

SHORT NOTE

A taxonomic redescription of the New Zealand Falcon, *Falco novaeseelandiae* Gmelin, 1788

ABSTRACT

The New Zealand Falcon is redescribed to clarify the confused original description, the existence of possible type specimens and the nomenclature of possible subspecific taxa. A synonymy, redescription and differential diagnosis are given.

INTRODUCTION

Gmelin (1788) based his original description of *Falco novaeseelandiae* on that of Latham (1781). Both authors confused the plumages, describing a juvenile as 'male' and an adult as 'female'. Until quite recent times the adult and juvenile plumages have been confused (Brown & Amadon 1968). Also many authors, such as Buller (1873) recognised two species or subspecies (e.g. Swann 1922) on the basis of body size. The large pale form known as the 'Quail Hawk' was separated from the smaller, darker 'Bush Hawk' using a succession of Latin synonyms.

In addition, the identity of the surviving type specimen is uncertain and so both the nomenclature and the description of the New Zealand Falcon require clarification.

CLASSIFICATION

Order: Falconiformes

Suborder: Falcones

Family: Falconidae

Genus and species: *Falco novaeseelandiae*

SYNONYMS

New Zealand Falcon Latham, 1781, Gen. Syn. i. p. 57.

Falco novae Seelandiae Gmelin, 1788 (ex Latham), Syst. Nat. i. p. 268.

Falco brunnea, Gould, 1838 (not Bechstein 1805), Synops. Birds Austr. pt iii. p.42.

Falco australis, Hombron and Jaquinot, 1841 (not Gmelin 1788), Annal. Sci. Nat. Paris, 2nd Series, vol. xvi p.32.

Hypotriorchis novaezealandiae, Gray, 1844, Gen. of Birds i. p.20.

Falco harpe, Forster, 1844, Descr. Anim. p.68.

Hieracidea novae zealandiae, Kaup, 1847, Isis p.80.

Falco ferox, Peale, 1848 (not Gmelin 1788), U.S Expl. Exped. p.67.

Harpe novae-zealandiae, Bonaparte, 1855, Comptes Rendus, xli. p.652.

Harpe brunneus, Gray, 1869, Hand -1. of B. i. p.22.

Ieracidea novae zealandiae, Gray, 1869, Hand -1. of B. i. p.22.

Hieracidea novae zealandiae, Buller, 1873, Birds of N.Z. 1st Ed. p.1.

Hieracidea brunnea, Buller, 1873, Birds of N.Z. 1st Ed. p.6.

Harpa novae zealandiae, Sharpe, 1874, Cat. Brit. Mus. Birds vol. 1 p.372.

Harpa australis, Sharpe, 1874, Cat. Brit. Mus. Birds vol. 1 p.373.

- Harpa ferox*, Buller, 1888, History of N.Z. Birds, p.220.
Nesierax sp. Oberholser, 1899, Proc. Acad. Nat. Sci. Philad. p.203.
Nesierax novaezealandiae, Buller, 1905. Suppl. vol. ii. p.58.
Nesierax australis, Buller, 1905, Suppl. vol. ii. p.59.
Nesierax pottsii, Mathews and Iredale, 1913, Ibis 1(10): 420.
Nesierax novae-seelandiae novae-seelandiae, Swann, 1922, Syn. Accipitres, 2nd Ed. p.185.
Nesierax novae-seelandiae pottsii, Swann, 1922, Syn. Accipitres, 2nd Ed. p.168.
Falco novaezeelandiae, Brown and Amadon, 1968, Eagles, Hawks and Falcons of the World, vol. ii p.808.

DESCRIPTION

The species description is based on the specimens documented by Fox (1977).

Adult male: Crown, nape and back blue-black, barred rufous or grey on scapulars and upper wing and tail coverts. Tail black, 7-11 narrow white separate bars, buff tip. Primaries black, 8-10 broad white bars on inner webs. Secondaries black, barred grey. Wing tips rounded, primary 8 (third from leading edge) longest. Black malar stripe, buff cheeks and superciliary stripe. Throat fulvous white with narrow white shaft line. Crop and breast white or cream, streaked vertically black or dark brown. Flanks loosely barred horizontally black with cream ocellations. Abdomen cream, streaked rufous. Undertail coverts rufous cream. Thighs rufous, streaked brown. Bill black with tomial tooth, base blue-grey. Cere, circumorbital ring and legs deep lemon yellow, richer during breeding season. Claws black. Irides dark brown.

Adult female: Larger than, but similar to, adult male. Crown and nape often less blue. Soft parts a paler yellow.

Immature: Variable. Both sexes similar apart from size. Back plain black, initially blue-black, fading in winter to dark brown. Some barred dorsally like adult. Black crown and malar stripe, buff cheeks and superciliary stripe. Throat fulvous white, finely streaked black. Crop and breast obscurely marked dark brown and fulvous, some paler. Abdomen cream, finely streaked brown. Undertail coverts dull brown and rufous. Thighs dull rufous brown, streaked dark brown. Tail black, 0-10 narrow white interrupted bars, often only faint. Soft parts olive green, sky blue or dull grey, changing to yellow at about 9 months. Claws black. Irides dark brown. Body moult to adult begins at 6-10 months. Full adult plumage reached by 16 months.

Nestling: Hatched with eyes and ears open, irides dark brown, legs pink, fine white natal down. At 11-12 days a thick, woolly, grey second down conceals natal down. Feathers appear from 14 days.

Eggs: Variable, pale to very dark pink when fresh, speckled rusty brown. Ovoid. Length 44.9 - 54.3 mm, breadth 34.4 - 39.6 mm, fresh weight 41 - 45 g, n = 5 Eastern Falcon eggs.

POLYMORPHS

The New Zealand Falcon apparently has three forms, differing in size, colour, habitat and range. For data on these forms (Eastern, Southern and Bush Falcons) see Fox (1977).

DIFFERENTIAL DIAGNOSIS

Found only in New Zealand and Auckland Islands. The tail: standard wing length ratio is larger than in all other *Falco* species.

TYPE SPECIMEN

Medway (1976), on historical grounds, considered No. 49692, now in the Naturhistorisches Museum, Vienna, as being a surviving type of the female of Latham's New Zealand Falcon and Gmelin's *Falco novae Seelandiae*, from the Leverian Museum. But the Leverian specimen described by Latham (1781:57) had 'no apparent bands on the tail', whereas No. 49692 has four cream-coloured bands and a fifth faint band on the tail (H. Schifter, pers. comm.). The identification of No. 49692 as a Latham type is therefore questionable. Latham gave his type locality as Queen Charlotte Sound.

REMARKS

Pending further data on the Southern Falcon, the New Zealand Falcon has been treated as a single variable species. Because polymorphs differ so much ecologically it is important for field workers to state the form and locality when studying this species. Adult females No. 19797 (Eastern Falcon, North Canterbury), No. 13067 (Southern Falcon, Adams Island, Auckland Islands) and No. 17674 (Bush Falcon, Whiteman's Valley, Wellington), all in the National Museum, Wellington, are representative samples of each form, although not formally designated as type specimens.

LITERATURE CITED

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N.C. FOX, *Wildlife Department, Carmarthenshire College of Technology and Art, Jobs Well Road Campus, Carmarthen, Dyfed, Wales, UK*