WHIRRAKEE

MAY 1980 VOL.1 Nº4

MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

WHIRRAKEE VOL. 1, No. 4.

Monthly Newsletter of The Bendigo Field Naturalists Club

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COVER PHOTO

Black-faced Cuckoo Shrike feeding young

Photographed at Kennington by Rob Watkins

(See article on pages 3-4)

Cover Design by Graham Hill

Typing by Diane Hill (pp.3-16)

Graham Hill assisted with the editing.

Tom Patullo organised collation.

EDITORS PAGE

You will notice that this issue of Whirrakee is bigger than the previous ones. It i very pleasing to be in the position of having too much material, but I sincerely hope that this continues to be the case rather than having too little. To those people who submitted items that they expected to see in this issue I can only apologise, and assure them their articles will appear in Vol.1, No.5. There was so much topical material to fit in this time that some items had to be held over to keep to a manageable size, bearing in mind that many copies are posted.

Anyone who has compared the first issues of Whirrakee will have noticed small changes resulting from some experimentation with ways of organising the material. Problems arise because of the policy of starting major articles at the head of a new page, and there is a need for a supply of small items, notices, and so on to use as fillers. There are probably many members who have observations which they could share with others but do not put pen to paper because they consider it hardly worth doing. However, the editor is often confronted with the situation where there is a space at the bottom of a page, too big to leave blank, but too small to start the next article in. A supply of short notes on observations by members would be very useful, and also place a lot of interesting and valuable information on record. So, how about it! Who knows, once some of you who are shy about writing long articles try your hand at some short ones, you might surprise yourselves, and join the growing number of regular contributors. At this point I would like to record my appreciation to the many members who have contributed so far. Whirrakee is already fulfilling the function I had in mind when I suggested changing the format of the newsletter. It is indeed, as one member remarked, a sort of a cross between a newsletter and a magazine, but it is providing an opportunity for permanent records in a recognised publication.

There is a way in which all members can help, whether contributors or not, and that is in publicising Whirrakee to potential subscribers. It would certainly help to make Whirrakee closer to self supporting, while at the same time make the information we publish available to a wider audience. I am thinking particularly of schools and institutions, local government and government departments. Very few subscriptions have been taken out so far, but it has to be admitted that there has not yet been any major effort to promote Whirrakee to potential subscribers. A little bit of promotion by a lot of people should be very effective, as long as we do not all leave it to the other person.

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Consider how much duller autumn in Australia would be if it were not for the brilliant colours of the exotic deciduous trees which add so much beauty to our gardens and countryside. It is currently fashionable among field naturalists and conservationists to "grow native", and in the case of the more extreme devotees, this is taken to the extreme of denying themselves the pleasure that exotic plants can add to a garden. Mary's interest in bonsai has led us into a study of exotic trees, and in particular to trying to learn as much as we can about their native occurrences as a guide to their requirements as bonsai. In later issues of Whirrakee we will share with you some of the information we have gathered on some of the exotic trees which have been planted in North Central Victoria, with emphasis on the rare and more interesting types.

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Please note: The deadline for the submission of copy for Whirrakee Vol.1,No.5 has been set as the 28th May, which is the Wednesday after the Committe Meeting.

Eric Wilkinson

Bendigo Bird Observers Group

Bird of the Night Discussion 11.4.1980

BLACK FACED CUCKOO SHRIKE - Coracina novaehollandiae also called Blue Jay, Summerbird, Shufflewing.

LITTLE CUCKOO SHRIKE - Coracina papuensis also called White Bellied, and White Breasted Cuckoo-Shrike.

CALLS B.F.C.S. various pleasant churring notes, rather quiet. The flying call has a musical tone, while at rest, the call has less variation in tone.

Little C.S. The usual call is rather shrill - "kisseek" whether flying or perched. Sometimes other churring notes are uttered.

APPEARANCE In each species, male and female are similar. Both species have a slim rather handsome blue-grey upper plumage, white abdomen and grey breast dark flight and tail feathers. The B.F.C.S. has a black throat, face and forehead and is longer by 5 cms that the Little C.S.
The Little C.S. has a grey throat, black forehead extending only to the eye. The immature B.F.C.S. can by confused with the mature Little C.S. but is distinguished by larger size, the black forehead extending past the eyes, and different calls.

HABITAT The B.F.C.S. is found in every type of natural habitat in the Bendigo District but is less frequently found in the mallee type. The Little C.S. is also found throughout the district but is much less common than the former. The Little C.S. also appears to prefer a proximity to water or the edge of the forest and is often found nesting close to a B.F.C.S. nesting site.

MOVEMENT In both species there is some movement of birds out of their territories in autumn to return again in springtime. Little is known of where or how far afield the birds move. There is some evidence of them gathering in flocks of up to 20 or more, mainly B.F.C.S but may be a few Little C.S. in the same flock, moving northwards. The flock does not move together, a few move at a time, flying short distances below tree top level. Some birds of both species however remain in the District throughout the year.

NESTING The breeding period in Bendigo District extends usually from September to January for both species. Mostly the nest is built on a green horizontal fork towards the outer end of a branch from 20 to 50' or more above the ground. Minimum height observed was about 16' for a B.F.C.S. Occasionally dry forks or upright forks have been used. The same nest site is often used year after year but both birds investigate other possible sites before deciding on the final site Birds have been seen to sit on a possible nest fork and pretend to weave nesting material while trying sites for suitability. Observations indicate that the same potential sites are also tried in succeeding years before being rejected. This is thought to be part of the birds' mating display or, that they were previous nest sites. An observation recorded that on one occasion the same nest was used twice in the one season.

A Little Cuckoo-Shrike was recorded taking 11 days to build its nest. It is believed that the B.F.C.S. takes about a week. Nests of both species are shallow built of grass, fine twigs or roots, bark, bound with cobwebs and moulded into the fork, and are very difficult to see. Male and female of both species share nest building, incubation, and feeding the young.

Eggs of both species are similar coloured dark olive green of glossy sheen with brown and black spots, or blotches. The clutch is 2-3, occasionally 4.

Bendigo Bird Observers Group, Bird of the Night Discussion continued.

Birds generally approach the nest tree from the same direction each time. They make a call when approaching the nest tree, apparently to warn the sitting bird or as a contact call if the mate is not sitting. After arrival at the nest tree, they move from 1 branch to another several times before arrival at the nest, and repeat the procedure when leaving the nest. Birds strongly defend the nest against intruders by swooping, and clapping their bills. They have been seen to flatten on a branch to hide themselves when danger approaches. On the other hand they soon accustom themselves to human habitation.

Generally found that the parent bird carries enough food to feed all the young in the nest at each visit, but it appears that this is not always the case. The young are fed on insects, especially cup moth grubs. It has also been observed that the young retain their position in the nest. This reduces movement and helps to preserve the nest. Nevertheless, nests have begun to deteriorate before the young leave the nest. It also helps to reduce the danger of young falling out of the shallow nest.

No information available on the incubation or fledgling periods. Observations show that in the later period of incubation and the brooding period the parent birds change over every few minutes 3-7 with the B.F.C.S. and about 5 minute intervals with the Little C.S.

FLIGHT pattern of both birds is undulating due to alternate flapping of wings and gliding with wings closed. The Little C.S. flight is less undulating. A very noticeable feature is the invariable habit of refolding or shuffling their wings each time they alight.

FOOD of both species consists of insects, fruit and seeds. The B.F.C.S. usually feeds inside the tree canopy, and occasionally from the ground. The Little C.S. is generally found feeding on the outside foliage of the tree canopy.

GENERAL Mention was also made of the Ground Cuckoo Shrike which occurs further to the north. However over a period of a number of years, 2 sightings have been made of this species in the Axedale area near the clay quarries. More frequent inspections in the area could reveal further occurrences.

The name cuckoo-shrike is a misnomer as the birds are not closely related to either cuckoos or shrikes, except perhaps a superficial ressemblence.

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WHAT STATE IS THE GARDEN IN?

The Conservation Council of Victoria and Native Forests Action Council have published a resource book on the Alpine and Forestry issues in Victoria, called "What State is the Garden In?"

The cost of this publication is $4.50 plus 50 cents postage, but the book is on offer at substantially cheaper price to member groups such as ours, if ordered in batches of five or more. Please advise our Secretary, Ian MacBean, if you are interested in taking advantage of this offer. An outline of the content of the publication will be tabled at the May meeting.

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The following article by Dr. Bill Holsworth is the text of a talk on the Platypus which he presented to the April meeting of the Mammal Survey Group.

THE PLATYPUS - A brief sketch of its origins, natural history, physiology and anatomy. by W.N.Holsworth.

The platypus (Ornithorhynchus anatinus) is a very shy nocturnal animal found in many lakes, rivers and streams in eastern Australia and Tasmania. The platypus and echidna are classified as Monotremes, a group of mammals distinct from the Marsupials and Placentals. Although they have been considered "primitive" they do not appear to be more closely related to reptiles than other mammals. Many of their "primitive" features are specialized adaptations.

Very few fossil platypus have been found. Recently, in South Australia, fossil bones 25 million years old (Miocene) indicate an animal (Obdurodon insignis) existed that was similar to the modern platypus but had a less developed "bill", better developed teeth, and was probably a less efficient burrower. Earlier fossils (Triassic) can only be related to some possible common ancestor of the platypus and echidna. Biochemical evidence suggests that the platypus and echidna diverged from other mammals somewhere between 170 and 100 million years ago.

The general features of the natural history of the platypus are fairly well known but there are few detailed studies of their ecology. The platypus weighs 800g (females) to 1500g (males), lives in burrows that it digs into the banks of the river or lake and feeds on aquatic invertebrate animals. Female platypus usually lay 2 eggs which they incubate until the young platypus hatches. The baby platypus feeds on milk for several weeks until it is fully furred and can feed itself. Some important facts are unknown. For example: How much variation is there in burrow design? How do food habits differ in different areas and at different seasons? How old is the female at sexual maturity? Is the breeding season the same in all areas? How long are the eggs incubated and how long is the young nursed?

Platypus make two kind of burrows. Resting burrows are made by both males and females at all times of the year. They are usually semi-circular excavations under the roots of red-gums and have no nesting material in the sleeping chambers. Platypus are solitary animals and usually only one animal occupies a resting burrow. Nesting burrows are constructed only by the female during the breeding season and are always occupied by only one adult female. They are 5m to 7m long and although they twist and turn in response to variations in soil condition, they never go more than half a metre below the surface. The entrance is always fully exposed and a metre or more above the water level. The arched opening is about 12cm wide and 8cm high. No pile of earth marks the excavation because the platypus digs by compacting the earth within the tunnel. The entrance to the nesting burrow is never blocked but about three blocks, or pugs, 30cm long, are built inside along the length of the tunnel. Soil for the pugs is dug out of side chambers. The nesting-chamber is about 30cm in diameter and is filled with green leaves, grass or roots.

The female probably does not leave the nesting burrow from the time the eggs are laid until the young are at least 2 weeks old. When the eggs are laid they are covered with a sticky coating so that they are usually found fastened together. There are no teats for the young to suck, just an area about 1cm diameter from which milk can be expressed.

The egg shell is somewhat similar to a reptile egg shell but it also has many properties similar to the egg of some marsupials. The albumin layer is similar to that found in a variety of mammals. The major difference between bird and reptile eggs and the platypus egg is the means by which the embryo obtains nourishment. All the food needed by a chick is passed from the uterus to the embryo through the shell. Thus, while in the female, after the shell has been deposited, the egg grows from 3 or 4mm to the full size of 15 x 17mm.

THE PLATYPUS continued.

The Monotremes are endotherms like other mammals and birds. That is, they maintain their body temperatures by the internal production of heat. Their body temperature may fluctuate over a greater range than is common for marsupial and placental mammals. For example, echidnas in a laboratory at 25C have a body temperature of 32.5C +- 2C. When kept at 10C their body temperature may drop to about 22C during periods of inactivity. Unlike many mammals neither the echidna nor platypus goes into torpor or hibernation.

Food habits of the platypus on the Shoalhaven River, N.S.W. have been studied recently. In all seasons, caddisfly larva (Tricoptera) made up 40-65% of their diet. Fly larva (Diptera), dragon fly larva (Odonata) and Mayfly larva (Ephemeroptera) made up most of the remaining portion of their diet. In winter non-insect food was more important than in summer. It obtains its food while swimming underwater with its eyes and ears closed. The dispersal of animals marked with tags or tape was also studied along a stretch of the Shoalhaven River. During 8-10 day periods most animals moved no more than 200m from their point of capture. A few individuals moved up to 1300m with two moving 2.4km and 2.6km along the river.

Since European man came to Australia platypus numbers have probably declined, and certainly their range has decreased. Although they can live in waterways polluted with sewage or silt an adult male must eat about 15g of insect food per day in the summer, and more in the winter. Insecticides, herbicides, heavy metals and other pollutants decrease the insect larva numbers in the rivers. This reduces the food available to platypus. Their numbers are further reduced by livestock which destroy the vegetation, compact the soil and erode the banks of the rivers. It is indicative of modern values that probably more money was spent designing the platypus illustration on the 20¢ coin than has been spent on platypus research in the past 10 years.

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A NATIVE GARDEN IN MAY.

by Tom Patullo.

Birds in the Garden. With the Ironbarks coming into flower throughout our area, we can expect to see an influx of the migratory Honeyeaters, hoping that our flowering natives will attract them into our gardens. These migratory birds would include, Eastern Spinebills, White naped honeyeaters, Black Chinned and Yellow faced honeyeaters, all of these birds are attracted to Correas which are now in full bloom and the many Grevilleas which are beginning to flower at this time. In addition to growing nectar bearing shrubs to attract the birds, one must endeavour to create natural habitat in the garden, (native plants creating thickets) thus giving the birds a feeling of security. A well placed drinking bowl with a constant supply of fresh clean water is also a must. Try to place the drinking bowl in natural surroundings with overhead cover. I have found that the birds prefer a natural cavity which holds water, to the stark, white painted pedestal type of bird bath that can be purchased at the nurserys. Acting on the advice of Mr.Bill King, who gave a talk, "Birds in the Garden", recently at one of our meetings, I hunted around for a piece of soft sandstone. I then gouged out a shallow cavity in this stone using an old cold chisel and hammer. I then found an old stump and erected it in the ground in a position where it had overhead cover, wedged the hollowed out sandstone in the top of it, and filled the old stump with good soil in which I planted some native violets. The violets quickly grew and surrounded the stone and stump. I fill the hole in the stump with clean water every day, sometimes twice a day. The depth of water would be about one and a half inches. At the same time I placed a white painted pedestal type bird bath close by in similar conditions. One fine afternoon recently I noticed that all the birds appeared to be using the natural stone bowl, so I decided to sit for an hour and take a count. This census proved that almost exclusively the birds were visiting the natural stone bowl.

The details of this hour census are as follows :-
On a fine Autumn afternoon - 28°C. I recorded the species of birds and the number of visits made to the drinking bowl.
There were thirteen different species of birds -
White plummed, Yellow tufted, and Fuscous Honeyeaters, Red wattlebirds, Eastern Shrike-tit, Grey Fantail, Sparrows, Blue wrens, Pardalote, Willie Wagtail, Diamond firetail, Zebra Finches, and Grey Thrush.

The total number of visits made to the bowl was seventy in the hour.
A further breakdown of the census was as follows:-

White plummed honeyeaters.	28	visits.
Yellow tufted honeyeaters.	10	"
Sparrows.	9	"
Blue wrens.	7	"
Fuscous honeyeaters.	3	"
Eastern shrike-tit.	3	"
Grey fantails.	3	"
Zebra Finch.	2	"

The remaining five - Red wattlebird, Pardalote, Willie wagtail, Diamond firetail and Grey thrush made only one visit each. Of the above seventy visits only two were made to the pedestal type bowl, I do not claim that there were seventy different birds visited the bowl in the hour as I had no way of knowing if some birds visited the bowl more than once, but the result shows how much a drinking bowl in the garden is used by the birds. We have no cats at our place.

A NATIVE GARDEN IN MAY. continued.

An Unusual Grevillea.

Last spring I obtained from a native nursery near Maldon a very nice form of Grevillea rosmarinifolia, I was told that it had a pink flower but I was totally unprepared for the beauty it turned out to be. It is still a very small plant but it has already flowered. The flowers, normal grevillea shaped, are mainly white, with long stamen a bright red, the whole effect giving the appearance of being pink. As with all the rosmarinifolia forms, it carries its flowers at the end of the branches, where they are easily seen and can be appreciated.

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REPORT ON TALK AT APRIL MEETING.

Dr. Holsworth gave an informative talk on the Ecology of the Rocky Mountains. He illustrated the lecture with excellent colour slides teken on his four month tour of the region last year. He explained the impact of the ice age on the formation of the landscape and the distribution of the plant communities. These processes were presented in pictures taken on the edge of glaciers and in mountain valleys from which the ice had retreated less than a century ago.

Bill explained that the plant communities and their associated animals are arranged in a pattern that changes with elevation and latitude. He showed that spruce and fir forests gave way to alpine tundra at the 8,000 feet level in Jasper National Park, but 1,500 miles south in Colorade, the change in plant communities took place at 12,000 feet. The birds and mammals of the Rocky Mountains were displayed in close-ups of ground squirrels, big-horn sheep, deer, grouse, ptarmigan and other birds.

The geological history of the Rocky Mountains and Great Basin was shown in a breath-takingly beautiful sequence of pictures taken in Grand Canyon, Zion, and Bryce Canyon National Parks.

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WOMBAT HILL GARDENS, DAYLESFORD

Wombat Hill Gardens have been developed on the volcanic hill of the same name overlooking the town of Daylesford. According to a booklet published by Daylesford Rotary Club, the gardens were reserved in the 1850's. Although they were already well established by Baron von Mueller's time, he was apparently actively involved in the supervision of improvements. The gardens are well worth a visit to see the many magnificent examples of exotic trees, some of which are over 100 years old. The huge trunks and enormous spreads of the conifers particularly show how much the deep, rich, volcanic soil and highland climate has been to their liking. There are some very pleasant vistas from the terraced paths which follow the contours of the hill, or you could climb the spiral steps of the Pioneers Memorial Tower and enjoy the "Bellbird View". (Former viewers of the T.V. series "Bellbird" would recognise the view used in the introduction to each episode).

by Eric Wilkinson.

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TORTOISE EGG CHAMBER AT KENNINGTON RESERVOIR.

by John Lindner.

On March 30th, 1980, at the end of a visit by the Junior Field Naturalists group to Kennington Reservoir to collect frogs, a small hole with a number of broken eggs lying around it, was discovered.

The hole was about 15 metres from the present water level, at the edge of the tree belt, around the lake (mainly Red Ironbarks), and in what was then very hard and dusty ground. It was located near the southern end of the reservoir, which has a good growth of strap-like water weeds, some willow trees in the corner, and muddy, gently sloping banks.
The hole measured 13cm deep and was 6 by 8cm wide. The total number of broken and whole eggs in and around the hole was 16 - however not all may have been counted. The eggs were white, but often stained, and elongated in shape with bluntly rounded ends. They measured 35mm in length and 23mm in width. The shells were hard and brittle. Most were rotten.*
Two contained well developed but dead baby tortoises, which had half emerged from them.

From the prominent keels running from head to tail along the carapace (top part of the shell), and the serrated edge at the rear of the carapace, the species was identified as the Murray Short-necked or Macquarie Tortoise (Emydura macquarii). This belongs to the group of short-necked tortoises. It ranges throughout the Murray-Darling system, in which, according to one reference, it is restricted to larger rivers and large waterholes on floodplains. Distinguishing features of adults are a pale or yellow stripe extending from the mouth back along the neck; and the fact that the plastron (lower shell) is much narrower than the carapace (upper shell). They may grow to 30cm (carapace length). The carapace is oval in shape. Only the juveniles have the characteristic carapace shape described above.

Nesting occurs in northern Victoria from the beginning of November to the middle of December. Presumably the egg chamber would have been rather nearer the water than it is now. The female deposits 15 to 18 eggs in the hole she has dug. According to one reference, the eggs are already brittle-shelled when laid. The eggs hatch two and a half months later.

Why wasn't this lot of eggs successful? Perhaps the ground was too hard and dry for the young tortoises to escape. Perhaps the nest was dug up by a fox or dog.

The other tortoise recorded in the Bendigo area is the Common or Eastern Snake-necked Tortoise (Chelodina longicollis). This species belongs to the group of long-necked tortoises. The plastron is much more nearly the size of the carapace. The carapace is darker in colour, while the plastron is pale white or yellow with dark bands along the seams between the plates. On mature specimens the edges of the carapace curl upwards slightly. This tortoise ranges along the whole east coastal region and inland to include the Murray-Darling system.

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* See following article.

THE ROTTEN EGG THAT HATCHED

by Meryl Wilkinson. (Age 8)

On March 30th we went on a Junior excursion and found a tortoises' nest in dry dirt near a reservoir. I was allowed to take an egg because they thought it was rotten. On the way home in the car Benjamin Fenselau sat on his, and was it rotten! When I got home I put the egg on the mantelpiece over the heater. Next morning when I looked at the egg its' head was poking out and I was very excited. Because we were going to Melbourne, Dad put it in his cutting tray which had a plastic cover to keep him safe and moist. When we came home late at night he was lying on his back and looked dead. When Dad turned him over he moved. He had an egg tooth and underneath his egg-sac was poking out. We put him in an ice-cream container with some water and gravel and a rock, but we changed it later to a baby's bath with more water and a clump of umbrella grass where he liked to hide. After two weeks his egg tooth disappeared and soon after his yolk sac shrank away. We gave him finely chopped worms and cooked egg yolk but he didn't eat them. He has got mosquito wrigglers in his bath now and we never see him eating them but they are disappearing.

In a few days we are going to put him in our garden pond.
We call him "Tort-for-Short"

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FIRST RECORD OF LITTLE FLAT BAT FOR BENDIGO

by Ian Fenselau.

A small bat was handed to me by Mrs. Jane Cleary, who had discovered the tiny mammal hiding under a carpet at St Lukes Church, White Hills. The tiny animal had scuttled around underneath the carpet making capture quite difficult.

I tentatively identified the bat as being Tadarida planiceps (Little Flat Bat), and although there was some discussion among Mammal Survey Group members, this identification has been confirmed at the National Museum. This bat belongs to a group commonly known as Mastiff, or scurrying bats. These bats are identified by having wrinkled lips, and projecting rodent-like tails. They are unusual bats because some species appear to be very much at home on the ground.

The bat aroused much interest within the Mammal Survey Group, and a party of members set a mist-net at the church several nights later (Feb.28th) in the hope of capturing more members of the resident colony. Twenty-seven bats were observed leaving the church, but not where the net was set. However a bat was observed later resting upon a beam high up in the church gables, and at the suggestion of one young member, numerous extensions were added to the handle of a butterfly net. and with a lot of luck, another specimen of the Little Flat Bat was captured.

Much is still to be learnt of the distribution of our Australian bats, and even of the arrangement of species. The Mammal Survey Group are most interested to receive specimens, and information on any known colonies.

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BIRD OBSERVATIONS

The following observations were reported at the Bird Observers Group meeting of 11th April 1980.

Several people reported flocks of White-winged choughs numbering 50 and even over 100. During autumn the birds gather into these large flocks and remain so through winter. If disturbed, large flocks may scatter into smaller groups only to re-form later. During early spring choughs disperse into breeding family parties usually numbering six to eight individuals. One party of choughs were reported to be building a nest, this being unusual at this time of the year. Another report was of choughs coming regularly to a bird feeding station to eat finch seed mix. White-winged choughs are declining markedly in some areas, but around Bendigo are holding their own. Apostle birds, a related species of inland eastern Australia, exhibit similar Autumn and Winter grouping behaviour.

Small groups of crimson rosellas in immature plumage were reported from Marong and at Millwood Dam in the Whipstick. Adult birds are normally found in wetter mountainous and coastal areas, but even immaturely-plumaged birds are seldom found as far inland as these observations.

An interesting specimen of the Corvid (crow and raven) family was exhibited at the meeting. It was seen to drop dead out of a tree near Pilcher's Bridge. Ray Wallace clearly showed that the bird must be the Australian raven (Corvus coronoides). The grey down base to the feathers demonstrated that the bird was a raven, as opposed to the white down feathers of a crow. They can also be separated by bill features: in the ravens the upper mandible extends slightly beyond the lower mandible, whilst in crows the two mandibles are of equal length. The long undivided throat hackles diagnosed it as an Australian raven. The little raven (Cervus mellori), and the forest raven (Cervus tasmanicus) which is not known to occur in the Bendigo area, have shorter hackle feathers with a divided tip.

A large flock of white-browed woodswallows were seen near Huntly. These birds were probably preparing to migrate northward. However, some white-browed woodswallows remained in the district over last winter, being reported in good numbers from Inglewood and the Whipstick, this being very unusual for our district.

Two members reported white-backed swallows close to Bendigo. This bird is rather rare in our district, being an inland bird, but is known to nest in mining sand heaps around the city during spring and early summer.

Keep a look out for the arrival of flame robins, yellow-faced and white-naped honeyeaters during the next few months.

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FOR SALE. Tape recorded cassette of bird calls. 60 minute tape of 53 Victorian Birds including Kookaburra, Whip bird, Lyre-bird, Grey butcher bird, 14 Honeyeaters, Little and Red wattlebirds, Red capped, Scarlet, Hooded, Yellow and Southern scrub Robins, Owlet and Spotted nightjars, Mallee fowl, Oriole, Cockatoos, Parrots, Curlew, Bellbird, Heath wrens, Babblers, Grey thrush, Mopoke, Friarbirds and others.
Price $8.00 plus 70c P.& P. if posted. W.Flentje, 15 Pilcher St.,Bendigo.

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MAMMAL SURVEY GROUP.

by Anne Speechley.

The April meeting of the Mammal Survey Group was held at the home of Rob and Cynthia Watkins in Marnie Rd., Kennington.

The group held a spotlight outing to Mount Brenanah (Sunday Morning Hills) on 28th March. The habitat was mainly open woodland with Grey-box and Yellow gum being the dominant trees. Sighted were two Brush-tailed Possums, One Eastern grey Kangaroo, fifty Ring-tailed possums and one sugar glider.

In the past it has been the practice on trapping outings to record only the sex and species of the animal having been caught. However it would seem that the more information that can be obtained the better. To this end the group has decided to look into purchasing a Spring Balance and measuring equipment, so that a more detailed study can be made and the size and weights of the same species in different areas can be compared.

Members have made interesting observations over the past month and some of these were, a black faced kangaroo sighted near St Arnaud, a dead Tuan (Phascogale tapoatafa) at Maiden Gully, a dead Rattus norvegicus at Beveridge, a Chocolate bat (Chalinobis morio) captured at Maiden Gully and a little Brown bat at Mandurang. A few of our members also have sugar gliders resident on their properties.

A campout will be held at Crosbie Forest near Heathcote, on the 10th - 11th May.

Next meeting at the Education Centre, Havlin St., Bendigo. Meetings start at 7.30 pm on the 3rd Thursday of each month and interested people are very welcome to attend.

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WESTERN GREY KANGAROO NEAR INGLEWOOD

There is an interesting article in the Victorian Naturalist for Jan./Feb. 1980 (Vol.97, No.1) by G.M.Coulson, recording an eastward extension of range of the Western Grey Kangaroo (Macropus fuliginosus).

The discovery of two road kill specimens on the Inglewood - Kingower road represented an eastward extension of the known range of this species of kangaroo of about 100 kilometres. The grey kangaroo of the Bendigo Area ia the Eastern Grey Kangaroo (Macropus giganteus). The two species were previously known to overlap in a narrow zone extending from Swan Hill to the Grampians, so the discovery of the Western Grey Kangaroo near Inglewood opens up gaps in the knowledge of kangaroo distribution which need filling in. Coulson says that "An experienced observer can identify animals in the field by their coat colour: eastern greys range from silver grey to grey-brown whereas western greys are a darker chocolate-brown with a dark brown to black face and ears - -". The article concludes with an appeal for information on the grey kangaroo populations of north-west Victoria. Any members who have information to contribute could forward the same to G.M.Coulson, Department of Zoology, University of Melbourne, Parkville, Victoria, 3052.
Mammal Survey Group members particularly should be able to help by paying special attention to any grey kangaroos they observe, especially west of the Loddon River.

Reference: Coulson, G.M.,1980. Extension of range of the Western Grey Kangaroo, *Macropus fuliginosus*, in Victoria.
Vict. Nat. 97 (1):pp.4-5.

by Eric Wilkinson.

NATURE DIARY

by I.Fenselau.

The local bushland has now had wonderful soaking rains after an extended dry period. Prospects for ground flora are now good, many species of fungi have already responded to the rains, and the frogs were singing happily from all the dams even before the rains had stopped.

PLANTS to look for in flower this month are -

1. Tiny Greenhood. P.parviflora - is four to eight inches tall and has three to six tiny flowers facing the stem. It is widespread but not common.
2. Autumn Greenhood P.revoluta - have a large striped green and white flower nearly two inches long with sometimes a brown streak. Colonies of basal leaves are often present but most times only a few flowers. Uncommon.
3. Spreading Wattle A.genistifolia - has been flowering for some time now in our district. It is a common, widespread prickly wattle, formerly known as A.diffusa.
4. Bent-leaf Wattle A.flexifolia - should be flowering very soon. It is restricted to a small area in the Whipstick.
5. Woolly Wattle A.lanigera - is a little late in flowering this year but will be flowering very soon. In our district it is restricted to a small area south of Spring Gully reservoir.
6. Green Correa C.reflexa - can be found flowering now outside the eastern fence of Spring Gully reservoir.
7. Red Correa C.reflexa - is flowering now in the Whipstick.
8. Granite Correa C.reflexa var.glabra - can be found at Mandurang just off Tannery Lane, and also near Buck-eye bridge.
9. Small Crowea C.exalata - is flowering now in the Whipstick.
10. Wild Lilac or Common Hovea Hovea heterophylla - might also be found flowering in the Whipstick soon.

BIRDS and their behaviour, their arrival and departure from a district, and sometimes their appearance are all affected by seasonal changes, and are of interest to keen observers.

1. Flame Robins move into our district from the south in the winter time. Some Scarlet Robins and Red Capped Robins live here all the time. The male Flame Robin is distinguished from the two local species by having an orange-red breast extending to the throat.
2. Pied Currawongs occasionally visit our district in the winter time, when conditions become to harsh for them in the mountains. They have a different call, and are much darker than our resident Grey Currawong. I observed a flock of eleven near Rushworth on the 25th April and would expect to see some soon in our district.
3. White Winged Choughs seem to assemble into large flocks at this time of year, and when spring comes again, dispense into their regular family groups.
4. Superb Blue Wrens Young males lose their blue plumage about this time, and are hard to distinguish from females. It is considered that they only retain their full male plumage after about five years.
5. Barn Owls - have been breeding very late this year. The high mouse population and mild weather has probably contributed to this.

NATURE DIARY CONTINUED

INSECTS

1. Wattle Goat Moths (Hepialidac family) emerged after the rains a fortnight ago, but not in as large numbers as expected. The moths are three or four inches long with silvery markins on the forewings. They fly rapidly and are attracted to lights. The larvae (bardie grubs to fishermen) build vertical tunnels in the soil, feeding on eucalypt tree feeder roots. They live in the tunnels for two or three years and after rains emerge as moths, to mate, lay up to 18,000 eggs and then die, thus completing their life cycle within a few days of emerging. The brown finger length empty pupal cases, with their exquisite "Jews harps" are well known to most country children.

FROGS

Many species of frogs could be heard singing in the dams after the recent rains. The juniors learnt last month that frogs breed after rain, and that it is the male frog who sings to attract females. Now that the weather is getting cold, most species will disappear, however the little "Crinias" can be heard calling through the winter months.

Interested juniors are advised that books are available from the club library for more detailed information on the species mentioned. Senior members will assist with identification, and directions to find some of the above.

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COMMITTEE MEETING of 28th April

Brief summary of main action/items of interest:

1. A submission to the Ministry of Conservation for National Estate money to purchase Block 16, linking the northern and southern sections of the Whipstick, will be prepared by the Land Purchase Fund Committee of the Club.
2. The Committee endorsed an application from the Mammal Survey Group to the Ingram Trust for more traps to a value of $500.
3. Rob Watkins has provided information on the late Sho Takasuka to a Canberra-based journalist for an article to appear in the magazine Hemisphere. Some coverage of Mr. Takasuka'a naturalist interests will be included.
4. A letter supporting the work of Cliff Beauglehole has been sent to the Minister of Lands and Conservation.
5. Paul Carr has filled the vacancy on the Junior F.N.Committee.
6. Back issues of "Australian Plants" have been donated by Mrs Moss.
7. Copies of submissions made by Hamilton F.N.C. to the L.C.C. have been received.
8. Whirrakee subscriptions have been taken out by the Bendigo Regional Library (2), the Forests Commission and the Bendigo C.A.E.

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BENDIGO FIELD NATURALISTS CLUB

Correspondence: P.O. Box 396, Bendigo, 3550

PRESIDENT	Rob Moors	Sedgwick.	39 6254
SENIOR VICE PRESIDENT	Chris Bunn	Averys Rd.,E'hawk.	46 8141
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TREASURER	Barbara McDougall	8 Mahon Ave,B'go.	43 3852
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 subscription rates are:
$4.50 Single, $7.00 Family, $2.00 Pensioner and $2.00 Children.

Members wishing to obtain Whirrakee posted to them can have this service by paying a postage levy of $3.30 per annum.
Subscription to Whirrakee for non-members is $5.50 per annum, posted.

General Meetings are held on the second Wednesday of each month at the Conference Rooms, Department of Agriculture, Midland Highway, Epsom. The meetings start at 7.30 pm, and conclude with supper.

Excursions: The assembly point for all excursions is outside the Special Services Complex in Havlin St. East, Bendigo. Full day excursions normally commence at 10 am (usually on a Sunday). Half day excursions normally commence at 2 pm, and may be either a Saturday or Sunday. Excursions are usually held on the weekend following the General Meeting.

Junior Field Naturalists Group meets on the first Sunday in each month at 2 pm. The assembly point is the Education Special Services Complex in Havlin St. East.

Bird Observers Group meets on the first Friday of the month at the Conference Rooms, Agriculture Department, Epsom at 7.30 pm.

Mammal Survey Group meets on the third Thursday of each month, except when the third Thursday is the day after the B.F.N.C. General Meeting, in which case the M.S.G. meeting is on the fourth Thursday. 7.30pm at Special Services Complex, Havlin St., Bendigo.

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Conservation Council of Victoria "World Environment Day Lecture"

Wed. 4th June 1980, 7.30 - 10.00 pm, Camberwell Civic Centre.

HARRY BUTLER - ALMOST IN THE WILD

Topic:- National Parks - their role in Australian Conservation.

Tickets are $4. for adults, $2. for children, $10. for 2 adults, 2 children. Ticket costs can be reduced by 50 cents per head by advance purchase of blocks of at least five. See Secretary for details and add name to list to accompany application if interested.

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NOMINATION FORM

Name. . . . . Address . . . . . .

Nominated by . . . . . .Seconded by . . . . . .

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- DIARY -

MEETINGS

May 14th. Mrs. Alison Oates of the National Museum of Victoria will speak on Food Plants of the Australian Aborigines

June 11th. Mr. John Seebeck of the Fisheries and Wildlife Department will speak on his researches into the Potoroo in Victoria.

EXCURSIONS

NB New meeting place outside the Special Services Complex in Havlin St.

Sun. May 18th "Picnic at Hanging Rock" (Hanging Rock - Camels Hump) Botany/Geology. Full day excursion departing at 10.00 am.

Sat.June 14th. Introduction to spotlighting for nocturnal animals at Mount Alexander, led by Mammal Survey Group members. Afternoon and evening.

JUNIOR FIELD NATURALISTS GROUP

Sun.June 1st. 2.00pm at Special Services Complex, Havlin St. Mr.Rod Fyfe will give an introductory talk on the aboriginal tribes who used to inhabit the Bendigo area, and then take the group to the aboriginal axe quarry at Mount Camel.

MAMMAL SURVEY GROUP

Thurs.May 22nd, at 7.30pm at Special Services Complex, Havlin St.,Bendigo.

BIRD OBSERVERS GROUP

Fri.June 6th, at 7.30pm at the Agriculture Department, Epsom. Roy Speechley will speak on the birds of New South Wales National Parks. B.O.G. members are asked to please note that the Bird of the Night has been changed to the Tawny Frogmouth.

W.V.F.N.C.A.

August 15th - 17th meeting at Wood Wood: hosted by Mid-Murray F.N.C.

Please note:

1. Maryborough Field Naturalists Club has issued an invitation to B.F.N.C. members to attend the Executive Meeting of the Conservation Council of Vict. in the Maryborough High School library, Palmerston St., Maryborough at 7.45pm on Friday 23rd May. The formal part of the meeting will be kept as brief as possible, to allow audience and executive ample time to meet informally over supper.

2. The Field Naturalists Club of Ballarat have issued an invitation to B.F.N.C. members to attend the second Stella Bedggood Memorial Lecture to be held at St.Pauls Hall, Victoria St., Ballarat on Friday June 6th at 8.00pm. Miss Helen Aston will speak on "Naturalists and the Nullabor".

3. The Field Naturalists Club of Victoria are celebrating their Centenary Year, and a copy of their "Calendar of Events" has been forwarded to the B.F.N.S. Unfortunately their Centenary Meeting and Centenary Picnic will be over by the time this issue appears, but there are many other interesting items, including a Centenary Nature Show on Friday - Sunday Oct.10th-12th. Those members who wish to look at the "Calendar of Events" may do so by contacting our Secretary, Mr. Ian MacBean.

4. Ballarat and Maryborough Field Naturalists Clubs have sent us their syllabuses for the year, and these may be inspected by arrangement with Ian MacBean.

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