

SHORT NOTE

A black-tailed Australasian Gannet and others with variable tails at Muriwai

On the evening of 27 October 1987, Ronald Meadows, an experienced glider-pilot, telephoned in some excitement to say that he had just photographed a gannet which clearly showed 12 black feathers in its tail (Fig. 1). It had been soaring above the expanding colony at Muriwai, which he has now been visiting for some years to study the gannets' mastery of the air and the ways in which they respond to awkward air-currents. Indeed, so closely has he been associated with the new offshoot colony on the bare southern headland, now protected by a fence, that for two successive years he has offered nesting material to a male which occupies the same site. He believes that when he appears this bird recognises him and comes to the fence in expectation of an acceptable 'hand-out'.

Two days after our conversation Mr Meadows brought the accompanying photographs, together with other negatives. The Australasian Gannet (*Sula serrator*) is said normally to have a tail of 12 rectrices, of which the four in the centre are black and the rest white, yet a photograph taken half a century ago by a Geoff Buddle (1951) shows a local gannet in which the six central tail-feathers are black and three on either side are white. Peter Stein's code for the tail of a typical adult gannet was 4.4.4. During his extended studies of the Horu Horu gannets he applied a mathematician's love of precision to growth and plumage-changes. After noting that the number of black rectrices varied in the tails of gannets, caught as they returned to the island,



FIGURE 1 — A "black-tailed" Gannet soaring over the Muriwai colony



FIGURE 2 — Only two black tail feathers, code 5.2.5

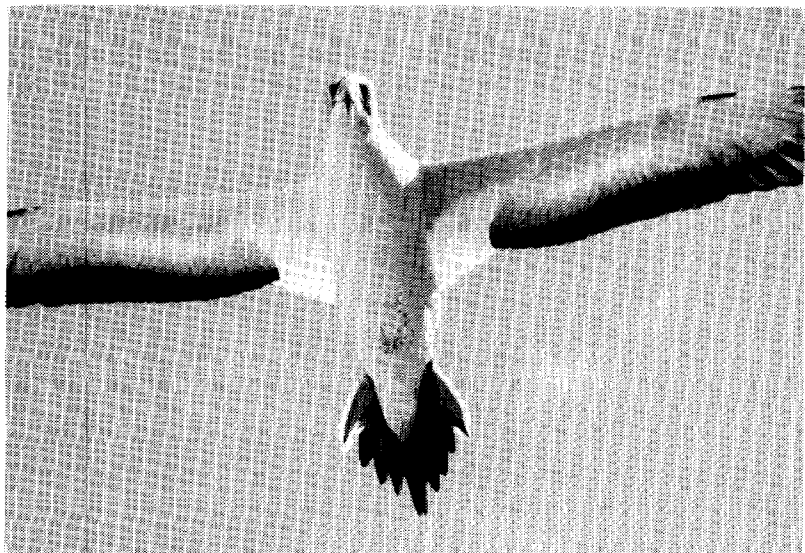


FIGURE 3 — Tail mainly black

Stein thought for a while that he had found a way of telling that a bird was subadult, but it was not to be. Even the number of tail-feathers proved to be inconstant. One 12-year-old bird had only eight rectrices with a code 3.2.3. Stein had also noted that occasionally up to ten central tail-feathers, even

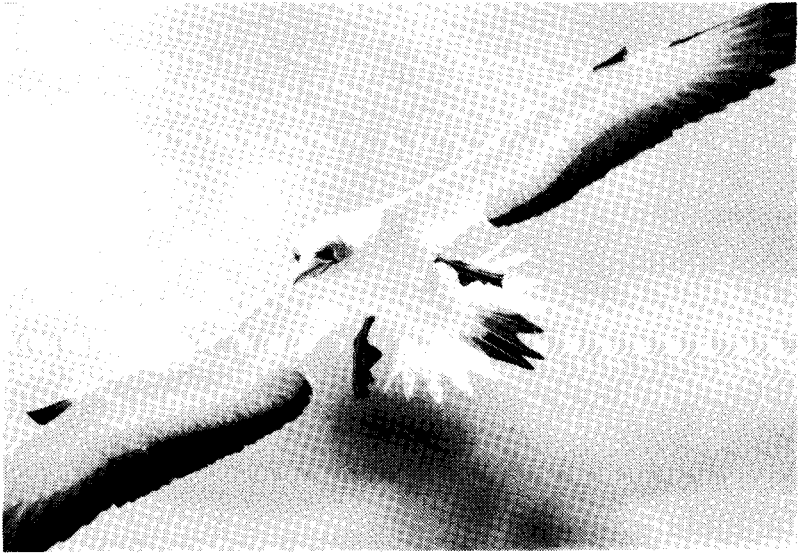


FIGURE 4 — An unevenly marked tail, code 5.3.4



FIGURE 5 — Carrying nest material, code 3.6.3, as in Buddle's photograph in apparent adults, might be black; an interesting observation duly noted in the "New Field Guide". But even with most 6-year-old subadults a code of 4.4.4 was normal. More recently Robertson (1985) has stated, without giving a precise formula, that the central tail-feathers of adults are black and the side feathers white; and also that, in the Australasian Gannet, the tail "changes from black, or black and white, to adult form over three or four years".

The Masked Booby (*S. dactylatra*), which breeds as close as the Kermadec and Norfolk Islands, is credited with having a wholly black tail. However Mr Meadows assures me that the bird which he photographed had the typical yellow crown and nape of a local gannet, and the bird in the picture certainly lacks the 'diabolical' appearance mentioned by Serventy & Warham (1971).

It is commonly accepted that the adult North Atlantic Gannet (*S. bassana*) has a white tail and the Cape Gannet or Malagash (*S. capensis*) a black tail, although in some examples the tail is variable. An instructive series of photographs in Nelson's "The Gannet" shows how the extent of black in the tail-feathers of North Atlantic Gannets shrinks during the years of immaturity; but even in fourth-year birds strong traces of black remain.

Although the three species of true gannets, as distinct from boobies, fish mainly over continental shelves, it is reasonable to conjecture that, aided by the West Wind Drift and the Roaring Forties, South African Gannets became the ancestors of Australasian Gannets and may still in their juvenile wanderings cross the Indian Ocean. Indeed recently, on the strength of photographs taken at Port Phillip Bay, Victoria, of a gannet with 12 black tail-feathers, *Sula capensis* has been added tentatively to the Australian list. Every year many seabirds from the south-west Indian Ocean or beyond reach New Zealand waters. In July 1987 a Grey-headed Mollymawk (*Diomedea chrysostoma*), bearing a South African band, was picked up at Whatipu, a few miles south of Muriwai, and Yellow-nosed Mollymawks (*D. chlororhynchos*), which seem to like the company of gannets, are now sighted by perceptive mariners every winter in the coastal waters of northern New Zealand.

Long isolation has enabled New Zealand gannets to evolve from fledging to maturity distinctive patterns of growth, plumage change and behaviour. However, variations in the number of black rectrices may indicate a not-too-distant origin from *S. capensis* and a tendency to revert to type. Alternatively, perhaps *S. capensis* sometimes straggles to New Zealand and has settled in to hybridise with *S. serrator*.

This note had been prompted by Ronald Meadows' outstanding pictures. To him I gratefully acknowledge my indebtedness. Since photographing the black-tailed gannet, he has returned to Muriwai and obtained pictures (Fig. 2-5) of other apparently adult, but probably young adult, gannets which show variations in the tail-feathers. These do not accord with Peter Stein's code of 4.4.4.

REFERENCES

- ALEXANDER, W.B. 1955. Birds of the Ocean.
 BUDDLE, G.A. 1951. Bird Secrets, p.40.
 MACKWORTH-PRAED, C.W.; GRANT, C.H.B. 1962. Birds of the Southern Third of Africa.
 NELSON, 1985. The Gannet.
 REED, S.M. 1979. Establishment of a new gannetry. Notornis 26: 89-92.
 ROBERTSON, C.J.R. 1985. Pages 110-111 in Complete Book of New Zealand Birds.
 SERVENTY, D.L.; WARHAM, J. 1971. Handbook of Australian Sea-birds.
 SIMPSON, K.; DAY, N. 1984. The Birds of Australia, p.42.
 STEIN, P.A. 1971. Horu Horu revisited. Notornis 18: 334.

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