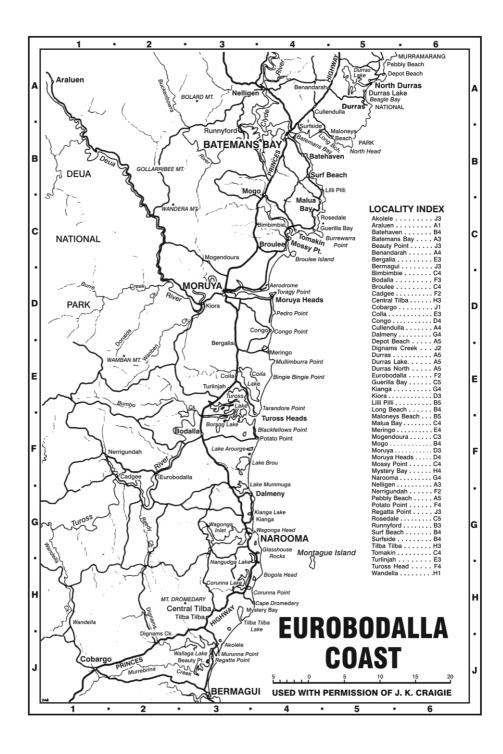
# **NATURE IN EUROBODALLA**

Number 33 (2018)



Compiled by D Kay and J Morgan



#### EUROBODALLA NATURAL HISTORY SOCIETY

### **ANNUAL RECORD FOR 2018**

The objects of the Society are to:

- Foster and encourage the study, enjoyment and conservation of the natural environment of the area;
- Arrange indoor meetings and field excursions for these ends;
- Encourage and train members in the keeping of records of the wildlife of the area;
- Prepare reports of these records from time to time;
- Liaise with other societies, organizations and individuals with similar interests.

#### **COMMITTEE**

Chair/Recorder: Julie Morgan
Secretary: Lyn Burden
Treasurer: Malcolm Griggs
Members: Fran Anderson

Mandy Anderson Steven Benjamin John Gordon David Kay

Gillian Macnamara

Annual Subscription Single \$20, Family \$30, Under 18 \$5

Cover: Green Tree Frog, *Litoria caerulea* found at Tuross Head Photo M Crowley

Date of Issue: November 2019

(c) Eurobodalla Natural History Society, PO Box 888, Moruya NSW 2537

ISSN 1322-2538 Nature in Eurobodalla

ABN 17389837706

# **CONTENTS**

| INTRODUCTION   | 5  |
|--|----|
| STSTEMATIC LIST  |    |
| Birds  | 9  |
| Mammals  | 45 |
| Reptiles   | 48 |
| Frogs  | 50 |
| Insects  |    |
| Dragonflies and Damselflies  | 51 |
| Bugs and Cicadas   | 51 |
| Beetles  | 52 |
| Flies  | 53 |
| Moths  | 53 |
| Butterflies  | 57 |
| Wasps and Bees   | 58 |
| Other Invertebrates  | 58 |
| Other invertebrates  | 30 |
| P J. Fullagar, C Davey, D Priddel and M Crowley<br>60th Annual Assessment of Shearwater Breeding Success<br>on Montagu Island. | 60 |
| M A Crowley, C C Davey and P J Fullagar<br>A winter visit to Montagu Island.   | 70 |
| Harvey D. Perkins<br>Terrestrial Arthropods of Montagu Island.   | 73 |
| Contributors to this issue.  | 80 |

#### INTRODUCTION

It is a pleasure to introduce this thirty third edition of *Nature in Eurobodalla*, a report on the status of the fauna of the Eurobodalla Shire compiled from records submitted to the Eurobodalla Natural History Society during 2018. A map of the Shire is reproduced inside the front cover and a list of place name abbreviations used in the text appears inside the back cover.

The year 2018 was the warmest on record for New South Wales, with a mean temperature 1.68 °C above average. Minimum temperatures for the year overall were very warm and both Batemans Bay and Narooma recorded their highest ever daily minimum temperature in December. The year was also dominated by very dry conditions, with the third-driest January to September on record. October to December saw some relief from the dry, with above average rainfall across parts of the State. Despite this, New South Wales experienced its sixth-lowest annual rainfall on record; its driest year since 2002.

Rainfall across the Eurobodalla was well below average, with the Bureau of Meteorology stations recording 741mm at Moruya Heads (78% of the average), 707mm at Narooma (75%) and 627mm at Montagu Island (72%). The wettest months were January with 156mm at Bergalia, February with 162mm at Maulbrooks Rd and 158mm at Comerang and November with 153 mm at Mystery Bay and 142 at Coolagolite. The driest months were April with 0.75mm at Coolagolite, 1.5 at Comerang and 2mm at Mystery Bay and July with 1mm at Maulbrooks Rd.

The year provided records of three new bird species for the Shire, Pied Butcherbird, (*Cracticus nigrogularis*) reported at Rosedale and Guerilla Bay in March, a Forest Kingfisher, (*Todiramphus macleayii*) reported at Broulee Is in October and a Beautiful Firetail, (*Stagonopleura bella*) reported from the Deua River valley in December. There was also the first record of a Green Tree Frog, (*Litoria caerulea*) at Tuross in December. Two moth species were recorded for the first time this year, a Spectacular Emerald, (*Chlorocoma cadmaria*) at Moruya in September and a Double-line Snout Moth, (*Lophotoma diagrapha*) at Comerang in March.

The absence of sightings can sometimes be as interesting as their presence and for the third year in a row the White-winged Triller was absent. Also absent from the records in 2018 was the Musk Duck, the first time this has occurred this century.

During the year members of the Society again participated in the NSW Parks and Wildlife shorebird monitoring programs and in BirdLife Australia surveys for Swift Parrot and Regent Honeyeater. No off-shore field trips were undertaken during the year and records of pelagic species are therefore primarily from land-based observations.

This report is restricted to those species recorded during the year; species not recorded are not listed. An annotated list of all bird species recorded in the Eurobodalla since the inception of the Society in 1986 is available on the Society's website (www.enhs.org.au) and is updated annually to reflect new sightings. As noted in previous years, the records reflect the distribution of observers and their interests as much as the distribution of the fauna. However, despite these shortcomings the records provide a valuable qualitative assessment of the status of species in the Shire, enabling trends over the years to be evaluated. One trend noticeable in 2018 in the area where I live near Moruya has been a marked increase in rabbit numbers, with conspicuous signs of rabbit activity in areas which have appeared rabbit free for more than a decade.

The vertebrate taxonomic sequence used basically follows Clayton *et al* (2006), with the listing of birds following the BirdLife Australia 2008 checklist based on Christides and Boles (2008). Taxonomic references used in compiling this report are listed below. The conservation status ascribed to bird species (Critically Endangered, Endangered and Vulnerable) is that given in Schedule 1 of the NSW Biodiversity Conservation Act, 2016.

Once again, my thanks go out to all contributors who have made this report possible. In particular I thank my co-complier, Julie Morgan, for her work as the Society's Recorder during the year. A complete list of those who have contributed their observations during the year appears on the final page.

Thanks also to Peter Fullager *et al* for the 60<sup>th</sup> Annual Assessment of Shearwater Breeding on Montagu Island, to Mike Crowley *et al* for the paper on a winter visit to Montagu Island, and to Harvey Perkins for his paper on the Terrestrial Arthropods of Montagu Island

David Kay September 2019

Braby, M.F. (2004): *The Complete Field Guide to the Butterflies of Australia*. CSIRO Publishing, Melbourne.

Brock, P.D. and Hasenpusch, J.W. (2009): *The Complete Field Guide to Stick and Leaf Insects of Australia*. CSIRO Publishing, Melbourne. Christides, L. and Boles, W.E. (2008): *Systematics and Taxonomy of Australian Birds*. CSIRO Publishing, Melbourne.

Clayton, M., Wombey, J.C., Mason, I.J., Chesser, R.T and Wells, A. (2006): *CSIRO List of Australian Vertebrates: A Reference with Conservation Status*. CSIRO Publishing, Melbourne.

Common, I.F.B. (1990): *Moths of Australia*. Melbourne University Press, Carlton.

Hangay, G. and Paul Zborowski, P. (2010): A Guide to the Beetles of Australia. CSIRO Publishing, Melbourne.

Higgins, P. and Peter, J. M. (eds.): *Handbook of Australian, New Zealand and Antarctic Birds*. Oxford University Press, South Melbourne.

Moulds, M.S. (1990): *Australian Cicadas*, New South Wales University Press.

Nielsen E.S., Edwards E.D., and Rangsit T.V. (1996): *Monograph of Australian Lepidoptera, Vol 4; Checklist of the Lepidoptera of Australia* CSIRO Publishing, Melbourne.

Theischinger G. and Hawking J. (2006): *The Complete Field Guide to Dragonflies of Australia*. CSIRO Publishing, Melbourne.

#### BIRDS

#### CASUARIIDAE Emu

Emu Dromaius novaehollandiae

Status: introduced in 1993, small wild population established.

Three at Trunketabella in May and Jun; 1 at Whittakers Ck in Nov;

tracks at Brou L in Mar. (MA/FM)

### PHASIANIDAE Quail, pheasants

Stubble Quail Coturnix pectoralis

Status: uncommon breeding resident.

Up to 20 at Com in Jan-Mar and Oct-Dec, up to 10 in other months.

Breeding: dependent young at Com in Mar. (JC)

# Brown Quail Coturnix ypsilophora

Status: uncommon breeding resident.

Up to 12 at Montagu Is in Mar; 6 at Com in Jun, 2 in May, Oct and Dec, calls in Mar.

#### **ANATIDAE** Swan, ducks

Freckled Duck Stictonetta naevosa

Status: Vulnerable; vagrant. Six at Com in Jul, 2 in Jun. (JC)

# Black Swan Cygnus atratus

Status: common breeding resident and bird of passage.

Widely reported throughout the year; up to 400 at WL in Jan; 250 at Brou L in Nov; 180 at Bingie in Feb, 160 in Jan; 150 at Long Swamp in Jul; 100 at MHS in Feb; 80 at MYA in Mar; 35 at MO in Apr; no more than 20 at other locations.

Breeding: cygnets at PS in Feb. (JM)

# Australian Shelduck Tadorna tadornoides

Status: vagrant.

Three at Com in Apr, 2 in Aug, 1 in Jan-Feb and May-Jul. (JC)

# Australian Wood Duck Chenonetta jubata

Status: common breeding resident.

Widely reported throughout the year; up to 200 at Com in Jun-Jul, 30-100 in other months; 120 at MYA in Aug; 70 at Runnyford Rd in Apr; 36 at DS in Nov; 35 at MB in Apr; no more than 30 at other locations.

Breeding: dependent young in Jan-Feb and Oct. (JC/J Coffey)

# Pink-eared Duck Malacorhynchus membranaceus

Status: vagrant.

Up to 11 at Com between 3 and 15 Jun. (JC)

### Australasian Shoveler Anas rhynchotis

Status: uncommon winter migrant, has bred.

Up to 41 at Com in Jul, 33 in Aug, 15 in Jun; 9 at Tomakin in Jul; 5 at

MYA in May-Jun, 4 in Mar; 2 at MO in May.

# Grey Teal Anas gracilis

Status: breeding resident.

Reported throughout the year; 30 at Com in Jan-May and Jul, 20 in other months; 30 at MB in Jul; 10 at PS in Jan, at Runnyford Rd in Apr and at Eurobodalla Rd in Aug; fewer than 10 at other locations.

Breeding: dependent young at Com in Jan. (JC)

#### Chestnut Teal Anas castanea

Status: common breeding resident.

Widely reported throughout the year; 50 at Com in Mar-May and Jul-Nov; 40 at Bingie in Oct, at MB in Jul and at MO in Aug; 20 at MYA in

Mar; fewer than 20 at other locations.

Breeding: dependent young at Com in Apr. (JC)

# Northern Mallard Anas platyrhynchos

Status: vagrant.

Seven hybrids at BBWG in Feb. (FM)

# Pacific Black Duck Anas superciliosa

Status: common breeding resident.

Widely reported throughout the year; 200 at Com in Apr-Jul, 50-150 in other months; 100 at BBWG in Feb; 40 at Eurobodalla Rd in Aug; 20 at PS in Jan and Jun-Jul; 15 at MO in Apr-May; no more than 10 at other locations.

Breeding: nesting at Com in Jan, dependent young in Feb. (JC)

# Hardhead Aythya australis

Status: common resident and bird of passage.

Up to 32 at Com in Jun, 12 in Aug; 14 at Trunketabella in Nov; 8 at MO in Oct, 7 in Apr; 7 at Eurobodalla Rd in Aug; 2 at Long Swamp in Jul.

#### **PODICIPEDIDAE** Grebes

# Australasian Grebe Tachybaptus novaehollandiae

Status: common breeding resident.

Up to 25 at MB in Jul; 12 at Bingie in Apr, 8 in May; 8 at Com in Jun, 7 in Apr and Sep; 6 at PS in Jun; no more than 3 at other locations.

# Hoary-headed Grebe Poliocephalus poliocephalus

Status: breeding resident.

Up to 60 at Brou L in Aug; 14 at MO in Nov, 12 in Aug; 8 at Bingie in Oct; singles at MHS in Jul and Com in Aug.

### **Great Crested Grebe** *Podiceps cristatus*

Status: vagrant.

One at Taylors Dam on Eurobodalla Rd in Jun. (JC/NC/SB/V Brown)

### **COLUMBIDAE** Pigeons, doves

#### Rock Dove Columba livia

Status: common breeding resident.

Established colonies at BB, MYA and NA; up to 35 at NA in Jan, Apr and Oct. (MA)

# White-headed Pigeon Columba leucomela

Status: common breeding resident.

Widely recorded in all months; up to 20 at TS in Mar, 10 in Dec; 20 at MHS in Aug; 13 at DS in Aug; 10 at Lilli Pilli in Mar, 7 in Jun; no more than 6 at other locations.

Breeding: juvenile at Surfside in Sep. (DB)

# **Spotted Dove** *Streptopelia chinensis*

Status: breeding resident.

Four at DS in Jan, Sep and Dec, at MB in Jul and Com in Jul-Aug, 1-3 at these sites most other months; 2 at MHS in Feb and at Broulee in Dec; 1 at MYA and Tilba in Sep.

Breeding: nesting at Com in Jun and Sep-Oct, dependent young in Jul. (JC)

# Brown Cuckoo-Dove Macropygia amboinensis

Status: uncommon breeding resident and bird of passage.

Up to 30 at MKS in Jun-Jul, 20 in Aug; 16 at NA in Sep; 8 at Lilli Pilli in Jul and Sep, 7 in Jun and Oct; 3 at Malua Bay in Jan-Feb and Dec, at DS in Oct; no more than 2 at other locations.

# Common Bronzewing Phaps chalcoptera

Status: common breeding resident.

Widely recorded in all months; up to 20 at MKS in Feb-Mar, 12 in Jan; 8 at PS in Feb, 6 in Jan; 5 at Bergalia in Dec; no more than 4 at other locations.

# Crested Pigeon Ocyphaps lophotes

Status: common breeding resident.

Recorded in all months; 11 at MO in Jun, 6 in Dec; 9 at MYA in May; 8 at Com in Jan-Feb and Apr-May; 6 at MB in Jul; no more than 4 at other locations.

Breeding: nesting at Com in Aug and Oct, dependent young in Jan. (JC)

### Peaceful Dove Geopelia striata

Status: breeding resident but becoming less common.

Three at Com in Mar, 2 in Feb and Oct, 1 in May, call in Nov. (JC)

#### Bar-shouldered Dove Geopelia humeralis

Status: uncommon resident.

Ten at Surfside in Apr, 1 in Jun; 2 at Montagu Is in Mar; 1 at Cullendulla Ck in Mar, at BBWG and Broulee in Oct; calls at BP in Jul.

# Wonga Pigeon Leucosarcia picata

Status: common breeding resident.

Widely recorded in all months; 8 at Bumbo Rd in Apr; 6 at MB in Apr and Nov, at Belowra Rd in May; 4 at MKS in Jan-Mar and at WL in Jul; no more than 3 at other locations.

# Topknot Pigeon Lopholaimus antarcticus

Status: bird of passage.

Up to 50 at MO in Dec, 18 in Sep; 17 at Mison's Rd in Jun and at PS in Oct-Nov; 15 at MHS in Dec; 7 at Tilba in Sep; 4 at Com in Oct.

# **PODARGIDAE** Frogmouths

Tawny Frogmouth Podargus strigoides

Status: breeding resident.

Three at MO in Sep, 1 in Apr and Aug; 1 at PS in Jan, at Com in Mar and May; calls at PS in Nov and at Deua R in Nov-Dec.

# **EUROSTOPODIDAE** Nightjars

White-throated Nightjar Eurostopodus mystacalis

Status: summer breeding migrant.

Up to 20 at PS in Jan, 5 in Nov, 2 in Mar, calls in Feb, Oct and Dec; 1 at

ERBG in Feb; calls at MKS in Feb.

### **AEGOTHELIDAE** Owlet-nightjars

# Australian Owlet-nightjar Aegotheles cristatus

Status: breeding resident.

One at Com in Feb-May and Aug-Oct; calls at PS in Jan and Oct-Nov. (JC/JM)

#### **APODIDAE** Swifts

# White-throated Needletail Hirundapus caudacutus

Status: summer migrant.

Reported in Jan-Mar and Oct-Dec; 100 at SB in Feb, at Broulee in Nov and at MO in Dec; 65 at Bergalia in Dec; 50 at MHS in Dec; 30 at Com in Jan and at Malua Bay in Nov; no more than 20 at other locations; last record at Monga NP on 25 Mar, first return at PS on 21 Oct.

#### **DIOMEDEIDAE** Albatrosses

#### Albatross sp.

Four off CO on 8 Jun. (FM)

# Wandering Albatross Diomedea exulans

Status: Endangered; uncommon pelagic. One off MHS on 3 Jun. (DB/JM/NC)

# **Black-browed Albatross** Thalassarche melanophris

Status: Vulnerable; common winter pelagic.

Thirty off MHS in Jun, 10 in Aug; 5 off DS in Jun; 2 off BP and CO in

Jun, off DS in Aug; 1 off Montagu Is in Mar.

# Shy Albatross Thalassarche cauta

Status: Vulnerable; common winter pelagic.

Fifty-nine off Montagu Is in Mar; 30 off MHS in Jun, 20 in Aug, 2 in

Jul; 2 off BP in Jun, 1 in Jul.

# Yellow-nosed Albatross Thalassarche chlororhynchos

Status: Regularly recorded off the coast. One off DS and off MHS in Jun. (DB/FM)

# Buller's Albatross Thalassarche bulleri

Status: Occasionally recorded off the coast.

One off BP on 3 Jun. (DB/JM)

#### **PROCELLARIIDAE** Petrels, shearwaters

### Giant Petrel sp Macronectes sp

Two juveniles off MHS on 3 Jun, 1 on 22 Aug. (DB/JM/NC)

### Prion sp.

Hundreds off MHS on 30 Jun and off Wasp Head on 18 Aug. (DB)

# Fairy Prion Pachyptila turtur

Status: Regularly recorded off the coast.

Up to 40 off MHS in Jul, 10 in Aug; 20 off BP in Jul. (JM/NC)

# Shearwater sp.

Hundreds off Corunna L in Feb; 1 at DS in Aug; several beachcast at Brou L in Nov. (J Coffey/FM)

# Wedge-tailed Shearwater Ardenna pacifica

Status: common breeding resident and summer migrant.

Low numbers at sea off Montagu Is in Mar; 1 dead at DS in Nov.

Breeding: chicks at Montagu Is in Mar. (C Davey)

# Sooty Shearwater Ardenna grisea

Status: summer breeding migrant.

One chick at Montagu Is in Mar. (C Davey)

### **Short-tailed Shearwater** Ardenna tenuirostris

Status: common summer breeding migrant.

Hundreds off MO in Jan-Feb, 40 in Oct, 20 in Apr; hundreds off

Montagu Is in Mar.

Breeding: chicks at Montagu Is in Mar. (C Davey)

# Fluttering Shearwater Puffinus gavia

Status: common pelagic.

Up to 2000 off MHS in Jun, 20 in Aug; 50 off BP in Jun, 10 in Jul; 2 off MO in Feb.

# Hutton's Shearwater Puffinus huttoni

Status: vagrant.

One recorded off MHS on 18 Jun. (DB)

# **SPHENISCIDAE** Penguins

Little Penguin Eudyptula minor

Status: common breeding resident.

Six off MHS in Jun, 2 in Jul. (JM/DB)

#### **SULIDAE** Gannets, boobies.

#### Australasian Gannet Morus serrator

Status: common winter migrant and bird of passage.

Up to 100 off Wasp Head in Apr; 40 off MO in Jun, 25 in Oct; 30 off Brou L in Nov; 20 off MHS in Jun and off BP in Jul; no more than 15 at other locations.

#### **ANHINGIDAE** Darter

# Australasian Darter Anhinga novaehollandiae

Status: breeding resident.

Two at MO in Apr; single birds at Com in Apr-Dec, at Bumbo Rd in Apr, at MHS in Aug, at DS in Aug and Nov and at Coila Ck Rd in Nov.

#### **PHALACROCORACIDAE** Cormorants

#### **Little Pied Cormorant** *Microcarbo melanoleucos*

Status: common breeding resident.

Reported in all months; 60 at Brou L in Nov, 12 in Mar; 20 at TS in Dec; 16 at WL in Jul; 10 at Corunna L in Feb and at MO in Nov; no more than 5 at other locations.

#### **Great Cormorant** Phalacrocorax carbo

Status: common resident.

Reported in all months; up to 200 at Com in Oct, 90 in Nov, 70 in Sep; 30 at Montagu Is in Mar; 20 at Brou L in Nov and at MO in Dec; 16 at Broulee in Dec; 12 at DS in Jan; no more than 10 at other locations.

# Little Black Cormorant Phalacrocorax sulcirostris

Status: common resident.

Reported in all months; 25 at DS in Jan, 12 in Apr; 20 at TS in Dec, 10 in Mar; 7 at MO in Aug; fewer than 5 at other locations

# Pied Cormorant Phalacrocorax varius

Status: uncommon resident.

Seven at MO in Nov; 4 at Broulee in Jun and at CO in Oct; 1-3 at five other locations.

#### **PELECANIDAE** Pelican

# Australian Pelican Pelecanus conspicillatus

Status: common resident.

Widely reported in all months; up to 90 at WL in Jul; 60 at MB in Jun; 35 at Com in Oct; 20 at DS in Aug and at TS in Dec; 10 at MO in Dec; fewer than 10 at other locations.

### **ARDEIDAE** Bitterns, herons, egrets

# White-necked Heron Ardea pacifica

Status: breeding resident.

Reported in all months; 4 at Trunketabella in Feb; 4 at MYA in Feb, 3 in Jan and Sep; 3 at Com in Oct; no more than 2 at other locations.

# Eastern Great Egret Ardea modesta

Status: common resident.

Four at MB in Jan, May, Jul and Oct; 4 at Com in May; 3 at BBWG in Feb, at DS in Aug; no more than 2 at other locations.

### Intermediate Egret Ardea intermedia

Status: uncommon migrant.

Six at Com in May, 1 in Feb-Mar and Nov; 2 at MYA in Aug; 1 at MB in Jun and Deua R in Oct.

# Cattle Egret Ardea ibis

Status: common autumn-spring migrant.

Recorded Mar-Nov; 106 at BI in Mar; 30 at MYA in May, 25 in Jul, 20 in Apr and Jun; 25 at MB in Mar; 20 at Com in May-Jun and at Bergalia in Sep; no more than 10 at other locations.

#### Striated Heron Butorides striata

Status: uncommon breeding resident.

Two at NA in Jan; 1 at Broulee in Feb. (MA/GLM)

# White-faced Heron Egretta novaehollandiae

Status: common breeding resident.

Widely reported in all months; 20 at Com in Jan-Mar and May-Jul; 10 at DS in May; 6 at MO in Nov; no more than 4 at other locations.

# Little Egret Egretta garzetta

Status: common resident.

Twelve at MB in Jan, 10 in Dec; 4 at Corunna L in Feb; 2 at Brou L in Mar and Nov, at Broulee in Aug and at MYA in Sep; 1 at Montagu Is in Mar.

# Eastern Reef Egret Egretta sacra

Status: resident.

Seven at MO in Apr, 2 in Jan-Feb and Oct; 3 at MB in Jul, 2 in Apr-Jun and Oct; singles at 5 other locations.

# Nankeen Night Heron Nycticorax caledonicus

Status: uncommon breeding resident.

Three at BBWG in Feb, 2 in Oct, 1 in Dec; 2 at Com in Jan, 1 in Oct. (JC/NC/RSor)

### THRESKIORNITHIDAE Ibises, spoonbills

#### Australian White Ibis Threskiornis molucca

Status: common resident and winter-spring migrant.

Seventy at MB in Jul; 50 at Com in Mar-Apr; 20 at MYA in Feb-Mar, at Bumbo Rd in Apr; 10 at Cullendulla Ck in Aug, at Brou L in Nov; fewer than 10 at other locations.

### Straw-necked Ibis Threskiornis spinicollis

Status: winter-spring migrant and bird of passage.

Up to 350 at Com in Jun-Jul, 250 in May; 170 at MYA in Jun, 100 in Mar; 100 at MB in Jul; 60 at Eurobodalla Rd in Aug; 40 at Bodalla in May; 30 at MO in Apr; fewer than 15 at other locations.

### Royal Spoonbill Platalea regia

Status: common resident.

Eighteen at Bumbo Rd in Apr; 15 at MHS in Aug-Sep; 14 at MB in May and at Trunketabella in Nov; 12 at WL in Feb and at NA in Apr and Dec; no more than 8 at other locations.

# Yellow-billed Spoonbill Platalea flavipes

Status: uncommon migrant.

Two at Com in Aug, 1 in Feb, Apr, Jun and Sep-Oct; 2 at Bingie in Oct and at Trunketabella in Nov; 1 at Eurobodalla Rd in Aug.

# ACCIPITRIDAE Osprey, kites, eagles, harriers, goshawks

# Eastern Osprey Pandion cristatus

Status: Vulnerable; uncommon migrant.

Three at BB in May-Jul, 1 in Feb-Mar; 2 at MHS in Jun-Sep, 1 in Oct-

Dec; 1 at PS in Jul-Aug and at DY in Oct.

Breeding: pairs nested at BB and MHS; the MHS effort failed whilst the outcome of the BB is unknown.

# **Black-shouldered Kite** *Elanus axillaris*

Status: breeding resident.

Recorded in all months; 2 at Bingie in Jan, at Com in Mar-Apr, at Bergalia in May, at MB in May and July and at MO in Dec; singles at 8 other locations during the year.

# Square-tailed Kite Lophoictinia isura

Status: Vulnerable; uncommon spring-summer breeding migrant. Two at PS in Feb and Sep, at BB in Aug and at MB in Oct; singles at 8 other locations during the year.

# White-bellied Sea-Eagle Haliaeetus leucogaster

Status: Vulnerable; common breeding resident.

Widely reported throughout the year; 4 at Corunna L in Feb and at MB in Apr and Jun; 3 at DS in Jan, Mullimburra Pt, Montagu Is and Brou L in Mar, at TS in Mar and Dec, at MO in Apr and Dec, at Com in Jun-Jul, no more than 2 at other locations.

Breeding: juveniles and immatures reported year round.

# Whistling Kite Haliastur sphenurus

Status: breeding resident.

Reported in all months; 6 at PS in Apr; 4 at Com in Feb and Jun-Jul and at MO in Sep; 3 at MB, WL and Bingie in Jul; no more than 2 at other locations.

Breeding: nesting at Com in Apr and Oct, dependent young in May and Nov. (JC/TA Ross)

### Brown Goshawk Accipiter fasciatus

Status: breeding resident.

Reported in all months; 2 at MO in Oct, 1 in Jan-Feb and Sep; 1 at Com each month, at Bingie in Jan, at PS and Bumbo Rd in Apr, at Broulee in Jun, at MB in Jul, at PS, Bergalia and Tilba in Sep and at Bevian Rd in Oct.

# Collared Sparrowhawk Accipiter cirrocephalus

Status: breeding resident.

One at PS in Jan, Mar-Apr and Aug and at MO in Sep and Nov-Dec. (JM/NM)

# Grey Goshawk Accipiter novaehollandiae

Status: breeding resident, both grey and white morph occurring. Two at Malua Bay in Jan; 2 at PS in Nov, 1 in Jan, Mar-Apr and Dec; 1 at MO in Jan-Feb, Apr-Jun and Oct-Dec, at Monga NP in Mar, at MB in Jun, at Cullendulla Ck and Reedy Ck Rd in Aug, at Bergalia in Oct and Dec, at DS and Coila Ck Rd in Nov and at Surfside in Dec.

# **Swamp Harrier** Circus approximans

Status: breeding resident.

Three at PS in Jan, 1 in Jun-Jul; single birds at Com in Jan, Oct and Dec, at MO in Feb, Sep and Dec, at Montagu Is in Mar, at MB in Jul and at BBWG in Oct.

Breeding: juvenile at PS in Jan. (JM)

# Wedge-tailed Eagle Aquila audax

Status: common breeding resident.

Reported in all months; 3 at PS in Jan, 2 in Feb; 2 at Com in Jan-Mar, May-Jul and Nov-Dec, 2 at MKS in Feb-Mar, at Coolagolite in Feb, Apr and Jul, at Malua Bay in Feb, at Belowra in May and at MB in Jul; single birds at 10 other locations during the year.

Breeding: juvenile at PS in Jan-Feb. (JM)

#### **Little Eagle** *Hieraaetus morphnoides*

Status: Vulnerable; uncommon breeding resident.

Single birds at MO in Apr and at Reedy Ck Rd in Aug. (NM/FM)

# FALCONIDAE Kestrel, hobby, falcons

#### Nankeen Kestrel Falco cenchroides

Status: common breeding resident.

Reported throughout the year; 4 at Com in Jan, 1-2 most other months; 3 at MB in Jul, 2 in Nov-Dec; 3 at WL in Jul; 2 at MO in Jan; single birds at 7 other locations during the year.

Breeding: nesting at Com in Jul. (JC)

# Brown Falcon Falco berigora

Status: breeding resident.

Reported throughout the year; 2 at Com in Jan, Mar-May, Jul and Oct-Dec, 1 most other months; 1 at MB in Jan, Apr and Jul, at PS in Feb and Apr, at TS in Mar, at MO in Jun, at MHS in Jul and at Belowra in Oct.

# **Australian Hobby** *Falco longipennis*

Status: breeding resident.

Two at MHS in Aug, at Malua Bay in Sep and at Com in Oct; single

birds at 6 other locations during the year. Breeding: nesting at Com in Oct. (JC)

# Black Falcon Falco subniger

Status: vagrant

One at MO on 5 Apr. (NM)

# Peregrine Falcon Falco peregrinus

Status: uncommon breeding resident.

Two at Wasp Head in Apr; 1 at Com in Mar-Jul and Sep-Dec, at Malua Bay in Feb, at Montagu Is in Mar, at MB and Rosedale in Jun, at BP in Jul, at MO in Aug-Oct, at Reedy Ck Rd in Aug and PS in Dec.

# RALLIDAE Rails, crakes, swamphen, moorhen, coot

# Purple Swamphen Porphyrio porphyrio

Status: common breeding resident.

Recorded throughout the year; 50 at BBWG in Feb; 35 at PS in Sep; 30 at Com in May; 15 at MO in Dec; 12 at Coila Ck Rd in Nov; 10 at

Eurobodalla Rd in Aug; fewer than 10 at other locations.

Breeding: dependent young in Jan-Feb, Apr and Dec. (DHK/NM)

# **Buff-banded Rail** Gallirallus philippensis

Status: rare breeding resident.

Six at TS in Dec, 3 in Mar, 1 in Aug; 4 at Montagu Is in Mar; 1 at Com

in Mar and Jun-Sep, 1 at BBWG in Aug.

Breeding: dependent young at TS in Dec. (GM)

### Baillon's Crake Porzana pusilla

Status: vagrant.

Two at BBWG on 6 Oct. (NC)

# Spotless Crake Porzana tabuensis

Status: rare resident.

Two at BBWG in Aug; possible call at PS in Jan. (DB/JM)

# **Dusky Moorhen** Gallinula tenebrosa

Status: uncommon breeding resident.

Six at BBWG in Feb; 2 at BI in Jul; 1 at Com in Jan-Apr, at PS in Feb and at MO in May.

#### Eurasian Coot Fulica atra

Status: common breeding resident.

Up to 180 at Com in Jun, 130 in May; 150 at Bingie in May, 100 in Apr; 80 at BBWG in Feb; 50 at MO in May and Nov; 40 at MB in Jul; 35 at Eurobodalla Rd in Aug; 20 at Long Swamp in Jul; fewer than 20 at other locations.

#### **HAEMATOPODIDAE** Oystercatchers

# Australian Pied Oystercatcher Haematopus longirostris

Status: Endangered; breeding resident.

Reported in all months; 9 at Brou L in Nov, 8 in Dec; 8 at BI in Jan, at DS in Nov; 6 at MB in Feb, at WL in Jul; 5 at Broulee in Jul; no more than 4 at other locations.

Breeding: nesting in Sep-Dec, dependent young in Jan, Oct-Dec.

# Sooty Oystercatcher Haematopus fuliginosus

Status: Vulnerable; breeding resident.

Reported in all months; 20 at MB in Mar-Apr; 9 at CO in Jan; 8 at MO and at Wasp Head in Jun; 7 at Montagu Is in Mar; no more than 4 at other locations.

#### **RECURVIROSTRIDAE** Stilts

### **Black-winged Stilt** *Himantopus himantopus*

Status: rare autumn-winter migrant and bird of passage.

Up to 7 at Com in Sep, 3 in Oct-Nov, 2 in Jul-Aug; 2 at Trunketabella in Aug; 1 at WL in Jul and at DS in Dec.

### **CHARADRIIDAE** Lapwings, plovers, dotterels

### Pacific Golden Plover Pluvialis fulva

Status: uncommon bird of passage.

Four at CO in Jan, 1 in Oct; 2 at MB in Oct-Nov, 1 in Dec. (JM/MA/NC)

# Red-capped Plover Charadrius ruficapillus

Status: common breeding resident.

Up to 25 at WL in Jul; 20 at CO in Jan and at Brou L in Mar; 15 at MHN in Mar; 13 at MHS in Mar; 7 at DS in Apr; no more than 4 at other locations.

Breeding: nesting at MO in Apr and Oct, dependent young in Nov. (NM)

# **Double-banded Plover** Charadrius bicinctus

Status: autumn-winter migrant.

Six at MHS in Mar, 4 in Aug; 3 at DS in Apr, 2 in Jun-Jul; 2 at Brou L in Mar and Sep, 1 in Feb; 2 at BI and WL in Jul.

# **Lesser Sand Plover** Charadrius mongolus

Status: Vulnerable; rare bird of passage.

Single birds at Brou L on 25 Nov and 1 Dec. (FM/DB)

# **Black-fronted Dotterel** Elseyornis melanops

Status: uncommon breeding resident.

Up to 5 at Com in Feb and Nov-Dec, 1-3 most other months; 4 at MO in Jan, 2 in Sep and Nov-Dec; 2 at Bingie in Apr and Sep-Nov; 2 at WL in Jul; 1 at Brou L in Nov.

Breeding: nesting at Com in Oct-Nov, dependent young in Jan and Nov. (JC)

#### **Hooded Plover** Thinornis rubricollis

Status: Critically Endangered; uncommon breeding resident.

Two at MB in Jan and Jun-Jul, 1 in Nov; 2 at Bingie in Jun, 1 in Jul; 1 at MO and WL in Jul. (AM/FM/MA)

# Red-kneed Dotterel Erythrogonys cinctus

Status: vagrant.

One at MO on 10-11 Sep and 15 Oct. (NM)

### Masked Lapwing Vanellus miles

Status: common breeding resident.

Widely reported in all months; up to 80 at Com in Jul, 50 in May-Jun and Aug; 30 at MYA in May; 10 at TS in Mar and Dec, at Long Swamp in Jul and at Brou L in Dec; fewer than 10 at other locations. Breeding: nesting in Sep and Nov, dependent young in Oct-Dec.

# **SCOLOPACIDAE** Snipe, sandpipers and allies

# Latham's Snipe Gallinago hardwickii

Status: uncommon summer migrant.

Four at Com in Dec, 3 in Nov, 2 in Feb; 3 at BBWG in Oct, 2 in Feb; 3 at MO in Nov; 2 at Bergalia in Oct-Nov and at Belowra in Oct; 1 at PS in Jan and at Eurobodalla Rd in Aug.

# Bar-tailed Godwit Limosa lapponica

Status: common summer migrant, some overwinter.

Up to 200 at NA in Nov, 90 in Dec, 80 in Jan; 30 at TS in Sep, 4 in Dec; 10 at Brou L in Sep and Dec, 9 in Nov.

# Whimbrel Numenius phaeopus

Status: summer migrant.

Fifteen at MHS on 30 Dec; 1 at WL in Jul and at BB in Sep.

# Eastern Curlew Numenius madagascariensis

Status: common summer migrant, some overwinter.

Fifteen at TS in Sep; 6 at MHS in Dec, 1 in Aug and Oct; 5 at BB in

Sep; 2 at MYA in Jan, at NA in May and WL in Oct; 1 at Cullendulla Ck in Jan and at MO in Apr.

# **Grey-tailed Tattler** *Tringa brevipes*

Status: uncommon summer migrant and bird of passage.

Single birds at CO in Jun and Aug and at MB in Nov. (MA/NC/V Brown)

# Common Greenshank Tringa nebularia

Status: summer migrant and bird of passage.

One at Com on 12 Dec. (JC)

### Ruddy Turnstone Arenaria interpres

Status: uncommon summer migrant and bird of passage. Two at CO in Jan, at Brou L and Coila L in Dec. (JM/DB)

#### **Great Knot** Calidris tenuirostris

Status: Vulnerable; uncommon summer migrant and bird of passage.

One juvenile at Brou L in Dec. (DB)

#### Red Knot Calidris canutus

Status: summer migrant and bird of passage.

Ten at Brou L in Nov, 5 in Dec; 2 at CO in Jan and Oct. (JM/NC/DB)

### Red-necked Stint Calidris ruficollis

Status: summer migrant and bird of passage.

Up to 20 at Brou L in Nov-Dec, 3 in Mar, 1 in Feb and Aug; 10 at Coila

L in Dec; 3 at MO in Nov, 1 in Oct; 2 at DS in Sep.

# Sharp-tailed Sandpiper Calidris acuminata

Status: summer migrant and bird of passage.

Up to 150 at Brou L in Nov, 100 in Dec; 14 at Com in Oct, 9 in Nov.

# Curlew Sandpiper Calidris ferruginea

Status: Endangered; summer migrant and bird of passage.

One at Brou L on 20 Sep. (TA Ross)

# **TURNICIDAE** Button-quail

# Painted Button-quail Turnix varius

Status: uncommon resident.

One at Malua Bay in Dec. (MW)

### **STERCORARIIDAE** Skuas, jaegars

**Brown Skua** Stercorarius antarcticus

Status: regularly recorded off the coast in winter.

Four off MHS in Aug, 1 in Jun; 1 off Wasp Head in Apr. (DB/NC/JM)

### Jaeger sp.

Status: summer pelagic, occasionally coming inshore.

One off Broulee Is and off NA in Mar.

# Pomarine Jaeger Stercorarius pomarinus

Status: regularly recorded off the coast in summer.

One off Mullimburra Pt in Jan and off Broulee in May. (NM/P Gatenby)

#### LARIDAE Gulls, terns

Little Tern Sternula albifrons

Status: Endangered; summer breeding migrant.

Up to 60 at Brou L in Oct, 18 in Dec; 5 at MB May; 2 at Coila L in Dec; 1 at Bingie in Jan.

### Fairy Tern Sternula nereis

Status: rare summer breeding migrant.

Four at Brou L on 3 Nov. (DB)

# Caspian Tern Hydroprogne caspia

Status: resident and bird of passage.

Thirty at WL in Jul; 10 at DS in Jan, 8 in Jun-Jul; 9 at Montagu Is in Mar; 4 at MYA in Jan; 2 at NA in Apr; 1 at MO and Wasp Head in Apr, at Cullendulla Ck in Aug and at Brou L in Nov.

# White-fronted Tern Sterna striata

Status: common winter migrant.

Up to 15 at BP in Jul; 10 at MHS in Jul-Aug, 3 in Jun; 2 at Bingie in

May; 1 at Wasp Head in Jun and DS in Sep.

# Common Tern Sterna hirundo

Status: uncommon summer migrant and bird of passage.

One at BI on 27 Jan. (MA)

# Crested Tern Thalasseus bergii

Status: common breeding resident.

Up to 500 at NA in Dec; 300 at DS in Jan; 200 at MHS in Jun and Blackfellow's Pt in Dec; 150 at Brou L in Nov; 100 at CO in Jan; 65 at

MB in Nov; fewer than 50 at other locations.

# Pacific Gull Larus pacificus

Status: vagrant.

Two at Montagu Is in Mar; 1 at MHS in Jun and Aug, all juveniles.

# Silver Gull Chroicocephalus novaehollandiae

Status: common breeding resident.

Reported in all months; 200 at MHS in Jun; 180 at Broulee in Dec; 50 at MO in Jan, at Montagu Is and at Brou L in Mar, at Blackfellow's Pt in Dec; no more than 30 at other locations.

#### **CACATUIDAE** Cockatoos

# Glossy Black-Cockatoo Calyptorhynchus lathami

Status: Vulnerable; breeding resident.

Recorded throughout the year, normally in pairs or family groups of 3; 5 at PS in Jan-Feb, 1-3 in Mar-Jul and Oct-Dec; 3 at Deua R in Mar and Oct-Nov, at Belowra and Bimbimbie in Oct, at MKS in Nov and at MO in Dec; no more than 2 at other locations.

Breeding: dependent young at PS in Nov-Dec, juveniles in Jan-Feb. (JM)

# Yellow-tailed Black-Cockatoo Calyptorhynchus funereus

Status: common breeding resident.

Widely recorded in all months; 22 at Belowra in May; 20 at MB in Feb; 18 at Deua R in Sep; 17 at Coolagolite in Jul; 16 at Malua Bay in Jun and at Bergalia in Dec; 15 at Broulee in Aug; no more than 12 at other locations.

Breeding: dependent young at DS and MB in Jan. (MA/J Coffey)

# Gang-gang Cockatoo Callocephalon fimbriatum

Status: Vulnerable; breeding resident.

Recorded in all months; 19 at Coolagolite in Feb, 12 in Mar and 10 in Jun; 5 at Lilli Pilli in Jan-Feb; 4 at DS in Sep and at Broulee in Dec; 3 at MKS in Jan; no more than 2 at other locations.

# Galah Eolophus roseicapillus

Status: common breeding resident.

Widely recorded in all months in pairs, small groups and large flocks; 50 at Com in Apr and at WL in Jul; 45 at Broulee in Sep, 20 in May; 34 at Belowra in Aug, 30 in Oct; 20 at MO in May; no more than 15 at other locations.

# Little Corella Cacatua sanguinea

Status: common breeding resident.

Widely recorded in all months in pairs, small groups and large flocks; 120 at MB in Oct; 100 at MYA in Jan-Feb and at MHS in Jul; 40 at MO in Oct; 30 at TS in Dec; 20 at Com in Jul; 15 at Deua R in Sep; no more than 10 at other locations.

# Sulphur-crested Cockatoo Cacatua galerita

Status: common breeding resident.

Widely recorded in all months; 150 at Com in Apr, 130 in Mar; 50 at Malua Bay in Jun and Sep; 40 at Eurobodalla Rd in Aug; 21 at DS in Aug; 20 at Broulee in Jun; fewer than 20 at other locations.

#### **PSITTACIDAE** Lorikeets, parrots

# Rainbow Lorikeet Trichoglossus haematodus

Status: common breeding resident.

Widely recorded in all months; up to 2000 at DS in May, 200 in Apr; 400 at Cullendulla Ck in Aug; 100 at MO in Sep; 80 at Broulee in Nov; 40 at Malua Bay in Jun; no more than 20 at other locations.

# Scaly-breasted Lorikeet Trichoglossus chlorolepidotus

Status: vagrant.

Four at MYA in Jun; 1 at Mison's Rd in Jun; calls at Brou L in Nov and PS in Dec. (JM/DB/FM)

# Musk Lorikeet Glossopsitta concinna

Status: common breeding resident.

Recorded each month; 200 at Bumbo Rd in Apr; 50 at DS in May and at Cullendulla Ck in Aug; 25 at MB in Oct; 20 at PS in Apr, at MYA in Apr and Oct and at Com in May; fewer than 20 at other locations.

# Little Lorikeet Glossopsitta pusilla

Status: Vulnerable; resident, has bred.

Recorded each month; 20 at MB in Apr, at Murramarang NP in Aug and at PS in Dec; 7 at Mogo SF in Apr; 2 at Tilba in Sep; 1 at Cullendulla Ck in Aug.

# Australian King Parrot Alisterus scapularis

Status: common breeding resident.

Singles, pairs and small groups widely recorded in all months; 40 at Com in Mar and May; 20 at Deua R in Mar and at MB in Dec; 16 at Malua Bay in Oct; 14 at Bergalia in Apr; 12 at MKS in Jan; no more

than 10 at other locations.

Breeding: dependent young at Malua Bay in Feb. (MW)

# Crimson Rosella Platycercus elegans

Status: common breeding resident.

Widely reported in all months, usually in groups up to 6; 40 at Com in Jul, 30 in Jun; 33 at Coolagolite in May; 20 at Monga NP in Mar; 16 at Broulee in Jul; 12 at Lilli Pilli in Dec; no more than 10 at other locations.

Breeding: dependent young in Sep, juveniles in Jan-Feb and May-Jul.

#### Eastern Rosella Platycercus eximius

Status: breeding resident.

Recorded in all months; 10 at Com most months; 7 at Belowra in Aug-Sep; 6 at MB in Apr and at Bergalia in May and Nov; 5 at Corunna L in Feb; fewer than 5 at other locations.

Breeding: dependent young at Com in Feb. (JC)

#### Swift Parrot Lathamus discolour

Status: Endangered; uncommon bird of passage.

Thirty at PS in Apr, 2 in Mar; 8 at Murramarang NP in Aug; 4 at Monga NP in Mar; 4 at DS in Aug, 2 in Jun; 1 at Cullendulla Ck in Sep.

#### **CUCULACIDAE** Cuckoos

# Eastern Koel Eudynamys orientalis

Status: summer breeding migrant.

Reported Jan-Mar and Sep-Dec; 4 at Broulee in Jan and Nov-Dec, at Com in Jan, at MO and TS in Dec; 3 at DS in Nov; 1 or calls at other locations; last record at Surfside on 9 Mar, first return at DS on 22 Sep. Breeding: young at TS in Mar. (GM)

# Channel-billed Cuckoo Scythrops novaehollandiae

Status: summer breeding migrant.

Reported Jan-Feb and Sep-Dec; 4 at Com in Jan; 2 at Malua Bay in Oct-Nov, at Broulee in Nov, at PS in Nov-Dec and TS in Dec; 1 or calls at other locations; last record at Bergalia on 24 Feb, first return at BB on 8 Sep.

Breeding: dependent young at Com in Jan and being fed by Pied Currawong at PS in Dec. (JC/JM)

#### Horsfield's Bronze-Cuckoo Chalcites basalis

Status: summer breeding migrant.

Two at Deua R in Dec; 1 at Com in Jan and Nov-Dec, at PS in Apr and

Sep-Oct and at MO in Nov; call at Tilba in Sep.

Breeding: juvenile at PS in Apr. (JM)

### Shining Bronze-Cuckoo Chalcites lucidus

Status: summer breeding migrant and bird of passage.

Two at MO in Dec, 1 in Feb and Oct-Nov; 1 at Com in Jan and Dec;

calls at PS in Jan, Mar and Oct-Nov.

Breeding: juvenile at MO in Feb. (NM)

# Pallid Cuckoo Cacomantis pallidus

Status: summer-breeding migrant.

Two at Com in Jan and Oct-Nov, 1 in Sep; 2 at Belowra in Oct; calls at Coolagolite in Jan and Oct-Dec, at Bimbimbie, Deua R, Malua Bay and Surfside in Oct.

### Fan-tailed Cuckoo Cacomantis flabelliformis

Status: common breeding resident.

Five at MO in Dec, 4 in Oct-Nov, 3 in Sep, 2 in Aug; 2 at DS in Oct and

at Belowra in Nov; all other records of 1 or calls.

Breeding: juvenile at MO in Dec. (NM)

#### Brush Cuckoo Cacomantis variolosus

Status: summer breeding migrant.

Single birds at Broulee in Jan and Oct, at Com in Jan and Nov, at PS in Feb and Apr, at MO in Apr and Nov-Dec, at Deua R in Dec; calls at

MKS in Jan and Dec and Bimbimbee in Oct.

#### **STRIGIDAE** Hawk owls

Powerful Owl Ninox strenua

Status: Vulnerable; breeding resident.

Two at MO in Dec, 1 in Sep; calls at MKS in Feb and PS in Mar-Apr and Oct.

# Barking Owl Ninox connivens

Status: Vulnerable; uncommon breeding resident. One reported at Polwombra on 20 Feb. (J Wiles)

# Southern Boobook Ninox novaeseelandiae

Status: breeding resident.

Two at Surfside in Dec, 1 in Apr; 1 at MO in Feb, Apr, Jun and Nov-

Dec and at Broulee in Dec; calls at 4 other locations.

Breeding: juvenile at Surfside in Dec. (DB)

#### **TYTONIDAE** Barn owls

**Sooty Owl** *Tyto tenebricosa* 

Status: Vulnerable; uncommon breeding resident.

Two at NA in Feb; calls at PS in Feb-Mar and Sep and Nov, at Pedro in

Feb-Apr. (JM/JMG/JS/S Doyle)

# Masked Owl Tyto novaehollandiae

Status: Vulnerable; uncommon breeding resident. Two at MYA in Jan; 1 at PS in Feb. (DB/JM/JS)

### Eastern Barn Owl Tyto javanic

Status: uncommon breeding resident.

Two at Surfside in Sep; 1 at BB in Feb, at Com in Jun-Jul and at

Cullendulla Ck in Aug. (DB/JC/FM)

# **ALCEDINIDAE** Kingfishers

# Azure Kingfisher Ceyx azureus

Status: breeding resident.

One or two at Com each month; 2 at CO in Oct; singles at MO in Jan, Apr-May, Sep and Dec, at MYA in Mar, at Bumbo Rd in Apr, at MHN in Jul, at BBWG in Aug and at Deua R in Oct-Nov.

# HALCYONIDAE Kookaburras, kingfishers

# Laughing Kookaburra Dacelo novaeguineae

Status: common breeding resident.

Widely reported in all months as individuals or family groups; up to 10 at PS in Jan-Feb, Apr, Jun-Oct and Dec; 8 at Broulee in Dec; 7 at MO in Sep; 6 at Com in Jan-Mar and Aug-Nov, at Bergalia in Oct; no more than 5 at other locations.

Breeding: nesting in Sep-Oct, dependent young in Jan-Feb.

# Forest Kingfisher Todiramphus macleayii

Status: vagrant.

One recorded at Broulee Is on 22 Oct; possible call reported at PS on 20 Oct; first records for the Shire. (I Jamieson/JM)

# Sacred Kingfisher Todiramphus sanctus

Status: summer breeding migrant; some may overwinter.

Recorded Jan-Apr and Oct-Dec; 4 at Com in Jan-Feb and Oct-Nov, at PS in Jan; no more than 2 at other locations.

Breeding: nesting at PS in Jan, dependent young in Feb (JM)

#### **CORACIIDAE** Dollarbird

**Dollarbird** Eurystomus orientalis

Status: summer breeding migrant.

Recorded in Jan-Mar and Oct-Dec; up to 9 at Com in Oct and Dec, 6 in Nov; 6 at PS in Jan; 4 at MB in Jan and at Bergalia in Dec; no more than 2 at other locations.

Breeding: nesting in Nov-Dec, dependent young in Jan, juveniles in Jan. (JC/MA)

#### **PITTIDAE** Pittas

Noisy Pitta Pitta versicolor

Status: vagrant.

One photographed at BP on 22 Oct. (DB)

### **MENURIDAE** Lyrebirds

# Superb Lyrebird Menura novaehollandiae

Status: breeding resident.

Recorded in all months; up to 20 at Tilba in Jun; 5 at Monga NP in Mar; 3 at Coolagolite in May and at Deua R in Sep; 1-2 or calls at other locations.

# **CLIMACTERIDAE** Treecreepers

# White-throated Treecreeper Cormobates leucophaea

Status: common breeding resident.

One or two widely reported in all months; 6 at PS in Jan-Feb, 2-4 in other months; 4 at Com in most months and at MO in Nov; 3 at Belowra and Reedy Ck Rd in Aug; no more than 2 at other locations.

# Red-browed Treecreeper Climacteris erythrops

Status: uncommon breeding resident.

Two at Monga NP in Mar; singles at MO in Apr and at ERBG in Sep. (FM/NM/NC)

# PTILINORHYNCHIDAE Catbirds, bowerbirds

**Green Catbird** Ailuroedus crassirostris

Status: breeding resident.

Two at NA in Nov-Dec. (MA)

# Satin Bowerbird Ptilonorhynchus violaceus

Status: common breeding resident.

Widely reported in all months, usually one to six; 20 at Belowra in Aug,

13 in Sep; 14 at Deua R in Sep; 10 at TS in Mar, at Malua Bay in Jun and Sep, at WL in Jul, at Com in Aug-Oct and Broulee in Dec; fewer than 10 at other locations.

Breeding: nesting at PS in Oct and at Com in Jan, dependent young in Feb. (JC/JM)

### **MALURIDAE** Fairy-wrens

# Superb Fairy-wren Malurus cyaneus

Status: common breeding resident.

Widely reported in all months in family groups up to 10; 30-40 at Com each month; 40 at Broulee in Feb, May and Jul; 21 at DS in May; 20 at PS in most months and at MO in Dec; 15 at ERBG and Belowra in May; no more than 10 at other locations.

Breeding: nesting at Com in Dec, dependent young in Jan-Feb and Nov. (JC)

# Variegated Fairy-wren Malurus lamberti

Status: breeding resident.

Reported in all months; 40 at PS in Sep, 10-30 in other months; 6 at MB in Oct and at Bergalia in Nov; 4 at MO in Jan and Aug, at Mogo SF in Apr; no more than 3 at other locations.

# Southern Emu-wren Stipiturus malachurus

Status: uncommon breeding resident.

Reported in all months; 8 at Broulee in Dec, 6 in Jan, 1-5 most other months; 8 at Cullendulla Ck in Mar; 4 at Runnyford Rd in Apr and at Bimbimbie in Jun.

# **ACANTHIZIDAE** Scrubwrens, gerygones, thornbills and allies **Pilotbird** *Pycnoptilus floccosus*

Status: uncommon breeding resident. Four at Monga NP on 25 Mar. (FM)

# White-browed Scrubwren Sericornis frontalis

Status: common breeding resident.

Widely reported in all months; 8 at Broulee in Feb and Nov; 6 at Com in Feb-Apr and Aug-Sep, at ERBG in May, at Tilba in Sep and at Bevian Rd in Oct; 5 at Lilli Pilli in Aug; no more than 4 at other location.

Breeding: juvenile at MB in Jan. (MA)

### Large-billed Scrubwren Sericornis magnirostra

Status: uncommon breeding resident.

Calls at Monga NP in Mar and at Tilba in Sep. (FM)

# Brown Gerygone Gerygone mouki

Status: common breeding resident.

Reported in all months; 20 at WL in Jul; 15 at Tilba in Aug; 12 at Bevian Rd in Oct; 10 at PS in Jun; 6 at MB in Oct; 5 at MO in Dec; no more than 4 at other locations.

Breeding: dependent young at Com in Jan. (JC)

# White-throated Gerygone albogularis

Status: summer breeding migrant.

Four at Com in Jan and Oct, 2 in Feb and 1 in Nov; 4 at Belowra in Oct-Nov, 2 in Sep.

#### Striated Thornbill Acanthiza lineata

Status: breeding resident.

Widely reported in all months; 40 at Broulee in Oct; 30 at PS in Jul, 10-20 most other months; 20 at Mogo SF in Apr; 10 at Com in Jan, at DS in Feb, at Bumbo Rd in Apr, at CO in Jun and at MO in Jun and Aug; fewer than 10 at other locations.

Breeding: dependent young at PS in Nov. (JM)

#### Yellow Thornbill Acanthiza nana

Status: breeding resident.

Reported in all months; 20 at Com in Feb-Apr; 15 at PS in Dec; 10 at Cullendulla Ck in Aug and at Broulee in Oct; 6 at Bumbo Rd in Apr, at MYA in Sep and Bevian Rd in Oct; no more than 5 at other locations.

# ${\bf Yellow-rumped\ Thornbill\ } A can thiz a\ chrysorrhoa$

Status: breeding resident.

Reported in all months; 15 at Com in Mar, 5-10 in other months; 7 at Belowra in May, 6 in Sep; 5 at MO in Apr; 4 at MYA in May.

Breeding: nesting at Com in Sep-Oct, dependent young in Dec. (JC/FM)

# Brown Thornbill Acanthiza pusilla

Status: common breeding resident.

Widely reported in all months; 20 at Com in Jan-Apr, at PS in Feb, Jul-Aug and Nov-Dec, at Tilba in Sep; 15 at Mogo SF in Apr, at Bergalia in May; 12 at CO in Jun; no more than 10 at other locations.

Breeding: nesting at Com in Oct-Nov, dependent young at Com and PS

in Nov. (JC/JM)

#### **PARDALOTIDAE** Pardalotes

### **Spotted Pardalote** *Pardalotus punctatus*

Status: common breeding resident.

One, two or calls reported in all months; 20 at DS in Jul, 15 in Jun; 10 at Mogo SF and Surfside in Apr, at PS in Jun-Jul, at Reedy Ck Rd in Aug and at Broulee in Oct; 5 at MO in Apr; no more than 3 at other locations.

#### **Striated Pardalote** Pardalotus striatus

Status: breeding resident.

Two at Mogo SF in Apr, at Com in Aug-Nov; 1 at MO in Apr and Dec, at MB in Apr, at DS in May, at MYA in Sep and at Broulee in Nov.

#### **MELIPHAGIDAE** Honeyeaters

# Eastern Spinebill Acanthorhynchus tenuirostris

Status: common breeding resident.

Widely reported in all months; 15 at ERBG in May and at BP in Jul; 12 at Broulee and MYA in Sep; 10 at CO in Jun; 8 at TS in Mar; 7 at MO in Sep; 6 at Bumbo Rd in Apr, at DS in May, at Reedy Ck Rd in Aug, at Bergalia in Sep-Oct, at Malua Bay in Nov and at Com in Dec; no more than 5 at other locations.

Breeding: nesting in Nov, dependent young in Jan, juvenile in Feb.

# Lewin's Honeyeater Meliphaga lewinii

Status: common breeding resident.

Widely reported in all months; 10 at Tilba in Sep; 6 at Bumbo Rd in Apr; 4 at DS in Jun, at WL in Jul, at Broulee in Oct-Nov; 3 at MO in Jan, Apr, Jun and Nov, at Coolagolite in Apr and at Reedy Ck Rd in Aug; no more than 2 at other locations.

Breeding: juvenile at Com in Feb. (JC)

# Yellow-faced Honeyeater Lichenostomus chrysops

Status: common breeding resident and summer migrant.

Widely reported throughout the year; 50 at Com in Apr, 10-20 in other months; 50 at Reedy Ck Rd in Aug; 30 at DS in Feb; 20 at Mogo SF and Bumbo Rd in Apr, at ERBG in May, at PS in Jun, Sep-Oct and Dec, at WL in Jul, at Belowra in Sep and at MO in Oct; fewer than 20 at other locations.

Breeding: nesting in Jan, dependent young in Jan-Feb.

### White-eared Honeyeater Lichenostomus leucotis

Status: autumn-winter migrant.

Reported Mar-Oct; 5 at Bimbimbie in Jun; 4 at PS in May-Jul, 2 in Apr; 3 at MO in Jun, 1 in Apr-May and Sep; 1 at Bergalia in Apr-May and Oct, at MB in Apr and Jul and at DS in Aug.

# Yellow-tufted Honeyeater Lichenostomus melanops

Status: uncommon breeding resident.

Ten at Monga NP in Mar; 1 at NA in Apr, at WL in Jul and at Brou L in Nov. (FM/MA/NC)

### Fuscous Honeyeater Lichenostomus fuscus

Status: uncommon winter migrant and bird of passage.

Reported in Jun-Sep; 20 at Murramarang NP in Aug; 6 at Broulee in Sep; 2 at PS in Jun and Aug, at MO in Jun; 1 at Benandarah and at Surfside in Jun.

# White-plumed Honeyeater Lichenostomus penicillatus

Status: vagrant.

One reported at MO on 22 Jun. (NM)

# Bell Miner Manorina melanophrys

Status: common breeding resident.

Colonies reported at Belowra, Brou L, Bumbo Rd, Comerang,

Coolagolite, Narooma, Tilba and Wallaga L.

# Little Wattlebird Anthochaera chrysoptera

Status: common breeding resident.

Reported in all months; 30 at DS in Jan and at Broulee in Jan-Feb; 20 at Corunna L in Feb and at WL in Jul; 12 at MO in May; no more than 10 at other locations.

Breeding: dependent young at Coolagolite in Mar. (DO)

#### Red Wattlebird Anthochaera carunculata

Status: common breeding resident and bird of passage.

Widely reported in all months; up to 300 at Com in May; 250 at Bumbo Rd in Apr; 70 at Reedy Ck Rd in Aug; 50 at MO in Sep; 40 at Broulee in Jan-Feb; 30 at Eurobodalla Rd in Aug; no more than 20 at other locations.

Breeding: nesting in Oct, dependent young in Jan, juvenile in Jan. (JC/J Coffey/GLM)

### White-fronted Chat Epthianura albifrons

Status: Vulnerable; breeding resident. One at DS on 21 Sep. (J Coffey)

### Scarlet Honeyeater Myzomela sanguinolenta

Status: summer breeding migrant and bird of passage.

Reported in Jan-Feb, Apr and Aug-Dec; 25 at MO in Dec, 20 in Nov; 20 at PS and Com in Dec; 12 at Broulee in Sep; 10 at Malua Bay in Oct and Dec; no more than 3 at other locations.

# Crescent Honeyeater Phylidonyris pyrrhopterus

Status: uncommon breeding resident, movement to coast in winter. One at Mogo SF on 1 Apr. (DB/JM)

# New Holland Honeyeater Phylidonyris novaehollandiae

Status: common breeding resident.

Widely reported in all months; 30 at Broulee in Nov, 20 in Jan-Feb and May; 30 at CO in Jun; 25 at BP in Jul; 20 at Corunna L in Feb and at MO in Oct; no more than 12 at other locations.

### White-cheeked Honeyeater Phylidonyris niger

Status: breeding resident in small localised colonies.

Seven at MO in Sep; 6 at Mogo SF in Apr; 5 at PS in Dec; 4 at CO in Jun; 3 at Broulee in Nov; 2 at Reedy Ck Rd in Aug and Bevian Rd in Oct; 1 at MYA in Sep.

# Brown-headed Honeyeater Melithreptus brevirostris

Status: uncommon summer breeding migrant.

Ten at PS in Jun-Jul and Sep; 8 at Com in Jan-Apr; 6 at MYA in Mar; 5 at MO and Surfside in Jun; 4 at MKS in Mar and Belowra in Sep; no more than 3 at other locations.

Breeding: dependent young at Com in Jan. (JC)

# White-naped Honeyeater Melithreptus lunatus

Status: breeding resident and bird of passage.

Recorded in all months; 50 at Mogo SF in Apr; 20 at PS in Jun, at Murramarang NP and Reedy Ck Rd in Aug; 10 at Bumbo Rd in Apr and at Belowra in Sep-Oct; no more than 6 at other locations.

# Noisy Friarbird Philemon corniculatus

Status: summer breeding migrant and bird of passage, often overwinters. Recorded each month except Jun; 20 at PS in Oct-Dec; 12 at Surfside in Apr; 10 at Broulee in Dec; 5 at Deua R in Nov-Dec and at MO in Dec;

no more than 4 at other locations.

Breeding: nesting in Oct-Dec, dependent young in Jan and Dec.

# Little Friarbird Philemon citreogularis

Status: vagrant.

Call recorded at PS on 1 Jan. (JM)

### Painted Honeyeater Grantiella picta

Status: Vulnerable; vagrant.

One at Bimbimbie in Nov and call at Brou L in Dec. (DB)

# **EUPETIDAE** Whipbird, Spotted Quail-thrush **Spotted Quail-thrush** *Cinclosoma punctatum*

Status: breeding resident.

Two on Belowra Rd in Jul, 1 in May; 1 at Coolagolite in Mar and at Bodalla SF in Aug.

# Eastern Whipbird Psophodes olivaceus

Status: common breeding resident.

Widely reported in all months; 8 at Broulee in Jan and Sep-Oct; 4 at MB in Jan; 3 at BP in Jul and at TS in Dec; 1-2 or calls at other locations. Breeding: dependent young in Dec, juveniles in Jan-Feb. (GM/MA)

# **NEOSITTIDAE** Varied Sittella

# Varied Sittella Daphoenositta chrysoptera

Status: Vulnerable; breeding resident.

Fifteen at DS in Jun, 12 in Jul; 7 at PS in Mar, 6 in Jun; 7 at Com in May, 6 in Feb; 6 at ERBG in Feb; no more than 4 at other locations.

Breeding: dependent young at PS in Feb. (JM)

# CAMPEPHAGIDAE Cicadabird, cuckoo-shrikes, triller Black-faced Cuckoo-shrike Coracina novaehollandiae

Status: common breeding resident.

Widely reported in all months, usually 1 or 2; 7 at Com in Mar; 5 at PS in Jan and Apr, at Monga NP in Mar, at MYA in Apr; 4 at MO in Jan-Feb, at DS and Coila Ck Rd in Nov; no more than 3 at other locations. Breeding: dependent young in Jan and Nov. (JC/JM/NM)

# White-bellied Cuckoo-shrike Coracina papuensis

Status: uncommon breeding resident and bird of passage.

Two at Murramarang NP in Aug; 2 at PS in Mar, 1 in Apr, Aug-Sep and Nov-Dec; 1 at DS in Jan and at Com in Mar.

### Cicadabird Coracina tenuirostris

Status: summer breeding migrant.

Recorded Jan-Mar and Oct-Dec; up to 10 at PS in Feb, 8 in Jan; 2 at MO in Jan, 1 in Nov-Dec; calls at MKS in Jan-Mar and at Malua Bay in Nov-Dec.

Breeding: nesting at PS in Jan, juveniles in Feb. (JM)

### **PACHYCEPHALIDAE** Whistlers and allies

# **Crested Shrike-tit** Falcunculus frontatus

Status: breeding resident.

Up to 4 at MO in Jul, 2 in Feb and Sep; 3 at ERBG in May; 2 at DS in Jun; 1 at Com in Feb, at Deua R in Mar; calls at Bumbo Rd in Apr.

# Golden Whistler Pachycephala pectoralis

Status: common breeding resident.

Widely reported in all months; 24 at PS in Sep, 10 in Apr and Nov; 10 at MO in Nov, 5 in Dec; 6 at Com in Mar; no more than 4 at other locations.

Breeding: juvenile at Com in Mar. (JC)

### **Rufous Whistler** *Pachycephala rufiventris*

Status: summer breeding migrant.

Recorded Jan-Apr and Sep-Dec; 6 at PS in Mar and Dec, at Belowra in Oct-Nov, at Com in Oct-Dec, and at MO in Nov; 4 at CO in Oct; no more than 3 at other locations.

Breeding: dependent young at Com and MO in Feb. (JC/NM)

# Grey Shrike-thrush Colluricincla harmonica

Status: common breeding resident.

Widely reported in all months, usually 1 or 2; 5 at Belowra in May and at Com in Jun and Aug; 4 at MB in Jan, at PS in Apr, Jun-Jul, Sep and Dec, at Tilba in Sep and at MO in Nov; no more than 3 at other locations.

# **ORIOLIDAE** Figbird, oriole

# Australasian Figbird Sphecotheres vieilloti

Status: breeding resident and summer breeding migrant.

Up to 10 at MYA in Feb, 6 in Sep, 5 in Aug, Oct and Dec; 1 at MHS in Jan and at BBWG in Sep; calls at TS in Dec.

### Olive-backed Oriole Oriolus sagittatus

Status: summer breeding migrant; some overwinter.

Four at MO in Nov, 3 in Sep; 3 at Deua R and Com in Dec; 2 at MKS in Feb, at Broulee and Coolagolite in Oct, at DS and PS in Nov; 1 or calls at other locations.

Breeding: dependent young at Com in Dec. (JC)

# **ARTAMIDAE** Butcherbird, magpie, currawongs, woodswallows **White-breasted Woodswallow** *Artamus leucorynchus*

Status: uncertain.

Twelve at PS in Feb, 10 in Mar, 8 in Apr and 4 in Nov; 12 at MHN in

Feb; 3 at Coila Ck Rd in Nov; 1 at MO in Apr.

Breeding; juveniles at PS in Feb. (JM)

# White-browed Woodswallow Artamus superciliosus

Status: vagrant.

Up to 100 at Surfside on 15 Apr; 1 at PS on 15 Sep. (DB/JM)

# Dusky Woodswallow Artamus cyanopterus

Status: Vulnerable; summer breeding migrant.

Up to 20 at Mogo SF in Apr; 16 at Bergalia in Apr; 11 at Com in Mar; 7 at Belowra in Oct, 6 in Sep; 4 at Brou L in Nov; 3 at DS in Jan and at Coolagolite in Feb; 2 at MHN in Nov; 1 at Deua R in Dec.

Breeding: dependent young at DS in Jan. (J Coffey)

# **Grey Butcherbird** *Cracticus torquatus*

Status: common breeding resident.

Widely reported with 1-2 at most localities throughout the year; 6 at PS in Apr and Dec; 4 at MO in Jan and Dec, at Coolagolite and TS in Dec; 3 at Monga NP in Mar and at Bumbo Rd in Apr; no more than 2 at other locations.

Breeding: nesting in Dec, dependent young in Nov-Dec. (JC/DO/NM))

# Pied Butcherbird Cracticus nigrogularis

Status: vagrant.

One reported at Rosedale on 30 Mar and at Guerilla Bay on 31 Mar; first records for the Shire. (J & T Lipscombe)

# Australian Magpie Cracticus tibicen

Status: common breeding resident.

Widely reported throughout the year; up to 80 at MYA in Mar, 48 in Jun; 70 at Com in May and Nov-Dec; 20 at Coila Ck Rd in Nov; 15 at

WL in Jul, at MO in Aug and Dec; 13 at DS in Jul; 12 at Monga NP in Mar and at Belowra in Sep; no more than 10 at other locations. Breeding: nesting in Sep-Nov, dependent young in Jan-Feb and Oct-Dec, juveniles in Jan-Feb.

# Pied Currawong Strepera graculina

Status: common breeding resident.

Widely reported all year; 60 at Com in May, 30 in Apr; 20 a PS in Aug and Oct, at Tilba in Sep; 10 at TS in Mar, at Malua Bay in Jul, at Coolagolite in Aug and at DS in Dec; fewer than 10 at other locations.

### **Grey Currawong** Strepera versicolor

Status: uncommon resident and winter migrant to coast.

Up to 6 at Belowra in Aug; 2 at Monga NP in Mar; 1 at Coolagolite in Jul-Aug.

# **DICRURIDAE** Drongo

### **Spangled Drongo** *Dicrurus bracteatus*

Status: uncommon autumn-winter migrant.

Two at Surfside in Mar; 1 at PS in Mar-Apr and at MB in May. (DB/JM/MA)

#### **RHIPIDURIDAE** Fantails

# Rufous Fantail Rhipidura rufifrons

Status: summer breeding migrant.

Recorded Jan-Apr and Nov-Dec; 2 at MB in Jan-Feb, at MKS in Mar; single birds at 11 other locations.

# Grev Fantail Rhipidura albiscapa

Status: common breeding resident.

Widely reported throughout the year; up to 40 at Com in Mar; 30 at Tilba in Sep; 10 at Monga NP in Mar, at Bumbo Rd in Apr, at PS in Jun, at Belowra in Sep, at Bevian Rd in Oct, at Broulee in Oct-Nov and at MO in Nov; fewer than 10 at other locations.

Breeding: nesting in Sep, dependent young in Jan and Dec.

# Willie Wagtail Rhipidura leucophrys

Status: common breeding resident.

Widely reported in all months, 1-4 at most sites; 20 at Com in Jan and Oct, 10-13 most other months; 8 at Belowra in Sep-Oct; 6 at Coila Ck Rd in Nov; 5 at MYA in May and at Tilba in Sep; no more than 4 at other locations.

Breeding: nesting in Jan and Oct-Nov, dependent young in Jan and Dec. (JC)

#### **CORVIDAE** Ravens

#### Australian Raven Corvus coronoides

Status: common breeding resident.

Widely reported throughout the year; 60 overflying Bergalia in May; 50 at Com in Jun-Jul; 30 overflying MKS in Mar; 10 at DS in Jun; 8 at MO in Apr, Oct and Dec; 7 at MYA in May; 6 at Belowra in Oct; no more than 5 at other locations.

Breeding: dependent young in Feb, juveniles in Jan-Feb.

### Little Raven Corvus mellori

Status: uncommon resident and winter migrant to coast.

Up to 200 at Com in Jul, 100 in Jun; 4 at MB in Jul; 1 at Deua R in Dec; call at MO in Apr.

### MONARCHIDAE Monarchs, flycatchers.

# Leaden Flycatcher Myiagra rubecula

Status: summer breeding migrant.

Recorded Jan-Mar and Oct-Dec; 4 at PS in Jan-Feb, 2 in Mar and Dec; 2 at MO in Jan-Feb and Nov; 1 at ERBG in Jan and at Bergalia in Feb; calls at MKS in Jan-Feb and Nov and at MB in Dec.

# Satin Flycatcher Myiagra cyanoleuca

Status: vagrant.

One at ERBG on 14 Jan. (DB)

# Restless Flycatcher Myiagra inquieta

Status: breeding resident and winter migrant to coast.

Recorded in all months; 4 at Com in Jan, 1-2 in other months; 3 at Belowra in Sep; 2 at ERBG in May and at Eurobodalla Rd in Aug; 1 at Bergalia in Feb and May, at MYA and Trunketabella in May and at Tilba in Sep.

Breeding: dependent young at Com in Jan. (JC)

# Black-faced Monarch Monarcha melanopsis

Status: summer breeding migrant.

Recorded Jan-Feb and Oct-Dec; 3 at DS in Feb and at MO in Nov; 2 at MB in Jan-Feb and Dec; 1 or calls at 7 other locations; last record at DS on 24 Feb, first return at PS on 21 Oct.

# Magpie-lark Grallina cyanoleuca

Status: common breeding resident.

Widely reported throughout the year; 37 at MYA in Jun, 11 in May; 14 at Belowra in Jul; 13 at WL in Jul; 10 at Com in Jan-Mar, May, Jul and Dec; no more than 4 at other locations.

Breeding: nesting in Oct, dependent young in Nov and Jan. (JC)

### **CORCORACIDAE** White-winged Chough

White-winged Chough Corcorax melanorhamphos

Status: breeding resident.

Up to 22 at PS in Feb, 15 in Mar; 16 at Com in May-Jun; 9 at MO in May and at Belowra in Sep; 8 at Coolagolite in Feb and at Bergalia in May; no more than 7 at other locations.

Breeding: nesting at Belowra in Sep, dependent young in Oct. (JC)

#### **PETROICIDAE** Robins

Jacky Winter Microeca fascinans

Status: breeding resident.

Recorded in all months; 16 at Belowra in May, 12 in Jul; 12 at Com in May, 10 in Apr and Jun-Jul; 6 at DS in Jun; no more than 4 at other locations.

Breeding: nesting in Nov, dependent young in Oct-Nov and juveniles in Mar.

# Scarlet Robin Petroica boodang

Status: Vulnerable; uncommon breeding resident and winter migrant to coast.

Recorded Mar-Aug; 3 at Bergalia in May, 1 in Apr; 3 at Belowra in Jul; 2 at PS in May and Jul, 1 in Apr and Jun; 1 at Monga NP in Mar, at MYA in May, at Cullendulla Ck and Coolagolite in Aug.

# Flame Robin Petroica phoenicea

Status: Vulnerable; rare breeding resident.

Two at Monga NP on 23 Mar, 1 on 25 Mar. (LB/FM)

#### Rose Robin Petroica rosea

Status: uncommon local breeding resident and winter migrant to coast. Three at Bumbo Rd in Apr; 2 at MB in Jul, at MHS in Aug and MYA in Sep; 1 or calls at 9 other locations.

### Eastern Yellow Robin Eopsaltria australis

Status: common breeding resident.

Widely reported in all months with 1-4 at most locations; 25 at ERBG in

May; 8 at Mogo SF in Apr, at MO in May, at WL in Jul and at Broulee

in Dec; no more than 6 at other locations.

Breeding: dependent young in Feb and Dec. (MW/NM)

#### **CISTICOLIDAE** Cisticolas

#### Golden-headed Cisticola Cisticola exilis

Status: uncommon breeding resident.

Recorded at Com each month except Aug, 20 in Jan-Mar, 2-10 in other

months; a few at Montagu Is in Mar; 2 at MYA in May.

Breeding: dependent young at Com in Jan. (JC)

### **ACROCEPHALIDAE** Reed-Warblers

# Australian Reed-Warbler Acrocephalus australis

Status: summer breeding migrant.

Recorded in Jan-Apr and Nov-Dec; 6 at PS in Jan, 1 in Feb; 4 at Com in Feb-Mar, 3 in Jan, 2 in Apr; 3 at BBWG in Feb; 2 at MO in Jan, 1 in Nov.

Breeding: dependent young at BBWG in Feb. (FM)

# **MEGALURIDAE** Grassbirds, songlarks

# Little Grassbird Megalurus gramineus

Status: uncommon resident, probably breeding.

Two at Com in Jan-Apr, at PS in Feb; recorded at Montagu Is in Mar. (JC/JM/C Davey)

# Rufous Songlark Cincloramphus mathewsi

Status: uncertain.

One at Belowra on 31 Aug. (JC)

# Brown Songlark Cincloramphus cruralis

Status: vagrant.

One at Com in Oct-Nov. (JC)

# **TIMALIIDAE** Silvereye

# Silvereye Zosterops lateralis

Status: common summer breeding migrant and bird of passage.

Widely reported in all months; no more than 30 at any location in Jan-

Mar; flocks up to 100 migrating north at Com, Mogo SF, PS and

Surfside in Apr, numbers then reducing to 50 or less in May-Aug; 100 at

Com in Sep-Oct and PS in Oct; no more than 20 at any location in Nov-Dec.

Breeding: dependent young at Com in Feb. (JC)

### **HIRUNDINIDAE** Swallows, martins

#### Welcome Swallow Hirundo neoxena

Status: common breeding resident and summer breeding migrant. Widely reported throughout the year; up to 100 at Com in Mar, 80 in Feb; 50 at PS in Feb; 42 at Runnyford Rd in Apr; 40 at Bumbo Rd in Apr; 30 at MO in Jan and at Eurobodalla Rd in Aug; 20 at TS in Mar and Dec, at MYA in May, at DS in Aug, at Belowra and Tilba in Sep; fewer than 20 elsewhere.

Breeding: nesting in Oct, dependent young in Nov-Dec. (JC)

# Fairy Martin Petrochelidon ariel

Status: spring/summer breeding migrant.

One at Tilba on 23 Sep. (FM)

# Tree Martin Petrochelidon nigricans

Status: resident and summer breeding migrant.

Up to 50 at Com in Feb, 30 in Mar; 20 at MYA in Feb, 15 in Sep; 20 at Bumbo Rd in Apr, at Belowra in Aug; no more than 10 at other locations.

#### **TURDIDAE** Thrushes

# Bassian Thrush Zoothera lunulata

Status: uncommon breeding resident.

Up to 10 at ERBG in May; 2 at Bergalia in Mar, at Malua Bay in Jun-Aug; 1 at Bumbo Rd in Apr, at Lilli Pilli in Jun-Jul, at WL in Jul and at DS in Aug.

### Common Blackbird Turdus merula

Status: breeding resident.

Two at MB in May, at Tilba in Sep, at Deua R in Nov and at Lilli Pilli in Dec; 1 at WL in Jul, at Com in Aug-Sep; calls at TS in Dec.

# **STURNIDAE** Starlings

# Common Starling Sturnus vulgaris

Status: common breeding resident.

Up to 150 at Com in Mar and Aug, 40-100 in other months; 60 at MB in Jan, at MYA and Belowra in May; 12 at Eurobodalla Rd in Aug; no more than 6 at other locations.

Breeding: nesting at Com in Oct, dependent young in Nov-Dec. (JC)

# Common Myna Sturnus tristis

Status: breeding resident.

Six at MYA in Feb, 4 in Sep; 4 at MO in May, 2 in Jan and Nov; 4 at Com in Oct, 2 in Jan, Sep and Nov; 2 at MB in Jan.

#### **NECTARINIIDAE** Mistletoebird

#### Mistletoebird Dicaeum hirundinaceum

Status: breeding resident and bird of passage.

Up to 5 at PS in Jan, 1-2 most other months; 2 at Com in Jan and Mar; singles at Corunna L and MO in Feb, Deua R in Mar, Mogo SF and Bumbo Rd in Apr, ERBG in May, CO in Jun, Reedy Ck Rd in Aug and Tilba in Sep.

#### **ESTRILDIDAE** Grass-finches

### Red-browed Finch Neochmia temporalis

Status: common breeding resident.

Widely reported throughout the year; 50 at Mogo SF in Apr; 40 at Com in Feb-Mar; 30 at PS in Feb and Sep-Oct, at Bumbo Rd in Apr, at Belowra in Sep; 25 at Broulee in May; no more than 20 at other locations.

Breeding: nesting in Jan and Oct-Dec, dependent young in Jan-Mar and Nov.

# Diamond Firetail Stagonopleura guttata

Status: Vulnerable; rare resident. Six at Belowra on 25 Jul. (JC)

# Beautiful Firetail Stagonopleura bella

Status: vagrant.

One reported from the Deua River Valley on 23 Dec, first record for the

Shire. (RS/AR)

# **PASSERIDAE** House Sparrow

# House Sparrow Passer domesticus

Status: common breeding resident.

Fifteen at Tilba in Sep, 8 in Feb, Jul and Dec. (FM/MA)

# **MOTACILLIDAE** Australasian Pipit

# Australasian Pipit Anthus novaeseelandiae

Status: breeding resident.

Twelve at Com in Jan-Mar, 4-10 in other months; 12 at MYA in May; 5

at Bingie in Jan and May, 1-3 most other months; 4 at Belowra in Jul; no more than 2 at other locations.

#### FRINGILLIDAE Finches

European Goldfinch Carduelis carduelis

Status: uncommon breeding resident.

Four at Com on 12 Sep. (JC)

#### **MAMMALS**

#### **TACHYGLOSSIDAE**

Short-beaked Echidna Tachyglossus aculeatus

Widespread and recorded in most months: 2 at PS in Oct-Nov, 1 in Jan, Apr, Jul, Sep; singles at MB in Jan, Apr, Nov-Dec, at DS in Aug, Oct, Dec, at Coolagolite in Sep and at Deua R in Oct.

#### **DASYURIDAE**

**Spotted-tailed Quoll** *Dasyurus maculatus* Signs at PS in Feb and Jul. (JM)

**Brown Antechinus** *Antechinus stuartii* One at Lilli Pilli in Mar. (IAG)

#### **PERAMELIDAE**

**Long-nosed Bandicoot** *Perameles nasuta* Signs and alarm calls at Deua R in Apr. (RS/AR)

#### **VOMBATIDAE**

### Common Wombat Vombatus ursinus

Activity reported throughout the year: 3 at Coolagolite in Aug-Nov, 2 in May and Jul, 1 in Mar-Apr, Jun and Dec, sign in Jan-Feb; 1 at Deua R in Mar, Oct and Dec, at Com and Belowra in Aug, signs at Bumbo Rd in Apr. (DO/RS/AR/JC/FM)

#### **PETAURIDAE**

#### **Yellow-bellied Glider** *Petaurus australis*

Two at Mossy Pt in Jul, 1 in Jun and Aug-Sep; 1 at Broulee in Jan; probable call at PS in Feb. (HR/GLM/JM)

# Sugar Glider Petaurus breviceps

Common and reported in all months except Jan: 4 at PS in Feb, 2 in Apr, calls in Jul-Sep; 2 at Com in Aug, calls in Apr-May and Sep; 1 at Mossy Pt in Jun-Oct; calls at Deua R in Mar and Oct-Dec.

#### **Greater Glider** *Petaurides volans*

One at Malua Bay in Feb and Mar, one a juvenile. (G.Stevens)

#### **PSEUDOCHEIRIDAE**

# Common Ringtail Possum Pseudocheirus peregrinus

Two at PS in Feb; 1 at Lilli Pilli in Feb-Mar and May, at Broulee in May; drey at Mossy Pt in Sep.

#### PHALANGERIDAE

# Common Brushtail Possum Trichosurus vulpecula

Widespread and regularly recorded throughout year in resident groups: 7 at Com in Aug, 6 in Jan-Feb and Apr, 5 in May-Jun and Sep-Dec, 4 in Mar and Jul; 2 at PS in Mar; 2 (adult and juvenile) at Lilli Pilli in Jan-Jun and Sep, 1 in Jul-Aug and Oct-Dec; 2 at Coolagolite in Feb and Aug-Oct, 1 in Mar, May-Jul and Nov-Dec; 2 at Mossy Pt in Aug-Sep, 1 in Jun-Jul; 1 at Deua R in Mar and Dec; recorded at MB in Apr.

#### MACROPODIDAE

### Eastern Grey Kangaroo Macropus giganteus

Widespread and regularly recorded throughout the year: maxima of more than 100 in Belowra in Aug, 92 at Coolagolite in Sep, 30 at PS in Apr, 27 at DS in Sep-Oct, 19 at Mossy Pt in Oct.

# Red-necked Wallaby Macropus rufogriseus

Widespread and regularly recorded throughout the year: 10 at Belowra in Aug; up to 8 at Coolagolite throughout the year; up to 5 at Deua R in Apr and Oct-Dec, including a female with a joey in the pouch; 1 or 2 at Mossy Pt in Jun, Aug and Nov; present at MB in Nov. (DO/JC/RS/AR/HR/MA)

# Swamp Wallaby Wallabia bicolor

Widespread and regularly recorded throughout the year: up to 16 at MB in Jan, Apr and Nov-Dec; up to 10 at PS in throughout the year; up to 5 at DS in Jun and Sep; up to 4 at Deua R in Mar, Oct-Dec, and at Coolagolite in Jan-May and Jul-Dec; up to 3 at Com throughout the year; singles elsewhere.

#### **PTEROPODIDAE**

# Grey-headed Flying Fox Pteropus poliocephalus

Camp at MHS active in Jan-Feb and Nov-Dec with a maximum of 3000 counted flying south over PS in Dec; 200 at BBWG in Feb; small colony at Ringlands in Apr; up to 5 at Com in Jan and Dec; 1 at Mossy Pt in

Jun-Nov. (JM/FM/JC/HR)

#### **MOLOSSIDAE**

Microbat sp.

At PS in Jul and Deua R in Oct-Dec.

#### **MURIDAE**

**Black Rat** Rattus rattus

One found dead at Coolagolite in Apr. (DO)

#### **OTARIDIDAE**

Seals. A count on 15 March prior to landing on Montagu Is gave an estimate of 60 Australia Fur Seal, *Arctocephalus pusillus* and 70 Longnosed (New Zealand) Fur Seal, *A. forsteri*. Six pups of various ages were noted, some very small and still suckling and others quite large. Several also observed far from the waterline in dense Kikuyu Grass and not included in the count. Fifteen Long-nosed Fur Seal were seen on rocks at the south landing on 19 March with an additional five further south. Ten seal sp. reported off MHS, 2 off CO and 1 off DS in Jun; also observed at NA in Apr. (C Davey/DB/FM/RSor)

#### **CANIDAE**

# Red Fox Vulpes vulpes

Two at Com in Jul, 1 in Apr-Jun and Sep-Nov; 1 at Coolagolite in Jan and Sep, at PS in Apr and at Bevian Rd in Oct.

### **LEPORIDAE**

Rabbit Oryctolagus cuniculus

Reports in all months: up to 10 at Com in Sep-Dec; up to 6 at Broulee in Jan-Mar, May, Aug, Oct and Dec; 1 at DS in Jul-Sep and at Lilli Pilli in Sep-Dec; many seen on the headlands between CO and Bingie in Oct.

#### SUIDAE

Pig Sus scrofa

Recorded at West Flat (Bodalla) in Jul, Sep-Oct. (JC)

#### **CERVIDAE**

Fallow Deer Dama dama

Up to 10 at West Flat (Bodalla) in May, Jul and Oct. (JC)

#### **DELPHINIDAE**

**Bottle-nosed Dolphin** *Tursiops truncatus* 

Thirty off MHS in Jul, up to 6 in Jun and Sep-Dec; up to 8 off DS in

Apr, Jun-Jul and Sep; 8 off Mossy Pt in Jul; also off CO in Jun. (JM/DB/J Coffey/HR/FM)

#### **BALAENOPTERIDAE**

**Humpback Whale** *Megaptura novaeangliae* Eleven off BP in Jul, with a mother and calf reported in Sep; 10 off MHS in Oct-Nov, 5 in Jun; 6 off DS in Jun. (FM/NC/JM/DB)

#### BALAENIDAE

**Southern Right Whale** *Eubalaena australis* Mother and calf off Long Beach in Jun, off Kianga in Jul and off TS in Aug. (NC/TA Ross/M Craig)

#### REPTILES

#### CHELIDAE

**Snake-necked Turtle** Chelodina longicollis

Recorded in all months except Jun-Jul: up to 20 at Com in Jan-Apr and Aug-Dec; 3 at Mossy Pt in Dec, 2 in Jan-Feb and 1 in Oct; 1 at ERBG in May, at Coolagolite in Sep and at Barlings Swamp in Oct.

#### **SCINCIDAE**

**Cream-striped Shinning Skink** *Cryptoblepharus virgatus* One at PS in Jan. (JM)

White's Skink Ergenia whitii

Observed occasionally at Montagu Is in Mar. (C Davey)

Yellow-bellied Water-skink Eulamprus heatwolei Two or three at Com in Jan-Apr and Sep-Dec. (JC)

Eastern Water-skink Eulamprus quoyii

Up to 3 at Lilli Pilli in Jan-Apr and Dec; 1 at DS in Jan. (IAG/J Coffey)

Dark-flecked Garden Sunskink Lampropholis delicata

Up to 6 at Mossy Pt in Jan-Feb and Aug-Dec; at Broulee in Mar-Apr and Sep. (HR/MF)

Pale-flecked Garden Sunskink Lampropholis guichenoti

One or two at Mossy Pt in Oct-Dec; recorded at Broulee in Feb and at Montagu Is in Mar.

Weasel Skink Saproscincus mustelinus

One at Mossy Pt in Jun and Dec. (HR)

# Eastern Blue-tongue Tiliqua scincoides

Two at Com in Jan-May and Sep-Dec; 1 or 2 at Mossy Pt in Jan-Feb and Sep-Dec; singles at DS in Jan and Dec, at Broulee in Jan-Feb and at PS in Jan.

#### **AGAMIDAE**

# Jacky Lizard Amphibolurus muricatus

Up to 5 at Mossy Pt in Jan-Feb and Sep-Dec and at PS in Jan-Apr and Sep-Dec; 1 or 2 Coolagolite in Jan-Apr and Sep-Dec; singles at Broulee in Mar-Apr and Oct, and at DS in Jan.

# Gippsland Water Dragon Physignathus lesueurii howittii

Up to 20 at Com in Jan-Apr and Oct-Dec; 2 at Malua Bay in Oct-Dec, one a juvenile; 1 or 2 at Deua R in Oct-Nov. (JC/MW/RS/AR)

#### **VARANIDAE**

#### Lace Monitor Varanus varius

Two at PS in Oct-Dec, 1 in Jan-Mar; 2 at Com in Feb, 1 in Jan, Mar and Dec; singles at Coolagolite in Jan-Feb, Apr and Oct-Dec, at Lilli Pilli in Feb-Apr, Sep and Dec, at Deua R in Mar, Oct and Dec, and at Brou L in Sep.

#### **BOIDAE**

# Diamond Python Morelia spilota

Four intertwined at Tilba in Sep; 3 at PS in Oct; 1 in Deua R in Nov. (AM/A Cram)

### **ELAPIDAE**

# **Common Death Adder** Acanthophis antarcticus

One at MKS in Oct (first record for this site) and at Deua R in Nov. (SMG/A Cram)

# **Highland Copperhead** Austrelaps ramsayi

One at Monga NP in Feb. (FM)

# Eastern Small-eyed Snake Cryptophis nigrescens

One at Coila in Aug. (NC)

# ${\bf Mustard-bellied\ Snake\ } {\it Drysdalia\ } rhodog a ster$

Two at DS in Sep and 1 in Dec. (J Coffey)

# Red-bellied Black Snake Pseudechis porphyriacus

Seen in all months except Jun-Aug: 3 at Com in Jan, 2 in Feb-Apr, Sep-

Oct and Dec and 1 in May and Nov; 2 at PS in Oct and 1 in Jan; 1 at Coolagolite in Jan, Mar, Oct and Dec, at Surfside in Jan, at Mossy Pt and Lilli Pilli in Feb, at Bumbo Rd in Apr, at BI in Sep.

#### **FROGS**

#### MYOBATRACHIDAE

### Common Eastern Froglet Crinia signifera

Common and widespread in coastal lands, woodland: recorded throughout the year at Barlings Swamp, Mossy Pt, Broulee, PS and Com.

# Brown-striped Frog Limnodynastes peronii

Widespread and common on coast: recorded in all months except May at Mossy Pt, Broulee, PS and Com.

### Haswell's Frog Paracrinia haswelli

Calls at PS in Jan and Mar-Apr. (JM)

### Brown Toadlet Pseudophryne bibronii

Recorded at PS in Mar and Mossy Pt in Jun-Oct. (JM/HR)

### Tyler's Toadlet Uperoleia tyleri

Up to 5 at Mossy Pt in Jan-Feb and Sep-Dec; calls at PS in Jan-Apr and Dec and at Barlings Swamp in Oct. (HR/JM/FM)

#### HYLIDAE

# Green Tree Frog Litoria caerulea

First record in the Eurobodalla at TS in Dec. (B Asbury)

# Keferstein's Tree Frog Litoria dentata

Up to 4 at Mossy Pt in Jan-Feb, Jun and Oct-Dec; 1 at Coila Ck Rd in Nov; calls at Com in Jan-Mar and Oct-Dec, at PS in Feb-Mar and Nov-Dec, at Brou L in Nov and at Coolagolite in Dec.

# Brown Tree Frog Litoria ewingii

Calls at PS in Feb-Apr and Jul and at CO in Jun. (JM/FM)

# **Eastern Sedgefrog** *Litoria fallax*

This relatively new species to the Eurobodalla seems to be establishing itself at a few locations: at least 100 among the Lomandra at ERBG in Feb, calling in May and Oct; up to 60 including many young at Mossy Pt in Feb, 20 in Jan, 15 in Nov, 10 in Oct, up to 5 in Jun-Jul and Dec; calling at Barlings Swamp in Oct and at Coila Ck Rd in Nov.

# Jervis Bay Tree Frog Litoria jervisiensis

Up to 3 at Mossy Pt in Feb, Jun-Oct and Dec; calls at PS in Jan, Mar-Apr, Oct and Dec. (HR/JM)

# Peron's Tree Frog Litoria peronii

Common and widespread in coastal areas: recorded throughout the year at Mossy Pt, Broulee, PS, Com and Coolagolite.

# Southern Leaf-green Tree Frog Litoria nudidigita

Calls at PS in Apr and Jul. (JM)

# Tyler's Tree Frog Litoria tyleri

One at Mossy Pt in Jan and Sep; 1 or calls at PS in Jan-Apr, Oct-Dec.

# Verreaux's Tree Frog Litoria verreauxii

Common and widespread in coastal areas: recorded throughout the year except May at Mossy Pt, PS and Com.

### **INSECTS**

# DRAGONFLIES, DAMSELFLIES

Blue Ringtail Austrolestes annulosus: Jan.

Orange Threadtail Nososticta solida: Jan.

Gold-fronted Riverdamsel Pseudagrion aureofrons: Mar-Apr, Dec.

Aurora Bluetail Ischnura aurora: Jan-Feb.

Red and Blue Damsel Xanthagrion erythroneurum: Jan-Mar, Dec.

Common Bluetail Ischnura heterosticta: Jan-Apr, Sep-Dec.

Blue-spotted Hawker Adversaechna brevistyla: Jan.

Australian Emerald Hemicordulia australiae: Jan-Mar, Nov-Dec.

Tau Emerald Hemicordulia tau: Jan-Mar, Nov-Dec.

Blue Skimmer Orthetrum caledonicum: Jan-Apr, Dec.

Scarlet Percher Diplacodes haematodes: Jan-Apr, Dec.

Wandering Percher Diplacodes bipunctata: Jan-Apr, Nov-Dec.

Black-faced Percher Diplacodes melanopsis: Jan-Apr, Dec.

Graphic Flutterer Jan-Feb.

Common Glider Tramea loewii: Jan-Apr, Sep, Dec.

# **BUGS, CICADAS**

Harlequin Bug Dindymus versicolor: Jan, Mar, May, Sep-Nov.

Green Vegetable Bug Nezara viridula: Sep.

Bronze Orange Bug Musgraveia sulciventris: Jan-Apr, Nov.

Metallic Shield Bug Scutiphora pedicellata: Jan-Feb, Sep, Dec.

Brown Shield Dictyotus caenosus: Jan.

Gum Tree Shield Bug Omyta centrolineata: Apr.

Orange Assassin Bug Gminatus australis: Nov.

Water Strider family Gerridae: Jan-Apr, Oct.

Water Boatman family Corixidae: Jan-Mar.

Razor Grinder Henicopsaltria eydouxii: Jan-Mar, Dec.

Black Prince Psaltoda plaga: Jan-Feb, Dec.

Red-eye Psaltoda moerens: Jan-Feb.

Greengrocer Cyclochila australasiae: Nov-Dec.

White Drummer Arunta perulata: Jan-Mar.

**Double Drummer** *Thopha saccata:* Jan-Feb, Sep, Dec.

Black Squeaker Atrapsalta encaustica: Jan.

Double-spotted Cicada Galanga (Cicadetta) labeculata: Jan-Mar, Dec.

Silver Princess Yovetta celis: Jan-Feb.

#### BEETLES

Repsimus Beetle Repsimus aeneus: Jan.

Green Scarab Diphucephala colaspidoides: Jan-Apr, Sep-Dec.

Christmas Beetle Anoplognathus rugosus: Jan-Feb, Sep, Dec.

White Christmas Beetle Anoplognathus pallidicollis: Jan.

Argentinian Scarab Cyclocephala signaticollis: Jan-Mar, Nov-Dec.

Dung Beetle family Scarabaeidae: Feb-Mar, May, Dec.

Net-winged Beetle Porrostoma rhipidium: Jan-Feb, Apr, Oct-Dec.

Plague Soldier Beetle Chauliognathus lugubris: Mar, Oct-Nov.

Tricolour Soldier Chauliognathus tricolor: Mar.

Clerid Beetle Eleale pulchra: Nov-Dec.

White-spotted Pintail Beetle Mordella leucosticta: Oct-Dec.

Honeybrown Beetle Ecnolagria grandis: Jan-Feb, Apr, Dec.

Acacia Leaf Beetle Dicranosterna immaculata: Jan-Apr, Jun, Oct-Nov.

Leaf Beetle Peltoschema oceanica: Feb.

Metallic Green Acacia Beetle Calomela ruficeps: Jan-Feb, Apr, Oct-Dec.

Small Blue Leaf Beetle Nisotra breweri: Jan, Oct-Dec.

**Dotted Paropsine Leaf Beetle** *Paropsis atomaria:* Nov.

Elm Leaf Beetle Pyrrhalta luteola: Mar.

Banded Pumpkin Beetle Aulocophora hilaris: Jan, Oct-Dec.

Three-lined Potato Beetle Lema daturaphila: Jan-Apr, Nov.

Green Tortoise Beetle Cassida compuncta: Mar-Apr, Dec.

Belid Weevil Rhinotia brunnea: Jan, Apr, Nov-Dec.

Botany Bay Weevil Chrysolopus spectabilis: Jan.

Yellow Shouldered Ladybird Apolinus lividgaster: Apr.

**Transverse Ladybird** *Coccinella transversalis*: Jan-Mar, May, Oct-Dec.

Variable Ladybird Coelophora inaequalis: May, Oct.

Mealybug Ladybird Cryptolaemus montnouzieri: Jan, Oct-Dec.

Twenty-eight Spotted Ladybird Epilachna vigintioctopunctata: Mar.

Twenty-six Spotted Ladybird Epilachna vigintisexpunctata: Jan-May, Oct-Dec.

Steelblue Ladybird Halmus chalybeus: Mar, Sep, Dec.

Common Spotted Ladybird Harmonia conformis: Jan, Sep-Dec.

Tortoise-shelled Ladybird Harmonia testudinaria: Aug.

**Spotted Amber Ladybird** *Hippodamia variegata*: Jan-Feb, Apr-Jun, Oct-Dec.

Fungus-eating Ladybird Illeis galbula: Jan-Jun, Oct, Dec.

Striped Ladybird Micraspis frenata: Jan-Dec.

Orange-spotted Ladybird Orcus australasiae: Nov-Dec.

Orcus bilunulatis: Jan-Feb, Sep-Oct.

#### FLIES

Giant Robber Fly Blepharotes splendidissimus: Jan.

Robber Fly Tolmerus sp.: Sep.

Hover Fly family Psychodidae: Sep, Nov.

**Spotted March Fly** *Scaptia guttata:* Jan-Feb, Sep, Nov.

Queensland Fruit Fly Bactrocera tryoni: Sep.

Fruit Fly Bactrocera sp.: Mar.

Green Long-legged Fly Austrosciapus connexus: Feb-Apr, Sep.

Crane Fly family Tipulidae: Feb.

Boatman Fly Pogonortalis doclea: Apr, Sep-Oct.

Boatman Fly family Platystomatidae: Nov.

Bee Fly family Bombyliidae: Sep.

Native Drone Fly family Syrphidae: Dec.

### MOTHS HEPIALIDAE

Elhamma australasiae: Feb-Mar.

Oxycanus dirempta: Jun. Oxycanus silvanus: Jun.

#### **PSYCHIDAE**

Saunder's Case Moth Metura elongatus: May.

Lomera boisduvalii: Oct.

#### **PLUTELLIDAE**

Diamondback Moth Plutella xylostella: Oct-Nov.

Tritymba pamphaea: Oct-Nov.

#### **OECOPHORIDAE**

Euchaetis rhizobola: Sep. Garrha pudica: Nov.

*Epithymema incomposita*: Apr. *Philobota hypocausta*: Nov.

#### **LECITHOCERIDAE**

*Crocanthes prasinopis:* Oct.

#### **TORTRICIDAE**

Conchylis subfurcatana: Nov.

**Light Brown Apple Moth** *Epiphyas postvittana*: Oct-Nov.

#### **ZYGAENIDAE**

Pollanisus sp.: Jan.

#### LIMACODIDAE

Cup Moth Pseudanapaea denotata: Feb.

### **PTEROPHORIDAE**

Plume Moth sp.: Jun, Sep.

#### **PYRALIDAE**

Meal Moth Pyralis farinalis: Feb-Mar, Sep, Nov.

Hednota pleniferellus: Feb-Mar.

Hednota bivittella: Mar.

Cabbage Centre Grub Hellula hydralis: Apr.

Asian Corn Borer: Ostrinia furnacalis: Feb-Mar, Nov.

Beet Webworm Spoladea recurvalis: Feb-Mar.

Nacoleia rhoeoalis: Feb-Mar, Oct-Nov.

Eggfruit Caterpillar Sceliodes cordalis: Feb-Mar.

Archernis callixantha: May.

# **GEOMETRIDAE**

Corded Geometrid Aphantes melanochorda: Jun.

Plain Line-moth Smyriodes aplectaria: May-Jun.

Ragged Geometrid Amphiclasta lygaea: Jul.

Black Geometrid Melanodes anthracitaria: Jan-Feb, May, Oct.

*Paralaea sp.:* Jun. *Fisera sp.:* Jun.

Clara Satin Moth Thalaina clara: Mar-Apr.

Bracken Moth Idiodes apicata: Sep-Oct.

Acute Point Moth Azelina (Metrocampa) biplaga: Mar-Apr.

Dashed Geometrid Dissomorphia australiaria: Aug.

Bold-waved Bark Moth Psilosticha attacta: Jun.

Grey Twisted Moth Circopetes obtusata: Jan.

Spring Taxeotis Taxeotis perlinearia: Sep.

**Oval-spot Taxeotis** *Taxeotis stereospila*: Oct.

Triangular Moth Epidesmia chilonaria: Feb.

Neat Epidesmia Epidesmia tryxaria: Feb-Mar, Oct-Nov.

Southern Grey Hypobapta percomptaria: Jun.

Red-lined Geometrid Crypsiphona ocultaria: Jan, Mar, Sep-Oct.

Double-fringed Emerald Chlorocoma dichloraria: Jun.

Cream-fringed Emerald Chlorocoma melocrossa: Oct.

**Spectacular Emerald** *Chlorocoma cadmaria*: Sep. First record of the species in the Eurobodalla.

Cream Wave Scopula perlata: Feb-Mar, May, Jul-Oct, Dec.

Plantain Moth Scopula rubraria: Jan-May, Oct-Dec.

Flecked Wave Idaea philocosma: Oct.

Purple Wave Idaea inversata: Nov.

Mecynata Moth Chrysolarentia mecynata: Apr, Sep-Nov.

Finely-lined Carpet Chrysolarentia severata: Sep.

Dark-patch Carpet Xanthorhoe anaspila: May.

Sodaliata Moth Epyaxa sodaliata: May.

Subidaria Moth Epyaxa subidaria: Jun, Sep.

Red-spotted Delicate Epicyme rubropunctaria: Sep.

### **LASIOCAMPIDAE**

Gum Snout Moth Entometa apicalis: Nov.

Banded Porela Porela vitulina: Nov.

#### **ANTHELIDAE**

White-stemmed Gum Moth Chelepteryx collesi: Jun.

White-stemmed Wattle Moth Chelepteryx chalepteryx: May, Oct.

Varied Anthelid Anthela varia: Larva in Feb.

Grey-headed Anthelid Anthela excellens: Feb. Common Anthelid Anthela acuta: May, Oct. Eyespot Anthelid Anthela ocellata: Nov.

#### **SATURNIDAE**

Helena Gum-moth Opodiphthera helena: Female laying eggs in Dec.

#### **SPHINGIDAE**

Hawk Moth Tetrachroa edwardsi: Feb.

Coprosma Hawk Moth Hippotion scrofa: Feb, Dec.

#### NOTODONTIDAE

Patterned Notodontid Aglaosoma variegata: Larvae in Jun.

Epicoma sp.: Mar-Apr.

Sparshall's Moth Trichiocercus sparshalli: Dec.

#### LYMANTRIIDAE

White Cedar Moth Leptocneria reducta: Larvae in Apr.

White Tussock Moth Acyphas sp.: Jul.

#### **ARCTIIDAE**

Banded Lichen Moth Lyclene structa: Feb, Apr, Nov.

Spotted Lichen Moth Asura cervicalis: Feb-Mar.

Lydia Lichen Moth Asura lydia: Jan, Mar.

Crossed Footman Thallarcha albicollis: Oct.

Variable Halone Halone sejuncta: Mar-May, Aug, Nov.

Lichen-eating Caterpillar Manulea replana: Mar, May, Dec.

Heliotrope Moth Utethesia sp.: Feb-May, Dec.

Magpie Moth Nyctemera amicus: Jan-Feb, May, Dec.

Dark-spotted Tiger Moth Spilosoma canescens: Mar, Dec.

Crimson Tiger Moth Spilosoma curvata: Feb-Mar, Sep, Dec.

**Tiger Moth** *Amata sp.:* Jan-Feb, Oct-Nov.

#### **NOCTUIDAE**

**Double-line Snout Moth** *Lophotoma diagrapha:* Mar-Apr. First record of the species in the Eurobodalla.

Plain Pantydia Pantydia sparsa: Mar, Sep.

Northern Old Lady Moth Dasypodia cymatodes: Feb.

Brown Praxis Praxis porphyretica: Mar, Oct.

Semi-Looper Trigonodes hyppasia: Mar, Jun, Dec.

Tobacco Looper Chrysodeixis argentifera: Sep.

Whistling Moth Hecatesia fenestrata: Jan-Feb, Nov.

Mistletoe Moth Comocrus behri: Jan, Dec.

Green-blotched Moth Cosmodes elegans: Jun-Jul, Sep.

**Tobacco Cutworm** Spodoptera litura: Apr.

Hypoperigea tonsa: Sep-Oct.

Proteuxoa cinereicollis: Apr-May.

Proteuxoa testaceicollis: Sep. Leucania diatrecta: May-Jun.

Bogong Moth Agrotis infusa: Jan, Sep-Nov.

Brown Cutworm Agrotis munda: Feb.

Variable Cutworm Agrotis porphyricollis: Apr-May, Aug. Native Budworm Helicoverpa punctigera: Jan-Jul, Sep-Dec.

#### BUTTERFLIES

#### **HESPERIIDAE**

Splendid Ochre Trapezites symmomus: Feb-Mar, Dec.

**Spotted Sedge-skipper** *Hesperilla ornata*: Dec.

Narrow-brand Grass-dart Ocybadistes flavovittata: Jan-Apr, Oct-Dec.

Dingy Grass-skipper Toxida peron: Mar.

#### **PAPILIONIDAE**

Macleay's Swallowtail Grampium macleayanus: Mar-Apr.

Blue Triangle Graphium sarpedon: Feb.

Orchard Swallowtail Papilio aegeus: Jan-Apr, Nov-Dec.

Dainty Swallowtail Papilio anactus: Feb-Mar.

#### **PIERIDAE**

Imperial Jezebel Delias harpalyce: Feb-Apr.

Black Jezebel Delias nigrina: Jan-Jul.

Spotted Jezebel Delias aganippe: Mar, Sep.

Caper White Belenois java: Dec.

Cabbage White Pieris rapae: Jan-Dec.

# **NYMPHALIDAE**

**Dusky Knight** *Ypthima arctous*: Feb-Apr, Nov-Dec. **Brown Ringlet** *Hypocysta metirius*: Jan-Apr, Sep-Dec.

Varied Swordgrass Brown Tisiphone abeona: Jan-Apr, Oct-Dec.

Marbled Xenica Geitoneura klugii: Feb-Mar.

Forest Brown Argynnina cyrila: Oct.

Wonder Brown Heteronympha mirifica: Jan, Apr.

Common Brown Heteronympha merope: Jan-Apr, Nov-Dec.

Spotted Brown Heteronympha paradelpha: Feb-Apr.

Bank's Brown Heteronympha banksi: Apr.

Tailed Emperor Polyura sempronius: Apr.

Varied Eggfly Hypolimnas bolina: Feb, Dec.

Meadow Argus Junonia villida: Jan-Jun, Sep, Nov-Dec.

Australian Painted Lady Vanessa kershawi: Jan-Mar, Sep-Dec.

Yellow Admiral Vanessa itea: Jan-Mar, Jun, Sep-Nov.

**Common Crow** *Eupoea core:* Jan, Apr. **Monarch** *Danaus plexippus*: Mar-May.

#### LYCAENIDAE

**Bright Copper** *Paralucia aurifer:* Aug.

Moonlight Jewel Hypochrysops delicia: Jan.

Imperial Hairstreak Jalmenus evagorus: Jan.

Varied Dusky-blue Candalides hyancinthina: Nov.

Cycad Blue Theclinesthes onycha: Apr, Sep, Dec.

Long-tailed Pea-blue Lampides boeticus: Feb.

Common Grass Blue Zizina labradus: Jan-May, Sep-Dec.

### WASPS, BEES

Blue-banded Bees Amegilla cingulata: Jan-Apr, Dec.

Teddy Bear Bee Amegilla bobiformis: Apr.

Masked Bee Hylaeus nubilosus: May, Nov-Dec.

Neon Cuckoo Bee Thyreus nitidulus: Feb.

Black (Blue) Flower Wasp Discolia sorror: Jan-Mar, Sep, Nov-Dec.

**Orange Caterpillar Parasite Wasp** *Netelia producta*: Jan-Apr, Nov-Dec.

Common Paper Wasp Polistes humilis: Jan-Jun, Sep-Dec.

White-faced Brown Paper Wasp Ropalidia plebeian: Jan-Jun, Sep-Dec.

Mason Wasp Abispa splendida: Jan-Feb.

Yellow Sand Wasp Bembix palmata: Jan, Dec.

Australian Cicada Killer Wasp Exeirus lateritius: Jan.

Mud-dauber Wasp Sceliphron laetum: Mar.

Cuckoo Wasp fam. Chrysididae: Dec.

# **OTHER INVERTEBRATES**

### **SPIDERS**

Species of spider commonly recorded:

**Huntsman Spider** Delena cancerides

White-tailed Spider Lampona cylindrata Black House Spider Badumna insignis **Net-casting Spider** *Deinopis subrufa* Red-back Spider Latrodectus hasselti St. Andrew's Cross Spider Agriope keyserlingi Leaf-curling Spider Phonognatha graeffei Daddy Long-legs Pholcus phalangoides Water Spider Dolomedes australiensis Wheel-weaving Garden Spider Eriophora transmarinas Golden Orb-weaving Spider Nephila sp. Little Striped Wolf Spider Lycosa furcillata Garden Wolf Spider Tasmanicosa godeffroyi Wolf Spider Tasmanicosa sp. **Spiny Spider** Austrocantha minex Two-spined Spider Poecilopachys bispinosa Flat Rock Spider Hemiocloea major Jumping Spider Opisthoneus sp. Striped Saitis Saitis virgatus **Lucrida Jumping** Sandalodes superbus House Hopper Hypoblemum villosum Common House Spider Parasteatoda tepidariorum Two-tailed Spider Tamopsis fickerti White-spotted Swift Spider Nyssus albopunctatus White-porch Spider Cryptachaea gigantipes

# 60th ANNUAL ASSESSMENT OF SHEARWATER BREEDING SUCCESS ON MONTAGU ISLAND, 19–27 MARCH 2019

Peter J. Fullagar, Chris Davey, David Priddel and Mike Crowley

A study of the breeding productivity of shearwaters (Ardenna spp.) coexisting on Montagu Island has continued annually since 1960. Before 1959 it was thought that only one species of shearwater bred on Montagu. In that year the discovery of two other species breeding on the island raised questions regarding the dynamics of this mixed colony. In this long-term study we measure breeding productivity each year by counting the total number of chicks of each species within three fixedarea plots. This is done in late March towards the end of the breeding season, thereby avoiding disturbance to breeding adults, eggs and young chicks. Results have been published annually since 1998 in *Nature in* Eurobodalla (eg Davey et al. 2018). Additional studies of the shearwaters on Montagu Island are listed in Appendix A. The format of this report and the abbreviations used are consistent with those in our previous annual reports (eg Davey et al. 2018). Montagu Island is divided into two parts by a steep gulch and a beach that is passable at all tides. We refer to these two portions as north island and south island. Replanting of south island with taller vegetation, using plants known to have been on the island in the past, has occurred following systematic control of Kikuyu Grass Pennisetum clandestinum. This has been done progressively over the last 17 years across designated zones, and these zones (numbered 1-9 or assigned as Asset A, B or C and Accidental) are used in this report for reference purposes. They are briefly described (condition in March 2013) and shown on a map in Fullagar et al. (2013).

Our shearwater colony study site on the SE side of north island (zone 9) is known as NISA (293 m²); the two study sites at the N end of south island are known as SISA (428 m²) and THiSA (293 m²) and are located at the N end of zone 8. The exact location of each study site is shown in Fullagar and Heyligers (2006).

In addition to assessing the breeding success of shearwaters annually, the vegetation is also mapped for each site. A grid of 1 x 1 ft cells (set up in 1967 before metrication) is laid over each study site. For NISA and THiSA the area is divided into  $60 \times 54$  cells, and for SISA  $72 \times 66$  cells.

The occurrence of each plant species within a study site is calculated as the proportion of cells in which that species occurs.

Bird records for the island have been reviewed by Fullagar (1989), but many subsequent records are included in annual reports (similar to this one) dating back to 1998. The names and taxonomic order of birds follow the IOC World Bird List (Gill and Donsker 2018); all other vertebrates follow Clayton *et al.* (2006), except for seals (see Davey *et al.* 2018). Names of butterflies follow Braby (2004); moths follow Common (1990); and vascular plants follow Heyligers and Adams (1989, 2004).

### **Survey Team**

This year's team comprised Peter Fullagar, Mike Crowley, Chris Davey and David Priddel (MIPartners); Penny Beaver, Harvey Perkins, Jesse Smith, Matthew Bruce and Lesley Priddel.

### **Weather and Habitat Conditions**

We departed Narooma on 19 March in two groups, the first at 09:00 and the second at 10:45, crossing the bar in easy conditions on a high tide. The crossing was choppy with squalls of rain. No work was possible this day because of continued showers. Work commenced on 20 March and it remained sunny all day. Rain early on 21 March delayed work until the afternoon. Fine conditions continued the following day (22March), before thunderstorms arrived late in the afternoon. March 23 was fine with a late afternoon southerly change. The southerly conditions, with rain, continued on March 24. From 25 to 27 March fine conditions prevailed.

Monthly rainfall figures (mm) from April 2018 to March 2019 are as follows: 4.2, 33.6, 106.8, 9.8, 5.2, 14.8, 73.0, 86.0, 108.0, 50.2 and 13.8. However, the records for January (50.2) and February (13.8) are incomplete with no data recorded between 16 January and 7 February, inclusive. Rainfall up to 27 March was 79.2 mm.

The vegetation on all study sites was lush and dense, as it had been in 2018. Spiny-headed Mat-rush *Lomandra longifolia* was in excellent condition; Scarlet Runner *Kennedia rubicunda* continues to encroach on NISA and SISA. Kikuyu Grass also continues to spread throughout the island and small areas remain on SISA. Morning Glory *Ipomoea cairica* has increased substantially in many areas, often smothering other vegetation or covering formerly exposed rock surfaces. Large patches of

Cape Sweet Pea or Dolichos Pea *Dipogon lignosus* also now occur in many places. Coastal Saltbush *Rhagodia candolleana* is spreading rapidly and woodland areas on the western side of south island are now well established.

### Coverage

We started work on SISA at 09:30 on 20 March, continuing until 13:00. We resumed work at 14:30 and completed the site at 18:00. On 21 March we completed THiSA between 13:00 and 17:30. We started NISA on 22 March at 09:00 and worked until lunch (12:00–12:50) and completed the survey at 14:45. On 23 March we made casual observations on the south island. Light rain on 24 March prevented any serious observations in the morning but general observations were made on south island in the afternoon. On 25 March, both north and south islands were surveyed, but strong winds hampered observations of bush birds and butterflies. On 26 March further general observations were made on south island.

### **Survey Results**

#### 1. Shearwaters

The results of this year's survey, together with those for 2018, are summarised in Table 1.

Table 1. No. of shearwater chicks and burrows found in the three study sites in 2019 (2018 data in brackets), and totals for both years

|                            | NISA      | THiSA   | SISA      | <i>Total</i> 2019 | <i>Total</i> 2018 |
|----------------------------|-----------|---------|-----------|-------------------|-------------------|
| Wedge-tailed<br>Shearwater | 55 (46)   | 21 (14) | 43(29)    | 119               | 89                |
| Short-tailed<br>Shearwater | 20 (14)   | 30 (23) | 39 (40)   | 89                | 77                |
| Sooty<br>Shearwater        | (0)       | 1 (0)   | (0)       | 1                 | 0                 |
| Number of burrows          | 144 (140) | 85 (83) | 158 (174) | 387               | 397               |
| Occupied burrows (%)       | 52 (43)   | 61 (45) | 52 (40)   | 54                | 42                |

As Table 1 shows, burrow numbers were similar to those in 2018, but the overall percentage of occupied burrows was higher. The average weight of Wedge-tailed Shearwater chicks this year was 426 g (142–692 g); the comparable figure for Short-tailed Shearwater was 737 g (321–1034 g). These average weights are greater than those of 2018: 300 g for Wedge-tailed Shearwater and 593 g for Short-tailed Shearwater. Wedge-tailed Shearwater comprised 73% on NISA, 40% on THiSA and 52% on SISA, giving an overall figure of 57%, continuing the steady increase in the ratio of Wedge-tailed to Short-tailed Shearwaters. NISA continues to be heavily dominated by Wedge-tailed Shearwater. One Sooty Shearwater chick was recorded.

### 2. Penguins

No landing site surveys were conducted and no birds were seen or heard ashore.

### 3. Frogs

To our surprise on 19 March we discovered a small population of Striped Marsh Frog *Limnodynastes peronii* in the well at the gardens near the northern end of south island. Adults were calling after recent rain. Large egg masses were present and pairs were in amplexus. We estimated about 10 individuals were present. Over the next day or so we found them in and around the quarters. Apparently, they probably arrived on the island in mulch that was imported during the revamp of the historic kitchen garden during the winter of 2016.

# General Observations of Birds, Mammals, Reptiles and Lepidoptera BIRDS

Thirty-two species were recorded this year and 13 eBird lists were submitted.

**Brown Quail** *Coturnix ypsilophora*. Heard or seen on all days with a maximum of 25 on 25 March. Presence of small chicks confirmed late breeding.

White-faced Storm-Petrel *Pelagodroma marina*. A detailed study of this species is currently being undertaken. Of 19 geolocators fitted to birds in January 2016, eight were recovered during five targeted surveys between September 2017 and January 2018. Data are currently being analysed. Banding efforts during this period found more than 330 individuals present at the colony, far in excess of what was expected. A

second year of intensive studies is planned for 2018–19 (Nicholas Carlile pers. comm.).

Shy Albatross Thalassarche cauta. A few seen on 25 March in late afternoon following a period of strong wind switching from N to SW. Gould's Petrel Pterodroma leucoptera. A detailed study of this species is currently being undertaken. Currently, there are about 60 known nest sites, mostly on north island, in rocky slopes and cliffs along the SW coastline and midway along the E coastline. Also, several nest sites occur along the upper levels of the cliffs in the gulch on the S side of north island, and along the NE coastline of south island. In 2018–19, 40 nests contained eggs, from which 25 chicks hatched. As of the end of January 2019, 24 chicks survived. (Nicholas Carlile pers. comm.)

Wedge-tailed Shearwater Ardenna pacifica and Short-tailed Shearwater Ardenna tenuirostris. See Table 1 for this year's chick count. Individuals and small groups of fewer than 20 individuals of each species seen at sea on most days.

**Sooty Shearwater** *Ardenna grisea*. One chick found on THiSA. **White-faced Heron** *Egretta novaehollandiae*. One seen at S end of south island on 19 and 24 March and another sighting at the NE shoreline of north island on 27 March.

**Australasian Gannet** *Morus serrator*. Present in low number on all days with a maximum of 6 on 26 March. Both adults and juveniles observed in approximately equal proportions.

**Little Pied Cormorant** *Microcarbo melanoleucos*. Two seen on eastern side of south island on 19 March.

**Great Cormorant** *Phalacrocorax carbo*. Seen on all days, with a maximum of 81 observed on 25 March.

**Spotted Harrier** *Circus assimilis*. An adult present every day. Reportedly, this bird has been seen on the island regularly since November 2018.

**Swamp Harrier** *Circus approximans*. One dark-plumaged bird, presumably a juvenile, seen on 24 March on south island.

White-bellied Sea Eagle *Haliaeetus leucogaster*. Maximum of three (one adult, one sub-adult and one immature) seen most days.

**Buff-banded Rail** *Gallirallus philippensis*. Few seen or heard; three on south island and one on north island.

**Sooty Oystercatcher** *Haematopus fuliginous*. Nine birds confirmed on south island at five locations on 25 March, including a pair at North Landing accompanied by a fully-grown juvenile, plus one bird on SW

shore of north island. However, a pair seen from the boat on the NE shoreline of north island on 27 March suggest that the total for the island may have been 10–11 individuals.

**Sharp-tailed Sandpiper** *Calidris acuminate*. One seen on E side south island on 26 March.

**Silver Gull** *Chroicocephalus novaehollandiae*. Present in low numbers on all days with a maximum of 28 on 23 March.

**Caspian Tern** *Hydroprogne caspia*. Seen most days with a maximum of four seen on 19 March.

**Greater Crested Tern** *Thalasseus bergii*. Present in low numbers on all days with a maximum of 10 seen on 23 March.

**Bar-shouldered Dove** *Geopelia humeralis*. Single bird seen most days; two on 26 March.

**Sacred Kingfisher** *Todiramphus sanctus*. One seen on 19 and 26 March.

**Peregrine Falcon** *Falco peregrinus*. Male and female adults seen occasionally on north island.

**Nankeen Kestrel** *Falco cenchroides*. An immature seen on 27 March near the lighthouse.

**Yellow-faced Honeyeater** *Lichenostomus chrysops*. Restricted to the thickets on the western side of south island (zones 1, 2, 4, 5, 6, 7 and Accidental). Maximum count of 33 on 26 March.

**Black-faced Cuckooshrike** *Coracina novaehollandiae*. Two present in thickets on the western side of south island.

**Australian Golden Whistler** *Pachycephala pectoralis*. One heard in thickets on western side of south island most days.

**Leaden Flycatcher** *Myiagra rubecula*. A female seen near the vegetable garden in the early afternoon of 26 March.

**Welcome Swallow** *Hirundo neoxena*. Seen daily. Maximum numbers estimated at 30. Some of these may have been passage migrants.

**Little Grassbird** *Megalurus gramineus*. Inconspicuous at this time of vear, few seen.

**Golden-headed Cisticola** *Cisticola exilis*. Not vocal and difficult to detect, but a few seen on most days. Maximum of 10 on south island on 26 March.

**Silvereye** *Zosterops lateralis*. Fewer seen or heard before 24 March but small flocks observed thereafter, with at least 300 seen on 26 March.

Some incidental records:

A Lesser Frigatebird *Fregata ariel* was seen by Amy Harris and Andy Young overflying the island on 8 March.

During a visit to the island between 9 and 12 November 2018 Chris Davey reported fewer nesting **Silver Gull** than in recent years. Counting along pathways and around the perimeter of rock outcrops within the colony gave an estimate of 450 active nest sites.

The size of the **Greater Crested Tern** colony was assessed from images taken from the lighthouse: 2074 adults with either eggs or chicks.

A Black-shouldered Kite, a Brown Goshawk, two White-bellied Sea Eagle, two Swamp Harrier, and two adult Peregrine Falcon along with two flying young were also present.

#### **MAMMALS**

Seals. A count on 25 March gave an estimate of 179 individuals on north island and 36 on south island, of which almost all were Longnosed (New Zealand) Fur Seal A. forsteri. Ten young of the year, some still suckling were observed. The number present along the W and NW shores of north island was confirmed when we viewed these areas from the boat before returning to Narooma in late morning on 27 March. No seals were present at the 'traditional' haul-out area for seals in the NE of north island, despite clear evidence that this site has been used recently. Cetaceans. A largely intact skeleton of a Common Dolphin Delphinus delphis was found at the south end of south island. Identification was confirmed from the skull and teeth, and the specimen was lodged with the Australian Museum.

#### REPTILES

White's Skink *Ergenia whitii*. Seen commonly at rock outcrops and along edges of mown tracks.

Grass Sun-skink Lampropholis guichenoti. Observed occasionally.

# **LEPIDOPTERA** (butterflies only)

**Dingy Grass-skipper** *Toxidia peron*. Seen all over south island. **Orchard Swallowtail** *Papilio aegeus*. A male seen near South Landing on 25 March and a female in the Accidental block on 26 March.

Cabbage White Pieris rapae. A few seen every day.

**Common Brown** *Heteronympha merope*. A few seen most days, mainly females.

**Meadow Argus** *Junonia villida*. A few seen near thickets on south island.

**Yellow Admiral** *Vanessa itea*. One seen on 26 March near S end of south island.

**Long-tailed Pea-blue** *Lampides boeticus*. Commonly seen on south island.

**Common Grass-blue** *Zizina otis*. One seen on 26 March near the boat shed at the jetty.

### Acknowledgments

We are indebted to the NSW National Parks and Wildlife Service, Office of the Environment and Heritage, for hospitality while on the island. We thank Amy Harris for organising our accommodation on the island and transport to and from the island, and Kel Myer and Shane Connelly for assistance while on the island. We also thank Andy Young, skipper of the 'Shearwater II', for transporting us, and our gear, safely to and from the island. We thank Penny Beaver, Jesse Smith, Harvey Perkins and Matthew Bruce for their contributions as members of the team. Once again Lesley Priddel provided a full catering service for us all, which was much appreciated. We thank Nicholas Carlile for supplying information on two species mentioned in our bird list.

Research was conducted under NPWS Scientific Licence 100668 and Animal Ethics Committee permit 170801/01.

#### References

- Braby, M.F. (20016). *The Complete Field Guide to Butterflies of Australia (Second edition)*. CSIRO Publishing, Melbourne.
- Clayton, M., Wombey, J.C., Mason, I.J., Chesser, R.T. & Wells, A. (2006). *CSIRO List of Australian Vertebrates: A Reference with Conservation Status*. CSIRO Publishing, Melbourne.
- Davey, C., Priddel, D., Crowley, M. and Fullagar, P. J. (2018). 59<sup>th</sup> Annual Assessment of Shearwater Breeding Success on Montagu Island, 15–20 March 2018. *Nature in Eurobodalla* 32: 56–63.
- Fullagar, P.J. (1989). Birds of Montagu Island, NSW. *Nature in Eurobodalla* 2: 27–35.
- Fullagar P. & Heyligers, P. (2006). Shearwater colonies on Montagu Island: are they being affected by encroaching Kikuyu Grass? *Australian Zoologist* 33: 476–479.

- Fullagar, P.J., Davey, C. & Priddel, D. (2013). 54<sup>th</sup> Annual Assessment of Shearwater Breeding Success on Montagu Island, 22–28 March 2013. *Nature in Eurobodalla* 27: 63–71.
- Gill, F. & Donsker, D. (Eds). (2018). IOC World Bird List (v8.1). doi:10.14344/IOC.ML.8.1.
- Heyligers, P.C. & Adams, L.G. (1989). Vascular Flora of Montagu Island, NSW. *Nature in Eurobodalla* 2: 36–40.
- Heyligers, P.C. & Adams, L.G. (2004). Flora and Vegetation of Montagu Island past and present. *Cunninghamia* 8(3): 285–305.
- **Appendix A**. A list of references concerning scientific studies on shearwaters on Montagu Island, NSW, shown in chronological order. Reports on the annual assessment of breeding success of shearwater on the island published in *Nature in Eurobodalla* annually since 1998 have not been included.
- Robinson, F.N. (1962). Shearwaters Breeding on Montague Island, New South Wales. *Emu* 61: 292–293.
- Serventy, D.L. (1963). Egg-Laying Timetable of the Slender-billed Shearwater *Puffinus tenuirostris*. The Proceedings XIIIth International Ornithological Congress: 338–343.
- Robinson, F.N. (1964). The Breeding of the Sooty Shearwater on Courts Island, Tasmania, and Montagu Island, N.S.W. *Emu* 63: 304–306.
- Sullivan, M.E. (1975). An Archaeological Survey of Montagu Island, N.S.W. *Australian Archaeology* 2: 37–45.
- Fullagar, P.J., Davey, C.C., van Tets, G.FD. & Heyligers, P.C. (1991). Is the Short-tailed Shearwater colonizing New South Wales? *Nature in Eurobodalla* 5: 51–56.
- Fullagar, P.J., Heyligers, P.C., Crowley, M.A., van Tets, G.F. & Davey, C.C. (1993). The Breeding Birds of Montagu Island, N.S.W. *Nature in Eurobodalla* 7: 57–64.
- Schultz, M.A. (1994). A comparison of the breeding ecology of the Short-tailed Shearwater *Puffinus tenuirostris* and the Wedge-tailed Shearwater *Puffinus pacificus* on Montague Island, NSW. Honours dissertation. Charles Sturt University, Albury.
- Fullagar, P.J. & Heyligers, P.C. (1998). Montagu Island Shearwater Population Survey March 1997. *M I Partners Report No. 7*, January 1998, 10pp.

- Tiller, C.J. (1998). Chick provisioning and fledging in two shearwater species breeding on Montague Island, NSW. Honours dissertation. Charles Sturt University, Albury.
- Schultz, M.A. (2000). The breeding and foraging ecology of the Short-tailed Shearwater *Puffinus tenuirostris* and the Wedge-tailed Shearwater *Puffinus pacificus* in southern NSW. PhD dissertation. Charles Sturt University, Albury.
- Klomp, N.I. & Schultz, M.A. (2000). Short-tailed Shearwaters breeding in Australia forage in Antarctic waters. *Marine Ecology Progress Series* 194: 307-310.
- Schultz, M.A. & Klomp, N.I. (2000a). Chick provisioning behaviour of two shearwaters breeding in south eastern Australia. *Australian Journal of Ecology* 25: 319-326.
- Schultz, M.A. & Klomp, N.I. (2000b). Does the foraging strategy of adult Short-tailed Shearwaters cause obesity in their chicks? *Journal of Avian Biology* 31: 287-294.
- Tiller, C. (2002). Comparative ecology of two sympatric shearwater species breeding on Montague Island, southern NSW. PhD dissertation. Charles Sturt University, Albury.
- Fullagar P. & Heyligers, P. (2006). Shearwater colonies on Montagu Island: are they being affected by encroaching Kikuyu Grass? *Australian Zoologist* 33: 476–479.
- Tiller, C.J., Klomp, N.I., Fullagar, P.J. & Heyligers, P.C. (2013). Catastrophic breeding failure caused by heavy rainfall in a shearwater colony. *Marine Ornithology* 41: 97-99.
- Springer, A.M., van Vliet, G.B., Bool, N., Crowley, M., Fullagar, P., Lea, M-A., Monash, R., Price, C., Vertigan, C. and Woehler, E.C. (2018). Transhemispheric ecosystem disservices of pink salmon in a Pacific Ocean macrosystem. *PNAS* 115: E5038-E5045

# A WINTER VISIT TO MONTAGU ISLAND M. A. Crowley, C. C. Davey and P. J. Fullagar

A short visit to Montagu Island from 3 -6 July 2019 provided an opportunity to make some observations on the birds, mammals and frogs. The following lists summarise our notes on species seen during the crossing from Bermagui to the Island on 3 July; species observed on or near the island on 4 and 5 July and those seen during the crossing from the island to Narooma on 6 July. We were not able to spend any time on North Island and it was not possible to view the seal colonies on the northern side of North Island from the sea.

#### **BIRDS**

**Brown Quail** *Coturnix ypsilophora*. All days. Often flushed from thick vegetation. Coveys of up to ten observed, but obviously numerous. **Little Penguin** *Eduptula minor*. One heard calling from north side of track near main landing 4 July.

**Indian Yellow-nosed Albatross** *Thalassarche carteri*. Two on the crossing from Bermagui 3 July; one on the crossing to Narooma 6 July. **Fairy Prion** *Pachyptila turtur*. Six on the crossing from Bermagui 3 July; one on the crossing to Narooma 6 July.

**White-faced Heron** *Egretta novaehollandiae*. One on 4 July on east side of south island.

**Australasian Gannet** *Morus serrator*. All days in low numbers; both adults and juveniles observed.

**Little Pied Cormorant** *Microcarbo melanoleucos*. One on 4 and 6 July. **Great Cormorant** *Phalacrocorax carbo*. All days with a maximum of 4 on 6 July.

**Eastern Osprey** *Pandion christatus*. One female flying south along eastern side of the island 3 July.

**Brown Goshawk** *Accipiter fasciatus*. One large bird, presumably female, seen in thickets on west side of south island, 4 July.

**Spotted Harrier** *Circus assimilis*. One male on all days. Has been present on the island since November 2018.

White-bellied Sea Eagle *Haliaeetus leucogaster*. All days. Maximum number of five, two adults, one sub-adult and two juveniles.

**Buff-banded Rail** *Gallirallus philippenis*. Two on 4 July.

**Sooty Oystercatcher** *Haematopus fuliginous*. Three individuals on all days. One at south landing; one eastern side of south island and one in

gulch.

**Silver Gull** *Chroicocephalus novaehollandiae.* All days. Flock of c 80 on north-west side of island 6 July.

**Pacific Gull** *Larus pacifiicus*. One juvenile with seals near south landing 4 July; again on north-west side of north island 6 July.

**Greater Crested Tern** *Thalasseus bergii*. All days. Very low numbers. Maximum 10 on crossing from Bermagui 3 July.

White-fronted Tern Sterna striata. One on rocks near landing 3 July; another on eastern side of south island 4 July.

**Arctic Jaeger** *Stercorarius paraciticus*. One flying north on eastern side of island 5 July.

Bar-shouldered Dove Geopelia humeralis. Two on 3 and 4 July.

**Sacred Kingfisher** *Todiramphus sanctus*. One at south landing 4 July. **Nankeen Kestrel** *Falco centroides*. One on west side of south island 4 July.

**Brown Falcon** *Falco berigora*. One roosting on communication tower below lighthouse 6 July.

**Peregrine Falcon** *Falco peregrinus*. Two (male and female) all days. **Yellow-faced Honeyeater** *Lichenostomus chrysops*. Estimated population of 50 in thickets along western side of south island on all days.

**Australian Golden Whistler** *Pachycephala pectoralis*. One female in thickets on western side of south island 4 July.

**Welcome Swallow** *Hirundo neoxena*. All days. Maximum of 4 around buildings on 5 July.

**Silvereye** *Zosterops lateralis*. A flock of 25 near kitchen gardens 3 July and small party of ten in thickets on south island 4 July; all birds the Tasmanian sub-species, one bird with band.

#### MAMMALS

#### Seals

No comprehensive count was undertaken. Seals were noted on the north-western side of north island. A maximum total of 40 **Long-nosed (New Zealand) Fur Seal** *Arctocephalus forsteri* were seen on the south-west side of south island. At least 8 pups were observed.

#### Whales.

**Hump-backed Whale.** *Megaptera novaeangliae.* Very numerous on all days travelling north on both sides of the island.

# **AMPHIBIANS**

**Striped Marsh Frog** *Lymnodynastes peroni*. Several calling from well at gardens 3 July.

### **REPTILES**

White's Skink Ergenia whitii. One seen near buildings 5 July

# TERRESTRIAL ARTHROPODS OF MONTAGU ISLAND Harvey D. Perkins

#### Introduction

The terrestrial arthropod biodiversity of Montagu Island (Barunguba) has never been investigated in any detail. In 2001 through 2004, during the annual shearwater breeding surveys, I made some initial efforts to investigate insect biodiversity and collected a number of specimens (under licence). These were pinned or preserved and lodged with the Australian National Insect Collection (ANIC) at CSIRO, however time limitations on ANIC staff means little was done with them. The only available records of these efforts are the notes made as part of the relevant shearwater breeding success reports for those years (Heyligers et al 2002, 2003; Fullagar et al 2002, 2004). Some ad hoc listings of butterflies observed during shearwater surveys have also been recorded in more recent shearwater survey reports.

#### Methods

In 2019 (19-27 March), I again participated in the shearwater breeding survey, for the first time since 2004. On this occasion no specimens were collected but over a hundred species of invertebrates were recorded photographically. These observations were made opportunistically during forays generally within several hundred metres of the lightstation, and generally along the established tracks. Most observations were therefore of species associated with foliage, flowers or the lightstation buildings. A small number were exposed, with minimal habitat disturbance, from under human artefacts around storage and garden areas. Photographs were submitted, together with specific locational coordinates to within 10 m accuracy, to the *Atlas of Life in the Coastal Wilderness* at https://atlasoflife.naturemapr.org/.

#### Results

A listing of the 103 species photographed is provided in the table below, together with a further 7 species (marked with an asterisk \*) which were recorded visually but without photographic support.

# Listing of terrestrial arthropods from Montagu Island

**DIPLOPODA (MILLIPEDES)** [2] JULIDA sp indet. a large juliform millipede Julidae Ommatoiulus moreleti Portuguese millipede CHILOPODA (CENTIPEDES) [3] **SCUTIGERIMORPHA** Scutigeridae Scutigera coleoptrata House centipede (# 2004) SCOLOPENDROMORPHA Scolopendridae a centipede (under rock) (\*) sp indet. a centipede (in shearwater burrow) (\*) sp indet. **CRUSTACEA** ISOPODA-ONISCIDEA sp indet. a slater **ARACHNIDA** [15] ARANEAE [15] Pholcidae sp indet. Daddy long-legs (poss. *Pholcus phalangioides*) Aranaeidae sp indet. a small pale araneid (Araneinae) Leaf-curling spider Phonognatha graeffei Nephila plumipes Humped golden orb-weaving spider Tetragnathidae Tetragnatha sp. a long-jawed spider Deinopidae Deinopus sp. a net-casting spider **Sparassidae** Neosparassus sp. a badge huntsman spider Desidae Badumna longinqua Grey house spider Miturgidae Miturga sp. a prowling spider Miturga sp. a prowling spider **Thomisidae** Lehtinelagia sp. a crab spider Salticidae Opisthoncus nigrofemoratus Black-thighed jumping spider Hypoblemum sp. a jumping spider (poss. *H albovittatum*) Lamponidae Lampona cylindrata White-tailed spider

Major flatrock spider

Trochanteriidae

Morebilus plagusius

**INSECTA** [93] ODONATA [3] Coengrionidae Pseudagrion microcephalum Blue Riverdamsel Ischnura aurora Aurora Bluetail Corduliidae Hemicordulia australiae Australian Emerald (\*) DERMAPTERA [1] Anisolabididae an earwig sp. indet. ORTHOPTERA [8] Mogoplistidae Ornebius sp. A scaly cricket Gryllidae Teleogryllus commodus Black field cricket (\*) Tettigoniidae Pseudorhynchus mimeticus a long-horned grasshopper Conocephalus semivittatus a meadow katydid Acrididae Acrida conica Giant slant-face Gastrimargus musicus Yellow-winged Grasshopper (\*) Austracris proxima Spur-throated Locust Phaulacridium vittatum Wingless Grasshopper EMBIOPTERA [1] Australembiidae Metoligotoma brevispina a webspinner (# 2001) MANTODEA [1] Mantidae Tenodera australasiae Purple-winged mantid BLATTODEA [1] Blattidae Australasian cockroach Periplaneta australasiae HEMIPTERA [9] Flatidae A green planthopper, torpedo bug Siphanta sp. Cercopidae Philagra parva Beaked spittlebug Membracidae Sextius sp. a green treehopper Lygaeidae Oncopeltus sordidus a seed bug Pentatomidae Poecilometis (strigatus?) Gum tree shield bug

Pentatomidae

Poecilometis (strigatus?)
Oncocoris apicalis
Plautia affinis
Cuspicona simplex

Cydnidae

Gum tree shield bug
Brown stink bug
Green stink bug
Green potato bug

Adrisa sp. A burrowing bug

#### HYMENOPTERA [11]

Ichneumonidae

Netelia sp. Netelia sp.

Heteropelma scaposum Echthromorpha intricatoria

Xanthopimpla sp.

Ichneumon promissorius

Braconidae

sp. indet. Chalcididae

sp. indet. Formicidae

> sp. indet. sp. indet.

**Apidae** Apis mellifera

NEUROPTERA [1] Chrysopidae

Mallada signatus

COLEOPTERA [9] Carabidae

sp. indet. Scarabaeidae

sp. indet. Elateridae

sp. indet. Coccinellidae

> Micraspis frenata Crvptolaemus montrouzieri

Rodolia cardinalis

Chrysomelidae (Arsipoda?)

Paropsis sp.(egg case) Curculionidae

Perperus sp. TRICHOPTERA [1]

sp. indet.

LEPIDOPTERA [31]

Tineidae

Moerarchis inconcisella

**Psychidae** 

Cebysa leucotelus Lepidoscia sp. Oiketicus sp. Tortricidae

Anisogona similana Crambidae

an orange ichneumon wasp an orange ichneumon wasp Two-toned caterpillar hunter White-spotted ichnuemon wasp

Yellow ichneumon wasp Banded caterpillar parasite

a small braconid wasp

a chalcid wasp

an ant (alate male) ant (alate mating pair)

Honey bee

Green lacewing

a carabid beetle (poss. *Notonomus sp.*) (# 2003)

a scarab beetle (Dynastinae)

a click beetle (poss. Conoderus sp.)

Striped ladybird Mealybug ladybird

Cardinal ladybird, Verdalia beetle

a flea beetle (Alticini)

a eucalypt leaf beetle (poss. P. atomaria)

a weevil (Entiminae-Leptopiini)

a caddisfly (adult and case)

a Tineid moth

Lichen bag moth a case moth caterpillar a case moth caterpillar (\*)

a tortrix moth

Tipanaea patulella Grass moth Spoladea recurvalis Beet webworm

Herpetogramma cynaralis a crambid moth (Spilomelinae)

Papilionidae

Papilio aegeus Orchard Swallowtail (\*)

Hesperiidae

Toxidia peron Dingy Grass-skipper

Pieridae

Pieris rapae Cabbage White Butterfly

Nymphalidae

Vanessa iteaYellow AdmiralJunonia villidaMeadow ArgusHeteronympha meropeCommon Brown

Lycaenidae

Lampides boeticusLong-tailed Pea-blueZizina otisCommon Grass-blue

Geometridae

Cleora displicata a bark moth
Ectropis bispinaria Loop-line bark moth

sp. indet. a bark moth (Ennominae-Boarmiini)

Idiodes apicata Bracken moth Epidesmia tryxaria Neat epidesmia

Scopula rubraria Reddish wave, Plantain moth

Noctuidae

Lophocalama neuritis a noctuid moth Agrotis ipsilon Black cutworm

Erebidae

sp. indet. a caterpillar (Lymantriinae, poss. Acyphas sp.)

Utetheisa pulchelloides Heliotrope or salt & pepper moth Spilosoma glatignyi Black and white tiger moth (# 2004)

Calyptra minuticornis
Diatenes aglossoides
Pantydia capistrata
Trigonodes hyppasia

Vampire moth
an erebid moth
a Pantydia moth
Triangle owlet

DIPTERA [16] Nematocera

Limoniidae

sp. indet. a Limoniid cranefly

Chironomidae

sp. indet. a non-biting midge

Culicidae

sp. indet. a mosquito

Brachycera

Stratiomyidae

sp. indet. a tiny soldierfly

Therevidae

Anabarhynchus sp. a stiletto fly

```
Dolichopodidae
```

sp. indet. a long-legged fly

sp. indet. a long-legged fly (prob. Austrosciapus sp.)

Syrphidae

Eristalinus sp. a hover fly

Sepsidae

sp. indet. an ant fly

Platystomatidae

sp. indet. a signal fly (poss. Rivellia or Scotinosoma sp.)

Muscidae

Dichaetomyia sp. orange bush fly

sp. indet. a bronze-coloured bush fly

Sarcophagidae

sp. indet. a flesh fly

Calliphoridae

Lucilia cuprina Australian sheep blowfly

Calliphora sp a blowfly

**Tachinidae** 

sp. indet. a bristle fly

#### Discussion

A synopsis of the collecting efforts of 2001 through 2004 indicates that upwards of 50 species across ten insect Orders were represented. The list of species recorded in 2019 largely overlaps these earlier records, though several notable exceptions, including an embiopteran, a carabid beetle, a *Spilosoma* moth and a scutigerid centipede known to have been collected in the earlier surveys, were not recorded in 2019. These have been included in the listing above but are distinguished with a hash (#) and the year of collection.

The presence of the flightless embiopteran (webspinner), in particular, invites speculation about the provenance, history and population dynamics of the insects and other terrestrial invertebrates on the island. Montagu/Barunguba is not so remote that flighted insects could make their way to the island either independently or with wind assistance, but it is far enough offshore to preclude most unflighted species (gossamer spiderlings excepted) from reaching the island without human or perhaps bird assistance. There is no doubt that many species have been brought to the island inadvertently through human conduits over the centuries, and particularly with recent revegetation efforts. And it may be that some species, such as the embiopteran (which was found in a shearwater burrow), might even have persisted on the island since it was last connected to the mainland during the glacial maximum ca 12,000 years ago.

With further knowledge and understanding of the species present on Montagu Island, these questions may become more tractable.

### Acknowledgements

I am heavily indebted to several moderators on *Atlas of Life in the Coastal Wilderness* for their expertise and dedication in identifying so many of the insects and other arthropods included in this list — particularly Kimberi Pullen, Glenn Cocking, James Lumbers, and Roger Farrow. Without their help many more of the species would remain unidentified or left at much higher taxonomic rank. That said, any errors in identification in this listing remain my responsibility. Gratitude and thanks also go to Amy Harris and other NPWS staff for their assistance with access to the island and their ongoing interest.

#### References

- Fullagar PJ, Perkins HD and Tiller CJ (2002). 43rd annual assessment of shearwater breeding success on Montagu Island, 26 March 1 April 2002. *Nature in Eurobodalla* 16: 60-67.
- Fullagar PJ, Perkins HD and Heyligers PC (2004). 45<sup>th</sup> annual assessment of shearwater breeding success on Montagu Island, 26-29 March 2004. *Nature in Eurobodalla* 18: 57-63.
- Heyligers,PC, Perkins HD, and Tiller CJ (2002). 42 <sup>nd</sup> annual assessment of shearwater breeding success on Montagu Island, 26-30 March 20 01. *Nature in Eurobodalla* 15: 66-72.
- Heyligers PC, Fullagar PJ and Perkins HD (2003). 44<sup>th</sup> annual assessment of shearwater breeding success on Montagu Island: 24-28 March 2003. *Nature in Eurobodalla* 17: 61-66.

#### Contributors to this issue

M Anderson, (MA) Mystery Bay.

B Asbury, Tuross.

S Benjamin, (SB) Catalina.

D Bertzeletos, (DB) Batemans Bay.

S Bond, ACT. V Brown, ACT.

L Burden, (LB) Moruya.

M Burk, Durras.

A Christiansen, Mystery Bay. N Clark, (NC) Surf Beach. J Coffey, South Durras.

J & P Collett, (JC) Comerang.

M Craig, Tuross. A Cram, Moruya.

M Crowley, Moruya Heads.

C Davey

K & M Dawes, Surfside.

D Deans, ACT. S Doyle, Pedro. J Fearn, Moruya.

M Fyfe, (MF) Broulee.

P Gatenby, Broulee.

J & M Gordon, (JMG) Narooma.

I & A Grant, (IAG) Lilli Pilli.

M Griffith, Congo.

S & M Guppy, (SMG) Moruya.

I Jamieson, Broulee.

P & H Haughton, Lilli Pilli.

D & H Kay, (DHK) Bergalia.

J & T Lipscombe, Guerilla Bay.

G Macnamara, (GM) Tuross.

A Marsh (AM) Bingie.

G & L McVeigh, (GLM) Broulee. N Montgomery, (NM) Meringo.

J Morgan, (JM) Pedro Swamp.

D Num, Moruya Heads.

D Ondinea, (DO) Coolagolite.

P Parker, Tuross.

H Ransom, (HR) Mossy Point.

T & A Ross, Kianga. J Sagar, (JS) Pedro.

B Scales, Narooma.

R Soroka, (RSor) Surfside. R Stacey & A Rees, (RS/AR)

Moruya.

G Stevens, Malua Bay.

J Wiles, Polwombra.

M Wilkinson, (MW) Malua Bay.

Field Meeting (FM)

#### Place Name Abbreviations.

BB Batemans Bay.

BBWG Batemans Bay Water Gardens.

BI Bermagui.

BP Burrewarra Point.

Com Comerang.

CO Congo.
DS Durras.

DY Dalmeny.

ERBG Eurobodalla Regional Botanic Gardens.

MB Mystery Bay.

MHN Moruya Heads North MHS Moruya Heads South.

MKS Maulbrooks Road South, Moruya.

MO Meringo. MYA Moruya. NA Narooma.

PS Pedro Swamp. SB Surf Beach.

TS Tuross.

WL Wallaga Lake.

NP National Park. NR Nature Reserve SF State Forest.