

# The correct family-group names of two parrot clades (Psittaciformes: Amazonini and Proboscigerini)

Steven M.S. Gregory & George Sangster

COPYRIGHT: © 2023 Gregory & Sangster. This is an article distributed under the terms of the Creative Commons Attribution Licence, which permits unrestricted use, distribution, and reproduction in any medium, provided the original authors and source are credited.

ABSTRACT: Following recent informal use by Smith *et al.* (2023), it is shown that Androglossini Sundevall, 1872, and Microglossini Hogg, 1846, should not have replaced Amazonini Mathews & Iredale, 1920, and Proboscigerini Mathews, 1916, respectively, by virtue of their being replacement names under Article 40.2 (ICZN, 1999) and being shown to be in prevailing usage as defined by the ICZN Code.

KEYWORDS: Androglossini, Microglossini, Amazonini, Proboscigerini, C.J. Sundevall, J. Hogg, G.M. Mathews, T. Iredale, International Code of Zoological Nomenclature.

ZOOBANK LSID for publication: D3BC40E7-AB6F-44D9-8A1E-4DBF35491DC3

## INTRODUCTION

The *Règles Internationales de la Nomenclature Zoologique* or International Rules of Zoological Nomenclature were first published in Paris (CIPNZ, 1905) in French, English and German, where the substantive language is French – “*la version française faisant foie en cas d’incertitude*”, with English and German provided as translations. Just two of the original Articles dealt with family names:

ART. 4. — The name of a family is formed by adding the ending *idae*, the name of a subfamily by adding *inae*, to the root of the name of its type genus.

ART. 5. — The name of a family or subfamily is to be changed when the name of its type genus is changed.

These came with no explanatory text, and the second, Article 5, was widely interpreted as meaning that family names based on junior objective or junior subjective synonyms could be replaced by those based on a senior synonym. This was highly fortuitous as, based on priority alone, a number of familiar family names would be very different, e.g., Hybrididae, not Tytonidae. The list is extensive, see Table I, which shows those for the non-Passerines found up until 1960, the year before the publication of the first ICZN Code. As can be seen, there has been considerable uptake and use of these replacement names, although some have issues which fall outside of the scope of this paper.

A review of the *Règles* was undertaken as part of the Thirteenth International Congress of Zoology held in Paris in July 1948, and again at the Fourteenth International Congress of Zoology, Copenhagen, August 1953. The results of which were published in the impressively entitled *Copenhagen Decisions* (ICZN, 1953). Couched in terms of ‘recommendations’, these included a definition of the expression “Family-Group”, the extension of priority to Family-Group names, and one item in particular (ICZN, 1953: 36) which forms an abrupt about-face:

**54. Effect on the name of a taxon belonging to the Family-Group of a change in the name of its type genus:** The Colloquium recommends:—

- (1) that the following provisions should be inserted in the *Règles* regarding the effect on the name of a taxon in the Family-Group of a change in the name of its type genus:—
  - (a) where the name of the type genus of a taxon belonging to the Family-Group has to be changed because it is found to be either (i) a junior objective synonym or (ii) a junior subjective synonym, the name of the Family-Group taxon based upon the name of that type genus is not to be changed;

It was recognized that priority could conflict with usage, and that usage was to be maintained if this would lead to greater stability and universality of nomenclature. These recommendations were not to come into operation until after the publication of a revised Code or *Règles* based upon them (ICZN, 1953: 103), although taxonomists were asked to guide themselves by the *Copenhagen Decisions* until such time as publication came about.

The first edition of the new ICZN Code was published in 1961, where the date of the Code became an important part of the new regulations (ICZN, 1961: 41):

**Article 40. Synonymy of the type genus.**—When, after 1960, a nominal type-genus is rejected as a junior synonym (objective or subjective), a family-group name based on it is not to be changed, but continues to be the valid name of the family-group taxon that contains both the senior and junior synonyms.

- (a) **Conservation of certain names.**—If a family-group name, changed before 1961 because of such synonymy, has won general acceptance, it is to be maintained in the interests of stability.
  - (i) In the event of divergent interpretations of the expression “general acceptance”, reference is to be made to the Commission.

This has remained virtually unchanged throughout the succeeding editions, and indeed the 4th (current) edition (ICZN, 1999: 46) has even removed the subclause about referring to the Commission:

- 40.2. **Names replaced before 1961.** If, however, a family-group name was replaced before 1961 because of the synonymy of the type genus, the substitute name is to be maintained if it is in prevailing usage.

It will be noted that the expression ‘prevailing usage’ has replaced ‘general acceptance’, and now has an entry in the glossary (ICZN, 1999: 121):

**Usage, prevailing, *n.*** Of a name: that usage of the name which is adopted by at least a substantial majority of the most recent authors concerned with the relevant taxon, irrespective of how long ago their work was published.

The importance of these will become clear as we investigate two names from Table I. Walter Bock, in his *History and Nomenclature of Avian Family-Group Names* (Bock, 1994: 90)

**Table I.** Non-Passerine family-group names proposed before 1961 which are, or are potentially, maintained by the application of Article 40.2 (ICZN, 1999), as having precedence over senior family-group names with junior synonyms as type genera by virtue of being in prevailing usage. Those representing taxa currently in use are shown in bold. Family-group names are shown at the rank when introduced (the highest for multiple ranks), with corrected suffixes where necessary, Article 11.7.1.3 (ICZN, 1999) and Article 32.5.3 (ICZN, 1999).

Junior family-group name	Senior synonym type genus	Senior family-group name	Junior synonym type genus
<b>Tinaminae</b> G.R. Gray, 1840	<i>Tinamus</i> Latham, 1790	Crypturidae Bonaparte, 1831	<i>Crypturus</i> Illiger, 1811
<b>Anhimoidea</b> Stejneger, 1885	<i>Anhina</i> Brisson, 1760	Palamedeinae Bonaparte, 1831	<i>Palamedea</i> Linnaeus, 1766
<b>Oxyuridae</b> Olphe-Galliard, 1887 <sup>1</sup>	<i>Oxyura</i> Bonaparte, 1828	Erismaturinae Eyton, 1838	<i>Erismatura</i> Bonaparte, 1832
Melanittini Verheyen, 1953	<i>Melanitta</i> Boie, 1822	Oidemiini Bonaparte, 1854	<i>Oidemia</i> Fleming, 1822
Bucephalidae Verheyen, 1953	<i>Bucephala</i> S.F. Baird, 1858	Glauconettini Olphe-Galliard, 1888	<i>Glauconetta</i> Stejneger, 1885
<b>Aythini</b> Delacour & Mayr, 1945	<i>Aythya</i> Boie, 1822	Fuligininae Swainson, 1832	<i>Fuligula</i> Stephens, 1824
Alecturidae Mathews, 1946	<i>Alectura</i> Latham, 1824	Catheturidae Sundevall, 1873	<i>Cathetus</i> Swainson, 1837
<b>Rollulinae</b> Bonaparte, 1850	<i>Rollulus</i> Bonnaterre, 1791	Cryptonichini Reichenbach, 1848	<i>Cryptonix</i> Temminck, 1815
Tetraogallini Bonaparte, 1854	<i>Tetraogallus</i> J.E. Gray, 1832	Oreotetragidae Cabanis, 1846	<i>Oreotetrax</i> Cabanis, 1846
<b>Raphidae</b> Richmond, 1917	<i>Raphus</i> Brisson, 1760	Dididae Billberg, 1828	<i>Didus</i> Linnaeus, 1766
<b>Mesitornithidae</b> Wetmore, 1960	<i>Mesitornis</i> Bonaparte, 1855	Mesoenatinae Reichenbach, 1861	<i>Mesoenas</i> Reichenbach, 1861
Chordeilinae Cassin, 1851	<i>Chordeiles</i> Swainson, 1832	Podagerinae G.R. Gray, 1847	<i>Podager</i> Wagler, 1832
Geococcygini Reichenow, 1884	<i>Geococcyx</i> Wagler, 1831	Leptostomatinae Swainson, 1837	<i>Leptostoma</i> Swainson, 1837
Taperinae Friedmann, 1933	<i>Tapera</i> Thunberg, 1819	Diplopterinae P.L. Sclater, 1862	<i>Diplopterus</i> Boie, 1826
<b>Heliornithinae</b> G.R. Gray, 1840	<i>Heliornis</i> Bonnaterre, 1791	Podoidae zu Wied, 1833	<i>Podoa</i> Illiger, 1811
<b>Gaviidae</b> J.A. Allen, 1897	<i>Gavia</i> J.R. Forster, 1788	Eudytidae J.F. Brandt, 1840	<i>Eudytes</i> Illiger, 1811
Pygoscelidae Mathews, 1935	<i>Pygoscelis</i> Wagler, 1832	Dasyramphinae Bonaparte, 1856	<i>Dasyramphus</i> G.R. Gray, 1846
<b>Hydrobatidae</b> Mathews, 1912	<i>Hydrobates</i> Boie, 1822	Thalassidrominae C.T. Wood, 1835	<i>Thalassidroma</i> Vigors, 1825
Pelecanoidinae G.R. Gray, 1871	<i>Pelecanoides</i> Lacépède, 1799	Haladrominae Bonaparte, 1850	<i>Haladroma</i> Illiger, 1811
Mycteriinae J.A. Allen <i>et al.</i> , 1908	<i>Mycteria</i> Linnaeus, 1758	Ibididae von Spix, 1825	<i>Ibis</i> Lacépède, 1799
<b>Cochleariinae</b> Olphe-Galliard, 1857	<i>Cochlearius</i> Brisson, 1760	Canrominae Bonaparte, 1838	<i>Canroma</i> Linnaeus, 1766
<b>Fregatidae</b> Hogg, 1846	<i>Fregata</i> Lacépède, 1799	Tachypetidae J.F. Brandt, 1840	<i>Tachypetes</i> Vieillot, 1816
<b>Phalacrocoracini</b> Bonaparte, 1853	<i>Phalacrocorax</i> Brisson, 1760	Halieidae Sundevall, 1836	<i>Halius</i> Illiger, 1811
<b>Anhingidae</b> Stejneger, 1885	<i>Anhinga</i> Brisson, 1760	Plotinae Bonaparte, 1831	<i>Plotus</i> Linnaeus, 1766
<b>Burhinidae</b> Mathews, 1912	<i>Burhinus</i> Illiger, 1811	Oedicephalinae G.R. Gray, 1840	<i>Oedicephalus</i> Temminck, 1815
<b>Rostratulidae</b> Mathews, 1913	<i>Rostratula</i> Vieillot, 1816	Rhynchoeinae C.L. Brehm, 1855	<i>Rhynchoea</i> Cuvier, 1816
<b>Jacanidae</b> Des Murs, 1854	<i>Jacana</i> Brisson, 1760	Parrinae G.R. Gray, 1840	<i>Parra</i> Linnaeus, 1766
<b>Calidridae</b> Hogg, 1845	<i>Calidris</i> Merrem, 1804	Platyramphidae Billberg, 1828	<i>Platyramphus</i> Billberg, 1828
Philomachinae Verheyen, 1958	<i>Philomachus</i> Merrem, 1804	Machetini Olphe-Galliard, 1891	<i>Machetes</i> Cuvier, 1816
<b>Arenariinae</b> Stejneger, 1885	<i>Arenaria</i> Brisson, 1760	Strepsilinae G.R. Gray, 1840	<i>Strepsilas</i> Illiger, 1811
<b>Turnicinae</b> G.R. Gray, 1840	<i>Turnix</i> Bonnaterre, 1791	Ortyginae Bonaparte, 1831	<i>Ortygis</i> Illiger, 1811
<b>Cursoriinae</b> G.R. Gray, 1840	<i>Cursorius</i> Latham, 1790	Tachydromidae Goldfuss, 1820	<i>Tachydromus</i> Illiger, 1811
<b>Aethiinae</b> J.A. Allen <i>et al.</i> , 1908	<i>Aethia</i> Merrem, 1788	Phaleridinae G.R. Gray, 1840	<i>Phaleris</i> Temminck, 1820

<sup>1</sup> Oxyuridae Olphe-Galliard, 1887, is a junior homonym of Oxyuridae Weinland, 1858 [Chromadorea], a family of parasitic Nematode worms, type genus *Oxyuris* Rudolphi, 1803. An application to the ICZN is in preparation to mandate the use of Erismaturinae Eyton, 1838, under Article 55.3.1 (ICZN, 1999).

Junior family-group name	Senior synonym type genus	Senior family-group name	Junior synonym type genus
Fraterculinae Olphe-Galliard, 1884	<i>Fratercula</i> Brisson, 1760	Mormonidae Hogg, 1845	<i>Mormon</i> Illiger, 1811
Stercorariinae G.R. Gray, 1871	<i>Stercorarius</i> Brisson, 1760	Lestrinidae Bonaparte, 1831	<i>Lestris</i> Illiger, 1811
Sagittariinae Finsch & Hartlaub, 1870	<i>Sagittarius</i> Hermann, 1783	Gypogeranidae Vigors, 1825	<i>Gypogeranus</i> Illiger, 1811
Buteogallini Verheyen, 1959	<i>Buteogallus</i> Lesson, 1830	Urubitingini Ridgway, 1873	<i>Urubitinga</i> G.R. Gray, 1840
Harpiini Verheyen, 1959	<i>Harpia</i> Vieillot, 1816	Thrasaetinae Blyth, 1850	<i>Thrasaetos</i> Bonaparte, 1838
Gypohieracinae Bonaparte, 1842	<i>Gypohierax</i> Rüppell, 1836	Racaminae G.R.Gray, 1840	<i>Racama</i> G.R. Gray, 1840
Tytonidae Mathews, 1912	<i>Tyto</i> Billberg, 1828	Hybridinae Lilljeborg, 1860	<i>Hybris</i> Nitzsch, 1833
Phoeniculidae W.L. Sclater, 1924	<i>Phoeniculus</i> Jarocki, 1821	Irrisorinae Strickland, 1843	<i>Irrisor</i> Lesson, 1830
Picoidinae Olphe-Galliard, 1888	<i>Picoides</i> Lacépède, 1799	Apternidae Hogg, 1846	<i>Apternus</i> Swainson, 1832
Momotidae zu Wied, 1831	<i>Momotus</i> Brisson, 1760	Prionitidae Billberg, 1828	<i>Prionites</i> Illiger, 1811
Cariaminae Lafresnaye, 1842	<i>Cariama</i> Brisson, 1760	Dicholophidae Sundevall, 1836	<i>Dicholophus</i> Illiger, 1811
Daptriinae Hellmayr & Conover, 1949	<i>Daptrius</i> Vieillot, 1816	Ibycterini Bonaparte, 1854	<i>Ibycter</i> Vieillot, 1816
Proboscigeridae Mathews, 1916	<i>Probosciger</i> Kuhl, 1820	Microglossidae Hogg, 1846	<i>Microglossus</i> Vieillot, 1822
Arinae G.R. Gray, 1840 <sup>2</sup>	<i>Ara</i> Lacépède, 1799	Macrocerinae Vigors, 1825	<i>Macrocerus</i> Vieillot, 1816
Amazonidae Mathews & Iredale, 1920	<i>Amazona</i> Lesson, 1830	Androglossidae Sundevall, 1872	<i>Androglossus</i> Sundevall, 1872
Psittichasinae von Boetticher, 1943	<i>Psittichas</i> Lesson, 1831	Dasyptilinae Bonaparte, 1854	<i>Dasyptilus</i> Wagler, 1832
Micropsittidae Mathews, 1927	<i>Micropsitta</i> Lesson, 1831	Nasiterninae Bonaparte, 1853	<i>Nasiterna</i> Wagler, 1832
Loriculinae Verheyen, 1956	<i>Loriculus</i> Blyth, 1849	Coryllinae A. Müller, 1882	<i>Coryllis</i> Finsch, 1867

wrote extensively about the procedures used by systematists prior to the publication of the first Code in 1961. He noted that family-group names were changed because of reasons of synonymy, and that the coupling of the names with the valid name of the type genus equated to Article 5 of the *Règles*. Because of this, independent priority was not used in determining the validity of family-group names, but rather the priority of the type genus itself. Bock concluded that a stable system of family-group names existed before the rules introduced by the 1961 Code, and that the effect of these rules could lead to confusion and instability. For names replaced before 1961, however, the new Code and its successors wisely recognized that a family-group taxon whose name was based on a senior synonym was more likely to be acceptable than one based on an obscure junior synonym, simply on the basis of priority. The 1961 Code also retroactively applied the necessity of a description or diagnosis for new names after 1930, which, when applied to family-group names, was potentially far more disruptive of stability than the issue of priority. This was not rectified until the publication of the 4th edition (ICZN, 1999: 18) when, belatedly, Article 13.2.1 allowed names published after 1930 and before 1961 to be accepted without a diagnosis provided that they had been used as valid before 2000. Family-group names published after 1960 without an Article 13.1.1 diagnosis became unavailable for the purposes of Zoological Nomenclature.

It should be quite clear from Table I, which junior family-group names are entitled to continued use under the various provisions of the ICZN Code (1999), and that are in ‘prevailing usage’. This has not, however, prevented two family-group names in the Psittaciformes from being contested. A recent paper presenting a phylogenomic analysis of the parrots of the world (Smith *et al.*, 2023) informally labelled a time calibrated tree using several family-group names

<sup>2</sup> Gray used ‘*Ara* Brisson’ not *Ara* Lacépède, 1799, which would normally invalidate this family-group name, as Article 12.2.4 (ICZN, 1999) requires formation from an available generic name, but as a replacement name under Article 40.2 this may not be significant.

that have come into recent use. We shall show that the grounds, stated elsewhere, for the re-introduction of these names is not supported by the provisions of the ICZN Code (1999).

#### A CLADE OF AMERICAN PARROTS INCLUDING *Amazona* Lesson, 1830

*Androglossa* Vigors, 1825, was introduced as a replacement name for *Psittacus* Auct. [Auctorum, 'of authors']. It may, or may not, have been intended for the species now in *Amazona* Lesson, 1830, as Vigors included no nominal species or any explanation. This has variously been regarded as either a *nomen nudum* or a *nomen dubium*, both terms defined in the Code's glossary (ICZN, 1999: 111). A family-group name, Androglossinæ, presumably based on *Androglossa* Vigors, 1825, was first used by Sundevall in 1844 (Sundevall, 1844: 376), and is therefore invalid for not being based on an available generic name, Article 12.2.4 (ICZN, 1999: 16). Although credited to 'Vig[ors], 1825', *Androglossus* Sundevall, 1872, has been accepted as 'ex Vigors' since that use, and the subsequent designation of a type species, by Salvadori (Salvadori, 1891: 268). The associated family-group name, Androglossini (at the rank of family) must date from Sundevall, 1872 (Sundevall, 1872: 69), with *Androglossus* Sundevall, 1872, a junior subjective synonym of *Amazona* Lesson, 1830. Three further family-group names for this clade were subsequently established. Chrysotinæ Garrod, 1875 (Garrod, 1875: 595), type genus *Chrysotis* Swainson, 1837, also a junior subjective synonym of *Amazona* Lesson, 1830, saw brief use, but none after 1899 due to the equally short-lived use of Pionidae Reichenow, 1881 (Reichenow, 1881b: 351), based on *Pionias* Finsch, 1868, an unjustified emendation of *Pionus* Wagler, 1832, a generic name still in use and never, to our knowledge, considered to be a synonym of *Amazona* Lesson, 1830.

The family-group name Amazonidæ Mathews and Iredale, 1920 (Mathews & Iredale, 1920: 45), appears to have been established as a direct result of the *Règles* (CIPNZ, 1905), Article 5, as their classification of the world's birds included practically all of those introduced up until that point, and listed as currently in use, see Table I. The type genus can be correctly inferred from the stem, Amazon-, Article 11.7.1.1 (ICZN, 1999: 12) for names proposed before 2000, with no evidence to the contrary. To be accepted by Article 40.2 as a name replaced before 1961 because of the synonymy of the type genus, prevailing usage must be established. We therefore undertook an extensive search of the ornithological literature and found (Table II) 16 further uses of 'Amazonidæ' or 'Amazoninae'. As far as can be ascertained, these represent the sum total of uses of a family-group name for a taxon that includes *Amazona* Lesson, 1830, with no uses of any other family-group name (other than inclusion in a general 'Psittacinae') for this taxon since 1920, and prior to 2012.

In Joseph *et al.* (2012: 31), Androglossini was used, and the following given as the reason: "Even though Androglossinae has not been used since 1872, it should stand because no other family-group name formed from a senior genus (e.g., Chrysotini Garrod, 1875 (*Chrysotis* Swainson, 1837), Pionini Reichenow, 1881 (*Pionus* Wagler, 1832) and Amazonini Mathews & Iredale, 1920 (*Amazona* Lesson, 1830)) has had significant usage in the last 100 years (Art. 40; cf. Bock 1994, p. 183)." Curiously, this gives the impression that Bock's statement reinforced their contention, whereas he actually wrote: "Androglossini – *Androglossus* Vigors, 1825 and *Chrysotis* Swainson, 1837 were synonymized with *Amazona* Lesson, 1830 prior to 1961, and Androglossini Sundevall, 1872 and Chrysotini Garrod, 1874 [*sic*] have been replaced by Amazonini Mathews and Iredale, 1920 (1872) which takes precedence from 1872." Schodde *et al.* (2013: 592) added to this by stating: "Amazonini Mathews & Iredale, 1920, based on *Amazona* Lesson, 1830, which is the in-use senior synonym of *Androglossus* Sundevall, 1872, may have been introduced in place of Androglossini before 1961, but its use is evidently too

**Table II.** Family-group names introduced for the clade of American parrots including *Amazona* Lesson, 1830, and their subsequent uses. Available names in bold. Authors are listed in references.

Author(s) and date	Family-group name	Remarks
Sundevall, C.J., 1844	Androglossinae	This first use has been overlooked. Invalid as presumably based on <i>Androglossa</i> Vigors, 1825, a <i>nomen dubium</i> or <i>nomen nudum</i> .
Sundevall, C.J., 1872	<b>Androglossini</b>	Probably unaffected by the status of <i>Androglossa</i> Vigors, 1825. Type genus <i>Androglossus</i> Sundevall, 1872, a junior subjective synonym of <i>Amazona</i> Lesson, 1830. Sundevall used an '-ini' ending at the rank of family.
Garrod, A.H., 1875	<b>Chrysotinae</b>	Type genus <i>Chrysotis</i> Swainson, 1837, a junior subjective synonym of <i>Amazona</i> Lesson, 1830.
Reichenow, A., 1881b	<b>Pionidae</b>	Type genus <i>Pionias</i> Finsch, 1868, an unjustified emendation of <i>Pionus</i> Wagler, 1832.
Salvadori, T., 1891	Pioninae	
Beddard, F.E., 1898	Chrysotinae	
Sharpe, R.B., 1900	Pioninae	
Ridgway, R., 1916	Pioninae	
Cory, C.B., 1918	Pioninae	
Mathews, G.M. & T. Iredale, 1920	<b>Amazonidæ</b>	Introduced under Article 5 of the <i>Règles</i> (CIPNZ, 1905) then in force "The name of a family or subfamily is to be changed when the name of its type genus is changed." <i>Androglossus</i> Sundevall, 1872, a junior subjective synonym of <i>Amazona</i> Lesson, 1830.
Peters, J.L., 1937	Psittacinae	
Verheyen, R., 1956	<b>Amazoninae</b>	
Brereton, J.L., 1964	<b>Amazonidae</b>	
Forshaw, J.M., 1973	Psittacinae	
Wolters, H.E., 1975	<b>Amazoninae</b>	
Wolters, H.E., 1983	<b>Amazoninae</b>	
Faccini, J.L.H. & W.T. Atyeo, 1986	<b>Amazoninae</b>	
Hensel, K. <i>et al.</i> , 1987	<b>Amazoninae</b>	
Atyeo, W.T., 1988	<b>Amazoninae</b>	
Pérez, T.M. & W.T. Atyeo, 1989	<b>Amazoninae</b>	
Atyeo, W.T., 1990	<b>Amazoninae</b>	
Lantermann, W. & B. Wildschrei, 1991	<b>Amazoninae</b>	
Boles, W.E., 1993	<b>Amazoninae</b>	
Krautwald-Junghanns, M.E., F. Schuhmacher & H.G. Sohn, 1998a	<b>Amazoninae</b>	
Krautwald-Junghanns, M.E., F. Schuhmacher, & H.G. Sohn, 1998b	<b>Amazoninae</b>	
Antonius, E., 2003	<b>Amazoninae</b>	
Kaleta, E.F. & M.A. Taday, 2003	<b>Amazoninae</b>	
Tavares, E.S., A.J. Baker, S.L. Pereira & C.Y. Miyaki, 2006	<b>Amazoninae</b>	
Joseph, L. <i>et al.</i> , 2012	<b>Androglossini</b>	
Schodde, R. <i>et al.</i> , 2013	<b>Androglossini</b>	

rare to satisfy the requirements of prevailing usage under Article 40.2 of the Code." We are unsure of the universal approbation that they seemed to expect, and our findings in Table II, together with the definition of prevailing usage (irrespective of how long ago their work was published), would suggest to us that this was the result of an inadequate search of the literature in this matter. We therefore conclude that the valid name for this clade is:

### **Amazonini**

Amazonidae, Mathews & Iredale, 1920 (1872)

Replacement name for Androglossini Sundevall, 1872, under Article 40.2 (ICZN, 1999: 46).

Type genus: *Amazona* Lesson, 1830. Article 11.7.1.1 (ICZN, 1999: 12).

Contents: *Myiopsitta*, *Brotogeris*, *Pionopsitta*, *Triclaria*, *Hapalopsittaca*, *Pyrilia*, *Graydidascalus*, *Alipiopsitta*, *Pionus* and *Amazona*.

ZooBank LSID for Amazonidae: B8342578-137E-4753-9A1D-3074DC82B387

### **A CLADE FOR THE PALM COCKATOOS *Probosciger* Kuhl, 1820**

*Microglossus* Vieillot, 1822, is a junior subjective synonym of *Probosciger* Kuhl, 1820. The first family-group name to be established for this genus was Microglossidae Hogg, 1846 (Hogg, 1846: 53). Independently, Bonaparte established an identical name in 1853 (Bonaparte, 1853: 643). Both have the type genus inferred from the stem Microgloss-, under Article 11.7.1.1 (ICZN, 1999: 12). The name was used by Lilljeborg in 1866 (Lilljeborg, 1866: 19), and was last mentioned, but not used, by Reichenow in 1881 (Reichenow, 1881a: 3).

The family-group name Proboscigeridae Mathews, 1916 (Mathews, 1916: 8, 77) was clearly established with the *Règles* (CIPNZ, 1905), Article 5, in mind as he wrote: "as *Probosciger* (= *Microglossus*) proves to be as distinct internally as it is externally, I promote it to family rank." Mathews and Iredale used the name again in their classification of the world's birds (Mathews & Iredale, 1920: 45). To be accepted by Article 40.2 as a name replaced before 1961 because of the synonymy of the type genus, prevailing usage must be established. We again, therefore, undertook a careful search of the ornithological literature and found (Table III) a further eleven uses of 'Proboscigeridae', 'Proboscigerinae' or 'Proboscigerini'. As far as can be ascertained, these include the sum total of uses of a family-group name for a taxon that includes *Probosciger* Kuhl, 1820, with no uses of any other family-group name (other than inclusion in a general 'Cacatuidae' at various ranks) for this taxon since 1916, and prior to 1997.

Schodde, in Schodde and Mason, *Zoological Catalogue of Australia* Vol. 37.2 (Schodde & Mason, 1997: 65, 72), used Microglossinae without comment or explanation, which our findings show would have been *contra* Art. 40 (b) of the ICZN Code (ICZN, 1985: 81) then in force. In Joseph *et al.* (2012: 31), Microglossini was used, this time with an extensive justification "Mathews introduced Proboscigerini (as Proboscigeridae) in place of Microglossini in 1916 (Mathews 1916, p. 8), subjecting the latter to potentially permanent replacement under Art. 40.2 were Proboscigerini now in prevailing use. In the current usage references cited above, we have found just three preferential usages of Proboscigerini and two of Microglossini over the last 50 years. Proboscigerini thus does not have significant currency, and so Microglossini should stand (Art. 40; *cf.* Bock 1994, p. 184)." Once again Bock is cited as corroborating evidence, but he actually wrote: "Microglossinae – *Microglossus* Geoffroy St.-Hilaire, 1823 was synonymized with *Probosciger* Kuhl, 1820 prior to 1961, and Microglossinae Bonaparte, 1853 has been replaced by Proboscigerinae Mathews, 1916-17 (1853) which takes precedence from 1853." Joseph *et al.* (2012) attempted to limit the scope of 'prevailing usage' to 'the last 50 years', but the glossary definition makes no such limitation (irrespective of how long ago their work was published), indeed the only use of

**Table III.** Family-group names introduced for the clade of palm cockatoos *Probosciger* Kuhl, 1820, and their subsequent uses. Available names in bold. Authors are listed in references.

Author(s) and date	Family-group name	Remarks
Hogg, J., 1846	<b>Microglossidæ</b>	Type genus from stem, Article 11.7.1.1 (ICZN, 1999), <i>Microglossus</i> Vieillot, 1822.
Bonaparte, C.L., 1853	Microglossidæ	Independently from Hogg, 1846. Type genus from stem, Article 11.7.1.1 (ICZN, 1999), <i>Microglossus</i> Vieillot, 1822.
Lilljeborg, W., 1866	Microglossini	
Finsch, O., 1867	Microglossidæ	
Gray, G.R., 1870	Microglossinæ	“Microglossum Geoffr[o]y. 1809” not found, a MS name.
Reichenow, A., 1881a	Microglossidæ	Mentioned but not used.
Salvadori, T., 1891	Cacatuinæ	
Sharpe, R.B., 1900	Cacatuinæ	
Mathews, G.M., 1916	<b>Proboscigeridæ</b>	Introduced under Article 5 of the <i>Règles</i> (CIPNZ, 1905) then in force “The name of a family or subfamily is to be changed when the name of its type genus is changed.” <i>Microglossus</i> Vieillot, 1822, a junior subjective synonym of <i>Probosciger</i> Kuhl, 1820.
Mathews, G.M., 1920	Proboscigeridæ	
Mathews, G.M. & T. Iredale, 1920	Proboscigeridæ	
Mathews, G.M., 1927	Proboscigeridæ	
Mathews, G.M., 1931	Proboscigeridæ	
Peters, J.L., 1937	‘Kakatoeinae’	<i>Kakatoe</i> Cuvier, 1800, placed on the Official Index of Rejected and Invalid Generic Names in Zoology. Opinion 1949.
Mathews, G.M., 1946	Proboscigeridæ	
Brereton, J.L., 1964	Cacatuidæ	
Mayr, E. & H.T. Condon, 1968	Proboscigeridæ	
Forshaw, J.M., 1973	Cacatuini	
Wolters, H.E., 1975	Cacatuinae	
Condon, H.T., 1975	Proboscigerinae	
Wells, R.W. & R. Wellington, 1992	Proboscigeridæ	
Schodde, R., 1997	Microglossinae	
Forshaw, J.M., 2002 <sup>3</sup>	Proboscigerini	
Reinschmidt, M., 2007	Proboscigerini	
Joseph <i>et al.</i> , 2012	Microglossini	
Gaudin, J., 2022	Proboscigerinae	

Microglossinae found by us in the fifty years preceding 2012, is Schodde’s re-introduction of 1997. We fail to see how every possible instance of this taxon being used from 1916 until 1997 can be anything other than ‘prevailing usage’, and as Gaudin (2022) in *Noms français normalisés des oiseaux du monde* has reverted to Proboscigerinae, we conclude that the valid name for this clade is:

<sup>3</sup> Not seen. The nomenclature used by Reinschmidt (2007) was taken from the German translation of this edition.



**Proboscigerini**

Proboscigeridae Mathews, 1916 (1846)

Replacement name for Microglossidae Hogg, 1846, under Article 40.2 (ICZN, 1999: 46).

Type genus: *Probosciger* Kuhl, 1820.

Contents: *Probosciger* the sole included genus as currently defined (Smith *et al.*, 2023).

ZooBank LSID for Proboscigeridae: 014EC3A9-419F-4EC0-8D26-2F7B4D219D1B

**CONCLUSION**

We have shown that the application of Article 40.2 (ICZN, 1999), and its predecessors, should be used wherever possible to preserve family-group names based on type genera that are senior synonyms. Preservation of such family-group names would be expected by those not familiar with the workings of the ICZN Code, as the names in column one of Table I, demonstrate. The principle of priority should not be used to promote the advancement of half-forgotten family-group names based on junior synonyms, especially if this is based on inadequate searches of the literature, and they have not had any use after 1899, Article 23.9.1.1 (ICZN, 1999). It is highly unlikely that any of the names in column one of Table I, would now be threatened, but it should be noted that family-group names based on type genera that are junior objective or subjective synonyms, cannot be replaced by names introduced after 1960. This will become more apparent with time as the increasing resolution and refinement of phylogenies reveal the need for names, which must first use those already in existence.

**REFERENCES**

- Antonius, E., 2003. *Lexikon ausgerotteter Vögel und Säugetiere*. 1–336. Natur und Tier Verlag, Münster.
- Atyeo, W.T., 1988. Feather mites from New World parrots. – *Fieldiana, Zoology*, 47: 1–26.
- Atyeo, W.T., 1990. Feather mites from New World parrots. – *Fieldiana, Zoology*, 62: 1–30.
- Beddard, F.E., 1898. *The Structure and Classification of Birds*. i–xx, 1–548. – Longmans, Green, and Co., London.
- Bock, W.J., 1994. History and nomenclature of avian family-group names. – *Bulletin of the American Museum of Natural History*, 222: 1–281.
- Boles, W.E., 1993. A new cockatoo (Psittaciformes: Cacatuidae) from the Tertiary of Riversleigh, northwestern Queensland, and an evaluation of rostral characters in the systematics of parrots. – *Ibis*, 135 (1): 8–18.
- Bonaparte, C.L., 1853. Classification Ornithologique par Séries. – *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences, Paris*, 37 (18): 641–647.
- Brereton, J.L., 1964 [1963]. Evolution within the Psittaciformes. – *Proceedings XIII International Ornithological Congress*, 1: 499–517.
- C.I.P.N.Z. [Commission Internationale Permanente de la Nomenclature Zoologique], 1905. *Règles Internationales de la Nomenclature Zoologique adoptées par les Congrès Internationaux de Zoologie*. 1–57. – F.R. de Rudeval, Paris.
- Condon, H.T., 1975. *Checklist of the birds of Australia. Part 1. Non-Passerines*. i–xx, 1–311. – Royal Australian Ornithologists Union, Melbourne.
- Cory, C.B., 1918. Catalogue of birds of the Americas and the adjacent Islands in the Field Museum of Natural History including all species and subspecies known to occur in North America, Mexico, Central America, South America, the West Indies, and islands of the Caribbean Sea, the Galapagos Archipelago, and other islands which may be included on account of their faunal affinities. Part 2, No. 1. Families

Bubonidae, Tytonidae, Psittacidae, Steatornithidae, Alcedinidae, Todidae, Momotidae, Nyctibiidae, Caprimulgidae, Cypselidae, Trochilidae. – *Field Museum of Natural History. Zoology Series*, 13 (2, 1): 1–315.

Faccini, J.L.H. & W.T. Atyeo, 1986. A new species of *Distigmesikya* Atyeo et al. (Acarina, Pterolichidae) and remarks on the taxonomic affinities of its host, the Hawk-headed Parrot (Aves, Psittacidae). – *International Journal of Acarology*, 12 (2): 79–82.

Finsch, O., 1867. *Die Papageien, monographisch bearbeitet*. Erster band. i–xii, 1–561. – E.J. Brill, Leiden.

Finsch, O., 1868. *Die Papageien, monographisch bearbeitet*. Zweiter band, Erster Haelfte. i–[xxx], 1–528. – E.J. Brill, Leiden.

Forshaw, J.M., 1973. *Parrots of the World*. 1–584. – Lansdowne Editions, Melbourne.

Forshaw, J.M., 2002. *Australian Parrots. Third [Revised] Edition*. 1–640. Alexander Editions, Brisbane.

Garrod, A.H., 1875. On some points in the anatomy of the parrots which bear on the classification of the suborder. – *Proceedings of the scientific meetings of the Zoological Society of London for the year 1874*, 42 (4): 586–598.

Gaudin, J., 2022. *Noms français normalisés des oiseaux du monde*. Version 3.4. 1–494. – Jimmy Gaudin, La Rochelle.

Gray, G.R., 1870. *Handlist of genera and species of birds distinguishing those contained in the British Museum*. Part II. i–xv, 1–278. – Trustees of the British Museum, London.

Hensel, K., D. Klasová, I. Masár, D. Matis, B. Matoušek & F. Vilček, 1987. Zásady tvorenia slovenského menoslovia živočíchov. – *Kultúra Slova*, 21 (10): 346–371.

Hogg, J., 1846. On the classification of birds, and particularly of the genera of European birds. – *The Edinburgh New Philosophical Journal, exhibiting a view of the progressive discoveries and improvements in the Sciences and the Arts*. 41 (81): 50–71.

I.C.Z.N. [International Commission on Zoological Nomenclature], 1953. *Copenhagen Decisions on Zoological Nomenclature additions to, and modifications of, the Règles Internationales de la Nomenclature Zoologique approved and adopted by the Fourteenth International Congress of Zoology, Copenhagen, August, 1953*. i–xxix, 1–135. – International Trust for Zoological Nomenclature, London.

I.C.Z.N. [International Commission on Zoological Nomenclature], 1961. *International Code of Zoological Nomenclature adopted by the XV International Congress of Zoology*. i–xvii, 1–176. – International Trust for Zoological Nomenclature, London.

I.C.Z.N. [International Commission on Zoological Nomenclature], 1985. *International Code of Zoological Nomenclature third edition adopted by the XX general assembly of the International Union of Biological Sciences*. i–xx, 1–338. – International Trust for Zoological Nomenclature, London.

I.C.Z.N. [International Commission on Zoological Nomenclature], 1999. *International Code of Zoological Nomenclature. Fourth Edition*. i–xxix, 1–306. – International Trust for Zoological Nomenclature, London.

Joseph, L., A. Toon, E.E. Schirtzinger, T.F. Wright & R. Schodde, 2012. A revised nomenclature and classification for family-group taxa of parrots (Psittaciformes). – *Zootaxa*, 3205: 26–40.

Kaleta, E.F. & M.A. Taday, 2003. Avian host range of *Chlamydophila* spp. based on isolation, antigen detection and serology. – *Avian Pathology*, 32 (5): 435–462.

Krautwald-Junghanns, M.E., F. Schuhmacher & H.G. Sohn, 1998a. Examination of the lower respiratory tract of Psittacinae and Amazoninae varieties by means of reconstructed computer x ray tomography. 1: Examination of healthy parrots. – *Tierärztliche Praxis. Ausgabe K, Kleintiere/Heimtiere*, 26 (1): 61–70.

Krautwald-Junghanns, M.E., F. Schuhmacher & H.G. Sohn, 1998b. Examination of the lower respiratory tract of Psittacinae and Amazoninae species by means of reconstructive transmission computed tomography. 2: Examination of parrots with respiratory symptoms. – *Tierärztliche Praxis. Ausgabe K, Kleintiere/Heimtiere*, 26 (2): 139–149.

- Kuhl, H., 1820. *Conspectus psittacorum. Cum specierum definitionibus, novarum descriptionibus, synonymis et circa patriam singularum naturalem adversariis, adjecto indice museum, ubi earum artificiosae exuviae servantur.* – *Nova Acta physico-medica Academia Caesarea Leopoldino Carolina*, 10 (1): 1–104.
- Lantermann, W. & B. Wildschrei, 1991. Gefangenschaftsbeobachtungen zum Greifverhalten bei Amazonenpapageien (Amazoninae, Aratingidae). – *Bonner Zoologische Beiträge*, 42 (1): 47–53.
- Lesson, R.P., 1830. *Traité d'Ornithologie ou Tableaux Méthodique des ordres, sous-ordres, familles, tribus, genres, sous-genres et races d'oiseaux.* Livr. 3. 161–240. – Levrault, Paris.
- Lilljeborg, W., 1866. Outlines of a systematic review of the class of birds. – *Proceedings of the scientific meetings of the Zoological Society of London for the year 1866*, 34 (1): 5–20.
- Mathews, G.M., 1916. *The Birds of Australia*. Vol. 6, part 1. 1–104. – Witherby & Co., London.
- Mathews, G.M., 1920. *Supplement No. 1. The Birds of Australia. Check List of the Birds of Australia Part 1. Orders Casuariiformes to Menuriformes.* i–iv, 1–116. – Witherby & Co., London.
- Mathews, G.M., 1927. *Systema Avium Australasianarum. A systematic list of the birds of the Australasian Region.* Part 1. i–x, 1–426, i–xvii. – British Ornithologists' Union, London.
- Mathews, G.M., 1931. *A List of the Birds of Australasia (including New Zealand, Lord Howe and Norfolk Islands, and the Australian Antarctic Quadrant).* [i–iv], 1–562. – Taylor and Francis, London.
- Mathews, G.M., 1946. *A working list of Australian birds including the Australian Quadrant and New Zealand.* [i–vi], 1–184. – Shepherd & Newman, Sydney.
- Mathews, G.M. & T. Iredale, 1920. Avian taxonomy. – *The Austral Avian Record*, 4 (2 & 3): 29–48.
- Mayr, E. & H.T. Condon, 1968. *Larius* Boddaert, 1783 (Aves): Proposed suppression under the plenary powers. – *Bulletin of Zoological Nomenclature*, 25 (1): 52–54.
- Pérez, T.M. & W.T. Atyeo, 1989. New feather mite species of *Aralichus* from the White-capped Parrot *Pionus senilis* (Spix). – *Journal of Parasitology*, 75 (1): 11–20.
- Peters, J.L., 1937. *Check-list of birds of the world*. Vol. 3. i–xiii, 1–311. – Harvard University Press, Cambridge, Massachusetts.
- Reichenow, A., 1881a. *Conspectus Psittacorum. Systematische Uebersicht aller bekannten Papageienarten.* – *Journal für Ornithologie*, 29 (1): 1–49.
- Reichenow, A., 1881b. *Conspectus Psittacorum. Systematische Uebersicht aller bekannten Papageienarten.* – *Journal für Ornithologie*, 29 (4): 337–398, tabelle 5.
- Reinschmidt, M., 2007. *Untersuchen zur Brutbiologie des Inkakakadus (Cacatua leadbeateri) im Loro Parque, Teneriffa.* i–vi, 1–317. – VVB Laufersweiler Verlag, Giessen.
- Ridgway, R., 1916. *The birds of North and Middle America. A descriptive catalogue of the higher groups, genera, species, and subspecies of birds known to occur in North America, from the Arctic lands to the isthmus of Panama, the West Indies and other islands of the Caribbean Sea, and the Galapagos Archipelago.* Part 7. Families Cuculidæ, Psittacidæ, Columbidae. – *Bulletin of the United States National Museum*, 50 (7): i–xiii, 1–543.
- Salvadori, T., 1891. *Catalogue of the birds in the British Museum.* XX. Catalogue of the Psittaci, or parrots, in the collection of the British Museum. i–xvii, 1–659. – Trustees of the British Museum (Natural History), London.
- Schodde R. & I.J. Mason, 1997. *Zoological Catalogue of Australia.* 37.2. Aves (Columbidae to Coraciidae). i–xiii, 1–440. – C.S.I.R.O. Australia, Collingwood.
- Schodde R., J.V. Remsen, Jr., E.E. Schirtzinger, L. Joseph & T.F. Wright, 2013. Higher classification of New World parrots (Psittaciformes; Arinae), with diagnoses of tribes. – *Zootaxa*, 3691 (5): 591–596.

Sharpe, R.B., 1900. *A Hand-list of the Genera and Species of Birds. [Nomenclator Avium tum Fossilum tum Viventium]*. Vol. 2. i–xv, 1–312. – Trustees of the British Museum (Natural History), London.

Smith, B.T., J. Merwin, K.L. Provost, G. Thom, R.T. Brumfield, M. Ferreira, W.M. Mauck, R.G. Moyle, T.F. Wright & L. Joseph, 2023. Phylogenomic analysis of the parrots of the world distinguishes artifactual from biological sources of gene tree discordance. – *Systematic Biology*, 72: 228–241.

Sundevall, C.J., 1844. Om Foglarnes vingar. – *Kongl. Vetenskaps-Akademiens Handlingar*, för år 1843: 303–384.

Sundevall, C.J., 1872. *Methodi Naturalis Avium Disponendarum Tentamen. Försök till fogelklassens naturenliga uppställning*. Part 1. i–xlvi, 1–72.

Swainson, W., 1837. *On the Natural History and Classification of Birds*. Vol. 2. i–vii, 1–398. – Longman, Rees, Orme, Brown, Green & Longman, and John Taylor, London.

Tavares, E.S., A.J. Baker, S.L. Pereira & C.Y. Miyaki, 2006. Phylogenetic relationships and historical biogeography of Neotropical parrots (Psittaciformes: Psittacidae: Arini) inferred from mitochondrial and nuclear DNA Sequences. – *Systematic Biology*, 55 (3): 454–470.

Verheyen, R., 1956. Analyse du potential morphologique et projet d'une nouvelle classification des Psittaciformes. – *Bulletin du Institute Royale des Sciences Naturelles Belgique*, 32 (55): 1–54.

Vieillot, L.P., 1822. *Galerie des Oiseaux du Cabinet d'Histoire Naturelle du Jardin du Roi ou descriptions et figures coloriées des Oiseaux qui entrent dans la collection du Muséum d'Histoire Naturelle de Paris*. Vol. 1, 2<sup>ème</sup> partie (1). 1–72.

Vigers, N.A., 1825. Sketches in ornithology; or, observations on the leading affinities of some of the more extensive groups of birds. Cont. – *Zoological Journal*, 2 (7): 368–405.

Wagler, J., 1832. *Monographia Psittacorum*. – *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften*, 1: 463–750.

Wells, R.W. & R. Wellington, 1992. A classification of the cockatoos and parrots (Aves: Psittaciformes) of Australia. – *Sydney Basin Naturalist*, 1: 107–169.

Wolters, H.E., 1975. *Die Vogelarten der Erde. Eine systematische Liste mit verbreitungsangaben sowie deutschen und englischen Namen*. Lieferung 1. 1–80. – Paul Parey, Hamburg.

Wolters, H.E., 1983. *Die Vögel Europas im System der Vögel. Eine Übersicht*. 1–70. – Biotropic Verlag, Baden-Baden.

---

#### Addresses

Steven M.S. Gregory (✉), 35 Monarch Road, Northampton NN2 6EH, UK.  
e-mail: sgregory.avium@ntlworld.com.

George Sangster, Naturalis Biodiversity Center, Darwinweg 2, PO Box 9517, 2300 RA Leiden, the Netherlands.  
e-mail: g.sangster@planet.nl.