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An annotated checklist of the fossil birds of Australia

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ABSTRACT
A complete annotated checklist of all species of birds based on fossil material known as of 2019 from continental Australia is presented. Taxa range from Cretaceous to Holocene in age. It includes synonyms with full bibliographic details and specifics of the type material in all cases, such as specimen or locality data, source local fauna and geological age. Nomina based on fossil material that are now synonymised under extant taxa are also included. The list includes 95 avian species, of which 78 are extinct, in 66 genera. Five extinct subspecies in modern genera are recognised. These species represent 33 family- and 19 ordinal-group taxa, or nearly half of modern avian orders.

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Introduction
Australia is home to a unique and diverse bird fauna that comprises about 936 species in 106 families, including 29 introduced species and 160 vagrants (Menkhorst et al., 2019). Our understanding of the total bird diversity of Australia is enhanced by the fossil record, which provides the only window into the prehistoric avifauna of our continent. Notable Australian bird fossils include the extinct mihirungs or giant fowl (Dromornithidae), and the flamingos (Phoenicopteriformes), which are today only found in Eurasia, Africa, and the Americas.

Australian fossil birds were first recorded in the world fossil bird checklists of Lydekker (1891), Lambrecht (1933) and Brodkorb (1963, 1964, 1967, 1971, 1978). While some fossil taxa were listed in regional avian checklists, e.g., Condon (1969), the first checklist of all Australian birds to list extinct taxa was compiled by Condon (1975), wherein fossil taxa were integrated within the list of extant taxa and presented with synonyms and other data. Rich and van Tets (1982) extensively reviewed the taxonomy and geological history of fossil birds from Australia and New Guinea and tabulated a useful summary of avifaunas from all then known Cenozoic localities. This was soon followed by a similar review of the fossil avian record (Rich & van Tets, 1984) alongside an annotated checklist of Australasian fossil birds (G. van Tets, 1984) including some synonyms and details of type specimens. Since then, there have been three notable publications by Vickers-Rich
(1991), Baird (1991), and Boles (2006) that review the diversity of Australian fossil birds. The last publication listed 46 species of fossil birds, including 26 species in 18 extinct genera and 20 other species (including 2 unnamed).

Since the last checklist, 35 years have passed and there has been the considerable investigation of the fossil avifauna by several workers (summarised by Boles, 2017) and a concomitant increase in the number of new fossil avian taxa discovered. Furthermore, with the recent influx of genetic data and analyses, our understanding of modern bird relationships has considerably transformed in the last two decades.

Here we provide a new checklist, which is a timely update of the taxonomy and systematic status of fossil birds so far recorded for Australia. The known fossil record of birds in Australia spans the Lower Cretaceous to the Holocene. This systematic list, excluding nomina dubia, comprises 95 bird species, of which 78 are extinct, in 66 named genera. Extant species are only included to capture either now-synonymised taxa that are based on fossil material, or extinct subspecies. As such, we have not listed every extant bird species that has been recorded in fossil deposits. Three extant species in three genera have five recognised extinct subspecies. Together, these species represent 33 family- and 19 ordinal-group taxa, or nearly half of modern avian orders worldwide. One named taxon is probably not avian.

Each species entry includes reference to the original description, synonyms, type specimens and their repositories, geological and geographical details, and references to revisionary works. Taxonomic nomenclature and sequence of modern avian taxa follows the fourth edition of the *Howard and Moore Complete Checklist of Birds of the World* (Dickinson & Christidis, 2014; Dickinson & Remsen, 2013) unless stated otherwise. Exceptions include the recognition of orders Ciconiiformes, Suliformes, and Apodiformes, following Gill et al. (2010) and Gill and Donsker (2019). Following the convention in ornithology, the official English names of species are capitalised to distinguish between a taxonomic species and a general description of a bird (e.g., Brown Falcon, a particular taxonomic species, and a brown falcon). Where available, we have included the English names of fossil species given in their original descriptions. A cross symbol † indicates an extinct taxon.

### Abbreviations

Institutional abbreviations: AM, Australian Museum, Sydney, Australia; ANWC, Australian National Wildlife Collection, CSIRO, Canberra, Australia; BMR, Bureau of Mineral Resources (now Geoscience Australia), Canberra, Australia; CPC, Commonwealth Palaeontological Collections, Bureau of Mineral Resources (now National Mineral and Fossil Collection, Geoscience Australia), Canberra, Australia; NHMUK, Natural History Museum, United Kingdom; NMV, Museums Victoria, Melbourne, Australia; QM, Queensland Museum, Brisbane, Australia; SAMA, South Australian Museum, Adelaide, Australia; UCMP, University of California, Museum of Paleontology, Berkeley, California, United States.

Other abbreviations: L, left; LF, Local Fauna; NSW, New South Wales; NT, Northern Territory; QLD, Queensland; R, right; SA, South Australia; TAS, Tasmania; VIC,
Some conventions

Within a suprageneric taxon, geologically older fossil taxa are listed before geologically younger taxa, for example, late Oligocene taxa are listed before Pleistocene taxa.

Primary synonyms, which refer to original descriptions of taxa, are formatted with the scientific name (genus, species, author and date) followed by a colon and the publication including the page on which the name is erected. For secondary synonyms, for example, new combinations or spelling lapses, the scientific name (binomial and author) is followed by a semicolon and the author and reference for the new synonym.

Synonyms are provided only for Genus-group and Species-group taxa; higher-level taxa are provided with their taxon authority as detailed in the References. For modern genera and species, the primary synonym (valid name) of that genus/species is listed first; thereafter, only synonyms that are based on fossils are listed. For some of these extant species, more complete synonym lists are available in Condon (1975) and Gill et al. (2010).

Taxa in this Checklist are restricted to those deriving from continental Australia (Tasmania and mainland Australia). Avian taxa deriving from Norfolk Island and Macquarie Island (although Australian Territories) are not included here, as they are listed in the New Zealand Checklist (Gill et al., 2010).

Class AVES Linnaeus, 1758: Birds

Subclass †ENANTIORNITHES Walker, 1981: Opposite Birds

Family INCERTAE SEDIS

Genus †NANANTIUS Molnar


†Nanantius eos Molnar


Subclass NEORNITHES Gadow, 1892: Modern Birds

Infraclass PALAEOGNATHAE Pycraft, 1900: Palaeognaths

Order CASUARIIFORMES Sclater, 1880a: Cassowaries and Emus

Family CASUARIIDAE Kaup, 1847: Cassowaries and Emus

Subfamily CASUARIINAE Kaup, 1847: Cassowaries

Genus CASUARIUS Brisson

†*Casuarius lydekkeri* Rothschild


Type locality and age reported as “Pleistocene cavern-deposits of the Wellington Valley, New South Wales” (Lydekker, 1891: 354; see also Miller, 1962), or as “Queensland Pleistocene” (Rothschild, 1911, p. 151). Based on its preservation features, the holotype is unlikely to have come from Wellington. It is similar in preservation to fossils collected from Darling Downs, Queensland (Dawson, 1985; G. van Tets, 1984; Worthy et al., 2014).

Subfamily **DROMAIINAE** G.R. Gray, 1871: Emus

**Genus †EMUARIUS** Boles

†*Emuarius guljaruba* Boles
*Emuarius guljaruba* Boles, 2001: *Emu* 101(4): 318, fig. 1B – Mammalon Hill, Lake Palankarina, Tirari Sub-basin, Lake Eyre Basin, SA; Etadunna Formation (Faunal Zone D), late Oligocene, Ngama LF. Holotype SAMA P23977, L tarsometatarsus.

†*Emuarius gidju* (Patterson & Rich)


**Genus DROMAIUS** Vieillot
*Dromiceius* Vieillot, 1816: *Analyse d'une nouvelle ornithologie élémentaire*: 54, 70 – type by monotypy *Casuarius novaehollandiae* Latham.

*Metapteryx* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(3): 453.


*Dromiceius* is a misprint of *Dromaius* (Vieillot, 1816, p. 70) and is rejected and invalid (Serventy et al., 1965).
†Dromaius arleyekwe Yates & Worthy

†Dromaius ocypus Miller
Dromiceius ocypus Miller, 1963: Records of the South Australian Museum 14(3): 414, fig. 1C – Lawson–Daily Quarry (UCMP locality V5769), Lake Palankarinna, Tirari Sub-basin, Lake Eyre Basin, SA; Tirari Formation, Mampuwordu Sand Member, Pliocene, Palankarinna LF. Holotype SAMA P13444, R tarsometatarsus.

Dromaius novaehollandiae (Latham): Emu
Dromaius patricius De Vis, 1888a: Proceedings of the Linnean Society of New South Wales (series 2) 3(3): 1290, pl. 36, fig. 13B – King Creek, Darling Downs, QLD; Pleistocene. Lectotype QM F5547, proximal R tibiotarsus (designated by Patterson & Rich, 1987, p. 95).

For other synonyms of Dromaius novaehollandiae, see Condon (1975).

†Dromaius novaehollandiae minor Spencer: King Island Emu
Dromaeus bassi Legge, 1907: Emu 6(3): 119 – King Island, Bass Strait, TAS; Recent.
*Dromaius parvulus* Mathews, 1910a: *The Birds of Australia* 1: 19, pl. 3. See Mathews (1910b, p. 34), for name he attributed to Gould to replace *Dromaius peroni* Rothschild; wrongfully attributed species to Kangaroo Island.


*Peronista peroni* (Rothschild); Mathews 1913, *A List of the Birds of Australia*: 2.

*Peronista spenceri* (Mathews); Mathews 1913, *A List of the Birds of Australia*: 2.

*Peronista diemenianus* (Jennings); Mathews 1927, *Systema avium Australasianarum* 1: 2 (*P. diemeniana* in Corrections, p. v).


*Dromaius novaehollandiae minor* Spencer; Gill & Donsker 2019, *IOC World Bird List* v9.2.

In referring to the Van-Diemen’s Land Cassowary, Jennings (1828, p. 382) wrote “The three last species are arranged under one genus by Dr Latham”. This may refer to Latham’s (1823, p. 384) account of the “Van Diemen’s Cassowary” based on two birds seen alive in “a London exhibition”, thought to be from Van Diemen’s Land (= Tasmania). The specimens of *Dromaius novaehollandiae diemenianus* from Tasmania in NHMUK were presented by R.C. Gunn in 1838 (Le Souëf, 1907) so post-date Latham’s observation. No specimens of the Tasmanian Emu are known to have been sent alive to Europe (Hume & Walters, 2012), despite being recorded as early as 1803 (Le Souëf, 1904). Therefore, birds mentioned by Latham (1823) probably refer to those collected on the expedition led by Nicholas Baudin in 1802 or others from King Island (see Pfennigwerth, 2010). Of those from Baudin’s expedition, two live birds reached Europe, one from King Island and one from Kangaroo Island, and only that from King Island is preserved as a skin specimen (Balouet & Jouanin, 1990; Hume, 2017; Pfennigwerth, 2010). Therefore, the name *Casuarius diemenianus* Jennings relates to two taxa of uncertain origin and thus is here considered a *nomen dubium*.

There has been extensive taxonomic confusion regarding the King Island and Kangaroo Island emus (Balouet & Jouanin, 1990; Hume, 2017; Hume & Walters, 2012; Jouanin, 1959; Pfennigwerth, 2010). Taxonomic names based on specimens of the King Island Emu that were erroneously thought to be from Kangaroo Island are marked with an asterisk *. Based on genetic and morphological analyses, the King Island, Kangaroo Island, and Tasmanian emus are considered subspecies of *D. novaehollandiae* (Heupink et al., 2011; Thomson et al., 2018).

†*Dromaius novaehollandiae baudinianus* Parker: Kangaroo Island Emu


*Dromaius novaehollandiae baudinianus* Parker; Gill & Donsker 2019, *IOC World Bird List* v9.2.

All other names that have been applied to the Kangaroo Island Emu were based on the King Island birds, so are synonymised above under *Dromaius novaehollandiae minor* Spencer (Hume, 2017; Hume & Walters, 2012; Jouanin, 1959; Parker, 1984).
†Dromaius novaehollandiae diemenensis Le Souëf: Tasmanian Emu
Dromaeus diemenensis Le Souëf, 1904: Collection of Australian birds’ eggs and nests in the possession of D. Le Souef, Director, Zoological Gardens, Melbourne: 23 – Melbourne, VIC. Nomen nudum.
Dromaeus diemenensis Le Souëf, 1907: Bulletin of the British Ornithologists’ Club 21(136): 13 – TAS; Recent. Syntypes NHMUK 1838.1.15.203, adult male skin; NHMUK 1838.1.15.204, adult female skin.
Dromaius novaehollandiae diemenensis Le Souëf; Mathews 1910a, The Birds of Australia 1: 14.

Infraclass NEOGNATHAE Pycraft, 1900: Neognaths
Parvclass GALLOANSERES Sibley, Ahlquist, & Monroe, 1988: Landfowl and Waterfowl Order †GASTORNITHIFORMES Stejneger, 1885a: Gastornithids and Mihirungs Family †DROMORNITHIDAE Fürbringer, 1888: Mihirungs

Genus †DROMORNIS Owen

†Dromornis murrayi Worthy, Handley, Archer, & Hand
Dromornis murrayi Worthy, Handley, Archer, & Hand, 2016: Journal of Vertebrate Paleontology 36(3): e1031345, p.11, fig. 5A–E – Hiatus A Site (QM locality 941), Hal’s Hill, D Site Plateau, Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone A, late Oligocene, Hiatus LF. Holotype QM F57984, partial cranium.

†Dromornis stirtoni Rich

†Dromornis planei (Rich)

†Dromornis australis Owen
Genus †BARAWE TORNIS Rich

†Barawertornis tedfordi Rich

Genus †ILBANDORNIS Rich

†Ilbandornis woodburnei Rich

†Ilbandornis lawsoni Rich


Genus †GENYORNIS Stirling & Zietz

†Genyornis newtoni Stirling & Zietz

Both the original description (Stirling & Zietz, 1896a) and description of additional material (Stirling & Zietz, 1896b) were reprinted in the Memoirs of the Royal Society of South Australia by Stirling and Zietz (1900). Further remains of Genyornis newtoni were described by Stirling and Zietz (1905, 1913)).

Genus INCERTAE SEDIS
Dromaius australis Woods, 1866: Report on the geology and mineralogy of the south-eastern district the colony of South Australia: 7 – Penola, SA; an archaeological site, so
presumed late Pleistocene. Two R tibiotarsi and two R tarsometatarsi, whereabouts unknown. *Nomen dubium.*


The specimens that formed the basis of the name *Dromaius australis* have not been located (Murray & Vickers-Rich, 2004) and were not illustrated; as such, the affinities of this taxon to Dromornithidae or Dromaiinae remain unresolved. Synonymy with *Dromornis australis* Owen, known only from a femur, is not supported given *Dromaius australis* Woods was based on tibiotarsi and tarsometatarsi (*contra* Brodkorb, 1963; Condon, 1975).

**Order ANSERIFORMES** Wagler, 1831: Waterfowl

**Family †PRESBYORNITHIDAE** Wetmore, 1926: Presbyornithids

**Genus †WILARU** Boles, Finch, Hofheins, Vickers-Rich, Walters, & Rich


†*Wilaru prideauxi* De Pietri, Scofield, Zelenkov, Boles, & Worthy


**Family ANSERANATIDAE** Sclater, 1880b: Magpie Geese

**Genus †EOANSERANAS** Worthy & Scanlon


†*Eoanseranas handae* Worthy & Scanlon

Eoanseranas *handae* Worthy & Scanlon, 2009: *Journal of Vertebrate Paleontology* 29(1): 206, fig. 1E–H,K – Hiatus A Site (QM locality 941), Hal’s Hill, D Site Plateau,
Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone A, late Oligocene, Hiatus LF. Holotype QM F45451, L coracoid.

**Family ANATIDAE** Leach, 1819: Ducks, Geese, and Swans

**Subfamily ERISMATURINAE** Eyton, 1838: Stiff-tailed Ducks

The subfamily name for the stiff-tailed ducks, “Oxyurinae Swainson, 1832 [1831]”, is invalid because it does not exist. This name is incorrectly attributed to Swainson (in Swainson & Richardson, 1832), who rejected the validity of the genus name *Oxyura* Bonaparte, 1828 and placed its type species in the genus *Fuligula* Stephens, 1824, in the subfamily Fuligulini (see Olson, 1995, p. 544). Furthermore, Oxyurinae Phillips, 1926 is a junior homonym of Oxyuridae Cobbold, 1864, a family of nematode worms (type genus *Oxyuris* Rudolphi, 1803), and therefore is unavailable (ICZN Article 53.1). Thus, Erismaturinae Eyton, 1838 (*Erismatura* Bonaparte, 1831 = *Oxyura*) is the first available name for a group including *Oxyura* and its allies.

**Genus †PINPANETTA** Worthy


**†Pinpanetta tedfordi** Worthy

*Pinpanetta tedfordi* Worthy, 2009: Zoological Journal of the Linnean Society 156(2): 417, fig. 1A,F – Young Bucks Quarry, Lake Palankarinna, Tirari Sub-basin, Lake Eyre Basin, SA; Etadunna Formation (Faunal Zone A), late Oligocene, Minkina LF. Holotype SAMA P41257, R humerus.

**†Pinpanetta vickersrichae** Worthy


**†Pinpanetta fromensis** Worthy


**Genus †TIRARINETTA** Worthy


**†Tirarinetta kanunka** Worthy

Subfamily ANSERINAE Vigors, 1825: Geese and Swans

Tribe CYGNINI Vigors, 1825: Swans

Genus CYGNUS Bechstein


Archaeocycnus De Vis, 1905: Annals of the Queensland Museum 6: 11 – type by original designation Archaeocycnus lacustris De Vis.

**Cygnus atratus** (Latham): Black Swan

Anas atrata Latham, 1790: Index ornithologicus 2: 834 – “lakes of Australia”.

Archaeocycnus lacustris De Vis, 1905: Annals of the Queensland Museum 6: 11, pl. 3 – Cooper Creek and Warburton River, Tirari Sub-basin, Lake Eyre Basin, SA; Pleistocene. Syntypes QM F5520, sternal part L coracoid (lower Cooper Creek; fig. 1A–B); QM F5521, distal R humerus (lower Cooper Creek; fig. 2A); QM F5522, distal L humerus (Kalamurina, Warburton River; fig. 2B); QM F5523, proximal R radius (Wankamaminna, Cooper Creek; fig. 3A–B); QM F5524, distal R ulna (unknown locality; fig. 4); QM F5525, proximal L femur (lower Cooper Creek); QM F5526, proximal R femur (Unduwumpa, Cooper Creek; fig. 5A–B); QM F5527, distal L tibiotarsus (Malkuni, Cooper Creek; fig. 6A–B); QM F5528, proximal L tarsometatarsus (Wurdulumankula, Cooper Creek; fig. 7A–B); QM F5529, 4th cervical vertebra (unknown locality; referred to Pelecanus conspicillatus by Rich & van Tets, 1981, p. 239, fig. 3C). Provisional synonymy with Cygnus atratus by G. van Tets (1984, p. 471).

Chenopis nanus De Vis, 1905: Annals of the Queensland Museum 6: 13, pl. 2 – Cooper Creek and Warburton River, Tirari Sub-basin, Lake Eyre Basin, SA; Pleistocene. Syntypes QM F5530, cranial part L coracoid (lower Cooper Creek; fig. 3A–B); QM F5531, distal R humerus (lower Cooper Creek; fig. 5); QM F5532, distal L tibiotarsus (lower Cooper Creek; fig. 6); QM F5533, distal L tarsometatarsus (Malkuni, Cooper Creek; fig. 7); QM F5534, distal L tarsometatarsus (Wurdulumankula, Cooper Creek), QM F5535, partial pelvis (Unduwumpa, Cooper Creek; fig. 4). Appears to be juvenile of Archaeocycnus lacustris (see Brodkorb, 1964). Provisional synonymy with Cygnus atratus by G. van Tets (1984, p. 471).

Cygnus lacustris (De Vis); Brodkorb 1964, Bulletin of the Florida State Museum, Biological Sciences 8: 209.

Subfamily ANATINAE Leach, 1819: Ducks

Tribe TADORNINI Reichenbach, 1849: Shelducks

Genus †AUSTRALOTADORNA Worthy


†Australotadorna alecwilsoni Worthy

Australotadorna alecwilsoni Worthy, 2009: Zoological Journal of Linnean Society 156(2): 429, fig. 5B,D,F – Lake Pinpa (= Pine Lake), Callabonna Sub-basin, Lake Eyre Basin,
SA; Namba Formation, late Oligocene, Pinpa LF. Holotype SAMA P43141, L humerus.

**Tribe AYTHYINI** Delacour & Mayr, 1945: Diving Ducks

**Genus AYTHYA** Boie


*Aythya australis* (Eyton): Hardhead


*Anas elapsa* De Vis, 1888a: *Proceedings of the Linnean Society of New South Wales* (series 2) 3(3): 1281, pl. 33, fig. 4A–B – Chinchilla, Darling Downs, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Lectotype QM F1124, L tibiotarsus (designated by Olson, 1977, p. 128). Synonymy with *Aythya australis* by Olson, 1977, p. 128).

*Nyroca reclusa* De Vis, 1888a: *Proceedings of the Linnean Society of New South Wales* (series 2) 3(3): 1292, pl. 33 fig. 3 – Chinchilla, Darling Downs, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Holotype QM F1123, L coracoid. Synonymy with *Aythya australis* by Olson (1977, p. 128).

*Nyroca reperta*; De Vis, 1888a: *Proceedings of the Linnean Society of New South Wales* (series 2) 3(3): 1292 (footnote, lapsus).

*Nettion elapsum* (De Vis); Brodkorb, 1964, *Bulletin of the Florida State Museum, Biological Sciences* 8: 226.

*Aythya reclusa* (De Vis); Brodkorb, 1964, *Bulletin of the Florida State Museum, Biological Sciences* 8: 229.

For *Nyroca effodiata* De Vis, 1905, see *Phaps* sp. (Columbidae, Columbiformes) as the type distal humerus fits to the type proximal humerus of *Leucosarcia proevisa*, the latter of which has priority (Olson, 1977, p. 128).

**Tribe ANATINI** Leach, 1819: Typical Ducks

**Genus ANAS** Linnaeus


*Anas superciliosa* Gmelin: Pacific Black Duck


*Nyroca robusta* De Vis, 1888a: *Proceedings of the Linnean Society of New South Wales* (series 2) 3(3): 1278, pl. 33, fig. 2 – Chinchilla, Darling Downs, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Lectotype QM F5550, L coracoid (designated by Olson, 1977, p. 127). Synonymy with *Anas superciliosa* by Olson (1977, p. 128).
Aythya robusta (De Vis); Brodkorb, 1964, *Bulletin of the Florida State Museum, Biological Sciences* 8: 229.

**Anas castanea** (Eyton): Chestnut Teal
*Mareca castanea* Eyton, 1838: *Monograph of the Anatidae, or duck tribe*: 119, pl. 22 – NSW.


*Anas (Nettion) strenua* De Vis, 1905: *Annals of the Queensland Museum* 6: 15, pl. 4, fig. 6 – Patteramordu, lower Cooper Creek, Tirari Sub-basin, Lake Eyre Basin, SA; Pleistocene. Lectotype QM F5541, proximal L humerus (designated by Olson, 1977, p. 129). Synonymy with *Anas castanea* by Olson (1977, p. 129).


*Nettion gracilipes* (De Vis); Brodkorb, 1964, *Bulletin of the Florida State Museum, Biological Sciences* 8: 226.

*Nettion strenuum* (De Vis); Brodkorb, 1964, *Bulletin of the Florida State Museum, Biological Sciences* 8: 226.

**Tribe INCERTAE SEDIS**

**Genus †Awengkere** Worthy & Yates

†**Awengkere magnanatis** Worthy & Yates
*Awengkere magnanatis* Worthy & Yates, 2018: *Contribuciones del MACN* 7: 224, fig. 1A–B – South Pit, Alcoota Scientific Reserve, NT; Waite Formation, late Miocene, Alcoota LF. Holotype NTM P4281, R tarsometatarsus.

**Genus Biziura** Stephens

**Biziura lobata** (Shaw): Musk Duck

*Dendrocygna validipinnis* De Vis, 1888a: *Proceedings of the Linnean Society of New South Wales* (series 2) 3(3): 1282, pl. 34, fig. 5A–B – Chinchilla, Darling Downs, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Lectotype QM F1125, proximal L humerus (designated by Olson, 1977, p. 129). Synonymy with *Biziura lobata* by Olson (1977, p. 130).
Dendrocygna validipennis De Vis, 1888a; Lambrecht, 1933, *Handbuch der Palaeornithologie*: 367 (lapsus).


**Order GALLIFORMES** Temminck, 1820: Landfowl

**Family MEGAPODIIDAE** Lesson, 1831: Megapodes

**Genus †NGAWUPODIUS** Boles & Ivison

*Ngawupodius* Boles & Ivison, 1999: *Smithsonian Contributions to Paleobiology* 89: 201 – type by original designation *Ngawupodius minya* Boles & Ivison.

†*Ngawupodius minya* Boles & Ivison

*Ngawupodius minya* Boles & Ivison, 1999: *Smithsonian Contributions to Paleobiology* 89: 201, fig. 1A–C – Lake Pinpa, Callabonna Sub-basin, Lake Eyre Basin, SA; Namba Formation, late Oligocene, Ericmas LF. Holotype NMV P160493, R tarsometatarsus.

**Genus †PROGURA** De Vis


*Chosornis* De Vis, 1889: *Proceedings of the Royal Society of Queensland* 6(1): 55 – type by monotypy *Chosornis praeteritus* De Vis.

*Palaeopelargus* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(3): 441 – type by monotypy *Palaeopelargus nobilis* De Vis.

Synonymy of *Progura* De Vis, 1888b with *Leipoa* Gould, 1841 was proposed by Boles (2008, p. 203), but these genera were shown to be morphologically distinct by Shute et al. (2017, p. 8).

†*Progura gallinacea* De Vis

*Progura gallinacea* De Vis, 1888b: *Proceedings of the Royal Society of Queensland* 5(4): 131, unnumbered pl. – Condamine River, South Central QLD = Ravensthorpe, near Pilton (c.10 km from Condamine River), Darling Downs, QLD (see Van Tets, 1974a); Pleistocene. Lectotype QM F1143, proximal L tarsometatarsus (designated by Boles, 2008, p. 199). Originally placed in Columbidae (Columbiformes) and allied to species of *Goura* Stephens, 1819 by De Vis (but see Van Tets, 1974a).

*Chosornis praeteritus* De Vis, 1889: *Proceedings of the Royal Society of Queensland* 6(1): 55, pl. 4 – Chinchilla, Darling Downs, QLD (type locality presumed by Van Tets, 1974a, p. 215); Chinchilla Sand, Pliocene, Chinchilla LF. Holotype QM F1132, proximal R carpometacarpus (fits to QM F1139, holotype of *Palaeopelargus nobilis*). Synonymy with *Progura gallinacea* by van Tets. (Van Tets, 1974a, p. 214).

*Palaeopelargus nobilis* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(3): 441, pl. 24, fig. 4A–B – Darling Downs, QLD; Pleistocene (type locality and age presumed by Van Tets, 1974a, p. 215). Holotype QM F1139, distal R carpometacarpus (fits to QM F1132, holotype specimen of *Chosornis praeteritus*).
Originally described as a stork (Ciconiidae: Ciconiiformes). Synonymy with *Progura gallinacea* by van Tets. (Van Tets, 1974a, p. 214).

*Progura gallinacea* De Vis; Brodkorb 1971, *Bulletin of the Florida State Museum, Biological Sciences* 15: 194 (*lapsus*).

*Progura naracoortensis* van Tets; van Tets 1985, *Kadimakara*: 196.

*L. [eipoa] (Progura) gallinacea* (De Vis); Boles 2008, *Oryctos* 7: 204.

†*Progura campestris* Shute, Prideaux, & Worthy


Genus †*Latagallina* Shute, Prideaux, & Worthy


†*Latagallina naracoortensis* (van Tets)

*Progura naracoortensis* van Tets, 1974a: *Transactions of the Royal Society of South Australia* 98(4): 214, fig. 4A – Henschke’s Quarry Cave, near Naracoorte, SA; Pleistocene. Holotype SAMA P17856, R tarsometatarsus.


*Leipoa gallinacea* (De Vis); Boles, 2008: *Oryctos* 7: 204. In part, fig. 6. Not *P. gallinacea* De Vis, 1888b.

*L. [eipoa] (Progura) gallinacea* (De Vis); Boles 2008, *Oryctos* 7: 204. Not *Progura gallinacea* De Vis, 1888b.


†*Latagallina olsoni* Shute, Prideaux, & Worthy


Genus †*Garrdimalga* Shute, Prideaux, & Worthy


†*Garrdimalga mcnamarai* Shute, Prideaux, & Worthy

Parvclass **NEOAVES** Sibley, Ahlquist, & Monroe, 1988: Higher Neognaths

Order **PHOENICOPTERIFORMES** Fürbringer, 1888: Flamingos and Allies

Family †**PALAELODIDAE** Stejneger, 1885b: Palaelodids

**Genus †PALAELODUS** Milne-Edwards


†*Palaeolodus pledgei* Baird & Vickers-Rich

*Palaeolodus pledgei* Baird & Vickers-Rich, 1998: *Alcheringa* 22(2): 137, fig. 2(1a,b) – Croc Pot Point (UCMP locality Site 3, V5762 = Turtle Quarry, ~25 m west of east tip of Paleomag. Hill South, G. Prideaux pers. comm. 12 December 2019), Lake Palankarinna, Tirari Sub-basin, Lake Eyre Basin, SA; Etadunna Formation (Faunal Zone A), late Oligocene, Minkina LF. Holotype SAMA P27996, distal L tarsometatarsus.

†*Palaeolodus wilsoni* Baird & Vickers-Rich


Family **PHOENICOPTERIDAE** Bonaparte, 1831: Flamingos

**Genus †PHOENICONOTIUS** Miller


†*Phoeniconotius eyrensis* Miller

*Phoeniconotius eyrensis* Miller, 1963: *Condor* 65(4): 292, fig. 3 – UCMP locality V5763, Lake Palankarinna, Tirari Sub-basin, Lake Eyre Basin, SA; Etadunna Formation (Faunal Zone A), late Oligocene, Minkina LF. Holotype SAMA P13649, distal L tarsometatarsus, with associated proximal phalanx of L digit III and proximal phalanx of R digit IV.

**Genus †XENORHYNCHOPSIS** De Vis


†*Xenorhynchopsis tibialis* De Vis

*Xenorhynchopsis tibialis* De Vis, 1905: *Annals of the Queensland Museum* 6: 10, pl. 1, fig. 6A–B – lower Cooper Creek, Tirari Sub-basin, Lake Eyre Basin, SA; Pleistocene. Lectotype QM F5515, distal R tibiotarsus (designated by Rich et al., 1987, p. 214).
†Xenorhynchopsis minor De Vis

Xenorhynchopsis minor De Vis, 1905: Annals of the Queensland Museum 6: 10, pl. 2, fig. 1A–B – Unduwampa, Cooper Creek, Tirari Sub-basin, Lake Eyre Basin, SA; Pleistocene. Holotype QM F5517, distal R tibiotarsus.

Genus PHOENICOPTERUS Linnaeus

Phoenicopterus Linnaeus, 1758: Systema Naturae, ed. 10, 1: 139 – type by monotypy Phoenicopterus ruber Linnaeus.

†Phoenicopterus novaehollandiae Miller

Phoenicopterus novaehollandiae Miller, 1963: Condor 65(4): 289, figs 1A,C, 2A – UCMP locality V6150, Lake Pitikanta, Lake Eyre Basin, SA; Etadunna Formation (Faunal Zone C), late Oligocene, Ngapakaldi LF. Holotype SAMA P13648, R tarsometatarsus.

Rich et al. (1987) tentatively referred several specimens to the extant Phoenicopterus ruber Linnaeus, 1758, including two of Pliocene age from the Stirton Quarry, Lake Kanunka, SA, and one of Pleistocene age from Wurdulumankula, Cooper Creek, SA, showing that the genus probably survived into the late Quaternary. Further research of these specimens is needed to resolve their taxonomic affinities.

Genus PHOENICONAIAS G. R. Gray


†Phoeniconaias proeses (De Vis)

Ocyplanus proeses De Vis, 1905: Annals of the Queensland Museum 6: 8, pl. 1, fig. 5B – unknown locality, Lake Eyre Basin, SA; unknown age. Holotype QM F5512, distal L tarsometatarsus. Originally placed in Limicolae (= Charadrii: Charadriiformes) by De Vis (1905). Placed in Laridae by Lambrecht (1933) and P. Brodkorb (1967), and in Rallidae (Gruiformes) by Condon (1975). Re-identified as member of Phoenicopteridae by Rich et al. (1987).

Ibis (?) conditus De Vis, 1905: Annals of the Queensland Museum 6: 10, pl. 2, fig. 2 – Wurdulumankula, Cooper Creek, Tirari Sub-basin, Lake Eyre Basin, SA; Pleistocene. Holotype QM F5519, L femur. Originally described as a stork (Ciconiidae: Ciconiiformes); synonymy with Ocyplanus proeses by Rich et al. (1987, p. 222).

Phoeniconaias gracilis Miller, 1963: Condor 65: 294, fig. 4A,C – UCMP locality Site 1, V5772 (= Stirton Quarry), Lake Kanunka, Tirari Sub-basin, Lake Eyre Basin, SA; Tirari Formation, Pliocene, Kanunka LF. Holotype SAMA P13650, distal L tarsometatarsus. Synonymy with Ocyplanus proeses by Rich et al. (1987, p. 222).

Carphibis condita (De Vis); Brodkorb, 1963, Bulletin of the Florida State Museum, Biological Sciences 7: 279.

Threskiornis conditus (De Vis); Condon, 1975, Checklist of the Birds of Australia 1: 63.

Phoenicopterus gracilis (Miller); Condon, 1975, Checklist of the Birds of Australia 1: 64.
Order **Columbiformes** Latham, 1790: Pigeons and Doves

Family **Columbidae** Illiger, 1811: Pigeons and Doves

Genus †**Primophaps** Worthy


†**Primophaps schoddei** Worthy


Genus **Phaps** Selby


*Lithophaps* De Vis, 1891: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(1): 121 – type by monotypy *Lithophaps ulnaris* De Vis.

**Phaps** species indeterminate


*Nyroca effodiata* De Vis, 1905: *Annals of the Queensland Museum* 6: 15, pl. 4, fig. 8 – Wurdulumankula, lower Cooper Creek, Tirari Sub-basin, Lake Eyre Basin, SA; Pleistocene. Holotype QM F5544, distal R humerus. Originally placed in Anatidae by De Vis (1905) but this specimen and the holotype of *Leucosarcia proevisa* are the distal and proximal portions of the same bone. The name *Leucosarcia proevisa* has priority (Olson, 1977, p. 128; see Van Tets & Rich, 1980).

*Aythya effodiata* (De Vis); Brodkorb, 1964, *Bulletin of the Florida State Museum, Biological Sciences* 8: 229. Either *Phaps chalcoptera* or *P. histrionica* on the basis of size, according to Van Tets and Rich (1980).

Van Tets and Rich (1980) noted that the fossils of *Lithophaps ulnaris, Leucosarcia proevisa* and *Nyroca effodiata* are indistinguishable from the extant Common Bronzewing *Phaps chalcoptera* and Flock Bronzewing *P. histrionica*. 
Order **APODIFORMES** Peters, 1940: Owlet-nightjars, Swifts, and Hummingbirds

Family **AEGOTHELIDAE** Bonaparte, 1853: Owlet-nightjars

Genus †**QUIPOLLRNIS** Rich & McEvey


†**Quipollornis koniberi** Rich & McEvey


Family **APODIDAE** Olphe-Gaillard, 1887: Swifts

Genus **COLLOCALIA** G. R. Gray


†**Collocalia buday** Boles


Order **CUCULIFORMES** Wagler, 1830: Cuckoos and Allies

Family **CUCULIDAE** Leach, 1819: Cuckoos, Coucals, and Koels

Subfamily **CENTROPINAE** Eyton, 1867: Coucals

The name Centropodinae Horsfield, 1823, as advocated by Bock (1994) is invalid as Horsfield only used “Centropi” as a plural term for species of *Centropus* (see Olson, 1995). Therefore, we use the subfamily name Centropinae as erected by Eyton (1867, p. 88) for the coucals.

Genus **CENTROPUS** Illiger

*Centropus* Illiger, 1811: *Prodromus systematis mammalium et avium*: 205 – type by subsequent designation *Cuculus aegyptius* J.F. Gmelin = *Centropus senegalensis* (Linnaeus).

†**Centropus bairdi** Shute, Prideaux, & Worthy


†**Centropus maximus** Shute, Prideaux, & Worthy

Thylacoleo Caves, Nullarbor Plain, WA; early to middle Pleistocene. Holotype WAM 09.3.283, associated remains of an adult individual.

†Centropus colossus Baird
Centropus colossus Baird, 1985: Records of the Australian Museum 37(6): 360, figs 5, 6A – Green Waterhole Cave (= Fossil Cave, 5L81), Tantanoola, SA; middle or late Pleistocene. Holotype, SAMA P24240, L humerus.

Order GRUIFORMES Bonaparte, 1854: Rails, Cranes, and Allies
 Family RALLIDAE Rafinesque, 1815: Rails, Crakes, and Coots

Genus †AUSTRALLUS Worthy & Boles

†Australus disneyi (Boles)

†Australus gagensis Worthy & Boles

Genus PORPHYRIO Brisson

Porphyrio melanotus (Temminck): Australasian Swamphen
Porphyrio melanotus Temminck, 1820: Manuel d’ornithologie, ed. 2, 2: 701 – NSW.

A multi-locus phylogenetic analysis has shown that the Purple Swamphen Porphyrio porphyrio species complex is paraphyletic, which is in agreement with morphological data (García-R & Trewick, 2015; Sangster, 1998). Accordingly, this complex has been split into six species: Western Swamphen Porphyrio porphyrio, African Swamphen P. madagascariensis, Grey-headed Swamphen P. poliocephalus, Black-backed Swamphen P. indicus, Philippine Swamphen P. pulverulentus, and Australasian Swamphen P. melanotus (García-R & Trewick, 2015; Sangster, 1998; Sangster et al., 2016).

†Porphyrio melanotus nujagura Boles & Mackness
Porphyrio porphyrio nujagura Boles & Mackness, 1994: Records of the South Australian Museum 27(2): 145, fig. 1L – EVS Site, Bluff Downs Station, QLD; Allingham Formation, early Pliocene, Bluff Downs LF. Holotype QM F23250, proximal R tarsometatarsus.
Genus **TRIBONYX** Du Bus de Gisignies


The native-hens (species *mortierii* and *ventralis*) were retained in *Tribonyx*, rather than being included in *Gallinula*, based on morphological analyses (Livezey, 1998).

**Tribonyx mortierii** Du Bus de Gisignies: Tasmanian Native-hen


†**Tribonyx mortierii repertus** (De Vis)

*Porphyrio (?) reperta* De Vis, 1888a: *Proceedings of the Linnean Society of New South Wales* (series 2) 3(3): 1283, pl. 34, fig. 7A–B – Chinchilla, Darling Downs, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Holotype QM F1126, distal R tarsometatarsus. Synonymy with *Tribonyx mortierii* as distinct subspecies by Olson (1975, p. 50).

*Gallinula strenuipes* De Vis, 1888a: *Proceedings of the Linnean Society of New South Wales* (series 2) 3(3): 1284, pl. 34, fig. 8A–B – Chinchilla, Darling Downs, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Holotype QM F1128, L tarsometatarsus. Synonymy with *Tribonyx mortierii repertus* by Olson (1975, p. 52).

*Tribonyx effluxus* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(3): 439 (figured in *De Vis*, 1888a: pl. 35, fig. 9B) – Chinchilla, Darling Downs, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Holotype QM F1138, distal R humerus (originally designated as a syntype of *Fulica prior* De Vis, 1888a). Synonymy with *Tribonyx mortierii repertus* by Olson (1975, p. 50).

*Porphyrio mackintoshi* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(3): 440, pl. 24, fig. 2A–B – ?Darling Downs, QLD; unknown age. Holotype distal R tarsometatarsus, missing. Synonymy with *Tribonyx mortierii repertus* by Olson (1975, p. 52).

*Gallinula peralata* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(3): 440, pl. 24, fig. 3A–B – ?Darling Downs, QLD; unknown age. Holotype QM F1144, R humerus. Synonymy with *Tribonyx mortierii repertus* by Olson (1975, p. 52).


*Gallinula effluxa* (De Vis); Condon, 1975, *Checklist of the Birds of Australia* 1: 106.

*Gallinula mortierii reperta* (De Vis); Olson, 1975, *Emu* 75(2): 52.
Genus **FULICA** Linnaeus


**Fulica atra** Linnaeus: Eurasian Coot


*Fulica prior* De Vis, 1888a: *Proceedings of the Linnean Society of New South Wales* (series 2) 3(3): 1285, pl. 35, fig. 9A – Chinchilla, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Holotype QM F1129, proximal R humerus. Synonymy with *Fulica atra* by Olson (1975, p. 50).

Order **SPHENISCIFORMES** Sharpe, 1891: Penguins

Family **SPHENISCIDAE** Bonaparte, 1831: Penguins

Genus †**PACHYDYPTES** Oliver

*Pachydyptes* Oliver, 1930: *New Zealand Birds*, ed. 1: 85 – type by original designation *Pachydyptes ponderosus* Oliver.

†*Pachydyptes simpsoni* Jenkins

*Pachydyptes simpsoni* Jenkins, 1974: *Palaeontology* 17(2): 294, pl. 37, figs 1–2; pl. 38, figs 1, 3; pl. 39, figs 3–5 – Blanche Point, SA; Blanche Point Formation, late Eocene. Holotype SAMA P14157a–g, associated remains of an individual comprising: SAMA P14157a, L coracoid; SAMA P14157b, proximal R humerus; SAMA P14157c, proximal L humerus; SAMA P14157d, R radius; SAMA P14157e, L carpometacarpus; SAMA P14157f, L phalanx II-1; SAMA P14157g, vertebra.

Synonymised with *Anthropornis nordenskjöldii* Wiman, 1905 by Jenkins (1985, p. 184), but this was rejected by Park and Fitzgerald (2012), who concluded that its affinities are unresolved. As such, this species is here retained in *Pachydyptes*, pending further re-evaluation.

Genus †**ANTHROPODYPTES** Simpson


†*Anthropodyptes gilli* Simpson


Genus †**PSEUDAPTENODYPTES** Simpson


†*Pseudaptenodytes macraei* Simpson

*Pseudaptenodytes macraei* Simpson, 1970: *Memoirs of the National Museum of Victoria* 31: 20, pl. 1, figs 1–2; pl. 2, fig. 2; pl. 3, fig. 1 – Spring Creek, Minhamite, VIC;

Genus *Eudyptes* Vieillot


*Eudyptes pachyrhynchus* G.R. Gray: Fiordland Crested Penguin


Cole et al. (2018) *Tasidyptes hunteri* van Tets & O’Connor, 1983: Records of the Queen Victoria Museum Launceston 81: 3, figs 2–3 – Stockyard Site, Hunter Island, TAS; late Holocene. Holotype ANWC B21141 (originally ANWC BS2670), pelvis in three parts. Synonymy by because the mitochondrial DNA sequences from the type specimens are indistinguishable from this species. Other referred specimens were attributed to *Eudyptes robustus* Oliver and *Eudyptula novaehollandiae* Stephens (see Cole et al., 2018, p. 463).

*Sphenisciformes* indeterminate


**Order PROCELLARIIFORMES** Fürbringer, 1888: Tube-nosed Seabirds

**Family DIOMEDEIDAE** G.R. Gray, 1840: Albatrosses

Genus *Diomedea* Linnaeus


†*Diomedea thyridata* Wilkinson

Diomedea thyridata Wilkinson, 1969: Memoirs of the National Museum of Victoria 29: 42, pl. 3, fig. 2; pl. 4, figs 2, 5 – Beaumaris, VIC; Black Rock Sandstone, late Miocene–early Pliocene, Beaumaris L.F. Holotype NMV P24172, partial premaxilla.


At the time this species was described, *Diomedea* included species that are now segregated into four genera (*Diomedea, Phoebastria, Phoebetria* and *Thalassarche*), so the generic affinities of this species may need revision.
Order **CICONIIFORMES** Garrod, 1874: Storks

Family **CICONIIDAE** Sundevall, 1836: Storks

Genus *CICONIA* Brisson

*Ciconia* Brisson, 1760: *Ornithologia* 1: 48 – type by tautonymy “*Ciconia*” Brisson = *Ardea ciconia* Linnaeus.

†*Ciconia lousebolesae* Boles


†*Ciconia nana* (De Vis)


Boles (2005a) reviewed the fossil storks of Australia and noted that the single extant species *Ephippiorhynchus asiaticus* (Latham) has a Pliocene – Pleistocene record.

Order **PELECANIFORMES** Sharpe, 1891: Pelicans, Ibises, Herons and Allies

Family **PELECANIDAE** Rafinesque, 1815: Pelicans

Genus *PELECANUS* Linnaeus


*Pelecanus* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6 (3): 444. Unjustified emendation.

†*Pelecanus tirariensis* Miller


†*Pelecanus cadimurka* Rich & van Tets

†*Pelecanus proavus* (De Vis)

*Pelecanus proavus* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(3): 444, pl. 24, fig. 6A–B – ?Darling Downs, QLD; unknown age. Syntypes L tarsometatarsus, missing, and QM F1141, part carpometacarpus; the figured tarsometatarsus is here selected as the lectotype.

The detailed description of the tarsometatarsus (De Vis, 1892) clearly identifies this bone as a pelican, whereas the carpometacarpus is indeterminate (Miller, 1966a). Based on figures of the tarsometatarsus in De Vis’s (1892) description, Miller (Miller, 1966b, p. 186) synonymised *Pelecanus proavus* with *Pelecanus conspicillatus*. However, Rich and van Tets (1981) remarked that the figures indicate a pelican distinct from *P. conspicillatus*, and recommended that *Pelecanus proavus* be provisionally retained until the lectotype is found.

*Pelecanus conspicillatus* Temminck: Australian Pelican


Family **THRESKIORNITHIDAE** Poche, 1904: Ibises and Spoonbills

Subfamily **THRESKIORNITHINAE** Poche, 1904: Ibises

Genus **THRESKIORNIS** G.R. Gray


*Threskiornis moluccus* (Cuvier): Australian Ibis


Originally described as a spoonbill (Threskiornithidae), on the basis of syntypes including a partial femur and two distal right tibiotarsi. Olson (1975) identified the tibiotarsi as belonging to *Tribonyx mortierii repertus* and designated the femur as the lectotype for
Olson (1981) recommended that *Platalea subtenuis* be treated as Aves incertae sedis, pending detailed comparisons of the lectotype specimen. Boles (2005b) identified the lectotypic femur as that of the living Australian Ibis *Threskiornis moluccus*.

**Order** SULIFORMES Sharpe, 1891: Frigatebirds, Anhingas, Gannets, and Cormorants  
**Family** PHALACROCORACIDAE Reichenbach, 1849: Cormorants and Shags

**Genus †NAMBASHAG** Worthy  

†*Nambashag billeroensis* Worthy  

†*Nambashag microglaucus* Worthy  
*Nambashag microglaucus* Worthy, 2011: Zoological Journal of the Linnean Society 163(1): 292, fig. 3A–C – Site 2, Billeroo Creek, Frome Downs Station, Callabonna Sub-basin, Lake Eyre Basin, SA; Namba Formation, late Oligocene, Namba LF. Holotype SAMA P32584, R femur.

**Genus MICROCARBO** Bonaparte  

†*Microcarbo serventyorum* van Tets  

*Microcarbo melanoleucus* (Vieillot): Little Pied Cormorant  

*Plotus parvus* De Vis, 1888a: Proceedings of the Linnean Society of New South Wales (series 2) 3(3): 1286, pl. 35, fig. 10A–B – Chinchilla, Darling Downs, QLD; Chinchilla Sand, Pliocene, Chinchilla LF. Holotype QM F1130, R humerus. Synonymy with *Haliëtor (= Microcarbo) melanoleucus* by Miller (1966b, p. 317).

*Anhinga parva* (De Vis); Brodkorb 1963, Bulletin of the Florida State Museum, Biological Sciences 7: 256.
Genus **PHALACROCORAX** Brisson

*Phalacrocorax* Brisson, 1760: *Ornithologia* 1: 60 – type by tautonymy “*Phalacrocorax*”

Brisson = *Pelecanus carbo* Linnaeus.


**Phalacrocorax carbo** (Linnaeus): Great Cormorant


*Australocorax gregorii* (De Vis); Lambrecht, 1933, *Handbuch der Palaeornithologie*: 293.

**Phalacrocorax varius** (J. F. Gmelin): Great Pied Cormorant


*Australocorax vetustus* (De Vis); Lambrecht, 1933, *Handbuch der Palaeornithologie*: 294.

**Family** **ANHINGIDAE** Lesson, 1831: Anhingas and Darters

Genus **ANHINGA** Brisson

*Anhinga* Brisson, 1760: *Ornithologia* 1: 60 – type by tautonymy and monotypy “*Anhinga*”

Brisson = *Plotus anhinga* Linnaeus.

*Plotus* Linnaeus, 1766: *Systema Naturae, ed. 12, 1*: 218 – type by monotypy *Plotus anhinga* Linnaeus.

†*Anhinga walterbolesi* Worthy


†*Anhinga malagurala* Mackness

*Anhinga malagurala* Mackness, 1995: *Emu* 95(4): 267, fig. 1 – Main Quarry, Bluff Downs Station, QLD; Allingham Formation, early Pliocene, Bluff Downs LF. Holotype QM F25776, R carpometacarpus.
Anhinga novaehollandiae (Gould): Australasian Darter


Anhinga laticeps (De Vis); Brodkorb 1963, Bulletin of the Florida State Museum, Biological Sciences 7: 256.

Order CHARADRIIFORMES Huxley, 1867: Shorebirds

Suborder CHARADRIII Strauch, 1978: Thick-knees, Sheathbills, Plovers, Oystercatchers, and Allies (sensu Paton et al., 2003)

Superfamily CHIONOIDEA Lesson, 1828: Stone-curlews and Sheathbills

Family INCERTAE SEDIS

Genus †CHIONOIDES De Pietri, Scofield, Hand, Tennyson, & Worthy


†Chionoides australiensis De Pietri, Scofield, Hand, Tennyson, & Worthy

Chionoides australiensis De Pietri, Scofield, Hand, Tennyson, & Worthy, 2016: Journal of the Royal Society of New Zealand 46(3-4): 191, fig. 1I,K,M,O – Neville’s Nirvana, Lake Palankarinna, Tirari Sub-basin, Lake Eyre Basin, SA; Etadunna Formation (Faunal Zone A), late Oligocene, Minkina LF. Holotype SAMA P41458, left coracoid.

Superfamily CHARADRIIOIDEA Leach, 1820: Plovers and Lapwings

Family CHARADRIIDAE Leach, 1820: Plovers and Lapwings

Genus VANELLUS Brisson


†Vanellus liffyae De Pietri, Scofield, Prideaux, & Worthy

Vanellus liffyae De Pietri, Scofield, Prideaux, & Worthy, 2018: Emu 118(4): 338, fig. 3A,E, I,J,M – Lake Kanunka, Tirari Sub-basin, Lake Eyre Basin, SA; Tirari Formation, Pompapillina Member, late Pliocene, Kanunka LF. Holotype SAMA P54992, R coracoid.
Suborder **SCOLEPACI** Strauch, 1978: Snipes, Sandpipers, and Allies

Family **PEDIONOMIDAE** Bonaparte, 1856: Plains-wanderers

**Genus †OLIGONOMUS** De Pietri, Camens, & Worthy


†*Oligonomus milleri* De Pietri, Camens, & Worthy

*Oligonomus milleri* De Pietri, Camens, & Worthy, 2015: *Ibis* 157(1): 70, fig. 1A,F,H,I, K,N – Steve’s Site (SAMA site 8309 = UCMP RV-8447), Lake Palankarinja, Tirari Sub-basin, Lake Eyre Basin, SA; Etadunna Formation (Faunal Zone B), member 7, late Oligocene, Ditjimanka LF. Holotype SAMA P27976, L coracoid lacking sternal end.

Order **ACCIPITRIFORMES** Vieillot, 1816: Diurnal Birds of Prey

Family **ACCIPITRIDAE** Vigors, 1824: Kites, Eagles, Hawks, and Allies

**Genus †PENGANA** Boles

*Pengana* Boles, 1993: *Alcheringa* 17(1): 20 – type by original designation *Pengana robertbolesi* Boles.

†*Pengana robertbolesi* Boles

*Pengana robertbolesi* Boles, 1993: *Alcheringa* 17(1): 20, fig. 1 – Sticky Beak Site, D Site Plateau, Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone A, late Oligocene, Sticky Beak LF. Holotype QM F16865, distal L tibiotarsus.

**Genus †NECRASTUR** De Vis

*Necrastur* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6 (3): 437 – type by monotypy *Necrastur alacer* De Vis.

†*Necrastur alacer* De Vis

*Necrastur alacer* De Vis, 1892: *Proceedings of the Linnean Society of New South Wales* (series 2) 6(3): 439, pl. 24, fig. 1A–B – ?Darling Downs, QLD; unknown age. Holotype QM F1136, proximal R humerus.

Gaff (2002) observed that this species significantly differed in size and morphology from modern Australian accipitrids.

**Genus AVICEDA** Swainson

*Aviceda* Swainson, 1836: *On the Natural History and Classification of Birds* 1: 300 – type by subsequent monotypy *Aviceda cuculoides* Swainson.

†Aviceda gracilis (De Vis)
Baza gracilis De Vis, 1905: Annals of the Queensland Museum 6: 7, pl. 1, fig. 4 – Locality 6, lower Cooper Creek, Tirari Sub-basin, Lake Eyre Basin, SA; Pleistocene. Holotype QM F5510, partial L humerus.
Aviceda gracilis (De Vis); Brodkorb 1964, Bulletin of the Florida State Museum, Biological Sciences 8: 280.

Considered Accipitriformes incertae sedis by G. van Tets (1984), pending discovery of additional material. Van Tets and Rich (1990) and Gaff (2002) suggested that this taxon was referable to the extant goshawk genus Accipiter.

Genus AQUILA Brisson
Taphaetus De Vis, 1891: Proceedings of the Linnean Society of New South Wales (series 2) 6(1): 123 – type by original designation Uroaetus brachialis De Vis.

†Avila bullockensis Gaff & Boles

Genus INCERTAE SEDIS
†Aquila brachialis (De Vis)
Uroaetus brachialis De Vis, 1889: Proceedings of the Royal Society of Queensland 6(4): 162, unnumbered pl. (pl. 10) – King Creek, Darling Downs, QLD; Pleistocene. Holotype QM F1117, distal L humerus.
Taphaetus brachialis (De Vis); De Vis 1891, Proceedings of the Linnean Society of New South Wales (series 2) 6(1): 123.
Uroaetus brachialis De Vis; De Vis 1905, Annals of the Queensland Museum 6: 6. Aquila brachialis (De Vis); Condon 1975, Checklist of the Birds of Australia 1: 84.

The affinities of Uroaetus brachialis are uncertain; De Vis (1889) initially considered it similar to Uroaetus (= Aquila), but then, when referring a femur to brachialis, erected the genus Taphaetus, for which the type species was U. brachialis by monotypy. However, with the discovery of the specimens named Taphaetus lacertosus by De Vis (1905), that author reassigned brachialis back to Uroaetus. Condon (1975) considered this species to be possibly referable to Aquila audax, whereas G. van Tets (1984) considered it to be an indeterminate accipitrinae. Pending a revision of the species, it seems advisable to retain brachialis in Aquila (= Uroaetus), following De Vis (1905).

†“Taphaetus” lacertosus De Vis
Uroaëtus lacertosus (De Vis); Brodkorb 1964, Bulletin of the Florida State Museum, Biological Sciences 8: 272.

Aquila lacertosus (De Vis); Condon 1975, Checklist of the Birds of Australia 1: 84.

Following the original description (De Vis, 1889) of Uroaëtus brachialis, De Vis (1891) erected a new genus, Taphaetus, for this species based on a partial left femur (QM F118) that he referred to the species. De Vis (1905, p. 6) later restored the holotype of the type species T. brachialis to the genus Uroaëtus and incorrectly used the genus name Taphaetus for a new species, T. lacertosus, based on a distal right humerus (QM F5507) and a right quadrate (QM F5507). In naming this taxon, De Vis created Taphaetus De Vis, 1905, type species Taphaetus lacertosus De Vis, 1905 by monotypy. This is invalid as it is a junior homonym of Taphaetus De Vis, 1891, now a synonym of Uroaëtus (= Aquila). If lacertosus is deemed to be generically distinct, then it requires a new generic name; but if it is only specifically distinct, then it needs to be referred to an appropriate existing genus (van Tets, 1974b). van Tets (1974b) proposed assigning Taphaetus lacertosus to the modern genus Ichthyophaga (now in Haliaeetus), then later suggested that this species may be a member of the Old World vulture subfamily Gypaetinae (van Tets, 1984). Pending the revision of lacertosus, we leave this species in “Taphaetus”.

Order **FALCONIFORMES** Sharpe, 1874: Falcons and Allies

Family **FALCONIDAE** Leach, 1819: Falcons

**Genus FALCO** Linnaeus


*Asturaetus* De Vis, 1905: *Annals of the Queensland Museum* 6: 6 – type by monotypy *Asturaetus furcillatus* De Vis.

*Plioaetus* Richmond, 1909: *Proceedings of the United States National Museum* 35: 592 (footnote). New name for *Asturaetus* De Vis, which is preoccupied by *Asturaëtos* Brehm, 1855.

**Falco berigora** Vigors & Horsfield: Brown Falcon

*Falco berigora* Vigors & Horsfield, 1827: *Transactions of the Linnean Society of London* 15 (1 [1826]): 184. All of Volume 15 was published in 1827 (Browning & Monroe, 1991).


*Plioaetus furcillatus* (De Vis); Brodkorb, 1964, *Bulletin of the Florida State Museum, Biological Sciences* 8: 291.
Order **PASSERIFORMES** Linnaeus, 1758: Perching Birds

Suborder **PASSERI** Linnaeus, 1758: Oscine Passerines

Family **MENURIDAE** Lesson, 1828: Lyrebirds

Genus **MENURA** Latham

*Menura* Latham, 1801: *Supplementum Indicis Ornithologici*: lxi – type by monotypy

†*Menura tyawanoides* Boles


Family **DASYORNITHIDAE** Schodde, 1975: Bristlebirds

Genus **DASYORNIS** Vigors & Horsfield: Bristlebirds

*Dasyornis* Vigors & Horsfield, 1827: *Transactions of the Linnean Society of London* 15(1): 231 – type by monotypy

†*Dasyornis walterbolesi* Nguyen: Walter’s Bristlebird


Family **ACANTHIZIDAE** Bonaparte, 1854: Thornbills, Scrubwrens, and Allies

Genus **PYCNOPTILUS** Gould


†*Pycnoptilus fordi* Baird

*Pycnoptilus fordi* Baird, 1993: *Alcheringa* 17: 395, fig. 5A,B3 – Pyramids Cave (M-89), Buchan, VIC; late Pleistocene. Holotype NMV P183128, R humerus.

Family **ORTHONYCHIDAE** G.R. Gray, 1840: Logrunners

Genus **ORTHONYX** Temminck

*Orthonyx* Temminck, 1820: *Manuel d’ornithologie, ou, Tableau systématique des oiseaux qui se trouvent en Europe, ed. 2*, 1: lxxxi – type by subsequent monotypy
†Orthonyx kaldowinyeri Boles
Orthonyx kaldowinyeri Boles, 1993: Emu 93(1): 45, fig. 1D – Last Minute Site, Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone C, middle Miocene, Last Minute LF. Holotype QM F16867, L femur.

†Orthonyx hypsilophus Baird
Orthonyx hypsilophus Baird, 1985: Records of the Australian Museum 37(6): 363, fig. 7, 8C – Green Waterhole Cave (= Fossil Cave, 5L81), Tantanoola, SA; middle or late Pleistocene. Holotype SAMA P24444, partial pelvis.

†Orthonyx wakefieldi Baird
Orthonyx wakefieldi Baird, 1993: Alcheringa 17(4): 390, fig. 3A – Pyramids Cave (M-89), Buchan, VIC; late Pleistocene. Holotype NMV P183118, R femur.

Family **NEOSITTIDAE** Ridgway, 1904: Sittellas

Genus **DAPHOENOSITTA** De Vis
Daphoenositta De Vis, 1897: Ibis 39(3): 380 – type by monotypy Daphoenositta miranda De Vis.

†Daphoenositta trevorworthyi Nguyen: Trevor’s Sittella
Daphoenositta trevorworthyi Nguyen, 2016: Palaeontologia Electronica 19.1.1A: 4, fig. 1.1, 1.3, 1.5 – Rick’s Sausage Site, Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone C, middle Miocene, Rick’s Sausage LF. Holotype QM F57897, distal left tibiotarsus.

Family **CINCLOSOMATIDAE** Mathews, 1922: Quail-thrushes and Jewel-babblers

Genus **CINCLOSOMA** Vigors & Horsfield

†Cinclosoma elachum Nguyen, Archer, & Hand
Cinclosoma elachum Nguyen, Archer, & Hand, 2018: Acta Palaeontologica Polonica 63 (3): 495, fig. 1A – Wayne’s Wok Site, Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone B, early Miocene, Wayne’s Wok LF. Holotype QM F57949, partial R carpometacarpus.

Family **ORIOLIDAE** Boie, 1826: Orioles and Allies

Genus †**LONGMORNIS** Boles

†Longmornis robustirostrata Boles
Longmornis robustirostrata Boles, 1999: Alcheringa 23(1): 54, fig. 1A–B – Neville’s Garden Site, Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone B, early Miocene, Neville’s Garden LF. Holotype QM F30886, mandible.
Family **ARTAMIDAE** Blyth, 1849: Woodswallows, Butcherbirds, and Allies

Subfamily **CRACTICINAE** Chenu & des Murs, 1853 (1836): Peltops, Butcherbirds, Magpies, and Currawongs

**Genus †KURRARTAPU** Nguyen

**†Kurrartapu johnnguyeni** Nguyen
Kurrartapu johnnguyeni Nguyen, 2013: *Emu* 113(4): 377, figs 1, 2B – Price is Right Site, Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone B, early Miocene, Price is Right LF. Holotype QM F56251, proximal R tarsometatarsus.

**Family INCERTAE SEDIS**

**Genus †CORVITALUSOIDES** Boles
Corvitalusoides Boles, 2006: *Alcheringa* 30(S1): 34 – type by original designation *Corvitalusoides grandiculus* Boles.

**†Corvitalusoides grandiculus** Boles
Corvitalusoides grandiculus Boles, 2006: *Alcheringa* 30(S1): 34, fig. 1 – Dirk’s Towers Site, Riversleigh World Heritage Area, Boodjamulla (Lawn Hill) National Park, QLD; Riversleigh Faunal Zone B, early Miocene, Dirk’s Towers LF. Holotype QM F36341, distal R tibiotarsus.

**AVES INCERTAE SEDIS**

**Genus †PALAEOLESTES** De Vis
Palaeolestes De Vis, 1911: *Annals of the Queensland Museum* 10: 17 – type by monotypy *Palaeolestes gorei* De Vis, 1911.

**†Palaeolestes gorei** De Vis

Originally described as a member of Accipitridae, but may be non-avian (Brodkorb, 1978; Boles, 2006). The affinities of *Palaeolestes gorei* are uncertain, pending detailed study of the holotype and only specimen.

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