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MONTHLY NEWSLETTER OF THE BENDIGO
FIELD NATURALISTS CLUB

WHIRRAKEE

Vol. 25.3

April 1953



MONTHLY NEWSLETTER OF THE BENIDIG
FIELD NATURALISTS CLUB

Monthly Newsletter of The Bendigo Field Naturalists Club.
Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*) which is virtually endemic to the Bendigo region.

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COVER PHOTO

Peregrine Falcon (*Falco peregrinus*)
See article by John Robinson/Don Franklin on p.8-11
Photo: John Robinson

Deadline for next issue ss Friday 15th April - this deadline will have to be adhered to because of the earlier than usual May meeting. Late contributions will miss out. Your co-operation is needed.

(Typed contributions are preferred, but if this is not possible, then please make every effort to use neat, legible hand writing or printing)

Permission to reproduce articles from Whirrakee must be obtained from Editor. All back numbers are available from the Editor at a cost of 50 cents each. (Complete sets of Volume 1 and 2 are available at the reduced price of \$5.00 per set. Postage extra.)

Having written several times about the drought, and the effects on plants in both bush and garden, it is a pleasure indeed to be able to write instead about the very welcome rains. It is too soon to declare the drought definitely over, but the respite from that daily grind of evening watering has been much appreciated. The response by plants to those three days of gentle, soaking rain has been rather dramatic. When plants given up as dead began to sprout from low down, just above ground level, the response could justifiably be called startling! Although the whole top growth had withered, and was to all appearances dead, the roots had obviously remained alive, but dormant. So far, this has happened with oak trees and a swamp cypress in our bonsai planting-out beds, and several other all but moribund trees have sprouted fresh new buds.

The rain over Easter has been a useful follow up, although the timing made it less welcome to those members who camped in the valley of Charleys Creek at Gellibrand. Rain fell on Saturday, Sunday night, most of Monday and again through Monday night and Tuesday morning. After the long drought it was quite a novel experience, and the sight of green pastures and damp bushland was certainly refreshing. Although the rain did restrict activities to some extent, the 45 campers were well provided for by a community tent and awning, behind a large fire which was kept burning continuously. I hope a full report will be published next month, but as one who took part, I can say that it was a very enjoyable and relaxing camp, with plenty of opportunity for people to follow their interests, whether mammals, birds, botany or camp cooking and relaxing by the fire. Some took the opportunity to explore the scenic delights of the Otways, others put a lot of time into exploring the local area, bird watching and/or collecting and identifying plants. Probably the highlight for those interested in birds was the presence of a White Goshawk, which passed over the camp area many times during our stay, allowing good views of this very rare species. The camp-site was on private property, and was shared with the rightful inhabitants, a herd of dairy cows. They added interest to the camp in more ways than one, but caused no real problem, although two of my daughters sleeping in a two man tent with the door open had the rather startling experience of waking to the sight of a cows head pushed right inside for a better look! Thanks are due to Glenise and Rob Moors who arranged permission for camping on the property, and the owner, Mr. Tom Morgan for giving that permission, and to John Lindner for his organisation of a very successful camp.

* * * * *

I would like to reduce the amount of back numbers of Whirrakee, which are creating a storage problem. During the two years or so before Whirrakee was mailed to all members, many members must have missed out on particular issues because of being absent from some meetings. Some members who were not often at meetings, but not paying the postage levy, which applied then, must have missed out on many issues. If you would like to fill those gaps, then provide me with your name and a list of back numbers needed, and I will parcel them for distribution at no cost, at the following meeting. This offer only applies to those who were financial members, and therefore entitled to them. Newer members are reminded that back numbers can be bought for 50 cents each, or \$5.00 a volume. I have about 30 sets of volumes 1 and 2, and about 20 sets of volume 3 available for sale.

Eric Wilkinson, Editor.

THE ORCHIDS OF BENDIGO AND DISTRICT

- PART 9, THE SPIDER ORCHIDS;

CALADENIA SPECIES WITH LONG FLORAL SEGMENTS

by Bob Allen and Tom Patullo

Illustrations by Graham Hill

Most of the story of the Caladenia orchids was discussed back in our September 1982 issue of Whirrakee (Vol.3 No.8). In that issue we described the short floral segmented Caladenias. We now discuss some of the most loved of all our orchids - the long floral segmented ones, commonly called the "spider orchids". We have the following species in our district:-

<u>Caladenia clavigera</u>	-	Plain-lip spider orchid
<u>Caladenia dilatata</u>	-	Green-comb spider-orchid
<u>Caladenia filamentosa</u>	-	Daddy long-legs
"	"	var. tentaculata
<u>Caladenia patersonii</u>	-	Common spider-orchid

Caladenia clavigera - Plain-lip Spider orchid
clavigera = clubbed

This is a very variable plant. The stem is hairy, erect and slender, with a loose narrow bract around the middle. The leaf is also hairy. The one or two flowers are yellowish with dark reddish-brown markings. The sepals are from about three to five centimetres long, wider towards the base and narrowing into fine points, usually (but not always) clubbed (clavate). They are traversed by a prominent reddish-brown, longitudinal stripe. The petals are rather similar, but shorter and very rarely clubbed. The dorsal sepal is erect, and incurved. The labellum is shortly clawed and recurved, with the laminal calli being linear and golf stick shaped. They are reddish-brown, in four to six longitudinal rows. The column is rather widely winged in the upper part, and has two yellow oval glands at the base.

This orchid has been found at Taradale, Whroo, Costerfield, Castlemaine and Maldon. Dr Jim Willis says the Southern and Central regions of Victoria, and mentions Bendigo. I have not found it here yet but expect to come across it one day. It is a rather rare orchid, and usually flowers in the October to December period.

Caladenia dilatata - Green Comb Spider-orchid
dilatata = widened, in reference to the lateral expansion of the labellum. This orchid is very variable in height, being anything from 15 cm to up to 30 cm. It has a very hairy stem and leaf. The flower is usually solitary, but on odd occasions there are two to the stem. It is a lovely combination of green, yellow and maroon. The labellum is on a moveable claw and is much wider than long (dilated). The lateral parts are deeply fringed at the edges, and are comb like, with four rows of maroon coloured papillae. The tip is dark red or maroon. The dorsal sepal is erect and the column incurved and widely winged, having two yellow, sessile glands at the base (as in C.clavigera). The lateral sepals are falcate (sickle shaped), and protrude into long tails that often cross, but the lateral petals are shorter. This beautiful orchid is found in the Whipstick, at Sedgwick and several other places in the Bendigo area. Dr Willis states that it is very widespread in Victoria, from Wyperfeld National Park through to Wilsons Promontary. W.H.Nicholls agrees by stating that "C.dilatata is probably our best known spider orchid, occurring quite abundantly not only on the sandy areas of the coastal districts, but also far inland to the timbered hills where often very fine specimens, sometimes two flowered, may be found. They occur in all states of Australia and are in bloom during the September to November period.

THE ORCHIDS OF BENDIGO AND DISTRICT continued

Caladenia filamentosa - Daddy long-legs
filamentosa - meaning thread like, referring to the long fine perianth segments.

This is a slender, shortly haired plant, around 25 cm high in this area. The leaf is narrow and linear with short hairs, and has one bract halfway up the stem. The flowers number from one to four, and are mostly reddish, with the perianth segments produced into long hairy- filaments. The sepals and petals are covered with small glands. The dorsal sepal is erect, incurved and about 5 cm long, and the lateral sepals are spreading. The labellum is ovate to oblong on a short claw. It has serrated margins, and the calli are in two to four closely set rows. The edges are finely toothed, with no glands at the column base. This beautiful orchid is found at Bridgewater, Maryborough, Kamarooka, and the Whipstick (in the Bagshot area). They are usually flowering in the August-September period.

The variety tentaculata is very much the same as daddy long-legs, except for the colour. J.M. Black describes the variety as follows:-

"Morphologically identical with the type but differing in coloration. The flowers cream coloured with dark markings, perianth-segments cream coloured, with reddish brown central stripe, and reddish brown tips. Labellum with conspicuous reddish brown divergent veins." Dr Willis agrees by stating that "The typical form has all crimson flowers but the variety tentaculata, although morphologically identical, is cream-coloured, or yellowish with reddish markings." In the Bagshot area both forms occur indiscriminately. This is also the case in Western Victoria but here the variety tentaculata is usually more frequent.

Caladenia patersonii - Common Spider-orchid

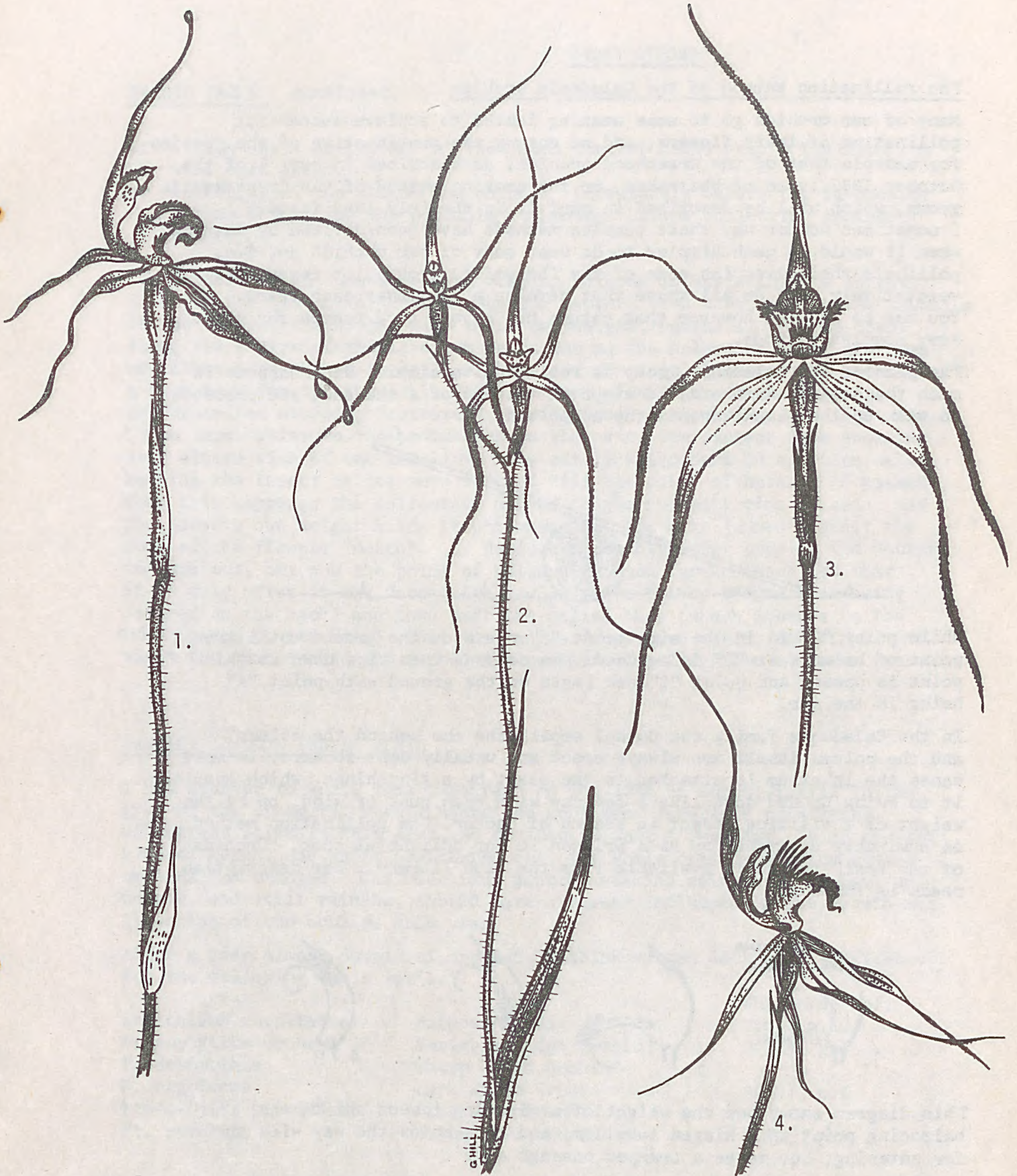
patersonii - after Col. William Paterson, Lt. Governor of N.S.W. and Tas.

A hairy species 20 to 30 cm high with large, usually solitary flowers (occasionally two or three), very variable in colour. Along the railwayline near Elmore they are white, and along the water-race at Sedgwick they are crimson. The leaf is very hairy, often over 15cm long and 5 mm wide. The perianth segments are all spreading, except the dorsal sepal, which has dark points and is glandular hairy. The dorsal sepal is erect or incurved over the column. The portion behind the column is dilated, then protruding into a long point up to 6 cm long. The lateral sepals are similar but spreading and drooping. The labellum is moveable, longer than it is wide and edged with small serrations. It usually has a purple or crimson tip. The calli of the lamina rarely extends beyond the bend. They are of the golf stick type, in four to six rows. The column is incurved and about 12 mm long with two yellow, sessile glands always present on the inside of the column base.

This beautiful orchid has been reported from all the Australian states, and is quoted as being widespread throughout the state of Victoria.

It flowers in the Spring. Dr Jim Willis has this to say "Caladenia patersonii is a highly polymorphic species with many colour forms. Several varieties have been recognized in Victoria, the most noteworthy being as follows.

1. Variety concolor, known from (amongst others) Heathcote, Castlemaine etc. and distinguished by the uniform prune-purplish colouration of its flowers.
2. Variety magnifica, a robust plant having yellow flowers streaked with vivid crimson (the segments up to 10 cm long) and known only from Clydesdale near Newstead.
3. Variety suaveolens, from the Portland district having brownish-green, exceptionally fragrant, flowers.



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|---------------------------------|--------------------------|
| 1. <i>Caladenia clavigera</i> | Plain-lip Spider Orchid |
| 2. <i>Caladenia filamentosa</i> | Daddy long-legs |
| 3. <i>Caladenia patersonii</i> | Common Spider Orchid |
| 4. <i>Caladenia dilatata</i> | Green-comb Spider Orchid |

(*C. filamentosa* var. *tentaculata* is very similar to *C. filamentosa* except for the colour change.)

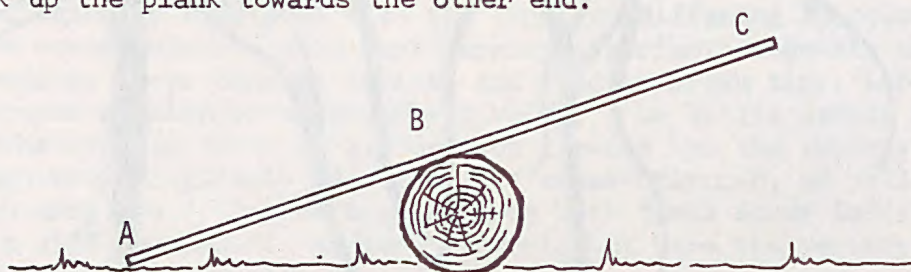
ORCHID FACTS

The Pollination Method of the Caladenia Orchids

Many of our orchids go to some amazing lengths to achieve successful pollination of their flowers, and so ensure the continuation of the species- for example that of the Greenhood orchids, as described in part 5 of the October 1982 issue of Whirrakee, or the amazing method of the Cryptostylis group, which will be described in part 12 in the July 1983 issue.

I sometimes wonder why these complex methods have been devised by nature when it would be much simpler to do what many of our orchids do, i.e. pollinate themselves (as some of the Thelymitra group), or regenerate vegetatively, (as do all those that develop a new tuber each year). You can be assured however that nature has a very good reason for these very complex methods.

The plan of the Caladenia group is really quite simple. What happens is much the same as when a child steps on the end of a see-saw, and proceeds to walk up the plank towards the other end.



While point "C" is in the air, point "A" rests on the ground until the point of balance at "B" is reached. The see-saw then tips down as this point is passed and point "C" now rests on the ground with point "A" being in the air.

In the Caladenia family the dorsal sepal (the one behind the column) and the column itself are always erect and usually bent forward. In most cases the labellum is attached to the plant by a tiny hinge, which enables it to swing up and down like a see-saw with each gust of wind, or by the weight of a visiting insect in search of nectar. The pollination method is admirably described by Rica Erikson in her delightful book, "Orchids of the West" (which is available from the club library). Her description reads as follows:-



This diagram shows how the weight of a visiting insect shifts the balancing point of a hinged labellum, and thus holds the way wide open for entering, but makes a cramped passage out.

1. The orchid awaits its visitor. 'x' denotes the shifting point of balance.
2. The insect's weight opens the orchid's mouth, which remains open until the insect walks so far as 'x', when the labellum suddenly swings over to imprison it.

ORCHID FACTS continued.

3. It must back as far as 'x' (now much further back) before the labellum will open again.
4. Backing past the stigma and anthers immediately before the re-opening - thus depositing the pollinia it brought before collecting another packet.

The spider orchids use some very cunning methods in assisting the insects to enter the flower in their search for nectar. When they land on the labellum of the orchid, the hinge, plus their own weight, causes it to drop open. Along the centre of the labellum up as far as the balancing point are rows of little pegs- known as calli. These act as stepping stones and provide a firm hold for the insect in its climb up. The edges of the labellums are described as being "serrated", having long teeth, being comb like, etc. These terms refer to the protuberances that stop the insect from escaping over either side of the labellum. They act like the bars in a prison cell, keeping the insect on the move forward till the point of balance is passed. When this happens, the delicately curved tongue suddenly tips inwards, and the insects own weight holds it prisoner with its back jammed against the roof of the flowers "mouth". It decides (probably after sipping the nectar) to back out, but now the point of balance is much further back, so that it is only after it has forced its way past the sticky stigma (and being smeared on the back) and then past the pollen bags (which adheres to the sticky patch on its back) that the tongue drops open again, enabling it to visit the next orchid and repeat the process of pollination all over again.

ORCHIDS TO LOOK FOR IN APRIL

I had started to write this paragraph on the 15th of March, (still in the grip of the drought), when I heard the confident forecasts predicting widespread rains in this area, so decided to wait a few days. It is now the 22nd of March, and as it has turned out, the whole outlook for our autumn orchids has changed. The beautiful gentle, soaking rain, over an inch up to now, and still raining, should have a marked influence on the growth and flowering of our orchids this year.

After a year almost devoid of orchids, I think we can look with confidence for the following this April.

		Whirrakee Ref.
<i>Eriochilus cucullatus</i>	Parsons Bands	3(6), p.10
<i>Prasophyllum archeri</i>	Variable Midge Orchid	3(10), p.7
<i>P. despectans</i>	Sharp Midge Orchid	-
<i>P. nigricans</i>	Dark Midge Orchid	3(10), p.6
<i>Pterostylis parviflora</i>	Tiny Greenhood	-
<i>Pt. revoluta</i>	Autumn Greenhood	3(9), p.6

THREE WAYS TO CATCH A STARLING

by John Robinson
written up by Don Franklin

Every bird has an instinctive escape mechanism to avoid predators. Some go to ground, others to cover; some seek security in speed or manouverability in the open sky; some find refuge in flocks, others by living in solitary obscurity; and so forth. Pitted against such varied and usually successful avoidance responses are a small group of specialized predators, birds themselves - since what else could catch a bird on the wing - chiefly falcons and goshawks.

It is with falcons that this article is concerned - specifically North Central Victoria's three bird-hunting falcons, the Peregrine, the Little Falcon (Australian Hobby) and the Black Falcon. These three share speed, skill and precision, and at least one food item, the starling; but it is there that the similarity finishes. Each has a different physique, hunting technique, prey preference and habitat preference, these four factors being so inextricably interwoven as to clearly define a unique niche for each species.

To start with physique. The Peregrine Falcon has relatively short, fairly narrow wings and a short tail, giving it the highest weight-to-surface area ratio of any bird of prey. This bullet-like build suits it to the lethal stoop, and the capture of relatively heavy prey such as galahs. For the momentum it is able to attain, it pays the price of reduced manouverability. The smaller Little Falcon has proportionally the longest, narrowest wings and a light weight, giving it more manouverability than the Peregrine. The price of this compromise is difficulty in capturing larger prey. It is ideally suited to the capture of small, slower but manouverable prey such as sparrows and martins, often in the vicinity of trees (but not in a forest). The Black Falcon has broad, long wings and a longer tail, an adaptation to the use of thermals in its usually flat and treeless hunting domain, and to manouverability close to the ground.

It is in the moment of capture that these variations can be seen to be put to most use. The Peregrine Falcon typically makes a steep dive from a considerable distance, maximizing its momentum and striking the flying prey down with a blow from the talons to the head or neck. With larger prey one blow may not be sufficient, so the predator does a quick loop and strikes again - and again if necessary, till the prey falls to the ground or is too stunned to struggle. Only with smaller prey such as a starling would the Peregrine make a clean sweep, 'grabbing' the bird rather than knocking it.

The Little Falcon captures its smaller prey in a rapid and rarely observed manouvre. The falcon attacks with a shallower, shorter stoop than the Peregrine, actually dropping to a metre or so below the prey, rising beneath it, twisting on to its side to make the 'grab' and departing to the side. The significance of this manouvre is twofold. Firstly, since its preferred prey species are relatively lighter, there is less need to knock the prey. A 'grab' is usually sufficient. Secondly, the preferred prey are such that they may be able to avoid, by sideways movement, a straight, rapid strike. By catching on the upswing, the falcon's manouverability is increased, and the doubly-surprised prey may be frightened into moving upwards, its weakest line of flight, and one where the falcon's momentum gives it a clear advantage.

THREE WAYS TO CATCH A STARLING continued

The Black Falcon tends to take proportionally the smallest prey of the three (e.g. quail). My relatively few observations of hunting by Black Falcons indicate that they use a simple, shallow, possibly slower dive to flush the avian prey off the ground, taking them in a clean sweep from above, at a metre or so height. On one occasion I observed a Black Falcon make an unsuccessful near-vertical stoop at a flock of starlings in flight.

I'm not saying that these techniques of capture always hold. Obviously, the approach must vary a little between individual falcons and between different prey species. Indeed, all these falcons take a wide variety of prey. But, because of their specialized techniques and physical limitations and the limitations posed by the reactions, habitat and size of their prey, relatively few prey species form the staple diet of each falcon. This tendency towards a staple diet is further accentuated by the habitualness of the falcons; the survivors soon learn what not to waste energy on. Individuals may even become wedded to a single prey species, ignoring all alternatives unless desperately hungry.

Thus, in this district the female Peregrine Falcon feeds chiefly on gulls, domestic pigeons and ducks. Spur-winged plovers might seem suitable prey - the right size and they live in suitably open hunting areas - but are rarely taken because the plover's combination of speed and manoeuvrability are usually too great. Dusky moorhens might seem suitable prey, but in daylight rarely rise clear enough of the water to give the Peregrine the mastery. White-winged choughs might seem suitable, but they don't often move out into sufficiently open spaces.

The much smaller male Peregrine is likely to have a staple diet of starlings, lorikeets and red-rumped parrots in this district. Starlings and sparrows are, I believe, the local staple of the Little Falcon, with the female preferring the former and the male the latter. For the Black Falcon the staple is likely to be quail, brown songlarks and pipits, taken by both sexes since the prey are so small relative to the predator.

To partly reiterate, there is a rough consistency in the habits and habitat of the prey of each falcon species. The Peregrine's prey (especially the female's) are mostly direct, fast-flying species of open spaces where the falcon need not fear obstacles - either open paddocks or above the tree tops. The paddock species will flush early, being well clear of the ground before the falcon strikes. All prey are at least at times found singly or in small parties, the situation in which the Peregrine prefers to hunt. In contrast, the Little Falcon shows a liking for plucking birds out of a flock. Its prey tend to be slower and more manoeuvrable, and occupy open spaces closer to trees than the Peregrine's prey. The Black Falcon's preferred prey are species of very open spaces. They are ground-hugging, well-camouflaged birds that, though well aware of the falcon's presence, will not flush until the last moment.

Given all these consistencies, each species should reasonably have an optimum habitat. With the Black Falcon this is quite obviously so. It hunts chiefly in very open flat plains covered by grass, pasture, low crops and saltbush. Any obstructions, even a fence, put the bird at a disadvantage. They search for their prey in circling flight somewhat like a brown falcon, utilizing thermals and tending to work along the rows of a crop. In this district these requirements are best met in the north, for example around Serpentine. Reasonably regular nesting by a small number of birds occurs in that area, and they are probably as numerous there as the Peregrine is in its more widely dispersed habitat in this district.

THREE WAYS TO CATCH A STARLING continued

When drought causes a food shortage the birds move south and to abnormal habitats such as towns. This probably accounts for observations at Eaglehawk, Strathfieldsaye, the Bendigo Sewage Works and Sutton Grange. When good rains produce too much cover for their prey, the falcon moves inland.

With the Peregrine and Little Falcons such a habitat preference is not so obvious. Individuals range throughout much of the district. Hunting grounds are dispersed and many observations are of birds just passing through. However, the Peregrine, at least, is quite 'fussy'. Being a resident, it requires a permanent concentration of food. Its hunting strategy of combining surprise with a direct stoop means that it requires a delicate balance of cover and open space. Locally, this requirement is met in two basic situations. One is on steeper forested hills, where the falcons chase birds above the treetops. Birds passing over the slopes (as galahs and pigeons often do) are particularly susceptible to capture, the cover in this case being the background of trees. The second situation is along belts of timber such as a forest edge or a timbered creek in farmland, where the prey are more likely to be birds flushed from the ground.

The Peregrine has three main strategies to exploit such situations. The first might be termed a random hunt. The falcon flies rapidly just above the tree tops in such a path as to repeatedly intersect the boundaries of timber and open ground, hoping to surprise prey that is in flight across the spaces or that will flush from the ground. The second strategy is more deliberate. After locating the prey, the falcon moves to the most advantageous position, utilizing cover and height to conceal its presence, and stoops, usually upwind, from a distance. The third strategy is a deliberate hunt by a pair of falcons. One bird dislodges the prey from its cover. The other, or both in alternation, strike the prey till it is caught.

The Little Falcon's chief hunting method is akin to the Peregrine's random hunt. The bird dashes through alternations of cover and open space, seeking to surprise birds in the open. Its greater manoeuvrability enables it to exploit prey closer to cover than the Peregrine, and the Little Falcon sometimes even passes through clear gaps in the branches of trees rather than over the tops. A less frequent alternative is for the Falcon to perch in a tree, not necessarily hidden, and wait for the birds to settle down before making a brief sally to catch one. The alternation of small spaces and trees is a widespread habitat in this district. Local distribution of the Little Falcon is influenced more by the presence of larger numbers of its prey species. Towns (including central Bendigo) and irrigation areas are prime feeding grounds.

The Little Falcon is probably the most numerous of the three species in this district, though its utilization of urban areas may over-accentuate this impression to many observers. It is a nomadic or perhaps even semi-migratory species, at least some leaving the district in winter. The few nests I have seen have not been reused in later years.

Of the three, the Peregrine is the stay-put, the same nest often being occupied in many successive years. About ten years ago, when I spent a lot of time looking for the birds, I could be reasonably certain of about 20 resident pairs within a 50 km. radius of Bendigo. The population may have been as much as 30 pairs, but is unlikely to have exceeded 40 pairs. Even at 20 pairs, the density is quite high - a pair to each 400 sq.km. - by national and international standards. (For comparison, and doubts about the health of these dense populations, see Don Franklin's summary in the Whirrakee of September 1981.)

THREE WAYS TO CATCH A STARLING continued.

I have already mentioned the Black Falcon that unsuccessfully stooped at starlings. It is perhaps not surprising that the predator failed, for the bird was at my home at Strathfieldsaye, an environment much too treed for this bird of the plains. Unable to utilize its normal shallow dive, it was forced to use a hunting technique to which it is less well-adapted. On another occasion, at Palm Valley in the Northern Territory, I observed a juvenile Peregrine vainly trying to catch a whistling kite. The likely explanation is that, having wandered in search of the elusive unoccupied site with a good food supply, it stumbled on the valley, physically ideal for hunting but lacking a good food supply. Driven by hunger and inexperience to attack such unlikely prey as the kite, and deprived of all hunting advantage by the failure of its first attack, the case was hopeless. The kite seemed more at home than the falcon.

Masters of the air falcons may be, but only by a slight margin. Even the reputed speed of the Peregrine is only fractionally greater than that of its prey. Falcons that make it to maturity may well be survivors for a full life, but only through repeated application of the most efficient hunting techniques, an acquired knowledge of their preferred prey's habits, and in the case of the resident Peregrine, an intimate knowledge of their home range. It is no mere accident of evolution that three falcons so superficially similar are really so different, nor is it merely a diversity for the sake of co-existence - survival is at stake.

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BENDIGO BIRD OBSERVERS GROUP

Bird of the Night Discussion November 1982

Subject - Nankeen Night Heron - *Nycticorax caledonicus*

APPEARANCE About 59 cms long with shorter legs and necks and shorter, stronger bills than other herons. The crown and nape are blue-black, the upper plumage mainly chestnut brown (nankeen, after a cotton Chinese cloth common many years ago). The colour under the body is creamy buff. Eyes and legs are yellow and the bill dark green to black. A patch of bare green skin bordered with white feathers occurs in front of the eyes. In breeding plumage, two white plumes extend from the nape of the head, down the back. The head is relatively large to the rest of the body. Immature birds are streaked brown and white and can be readily mistaken for bitterns.

CALL The call is described in G.Pizzey's Field Guide as a "Loud somewhat peevish 'KYOK' usually at night, and on departure from roost."

FOOD consists of insects, crustaceans, fish amphibians, and occasionally eggs and nestlings of other birds, and mice during plagues.

HABITAT The birds occur throughout Australia, in or near suitable wet swamps or shallow water.

BREEDING In Victoria the usual breeding period is springtime but depends on the abundance of food at the time, which is consequent on water levels in the breeding areas. They often nest in colonies with other water-birds, usually in trees or bushes, often with water underneath, but sometimes on the ground. The nest is loosely constructed of sticks. Generally the clutch of eggs is three but may be up to five. Colour of the eggs is light blue to green. The incubation and fledging periods are unknown.

BENDIGO BIRD OBSERVERS GROUP Bird of the Night Discussion continued

GENERAL As a rule the birds roost during the daytime in densely foliated trees in or close to water, and feed at night. On occasions they may be seen to be active in day-time, having been disturbed, or for additional feeding requirements. In the Bendigo District, it is believed that breeding has occurred occasionally at Tandarra and Tang Tang swamps.

In the Barmah and Gunbower forests, Nankeen Night Herons have nested during flood periods in the company of Cormorants, Ibis, Egrets, Ducks and Herons, Darters and Spoonbills.

They appear to be spasmodic nomads in the Bendigo area. Sightings have occurred occasionally in Wellsford forest, the Sewerage Farm, Lake Weeroona, at Eddington on the Loddon River, and of a single bird at the Millwood Dam in the Whipstick. There was an instance of a bird roosting by day in a Cypress tree near the centre of Bendigo, and leaving about dusk with a croaking call, in the direction of the Crusoe reservoir.

They call at night time and at dusk, usually in flight, or when taking off. Plumes are moulted and regrown before the breeding period.

Apparently some birds stay in suitable areas while conditions are favourable, but many birds need to seek other feeding areas when food becomes scarce in the normal area.

Observation indicate that mud-eyes are also a source of food.

As a result of an outbreak of encephalitis in the Murray Valley in 1974, research work indicated that Nankeen Night Herons may have been the main carrier of the disease. Blood samples showed the highest rate of infection occurred in these birds. Since then there has been no further outbreak and no further information has been revealed, to confirm or deny the suspicion.

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IMPORTANT ANNOUNCEMENTALTERATION TO MAY SCHOOL HOLIDAY CAMP ARRANGEMENTS

Discussion amongst those intending to take part in the May School Holiday camp in the Lower Glenelg National Park indicated a generally unfavourable reaction to the previously announced split camping arrangement, and particularly to the idea of shifting camp half way through. The Committee has therefore decided that the whole fortnight will be spent at the campsite at Little Moleside Creek, at the eastern end of the park. This site is suitable for caravans and campervans as well as tents. See page 18 of last month's Whirrakee for details of campsite.

At the May meeting, a map showing the route to the campsite from Dartmoor will be available. If you intend coming, please ensure that you collect a copy. Otherwise you will have to call in at the park headquarters at Nelson, and get directions from there.

IN A NATIVE GARDEN

by Tom Patullo

ON THE IMPORTANCE OF DRINKING POINTS FOR THE BIRDS

With the century plus temperatures we have been having this summer, I would like to stress the attraction that a fresh supply of cool drinking water has for the birds which come into our gardens. I think a number of small receptacles, at different positions in the garden, is better than one large one. Some birds like to take control and chase the smaller ones away. They can go to another drinking point if there is more than one.

I consider the ideal situation is in a secluded, shady position with overhead cover. The actual vessels can be anything that will hold water. I have used empty ice-cream containers with success, in which case I place the plastic container against a rough stone so that the rim of the container is level with the top of the stone. The birds can stand on the stone to drink. They appear to lose confidence if the container is isolated. A flat plastic dog-food container is quite good, as also are a couple of flat sandstone slabs with shallow hollows that will hold water, except that they need refilling more often.

As we have no cats at our place, I place the drinkers at ground level. If you have a cat, a pedestal bird bath is best, so that the water is well off the ground with clear surroundings, away from trees and shrubs which would enable a cat to stalk the birds. "Give the birds a chance".

During the torrid days of summer, we believe that we had more birds in our garden than ever before. As there has been a dearth of nectar in the grevilleas due to the stress of the drought, we attribute the number of bird visitors to a couple of reasons, firstly, the fact that there is always a plentiful supply of fresh, cool drinking water, and secondly, the amount of mulching we have done on our garden this year.

The loose litter of the gum leaf mulching seems to give an inexhaustable supply of wogs and insects for the ground feeding birds, such as the Grey Thrush, Yellow Robin, etc., and of course, our family of White Browed Babblers. These Babblers are delightful birds, being a never ending source of interest and amusement for my wife and I, as we watch them fossick for food in the loose litter under the trees and bushes. The insects therein fall easy prey to the busy Babblers. They are never still, as they always appear to have something to do. Our party of birds used to frequent a thicket of *Melaleuca decussata* which grows further up the hill, and normally has a plentiful supply of loose litter underneath. During the last year or so this thicket has become very sparse, and dry, so the Babblers have moved into our garden. Their main occupation appears to be the gathering of nesting material with which to build their large, loosely constructed communal nests. One wonders where all the material comes from. At one time I counted eight nests at different points around the garden. However, the loose structures sometimes become casualties of the strong winds. They appear to soon abandon these nests, leaving them to other, sometimes strange tenants. The most recent example was a nest taken over by a Tree Dragon lizard. This little fellow has become very tame and will accept scraps of meat when offered, and comes quite close when I am using the hose. He drinks from water which remains in upturned leaves.

AROUND THE NURSERIES

Recently I had the good fortune to be shown a most unusual young tree - a beautifully variegated Eucalypt. I have never seen one before, nor have I ever heard of, or read of, such an occurrence. It is a beautifully growing, shapely young Eucalypt of some five feet in height. The proud owner told me that it came up as a self sown seedling in his back yard and has held the beautifully variegated yellow and green foliage right from the start. At the moment it has the appearance of being a young Mahogany Gum, but as there are, as yet, no buds, flowers or seed capsules for positive identification, one cannot be sure.

Grafted Desert Pea Reading the garden notes in the Herald, by Noelle Weatherley, recently I came across an article on the grafted Desert Pea, Clianthus formosus. Evidently this practice has been carried out successfully in Europe for many years. The hardy rootstock used is that of another member of the Clianthus family, the New Zealand Glory Pea, Clianthus puniceus - a hardy perennial with vigorous rootstock and a lifespan of five years or more.

The actual grafting, referred to in the article as the micro-grafting technique, is carried out by grafting day old Desert Pea plants onto tiny seedlings of the New Zealand Glory Pea, evidently where the micro comes in. In Europe the plants are grown in glasshouses, but in Victoria they can quite easily be grown all the year round, with some frost protection in the coldest part of the year. This can be arranged by planting in a frost free part of the garden, or growing in a large container which can be moved to the desired position in winter, and with this care they should survive for five years or more. They need an adequate supply of water during the hot weather. Do not allow them to dry out, and be sure to apply water to root area only; keep foliage dry. Use some fertiliser sparingly at regular intervals of several weeks. Use Thrive, Osmacote or Blood and Bone. Try and arrange some shelter from the hottest of the midday sun in mid summer. These grafted plants are now obtainable from our nurseries. Max Richardson of Epsom has some on hand, or will obtain one for you should you care to try one.

A couple of nice Grevillea hybrids are obtainable now. Firstly, a relation of G. Robyn Gordon, which comes from the same source, named G. Sandra Gordon. The parents of this hybrid are G. sessilis x G. pteridifolia. It bears long golden-orange, brush-like flowers from six to eight inches long, and blooms from April to October. The second is a beautiful hybrid with unusual colouring called Misty Pink with the parents being G. banksii x G. sessilis and having brush-like flowers of some six inches, of delicate pink and cream colouring. A prolific flowerer, it is claimed that it will bloom all the year. When the flowers are out they are literally dripping nectar, however I have found that the colouring is best just before the flower is full blown as the colour fades as the flower matures.

Another plant obtainable now is Hibbertia stellaris, a neat, compact plant with fine foliage, ideal for a container, which bears a prolific crop of smallish orange flowers for most of the year. It will grow in full sun to semi-shade.

An interesting variation of the Whipstick ground cover, Myoporum parvifolium, is a pink flowered form now readily available. The plants are now in full bloom (tenth of March) and are quite a pretty sight, covered as they are with small, starlike pink flowers.

PORT PHILLIP BAY EXCURSION

Weekend Saturday 13th and Sunday 14th August Port Phillip Bay excursion with members of the Bird Observers Club of Melbourne.

Leader - John Lindner.

This could be one of the most interesting excursions for the year, but its success will depend on some preparation and planning by club members.

Program:

1. Leave Bendigo Friday night or Saturday morning.
2. Visit Ocean Grove Nature Reserve and, if time, other areas of interest on the Bellarine Peninsula. For example, Orange-bellied Parrots may be observed on the golf-course at Ocean Grove.
3. Camp Saturday night at Queenscliff. A suitable camping ground or caravan park will be selected.
4. Port Phillip Bay trip on Sunday. The ferry with Bird Observers Club members aboard will arrive at Queenscliff at about 11.30 a.m. A four hour tour of Port Phillip Bay will follow, the theme being sea birds, of which many nomadic species over-winter in and around the bay. Mr. Mike Carter, an authority on sea birds, will be on board to aid with identification. Locations to be visited include the Rip, Chinaman's Hat, Pope's Eye, Swan Bay and Wedge Light. The boat returns to Queenscliff at 3.30 p.m.

Charges for the boat trip:

\$11.00 per adult, \$5.50 per child. We must pay the Bird Observers Club in advance so the deadlines are as follows:

Club meeting Wednesday 8th June: firm commitment to participate.

Club meeting Wednesday 14th July: collect money.

At least 20 participants will be needed to make the excursion viable.

Additional notes:

1. The ferry trip will only be cancelled in the event of extremely rough weather. Viewing is from under cover, so rain will not cause cancellation.
2. If extremely bad weather causes the boat trip to be cancelled, we will divert to the Brisbane Ranges National Park.
3. This is one occasion when the use of a 20 seater self-driven bus could be most economical. Charges will be investigated.
4. Day trippers will need to be at Queenscliff by 11.00 a.m.

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MAP SALES IN BENDIGO

Perhaps not all members are aware that the Lands Department office in the State Offices building in Hargreaves St., Bendigo, is now selling Lands Dept. and National Mapping topographic maps. This fills a long felt need in Bendigo, and was largely due to the initiative of Berry Vardy who is a Lands Dept. surveyor, as well as keen member of the B.F.N.C. Continuation of the service will depend on public support, so spread the word.

BIRD NOTES AND OBSERVATIONS FOR MARCH

Club member Mr Ray Wallace was our speaker for the March meeting. Ray talked about, and showed slides of, the twenty species of waders that have been recorded in the Bendigo district. It was suggested that beginners, who are interested in identifying waders should get to know Bendigo's most common migrating wader, the Sharp-tailed Sandpiper. One can relate to other waders using the Sharp-tailed Sandpiper as a guide for size, length of bill, colour, and general appearance. However, it was agreed amongst the members that the best way to identify waders is to put in many hours of field observations.

A member reported at the meeting that he had received a letter from a Geelong observer, who, upon investigating the aftermath of the Ash Wednesday fire, found six hundred dead birds of forty-two species, which probably died from smoke inhalation. One can imagine the many hundreds of thousands of birds and animals that perished in those terrible fires, the worst recorded for forty-four years.

One bird that has been on the move in recent years, continually spreading southwards, is the Crested Pigeon. Normally a bird of the dry interior of Victoria, inhabiting the fringe areas of open Mallee and Black Box country, it has in the last decade increased its range dramatically due to mans agricultural activities. Inglewood, Bridgewater, and Llanelly were once their southern limits, but now they are common around Bendigo and Maryborough, with one unconfirmed sighting at Mt. Beckworth near Clunes. Lyall Glen, Nth Redesdale recorded its first Crested Pigeon on the 4th March.

A number of observers visited the Bendigo Sewerage Farm on the 12th of February, where they found good numbers of Sharp-tailed Sandpipers and Red-necked Stints. Of more interest were the sightings of Curlew Sandpipers and a lone Common Sandpiper. The Common Sandpiper can be identified by its clean appearance and by its habit of teetering. A lone Rufous Fantail was observed in the Whipstick Forest, Kamarooka Block on the 3rd March. The observer stated that this bird is usually associated with moist forests and was probably heading northwards on its annual migration.

There has also been some out of season nesting taking place. One member's theory on the out of season breeding is that most birds in the spring missed out on breeding due to the dry conditions, but the urge to breed and populate are so strong that this delayed breeding season is occurring. Some breeding reports are of Common Bronzewing nesting on the 9th of February, a Magpie feeding a full grown young, a young Brown Flycatcher begging for food on March 9th, a Dusky Woodswallow fledgling calling for food on March 20th, a flock of Sittellas with young begging for food and a grown Shrike-tit following another around begging for food on Feb. 20th. It seems from these reports that the immature birds are progeny from the spring crop but are still dependent on their parents because of the lack of food.

A Sedgwick member has had, in the last few weeks, a visitor, a White-throated Treecreeper which roosts by clinging to the door of the engine shed. Other sightings from our March meeting included a Greenshank recorded on a large farm dam at Strathfieldsaye (Feb. 15th), Swift Parrot seen at Maryborough on Feb. 7th, and at Linton on the 5th and 9th of Feb., Darters, two Males and two females (or immatures) and six Caspian Terns at Lake Eppalock on Feb. 20th. A hint for people who have problems with Starlings raiding their fruit trees. One of a flock was caught in a net that was placed over a fruit tree to protect the fruit. The sight of the starling hanging from the net, and the distress call it was making, frightened the flock so much that they stayed away for a month. Before this incident Starlings were daily visitors to this particular garden.

MAMMAL SURVEY GROUP REPORT

Meeting of 17th March 1983.

A good roll up of members (14) was present at Bill Holsworth's home for the March meeting, at which the main activity was to be banding of insectivorous bats. It was considered that the Group needed more experience and training in bat banding, so Ian Temby and Gary Davies, from Melbourne, kindly offered to help-out.

In preparation for the night's demonstration, the Group set up the bat trap at Saint Aiden's Orphanage the previous night, and managed to capture 38 bats. Our two visitors, being quite keen batos, spent the early part of the evening in the field with the bat trap, while the Group conducted the business part of the meeting.

During last month's excursion to the Malone's property at Wilson Hill, members saw bats flying overhead which had spots under their wings, some members believed that these spots were holes in the wing membrane. Six bats were captured by setting strings over a dam.

The bat trapping expedition to Saint Aiden's the night of the 25th and the morning of the 26th February produced 105 specimens of six species of bats.

It was planned that the Group hold a field survey on:

- (i) Anzac long weekend in the Axedale area;
- (ii) Queen's Birthday Weekend near Melville's Caves.

The Group's 1983 Trapping Permit from Fisheries and Wildlife Division has been received.

Discussions on various types of pitfall traps, hog deer and other subjects not really related to mammals were followed by a showing of bat slides taken by Rob Watkins and Bill Holsworth.

An observation was made of a dead koala found in the Wellsford Forest. The rest of the night was taken up with weighing, measuring and banding the thirty eight bats. There was quite a variety of bands, but these were accompanied by a list of the bat species they fitted.

The next meeting is to be held at Ian Fenselau's home in Buckland St., White Hills on the 20th April.

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NOTICE OF MOTION

I hereby give notice of motion that at the Club meeting to be held on the 4th of May I intend to move That the motion 'That this Club dissociates itself from the activities of any body engaged in party political campaigning' be rescinded. My main reasons for taking this action are:

1. The motion is far too sweeping in that it seems to forbid any future contact with political parties or politicians;
2. The wording is very ambiguous and thus very difficult to interpret;
3. The motion contradicts item 2 part (c) of the B.F.N.C.'s constitution which states "to take appropriate action to protect flora and fauna and matters of national importance relating to natural history". and
4. I believe that rescinding the motion is the best way of rectifying the present situation.

John D. Berry.

18.

COMMITTEE REPORT

The March Committee meeting was held at Rod Fyffe's home on March 21st.

1. Alan Spence was appointed to fill the Committee vacancy caused by the resignation of Ian Brown due to his move to Sydney.
2. It was reported that the final editing of "Eucalypts of Bendigo" had now been completed. The first typing will commence soon.
3. All presently unfinancial members have now been deleted from the Whirrakee mailing list.
4. A report from the C.C.V. indicated that the Government is not going to take action on the L.C.C. Whipstick recommendation until the proposed amalgamation of the Forest Commission and Lands Dept. has been resolved.
5. Camping during the May holidays will be at Moleside Creek in the Glenelg National Park for the whole fortnight now.
6. In response to a letter from the B.C.A.E. it was decided to send a letter to the college asking if they would be interested in a prize for a natural history collection to be awarded annually.
7. The Bird Observers Club Melbourne meeting on country groups should have a representative from our club. This is to allow contact and liaison to be maintained.
8. The committee decided to write to the Minister for Tourism and the Premier protesting about provisions in the proposed Alpine Resorts Bill and Aboriginal Claims Bill allowing the status of Parks and Reserves to be changed by the Governor-in-Council.
9. The Committee is to review the possibility of recommending that some of our older members should be added to the list of Life Members.

PUBLICATIONS RECEIVED

1. E.C.O.S. No. 35 Autumn 83
2. Geelong F.N.C. Newsletter Mar. 83
3. Victorian Naturalist Vol.100 No.1 Jan/Feb. 83
4. A.C.F. Newsletter Vol.15 No.2 Feb./Mar. 83
5. Ballarat F.N.C. Excursion-News Sheet Mar. 83
6. Parkwatch No.132 Autumn 83
7. Bird Observer No.614 Mar. 83
8. Environment Victoria No.45 Jan./Feb. 83

BENDIGO FIELD NATURALISTS CLUB

Address for correspondence, P.O. Box 396, Bendigo 3550.

Office bearers for 1982-1983

PRESIDENT	Eric Wilkinson	7 Weatherall St. Cal.Gully	46 8736
SENIOR VICE PRESIDENT	Rob Moors	Sedgwick	39 6254
JUNIOR VICE PRESIDENT	John Lindner	62 Simpsons Rd. E'hawk	46 7132
SECRETARY	Laurie Leeson	76 Lawson St., Spring Gully	43 0521
ASSISTANT SECRETARY	Rod Fyffe	546 Hargraeves St. Bendigo	43 7673
TREASURER	Glenise Moors	Sedgwick	39 6254
MEMBERSHIP OFFICER	Win Dimeo	Kamarooka	36 9226
EXCURSION ORGANISER	John Lindner	62 Simpsons Rd., E'hawk	46 7132
LIBRARIAN	Helen Boon	Kamarooka	36 9252
EDITOR	Eric Wilkinson	7 Weatherall St. Cal.Gully	46 8736

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Membership of The Bendigo Field Naturalists Club is open to all those interested in natural history. The membership subscription rates are Single \$9.00, Family \$13.00, Pensioner and children, \$6.00 Whirrakee subscription only, \$8.00

General Meetings are held on the second Wednesday of each month at the Conference Rooms, Department of Agriculture, Midland Highway, Epsom. Meetings Start at 7.30 pm, and conclude with supper. The Annual Meeting is held in September.

Excursions The assembly point for excursions is outside the Special Services Complex in Havlin St. East, Bendigo, unless otherwise specified. Full day excursions normally commence at 10.0 am., (usually on a Sunday) Half day excursions normally commence at 2.0 pm, and may be either a Saturday or Sunday. Day or half day excursions are usually held on the weekend following the General Meeting. Campouts held several times in a year, usually co-inciding with long weekends or holiday periods.

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The B.F.N.C. has two active sub-groups.

The BIRD OBSERVERS GROUP meets on the first Friday of the month at the Agriculture Department, Epsom, at 7.30 p.m.

President: John Berry 22 Barrell St., Eaglehawk 46 9921
Secretary: Harvey Rich, 58 Dundas Rd., Maryborough 61 1698

The MAMMAL SURVEY GROUP meets on the third Thursday of each month, (or fourth Thursday when third Thursday is day after general meeting) at 8.0 p.m. in member's homes as announced in the monthly diary.

President: Berry Vardy, Rocky Rises Rd., Maiden Gully, 49 6214
Secretary: John Lindner, 62 Simpson's Rd., Eaglehawk 46 7132

BENDIGO FIELD NATURALISTS CLUB

Address for correspondence, P.O. Box 322, Bendigo 3550.

- DIARY -

Office hours for 1982-1983

MEETINGS

- April 13 David Luke, Regional Soil Conservationist for the Soil Conservation Authority's Northern Region, based on Bendigo, will speak on 'The 1983 Drought - the effects on crop land; the control measures used, and thoughts for the future.'
- May 4 The use of magnification in nature study - an introduction to the use of hand lenses, magnifying glasses and microscopes by Laurie Leeson, followed by a workshop at which members will have the opportunity to view specimens by the above means.
(The Franklin River night has been deferred.)
- June 8 Birds and Wildflowers of the Inglewood area by Barbara Salter (birds) and Margaret Watts (flowers).

EXCURSIONS

- May holidays School holiday camp-out in Glenelg National Park
- May 8-21 (See p.12 for an important announcement about the venue.)
- May 14-15 W.V.F.N.C.A. Meeting/ Campout at Mildura.
(Details on p.20 of March Whirrakee)
- Queens Birthday
- W/E Melville Caves
- June 11-13 Campout or day visits. A combined weekend with members of the Central Victorian Archaeological Society, who will have expert leaders to discuss the aboriginal relics in the area.
The Mammal Survey Group will be trapping and spotlighting.
Details of camp-site will be provided next month.

MAMMAL SURVEY GROUP

- Thurs. April 21 8.0 pm at Ian and Carol Fenselau's home, Buckland St., White Hills.
Subject: Anatomy of the Koala.

BIRD OBSERVERS GROUP

- Fri. May 6 7.30 pm, Dept. of Agriculture, Epsom.
Don Franklin will talk on the wildlife to be found in a clump of porcupine grass. Jack Kellam will speak on some Bendigo birds.
Bird of the Night: Black Chinned Honeyeater.

COMMITTEE MEETING

- Mon. April 18 8.0 pm, Laurie Leeson's home, 76 Lawson St., Spring Gully.