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THE SHAG BAY ROCKSHELTER, TASMANIA

J. Stockton

This article is based on information from Vanderval, R.L. (1977)  
The Shag Bay Rockshelter, Tasmania. The Artefact 2 (4): 161-170

The Shag Bay rockshelter was excavated by Dr. Vanderval in 1974. The shelter chosen for excavation is 15m above the Derwent River. It is the largest of the shelters in the cliff and has a westerly aspect across the Derwent estuary. The shelter is 12m long and 4m deep. The shell midden is capped by a roof fall up to 1m thick. The occupational deposit consists of 25cm of shell midden with large quantities of shellfish remains in a charcoal and ash matrix.

The most common component of the midden was the mussel Mytilus planulatus with a minimum of 3,850 individuals represented in the deposit excavated. Surprisingly, there were very few occurrences of the large common mud oyster Ostrea angasi. Other species present in small numbers were limpets, Chiazacmea flammea, top shells, Austrocochlea constricta and coniwink, Bembicium auratum.

Two stone artefacts were recovered, one a nosed scraper, the other a flake.

There were no remains of animal bone or scale fish bone.

Carbon samples for C14 dating were collected from near the top of the occupation zone and from the base. The samples gave dates of 4,720± 110 B.P. and 5,300± 120 B.P. respectively. The spread of only 700 years suggests that the rockshelter was used for only a short period in archeological time.

The evidence of the stratigraphy suggests numerous short term occupations. Vanderval sees Shag Bay as an extreme example of the east coast pattern of intensive, short term, single resource use with mussels the main attraction to the area.

## THE PLANTS AND BIRDS OF THE MT. NELSON-BONNET HILL AREA

Ann V. Ratkowsky

Over the past five years I have included the Mt. Nelson-Bonnet Hill area in my various surveys of the vascular plants and birds of the Mt. Wellington area. The following lists augment the information of G. van Munster in his article "Bonnet Hill Area", *Tasmanian Naturalist*, No. 54, August 1978, in which he describes this naturally rich and valuable area and presents a case for the conservation of its flora and fauna.

My survey area, which includes a considerable proportion of that surveyed by van Munster, also incorporates the northern and eastern slopes of Mt. Nelson.

## PLANTS

## MONOCOTYLEDONAE

## Gramineae (Poaceae)

|             |                |
|-------------|----------------|
| Agrostis    | avenacea       |
|             | aequalis       |
| Amphibromus | archeri        |
| Danthonia   | purpurascens   |
|             | setacea        |
|             | caespitosa     |
|             | procera        |
|             | laevis         |
|             | pilosa         |
| Deyeuxia    | quadriseta     |
| Dichelachne | sciurea        |
|             | crinita        |
| Distichlis  | distichophylla |
| Festuca     | asperula       |
| Microlaena  | stipoides      |
| Pentapogon  | quadrifidus    |
| Poa         | australis      |
| Stipa       | aphylla        |
|             | mollis         |
|             | pubinodis      |
| Tetrarrhena | distichophylla |
| Themeda     | australis      |

## Cyperaceae

|              |              |
|--------------|--------------|
| Carex        | breviculmis  |
|              | inyx         |
| Gahnia       | graminifolia |
|              | grandis      |
|              | radula       |
| Lepidosperma | elatius      |
|              | filiforme    |
|              | laterale     |
|              | lineare      |
| Schoenus     | apogon       |
|              | maschalinus  |

|                         |  |
|-------------------------|--|
| <b>Scirpus</b>          | antarcticus<br>fluitans<br>hookerianus<br>inundatus<br>platycarpus               |
| <b>Centrolepidaceae</b> |  |
| <b>Centrolepis</b>      | aristata   |
| <b>Juncaceae</b>        |  |
| <b>Juncus</b>           | gregiflorus<br>holoschoenus<br>pallidus<br>procerus<br>subsecundus<br>sarophorus |
| <b>Luzula spp.</b>      |  |
| <b>Liliceae</b>         |  |
| <b>Anguillaria</b>      | dioica   |
| <b>Arthropodium</b>     | milleflorum  |
| <b>Astelia</b>          | alpina   |
| <b>Bulbine</b>          | bulbosa  |
| <b>Dianella</b>         | revoluta<br>tasmanica  |
| <b>Drymophila</b>       | cyanocarpa   |
| <b>Laxmannia</b>        | sessiliflora   |
| <b>Lomandra</b>         | longifolia   |
| <b>Hypoxidaceae</b>     |  |
| <b>Hypoxis</b>          | hygrometrica   |
| <b>Iridaceae</b>        |  |
| <b>Diplarrhena</b>      | moraea   |
| <b>Orchidaceae</b>      |  |
| <b>Caladenia</b>        | carnea<br>gracilis   |
| <b>Chiloglottis</b>     | gunnii   |
| <b>Diuris</b>           | pedunculata  |
| <b>Glossodia</b>        | major  |
| <b>Micrurus</b>         | parviflora   |
| <b>Pterostylis</b>      | longifolia<br>nana   |
| <b>Thelymitra</b>       | grandiflora<br>ixioides<br>nuda<br>pauciflora                                    |

## DICOTYLEDONAE

## Ranunculaceae

|            |              |
|------------|--------------|
| Clematis   | aristata     |
|            | gentianoides |
| Ranunculus | lappaceus    |

## Dilleniaceae

|           |         |
|-----------|---------|
| Hibbertia | hirsuta |
|           | stricta |

## Violaceae

|       |           |
|-------|-----------|
| Viola | hederacea |
|-------|-----------|

## Pittosporaceae

|            |            |
|------------|------------|
| Bursaria   | spinosa    |
| Marianthus | procumbens |

## Tremandraceae

|            |        |
|------------|--------|
| Tetradthea | pilosa |
|------------|--------|

## Polygalaceae

|           |          |
|-----------|----------|
| Coesperma | volubile |
|-----------|----------|

## Hypericaceae

|           |           |
|-----------|-----------|
| Hypericum | gramineum |
|-----------|-----------|

## Malvaceae

|                |          |
|----------------|----------|
| Asterotrichion | discolor |
|----------------|----------|

## Linaceae

|       |           |
|-------|-----------|
| Linum | marginale |
|-------|-----------|

## Geraniaceae

|             |                |
|-------------|----------------|
| Geranium    | potentilloides |
|             | sclanderii     |
| Pelargonium | inodorum       |

## Oxalidaceae

|        |             |
|--------|-------------|
| Oxalis | corniculata |
|--------|-------------|

## Rutaceae

|            |            |
|------------|------------|
| Boron.a    | pilosa     |
|            | nana       |
| Eriostemon | verrucosus |
| Correa     | reflexa    |

Stackhousiaceae

Stackhousia monogyna

Rhamnaceae

Pomaderris elliptica

Sapindaceae

Dodonaea viscosa

Mimosaceae

Acacia  
genistifolia  
verticillata  
riceana  
stricta  
myrtifolia  
melanoxyton  
searnsii  
dealbata

Papilionaceae (Fabaceae)

Sphaerolobium vininum  
Daviesia latifolia  
ulicina  
Pultenea daphnoides  
stricta  
pedunculata  
juniperina  
Bossiaea prostrata  
Hovea heterophylla  
Indigofera australis  
Kennedyia prostrata

Rosaceae

Acaena ovina  
anserinifolia

Crassulaceae

Crassula helmsii

Droseraceae

Drosera auriculata

Haloragaceae

Haloragis tetragyna  
teucrioides

## Myrtaceae

|              |            |
|--------------|------------|
| Leptospermum | scoparium  |
| Callistemon  | pallidus   |
| Eucalyptus   | ovata      |
|              | viminialis |
|              | globulus   |
|              | obliqua    |
|              | pulchella  |
|              | amygdalina |

## Umbelliferae (Apiaceae)

|        |              |
|--------|--------------|
| Daucus | glochidiatus |
|--------|--------------|

## Rubiaceae

|             |            |
|-------------|------------|
| Coprosma    | hirtella   |
|             | quadrifida |
| Opercularia | varia      |
| Asperula    | scoparia   |

## Compositae (Asteraceae)

|               |                |
|---------------|----------------|
| Legnophora    | stipitata      |
|               | hugelii        |
| Brachycome    | decipiens      |
|               | scapiformis    |
| Olearia       | viscosa        |
|               | erubescens     |
|               | stellulata     |
|               | renulosa       |
|               | ericioides     |
|               | floribunda     |
|               | glandulosa     |
| Vittalinia    | triloba        |
| Gnaphalium    | collinum       |
| Leptorhynchus | equumatum      |
|               | linearis       |
| Helichrysum   | scorpioides    |
|               | dealbatum      |
|               | apiculatum     |
|               | semipapposum   |
|               | purpuraceum    |
|               | dendroideum    |
|               | obcordatum     |
|               | scutellifolium |
| Cassinia      | aculeata       |
| Craspedia     | glauca         |
| Senecio       | linearifolius  |
|               | minimus        |
|               | quadridentatus |
|               | glomeratus     |
|               | hispidulus     |
| Bedfordia     | salicina       |
| Microseris    | scapigera      |

## Stylidiaceae

|           |               |
|-----------|---------------|
| Stylidium | graminifolium |
|-----------|---------------|

## Goodeniaceae

|          |        |
|----------|--------|
| Goodenia | ovata  |
|          | lanata |

## Campanulaceae

|              |            |
|--------------|------------|
| Wahlenbergia | gymnoclada |
|              | consimilis |

## Lobeliaceae

|         |         |
|---------|---------|
| Lobelia | gibbosa |
|---------|---------|

## Epacridaceae

|            |            |
|------------|------------|
| Astroloma  | humifusum  |
| Cyatnodes  | divaricata |
| Lissanthe  | strigosa   |
| Leucopogon | collinus   |
| Acrotiche  | serrulata  |
| Epacris    | impressa   |

## Oleaceae

|          |            |
|----------|------------|
| Notoxasa | ligustrina |
|----------|------------|

## Gentianaceae

|             |           |
|-------------|-----------|
| Gentianella | diemensis |
|-------------|-----------|

## Boraginaceae

|             |            |
|-------------|------------|
| Cynoglossum | suaevolens |
|-------------|------------|

## Convolvulaceae

|             |            |
|-------------|------------|
| Convolvulus | crubescens |
|-------------|------------|

## Solanaceae

|         |            |
|---------|------------|
| Solanum | laciniatum |
|---------|------------|

## Scrophulariaceae

|           |         |
|-----------|---------|
| Euphrasia | collina |
|-----------|---------|

## Labiatae (Lamiaceae)

|          |          |
|----------|----------|
| Praxella | vulgaris |
|----------|----------|

Plantaginaceae

Plantago varia

Polygonaceae

Rumex brownii

Lauraceae

Cassipouita pubescens

Proteaceae

Lomatia tinctoria  
Bankia marginata

Thymelaeaceae

Pimelea linifolia  
humilis  
nivea

Santalaceae

Leptomeria drupea  
Exocarpos cupressiformis  
strictus

Euphorbiaceae

Poranthera microphylla  
Beyeria viscosa  
Phyllanthus australis

Casuarinaceae

Casuarina stricta  
littoralis

**PERIDOPHYTA**

Dennstaedtiaceae

Pteridium seculentum

Adiantaceae

Cheilanthes tenuifolia



BIRDS

Accipiter fasciatus  
 Falco berigora  
 Falco cenchroides  
 Coturnix australis  
 Ballus pectoralis  
 Vanellus miles  
 Phaps chalcoptera  
 Calyptorhynchus funereus

Lathamus discolor  
 Platycercus caledonicus  
 Cuculus pallidus  
 Cuculus pyrrhophamus  
 Chrysococcyx lucidus

Ninox novaeseelandiae  
 Podargus strigoides  
 Hirundapus caudacutus

Dacelo novaeguinae  
 Hirundo neoxena  
 Cecropis nigricans  
 Anthus novaeseelandiae

Coracina novaehollandiae  
 Zosterops iaxma  
 Turdus merula  
 Petroica rodinogaster  
 Petroica phoenicea  
 Petroica multicolor  
 Melanodryas vittata  
 Pachycephala olivacea  
 Pachycephala pectoralis  
 Colluricincla harmonica  
 Myiagra cyaneleuca  
 Ptilinopus fuliginosa  
 Cincloeca punctatus  
 Malurus cyaneus

Sericornis frontalis

Acanthis pusilla  
 Acanthis ewingii  
 Acanthis chrysorrhoa  
 Anthochaera paradoxa  
 Anthochaera chrysoptera  
 Lichenostomus flavicollis  
 Melithreptus validirostris  
 Melithreptus affinis  
 Phylidonyris pyrrhoptera  
 Phylidonyris novaehollandiae  
 Acanthorhynchus tenuirostris  
 Pardalotus punctatus  
 Pardalotus striatus

Brown Goshawk  
 Brown Falcon (Brown Hawk)  
 Australian Kestrel  
 Brown Quail  
 Levin's Rail  
 Masked Lapwing  
 Common Bronzewing  
 Yellow-tailed Black-Cockatoo

Swift Parrot  
 Green Rosella  
 Pallid Cuckoo  
 Fan-tailed Cuckoo  
 Shining Bronze-Cuckoo (Golden  
 Bronze Cuckoo)  
 Southern Boobook (Spotted Owl)  
 Tawny Frogmouth  
 White-throated Needletail (Spin-  
 tailed Swift)

Laughing Kookaburra  
 Welcome Swallow  
 Tree Martin  
 Richard's Pipit (Australian  
 Pipit)  
 Black-faced Cuckoo-shrike  
 White's Thrush (Ground Thrush)  
 Blackbird  
 Pink Robin  
 Flame Robin  
 Scarlet Robin  
 Dusky Robin  
 Olive Whistler  
 Golden Whistler  
 Grey Shrike-thrush  
 Satin Flycatcher  
 Grey Fantail  
 Spotted Quail-thrush  
 Superb Fairy-wren (Superb Blue  
 Wren)

White-browed Scrubwren (Brown  
 Scrubwren)  
 Brown Thornbill  
 Tasmanian Thornbill  
 Yellow-rumped Thornbill  
 Yellow Wattlebird  
 Little Wattlebird  
 Yellow-throated Honeyeater  
 Strong-billed Honeyeater  
 Black-headed Honeyeater  
 Crescent Honeyeater  
 New Holland Honeyeater  
 Eastern Spinebill  
 Spotted Pardalote  
 Striated Pardalote (Yellow  
 capped Pardalote)

Zosterops lateralis  
Carduelis carduelis  
Carduelis chloris  
Passer domesticus  
Eublemma bella  
Sturnus vulgaris  
Artemus cyanopterus  
Cracticus torquatus  
Strepera fuliginosa  
Strepera versicolor  
Corvus tasmanicus

Silvereye  
European Goldfinch  
European Greenfinch  
House Sparrow  
Beautiful Firetail  
Common Starling  
Dusky Woodswallow  
Grey Butcherbird  
Black Currawong (Black Jay)  
Grey Currawong (Black Magpie)  
Forest Raven

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### INTERMEDIATE EGRETS IN TASMANIA

L.E. Wall

Three species of egrets can now be stated to be regular visitors to Tasmania, generally arriving in April or May and returning to the Mainland in October or November - they are the Great Egret (formerly White or Large Egret), the Little Egret and the Cattle Egret. Occasionally individuals remain throughout the summer but they are not known to breed here. Records of the other two species of egrets - the Intermediate Egret *Egretta intermedia* (formerly Plumed Egret) and the Eastern Reef Egret (formerly Reef Heron) are rare.

There are only two published records of the Intermediate Egret for the State: these were at Howrah on 7 June 1958 (Emu, 59: 184-186) and at St. Helens on 9th March 1977 ("Birds of Tasmania" by R.H. Green, 1977).

On 6 May 1978 I saw five Intermediate Egrets in company with two White-faced Herons near Pateena bridge in the Longford district; they were pure white birds with yellow bills and very slightly smaller than the herons they were with. I was unable to make more detailed observations but the size and bill colour were carefully noted. The following day I was able to spend a leisurely couple of hours in the district but was then unable to find these birds.

A fortnight later I saw another bird which I believe was of the same species on a farm dam at Margate but in the poor light of very late afternoon I could not be sure. On two later visits I was unable to locate this bird again.

There is an increasing belief that other occurrences of the Intermediate Egret have not been recognized because of confusion with the Great Egret. Plumage in both species is similar but the size differences are marked. If, as is usually the case, a Great Egret is seen with a White-faced Heron nearby for comparison, the larger size of the Great Egret is very noticeable, whilst as noted above the Intermediate Egret is slightly smaller than the heron.

## THE EFFECT OF TIME OF DAY ON BIRD ACTIVITY

Ann V. Ratkovsky

There is a generally held belief that, as for example stated in the R.A.O.U. Atlas Newsletter, No. 7, September 1978, P. 1: "Generally, Australian birds are most active in the early morning and late evening. Observations during these periods are likely to be more productive". Having conducted several bird surveys over the past few years (Hem. 77:19-22, 1977; Tas. Nat. 53:11-12, May 1978), I felt that bird activity is fairly uniform throughout the whole of the morning. The opportunity became available for me to systematically investigate bird activity at different times of the day when we recently moved to a house situated on the edge of dry sclerophyll bushland at the foot of Mt. Nelson. The survey was prematurely terminated by an indiscriminately lit bushfire which ravaged the survey area on October 2, 1978. Nevertheless, the results accumulated to that date were statistically significant.

Bird activity was assessed as the number of different species seen or heard in timed counting sessions during the day as follows. I made 10 min. walking counts at 7.15a.m., 11.15a.m., 4.30p.m. and 5 min. sitting counts between 11.30a.m. and 1.30p.m. at 30 min. intervals in an area particularly rich in bird life near our house. Although I would not normally mix walking and sitting counts, the fact that the 11.15a.m. walking counts and the 11.30a.m. sitting counts do not differ significantly enables me to present all the results in a single table:

| Time of Day | Mean Number of Species $\pm$ S.E. | Number of Counting Sessions |
|-------------|-----------------------------------|-----------------------------|
| 7.15a.m.    | 16.1 <sup>a</sup> $\pm$ 0.72      | 9                           |
| 11.15a.m.   | 15.7 <sup>a</sup> $\pm$ 0.80      | 9                           |
| 11.30a.m.   | 14.5 <sup>ab</sup> $\pm$ 0.43     | 6                           |
| 12 Noon     | 13.5 <sup>bd</sup> $\pm$ 0.54     | 10                          |
| 12.30p.m.   | 10.0 <sup>c</sup> $\pm$ 1.04      | 10                          |
| 1.00p.m.    | 8.2 <sup>c</sup> $\pm$ 0.77       | 10                          |
| 1.30p.m.    | 8.2 <sup>c</sup> $\pm$ 0.78       | 8                           |
| 4.30p.m.    | 12.0 <sup>d</sup> $\pm$ 0.71      | 9                           |

Note: Means not followed by the same letter differ significantly ( $p < 0.05$ )

The above table shows that the species numbers throughout the morning are similar, but they decrease after 11.30a.m. to a minimum between 12.30p.m. and 1.30p.m. At 4.30p.m. the numbers are similar to what they were at 12 Noon. The low counts were not due to the absence of any particular species, except that the Strong-billed Honeyeater was almost totally silent at Mid-day. The Black-headed Honeyeater and Forest Raven were less vocal at Mid-day as was the Grey Shrike-thrush in the late afternoon counts. The constancy of the morning counts is gratifying to me as all my previous bird surveys have been conducted between the hours of 7.15a.m. and 11.30a.m.

Future work could be done to study when, how and to what extent bird activity increases from 1.30p.m. onwards, as after that time I investigated only one afternoon time (4.30p.m.). This would give greater insight into bird activity throughout the entire day.

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