

GEELONG NATURALIST

MONTHLY MAGAZINE OF THE GEELONG FIELD NATURALISTS CLUB INC



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CLUB NOTICES

Tonight's speaker is...

Kate Blood

Kate is the Project Leader, Weed Alert Rapid Response with the Department of Primary Industries (DPI) in Victoria. She lives and works in Beaufort, Victoria and is the author of *Environmental Weeds: A Field Guide for SE Australia* and co-author of the *Weed Navigator*. Apart from hunting out new weeds in the State, she delivers environmental weed training courses, and supports an extensive network of Weed Spotters around the State. She is a Board Member of the Invasive Species Council in Australia.

At the June meeting

...the speaker will be Brian Ibbotson

Brian is from Roydhouse Photographic Supplies in Ryrie Street and he will talk about digital camera technology.

President's Corner

... Deborah Evans

Welcome everyone to our new Club year.

Committee

The new committee has had its first meeting and we are pleased to welcome two new members, Kate Hill and Bretan Clifford, as well as Peter Williams who has been on the committee before. Diana Primrose has agreed to take on the vice-president's position temporarily but we still wish to have this position filled on a more permanent basis. Our thanks to Diana, whose experience as a past president is invaluable.

Other office and duty holders

There are a number of non-committee 'helper' positions needed to keep the Club functioning effectively without overburdening any individuals. We are currently looking for extra assistance in welcoming new members and visitors at meetings and in setting up the audio-visual equipment. We would also like a deputy to fill in for Roy Whiteside who prepares the reports on our monthly talks for the *Naturalist*. If you can assist in any of these tasks please contact me or another member of the committee.

Join us before meetings

Now that we have settled into our new facilities, we would like to take advantage of them by giving members greater opportunity to browse the library holdings, without extending meetings too late into the evening. We will be setting up the venue at 7.15 pm and we invite you all come early to join us over a cup of tea or coffee. We would also like to remind you all to sign the attendance book at each meeting when you collect your name tag and copy of the *Naturalist*.

Memberships

We were pleased to be able to hold our membership steady last year. Let's aim to do better than that this year. Please get your renewals to us as soon as possible and keep on the alert for potential new members. We would particularly like to see an increase in younger members and families, as these will provide the Club with a healthy future.

We welcome

Mrs Judith Green

**to the Club
and wish her a long and
happy association.**

GFNC Website

... Barry Lingham

Any observations (plant, mammal, bird, reptile, invertebrate etc.) can be emailed to the GFNC email address or phoned to Barry (5255 4291) so that they can be incorporated onto the site frequently.

Members will then be able to find out about interesting sightings very quickly by checking the webpage.

**Photograph on front cover by
Claire Greenwell**

Grant Baverstock measuring a bat at Bannockburn during a GFNC excursion.

See full report on page 1.

Club Excursion to Wabdallah Reserve and Bannockburn Bush 17 April 2005

...*Claire Greenwell*

Fourteen members and one visitor (my Mum) accompanied by our leader Grant Baverstock who was ably assisted by two of his children explored the Wabdallah Reserve at the end of Milton Street, Bannockburn. This small reserve containing Manna and Yellow Gums with Silver Wattle, Sweet Bursaria, Wahlenbergia, Convolvulus sp., Black-anther Flax Lily, Kangaroo Grass, Cranberry Heath, Pigface and environmental weeds Serrated Tussock, Flaxleaf and English Broom looked as if it had recently had a fuel-reduction burn through part of it.

In an unburnt section, scale insects on the Pigface had produced white 'towers' a few millimetres tall capped with a greenish brown top. Largish dark ants were tending these, quite possibly 'milking' them, and not far away, other ants (possibly meat ants) were feeding on lerps or scale insects—or their brownish secretions—on the leaves of a Manna Gum.

We saw 14 species of birds including Whistling Kite, Common Bronzewing, Red-rumped Parrots, Eastern Rosella, Red Wattlebird, White-plumed Honeyeater, Grey Shrike-thrush, Willie Wagtail, Dusky Woodswallow, Welcome Swallow, Australian Magpie, Raven sp., Common Blackbird and Common Starling.

The children were delighted to find Swift Moth larvae cases still containing meconium (brownish fluid from newly emerged moth), a Case Moth cocoon and Caper White, Painted Lady and Common Brown Butterflies. A flying Bull Ant sat on the side of the gateway, a nest of the same not far away. Craneflies were doing a swing dance on the side of a Yellow Gum to avoid being eaten by a large dark spider peeking out from under the bark.

About 4.00 pm we drove to the Bannockburn Bush

Reserve a few kilometres away where Grant set up two Harp Traps. We all enjoyed our picnic tea, with lots of chatter and cries of delight when we could see bats flitting between the trees and actually hear them via the detector which changes the high frequency sound that they emit for echo-locating (although children can often hear them—their ears not yet sound-damaged).

Shortly after this, we checked the traps and found a number of specimens in it. These were placed in calico bags and taken back to the car for species identification, measuring and sexing to be recorded before being released. Most were Little Forest Bats.

A very enjoyable afternoon and evening, thankyou Grant!



Harp Trap used for trapping bats

Club Excursion You Yangs Sunday 15 May 2005 Leader: Trevor Pescott

Note: For this excursion members are requested to organise car pooling beforehand and meet at the You Yangs.

- 10.00 am** You Yangs Information Centre. We will meet Parks Victoria officer, Sandy. Bird-watching among yellow gums. Tawny Frogmouths roost in them.
- 11.00 am** Kurrajong Picnic Ground, Great Circle Drive. (Toilets available here, but not at future stops). Check stumps where Sugar Gliders live. Great Circle Drive from here on is one-way traffic only.
- 12 noon** Stockyards Car Park. Lunch stop, unless it is crowded. It is the start of the mountain bike circuit—bikes have right-of-way. (If crowded we will go on to top of Grassy Gully Track). The area is rich in invertebrates and reptiles under exfoliated granite slabs. There is a colony of Black Rock Skinks here, visible in sunny weather.
- 2.00 pm** Eastern Paddock/East Flat/Branding Yard. Excellent bird-watching area. Dip-net for Fairy Shrimps and other fauna at the large ephemeral lake.

Depending on 'local knowledge', we will have an unscheduled stop if Brittle Greenhoods are flowering.

Trevor Pescott. (ph: 5243 4368)

On the Table

...Valda Dedman

Lesser Long-eared Bat *Nyctophilus geoffroyi*

The second issue of the *Geelong Naturalist*, July 1964, has a photo of a Lesser Long-eared Bat on its cover and an article by T. Fletcher. The German 'Fledermaus' (flying mouse) describes the little brown bat found somewhat worse for wear by Roy Whiteside on 6 February this year on his Highton lawn. The name 'Lesser long-eared bat' reminds us of its large ears, ribbed and convoluted inside to help it pick up the least sound and echolocate. The scientific name *Nyctophilus* tells us that it is a creature of the night. It was named for the famed 18th Century French naturalist Geoffroy de Saint-Hilaire who was professor of vertebrate zoology at the natural history museum in Paris and who influenced Darwin in his thinking on evolution. It is one of our most common microbats and often found in houses.

These little bats are distinguished from others in their family by a naked nose-groove in the form of a Y. They have soft grey fur, chocolate brown on the back and pale grey on the belly. Their wings are of softest fabric, tissue thin, but in fact containing two layers with blood vessels between. The second to fifth finger bones are long and fine and form the frame for the wing; the 'thumb' is an external hook. Their teeth are very sharp. They eat insects, up to 40% of their own weight in a single night. They swoop low, almost to ground level.

Females form small maternity colonies and huddle together to keep warm. They give birth in October after a labour of one to one and a half hours, often to twins. The young emerge into the tail umbrella and climb up, umbilical cord still attached, to the nipples located under the mother's armpits. When they are four weeks old, they begin to forage for themselves.

Brown Falcon *Falco berigora*

Brown Falcons are most at home on the wide-open plains. This one was found dead on Pollocksford Road, where they often perch on power lines. In the hand it seemed so much larger and heavier than I expected and I admired its beautifully patterned plumage. Brown Falcons show great variation in plumage colour and pattern and may be very dark. Males tend to be paler-chested than females. Dark ones can even resemble Black Falcons, which have shorter legs and smaller eyes. The downy chicks of Black Falcons are white and those of the Brown Falcon are buff.



Plumage patterns

They are opportunistic predators of many kinds of prey and are the only raptor known to eat snakes. They swoop down after prey on the ground, their long unfeathered legs enabling them to hunt with great agility. A light wing loading allows easy hovering and easy lifting to escape the strikes of a venomous snake. However at Serendip, in November 2001, Gordon McCarthy saw a Brown Falcon that could not take off with a large Brown Snake in its talons. It dragged the snake away. Their relatively wide gape enables them to swallow snakes whole or gulp down small prey, lessening the risk of losing prey to pirates. They will hesitate in flight to reach down with one foot and snatch a mouse from the ground. A study found that when they hunt in pairs their success rate in taking prey is increased by 2.7 times. With small mammals the success rate may be as high as 57% (only the Nankeen Kestrel is more successful).



Scaly claws and sharp talons assist in prey capture

Adult falcons are aggressive defenders of their territory and fly and swoop at intruders or rivals, often screeching or cackling, and presenting their talons as a deterrent. Charles Belcher in 1914 said that their distinctive call is most often heard around Geelong during August and September, 'when in the mating-time both birds will go through prolonged aerial evolutions, uttering a kind of a squealing chuckle the while'. Belcher also commented in *The Birds of the District of Geelong, Australia*:

The favourite site for the nest is an isolated gum tree on a plain, or else near the outside of a clump of gums standing by themselves; always the nest tree is in a commanding position. The nest is a large rough structure, placed in a thick horizontal fork or rarely more than 30 feet from the ground. It is lined with tufts of cow-hair and strips of bark; the depression in which the eggs are laid is shallow. Three eggs is the normal clutch, laid in the last week of September or the first week of October as a general rule; but I have known eggs to be found in August ... The growing young are apt to knock the nest to pieces, so that, though quite a large structure when built, it may be no bigger than a Magpie's nest by the time the brood leaves it.

The specific name *berigora* is an aboriginal name. *Falco* is derived from the Latin *falx*, a sickle, and refers to the shape of the talons.



Mid-week Bird Group Excursion Aireys Inlet area 14 April 2005

... *Pat and Hans Streefkerk*

Thursday morning April 14 dawned wet and windy—much needed rain but not a good start for bird watching. We really thought we would have a poor outing. However eight people braved the weather for what turned out to be a very good morning with the weather improving as we went.

We started at Distillery Creek Picnic Area where we had a pleasant walk around. This rain should mean that the autumn greenhoods will soon appear. There were none there yet, but the birdlife was cheerful and noisy. We moved on to the sewage ponds up Distillery Creek Rd. The first pond is suffering from blue-green algae but the big pond has plenty of bird life, with plenty of water birds clustering as each new pumping comes through. We climbed in and had a walk around, only to be rebuked by a workman there, who was kind enough to give us a contact for future occasions when someone will meet us and open the gate if we ring up first for permission.

As we walked back beside the ponds we were fortunate enough to see first a Scarlet Robin, then a Flame Robin. We also saw a big flock of approximately 30 Gang-gang Cockatoos. In that area we saw 31 species.

We returned towards Aireys Inlet and first had morning tea at a different spot in the picnic area, then detoured down the Old Coach Road, where we saw Red-browed Finches and many honeyeaters—a lovely spot near the creek. That area helped us to a total of 27 species altogether in the Distillery Creek area.

From there we crossed the Great Ocean Road to the Alan Noble Swamp which has been dredged out, had boardwalks built and native shrubs planted. At present it is a bit bare, but there were still plenty of birds (27 species) and there was one Nankeen Night Heron spotted.

Altogether we saw 59 species (listed below) and had a very enjoyable morning.

Bird Observations

- Musk Duck
- Black Swan
- Australian Wood Duck
- Pacific Black Duck
- Grey Teal
- Chestnut Teal
- Hardhead
- Australasian Grebe
- Hoary-headed Grebe
- Little Pied Cormorant
- Great Cormorant
- White-faced Heron
- Great Egret
- Cattle Egret
- Nankeen Night Heron
- Wedge-tailed Eagle
- Brown Falcon
- Nankeen Kestrel
- Purple Swamphen

- Dusky Moorhen
- Eurasian Coot
- Masked Lapwing
- Spotted Turtle-Dove
- Gang-gang Cockatoo
- Galah
- Sulphur-crested Cockatoo
- Musk Lorikeet
- Australian King-Parrot
- Crimson Rosella
- White-throated Treecreeper
- Superb Fairy-wren
- Spotted Pardalote
- White-browed Scrubwren
- Brown Thornbill
- Yellow-rumped Thornbill
- Yellow Thornbill
- Red Wattlebird
- Little Wattlebird
- Yellow-faced Honeyeater

- Singing Honeyeater
- White-eared Honeyeater
- White-naped Honeyeater
- New Holland Honeyeater
- Eastern Spinebill
- Scarlet Robin
- Flame Robin
- Eastern Yellow Robin
- Olive Whistler
- Golden Whistler
- Grey Shrike-thrush
- Magpie-lark
- Grey Fantail
- Willie Wagtail
- Australian Magpie
- Grey Currawong
- Little Raven
- Red-browed Finch
- Welcome Swallow
- Silvereye

Jerringot Report

... *Valda Dedman*

Thank you to Lance, Michael and Trevor who worked so hard and willingly at spreading mulch, especially as there was much more than I had realised. I had many offers of help, which I greatly appreciated. The garden around the bird hide now looks well cared for. I am hoping that the Club will install microbat roosting boxes at Jerringot, and with Grant Baverstock's help, carry out a monitoring program. I have box patterns available, courtesy of the Latrobe Valley Field Naturalists, and two people so far have offered to construct the wooden boxes. There has obviously been a spectacular flowering of the

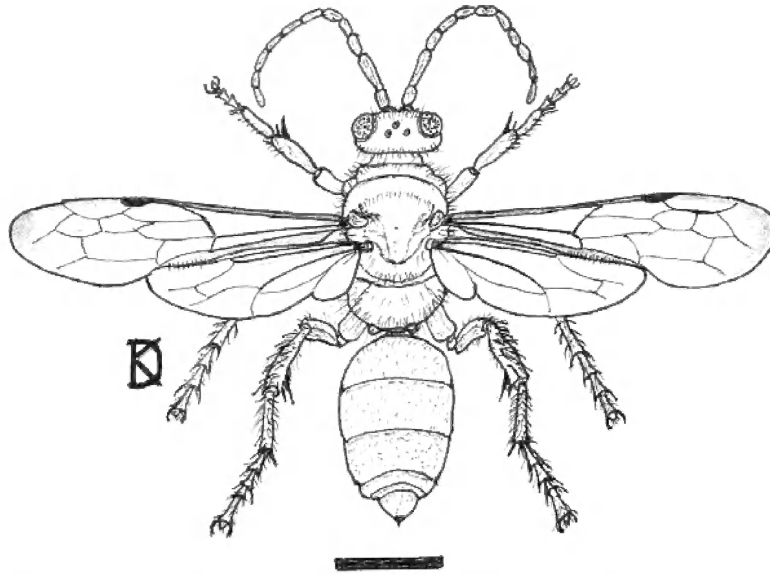
Water Plantain this year, judging by the number of tall stalks with attractive dried seedheads that I found in the east drain. I would encourage you all to visit 'our' wetlands on Belmont Common.

I would be grateful to receive any post-1997 bird records for Belmont Common and Jerringot in particular. We do not know of any decline or increase in bird species or numbers there, although there have been changes in habitat over the past few years. I will be talking to the Bird Group next year on this topic. Please send any records to dedmanv@iprimus.com.au.

A Parasitoid Wasp from Belmont

...*Dave King*

216/86 Church St., Grovedale, 3216
kingdf@optusnet.com.au



Cryptocheilus sp., Pompilidae - Pepsinae
 Scale bar 5mm

Introduction

This is something of a sequel to an article that appeared in the *Geelong Naturalist* of December 2004, (King 2004). In this instance the writer was presented with a wasp by fellow Club member, Dick Southcombe, who collected the specimen from the porch of his home in Belmont, 38°12'S 144°21'E.

Examination determined it to be a species of the genus *Cryptocheilus*, Pompilidae-Pepsinae. These wasps are commonly termed 'Spider Wasps', for they prey on spiders. The female prepares a nest in the soil by burrowing out a tubular hollow. She will then hunt, usually at ground level in the vicinity, for suitable spider prey specimens of her own size, and often larger. Upon capture the wasp will sting the prey to immobilise it. Paralysis occurs almost immediately. The prey is then dragged to the prepared nest burrow into which it is pushed. Once in the burrow the wasp lays a sausage shaped egg upon the spider's abdomen, (Evans & Eberhard 1970), and the burrow is closed.

Duration of the egg stage is normally around two or three days, and on hatching the wasp larva will commence to feed upon the live, but immobilised spider. After several moults the larva will have consumed all the soft parts of the spider and will begin to prepare itself a cocoon of sand grains, using silk from glands on the head to consolidate the grains. From here on, the pupal stage commences; being univoltine, lasting for several months until the following spring, then emerging as an adult wasp.

Description

The wasp is a robust hymenoptera capable of handling prey of equivalent weight. It is entirely black in colour, with the exception of the antennae, which are bright orange. Each antenna has eleven segments. The legs are relatively long, the hind femora extending to at least the tip of the abdomen. All the femora are without spines at their apex. Fore tibia have a single apical spine, whilst mid and hind femora have two, together with two rows of spines dorsally. The compound eyes are set well apart, are not emarginate and have no visible hairs. Three ocelli are placed between the apex of the eyes. Hair is prominent on the clypeus (central plate on the face) and the rear of the head. Light coloured hair covers the lateral surface of the thorax. Narrow bands of silver grey delimit segments of the gaster. The gaster is subpetiolate unlike the majority of hymenoptera, which have a prominent petiole connecting to the thorax. As with most flying insects the wing venation is diagnostic, the forewings are infuscated, particularly at the tips. During flight the fore and hind wings are coupled by means of a series of hamula (L. *hamulus*, little hook) on the leading edge of the hind wing.

References

- Evans, H.E. & Eberhard, M.J. (1970) *The Wasps*, University of Michigan, U.S.A.
 King, D.F. (2004) *Geelong Naturalist*, vol. 40, no. 8, Geelong Field Naturalists Club.

Out and About

...Valda Dedman

In the week before Easter we visited the old gold-mining town of Walhalla. In their quest for gold the mining companies stripped the surrounding hills bare of timber to feed their engines and batteries. Today the forest has recovered, but it probably differs in species composition and abundance from what it was originally. One of the people who documented its plants and fungi was Henry Tisdall, the headmaster of Walhalla school from 1868–1886. The site of Walhalla State School No. 957, near the Long Tunnel Battery, is now the Tisdall Environmental Centre, the campsite of Monbulk College. It is available for hire, housing 28 people in bunkstyle accommodation. Henry Tisdall was a foundation member of the FNCV and at their third 'Conversazione', in April 1883, he exhibited a series of watercolour drawings of the wildflowers of the district. Moe and District Historical Society has recently obtained a grant from the Victorian Ministry of the Arts for the conservation of Tisdall's paintings in the Latrobe Regional Art Gallery.

Tisdall wrote many articles for the *Victorian Naturalist*, including 'Walhalla as a collecting ground' (1895). After he returned to Melbourne, he became very active in the FNCV and was President from 1893–1895. On von Mueller's advice he collected fungi and algae, a field poorly represented at the time. He was also a Corresponding Member of the first Geelong Field Naturalists Club, wrote articles for the *Geelong Naturalist* and spoke to the club on several occasions about Victorian fungi.



Fruiting Blackfellows Bread *Laccocephalum mylittae* (formerly *Polyporus mylittae*). It was first described by Henry Tisdall. (See my article in *Geelong Naturalist* vol. 36, no.1, May 2000.)

We also explored some of the surrounding countryside. On one walk we climbed, ever so gently, through several distinct vegetation zones—Myrtle Beech, with ferns and

lacy lichens; Silver Wattle tall, slim and crowded; Mountain Ash; a shrub zone with Mountain Correa and Tasman Flax-lilies bright with purple berries, to the beginning of the Snow Gums among the granite outcrops. Mushroom Rock towered above us and lived up to its name, spotted with grey lichen.



Mushroom Rock

We were on the Alpine Track to Mt Erica and we saw birds not found west of Melbourne. A plump Wonga Pigeon, slate grey with spotted white breast, crossed our path. Eastern Whipbirds were calling, but were difficult to spot. And then there were the Lyrebirds, that outdid the whipbirds in the intensity of their calls. You always know when you are listening to a lyrebird; the sounds are larger than life, ringing across the mountainsides. We listened entranced for more than five minutes as one went through its repertoire—Grey Shrike-thrush, Whipbird, Crimson Rosella, King Parrot, Yellow-tailed Black Cockatoo, Red Wattlebird, Pied Currawong, the most perfect Kookaburra, interspersed with own churrings. No Gang-gangs though, surprisingly.

There were devastating fires in this area in February 1932, yet the Forests Commission Surveyor, Mervyn E. Bill, found that lyrebirds were present in the charred bush just two weeks later when most other birds were gone or had perished. He recalled what he had been told by Mr M. Mitchell who also had survived the fire. Six of his mates had been burned to death, but he had been saved by sheltering in the Thomson River. While there he noticed an amazing event.

From eight o'clock in the morning, three hours before the fire reached me, the Lyre-birds began to flock from the higher country to take shelter in the river; and, moreover, they could not be made to move from the positions they had taken up immediately on reaching the water. They were either stupefied by smoke (which was extremely unlikely) or the instinct of preservation which had led them from the bush many hours before the fire would actually have reached them, overcame the usual timidity displayed toward human beings.

(*Victorian Naturalist* vol. 49, no. 24)

There is some evidence that lyrebirds were formerly in Lerderderg Gorge, but not in the Otways.



ORANGE-BELLIED PARROT SURVEYS 2005

The official Orange-bellied Parrot survey dates for 2005 are:

22 May (Sunday)
23 & 24 July (Saturday & Sunday)
18 September (Sunday)

Please record these dates in your diary. This year Peter Menkhorst (Department of Sustainability and Environment) will be coordinating the surveys for Victoria.

Geelong area coordinator:
Craig Morley
Phone: 5221 4604 (after hours until 9pm)
e-mail (Tuesday to Friday):
morley.craig.q@edumail.vic.gov.au

I look forward to working with all volunteer counters and observers in the coming months.

Members are encouraged to arrive early at general meetings.

The room will be open at 7.15 pm to allow members to use the library, buy raffle tickets, pick up their copy of *Geelong Naturalist*, have a cup of tea or coffee and, of course, chat to other members and visitors.

You Yangs Boneseed Pull

Saturday May 28 & Sunday May 29

Once again we are looking for a few minutes of your time and effort to weed our 'hill'—it desperately needs more weeds pulled out before they flower in the spring.

Location: The Saddle. Enter the park and follow signs on Great Circle Drive in a clockwise direction. Look for the sign to the gate (which will be closed but unlocked) to our work area. Close the gate behind you.

Time: 9.30 am Saturday
10.00 am Sunday

Bring: Eye protection, gloves, lunch, flora/bird books, warm/wet clothing and, as always, a friend.

Contact: Rob Beardsley 5241 1951 or mobile 0418 534075
Claire & Dennis Greenwell 5243 7047 or mobile 0408 108992

Next Mid-week Bird Group Excursion

Long Forest

Thursday May 19

Leader: Marilyn Hewish

Long Forest is a fascinating and unique area. It contains an isolated remnant of Bull Mallee woodland hidden away between Melton and Bacchus Marsh. More than 170 species of birds have been recorded in the area over the last 20 years, many of them locally rare, endangered, or just plain astonishing (Crested Bellbird). While sightings of the rarities can't be guaranteed, we can expect to see a variety of woodland birds and enjoy some lovely scenery in the creek-valleys.

Meet: 8:30 am at the Corio Village car-park, southwest corner, adjacent to the Gellibrand Street–Goulburn Avenue intersection. Polly Cutcliffe will organise the departure from here.

OR 9:30 am at Lake Merrimu Picnic Ground west of the lake on the Bacchus Marsh–Toolern Vale Road. Here we will meet our guide, Marilyn Hewish.

Finish: Whenever you wish. We will walk to Long Point and back in the morning, and then move to another area for lunch. Marilyn is happy to continue until 4.00 pm, for those to wish to explore further.

Bring: Lunch, portable snacks and drinks; if necessary, sunscreen, a hat, raingear. Please wear sturdy shoes.

Please note: It isn't possible to visit Long Forest without climbing hills, as all tracks lead down into the creek-valleys. The climbs are long and consistent rather than super-steep, the tracks are in reasonable condition, and we will take them slowly.

Enquiries: Polly 5244 0182, Marilyn 5367 3196.

Mid-week Bird Group

Advance Notice

Thursday June 16 to Little River Earth Sanctuary

Leader: Melissa Doherty of L.R.E.S.

Full details in June *Geelong Naturalist*

Intertidal Environments of the Surf Coast

A talk given at the General Meeting 1 March 2005
by Christine Porter

...Roy Whiteside

This talk covers some of the work undertaken by the speaker in conjunction with the Surf Coast Shire whilst she was a Research Fellow at Deakin University for two years.

The talk is in two parts:

1. A general introduction to rocky shores with mainly Surf Coast examples.
2. The Surf Coast Intertidal Project

PART 1 ROCKY SHORES

The region in question is the narrow band of coastline that is regularly inundated with seawater then exposed to the atmosphere with the rise and fall of tides.

The main factors that shape the animal and plant communities that can live on rocky shores are:

- physical factors involving tides, wave action, water temperature, rock type and sand scouring
- biological factors involving predators, competition for space and food, recruitment (i.e. when breeding occurs and how far offspring travel before they settle) and adaptations these animals have to the new habitat.

TIDES

There are two cycles per day occurring about one hour later each day. Tidal variation occurs as a result of the rotation of earth on its own axis and the different alignments of the sun and moon. There is a variation in tidal range throughout a month. Neap tides have a low variation whereas spring tides have a high variation. Tides create a gradient of exposure to air on shore which is caused by regular inundation and exposure to air. The sites where animals are located on the shore are dependent on how they can cope with the exposure to air because most of the animals are of marine origin.

WAVES

Wave energy varies from shore to shore, e.g. high energy shores of southern Tasmanian coast to low

energy shores inside Port Phillip Bay. This influences the species which are present. On high wave energy shores, animals adapt to the constant battering, e.g. barnacles which are firmly attached to the shore. On low wave energy shores there is a sediment build up. The Surf Coast has moderate wave energy in general.

ROCK TYPE

This influences the shore topography and habitats available. The main rock types along the Victorian coastline are:

- Granite, e.g. at Wilsons Promontory
- Basalt, e.g. at Phillip Island
- Limestone/calcarene, e.g. east of Aireys Inlet
- Sandstone, e.g. steps at Jan Juc near Bird Rock where the shore is flat to gently sloping. There are many cracks and crevices. Sandstone is a fairly soft rock which breaks up easily.
- Mudstone, e.g. west of Lorne
- Conglomerates and mosaics, e.g. around Aireys Inlet which has a lot of different types of rock along a short stretch of coastline.

ROCKY SHORE HABITATS:

- Wave cut platforms—these are the dominant type along the Surf Coast e.g. at Winki Pop near Bells Beach
- Boulders cobbles and rubble—there are no actual boulder shores along the Surf Coast but there are areas of combined boulder, cobbles and rubble along some of the shores. e.g. rock rubble at Point Danger.
- Steep and Vertical faces—these occur at Bird Rock. Animals that can live on a vertical surface depend on the orientation in relation to the sea. There is more variety of species at the low tide mark than at the high tide mark. An example at Jan Juc showed large patches of tube-worm with a few mussels and algae species.

- Ledges and Crevices—these provide habitat for animals that would not survive on a rock surface, e.g. certain sea-snails and sponges.

- Rock pools—these give some indication of what lives in the ocean. There are many animals and plants that normally occur in the ocean but which have the alternative of living in a pool as it always is in water. The temperature in these pools can vary a lot, depending on air temperature and animals that live there can cope with those temperature variations, e.g. at Paincalak Creek or Point Lonsdale. These regions contain algae, e.g. Blue-green and Coralline Algae together with animals such as shrimps, blennies, gobies, octopuses and various Gastropods, e.g. sea-slugs etc.

- Zonation—the gradient in physical conditions on a rocky shore leads to a distinctive pattern distribution, which often is referred to as zonation. This is far more pronounced on steep shores than on a gently sloping platform. Sometimes the zones are not very apparent because of the ruggedness of a shore which means there is a considerable variation in habitats along that shore. There tends to be certain key animals that live in each habitat of those different zones along the shore.

- Adaptations—what lives on these shores depends on what kind of adaptation these animals have. They can be physical, e.g. they form a shell, or they can be physiological, e.g. able to tolerate high temperatures or they can search for certain habitats, e.g. when the tide is out they move to a cooler habitat or a crevice.

Continued next page...

TYPICAL ZONES OF SOUTHERN SHORES

Splash zone is close to the high tide mark and it applies to regions that are not covered by water, but are affected by spray on shores of high wave energy. Typical animals are molluscs such as periwinkles.

- Upper Littoral is a typical habitat of barnacles and an occasional limpet.
- Mid-littoral has some gastropods feeding on small algae and other species.
- Low littoral has tube worms and other species.
- Sub-littoral fringe occurs at the very low tide level.

PART 2 SURF COAST INTERTIDAL PROJECT

The aim of the study was to describe and categorise shores of that coastline; determine the patterns of human use of those shores; assess the impacts on these uses; identify management issues. The study area covered the shores between Point Impossible to a few kilometres southwest of Lorne with numerous study points along the coast. Physically the area has a cool temperate climate; winds predominantly from south west; mean water temperature ranging from 18°C in summer to 13°C in winter; lowest tides occurring during daylight hours in summer; sand smothering and scouring are significant. Aireys Inlet is a transition zone for rock type with a mosaic of rock types, with shores to the east of sandy limestone and shores to the west of sandy mudstone. Most shores are 60–90 m wide at mean low tide; main shore type is a wave cut platform; other habitats are rock rubble, crevices, rock pools and verticals. Sandstone and mudstone shores are physically distinct from each other in height of platform, rugosity, rock stacks and extent of rubble

Species assemblages represent groups of dominant species occurring together as given in the following examples: Bull Kelp fringe; Barnacle patches; Low mixed algae; *Galeolaria*; Cunjevoi; 'Skuzz'; *Gelidium* turf; Ulvoids; Coralline turf; Grazers/bare space; Algal turf; Grazer/deposit; *Dicathais*/Turbo; *Siphonaria* zelandia; Hormos/ramats; Littorinids; Mussel beds; *Amphibolis*; Algal Pools; Pools-

other. N.B. The term 'turf' means low growing algae and the term 'algae' refers to all seaweeds. *Hormosira* mats are typical of sandstone shores whereas a mussel, barnacle and *Galeolaria* combination is typical of mudstone. Littorinid and grazer assemblages are widespread on mudstone. On high use reefs *Hormosaria* is replaced by algal turf. Grazer and deposit feeders are typical of rubble and cobble habitats. Aireys Inlet appears to be a biogeographic transitional area in rock type and water temperature.

A total of 94 animal species and 48 plant taxa were recorded from 39 shores. All were common intertidal biota for Victorian shores. There were some locally uncommon species on less than 10% of these shores. There was some risk of local extinctions. More than five locally uncommon species occurred at Point Impossible West; Point Danger; Steps; Point Addis; Cinema Point; The Springs/Cathedral Rocks; Lorne West. Also, 12 species (9 plant and 3 animal) were found only on sandstone shores and the 2 species found only on mudstone shores were the molluscs *Austrocochlea concamerata* and *Patelloida victoriana*. Significant animals were found at Point Danger and Cinema Point. Significant plants were found at Point Danger, Bird Rock, Steps, Winki Pop, Southside, Point Addis, Urquarts Bluff, Eaglesnest reef, Eagle Rock, Lorne West rocks.

THREATS TO ROCKY SHORES

These involve water quality (two sewage outlets, storm-water and runoff); litter (from land, visitor and sea); oil spills from shipping; over-exploitation; trampling, e.g. Neptunes necklace; coastal engineering works; introduced organisms; pets and feral animals.

EFFECTS OF TRAMPLING

Damage to *Hormosira* cover as one footstep can remove 25% of a plant; bare patches and reduced frond length occurs; effects are highest during summer; changes in assemblage composition occur; reduced diversity is possible; it is an issue for sandstone shores.

EFFECTS OF COLLECTING

These are reduced abundance, reduced mean size within populations,

changes to community structure and local extinctions. Harvested species were mostly shellfish and included the following: Abalone *Haliotis* spp.; Dog whelk *Dicathais orbita*; Limpet *Cellana tramoserica*; Top shells *Austrocochlea* spp.; Cunjevoi *Pyura stolonifera*; Mussels; Octopus; Crab species e.g. Redbait Crab; Uncommon shellfish species.

USE OF SURF COAST ROCKY SHORES

- Offpeak (May to Oct)—Less than 1 person per 5 minutes on shore and 11.5 people per 5 minutes in water. Main activities were surfing and walking; highest use places were Winki Pop, Bird Rock, North Lorne.
- Peak (Nov to Apr)—4 people per 5 minutes on shore and 9 people per 5 minutes in water. Main activities were surfing, walking and fossicking; highest use shores were Point Danger, Bird Rock, Winki Pop, Urquarts Bluff and Point Grey. Highest use was on holiday weekends; maximum rock use was over 30 persons per 5 minutes for Point Danger, Urquarts Bluff and Point Grey; maximum water use was over 20 per 5 minutes for Winki Pop and Point Danger; there were periodic severe impacts; main impact likely to be disturbance from foot traffic and fossicking. Most fishing was from boats and surf beaches; average one boat per observation period for entire coast; shore fishing is most popular around Lorne, especially at Jump Rock; spear fishing was observed at least once on ten shores and several times at Point Danger, Point Grey, Sandy Gully.

CONCLUSIONS

Use levels of the Surf Coast shore are low compared with most shores close to Melbourne. There are spikes of high use for some shores during summer which are of some concern. Most shores are in good ecological health.

Mudstone and sandstone shores differ physically and ecologically. It is recommended that some low use shores should be managed to maintain their high natural values.

A vote of thanks was given by Deborah Evans



Excursion Report Point Addis Intertidal Area Sunday 20 March 2005

...*Diana Primrose*

It was a beautiful sunny morning as 17 members and friends met at Pt Addis car park for our excursion led by Christine Porter. Christine, who was our speaker at the March General Meeting, led us through the tidal zones and rock pools identifying our discoveries. She reminded us of the correct manner of handling sea creatures—not touching with sunscreen covered fingers, keeping the creatures covered with sea water (in little plastic dishes) whilst examining them, and returning them to the pool from which they came.

We descended the steps to the beach with the beautiful sandstone cliffs above us. Moonah *Melaleuca lanceolata*, in stunted form, was growing on top of the cliffs and the pretty Coastal Correa *Correa alba* was in flower and growing on the slopes. Not in flower but growing profusely were: Sea berry saltbush *Rhagodia candolleana*, Bower Spinach *Tetragonia implexicoma*, Slender Velvet Bush *Lasiopetalum bauerii*, Flax Lilies *Dianella* sp., and Coast Pomaderris *Pomaderris oraria*.

We started at the supra-littoral fringe, or 'splash zone', where we found creatures able to survive with a 'splash' and not dependent on a definite 'drowning'. Two species of periwinkle, the grazing Common Limpet, and False Limpet (which does not have gills but breathes air), three species of barnacles, predatory snails, black lichen, and multitudes of tube worms and tiny mussels clinging to the rocks.

Further down in the mid-littoral zone Neptune's Necklace, a brown algae *Hormosira banksii*, covered the rocks in profusion—very slippery underfoot. We scooped up two little isopod species which sped around the plastic dish at high speed and looked like little armoured tanks under the magnifying glass. A group of 'Red Waratah' sea anemones *Actinia tenebrosa*, other anemone species, and a good population of Chitons with their eight segmented 'coat of mail' shields—one demonstrating how to slide over a rock. Patches of blue-green algae and turf algae on the rocks, many different species of brown algae, *Cystophora* sp. commonly called 'seaweed', some sea lettuce *Ulva* sp. and a lone specimen of sea grass *Amphibolus Antarctica*, an angiosperm.

The rock pools and 'rubble zone' provided many treats—seaweed crabs dressed up like little moving patches of sea weed, common shore crab, red bait crabs, various sea stars—one rather distastefully devouring one of its own species. A beautiful sea urchin with dark red spines and with its tube feet extended—a pretty sight under the magnifying glass. A Blenny (little fish) darting around a pool at the speed of light, finally cornered and 'dished' for closer inspection. A little stone crab—a beautiful little brown furry creature with blue 'feelers' which can draw in its legs and hunch itself up to look just like a little round stone. A (dead) swimmer crab with its back feet 'paddles'

and two make believe 'eyes' on its back—used as a disguise when it buries itself head first in the sand. A baby eel (elver) about 8 cm long, sea squirts, an abalone, elephant snails disappearing under their mantles when disturbed.

These are some of the interesting discoveries we made on this beautiful morning. Thanks to Christine for a scientific species list, and to Polly Cutcliffe who recorded the birds.

BIRD LIST

Great Cormorant *Phalacrocorax carbo*
White-faced Heron *Egretta novaehollandiae*
Silver Gull *Larus novaehollandiae*
Superb Fairy-wren *Malurus cyaneus*
Rufous Bristlebird *Dasyornis broadbenti*
White-browed Scrubwren *Sericornis frontalis*
Red Wattlebird *Anthochaera carunculata*
New Holland Honeyeater *Phylidonyris novaehollandiae*
Welcome Swallow *Hirundo meoxena*

PLANT LIST (mainly seaweeds)

<i>Rivularia</i> sp.	Blue-green seaweed
<i>Lichina</i> sp.	lichen
<i>Ulva</i> sp.	green seaweed, sea lettuce
<i>Dictyosphaeria serica</i>	green seaweed
<i>Caulerpa brownii</i>	green seaweed
<i>Halopteris</i> sp.	brown seaweed
<i>Padina fraseri</i>	brown seaweed
<i>Zonaria</i> sp.	brown seaweed
<i>Nothia anomala</i>	brown seaweed
<i>Durvillaea potatorum</i>	brown seaweed
<i>Hormosira banksii</i>	brown seaweed, Neptunes
<i>Cystophora</i> spp.	brown seaweed, at least three
<i>Caulocystis unifera</i>	brown seaweed
<i>Gelidium pusillum</i>	red seaweed
Encrusting corallines	red seaweed
<i>Amphibolis antarctica</i>	seagrass

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INVERTEBRATE LIST

Anemones

Actinia tenebrosa
Oulactis mucosa
Cnidopus veritar
Anthothe albocincta

Polychaetes

Galeolaria caespitosa

Barnacles

Cthamalus antennatus
Caemosipho columna
Tetraclitella purpurascens

Isopod

Unid sphaeromids

Decapods

Rock pool shrimp
Lomis hirta
Notomithrax ursus
Paragrapsus quadridentatus
Plagusia charbrus

Mollusca-Chitons

Ischnochiton australis
Ischnochiton elongatus
Plaxiphora albida

Mollusca-Prosobranchs

Haliotis rubra (abalone)
Scutus antipodes
Clypidina rugosa
Cellana tramosercia
Patelloida alticostata
Patelloida latistrigata
Notoacmea petterdi
Austrocochlea constricta
Austrocochlea odontis
Bembicium nanum
Nodilittorina unifasciata
Nodilittorina praetermissa
Turbo undulatus
Dicathais orbita
Lepsiella vinosa

Pulmonates

Siphonaria diemenensis
Siphonaria zelandica
Onchidella patelloides

Bivalves

Xenostrobus pulex
Brachydontes rostratus

Bryozoa

Mucropetraliella ellerii

Echinoderms

Holopneustes porosissimus
Patiriella calcar

Ascidians

Two unidentified species

Plus two rock pool fish: Blenny
Pictiblennius tasmanianus and one
 unidentified eel-like fish (possibly
 elver)

Plant Group

...Dick Southcombe

Leon Costerman's presentation at the inaugural Wider Geelong Flora Lecture Series in March prompted us, at our April plant group meeting, to search out and look more closely at our region's eucalypts. At our May meeting we will endeavour to write a description of each regional eucalypt species together with information on habitat, locality etcetera which may be appropriate for inclusion in a future *Flora of the Geelong Region*.

I believe such a publication is certainly possible given the talented membership of Geelong's numerous regional biodiversity groups and am firmly of the opinion it should be a cooperative project jointly owned and promoted by all the contributing groups.

Comments on this potential project are sought and would be very welcome from GFNC members and any other person or group within the Werribee Plain, Brisbane Ranges, Central Volcanic Plain, Eastern Otway Plain Range and connecting coastline area.

Woodpeckers and Owls

...Marilyn Hewish

Laura Stenzler from the US sent me some interesting news on the general birding front. The Ivory-billed Woodpecker from the US has been rediscovered, the previous record was 60 years ago. This is a humungous bird. Check this website <http://www.birds.cornell.edu/ivory/>. Laura was a member of the GFNC for 6 months in 2003.

Dean and I went for walk through Anakie Gorge on April 29 2005, and saw one brown Pink Robin and a pair of Powerful Owls, perched close together, along the walk between the eastern Anakie Gorge car park and Stony Creek Picnic Ground. The female was clutching a Ring-tailed Possum.

⇒ A campaign has been started to protect the forests in far South West Victoria. It centres on the largest lowland forest, the Cobboboonee. Environment Victoria, The Wilderness Society, the Portland Field Naturalist Club, Friends of the Earth, and ACF are supporting the campaign.

⇒ Lynn Murrell's walk from west to east along the coast of Victoria has highlighted management issues and concerns. His journey has been recorded on his website www.walkthetalk.ws and photographs can be found at www.vcc.vic.gov.au

⇒ Helen Langley of Timboon succeeds Dick Southcombe as the President of SEANA. Rob Moors of Bendigo is Treasurer and John Gregurke of Ballarat is Secretary.

⇒ The Autumn 2005 edition of *Nature Australia* is packed full of great stories. One debunks the myth that snakes have no hearing. They can detect in a very narrow frequency (about 100–400 hertz), and that allows them to hear some frog calls and human footfalls for example. Another article is about silverfish, living fossils resembling the first insects that ever lived. And the article about lichens in the Antarctic was very interesting. Did you know that one lichen grows as slowly as a millimetre every 100 years?

Quail-like Birds of the Geelong Region Bird Group Report by Barry Lingham 21 April 2005

There are several groups of quail-like birds that can be found in the Geelong area that have similar appearance and can be easily confused. The two main groups can be divided into 'true quail' and 'button quail'. I have also included the Plains Wanderer, as it appears somewhat quail-like.

True Quail

True quail are part of the order of Galliformes (game birds) in the family of Phasianidae (pheasants). There are three native Australian species that may be seen around Geelong.

Stubble Quail *Coturnix pectoralis*

- Large quail (16–20 cm long)
- Weight about 100 g
- Large white eyebrow
- Male has cinnamon throat patch
- Female has smaller buff or cream throat patch
- Underparts whitish, streaked brown.
- Male has black streaks on breast
- White streaks on back give appearance of lines.

Quite common in Geelong region, but not often seen unless flushed. Distinctive three-note call 'chee-key-wup' or 'two-to-weep' heard from July to January. Most records in the Geelong region are from October until February/March. This may reflect observation of calls rather than actual presence of birds. Dispersive after breeding. Some banded birds have been recovered over 1000 km away.

Brown Quail *Coturnix ypsilophora*

- Large quail 17–22 cm long
- Weight 90–120 g
- Overall brownish appearance and

- appears darker than Stubble Quail
- Creamy median crown stripe
- Wavy black barring underneath
- Prefers damper areas although it can be found in cropland
- Tends to give a 'chirrup' when flushed.

This bird is rarely reported locally. Most records are from coastal undergrowth.

King Quail *Coturnix chinensis*

- Smaller quail than Stubble Quail, 13–15 cm long
 - Male has blue face, breast and sides plus striking black and white pattern on chin and throat, chestnut flanks
 - Female similar to a small Brown Quail, including barring on under parts
 - Prefers shrubland and grassland along the coastal areas
 - Very secretive and elusive.
- Very few local records. Some records may be of aviary escapees.

California Quail *Callipepla californica*

is an introduced species that has a feral population on King Island. Striking markings on male including chestnut crown, black and white facial markings and drooping plume over forehead.

Button-Quail

Button-quail form a separate family. Three of the seven Australian species could be seen locally.

Painted Button-quail *Turnix varia*

- Male 17–19 cm long. Weight 75 g
- Female 18–23 cm long. Weight 110 g
- Generally grey, spotted white on head and under parts; upper parts

- blotched black with chestnut bars and white edges
- Female has bolder white spotting on a blacker background around sides of crown and nape, male has grey background
- Female makes booming call like a bronzewing
- Found in open forests with plenty of leaf litter.

An uncommon bird, but regularly seen in its favourite habitat.

Little Button-quail *Turnix velox*

- Male 12–14 cm. Weight 35 g
 - Female 14–16 cm. Weight 50 g
 - Small bird with rufous upperparts narrowly streaked white. Underparts lighter with dark scalloped breast margins. White under tail and rear flanks.
 - Female more boldly marked than male. Seasonal variation in plumage, with non-breeding pattern similar to males.
 - In open forest, mallee, grassland, spinifex, cereal cropland, etc.
- Very few local records, but one report in the You Yangs in December 2004.

Red-chested Buttonquail *Turnix pyrrhotorax*

Small bird with dark brown crown and neck spackled with rufous. Back dark brown scalloped with black and white. Chest and throat chestnut-orange. Flanks rufous-buff. Only a few local records.

Plains Wanderer

Small quail-like bird slightly larger than a Little Button-quail. Similar in size to a Stubble Quail. Longer legs than quail. Often adopts upright stance. Found in areas of native grasses.

Comparing Quail and Button Quail	
<p>Button-Quail Three toes No crop Females larger than males Females more colourful Polyandrous Male incubates eggs Males attends young Male has brood patch</p>	<p>True Quail Four toes Has a crop Sexes similar size Males most colourful Monogamous Female incubates Female attends young Male has no brood patch</p>



GFNC Excursion
Clowes Lane and Freshwater Lake area, Bellarine Peninsula
Sunday 20 February 2005

...Rosalind Smallwood

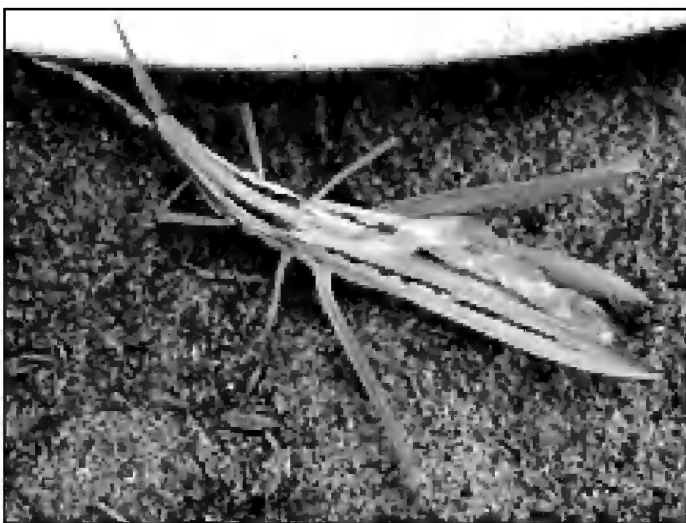
Plant list

Chaffy saw-sedge *Gahnia filum*
 Coastal spear grass *Austrostipa stipoides*
 Moonah *Melaleuca lanceolata*
 Australian salt grass *Distichlis distichophylla*
 Beaded glasswort *Sarcocornia quinqueflora*
 Kangaroo grass *Themeda triandra*
 Coastal beard-heath *Leucopogon parviflorus*
 Small-leaved clematis *Clematis microphylla*
 Black-anther flax lily *Dianella revoluta*
 Kangaroo apple *Solanum laciniatum*
 Small-leaf bramble *Rubus parvifolius*
 Coastal wattle *Acacia longifolia*
 Hedge wattle *Acacia paradoxa*
 Golden wattle *Acacia pycnantha*
 Silky guinea-flower *Hibbertia sericea*
 Coast bitter-bush *Adriana quadripartite* (syn. *A. klotschii*)
 Bidgee-widgee *Acaena novae-zealandiae*
 Australian bracken *Pteridium esculentum*
 Seaberry saltbush *Rhagodia candolleana*
 Coastal banksia *Banksia integrifolia*
 Knobby club rush *Ficinia nodosa* (syn. *Isolepis nodosa*)
 Bower spinach *Tetragonia implexicoma*
 Tea-tree *Leptospermum laevigatum*
 Wire-leaf mistletoe *Amyema preissii* on *Acacia pycnantha*
 Karkalla *Carpobrotus rossii*
 Wallaby grass *Danthonia* sp.
 Kidney weed *Dichondra repens*
 Climbing lignum *Muehlenbeckia adpressa*
 Salt lawrencia *Lawrencia spicata*



Barry Lingham, Graeme Tribe, Jackie Birrell,
 Deborah Evans, Roma Julian and Jan Venters
 GFNC excursion 20 February 2005

Photographer: Rosalind Smallwood



Stick insect, Freshwater Lake,
 GFNC excursion 20 February 2005
 Photographer: Rosalind Smallwood

Free Environmental workshops

Organised by Greening Australia, Colac Otway Shire, City of Greater Geelong and Surf Coast Shire.

Wetlands and Farm Dams: You Yangs and Serendip Sanctuary, Lara with Nick Romanowski on Friday **13 May** at 10 am to 4 pm.

Fungi: The Fungi day with Bruce Fuhrer is on Saturday **14 May** at the Forrest Hall and a Lake Elisabeth site visit.

Weeds: Weed ecology, identification and management with Kate Blood and Randall Robinson on Friday **17 June**.

Contact John Rees 5231 6913 for dates and details.

Our First Wider Geelong Flora Lecture Series

...Kate Hill

With over 130 attendants, the first of the Wider Geelong Flora Lecture Series was a great success. Before testing out our new meeting facilities at the Geelong Botanic Gardens we had a relaxing picnic dinner followed by an insightful guided tour of the 21st Century Indigenous Garden and nursery. Renowned guest speakers Leon Costermans and Mark Trengove then gave us insight into our local indigenous flora and its landscape influences.

Leon Costermans (a well-known botanist and author of *Native Trees and Shrubs of South-eastern Australia*) spoke of the underlying processes that have shaped our region. He explained how geology is one of the fundamental elements that determines what type of vegetation will grow and is usually used to map the boundaries of different vegetation communities. Leon talked of the geological story and main rock types around Geelong with a particular focus on the Brisbane Ranges. They are:

1) Approximately 450 million years ago (Ordovician)

Eastern Australia was a deep ocean trough into which sand and mud were washed from ancient terrain in the west. After hardening into sandstones, mudstones and shale, these sedimentary rocks were intensely folded and faulted. No plants were on land yet.

2) Approximately 370 million years ago (Devonian)

With crustal instability, molten rock (magma) forced its way from deeper in the crust into the Ordovician sedimentary rocks and cooled slowly to form granite. This has subsequently been exposed by erosion in places (e.g. You Yangs).

3) Approximately 120 million years ago (Cretaceous)

Deep basins formed in the Otway area, into which clayey sands were washed. Subsequent uplift of this area produced the Otway Ranges which are now forested.

4) Approximately 60 million years ago (Tertiary)

In a wide variety of events (with rise

and fall of land and sea level) sands, clays and limey material was deposited under mostly shallow sea and on land. These have resulted in mainly horizontal layers of sandstone, limestone and iron-bearing sands on top of older rocks.

5) Approximately 2 million to 15 000 years ago (Pleistocene)

Lots of volcanic eruptions from many eruption points produced lava which followed down valleys and across plains and solidified to form basalt. This basalt makes up much of our region's vegetation (i.e. basalt plains grassland) where originally there was little indigenous tree or shrub vegetation in lower rainfall areas. There is very little indigenous vegetation left of this community as it was quickly settled.

6) Last 20 000 years (Holocene)

All land surfaces are constantly eroding to deposit sediments along stream courses on fault slopes, in lakes etcetera. Also limey sands have been worked up into bars, dunes and layers from the Bass Strait area with the rise and fall of the sea level, giving rise to limestone coastal dunes, especially over the basalt.

Our second guest speaker **Mark Trengove** (local botanist and environmental consultant) gave an interesting overview of the dominant Ecological Vegetation Classes (EVCs) of our region. In Geelong we have three bioregions which contain 42 EVCs of which 4 are extinct, 15 are endangered, 4 are rare, 12 are vulnerable and 6 are of least concern.

Mark continued to highlight how the story gets worse when you look at the tiny area covered by the rare EVCs. He explained how EVCs are used by the Department of Sustainability and Environment (DSE) to broadly classify native vegetation types. The official definition of an EVC is: 'an aggregation of floristic communities that are defined by a combination of floristics, life forms and position in the landscape and an inferred fidelity to a particular environment'. Mark also enlightened us on Floristic Vegetation Classes (FVCs), which is

another more detailed approach to vegetation classification. For example, the majority of the Bellarine Peninsula is composed of the EVC Grassy Woodland; however, the FVCs this EVC would be broken down to include Redgum Woodland, Manna Gum Woodland, Yellow Gum Woodland and Swamp Gum Woodland. Consequently, Mark pointed out that although it is good to have the broad overview of EVCs, it is also important that we don't lose the more precise interpretation of information.

Mark discussed the magnitude of the Native Vegetation Framework which was created in 2002 by the state government. Its primary goal is to create a reversal of the long term decline in extent and quality of native vegetation; however, the operational guidelines has unfortunately not yet been approved by the Minister for Environment Mr John Thwaites. Consequently, local governmental authorities and developers have no power to put this essential framework into action.

Mark also explained about the relatively new concept of a 'habitat hectare', which is a site-based measure of the quality and quantity of native vegetation. This is done by numerically scoring the remnant patch on numerous standard attributes and comparing the overall score to a benchmark of the particular EVC in that region. This information can be accessed over the internet, together with an EVC status and this is crucial to whether that vegetation can be protected or cleared. Mark stressed how the Framework gives a pretty solid basis to protect vegetation, and therefore it is essential that the guidelines are approved and implemented. He also highlighted that the system is very broad and still needs work, particularly when vegetation types do not quite match up to the benchmark and are therefore scored lower and given less protection.

Many thanks to Leon and Mark for the intriguing talks.



This Month

...Joe Hubbard

As I keep saying, you don't know what will turn up! Wasn't it exciting to have geckoes and ants as lead stories in the April Geelong Naturalist? I would say that Dick and Shirley Southcombe would have provided an attractive habitat for the geckoes—and the moral to this you know! And, of course, those who campaigned to protect some of the ant and butterfly habitat had their actions vindicated in the best of ways. As I write this I'm distracted by two Eastern Spinebills feeding on the large blue bells of a *Campanula*. These are one of several bird species you'd expect to see in your urban garden from now on and right through winter. And so the year rolls on full of interest, excitement, and, yes, predictability. So let's roll with it—you know about the unexpected—and there's always something to look forward to.

Doctor Egret I presume

Lovely Banks 3-5-04

In the mist of early morning, Cattle Egrets stood around in little groups, hunched up, with their wings in their pockets. Others, early starters, were spread across the field looking for breakfast. It was comical the way a hunched up group (like white-coated doctors around a patient) were standing around a cow lying down—no doubt waiting for it to get up to assist them in their quest for food. The beast soon obliged, and after a quick survey of where it had lain, her entourage followed. There must have been in excess of 100 Egrets here—my first sighting for the season.

Now you see it!

Newtown 5-5-04

There were no alarm calls from the New Holland Honeyeaters to greet the White (Grey) Goshawk's arrival. From its high perch in the Poplar it overlooked many backyards and front gardens. It must have come in by the back door! Faster than this thought it dropped into a 45° stoop showing extraordinary acceleration. Wanting to see the result I dashed up to the back fence, climbed up, looked over, but found nothing. Couldn't believe it! A few minutes later, the two resident Ravens (they nest in the Poplar) swooped into next door's garden and harassed the Goshawk into flight, still clutching its victim (unidentified).

From a Black Wattle

Bannockburn 5-5-04

A small flock of Varied Sittella, in their inimitable way, worked their way downwards through the Black Wattles. With their sharp musical two-note calls, Pardalotes were more often heard than seen in these same trees. Close by, silent and unobtrusive, several Yellow Robins went about their business in a small thicket of Hedge Wattle. Another participant was an all grey female Golden Whistler. From a venerable and imposing Red Gum a plaintive 'Few-ee Fewee' led Val to find a Crested Shrike-tit. From time to time you come across congregations of bush birds—this was one of them.

Green, Blue and the rare—mallee

Kamarooka State Park 27-5-04

Apparently remnant northern plains species can be found here—but not much we could identify. I believe we found the Grey Mulga, a rounded shrubby wattle, and Weeping Pittosporums covered with orange fruits. Where we entered the road was lined with mallee gums and one species was flowering. Flowers often mean feeding birds and so we stopped to investigate. The trees were full of bird calls and as it turned out mainly Yellow-plumed Honeyeaters.

To get you going...

Cattle Egrets—always associated with pastures and cattle but flocks can sometimes be seen at Jerringot and roosting at Balyang. (Melways 451 F8) Would you believe! Just finished writing this, stepped outside to enjoy a wine and evening, to see three Cattle Egrets flying in a direct line to Balyang.

Grey Goshawk—uncommon but a few regular visitors in the cooler months. Skulks but easier to see than some because of its white plumage.

Bannockburn—small area of bush accessed via gate on Shelford Road just about opposite Brislanes Road. Vicroads 93 D2 (near the P on the map). After this you continue on, then right into Stephens Road (close by!) next to golf course—Yellow Gum bushland. Patrol the boundary fence between bushland and Barwon Water property. During winter months check for robins.

Kamarooka State Park (Vicroads 44 H2) 30 km north of Bendigo. Day trip possible—take two days for comfort! We took the East Kamarooka Road. Some roads and tracks could be dry-weather only! We saw Hooded Robins and Crested Bellbirds. Patches of mallee scrub and open woodlands of Grey Box and Yellow Gum.

You Yangs

After warring with Boneseed relax with some birdwatching in the East Paddock. This is the open area on the left just after you pass Branding Yard Road. Good place for Flame Robins and there are sometimes Southern Whitefaces among a flock of ground feeding Yellow-rumped Thornbills.

And you know what I'm going to say—(I've pinched that from Peter!)—

Cheers!



Reminder: annual fees are now due

Birds and Boats in Norway

Bird Group Report 15 March 2005

...Marilyn Hewish

In March 2005, I spoke to the Bird Group about a boat trip which Dean and I took down the coast of Norway in September 2003. This was on the Coastal Express, a regular cargo, postal and passenger service initiated in the late 1800s to service the towns along the rugged Norwegian coast. A fleet of ships connects Kirkenes in the north with Bergen in the south over a trip of six days. Although the service was not designed for tourists (no pool, no floor-shows, definitely no Bingo!), they discovered it early in its history. This route along one of the world's most beautiful coastlines is now renowned for its stunning scenery of mountains, fjords, islands and seascapes. An added attraction is the chance to travel well above the Arctic Circle. Approximately one third of Norway is in the Arctic Zone. It remains habitable only because of the warming influence of the Gulf Stream.

We began by flying to Kirkenes in northern Norway, the starting point for the boat journey and only a few kilometres from the Russian border. One step off the plane, and we recognised the unmistakable touch of an Arctic wind, almost burning the skin wherever it was exposed. The town was reasonably small and had the feeling of frontier-living, clinging onto the shore in a hostile landscape of grey granite boulders, stunted bare brown birch trees, and a cold grey sea. We were so far north that the sun stayed low to the horizon. The light was always dim and tinged with golden sunset colours, we cast long shadows even at noon, and twilight was prolonged over hours. The window of our room at the Rica Hotel faced due north up Varanger Fjord, a view worth a million dollars.

Considering the bleakness of the surroundings, the birding was remarkably productive. A peninsula enclosed a bay with mudflats, a rarity in Norway, and turbulent water in a strait offshore attracted feeding flocks of eiders, mergansers, gulls and cormorants. Flocks of land birds moved through the birch forests to mark the migration season, with thrushes such as Redwings and Fieldfares being particularly common. I saw a Lesser Spotted Woodpecker and it turned out to be the first record for Kirkenes. Luckily I saw it from about two metres and for several minutes, when it flew in to a birch tree and started hammering on the trunk. I sent my drawings and description to the Norwegian birding website as confirmation. Birding in the north during the migration seasons often turns up the unexpected.

Perhaps the greatest excitement of the trip came from our sightings of the Northern Lights almost directly above us for five nights running. We saw them first from our hotel room window in Kirkenes. We periodically checked the sky in the early part of the night—possibly something there, perhaps wishful thinking. But when I pulled the curtains aside at midnight, there were curtains in the sky too. Do you think Dean woke up in a flash when I shouted, "Aurora"? Every night we saw at least a broad green glow in the sky with occasional searchlight-like

beams, but the greatest display was over Baatsfjord north of Kirkenes. Northern Norway is directly below the circle around the north magnetic pole where particles from the sun stream down the earth's magnetic lines of force and stimulate the molecules of the upper atmosphere to glow. There were green rippling curtains trimmed with red, bright white streaks like meteor trails, and multiple broad bands arching over our heads and breaking up into vivid green swirling congealed blobs. Photographs can't do justice to the dynamic nature of the display, fading and growing and always changing ("Wow! Look over there!").

Over the course of the trip, we developed strategies for bird-watching from the boat. Despite the cold, Dean and I spent as many daylight hours as possible on deck. It was not possible to bird-watch from inside—the windows were coated with dirty spray. Life on deck required some stamina, as it was often extremely cold and exposed to the wind. One day, we spent five hours on deck at zero degrees Celsius. Although we had lost the feeling in our feet, we couldn't tear ourselves away from the sunset. We soon noticed that we were in an exclusive group of about 15 people who stayed on deck from dawn to dusk. They were, like us, addicted to the scenery and fresh (!!!) air (but they were not bird-watchers). We were not masochists, however. Every sheltered nook and cranny on deck had someone hiding away in it. I found a good spot by a warm-air vent from the kitchen—very comfortable if I ignored the fishy smells.

I stood at one side of the ship and Dean on the other, and we called to each other when birds appeared. There were some speed records set for crossing a ship deck during exciting moments. This sea-watch required concentration, as the birds came infrequently and slipped by so fast. We were exhausted by the end of each day. Late in the journey, we felt that our skills in intercepting flying birds in the binoculars had improved remarkably. I didn't consult the field guide on deck. No time. I watched and memorised features while the birds were in view, and then drew quick sketches. We missed some identifications in the first few days, but it was like an immersion course and we learnt fast.

Day 1 of the boat trip: We enjoyed a magnificent lunch aboard. The food throughout the trip was delicious and seafood was a feature. On leaving port, we sailed north up Varanger Fjord, encountering bumpy seas, snow squalls, and gulls and Fulmars beating against the wind and skimming the white-caps. Flocks of Red-breasted Mergansers took off ahead of the ship and we made our first attempts to identify distant unfamiliar birds in flight from a moving ship. Purple Sandpipers on the wharf at Vardoe were fortunately on dry land. I made a mad dash between cargo-loading cranes and containers and across a construction site to see them up close, while the other passengers made a tour of a historical fort. My priorities were 'birds first'. The scenery was treeless Arctic tundra.

Continued next page...

The cliffs fringing the sea-channels were steep and rose to a high plateau, but the contours were softened by scooped-out valleys, expanses of rounded purple-grey granite, a soft cover of orange and brown heather like a draped blanket, and innumerable waterfalls glistening like silver threads. That night, as we sailed along the northern Norwegian coast, Dean set his alarm for 2 am, and went on deck to log on the GPS our northernmost point during the trip, 71 degrees north. I stayed in bed.

Day 2: Over the course of the day, the scenery changed from tundra to spectacular mountain ranges with vertical cliffs, jagged black peaks, snow and swirling clouds. As we travelled along a strait between the mainland and a large island, we found ourselves in the middle of a massed bird migration. Thousands of Kittiwakes worked their way south, spread evenly across the strait as far we could see, and flying in a direct and purposeful manner low over the water. They continued to pass the ship over several hours. Common Eiders, cormorants, Gannets and gulls were scattered among the flocks, also working south. Three waders flew beside the ship for just long enough for me to get the binoculars onto them. Luckily, they were the only waders I could possibly have identified under those conditions: Redshanks have distinctive white rumps and wide white trailing edges on the wings. That evening we sailed into Oeksfjord in a matchless setting: mountains, snow, fjord and sea shining gold and pink in the light of the setting sun. A Golden Eagle flying high over the fjord provided the icing on the cake.

Day 3: The highlight of this journey for us was the trip through the Lofoten Islands. There the narrow passages between the islands are bounded by towering mountains rising out of the sea, and we were fortunate to have a perfect sunny day, sparkling snow from recent falls, and water like ruffled silver silk to add to the view. Clearly migrating birds also enjoyed the shelter of the narrow sea-passages running roughly north-south in the direction of their movement. We saw Kittiwakes, gulls, Arctic Jaegers, Arctic Terns, and members of the Auk family such as Common and Black Guillemots. As we sailed into the harbour at Stokmarknes, we passed through flocks of small black-and-white birds scattered across the water, the birds always too distant and the boat too speedy for a perfect view (where is the emergency cord). But luckily, between us we were able to piece together a description, and they were Razorbills, also members of the Auk family (identified by bill shape and a white patch behind the eye). We waited impatiently for our ship to sail out of the harbour so we could have a second look, but when it did, the birds were gone—they were after all on migration and couldn't wait around for bird-watchers. In the Lofoten Islands, we finally saw White-tailed Eagles, the common sea-eagles of Norway.

Day 4: On this day, we crossed the Arctic Circle, marked by a metal globe on an island. The scenery was by this time less forbidding, the mountains more rounded and the snow confined to the very tops of the peaks. We encountered our first extensive pine forests and green in the landscape. Scenery highlights were the Seven Sisters, a range dissected into multiple peaks by

high glacial valleys, and Torghatten, a mountain with a view of the sky through a natural hole half way up. Birds were scarcer than on previous days. Flocks of Kittiwakes often signalled the appearance of other birds, all migrating together or concentrating around a rich feeding patch. A Yellow-billed Diver was identified by its large size and pale colouring. This is the rarest of the four Divers in Norway. Finally we saw Puffins, taking off from the water and flying across the bows of the ship. They hardly looked airworthy, with their stubby bodies, small wings, and clumsy tail-down attitude in flight. But those small wings beat very fast, and once airborne the birds quickly moved out of sight. In port, Barn Swallows occurred in large flocks, probably also on migration.

Day 5: The shoreline scenery was generally of rounded hills, although we could see some distant snowy peaks further inland. Velvet Scoters and Shelducks flew south, and Red-necked and Little Grebes rested on the water. Several European ducks and grebes migrate over the sea, even though they prefer inland wetlands during the main spring-summer season. They were all new birds for the trip. The Shelducks have black and white plumage, chestnut breast-bands and bright red bills—very striking in the light of the setting sun. At Kristiansund, it was positively warm (10 degrees). In Romsdalsfjord, a magnificent snow-capped range loomed over us, the snow catching just enough light to be visible in the gathering evening gloom. We were finally too far south for the Northern Lights.

Day 6: For the last morning of the trip, we sailed south to Bergen. It was dull, grey, foggy and raining. Bergen is renowned as a wet place.

This was not the usual kind of bird-watching trip, where we aim for a close and prolonged view of the birds. It was however fascinating for the challenge of rapid-fire bird observation and identification, developing by the end into an almost instinctive recognition of birds. And we will always treasure the memory of being within and part of that massive southwards migration, in which northern European birds flee the approaching winter each year.



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Bird Observations March 2005

What a great month this has been for watching birds in the Geelong Region. The autumnal migrations are now well underway, but some of the 'arrivals' have turned up before the 'departures' have gone. Many waders seem to have stayed later this year, with 4000 still present in the Barwon Estuary on the 17 April. Nearly all Sharp-tailed Sandpipers depart for northern regions by the end of March in most years, but they were still being seen in the second week of April, well after the arrival of the New Zealand visitors (Double-banded Plovers). Flame Robins, Yellow-faced Honeyeaters and the Tasmanian race of the Grey Fantail have all been passing through. Last month, a single Fork-tailed Swift was noted; this month they have been seen in large numbers totalling several thousand birds. It was great to see the arrival of the swifts after many years of few reports in the Geelong area. First return records of Swift Parrots were reported in the first week of April. Keep your ears open and try and hear their loud, distinctive call over the next few months. Lake Lorne continues to provide amazing records. Large numbers of Freckled Duck have been present at this urban wetland for several months. Now we have breeding records of three different species of cormorant, Little Pied, Little Black plus Great, all of which were nesting at the lake last month. Great Cormorants have rarely nested in the Geelong area. Another astonishing wetland sight was the flocks of Banded Stilts and Red-necked Avocets that were massed in the Moolap Saltworks. Vast numbers were feeding there during the first week of April. The exposed mud at Duck Island was the site where three Lewin's Rails were observed. These elusive birds were very cooperative and moved out from the cover of the glasswort to give good views. ... *Barry Lingham*

Don't forget to pass on interesting sightings directly to Barry for inclusion on the website so we can all find out what is happening.

Observers were: BA_t, Bryant Attwood; BellBOCA; BL, Barry Lingham; BL_a, Brian Latter; CM_o, Craig Morley; DH_e, Dean Hewish; GM_c, Gordon McCarthy; GT, Graeme Tribe; HB, Hans Beste; JB_t, Judy Beste; JCo, Joan Cohen; JN, John Newman; MH_b, Maarten Holzenbosch; MH_e, Marilyn Hewish; RG_a, Rob Ganly; RM_c, Rob Mackenzie; TFI, Tom Fletcher; TP, Trevor Pescott; VC, Vernon Cohen

Species	Number	Date	Comments	Observer
Freckled Duck	230	2/4	<u>Lake Lorne, Drysdale</u> , most out on the open water.	RMc
Little Pied Cormorant	Present	18/3	<u>Lake Lorne</u> , nesting colony on the island.	TFI, GMc
Little Black Cormorant	Present	18/3	<u>Lake Lorne</u> , nesting colony on the island.	TFI, GMc
Great Cormorant	1	18/3	<u>Lake Lorne</u> , a bird sitting on nest.	TFI, GMc
	1	31/3	<u>Lake Lorne, Drysdale</u> , a bird sitting on a bulky nest 1.5 m above water on the remains of a dead tree in an exposed position in the centre of the lake. A rare record for Geelong. Three large nestlings 21/4.	RMc
Grey Goshawk	1	1/2	<u>Ocean Grove</u> , a white phase male seen at Woodlands Estate at 1715. Also seen 9/3, and on 8/4.	TFI, PF
	3	25/3	<u>Deviation Hill, Newtown</u> , circling high.	BA _t
Buff-banded Rail	4	5/4	<u>Duck Island</u> , emerging from Glasswort <i>Sclerostegia sp.</i> to take small crabs from beach, and darting back to cover.	RMc, DH _e , MH _e
Lewin's Rail	3	5/4	<u>Duck Island</u> , emerging from Glasswort <i>Sclerostegia sp.</i> to take small crabs from beach, and darting back to cover.	RMc, DH _e , MH _e
Eastern Curlew	6	5/4	<u>Duck Island area</u> , feeding on sand/mud flats.	RMc, DH _e , MH _e
	3	12/4	<u>Point Henry</u> , flew NE past the point.	RMc
Marsh Sandpiper	25	25/3	<u>Moolap Saltworks</u>	BL
Common Greenshank	28	5/4	<u>Duck Island area</u> , feeding on sand/mud flats.	RMc, DH _e , MH _e
	33	12/4	<u>Point Henry</u> , along W shore.	RMc
Common Sandpiper	1	3/2	<u>Barwon River estuary, Ocean Grove</u> , on mud flats adjoining boat launching ramp.	TFI, PF
Ruddy Turnstone	22	5/4	<u>Duck Island area</u> , feeding on sand/mud flats.	RMc, DH _e , MH _e
Red Knot	4	5/4	<u>Duck Island area</u> , feeding on sand/mud flats.	RMc, DH _e , MH _e
Red-necked Stint	200+	3/4	<u>Lake Modewarre</u> , with Double-banded Plovers and Red-capped Plovers. Many in breeding plumage.	JN
	450	5/4	<u>Duck Island area</u> , feeding on sand/mud flats.	RMc, DH _e , MH _e
	270	7/4	<u>Black Rocks</u> , many in or near breeding plumage.	RMc
Sharp-tailed Sandpiper	2	3/4	<u>Lake Modewarre</u> , one in breeding plumage.	JN
	1	5/4	<u>Duck Island area</u> , feeding on sand/mud flats.	RMc, DH _e , MH _e
Curlew Sandpiper	18	5/4	<u>Duck Island area</u> , 2 birds in or near breeding plumage.	RMc, DH _e , MH _e
Banded Stilt	2000+	25/3	<u>Moolap Saltworks</u> with Red-necked Avocets.	BL
	3000+	26/3	<u>Moolap Saltworks</u>	BA _t
Red-necked Avocet	500+	26/3	<u>Moolap Saltworks</u> . 400± on 8/4	BA _t
	500	1/4	<u>Moolap Saltworks</u>	GMc
Banded Stilts/Red-necked Avocets	6000±	7/4	<u>Moolap Saltworks</u>	GMc, BL
Grey Plover	1	5/4	<u>Duck Island area</u> , feeding on sand/mud flats.	RMc, DH _e , MH _e
Red-capped Plover	1	4/3	<u>Fyansford Common</u> . Still present 7/3.	RG _a
	50+	3/4	<u>Lake Modewarre</u> , many in breeding plumage.	JN
	8	7/4	<u>Point Henry wetlands</u> , including 2 adults with 2 chicks.	RG _a

Species	Number	Date	Comments	Observer
Double-banded Plover	35+	3/4	<u>Lake Modewarre</u> , many in breeding plumage.	JN
	14	5/4	<u>Duck Island area</u> , feeding on sand/mud flats.	RMc, DHe, MHe
	31	7/4	<u>Black Rocks</u> , on beach.	RMc
Black-fronted Dotterel	13	1/3	<u>Fyansford Common</u>	RGa
Hooded Plover	2	1/2	<u>Lake Victoria E.</u> Mature plumage.	TFI, MHb
	3	7/4	<u>Black Rocks</u> , 2 adults and an immature.	RMc
Red-kneed Dotterel	3	5/4	<u>Hospital Lake</u> , in flooded paddock off Lake Road.	BL
Wader sp.	4000	17/4	<u>Barwon Estuary</u> , 16 with orange flags. Late this year.	GT
Arctic Jaeger	2	27/3	<u>Avalon Beach</u> , harassing Silver Gulls. Seen on three different occasions up to 10/4 at Avalon Beach and Limeburners Bay spectacularly harassing Silver Gulls and catching the disgorged food before hitting the water! On 12/4 they were viewed for over 1½ hours at Limeburners Bay with over 1000 Silver Gulls at low tide. Generally one would work a gull raft inside the bay while the other worked those at the Spit. Approximately every 5 minutes they would come together with a duel effort, one harassing and the other waiting to receive the meal.	RGa, VC, JCo
Pomarine Jaeger	1	6/3	<u>Port Phillip Bay E of Queenscliff</u> , a light phase bird.	HB, JBt
Swift Parrot	4	5/4	<u>Leopold</u>	RMc
	1	6/4	<u>Queens Park</u> , near 4th Fairway	CMo
	2	16/4	<u>Fairmont Road, Newtown</u>	CMo
White-throated Needletail	5	12/3	<u>Ocean Grove</u>	TFI, PF
	6+	1/4	<u>Newtown/Highton</u> around 1700.	CMo
	Several	2/4	<u>Barwon Estuary</u> , flying NE with Fork-tailed Swifts.	GT
Fork-tailed Swift	20+	2/4	<u>Ocean Grove area</u>	BL
	25+	31/3	<u>Buckley Falls Park</u>	BAt
	386	1/4	<u>Leopold</u>	RMc
	50±	2/4	<u>Wallington</u>	RMc
	100+	2/4	<u>Newtown</u>	CMo
	30+	2/4	<u>Barwon Estuary</u>	GT
	250+	2/4	<u>Gherang</u>	JN
	200+	2/4	<u>Ceres</u>	JN
	1000s	3/4	<u>Gnarwarre Road, Gnarwarre</u>	BAt
	50-60	3/4	<u>Bacchus Marsh</u>	DHe, MHe
1000+	3/4	<u>Barrabool Hills</u>	RGa	
Rainbow Bee-eater	4+	22/2	<u>Batesford</u> , on private property, with a fortuitous apiarist beehive colony nearby!	RGa
	1	23/3	<u>You Yangs</u> , heard calling near the Information Centre	TFI, GMc
Southern Whiteface	3	15/4	<u>Sandy Creek Road, just S of Granite Road</u> . Bathing in a rainpuddle in farmland with Zebra Finches and Red-rumped Parrots.	MHe, DHe
Red Wattlebird	12	7/4	<u>Connewarre</u> , a flock flying S near Tait Point.	RMc
Yellow-faced Honeyeater	43	5/4	<u>Duck Island</u> . A flock of 5 birds flew in from E and disappeared, flocks of 8 and 30 flew S.	RMc, DHe, MHe
	Present	5/4	<u>Newtown</u> , small numbers, in groups up to 12, drifting WNW between 0900 and 1630.	CMo
	3	6/4	<u>Ocean Grove Nature Reserve</u> . Autumn return.	BL, BellBOCA
	32	12/4	<u>Point Henry</u> , three flocks (25, 6, 1) flew S along edge of cliff on W side.	RMc
	1000+	17/4	<u>Gnarwarre Road, Gnarwarre</u> . Flying S to N between 0830 and 0945, passing through in groups of 100+, pausing briefly on eucalypts before forming up and heading N.	BAt
	15±	21/4	<u>Buckley Falls Park</u> , flew NW from eucalypts.	BAt
Flame Robin	2	5/4	<u>Duck Island</u> , a fully-coloured male and a brown bird.	RMc, DHe, MHe
	6+	6/4	<u>Ocean Grove Nature Reserve</u>	BL, BellBOCA
	2	15/4	<u>Queenscliff</u> , near Black Lighthouse, both males.	BLa
	1	16/4	<u>Mount Duneed</u> , a brown bird. Also 20/4.	BAt
Pink Robin	1	30/3	<u>Ocean Grove Nature Reserve</u> , a brown bird.	GMc
	1	31/3	<u>Batesford</u>	RGa
Rufous Whistler	1	23/3	<u>You Yangs</u> , a female at Big Rock.	TFI, GMc
Restless Flycatcher	2	17/4	<u>Gnarwarre Road, Gnarwarre</u> . Seen in same area in 2004.	BAt
Rufous Fantail	1	12/4	<u>Ocean Grove Nature Reserve</u>	TFI, GMc
Grey Fantail	1	5/4	<u>Duck Island, Swan Bay</u> , unusually shy. Identified by MHe as a Tasmanian subspecies <i>albiscapa</i> —very dark with narrow white margins to tail and rich-buff underparts.	RMc, DHe, MHe
	5+	11/4	<u>Ocean Grove Nature Reserve</u> . Tasmanian subspecies.	BL
House Crow	1	31/3	<u>Queenscliff</u>	TP
Diamond Firetail	38	25/3	<u>You Yangs</u> , 26 scattered along Hovells Creek and 12 at Eastern Paddock. Total of 26 on 15/4.	MHe, DHe

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Coming Events

MAY 2005	JUNE 2005
3 General Meeting: Kate Blood. 'Weeds'	7 General Meeting: Brian Ibbotson. 'Digital cameras'
10 Plant Group: Eucalypts around Geelong	14 Plant Group
15 Excursion: You Yangs Leader: Trevor Pescott	16 Bird Group
19 Bird Group: Craig Morley. 'Birds from Here to There—Migration'	17 Mid-week Bird Group Excursion: Little River Earth Sanctuary. Leader: Melissa Doherty
19 Mid-week Bird Group Excursion: Long Forest. Leader: Marilyn Hewish	19 Excursion: Edwards Point
28–29 Boneseed pull—You Yangs Leaders: Rob Beardsley/Claire & Dennis Greenwell	
31 Mammal Group: Contact Trevor Pescott	

***The closing date for the next magazine will be Monday evening, 30 May 2005,
Early lodgement of articles (small & large) would be a great help—late copy may not be accepted.
Hard copy or diskette (saved as a Word document or .rtf please)
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For further details phone Lorraine Phelan: 5243 0636***

The latest editions of the following references are recommended:

- Birds:** Christidis, L. & Boles, W. (1994) *The Taxonomy and Species of Birds of Australia and its Territories*, Royal Ornithologist Union Monograph 2, RAOU, Melbourne.
- Invertebrates:** CSIRO (1991) *The Insects of Australia: A Textbook for Students & Research Workers*, Vol 1 & 2, MUP, Melbourne.
- Mammals:** Menkhorst, P.W. (ed.) (1995) *A Field Guide to the Mammals of Australia*, Oxford University Press, South Melbourne.
- Plants:** Ross, J.H. & Walsh, N.G. (eds) (2003) *A Census of the Vascular Plants of Victoria*, Royal Botanic Gardens of Victoria, Melbourne.
- Reptiles and Amphibians:** Cogger, H. (1992) *Reptiles and Amphibians of Australia*, Reed Books, Chatswood, NSW.

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Meetings start at 8.00 pm at:

Geelong Botanic Gardens Friends Room.
Entrance is at the intersection of Holt Rd and Eastern Park Circuit in Eastern Park.
[Melway Map 452 G4]

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