

SHORT NOTES

A Record of the Macaroni Penguin for Australian Antarctic

While watching slides, taken at Mawson Base (67° 36' S, 62° 53' E) during 1963-64 by Mr K. Shennen, a picture was shown of a strange penguin which arrived there 17 February 1964. On closer examination (Plate 5) this penguin turns out to be a Macaroni Penguin *Eudyptes chrysolophus chrysolophus*. The chin and throat are black, and not white as in *schlegeli*, the other subspecies. After examining the records (Ingham 1962, Emu 62: 126-128; Orton 1963, Emu 63: 14-22) this appears to be the first record of the species for this area.

Large numbers of Macaroni Penguins breed on Heard Island (Law and Burstall, ANARE Interim reports No 7, 16-17) approximately 1,600 km north-north-east of Mawson which is the closest known breeding area. The bird photographed is one year old, judging by the very short superciliary crest, and appears to be about to enter the first stages of the annual moult, which is right for this time of year.

The very similar Royal Penguin *Eudyptes chrysolophus schlegeli*, the white-faced race of the Macaroni endemic at Macquarie Island, turns up quite regularly in very small numbers at Campbell Island between late January and early March (Bailey and Sorensen 1962, Subantarctic Campbell Island) 640 km north-east of Macquarie Island. The Royal has also been encountered in New Zealand as far north as Cook Strait, and the farthest records from Macquarie are for Tasmania and South Australia 1,450 and 3,050 km distant respectively (Sharland 1958, Tasmanian Birds; Cayley 1964, What Bird is That?). As yet the Macaroni Penguin has not been recorded for Australia, though Serventy and Whittell (1962, Birds of Western Australia, 3rd ed.: 70) mention it as a possible visitor.

With this record at Mawson, dispersal from the breeding islands is probably random for both the Macaroni and the Royal Penguin with birds appearing wherever there may be suitable land on which to haul out at the time of moult. Though age has not been determined in all cases it appears from available information (Bailey and Sorensen *op. cit.*: 111) that it is the youngest age-group which wanders the greatest distances, though the bird observed by Sorensen in March 1945 at Campbell Island was an adult.

I thank Mr. Shennen for permission to publish this observation and Mr. Hayne, Photographic Officer,

Australian Antarctic Division, Department of Supply, for permission to reproduce the photograph.

W. J. MERILEES, *Biology Department, Selkirk College, Box 1200, Castlegar, B.C., Canada.*
6 November 1969.

Western Sandpiper in Tasmania

At 14:00 on 6 September 1969 a single migratory wader was present at Clear Lagoon, Sandford, near Hobart, Tasmania. It was watched for over 30 minutes in good light through x10 glasses. At times it was seen alongside Red-capped Dotterels *Charadrius alexandrinus*. The bird was still in breeding plumage, its most prominent field characters being the warm reddish-brown upperparts and a bill that was long for a stint. It was quite tame and allowed an approach to within 15 m. It could not be found the following day or on later visits. The following detailed description was taken in the field:

Size and shape: a typical small *Calidris* sandpiper, slightly larger than Red-necked Stint *C. ruficollis*; body as long as Red-capped Dotterel but slimmer. Head: pale in contrast to the rest of the upperparts: crown mottled red and black: pale-cream superciliary stripe, darker brownish-red line extending from the base of the bill through and behind the eye. Upperparts: mantle and scapulars warm reddish-brown, the individual feathers having dark centres edged with reddish-brown: wing-coverts reddish-brown, primaries and secondaries grey, giving a two-toned effect: white wing-bar broadening and becoming more diffuse across the primaries: rump with dark-brown centre with white on the sides: tail dark-brown with lighter brown outer tail feathers. Underparts: chin white: indistinct sepia markings from shoulder of wing extending across the breast, buff wash: remainder white. Eye: black. Bill: black, tapering and down-curved towards the tip, longer than Red-necked Stint, about as long as head. Legs: black or very dark-brown, as long as Red-capped Dotterel.

The small size excludes Baird's Sandpiper *C. bairdii* and larger species. The rump pattern excludes White-rumped Sandpiper *C. fuscicollis*. The black legs exclude Least Sandpiper *C. minutilla*, Long-toed Stint *C. subminuta* and Temminck's Stint *C. temminckii*, all of which have yellowish legs. Of the remaining small sandpipers, Semipalmated *C. pusilla*, Red-necked Stint and Little Stint *C. minuta*, none has reddish-brown margins to the feathers of the mantle, scapulars and wing-coverts in any plumage, nor does any of the species previously mentioned. The bill was about as long as the head, perhaps 20-25 mm long and thus longer than in other stints. The bills of *ruficollis* and *minuta* either do not or barely



PLATE 5
Macaroni Penguin at Mawson Base, 25 February 1964.
ANARE photograph by K. Shennen.

exceed 20 mm in length (see Thomas and Dartnall below; Dement'ev *et al.* 1951, Birds of the Soviet Union) and are thus noticeably shorter than the length of the head. The two species that are difficult to separate by bill-length are *pusilla* (16–23 mm, Nisbet 1963, Br. Birds 56: 55–58) and the Western Sandpiper *C. mauri* (20–28 mm, Nisbet *loc. cit.* 20–25 mm, Recher *in litt.*). However the bird in question was in breeding plumage, the characters of which, as stated above, exclude *pusilla* (Palmer in Stout (ed.) 1967, Shorebirds of North America).

It was therefore concluded that the bird at Clear Lagoon was the Western Sandpiper, there observed for the first time in Australia. I sent a copy of my field description to Dr H. F. Recher, who is familiar with the species and confirmed my identification.

D. G. THOMAS, 9 Lallaby Road, Moonah, Tas.
7009.

6 November 1969.

First Record of the Little Tern in Tasmania

Previously, only the Fairy Tern *Sterna nereis* has been known in Tasmania, where it breeds each year in many places.

On 1 December 1968 two nests were found at Diana's Basin, about 10 km south of St Helens Point. These were assumed to belong to Fairy Terns and had C/2 and C/3. On 14 December the nests still had eggs, four others (2 x C/3, 1 x C/2 and 1 x C/1) were found, and approximately 20 terns were on the beach. On 22 December there were eight nests (5 x C/3, 1 x C/2 and 2 x C/1). One C/3 had just begun to chip. Photographs were taken on the last two visits.

The nests successfully survived the Christmas and New Year holidays; on 5 January 1969 seven clutches had hatched, and 20 adult birds were in attendance. On 8 February only 5 adults were present, and no juveniles were noted.

When inspecting the colour transparencies of these nests, the birds were seen to have completely black lores, and the white extended above the eye. The photographs were shown to Mr M. S. R. Sharland, who identified the birds as Little Tern *Sterna albigifrons*. They were also sent, with some transparencies taken on 11 January 1969 of an isolated pair of terns nesting 30 km further south, to Mr F. T. H. Smith who confirmed Mr Sharland's identification, writing: 'There is no doubt in my mind that all of the pictures are of the Little Tern *Sterna albigifrons*.' Mr W. B. Hitchcock also confirmed the identification from the transparencies, writing: 'There is no doubt they are *Sterna albigifrons*.'

The Little Tern was thus clearly breeding in Tasmania in 1968–69, and may have been doing so previously. A close watch should be kept of all

small terns, nesting in Tasmania, to determine the present status of both *nereis* and *albigifrons*.

J. R. NAPIER, Millbrook, St Marys, Tas. 7215.
13 November 1969.

Difference in size between the sexes of the Curlew Sandpiper

Difference in size between the sexes has been reported in several *Calidris* spp. In the Pectoral Sandpiper *C. melanotos* and Sharp-tailed Sandpiper *C. acuminata* the male is larger than the female (Dement'ev *et al.* 1951, Birds of the Soviet Union, 3; Pitelka 1959, Condor 61: 233–264). In the Dunlin *C. alpina* the female is larger than the male (Soikkeli 1966, Bird Study 13: 256–269). No such difference has been recorded for the Curlew Sandpiper *C. ferruginea*.

We measured the wing, tarsus and exposed culmen of 57 adult Curlew Sandpipers collected in south-eastern Tasmania. All were subsequently sexed by dissection. The following measurements, all in mm, were obtained:

Wing. (Birds moulting primaries 9 and 10 omitted).
33 ♂♂. Mean 126.5 ± 0.7 , range 118–135, s.d. ± 4.0 .
19 ♀♀. Mean 129.8 ± 0.8 , range 124–135, s.d. ± 3.4 .

Tarsus.

33 ♂♂. Mean 28.4 ± 0.3 , range 26–30, s.d. ± 1.7 .
23 ♀♀. Mean 29.8 ± 0.3 , range 27.5–33, s.d. ± 1.2 .

Culmen.

34 ♂♂. Mean 35.6 ± 0.7 , range 31.5–40.0, s.d. ± 2.35 .
23 ♀♀. Mean 39.5 ± 0.5 , range 35.5–43.5, s.d. ± 2.5 .

For all three sets of measurements the difference in means is highly significant ($P < 0.005$), the female being larger than the male. There is some overlap.

Birds were also weighed, omitting those that had premigratory deposits of fat. A highly significant correlation between culmen length and weight was found ($P < 0.001$). The linear regression of weight on culmen was

Weight gm — 50 = $1.5 + 0.98$ (Culmen mm — 30)
with 95 per cent confidence limits of ± 7.6 gm.

A series of similar measurements was obtained from 31 ♂♂ and 50 ♀♀ Red-necked Stints *C. ruficollis*. Only slight evidence for difference of size between the sexes was found; the difference between mean lengths of the culmen ($\delta 17.5 \pm 0.2$, $\phi 18.6 \pm 0.25$) was significant at the 95 per cent level, but not at the 98 per cent level, but there was a large overlap.

D. G. THOMAS, 9 Lallaby Road, Moonah, Tas.
7009.

A. J. DARTNALL, Tasmanian Museum, Hobart, Tas.
7000.

2 January 1970.

The possible ecological significance of hawking by honeyeaters and its relation to nectar feeding

During the past three years (1967–69) we have had many opportunities to observe the behaviour of honeyeaters wintering in the area of Hawkesbury Sandstone north of Broken Bay on the Hawkesbury River (50 km north of Sydney, NSW). In two of these years (1967 and 1968), there have been large assemblages of many species of honeyeaters in the coastal heaths dominated by *Banksia ericifolia*. *B. ericifolia* flowers in July and August, producing many inflorescences and much nectar that is very attractive to honeyeaters of many species; we have recorded as many as 15 species in one assemblage and 19 species altogether in the area. A feature of these wintering assemblages is the large amount of time and energy that individuals spend in taking small insects in flight ('hawking'), and the question arises what the birds gain by these pursuits. The energy obtained from a small insect probably does not compensate for the energy expended in its capture. Even large honeyeaters (e.g. Noisy Friarbird *Philemon corniculatus*, Red Wattlebird *Anthochaera carunculata* and Little Wattlebird *Anthochaera chrysoptera*) will repeatedly fly long distances (maximum observed 30 m) to take minute insects. We suggest that in these circumstances hawking can be best considered as a means of obtaining protein, not energy. Much energy in the form of nectar is easily obtained from *B. ericifolia*, and honeyeaters can afford to spend much of their time and energy in pursuing small insects. As shown by paper chromatograph studies, nectar itself is a poor source of protein.

During the winter there are few strictly insectivorous birds in the area of Hawkesbury Sandstone, but many nearby in forest habitats on the Wianamatta Shale. Yet there must be some source of protein available in the Hawkesbury region to support the large numbers of wintering honeyeaters. Possibly insects are not sufficiently abundant in the area of Hawkesbury Sandstone to support a diverse population of insectivorous birds, but the large assemblages of many species of honeyeaters occur because honeyeaters obtain their energy requirements from nectar and need insects only as a source of protein. Alternatively because honeyeaters are able to exploit a source of energy (nectar) unavailable to strictly insectivorous species, they may be able to exploit populations of insects to a level below which these are not large enough to support the insectivores. In this way insectivorous birds (particularly treecreepers *Climacteris* spp. and Thornbills *Acanthiza* spp.) may be excluded from the habitats occupied by large numbers of honeyeaters. If the last suggestion is correct, it would mean that large assemblages

of non-breeding birds that are present during only a small part of the year exclude other species that might nest in the area and that would normally be resident throughout the year. This matter deserves further study.

H. F. RECHER, *Department of Environmental Studies, The Australian Museum, 6-8 College Street, South Sydney, NSW, 2000.*

I. J. ABBOTT, *Department of Zoology, Monash University, Clayton, Vic. 3168.*

23 February 1970.

Unusual records of Spine-tailed and Fork-tailed Swifts

Weather at Iron Range, Cape York Peninsula, in July 1969 was unusual; heavy rain occurred daily, especially at night. These conditions had been more or less continuous since the end of the wet season. On the afternoon of 19 July, immediately after a prolonged shower, I was on the Portland Roads track about 600 m east of its junction with the Coen track, when five Spine-tailed Swifts *Hirundapus caudacutus* were noted, soaring between 30 m and 60 m above the rain-forest. All were readily identified as this species, because the white under-tail coverts and protruding feather shafts of the tail were clearly visible as birds approached me; and the usual numbers of Grey Swiftlets *Collocalia francica* were hawking about, thus providing a comparison of size. Soon after returning to camp at the junction of the Coen and Portland Roads tracks, a flock of about 50 swifts appeared overhead, and hawked for about 15 minutes at heights between 30 m and 60 m. All birds that were closely observed were Fork-tailed Swifts *Apus pacificus* by their deeply forked tails, but there could have been Spine-tailed Swifts in the flock. I can find no reference in the literature to either species wintering in Australia; but on referring this record to Messrs. K. G. Simpson and D. J. Noonan, they advise that there are at least three records of *Apus Pacificus* in Australia during southern winter months. These are two sightings of single birds in the north of South Australia during July and August of different years, and a record by Mr E. Lindgren of a single bird with three unidentified martins at King's Park, Perth, on 4 June 1964. There are no records of *Hirundapus caudacutus* earlier than the beginning of September. Normally the main flocks of both species arrive in northern Australia from about early October, and rare sightings could perhaps be expected during late September. The swifts have finally departed again by the end of April.

A. BLACKBURN, *10 Score Road, Gisborne, N.Z.*
26 February 1970.