

THE PLUMAGES OF FLEDGLING *Phoebetria* ALBATROSSES

There are clear plumage differences between adult and sub-adult Sooty Albatrosses (*Phoebetria fusca*), and adult and sub-adult Light-mantled Sooty Albatrosses (*P. palpebrata*). However, there has been confusion as to the identification of juvenile birds, and it has been stated that it may be impossible to identify some juvenile *Phoebetria* (Cox 1976, *S. Austr. Orn.* 27, 28-82; Serventy, Serventy & Warham 1971, *Handbook of Australian Sea-birds*: 79; Watson 1975, *Birds of the Antarctic and sub-Antarctic*: 98). An adult is defined here as a bird which has bred, or will breed in that season. A sub-adult is a bird which has visited the breeding ground subsequent to fledging. A juvenile has not visited the breeding ground subsequent to fledging. Cox (1976) has summarised the identification of *Phoebetria*. This note describes the differences between fledglings of the two species at Marion Island (46°54'S 37°45'E) observed between October 1974 and June 1975, which may aid identification at sea.

I was unable to distinguish consistently between nestlings of the two species prior to the development of teleoptile plumage. At fledging, *P. fusca* nestlings had greyish-white eye-rings, dark grey sulci and dark shafts to the primary feathers. The body plumage was similar to that of the adult. By this time, plumage of adult and sub-adult birds has become worn and is lighter in colour than that of fledglings. *P. palpebrata* nestlings were last seen about three weeks prior to fledging, at which time the teleoptile plumage was well developed. At this stage, the nestlings had greyish-white eye-rings, dark grey sulci and dark shafts to the primary feathers. The body plumage was slightly more uniformly grey than that of the adult. However, the abdomen and mantle were clearly lighter in colour than in *P. fusca* fledglings. Sorenson (1950, *Cape Exp. Series Bul.* No. 8, p. 7) described the sulcus colour of two *P. palpebrata* nestlings at



P. palpebrata

P. fusca

FIGURE 1 — Eye-ring shape in *Phoebetria fusca* and *P. palpebrata*.

fledging as brownish, and bluish-brown at the base. The *P. palpebrata* nestlings I observed at Marion Island may have developed this coloration prior to fledging, and after my departure from the island. The shape of the eye-ring of the two species (adult and sub-adult birds, and nestlings prior to fledging) was different (Fig. 1). However, this is an aid to identification only at very close quarters, and in live birds.

The two species are distinguishable at fledging, on the basis of eye-ring shape and general plumage coloration. It appears that wear on the plumage of fledgling *Phoebetria* produces buffy or whitish edges to the feathers, particularly on the mantle and nape of *P. fusca*. Thus a post-fledgling *P. fusca* with worn plumage apparently has a buffy or whitish mantle and nape, and would be very difficult to separate from adult and sub-adult *P. palpebrata* in the field. However, it appears that *P. fusca* consistently has a darker abdomen than *P. palpebrata*, and this may be a valuable aid to identifying juvenile *Phoebetria*.

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MULTIPLE CLUTCHES BY WELCOME SWALLOWS IN THE WAIRARAPA

A pair of Welcome Swallows (*Hirundo neoxena*) was studied over four breeding seasons (1974-75 to 1977-78) at the Field Research Area of the Ministry of Agriculture, 8 km south of Masterton. It is assumed that the same pair was studied each year because their markings and behaviour were consistent. Daily observations were made during the nesting season from a hide only 1.7 m from the nest, which was under a farm bridge.

Both birds took part in the nest construction, which began in August each year and was characterised by slow beginnings, when mud was layered for the nest foundation, and by rapid completion (3 days) during the nest-lining stage. The important dates during the 1976-77 season, typical of each season, are given in Table 1. Eggs were laid one per day; the average of 10 clutches was 4.2 eggs, range 3-5. Incubation began immediately the last egg was laid and lasted 15-16 days. Chicks were fed by both parents and fledged at three weeks. Feeding continued for another two weeks, after which the chicks dispersed.

When chicks were very young, they were fed at intervals of often up to an hour but when they were near to fledging, intervals were nearer 30 minutes. After fledging, the intervals varied considerably