A DISTRIBUTION STUDY OF THE SOUTH-POLAR SKUA

By CARL R. EKLUND

In conjunction with activities to be carried out in the Antarctic during the International Geophysical Year of 1957 - 58, a banding study is being 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 sub-species should help solve some of the questions on its distribution and relationship with other recognised forms.

Six nations, including Argentina, the United Kingdom, Japan, Norway, the U.S.S.R. and the United States, will band at 16 stations, and Chile and France have agreed to carry out observations at certain of their stations. Australia, which is already using a coloured band at the Mawson Station, will also band at its Vestfold Hills Station if materials can be forwarded there. New Zealand will carry 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 but heavier to that being used successfully in neckband 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 16 and possibly 17 stations, a dual colour was obtained with some by applying a vinyl-based paint suitable for thermoplastics to one-half of the band.

Colours and the position and station at which each band are being used are shown in Table 1. Some positions are approximate pending location and establishment of sites.

Vinyl plastic, pressure-sensitive adhesive tape of the same colour as the thermoplastic material will be applied over the band to further ensure retention.

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

Some dyeing of adult skuas will be carried out at the Wilkes Station (Knox Coast) using a scarlet colour. Experiments will also be made at this station with green wing or neck streamers made of a plasticised polyvinyl chloride material. If time permits, birds will also be dyed at the Cape Adare Station, using a yellow colour. This method of marking has been quite successful with geese and mourning doves in the United States.

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

TABLE 1: BANDING STATIONS

Country & Station	Location	Colour of Band
UNITED STATES		
Williams Air Facility	Lat. 77° 50' S, Long. 166° 36' E	Grey-Red
Little America	Lat. 78° 14' S, Long. 161° 55' W	Blue
Marie Byrd	Lat. 80° 00' S, Long. 120° 00' W	Black

South Pole	Lat. 90° 00' S	White
Wilkes (Knox)	Lat. 66° 00' S, Long. 110° to 115° E	Green
Adare (jointly with N.Z.)	Lat. 72° 00' S, Long. 171° 00' E	Red
Weddell	Lat. 78° 00' S, Long. 50° 00' W	Yellow
ARGENTINA		
General Belgrano	Lat. 77° 58' S, Long. 38° 48' W	Yellow-Blue
San Martin	Lat. 68° 08' S, Long. 67° 06' W	Blue-Green
Almirante Brown	Lat. 64° 53' S, Long. 62° 52' W	Yellow-Green
AUSTRALIA		
Mawson	Lat. 67° 36' S, Long. 62° 53' E	Already using orange
Vestfold Hills	Lat. 68° 30' S, Long. 78° 00' E	Grey-Yellow (if bands can be forwarded)
JAPAN		
Prince Harold Coast	Lat. 70° 00' S, Long. 35° 00' E	Red-Blue
NEW ZEALAND		
Scott	Lat. 77° 52' S, Long. 163° 00' E	To use N.Z. metal numbered band & some coloured bands of nearby Wms. Air Fac.
Adare	See U.S. above	Jointly with U.S.
NORWAY		
Queen Maud Land	Lat. 70° 30' S, Long. 01° 00' W	Yellow-Black
U.S.S.R.		
Mirny	Lat. 66° 33' S, Long. 93° 00' E	Yellow-Red
UNITED KINGDOM		
'B' Deception Island	Lat. 62° 59' S, Long. 60° 34' W	Grey-Green
'F' Argentine Island	Lat. 65° 15' S, Long. 64° 16' W	White-Yellow
'H' Signy Island	Lat. 60° 43' S, Long. 45° 36' W	White-Blue

Banding-location maps with record and instruction sheets were also sent to the French for 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 de Cunha and Gough Islands; to Australia for use at Macquarie Island; to New Zealand for use at Campbell Island; and to Chile for use at four of its stations in the Palmer Peninsula (Grahamland). It is hoped that similar material can be sent to South Africa's Marion Island Station.

The success of the study is dependent upon two things: (1) the number of birds banded, and (2) 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 is 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 personnel at the outlying islands off 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 recording 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° 20' S, longitude 160° 40' E, 160 miles from the Pole. A sledging party on the second Byrd Expedition saw the species at latitude 86° 05' S. It is entirely possible, therefore, that the South-polar Skua is the first bird to 'attain the pole'. And provision has been made to band it!

It would be appreciated if information is forwarded the author, USNC-IGY, Regional Programmes Office, Room 716, 1145 19th Street, N.W., Washington 25, D.C., who until February, 1958, will be station scientific leader at the Wilkes Station on the Knox Coast. Contact via amateur radio might be made there since a 'ham' station will be in operation.