

## SHORT NOTE

The ‘French kiwi’ *Dromiceius novaezelandiae* first recorded and named by R.P. Lesson in the Bay of Islands, April 1824

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The scientific expedition of the French naval corvette *La Coquille* under the command of Louis Isidore Duperrey (1786–1865) circumnavigated the globe during 1822–1825 (Cretalla 2010; Dickinson *et al.* 2015; Lee 2018). Within the extensive collections of botanical, mineralogical, and zoological specimens of the expedition, were at least 254 bird species, some 46 of which were apparently new to science (Cuvier 1825). The overwhelming majority were described and named either by René Primevère Lesson (1794–1849), or by his naval surgeon colleague Prosper Garnot (1794–1838), or by the two as co-authors (Lee & Bruce 2019).

*La Coquille* called at the Bay of Islands, from 3–17 April 1824. The 2 officers responsible for natural history were the first lieutenant Jules-Sébastien-César Dumont d’Urville (botany and entomology) and Lesson (zoology). Garnot had left the ship in Sydney the previous month because of illness.

Lesson and d’Urville undertook the first biological survey of the Bay of Islands since the visit of James Cook in late 1769. The ornithological records of Cook’s naturalists Banks and Solander were never published and collected specimens were evidently dispersed and lost (Bartle 1993).

Lesson collected, described, and named (along with Garnot) a number of New Zealand birds – many for the first time (Andrews 1986).

These include southern royal albatross (*Diomedea epomophora*), North Island kaka (*Nestor meridionalis septentrionalis*), North Island saddleback (*Philesturnus rufusater*), North Island tomtit (*Petroica macrocephala toitoi*), North Island robin (*Petroica longipes*), whitehead (*Mohoua albicilla*), and New Zealand kingfisher (*Todiramphus sanctus vagans*).

Lesson also collected specimens and provided descriptions, including the Māori names for three other New Zealand birds, grey warbler (*Gerygone igata*), North Island fantail (*Rhipidura fuliginosa placabilis*), and North Island fernbird (*Bowdleria punctata vealeae*) and lodged them with the Muséum national d’Histoire naturelle (MNHN) in Paris but did not assign scientific names (Lesson 1825). These were left for later naturalists to name (Lee 2016).

Lesson did publish a description and allocated a scientific name *Dromiceius novaezelandiae* for another New Zealand bird, the kiwi, introducing the indigenous name ‘kivi-kivi’ (kiwi kiwi) to ornithology (Mathews 1935). This appears to have been of the Northland taxon of the North Island brown kiwi (*Apteryx mantelli*). However, despite Lesson’s prior publications (1828, 1829 [in Duperrey], 1830, 1838, 1839, 1844), and his name *Dromiceius novaezelandiae* being cited under the entry “Apteryx” in contemporary encyclopaediae (cf. Anon. 1838: 352; Heck 1838: 339; Glaire & Walsh 1840: 581) and by Gray in his *A List of the Genera of Birds...* (1840: 63), Lesson’s name was overlooked when the North Island brown kiwi species was later named by Bartlett (1852).

Lesson's description and name were based on a section of skin, the feathers of which were intended to be woven into a cloak, *kākahu*, more precisely *kahu kiwi* (Harwood 2011), shown to him by Māori at the Bay of Islands. During this time the ship was moored at the entrance to Manawaora Bay, near the Russell peninsula, today the site of a remnant Northland brown kiwi population (Craig *et al.* 2010; Lee & Bruce 2019).

Lesson was told that the bird from which the skin was taken was flightless and common in the forest where it was hunted with dogs. Unaware of Shaw (1813), Lesson deduced this bird to be a new and smaller species of the emu that he had seen in New South Wales a few weeks previously and which he recorded in his *Manuel d'Ornithologie* (Lesson 1828: 210) as "L'ÉMOU PAREMBANG *dromiceius Novæ-Hollandiæ*. *Casuarius Novæ-Hollandiæ*, Lath", followed immediately by:

"ÉMOU KIVIKIVI, *dromiceius Novæ-Zelandiæ*. Less."  
 "Cet é mou est de moitié plus petit que le précédent ; son plumage est grisâtre, suivant ce que me dirent les naturels, car je n'en ai vu qu'une peau à moitié détruite et informe. Les habitants en estiment la chair et le chassent avec des chiens. Ils le nomment kivi-kivi. Il est très commun dans les forêts de la Nouvelle-Zélande."

[In translation: 'This emu is half the size of the preceding species [*dromiceius Novæ-Hollandiæ*]; now *Dromaius novaehollandiæ*]; its plumage is greyish, following what the natives said to me, for I have seen only a half-destroyed and shapeless skin. The inhabitants esteem the flesh and hunt it with dogs. They call it kivi-kivi. It is very common in the forests of New Zealand.'] Given the little he had to go on Lesson's deduction was impressive.

It was only after the publication of his *Manuel* in 1828 that Lesson became aware of the *Apteryx* first announced by Shaw (1813). After this Lesson always connected his discovery with Shaw's description (Lee & Bruce 2019). This he cited in his next publication, a livraison from part 2 of the *Zoologie* volume 1 of the voyage (Lesson in Duperrey 1829: 418). Translated, this states: 'The natives often spoke to us of a bird without wings, of which they brought us remains, which seemed to us to be those of an emu. Mr Kendall [the English missionary Thomas Kendall (1788–1832)], confirms this belief by asserting the existence of cassowaries analogous to those of Australia in the woods of New Zealand. We do not doubt today that it must be the *Apteryx* [*sic*] *australis* of Shaw figured on pl. 1057 and 1058, of the 24<sup>th</sup> volume of his *Miscellany*.'

Further to the above, Lesson also provided in a footnote a description obviously based on Shaw's 1813: text to pl. 1057–1058 "*Character Genericus*"

and "*Character Specificus*" (see Lee & Bruce 2019).

In his *Traité d'Ornithologie* (1830: 12) Lesson expanded his initial description (again based on Shaw) and placed his name as a junior synonym of Shaw's name.

Lesson's association of his name with Shaw's has been long misinterpreted in the literature to mean the names applied to the same species, and indeed to the point that both names were associated with the same South Island locality, e.g. Bonaparte (1856), Giebel (1872), Rothschild (1899), Dubois (1913), Mathews & Iredale (1913).

Lesson (1838: 71) again dealt with the *Apteryx* in his *Compléments de Buffon* vol. 2, revealing he was shown the skin by a Bay of Islands chief, almost certainly the Ngare Raumati leader Tui (or Tuai) (1797?–1824). During the visit of *La Coquille* Tui lived on board the ship, but on 10 April formally welcomed Lesson and other crew members, including Dumont d'Urville, to his fortified village or pā called Kahuwera on the nearby Paroa peninsula. This was where Lesson most likely saw the skin (Lee 2018).

Lesson (1839: 348) referred briefly to his discovery again using the name "*l'aptéryx*" in the second volume of his popular book *Voyage Autour du Monde*. Lesson's last recorded reference to *Dromiceius* was in *L'Écho du Monde Savant*, 26 May 1844, under the heading "Sciences Naturelles - Notice sur l'aptéryx". In this essay Lesson reviewed all the published work on the *Apteryx* mainly by British scientists, including that of Richard Owen (1804–1892), as well as noting Owen's announcement the previous year regarding the second New Zealand ratite, the giant moa *Dinornis novaeseelandiæ*. Lesson praised Shaw, revealing that French scientists for many years had ignored Shaw's discovery and that he himself had only become aware of his work in 1829 while preparing his *Compléments de Buffon*. Lesson recalled his erroneous initial impression that the partial specimen he saw was that of a new emu, noting it was to 'serve as a cloak for a New Zealand chief'.

He reported that in recent years 'well-preserved' kiwi specimens had been received in London and at the "Muséum de Paris" (MNHN), noting two 'magnificent individuals' also obtained at the Bay of Islands in May 1840 by his former shipmate Dumont d'Urville (1790–1842), then in command of *La Coquille*, renamed *L'Astrolabe*. Lesson referred to these MNHN specimens as 'precious ornaments in the galleries.' (Fig. 1 & 2). Lesson concluded, 'I have reproduced all the titles on the various writings on the *Apteryx* which have come to my knowledge. It is because the compilers can forget too easily the writings of their predecessors, appropriating without ceremony, before the public, the ideas produced by their predecessors.'



**Figure 1.** North Island brown kiwi (*Apteryx mantelli*). The specimen illustrated is one of two specimens collected by Dumont d'Urville of *L'Astrolabe* (previously *La Coquille*) at the Bay of Islands in 1840. '*Apteryx austral*. Shaw.' Engraving Girard after Le Breton and Werner. Plate 24. Pub. 1843. *Voyage Au Pole Sud et dans l'Océanie. Atlas. Zoologie, Oiseaux*. Biodiversity Heritage Library.

Six years later the British zoologist Abraham Bartlett (1812–1897) presented a report on a kiwi specimen sent to London by the New Zealand colonial official Walter Mantell (1820–1895) who had collected it at Dusky Sound. This had appeared to Bartlett to be different in a number of respects to the specimens he was familiar with in various collections such as those of the British Museum and the Royal College of Surgeons. Bartlett was about to describe it so but remembered that Shaw's *Apteryx australis* specimen was in the private collection of the Earl of Derby, (Edward Smith-Stanley, 13<sup>th</sup> Earl of Derby, 1775–1851). This specimen, the holotype, Shaw had reported was obtained from New Zealand's "south coast" (Shaw 1813: 216.) Access was obtained and an anatomical examination of the specimen found its key diagnostic features to be the same as Mantell's. Bartlett here suggested Shaw's specimen had also originated from "Dusky Bay" on the advice of "J.E. Gray Esq." (Shaw's specimen was soon after bequeathed to the Liverpool Museum, now World Museum, where it is still held [specimen no. D180]).



**Figure 2.** One of two Northland brown kiwi specimens, collected by Dumont d'Urville of *L'Astrolabe* (previously *La Coquille*) at the Bay of Islands in 1840. Both mounted specimens were rediscovered at the MNHN, Paris in 2018. One of which is on display in the galleries evidently since reported there by Lesson in 1844. The specimen in the photograph is currently held in the zoothèque. The label (inset) on the base reads "*Apteryx australis* (Shaw.) *L'Astrolabe* N. ZÉLANDE." These appear to be the oldest specimens of the North Island brown kiwi in existence. Photos: Patrick Boussès, MNHN.

On this basis Bartlett named *all the other* specimens, which he determined "as far as I was able to ascertain" had been provenanced from the North Island, as *Apteryx mantelli* (Bartlett 1852: 274–276). He did not nominate a type and made no mention of the earlier name Lesson had applied to a North Island specimen.

Then, 83 years later, Gregory Mathews (1876–1949), reviewed Bartlett's name and concluded that as Lesson's name preceded Bartlett's by 24 years, and was based on specimen material seen at the time, the North Island brown kiwi, then considered a subspecies of *A. australis*, "must be called *Apteryx australis novae-zelandiae* (Lesson 1828)" (Mathews 1935: 179). Mathews (1937, 1946) reiterated this recommendation albeit with the spelling "*novaezealandiae*", an incorrect subsequent spelling first used by Gray (1840). Nonetheless, it was the original spelling (see Article 32.2.3 of ICZN 1999) first used by Mathews (1935) in his proposal to replace *mantelli* as the oldest name for the North Island brown kiwi.

Mathews indicated that kiwi populations within the North Island might be separable and thus regarded *mantelli* as representing another potentially distinct population, predicting "It is possible that the bird for the south of the North Island may differ from that of the north so that

*mantelli* Bartlett may come into use for the former." Mathews selected "Wellington Province", originally covering the southern half of the North Island, as its type locality (Mathews 1935: 179). However, the second species of kiwi (sub-fossil remains) identified over much of the southern North Island proved to be an extinct population of *A. rowi* (Gill *et al.* 2010). Following his death Mathews' work fell out of favour, particularly after the assessment by Serventy (1950) and his criticism of "Mathewsian names". This may explain why, in the first official *Checklist of New Zealand Birds* (Fleming 1953), the entry for "Apterygidae: Kiwis" ignored Mathews (1935, 1937, 1946), and instead announced: "As there has not been a recent investigation of the morphological and distributional relationships of the kiwis, a modification of the arrangement of Mathews (1931) is presented." The *Checklist* identified one species of brown kiwi with three subspecies, North Island, South Island and Stewart Island and two species of spotted kiwi (little spotted and great spotted). This treatment was followed in the next two checklists (Kinsky 1970; Turbott 1990). However, the fourth and current *Checklist* (Gill *et al.* 2010: 19), taking into account the results of recent advances in genetic research, in particular Holdaway *et al.* (2001) and Tennyson *et al.* (2003), recognises five species and two subspecies of kiwi. These five species include three of brown kiwi, *A. australis* (*A. a. australis*, *A. a. lawryi*), *A. mantelli* and the newly named *A. rowi*, plus the little spotted kiwi *A. owenii* and great spotted kiwi *A. haastii*. Gill *et al.* (2010) noted Lesson's name "*Dromiceius Novae Zealandiae*" [*sic*], which along with two others was dismissed on the grounds of being "historical names not based on localised specimens or adequate descriptions...unable to be referred to known taxa".

Recent and ongoing mtDNA analyses of kiwi populations are revealing a dramatic and previously unappreciated level of genetic diversity in largely morphologically cryptic populations of kiwi, indicating a taxonomic reality that has yet to be fully reflected in nomenclatural terms (*cf.* Shepherd & Lambert 2008; Craig *et al.* 2010; Shepherd *et al.* 2012; Weir *et al.* 2016; White *et al.* 2018). Craig *et al.* (2010) provided the officially accepted common name 'Northland brown kiwi' for the "genetically distinct" Northland taxon within *A. mantelli*. Moreover, Weir *et al.* (2016: E5581-82) identified 11 extant kiwi taxa, confirming four genetically distinctive allopatric populations, including the Northland taxon, within *A. mantelli* that they argue merit status as "distinct subspecies".

Just prior to the appearance of the *Checklist* by Gill *et al.* (2010), but too late to be included therein, Shepherd *et al.* (2009) selected a neotype for *A. mantelli*, collected at Ohakune in the central North Island which we note is within the habitat range

of the "western taxon" of Craig *et al.* (2010) and Heather & Robertson (2015) and also the proposed "Taranaki" subspecies of Weir *et al.* (2016) (and interestingly just within the northern limits of Mathews' proposed type locality).

Shepherd *et al.* (2009) could find no reliably traceable or sufficiently preserved North Island brown kiwi specimens in the United Kingdom dating from Bartlett's time, but as the result of an inquiry related to Lee (2018) and Lee & Bruce (2019) both kiwi specimens collected by d'Urville in 1840 from the Bay of Islands (Dumont d'Urville 1846: 183-184) have been rediscovered in the MNHN in Paris, numbered 15560 and 15562, "Ancien catalogue" (Patrick Boussès *pers. comm.* 04 July 2018). These evidently well-preserved mounted specimens of the Northland taxon appear to be the oldest North Island brown kiwi specimens in existence (Fig 2.)

Lesson's kiwi description was based on specimen material (although evidently uncollected), its "*grisâtre*" ('greyish') feathers compatible with plumage descriptions of North Island brown kiwi (Oliver 1955; Heather & Robertson 2015), with a region-specific locality, the inner Bay of Islands. Furthermore, we note the name has been used as valid since 1899 – see Article 23.9 of the Code (ICZN 1999). We suggest that if the taxonomic status of the Northland brown kiwi taxon is elevated to subspecies rank as proposed by Weir *et al.* (2016) then Lesson's (and Mathews') name *novaezealandiae* could be reconsidered.

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