

## SUMMER-WINTER MOVEMENTS OF OLIVE WHISTLERS *Pachycephala olivacea* IN THE SNOWY MOUNTAINS

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In a study of the songs of the Olive Whistler *Pachycephala olivacea* in the Kosciusko National Park (148°25'E., 36°20'S.), White (1984) concluded that the territorial advertisement song showed a microgeographic variation between the three major basins of the Geehi River, the Snowy River and the Thredbo River. There were distinct differences in the form of the notes and syllables composing the song of the birds in each region. White (1984) attributed these differences to cultural changes in the songs of the three populations which are, at least partially, isolated by the encircling high mountains that inhibit inter-

breeding and social contacts. This isolation hypothesis can be tested by appeal to the detailed reports of sightings of the Olive Whistler submitted to Blakers *et al.* (1984) for inclusion in the Atlas of Australian Birds. The RAOU reports for 10' blocks for which the correct altitude could be found by map references, together with some personal observations, are shown in Table 1. Each report gives the date and the latitude and longitude of the northern and western boundaries of each 10' block. The number of birds was not reported. Reports for summer, November to February, were from 10'

TABLE 1

Reports of the presence of Olive Whistlers in the Snowy Mountains in summer and winter.

<b>Geehi-Murray River Basin</b>			
<b>Summer</b>	Valentine Falls Track	1 740 m	Nov., Dec., Feb.
	Schlink Pass	1 800 m	Dec.
<b>Winter</b>	Cudgewa North	500 m	Sept.
	Tintaldra	500 m	Oct.
	Khancoban	500 m	June, July, Aug., Sept.
<b>Snowy River Basin</b>			
<b>Summer</b>	Mt Tate	1 800	Feb.
	Guthega Village	1 600 m	Dec., Jan.
	Pipers Creek Aqueduct	1 600 m	Dec., Jan.
	Munyang Aqueduct	1 600 m	Dec., Jan.
<b>Winter</b>	Eucumbene Dam	1 200 m	May
	Island Bend	1 200 m	No dates available
<b>Thredbo River Basin</b>			
<b>Summer</b>	Dead Horse Gap	1 600 m	Nov., Jan.
	Rams Head Range	1 500 m-1 900 m	Feb.
	Thredbo Village	1 500 m	Dec., Jan., Feb.
	Ranger Station	1 300 m	Jan.
<b>Winter</b>	Thredbo Diggings	1 200 m	Apr.

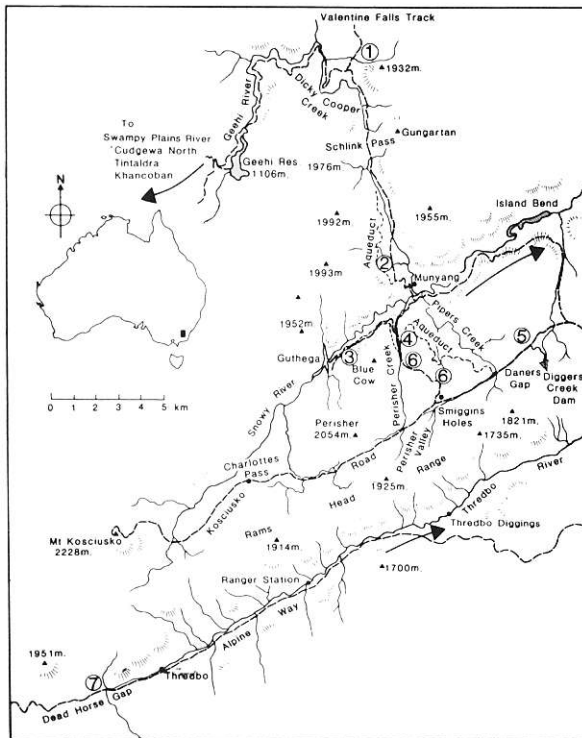


Figure 1. (1) Valentine Falls Track. (2) Schlink Pass. (3) Guthega Village. (4) Pipers Creek Aqueduct. (5) Diggers Creek Dam Track. (6) Link Road. (7) Dead Horse Gap.

blocks above 1 500 m (except for the Ranger Station at 1 300 m); those below 1 500 m were in winter, April to November. Olive Whistlers were reported at Island Bend in 1977 presumably in winter as none were found during several years' search in summer. Gall and Longmore (1978) report Olive Whistlers as common throughout the Thredbo Valley but give only one date, an immature at the Ranger Station at 1 300 m, in January 1978.

The high mountains where the birds are found in summer have a dense cover of snow in winter. It is reasonable to postulate that the birds move to less rigorous altitudes when the snow begins to accumulate. Slatyer *et al.* (1985) show that 1 181 m is the lower altitudinal limit of snow cover in the Snowy Mountains so this could be the dividing altitude between summer and winter

habitats. The mean duration of snow cover at 1 600 m is approximately 100 days from mid June to early October (Slatyer *et al.* 1985).

Birds at the headwaters of the Geehi River Basin (e.g. the Valentine Falls Track at 1 740 m) would find an easy route down the steep fall of the river of only 22 km to the Swampy Plains River at 500 m. Some may go further to Khancoban, Cudgewa and Tintaldra (Figure 1). The birds in the upper Snowy River Valley (Guthega Village, Pipers Creek and Munyang Aqueducts) probably go down this river to Island Bend, 1 200 m, and beyond. Similarly there is an easy route from Thredbo Village and Dead Horse Gap to Thredbo Diggings 12 km down the valley. Each route is separated from the other by mountains up to 1 900 m.

In early descriptions of microgeographic variation, for example by Marler & Tamura (1962) in California, the populations were separated by distance. In the Kosciusko National Park the ranges of the Snowy Mountains segregate the populations of Olive Whistler in these three river basins and this most likely allows the cultural evolution of local forms of song pattern.

#### ACKNOWLEDGEMENTS

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#### REFERENCES

- Blakers, M., Davies, S. J. J. F. and Reilly, P. N. (1984). *The Atlas of Australian Birds*. RAOU, Melbourne University Press.
- Gall, B. C. and Longmore, N. W. (1978). Avifauna of the Thredbo Valley, Kosciusko National Park. *Emu* 78: 189-196.
- Marler, P. and Tamura, M. (1962). Song "dialects" in three populations of White-crowned Sparrows. *Condor* 64: 368-377.
- Slatyer, R. O., Cochrane, P. M. and Galloway, R. W. (1984). Duration and Extent of Snow Cover in the Snowy Mountains. *Search* 15: 327-331.
- White, F. W. G. (1985). Microgeographic Variation in the Songs of the Olive Whistler in the Kosciusko National Park. *Emu* 85: 181-188.