

on the remaining egg—presumably an infertile one. The male appeared, too, his bill full of food, and peered all around for the young, looking both inside the nest and outside and to the rear of it. Eventually he swallowed the food himself. The female continued to sit most of the afternoon and occasionally left to collect food. Later in the evening I saw both sexes bring in food simultaneously and again search diligently for the vanished chicks. That evening neither roosted in the nest and by the following morning they appeared to have abandoned it.

A Distribution Study of the South-Polar Skua

By CARL R. EKLUND, Washington, U.S.A.

In conjunction with activities being carried out in the Antarctic during the International Geophysical Year of 1957-8, a banding study has been undertaken to determine more about the Skua (*Catharacta skua*). Ornithologists disagree on the systematic treatment of the bipolar forms of the genus *Catharacta*. The South-polar Skua (*C. s. maccormicki*) appears to be the common breeding bird on the Antarctic Continent. A banding study of this subspecies should help to solve some of the questions on its distribution and relationship with other recognized forms.

Six nations including Argentina, the United Kingdom, Japan, Norway, the U.S.S.R., and the United States are banding at sixteen stations, and Chile and France have agreed to carry out observations at certain of their stations. Australia, which had already been using a coloured band at Mawson Station prior to this study, will also band at its Vestfold Hills Station. New Zealand is carrying out joint banding studies with the United States at two stations.

Multi-coloured, unnumbered, one and one-half inch wide thermoplastic leg bands are being used. The material is manufactured of rubber-styrene under the trade name of Boltaron, and is similar to, but heavier than, that being used successfully in neck-band markers for geese by the United States Fish and Wildlife Service. The bands were given limited testing at the U.S. National Zoological Park in Washington, D.C., on Skuas which were taken in the Antarctic in 1955.

Seven basic colours, which are readily distinguished from each other in the field, are being used. To provide a sufficient number of different colours for each of the sixteen stations a dual colour was obtained with some by applying a vinyl-based paint suitable for thermoplastics to one-half of the band. Vinyl plastic, pressure-sensitive adhesive tape of the same colour as the thermoplastic material, is applied over the band to ensure retention.

Colours, and the station at which each band are being used, are shown in the Table.

In addition to the coloured band a numbered aluminium band or ring is placed on the other leg. Some participating countries have national banding programmes and are using their own marked bands. Others have been supplied with metal bands now being used by the U.S. Fish and Wildlife Service in migratory bird studies. This Service has agreed to act as a clearing house for returns.

Outfits, including coloured and metal bands, vinyl plastic adhesive tape, material for trapping birds, and record and instruction sheets were forwarded to all co-operating countries in October 1956.

Banding-location maps with record and instructions sheets were also sent to the French for the use at their Point Geologie Station on the Antarctic Continent, as well as at Kerguelen and Amsterdam Islands; to United Kingdom observers for use at the Union of South Africa's Tristan da Cunha and Gough Islands; to Australia for use at Macquarie Island; to New Zealand for use at Campbell Island; to Chile for use at four of its stations in the Palmer Peninsula (Grahamland); and to South Africa's Marion Island Station.

The success of the study is dependent upon two things: the number of birds banded and the observations made of banded birds in the Antarctic as well as outside of the polar region.

Within the Antarctic it is hoped that each station will record observations of birds wearing coloured bands other than the one used by that particular station, as well as observations of Skuas which occur there in successive years with the station's own coloured band. One full, and parts of two, breeding seasons will be available for this. In addition, it is hoped that personnel at the outlying islands of Antarctica will record occurrences of banded birds. It is further hoped that ornithologists and others throughout the southern hemisphere will report any observations or records of Skuas with coloured bands as well as numbered metal bands if the birds are captured.

This most southerly recorded of all birds may show some extremely interesting flight patterns. Captain Scott on his trek to the South Pole saw it, in January 1912, at latitude $87^{\circ} 20' S.$, longitude $160^{\circ} 40' E.$, 160 miles from the pole. A sledging party of the second Byrd Expedition saw the species at latitude $86^{\circ} 05' S.$

By the end of January 1958, 671 Skuas had been banded at the Wilkes Station, of which 499 were adults. Sixty-nine of 273 adults banded there during the first season in January through March 1957 were recaptured the following breeding season at the same area. The green colour was easily recognized in the field, did not fade, and there was no evidence of any bands having come off. Some dyeing and painting of

adult Skuas was also carried out here, using varied colours. Four birds were flown to the South Pole Station, banded with white bands, and released from there in a homing experiment.

It would be appreciated if information could be forwarded to the author, USNC—IGY, Regional Programs Office, Room 716, 1145 19th Street, N.W., Washington 25, D.C., who until February 1958 was Station Scientific Leader at the Wilkes Station on the Budd Coast.

TABLE

Country	Station	Colour of Band
United States ..	William Air Facility	Gray/Red
	Little America	Blue
	Marie Byrd	Black
	South Pole	White
	Wilkes (Budd Coast)	Green
	Adare (Cape Hallett)	Red
	Weddell	Yellow
Argentina	General Belgrano	Yellow/Blue
	San Martin	Blue/Green
	Almirante Brown	Yellow/Green
Australia	Mawson	Orange
	Vestfold Hills	Grey/Yellow
	Prince Harold Coast	Red/Blue
Japan	Scott (jointly with U.S.A.)	As at William Air Facility
New Zealand . ..	Adare (jointly with U.S.A.)	As at U.S. Adare
Norway	Queen Maud Land	Yellow/Black
U.S.S.R. . . .	Mirny	Yellow/Red
United Kingdom ..	'B' Deception Island	Gray/Green
	'F' Argentine Island	White/Yellow
	'H' Signy Island	White/Blue

House Sparrows' Western Range.—On the Eyre Highway the House Sparrow (*Passer domesticus*) has established itself some distance west of Tarcoola, on the Trans-Continental Railway (*vide* Sage, *Emu*, vol. 57, p. 351). I observed quite large numbers preparing to roost in the trees lining the Highway at Penong, 546 miles west of Adelaide, on January 14, 1957. Penong supports the last store, as well as the last hotel, that westward-bound Sparrows would meet on the Eyre Highway en route to the Nullarbor Plain, and may be the general westward limit of their present distribution in Australia.

A flock of about 40 Starlings (*Sturnus vulgaris*) was observed in flight at Nullarbor homestead, 152 miles west of Penong and well out into the treeless plain, on January 3, 1957. A flock, presumably the same birds, was seen at the deserted White Wells Homestead, 7 miles to the east, at dusk two days later, and appeared to be roosting there.—P. E. ROBERTS, Beecroft, N.S.W., 28/1/58.