

Island differentiation of New Zealand's extinct mergansers (Anatidae: Mergini), with description of a new species from Chatham Island: correction and addition

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Abstract

An ambiguous designation of the holotype of Chatham Island Merganser *Mergus milleneri* is corrected, and an overlooked discovery of a bone of this merganser associated with a Polynesian midden dating from the early 16th Century is appraised.

Key words: Chatham Island, Merganser, *Mergus milleneri*, holotype.

Correction

Bones of a merganser from Chatham Island, 800 km east of New Zealand, were identified as differing in size and proportion from those of mergansers at Auckland Islands, New Zealand, the type location for the Auckland Islands Merganser *Mergus australis* and the taxon then also encompassing mergansers from the main islands of New Zealand (Williams *et al.* 2014). As a consequence, Chatham Island's merganser was described as a new species *Mergus milleneri*. The holotype of this new species was designated as a skull collected

from the cave Te Ana a Moe, Chatham Island, by P.R. Millener in 1991 and held at the Museum of New Zealand Te Papa Tongarewa. The holotype was illustrated alongside a skull of the Auckland Island Merganser (Williams *et al.* 2014: Fig. 3), and in the text and in the legend of the figure, the holotype specimen number was given as NMNZ S.29496.3. However, the Chatham Island Merganser skull in the figure was clearly labelled “29496.7”.

The holotype specimen number given in the text and in the legend of Figure 3 was incorrect. The holotype should have been designated as NMNZ S.29496.7.

Addition

At the time of publication we were unaware of any merganser bone having been collected from any archaeological site on Chatham Island, only from the cave Te Ana a Moe and from scattered natural bone accumulations in the island's sand dunes. However, we had overlooked Marshall *et al.*'s (1987) record of avian remains collected from Polynesian middens excavated at Waihora, Chatham Island, in 1973. This record included an eroded right femur with a minimal length of 46.1 mm, identified by R.J. Scarlett as being from a merganser, extracted from strata from which charcoal was dated to 1450–1620 AD (Sutton & Marshall 1977). This bone is now in the archaeological collection at Otago Museum, Dunedin, New Zealand, but is without a specimen number and cannot now be identified with certainty (M. White, pers. comm.).

Marshall *et al.* (1987) also recorded the presence in the Otago Museum archaeological collection of four other bones collected from Chatham Island by D.R. Simmons (see Simmons 1964) and later identified by R.J. Scarlett as being from mergansers. These include a left humerus (specimen D67.2206, length 65.2 mm) and a right carpometacarpus (specimen D67.2241, length 36.2 mm), both extracted from the natural deposit in the cave Te Ana a Moe. Their measurements lie in the lower quartile of measurements of female Chatham Island Mergansers recorded in Williams *et al.* (2014).

The third bone, a right tibiotarsus (specimen D67.1464), was collected from a

“dune midden, Waitahu, Chatham Is.” and was originally identified by an unknown person as being from a Grey Duck *Anas superciliosa*. From a photograph of the bone we confirm the original identification and note that the bone's length (90 mm), which considerably exceeds lengths of tibiotarsi from all Chatham Island and Auckland Island Mergansers reported by Williams *et al.* (2014), lies within the range of measurements for Grey Duck tibiotarsi reported by Worthly (2004).

The fourth bone listed by Marshall *et al.* (1987), without any associated specimen number, was a left “immature” femur. It cannot now be identified with certainty in the museum's collection (M. White, pers. comm.).

Avian remains extracted from the cave Te Ana a Moe have been dated from *c.*1250 years BP (for surface remains) to *c.* 3000 years BP (at 1 m depth) (Millener 1999). The significance of the Waihora archaeological merganser specimen is that if its identification and dating are confirmed, it provides first evidence for the contemporaneous presence of the merganser and the initial human colonists on Chatham Island. The merganser was not known to the first European colonists reaching the island in the early 19th Century. However, Millener (1999) has challenged stratigraphic interpretations at the Waihora archaeological sites by dating Dieffenbach's Rail *Gallirallus dieffenbachii* bones from there as up to *c.* 5950 cal BP. He suggested that much of the so-called midden material at this site has been eroded from naturally accumulated deposits that considerably pre-date human occupation. Because of this

stratigraphic uncertainty we consider that contemporaneous occupation of Chatham Island by mergansers and the initial human settlers has yet to be confirmed.

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Photograph: Murray Williams braving the elements on Chatham Island to visit the cave Te Ana a Moe, from which most Chatham Island Merganser bones and the sole complete skeleton of Chatham Island Duck (see elsewhere in this issue) were recovered, by H. Campbell.



Photograph: Alan Tennyson, curator of fossils in his curatorial lair at the Museum of New Zealand Te Papa Tongarewa, by Te Papa images.