SHORT NOTE

An extinct New Zealand raven (*Corvus antipodum*) on the Auckland Islands – an osteographic enigma?

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A tarsometatarsus of a New Zealand raven (*Corvus antipodum*) was found in sand dunes on Enderby Island in 1964 (Dawson 1964a). The circumstances of its discovery and the bone are described, and the significance of the find is discussed.

During January 1964, I led an oceanographic cruise aboard HMNZS *Endeavour* to the New Zealand subantarctic (Dawson 1964b). I had about an hour ashore at Sandy Bay on Enderby Island, on 18 Jan 1964, and was able to search for bird bones among dune deposits first noted there in 1875 (Kiesenwetter & Kirsch 1877). Among the bones identified in the field was the distinctive left tarsometatarsus of a raven (*Corvus* sp.), recognisable partly by the shape of its hypotarsus (Wang *et al.* 2013). This was a genus that I was

FIGURE 1. Raven tarsometatarsi from three New Zealand sites. LEFT: S.047719, Corvus antipodum, Enderby Island, Auckland Islands, 18 January 1964, collected by Elliot Dawson. MIDDLE: S.047720, C. antipodum, Lake Grassmere spit, Marlborough, 26 August 1948, collected by Elliot Dawson and Robert Moginie. RIGHT: S.030732, C. moriorum, Tahatika Creek, Chatham Island, 1 February 1992, collected by Philip Millener. All specimens are held by Te Papa (NMNZ). Image: Jean-Claude Stahl, Te Papa.



Received 16 May 2019; accepted 27 July 2019 Correspondence: elliotwdawson@icloud.com **TABLE 1.** Measurements (mm) of tarsometatarsi of ravens from the North and South Islands of New Zealand (*Corvus antipodum*), the Chatham Islands (*C. moriorum*), and the unique specimen from Enderby Island, Auckland Islands (NMNZ S.047719). All measurements apart from the Enderby Island specimen are from Table 2 of Gill (2003).

Bone parameter	Locality	n	Mean	Range
Length	Enderby Island	1	69.3	-
	North Island	27	67.6	63.1–72.6
	South Island	15	70.8	68.6–73.6
	Chatham Islands	23	72.9	70.7–76.6
Proximal width	Enderby Island	1	11.7	-
	North Island	28	11.0	9.9–11.8
	South Island	14	11.6	10.9–12.3
	Chatham Islands	25	12.2	11.4–13.2
Minimum shaft width	Enderby Island	1	4.3	-
	North Island	28	4.0	3.7–4.3
	South Island	16	4.3	3.9–4.7
	Chatham Islands	23	4.6	4.3-5.2

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familiar with from both museum collections and in the field. The collections made on Enderby Island were entered in the station register on board *Endeavour* as NZOI D162, with the bones as Sample No. 5. The raven bone (NMNZ S.047719) is now held by Museum of New Zealand Te Papa Tongarewa (Fig. 1).

Bones of New Zealand ravens (*Corvus antipodum*) occur in middens and pre-human sites as far south as Stewart Island, with a larger species (*Corvus moriorum*) previously found on the Chatham Islands (Gill 2003; Scofield *et al.* 2017). The Enderby Island bone is indistinguishable in size and prop-ortions from tarsometatarsi of *C. antipodum* from the South Island and Stewart Island, but is slightly shorter than the smallest *C. moriorum* tarsometatarsus (Fig. 1 and Table 1). Hence, the bone should be referred to *C. antipodum* (Forbes, 1893).

There had been no authentic record of a corvid on the Auckland Islands until the 1964 find. Benjamin Morrell's listing of 'rooks' among birds he had seen at the Auckland Islands in Jan 1830 (Morrell 1832; Miskelly & Taylor 2020 – Chapter 2 in this book) should be ignored since Morrell had a well-earned reputation for being inaccurate and unreliable (Childerhouse & Gales 1998).

No further raven bones have been identified among more than 3,500 bones subsequently collected on Enderby Island (Tennyson 2020 -Chapter 7 in this book). Hence, the Enderby raven was most probably a vagrant. Despite intermittent human settlements on Enderby Island since prehistoric times (Anderson 2005; Richards 2018), there appears no good reason for the bone to be considered either a deliberate or an accidental introduction of either a bird or an artefact. Although ravens have a significance in the cultures of every other country where they occur, including Hawaii (Marzluff & Angel 2005), there is no evidence of New Zealand ravens having any cultural significance, e.g. ceremonial use of their bones.

The simplest conclusion is that this bone (an amazingly fortuitous find by someone who recognised it in the field) is a relic of a single raven that reached the Auckland Islands as a vagrant from New Zealand, within the late Holocene.

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