

**THE TAXONOMIC STATUS OF  
EXTINCT NEW ZEALAND COOTS,  
*Fulica chathamensis* subssp. (Aves: Rallidae)**

By P. R. MILLENER

Subfossil remains of a large flightless coot were first discovered on Chatham Island by H. O. Forbes (*Fulica chathamensis*, Forbes 1892) and subsequently in the South Island by A. Hamilton (*Fulica prisca*, Hamilton 1893).

Further discoveries have considerably enlarged the geographic range on the New Zealand mainland (Dawson 1962; Brodkorb & Dawson 1962; Trotter 1965; Millener, in press). However, general agreement on the number of forms admitted and their generic and specific status has yet to be reached.

Hamilton (1893), apparently solely for convenience, and Rothschild (1907), on the presumption (for which he gave no evidence) that the mainland form was volant, proposed specific separation for the mainland and Chatham forms. Scarlett (1955), followed by Oliver (1955), however, allowed no such distinction. Brodkorb & Dawson (1962), citing the evidence of Andrews (1896) that the New Zealand forms differed from both *Palaeolimnas newtoni* Milne Edwards (the type species) and *Fulica*, proposed the new genus *Nesophalaris*. They treated the two forms as discrete taxonomic units "in the absence of a more critical comparison."

Olson (1973), on the basis that both forms exhibit characters of the pelvis and humerus typical of *Fulica*, returned them to that genus. Although Olson (1975) agreed with Scarlett that the two forms could not be clearly distinguished on the basis of size or on the shape of the crania, and therefore that specific separation was unwarranted, he did propose that morphological differences in the humeri were sufficient to validate subspecific distinction as *Fulica c. chathamensis* Forbes, 1892 and *Fulica c. prisca* Hamilton, 1893.

Examination of almost all the Extinct Coot bones available in New Zealand museums and private collections (Millener, in press), however, has shown the criteria selected by Olson to be insufficiently reliable to distinguish the two forms.

It is here proposed that certain characteristics of the sterna and tibiotarsi, described in detail below, provide a more consistent and less subjective means of discrimination.

Of the specimens illustrated, those designated Av 5280 are from a skeleton found by H. O. Forbes on Wharekauri, Chatham Islands

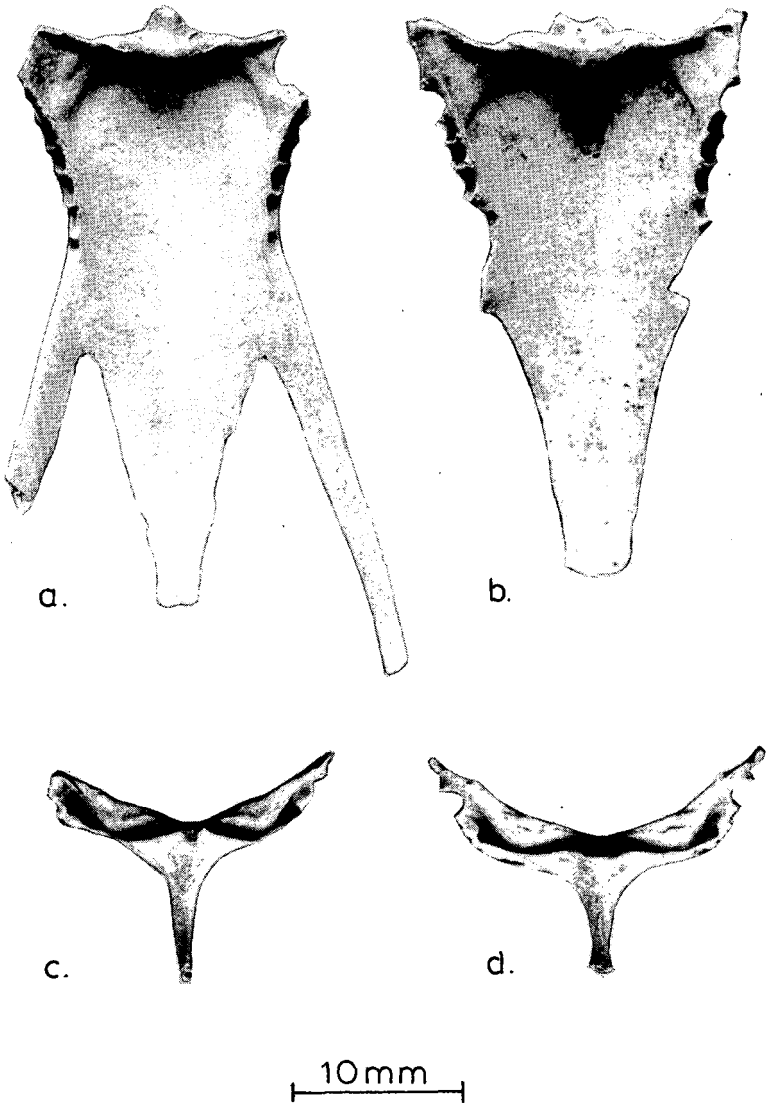


FIGURE 1 — Sterna of *Fulica chathamensis* subspp. in dorsal (a, b) and anterior (c, d) views.

a, c *Fulica c. chathamensis* (Av 5280)

b, d *Fulica c. prisca* (AU 6394)

c. 1892 and now held by the Canterbury Museum; and those designated AU 6394 are from a skeleton found by C. J. Templer in Mac's Quarry Cave, Waitomo in 1978 and now held by the Auckland University Geology Department.

*Sternum* (Figure 1 a-d)

Viewed in dorsal aspect, the ventral manubrial spine of *chathamensis* is distinctly rounded anteriorly (Fig. 1a). A distinct central zone of demarcation separates the coracoidal sulci. In *prisca* the spine is somewhat broader and anteriorly is flattened or, more usually, notched (Fig. 1b). It has on its ventral surface a small spike, which is usually

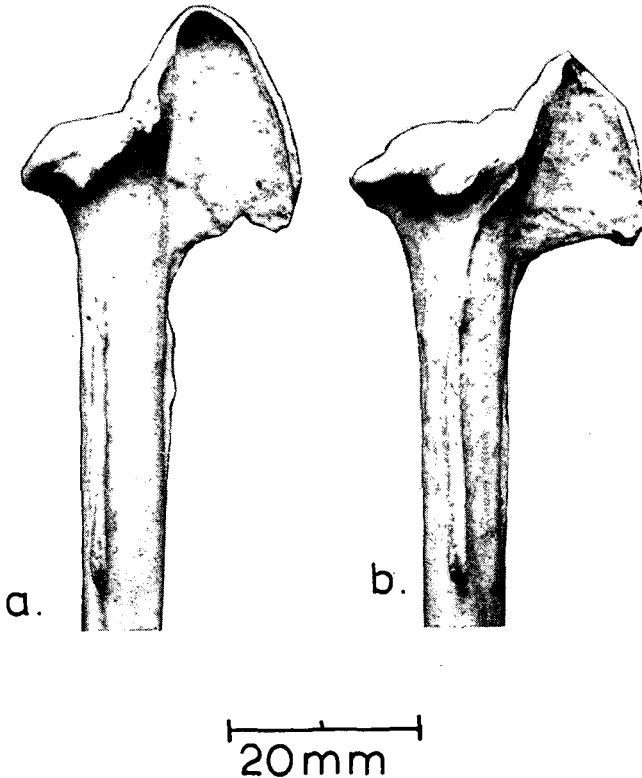


FIGURE 2 — *Fulica chathamensis* subsp.: proximal portions of right tibiotarsi in external lateral view.

- a *Fulica c. chathamensis* (Av 5280)  
 b *Fulica c. prisca* (AU 6394)

absent in *chathamensis*. The coracoidal sulci merge centrally, exhibiting no noticeable zone of demarcation between them.

In anterior view, the coracoidal sulci of *chathamensis* take the shape of a very broad W (Fig. 1c) due to the upturning of the ventral manubrial spine. No such upturning is evident in *prisca*, and thus the sulci form a very shallow U (Fig. 1d).

#### *Tibiotarsus* (Figure 2 a-b)

In external lateral aspect, the proximal tibiotarsus of *chathamensis* exhibits a ridge which extends vertically upward from the fibular crest to the protuberance external to, and below, the lateral articular surface (Fig. 2a). In *prisca* a comparable ridge, proximo-anteriorly directed, connects the fibular crest and the outer cnemial crest (Fig 2b). Thus, whereas in *chathamensis* a markedly undercut rim connects the protuberance beneath the lateral articular surface with the outer cnemial crest, in *prisca* the two are separated by a distinctive groove.

In *chathamensis* too, the depression between the inner and outer cnemial crests is much deeper than that of *prisca*, while the inner cnemial crest itself is, proximally, noticeably more elongated.

Despite the available material consisting almost entirely of isolated bones from widely separated localities and of varied geologic age (certainly, in some cases, in the order of thousands of years), these selected characteristics allowed a remarkably consistent distinction to be made between the mainland and Chatham Island forms. Consequently, Olson's (1975) recommendation of subspecific status for the two forms is strongly supported.

Indeed, in many extant species (e.g. *Gallirallus australis*, *Nestor meridionalis*, *Callaeas cinerea*), subspecific status is given to forms which, osteologically, vary but little in size and are indistinguishable by shape or form. It would, therefore, not seem unreasonable to confer specific status on each of the two forms of Extinct Coot. Confirmation of a proposal such as this must, however, await the availability of larger sample sizes than exist at present.

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## SHORT NOTE

### RED-CAPPED DOTTEREL IN NORTH CANTERBURY

During the 1960s and 1970s, I spent much of my spare time wandering upstream of the mouths of the rivers and tributaries of northern Canterbury. During this time, I have been aware of a general presence of the Red-capped Dotterel (*Charadrius alexandrinus ruficapillus*), although it has not been easy to find and seldom in the same place twice. I have encountered it, in singles or small groups, mainly on the Ashley and Waipara Rivers and once on the Leader River between early July at the earliest and late November at the latest. I have the impression that it arrives in late winter and prefers the shallower, more quietly flowing streams with plenty of cover nearby. However, my sightings on these quieter streams have not been at the same places from year to year, or even from month to month. If, then, they really prefer the major rivers, the reason that their population has not increased greatly may be that these rivers are subject to heavy flash floods from July to December. They do not seem to re-nest, and so with lost nests, they may depart early.

All my sightings have been within about 15 km of the river mouths. Since Shand's reports of a female Red-capped breeding with a male Banded Dotterel (*C. bicinctus*) in 1947 and 1950 (Oliver 1955, *New Zealand birds*), the general attitude to any mention I have made about birds I have seen has been to assume that they too are hybrids. However, my descriptions seem to match that of adult Red-capped (B. D. Heather, pers. comm.), lacking any suggestion of the size, pattern, or general colouring of Banded Dotterels.

The first account in my notes is of a field weekend 25-28 October 1963 by the local OSNZ branch, which included a survey of the Ashley River from the Gorge bridge to the main road. A pair of Red-capped (called "hybrids" as usual) with two chicks was found. Probably because of a typing error, this was reported as five chicks in the report (*Notornis* 11 (1): 61-62, 1964). In my notes, the adult description