

## AN ALBINISTIC ADELIE PENGUIN

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Plumage alterations in the Adelie Penguin (*Pygoscelis adeliae*) are rare, but have been noted previously (Wilson 1907). In a two-year expedition during which a constant watch for plumage variation was kept, less than a half-dozen instances were found in hundreds of thousands of Adelie Penguins. Variations in pigmentation were limited to a white spot on the normally black nape of the neck, and two specimens of the isabelline color phase, in which pale brown is substituted for black. The notable point is the paucity of records of variation.

In some other groups of birds albinism is more frequent. Seventy-three of 852 specimens (8.5 per cent) of storm petrels (Hydrobatidae) exhibited varying degrees of albinism (Baptista 1966). Plumage alterations are frequent in the Icteridae (Nero 1954). Gross (1965) compiled a list of 304 species of North American birds exhibiting albinism. Sage (1963) listed 163 British species and noted that the majority of the records (67 per cent) occurred in the Turdidae, Corvidae, Hirundinidae, Passeridae, Sturnidae, and Fringillidae in that order. He states, "the highest incidence of albinism appears to be in the species that are both social in their breeding habits and also fairly sedentary." The Adelie penguin is certainly both social and sedentary but the recorded incidence of albinism is not sizeable.

On 10 January 1967, on Franklin Island (76° 07' S, 168° 20' E) in the Ross Sea, a near albino Adelie Penguin was sighted (fig. 1).

Gross (1965) separates albinism into four categories: (1) "total" or "pure," where there is complete lack of melanism; (2) "incomplete" when pigment is absent from the plumage, eyes, or naked parts, but not all three; (3) "imperfect" when pigment is reduced or diluted in any or all areas but never completely absent; and (4) "partial" when it is absent from local areas. By this classification, the Franklin Island specimen would be "imperfect." The eyes were not pink, black pigment was not totally missing from the plumage, and the color of the feet was not noted.

Morphologically there are two particularly interesting points; the feathers are black on the base of the bill and on the wings. The base of the bill of the Adelie Penguin is feathered as opposed to the bare base of the bill of more northerly species. This suggests that feathering of the bill of the Adelie Penguin may be under separate genetic control. The pigmentation of the wing would also seem to be under separate genetic control although it is doubtful that its feathering is a secondary feature. It is also interesting, though probably coincidental, that these



FIGURE 1. Albinistic Adelie Penguin.

two areas are important for heat regulation and are still black.

The penguin had two healthy and normally pigmented chicks, neither of which showed any sign or albinism in the downy plumage. It is significant that the bird was able to breed successfully despite its unusual appearance. This suggests the aberrations of plumage did not inhibit recognition of the species or the display behavior associated with mating.

The albinistic penguin was gone the next day and a penguin with normally pigmented plumage, presumably the mate, was brooding the chicks. Care was taken to note any additional deviations from normal pigmentation in the colony (about 80,000 individuals) but no further examples were seen.

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