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## The correct spelling of the family-group name based on Leiothrix

by Andy Elliott & Normand Davidt

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Summary.—The family-group name based on the genus Leiothrix has been the object of a certain amount of doubt and confusion in recent years, centred around the spelling of the stem of the name. When the name was coined in 1832, it was with the correct stem, 'Leiotrich-', and this spelling was almost invariably used over the following c.180 years. An erroneous subsequent spelling of the stem 'Leiothrich-' first appeared in 1869 but was largely ignored until the 21st century, when several recent authors have mistakenly adopted it, although the original and correct spelling is also still commonly used. The original spelling of the stem is the only correct form, so a family based on this name must be known as Leiotrichidae.

The Oriental babbler genus Leiothrix was first introduced by Swainson (in Swainson & Richardson 1832: 490). Its type was therein stated to be Parus furcatus Temminck in Temminck & Laugier, 1824, which proved to be a junior synonym of Sylvia lutea Scopoli, 1786, a species nowadays known as Leiothrix lutea, the Red-billed Leiothrix.

On the same page, Swainson considered his new genera *Leiothrix* and *Pteruthius* to form a subfamily within his family Ampelidae, and accordingly he named this new subfamily Leiotrichanae. Within this same work, the genus-group name Leiothrix and the familygroup name Leiotrichanae appear four times each, always together, on pp. 232-233, 490, 500 and (in the Index) 512-513. In each of these four cases, both names are invariably spelt as indicated here: it is clear that both spellings were fully intentional.

The genus name Leiothrix is formed from two Greek words, λειος (leios: smooth) and θριξ (thrix: hair) (Liddell & Scott 1883: 881, 682). According to the International code of zoological nomenclature (hereafter the Code; ICZN 1999), the correct stem of a family-group name based on a generic name that 'is or ends in a Greek or Latin word ... is found by deleting the case ending of the appropriate genitive singular' (Art. 29.3.1). Leiothrix ends in the Greek noun  $\theta \rho \iota \xi$  (thrix), the genitive of which is  $\tau \rho \iota \chi \circ \zeta$  (trichos—the 'ch' sound being soft, as in Scots 'loch' or as in Spanish pronunciation of the letter 'j'). The case ending to be deleted here is '-os', which leaves the stem '-trich-', not '-thrich-'. The inescapable conclusion is that Swainson's original stem is correctly formed, and that the correct spelling of this family-group name at family rank is Leiotrichidae.

Further support can be found in the third edition of the Code (ICZN 1985). This edition included an Appendix D, providing information and recommendations for the formation of names, including guidance for the cases of some specific Greek and Latin words. This informative appendix (present since the first edition of 1961) was dropped from the fourth edition, perhaps merely to make the whole volume less cumbersome. Under Art. 86.3, rules from previous editions of the Code no longer have any force—but that is not in any way to imply that information provided in previous editions was inaccurate. Indeed, the current ICZN website still includes the details from this appendix and suggests that coiners of new names may wish to consult it (https://www.iczn.org/the-code/formation-of-names/; also https://www.iczn.org/other-publications/). On p. 223 of this appendix in the 1985 edition



(reproduced through the ICZN website, on p. 17 of the offered .pdf), in Table 2, Part B, N° 24, the Greek word  $\theta \rho \iota \xi$  is dealt with explicitly, and the text states that the correct family name based on this noun is 'TRICHIDAE'.

To some, the evident spelling difference ('th' versus 't') between the genus- and family-group names might appear slightly strange, but surely no more so than such wellentrenched cases as *Threskiornis*/Threskiornithidae, *Apus*/Apodidae or *Apteryx*/Apterygidae.

The suffixes applicable to family-group names are nowadays strictly regulated by Art. 29.2 of the current, fourth edition of the Code (ICZN 1999). Under this article, family-group names are formed of the stem (based on the genus name) and the respective terminations: -idae at the rank of family; -inae for a subfamily; and -ini for a tribe. In earlier times various different terminations were used by different authors, but by the time of the Strickland Code, the first serious attempt to universalise practices in nomenclature, it was already strongly recommended that '-idae' and '-inae' should be the respective terminations used for family and subfamily (Strickland 1843: 272). Thenceforth, the suffixes of previously existing family-group names were adapted, where necessary, to fit these norms (current Code, Arts. 11.7.1.3 and 32.5.3.1). Bonaparte (1854: 120) was apparently the first to use this family-group name with the correct stem and corrected suffix, in his Leiotrichinae.

The issue presently under discussion is not the suffix but the stem, and, rather surprisingly, the stem of the original and correct spelling has frequently been overlooked in recent years, with several authors erroneously adopting a form 'Leiothrichidae/-inae' (or even, occasionally, 'Leiothricidae/-inae')1.

Following its original introduction, this family-group name was used with moderate frequency during the rest of the 19th century but rather less throughout the 20th century, when it fell into desuetude, largely because the genus was normally classified among the babblers of the family Timaliidae, or of the subfamily Timaliinae within the outsize family Muscicapidae (sensu lato), with no further formal taxonomic subdivision. Throughout this period, the correct form, Leiotrichidae/-inae, was almost invariably used by all authors, e.g. Jerdon (1863: 241), Wallace (1874: 409), Sclater (1874: 171 and 1881: 34), Seebohm (1879: 309) and Fürbringer (1892: 145). During the mid-19th century several taxonomists objected to what they considered to be linguistically inappropriate scientific names, and they sought to 'improve' them, but almost all of these proposals have ended up in nomenclature's dustbin as unjustified emendations. In one such case, Strickland (1841: 29) proposed altering the spelling of Swainson's genus name to 'Liothrix', a spelling also used by Sundevall (1872: 10); Cabanis (1847: 323) based a family-group name on this unjustified emendation but he still used the correct spelling of the second element of the name in his family 'Liotrichidae'. The erroneous spelling 'Leiothrichinae' was first used by Gray (1869: 312) but it was not followed by other authors<sup>2</sup>; for example, Ridgway (1882: 323) cited Gray's work and the exact page number but himself used the correct spelling, Leiotrichinae. Again, the sparse mentions from the 20th century use the correct spelling, for example Newbigin (1913: 218) and Van Tyne & Berger (1976: 733), but towards the end of the century Bock (1994: 151)

<sup>&</sup>lt;sup>2</sup> Gray accurately cited Cabanis' spelling but himself adopted the erroneous spelling of the stem in his own version of the family-group name.



Even if an author were to claim that *Leiothrix* is not based on Greek words but for instance on a random combination of letters, the valid options might be 'Leiothrixidae', or possibly even 'Leiothridae' but never 'Leiothrichidae' or 'Leiothricidae'. But in any case, Art. 29.3.1 (quoted in part above) precludes this, as the generic name does unquestionably end in a Greek word.

used the same misspelling as Gray, although with no reference to Gray or indeed to any authority other than Swainson<sup>3</sup>.

Latterly, in the last 10–15 years or so, the traditional babbler assemblage has repeatedly been taxonomically reassessed, leading to various proposed rearrangements involving, among other things, the recognition of several additional families, subfamilies and tribes. As a result, Swainson's name has once again come into regular use but for some reason several authors have used the erroneous spelling 'Leiothrichidae/-inae'. Notwithstanding this, the correct spelling is still very commonly used in both papers and books, e.g. Olsson & Alström (2013: 155), del Hoyo & Collar (2016: 540), Craik & Lê Quý Minh (2018: 280), Treesucon & Limparungpatthanakij (2018: 332), Päckert et al. (2019: 8), Scott (2020: 19), del Hoyo (2020: 652), Borrow & Demey (2022: 270), Huang et al. (2023: [1]), etc. See also numerous search results in both Google Scholar and Google Books.

The spelling Leiotrichidae is the author's original spelling of the name (with corrected suffix). It is also indisputably the correct form of the name in accordance with Art. 29.3.1 of the Code. This spelling was used almost exclusively from Swainson's time right up until the first decades of the 21st century, and is still in common use today. By all criteria, the correct stem of this family-group name is Leiotrich-, giving the spellings Leiotrichidae (family), Leiotrichinae (subfamily) or Leiotrichini (tribe).

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<sup>&</sup>lt;sup>3</sup> Curiously, in this publication the family-group name is cited to 1831 while on the same line the genusgroup name is listed as 1832, which would have been impossible, as a new family-group name must be based on an available generic name (Art. 11.7.1.1). It turns out (as already noted above) that both dates refer to text just four lines apart on the same page, nominally published as 1831, but actually published in February 1832 (Dickinson et al. 2011: 150-151).

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