

January 1995 Number 277

Editor Phil Collier

The Tasmanian Field Naturalists Club Inc. encourages the study of natural history and supports conservation. People with a range of backgrounds and knowledge are welcome as members.

Contact Don Hird (ph 34 4293) for more information, or write to GPO Box 68A, Hobart, 7001.

Programme

General meetings start at 7:45pm on the first Thursday of the month in the Life Science Building at the University of Tasmania. *Outings are usually held on the following Saturday meeting at 10am outside the main entrance to the Museum in Macquarie Street.*

- 2 Feb** Peter Last will talk about sharks and rays of Australia.
- 4 Feb** *Weekend outing to Ellendale. More details at the February meeting.*
- 2 Mar** Annual General Meeting including the Club's annual reports. We will also appoint the new committee by voting if necessary. Please consider whether you have time to devote to the committee this year; a nomination form is included. There's even a chance for stardom as the President is retiring. As usual entertainment will be a Presidential address. As always, it will be interesting to see what subject Don tackles this year.
- 4 Mar** *8am start. An outing to Porters Hill to view the study site of Don's research on potoroos. Don will demonstrate the new traps, and no doubt produce a potoroo for our inspection.*
- Late Mar** *Federation of Field Naturalists of Tasmania meeting hosted by the Devonport Club. Full details available at meetings or from Don Hird.*
- 6 Apr** Sally Bryant from the Parks and Wildlife Service will speak about the threatened species program in New Zealand. She will discuss the lessons we can learn on how they manage rare birds, beetles and plants.
- 8 Apr** *8am start. A visit to the south coast of Tasmania from Cockle Creek to South Cape Bay. A walk of about 15km passing through a variety of plant communities to a barren headland and sandy beach. The track has been upgraded to a good standard.*
- 4 May** Dick Martin, Executive Officer from the CSIRO Centre for Research on Introduced Marine Pests will speak on the introduction of marine pests.

From the editor

This is the last edition of the *Bulletin* that I will edit, for a while at least. I've enjoyed now two spells as editor and now I want to move on to new challenges. I wish the new editor as much fun as I've had putting the program and articles into some sort of coherent form!

Thanks to Rob Valentine and the other trustees of the Tasmanian Museum and Art Gallery for their providing such an eminently suitable venue.

Butterflies of Tasmania represents an enthusiasm, not a strictly commercial or utilitarian venture. Tasmanian Field Naturalists' Club, a community group founded in 1904, is the publisher of *Butterflies*. As background to this production I will briefly expand on Tas.

FieldNats activities and how we see our role in the community. Our three broad areas of activity inter-mesh with those of museums, education, and tourism features for which Tasmania is renowned.

Field study activities are exemplified by visits to Schouten Island in 1925 and again in 1993. The 1925 Easter camp over 5 days, involved leaving Hobart by chartered steamer *Koomeela* at midnight. The fifty men women and children briefly visited Maria Island en route, and may well have been Errol Flynn; we still have swashbuckling young members as well as sprightly older ones. The published report describes "boatload after boatload of impedimenta coming ashore ..." as well as accounts of geology, botany and general nature notes. Our 1993 visit of seven adults reported new vertebrate and plant records and survey results including sightings of Hooded Plover, a vulnerable beach wading bird, to supplement a wide-ranging census. Although not all of our 11 annual excursions are as elaborate, information obtained adds to our knowledge of our natural

heritage.

Publishing in natural history is another area of activity with books like *Tasmanian Birds* and *Butterflies of Tasmania*. Our *Tasmanian Naturalist* journal is still in print and relevant after 90 years.

Conservation is our third area of activity and that which has increased most in public prominence. While we don't seek headlines in an area often seen as beset with ritual conflict, we have specific concern in many areas. Recent examples include the following

- Access of motor vehicles to beaches; Tasmania's new Draft Coastal Policy includes no acknowledgement of a problem recognised by prohibition in most of Australia; - such issues shouldn't need to be debated anew (or ignored).
- *Rare & Endangered* species legislation; dilution of the Australian Standard is evident in Tasmania; - despite firm but polite request we haven't been able to obtain explanation.
- Land clearance; we have functioning, accepted models interstate, but despite losing 6000 Ha. per annum, much occurring in the least protected habitat types, on it goes. A paradox of modern technology appears where such activity is relatively easily monitored, but other technologies allow ever more rapid environmental change.

We aim to carefully participate in the conservation debate, and to record our concerns. Conservation issues could easily consume all of our energies; careful prioritisation and consideration is necessary. Tasmania is famed

for its natural heritage; our standard of care in this regard says much about our wider reputation and culture.

In summary, I know that *Butterflies* is no recent flutter. I recall discussing the idea with Peter on a Hastings cave-fauna trip some 10 years ago, before either of us were parents of junior Tas FieldNats. Much credit is due to Peter and Julie, also to others including those acknowledged in the book, in the background, and to members at large. Book publishing is new to the current generation of Tas. FieldNats, there has been much learning as we've gone along, but now have a result to be proud of.

This is the address by Don Hird at the launch of Butterflies of Tasmania on 30 November 1994. Don has edited it for publication here.

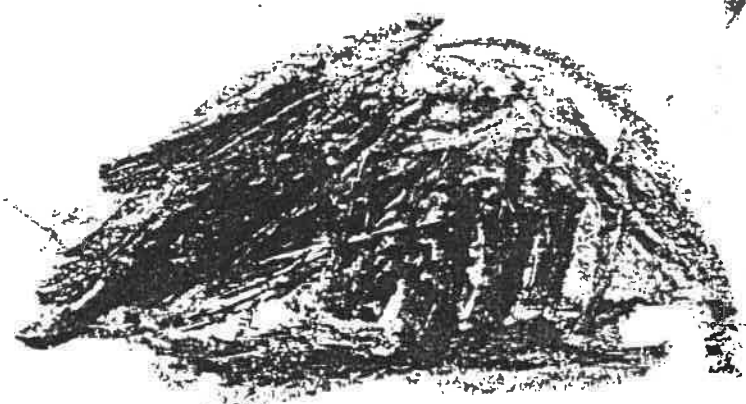



New Members

A special welcome to our new members Andrew Walsh and Amanda Fisher, Peauru and Kristine Tarts.

HOW THE PADAMELONS GOT THEIR FUR

There lived two pademelons.
One that lived on the plain and one
that lived in the hills. One that
was small and one that was big.



One day they had a moss fight
and it scraped against a rock and
came flying back to the
pademelons and that is how the
pademelons got their fur.



Hally

Reviews

Launch of *Butterflies of Tasmania*

Reviewed by Phil Collier

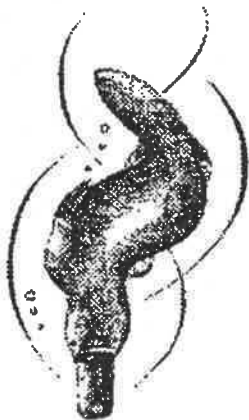
Butterflies of Tasmania was launched by the ABC broadcaster Robyn Williams on 29 November at the Tasmanian Museum and Art Gallery. This was an event that will be long remembered in the history of the Club. There were a good number of people in attendance.

The formal proceedings were chaired by Alderman Rob Valentine on behalf of the Trustees of the Museum. He first introduced our President, Don Hird, who explained the aims and activities of the Club. In such a forum Don couldn't resist also a swipe at the current conservation ethos in the State, notwithstanding the presence of the Minister for Parks, Wildlife and Heritage, Mr John Cleary.

Next to speak was Robyn Williams. Robyn entertained with a wide-ranging address including a eulogy to the energy, enthusiasm and talent of our artist, Julie Virtue. In conclusion Robyn formally launched the book *Butterflies of Tasmania*. Last to speak was Dr Peter McQuillan, the book's author, who spoke of the place of butterflies in the eyes and minds of people.

After the formal speeches, guests enjoyed supper provided by the members of the Club. Several members took the chance to speak personally with Robyn Williams, the Minister and of course Julie Virtue and Peter McQuillan. There was also a display of pinned butterflies and some of the original paintings.

Butterflies of Tasmania is now on sale for \$19.95 around town. It is also possible to buy greetings cards with lithographs of some butterflies, framed and numbered lithographs of some butterflies and even original artwork.



Gipsy Point Lodge

Hosts Alan Robertson and Susan Webb

Reviewed by Phil Collier

Last year we spent a week at Gipsy Point Lodge during their *Field Naturalists' Week*. The Lodge specialises in bird watchers, and the hosts are both keen and knowledgeable birdos. The field nats week has an additional focus on orchids and wildflowers.

The tariff of \$785 includes accommodation in two-bedded rooms at the lodge, all meals, prepared by an excellent chef, and trips out every day from Sunday to Saturday. The advertised guest leader was unavailable, but Clive and Fay Gordes were our orchid experts. They were only vaguely familiar with the general area as far as orchids were concerned, but were great enthusiasts and quite charming.

I was slightly disappointed with the orchids that we found, perhaps I was expecting too much. The highlights amongst the orchids were *Thelymitra x irregularis*, a beautiful hybrid between *T. carnea* and *T. ixioides*, a white form of *Calochilus robertsonii*, and *Caladenia tessellata*. Most other orchids we saw are fairly easily found in Tasmania. In total we saw 40 species and 10 species in the grounds of the lodge.

We also spent some time birding. There were a few highlights, including the elusive southern emu wren, crested shrike-tit, brush bronzewing (surprisingly common), 23 royal spoonbills, and good views of eastern whipbird. A Lewins rail appeared in the garden at breakfast time one day, but we were into the apricot muffins and missed it. We saw 87 species of bird for the week.

The Lodge is a very civilised way to enjoy a week in the bush. The Lodge runs several special weeks each year with the top birdos, for example Ken Simpson, Graeme Pizzey and Richard Jordon. Several weeks are nominated for outings with the Lodge hosts, but with no special guest leader.

The *Field Naturalists' Weeks* in 1995 are 8 to 14 October and 5 to 11 November. Phone Alan or Susan on 051 58 8205 for more details.

Summaries of recent news reports

Gilberts potoroo

A small marsupial thought extinct for 125 years has been found on Western Australia's southern coast. Researchers found the animal, Gilberts potoroo, recently in a nature reserve east of Albany, 400km south of Perth

The last recorded sighting of the animal was in the same area in 1869. Five of the marsupials—two adult males, a juvenile male and an adult female with a pouch young—were found alive in traps late last year.

Gilberts potoroo grow to about 30cm, weigh about 1kg, have rat-like tails, a snout and a furry coat of grey, reddish brown and black. They were first identified by Europeans in 1840. A search for the marsupials in 1975 didn't turn any up. The animals had probably existed in such small numbers they were not previously detected, but fox-baiting in recent years had allowed the colony to increase.

Wollemi Pines

Thirty-nine trees related to a species that existed 150 million years ago have been found west of Sydney. The trees were found in August in a remote deep gorge in the Blue Mountains at Wollemi National Park. The tree's home is a tiny 5,000m² grove of rain forest within the 500,000 hectare park. So far 23 adults and 16 juveniles have been found, making it also one of the world's rarest plants. The oldest tree is believed to be between 200 and 300 years old.

The trees have been named the Wollemi Pines. They are up to 40m tall and 3m in diameter and are covered in dense, waxy foliage with distinctive bubbly bark, which makes them look like they are coated with bubbly brown chocolate! "Wollemi" is an aboriginal word meaning "look round you".

The closest relatives of the Wollemi Pines died out in the Jurassic era 195-140 million years ago, and the Cretaceous era, 140-65 million years ago.

The Wollemi pine had been thought extinct for 150 million years and will be classified in new genus.

Once the Wollemi Pines would have covered vast areas of the world, but as the climate changed the few remaining trees survived only in this damp, protected gorge. This is a plant family that was widespread, including the northern hemisphere, before that great extinction, when we lost the dinosaurs. It's been in a very sheltered spot that's probably escaped fire for a very long time.

The Wollemi Pines were discovered by National Parks and Wildlife Service officer David Noble. He was exploring a gorge in the park and initially didn't think it was anything new, just a bit different. The Director of the Sydney Botanic Gardens, Carrick Chambers, said the only recent comparable discovery of its kind was made in 1944 when another prehistoric tree species was found in China.

Tasmanian Field Naturalists Club Inc. — Committee Nomination Form

I hereby propose _____ for the position of _____

Proposer _____ Signer _____
Signature Signature

I agree to stand for the above position _____
Signature Date

Positions on the committee: President, Vice-President, Treasurer, Secretary, Bulletin Editor, Naturalist Editor, Programme Officer, Librarian, and three committee members.

Bulletin of the Tasmanian Field Naturalists Club Inc.

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Program

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- 4 May Dick Martin, Executive Officer from CSIRO Centre for Research on Introduced Marine Pests, will speak on this current topic.
- 6 May 9 a.m.: A Marion Bay beach walk will follow the marine theme of the talk. We will be looking for beachwashed items of interest as well as regular denizens of Marion Bay.
- 1 June Dave Watts, well-known local wildlife photographer, will not only illustrate his craft but talk about expert tips and techniques which he clearly possesses.
- 3 June 9 a.m.: Don Hird will lead a walk to a feature known as Gumtop east of Lachlan in the Derwent Valley at the western end of the Wellington Range. Habitats include some similar to those on the more familiar "Hobart" face of Mt. Wellington, but in a more intact state. The area has recently yielded interesting mammal survey results and any further findings can be used to advocate a higher reserve status for the whole Wellington Range. Please Note -; the walking involved is not very far but is quite steep in places.
- 6 July Roger Buttermore, assistant curator of invertebrates at the museum, will speak about our recent but not entirely welcome colonists, Bumblebees.
- 8 July 10 a.m.: Bumblebees being in hibernation, we will use at our usual meeting place (Life Science Building at the University of Tasmania) together with sophisticated video equipment to view significant but small specimens of Kevin Bonham's landsnails. If you have other small specimens bring them along.
- 3 August Jill Hickey, Hobart City Council's Bushland Manager, will speak on local areas of interest and their conservation significance and management.
- 5 August 10 a.m.: Hobart boasts quite a range of natural and semi-natural bushland features such as The Domain, Knocklofty, Lambert / Skyline Park and on to (at present) Mt. Wellington itself. We will visit a range of these.

New Members A special welcome to Pam Coogan.

General News

New President and Committee changes. Congratulations to Patti Virtue, well known to active members, who is our new President. Sue Collier has returned to the committee as Vice-President. Jim Paterson has joined as a general committee member, while Phil Collier has taken leave of the committee for a year or so.

Survey Group Report

Mammal survey has recommenced with worthwhile results. A bulletin or two back, I wrote about an area at the western end of the Wellington range which looked interesting in terms of mammal signs, for being a habitat type perhaps poorly reserved, and for its aesthetic value. The local Parks ranger kindly allowed access through the locked gate which enabled us to deploy survey traps without carrying heavy gear too far.

A keen environmental studies student assisted with the field work and early results indicate a previously unreported habitat type for the vulnerable Eastern Barred Bandicoot. This animal, together with an abundance of eastern quolls and a potoroo, was caught in *Eucalyptus johnstonii* woodland with a shrubby understorey on poorly drained sandstone soils. Books will tell you that known habitat for the eastern Barred Bandicoot is "grassy areas usually associated with pasture and agricultural areas" or similar. This is the most pristine recorded habitat that I know of for the species; its last relic population on mainland Australia is near Hamilton in western Victoria where it lives in a rubbish tip and the habitat has been described as "abandoned car bodies"! Last year we also found them in another natural habitat, admittedly nearer disturbed areas, at Lambert Gully, Mt Nelson. The species is also poorly represented in reserves.

An interesting but less positive result was the absence of small (rat and mouse sized) mammals early in the survey program. Yet another type of result was apparent smokestains on a sandstone escarpment, possibly an indication of aboriginal occupation of an area that would have overlooked and enabled access to rich lowland foraging areas in the Lachlan and Derwent valleys. The results of all of these findings will appear in more detail later in the *Naturalist*.

The results will also enable us to advance the cause of upgrading the status of the Mt Wellington range from its current patchwork quilt of Council, Water Board and Lands administration to something more like (or actually) National Park. Previous reviews of the conservation and heritage values of the area have concentrated on published reports relating to the easily accessible and better known areas of our mountain, usually those close to the Mountain Road. Some of these have not been revised in over a century. These findings seem symptomatic of some of our poorly known habitats which haven't been systematically surveyed. They also represent a base on which further work can be undertaken.

Results such as this indicate the lead role we can play in adding to the detailed knowledge of our natural heritage. Results are not always as significant as these, and the field work can be time-consuming, but the overall result seems thoroughly worthwhile.

The Survey Group is active intermittently at the moment. We welcome visitors and new surveyors and observations (in writing please).

Don Hird, Survey Group Convener.

From the Younger Members

BY JOSEPH J. COLLINS

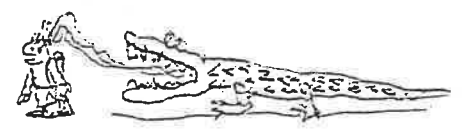


NATURALIST

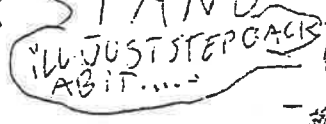
ANIMALS IN DANGER



TREES AND SHRUBS



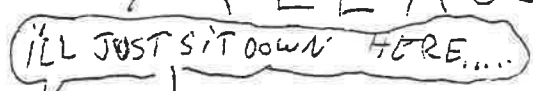
UNDERSTAND THE BUSH



RARE ANIMALS



ALL ABOUT THE ECO SYSTEM



LOTS OF FUN



INTERESTING

SAVE ENDANGERED SPECIES

TREE-MENDOUS



BUSH WALK



Conservation Lobbying Activities

Lake Pedder lives (if not breathes) after two decades. Our submission emphasised the irrecoverable loss of original biodiversity (scarcely mentioned elsewhere), and doubted the current priority of the drainage proposal. We also suggested that a fracas of the type for which Tasmania has become renowned would probably ensue. This latter suggestion at least seems utterly vindicated, with the public debate largely focussing on whether or not to beatify the platypus ! While platypus populations would almost certainly have been healthier in the mosaic of stream habitats in the original landscape, the issue shouldn't focus on one cute but abundant species. The core aim of modern conservation aims to keep representative samples of natural features, a concept the protagonists in this debate seem to have missed. The media are also apparently slow learners in this respect. Some of the cost estimates of the draining proposal remind one of the outrageous power demand projections used to "justify" the original and subsequent developments, although costs would undoubtedly be significant. Please ask if you would like to see our submission.

Another summer of ritual conflict over woodchip license issues was another issue in which we were less involved but nonetheless concerned. The credibility of most parties seemed to suffer yet again. Our view is essentially that some independent arbitration (eg federally mediated) is needed, partly because Australia as a whole seems to apply a higher environmental standard of care than Tasmania usually does and because the the exponents of natural resource exploitation shouldn't also be conservators of our natural heritage. The haste of the decision process and the representativeness and performance of the conservation advocates left much to be desired. Our view of representation has been that diversity amongst conservation groups is necessary, but that we would want to be recognised as an independent body. Strident groups have appointed themselves "the conservation movement" without consultation or agreement. Amongst their claims with which we have substantial disagreement is that conservation priorities are not an issue and that definitions (such as that of old growth forest) can be varied at will. Industry claims that Tasmania is well served for nature conservation are equally vapid. Meaningful dialogue would seem difficult in these circumstances. An aspect of the woodchip debate that seems underrated is that of end-use consumption. Newsprint is the main such product and its rampant and usually fleeting consumption indicates that the industry and consumers could bear more of the conservation cost of forest exploitation.

The "Road to Nowhere" seems little more than an act of spite and parochialism, if only in terms of road maintenance priority.

Ramsar Convention in Brisbane in March 1996.

Birdwatchers will know Ramsar as an important international convention involving agreements to protect wetland habitats. This sixth convention has been cited as "the most significant international environment conference ever to be held in Australia" (Senator the Hon. John Faulkner). Perhaps this will be an opportunity to promote the extensive wetland lagoon complex on the east coast of Flinders Island (in its entirety) as worthy of Ramsar status.

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- Thurs. 3 August 7.45p.m.: Jill Hickie will speak about her role as Hobart City Bushland Manager. She will outline the values of bushland remnants and aspects of their management.
- Sun. 6 August 10 a.m.: We will visit several of Hobart's Bushland Remnants, probably including Knockofty, Lambert Park (Mt. Nelson), and Truganinni Reserve. The excursion will be jointly lead by members with recent experience of and expertise in each of these areas.
- Sat. 19 August 7 p.m.: (Supplementary Excursion) Don Hird is taking the Friends of Knockofty spotlighting. Meet at the Knockofty carpark near the top of Forest Rd West Hobart. Bring a torch, warm clothing.
- Thurs. 7 September 7.45p.m.: Liz Turner (Curator of Invertebrates, Tas. museum and Art Gallery) will speak on the Biology of Mudflats.
- Sat. 9 September 10 a.m.: Outing to inspect examples and inhabitants of mudflats south of Hobart (kingston area).
- Thurs. 5 October 7.45 p.m.: Deidre Johnson will speak about her detailed mapping of Eucalypts in the Hobart area, and the factors associated with their distribution.
- Sun. 8 October 8 a.m.: South Cape Bay walk; this was scheduled but deferred earlier in the year due to very adverse weather. At this time of the year orchids will be on show. The whole walk is of medium standard, but without extensive climbing involved. A shorter version may also be available.
- Thurs. 2 November 7.45 p.m.: A speaker will give an illustrated talk about penguins (fairy penguins if possible but otherwise antarctic species).
- Sat. 4 November 6 p.m.: (Subject to confirmation in the next Bulletin). Meet at Marion Bay for a nocturnal excursion. Priscilla Park advises that the conjunction of moon, tides and seasonal animals makes this an ideal excursion to view and study such things as fairy penguins exchanging nest duty, feeding behavior and prey of Hooded Plover and Pied Oysercatchers, resident small mammals, just for a start!. The midnight feast and breakfast in the dunes are optional for the enthusiasts.
- December Weekend (8-10th) : Excursion to Launceston FieldNats' property Myrtle Bank, keep this in mind.

New Members A special welcome to Janet Fenton and family.

General News

The Committee has now met twice under our new President, Patti Virtue; we have developed an interesting and busy program.

Another item under development is a Conservation Policy or platform, currently being developed by Kevin Bonham and Don Hird. We plan to

release a draft for discussion later in the year, contact either of the above in the meantime if you would like to be involved throughout the process.

From this Bulletin we will be publishing more Excursion Reports in the Bulletin, this should enable them to be more available to members and encourage participants to contribute.

Survey Group Report

Field Survey Excursion

23-24 September 1995.

Conservation on private land is an important and current topic. Tasmania is yet to enact *Land for Wildlife* or similar programs which have become important national models in South Australia and Victoria.

Andrew Downie is a Derwent Valley farmer who has taken a leadership role in this context by, amongst other things, setting aside and fencing off some 240ha of dry sclerophyll (silver peppermint) woodland. Through the federal Save the Bush program the remnant vegetation has been assessed as having high conservation significance on a local, regional and statewide basis. Plant communities have been described and a flora compiled. Andrew has invited us to survey his block both for mammals and other natural features; Tas FieldNats and B.O.A.T. have previously surveyed birds on the site.

The property is Glen Elg, located some 10km south of Hamilton, adjacent to the Lyell Highway. The excursion will be overnight although anybody interested might also come for a day if preferred.

We have previously had an intermittently active survey group, somewhat subject to availability of equipment. Excursions and activities have largely focussed largely on mammal survey, but other natural history topics have also been explored and are no less important. Our Schouten Island excursion and report from 1993 is an example of our work.

By the September club meeting a map and timetable will be available from me. Camping equipment will be required for an overnight stay. New mammal surveyors will be welcome, as will suggestions for further activities. One possibility for the latter is a Parks interest in obtaining mammal survey data for the Southport Lagoon Reserve.

On a less optimistic note, we have again apparently missed a "Save the Bush" grant this year. This time its because we're deemed ineligible even though we came very close last year and had an enhanced case this year. We hope to obtain a grant to obtain our own mammal survey equipment.

Great Sassafrass Pollenation Mystery

At Bermuda Hill (July excursion) Sassafrass was in bud; it usually flowers in September / October. It is in an old Gondwanan family (Monimiaceae), and is quite widespread and common in cool temperate forests in southeastern Australia. Despite all of this, and its apparent "advertising" to attract pollinators, the responsible insects(?) are unknown. This would be a very worthwhile small project for anybody with the time and interest.

Outing Report: Bermuda Hill 8 July 1995

Kevin Bonham (leader)

Bermuda Hill is a mixed forest site in the Huon Valley, less than an hour's drive from Hobart (GR 918 320 Tasmapi Huon). It can be accessed via Bermuda Road which turns off Glen Huon Road about 3km NW of Glen Huon. Having first passed through this area in January, I suggested it for the July outing which was attended by a vigorous group of about 15 members.

We searched three sites - a very dense wet sclerophyll forest accessed via an old logging track, a more open area along the road with a higher ratio of rainforest plants, and, for contrast, a dry sclerophyll remnant near the Frying Pan Road junction. Although the dry site showed obvious damage from fires and weed invasion, the first two sites showed remarkably little impact from selective sawlogging and special timbers extraction early this century.

The mixed forest understorey included myrtle, sassafras, musk, dogwood, native pepper, laurel, manferns and occasional small celery-top pines. Surprisingly there was also something in flower with three helmet orchids (*Corybas diemenicus*) found at our lunch site.

Vertebrates included a wombat at the third site and a total of six froglets (*Crinia signifera*). The real highlight was the outstanding invertebrate fauna. The three velvetworms (one at each site) received the most attention - unfortunately none of us are competent to identify them at species level. Harvestmen were very well represented and included the largest specimens I have seen outside the north-west of Tasmania. Unusual lilac coloured isopods (slaters) and some scale insects on Myrtle (believed to be undescribed), as well as good selections of amphipods, spiders, earthworms and flatworms, a large carabid beetle, a very large centipede and a very energetic cricket were also seen. The oddity of the day was a strange pink wormlike animal that everted a part of its body to much greater than its normal length. It moved by extending a long sucker to grab hold of its destination, then dragging its body back around the sucker. It was

later determined to be a Nemertean, a phylum between flatworms and earthworms & leeches. Most of the group had never seen one of these before. The snail fauna, with 12 species at the two wetter sites, was very impressive and included two rarities - the arboreal *Discocharopa mimosa* (13th known record) and an undescribed *Roblinella* (8th known record) - as well as two rather uncommon species and one very seldom found in mixed forests.

Bermuda Hill is State Forest. The area to the north is pine plantation, while much of Scotts Divide to the south has been converted to plantations of introduced Mainland eucalypts. Some further logging is planned and we are unsure of the size of the exempted area. We suspect that this area has high conservation value, principally for the range of invertebrate species present so abundantly, even though such statements are devalued by the constant exaggerations of the "save everything" brigade. Other factors include the ease of access as an educational and scientific resource, the scarcity of comparable reserves in the area (Tahune Park, 15km away, has a very different ecosystem.), the rapid successions of plant communities on the slopes and the difficulty of regeneration in an area surrounded by disturbance. Some of us felt that the area deserves more than standard "habitat strip" treatment and that an area of several dozen hectares should be set aside.

It was a most interesting outing to a surprisingly little known area. Thanks to everyone who attended for their enthusiastic searching efforts!

Outing Report: Illa Brook, 3 June 1995

Don Hird (leader)

The general area of this excursion was mentioned in the last Bulletin as having potential as part of a (proposed) Wellington Range National Park. Mammal survey has revealed new information about habitats for barred bandicoots, which also indicate the lack of comprehensive survey data available for Tasmania.

Illa Brook rises under Mounts Marion and Patrick at the northwestern end of the Wellington Range. We started our walk from where the brook crosses the Lachlan Rd, heading up a track past the reservoir from which Lachlan's water is drawn.

A potentially valuable feature of this area is that it includes woodland with a grassy understorey, generally a habitat which is poorly reserved. The valley has dolerite derived substrates in its lower sections but triassic sandstone soils and outcrops for much of its middle section. Sandstone cliffs appear to be well used as raptore nest sites. The dominant eucalypts tend to vary with soil type in a similar manner to, but not to the same extent as, in the Snug Tiers area.

Unfortunately the habitats are not pristine, despite the use of the area as a domestic water catchment. Recent rubbish dumping and woodcutting were evident, as were some well established weed species and some evidence of former landclearance.

Despite these shortcomings the area has conservation potential as an example of lowland valley habitat. A velvetworm, and a stonefly with bright red hindwings were found, and Kevin reported a distinctive landsnail fauna. A botanical item was an endemic Tasmanian shrub in the Hibiscus family (*Asterotrichion sp*; Malvaceae) that had a show of scented creamy pendulous flowers. The species is dioecious (separate male and female plants). As with many of our flora the pollenation syndrome is unknown, Peter McQuillan suggests that it may attract and rely on some of the few moths that fly as late as June.

The general area was determined by prior mammal survey to be habitat for Eastern Barred Bandicoot and Eastern Quolls, but with no small mammals detected at higher altitudes on sandy soils. This aspect is also worthy of follow up for this lowland area.

Collecting Policy

Lately observant members have found a range of invertebrates (especially) which have proven to be of interest. One example is the nemertine mentioned in the Bermuda Hill report. On subsequently checking with Australian expert (in Townsville), it sounds most like a species for which the nearest known records are northern NSW and southern Queensland.

This raises the issue of what is responsible collecting, and how it should it be followed up. Provided the area of habitat is significant our activities are most unlikely to decimate populations of invertebrates given their cryptic nature and our relatively inefficient searching. Given then the paucity of scientific collections and of our knowledge of the faunas, careful systematic collecting seems both acceptable and advisable.

A requirement is that specimens are properly recorded by recommended techniques and / or lodged with museums. We will obtain equipment for this pupose with a view to extending the value of our findings.

Bulletin of the Tasmanian Field Naturalists Club Inc.

Oct. 1995, Number 280

Editor; Don Hird.

The Tasmanian Field Naturalists Club encourages the study of natural history and supports conservation. We issue our journal, the *Tasmanian Naturalist*, annually in October. People with a range of backgrounds and knowledge are welcome as members.

Contact Don Hird (344 293) for further excursion details or more information, or write to GPO Box 68A Hobart, 7001.

Program

General meetings start at 7.45pm on the first Thursday of the month in the Life Science Building at the University of Tasmania. Outings are usually held the following Saturday or Sunday, meeting at 10am outside the main entrance to the Museum in MacQuarie Street. If you're attending an outing but not the meeting prior, check as to the timing of the excursion; sometimes unforeseen late changes occur.

- 2 November **Penguins.** Sally Bryant and Mark Holdsworth from Parks, Wildlife and Heritage will speak about the biology of fairy penguins in Tasmania. Nick Mooney will summarise the recovery effort following the Tamar oil spill earlier this year, including its effects on local penguin colonies.
- 4 November 7 p.m. Meet at the Museum to travel to Marion Bay for an evening excursion which will include observing the penguins changing nest roster duties, trapping for insects and small mammals inhabiting the beach and dunes, and studying the prey of hooded plover. We plan to have a Barbeque meal at the Marion Bay carpark from around 7.45p.m. with the activities to follow into the evening. The tides and moon should favour our planned activities. At least some people will stay over to examine overnight results the next morning; bring camping gear, midnight supper and breakfast etc. if you plan to do this.
- 7 December Jeff Campbell from **Launceston Field Naturalists** will speak about their property *Skemp's* and its environs to whet our appetite for the weekend outings. Bring a plate of Xmas supper.
- 8 / 10 December North eastern weekend, based around Skemp's. See details on page 3.
- January 1996 NO GENERAL ACTIVITIES.
- 1 February We are hoping to arrange a speaker and excursion around the subject of Tasmanian Seaweeds. Watch for details in January Bulletin.
- 22-24 March Federation Weekend at Maria. See details on page 3.

New Members. Welcome to Huon Valley naturalists Sue and Melanie Lovell.

1996 Subs

Subscriptions are payable for the calendar year in advance, unchanged from 1995 at :

Junior / Concession	\$15-00
Adult	\$20-00
Family	\$25-00
Naturalist Sub. (Australia)	\$14-00
Naturalist Sub. (Library)	\$18-00
Naturalist Sub. (Overseas)	\$22-00

Members automatically receive the *Naturalist*.

From the Younger Members

BRIGHT YELLOW SOUTH WEST NEMERTEAN

The report of a sighting of a Nemertean Worm at a recent Field outing to Bermuda Hill reminded me of the excitement I felt when my sister and I saw our first specimen two years ago (1993) on the South Coast Range while walking the South West Coast track. The unsegmented worm-like creature was using its proboscis to drag itself along a root which protruded from the mud. Within a few minutes it had powerfully climbed several metres up the rough bark of a tree. Our specimen was bright yellow, in contrast to the pink colouring of the Bermuda Hill specimen.

Intrigued with the creature, I discovered the following facts when I returned home. With their sticky proboscis Nemerteans trap small invertebrates which pass by, then stab the prey with a sharp 'stylet' on the end of the proboscis, before sucking out its soft insides.



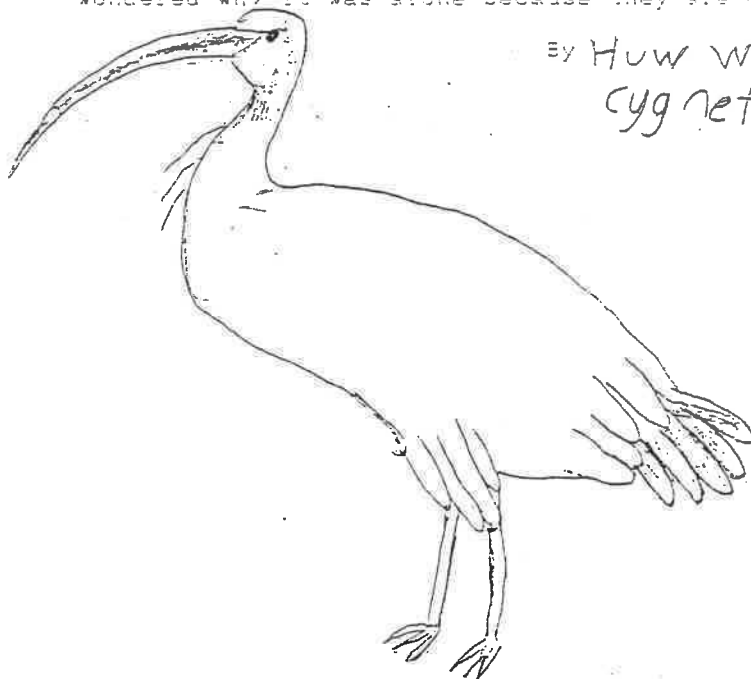
Owen Wilkins, Cygnet.

SACRED IBIS !

Did you see the Sacred Ibis (*Threskiornis molucca*) at Electra? It was in a marshy paddock from 30 Sept to 9 Oct in the late afternoons. There were 2 Pacific gulls, 2 black swans, and a few ducks with it. It was jabbing its long black curved beak into the short moist grass.

A book I read about ibis said they eat grasshoppers and lots of insect pests which would cause problems if there were no ibis.

I wondered why this ibis was at Electra because this is their breeding season, and they breed on the Mainland. I wondered why it was alone because they are usually in flocks.



By Huw Wilkins
Cygnet

Outing Reports

South Cape Bay, 8 October 1995

Despite an early start, a long drive and dubious weather, the South Cape Bay walk (postponed from April) still attracted an impressive turnout of 21, including five interstate visitors.

The walk from Cockle Creek to South Cape Bay is about 5 1/2km long, and took us about 1 1/2 hours each way. Along the way the track passes through a good range of habitats, starting in low, scrubby eucalypt forest and passing through a small section of swamp forest before opening out into scrubby buttongrass plains. Close to South Cape Bay there are three unusual "rainforest" (teatree/laurel/ manfern) gullies growing on sand. The very last section down to the bay is an area of black shale on which virtually nothing grows.

Orchids were one obvious highlight, with eight species being more or less in flower, of which *Acianthus caudatus* was by far the commonest. The most spectacular was a spider orchid which was probably a pale form of *Caladenia caudata*, although it was not typical. The others were *Pterostylis nutans*, *P. pedunculata*, aff. *tunstallii* (formerly *longifolia*), *nana*, *Caladenia* aff. *alpina* (the "lowland" form) and *Prasophyllum brevibracte*. Several more were in bud. A purple *Euphrasia* was abundant across the buttongrass sections.

At least two ground parrots were seen. As is typical of the species they did not fly very far when disturbed. It was, however, a quiet day for reptiles, amphibians and mammals, with the most interest coming from a piece of reptile skin found in an owl scat.

Invertebrates were surprisingly scarce in the early sections although there were some good finds in the teatree/laurel gullies at the end of the walk. These included a large carabid beetle and the rare snail *Roblinella curacaoe* (20th known locality.)

The track, although a little muddy in places, has been extensively boardwalked and is not as soggy as it once was. As a result it is a level and quite easy walk, and despite the variation in ages represented, we all got there and back with surprisingly little variation in time taken.

Kevin Bonham

FEDERATION REPORT Golden Valley 22-4 September 1995

Owing to a communications breakdown, the weekend was poorly attended, with only 8 delegates and one rufous wallaby present. This did, however, make for a pleasantly short business meeting! The weekend was held at Camp Quamby, which is on the side of Quamby Bluff, surrounded by wet eucalypt forest which, although degraded, revealed a good invertebrate fauna. Side outings were held to Liffey Falls, where we walked up to the Liffey River crossing, and the Central Plateau, where we viewed the quarantine zone surrounding Pine Lake. On Saturday I joined the Deloraine Field Nats and the Herpetological Society on a frog excursion to the top of the Gog Range. The presentation on Saturday night was by Dick Jam from the host club, Launceston Walking Club. He showed some slides from their well-known slide show and gave an interesting discussion of the logistics of running such a large club.

The meeting on Sunday morning resolved that the Federation object to the use of park entry fees for the "bronze whale" sculpture at Cockle Creek. We also voted to support the complete protection of the Chappell Island tiger snake, a distinct subspecies which is threatened by poaching and an apparently ambitious land claim.

I found the Quamby Bluff area an interesting one for invertebrates, In 5 hours searching over two days I found an outstanding 14 species of snail, although many well-known large species were not among these. Other finds included numerous scorpions, a few velvetworms and an enormous black flatworm I'd like to thank Dick James from LWC for organising the weekend, Nick Cummings from DFNG for transport on Sunday, and particularly the Tas FieldNats committee for agreeing to pay my travel costs for the weekend.

Kevin Bonham.

Tas FieldNats Conservation Policy

As foreshadowed in the July Bulletin, a draft policy is before the committee. We hope to include a revised policy in the January Bulletin for members' comment.

Skemp's Weekend Details.

Friday 8th December -: arrive from 6 p.m., see map. Travelling time from Hobart about 2 1/2 - 3 hours from Hobart.

Saturday -: Depart Skemp's 9 a.m. Phil Collier (author of alpine plants of Tasmania Plant Identikit) will guide us around botanical features of Ben Lomond National Park; alpine wildflowers should be at their best. A special attraction is *Chionohebe ciliolata* on Hamilton Crags, only known location outside New Zealand. We hope the weather will be kind. National Park fees will apply. We have invited Launceston members to join us. Spotlighting in the evening -bring spotlight and / or torch.

Sunday -: Launceston members will show us around their property including native plantings. BBQ for lunchtime, BYO everything.

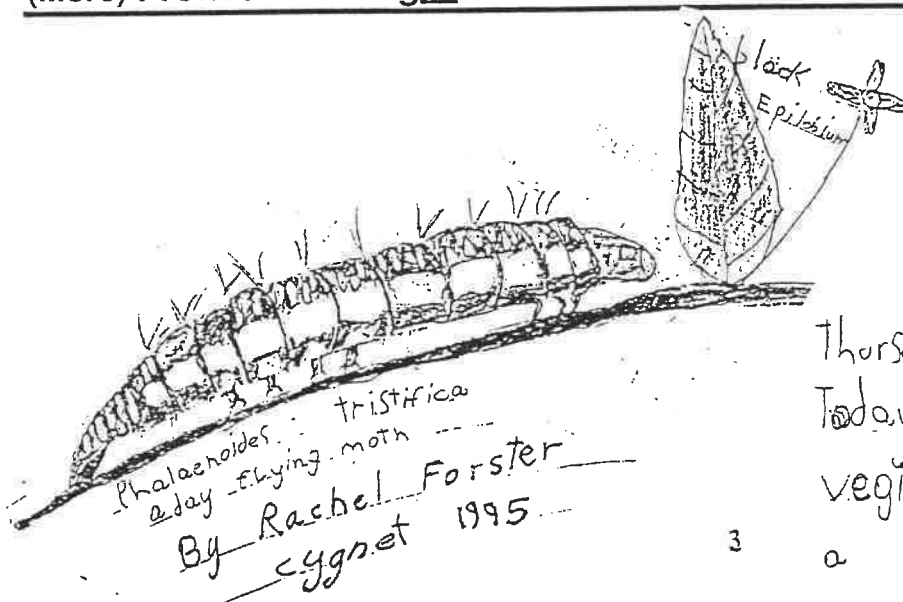
Accommodation is available in bunks - cost \$7- per adult per night or \$3- per child per night plus \$2- annual membership fee. Camping is \$5- per adult per night or \$1- per child per night plus \$2- annual membership fee. The centre has full cooking facilities including microwave, fridge, cutlery etc. You will need to bring sleeping bags / bed linen, pillows and all food, there is no shop nearby. Please book with Sue Collier (296 597) by 7 December. First come, first served basis for bunks in the hut. There is plenty of camping. Bring warm clothes and good footwear.

Forward Notice - Maria Island Federation Weekend ; March 22-24 1996.

Our club is hosting the next Federation of Tasmanian Field Naturalists Clubs Meeting. Accommodation is available in the penitentiary or camping. Return ferry fare is \$19, if we have 20 plus people travelling together we may be able to arrange a special charter on the Friday evening. There will also be a 9a.m. ferry to Maria at this time of year.

Maria is a wonderful venue for natural history, particularly birding and geology. We hope to have a guest speaker who specialises in the area. Pencil the dates in your diary and watch this space for further info. We are hoping for a good turnout from our club. Further details Sue Collier (296 597).

(More) From the Younger Members



Thursday the 26th of January
Today I was weeding our
vegi garden when I saw
a beautiful yellow and
caterpillar munching leaves.

(More) Outing Reports

Howden Seashore Excursion, September 1995.

Of all the habitat types visited by naturalists and others, the rocky shore is one where many of the local animals and plants are on show, at least around low tides. This, together with Australia's legendary cultural association with the beach, has resulted in many guidebooks to one or more features of shore life. Perhaps the doyen of these, since the 1950's, has been Dakin's *Australian Seashores*, later edited by Isobel Bennett. (Angus and Robertson Publishers, very reasonably priced for a production of its standard).

Thus armed (but also with Judy Sprent's field library of other guides) we approached Howden Peninsula on a mild and sunny early-spring Saturday. The shore at the carpark where the road ends is a protected, low-energy coast, with small sandy bays interspersed with pebbly and boulder strewn sections and some sandstone rock shelves. We were essentially browsing (in the information, not culinary sense !) for shore life, we hadn't decided to focus on molluscs, crabs, algae or etc.

With around 20 people of whom half were observant children, specimens were quickly presented to the holders of books, lenses and trays. The shore crabs (family Grapsidae) were identified primarily from a small Gould League guidebook, shell notches and patterns distinguish, for example the notched, mottled and purple shore crabs which live under rocks from where they are opportunist foragers. A more active crab was the smooth pebble crab, *Phyllira laevis* (fam. Maiidae), a long-limbed wading crab with an almost spherical body. The remains of a little seaweed crab *Naxia* sp. with its algal camouflage intact was found amongst the flotsam at the tidemark. Another, non-crab, crustacean was a sea-louse *Isocladus* sp.

A frequent denizen of the crevices under rocks near or on sandy bottoms was a superficially crab-like crustacean with large chelae (nippers). This was identified from a crustacean guide to be a Half Crab, *Petrolisthes* (? *elongatus*), fam. Porcellanidae. Obvious differences between these specimens and true (brachyuran) crabs included the presence of long, backswept antennae, three (not four) pairs of walking legs, and tail that, while tucked under the abdomen, was clearly more significant than that of the true crabs. Their enlarged nippers extend laterally, then fold forward onto themselves. Half crabs are more closely related to hermit crabs (Anomurans), and despite their fearsome appearance feed on particulate matter amongst sand grains. Howden specimens were a lustrous olive-green. A paradox was that no mention of this group appears in Dakin's book, while a popular crustacean guide referred to them as predominantly warm-temperate to tropical. I incidentally looked for half crabs at Stewart's Bay, Port Arthur, some weeks later but instead found abundant isopods ("shore slaters") under rocks, but also just one beach-washed bright-blue porcellanid.

Several large polyclad (not a brand-name !) flatworms (around 5 X 1.5cm) were found clinging to the underside of rocks in the intertidal zone. The slow but methodical way in which these specimens righted themselves after the indignity of having their underside, with central mouth, inspected was intriguing. Their more normal gliding movements and active swimming abilities were also admired.

Amongst the molluscs, periwinkles, *Littorina* sp., were common. Also seen were Ribbed Top Shells, *Austrocochlea constricta*, Noddywinks, *Bembicium nanum*, and the Lineated Cominella, *Cominella* sp. A small bivalve mollusc frequented the small tube-worm (*Galleolaria* sp.) colonies on loose boulders. The shell of a sand snail, *Conuber conicus*, was found on the beach. This is an incomplete sample of specimens found, although further comparison with the lists from Margaret Richmond's Shells of Tasmania would be worthwhile.

Sea dragons were found beached washed. Over lunch penguins were spotted surfacing in North-West River Bay. Also found under rocks were ribbon worms, (Phylum Nemertea), topical to members as an interesting terrestrial species was found in the southern forests earlier in the year.

A more interesting and enjoyable casual excursion would be hard to find. Reference to books, both in the field and as "homework" proved to be both valuable and at times frustrating. This is an area in which an accurate local guide would be a real asset, with educational merit. The problem with books like Dakin is that in attempting to summarise Australian biotas they have to skip some elements. The less diverse, cool temperate biotas away from major population centres are likely to be the least well covered, especially if there isn't or hasn't been commercial interest in them !

While we didn't attempt to quantify or obtain detailed zonation of our findings, a comparison of some biotas from similar and contrasting beaches would make an excellent project for those members with available time. Guidebooks are emerging, but again don't provide local detail; some are listed below.

(More) Outing Reports

Howden Seashore Excursion, continued.

Australian Seashores, Isobel Bennett & William Dakin, Angus and Robertson Publishers.

Tasmanian Seashells, Margaret Richmond, Devonport.

Coastal Invertebrates of Victoria : an Atlas of Selected Species, Marine Research Group, Victoria

Crustaceans of South Australia, H.M. Hale, 1927-29, Government Printer, South Australia.

Coastal Marine Ecology of Temperate Australia, A.J. Underwood, 1995, UNSW Press.

Seashore Ecology, T.H. Carefoot & R.D. Simpson, 1983, University of Queensland Press.

Biology of Intertidal Animals, R.C. Newell, 1970, Logos Press.

A Field Guide to the Crustaceans of Australian Waters, D.S. Jones & G.J. Morgan, 1994, UNSW Press.

Don Hird

Survey Group Report

In late October the Wildlife Survey group visited Glenelg, a Derwent Valley property which has retained a large block of remnant habitat of conservation value. Mammal survey only revealed an abundance of brushtails, including much evidence of the synchronised breeding season with several spotlighted animals carrying back-young. We also saw an apparently displaced individual seen in the daytime. There were diggings of bandicoots or bettongs but no further evidence at this stage, barred bandicoots are definitely known from the area. We found several bird species at nests, e.g. Green Rosellas, Spotted and Striated Pardalotes. Mt Spode was climbed for a fine Derwent Valley View.

Conservation in Tasmania : Costume Drama or Concerted Effort ?

Several of us who follow the tangled web of conservation lobbying have become concerned about the standard of representation of local issues and the level of dialogue between the various parties. A recent example is the annual woodchip licence process which soon degenerated into yet another slanging match and advertising battle, with each adversary apparently wanting an all-or-nothing result. I felt that the underlying principle for licences, reported to be a comprehensive and representative reserve system for each State concerned, had much potential for real conservation progress, especially in the biodiversity context; it is seldom difficult to find examples of inadequately reserved habitats or species, or of poorly known biotas. This concept, unfortunately, seemed to be blithely passed over by the most prominent combatants, possibly leading to so many informed people not joining the debate.

We have become used to big claims for and against conservation, indeed from the media one would believe that nothing else is at stake. Some say that because we have 20-something per cent of Tasmania reserved then any further claims are greedy; to accept this is to potentially sacrifice important unprotected elements of our natural heritage. From the other side, though, the commitment to dialogue and steady progress has been questionable with unexplained boycotts and some high-profile theatrics which seem unlikely to progress the issues. The Tarkine is undoubtedly of conservation value, but it is not the only (or arguably the highest) current priority. Its mode of promotion is a gift to those who like to portray conservation as largely the province of exhibitionists and extremists, who goad but don't fully discuss the issues. Quite why a new conservation organisation is required for each single issue is debatable, particularly as establishment of credibility takes time. Conservation has always been a broad movement, its better to accept and work with this diversity than make it a race for opportunists.

I've looked for but seen very little discussion of the principle of a comprehensive and representative reserve system in local media. A recent Mercury editorial waffled about its perceived acceptability to "reasonable conservationists" of further woodchip onslaught while the same edition accepted paid advertisements from the Forest Protection Society, a sham community group reported to receive \$900 000 annually from the Forest Industries Association. Newspapers are also beneficiaries of cheap wood fibre. The 7.30 Report is happy to run footage of colourful Tarkine denizens making imaginative claims, but little of a more sophisticated context.

In NSW a recent change of government has meant more than 20 new national parks to partly remediate unprotected biodiversity. Programs to monitor threatened species and communities are funded in part by substantial levies on agencies exploiting natural resources. We have recently been advised that there will be no community consultation forum to supplement proposed Tasmanian Threatened Species Legislation, a break with an important and long-standing precedent. National policies are an enticing alternative, but local acceptance will always be important. A modicum of solidarity and discourse between local conservation advocates should come first.

Don Hird

Tasmanian Field Naturalists' Club Inc

(established 1904)

WILDLIFE SURVEY GROUP

Wildlife Survey primarily aims to study distributions of fauna and flora. This applies on both a broad geographical scale and between detailed habitat types. Many Australian biotas are poorly known and new information is much needed and often not difficult to find. Tas FieldNats Wildlife Survey Group is based around Mammal and Field Survey Groups which have proved valuable interstate. Mammals are a focus group but animals and plants are often encountered which either interact with mammals or are of interest in their own right.

In addition to the intrinsic interest of natural populations, the conservation of our natural heritage is a compelling reason for further study. With the notable exception of the thylacine Tasmania's mammal species have held up remarkably well when compared to the extinction rates and reduction in ranges of their mainland Australian counterparts since European settlement. Despite this, there is no room for complacency as the rate of habitat change is probably at an historical high point and several species now extinct elsewhere have inadequate areas of reserved habitat, for example the bettong.

Although many naturalists prefer to specialise in a particular group of animals or plants, most find that other groups are worthy of attention and can't be ignored. On a practical level, our activities focussed around overnight studies of a primarily nocturnal mammal fauna usually allow time to follow up field studies in the local habitat more generally.

A better knowledge of faunas is important not only on a scientific level but also as a useful adjunct to conservation measures. Perhaps this knowledge

would be most directly useful in determining the range of habitats occupied by various species and thus needing representative reservation. Other benefits include factors such as reproductive rate and timing which might in turn determine the ability of populations to recover from bushfires, for example. It follows from the conservation emphasis of natural history generally that techniques used should not harm animals, and should minimise any discomfort imposed. Handling of fauna is restricted to experienced persons holding appropriate permits.



Eastern Quoll : probably extinct on mainland Australia. Widespread in Tasmania, but apparently susceptible to urban development.

A range of ancillary information is collected in the survey process, for example habitat details, or by supplementing direct survey techniques. Careful and sustained observation may reveal hitherto unknown behavioral repertoires. Additional information on populations may be revealed by repeated surveys within an area; for example some indication of relative abundance may be obtained, as may evidence of seasonal activity patterns.

Capture/release Survey Techniques

This usually involves trapping animals in cages for a minimal period before examination and release. Live-traps are available in sizes for animals ranging from mice to large possums. These are suitably baited, peanut butter concoctions work well with most small animals while meat or fish attracts medium-sized carnivores. Pitfall traps are also used, often in conjunction with a temporary fence to guide animals to the pit. While they need to be carefully designed, they can be useful, in suitable conditions, for species which don't readily enter cages. "Hair Tubes" capture a few hairs rather than the whole the animal; most mammals can be identified on microscopic characters of such a sample. Provision of nest or refuge sites from which animals may freely come and go is another survey method, as well as physical boxes such things as suspended hession bags may be colonised by Pygmy Possums and may later be revisited to observe or examine the occupants.

Direct Observation Techniques

Direct observation is self explanatory for animals such as larger wallabies and kangaroos which may be encountered by chance or stalked. Experience may amplify this technique in, for example, concentrating on careful observation at dusk when, under good conditions, emerging nocturnal species may be observed in silhouette. By regularly visiting habitats under a range of conditions a careful observer may gain insights not apparent on more casual inspection. One example is platypus observation; although not uncommon, platypus are less known than say wombats or wallabies but patient inspection of quiet pools will often reveal animals in their characteristic feeding dive around dusk and dawn or, in suitable conditions, basking.

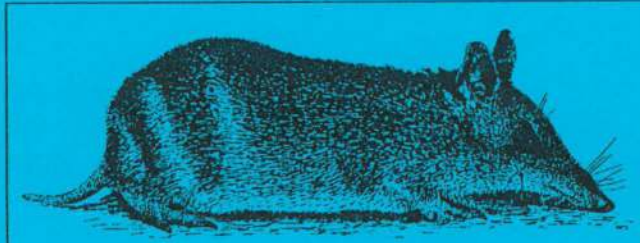
Spotlight observation primarily relies on the reflection of light from nocturnal animals eyes although other observations are also possible. Good binoculars are important, as is adequate observer-insulation and often patience.

Roadkills are perhaps the most common way wildlife is seen in Tasmania. While unfortunate, they at least indicate a population of animals in surrounding areas. Careful recording of details of roadkilled animals has revealed significant new information about distribution of species, and can indicate areas to survey further by other means.

Systematic inspection of likely refuges of animals may often yield useful observations such as tree hollows and crevices under bark which are often used by arboreal animals and bats. Hollows are often surrounded by scratchings of animals using or exploring them, and usually seem subject to intense competition for occupation, with users often preferring a size in close proportion to their own body size. Burrows are constructed by wombats and secondarily used by quolls and a range of other species.

Tracks and Signs Recording

Tracks and signs often provide an early indication of species present in an area. Tracks are usually footprints, signs may be a range of indirect indications of a species presence. Some of these are often clear and almost unmistakable, others are subtle and accurate interpretation relies on experience and deduction. Scats, bones, foraging signs such as diggings, burrows and hair samples are all examples of mammal signs.



Eastern Barred Bandicoot : virtually extinct on mainland Australia. In Tasmania it is widespread and possibly declining. Its biology, particularly habitat usage, is poorly known. It lacks adequate reserved habitat and there is no evident program to remedy this situation.

Summary

Wildlife Survey using techniques outlined above have been used in other states for some decades. They have been instrumental in detailing the ranges and compositions of faunas, often a labour intensive process but one providing invaluable information. The Tas Fieldnats Wildlife Survey Group intends holding regular excursions as well as encouraging the systematic recording of information gleaned from all available sources. Details of activities will appear in our Bulletin and our journal, the *Tasmanian Naturalist*, as they are consolidated.

Illustrations above from ; *Australian Monotremes and Marsupials*, by Gordon Lyne. Angus and Robertson Publishers, 1967.

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Skulls of the Mammals in Tasmania, by Dr Robert Green, Queen Victoria Museum and Art Gallery, 1983.

Mammal Tracks and Signs; a field guide for south-eastern Australia, by Barbara Triggs, Oxford University Press, 1984.

The Australian Museum Complete Book of Australian Mammals, edited by Ronald Strahan, Angus and Robertson Publishers, 1983.

Prepared by Don Hird, Tasmanian Field Naturalists Club Inc., GPO Box 68A Hobart, 7001.



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