bulletin

— Photo Hedda Morrison

visibility. The fire trail bulldozed through the valley also aided the discovery of artefactual material and hundreds of stone tools were collected on the trail where it runs up the valley to the Rendezvous Creek saddle.

Field work is still in progress at Nursery Swamp and the final analysis must wait until this is completed. A picture is emerging of Aboriginal occupation in the valley from at least 4,000 years ago on a seasonal or year round basis. Manufacture of axes and other stone tools was occurring, using exotic and locally available raw materials with implications for trade with surrounding tribal groups. The painting sites suggest some sort of ceremonial or ritual activity. The excavated material shows that local fauna was exploited and we can assume that local plant foods were also eaten. Occupation seems to be confined to the lower valley slopes in the form of open sites and small rock shelters. The artefact assemblages suggest a variation in site usage at the two ends of the valley.

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Lecture to the Association
Thursday 17 May 1984
See *Leafy* p. 50-51

Nature conservation in Australia started with the creation of parks and reserves in the last century, but it was not until the late nineteen sixties that it attracted widespread popular support and again impinged upon the consciousness of our legislators. Within the rapidly growing conservation movement, three individuals are outstanding in providing leadership and inspiring the prolonged persistence necessary for success. Each of the three abandoned or jeopardised a professional career to become conservation leaders. They are Milo Dunphy, architect; Dr Bob Brown; and John Sinclair, adult educationist. For each, environmental leadership has entailed heavy financial sacrifice. Such selfless dedication to public interest rates no mention in the honours list.

Milo Dunphy was, literally, born to be a conservationist. As a child he absorbed conservation awareness from his parent, Myles J. Dunphy, O.B.E., acknowledged as the "father" of conservation and recently presented by the I.U.C.N. with the Packard Award for "Long Service with Merit in Advocacy of National Parks." In naming his son, Myles revealed the same visionary genius which he exhibited in proposing most of our present major national parks decades before they came into being. The legendary Milo was a Greek athlete of prodigious strength who won the wrestling event in the original Olympic Games 12 times. Milo Dunphy is a frequent winner in the political wrestling essential to environmental protection. Even more prophetic was the unique christian name "Kanangra"; Milo took a leading part in saving this magnificent wilderness, the Mecca of bushwalkers, from becoming the site of a roaring limestone quarry and a pine plantation.

In January 1931, at the age of 20 months, Milo played a leading role in the first and last perambulator journey from Oberon to Kanangra Walls and back. The motive power was provided by his father and mother. "No parents ever slaved for their offspring as we did" wrote Myles in "The Sydney Bushwalker" of October 1962, describing their exertions in the hot sun on the hill beyond the Fish River. Beyond this was half a mile of loose ballast that "rattled Milo's teeth," and later they had to stop to "give him a rest from the constant shaking. At times he must have felt like a blancmange in an earth tremor." Not that Milo didn't do quite a lot of walking – in fact he wanted to walk but liked to stop and play with the countless stones, an activity which held up the expedition. Milo appears to have thoroughly enjoyed the trip and "look to camp life with avidity." On the last night of the trip an enormous meteor fell close at hand, there was an earth tremor, and the Dog Face Rock near Katoomba collapsed with a sharp detonation, heard near Oberon by the Dunphy family. Were these phenomena portents of Milo's later impact on the establishment?

Bushwalking, interspersed with some cycling and canoeing trips, has occupied most of Milo's leisure time (if leisure is the word) ever since that epic perambulator trip. He continued to accompany his parents on their camping trips, and when he grew up joined the Mountain Trails Club, to which most of the early conservationists belonged. The range of his trips broadened to include, in recent years, most of the remote wildernesses in Australia. In the last five years he has also led several Himalayan tours.

In professional life, too, he followed in the footsteps of his father who was in charge of the architectural school at the Sydney Technical College. Milo graduated from the S.T.C. with an honours diploma and the Byers Hadley Travelling scholarship. He then completed a year's post graduate study in town planning at the University of Sydney, followed by a year spent working in northern Europe, and a three months' cycling tour of Scotland, Scandinavia, Denmark, Holland and Belgium. Back in Australia he formed a partnership with Bruce Loder which later developed into an inter-disciplinary group, Dunphy, Bell and Partners, Architects Planners, involved in planning, landscape and surveying, as well as architecture. This highly qualified group planned some major developments, including

the Sutherland Town Hall and numerous government and municipal offices, and a number of churches. Reports were prepared for the National Capital Development Commission on street furniture and advertising in Canberra, and designs provided for park installations. In November 1971 architectural work in progress aggregated over \$5 million, (\$15m in today's money). Milo has now virtually abandoned his successful architectural career to work for the conservation movement.

Parental guidance, architectural and town planning study and extensive experience in the field of environmental planning were an ideal preparation for Milo's subsequent career, which he entered via his profession. In 1962 he was Councillor of the NSW Chapter, Royal Australian Institute of Architects where he served terms as Treasurer and Chairman of the Environment Board. His transition to full time environmentalist commenced with his election to the Colong Committee when it was formed in 1968. He became its Press Secretary and later Secretary.

The appointment in 1968 of the Colong Committee — formed to stop the mining of Colong Caves near Mount Armour in the Kanangra-Boyd wilderness, was the start of a new conservation era. In the post World War 2 economic expansion there was little possibility of reserving any area unless it was economically useless. The only effective avenue of influence available to the puny conservation movement lay in personally influencing land use authorities, a method followed by Myles Dunphy, Tom Moppett and Alan Strom. Myles Dunphy's Kosciusko National Park proposal was adopted in 1945, but subjected to intense economic exploitation in the form of a vast hydro-electric scheme, extensive resort development and, later, the excision of 80,000 acres of commercial timber. The 50 million tons of limestone at Mount Amour was a valuable resource by reason of its proximity to the Maldon cement works. So too was the readily accessible, high rainfall Boyd Plateau, in the northern portion of the Kanangra-Boyd wilderness, where the Forestry Commission planned a pine plantation. Milo Dunphy and Father Jim Tierney were the leaders of the Colong campaign and, in 1970, the Committee unanimously accepted Milo's motion for the inclusion of the Boyd Plateau in its objectives. The Colong issue marked the beginning of widespread opposition to mining the wilderness areas and the Boyd issue was the forerunner of the opposition to clearing of native forests for pine plantations.

For the first time in NSW Nature conservation hit the headlines, as have many subsequent conservation issues. The Colong and Boyd campaigns commanded hundreds of column-inches of press publicity, often appeared on TV screens, and occupied many hours of parliamentary debating time. Virtually the whole conservation movement, consisting of some 200 societies, was mobilised in support of the Kanangra Boyd issues. As secretary of the National Parks Association and principal spokesman for the Colong Committee, Milo soon became the best known conservationist in the State, the hero of the nature lovers and the ogre of development interests.

When a group of concerned environmentalists, possibly inspired by the activities of the Colong Committee, decided, in 1972, to form the Total Environment Centre, they invited Milo to become Director. Since the total environment is, if not the universe, at least the whole world, this appointment entailed considerable diversification of his activities into fields such as coal loaders, urban parks, foreshore reservation, plant variety rights, atmospheric and water pollution and uranium mining. In most of these fields, however, Milo acted mainly as a consultant, advising interested organisations and special committees on methods of presenting their case and attracting publicity. His interest in nature conservation was as strong as ever. He became a foundation member of the Myall Lakes Committee, which led the campaign against beachmining, in 1969. In 1972 he was seconded to Hobart as Joint Director of the United Tasmania Group's election campaign to save Lake Pedder, and in 1973 was appointed by Prime Minister Whitlam to the National Estate Inquiry. In 1971 he found time to

contest the State electorate of Miranda as an Australia Party Candidate and in 1973 contested the Federal electorate of Cook. Ten years later he contested Bennelong as an Independent, campaigning on the single issue of the Franklin Dam. He received 12.7% of the votes cast, possible sufficient, had the Labor Party fielded a stronger candidate and preferences been distributed, to unseat the then Federal Treasurer.

He became a Councillor of the National Parks Association of NSW, and of the Australian Conservation Foundation, of which he became Vice-President in 1976. Last year he was elected Vice-Chairman of the Nature Conservation Council of NSW.



Colong Caves were always a struggle but the greatest one was to retain them from the limestone quarriers. From the Colong Committee, which was formed to fight this issue, a new spokesman for wilderness emerged in Milo Dunphy and a period of activity in conservation not seen since the 1930's. — Photo Reg Alder

Despite these multifarious activities, Milo continued to participate in, and inspire, the work of the Colong Committee. By 1974 Colong was saved and early in 1975, when Milton Morris, Minister for Lands, announced there would be no pines on the Boyd, the Committee, stunned by its sudden success in accomplishing both its objectives after a seven year battle, considered winding up. Milo would have none of it. There was plenty more to do, and the Committee had learned how to do it. Three more objectives were adopted — saving the Border Ranges Rainforests, achieving Myles Dunphy's Greater Blue Mountains National Park proposal, and establishment of Kakadu National Park. As previously, the strong support of other conservation bodies was soon obtained, while Milo and his assistant director, Jeff Angel, threw the resources of the now influential Total Environment Centre into the campaign. Within a few months the Border Ranges issue hit the headlines. Before the end of the decade the campaign had the support of the entire conservation movement and had been translated into a demand for the preservation of all rainforests, an objective now largely achieved. So, too, were the other objectives realised, though credit for the saving of the Northern Blue Mountains lies principally with the T.E.C. sponsored Colo Committee, and the A.C.F., strongly influenced by Milo, took the lead in saving Kakadu.

Not everybody agrees with Milo's methods. Many, particularly in development circles, consider him too radical and uncompromising. But it is unlikely that, in the milieu of the seventies, gentle persuasion would have succeeded. After nearly two centuries of exploitation, described by the NSW Minister of Agriculture as having "no precedent in man's history for such widespread destruction in so short a time" (an observation previously made by Milo), little remained of the natural environment. The remnants, hitherto protected mainly by difficulty of access, were exposed to the ravages of bulldozers, off-road vehicles and other developmental machinery. Conservation had to be accomplished quickly or it would be too late. Future generations will have cause to thank Milo Dunphy, John Sinclair, Bob Brown and their helpers for preserving some of Australia as nature intended it to be.

Alex Colley

Burnt is Beautiful heads an article in Hemisphere of November/December 1983 and in it the writer, an itinerant with an Honours degree in politics, seeks to prove that fires are not a disaster and have always been an essential part of the system.

There is no doubt that fires have always taken part in shaping the environment through lightning strikes and in later years through the burning policies of Aborigines, but this is not necessarily a justification that fires are a necessity to preserve the environment in its most desirable natural form.

Perhaps the easiest way to summarize the article is by extracting in condensed form the many statements that fire is needed or harmless in the long term. The article is based on observations from a fire in the Little Desert National Park in Western Victoria.

Many plants and animals benefit from hot bushfires. Plant communities are sorted out and given room to grow.

New areas of grazing country are left open for kangaroos and emus. Many animals surprisingly survive.

Snakes and other fast moving reptiles retire to deep burrows.

The denizens of the scrub seem to sense the onslaught of the fire and flee.

Snakes will be on the move one kilometre from the seat of the fire.

Birds lose their nesting places for a time but new ones are created in burnt out trees.

Birds will soon return because of the variety of feed that follows a fire and the transitory population is often much larger.

Seeds dropped because of the fire are left unmolested by predators and the slightest wind covers them with loose sand for re-establishment.

Regeneration of trees, bushes and heaths starts within a few weeks.

Ten days after rain native grasses peek through and the larger animals return. For at least five years the area remains a prime feeding ground as the widest variety of plants will survive and have diversity.

Left untampered with and unburnt Little Desert scrub will strangle itself within fifteen to twenty years.

It is only after a fire that we have the widest possible selection of plant species. As bushes, heaths and smaller trees take over, the grasses are destroyed and grazing animals move on to other recently burnt areas.

Areas that have been unburnt are characterised by the almost complete dominance of one type of plant species.

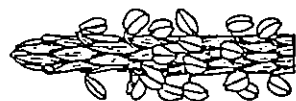
Areas that have been burnt in the last twelve to fifteen years provide the maximum diversity.

A base for the widest possible diversity of animals is provided in areas which have been burnt in the last five or six years.

If diversity is wanted it is necessary to burn the areas at the peak of their diversity.

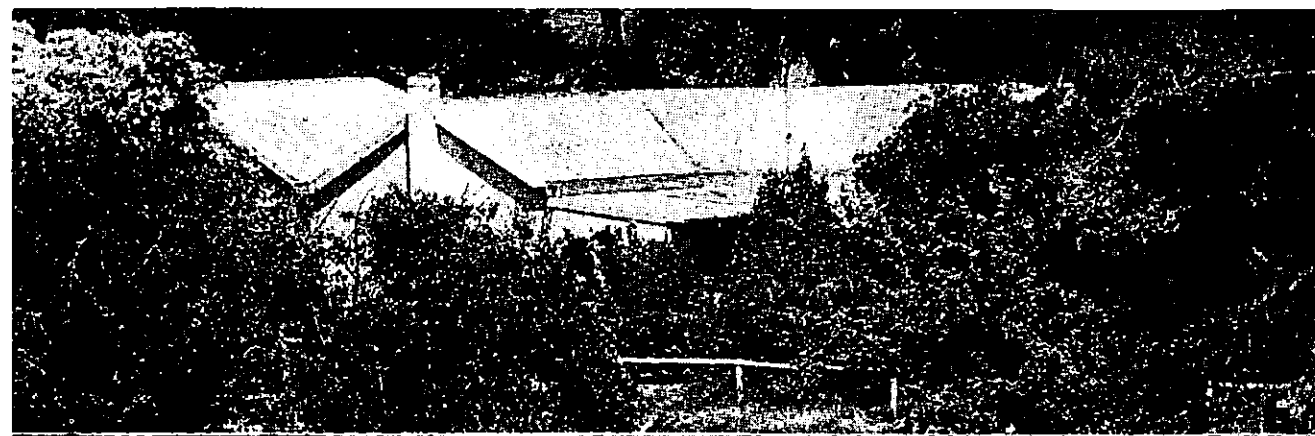
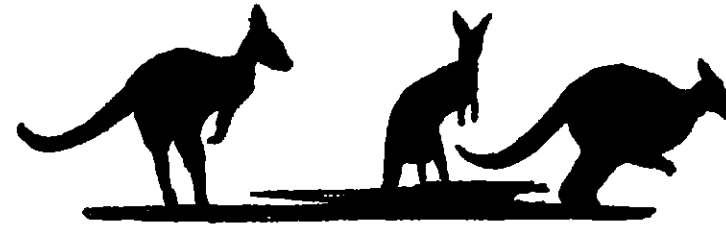
Burnt may be beautiful, but it is not until the effects of fire are fully understood that the beauty can be appreciated — for the survivors it is a bonanza of feed and a new chance to begin all over again to create an ecological system of incredible variety.

Fire may be a natural phenomenon in our country but man made burns are not and to me the supposed benefits are not a justification for regular burns which do not allow for the unscarred full development of the many longer lived species. Perhaps some readers, more qualified than I am, may care to comment on the many statements in this article.



Reg Alder

TIDBINBILLA



The Departmental brochure on Tidbinbilla Nature Reserve covers fairly extensively the natural features and trails the visitors can see and walk along. It however pays no attention to the historical aspects of the area or to its own declaration as a Nature Reserve. As was pointed out in the previous issue of this Bulletin, national parks can contain areas of cultural interest (many demolished) as well as flora, fauna and natural features.

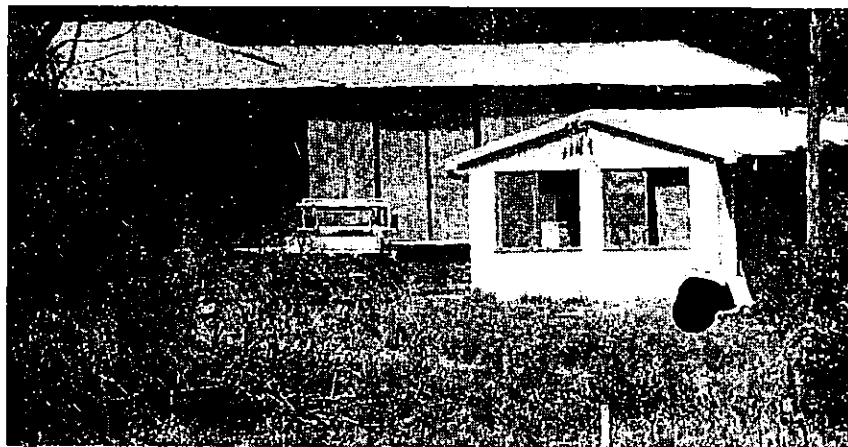
The earliest recorded settler in the Tidbinbilla Valley, or Tidbinbilla, was recorded in the 1848-50 Return of 'Squatters Runs', was George Webb who had been breeding cattle and horses there since 1839. He left in 1866 to settle at Uriarra.

The first selector to take up freehold land in the Valley was John Noone with a block of land at Hurdle Creek. He subsequently moved further up the valley to where the bird feeding area and its old trees serve to mark the site of the now demolished old homestead. His descendants lived there until their land was resumed for the Reserve.

This year is the centenary of the arrival of George Green and George Hatcliff to take up a selection at Apple Tree Flat at the head of Tidbinbilla Valley. They soon decided to move further down to Ash Corner, where they built a small hut to which George Green brought his wife in 1886. As their growing family was being raised at Ash Corner, a new home was gradually being built at Rock Valley and by 1895 two rooms of slab and a separate pise bedroom had been completed. A dairy was built in 1897 as well as an extra room and the home was gradually extended until it reached its present size as shown in the photograph. The homestead is situated in the grove of trees just beyond the Information Centre before the junction of the road to the wildlife enclosures. Today it is given no significance in the Reserve, the rendering over the pise walls is starting to flake off in large slabs and although the Department acknowledges that it will maintain it (even though it is said to have no historical interest!) there are no funds to carry out any work. Perhaps it could be made a Centennial Project with some eventual use made of the building.

The Valley was once completely tree covered and the work of the pioneers in shaping its present form and their culture should be drawn to the attention of and acknowledged to visitors.

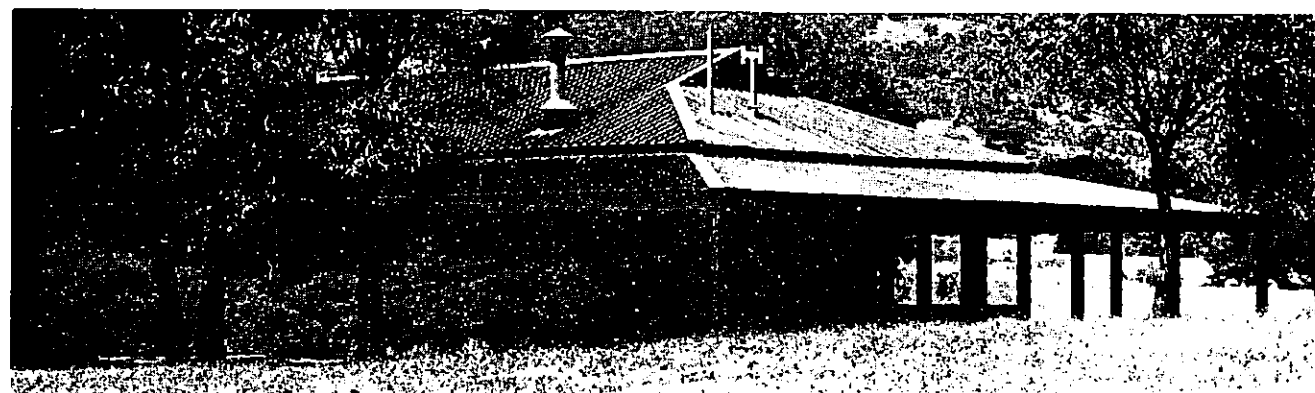
Historic detail from 'To Green the Memory' by Monica Flint



The workshop area and ranger offices stand out in stark contrast to the adjoining old Green homestead. Little thought has been given to a low profile in construction and a visually unobtrusive design which would blend in with the homestead. The complex is entirely out of keeping with the concept of what is appropriate in a reserve. A fine example of a pise stable and hay loft of unique construction adjacent to the homestead was demolished to make way for these unsightly structures.



Sketches — Ken Johnson



The Information Centre at Tidbinbilla in contradistinction to the maintenance depot is a fine example of a building suited to the Reserve with its pleasing design and low visual impact. Photographs and comment by Reg Alder

BOOK REVIEW OF BIRDS AND BILLABONGS



This is a splendid book which will be of interest to all who care about the preservation of Australia's ever decreasing wetlands. A graceful and well informed text by Allan Fox provides the framework for a magnificent series of colour photographs by Steve Parish illustrating the life of the wetlands. The whole is contained in a handsomely produced volume though printed, I am sorry to say, in Hong Kong. I suppose that if it had been printed in Australia no environmentalist would be able to afford to buy it.

Fox uses some judicious quotations to show what life in the wetlands was like when the white man first appeared on the scene coupled with descriptions of areas where that life is still abundant. He goes on to describe the ecological systems which sustain that life. He also gives a moving account of how the aborigines made use of the wetland resources. Those resources provided aborigines with an abundance of food but they were careful never to over exploit them. They lived in harmony with the environment.

Not so the European settler who in his ignorance and arrogance thought to adapt the environment to his needs and not his needs to the environment. The sheep and cattle did untold damage to the margins of the wetlands. Tree clearing accelerated the rate of runoff. Dams and weirs altered the natural flow of water that gave life to the rivers and billabongs and flood plains. Vegetation designed by the Almighty for one pattern of water flows suffered severely when engineers restricted or changed the process of seasonal flows. The great riverine forests of the Murray have not only suffered great damage but face the possibility of total collapse.

The wetlands not only provide the habitat for large numbers of Australian birds and other animals but also winter quarters for innumerable migrants escaping from the harsh northern winter. Yet everywhere floodplains are being reduced, often in the supposed interests of householders who have persistently built their houses far too close to the water. Floods result in levees and drains being built creating in their wake a whole new vested interest of farmers and maintenance workers determined to see their new systems perpetuated. Ironically Australia, which is so busy destroying its wetlands, is the signatory of a 1974 UN Convention calling for their protection.

Fox describes some bright spots where enlightened planners and sportsmen have cooperated in protecting threatened wetlands. Unfortunately they tend to be the exceptions which make the rule of wetland degradation. He has some valuable thoughts to offer on genuine environmental education and suggestions as to how Australia's vast number of generally sterile farm dams could be improved for the benefit of wildlife.

Parish's photographs are magnificent. He has a sensitive and perceptive understanding of what makes a fine photograph. His photographs are nearly all of such a high standard that it is invidious to select a few for special mention. My advice is buy the book and see for yourself. Parish must also be an uncommonly hard worker.

The book can be strongly recommended for anyone interested both in conservation and fine photography.

Alastair Morrison

Allan Fox, Of Birds and Billabongs, 142 colour plates by Steve Parish, Rigby Publications, 1983, \$25. A copy, donated by the author, is available for loan from the Association library. Copies may be purchased through our Book Sales officer.



COMMUNICATING WITH THE MEDIA

In the June 1982 edition of the Bulletin two writers referred to the relationship between conservation and the media. John van Pelt reached for the cliché book and pulled out "the sensation orientated press", while Alex Colley gives us a pat on the back for the coverage of the Franklin River debate. I say "us" because I work for the dreaded, the omnipresent, the much-maligned media. Since 1976 I have been a journalist working for two major metropolitan newspapers, covering most areas of news. In that relatively brief time I have heard more misdirected criticisms of the media than I care to recall and vainly sought well-argued, informed criticism that is so necessary if a service or organisation is to improve its performance. The problem appears to be at its simplest that the media is a very easy target for blame for almost anything. If you are sick of kicking the cat and lambasting the government, then you can always have a go at the media. The fact that the newspapers, television and radio stations rarely fight back means that the illogical attacks attain a level of acceptance which they do not deserve.

To our critics then, to the indifferent and to those many tireless self-publicists in the conservation movement and the general community I would like to offer some very simple but practical advice on relations with the media. While you may not think you are in a position where you would be likely to be contacted by the press, television or radio, you should be prepared for that eventuality or indeed for the time when *you* might want to make the contact to get your opinion or that of your organisation, across to the public.

Firstly, some general points. All newspapers, television and radio stations except the A.B.C. are competing in a commercial market for increased readership and audience to improve circulation and ratings and in turn increase advertising revenue. Until the great revolution arrives that is likely to remain the situation. The media company boards and editorial executives naturally have considerable influence on the overall emphasis in news selection and editorial stance. At one extreme there is Rupert Murdoch who has reputedly written stories and editorials for newspapers in his stable and given specific directions about the political position a paper should take. At the other end of the spectrum, The Age remains proud of its alleged independence, marked this year by its editorial backing of the Victorian ALP in the April State election. Despite the conflicts of interest and limitations this relationship imposes, the media generally is able to carry a far more diverse range of topics and opinions than is usually recognised. Pressure groups and individuals wishing to publicise their points of view have a fair chance of getting media coverage if they first learn the appropriate language, technique and style. The old saying, "a bad workman quarrels with his tools," could be translated to "a bad communicator always blames the proprietors" if he/she or they do not get coverage.

You may want to be a total recluse from the media because you detest what it does and the way it does it. So be it. But do not complain then if your viewpoint is ignored in public debate and your opponents grab the limelight. If you don't try and work the system the system will not work for you, or . . . if you don't make the running you won't get a run. So approach the media in a positive manner, no matter what you may think of it. Those who are too negative, are always desperately pulling up the drawbridges in hypersensitive defence, will always come off second best. A negative contribution has far less value than a positive one. Even an effective "no comment" can be put positively . . . "Thank you for contacting me, I am afraid at the moment all I am able to say is . . . I would really like to give you a fuller comment but you can understand that in the present situation that is not possible because . . . But in a few weeks/days/hours I might be able to be of more help, perhaps I could give you a call . . . "Never, never say to a journalist: "I don't know why you are

pursuing this, there is no story in it." Immediately the journalist becomes suspicious: "Why is she/he telling me to hold off; have they something to hide?" That is often found to be the case. To give a related real life example: a colleague of mine had heard about a strike by a group of workers employed by a manufacturing company. It is a common occurrence and there were no wider industrial implications so it was hardly a great story. But it was a quiet time so he decided to pursue it and rang the company for comment. The company spokesman was abrupt: "Yes we have got a strike; what are you going to do about it?" He continued to answer questions in a similar tone. My colleague's ire was raised to the point where he determined to write the story no matter how insignificant it was, just to prove in a sense that the company's intimidation had not been successful.

That leads on to another point: people who are good at media relations are generally good at human relations and people who have a rough trot with the media are often bad at human relations. No matter how you might feel, be nice! When a journalist returns from a job and is asked how it went they will almost invariably say: "Oh, he/she was really nice/helpful/charming" or, "Oh, he/she was really rude/abrupt/curt . . ." The attitude the journalist takes towards a story will be strongly influenced by the personal approach of the people with whom they are dealing, and vice versa. It will often determine whether they write the story at all. Being pleasant is just part of that all important positive approach. Journalists, believe it or not, are people. Some are rude, some untrustworthy, some badly dressed and badly spoken, a significant but thankfully, declining number, drink too much. But overall we are a pretty ordinary bunch of people who out of working hours do much the same as other ordinary people. When you are dealing with journalists relate to them first and foremost as people.

If you are trying to put across your views or your organisation's views to the media in whatever form, letter, press release or verbal communication, certain basic criteria must be met if your attempts are to be successful. The information must be: 1. Interesting; 2. Incisive and well-argued; 3. Substantial, and most importantly 4. New. Fail one or more of these tests and your chances of getting media coverage are pretty limited. Pass them all and you will at least stand a fair chance of "getting a run."

Let's look at those criteria in more detail.

1. Interesting. A newspaper, radio or television program's *raison d'être* is to be read, listened to or watched and if it is not interesting it won't be. When you are pushing across information think for a moment: Will a significant number of people be interested in this or at least become interested. "What's your lead?" you will hear a journalist ask a colleague as he strains over the typewriter. Translated from newspaper lingo that means: "What have you found that is new and interesting in the information." The lead sells the story to the sub-editors who decide whether it will get in the paper, and ultimately be read.

2. Incisive and well-argued. I have come across many press releases, reports and so on where interesting ideas are buried in a mass of words. Journalists work to deadlines. Concise, well-argued statements are more likely to stir interest than long-winded, abstruse ones. When in doubt about how to write things for the media, scan newspaper articles, note how the lead comprises the thrust of the article with the information declining in importance as you reach the bottom paragraphs. Try to adjust your style to that of a newspaper, for example: "The ACT branch of the National Parks Association today called on the Department of the Capital Territory to stop construction of fire access tracks in the Gudgenby Nature Reserve. The Association said the tracks seriously diminished the wilderness quality of the reserve and increased the risk of erosion on steep slopes. The NPA president, . . . , said the continued construction of the tracks highlighted the need for a proper plan of management for Gudgenby . . . said until guidelines were laid down various development works could be allowed that would permanently damage the area's beauty.

EMERGENCIES IN THE BUSH

Survival in the bush is 80 per cent mental attitude, 10 per cent equipment and 10 per cent skills.

When an emergency arises, don't panic. Sit down, make a logical plan and stick to it.

ILLNESS OR INJURY

Any illness or injury should be reported at once to the leader.

An injured person should never be sent back alone, and should not be left alone unless absolutely necessary.

While awaiting help, an injured person and companions should move only if necessary and then should leave conspicuous signs or messages of direction and destination for rescuers.

IF LOST

Scout around for landmarks. Sit down and pool ideas. Decide on the most probable position and plan best route to safety (along ridge, down creek, etc.). Is retreat to previous landmark possible or worthwhile?

While following planned route, use map and compass and observe landmarks with a view to fixing position. Deviate from plan only when position is certain.

Walk steadily, marking route, especially changes in direction. Break twigs, leave stones on logs, etc. Leave prominent dated note at any camp or fireplace, indicating plans, names and condition of party.

Pool and ration food.

Don't travel at night. Find a sheltered campsite before dark.

If unable to find a route to safety, find a sheltered but conspicuous campsite with water. Light a smoke fire and stay put.

HYPOTHERMIA

Hypothermia, or in its milder form, exposure, is a serious drop in body temperature. It may be difficult to detect as those affected do not ordinarily complain of such a drop.

Anyone who shows signs of tiredness, drowsiness, stumbling, lagging behind the group, who complains of numbness or is uncharacteristically difficult to reason with during a cold weather walk, should be sheltered from the wind and not be forced or helped to walk any distance to a more comfortable area — such exertion could kill.

Critical areas for heat loss are the head and neck, sides of chest, groin, hands and feet. Fifty per cent heat loss is from the head and neck; it is therefore imperative that this area be adequately covered.



Enjoy the Bush

Safety Hints for Walkers



**P.O. Box 457
Canberra City
A.C.T. 2601**

ON THE TRACK

Be prepared at starting points.

Listen to the leader from the leader. Don't leave the party without informing the leader.

EQUIPMENT

Wear proper walking boots or shoes with rubber soles and thick socks. Take windproof and water-proof clothing and a hat.

Take plenty of food and water. ▲

Take a map and compass, a torch and matches.

Carry basic First Aid equipment. Walkers are responsible for their own injuries.

WALKING

Get through rather than over fences; but if climbing do so at a post.

Leave gates as you find them; make sure the last person knows whether to close the gate or leave it open.

In scrub, walk a few paces behind the person in front. It is the responsibility of the follower to avoid the springing twigs, not the one in front to hold them back.

CONSERVATION

Do not litter. Carry out what you carry in.

Do not pick wildflowers, or disturb animals or birds.

Remind your children about conservation of the bush.

Do not allow stones to be thrown, bushes broken, rocks dislodged, or wildlife habitats disturbed.

Replace aboriginal artefacts, and do not deface aboriginal art.

Leave dogs and other pets at home.

FOR COURTESY AND SAFETY PLEASE MAKE SURE THE WHOLE PARTY IS BACK BEFORE LEAVING. YOUR ASSISTANCE MAY BE NEEDED.

IN CAMP

Consider the comfort and feelings of others when siting your tent.

FIRES

Carry matches in a waterproof container, or use a disposable cigarette lighter.

Use only dead branches for tent poles and dead wood for your fire.

Do not burn plastics or foil. Carry them out.

Light your fire at a safe distance from tents and trees.

Observe local regulations about fires in the open, especially regarding clearing leaves and grass from the area. Make sure your fire is out when you leave camp.

Replenish the wood supply if you use any provided at a camping spot.

A HIGH STANDARD OF CAMP HYGIENE SHOULD BE MAINTAINED.

Don't drink unboiled water if there is any doubt about it.

Avoid stepping over uncovered food.

Bathe downstream from where drinking water is obtained.

Avoid contaminating streams with soap or detergent.

Where no toilet facilities are available, all human waste should be buried at a reasonable distance from streams, camps and tracks.

CLEAN YOUR CAMPSITE BEFORE YOU DEPART, LEAVING IT AS TIDY AS YOU WOULD WISH TO FIND IT.

PARK SAFETY

BEFORE YOU BEGIN

Know the area. Ask the Rangers for brochures, maps and advice.

Observe park regulations. They are for your enjoyment and protection.

Notify park headquarters of your plans to explore.

Use the bush walking register when provided.

Don't try it alone. Whether it's a short hike or a pack walk, a companion may save your life in an emergency.

Know your own limits. Strenuous exertion, especially in extremes of temperature or altitude, can be dangerous if you are unaccustomed to sustained exercise.

DRESS SENSIBLY

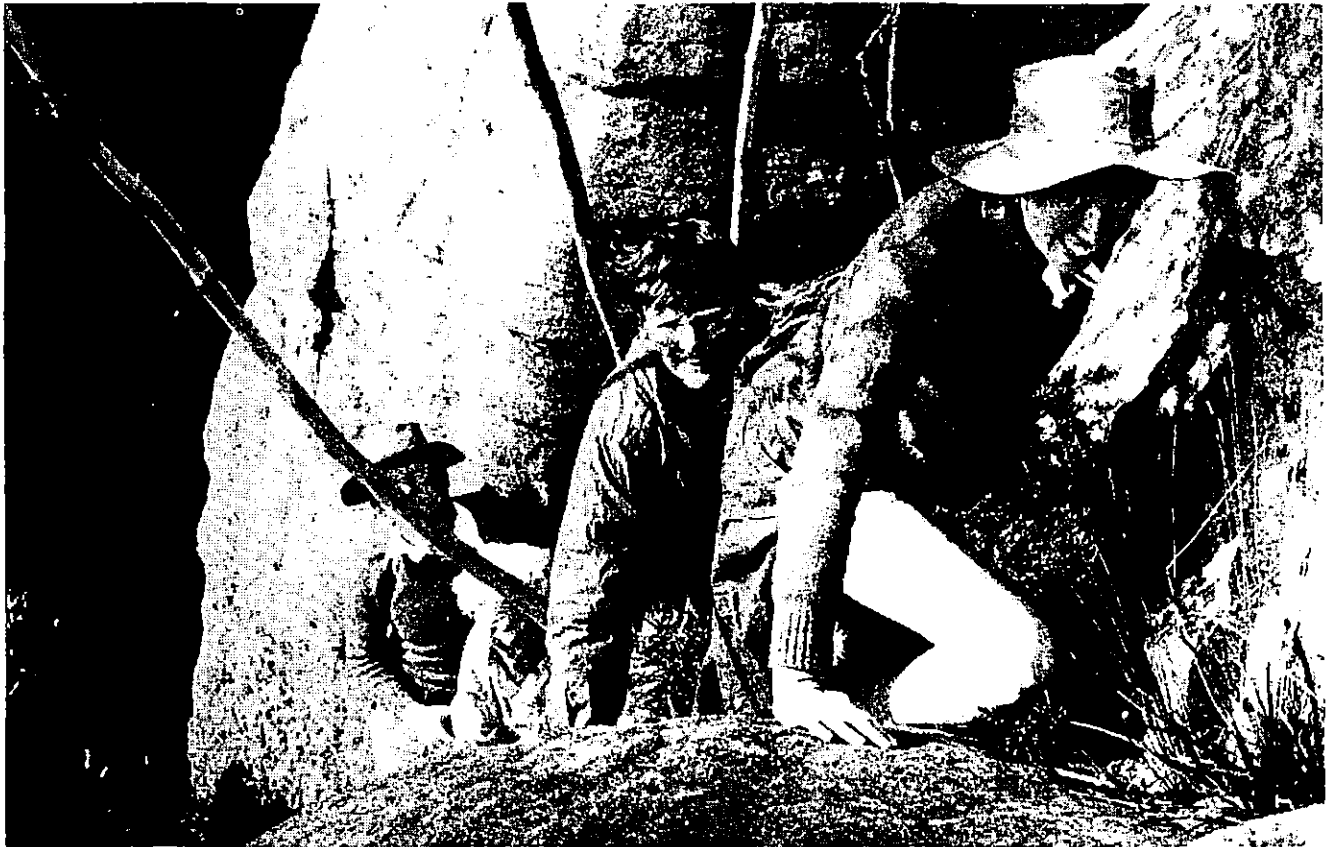
Even in the heat of summer it may be very cold in the mountains or in caves. Take your windproof and waterproof clothing and a hat.

REPORT TROUBLE - your own, or someone else's.

WATCH YOUR CHILDREN

See that they observe safety and conservation principles.

DRIVE CAREFULLY



Members climbing a cleft through the cliffs on the eastern side of Hidden Valley in the Budawangs. Over recent years the valley has become well known and the favourite camp site, near where the creek debouches through a break in the cliffs, is becoming increasingly worn.

— From colour negative by Fiona Brand

And so on and so on . . . "When sending out any sort of written communication always leave a name and telephone number on the bottom for follow-up contact. If you have a propensity for verbosity remember that many people only read the first four or five sentences of any article or letter. If they can't get an idea of what you are on about in that space then they are unlikely to keep on reading.

3. Substantial. Don't bother trying to get attention unless you have a substantial argument or case to make. Again apply that question: "How many people will be interested in this?" Journalists hate nothing more than to be badgered by people repeatedly pushing their hobby horses of trivia. We recognise that the media carries plenty of trivia but that does not mean we derive any enthusiasm from reporting it.

4. New. The derivation of news, but how many people forget that, as they trot out a whole lot of information that while very interesting is simply not new. You must be able to advance a new argument or opinion, shed new light on an existing issue or reach new conclusions. Of all tests the originality or newness of information is the most crucial. One of the many justified criticisms of the media is that it can become intensely interested in an issue one day and then lose all interest the next, even when the issue deserves more extended coverage. Because this approach is not likely to change in the near future, organisations or individuals that wish to comment on a newly announced policy, decision, report etc should respond quickly or their comments will not see the light of day. Press releases of response generally must be issued on the same day, or at latest the day after the decision is announced otherwise they are likely to be consigned to the rubbish bin. This inevitably means the organisation or individual must do its best to find out when the decision/policy is to be made public so it can be ready to respond promptly.

Having followed these precepts you open the newspaper, listen to the radio or watch the television and read or hear your viewpoints being reported. "But hang on," you say, "they've misquoted me;" or "they've twisted the whole thing around, I just knew they'd get it wrong . . . typical media!!!" I start out with a frank admission that there is

misquoting and gross misinterpretation in the media, too much of it, BUT not anything like the amount that is often alleged. Many people in my experience and indeed that of many others, simply do not remember what they have said. Using a tape recorder for all interviews, I have sometimes reluctantly agreed to read back to people what they have said. "Oh gosh did I say that, oh yes so I did", is often the response as they hear repeated some of their more forthright statements. A colleague of mine was interviewing a woman who had developed some original methods of careers guidance. In the course of the interview she mentioned that she had been misquoted in an article in another newspaper. My colleague returned to the office looked up the contentious article and there found almost word for word what the woman had told her in the interview that day!

It is very easy for a person to claim to have been misquoted when comments accurately reported in the media get them into hot water.

Twisting around a statement in the course of reporting it does not necessarily mean misreporting. Sometimes the most new, interesting, concise, well-argued point is buried near the bottom of the statement or near the end of the interview. The reporter is only doing his/her job properly if he/she brings it to the top . . . as long as the whole thing is kept in the right context.

If you still believe you have been misquoted or misinterpreted then make a complaint. If you believe the case is serious, ring the chief of staff or reporter concerned. Complaints that can be supported are in my experience taken very seriously. My previous employer tended to find you guilty in such cases and challenged you to prove your innocence. If you really want to go the whole hog you can take the complaint to the Press Council. The problem of course is that some media companies have refused to be involved in the Press Council's operations. And that brings me to my first major criticism of the media, but that's another story . . .

STEPHEN JOHNSTON

SALAAM A LAIKUM (Hello)

When in Pakistan expect the unexpected and it usually happens. This was the motto that Den and I adopted whilst we travelled and trekked for five weeks in June and July of last year. We were fortunate to live with a warm and caring family and to experience both their daily life and special festivals. This included living with them through the Muslim month of fasting or Ramazan and participating in the Eid Festival at the end of that period.

Whilst in Pakistan we wore the national dress of Khameez (tunic) and Shalwar (harem pants) and Dopata (veil). We also wore this trekking and found it eminently suitable in the conditions of extreme heat although with my veil wrapped around my Aussie bushwalking hat beekeeper style I must have looked like a Victorian memsahib going for a stroll. During the entire time we ate Pakistani style and enjoyed a wide variety of foods. Basmati rice, dhal and delicious bread, either the fragrant chappati, the doughier roti or the superb Afghanistan 'Nan' cooked Tandoori style in an earth oven and a dinnerplate sized meal in itself, formed our staple diet. After one unfortunate experience with meat we tended to stay with chicken (which was killed and cooked on the same day). The fresh lychees, and many varieties of succulent mangoes and the delicately spiced cardamon flavoured green tea were special treats. Pakistani food is a delectable mixture of the exotic Arabian and the colourful and spicy Indian.

During the month of Ramazan the bazaars close during the day and often one cannot even purchase a drink so we were fortunate to be staying with a family or their friends. Our family ate their main meal at 3.00a.m. Needless to say we did not join them for this but ate our main meal at sundown when they broke their fast with mainly liquid and fruit. We did turn our nights into days and adopted the afternoon siesta routine along with everyone else.

Arriving in Karachi at 1.00a.m. on the hottest night of the year was our introduction to Pakistan. Here we spent several days experiencing our first introduction to a completely new culture. We experienced too the frustration of Karachi's irregular water and electricity supply, bargaining in the bazaars and the biggest cockroaches I have ever laid eyes on. Flying the length of Pakistan to our host's home in Rawalpindi revealed extensive reclamation of the desert areas and heavy agricultural cropping in watered areas. With a population of over 90 million people Pakistan's food requirements are high. The twin cities of Islamabad (the planned Government administrated centre - as in Canberra) and Rawalpindi (the ancient city) almost merge and the freeways in Islamabad lined with Eucalyptus, *Grevillea robusta* and flowering shrubs are surprisingly reminiscent of Canberra as the climate and surrounding countryside and hills are of the ACT. Street trees are white painted around their bases to remind people that these are protected and not to be chopped for firewood. On a day trip to Murree (a cool hill country summer resort) we passed through beautifully scented fir forests which sadly had a lollypop appearance due to every single tree having the majority of its branches lopped for firewood, such are the pressures of population. In spite of continuous plantings by the forestry departments this problem is increasing in magnitude and further up in the Himalayas the decreasing tree line and severe erosion were stark reminders of the consequences of this practice of tree lopping.

The plane trip to Gilgit (a remote valley near Hunza and the Chinese border) was very dependent upon weather conditions. An early morning monsoon cloudburst almost scotched our chances but fortunately we made it in what must be one of the most spectacular plane flights in the world. A dress circle panorama of Himalayan peaks with ethereal worlds of snow and glaciers from horizon to horizon. Plunging through the gorge of the Indus we pulled up short under a beetling mountain overlooking the town of Gilgit. Our Hunza guide met us at the airport and we proceeded to the bazaar to buy our food for a five day trek on the Rupal side of Nanga Parbat (26,000 ft) or 'Sleeping

Lady' Mountain the last flank of the Himalayan Range. A Japanese Climbing expedition were at the 10,000 ft high base camp which we were aiming for.

The following day we undertook the 90 mile 9 hour jeep drive down the Askole River Gorge (a road they told us when we returned was the most dangerous road in Pakistan) a tortuous drive hung over a raging glacier fed river, a road of crazy swing bridges, a moving dustslide and glaciers to negotiate. A road where we had to gather up our shalwar and run for our lives through the landslide upon our return journey with boulders bouncing down the mountainside and a terrified sweating driver who brought the jeep through alone after us and was consoled with Australian glucose sweets till he regained his composure.

Trekking in Pakistan is definitely not Nepal style trekking and for time we soon learnt to multiply all estimates given to us by three. We spent three days climbing from 7,000 to 10,000 feet and returned following trails between villages of simple subsistence style living. Lush gardens of companion planting crops, stone waterwheels, amazing irrigation channels and aqueduct systems, flocks of tinkling belled goats with their cloaked herders, the wedding party travelling on the glacier between villages, the hospitality and the crowds of men who gathered to watch as we pitched our tent in the villages at night are recollections. Not so good was the constant anxiety over infection and the very real problems of dehydration we experienced in the fiercely reflected heat of the mountain gorges even with a walking itinerary from 6.00a.m. until 11.00a.m. The area being only 20 km. from Kashmir was a sensitive one and near the end of our trek we were inspected by a large contingent of soldiers who appeared out of nowhere one morning. Travelling the 14 hour journey on the Old Silk Road the Korokoram Highway to Abbottabad and civilization we also checked out through 5 police check posts. The highway is an amazing feat of engineering but travelling too fast on an overloaded bus with bald tyres and two unnerving accidents within the day left us leaving the bus glad to be still alive.

We spent the week at Abbottabad, a beautiful green valley in the foothills with our family where we celebrated Eid. On the night of 11th July the whole family gathered on the lawn to watch for the new moon and upon sighting it there was much jubilation. We were rushed off to the bazaar to buy glass bangles and to have our palm hennaed. The bazaar was packed with crowds of celebrating citizens very similar to our pre Christmas shopping rush. There followed three days of visiting friends and eating special dishes. It was during this time that we experienced particularly the warmth and caring of the extended family, an experience so often lacking in our society.

We travelled across to Peshawar not far from the Afghanistan border where we explored the rambling city with its copper bazaars and mudwalled refugee areas on the city edges. Peshawar was known as the wild frontier town in earlier days and remnants of the huge walled fort and the bandolier and gun carrying men in the street plus the free availability of certain goods on the shops tend to remind one of the cities notorious past and its strategic positioning at the crossroads between east and west - the Khyber Pass.

We returned to Islamabad and completed our stay in Pakistan by visiting the exquisitely beautiful Moghul palaces and museums in Lahore. The mosaic tiling in pink, white, aqua and mirror glass and the mathematical properties of the archway architecture were fine examples of that period. We flew from Lahore to Delhi to return to the West and enjoyed the most appreciated cup of coffee (our first in many weeks) with milk in it.

Noelme Denise

BLACK AND WHITE PRINTS FROM COLOUR FILM NEGATIVES

It may not be generally realised that reasonable quality B&W prints may be made direct from colour film negatives. Members who have photographs of interesting subjects of Association activities or require photographs to illustrate an article should submit them to the Editor for appraisal.

SLAKEBITE IN THE WONNANGATTA VALLEY, VIC.

Readers will no doubt all be conversant with the changed procedures developed by CSL (Commonwealth Serum Laboratories, Melbourne), after intensive research, for the treatment of snakebite. In the course of my work as a nursing sister, I had the opportunity to hear Struan Sutherland (CSL) first hand as he explained the principles of lymphatic compression which are the basis of this treatment. Little did I know that within six months I would be making practical application of this knowledge on my sixteen-year-old son.

My husband persuaded me to attempt the walk into Wonnangatta Homestead (Australia Day weekend 1981), and our son Nigel was pressed into service as an "extra pack horse". One condition made by me before walking was that the first aid equipment be adequate. However, as later events proved, one must take into account the height of walkers in calculating the number of crepe bandages required to bandage limbs: ours reached to the knee of our six foot son, therefore were quite inadequate.

The drama commenced on day two in the valley, and resulted from a disregard of cardinal hiking rules: (i) Wandering through a very "snakey" area (marsh with large grass tufts), without due care; and (ii) Refusal of son to wear his hiking boots — having thongs on at the time.

When he was bitten, strangely enough, a snake was not our first thought. As with most crisis situations, I guess that we all operate under the assumption that the worst would never happen to us . . .

He walked a short distance to me, complaining loudly about the pain in his foot. Then we saw the two classic puncture marks, each surrounded by a small white swelling. Often there may be one or many puncture marks, or surrounding bruising from the force of impact. I immediately placed a dressing over the site and proceeded to bandage firmly over the area and up the leg using crepe bandages. He was sitting down at this stage. It was now that we realised the inadequacy of our bandages, but fortunately this was remedied by a nursing sister in the area.

The snake had not been sighted; this, according to Struan Sutherland, is quite a common situation. We knew that both tiger and black snakes frequented the area, and judged by the distance between the puncture marks that it could have been a fairly large one. The problem of not knowing the actual type of snake involved means that: (i) One does not know how soon respiratory or other symptoms may occur/develop, although this is also dependant on dose of venom, and proximity of large blood vessels; and (ii) Subsequent choice of a specific anti-venene is complicated. However, in this new treatment the puncture site is not wiped clean, and samples of venom can be collected from the skin for laboratory analysis in the larger centres.

Fortunately for us, there was a large number of four-wheel-drives in the area, and we were taken out by one of these, CB radio being used to alert the Heyfield hospital of our imminent arrival. We attempted to keep the victim as still as possible, (difficult in a short wheel base vehicle on the Wonnangatta Track with a six foot patient; bandaging the legs together is recommended). Efforts to allay anxiety in him were very successful; however inwardly I was having anticipatory horrors about coping with a respiratory arrest under such conditions.

It took five hours from bite to arrival at the hospital, and we were somewhat nonplussed to be greeted with the news that the two sisters knew nothing about snakebite but had been reading up the literature! The local doctor, however, was quite experienced, and treated Nigel very carefully. The bandage was released only over the site and the punctures inspected. The patient stayed in overnight with the upper bandage still in place, having regular observations of vital signs and urine tests for blood. An important point with this new treatment is that the bandages must not be released until the patient is under medical super-



Forty years ago most snakes encountered on bushwalks were killed. Today snakes are protected and most if encountered, unless provoked or stood on, will avoid humans. Note the high fashion in shorts. — Photo Reg Alder

vision, and preferably with an intravenous infusion in position, as there can be a sudden surge of venom into the system. Nigel did well without further treatment though his leg was very swollen.

On replacing the thong next day, we found that the rubber strap exactly covered the punctures. We are assuming that the snake must have hit this and perforated it, thereby perhaps giving a lower actual dose of venom with limited penetration of the skin . . . All in all, we were very lucky!

Tricia Cristofaro
Reprint from 'Walk 1982'
— Melbourne Bushwalkers

(This incident draws attention to the need for ALL members to carry individual first aid kits whereby by the diversity and quantity of their components most contingencies can be coped with. Elastic bandages are essential for snake bite treatment and full details of the methods to be used are contained in the December 1982 and March 1984 issues of this Bulletin. — Editor)

INSECTS – FACTS AND FALLACIES

"I don't rejoice in insects at all" – Alice in Wonderland

Insects have been closely involved with mankind from prehistoric times. In spite of their enormous economic impact, their potential for spreading disease and their nuisance value they receive little acknowledgement of their impact in the literature and languages of the world.

Insects have been on earth for a long time. The first fossil record of insects is one of springtails found in rock some 350 million years old. While the fossil record is obviously incomplete we can get some idea of the relative ages of the various groups. Among the earliest insects were the grasshoppers, cockroaches and dragonflies.

Next in the fossil record are groups such as the mayflies, silverfish, lacewings and stick insects. About 185 million years ago the familiar beetles came on the scene. It is not surprising that the beetles are familiar – there are at least 300,000 species. Probably more than any other group of organisms. Shortly after the beetles appeared in the fossil record the first Hymenoptera appeared. If the name Hymenoptera doesn't mean a great deal then ants, wasps and bees will probably mean more. Of these three, the bees have been most intimately associated with man. Plundering honey was a prehistoric activity and bees have been kept in hives since at least Egyptian times. In spite of the domestication it was thought that bees had a king, at least till Shakespeare's time.

At about the same time in the record the flies arrived. They are distinguished from other insects by having two wings only. There are about 85,000 species of fly, many of them being closely tied up with human affairs.

With a fossil history of some 60 million years, the butterflies and moths are relative newcomers. In biological terms they have been expanded rapidly; there is an estimated 200,000 species on earth. They were the last of the large insect orders to emerge, the groups which have been preserved in more recent rocks are termites, fleas, mantises and lice.

It is worth remembering that the fossil record is fragmentary and haphazard as soft bodied insects will not be as well preserved as hard bodied ones and so the relative ages of the various groups could well be biased.

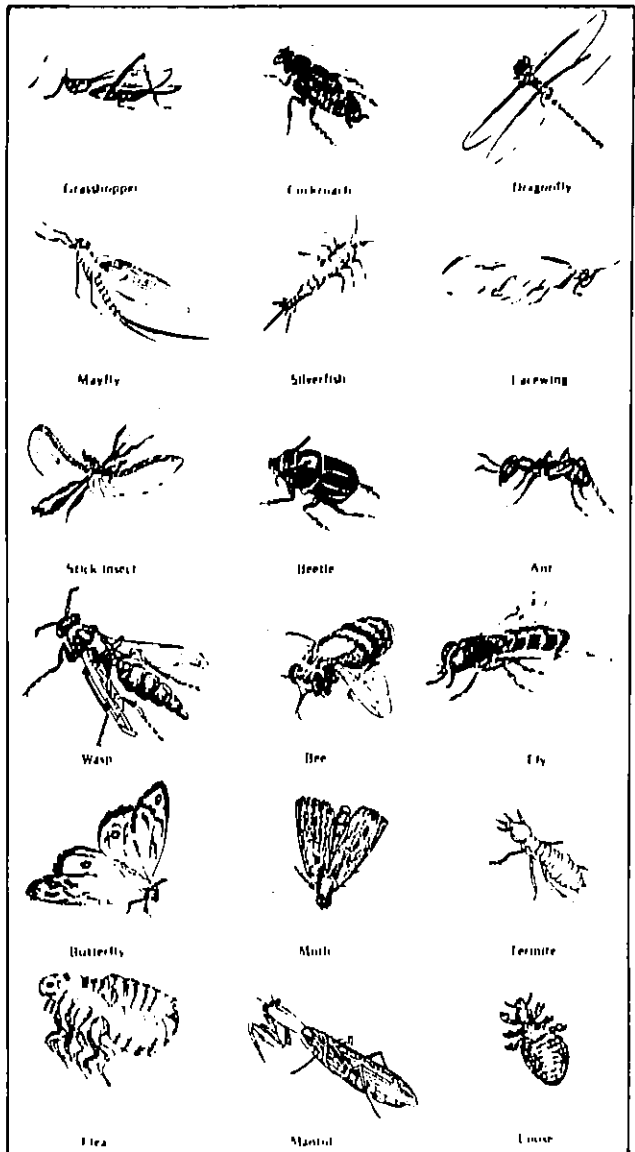
In all there are at least 3 million insect species in the world. They are all quite small. Some stick insects can be 33cm long and the greatest wingspan of a living insect is 28cm recorded in the birdwing butterflies of Papua New Guinea. From the fossil record the largest insect ever was a dragonfly with a wingspan of 73cm. Most insects are 2cm or less. This limitation in size is a function of their anatomy and physiology.

The bodily support for an insect lies in its hard cuticle, because this is not able to expand insects must grow by moulting and achieve their size increase while the new exoskeleton is soft and pliant. There are three basic pathways insects follow from egg to adult. The simplest is to retain the same body pattern and just get bigger. Very few groups, the silverfish is one, actually do this. Some groups slowly develop wings as they moult until the fully fledged adult emerges and is capable of flight, this path is followed by groups such as cockroaches and grasshoppers. The bulk of insects go through some variant of the egg-larva-pupa-adult sequence. This means that if you see an adult insect with wings (including beetles and earwigs where the forewings have evolved into tough plates to protect the rear wings) it must be an adult and also it will not grow any larger. In other words little flies do not grow into larger ones.

The blood of insects carries nutrients to the various parts of the body, it does not act as an oxygen carrier as animal blood does. This coupled with the impermeability of the insect skin means that oxygen must be absorbed by mechanisms different from our lungs. Insects gain their oxygen by means of a network of tubes opening out to the atmosphere. This inactive method is slow and inefficient and this is the factor determining the size of insects.

If the body becomes too big the oxygen diffusion will be so much slower and the insect would be too lethargic and easy prey. Thus those films and novels about monster insects taking over the world are true fairy tales.

Insects have no internal control over body temperature but they can control their temperature indirectly by adopting resting positions in or out of direct sunlight. Many insects have heat absorbing colouring and there are a few which can change colour as the outside temperature changes, also the furry bodies of moths, butterflies and bees trap heat next to the body. An insect can use one or all of these strategies to maintain an optimum temperature.



Sketches by Ken Johnson

Insects must eat, at least in the larval stage, and so they need fully developed digestive systems. They can produce digestive enzymes, their gizzards grind their food and digestion takes place in the mid-intestine where the nutrients are circulated to the body by the blood. Muscles are needed to move the mouthparts and to control the gizzard. Muscles are also used to move the antennae, for walking and for flying. There are even long muscles inside the legs which control the claws on the ends of their legs.

Flight is the most amazing development the insects have achieved. If the fossil record is to be believed insects were the first aviators and took to the air 200 million years before an offshoot of the reptile line evolved wings and feathers and took off after them. Exactly how insects evolved wings is unclear and subject to great debate but it is one of the major factors in ensuring that the insects have survived and spread so widely on the globe. The largest muscles are used for flight and wing beats range from about 10 beats per second in butterflies to nearly 600 beats per second in mosquitoes – hence the difference in pitch, the different noises produced by flying insects is a function of the

frequency of wing beat. Observations about the speed of insect flight vary but it seems that the fastest, hawk moths, horse flies and some dragonflies, can approach 55kph. Houseflies and bees fly at about 10kph.

A flying organism needs good senses and insects have a good sense of equilibrium and adequate vision. They do not see the same colour range as we do but many insects can see into the ultraviolet end of the spectrum and so their view of the world is markedly different from ours. Because of their hard cuticle and the other senses of the insects are located in the hair-like organs scattered over the body, particularly on the antennae, mouthparts and feet. Touch, smell, taste, body position and wing stress can all be sensed by an insect, sometimes in ways quite foreign to any experiences we have. Many insects can 'taste' with their feet and this is quite a good arrangement for an insect walking over leaves some of which will be palatable and others not. The senses in an insect can trigger hormonal changes leading to activities such as mating, egg laying, hibernating, migrating etc. Adult insects must have the ability to find food and to find a mate. Finding a mate can be achieved in many ways. Many insects swarm and the movement attracts other members of the species. Some rely on colour and some on scent to attract mates. A few use sound while a small number employ bioluminescence.

Generally mating followed by egg laying is the normal insect life cycle but many insects have evolved other strategies to cope with scarce or abundant food supplies. Some insects, greenfly for instance, will simply bud when conditions are good and in this way they can increase their population very quickly. When conditions worsen they will lay eggs which can be dormant till an improvement occurs.

In general most insect populations are affected by food supply, disease, predators and the weather. To counter these factors insects rely on their size and senses, their mobility, their reproductive capacity and their ability to remain dormant (as eggs or pupae if necessary) when conditions are bad. Thus a balance is established. Mankind can upset the balance by growing large areas under only a few crops. This provides easy feed for large numbers of pest insects and farmers have to spray constantly against aphids, locusts, caterpillars etc. Even after harvesting stored products must be guarded against insect depredations.

Insects also impact on mankind when they act as disease spreaders. The cost of diseases such as malaria, typhus, cholera and sleeping sickness is enormous and insects help to spread them all.

From man's viewpoint biological control, silk, honey and some dyes are the only benefits and economic products gained from insects. However the vast majority of the thousands of insect species lead their lives quite apart from human endeavour simply playing their part in the web of natural ecosystems. When next you visit the bush, don't simply cast your eye on the large and spectacular. Spare a glance at the small and insignificant too, quite often you will be surprised by the colour and beauty you find while some knowledge of the complexity of life history and behaviour of even the smallest insect can fill you with wonder.

*Lecture to the Association
21st July 1983*

Norman Morrison

HERITAGE GRANT

The Heritage Grant of \$2000 received from the community Development Fund for the dissemination of information towards the promotion of natural conservation is being used by the Association to good effect.

One major project has been to increase our already large free list to distribute the Bulletin to all Public Libraries, High Schools, Colleges, Scouts, Girl Guides and other points where it can be seen by the public.

A seminar on the Murrumbidgee Corridor was held and our Publicity Committee is building up its display and publicity material. The Association also took an active part in Heritage Week activities.

N.P.A. TREE GROWING AT GLENDALE

A report of the planting of native trees at Glendale in the Gudgenby Nature Reserve appeared on page 5 of the Bulletin in September 1983 (Vol 21 No.1). Readers may recall that 465 Eucalypts and 3 Kurrajongs were planted out on 28 May and 4 June 1983. This is a progress report.

Tree maintenance working parties were advertised in the Bulletin for September, November, January, February and March. Attendance varied between 5 and 17 persons. In addition smaller working parties were arranged for specific tasks. Lunches were pleasant in sun or shade depending on temperature. A cool-off in the river was popular on warmer days. In recent weeks there was a bonus for workers. Curious? Ask one of those attending!

Much was achieved in sometimes difficult circumstances and on behalf of the Association I wish to thank all those involved.

We have had more than adequate rain and the Gudgenby River flooded on two occasions and has been running generally at a good level. Three trees were below the flood level for a couple of days.

We estimate that loss since planting has not exceeded 10%. More trees have been lost from 'wet feet' than from other causes. Some were planted in what have since turned out to be soaks which ran water for long periods. Unfortunately all 3 Kurrajongs failed to survive the winter and early spring. There has been some insect damage, but the Eucalypts are well equipped to recover from this problem.

The tallest tree at the March working party was a Candlebark about 1.5m high. Most others were a little under 1.0m, but some are not growing vigorously at all. An extra helping of slow release fertiliser was given to these, but at least some are suffering from rock not far below.

The good growing conditions brought up grass, clover and many varieties of weeds in much of the area to over 1.8m high. This growth made location of the young trees a difficult task and this meant a tractor and slasher could not be used to ease the problem. Our workers had to push through this 'jungle' (often with water at the base) to locate trees, remove the guards and hack out the undergrowth to give the trees a chance. We learnt not to give up hope if there appeared to be no tree in a choked tree guard; most times careful weeding revealed a struggling tree at the bottom! We extended the weeded circle to 1.2m to let the trees see a little sun.

The drainage and creek channel area among the willows at the north end (called 'channel country') has been a particular problem. Apart from a very dense grass growth and water under foot, much effort has been put into draining water away from individual trees. One Apple Box was nicknamed 'Neptune' because it seemed to relish growing in a flowing pool of water!

Although weeds and surplus water made maintenance difficult, it is heartening to see the regeneration of native trees around the area. Snow Gums and Candlebarks are two species that I have specially noted.

Turning to tree guards, it was noticeable that trees protected by drums or large fruit cans, over-wintered better than those with only wire netting; however in some cases the hot metal scorched leaves on the north side in summer.

We found motor tyres are worth while as a general protection and even tend to inhibit weeds inside the tyre circle. We have no evidence of rabbits getting over a tyre, but in one spot there were 4 rabbit scratchings within a couple of centimetres of the outside of a tyre. Perhaps the smell of the tyre is only a deterrent at nibbling distance.

Our homemade wire netting guards varied from 0.6 to 0.9m high, and the high ones are a great help in locating young trees. The homemade wire pegs worked reasonably well to pin the guards down if the soil was not too stoney. In many cases a 0.9m stake was used as well. However when the grass and weeds grew all through the netting it was necessary to remove the guard for weeding; the task of locating the pegs and then removing them was difficult and time-consuming. In retrospect it would have been

better (but more expensive) to use one 1.8m stake to secure each guard and also provide a good means of tree location.

Kangaroos and probably wombats, initially caused damage to many tree guards; presumably they blundered into them in panic in the dark when frightened by road traffic, etc. This damage has now reduced markedly and I presume they have learnt the location of guards; certainly there are still plenty of fresh droppings.

A recent problem with netting tree guards is that the growing tips of the trees are blown through the netting and remain there so that all the little branches grow out and not up. *L. bridgestana* and *L. rubida* seemed more prone to this problem. We tried tethering inside the guard, but growth rapidly nullified the tether. We are indebted to staff of the National Botanical Gardens for advice and as a result have cut the tethers which inhibit root and trunk development; and have lowered the height of many of the guards to about 0.45m so that most of the branches are above the guard. Some netting guards have been removed altogether as an experiment, retaining the tyre as sole protection.

I hope that by next summer most of the trees will be large enough to remove their guards completely.

We plan to take a census of the trees showing species and good or poor growth. The results should be available by the time this Bulletin is distributed.

Charles Hill



40 years ago crossing Yadhoro Creek a strong back was even better than a helping hand
Photo Reg Alder

PROPOSED YAOUK SKI FACILITY

NPA members may recollect seeing press reports last year about a proposed ski facility in the Yaouk area. I had assumed — as anyone else reading the report would probably have done too — that the proposal referred to the Yaouk Mountain massif.

This, however, is not the case. The proposal involves the head of the Yaouk valley. Land at the upper end of the valley has been bought by a land developer and subdivided. On one such lot it has been proposed to establish a ski facility using artificial snow.

The location of the run would adjoin the ACT border immediately to the south-east of Yaouk Gap. Dams on a small creek south of the Gap would hopefully provide the water for artificial snow making.

It seems questionable whether the project will actually go ahead. The area does not receive much natural snow. Reconstruction of the present track up the valley to provide an access road of acceptable standard would be very expensive. To this would have to be added the cost of artificial snow installations, assuming that the water supply is adequate. And such a ski facility could hardly be competitive with the already well developed facilities at Mount Selwyn which are now being extended.

Nevertheless, even if a ski lift is not built, the existence of this private property may pose problems if the Scabby and upper Yaouk areas are to be incorporated in the Kosciusko National Park.

Alastair Morrison

PERISHER SKI TUBE — REVISED E.I.S.

The proponents of the Perisher Ski Tube recently released for comment a revised E.I.S. Following wide spread opposition to a number of proposals in the original E.I.S. The first E.I.S. called for the closure during winter of the Kosciusko road from the Guthega turn off giving the Skitube a monopoly of the transportation modes to the Perisher Valley. The proponents claimed this action was necessary to ensure an adequate return from the Skitube.

The revised E.I.S. drops this proposal and scales down the Skitube capacity. The proponents now claim that this lower cost system can compete with car/bus travel and remain economic.

In commenting on the revised E.I.S. the NPA made the following points:—

- General support for the concept of an underground railway transport system as previously.
- Opposition to the siting of the lower terminal complex.
- Concern over the environmental impact of the upper terminal.
- Concern over the impact of tunnel construction methods on the Thredbo River.
- Continued support for the eventual extension of the railway to Jindabyne as opposed to the upgrading of the Alpine Way.

Any interested members can obtain copies of the full NPA submission from the Secretary.

Neville Esau



But now to cross Naas Creek, with the new order, it was either wet boots or sore feet — From colour negative by Dianne Thompson

NATIONAL PARKS ASSOCIATION OUTINGS

Please notify the leader by the previous Wednesday of your intention to go on any weekend outing.

The Committee suggests a donation of FOUR cents per kilometre (calculation to nearest dollar) be offered to the driver by each passenger accepting transportation. Drive distances quoted from the meeting point, for one way only, are approximate and for guidance only. Walk distances shown are total.

All persons joining an outing of the National Parks Association of the A.C.T. 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 A.C.T., its officer bearers and appointed leaders are absolved from any liability in respect of any injury or damage suffered whilst engaged on any such outing.

JUNE 3 SUNDAY WALK

Rendezvous Creek Paintings Ref: Rendezvous Creek 1:25,000 Leader: Dianne Thompson 886084
Meet: Kambah shops 8.30a.m. 12km walk across paddocks, through open country. Mostly undulating with a short climb to the rock shelter 45km drive.

JUNE 3 SUNDAY WALK

Mt Gudgenby Ref: Yaouk 1:25,000 Leader: Neville Esau 864176
Meet: Gudgenby bridge beyond Glendale at end of bitumen at 8.30a.m. 20km round trip with 750 metre climb for magnificent views of Gudgenby Nature Reserve from the summit. 60km drive.

JUNE 6 WEDNESDAY MID WEEK WALK

Molonglo Gorge Ref: A.C.T. 1:100,000 Leader: Olive Buckman 488774
Meet: Morshead Drive, first barbeque area east of Duntroon entrance at 10.00a.m. 6km walk on track with some rocks and short climbs. 10km drive.

JUNE 9/10/11 QUEEN'S BIRTHDAY PACK WALK

Naas River Valley Ref: A.C.T. 1:100,000 Leader: Les Pyke 812982
Easy scenic pack walk of some 30km over 3 days mostly along trail in river valley from Mt Clear station to Glencoe area. Leader would like contact by June 2 to organize transport pickup.

JUNE 9/10/11 QUEEN'S BIRTHDAY PACK WALK

Bogong Peaks Ref: Yarrangobilly 1:100,000 Leader: Philip Gatenby 416284
An exploratory walk, weather permitting. Contact leader for details. Approx. 240km drive.

JUNE 9/10/11 QUEEN'S BIRTHDAY CAR CAMP

Bournda State Recreation area near Tathra Leader: Ian Currie 958112
Pleasant wooded campsite, lake and ocean swimming – maybe. Good bird area and easy walks.

JUNE 17 SUNDAY WALK

Camel Ridge, Tidbinbilla Peak Ref: Tidbinbilla 1:25,000 Leader: Olive Buckman 488774
Meet: Cotter Road and Eucumbene Drive 8.30a.m. 14km walk with a climb up the fire trail, then through bushy scrub and along rocky ridges. 25km drive.

JUNE 17 SUNDAY WALK

Tharwa area Ref: A.C.T. 1:100,000 Leader: Betty Campbell 811771
Meet: 11.00a.m. Tharwa Bridge. Walk of 8 to 10km through open country with possibly a hill to climb.

JUNE 24 SUNDAY WALK

Billy Range Ref: Michelago 1:25,000 Leader: Hela Lindemann 812322
Meet: Kambah Village shops 8.30a.m. Walk along the ridge of the Billy Range for 10km. Some tracks but mostly open scrub.

JUNE 24 SUNDAY WALK

McKeanie Trig Ref: Corin Dam 1:25,000 Leader: Charles Hill 958924
Meet: Kambah Village Shops 8.15a.m. Walk to very good viewpoint over rocky and forested terrain; no tracks. 11km, 300m climb, steep in parts. 50km drive.

JULY 1 SUNDAY WALK

Gibraltar Peak Ref: Tidbinbilla 1:25,000 Leader: Lyn Richardson 415498
Meet: Eucumbene Drive-Cotter Road 8.30a.m. 8km walk to this fine vantage point overlooking the Tidbinbilla Nature Reserve. 30km drive.

JUNE 30/JULY 1 PACK WALK

Bawley Point Ref: Kioloa and Toubouree 1:25,000 Leader: Reg Alder 542240
One kilometre walk to beach camp near Nuggan Point. 200km drive.

JULY 7 SATURDAY TREE MAINTENANCE

Glendale Crossing Ref: A.C.T. 1:100,000 Leader: Charles Hill 958924
Anytime from 9.30a.m. Contact leader for details.

JULY 8 SUNDAY WALK

Tidbinbilla Mt Ref: Corin Dam 1:25,000 Leader: Frank Clements 317005
Meet: Eucumbene Drive-Cotter Road 8.00a.m. Steep 600 metre climb; mostly scrub, rocks and fallen trees. Possibly snow as well. 25km drive.

JULY 8 SUNDAY AFTERNOON WALK

Tuggeranong Railway Line Ref: A.C.T. 1:100,000 Leaders: Margaret Aston 887563, Sheila Kruze
Meet: Monaro Highway-Mugga Lane 1.00p.m. Pleasant ramble along the railway line area. Bring afternoon tea.

JULY 11 WEDNESDAY MID WEEK WALK

Farrer Memorial and Castle Hill Ref: A.C.T. 1:100,000 Leader: Charles Hill 958924
Meet: Kambah Village shops 9.45a.m. Walk across Lambrigg to memorial. Drive to foot of Castle Hill and walk up open ridge for excellent views. Combined distance 6km, vertical rise 230m, walking mainly on grass. 20km drive.

JULY 15 SUNDAY NATURE RAMBLE

Smokers Flat and Bluebell Creek

Ref: A.C.T. 1:100,000

Leader: Peter Ormay 512428

Meet: Kambah Village shops 9.30a.m. Walk about 8km from locked gate off Corin Dam Road through bush in the area south of Baroomba Station. Unusual plants, some not yet recorded in the A.C.T. Bring binoculars too for bird spotting. Climb of 200m. 40km drive.

JULY 13/14/15 PACK WALK

Pagoda Rock

Ref: Budawangs Bushwalkers Map

Leader: Dudley Nicol 824371

Ring leader for details. Camp Friday night at Yadbora, then walk to Pagoda Rock via Monolith Valley.

JULY 22 SUNDAY SKI TOUR

Klandra/Selwyn area

Ref: Cabramurra 1:25,000

Leader: Charles Hill 958924

Cross country ski tour depending on snow and weather conditions; about 15km. Some experience needed. Please contact leader early.

JULY 22 SUNDAY WALK

Hospital Creek

Ref: Yaouk 1:25,000

Leader: Beverley Hammond 886577

Meet: Kambah shops 9.00a.m. approx. 10km walk, mostly easy grades, on fire trails and open scrub, in Gudgenby Nature Reserve. Suitable for beginners. 50km drive.

JULY 29 SUNDAY WALK

Mt Majura

Ref: Canberra UBD

Leader: Hansine Hansen 473453

Meet: Canberry Fair car park 11.00a.m. Bring lunch and enjoy an 8-10km walk on tracks.

JULY 28/29 CROSS COUNTRY SKIING

Sawpit Creek

Ref: Kosciusko 1:100,000

Leader: Denise Robin 814837

Camp at Sawpit Creek. Touring depending on snow and weather conditions. Suitable for families and beginners. Contact leader early. Lessons available for \$12.

AUGUST 5 SUNDAY WALK

Naas Creek

Ref: A.C.T. 1:100,000

Leader: Les Pyke 812982

Meet: Kambah Village shops 8.30a.m. 15km return walk up the picturesque Naas Creek Valley past Sentry Box. Reasonably level, mostly on grass, with some side rambles from the creek itself. 75km drive.

AUGUST 5 SUNDAY WALK

Lake George

Ref: A.C.T. 1:100,000

Leader: Betty Campbell 811771

Meet: 10.00a.m. Canberry Fair car park. Walk for 8-10km in open country, mostly undulating but may be a hill or two.

AUGUST 5 SUNDAY SKI TOUR

Guthega

Ref: Kosciusko 1:100,000

Leader: Ann Wallace 810949

A day skiing in the Guthega area. Some experience necessary. Contact leader for details.

AUGUST 9 THURSDAY MID WEEK WALK

Mt Stromlo

Ref: A.C.T. 1:100,000

Leader: Gladys Joyce 956959

Meet: Eucumbene Drive-Cotter Road 10.00a.m. Walk along forest roads and high open areas of Mt Stromlo; very good views. Easy walk, 5km, vertical rise 100m. 3km drive.

AUGUST 12 SUNDAY WALK

Cotter Gap

Ref: Corin Dam 1:25,000

Leader: Reg Alder 542240

Meet: Kambah Village shops 8.30a.m. Walk from Orroral Tracking Station along fire trail 16kms. 60km drive.

AUGUST 12 SUNDAY WALK

Brandy Flat

Ref: Michelago 1:25,000

Leader: Ian Currie 958112

Meet: Kambah Village Shops 9.00a.m. Walk from Glendale Maintenance Depot along fire trail 9kms. 60km drive.

AUGUST 18/19 CAR CAMP

Bungonia Gorge

Ref: Caoura 1:31680

Leader: Ian Currie 958112

Meet: Bungonia Camping area 10.30a.m. Short walks around the Gorge Area. 150km drive.

AUGUST 18/19 PACK WALK

Kybeyan Range

Ref: Cobargo 1:100,000

Leader: Phillip Gatenby 416284

Walk in Wadbilliga National Park to Kydra Peak and beyond. Contact leader for details. 160km drive.

AUGUST 26 PRESIDENT'S BARBEQUE

Pierce's Creek

Ref: A.C.T. 1:100,000

Leader: President

Come to Pierce's Creek beyond Cotter and bring a barbeque lunch. Short walks. Watch for N.P.A. signs.

SEPTEMBER 2

Mt Coree

Ref: A.C.T. 1:100,000

Leader: Arno Wynd 478542

Meet: Corner Cotter Road and Eucumbene Drive 8.00a.m. Steep climb of 600m through scrub from Blundells Flat to the peak, then return down rough Pabnal Road. 30km drive.

SEPTEMBER 1/2 PACK WALK

Gourock Range

Map: A.C.T. 1:100,000

Leader: Robert Story 812174

A walk by the headwaters of the Queanbeyan River. Meet at the airport (on main road, just beyond turn-in) at 7.00a.m. on Saturday. Phone leader to advise him of your intention to go please.

SEPTEMBER 9 SUNDAY WALK

Long Flats

Ref: Bredbo 1:25,000

Leader: Frank Clements 317005

Meet: Kambah shops 8.00a.m. Walk 18km along fire trail, 300m climb with some steep sections. 65km drive.

SEPTEMBER 15 TREE MAINTENANCE

Glendale Crossing

Ref: A.C.T. 1:100,000

Leader: Charles Hill 958924

Ring leader for details. Anytime after 9.30a.m.

NATIONAL PARKS ASSOCIATION OF THE AUSTRALIAN CAPITAL TERRITORY INC.
Inaugurated 1960

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Annual Subscription Rates

1 July-30 June:	Family members \$15	Student members \$6
	Single members \$12	Corporate members \$8
	Pensioners \$ 6	Bulletin only \$8

For new members joining between:

1 January-31 March:	Half specified rate
1 April-30 June:	Annual Subscription – 15 month's membership benefit

DEADLINE DATES for NPA Bulletin contributions: 15 July, 15 October, 15 December, 15 April

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 organized 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.

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

DESIGN BY REG ALDER
PRINTED BY DEREK KELLY 541226
TYPESET BY BELCONNEN TYPESETTING – 547390

National Parks Association A.C.T.

OUTINGS SUMMARY

June	3	Sunday	Rendezvous Creek Paintings	Walk	
	3	Sunday	Mt Gudgenby	Walk	
	6	Wednesday	Molonglo Gorge	Walk	
	9/10/11	Long Weekend	Naas River Valley	Pack Walk	
	9/10/11	Long Weekend	Bogong Peaks	Pack Walk	
	9/10/11	Long Weekend	Bournda S.R.A.	Car Camp	
	17	Sunday	Camel Ridge	Walk	
	17	Sunday	Tharwa	Walk	
	24	Sunday	Billy Range	Walk	
	24	Sunday	McKeahnle Trig	Walk	
	30/1	Weekend	Bawley Point	Pack Walk	
	July	1	Sunday	Gibraltar Peak	Walk
7		Saturday	Glendale Crossing	Tree Maintenance	
8		Sunday	Tidblinbilla Mt	Walk	
8		Sunday	Tuggeranong Railway	Walk	
11		Wednesday	Farrer Memorial	Walk	
15		Sunday	Bluebell Creek	Nature Ramble	
13/14/15		Weekend	Pagoda Rock	Pack Walk	
22		Sunday	Selwyn	Ski Tour	
22		Sunday	Hospital Creek	Walk	
29		Sunday	Mt Majura	Walk	
28/29		Weekend	Sawpit Creek	Ski, Camp	
August		5	Sunday	Naas Creek Valley	Walk
	5	Sunday	Lake George	Walk	
	5	Sunday	Guthega	Ski Tour	
	9	Thursday	Mt Stromlo	Walk	
	12	Sunday	Cotter Gap	Walk	
	12	Sunday	Brandy Flat	Walk	
	18/19	Weekend	Bungonia Gorge	Car Camp	
	18/19	Weekend	Kybeyan Range	Pack Walk	
	26	Sunday	Pierce's Creek	Barbeque	
	September	2	Sunday	Mt Coree	Walk
		1/2	Weekend	Gourock Range	Pack Walk
		9	Sunday	Long Flats	Walk
15		Saturday	Glendale Crossing	Tree Maintenance	
15/16		Weekend	Tantangra Mt	Pack Walk	
19		Wednesday	Pierce's Creek	Walk	
22	Saturday	Black Mt	Nature Walk		

GENERAL MEETINGS

- JUNE** - Thursday 21 1984
Joan Staples - Assistant National Liaison Officer, Australian Conservation Foundation.
Subject: Daintree - Potential World Heritage Under Threat?
- JULY** - Thursday 19 1984
Henry Burmester - Executive member of the Conservation Council of the Canberra and South-east Region Environment Centre.
Subject: Antarctica - Exploitation or Conservation?
- AUGUST** - Thursday 16 1984
Annual General Meeting and Election of Officers followed by slides of the year's activities.