

Catalogue of type specimens of birds in the Museum of New Zealand Te Papa Tongarewa

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ABSTRACT: Type specimens of birds, including fossils, were deposited in the collections of the Museum of New Zealand Te Papa Tongarewa (Te Papa) and its predecessor organisations from 1871 onwards. These are listed here for the first time. We have identified 69 primary type specimens, which are name-bearing specimens for 61 taxa, and 446 registered lots of secondary type specimens in the collections. In total, 73 names are based on these specimens. More than half of these names are now junior synonyms. The primary types of at least nine taxa, notably eight species named by Walter Buller, are missing. The remaining type specimens are now all labelled and conserved in line with the recommendations of the International Commission for Zoological Nomenclature. Loss of types from the collection before 1914 reflected inadequate government funding of the national collections during the first 50 years of the museum's existence.

KEYWORDS: type specimens, Aves, birds, catalogue, missing, museum, Te Papa, New Zealand.

Introduction

Increasingly from the 1830s, the identity of new species of birds could be checked because individual specimens or groups of specimens on which new names are based began to be specifically labelled and conserved in museums as type specimens (Farber 1976, 1982). If a similar specimen was obtained, then its identity could be tested against the type. Thus, the idea of museum bird collections as the ultimate reference for bird classifications was established (Farber 1976). The importance of conserving original name-bearing type specimens in collections was recognised by some bird taxonomists from the earliest days (e.g. Latham 1821: ix). However, despite the adoption of the Strickland Code in 1842, even in Europe only the most progressive bird curators (e.g. Gray 1844; Schlegel 1862; Pelzeln 1873) complied with this (Farber 1976). Adoption of strict criteria for type specimens gained general acceptance only after 1905, when the first *International Code of Zoological Nomenclature* was

published (Wagstaffe 1978). The *Code* spelt out rules as to what type specimens were and the responsibility of museums to identify and look after them.

However, in New Zealand, the importance of type specimens was recognised only in relatively modern times, although there were exceptions (e.g. Hutton 1871). Colonial and post-colonial administrations in New Zealand saw little purpose in building up well-documented reference collections, partly because the centres of expertise and research on birds were mostly in Europe and North America. The importance of museums for education was understood, so public museums were established in many colonies, but they were neither staffed nor resourced to develop reference collections or to carry out research on these. This was the situation in New Zealand for the Dominion Museum (now Te Papa) before 1930 (Dell 1965).

In the nineteenth century, the bird collection of the Colonial Museum – now Museum of New Zealand Te Papa Tongarewa (Te Papa) – was not catalogued and few

specimens had collection data attached. The first type specimens were deposited in the museum by Walter Buller in 1871 (data from Galbreath 1989: 323). Separate registers for different natural history collections were introduced by the Director W.R.B. Oliver only from about 1928 (Roberts & Paulin 1997). The lack of documentation of nineteenth-century specimens has proved a great problem in the compilation of this type list. In many instances, colonial naturalists describing new species did not designate type specimens or, if they did, the specimens were not labelled as types. Particularly guilty in this regard was Walter Buller, who had a hazy understanding of the nature and significance of type specimens (Galbreath 1989: 323). When Buller presented the Colonial Museum with his bird collection in 1871, he regarded it as forming the 'type' collection for the museum, although most specimens were not types in the correct sense and none was labelled as such or even with the species name (Bartle & Yaldwyn 2001). However, the Colonial Museum zoologist of the time, Captain F.W. Hutton, wrote the scientific names of the species on the labels of the specimens (Hutton 1874a). He also appreciated the significance of types because, in September 1871, he wrote 'the collection of birds purchased from Mr. Buller for the Colonial Museum ... contains type specimens of all his new species, except *Gerygone assimilis* and *Creadion cinereus*' (Hutton 1871: v).

Compounding the above difficulties has been the disappearance of many specimens originally deposited in the Colonial Museum. Many of the vertebrate specimens obtained by the museum during the nineteenth century have been lost, destroyed or exchanged, including many types (Roberts & Paulin 1997; Worthy 1997a). For example, specimens deposited in museums by Buller were sometimes 'later removed by him and included in his own collections' (Stidolph 1927: 213), including what later became the holotype of *Sceloglaux rufifacies* Buller, 1904 (Worthy 1997a; Fuller 2000). In 1871–72, some Colonial Museum collections were 'not properly accommodated and so ... constantly liable to injury by insects and mice', and by 1889–90 collections had been suffering from the 'ravages of insects and dust' for some years (Kell 2001: 3). During 'the summer of 1893', Bather (1895) noted that the Colonial Museum was 'the worst-managed institution of the kind in probably the whole Southern hemisphere'. Bather found museum labels missing and others 'often attached to the wrong specimens'. Bather also noted that 'Curator' James Hector and his assistant, Alexander McKay,

had an 'insufficiency of men, money and time' to carry out their duties. Roberts & Paulin (1997) identified a 'chaotic period' from 1893 to 1913 as being the worst for destruction and loss of types at the museum.

Although there were no staff dedicated exclusively to the care of the bird collection before the appointment of F.C. Kinsky as curator in 1963 (Bartle & Yaldwyn 2001), the collection was cared for by a series of zoological assistants. The first bird cataloguing began in 1908, but it appears that type specimens began to be labelled as such only after about 1930 by a small group of staff, beginning with W.R.B. Oliver, C. McCann, J.C. Yaldwyn and F.C. Kinsky.

Apart from Yaldwyn's (1979) list of moa types, no catalogue of type specimens of birds has previously been published for Te Papa or its predecessors – the Colonial Museum (1865–1907), the Dominion Museum (1907–73) and the National Museum of New Zealand (1973–92). The collection of recent and fossil birds at Te Papa currently numbers nearly 69 000 specimens (Gill 2006: Table 1). These have now all been catalogued in Te Papa's electronic database, KE EMU, and images of most primary types are available online.

The International Commission on Zoological Nomenclature (ICZN 1999: 79) has identified the following institutional responsibilities in connection with name-bearing types (Recommendation 72F.), to:

1. ensure that all are clearly marked so that they will be unmistakably recognized as name-bearing types;
2. take all necessary steps for their safe preservation;
3. make them accessible for study;
4. publish lists of name-bearing types in its possession or custody; and
5. so far as possible, communicate information concerning name-bearing types when requested.

Te Papa now complies with all of the above recommendations. At present, however, the types are not segregated from the main bird and fossil collections.

Abbreviations and terms used in the text

Mount – feathered specimen mounted for display

NMNZ – National Museum of New Zealand (now Museum of New Zealand Te Papa Tongarewa), Wellington

Skin – feathered specimen prepared as a study skin

Cataloguing history

Two Te Papa registration series are currently used for bird specimens: one for recent specimens (numbers from this

catalogue are now prefixed 'OR.') and one for fossil specimens (now prefixed 'S.'). Between 1908 and 1923, all bird specimens were catalogued in another register (now superseded), numbered with the prefix 'A'. The first entries in this register were by Augustus Hamilton, but from September 1914 his son Harold Hamilton catalogued most of the birds, which numbered nearly 1200 specimens by May 1923. All the specimens in the 'A' register that are still held in the collection have been recatalogued into the two currently used registers. The 'OR' register was probably begun in the 1920s (e.g. it was cited by Oliver 1930a: 41). We suspect that the 'S' register was begun in about 1940, when Oliver was preparing his monograph on moa (Oliver 1949). Until about 1959, non-moa fossil birds were registered in the 'OR' register. This explains why some type material of fossil taxa (*Pachydyptes ponderosus* Oliver, 1930a, *Pachydyptes novaezealandiae* Oliver, 1930a and *Fulica prisca* Hamilton, 1893) appears in this list with the prefix 'OR'. However, not all fossil specimens registered before 1959 have the prefix 'OR', because some have since been re-registered into the 'S' register. Only current catalogue numbers are provided here.

All registration numbers are now prefixed by 'NMNZ' (following Leviton *et al.* 1985), although this prefix does not appear in Te Papa's electronic database. In earlier publications, the registration numbers of types may be preceded by the prefixes 'CM' (for Colonial Museum), 'DM' (for Dominion Museum), 'NM' (for National Museum) or 'MNZ' (for Museum of New Zealand). These four prefixes are no longer used and have been supplanted by 'S.' or 'OR.' in the electronic database, and by 'NMNZ S.' or 'NMNZ OR.' in other databases, specimen records and labels.

Methods

The primary sources of information used to compile this catalogue were the existing specimens and their labels in the Te Papa collection. The second main sources of information were the publications describing new bird species.

Te Papa's extensive archive of documents dating back to 1865 (46 000 registered entries in 2007) were not generally used as sources for the current catalogue because of time constraints. However, future archival research might prove to be profitable, for the archives include Colonial Museum letter books, receipt books and additions books.

As part of our research, each type specimen was specifically labelled as to its type status and was databased

accordingly. Before our work, many specimens were not labelled as types at all and others were labelled inadequately. Images of the primary types were obtained for Te Papa's website.

The taxonomic sequence of bird orders used here follows Dickinson (2003). The author(s) and year of publication of each taxon are given after the species/subspecies name. The name of the journal or book, followed by volume number (if a journal), and the page number on which the name was first proposed are also given. The status of the type appears in bold capitals, according to the definitions given in the ICBN *Code* (1999: 119–120, see below). The age, sex, nature of specimen and collection details – including locality, date and collector – are given if known. However, details of paratype specimens are not provided in full where there are more than 15 specimens of a taxon. Additional notes on the history of each type specimen are provided where relevant, under the heading 'Comments', including information on the location of other type specimens of listed taxa. Current names for the species represented by the type specimen(s) are provided together with a recent reference.

Primary types

Holotype The single specimen designated as the name-bearing type of a nominal species or subspecies when the nominal taxon is established.

Lectotype A syntype designated as the single name-bearing type specimen subsequent to the establishment of a nominal species or subspecies.

Syntype Each specimen of a type series from which neither a holotype nor a lectotype has been designated.

Neotype The single specimen designated as the name-bearing type of a nominal species or subspecies when there is a need to define the nominal taxon objectively and no previous name-bearing type is believed to be extant.

Secondary types

Allotype A term for a designated specimen of opposite sex to the holotype.

Paratype Each specimen of a type series other than the holotype.

Paralectotype Each specimen of a former syntype series remaining after the designation of a lectotype.

Cotype A term formerly used for either syntype or paratype that should no longer be used in zoological nomenclature.

List of type specimens

Order DINORNITHIFORMES

Family EMEIDAE

Pachyornis (Pachyornis) australis Oliver, 1949
Dominion Museum Bulletin 15: 70.

Holotype

NMNZ S.26: one skull and 20 vertebrae, fossils, Late Pleistocene or Holocene age, collected at Salisbury Tableland Cave, Northwest Nelson, New Zealand, in 1879 by A. McKay.

CURRENT NAME: *Pachyornis australis* Oliver, 1949 – Worthy & Holdaway 2002: 73.

Pachyornis (Mauiornis) septentrionalis Oliver, 1949
Dominion Museum Bulletin 15: 61.

Lectotype

NMNZ S.129: pelvis, fossil, Holocene age, collected in limestone cave at Te Pohue, Hawke's Bay, New Zealand, in 1909 by H. Hill (see Yaldwyn 1979; Worthy & Holdaway 2000).

COMMENTS: Lectotype designated by Worthy & Holdaway (2000: 104).

Paralectotype

NMNZ S.129: eight bones, fossils, Holocene age, collected in limestone cave at Te Pohue, Hawke's Bay, New Zealand, in 1909 by H. Hill (see Yaldwyn 1979; Worthy & Holdaway 2000).

COMMENTS: Oliver's type specimens comprise parts of two individuals from two species – most bones agree with *Pachyornis geranoides* (Owen, 1848) but two tibiotarsi are *Anomalopteryx didiformis* (Owen, 1844) (see Worthy 2005a). Worthy & Holdaway (2000) designated the pelvis as the lectotype, therefore making all other bones in the series paralectotypes. Subsequently, Worthy (2005a) invalidly designated the sternum as the lectotype. Article 74.1.1 of the *Code* (ICZN 1999) states that 'the valid designation of a lectotype fixes the status of the specimen as the sole name-bearing type of that nominal taxon; no later designation of a lectotype has any validity'.

CURRENT NAME: *Pachyornis geranoides* (Owen, 1848) (all the bones except two tibiotarsi) – Worthy 2005a: 40.

Euryapteryx pygmaeus Hutton, 1891
New Zealand Journal of Science 1: 249.

Holotype

NMNZ S.24322: single left and right tarsometatarsi, fossils, Late Pleistocene age, collected on Takaka Hill, New Zealand (Hutton 1892; Worthy & Holdaway 1994).

COMMENTS: These bones were transferred from the Nelson Museum to Wellington (Worthy 1992, pers. comm., 1999).

CURRENT NAME: *Euryapteryx gravis* (Owen, 1870) – Worthy 2005a: 40.

Family DINORNITHIDAE

Dinornis gazella Oliver, 1949
Dominion Museum Bulletin 15: 166.

Holotype

NMNZ S.107: one pelvis, fossil, Late Pleistocene or Holocene age, collected at Te Aute, Hawke's Bay, New Zealand, in 1888 by Augustus Hamilton (Worthy 2000a).

CURRENT NAME: *Dinornis novaezealandiae* Owen, 1843 – Bunce *et al.* 2003: 174.

Dinornis hercules Oliver, 1949
Dominion Museum Bulletin 15: 174.

Holotype

NMNZ S.217a: one right tibiotarsus, fossil, Late Pleistocene or Holocene age, collected in limestone cave, Coonoor Cave, Hawke's Bay, New Zealand, in Jul. 1914 by M. Conway.

CURRENT NAME: *Dinornis novaezealandiae* Owen, 1843 – Worthy & Holdaway 2002: 73.

Order APTERYGIFORMES

Family APTERYGIDAE

Apteryx maxima Sclater & Hochstetter, 1861
Natural History Review (October): 506.

Neotype

NMNZ OR.22663: adult female skin, collected near Charleston, New Zealand, on 23 Dec. 1981 by D. Gaddock.

CURRENT NAME: *Apteryx haastii* Potts, 1872 – Palma *et al.* 2003.

Apteryx rowi Tennyson, Palma, Robertson, Worthy & Gill, 2003

Records of the Auckland Museum 40: 57.

Paratypes

NMNZ OR.27239: juvenile male, partial skeleton and one leg in ethanol, collected on 15 Feb. 2002 by C. Rickard;

NMNZ OR.27240: immature female, partial skeleton and skin and leg in ethanol, collected on about 8 Mar. 2002 by S. Anderson; NMNZ OR.27241: adult female, partial skin and partial skeleton, collected on 20 May 2002 by S. Anderson; NMNZ OR.27242: immature female, partial skin and partial skeleton plus mandible and one leg in ethanol, collected on 16 Jun. 2002 by C. Rickard; and

NMNZ OR.27243: adult male, partial skin and partial skeleton plus partial skin and one leg in alcohol, collected in late Jul. 2002 by S. Anderson. All collected in South Okarito Forest, New Zealand.

COMMENTS: The holotype of *Apteryx rowi* is in the Canterbury Museum, registered as AV 38269 (Tennyson *et al.* 2003).

CURRENT NAME: *Apteryx rowi* Tennyson, Palma, Robertson, Worthy & Gill, 2003 – Cunningham *et al.* 2007.

Order GALLIFORMES Family MEGAPODIIDAE

Megavitiornis altirostris Worthy, 2000b

Journal of the Royal Society of New Zealand 30: 351.

Holotype

NMNZ S.37362: right tarsometatarsus and 11 phalanges (I.1, II.1, II.2, II.3, III.1, III.2, III.3, III.4, IV.1, IV.2, IV.3) of one foot, fossils, probably Holocene age, collected in Udit Tomo, Wainibuku, Viti Levu, Fiji, on 3 Oct. 1998 by T.H. Worthy, G. Udy and S. Matararaba.

Paratypes

NMNZ S.37016–9, S.37180 and S.37182: fossils, probably Holocene age, collected at Qara-ni-vokai, Voli Voli Cave, Sigatoka, Viti Levu, Fiji, on 27–28 Mar. 1998 by T.H. Worthy, A. Anderson and S. Matararaba; and NMNZ S.37357–61, S.37363–87, S.37390–410 and S.37412–55: fossils, probably Holocene age, collected in Udit Tomo, Wainibuku, Viti Levu, Fiji, in Oct. 1998 by T.H. Worthy, G. Udy and S. Matararaba.

CURRENT NAME: *Megavitiornis altirostris* Worthy, 2000b – Steadman 2006: 522.

Megapodius amissus Worthy, 2000b

Journal of the Royal Society of New Zealand 30: 342.

Holotype

NMNZ S.37468: right tarsometatarsus, fossil, probably Holocene age, collected in Udit Cave, Wainibuku, Viti Levu, Fiji, on 3 Oct. 1998 by T.H. Worthy, G. Udy and S. Matararaba.

Paratypes

Other elements of NMNZ S.37468 (the holotype is the right tarsometatarsus), with the same collection data, are considered to be probably part of the same individual (Worthy 2000b): left and right coracoids, a proximal end and shaft of a left humerus, left femur, left and right tibiotarsi, left tarsometatarsus, right phalanges I.1, II.2, III.2, III.3, IV.1, IV.2, left phalanx II.2 and one ungual; NMNZ

S.37456–67 and S.37469–75: collected in Oct. 1998; and NMNZ S.38255–56: collected on 20 Nov. 1999. Fossils, probably Holocene age, collected in Udit Cave, Wainibuku, Viti Levu, Fiji, by T.H. Worthy, G. Udy and S. Matararaba.

CURRENT NAME: *Megapodius amissus* Worthy, 2000b – Steadman 2006: 522.

Order ANSERIFORMES Family ANATIDAE

Cereopsis novaeseelandiae Oliver, 1955

New Zealand Birds: 601.

Holotype

NMNZ OR.8686: skull of recent age, without data.

CURRENT NAME: *Cereopsis novaehollandiae* (Latham, 1801) – Worthy & Holdaway 2002: 228.

Cygnus chathamicus Oliver, 1955

New Zealand Birds: 603.

Holotype

NMNZ S.23219: skull, fossil, Holocene age, collected on the Chatham Islands, New Zealand.

Paratype

NMNZ S.23219: the remaining bones from the 'composite skeleton' that includes the holotype skull, with the same collection data as the holotype.

COMMENTS: These type specimens have recently been considered 'lost or not identifiable' (Worthy & Holdaway 2002: 227). However, further research has allowed us to provide convincing evidence that skeleton NMNZ S.23219 includes the type specimens:

a) NMNZ S.23219 dates from the correct era, i.e. it was present in the Dominion Museum when Oliver described *Cygnus chathamicus* in 1955. Some writing on one of the labels associated with NMNZ S.23219 is in Augustus Hamilton's hand – as he died in 1913 (Ross O'Rourke, pers. comm., 2007), this specimen was most likely in the collection before then. The type skeleton was certainly in the collection by 1930, when a photograph of it, taken by museum taxidermist Charles Lindsay, was published in Oliver (1930a: 233).

b) The meagre amount of collection information written on the label (referred to above in point 'a') agrees with that published in the original description of *Cygnus chathamicus*. That label simply reads 'Swan Chatham Islds.', while Oliver (1955) wrote that the type specimens are 'from the Chatham Islands'.

c) The preservation of skeleton NMNZ S.23219 agrees with photographs of the type material. The photograph of the

type skeleton in Oliver (1930a, 1955) shows a complete mounted articulated specimen. At first sight, the disarticulated skeleton NMNZ S.23219 does not appear to have previously been mounted. However, many bones show brown marks at their proximal and distal ends, which we believe are remnants of glue formerly used to articulate the skeleton. Also, the label (referred to above in point 'a') appears to be from a mounted display specimen. NMNZ S.23219 includes all the major elements of a swan's skeleton, in agreement with photographs of the type material, although many of the more delicate bones are now damaged.

d) The relatively large size of NMNZ S.23219 matches the data given in the type description. While most measurements of the elements of NMNZ S.23219 agree with those in the type description, some are not a very close match, such as the humerus length (263 mm in the type description, 251 mm measured by us). We suggest that Oliver may have found taking the measurements difficult on the mounted skeleton and made some minor errors. Both Oliver's (1955) measurements of the type skeleton and our measurements of NMNZ S.23219 are near the top of the measurement range presented by Worthy (1998a) for New Zealand swan skeletons.

e) NMNZ S.23219 is the only candidate to be the type material of *Cygnus chathamicus*. It is the most complete fossil swan skeleton from the Chatham Islands held by Te Papa and no specimens matching the type material are held in the other main museum bird collections of New Zealand (Auckland, Canterbury and Otago museums; Brian Gill, Paul Scofield and Otto Hyink, respectively, pers. comm., 2007).

CURRENT NAME: *Cygnus atratus* (Latham, 1790) – Worthy 1998a: 115.

Manuberikia lacustrina Worthy, Tennyson, Jones, McNamara & Douglas, 2007

Journal of Systematic Palaeontology 5: 10.

Holotype

NMNZ S.42307: largely complete left humerus, fossil, Early–Middle Miocene age, collected at Site 1a, Home Hills Station, Manuherikia River bank, Otago, New Zealand, on 17 Mar. 2003 by T.H. Worthy, A.J.D. Tennyson and assistants.

Paratypes

NMNZ S.40094: proximal left humerus, collected on 9 Dec. 2001 by C. Jones, T.H. Worthy and A.J.D. Tennyson; NMNZ S.42306: right humerus, collected on 16 Mar. 2003 by T.H. Worthy, A.J.D. Tennyson and assistants; and NMNZ S.42308: worn right humerus, collected on 16 Mar. 2003 by

T.H. Worthy, A.J.D. Tennyson and assistants. Fossils, Early–Middle Miocene age, collected at Site 1a, Home Hills Station, Manuherikia River bank, Otago, New Zealand.

CURRENT NAME: *Manuberikia lacustrina* Worthy, Tennyson, Jones, McNamara & Douglas, 2007.

Manuberikia minuta Worthy, Tennyson, Jones, McNamara & Douglas, 2007

Journal of Systematic Palaeontology 5: 12.

Holotype

NMNZ S.42317: largely complete left humerus, fossil, Early–Middle Miocene age, collected at Site 1a, Home Hills Station, Manuherikia River bank, Otago, New Zealand, on 17 Mar. 2003 by T.H. Worthy, A.J.D. Tennyson and assistants.

Paratypes

NMNZ S.40472: distal left humerus, collected at Site 1a, Home Hills Station, Manuherikia River bank, on 12 Dec. 2001 by C. Jones, T.H. Worthy and A.J.D. Tennyson;

NMNZ S.41067: proximal right humerus, collected at Croc Site L1, Mata Creek, on 10 Dec. 2001 by T.H. Worthy, A.J.D. Tennyson and C. Jones; NMNZ S.42276: proximal right humerus, collected at Croc Site L1, Mata Creek, on 5 Oct. 2002 by T.H. Worthy, A.J.D. Tennyson and assistants; NMNZ S.42318: proximal right humerus, collected at Site 1a, Home Hills Station, Manuherikia River bank, on 17 Mar. 2003 by T.H. Worthy, A.J.D. Tennyson and assistants; and NMNZ S.42809: right humerus, collected at Croc Site L1, Mata Creek, on 19 Feb. 2004 by T.H. Worthy, A.J.D. Tennyson and assistants. Fossils, Early–Middle Miocene age, collected in Otago, New Zealand.

CURRENT NAME: *Manuberikia minuta* Worthy, Tennyson, Jones, McNamara & Douglas, 2007.

Miotadorna sanctibathansi Worthy, Tennyson, Jones, McNamara & Douglas, 2007

Journal of Systematic Palaeontology 5: 14.

Holotype

NMNZ S.42794: largely complete right humerus, fossil, Early–Middle Miocene age, collected at Site 1a, Home Hills Station, Manuherikia River bank, Otago, New Zealand, on 22 Feb. 2004 by T.H. Worthy, A.J.D. Tennyson and assistants.

Paratypes

NMNZ S.42272: right humerus, collected on 3 Oct. 2002; NMNZ S.42273: right humerus, collected on 3 Oct. 2002; NMNZ S.42274: proximal right humerus, collected on 4 Oct. 2002; and NMNZ S.42275: distal left humerus, collected on 4 Oct. 2002. Fossils, Early–Middle Miocene

age, collected at Croc Site L1, Mata Creek, Otago, New Zealand, by T.H. Worthy, A.J.D. Tennyson and assistants.
CURRENT NAME: *Miotadorna sanctibathansi* Worthy, Tennyson, Jones, McNamara & Douglas, 2007.

Dunstanetta johnstoneorum Worthy, Tennyson, Jones, McNamara & Douglas, 2007

Journal of Systematic Palaeontology 5: 18.

Holotype

NMNZ S.41007: distal left humerus, fossil, Early–Middle Miocene age, collected at Site 2c, Home Hills Station, Manuherikia River bank, Otago, New Zealand, on 9 Dec. 2001 by A.J.D. Tennyson, C. Jones and T.H. Worthy.

Paratypes

NMNZ S.42481 (right coracoid), S.42482 (right ulna), S.42483 (partial left tarsometatarsus), S.42484 (right tarsometatarsus) and S.42485 (pedal phalanx RII.1): fossils, Early–Middle Miocene age, collected at Site 2a, Home Hills Station, Manuherikia River bank, Otago, New Zealand, on 18 Mar. 2003 by T.H. Worthy, A.J.D. Tennyson and assistants.

COMMENTS: The holotype and all the paratypes are probably parts of a single individual (Worthy *et al.*, 2007).

CURRENT NAME: *Dunstanetta johnstoneorum* Worthy, Tennyson, Jones, McNamara & Douglas, 2007.

Matanas enrighti Worthy, Tennyson, Jones, McNamara & Douglas, 2007

Journal of Systematic Palaeontology 5: 20.

Holotype

NMNZ S.42281: largely complete left humerus, fossil, Early–Middle Miocene age, collected at Croc Site L1, Mata Creek, Otago, New Zealand, on 3 Oct. 2002 by T.H. Worthy, A.J.D. Tennyson and assistants.

Paratype

NMNZ S.42704: distal right humerus, fossil, Early–Middle Miocene age, collected at Site 1a, Home Hills Station, Manuherikia River bank, Otago, New Zealand, on 18 Mar. 2003 by T.H. Worthy, A.J.D. Tennyson and assistants.

CURRENT NAME: *Matanas enrighti* Worthy, Tennyson, Jones, McNamara & Douglas, 2007.

Oxyura vantetsi Worthy, 2005b

Memoirs of the Queensland Museum 51: 263.

Holotype

NMNZ S.1081: adult left humerus, fossil, Holocene age, collected at site N141/XII, square 4K, below Taupo Ignimbrite, Lake Poukawa, Hawke's Bay, New Zealand, on 20 Nov. 1967 by T.R. Price and assistants.

COMMENTS: The species description wrongly gives the registration number as NMNZ S.108 (Worthy 2005b).

Paratypes

NMNZ S.3370: right humerus, collected at site N141/XII, square 3J, layer 2, on 13 Apr. 1968; NMNZ S.3527: right humerus, collected at site N141/XII, square 21 (SE), layer 5, on 3 Jun. 1967; NMNZ S.5915: left humerus, collected at site N141/XII, square 10 (NE), 18 in [46 cm] below Taupo Ignimbrite, on 6 Sep. 1969; NMNZ S.9745: left humerus, collected at site N141/XII, square 4B (NW–NE), base *Hyridella* midden, on 4 Jun. 1966; NMNZ S.12165: left humerus, collected at site N141/XII, square 5G (NW), 7 in [18 cm] below Taupo Ignimbrite, on 28 Oct. 1972; NMNZ S.13730: right humerus, collected at site N141/XII, square 10F (NE), on Taupo Ignimbrite, on 14 Oct. 1972; and NMNZ S.20605: right humerus, collected at site 141/II, square 12C, Totara Point, on 15 Jun. 1963. Fossils, Holocene age, collected at Lake Poukawa, Hawke's Bay, New Zealand, by T.R. Price and assistants.

CURRENT NAME: *Oxyura vantetsi* Worthy, 2005b – Tennyson & Martinson 2006: 48.

Order SPHENISCIFORMES

Family SPHENISCIDAE

Pachydyptes ponderosus Oliver, 1930a

New Zealand Birds: 86.

Holotype

NMNZ OR.1450: left humerus, fossil, late Eocene (Runangan) age, collected from rocks at Fortification Hill, Oamaru, New Zealand, before 1872 by C. Traill (Simpson 1971).

CURRENT NAME: *Pachydyptes ponderosus* Oliver, 1930a – Checklist Committee 1990: 64.

Pachydyptes novaezealandiae Oliver, 1930a

New Zealand Birds: 86.

Holotype

NMNZ OR.1451: left humerus, fossil, Oligocene (Dunroonian to Waitakian) age, collected from rocks, Oamaru District, New Zealand (Simpson 1971).

CURRENT NAME: *Platydyptes novaezealandiae* (Oliver, 1930a) – Checklist Committee 1990: 64.

Eudyptula minor chathamensis Kinsky & Falla, 1976

National Museum of New Zealand Records 1: 115.

Holotype

NMNZ OR.13651: adult male skin, collected at the Star

Keys, Chatham Islands, New Zealand, on 7 Sep. 1968 by B.D. Bell.

Paratype

NMNZ OR.13654: adult female skin, collected at the Star Keys, Chatham Islands, New Zealand, on 7 Sep. 1968 by B.D. Bell.

CURRENT NAME: *Eudyptula minor* (Forster, 1781) – Checklist Committee 1990: 70.

Eudyptula minor variabilis Kinsky & Falla, 1976
National Museum of New Zealand Records 1: 116.

Holotype

NMNZ OR.10517: male skin and stomach in ethanol, collected at Mahina Bay, Wellington, New Zealand, on 27 Apr. 1964 by R. Alexander.

Paratype

NMNZ OR.9427: adult female skin, collected at Petone, Wellington, New Zealand, on 7 Nov. 1960 by D. Skinner.

CURRENT NAME: *Eudyptula minor* (Forster, 1781) – Checklist Committee 1990: 70.

Order PROCELLARIIFORMES
Family DIOMEDEIDAE

Diomedea exulans antipodensis Robertson & Warham, 1992

Bulletin of the British Ornithologists' Club 112: 74.

Holotype

NMNZ OR.23412: adult female skin, collected on Central Plateau, Antipodes Island, New Zealand, on 3 Mar. 1985 by C.J.R. Robertson.

Allotype

NMNZ OR.23411: adult male skin, collected on Central Plateau, Antipodes Island, New Zealand, on 3 Mar. 1985 by C.J.R. Robertson.

COMMENTS: Paired with holotype OR.23412.

Paratypes

NMNZ OR.21373 (skin) and OR.21374 (female skin): collected at Antipodes Island, New Zealand, on 24 Nov. 1978 by C.J.R. Robertson.

CURRENT NAME: *Diomedea antipodensis antipodensis* Robertson & Warham, 1992 – Brooke 2004: 176.

Diomedea exulans gibsoni Robertson & Warham, 1992
Bulletin of the British Ornithologists' Club 112: 76.

Holotype

NMNZ OR.23375: adult male skin, collected at Astrolabe Point, Adams Island, Auckland Group, New Zealand, on 15 Feb. 1985 by C.J.R. Robertson.

Allotype

NMNZ OR.18110: adult female skin, collected on Adams Island, Auckland Group, New Zealand, on 5 Jan. 1973 by B.D. Bell.

Paratypes

NMNZ OR.18109: male skin, collected on Adams Island, Auckland Group, New Zealand, on 5 Jan. 1973 by B.D. Bell; and NMNZ OR.23374: male skin, collected on Adams Island, Auckland Group, New Zealand, on 15 Feb. 1985 by C.J.R. Robertson.

CURRENT NAME: *Diomedea antipodensis gibsoni* Robertson & Warham, 1992 – Brooke 2004: 176.

Family PROCELLARIIDAE

Pachyptila turtur subantarctica Oliver, 1955
New Zealand Birds: 119.

Paratypes

NMNZ OR.5615 (male skin) and OR.5616 (female skin): collected on the Antipodes Islands, New Zealand, on 6 Nov. 1950 by R.A. Falla.

COMMENTS: The holotype of *Pachyptila turtur subantarctica* is in the Canterbury Museum, registered as AV 3244 (Freeman & Tunnicliffe 1997). Oliver (1955) does not give detailed information for the paratypes, other than noting that the 'subspecies was again collected on [Antipodes Island] by the Alert expedition of Nov., 1950'. Although five specimens held by Te Papa (NMNZ OR.5615–6 and 10441–3) fit that collection location and date, only NMNZ OR.5615–6 were registered into the museum collection before Oliver published his 1955 description. We have therefore assumed that NMNZ OR.10441–3 were not used by Oliver for his description and are not paratypes.

CURRENT NAME: *Pachyptila turtur* (Kuhl, 1820) – Checklist Committee 1990: 42.

Pachyptila (Pseudoprion) eatoni pyramidalis Fleming, 1939

Emu 38: 400.

Paratypes

NMNZ OR.9799 (feathered head), OR.17345–8 (feathered heads) and OR.17285 (adult female skin): collected at The Pyramid, Chatham Islands, New Zealand, on 16 Dec. 1937 by C.A. Fleming.

COMMENTS: The holotype of *Pachyptila (Pseudoprion) eatoni pyramidalis* is in the Auckland Museum, registered as AV 1408.2 (Gill 1983).

CURRENT NAME: *Pachyptila crassirostris pyramidalis* Fleming, 1939 – Tennyson & Bartle 2005: 52.

Pachyptila crassirostris flemingi Tennyson & Bartle, 2005

Notornis 52: 49.

Holotype

NMNZ OR.17502: adult male skin, collected on Ewing Island, Auckland Islands, New Zealand, on 23 Feb. 1973 by B.D. Bell.

Paratype

NMNZ OR.17499: adult female skin, collected on Ewing Island, Auckland Islands, New Zealand, on 23 Feb. 1973 by B.D. Bell.

CURRENT NAME: *Pachyptila crassirostris flemingi* Tennyson & Bartle, 2005 – Onley & Scofield 2007: 6.

Pterodroma kидderi okahia Mathews, 1935

Bulletin of the British Ornithologists' Club 56: 37.

Holotype

NMNZ OR.14118: mount, collected at Ohakea, New Zealand, on 16 Jul. 1934 by H.A. Fraser.

CURRENT NAME: *Lugensa brevirostris* (Lesson, 1831) – Brooke 2004: 320.

Pterodroma occulta Imber & Tennyson 2001

Emu 101: 126.

Paratype

NMNZ OR.26905: adult male skin, collected 30 miles [48 km] east of Mera Lava, Banks Islands, Vanuatu, on 29 Jan. 1927 by R.H. Beck.

COMMENTS: NMNZ OR.26905 was previously in the American Museum of Natural History, New York, USA, registered as AMNH 216916. It was obtained by Te Papa through exchange in 2002. The holotype (AMNH 216917) and four other paratypes are in the American Museum of Natural History; one other paratype is in the Australian Museum, Sydney (Imber & Tennyson 2001).

CURRENT NAME: *Pterodroma occulta* Imber & Tennyson, 2001 – Dickinson 2003: 74.

Pterodroma leucoptera caledonica Imber & Jenkins, 1981

Notornis 28: 153.

Paralectotypes

NMNZ OR.11377: female skin, collected on Otaki Beach, New Zealand, on 25 Jun. 1961 by P.C. Bull; NMNZ

OR.11378: female skin, collected in the Tasman Sea at 43°28'S 163°55'E, on 3 Mar. 1965 by P.C. Harper; and NMNZ OR.17366: subadult male skin, collected at Titahi Bay, New Zealand, on 4 May 1973 by the SPCA.

COMMENTS: The lectotype is in the American Museum of

Natural History, registered as AMNH 824271, and six other surviving paralectotypes are in the Auckland Museum, New Zealand (Palma & Tennyson 2005).

CURRENT NAME: *Pterodroma leucoptera caledonica* Imber & Jenkins, 1981 – Checklist Committee 1990: 49.

Puffinus spelaesus Holdaway & Worthy, 1994

Emu 94: 203.

Holotype

NMNZ S.28002: 39 bones of one individual, fossils, Holocene age, collected from Level 2, Te Ana Titi Cave, Fox River, Westland, New Zealand, on 18 Oct. 1991 by T.H. Worthy and A. Melhuish.

Paratypes

NMNZ S.27958: 61 bones of two individuals, fossils, Holocene age, collected from Te Ana Titi Cave, Fox River, Westland, New Zealand, on 18 Oct. 1991 by T.H. Worthy and A. Melhuish; NMNZ S.27964: 17 bones of one individual, fossils, Holocene age, collected from Te Ana Titi Cave, Fox River, Westland, New Zealand, on 18 Oct. 1991 by T.H. Worthy; and NMNZ S.28018: 80 bones, fossils, Late Pleistocene or Holocene age, collected from How Dat Cave, Fox River, Westland, New Zealand, on 18 Oct. 1991 by T.H. Worthy.

Other paratypes are bones in the series NMNZ S.27956–28015 and S.28196 (R.N. Holdaway, pers. comm., 10 Sep. 1999; T.H. Worthy, pers. comm., 11 Feb. 2003). NMNZ S.27956–28015: collected on 28 Aug. 1991 by T.H. Worthy and R.N. Holdaway, on 18 Oct. 1991 by T.H. Worthy, A. Melhuish and J. Ravens, and on 5–9 Dec. 1991 by T.H. Worthy and A. Melhuish; and NMNZ S.28196: collected on 12 Mar. 1992 by T.H. Worthy and A. Melhuish (T.H. Worthy, pers. comm., 2 Feb. 1999). Fossils, Holocene age, collected from Te Ana Titi Cave [= Fox's Lair Cave on most labels], Fox River, Westland, New Zealand.

COMMENTS: None was collected in Nov. 1991 (T.H. Worthy, pers. comm., 2 Feb. 1999), contra Holdaway & Worthy (1994).

CURRENT NAME: *Puffinus spelaesus* Holdaway & Worthy, 1994 – Tennyson & Martinson 2006: 38.

Puffinus assimilis haurakiensis Fleming & Serventy, 1943

Emu 43: 119.

Paratypes

NMNZ OR.937: adult male skin, collected on Muriwai Beach, Auckland, New Zealand, on 8 Jul. 1936 by R.A. Falla;

NMNZ OR.23618: adult male skin, collected at Hen Island,

New Zealand, on 26 Nov. 1939 by C.A. Fleming, ex Fleming collection no. 569, identified as a paratype on the label by Fleming; NMNZ OR.23619: male skin, collected on Muriwai Beach, Auckland, New Zealand, on 8 Jul. 1936 by C.A. Fleming, ex Fleming collection no. 62; and NMNZ OR.23620: adult female skin, collected at Dragon's Mouth Cove, Hen Island, New Zealand, on 27 Nov. 1939 by C.A. Fleming, ex Fleming collection no. 568, identified as a paratype on the label by Fleming.

COMMENTS: Fleming & Serventy (1943) state that two birds from Muriwai Beach were found by Fleming. We have assumed that these are skins OR.937 and OR.23619, despite skin OR.937 apparently having been collected by Falla. However, it was prepared by Fleming and was initially in his collection, and there are no skins with these collecting details in the Auckland Museum collection (B. Gill, pers. comm., 19 Aug. 1999). The holotype of *Puffinus assimilis haurakiensis* is in the Auckland Museum, registered as AV 130.9 (Gill 1983).

CURRENT NAME: *Puffinus assimilis haurakiensis* Fleming & Serventy, 1943 – Dickinson 2003: 76.

Family HYDROBATIDAE

Oceanites oceanicus parvus Falla, 1937

BANZARE Reports (Series B, 2): 208.

Paratype

NMNZ OR.23628: adult male skin, shot off Murray Island, Golfe du Morbihan, Kerguelen Island, Indian Ocean, on 23 Feb. 1930 by R.A. Falla, ex Fleming collection no. 650. COMMENTS: The holotype (registered as AV 1202.8) and three paratypes of *Oceanites oceanicus parvus* are in the Auckland Museum (Gill 1983).

CURRENT NAME: *Oceanites oceanicus oceanicus* (Kuhl, 1820) – Jouanin & Mougin 1979: 103.

Cymochorea leucorhoa muriwai Mathews & Hallstrom, 1943

Notes on the Order Procellariiformes: 30.

Holotype

NMNZ OR.21731: adult male skin, collected on Muriwai Beach, Auckland, New Zealand, in Aug. 1922 by R.A. Falla.

CURRENT NAME: *Oceanodroma leucorhoa leucorhoa* (Vieillot, 1818) – Dickinson 2003: 78.

Family PELECANOIDIDAE

Pelecanoides miokuaka Worthy, Tennyson, Jones, McNamara & Douglas, 2007

Journal of Systematic Palaeontology 5: 8.

Holotype

NMNZ S.42431: distal right humerus, fossil, Early–Middle Miocene age, collected at Croc Site L1, Mata Creek, Otago, New Zealand, on 5 Oct. 2002 by T.H. Worthy, A.J.D. Tennyson and assistants.

CURRENT NAME: *Pelecanoides miokuaka* Worthy, Tennyson, Jones, McNamara & Douglas, 2007.

Order CICONIIFORMES

Family ARDEIDAE

Ardeola Novae Zelandiae Purdie, 1871

Proceedings of the New Zealand Institute (Otago Institute) 3: 99.

Holotype

NMNZ OR.644: mount, collected at the head of Lake Wakatipu, New Zealand, received from J.S. Worthington.

COMMENTS: This specimen was purchased from the Otago Museum in 1907.

CURRENT NAME: *Ixobrychus novaezelandiae* (Purdie, 1871) – Tennyson & Martinson 2006: 40.

Nycticorax kalavikai Steadman, Worthy, Anderson & Walter, 2000

Wilson Bulletin 112: 169.

Holotype

NMNZ S.37651: right tarsometatarsus, fossil, Holocene age, collected at Anakuli Cave, Niue, on 7–12 Jan. 1995 by T.H. Worthy.

Paratypes

NMNZ S.37652–37700: various bones, fossils, Holocene age, collected at Anakuli Cave, Niue, on 7–12 Jan. 1995 by T.H. Worthy.

CURRENT NAME: *Nycticorax kalavikai* Steadman, Worthy, Anderson & Walter, 2000 – Steadman 2006: 522.

Order PELECANIIFORMES

Family SULIDAE

Sula dactylatra fullagari O'Brien & Davies, 1990

Marine Ornithology 18: 2.

Paratypes

NMNZ OR.1098: adult female skin, collected on Curtis Island, Kermadec group, New Zealand, on 16 Apr. 1929 by C.J. Lindsay; NMNZ OR.12710: adult male skin, collected

on Raoul Island, Kermadec group, New Zealand, on 8 Jun. 1944 by J.H. Sorensen; and NMNZ OR.15955 (adult female skin) and OR.15956 (adult male skin): both collected on Macauley Island, Kermadec group, New Zealand, on 21 Nov. 1970 by W. Spiekman.

COMMENTS: The holotype is held in the Australian National Wildlife Collection, Canberra, registered as no. 13321, and other paratypes are held in the Australian Museum, Sydney (O'Brien & Davies 1990).

CURRENT NAME: *Sula dactylatra fullagari* O'Brien & Davis, 1990 – Dickinson 2003: 90.

Family PHALACROCORACIDAE

Phalacrocorax carbo var. *major* Forbes, 1892a
Transactions and Proceedings of the New Zealand Institute 24: 189.

Syntype

NMNZ S.23178: right ulna, fossil, Late Quaternary age, collected at Te Aute, Hawke's Bay, New Zealand, in 1887–88 by A. Hamilton (Hamilton 1889; Worthy 2000a).

COMMENTS: Other syntypes are in the Natural History Museum, London, United Kingdom, registered as NHM A4337–4338 (Worthy 2000a).

CURRENT NAME: *Phalacrocorax carbo novaehollandiae* Stephens, 1826 – Checklist Committee 1990: 81.

Stictocarbo steadi Oliver, 1930b

Transactions and Proceedings of the New Zealand Institute 61: 139, pl. 24.

Holotype

NMNZ OR.825: adult male skin, collected in Otago, New Zealand, by H.H. Travers.

COMMENTS: The paratype of *Stictocarbo steadi* is in the Canterbury Museum, registered as AV 649 (R.P. Scofield, pers. comm., 2007). Oliver (1930b) received two specimens from Edgar Stead but described only the male (AV 649); therefore, the second unsexed specimen (Canterbury Museum AV 650) is not a paratype.

CURRENT NAME: *Stictocarbo punctatus oliveri* (Mathews, 1931) – new combination.

Phalacrocorax oliveri Mathews, 1931

Bulletin of the British Ornithologists' Club 51: 18. *Nomen novum* for *Stictocarbo steadi* Oliver, 1930b, not *Carbo carbo steadi* Mathews & Iredale, 1913.

Holotype

NMNZ OR.825: adult male skin, collected in Otago, New Zealand, by H.H. Travers.

COMMENTS: The single paratype of *Phalacrocorax oliveri* is in the Canterbury Museum, registered as AV 649 (R.P. Scofield, pers. comm., 2007).

CURRENT NAME: *Stictocarbo punctatus oliveri* (Mathews, 1931) – new combination.

Phalacrocorax featherstoni Buller, 1873

Ibis 3 (third series): 90.

Holotype

NMNZ OR.805: adult female skin, collected at the Chatham Islands, New Zealand, on 5 Aug. 1871 by H.H. Travers.

CURRENT NAME: *Stictocarbo featherstoni* (Buller, 1873) – Checklist Committee 1990: 85.

Order GRUIFORMES

Family RALLIDAE

Pleistorallus flemingi Worthy, 1997b

Alcheringa 21: 76.

Holotype

NMNZ S.34498: right tibiotarsus, fossil, c. 1 million years old, collected from estuarine sediments in the Kaimatira Pumice Group, 7 km north of Marton, Manawatu, New Zealand, on 27 Sep. 1974 by J.C. Yaldwyn.

Paratype

NMNZ S.34497: distal left femur, fossil, c. 1 million years old, collected from estuarine sediments in the Kaimatira Pumice Group, 7 km north of Marton, Manawatu, New Zealand, in 1971 by G. Coles.

CURRENT NAME: *Pleistorallus flemingi* Worthy, 1997b – Worthy & Holdaway 2002: 8.

Rallus macquariensis Hutton, 1879

Ibis 3 (fourth series): 455.

Holotype

NMNZ OR.15139: pelvis of recent age, collected on Macquarie Island.

COMMENTS: The remainder of the holotype specimen is preserved as a mount in the Otago Museum, registered as AV 740.

CURRENT NAME: *Gallirallus macquariensis* (Hutton, 1879) – Holdaway *et al.* 2001: 132.

Rallus modestus Hutton, 1872

Ibis 2 (third series): 247.

Syntype

NMNZ OR.1371: downy chick mount, collected on Mangere Island, Chatham Islands, New Zealand, in Jan. 1872 by H.H. Travers.

COMMENTS: Among the 34 recent specimens of this species located worldwide (Tennyson & Martinson 2006), we could not trace the other two syntypes.

CURRENT NAME: *Cabalus modestus* (Hutton, 1872) – Holdaway *et al.* 2001: 132.

Ocydromus pygmaeus Forbes, 1892b

Nature 46: 252.

Syntype

NMNZ S.27255: sternum, two right tibiotarsi and one right tarsometatarsus, fossils, probably Holocene age, collected from a limestone cave on Chatham Island, New Zealand, in 1892 by H.O. Forbes.

CURRENT NAME: *Cabalus modestus* (Hutton, 1872) – Holdaway *et al.* 2001: 132.

Ocydromus hectori Hutton, 1873

Journal für Ornithologie 21: 399.

Holotype

NMNZ OR.2481: adult male skin, collected on Eglinton Flats, Otago, New Zealand, in Feb. 1873 by Mr Morton.

COMMENTS: Some of these collection data were published by Hutton (1874b).

CURRENT NAME: *Gallirallus australis hectori* (Hutton, 1873) – Checklist Committee 1990: 121.

Ocydromus minor Hamilton, 1893

Transactions and Proceedings of the New Zealand Institute 25: 103, 106.

Syntypes

NMNZ S.987 (pelvis), S.988 (pelvis) and S.989 (part sternum): fossils, Late Holocene age, collected at Castle Rocks, Oreti River, Southland, New Zealand, in 1892 by Augustus Hamilton (see Worthy 1998b).

COMMENTS: Most of the syntype series is missing (Olson 1975).

CURRENT NAME: *Gallirallus australis* (Sparrman, 1786) – Worthy & Holdaway 2002: 380.

Gallirallus huiatua Steadman, Worthy, Anderson & Walter, 2000

Wilson Bulletin 112: 175.

Holotype

NMNZ S.37708: left tarsometatarsus, fossil, Holocene age, collected at Anakuli Cave, Niue, on 7–12 Jan. 1995 by T.H. Worthy.

Paratypes

NMNZ S.37709–37711: various bones, fossils, Holocene age, collected at Anakuli Cave, Niue, on 7–12 Jan. 1995 by T.H. Worthy.

CURRENT NAME: *Gallirallus huiatua* Steadman, Worthy, Anderson & Walter, 2000 – Steadman 2006: 523.

Vitirallus watlingi Worthy, 2004

Journal of the Royal Society of New Zealand 34: 303.

Holotype

NMNZ S.37543: partial mandible, fossil, Late Pleistocene or Holocene age, collected at Qara-ni-vokai, Voli Voli Cave, Viti Levu, Fiji, on 30 Sep. 1998 by T.H. Worthy, G. Udy, S. Matararaba and T. Sorovi.

Paratypes

NMNZ S.37138 (107 bones) and S.37543 (premaxilla): fossils, Late Pleistocene or Holocene age, collected in the terminal chamber of Qara-ni-vokai, Voli Voli Cave, Viti Levu, Fiji, on 28 Mar. 1998 by T.H. Worthy, A. Anderson and S. Matararaba.

CURRENT NAME: *Vitirallus watlingi* Worthy, 2004 – Steadman 2006: 523.

Fulica prisca Hamilton, 1893

Transactions and Proceedings of the New Zealand Institute 25: 98.

Lectotype

NMNZ S.990: right humerus, fossil, Late Holocene age, collected at Castle Rocks, Oreti River, Southland, New Zealand, in 1892 by Augustus Hamilton (see Worthy 1998b).

COMMENTS: Lectotype designated by Olson (1975).

Paralectotype

NMNZ OR.379: many bones, fossils, Late Holocene age, collected at Castle Rocks, Oreti River, Southland, New Zealand, in 1892 by Augustus Hamilton (see Worthy 1998b).

COMMENTS: Some other paralectotypes may be missing (Olson 1975).

CURRENT NAME: *Fulica prisca* Hamilton, 1893 – Worthy & Holdaway 2002: 390.

Order CHARADRIIFORMES

Family CHARADRIIDAE

Charadrius bicinctus exilis Falla, 1978

Notornis 25: 102.

Holotype

NMNZ OR.13071: adult male skin, collected at Adams Island, Auckland Islands, New Zealand, on 28 Aug. 1944 by E.G. Turbott.

Paratypes

NMNZ OR.7946 (skin) and OR.12781 (skin): collected

on 8 Mar. 1954 by R.K. Dell; NMNZ OR.10066 (male skin) and OR.10067 (female skin): collected on 17 Jan. 1963 by B.D. Bell; NMNZ OR.13072 (adult male skin), OR.13073 (adult female skin), OR.13074 (adult female skin) and OR.13075 (adult female skin): collected on 19 Apr. 1944 by E.G. Turbott; NMNZ OR.17521 (adult male skin) and OR.17522 (juvenile male skin): collected on 25 Feb. 1973 by B.D. Bell; and NMNZ OR.19288 (adult male skin) and OR.19289 (adult male skin): collected on 8 Feb. 1976 by J.A. Bartle. All collected at Enderby Island, Auckland Islands, New Zealand.

COMMENTS: Two other paratypes of *Charadrius bicinctus exilis* are in the Canterbury Museum (Falla 1978).

CURRENT NAME: *Charadrius bicinctus exilis* Falla, 1978 – Checklist Committee 1990: 133.

Charadrius obscurus aquilonius Dowding, 1994
Notornis 41: 230.

Paratypes

NMNZ OR.2366: female skin, collected at Spirits Bay, New Zealand, on 20 Feb. 1929 by C.J. Lindsay; NMNZ OR.18370: adult male skin, collected at the mouth of Muriwai Stream, Auckland, New Zealand, in Aug. 1937 by W.P. Wardlaw, ex Fleming collection no. 217; and NMNZ OR.24163: immature female skin and trunk skeleton, collected at Whale Island, Bay of Plenty, New Zealand, on 15 Dec. 1990 by M. Harrison.

COMMENTS: The holotype (registered as B 2709) and two other paratypes of *Charadrius obscurus aquilonius* are in the Auckland Museum (Dowding 1994).

CURRENT NAME: *Charadrius obscurus aquilonius* Dowding, 1994 – BirdLife International 2000: 188.

Family SCOLOPACIDAE

Coenocorypha miratropica Worthy, 2003
Bulletin of the British Ornithologists' Club 123: 95.

Holotype

NMNZ S.38711: left humerus, fossil, probably Holocene age, collected in Vatuma Cave, Viti Levu, Fiji, on 18 Nov. 1999 by T.H. Worthy, G. Udy and S. Matararaba.

Paratype

NMNZ S.38711: an additional 14 bones, with the same collection data as the holotype.

CURRENT NAME: *Coenocorypha miratropica* Worthy, 2003 – Steadman 2006: 362.

Family LARIDAE

Bruchigavia melanorhyncha Buller, 1869

Ibis 5 (new series): 43.

Lectotype

NMNZ OR.2387: skin, collected in the South Island, New Zealand, ex Buller collection no. 238.

COMMENTS: Buller (1869) described *Bruchigavia melanorhyncha* from 'specimens' obtained in the South Island. Archived records (Buller 1871) show that, in 1871, the Buller collection held in the Colonial Museum included specimens of one male and one female of '*Larus melanorhynchus*' numbered as '237 and 238'. Hutton (1898–1900) noted that a 'Cotype' of '*Bruchigavia melanorhyncha*, Buller' was in the Canterbury Museum. Three specimens, either previously labelled or registered as *Bruchigavia melanorhyncha*, are present in Te Papa today (NMNZ OR.2383, 2385 and 2387), but none has been identified in the Canterbury Museum (P. Scofield, pers. comm., 2007). Only one of those birds (NMNZ OR.2387) is positively identifiable as originally being in Buller's collection, so we accept only that bird as clearly being part of the syntype series and hereby designate it as the lectotype of *Bruchigavia melanorhyncha* Buller, 1869. Consequently, this specimen is also the lectotype of *Larus bulleri* Hutton, 1871.

This designation of a lectotype is desirable because of the uncertain type status of other specimens, especially of at least one specimen mentioned and measured by Hutton (1871) in his description of *Larus bulleri*. Hutton (1871) gives minor morphological differences between the birds that he examined and those described by Buller (1869). Hutton (1871) also refers to the species occurring in the North Island, whereas Buller (1869) only referred to South Island specimens. Despite those additional data, there is no doubt that Hutton (1871) did not intend to describe *L. bulleri* as a new species but only as a replacement name for *Bruchigavia melanorhyncha* Buller. Therefore, Hutton's (1871) description and the specimens that he examined have no bearing on the identity of the type specimens.

Additionally, further confusion about the identity of the type specimens of *Bruchigavia melanorhyncha* Buller, 1869 (and therefore of *Larus bulleri* Hutton, 1871) was introduced when Potts (1872) created a junior primary homonym of *Larus bulleri* Hutton, 1871, by publishing the name *Larus bulleri* Potts, 1872 based on two specimens from the Waimakariri River held in the collection of the Canterbury Museum. No specimens clearly matching Potts' type

specimens are identifiable in the Canterbury Museum today (P. Scofield, pers. comm., 2007).

CURRENT NAME: *Larus bulleri* Hutton, 1871 – Dickinson 2003: 148.

Larus bulleri Hutton, 1871

Catalogue of the birds of New Zealand: 41, 78. *Nomen novum* for *Bruchigavia melanorhyncha* Buller, 1869, not *Larus melanorhynchus* Temminck & Laugier, 1830.

Lectotype

NMNZ OR.2387: skin, collected in the South Island, New Zealand, ex Buller collection no. 238.

COMMENTS: See above under *Bruchigavia melanorhyncha* Buller, 1869.

CURRENT NAME: *Larus bulleri* Hutton, 1871 – Dickinson 2003: 148.

Order COLUMBIFORMES

Family COLUMBIDAE

Natunaornis gigoura Worthy, 2001

Journal of the Royal Society of New Zealand 31: 767.

Holotype

NMNZ S.37484: left tarsometatarsus, fossil, probably Holocene age, collected in Udit Cave, Wainibuku, Viti Levu, Fiji, in Oct. 1998 by T.H. Worthy, G. Udy and S. Matararaba.

Paratypes

NMNZ S.37300–5, S.37307, S.37313, S.37481–3 and S.37485–94: collected in Oct. 1998; and NMNZ S.38259–60 and S.38271: collected on 20 Nov. 1999. Fossils, probably Holocene age, collected in Udit Cave, Wainibuku, Viti Levu, Fiji, by T.H. Worthy, G. Udy and S. Matararaba.

CURRENT NAME: *Natunaornis gigoura* Worthy, 2001 – Steadman 2006: 525.

Gallicolumba leonpascoi Worthy & Wragg, 2003

Journal of the Royal Society of New Zealand 33: 773.

Holotype

NMNZ S.40789: largely complete left tarsometatarsus of adult, fossil, Late Pleistocene to Holocene age, collected on Henderson Island, Pitcairn Group, in 1991–92 by M. Weisler and G. Wragg.

Paratypes

NMNZ S.40839: right tarsometatarsus of adult, collected at Site 10, test pit 1, spit 50; and NMNZ S.40844: largely complete left tarsometatarsus of subadult, collected at Site 10, test pit 3, spit 7. Fossils, Late Pleistocene to Holocene

age, collected on Henderson Island, Pitcairn Group, in 1991–92 by M. Weisler and G. Wragg.

CURRENT NAME: *Gallicolumba leonpascoi* Worthy & Wragg, 2003 – Steadman 2006: 524.

Ducula harrisoni Wragg & Worthy, 2006

Historical Biology 18: 130.

Holotype

NMNZ S.41609: proximal right tarsometatarsus, fossil, Late Quaternary age, collected at site 5, spit 7, Henderson Island, Pitcairn Group, between Jan. 1991 and Mar. 1992 by M. Weisler and G. Wragg.

Paratypes

NMNZ S.41617–8, S.41639–41, S.41649, S.41653, S.41657, S.41684, S.41715, S.41717, S.41722, S.41728, S.41735, S.41758 and S.41760: fossils, Late Quaternary age, collected on Henderson Island, Pitcairn Group, between Jan. 1991 and Mar. 1992 by M. Weisler and G. Wragg.

CURRENT NAME: *Ducula harrisoni* Wragg & Worthy, 2006.

Order PSITTACIFORMES

Family PSITTACIDAE

Cyanoramphus novaezelandiae chathamensis Oliver, 1930a

New Zealand birds: 412.

Syntypes

NMNZ OR.459: male skin; NMNZ OR.474: male skin, collected on Pitt Island in Jan. 1872 by H.H. Travers; NMNZ OR.476: female skin, collected on South East Island in Sep. 1890 by H.C. Palmer; NMNZ OR.478: male skin, collected on South East Island in Sep. 1890 by H.C. Palmer; and NMNZ OR.1816: male skin, collected on Rangatira [= South East] Island on 15 Mar. 1926 by J.G. Correia. All collected on the Chatham Islands, New Zealand.

COMMENTS: Oliver (1930a) described the distinctive plumage of the subspecies but did not give specific information for any of the type material. However, Oliver's archives at Te Papa (MU000233/028/0004) indicate that he examined the above specimens for his description, plus one specimen in the Canterbury Museum (registered as AV2568) and two specimens in the Auckland Museum (no registration numbers are noted, but both were male and had the following bill and wing lengths respectively: 16.5 mm and 130 mm, and 16 mm and 127 mm). These eight specimens constitute the syntype series. A few other specimens were in the Dominion Museum collection by 1930 (e.g. NMNZ OR.468, OR.479 and OR.1808), but we do not

regard them as syntypes because they are not clearly identified in Oliver's archives. NMNZ OR.474 may have been collected on Mangere Island (see discussion under *Petroica traversi* Hutton, 1872).

CURRENT NAME: *Cyanoramphus novaehollandiae chathamensis* Oliver, 1930a – Checklist Committee 1990: 178.

Order PASSERIFORMES Family ACANTHISITTIDAE

Xenicus longipes variabilis Stead, 1936

Transactions and Proceedings of the Royal Society of New Zealand 66: 313.

Paratype

NMNZ OR.18126: adult male skin, collected on Big South Cape Island, southwest of Stewart Island, New Zealand, in Dec. 1931 by E.F. Stead, ex Fleming collection no. 442.

COMMENTS: The holotype of *Xenicus longipes variabilis* is in the Canterbury Museum, registered as AV 227 (Freeman & Tunnicliffe 1997).

CURRENT NAME: *Xenicus longipes variabilis* Stead, 1936 – Dickinson 2003: 335.

Xenicus haasti Buller, 1869

Ibis 5 (new series): 37.

Syntypes

NMNZ OR.5094: probable immature female skin, ex Buller collection no. 37; and NMNZ OR.12586: female skin, ex Buller collection no. 36. Both collected in the Southern Alps, New Zealand, in the 1860s by J.F. von Haast.

COMMENTS: Buller (1869) named this species from specimens forwarded to him by Haast. The only two rock wrens in the collection that Buller presented to the Colonial Museum in 1871 were listed by him as *Xenicus haasti* (see Buller 1871) and by Hutton (1871: 7) as *X. gilviventris*, with *X. haasti* as a junior synonym. Therefore, we have assumed that the two rock wrens from the Buller collection, which are currently held in Te Papa, are the syntypes of *X. haasti*.

CURRENT NAME: *Xenicus gilviventris* Pelzeln, 1867 – Checklist Committee 1990: 193.

Xenicus gilviventris rineyi Falla, 1953

Notornis 5: 142.

Holotype

NMNZ OR.2397: male skin, collected at Lake McArthur, southwestern Fiordland, New Zealand, on 13 Apr. 1953 by T. Riney.

Paratypes

NMNZ OR.2396: male skin, collected southwest of Lake

McArthur on 18 Apr. 1953; and NMNZ OR.2398: male mount, collected north of Lake McArthur on 14 Apr. 1953. Both collected in southwestern Fiordland, New Zealand, by T. Riney.

CURRENT NAME: *Xenicus gilviventris* Pelzeln, 1867 – Checklist Committee 1990: 193.

Pachylichas yaldwyni Millener, 1988

Journal of the Royal Society of New Zealand 18: 391.

Holotype

NMNZ S.22683: right tarsometatarsus, fossil, Late Pleistocene age, collected at Limestone Cave Passage, Honeycomb Hill Cave, Oparara Valley, New Zealand, on 29 Sep. 1983 by P.R. Millener, N. Clementson and P. Wood.

Paratypes

NMNZ S.22475, S.22486, S.22488, S.22501, S.22527, S.22550, S.22560, S.22567, S.22570, S.22586, S.22591, S.22609, S.22618, S.22639, S.22644, S.22683, S.22756, S.22769, S.22795, S.22808, S.22811, S.22815, S.22845, S.22851–3, S.22865, S.22869–70, S.22912, S.22924, S.22927, S.22941, S.22960, S.22966, S.22976, S.22990, S.23000, S.23015, S.23090, S.23098–103, S.23130, S.23317, S.23520–1, S.23577–9, S.23583 and S.24321: various bones, fossils, Late Quaternary age, collected at Honeycomb Hill Cave, Oparara Valley, and Babylon Cave (S.24321), West Coast, South Island, New Zealand, in 1983–87 by P.R. Millener, T. H. Worthy and others.

COMMENTS: The specimens in S.22852 are not *Pachylichas yaldwyni* – they are a cranium of *Traversia lyalli* Rothschild, 1894, and a coracoid, a scapula and a phalanx of *Xenicus* sp. Other paratypes are held in the Geology Department of the University of Auckland, and in the Canterbury Museum (Millener 1988).

CURRENT NAME: *Pachylichas yaldwyni* Millener, 1988 (all the bones except S.22852) – Checklist Committee 1990: 194.

Pachylichas jagmi Millener, 1988

Journal of the Royal Society of New Zealand 18: 395.

Paratypes

NMNZ S.24316: left femur, collected at Hukanui 7 Cave, Hawke's Bay, New Zealand, in 1952 by W.H. Hartree; NMNZ S.24317: right tarsometatarsus, collected at Haurangi 15E Cave, Wairarapa, New Zealand, in 1967 by G.S. Markham; NMNZ S.24318: right humerus, collected at Haurangi 16 Cave, Wairarapa, New Zealand, on 6 Jan. 1969 by G.S. Markham; and NMNZ S.24320: 16 bones,

collected at Fissure 1 Cave, Wairarapa, New Zealand, in 1969 by G.S. Markham. Fossils, Late Quaternary age.

COMMENTS: The holotype of *Pachyplichas jagmi* is in the Geology Department of the University of Auckland, registered as AU7102.20. One paratype (NMNZ S.24319: distal right tibiotarsus, collected at Haurangi 4 Cave, Wairarapa, New Zealand, on 12 Apr. 1968 by G.S. Markham) was not found in Te Papa's collections. Other paratypes are held in the Geology Department of the University of Auckland, and in the Canterbury, Te Manawa and Waitomo museums (Millener 1988).

CURRENT NAME: *Pachyplichas jagmi* Millener, 1988 – Checklist Committee 1990: 195.

Dendroscansor decurvirostris Millener & Worthy, 1991 *Journal of the Royal Society of New Zealand* 21: 182.

Holotype

NMNZ S.27775: partial skeleton, fossil, Late Quaternary age; parts of the same skeleton were collected at Moonsilver Cave, Takaka State Forest Park, New Zealand, in Apr. 1986 by P. Wood and O. Dennis, and on 7 Mar. 1989 by T.H. Worthy.

Paratype

NMNZ S.22940: partial mandible, fossil, Late Quaternary age, collected at Eagle's Roost site, Honeycomb Cave, Oparara Valley, New Zealand, on 1 Jul. 1983 by J.A. Bartle. CURRENT NAME: *Dendroscansor decurvirostris* Millener & Worthy, 1991 – Tennyson & Martinson 2006: 106.

Family PETROICIDAE

Petroica macrocephala chathamensis Fleming, 1950a *Transactions and Proceedings of the Royal Society of New Zealand* 78: 36.

Holotype

NMNZ OR.1832: adult male skin, collected on Rangatira [= South East] Island, Chatham Islands, New Zealand, on 15 Mar. 1926 by Hicks.

Paratypes

NMNZ OR.1833: adult female skin, collected on Rangatira [= South East] Island on 15 Mar. 1926 by Hicks; NMNZ OR.5179: male skin, collected on Pitt Island, purchased from S. Dannefaerd in Mar. 1906; NMNZ OR.5180: male skin, purchased from S. Dannefaerd in Mar. 1906; NMNZ OR.5181: female skin, collected on Rangatira [= South East] Island, purchased from S. Dannefaerd in Mar. 1906; NMNZ OR.5182: male skin, collected on Pitt Island, on 14 Sep. 1871 by H.H. Travers; NMNZ OR.5183: female skin,

collected on 2 Sep. 1900, received from H.H. Travers [Fleming (1950a: Table 5) mistakenly gives the collection date as 2 Sep. 1909]; NMNZ OR.5184: female skin, purchased from S. Dannefaerd in Mar. 1906; NMNZ OR.5185: male skin, collected in Sep. 1900, received from H.H. Travers; NMNZ OR.5186: male skin, received from H.H. Travers; and NMNZ OR.28452: male skin, collected on South East Island on 17 Dec. 1937 by C.A. Fleming. All collected in the Chatham Islands, New Zealand.

COMMENTS: In 1950, other paratypes were held by the Auckland Museum, the Canterbury Museum, the University of Auckland and in a private collection (Fleming 1950a). NMNZ OR.5182 may have been collected on Mangere Island (see discussion under *Petroica traversi* Hutton, 1872). CURRENT NAME: *Petroica macrocephala chathamensis* Fleming, 1950a – Dickinson 2003: 522.

Petroica australis rakiura Fleming, 1950b

Transactions and Proceedings of the Royal Society of New Zealand 78: 141.

Paratypes

NMNZ OR.1752: male skin, collected on Stewart Island, New Zealand, in Jul. 1897, received from H.H. Travers [Fleming (1950b: 143 and Table 10) mistakenly gives the collection year as 1907]; NMNZ OR.1757: male skin, collected on Stewart Island, New Zealand, in Jul. 1899, received from H.H. Travers; and NMNZ OR.22714 (male skin) and OR.22715 (skin): collected on Pukeweka Island, off Stewart Island, New Zealand, on 13 Jun. 1938 by W.P. Wardlaw.

COMMENTS: The holotype, registered as AV 270, and the five other paratypes of *Petroica australis rakiura* are in the Canterbury Museum (Fleming 1950b; P. Scofield, pers. comm., 2007). In his text, Fleming (1950b) mentions three specimens in the Dominion Museum labelled 'Stewart Island'. However, only two Stewart Island birds are listed in his Table 10 and records indicate that these were the only ones in the Dominion Museum at the time. The two Pukeweka Island paratypes in Te Papa were received by the museum after 1950.

CURRENT NAME: *Petroica australis rakiura* Fleming, 1950b – Dickinson 2003: 522.

Petroica traversi Hutton, 1872

Petroica traversi Hutton, 1872 (July): *Ibis* 2 (third series): 245.

Syntypes

NMNZ OR.1687: female skin, collected on 16 Sep. 1871; NMNZ OR.1689: male skin, collected on the Chatham Islands; NMNZ OR.1694: skin, collected on Mangere

Island, in Sep. 1871; NMNZ OR.1697: female skin, collected in Dec. 1871; and NMNZ OR.1698: male skin, collected on 16 Sep. 1871.

COMMENTS: Hutton's (1872) description was based on 'several specimens' collected by Henry H. Travers. Although labels for these syntypes do not state a collector, it must have been Henry Travers, who is the only person known to have collected birds on the Chatham Islands in the 1870s (e.g. Travers & Travers 1873). The labels for NMNZ OR.1687, OR.1697 and OR.1698 give the collection location as 'Pitts Island', but these actually refer to Mangere Island (a small island offshore from Pitt Island), Chatham Islands, New Zealand, because Henry Travers noted that he collected this species only on Mangere Island (Hutton 1872; Travers & Travers 1873). Syntype NMNZ OR.1689 does not have a collection date but it carries a label similar to those found on NMNZ OR.1687, OR.1694 and OR.1697 in what is probably Hutton's writing, stating '*Petroica traversi* Hutton'. Therefore, we have assumed that it is part of the same series examined by Hutton.

These syntypes may also be syntypes of *Miro traversi* Buller, 1872 (June), because in Hutton's (1872) description, the journal editor noted that Buller's description was 'taken from the same specimens'; however, it is unclear which specimens Buller actually examined. In 1872, James Hector of the Colonial Museum sent Buller (in England) specimens collected by Travers, with Hutton's 'names attached to each' (Buller 1872–73: 123; Galbreath 1989: 107; Hutton 1874a: 38). Those specimens labelled '*Petroica traversi* Hutton' (NMNZ OR.1687, OR.1689, OR.1694 and OR.1697) may be some of Buller's syntypes. In the Natural History Museum, London, there is one specimen (Knox & Walters 1994: 218 – reg. no. 1874.7.7.1) from the 1870s, which might also be a syntype of *Petroica traversi* Hutton or *Miro traversi* Buller, or both. It has a label reading 'Miro Traversi new species / Chatham Islands' (A. Tennyson, pers. obs., 2004).

CURRENT NAME: *Petroica (Miro) traversi* (Buller, 1872) – Checklist Committee 1990: 211.

Family MELIPHAGIDAE

Anthornis melanura oneho Bartle & Sagar, 1987
Notornis 34: 297.

Holotype

NMNZ OR.22064: adult male skin, collected on Aorangi, Poor Knights Islands, New Zealand, on 6 Mar. 1980 by J.A. Bartle.

Paratypes

NMNZ OR.22061: immature male skin, collected on 23 Feb. 1980; and NMNZ OR.22065: adult female skin, collected on 5 Mar. 1980. Both collected on Aorangi, Poor Knights Islands, New Zealand, by J.A. Bartle.

COMMENTS: One other paratype is in the Auckland Museum (Bartle & Sagar 1987).

CURRENT NAME: *Anthornis melanura oneho* Bartle & Sagar, 1987 – Checklist Committee 1990: 214.

Mimus carunculatus Buller, 1865

Essay on the Ornithology of New Zealand: 10.

Holotype

NMNZ OR.1331: adult mount, collected at Matakana, on or before 1855 by I. St John.

COMMENTS: Examined by Buller in the Auckland Museum in 1855, then acquired by Buller from Hutton in 1868 and presented to the Colonial Museum in 1871 (Buller 1871: collection no. 33; Galbreath 1989: 89). Buller was dubious about whether the specimen was actually collected in New Zealand (Galbreath 1989: 89).

CURRENT NAME: *Anthochaera carunculata* (White, 1790) – Checklist Committee 1990: 217.

Anthochaera bulleri Finsch, 1867

Journal für Ornithologie 15: 307, 342. *Nomen novum* for *Mimus carunculatus* Buller, 1865, not *Merops carunculatus* Shaw, 1790.

Holotype

NMNZ OR.1331: adult mount, collected at Matakana, on or before 1855 by I. St John.

COMMENTS: See above, under *Mimus carunculatus* Buller, 1865.

CURRENT NAME: *Anthochaera carunculata* (White, 1790) – Checklist Committee 1990: 217.

Family CORVIDAE

Corvus antipodum pycrafti Gill, 2003

Journal of Systematic Palaeontology 1: 54.

Holotype

NMNZ S.38960: right humerus, fossil, Holocene age, collected from sand dunes south of Mussel Point, Marfell's Beach, Marlborough, New Zealand, on 13 Sep. 1996 by T.H. Worthy and R.N. Holdaway.

Paratypes

NMNZ S.36310: right femur, collected at Lake Grassmere on 26 Aug. 1948 by E.W. Dawson; NMNZ S.36367: left

ulna and right femur, collected at Lake Grassmere in 1951 by E.W. Dawson; and NMNZ S.38960: right femur, collected from sand dunes south of Mussel Point, Marfells Beach, on 13 Sep. 1996 by T.H. Worthy and R.N. Holdaway. Fossils, Holocene age, collected in Marlborough, New Zealand.

COMMENTS: One further paratype is held by the Auckland Museum, registered as AIM 575 (Gill 2003).

CURRENT NAME: *Corvus antipodum pycrafti* Gill, 2003.

Family SYLVIIDAE

Trichocichla rufa cluniei Kinsky, 1975

Bulletin of the British Ornithologists' Club 95: 100.

Holotype

NMNZ OR.18520: adult male skin, collected in Delanacan Mountains, Vanua Levu, Fiji, on 10 Jun. 1974 by F.C. Kinsky.

CURRENT NAME: *Megalurulus rufus cluniei* (Kinsky, 1975) – Dickinson 2003: 578.

Missing types

The following type specimens could not be located in Te Papa's collections.

Anas gracilis Buller, 1869

Ibis 5 (new series): 41.

Syntypes

Buller's (1869) description was based on three New Zealand specimens: a male and female shot by Buller in the Orona Stream, near its junction with the Manawatu River; and one from Hawke's Bay Province. Although two specimens of this species, which presumably were part of the syntype series, were obtained by the Colonial Museum from Buller in 1871 (Buller 1871: collection nos 192 and 193), no Buller specimens of *Anas gracilis* are now found in the collection.

CURRENT NAME: *Anas gracilis* Buller, 1869 – Checklist Committee, 1990: 103.

Rallus featherstonii Buller, 1865

Essay on the Ornithology of New Zealand: 18.

Holotype

According to Buller (1871: collection no. 167), this mounted specimen was deposited in the Colonial Museum. It was supplied to the Auckland Museum on or shortly after 1855 by I. St John, who said that it had been killed near Nelson (Galbreath 1989: 89). There is one specimen without data, formerly a mount, of *Crex crex* present in the Te Papa collection (NMNZ OR.4195), which could be the holotype.

However, there were several other mounted *Crex crex* without data formerly in the Te Papa collection, any of which might have been the holotype. Therefore, we regard the holotype as missing.

CURRENT NAME: *Crex crex* (Linnaeus, 1785) – Galbreath 1989: 89.

Gallinago pusilla Buller 1869

Ibis 5 (new series): 41.

Holotype

This species was described from a single 'example' from 'a small rocky islet off Chatham Island' that was forwarded to Buller by Charles Traill (Buller 1869: 41). The type specimen was apparently deposited in the Colonial Museum in 1871 as part of Buller's collection (Buller 1871: collection no. 146). However, at present, no specimen of *Coenocorypha pusilla* is identifiable in the collection as being received from Buller or from Traill. Hutton (1898–1900) noted that a 'co-type' of this species was in the Canterbury Museum. However, as Buller (1869: 41) described this species from one specimen only, there can be no types other than the holotype.

CURRENT NAME: *Coenocorypha pusilla* (Buller, 1869) – Checklist Committee 1990: 142.

Nestor occidentalis Buller, 1869

Ibis 5 (new series): 40.

Syntypes

This species description was based on two specimens obtained in Fiordland by Hector (Buller 1869: 41, 1872–73: 50–51). Buller presented two specimens of *Nestor occidentalis* to the Colonial Museum in 1871 (Buller 1871: collection nos 91 and 92). These were probably the type specimens, but no Buller specimens of South Island kaka are now identifiable in the collection.

CURRENT NAME: *Nestor meridionalis meridionalis* (Gmelin, 1788) – Checklist Committee 1990: 175.

Platycercus alpinus Buller, 1869

Ibis 5 (new series): 39.

Syntype

This species was named from 'several specimens' from 'forests of the Southern Alps' that Buller received from Haast and 'other examples' 'from the Nelson Province' sent to him by Travers (Buller 1869: 40). Buller presented one specimen of *Platycercus alpinus* to the Colonial Museum in 1871 (Buller 1871: collection no. 82). This was probably a syntype specimen, but no Buller specimens of *Cyanoramphus* are now identifiable in the collection.

CURRENT NAME: *Cyanoramphus auriceps* (Kuhl, 1820) – Checklist Committee 1990: 179.

Sceloglaux rufifacies Buller, 1904
Ibis 4 (eighth series): 639.

Holotype

A female mount of *Sceloglaux* – collected in the Wairarapa, North Island, New Zealand – was given to the Colonial Museum on 13 Mar. 1869 by Mr P. Lucas (Buller 1872–73; Worthy 1997a). About 30 years after the specimen arrived in the museum, it was given to Buller, who named it as the new species *Sceloglaux rufifacies* in 1904 and then tried, unsuccessfully, to sell it to Walter Rothschild in England (Worthy 1997a; Fuller 2000). Worthy (1997a) was unable to identify this specimen in any of the museum collections that he examined during his worldwide review of *Sceloglaux* specimens.

CURRENT NAME: *Sceloglaux albifacies rufifacies* Buller, 1904 – Checklist Committee 1990: 185.

Sphenoeacus rufescens Buller, 1869
Ibis 5 (new series): 38.

Holotype

The holotype, collected by Charles Traill on ‘a small rocky isle, a satellite of Chatham Island’ (Buller 1869), was held in the Colonial Museum (Buller 1871: collection no. 43, 1872–73; Hutton 1871) but is no longer present in the collection. Hutton (1898–1900) noted that a ‘co-type’ of this species was in the Canterbury Museum, but as Buller (1869: 38) referred to only a single specimen, there can be no types other than the holotype.

CURRENT NAME: *Bowdleria rufescens* (Buller, 1869) – Checklist Committee 1990: 204.

Anthornis auriocula Buller 1865
Essay on the Ornithology of New Zealand: 8.

Holotype

This specimen was a juvenile male collected near Waitangi, Chatham Islands, in 1855 by W. Buller (Buller 1872–73: 96). Buller presented one specimen to the Colonial Museum in 1871 (Buller 1871: collection no. 30) and later stated that the type of this species ‘is now in the Colonial Museum’ (Buller 1872–73: 96), but there is no specimen present in the Te Papa collection that clearly matches this bird now.

CURRENT NAME: *Anthornis melanocephala* (Gray, 1843) – Holdaway *et al.* 2001: 138.

Note: As commented on above, parts of the syntype series of *Ocydromus minor* Hamilton, 1893, possibly the syntypes

of *Miro traversi* Buller, 1872, parts of the paralectotype series of *Fulica prisca* Hamilton, 1893, and one paratype of *Pachyplectes jagmi* Millener, 1988, are also missing. The *Pachyplectes* specimen is likely to be simply misplaced within Te Papa’s bird fossil collection.

Conclusions

Te Papa holds and cares for many type specimens of birds, including fossil remains. We have identified 69 primary type specimens (47 holotypes, three lectotypes, 18 syntypes and one neotype), which are name-bearing specimens for 61 taxa, and 446 registered lots of secondary type specimens (two allotypes, 439 paratypes and five paralectotypes) in the collections. In total, 73 names are based on these specimens. More than half of these names are now junior synonyms, partly reflecting the difficulties faced by ornithologists based in colonial New Zealand to obtain the original literature containing early descriptions of New Zealand birds by European authors. Prior to the gift of Charles Carter’s book collection to the Colonial Museum in the 1890s (Bartle 2004: 149; Fitzgerald 2004: 191), much of the key early literature on New Zealand birds was unavailable in this country.

Several types originally deposited in the Colonial Museum are missing. They include the primary types of at least eight taxa named by Walter Buller between 1865 and 1904, as well as parts of one syntype series and possibly parts of one paralectotype series of two fossil taxa named by Hamilton in 1893. Loss of types from the collection before 1914 reflected inadequate government funding of the national collections during the first 50 years of the museum’s existence.

Most bird types held in Te Papa are from the New Zealand region, but several from other South Pacific islands (including New Caledonia, Vanuatu, Fiji, Niue and Henderson islands) are also included in the collection. One type is from Kerguelen Island in the South Indian Ocean.

Catalogues of bird types have already been published for the Auckland Museum (Gill 1983) and the Canterbury Museum (Freeman & Tunnicliffe 1997). Several other New Zealand collections of birds contain type specimens but lack published type lists, including the Geology Department of the University of Auckland, and the Waitomo, Te Manawa and Otago museums. Furthermore, it is likely that future research will uncover additional as yet unrecognised type specimens in the collections that already have published lists.

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