

LITERATURE CITED

- BARLOW, M. 1972. The establishment, dispersal and distribution of the Spur-winged Plover in New Zealand. *Notornis* 19: 201-211.
- BARNES, R. D. 1968. *Invertebrate zoology*. 2nd ed. Philadelphia: W. B. Saunders.
- BOMFORD, M. 1978. The behaviour of the Banded Dotterel, *Charadrius bicinctus*. MSc thesis, Univ. Otago, Dunedin.
- CARROLL, A. L. K. 1970. The White-faced Heron in New Zealand. *Notornis* 17: 3-24.
- EAST, R.; POTTINGER, R. P. 1975. Starling (*Sturnus vulgaris* L.) predation on grass grub (*Costelytra zealandica* (White), Melolonthinae) populations in Canterbury. *NZ J. Ag. Res.* 18: 417-452.
- LALAS, C. 1979. Seasonal movements of Black-fronted Terns. *Notornis* 26: 69-72.
- MIERS, K. A.; WILLIAMS, M. 1969. Nesting of the Black Swan at Lake Ellesmere, New Zealand. *Wildfowl* 20: 23-32.
- PIERCE, R. J. 1979. Foods and feeding of the Wrybill (*Anarhynchus frontalis*) on its riverbed breeding grounds. *Notornis* 26: 1-21.
- SAGAR, P. M. 1976. Birds of the Washdyke Lagoon area, South Canterbury. *Notornis* 23: 205-212.
- SIBSON, R. B.; MCKENZIE, H. R. 1944. Some observations on stilts in the Firth of Thames. *NZ Bird Notes* 1: 51-57.
- STUDHOLME, E. C. 1940. Te Waimate; early station life in New Zealand. Dunedin: A. H. & A. W. Reed.
- VEITCH, C. R. 1978. Waders of the Manukau Harbour and Firth of Thames. *Notornis* 25: 1-24.
- WILLIAMS, M. 1971. The distribution and abundance of the Paradise Shelduck (*Tadorna variegata*, Gmelin) in New Zealand from pre-European times to the present day. *Notornis* 18: 71-86.
- WILLIAMS, M. 1977. Locations of recoveries of Black Swans (*Cygnus atratus* Latham) banded at Lake Whangape and Lake Ellesmere, New Zealand. *Aust. Wildl. Res.* 4: 289-299.

R. J. PIERCE, *Department of Zoology, University of Otago, Dunedin*



SHORT NOTE

SPINE-TAILED SWIFTS IN SOUTH OTAGO

At 11 a.m. NZDST on 16 February 1979, at Tautuku Lodge, South-east Otago, about 30 km south of Owaka on Highway 92, I noticed a Spine-tailed Swift (*Chaetura caudacuta*) and pointed it out to my companions Roger McElwain, Geoff Patterson, Paul Wright and Tony Harris. Closer observation revealed the presence of six birds, and over the next 15 minutes this increased in steps through 9 and 12 to 13. Five minutes later, at 11.20 a.m., a large flock appeared over the bush to the west, bringing the total number to at least 60.

The weather was overcast with light rain. The birds were flying fairly high over the bush (which in this area is podocarp-hardwood forest) with a rapid bat-like flight, interspersed with brief glides. They had long swept-back pointed wings and square tails. They were completely dark with under the tail a patch of white that was not easy to see. No white was noticed under the chin but could easily have been missed in the light conditions.

We last saw 25 of them flying over the Fleming River valley while we were looking for Fernbirds. We then left the area for the Tautuku Estuary.

P. MILLER, 25 Ramsay Street, Dalmore, Dunedin.