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## MARINE RESERVES IN TASMANIA

National Parks and Wildlife Service has recently announced its intention, in association with the Tasmanian Fisheries Development Authority, to establish a small number of Marine Reserves along our coasts, with the following objectives:-

1. To protect representative samples of marine habitats and ecosystems and sites of special significance for present and future generations; whilst facilitating public recreation including fishing, boating, water sports and nature study.
2. To protect underwater landscapes and features of archaeological and historic importance, including shipwrecks.
3. To protect key marine geological formations.
4. To establish scientific reference areas.
5. To educate the public in the resources, protection and use of the marine environment.

An initial survey of potential Marine Reserves in Tasmania has been carried out by G. Edgar and his report has been published as Occasional Paper No. 4 by the National Parks and Wildlife Service. Five areas have been recommended as Marine Reserves extending for a distance of one kilometre from the shore.

This concept should receive the whole-hearted support of all naturalists, but the present proposal that fishing should be allowed is in conflict with other aspects of the first objective stated. Protection of marine habitats and ecosystems cannot be complete while fishing (whether commercial or amateur) is permitted.

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## CLUB EXCURSION PARTRIDGE ISLAND, 15 March 1981

The Hobart Walking Club invited us to join them in a day trip by river steamer, leaving Hobart at 8 a.m. and returning by 6 p.m. We had very little more than two hours on the island.

The following lists were compiled on that occasion and on other short visits but are certainly incomplete.

Additions by other visitors would be welcomed.

### Botany (by M. Allan and M. Wall)

- |   |                                    |
|---|------------------------------------|
| <i>Acacia genistifolia</i>                  | <i>Daviesia ulicifolia</i>         |
| " <i>melanoxylo</i>                         | <i>Dianella revoluta</i>           |
| " <i>myrtifolia</i>                         | " <i>tasmanica</i> Fruit           |
| " <i>sophorae</i>                           | <i>Dichondra repens</i>            |
| " <i>stricta</i>                            | <i>Dillwynia cinerascens</i>       |
| " <i>suaveolens</i>                         | <i>Distichlis distichophylla</i>   |
| " <i>verticillata</i> var. <i>latifolia</i> | <i>Drymphila cyanocarpa</i>        |
| "    "    " <i>verticillata</i>             |                                    |
| <i>Aceana novae-zelandiae</i>               | <i>Epracris impressa</i> f.        |
| <i>Amperea xiphoclada</i>                   | " <i>lanuginosa</i> f.             |
| <i>Aotus ericoides</i>                      | <i>Eucalyptus globulus</i>         |
| <i>Apium prostratum</i> f.                  | " <i>nitida</i>                    |
| + <i>Araucaria excelsa</i>                  | " <i>obliqua</i>                   |
| <i>Asplenium obtusatum</i>                  | " <i>viminalis</i>                 |
| <i>Astroloma humifusum</i> f.               | <i>Exocarpus cupressiformis</i>    |
| <i>Atriplex hastata</i> f.                  | <i>Fuchsia</i> sp.                 |
| <i>Banksia marginata</i> f.                 | <i>Gahnia grandis</i>              |
| <i>Bedfordia salicina</i>                   | <i>Geranium potentilloides</i>     |
| <i>Billardiera longiflora</i>               | <i>Gleichenia microphylla</i>      |
| <i>Blandfordia punicea</i>                  | <i>Goodenia ovata</i>              |
| <i>Blechnum patersonii</i>                  | <i>Haloragis teucrioides</i>       |
| <i>Bossiaea prostrata</i>                   | <i>Helichrysum costatifructum</i>  |
| + <i>Carex flacca</i> (?)                   | " <i>dealbatum</i>                 |
| <i>Carpobrotus rossii</i>                   | " <i>dendroideum</i>               |
| <i>Cassinia aculeata</i>                    | " <i>reticulatum</i>               |
| <i>Cassytha glabella</i> f.                 | " <i>scorpioides</i>               |
| " <i>pubescens</i>                          | <i>Hibbertia procumbens</i>        |
| <i>Casuarina monilifera</i>                 | <i>Hydrocotyle</i> sp.             |
| " <i>stricta</i>                            | <i>Juncus</i> spp.                 |
| <i>Centaurium</i> sp.                       | <i>Kennedyia prostrata</i>         |
| <i>Clematis aristata</i>                    | <i>Leptospermum glaucescens</i> f. |
| <i>Correa alba</i> f.                       | " <i>scoparium</i>                 |

<i>Leptospermum concavum</i>		<i>Salicornia quinqueflora</i>
<i>Leucopogon collinus</i> f.		<i>Samolus repens</i>
" <i>ericoides</i>		<i>Scirpus</i> sp.
" <i>parviflorus</i>		" <i>nodosus</i>
<i>Lindsaya linearis</i>		<i>Senecio linearifolius</i>
<i>Lissanthe strigosa</i>		" <i>squarrosus</i> f.
<i>Lobelia alata</i> f.		" <i>quadridentatus</i>
<i>Lomandra longifolia</i>		<i>Sprengelia incarnata</i>
<i>Melaleuca gibbosa</i> f.		<i>Stipa</i> sp.
" <i>squarrosa</i>		<i>Stylidium graminifolium</i> f.
<i>Microtis</i> sp.		<i>Tetragonia implexicoma</i>
<i>Mitrasacme pilosa</i>		<i>Thelymitra</i> sp.
<i>Monotoca elliptica</i>		<i>Veronica gracilenta</i>
" <i>glauca</i>	+	<i>Vinca major</i>
<i>Olearia phlogopappa</i>		<i>Viola hederacea</i>
" <i>ramulosa</i>		<i>Wahlenbergia</i> sp.
<i>Oxalis corniculata</i> f.		
<i>Pimelea linifolia</i>		
<i>Plantago triantha</i>		
<i>Poa</i> sp.		
<i>Poranthera microphylla</i> fruit		+ = Introduced sp.
+ <i>Prunella vulgaris</i>		
<i>Pteridium esculentum</i>		
<i>Pulteneae daphnoides</i> var. <i>obcordata</i>		f. = flowering
" <i>dentata</i>		
" <i>juniperina</i>		
+ <i>Pyrus communis</i>		
+ <i>Quercus</i> sp.		
<i>Restio complanatus</i>		
+ <i>Rosa rubiginosa</i>		
+ <i>Rubus fruticosus</i>		

### Birds

Little Penguin, Short-tailed Shearwater, Australian Gannet, Black Cormorant, White-faced Heron, Wedge-tailed Eagle, White-breasted Sea Eagle, Brown Hawk, Brown Quail, Pied Oystercatcher, Pacific Gull, Southern Black-backed Gull, Silver Gull, Crested Tern, Swift Parrot, Green Rosella, Fan-tailed Cuckoo, Spine-tailed Swift, Welcome Swallow, Tree Martin, Black-faced Cuckoo-shrike, Blackbird, White-browed Scrub-wren, Dusky Robin, Grey Fantail, Golden Whistler, Olive Whistler, Grey Shrike-thrush, Spotted Pardalote, Yellow-tipped Pardalote, Forty-spotted Pardalote, Grey-breasted Silvereye, Yellow-throated Honeyeater, Black-headed Honeyeater, Strong-billed Honeyeater, New Holland Honeyeater, Yellow Wattle-bird, Beautiful Firetail, Goldfinch, Greenfinch, Starling, Dusky Wood-swallow, Forest Raven.

## A DESCRIPTIVE ACCOUNT OF THE FORESTS NEAR ROCKA RIVULET, EASTERN TIERS

F. Duncan, S. Harris and M.J. Brown

National Parks and Wildlife Service

### INTRODUCTION

Compared to their west Tasmanian counterparts, the forests in the east of the State have not been effectively researched to any great degree. Roading associated with pulpwood extraction has opened up many scenically and scientifically interesting forest areas, which were difficult to visit in the past. It seems worthwhile that some of these forested communities be documented to provide a datum base allowing comparison with reforestation processes in nearby clearfelled coupes.

This article outlines the vegetation in an area of approximately one thousand hectares in the upstream catchments of Rocka Rivulet and Lisdillon Rivulet. Figure 1 shows the boundaries of the study area. Under current plans, logging is due to take place in the region in 1990-95.

The landscape is undulating, with an altitudinal range of 300 m to 700 m. Watercourses vary from steep-sided creeks and gullies which discharge into the major eastern flowing rivulets, to slower flowing streams which frequently diverge into marshes in areas of extensive plateau development (outside the study area). The bedrock is dolerite which forms yellow podzolic soils, usually with a gradational profile (Nicholls and Dimmock, 1965). As such it is typical of most of the Eastern Tiers State Forest area.

The vegetation of the region is broadly classified as dry sclerophyll forest (Jackson, 1965). Variation in community type is related primarily to variation in aspect and landform, factors which have been demonstrated as important in delineation of sclerophyll communities elsewhere in the State (Jackson 1973, Kirkpatrick 1981).

### VEGETATION

The vegetation of the western section of the study area was examined by sampling representative communities identified from aerial photographs. Figure 1 shows the extent of the different forest communities. Sampling has not yet been conducted in the eastern section of the area, however the vegetation has been tentatively mapped on the basis of extrapolation from those areas already examined.

Seven communities were identified, based on structure and dominance and these are briefly described below. A species list compiled from the different sampling sites is included as Appendix 1.

#### 1. Rainforest ± *E. dalrympleana*/*E. delegatensis*

On steep slopes bordering the upper reaches of Rocka Rivulet and Lisdillon Rivulet, and in the gullies associated with these streams, tall *E. delegatensis* and *E. viminalis*/*dalrympleana* emerge from a dense rain-forest substratum. This vegetation type, with *E. dalrympleana* the dominant, also occupies the headwaters of Anglers Creek.

In some gullies pure rainforest is found, the emergent eucalypts being completely absent.

The rainforest stratum reaches a height of 20-25 metres, and is dominated by sassafras (*Atherosperma moschatum*), *Olearia argophylla* and *Pomaderris apetala*. *Acacia dealbata* is an occasional emergent. Under the dense rainforest canopy the understorey is sparse, with manfern (*Dicksonia antarctica*) and other ferns (*Blechnum watsii*, *Hypolepis rugosula*, *Polystichum proliferum*) occurring near watercourses and in occasional openings. A small grove of the uncommon and poorly reserved rough tree fern (*Cyathea australis*) was found in Tiger Creek. Minor species of epiphytic ferns include *Grammitis meridionalis*, *Hymenophyllum flabellatum*, *Tmesipteris billardieri* and *Ctenopteris heterophylla*. The litter layer is dense, and mosses and lichens are attractive colonisers of rocks, tree trunks and decomposing logs.

## 2. *E. brookerana* (tall) open forest

*Eucalyptus brookerana* open forest is restricted to fairly open gully and stream-side habitats. It was sampled in the Tiger Creek/Kenneth Creek area, and near to the point where Rocka Rivulet is bridged by M-Road. The mesic understorey is dominated by blanket bush (*Bedfordia salicina*), woolly tea tree (*Leptospermum lanigerum*), native currant (*Coprosma quadrifida*), pinkwood (*Beyeria viscosa*), stinkwood (*Zieria arborescens*), dogwood (*Pomaderris apetala*) prickly mo (*Acacia verticillata*), and silver wattle (*Acacia dealbata*). Away from the immediate gully environment, the wet forest understorey species are replaced to some extent by *Goodenia ovata* (parrot food). The ground layer is generally sparse, with a thick litter layer punctuated by occasional clumps of hardferns (*Blechnum watsii*, *Blechnum nudum*) and cutting grass (*Gahnia grandis*).

Tiger Creek is the type location of *E. brookerana* (Gray 1979) and is thus of considerable scientific interest.

The Tiger Creek *E. brookerana* community comprises second growth of excellent form. Individuals extend some distance into the south facing *E. delegatensis* forest but become less common as the ridge top is approached.

## 3. *E. delegatensis* -- (*E. dalrympleana*) open forest

This community is the most extensive in the study area. Height and composition of both dominants and understorey varies considerably, depending on aspect and landform. From fieldwork four units can be recognised.

### A. Wet sclerophyll/dry sclerophyll understorey

This unit occupies south and east facing slopes. Tall trees are found in the lower slope regions, where *E. brookerana* is the sub-dominant species. *E. brookerana* becomes progressively less common upslope, with *E. dalrympleana* assuming the subdominant role. Tree height also decreases as the ridge is approached.

In the downslope region, the more common understorey species comprise *Bedfordia salicina*, *Pomaderris apetala*, musk (*Olearia argophylla*) and prickly mo (*Acacia verticillata*). These species are replaced by drier habitat

species such as *Goodenia ovata*, native olive (*Notelaea ligustrina*), *Correa lawrenciana*, *Acacia mucronata* and native cherry (*Exocarpos cupressiformis*) in the mid-slope region. Apart from occasional thickets of bracken (*Pteridium esculentum*) the ground layer is vegetatively sparse, though considerable litter build-up has occurred. Soil development is minimal, with a dense coverage of rock and scree characterising all sampled sites.

#### B. *Bedfordia* thicket understorey

Tall *E. delegatensis* open forest with a dense *Bedfordia salicina* understorey occupies the fairly gentle slopes grading off the Moaners Tier ridge-line. This community is remarkable for its homogeneity, with little vegetative development occurring under the 2.5 – 5 metre *Bedfordia salicina* layer. Occasional clumps of *Blechnum nudum* and Woodsman sag (*Dianella tasmanica*) occupy more open areas created by windthrown trees. Guitar plant (*Lomatia tinctoria*) is the only regular undershrub.

#### 4. *Leptospermum lanigerum* scrub

Small level areas at the headwaters of gullies and creeks are characterised by scrub and open woodland communities. The water table tends to be high, and the major species are those found in wet sclerophyll and swamp environments. The dense shrub layer is dominated by *Leptospermum lanigerum* with *Acacia verticillata*, *Bedfordia salicina*, *Pomaderris apetala*, *Coprosma quadrifida* and *Beyeria viscosa* also present. Tall sword-sedge (*Lepidosperma elatius*) is the major understorey species. The eucalypt component, where present, is variable though generally of poor form. In the headwaters of Tiger Creek *E. brookerana* and *E. delegatensis* are found in this community.

#### 5. *E. obliqua*, *E. amygdalina*, *E. pulchella*, *E. dalrympleana* open forest

This community occurs on north and west facing slopes in the lower altitudes. Some variability is characteristic of the species composition of both the dominant layer and the understorey. Trees are often of poor form, possibly as a result of frequent firing. The understorey features a high species diversity, particularly in the shrub layer where many 'short prickly' species provide a colourful display in spring and early summer. Common shrub species include *Bedfordia salicina*, *Banksia marginata*, *Lomatia tinctoria*, *Pultenaea gunnii*, *Pultenaea juniperina*, *Tetratheca pilosa*, *Acacia myrtifolia*, *Boronia pilosa*, *Cyathodes glauca* and *Hibbertia riparia*. *Eucalypt* seedlings are reasonably common. Although the ground is rocky and the soil (where present) skeletal, a variety of herb species is present, but their overall ground cover is low. More common species include *Stylidium graminifolium*, *Galium albescens*, *Comesperma volubile* and *Helichrysum scorpioides*. Occasional sags (*Lomandra longifolia*, *Dianella tasmanica*) are also present.

#### 6. *E. coccifera* (low) open forest

This community occupies the exposed ridge top of Moaners Tier. Trees average 10 to 15 metres in height, and are gnarled and twisted in appearance. The understorey is fairly sparse, being dominated by *Leptospermum scoparium*, *Callistemon pallidus*, *Acacia mucronata*, *Acacia dealbata*, *Lomatia tinctoria* and regrowth and seedlings of *E. coccifera*.

The soil is shallow or non-existent, with dolerite outcropping along much of the ridge line. Mosses and lichens provide a dense ground stratum on the rock surface, elsewhere the litter layer is reasonably dense.

This community is of considerable scientific interest, as it contains an outlying easterly occurrence of *E. coccifera*. It is also an extremely attractive community, the shape and colouring of the trees and open nature of the understorey having great appeal to visitors. The harshness of the exposed ridge environment, and the slow growth rate of *E. coccifera*, would place this community in some jeopardy if disturbed either by clear-felling or in a subsequent regeneration burn.

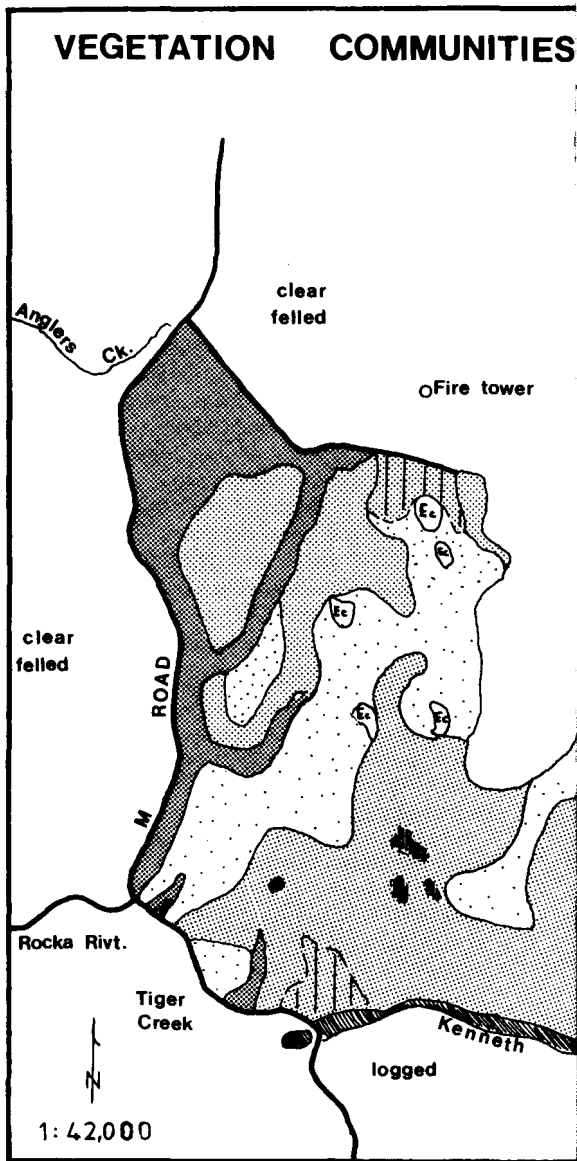
## CONCLUSION

There is a wide range of plant communities in the area including examples of some communities which are becoming more restricted. The study area contains one small pocket of good examples of the rough tree fern *Cyathea australis*. This tree is presently reserved only on Maria Island and whilst it is probably scattered throughout the Eastern Tiers region, its distribution in Tasmania comprises occasional widely separated stands of a few individuals. Small stands of the endemic Tasmanian Snow Gum *Eucalyptus coccifera*, occur on small plateaux and some ridgelines in the proposed reserve. A particularly attractive stand is centred on GR 713236 (Little Swanport 1:100,000 sheet) on Moaners Tier, at an altitude of 680 m. The type locality of *Eucalyptus brookerana* is at Tiger Creek. This tree reaches fine form in the Tiger Creek headwater, Kenneth Creek and Rocka Rivulet headwater localities.

The study area is bounded by cleared land to the north and west. Further clear-felling coupes are planned east of the Lisdillon Rivulet for 1990. It is therefore important to describe as yet untouched areas to provide benchmarks against which adjoining regeneration forests can be compared.

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# ROCKA RIVULET AREA



Ruiforest ± *E. dalrympleana* /  
*E. delegatensis*



*E. brookerana* (tall) open forest



*E. delegatensis*-(*E. dalrympleana*)  
open forest

A. wet sclerophyll/dry sclerophyll understorey



B. *Bedfordia* thicket understorey



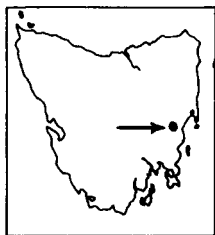
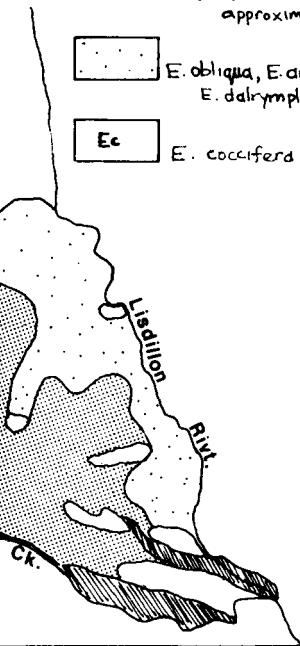
*Leptospermum lanigerum* scrub with  
approximate inferred boundary



*E. obliqua*, *E. amygdalina*, *E. pulchella*,  
*E. dalrympleana* open forest



*E. coccifera* (low) open forest



## CHECKLIST OF SPECIES

The nomenclature for species in the checklist follows Curtis (1963, 1967) and Curtis and Morris (1975) for dicotyledons and gymnosperms, Willis (1970) and Townrow (1973) for monocotyledons, and Jones and Clemesha (1981) for pteridophytes.

Endemic species are prefixed by *e*, and introduced species by *i*.

## PTERIDOPHYTA: FILICINAE

- Aspidiaceae *Polystichum proliferum*  
*Rumohra adiantiformis*
- Aspleniaceae *Asplenium flabellifolium*
- Blechnaceae *Blechnum nudum*  
*Blechnum wattsi*
- Dennstaedtiaceae *Histiopteris incisa*  
*Hypolepis rugosula*  
*Pteridium esculentum*
- Dicksoniaceae *Cyathea australis*  
*Dicksonia antarctica*
- Grammitidaceae *Ctenopteris heterophylla*  
*Grammitis billardieri*  
*Grammitis meridionalis*
- Hymenophyllaceae *Hymenophyllum australe*  
*Hymenophyllum cupressiforme*  
*Hymenophyllum flabellatum*  
*Hymenophyllum rarum*  
*Polyphlebium venosum*
- Polypodiaceae *Microsorium diversifolium*

## PTERIDOPHYTA: PSILOPHYTINAE

- Psilotaceae *Tmesipteris billardieri*

## ANGIOSPERMAE: DICOTYLEDONES

- Campanulaceae *Wahlenbergia* sp.
- Compositae *e* *Bedfordia salicina*  
*Gnaphalium* sp.  
*Gnaphalium collinum*  
*Helichrysum scorpioides*  
*i* *Hypochaeris radicata*  
*Lagenophora stipitata*  
*Olearia argophylla*  
*Olearia lirata*  
*Senecio linearifolius*  
*Senecio minimus*
- Convolvulaceae *Convolvulus* sp.
- Crassulaceae *Crassula sieberana*
- Dilleniaceae *Hibbertia riparia*
- Epacridaceae *e* *Cyathodes divaricata*  
*e* *Cyathodes glauca*

- e* *Cyathodes parvifolia*  
*Epacris impressa*
- Euphorbiaceae *Beyeria viscosa*  
*Poranthera microphylla*
- Geraniaceae *Geranium potentilloides*  
*Pelargonium* sp.
- Goodeniaceae *Goodenia ovata*
- Haloragaceae *Haloragis teucrioides*
- Hypericaceae *Hypericum gramineum*
- Elaeocarpaceae *Aristotelia peduncularis*
- Labiatae *Prostanthera lasianthos*
- Leguminosae:  
Mimosoideae *Acacia dealbata*  
*Acacia genistifolia*  
*Acacia melanoxylon*  
*Acacia mucronata*  
*Acacia myrtifolia*  
*Acacia verniciflua*  
*Acacia verticillata*  
var. *verticillata*
- Leguminosae:  
Papilionatae *Goodia pubescens*  
*Pultenaea gunnii*  
*Pultenaea juniperina*
- Monimiaceae *Atherosperma moschatum*
- Myrtaceae *Callistemon pallidus*  
*e* *Eucalyptus amygdalina*  
*Eucalyptus brookerana*  
*Eucalyptus coccifera*  
*Eucalyptus dalrympleana*  
*Eucalyptus delegatensis*  
*Eucalyptus globulus*  
*Eucalyptus obliqua*  
*e* *Eucalyptus pulchella*  
*Eucalyptus viminalis*
- Myrtaceae *Leptospermum lanigerum*  
*Leptospermum scoparium*
- Oleaceae *Notelaea ligustrina*
- Oxalidaceae *Oxalis corniculata*

## ANGIOSPERMAE: DICOTYLEDONES (Continued)

Pittosporaceae	<i>Billardiera longiflora</i> <i>Bursaria spinosa</i> <i>Pittosporum bicolor</i>
Proteaceae	<i>Banksia marginata</i> <i>Hakea lissosperma</i> <i>e Lomatia tinctoria</i>
Polygalaceae	<i>Comesperma volubile</i>
Ranunculaceae	<i>Clematis aristata</i>
Rhamnaceae	<i>Pomaderris apetala</i>
Rosaceae	<i>Acaena novae-zelandiae</i>
Rubiaceae	<i>Coprosma hirtella</i> <i>Coprosma quadrifida</i> <i>e Galium albescens</i>
Rutaceae	<i>Boronia pilosa</i> <i>Correa lawrenciana</i> <i>Zieria arborescens</i>
Santalaceae	<i>Exocarpos cupressiformis</i>
Stylidiaceae	<i>Stylidium graminifolium</i>
Thymelaeaceae	<i>Pimelea drupacea</i> <i>e Pimelea nivea</i>
Tremandraceae	<i>Tetratheca pilosa</i>

Umbelliferae	<i>Hydrocotyle sp.</i> <i>Hydrocotyle sp.</i>
Violaceae	<i>Viola hederacea</i>

## ANGIOSPERMAE: MONOCOTYLEDONEAE

Cyperaceae	<i>Gahnia grandis</i> <i>Gahnia radula</i> <i>Lepidosperma elatius</i> <i>Lepidosperma laterale</i>
Gramineae	<i>Deyeuxia quadriseta</i> <i>Stipa sp.</i>
Juncaceae	<i>Luzula sp.</i>
Liliaceae: Dianelleae	<i>Dianella revoluta</i> <i>Dianella tasmanica</i>
Liliaceae: Tovarieae	<i>Drymophila cyanocarpa</i>
Liliaceae: Xeroteae	<i>Lomandra longifolia</i>
Orchidaceae	<i>Chiloglottis gunnii</i> <i>Pterostylis curta</i> <i>Pterostylis longifolia</i> <i>Pterostylis parviflora</i>

GOLDEN ORB-WEAVER SPIDERS (*Nephila* sp.) IN TASMANIA

by Alison Green

Tasmanian Museum, Hobart

The finding of a golden orb-weaver spider in Tasmania is a rare event. Prior to 1974 the Tasmanian Museum had no local examples of *Nephila* sp. in its collection.

On 21. V. 1974 John Wright, of Sorell, found a female of a species of *Nephila* in a caravan park at Sorell, S.E. Tasmania. This spider was given to the Tasmanian Museum where it was kept alive for several days. Overnight on 23-24. V. 1974 it produced an egg sac of golden-coloured silk. Because of the place where it was collected, there was speculation that the spider may have come to Tasmania, from the Australian mainland, hidden on a car or a caravan. When advised of the discovery, Professor V.V. Hickman told the author that he had seen only two specimens of *Nephila* in Tasmania during about fifty years of collecting spiders.

No more Tasmanian examples of *Nephila* were brought to the museum until 1981 when four females were received within two months, all from S.E. Tasmania. They were collected as follows:

in a garden at Risdon Vale, on 13. II. 1981, by Mrs. M. Dunn;

at Sandford, on 8. III. 1981, by Mr. J. Karimalis;

at Sorell, early in March, 1981, by Mrs. H. Clarke;

in a garden at South Hobart, on 7. IV. 1981, by Danny Knott.

The last example was the only one found west of the Derwent River.

In August, 1981, Professor V.V. Hickman presented to the Tasmanian Museum the two specimens of *Nephila* sp., both females, which he had collected. One of these was found on 24. III. 1928, in an orb web in wattle, eight feet from the ground, at Trevallyn, Launceston, N. Tasmania. The other was found on 19. IV. 1961, in an orb web in a eucalypt, at East Risdon, S.E. Tasmania.

The seven Tasmanian golden orb-weavers, now held by the museum, seem to belong to one species. They are close to *Nephila edulis* (Labillardière, 1799), a species which occurs in eastern states of mainland Australia. One spider has been sent to Mr. M.R. Gray, Arachnologist at the Australian Museum, Sydney, to obtain his help with its identification. Mr. Gray has reported that it is not possible to decide whether this female belongs to *N. edulis* or to some other species of *Nephila*; to proceed further with the specific identification he needs to examine a male spider. All of the Tasmanian Museum's specimens are females. Thus the identity of our spiders must remain as *Nephila* sp., close to *N. edulis*, until somebody finds a mature male which Mr. Gray can examine.

The largest of the museum's female spiders has a body length of 25 mm and a leg span of about 90 mm. The dorsal surface of the body appears to be silver-grey, with a crescent of off-white on the anterior part of the abdomen. Black spots on the cephalothorax are actually bare patches where the true body colour shows amongst a covering of silver-grey hairs. The legs are pink and black with prominent tufts of black hairs.

A golden orb-weaver's web is unusually strong. It consists of a central orb, formed mainly of yellow silk, supported by an irregular framework of white silk. When disturbed, a female may shake her web so that it vibrates.

The male of a *Nephila* species is much smaller than the corresponding female. In *N. edulis* the male has a body length of about 6 mm. There is a photograph of both sexes of *N. edulis* in Mascord (1980, pl. 22, fig. 4). A male which is seeking his chance to mate with a female may wait near the upper edge of her web. Thus, if a female of *Nephila* sp. is observed, it is worth examining the web and the surrounding vegetation in case a male spider is stationed nearby.

The specific name, *edulis*, usually is given to animals which are edible, so its choice for a spider was intriguing. The explanation was found in Koch, L. (1871-1879), **Die Arachniden Australiens**. Koch reported Labillardière's observations about specimens from New Caledonia, which he named as *N. edulis* in 1799. A rough translation from German is as follows:

The natives collect these spiders as articles of food. They throw them into a clay pot which they place on the fire in order to kill the animals, whereupon they roast them on the glowing embers and then eat them.

The author has not been tempted to try this recipe.

Mr. M.R. Gray's work towards the identification of the species of *Nephila* found in Tasmania is acknowledged with thanks. It is hoped that mature males of *Nephila* sp. can be collected so that his investigation of the species can continue.

#### Reference

MASCORD, R. (1980). Spiders of Australia, a field guide. 128 pp. A.H. & A.W. Reed: Sydney.

## AN AGGRESSIVE HERON

A.M. Tagg

On 4 August 1981 I observed a White-faced Heron patrolling up and down the side of a waterhole driving back three Spurwing Plovers each time they approached the water. It kept this up for almost a quarter of an hour till the plovers left.

## RUDDY GREENHOOD (*Pterostylis rufa rufa*)

M. Wall

In The Tasmanian Naturalist No. 65 (April 1981) I recorded progress in the flowering of one of these in a pot.

Since that was written in April another bud appeared, making ten in all, and that flower did not die until the end of June. The plant was blooming continuously for five months.

Now, in July, two healthy rosettes of leaves are well developed.

## A BROODING CHITON IN NEW SOUTH WALES

Elizabeth Turner

(Tasmanian Museum)

*Ischnochiton (Haploplax) lentiginosa*

In June, 1979, Mrs. A.M. and Mr. J.R. Penprase, of Hobart, found a brooding chiton at Long Reef, Collaroy, New South Wales. A specimen of *Ischnochiton (haploplax) lentiginosa* (Sowerby, 1840) was brooding more than 120 metamorphosed (eight-valved) juveniles, half of these in each side of the mantle cavity. The adult chiton is 11.50 mm. in length and the juveniles are 0.40 mm. long. These specimens are lodged in the collection of the Tasmanian Museum, reg. no. E10768.

To the author's knowledge this is the first record of a brooding chiton found on the mainland of Australia.

Several species of chitons are known to brood in Tasmania. *Ischnochiton (Haploplax) mayi* Pilsbry, 1895, and *Ischnochiton (Heterozona) subviridis* (Iredale & May, 1916) both protect their juveniles to the metamorphosed stage. *Callochiton crocinus* (Reeve, 1847) broods its eggs but it is not known how far they develop before dispersal. *Callistochiton mawlei* Iredale & May 1916, has been found with metamorphosed juveniles attached to the dorsal surfaces of several adults. In the collection of the Tasmanian Museum an example of *Eudoxochiton (Eudoxoplax) inornatus* (Tenison Woods, 1881) has several eggs inside the mantle cavity. However, it is not known if the last two species are genuine brooders.

## Reference

TURNER, H.E. (1978). Brooding of chitons in Tasmania. *J.Malac.Soc.Aust.* 4(1-2): 43-47.

## MOLLUSCS OF CALVERT'S LAGOON, SOUTH ARM

J. &amp; M. Grist

Calvert's Lagoon is a brackish lake sheltered from the ocean and heavily covered with water weed. Recent rains following the drought of last year have rendered the previously nearly dry lake into a deceptively safe-looking place to walk on, but underneath the weed is very treacherous mud.

Undoubtedly the most numerous of the species present is the screw shell *Coxiella striata*. This little shell, about 10 mm long, is a brownish colour.

The second main species is *Physastra gibbosa*. Slightly larger (about 15 mm) this gastropod, unlike nearly all gastropods, is sinistral; i.e. it has its opening on the left side when it is held with the opening towards the holder. It is a very interesting and somewhat fragile shell.

The third species we found was a round flat gastropod under 10 mm across. On the top surface are beautiful brown markings following the body whorl lines. It is an introduced species named *Cerneuella vestita*.

Two larger shells were found embedded in the bank. They were weathered specimens of the very common land snail *Caryodes dufresnii* more commonly found in wet forests such as those on the slopes of Mt. Wellington. They often grow to a length of 40 mm.

## RONALD CAMPBELL GUNN

by

Ron C. Kershaw

While looking at problems associated with the fossil land mollusc *Bothriembryon gunnii* it seemed appropriate to look at information on the remarkable man whose name it has. Ronald Gunn's name is associated with a good many species particularly plants for he was, of course, best known for his knowledge of botany.

It seems appropriate that some reference to this important naturalist should be made in this year, one hundred years from his death on 13th March 1881. In the Proceedings of the Royal Society of Tasmania for April, 1881 (p. iv) Mr. T. Stephens paid a tribute from which it is worth quoting a sentence.

"From the time of his arrival Mr. Gunn's name appears associated with every early attempt to cultivate a knowledge of the natural products and resources of the colony; in the field of Botany he was one of the first pioneers, and for many years stood alone."

The impact of this man is well demonstrated by the tribute paid him by Sir Joseph Hooker in his introduction to the *Flora Tasmaniae*. This eulogy was quoted by the then president of the Royal Society of Tasmania in his opening address read 12 April 1881. (Lefroy, 1882) A significant remark made by Sir J.H. Lefroy was that "Such men . . . are rarely honoured as they deserve".

Having migrated to Tasmania in 1829 Gunn seems to have very quickly set about studying the environment. His duties led him to many parts of Tasmania so that he had much opportunity to collect and study. Some indication of his life in Tasmania can be deduced from the entry in the *Australian Encyclopaedia* Volume IV, pp. 403-4, where his place in Australian history is clearly established. For further information Reynolds (1926) should be consulted.

Lefroy, J.H. 1882. "Presidential Address" Pap. Proc. R. Soc. Tasm. 1881.

Reynolds, J. 1926. "Ronald Campbell Gunn" Tasm. Nat. New Series Volume 1. No. 5; 13-14.

## SOME NOTES ON REGROWTH OF VEGETATION FOLLOWING A WILDFIRE IN FREYCINET NATIONAL PARK

R.G. Tyson

National Parks & Wildlife Service

A cursory inspection on 19th July 1981 of the vegetation along the Hazards Beach Track between Hazards Beach and the Quarry revealed some interesting species regrowing after the bushfires of February 1980, some 17 months previously. This area was subjected to an intense fire as the main fire front south of the quarry met the back-burn from the Isthmus Track.

The most notable species observed was the relatively rare Tasmanian endemic *Anthocercis tasmanica*. A large patch of several hundred plants ranging in height up to 1 metre occurs between Fleurieu Point and Deep Gap Creek, with a smaller patch at Lousy Creek. The plants had not yet flowered.

*Trachymene anisocarpa*, is abundant, with flowering heads up to 2 metres high. This species is a biennial umbelliferous plant, flowering in its second year. It was apparently uncommon in the area prior to the fire, and had not been recorded from previous surveys of the area. Since the vegetation had not been burnt for 20-25 years, the species presumably has a high longevity. It is also growing in areas disturbed by the quarrying activities.

*Solanum laciniatum*, *Goodia lotifolia* and *Indigofera australis* are all particularly vigorous, forming dense bushes. *Casuarina stricta* has formed dense thickets, particularly in the area around Lemana Lookout. Individuals are up to 1.5 metres high. In June 1980 Margaret Allen reported seeing thousands of casuarina seedlings about 2½" high with their true leaves developing. (S.G.A.P. Newsletter 4(3)).

Species List: *Acacia botrycephala*, *Acacia myrtifolia*, *Acacia suaveolens*, *Acacia verticillata* var. *ovoidea*, *Acianthus exsertus* (flowering), *Anthocercis tasmanica*, *Baeckea ramosissima* (flowering), *Banksia marginata*, *Bossiaea cinerea* (flowering), *Bulbine semi-barbata* (flowering), *Callitris rhomboidea*, *Carpobrotus rossii*, *Casuarina littoralis*, *Casuarina stricta*, *Cassinia spectabilis*?, *Correa reflexa*, *Dampiera stricta*, *Dampiera xiphioclada*, *Dillwynia sericea*, *Diurus* sp. (flowering), *Drosera planchonii*, *Eriostemon virgatus* (flowering), *Eucalyptus amygdalina*, *E. viminalis*, *Gahnia radula*, *Gonocarpus teucriodes*, *Goodenia lanata*, *Goodenia ovata*, *Goodia lotifolia*, *Hibbertia riparia*, *Indigofera australis*, *Kennedia prostrata*, *Kunzea ambigua*, *Lepidosperma concavum*, *Leptospermum glaucescens*, *Leptospermum grandiflorum*, *Leucopogon ericoides*, *Lomandra longifolia*, *Lomatia tinctoria*, *Olearia ramulosa*, *Opercularia varia*, *Pterostylis* sp. (single flower, leafy stem, flower withered), *Solanum laciniatum* (flowering), *Spyridium vexilliferum*, *Stackhousia monogyna* (buds), *Tetrarrhena distichophyllum*, *Trachymene anisocarpa* (flowering), *Xanthorrhoea australis*, *Xanthosia pilosa*.