

Text extracted from Gill B.J.; Bell, B.D.; Chambers, G.K.; Medway, D.G.; Palma, R.L.; Scofield, R.P.; Tennyson, A.J.D.; Worthy, T.H. 2010. *Checklist of the birds of New Zealand, Norfolk and Macquarie Islands, and the Ross Dependency, Antarctica*. 4<sup>th</sup> edition. Wellington, Te Papa Press and Ornithological Society of New Zealand. Pages 64, 78-79, 111-112 & 120-121.

## Order PROCELLARIIFORMES:

### Albatrosses, Petrels, Prions and Shearwaters

Checklist Committee (1990) recognised three families within the Procellariiformes, however, four families are recognised here, with the reinstatement of Pelecanoididae, following many other recent authorities (e.g. Marchant & Higgins 1990, del Hoyo *et al.* 1992, Viot *et al.* 1993, Warham 1996: 484, Nunn & Stanley 1998, Dickinson 2003, Brooke 2004, Onley & Scofield 2007). The relationships of the families within the Procellariiformes are debated (e.g. Sibley & Alquist 1990, Christidis & Boles 1994, Nunn & Stanley 1998, Livezey & Zusi 2001, Kennedy & Page 2002, Rheindt & Austin 2005), so a traditional arrangement (Jouanin & Mougín 1979, Marchant & Higgins 1990, Warham 1990, del Hoyo *et al.* 1992, Warham 1996: 505, Dickinson 2003, Brooke 2004) has been adopted. The taxonomic recommendations (based on molecular analysis) on the Procellariiformes of Penhallurick & Wink (2004) have been heavily criticised (Rheindt & Austin 2005) and have seldom been followed here.

## Family PROCELLARIIDAE Leach:

### Fulmars, Petrels, Prions and Shearwaters

Procellariidae Leach, 1820: *Eleventh room. In Synopsis Contents British Museum 17th Edition, London*: 68 – Type genus *Procellaria* Linnaeus, 1758.

Subfamilies Procellariinae and Fulmarinae and shearwater subgenera *Ardenna*, *Thyellodroma* and *Puffinus* (as recognised by Checklist Committee 1990) are not accepted here given the lack of agreement about to which subgenera some species should be assigned (e.g. Austin 1996, Nunn & Stanley 1998, Kennedy & Page 2002, Austin *et al.* 2004). The arrangement of species used here follows the traditional order of Jouanin & Mougín (1979), except for the placement of the more recently accepted genera *Lugensa* and *Pseudobulweria*. Imber (1985d) concluded that *Lugensa* should follow the fulmar species and that *Pseudobulweria* should follow *Procellaria*. Penhallurick & Wink (2004) also found a close relationship between *Pseudobulweria* and *Procellaria* and Bretagnolle *et al.* (1998) concluded that *Pseudobulweria* was closely related to shearwaters, so here *Pseudobulweria* is placed between *Procellaria* and *Calonectris*.

*Prion* of Lacépède (1799: 14) has been associated with species now recognised as belonging to *Pachyptila* Illiger, 1811, but it is a *nomen dubium* (Mathews & Iredale 1913: 236, Iredale 1913: 25, Mathews 1922: 166). *Priamphus* Rafinesque (1815: 72), based on *Prion* Lacépède, is also a *nomen dubium*.

The following names of relevance to New Zealand taxa are not listed under any species because: *Procellaria fregata* of Linnaeus (1766: 212) is a *nomen dubium* (Mathews 1936a); *Procellaria nigra* of Pallas (1769: 28) is a *nomen dubium* (Mathews 1934); *Procellaria fuliginosa* of Gmelin (1789: 562) and *Procellaria melanopus* of Gmelin (1789: 562) are *nomina dubia* (Godman 1907–08: 22, Bourne 1995); *Procellaria velox* of Kuhl (1820: 143) is a *nomen dubium* (Mathews 1912–13: 170); *Procellaria grisea* of Kuhl (1820: 144) is both a *nomen dubium* and a junior primary homonym of *Procellaria grisea* Gmelin, 1789; *Procellaria lugens* of Kuhl (1820: 144) is a *nomen dubium* (Salvin 1876, Bourne & Elliott 1965); *Procellaria munda* of Kuhl (1820: 148) and *Nectris munda* of Kuhl (1820: 148) have been placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* with name numbers 484 and 485 respectively (ICZN 1957).

## Genus *Puffinus* Brisson

*Puffinus* Brisson, 1760: *Ornithologie 1*: 56, 6: 129 – Type species (by tautonymy) *Puffinus* = *Procellaria puffinus* Brünnich = *Puffinus puffinus* (Brünnich).

*Nectris* Kuhl, 1820: *Beitr. Zool. vergl. Anat. 1*: 146 – Type species (by subsequent designation) *Procellaria puffinus* Brünnich = *Puffinus puffinus* (Brünnich).

*Thyellas* Gloger, 1827: *Froriep's Notiz.*: 279. Unnecessary *nomen novum* for *Puffinus* Brisson, 1760.

*Rhipornis* Billberg, 1828: *Synop. Faun. Scand. 1*: tab. A. Unnecessary *nomen novum* for *Puffinus* Brisson, 1760.

*Cymotomus* Macgillivray, 1842: *Man. Brit. Ornith.* 2: 13 – Type species (by monotypy) *Procellaria puffinus* Brünnich = *Puffinus puffinus* (Brünnich).  
*Ardenna* Reichenbach, 1853: *Avium Syst. Nat.*: iv – Type species (by original designation) *Puffinus major* (Faber) = *Puffinus gravis* (O'Reilly).  
*Thiellus* Bonaparte, 1857: *Consp. Gen. Avium* 2: 200. Unjustified emendation.  
*Thyellodroma* Stejneger, 1888: *Proc. U.S. Nat. Mus.* 11: 93 – Type species (by original designation) *Puffinus sphenurus* Gould = *Puffinus chlororhynchus* Lesson.  
*Zalias* Heine & Reichenow, 1890: *Nom. Mus. Hein. Ornith.*: 362 – Type species (by subsequent designation) *Puffinus chlororhynchus* Lesson.  
*Reinholdia* Mathews, 1912: *Austral Avian Rec.* 1: 107 – Type species (by original designation) *Puffinus reinholdi* Mathews = *Puffinus gavia* (J.R. Forster).  
*Neonectris* Mathews, 1913: *Austral Avian Rec.* 2: 12 – Type species (by original designation) *Puffinus brevicaudus* Gould = *Puffinus tenuirostris* (Temminck).  
*Hemipuffinus* Iredale, 1913: *Austral Avian Rec.* 2: 20 – Type species (by original designation) *Puffinus carneipes* Gould.  
*Alphapuffinus* Mathews, 1914: *Austral Avian Rec.* 2: 110 – Type species (by original designation) *Puffinus assimilis* Gould.  
*Microzalias* Mathews & Iredale, 1915: *Ibis* 3 (10th ser.): 597 – Type species (by original designation) *Puffinus nativitatis* Streets.  
*Cinathisma* Hull, 1916: *Emu* 15: 205 – Type species (by monotypy) *Cinathisma cyaneoleuca* Hull = *Puffinus gavia* (J.R. Forster).  
*Paranectris* Iredale, 1930: *Australian Zool.* 6(2): 115 – Type species (by original designation) *Procellaria grisea* Gmelin = *Puffinus griseus* (Gmelin).

### ***Puffinus gavia* (J.R. Forster)**

### **Fluttering Shearwater**

*Procellaria gavia* J.R. Forster, 1844: in M.H.C. Lichtenstein, *Descrip. Animalium*: 148 – Queen Charlotte Sound, Marlborough.

*Aestrelata gavia* (J.R. Forster); Coues 1866, *Proc. Acad. Nat. Sci. Philad.* 18: 154.  
*Puffinus ?obscurus*; Hutton 1869, *Ibis* 5 (n. ser.): 352. Not *Procellaria obscura* Gmelin, 1788.  
 ? *Puffinus opisthomelas*; Finsch 1870, *Journ. für Ornith.* 18: 371. Not *Puffinus opisthomelas* Coues, 1864.  
*Fulmarus (Cookilaria) gavia* (J.R. Forster); G.R. Gray 1871, *Hand-list Birds* 3: 107.  
*Puffinus opisthomelas*; Hutton 1872, *Ibis* 2 (3rd ser.): 84. Not *Puffinus opisthomelas* Coues, 1864.  
*Puffinus gavius* (J.R. Forster); Buller 1873, *History of the Birds of N.Z.*, 1st edition: 318. Unjustified emendation.  
*Puffinus gavia* (J.R. Forster); Buller 1888, *History of the Birds of N.Z.*, 2nd edition 2: 236.  
*Puffinus obscurus*; Buller 1888, *History of the Birds of N.Z.*, 2nd edition 2: 238. Not *Procellaria obscura* Gmelin, 1788.  
*Puffinus reinholdi reinholdi* Mathews, 1912: *Birds Australia* 2: 47 (key), 74, pl. 74 – New Zealand and east Australian seas.  
*Reinholdia reinholdi byroni* Mathews, 1913: *Austral Avian Rec.* 1: 187 – “Byron Bay”, New South Wales, error for Five Islands, New South Wales, Australia (*vide* Mathews 1916, *Bull. Brit. Ornith. Club* 36: 89).  
*Reinholdia reinholdi reinholdi* (Mathews); Mathews & Iredale 1913, *Ibis* 1 (10th ser.): 225.  
*Puffinus assimilis gavia* (J.R. Forster); Mathews & Iredale 1913, *Ibis* 1 (10th ser.): 226.  
*Reinholdia reinholdi* (Mathews); Mathews & Iredale, 1915: *Ibis* 3 (10th ser.): 590.  
*Cinathisma cyaneoleuca* Hull, 1916: *Emu* 15: 205, pl. 32 – Ulladulla, New South Wales, Australia.  
*Reinholdia reinholdi melanotis* Mathews, 1916: *Bull. Brit. Ornith. Club* 36: 89 – “Kaipara Beach, near Helensville, Waitemata County”, error for Muriwai Beach, near Helensville, Waitemata County (*vide* Checklist Committee 1990, *Checklist Birds N.Z.*: 28).  
*Reinholdia reinholdi montagui* Mathews, 1922: *Austral Avian Rec.* 5: 2 – New Caledonia.  
*Reinholdia gavia gavia* (J.R. Forster); Mathews 1922, *Austral Avian Rec.* 5: 2.  
*Reinholdia gavia byroni* Mathews; Mathews 1927, *Syst. Avium Australasianarum* 1: 112.  
*Reinholdia gavia montagui* Mathews; Mathews 1927, *Syst. Avium Australasianarum* 1: 112.  
*Puffinus gavia byroni* (Mathews); Falla 1934, *Rec. Auck. Inst. Museum* 1: 252.  
*Puffinus gavia gavia* (J.R. Forster); Checklist Committee 1953, *Checklist N.Z. Birds*: 21.  
*Puffinus (Puffinus) gavia* (J.R. Forster); Checklist Committee 1990, *Checklist Birds N.Z.*: 28.

Breeds only on New Zealand offshore islands: Manawatāwhi / Three Kings, Motuopao, Wekarua, Motu Purihi (in the Simmonds Islands), Moturoa, Stephenson (Mahinepua), Cavalli, Poor Knights, Bream, Hen and Chickens, Mokohinau, Hauturu / Little Barrier (formerly), Lots Wife, Saddle and stack off Opakau (both off Great Barrier Island (Aotea Island), Channel, Little Tiri, Maria, Horuhoru Rock (Gannet Rock), Mercury, The Aldermen, Slipper (Whakau), Motunau (Plate), Taumaihi, Rurima, Moutohara (Whale, formerly), East (Whangaokeno), Moturipa, Motuheka, Taranaki coast islands, Stephens (Takapourewa), Trio (Kuru Pongi) and Chetwode Islands; also on islands in Queen Charlotte Sound and off the east coast of Marlborough (Falla 1934; Moors 1980; Medway 1994; Marchant & Higgins 1990; Taylor 1990; Taylor & Tennyson 1990; Brown 1991; Taylor & Parrish 1991, 1992; Powlesland & Pickard 1992; Owen 1994; Gaze 2000). Translocation has established a breeding population on Maud Island, Pelorus Sound (Bell *et al.* 2005). Ranges mainly over the continental shelf,

as far south as South Canterbury in autumn and winter (Imber 1985b). Straggles as far south as Southland (e.g. Tennyson 1990b; Renner 1995, 2001; Wood 2004; Schofield & Schofield 2006), the Chatham Islands (Imber 1994) and possibly Snares Islands / Tini Heke (Miskelly *et al.* 2001a). Immatures and non-breeders regular in eastern Australian seas (Marchant & Higgins 1990). Has straggled to Lord Howe (McAllan *et al.* 2004), New Caledonia and Vanuatu (Jouanin & Mougin 1979). Identified from numerous Late Pleistocene–Holocene fossil and midden sites in the North, South, Stewart / Rakiura and Chatham Islands but some bones may be remains of Scarlett's or Hutton's shearwaters, since the post-cranial bones of these species are difficult to distinguish (Millener 1991; Worthy 1997d, 1998a).