

SHORT NOTES

ORANGE-FRONTED PARAKEET: RECORD OF FLOCKING

Despite Harrison's (1970) review of what is known of *Cyanoramphus malherbi* Souance, the smallest and rarest of New Zealand parakeets, its status is still subject to discussion. At the NZ Ecological Society's annual conference in Wellington (August 1980), a poster display by Mr Allan J. Nixon, illustrating his research on *Cyanoramphus* parakeets, mentioned Holyoak's suggestion (1974) that *C. malherbi* (Orange-fronted Parakeet) may be a "morph" (i.e. an infra-subspecific form, mutation, phase or variation) of the Yellow-crowned Parakeet, *C. auriceps* (Kuhl). Its constancy, its apparent restriction to the South Island part of the range of *C. auriceps*, and its failure to turn up in a century's experience (more or less) of aviary breeding of *C. auriceps* may be cited as evidence for specific status, and there is additional evidence, not hitherto recorded, that Orange-fronted Parakeets occasionally associate in small flocks.

The late A. C. O'Connor, 1883-1951 (see Dell 1975), one of the last amateur collectors of New Zealand birds, was wool auctioneer for Wright Stephenson & Co. Ltd, stock and station agents, Wellington, and he regularly travelled to other New Zealand centres for the periodic wool sales. When I first knew him, his wife was an invalid, and they had separate rooms upstairs in his Grant Road house. He used the dressing room adjacent to his own room as a museum for his collection. He told me he liked to bring home a bird from his trips, so that he could prepare the skin in the evenings of the following week, within talking distance of his wife. So when in Nelson, Christchurch, or Invercargill, he would borrow the firm's car for the weekend to visit nearby bush or tidal estuaries, and in other centres he would meet up with ornithologist friends for an excursion. (On one occasion, for instance, I arranged to explore with him the shag colony on an island in Lake Waikare in the Waikato, which led to the first firm evidence that Little Black Shags bred there).

On 14 August 1928, O'Connor had driven from Nelson to the "Owen Junction" (Owen River of the *New Zealand Atlas*) and was strolling up a road or track in the bush when he heard parakeets chattering in the canopy above. Thinking they would be Yellow-crowned, he shot one, but was amazed to find, when he picked it up, that it was Orange-fronted. He raised his 410 shotgun and fired again and again and brought down four more Orange-fronted Parakeets. This was always a rare bird, and a new species to add to his collection, but to collect five specimens at one time was unprecedented, almost a miracle.

O'Connor's generation overlapped with that of H. H. Travers and other commercial collectors such as Bills and Dannefaerd, but he was not entirely devoid of conscience as a collector. After his un-

precedented luck in collecting five *C. malherbi* from one flock, he took steps to share the spoil with others. One specimen was handed directly to Dr W. R. B. Oliver (Dominion Museum), where it was mounted by the taxidermist, C. J. Lindsay. Another was given to the late Harry G. Drew of Wanganui, another collector friend who was a proficient taxidermist (taught, when a boy, as he told me in 1945, by Andreas Reischek when the latter came to Wanganui to mount birds for Harry's father, Samuel H. Drew, who founded Wanganui Museum). While O'Connor was competent in preparing study skins, he could not mount birds as well as Drew, and I believe Drew mounted two of O'Connor's *C. malherbi* (one for himself) while O'Connor made study skins of two more. O'Connor later gave (or exchanged) one of these skins to Edgar F. Stead and the other, probably some years later, to R. A. Falla for the Auckland War Memorial Museum, after he joined the staff in 1931. All five birds can still be traced.

O'Connor's manuscript catalogue (Canterbury Museum) has the following entries:

- 442 Owen Junction 14/8/28 ♂ (now Cant. Mus. Av. 63, ex E. F. Stead Coll.)
 443 " " " ♂ (marked "Falla, Auck.", now Auckland Museum, Av. 44.5)
 444 " " " ♂ (now Cant. Mus. Av. 2570, mounted, ex A. C. O'Connor Coll.)

National Museum, Wellington, has the following mounted specimens:

No. 446 Owen Junction ♂ 15/10/28

No. 1364 Owen R. Junction ♂ A. C. O'Connor, September 1928.

No. 446 is presumably the specimen given to Oliver by O'Connor and 1364 was acquired when the Drew Collection was purchased by National Museum about 1946.

I discount the dates associated with the two last specimens. O'Connor told me he got five birds together, giving one to Oliver and one to Drew, and that they were the only *C. malherbi* he ever collected. O'Connor had access to freezing chambers, and taxidermists sometimes put down on labels the dates they received or skinned the specimen. I do not recall O'Connor commenting on the five specimens all being males, and this should (if possible) be checked by measurements.

The three species of mainland parakeet are very similar and obviously closely related. The two larger species interbreed readily in captivity, occasionally in the field (Taylor 1975) and few would doubt that the two smaller species would also hybridise, given the right conditions. Moreover, although Taylor (1975) has recorded ecological differences between Red-crowned and Yellow-crowned, no one has yet been able to define precisely the differences in ecological niche between the three species, the suggestion that *C. malherbi* is

montane or subalpine being incompatible with its occurrence in lowland mixed flocks. This suggests that speciation was quite a recent event, no older than Quaternary in terms of the writer's model roughly correlating systematic differences with time of separation (Fleming 1961; see also Taylor 1975). *Cyanoramphus* is one of the few genera of New Zealand birds containing more than one species. I have elsewhere suggested (Fleming 1974) that the alternating high and low sea levels of the Pleistocene, by repeatedly isolating and linking the main islands, constitute a likely mechanism for initiating such speciation. During the phase of isolation, the southern isolates in each case became ecologically modified for life in southern (if not subalpine) conditions, sufficiently to permit them to live sympatrically with the northern stock when they mingled again after Cook Strait was bridged once more. This model seems most applicable to *Nestor* (Kaka and Kea) and *Xenicus* (Bush and Rock Wren), where the extra South Island species are obviously subalpine, but still seems tenable for the other groups, in which the South Island derivatives are forest species, like their more widespread presumptive ancestors (kiwis, Bush Canary-Creeper complex and parakeets). One difficulty with the model (for all cases) is to explain why the southern form, if evolved earlier in the Pleistocene, did not extend into the North Island across the Cook Strait land bridge in the Last Glaciation; this difficulty would be overcome if speciation dated from the last (i.e. post-glacial) flooding of the strait, but that seems far too recent a date for the degree of differentiation that has occurred. In both cases where three sympatric species have evolved (kiwis and parakeets), the species confined to the South Island (*Apteryx haastii* and *Cyanoramphus malherbi*) would be the result, under this hypothesis, of the latest episode of speciation in the South Island.

O'Connor's record of flocking is obviously relevant to the status of *C. malherbi*; additional data to throw light on parakeet speciation will come from Mr Nixon's studies. I am grateful to Mrs Sylvia Reed (Auckland Institute and Museum), Mr N. H. S. Hyde (National Museum, Wellington) and Mr Ron Scarlett (Canterbury Museum) for supplying data on specimens in the collections of these institutions, to Mr R. H. Taylor for encouraging me to write this note, which I alone could write at this time, and to Mr Nixon for the Holyoak reference.

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