



WHIRRAKEE

September 1980

Vol. 1 N° 8



MONTHLY NEWSLETTER OF THE BENDIGO
FIELD NATURALISTS CLUB

Monthly Newsletter of The Bendigo Field Naturalists Club.

Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsoni*) which is virtually endemic to the Bendigo Region.

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COVER PHOTO

Eriostemon verrucosus, ~~Bendigo~~ Fairy Waxflower.

Photo: Tom Patullo.

See page 4 of article by Peter Ellis on Rutaceae of the Bendigo Region, (pages 3-6).

Cover Design by Graham Hill.

COMMITTEE MEETING of 25th AUGUST

Summary of main action/items of interest.

1. The Secretary reported that the submission to the Land Conservation Council had been completed and posted.
2. A list of B.F.N.C. equipment is to be published in Whirrakee with an appeal for information on items which are not on the list, if any.
3. Information brochures are in hand - Messrs Bunn and Wilkinson to report to September Committee meeting.
4. Discussion on a Land Purchase Fund was deterred for consideration by the incoming committee.
5. The bird list for Barfold Gorge requested by the Loddon-Campaspe Regional Planning Authority is being compiled by Bird Observers Group members.
6. Arrangements have been made to meet Ballarat F.N.C. members at Clunes P.O. at 10.0am and Maryborough F.N.C. on site on Sat. Oct.25th for the combined excursion to Mt. Beckworth.
7. A letter was received from Bendigo City Council about fencing the recently gazetted Boyd St. Flora Reserve. Two decisions were made on this. Firstly it was decided that interest earned on the \$1000 grant from the Winifred Waddell Estate for fencing Boyd St. should be added to the grant money for that purpose. Secondly, it was decided to reconstitute the Boyd St. Sub-Committee with Rob Moors as Convenor and Peter Ellis, Berry Vardy, & Graham Hill to be invited to join.
8. The Bendigo Branch of the Apiarists Association forwarded an invitation to their Field Day at Mandurang South on Sun. Sept.28th, and requested assistance with flora identification. Laurie Leeson and Roy Speechley volunteered to assist.
9. In response to a request from the Australian Conservation Foundation for ideas on use of the S.Ebbart Bequest to A.C.F. of \$100,000. a letter will be sent suggesting use for a land purchase fund, with eventual reimbursement by government to return funds for further purchases.
10. It was decided to recommend subscriptions for 1980-81 to be \$9. family, \$6. single, and \$3. pensioner or junior, to cover anticipated increases in running expenses and production costs for Whirrakee.

New Members

Sandra Levy, 28 Yallambie Drive, Bendigo.

Nola Bryant, 10 Waugh St., Kangaroo Flat.

Andrew Kelly, 153 Mitchell St., Bendigo.

Dr. Jill Rowbottom, 127 Wills St., Bendigo (C/o Arnold St. Clinic).

Wayne Steward, Toolamba.

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RUTACEAE OF THE BENDIGO REGION - Part 1

by Peter Ellis.

Introduction.

The plant family Rutaceae is widespread in temperate and tropical parts of the world, with its greatest development being in Australia and South Africa. There are 900 species classified into four sub-families and 150 genera. The family's name is derived from the European herb Rue (*Ruta graveolens*), commonly known as 'the herb of grace'. This rather toxic plant has been renowned since ancient times for its medicinal qualities. In a recent Society for Growing Australian Plants journal it is mentioned that in the days of the dreaded plague in London, herbal treatment with Rue and Rosemary was adopted in an attempt to ward off the disease, from which the saying 'rue the day' was derived.

Probably the best known genus of the Rutaceae would be Citrus, which includes among its 60 species the lemon (*Citrus limon*), seville orange (*C. aurantium*), sweet orange (*C. sinensis*), grapefruit (*C. paradisi*), lime (*C. aurantifolia*), mandarin (*C. reticulata*), pomelo or shaddock (*C. reticulata*), and citron (*C. medica*). Other well known overseas genera include *Fortunella* (*F. marginata*, Kumquat), and *Diosma*, a popular garden plant from South Africa.

The best known of the indigenous Australian genera of this family would be *Eriostemon* (waxflowers), *Boronia* and *Correa*. The beautiful scent of the brown boronia (*B. megastigma*) from Western Australia led to this species being widely cultivated for the cut flower trade, particularly in Melbourne. This gave rise to the misnomer 'Melbourne Boronia', probably by association with the suburb which took its name from the plant, which was widely grown there. The 'orange blossom' like appearance of flowers of some of the waxflowers (*Eriostemon*) gives the clue to the link with overseas citrus relatives. Both have starry flowers and aromatic, sometimes pungent, foliage due to oil glands dotted through the foliage.

Only one of the indigenous Australian members of the family has possibilities for development as a future food plant. This is the Australian Desert Lime, Native Lime or Native Kumquat, *Eremocitrus glauca*, which is restricted to the arid inland. Although not the only drought resistant member of its family, it is able to withstand both severe cold in winter and the extreme dryness and burning heat of summer. The one to one and a half centimetre diameter fruits are mild flavoured with a pleasant acid juice. Early settlers made an ade from the juice and jam and pickles from the fruit. (The Macadamia Nut from Queensland was once claimed to be Australia's only food tree, but current research is directed to the Quandong, and there is interest in the Native Lime. There may be many other native species which could be developed as food plants also.)

Two other inland species of Rutaceae are worthy of mention. The Leopard Tree (*Flindersia maculosa*), noted for its beautifully spotted trunk, is particularly abundant in the Mootwingee - White Cliffs area north of Broken Hill. Wilga (*Geigera parviflora*), of the Victorian mallee and neighbouring regions of adjoining states, is rather like a giant *Boronia*. It is a good shade and fodder tree for stock.

The species of Rutaceae native to the Bendigo region.

All of the six genera of Rutaceae which occur in the Bendigo region belong to the tribe Boronieae of the sub-family Rutoideae.

RUTACEAE OF THE BENDIGO REGION - Part 1 continued

There are three species of *Eriostemon*, one each of *Crowea*, *Boronia*, *Phebalium* and *Zieria*, and two species of *Correa*. All have the aromatic foliage characteristic of the family. Depending on the genus there are four or five petals; usually waxy, and the same or double number of stamens. A small waxy disc separates the ring of stamens from the central style. The petals are free except in *Correa*, and the sepals are joined into little cups with four or five lobes as the case may be. The seed capsules are either soft and fruity, or dry ones that open in four or five places.

1. Genus ERIOSTEMON

There are three species of *Eriostemon* in the Bendigo region, one common and widespread (*E. verrucosus* - Bendigo or Fairy Waxflower), one moderately common in the Whipstick (*E. angustifolia*), and one very rare one from an area at Mandurang South, where only a dozen or so plants are known (*E. pungens*). Characteristic of *Eriostemon* are the waxy orange-blossom type star flowers with five petals and ten stamens. They are all small shrubby plants with small leaves, and in *E. verrucosus* and *E. angustifolia*, the warty and lumpy oil glands are prominent. *Eriostemon* takes its name from the Latin 'erio' (wool) and 'stemo' (stamens), referring to the woolly stamens.

Eriostemon verrucosus - Bendigo Waxflower or Fairy Waxflower.

This very beautiful small shrub flowers prolifically in late winter and spring and can be found in natural bushland in virtually any direction around Bendigo, although rare in the mallee areas of the Whipstick. It has deep rosy red buds which begin to open in July and August. The white to pale shell pink flowers with orange anthers are seen in full profusion in mid-September, but only odd flowers remain by November. The average height is about 60 cm, but it can reach close to a metre in this area, and as noted below, is much larger at Mt. Arapiles.

This plant put on such prolific displays in the old days, probably due to the rapid growth that would have resulted from clearing timber for the mines from the hills of Bendigo, that it became known as 'Bendigo Waxflower' no matter where it was found. The folk history of this wildflower above all others was further enhanced due to its local popularity as a cut flower, and it was widely sought for this. On Railway Picnic Day, which coincided with the Football Grand Final, drayloads of waxflower were sold at the Bendigo Station to the crowds returning to Melbourne and the train exterior itself was often decorated with great bunches of 'waxie' tied down. Fortunately today it is strictly protected in its natural habitat, whilst on the other hand nursery cultivated forms are available for the home 'bush garden'. *Eriostemon verrucosus* is by no means confined to the Bendigo district however, and is widely spread throughout the gold field's districts of north central Victoria, and in different forest habitats in the Brisbane Ranges, Little Desert and Gippsland. At Mt. Arapiles near Horsham old specimens measure 2 metres in height and 2-3 metres diameter. Botanists prefer the common name 'Fairy Waxflower' rather than Bendigo waxflower, because of this wide distribution.

The Bendigo City Council has commemorated the historic association and abundance in this area by adapting the Bendigo Waxflower as floral emblem of the city. Possibly the most extensive single display in the region can be seen in a recently gazetted flora reserve at Boyd St., in the city area. Other good localities in the city are at Jackass Flat and Faugh a' Ballaugh respectively, whilst the Rifle Range and Whipstick Forest are good areas near Eaglehawk. South of the city, One-Tree Hill and the neighbouring Spring Gully/Diamond Hill areas are good. The specific name *verrucosus* refers to the warty foliage and the leaf if opened or flattened is heart shaped or obovate. The old name in fact was *Eriostemon obovalis*.

RUTACEAE OF THE BENDIGO REGION - Part 1 continued.

Eriostemon angustifolia - Small leaf Waxflower.
(Formerly recorded as E. difformis).

This is a rather dainty, small leaved and smaller flowered waxflower which grows somewhat taller than E. verrucosus. The small leaves are thick and scaly, and the buds open pink to reveal numerous small white waxy flowers in spring. (The glabrous (smooth) outer appearance of the petals distinguishes it from the true E. difformis) It is common in the central and northern portions of the Whipstick, beyond Flagstaff Hill. It is also found in similar mallee areas near Inglewood, Wedderburn and Wychitella, and in the granite area of Mt. Kooyoora near Melville Caves.

Eriostemon pungens - Prickly Waxflower

This is locally a very rare plant, confined to a small patch of a dozen or so plants in one small area in the Mandurang Forest, mid-way between One Tree Hill and Diamond Hill. The species occurs in the Little Desert and at Wyperfeld, but these forms have pink buds and flower in August and September. The local form does not flower until late in October or even November, and has greenish buds followed by white flowers. The prickly foliage easily distinguishes it from the other two species. (E. pungens was originally classified as a Phebalium). It is a low compact bush with slender branches reaching only 20-30 cm in height, and the small almost stalkless, lanceolate leaves have a prickly point, from which the plant derives its common name. The flowers are very similar to the other two waxflower species, but the prickly foliage does not have prominent, warty oil glands.

Genus CROWEA

There is only one species of Crowea in the Bendigo Region, and that is C. exalata (Small Crowea). This genus is superficially similar to Eriostemon and one N.S.W. species popular in garden cultivation is sometimes called 'Pink Waxflower'. Like Eriostemon it has five petals, but it is distinguished by hairy appendages on the stamens. The stems have oil glands, but the fine aromatic foliage is neither warty nor prickly. The starry flowers are pink. The genus is named after J. Crowe, an English botanist.

Crowea exalata - Small Crowea

This species occurs in the Whipstick, and also at Inglewood and Wychitella. It can be found as close to Eaglehawk as Blue Jacket Reservoir, and is found both in mallee and box ironbark habitat in the Whipstick. The local form has dainty, starry pink flowers, borne on small, slender and somewhat straggly bushes up to 40 cm high. The local form is autumn flowering, except for odd plants which flower in spring, but the Gippsland form in general garden cultivation flowers virtually continually from autumn to spring. The Gippsland form's flowers fade with age, whereas the local form deepens to red, and this gives it interesting possibilities for garden use. The species name exalata means 'wingless', probably referring to the fruit.

Genus BORONIA

This genus is named after Francesco Borone, a Milanese assistant of John Libthorp when the latter was collecting material in Greece for the composition of his "Flora Graeca". Borone died in Athens in 1794, as a result of falling from a window while asleep.

Boronia is distinguished from Eriostemon and Crowea by having four rather than five petals, and has eight stamens. Flowers are usually shades of pink, but can be white, or even blue. Foliage is not warty as in Eriostemon, but is usually aromatic and often strongly pungent. This is certainly true of the only local species, B. anemonifolia.

RUTACEAE OF THE BENDIGO REGION - Part 1 continued.Boronia anemonifolia - Sticky Boronia or 'Stinky Wax'.
(Syn. B.dentigera)

This is a very showy, profusely pink flowering shrub, with strongly aromatic, pungent smelling foliage when crushed, which led to the local name of 'Stinky Wax'. Local people familiar with the cultivated forms of Boronia evidently did not associate this plant with its own genus, but thought of it as a form of waxflower because of its open, starry flowers. Actually, of the more than 70 species of Boronia in Australia only a few have cupped, bell shaped flowers. Because of their beautiful scent these few were widely cultivated very early, including Brown Boronia (B.megastigma), B.elaticor, and B.heterophylla from W.A., and B.serrulata from N.S.W., all pink except for the first named, and all having the bell shaped flowers most people associate with Boronia. The great majority of Boronia species however, have the open, starry, four petalled flowers typified by our local species. Many such species of Boronia are now in cultivation, although the local one is not yet widely grown. However it is an attractive shrub of up to a metre or so in height, with erect, slender branches, and a somewhat open growth habit. The stems have prominent oil glands. It has small, three lobed toothed leaves, which the earlier specific name of dentigera referred to, and bears numerous small, waxy pink flowers along the stems in spring. It flowers from July to October, with a peak in September. It is found throughout the Whipstick, but often as solitary plants, or small, isolated groups, and is therefore not commonly noticed. However, there are fairly extensive showy areas along Fox's Bend Road, and at Blue Jacket Reservoir in the southern Whipstick, and at Jackass Flat in Bendigo. The most extensive and dense local display is the so-called 'Boronia Patch' in a fenced reserve in the Mandurang State Forest south of Diamond Hill and Spring Gully Reservoir. It also occurs in the mallee areas of Inglewood and Wychitella, and there is a nice area in the Rushworth Forest near Whroo. The best and most extensive display I have seen, with the deepest pink flowers, is in forest near Fryerstown.

The specific name anemonifolia (foliage like an anemone) evidently refers to the indented foliage, as did the name previously in use (dentigera).

Genus ZIERIA

This genus of about 22 species is named after John Zier, a Polish botanist who assisted F.C.Erhart in his collection of plants of the Electorate of Hanover from 1780 - 1783, and afterwards worked in London, where he died in 1796. Zieria resembles Boronia in having four waxy petals, but differs in having only four stamens rather than eight. The only locally recorded species is Z.aspathaloides.

Zieria aspathaloides - Whorled Zieria

This has not been recorded in the vicinity of Bendigo as yet, but was found on the granite at Melville Caves and at Mt. Tarrengower only two years ago, although there were only a few plants in each case. It is a heath like shrub with softly hairy branches up to a metre in height. The leaves are narrow, smooth above and woolly grey beneath, and 5-10 cms long (2-4 inches); divided with three leaflets, stalkless or almost so. The open, waxy, starry flowers are pink.

The name aspathaloides means 'like an Aspalathus'.

To be continued.

TAWNY FROGMOUTH - PODARGUS STRIGOIDES

Bendigo Bird Observers' Group. Bird of the Night Discussion 6th June 1980.

compiled by Bill Flentje.

CALL "Oom, oom, oom" repeated quickly, harsh scolding calls when agitated, and also a popping call.

APPEARANCE Both sexes are alike, 38 to 40 cms long. Plumage generally grey-brown with dark streaks, resembling dry timber with dark cracks. Eyes are yellow. The bill is large and broad, shaped like the mouth of a frog - hence the common name of frogmouth. During the day, the birds roost on a branch of a tree, and imitate a broken dead branch so effectively that it is difficult to detect the difference, unless they open an eye, or move. Long bristles on the forehead, help to disguise the beak. Observers have noticed that the plumage is streamlined when the birds are roosting, but when roused or active the feathers are fluffed out, and give the birds a more plump appearance.

HABITAT They inhabit most forest and woodland areas, throughout the Bendigo District, and are relatively common in view of the large area required as a territory.

HABITS The birds are nocturnal, sedentary, and arboreal, though they often collect food from the ground. They fly silently with slow flapping of the wings. When searching for food, they perch on a limb for a vantage point and look for any movement indicating food. They sometimes become vehicle traffic victims apparently having been dazzled by headlights. One member observed a tawny frogmouth recently, poised with wings spread out on the wire door of the house, evidently attracted to the light inside. They appear to maintain the same territory for many years and have used the same nest site for several years.

FOOD consists of insects, especially moths, lizards, frogs, mice, and probably Antechinus sp. Regurgitated pellets are smaller than boobook owl pellets. They are sometimes seen feeding on insects around street lights, and occasionally are hit by vehicles in this situation. The beak is strong enough to kill mice, and the birds occasionally bite while being handled during banding, but are not usually very aggressive.

BREEDING may occur from August to December. Usually only one clutch is raised each season, but if the first attempt is unsuccessful they may nest a second time. On one occasion, birds nesting in May were observed.

NEST Nests are flimsy, composed of a loose arrangement of sticks forming a platform and often lined with green leaves. It is generally placed on a thick horizontal fork, occasionally a vertical fork, about 20 ft to 30 ft above ground. According to author R.K.Monro both birds help to build the nest. Mating display includes the male offering food to the female.

EGGS are mainly 2, occasionally 3, shiny white and oval shaped. No information was available on the extent of the incubation period. Observations indicate that fledgling birds are well advanced by the time they leave the nest, and R.K.Monro suggests a period of between 4 and 5 weeks before they are able to fly. Observations and photographs show that young birds are lighter in colour than mature birds. Although occasional sightings have been made of young birds having fallen out of the nest and died, observers believe that tawny frogmouths are generally very successful breeders.

GENERAL Photographers record that sometimes birds show aggression towards human intrusion by loud clapping of the beak, hissing harshly, and dive-bombing. One photographer was contacted in the back by a bird. However occasionally birds have not taken much notice at all. It was also claimed that the call is ventriloquial.

IN A NATIVE GARDEN

by Tom Patullo

This month we can discuss Hakea, a genus that adapts well to native gardens. Probably the best known is the very beautiful Hakea laurina, the strawberry hakea. It is very easily raised from seed and will flower in its second or third year, becoming a well grown specimen in four years, up to twelve feet high in this area. It is best grown in the open so that it can build up wind resistance as it grows. I have seen it grown on the sheltered side of a paling fence, only to be blown over when it got above the protection.

There are three very beautiful forms of Hakea which are very similar and about which there is a great deal of confusion. I refer to H. multilineata, H. francisiana and H. bucculenta. I have two of the above forms doing very well in my garden. The H. multilineata is in full flower at the moment, while the H. francisiana, a young bush in its second year from planting out, is in full bud. I have seen the H. bucculenta in flower in the Maranoa gardens in Melbourne. All three forms seem to be known as grass leaved hakea on account of having long thin leaves, up to ten inches in length. They all have longish pink or red and white bottle brushes, from one inch to four inches long. The honeyeaters love them.

Bendigo area has one indigenous form of Hakea, H. sericea, the silky hakea. Easily grown from seed, it flowers in the winter and on a warm day exudes a pleasant honey perfume which can be experienced a great distance from the bush. The local form has white grevillea-like flowers, but there is a pink flowered form available. Another form similar to above, a smaller bush with sweet delicate perfume, grows in the Little Desert and the Grampians.

Another form somewhat similar in flower form to H. laurina is the H. petiolaris, the Sea Urchin Hakea, with purple red flowers and thickish rounded leaves, grows well in this area, as also does the H. victoriae, Royal Hakea worth growing for its variegated foliage. The blue grey adult leaves are large rounded and heavily veined with orange. There are some one hundred forms of Hakea in all, all entirely Australian.

I have heard a lot about Organic Gardening lately, so, having received an invitation to visit one such recently, my wife and I went along to see the results, which we considered to be quite impressive.

The method explained to us was roughly as follows. The area was first mowed very short, then sprinkled very liberally with gypsum. The area was then covered with old papers, one quarter of an inch thick, or old corn sacks, rags, old carpets or underfelt will do, then the whole was covered with eighteen inches of straw. When planting, make a hole or nest in the straw, pierce a hole through the paper or whatever, tip in a large bucket full of good compost, drive a stake, then plant the shrub in the compost. As the straw rots down, add more. The owner stressed the fact that a shovel had not been used, - the "No Dig Method"

Well, having some problem spots in our own garden we decided to experiment. However I could not accept the "no dig" part. I believe that it must improve the method if the ground is broken up first, so I deviated a little from the above. I removed the topsoil to one side, as deep as I could drive the shovel, then broke the subsoil with the pick, returned the topsoil, then proceeded as above, but instead of straw, (I did not have any) I put eight inches or so of bush litter and compost, sprinkled with blood and bone, to start off the bacteria, which in turn speeds up the decomposition of the litter, then spread a thin layer of good soil over all. I will not plant these areas until autumn but even now, a few weeks later, the soil looks very much improved.

IN A NATIVE GARDEN continued

This brings us to the subject of Raised Gardens and Rock Walls that I mentioned last month. Most native plants need good drainage, and this must be kept in mind when contemplating the growing of native plants. The ideal thing to do in the very beginning, though not always possible, is to have the clay subsoil broken up by deep ripping. Failing this however, we can help good drainage, firstly, on a flat block by using raised gardens, and secondly on sloping blocks by terracing.

On the flat block we can raise the gardens by the use of old sleepers, fence posts, logs or stones, by placing them round the edge of the beds and filling with good soil, preferably natural bush soil if available. Try to maintain the soil round the outside edge slightly higher than the middle so that water will soak in rather than run off. Some people like to make raised beds round the butts of mature, existing trees. We have done this and successfully grown daffodils, hyacinths etc. in this situation. We have found however thtt gardens round big trees need a lot more water.

If you have a sloping block it does not automatically follow that you have good drainage. To ensure good drainage one can terrace the block with dry rock walls. This may seem, at first thought, to be a pretty big job. I once asked the "Sow What" man himself how to go about landscaping an acre block and he said, "Do a little at a time". This I have done, I still have a long way to go.

Well, back to the dry rock walls. I advise dry rock walls because they are built without the use of cement, a product it is advisable to keep away from natives, and they allow drainage. Small succulents can also be planted in the soil crevaces in between the rocks, and as the wall weathers it takes on a very natural appearance. The use of moss covered rocks will help. Again be sure to keep the outside of your garden higher to prevent the soil being washed out from between the rocks in the wall.

As you erect your wall try to avoid straight lines. Curves soften the effect and add interest, as they seem to invite one to follow round the curve to something interesting further along. Perhaps this might be a pocket made on a different level, containing a feature plant such as a double wax-flower.

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PIEPERS HILL EXCURSION

The excursion to Piepers Hill area at Strathfieldsaye on Sunday 24th August was early for many of the spring flowers. Mr. Frank Robbins noted a good patch of Diggers Speedwell (*Veronica perfoliata*). This species was formerly thought to be confined to Spring Gully and Mt. Ida.

Rob Watkins the intended leader appreciated the gesture by Rob Stephens in leading the excursion in his absence.

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NEW PLANT FOR THE BENDIGO DISTRICT

by Ray Wallace.

On a warm sunny day in late August I decided upon a ramble through the bushland in the Harvey Town - Maiden Gully area in preference to the company of archaeological text books. In the north-west corner of Devonshire Gully a shrub 1.3 metres in height was discovered bearing reddish-orange pea flowers suffused with brown, that being the colour of the standard part of the pea flower, the keel was coloured brown. The leaves of the shrub were trifoliate like those of Medic (Medicago sp), Clover (Trifolium sp.) and coloured a bluish-green. The stems were of a reddish hue. Altogether it was quite dissimilar to any of the other pea flowering genera such as Dillwynia, Pultenaea, and Daviesia found in Bendigo's bushland. The plant proved to be a specimen of Western Golden-tip (Goodia medicaginea) a member of the tribe Genisteae within the large and colourful pea family Papilionaceae.

This was my original tentative identification with the assistance of texts by Willis, Ewart and Galbraith. This identification was then confirmed much more conclusively by Mr. Jack Kellam who stated none of the genus Goodia had been observed before in the Bendigo district. According to Willis in his "A Handbook to Plants in Victoria" Vol.2 it is found only in the areas around Mt. Arapiles and Ben Nevis in Western Victoria. It is also found in South Australia and Western Australia.

Goodia medicaginea can be distinguished from Goodia lotifolia (also not in the Bendigo area) by its smaller size, smaller flowers and smaller foliage. The flowers of G.lotifolia are clear yellow whilst those of G.medicaginea are of an orange-brownish hue. The plant's generic name commemorates the name of Peter Good, botanist and collector for Robert Brown.

Subsequent searching in the area revealed three further specimens of this charming small shrub growing in the southern corner of Devonshire Gully under a canopy of Yellow Box (Eucalyptus meliodora) in dampish conditions.

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JUNIOR FIELD NATURALISTS GROUP REPORTSunday August 3rd

Leader: Dr. Bill Holsworth.

Subject: Pond Life

There was a large turnout for this activity: 21 children and 13 adults. A complete tour of the dam at Flora Hill Primary School was made, examining the vegetation in the various zones in, near and away from the water, and netting specimens of animal. A brief visit was also made to the Kennington Reservoir, where the water is much clearer than that at Flora Hill, and the main aquatic vegetation is the attractive ribbon weed. The group then returned to Havlin St. to examine the animal specimens under microscopes: shrimps, water beetles, snails, larvae of certain insects.

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BIRD OBSERVATIONS

A discussion of the observations reported at the Bird Observers Group meeting of 1st August 1980.

Although our observations are mostly concerned with local birds it is nice to receive reports from some of our members who are on holidays.

A Black-backed Magpie has attained fame at the C.S.I.R.O. headquarters, Gungahlin, Canberra. It was caught and fitted with a number band 23 years ago when it was a free-flying adult. While raising broods in the vicinity of Government House, it has dive-bombed four Governor Generals.

A Beach Stone Curlew observed at Red Rock beach in July, this year, is further south than generally recorded. It was considered a highlight when observed at Noosa Heads a few years ago during a field outing by the Royal Australasian Ornithologists Union.

The Red-whiskered Bulbul is at present common about the town of Coffs Harbour, N.S.W. Previously it had been recorded as common only about Sydney. A number of these birds were observed feeding in a species of native fig in a reserve near Coffs Harbour early in July.

An observation from Mt. Buffalo is a sighting of about fifteen Striated Thornbills above the snowline. These birds are more commonly found in the drier forests. This group may have been migrating towards their spring territory.

Although the mouse plague appears to have declined in this district, two Black-shouldered Kites have been present at Sedgwick for several weeks. This species has not previously been reported from this area. Most years, birds of this species may be seen hunting in the grassy valleys of Eaglehawk/Long Gully and Golden Square areas.

Long-billed Corellas are usually reported in company with white cockatoos but at Ravenswood recently a group of seven were seen in company with galahs.

An example of the secretive behaviour of birds during nest-building was reported from Strathfieldsaye. The nest of a pair of Red Wattlebirds was not discovered until it was nearly completed, in spite of the fact that it was within a few yards of a frequently-used back door.

Although Whistling Kites appear to have been declining in numbers over recent years it is encouraging to hear that eight birds of this species were sighted at Cairn Curran Reservoir.

The Western Warbler is not common in our bushlands but to see one in a house garden in Kennington was a very unusual event.

Following the report in the last issue of Whirrakee of the welcome sound of the Pallid Cuckoo, further reports come from the Sugarloaf Hills and Sedgwick where this bird has been heard heralding the spring.

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The Mammal Group met at the home of R. and C. Watkins on 21st of August. The meeting was, as usual, well attended.

Edith Oakes was kind enough to show slides collected on her visit to the La Brea Tar Pits in Los Angeles, America. These proved of much interest and members were grateful for the rare opportunity to view these mammal fossils.

The group has received the last of the traps ordered and looks forward to a fruitful trapping season with the approach of the warmer weather.

A large number of Grey Kangaroos have been sighted in the Pilchers Bridge Forest by R. and C. Watkins.

Eptesicus sp., The Little Brown Bat was found at the Psychiatric Centre by D. Gibbons, who also reported on a dead Squirrel Glider found near Echuca.

The next meeting will be on the 18th of Sept. at the Bendigo College of Advanced Education in Edwards Rd., Flora Hill, starting at 7.30pm. The evening will be spent preparing Mammal Specimens.

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BOOKS AND PERIODICALS IN THE BENDIGO FIELD NATURALIST'S CLUB LIBRARY

Arranged in broad subject groups:

BIRDS

<u>Author</u>	<u>Title</u>
BIRD OBSERVERS CLUB B.F.N.C. (Compiler)	Birds of Bendigo
CHAPMAN, G.	Common Australian Birds.
COWARD, T.A.	Migration of Birds.
HINDWOOD, K.	Australian Birds in Colour.
RIX, Cecil E.	Companion to Coopers' Birds of a salt field.
TASMANIAN F.N.C.	Tasmanian Birds.
VIDLER, E.A.	Our own Birds of Australia.
WHEELER, W.R.	Birds of the Dandenongs.

CONSERVATION OF NATURAL RESOURCES

BENDIGO F.N.C.	Submission to L.C.C. of the Bendigo Whipstick.
CEAN, R.L.	Ayers Rock - Mt.Olga National Park.
GEELONG F.N.C.	Proposed preservation of Mount Cole Range.
JOHNSON, Dick	Alps at the Cross-roads.
LAND CONSERVATION COUNCIL	East Gippsland study area report
" " "	Mallee Study area report
" " "	Melbourne study area report
" " "	North Eastern study area districts 3, 4, 5 report.
MARYBOROUGH F.N.C.	A submission recommending a Paddy's Ranges National Park in Maryborough's Box/Ironbark Forest.
LAKE PEDDER COMMITTEE OF ENQUIRY	Lake Pedder and the future of Lake Pedder, 1973.
TERRI, G.A.	Wyperfeld: the history of a station settlement and the flora and fauna of Wyperfeld National Park, 1975.

BOOKS AND PERIODICALS IN THE BENDIGO FIELD NATURALIST'S CLUB LIBRARY cont.FUNGI

- WILLIS, James H. Victorian fungi
 WILLIS, James H. Victorian toadstools and mushrooms.

GEOLOGY

- BROWN, G. Prospector's Guide (Victoria) 1936

INSECTS

- BURNS, A. Australian Butterflies in colour.
 McKEOWN, K.C. Insect wonders of Australia.
 MASCORD, R. Australian spiders in colour.
 RAINBOW, W.J. Guide to study of Australian butterflies.
 SAVORY, T.H. Arachnida.

NATURAL HISTORY

- HURLEY, P.J. In search of Australia
 LEACH, J.A. Australian nature studies.
 MUNRO, Ronald K. Australian nature stones.

PLANTS

- COCHRANE, E. (and others) Flowers and plants of Victoria.
 DICKINS, H.P. Australian wildflowers (orchids)
 DICKINS, H.P. One hundred Australian Wildflowers
 DICKINS, H.P. Victorian orchids.
 FIELD NATURALISTS CLUB OF VICT. Census of the plants of Victoria.
 EWART, A.J. Weed, poison plants and naturalised
 aliens of Victoria.
 GARDNER, C.A. Wildflowers of Western Australia.
 GRAY, C.E. Victorian Native Orchids Vols 1-2
 HARTLEY, W. Australian plants at risk.
 SOCIETY FOR GROWING AUST. PLANTS. Australian plants.
 STEWART, H.C.E. Flower and feather at Mt. Buffalo Nat. Pk.
 WILLIS, J.H. Handbook to plants in Victoria.
 ZIMMER, G.E. Popular dictionary of botanical names
 and terms.
 ZIMMER, W.J. Flora of the far North-west of Vict.

SEASHORE BIOLOGY

- CHILD, J. Australian seashore life.

REPTILES

- COGGER, H. Australian reptiles in colour.

TREES & FORESTS

- BLAKELY, W.F. A Key to the Eucalypts. 3rd edition.
 ROGERS, F.J.C. Field guide to Victorian wattles.
 SNOWDEN, Rita F. Trees unafraid.
 VICTORIA FORESTS COMMISSION. Field guide to the Grampians
 " " " Grampians State Forest.

BOOKS AND PERIODICALS IN THE BENDIGO FIELD NATURALIST'S CLUB LIBRARY cont.PERIODICALS (Magazines)

AUSTRALIAN BIRD WATCHER
 AUSTRALIAN INT. ABORIGINAL STUDIES Newsletter
 AUSTRALIAN WILDLIFE RESEARCH

BALLARAT F.N.C. Newsletter
 BENDIGO NATURALIST Vols 1-4 (bound)
 BIRD OBSERVER

CASTLEMAINE NATURALIST
 CONSERVATION COUNCIL OF VICT. Newsletter

ECOS

FUR, FEATHERS & FINS (Vic. Wildlife Dept.)

GEELONG NATURALIST

HABITAT

PARTKWATCH (formerly V.N.P.A. Journal)

W.U.N.N.A.T. Sunraysia naturalist

TJURKULPA Aust. Conserv. Foundation Newsletter.

V.N.P.A. (later Parkwatch)

VICTORIAN NATURALIST

WILDLIFE

The above books and periodicals are arranged alphabetically on the shelves in the Diagnostic Laboratory's library and are available for loan. The Loans Book is on the shelf to the right as one turns into the collection.

1. Please enter (in alphabetical order in the book)
 - (a) the book or periodical details
 - (b) date borrowed.
2. Please cross off when the item is returned.

MANY, MANY periodicals issues are missing. Please search at home.
 e.g. Bendigo Naturalist, Bird Observer, Ecos. etc. etc. etc.

Recently a box of books, including some back numbers of periodicals was returned or placed on one of the shelves. Thanks are due to who ever it was. Suggestions for purchases will be welcomed. As one can see, the subjects are sparsely represented.

Diana Collier, Sept. 1980.

MEETINGS

Sept. 10th. Annual General Meeting. Presidents Address.(Mr. Rob Moors)

Oct. 8th. Mr. Gyn Jones, O.I.C. of the Kerang Office of the Dept. of Agriculture will speak on "Salinity in Northern Vic."

Nov. 12th To be announced.

EXCURSIONS.

Weekend Campout

Sept. 12th - 14th. Stuart Mill based on Church of England Camp at Stuart Mill.

Saturday morning - West of England Lookout; afternoon - Hard Hills, St.Arnaud;

Sunday morning - proposed Kara Kara State Park above Teddington Reservoir;

Sunday afternoon - leisurely return to Bendigo via proposed Flora Reserve at Dalyenong.

This excursion is mainly to view the spring wildflower displays in this interesting area, but will also cover other aspects, including birds and geology.

Leaders: Rob and Glen Moors (Phone 39 6254), Eric Wilkinson (Phone 46 8736)

Sat. Oct. 25th. Combined excursion to Mount Beckworth near Clunes with Ballarat and Maryborough F.N.C.

Option of extending into a weekend camp out.

Mount Beckworth is a granite range proposed as a Scenic Reserve by the L.C.C. noted for its spring wildflower display, and from its summit is a marvellous view of the many volcanoes which surround it.

NB MEETING PLACE AND TIME IS CLUNES POST OFFICE AT 10.00 AM

JUNIOR FIELD NATURALISTS GROUP

Sunday Oct. 5th 2.0pm at Special Services, Havlin St.

Mr. John Lindner and Mr. Don Franklin will give an introduction on edible plants, and then take the group out to see what can be found to eat in the bush.

BIRD OBSERVERS GROUP

Friday Oct. 3rd. 7.30 pm, at Agriculture Dept. Epsom.

Discussion on Cuckoos. Bird of the Night: White-winged Triller.

MAMMAL SURVEY GROUP

Thursday 18th. Sept. 7.30 pm, Biology Dept., Bendigo College of Advanced Educ., Edwards Rd., Flora Hill. Evening will be spent preparing mammal specimens.

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

Sat. Oct. 11th. to Sun Oct. 12th. Maryborough. See Whirrakee Vol.1(6).

Victorian Apiarists Association Field Day, Mandurang Reserve,

Sun. Sept. 28th, 11.00 am - 5.00 pm.

Entry Fee \$1.00 Barbeque facilities and hot water provided.

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
JUNIOR VICE PRESIDENT	Bill Flentje	Pilcher St. Bendigo.	43 3950
SECRETARY	Ian MacBean	7 Beebe St. Bendigo.	43 0191
TREASURER	Barbara McDougall	8 Mahon Ave. Bendigo.	43 3852
EDITOR	Eric Wilkinson	7 Weatherall St. Cal.Gully.	46 8736
GROUP SECRETARIES			
Bird Observers	Glenise Moors	Sedgwick.	39 6254
Mammal Survey	Roy Speechley	McLeans Rd. Strathfieldsaye.	39 5573

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, 7.30 pm in member's homes as announced.

NOMINATION FORM

Name Address

Nominated by

Seconded by