

SHORT COMMUNICATIONS

NEST AND EGGS OF THE ATHERTON SCRUB WREN

Five specimens of the Atherton Scrub Wren *Sericornis keri* are known (Galbraith and Parker 1969, Emu 69: 212-32). In the course of long-term studies of closed forest habitat in north-eastern Queensland, the nest and eggs of the species were found on 18 November 1970 by flushing birds near Mt Hypipamee (991 m high) in the Hugh Nelson Range, 19 km south of Atherton. The incubating bird was collected; the skin was identified at British Museum (Natural History), London, and is now in the reference collection of the Queensland Department of Primary Industries.

Nest. Built into open bank at side of road, well concealed by grasses and slender ferns; ovoid in shape, with external dimensions 150 x 125 mm; entrance at side and near apex; composed externally of dead plant material including whole and skeletonized dicotyledonous leaves and parts of palm leaves and fibrous stems, the last two items becoming fine towards the internal chamber and joined together by a layer of white fibrous matter; chamber lined with feathers.

Eggs. Two, partly incubated; colour pattern as for those of the Large-billed Scrub Wren *S. magnirostris* (Campbell 1901, Nests and Eggs of Australian Birds: 247); dimensions 19.7, 19.5 x 15.2, 15.3 mm respectively.

Incubating bird. Female, skull fully pneumatized; weight, 12.4 g; measurements in mm: total length 126.8, wing 56.1, culmen 14.1, tarsus 22.2, mid-toe (excl. claw) 13.8; rectrices moulting; gizzard contents, Coleoptera and gastropod molluscs (*Egilomen*

sp (Endodontidae)); difficult to flush out from nest after initial encounter.

Several features of this first observation of breeding in the species are noteworthy. The nest was at ground-level, supporting the contention of Galbraith and Parker (op. cit.) that the species is not so arboreal as *S. magnirostris*; food habits confirm this. Sizes of the eggs are well within 95 per cent confidence limits for lengths (19.1 ± 1.0 mm) of eggs of the sixteen clutches purported to be of the Large-billed Scrub Wren in the literature (e.g. North 1904, Nests and Eggs of Birds found breeding in Australia and Tasmania, 1: 303) or examined personally at Queensland Museum, Brisbane; Australian Museum, Sydney; National Museum of Victoria, Melbourne; and CSIRO Division of Wildlife Research, Canberra. However, breadths of the *S. keri* eggs are outside these limits (14.07 ± 0.94 mm). Although the reported clutch-size of *S. magnirostris* is related to both length and breadth of the eggs concerned, the simple relation that eggs in smaller clutches are larger is not true. No reliance can be placed on the unusually large clutches incorporated in the museum collections (2 x C/2, 10 x C/3, 3 x C/4, 1 x C/5); the RAOU Nest Record Scheme records 3 x C/3 for *S. magnirostris*.

Accordingly, additional characteristics of the Atherton Scrub Wren at this juncture are that its eggs are larger, especially broader, and that its clutch-size may be smaller, than those of the Large-billed Scrub Wren.

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THE PURPLE-CROWNED PIGEON AT TOWNSVILLE, Q.

Most papers specifically about the Purple-crowned Pigeon *Ptilinopus superbus* refer to accidental occurrences in south-eastern Australia (e.g. Hindwood 1953, 1959). During long-term studies of closed forest habitat in northern Queensland, where the species is briefly noted as common by MacGillivray (1914), Campbell and Barnard (1917), Gill (1970) and others, the opportunity has been taken to gather some additional data on habits. In particular, observations at Townsville on coastal open lowland some 38 km south and 24 km north of the closed forests

that occur on Mt Halifax (1,063 m high) and Mt Elliott (1,193 m high) respectively are noteworthy. The following specimens, some provided by local naturalists, have been taken at Townsville since 1956:

1. Melton Hill, 12 January 1956—'hit house'
2. North Ward, 6 November 1962—'accidentally killed'
3. City, March 1963—'accidentally killed'
4. Oonoonba, 24 January 1966—'flew into flyscreen door at night'
5. Mundingburra, 30 September 1968—'flew into window at night'

6. City, 9 November 1970—'found with broken wing'
7. Hermit Park, 18 May 1971—'brought into house by cat at 04:00'
8. City, 20 October 1971—'found dead on lawn in early morning'
9. Oonoonba, 6 March 1972—'flew into flyscreen door at night'

The suburbs are in all sectors of the city. The specimens were adult males and adult females with only the former in breeding condition. No bird was moulting remiges or rectrices. All birds had empty crops and gizzards but had substantially greater deposits of fat than birds collected at the same times in closed forests to the north (Mt Spec, Mt Fox and Kirrama) and south (Eungella); weights were not appreciably different, however.

Broadbent (in Campbell 1901) concluded that Purple-crowned Pigeons in northern Queensland migrated to New Guinea during March and returned in September apparently after the manner of the more conspicuous pigeons, e.g. Torres Strait Pigeon *Ducula spilorrhoa* (Thomson 1935) and other birds, e.g. *Pitta* spp (Barnard 1911). The above records are reasonably evenly distributed from the end of September to the middle of May, are all of birds in good condition and generally span the breeding and moulting seasons (September to February and October to March, respectively). The records support Broadbent's contention that the species is a summer visitor to the region, but birds are liable to pass at least through Townsville on any date during the period as solitary passage migrants. Only six specimens in the Queensland Museum, out of twenty-two, have adequate details of where the birds were collected; it is noteworthy that of the three localities concerned two (Booby Island and Herston, Brisbane) also are outside closed forests. All the above records are compatible with the view that the species moves only at night. Except in closed forests, birds are normally never seen during daylight, even near forest as on the Atherton Tableland, and it has generally been concluded that the species is scarce or absent outside these forests (Lavery 1968; Bravery 1970).

The species is thus comparable with some pittas,

trogons, thrushes and quail in eastern Africa (Moreau 1966). As with these, the Purple-crowned Pigeon is evidently accident-prone, by flying into obstacles in the dark.

It is perhaps also indicative of a more abundant status that other pigeons that move commonly by day, e.g. Topknot Pigeon (Frith 1962), or that occur frequently in low closed forest ('dry scrub') nearer the city, e.g. Red-crowned Pigeon *Ptilinopus regina* at Many Peaks Range (Lavery 1968), have never been recorded in Townsville.

Accordingly, the Purple-crowned Pigeon is more widespread and common throughout Australia than has previously been admitted, and D'Ombraïn's (1922) atypical record of abundance in New South Wales is no longer unreasonable. However, details of the general pattern of movement in different populations remain speculative and additional study is necessary.

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FACIAL CHARACTERISTIC OF ROCKHOPPER PENGUINS

At present, racial separation of the Rockhopper *Eudyptes chrysocome* is based on slight differences in colour of plumage and of size, has probably been done in museums without observations from the field, and probably omits or doubtfully records characters that may disappear after death. Murphy (1936: 418) stated that 'a careful comparison fails to reveal any of the alleged subspecific distinctions between the Magellanic and New Zealand specimens.' Mathews and Iredale (1921: 11) listed four races on the basis of size and coloration, particularly on the lengths of bill and crest and the colour of the throat. Serventy *et al.* (1971: 52) separated races on size alone.

I found that taxonomic papers are based on the study of birds in only one of the two areas. No author appears to have compared Indo-Pacific birds with those in the South Atlantic.

THE CHARACTERISTIC

In clear photographs of Falkland birds, some enlarged to more than life size, the exposed and thinly feathered skin of the face is dark to the edge of the bill. At the proximal edge of the bill there is a thin bare margin of similarly coloured dark skin which shows as a 'beading' on sharp, highly enlarged, photographs. This gives the birds a uniformly coloured face (Plate 1a). In photographs of adult birds on Macquarie Island the face of the birds is similarly dark, but the skin at the margin of the bill is pink or light forming a clearly defined division between the bill and the face (Plate 1b). Skins from Macquarie Island in museum collections look like those from the Falkland Islands, the pale margin having shrunk and discoloured.

For convenience I have called Falkland-type birds 'dark-faced' and Macquarie-type birds 'light-faced'. Photographs of dark-faced birds have been taken on Staten Island (Boswall 1972), in the Falkland Islands (Beck in Murphy 1936: pl 25-27; Beck in Alexander 1955: pl 54; Cobb 1933: 83; Pettingill 1962: pl between pp 18 and 19, 50 and 51, 98 and 99, and 130 and 131; Pettingill 1960, 1964; Strange 1973; many unpublished photographs taken by myself, Messrs J. Winkley, J. Juleff and D. Davison, and members of the Falkland Island Photographic Society) and on Gough Island (HRH Prince Philip 1962: pl 26; unpublished photographs by Dr N. M. Wace).

A recent paper (Sogonzac 1972: pl 1-3) shows that a dark-faced form may also occur on New Amsterdam but the feature can only be identified on a single bird and the large crest of all the birds illustrated suggests to me that these may prove to be a separate form from those discussed above.

Photographs of light-faced birds have been taken on Macquarie Island (Falla 1937: figs 81, 83, 85 and 86; Law and Burstall 1956: pl 8; Warham 1963; Serventy *et al.* 1971: fig. 21, col. pl 128; and unpublished photographs by Dr P. J. Fullagar, Messrs D. Purchase, E. Slater and W. J. M. Vestjens), on Heard Island (Falla 1937: fig. 87; Downes and Gwynn 1955: pl 5 and 6; Downes *et al.* 1959: pl 14 and 15), and on Campbell Island (Bailey and Sorensen, 1962: 103-107; unpublished colour transparencies by Mr B. D. Bell.)

Published photographs of dark-faced birds are these: 10 from Staten Island, 71 from the Falkland Islands, 3 from Gough Island and 1 from New Amsterdam Island; of the light-faced form these: 15 from Macquarie Island, 9 from Heard Island and 5 from Campbell Island. None of the material I have examined, published or unpublished, gives any evidence that both forms occur on the same island.

Photographs of juveniles show that some, if not all, immature light-faced Rockhoppers do not show the characteristics of adults (Bailey and Sorensen 1962).

TYPE-LOCALITY

In his original description Forster (1781) gave Tasmania and the Falkland Islands as the joint type-locality ('Habitat in Novae Hollandiae parte australi appellata *Van Diemen's Landt* et in insulis Falklandicis.') His description was based on two specimens. One was captured alive by a sailor in Furneaux's crew about March 1773, in Adventure Bay, South Bruny Island, Tasmania. When the bird died, it was stuffed on Furneaux's orders and subsequently examined and described by Forster and drawn by his son ('... in Novae Hollandiae maxime australem pervenit angulum et in portu dicto *Adventure Bay*, hanc *Aptenodyten* scopulo insidentem reperit, ... ad describendum mihi permissae fuere, filius etiam candem delineavit: ...'). The second specimen, from the collection of the Duke of Brunswick, reputedly collected in the Falkland Islands, was drawn by J. F. Miller for Forster's monograph.

Forster's description appears to rely heavily on notes that he took of the Tasmanian specimen, but he referred to Bougainville's '*Voyage autour du monde*' in both the French edition (1771) and the English translation (1772), which he made. On pages 64 and 65 of Forster's translation of Bougainville's work the Rockhopper is described thus:

'The third sort of penguins live in great flocks or families like the second; they inhabit the high cliffs, where we found the saw-bills (*becs-scies*), and they lay their eggs there. Their distinguishing characters are, the smallness of their size, their dark

yellow colour, a tuft of gold-yellow feathers, which are shorter than those of the egret, and which they raise when provoked, and lastly, some other feathers of the same colour, which stand in the place of eyebrows; our people called them hopping penguins, because they chiefly advance by hopping and skipping. This species carries a greater air of liveliness in its countenance than the two others.'

The 'second sort' of penguins to which he referred were probably Gentoo Penguins *Pygoscelis papua* and the 'sawbills' are one of the two resident cormorants in the Falklands, probably the King Shag *Phalacrocorax albiventer*. The 'egret' may be the Falkland Night-heron *Nycticorax nycticorax falklandicus*. In a footnote to the translation Forster says that 'this last species of penguin, or auk, seems to be the same with the alca cirrhata of Dr. Pallas, Spicileg. Zool. Fasc. v. p. 7, tab. i & v, fig. 1-3'.

The description of the habitat and the fact that Bougainville was responsible for the establishment of the Port Louis (then Fort Louis) settlement in February and March 1764 suggests that the colonies described are those in Berkeley Sound, East Falkland Island. If West Falkland colonies were being described, mention of the Black-browed Albatross *Diomedea melanophrys* could scarcely have been omitted. The exact island in Berkeley Sound is difficult to establish, but only two islands meet the requirement of having cliffs. Of the two, Kidney and Cochon Islands, Kidney seems the most likely because there is a mixed colony of Rockhopper Penguins and King Shags nesting on the tops of the northern cliffs (those facing towards the Sound) to this day and Night-herons occur on the island. In a nearby bay, Kidney Cove, the beach is frequently black with Gentoo Penguins.

The sketch drawn by Forster's son was never published and is probably the drawing in the British Museum Collection listed as 'Forster Drawings, Pl. 80'.

I have examined the published plate drawn by Miller for Forster, and a photograph of the sketch drawn by Forster's son, and tend to agree with Mathews (1921) that the latter drawing is not that of a Rockhopper Penguin. Though the detail in the pencil sketch is poor, the bird illustrated is evidently a *Eudyptes*-type penguin with a black face. The bill is thick and heavier than that of the Rockhopper and the crest appears to meet in front of the head. Though I agree with Mathews's rejection of the drawing I consider the sketch a little too vague for positive identification and find Mathews's failure to consider the measurements in Forster's description surprising because they appear large for a Rockhopper. Mathews must have been familiar with these measurements because the work to which I referred

was Mathews's copy and contained marginal notes by him.

The coloured plate by Miller, which Forster used to illustrate his paper and which Miller subsequently used laterally reversed and with very minor modifications in his 1784 description of *Eudyptes crestatus*, is very definitely of a dark-faced Rockhopper of the South Atlantic form, though the locality is not particularly relevant in view of the change in colour of the soft parts in dead birds.

Because the identification of the plate cannot be disputed, and having considered Forster's reference to Bougainville (see above), I recommend that the type-locality of the dark-faced Rockhopper Penguin *Eudyptes chrysocome chrysocome* be restricted to the Falkland Islands. I propose the locality: Kidney Island, Berkeley Sound, East Falkland Island, and recommend that the Tasmanian record be deleted because it does not refer to this species.

DISCUSSION

Photographs show two distinct groups of Rockhopper Penguins and indicate that a third group with very large crests may be distinct (Sogonzac 1972). The range of the groups has not been established and will depend upon an examination of live birds and photographs throughout the range of the species. At present the facial differences between birds in the South Atlantic region and the Australasian region, at the two ends of the range, appears distinct but the possible presence of dark-faced birds on New Amsterdam and light-faced birds on Heard Island indicate a transitional zone in the Indian Ocean. I found that Sogonzac's photographs more closely resembled unpublished photographs taken by Wace on Gough Island than published photographs of birds on Heard Island.

CONCLUSIONS

By the characteristics of its face the Rockhopper Penguin *Eudyptes chrysocome* can be divided into two recognizable forms:

Dark-faced Rockhopper Penguin *Eudyptes chrysocome chrysocome* (Forster, 1781) Falkland Islands—restricted to Kidney Island, Berkeley Sound, E. Falkland Island—occurring on Staten Island, the Falkland Islands, Gough Island and New Amsterdam.

Light-faced Rockhopper Penguin *Eudyptes chrysocome filholi* (Hutton, 1878) Campbell Island, occurring on Heard, Macquarie and Campbell Islands.

The form *Eudyptes chrysocome moseleyi* (Mathews and Iredale, 1921) Inaccessible Island, Tristan Da Cunha group, represents a form of the Dark-faced Rockhopper visually distinct on characteristics of the crest.

Other names that have been used are *catarractes*,

PLATE 1



Plate 1a (upper). Dark-faced Rockhopper; Kidney I., E. Falkland Island. (photo. M. Carins).
1b (lower). Light-faced Rockhopper; Macquarie I. (photo. E. Slater).

chrysolophus, *cirrhat*, *demersus*, *gorfua*, *interjectus*, *nigrivestis*, *saltator* and *serresianus*. Two of these are already used for other species (*demersus* and *chrysolophus*); none has been used recently.

Eudyptes crestatus (Miller, 1784) is rejected under Article 17 (2) of the International Code of Zoological Nomenclature (1961) because the name did not remain in unchallenged use for fifty years and because the Tasmanian record of *E. c. chrysocome* and Forster's mixed description do not invalidate his plate.

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