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AVIFAUNA OF TASMANIAN ORCHARDS (PART 2)

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(Part 1 appeared in The Tasmanian Naturalist, No.56
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ANNOTATED LIST OF SPECIES (Continued from Part 1)

15. Silver Gull

Larus novaehollandiae

One record of six birds at Port Huon 20 September, 1975.
The birds were searching the ground for food during bad
weather.

16. Domestic Pigeon

Columba livia

Two birds flying out of an orchard at Huonville is my
only record.

17. Common Bronzewing

Phaps chalcoptera

One record of two birds flying between rows of pear
trees at Forcett.

18. Yellow-tailed Calptorhynchus funereus
Black Cockatoo

An occasional visitor. Fifty per cent of orchardists who recorded this species claimed that it damaged their fruit. The fruit is stripped for the seeds only.

19. Galah Cacatua roseicapilla

One bird flying above a pear orchard at Forcett 8 November, 1977 is my only record.

20. Sulphur-crested Cacatua galerita
Cockatoo

An occasional visitor. Seventy per cent of orchardists who recorded this species claimed that it damaged their fruit. The fruit is stripped for seed only.

21. Rainbow Lorikeet Trichoglossus haematodus

Recorded in 1842 and 1871. The only recent record is of one bird feeding on pears in company with Musk Lorikeets at Launceston on 26 March, 1977 (Green, 1977).

22. Musk Lorikeet Glossopsitta concinna

Little (1910) reported that the 1898 bushfires wiped out the native food of this species resulting in serious damage to all types of orchard fruit. Recent reports of sightings from Sandford, Dunalley, Castle Forbes Bay, Triabunna, Devonport and Launceston. Some damage to fruit also reported.

23. Swift Parrot Lathamus discolor

Reported on rare occasions at Castle Forbes Bay and irregularly at Dunalley. Some damage to fruit claimed.

24. Green Rosella Platycercus caledonicus
Common visitor. Littler (1910) stated that this species had not developed strong fruit eating habits. He observed a flock on the ground searching for terrestrial food, paying no attention to fruit on the trees. I have also observed flocks on the ground feeding on wind-fall fruit and terrestrial food ignoring ripe fruit on trees. Seventy six per cent of orchardists who recorded this species claimed it damaged fruit.
25. Eastern Rosella Platycercus eximius
Occasional visitor (Green, 1977). Slight damage to fruit alleged at Dunalley and Copping.
26. Blue-winged Parrot Neophema chrysostoma
Visits orchards occasionally (Green, 1977).
27. Pallid Cuckoo Cuculus pallidus
Observed at Triabunna and Dunalley.
28. Fan-tailed Cuckoo Cuculus pyrrhophanus
Recorded at East Risdon, Forcett, Taranna and Triabunna.
29. Spotted Owl Ninox novaeseelandiae
An occasional visitor to Southport, New Norfolk and Dunalley.
30. Masked Owl Tyto novaehollandiae
Rare visitor to New Norfolk.
31. Tawny Frogmouth Podargus strigoides
Recorded at East Risdon and Triabunna.

32. Spine-tailed Swift Hirundapus caudacutus
Observed at Ilfraville and Forcett flying between rows of pear trees.
33. Kookaburra Dacelo novaeguineae
Common visitor to most orchards, rare south of Hobart.
34. Common Skylark Alauda arvensis
Common visitor to East Risdon, Ranelagh and Scottsdale.
35. Welcome Swallow Hirundo neoxena
Common migrant, nests in orchard sheds and culverts.
36. Tree Martin Cecropis nigicans
Recorded at Forcett, East Risdon, Franklin, Waterloo and Southport.
37. Richards Pipit Anthus novaeseelandiae
One bird observed at Ranelagh.
38. Black-faced Cuckoo-Shrike Coracina novaehollandiae
Migratory visitor to Dunalley, Forcett and Castle Forbes Bay. Littler (1910) reported that in some parts of northern Tasmania this bird suddenly developed fruit eating habits in 1908, a trait not known before. I have no recent records of fruit eating habits.
39. Common Blackbird Turdus merula
Common breeding resident. Seventy five per cent of orchardists who recorded this species claimed it damaged fruit.

40. Flame Robin Petroica phoenicea
Two winter records at Forcett and East Risdon.
41. Scarlet Robin Petroica multicolor
Common visitor to most orchards.
42. Dusky Robin Melanodryas vittata
Common visitor to most orchards.
43. Golden Whistler Pachycephala pectoralis
Recorded at Forcett, Dunalley and Triabunna.
44. Grey Shrike-Thrush Colluricincla harmonica
Common visitor to most orchards.
45. Satin Flycatcher Myiagra cyanoleuca
Migratory visitor to a pear orchard at Forcett.
46. Grey Fantail Rhipidura fuliginosa
Common visitor to most orchards.
47. Superb Blue Wren Malurus cyaneus
Common visitor to most orchards.
48. Brown Thornbill Acanthiza pusilla
Common visitor to East Risdon and Forcett.
49. Tasmanian Thornbill Acanthiza ewingii
One record of six birds at Ranelagh, 16 August, 1975.

50. Yellow-rumped Acanthiza chrysorrhoa
Thornbill

Recorded at Scottsdale, East Risdon, Forcett and Copping.

51. Yellow Wattlebird Anthochaera paradoxa

A common nomadic visitor. Twenty five per cent of orchardists who recorded this species claimed it damaged fruit. Over-ripe and wind-fall fruit is favoured, although some ripe fruit is taken from the trees. Flocks often get intoxicated on fermented fruit dumped in waste heaps.

52. Little Wattlebird Anthochaera chrysoptera

Large flocks recorded at Triabunna April-May 1969 and 1970, 20 + feeding on rotten fruit at Triabunna 23 April, 1970. Wall (1974) quotes that this species often raids orchards to feed on stone fruit and soft pears.

53. Noisy Miner Manorina melanocephala

Regular visitor to orchards within their restricted range. Some damage caused to plums at Dunalley was the only report of fruit damage I received.

54. Yellow-throated Lichenostomus flavicollis
Honeyeater

Regular visitor. No reports of fruit damage from orchardists interviewed. Littler (1910) claimed some damage to cherry crops. Sharland stated in the Mercury, 1 May, 1976, that ripe and over-ripe pears are damaged by this species in Hobart gardens.

55. Strong-billed Melithreptus validirostris
Honeyeater

Six birds in a pear orchard at Forcett on 8 January, 1978 is my only record. Sharland (1958) and Officer (1971) claim that fruit is occasionally eaten. No reports of fruit damage from orchardists interviewed.

56. Black-headed Melithreptus affinis
Honeyeater

Recorded in flocks of up to 30 + at Triabunna and Forcett. Sharland (1958), Cayley (1966) and Officer (1971) claim that fruit is damaged. No reports of fruit damage from orchardists interviewed.

57. Crescent Honeyeater Phylidonyris pyrroptera

Occasional visitor. Officer (1971) claims that very little fruit damage is caused by this species. Sharland in the Mercury, 1 May, 1976, states that the juice from ripe and over-ripe pears is extracted from Hobart gardens. I received no reports of fruit damage from the orchardists interviewed.

58. New Holland Phylidonyris novaehollandiae
Honeyeater

Recorded at New Norfolk, Forcett and Triabunna where a flock of 100 + was observed 29 May, 1969. Sharland (1958) stated that soft pears and other fruit are damaged. I received no reports of fruit damage from the orchardists interviewed.

59. Eastern Spinebill Acanthorhynchus tenuirostris

My only observation was at Forcett. Sharland (1958) quotes orchards as an occasional habitat of this species.

60. Spotted Pardalote Pardalotus punctatus
Recorded at Forcett, Sandford and Triabunna. Sharland (1958) classifies this species as a visitor to orchards.
61. Striated Pardalote Pardalotus striatus
Recorded at Sandford and Forcett.
62. Silvereeye Zosterops lateralis
Common visitor. Sixty five per cent of orchardists who recorded this species claimed that it damaged fruit. The species had developed a taste for fruit as early as 1910 (Littler 1910). Silvereeyes provide a useful service to orchardists by eating grubs and other insect pests.
63. European Goldfinch Carduelis carduelis
Common breeding resident. Decline in numbers noticed in the Geeveston district due to the removal of many of the orchards and harmful chemical sprays. One bird observed at Glen Huon with its beak inside an over-ripe apple that had been partly eaten by other birds. Many orchardists claimed that nesting birds fouled fruit around the nest site.
64. European Greenfinch Carduelis chloris
Recorded at Scottsdale, Dunalley, Forcett and Middleton. Also recorded at New Norfolk where numbers have increased during the last twelve years.
65. House Sparrow Passer domesticus
Common breeding resident. Forty per cent of orchardists who recorded this species claimed that it damaged fruit mainly by eating buds and ripe fruit.

66. Beautiful Firetail Emblema bella
Occasional visitor to most southern orchards. Lalla and Sassafras were the only northern orchards to record this species.
67. Common Starling Sturnus vulgaris
Common breeding resident. Eighty per cent of orchardists who recorded this species claimed it damaged fruit.
68. Dusky Woodswallow Artamus cyanopterus
Recorded at Waterloo and Forcett.
69. Grey Butcherbird Cracticus torquatus
Recorded at Castle Forbes Bay, Forcett and Dunalley. One report of damage to plums at Dunalley.
70. Australian Magpie Gymnorhina tibicen
Common visitor to orchards within its restricted range.
71. Black Currawong Strepera fuliginosa
Common visitor. Flocks of over 100 birds observed eating over-ripe apples at Judbury and Lunawanna August, 1975. Littler (1910) states that before orchards came into existence the food of this species was almost entirely insects. By 1910 orchards were regularly raided for fruit. Forty seven per cent of orchardists who recorded this species claimed it damaged fruit.
72. Grey Currawong Strepera versicolor arguta
Common visitor. Littler (1910) claimed that like the Black Currawong this species had developed fruit eating habits, but to a lesser extent. Several reports of recent attacks on mostly over-ripe fruit.

73. Forest Raven

Corvus tasmanicus

Common visitor. Eighty five per cent of orchardists who recorded this species claimed it damaged fruit. Littler (1910) states that fruit-eating habits had developed by 1910. At Judbury in August, 1975 50 + Ravens were feeding on wind-fall apples in company with 100 + Black Currawongs.

CONCLUSION

Seventy three species of birds were found in orchards and twenty six of these were claimed to damage fruit. The largest proportion of these were honeyeaters (8 species), parrots (7 species) and introduced birds (4 species). Some ripe fruit is damaged but mostly over-ripe and wind-fall fruit is preferred. Most of the twenty six species that damaged fruit are insectivorous and destroy many insect pests throughout the year. Insectivorous birds help control the Brown Apple Moth which is rapidly increasing in numbers, possibly more so in orchards where bird numbers have been reduced by pesticides, etc. Sixteen of the species of birds recorded help control mammal pests.

Orchardists can minimise fruit damage by using many devices ranging from scare guns to various forms of netting over trees. However, few are 100 per cent effective or inexpensive enough for broad hectare usage. Mrs.C. Lott of King Island could have a simple and cheap method of protecting fruit crops. She places plastic snakes in her apple trees. Six plastic snakes to eight trees proved effective in not only keeping away birds but opossums as well. The snakes should be shifted once a day for best results.

With a bit of thoughtful management, birds and orchardists can be beneficial to each other.

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The Bird Species of Mt. Nelson in Relation
to Microhabitat and Recent Bushfires
Ann V. Ratkowsky.

The two surveys described here were conducted in the dry sclerophyll bushlands in the hills of Mt. Nelson, Hobart.

For the first survey, I selected three nearby areas differentiated by their geographical characteristics: East facing slope (E), West facing slope (W), and a wet gully (G). The elevation of (E) and (W) were approximately the same (330 m.), (G) was in Cartwright Creek, (40 m. - 160 m. elevation). Whereas (E) was fairly open sclerophyll with a very light understorey, (W) was vegetationally denser, and (G), being a creek, supported a dense understorey. The survey was conducted for 24 weeks, 30 August, 1978 to 16 February, 1979, with a total of 38 visits. During each visit, I spent approximately 30 minutes walking through each of the three areas, recording each species heard or seen for each area. On 29 November, 1978, a controlled burn occurred in (E). This markedly affected the average number of species in (E) as Table 1 shows. The average numbers in (W) and (G) did not change.

Table 1

Mean number of bird species per visit

	Before 29 Nov.	After 29 Nov.	Statistical
Number of visits	18	20	Significance
E	11.56	6.90	***
W	14.44	15.10	n.s.
G	18.72	17.85	n.s.
*** p 0.001; n.s. = not significant, p 0.05			

The second survey was initiated by a severe bushfire which, on 2 October, 1978, raged through dry sclerophyll bushland adjacent to our house and over Porter Hill, Mt. Nelson. Three days later, 5 October, I commenced a survey to record and compare bird species present in the burnt (B) and adjacent unburnt (U) bush at the same elevation, 100 m. to 180 m. This survey was continued for 19 weeks, with a total of 63 visits, until 16 February, 1979, after which time we decided to move elsewhere to live.

The list of species observed in the two surveys are tabulated adjacently in Table 2.

Table 2

Number of visits in which the listed species
was observed in each area in each survey

	E	W	G	B	U
Brown Goshawk	0	0	1	0	0
Brown Falcon	0	0	0	0	1
Brown Quail	0	0	0	1	0
Lewin's Rail	2	1	0	0	0
Common Bronzewing	0	0	17	8	0
Yellow-tailed					
Black Cockatoo	0	0	3	0	1
Swift Parrot	3	3	12	0	5
Green Rosella	6	19	37	2	25
Pallid Cuckoo	4	7	6	6	18
Fan-tailed Cuckoo	16	29	31	7	42
Shining Bronze-Cuckoo	2	3	20	1	20
Southern Boobook	0	0	6	0	1
Tawny Frogmouth	0	0	4	0	2
Laughing Kookaburra	5	0	1	1	3
Tree Martin	1	2	0	0	1
Black-faced					
Cuckoo-shrike	16	24	0	19	18
White's Thrush	0	0	24	0	0
Blackbird	13	16	36	39	59
Pink Robin	0	0	10	0	0
Flame Robin	4	19	0	1	1

Scarlet Robin	Petroica multicolor	7	8	1	18	30
Dusky Robin	Melanodryas vittata	0	3	0	4	0
Olive Whistler	Pachycephala olivacea	2	2	15	0	8
Golden Whistler	Pachycephala pectoralis	13	21	31	6	28
Grey Shrike-thrush	Colluricincla harmonica	26	37	35	31	56
Satin Flycatcher	Myiagra cyanoleuca	7	10	13	4	45
Grey Fantail	Rhipidura fuliginosa	9	23	38	34	60
Spotted Quail-thrush	Cinclusoma punctatum	0	1	0	0	2
Superb Fairy-wren	Malurus cyaneus	18	34	3	13	61
White-browed Scrubwren	Sericornis frontalis	0	0	38	0	0
Brown Thornbill	Acanthiza pusilla	34	38	4	31	60
Tasmanian Thornbill	Acanthiza ewingii	0	0	30	0	0
Yellow Wattlebird	Anthochaera paradoxa	5	4	26	2	26
Yellow-throated Honeyeater	Lichenostomus flavicollis	32	35	30	18	56
Strong-billed Honeyeater	Melithreptus validirostris	7	28	35	1	19
Black-headed Honeyeater	Melithreptus affinis	15	34	6	3	20
Crescent Honeyeater	Phylidonyris pyrrhoptera	14	17	14	0	16
New Holland Honeyeater	Phylidonyris novaehollandiae	0	9	37	7	63
Eastern Spinebill	Acanthorhynchus tenuirostris	3	4	0	0	0
Spotted Pardalote	Pardalotus punctatus	5	19	32	15	60
Striated Pardalote	Pardalotus striatus	24	34	20	12	28
Silvereye	Zosterops lateralis	5	14	34	11	58
European Goldfinch	Carduelis carduelis	5	19	18	39	60

Continued ...

Table 2 (Cont'd)

	E	W	G	B	U
Beautiful Firetail	0	0	0	2	1
Dusky Woodswallow	4	5	0	11	3
Grey Butcherbird	2	1	1	0	19
Grey Currawong	1	4	0	0	0
Forest Raven	36	35	26	10	47

E = east-facing slope;
B = burnt area;

W = west-facing slope;
U = unburnt area

G = gully

In the first survey, the average numbers of bird species per visit were: (E) 9.1, (W) 14.8, (G) 18.3. These figures show that the micro-habitat (G) had the richest avifauna, with (W) in second place. The average number of species in (E) was lower than in either of these even before the fire of 29 November as the means of Table 1 show. The results thus demonstrate that within a large area of dry sclerophyll bushland, there are local environmental distributions of bird species. The most noteworthy are:-

Species that occurred only in (G):-

Common Bronzewing, Yellow-tailed Black Cockatoo, Southern Boobook, Tawny Frogmouth, White's Thrush, Pink Robin, White-browed Scrubwren, Tasmanian Thornbill.

Species that occurred predominantly (but not exclusively) in (G):-

Shining Bronze-Cuckoo, Olive Whistler, Yellow Wattlebird, New Holland Honeyeater.

Species which never occurred in (G):-

Black-faced Cuckoo-shrike, Flame Robin, Eastern Spinebill, Dusky Woodswallow, Grey Currawong.

The exclusive presence of White's Thrush, Pink Robin, White-browed Scrubwren and Tasmanian Thornbill in (G), species which are normally regarded as wet sclerophyll inhabitants, indicates that where a suitable micro-habitat exists these birds may be found in what is classified as dry sclerophyll bushland.

In the second survey, the average numbers of bird species per visit are (B) 5.7, (U) 16.2. The most frequently observed birds in (B) were:-

Blackbird, Grey Shrike-thrush, Grey Fantail, Brown Thornbill, European Goldfinch.

Even 19 weeks after the drastic fire, very few bird species were recorded in (B). The comparison of this survey with my earlier survey on Tolmans Hill ("The Effect of a Spring Fire on the Number of Bird Species", 'The Tasmanian Naturalist' No. 53 May, 1978) is interesting. On Tolmans Hill, after a controlled burn in which low vegetation and trees up to 8 m. high were burnt, the number of bird species were originally much reduced in the burnt area but re-established themselves to the number of species in the unburnt area after 11 weeks. In the Porter Hill holocaust, all low vegetation and all trees including crowns of trees were burnt. The average number of species in (B) (5.7), was much lower than that in (U) (16.2), and remained fairly constant at this low level throughout the 19 weeks.

These observations indicate clearly that intensity of fire is a very important factor in determining the rate at which avifauna will repopulate a burnt area, i.e. the more severe the burn, the longer the time required for recovery.

The adjacent tabulation in Table 2 of species lists of the two surveys, draws one's attention to two species whose distributions are noteworthy: the Common Bronzewing appeared only in (G) and (B), two vastly different microhabitats. The New Holland Honeyeater appeared very frequently in (G) and (U), again two very different microhabitats, but never appeared in (E) which was vegetationally similar to (U). The explanation could be that these species are residential, and the same individuals were being observed in each visit.