

## The Former Existence of a Species of *Falco* in the Chatham Islands, New Zealand: Some New Evidence

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Resulting from his expedition for collecting the bones of extinct birds in the Chatham Islands, 500 miles to the east of New Zealand, from January 21 to February 16, 1892, H. O. Forbes identified the remains of a small hawk, and he reported this in various publications (Dawson, 1957); but these bones could not be located subsequently by other workers, with the exception of one bone among five records of *Falco* from the Chatham Islands and now in the Canterbury Museum, Christchurch (Oliver, 1955; Scarlett, 1955). These five bones are all the material evidence so far known of the presence of *Falco* in the Chatham Islands.

Despite the rediscovery of much of Forbes' original material (Dawson, 1958), now in the British Museum (Natural History), no *Falco* bones collected or named by Forbes were found. It has been my privilege recently to examine and identify, for the Department of Palaeontology of the British Museum, a very large collection of bones of extinct birds from New Zealand and the Chatham Islands—formerly part of the late Lord Rothschild's museum at Tring; this collection has yielded, among its masses of unidentified and unsorted bones, some further material of a species of *Falco*.

The bones which have so far been identified and subsequently registered in the Museum collection are: 1 skull, 2 premaxillae, 5 mandibles, 1 sternum, 11 pelves, 9 humeri, 5 femora, 8 tibio-tarsi, 3 tarso-metatarsi, 1 coracoid, and 1 phalanx; collected by H. O. Forbes in February 1892.

It is a matter of some interest that Forbes (1892) was able to distinguish a stratification in the Chatham Island deposits, ranging from the overlying "dark vegetable soil, whose depth indicates that a long period of time has been necessary for its accumulation," to a layer of "more or less friable sea-sand, several feet in depth," followed by a third layer "in some places thirty to forty feet thick, of hard pink-coloured sand," apparently underlain by limestone rock. According to Forbes, certain birds (e.g., *Diaphorapteryx hawkinsi* and *Palaeolimnas chathamensis*) occurred in the pink sand while others, which "probably died out more recently," were derived from the over-lying sea-sand. He listed "the small hawk (*Harpa ferox*)" in the latter category but there is, in the British Museum collection, one tibio-tarsus firmly coated with the pink sand, also characteristic of many of the *Diaphorapteryx* bones there. This may be of significance when a detailed chronology of the Chatham Island sand dunes is achieved.

Even with such a small number of bones present among the several thousand making up the entire Rothschild Collection, this identification is enough to verify Forbes' earlier published records (Dawson, 1957), and to show that a species of *Falco* was moderately abundant at one time in the Chatham Islands. In the collection are bones of a harrier of the genus *Circus* occurring with about the same frequency, but, unlike *Falco*, a species of *Circus* still lives in this region. The *Falco* bones, the skull and pelvis in particular, are sufficiently well-preserved to allow good comparisons to be made with the species occurring at present on the mainland of New Zealand, and this aspect will be considered later.

Another record of *Falco* in the Chathams exists, apart from those listed earlier (Dawson, 1957). Buller (1875) mentioned an egg of "*Falco ferox*" from the Chathams, reputedly collected by T. H. Potts, and in the collection of the Canterbury Museum. He gave a later reference to this egg (Buller, 1888), and, apart from the bones, this seems to be the only evidence of the living bird in this region.

I should like to take this opportunity of thanking Dr W. E. Swinton, Keeper of Fossil Reptiles and Birds, British Museum, for the facilities he provided and for the services of his two assistants, Mr B. H. Newman and Mr L. Port. I am greatly indebted to my wife for her constant help and advice in dealing with this collection.

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**Status of Pacific Gull in South Australia.**—At present, the Pacific Gull (*Larus pacificus*) could hardly be regarded as a very numerous species in South Australian waters. There are no records of Pacific Gulls having been observed in large numbers anywhere in the State during the past 50 years.

It is interesting, therefore, to note that Dr. Erhard Eylmann, in a paper on "Die Vogelwelt des südöstlichen Teiles vom Staate Südaustralien" (*Journal für Ornithologie*, 62: 242, 1914) classes the species among the sea birds occurring in large numbers along the coastline of the State. There can be no question of confusion with the Silver Gull (*L. novae-hollandiae*) which, he states, occurred in considerable numbers.

It seems possible that European settlement has enabled the Silver Gull to multiply during the past half-century, and that this and other factors have caused a decline in the population of Pacific Gulls. — ERHARD F. BOEHM, Sutherlands, S.A., 7/4/61.