



***Nemachilichthys ruppelli* (Teleostei: Nemacheilidae) and the proper correction of the German umlaut**

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In a re-description of the South Asian fish species *Nemachilichthys ruppelli* (Sykes, 1839a) Keskar *et al.* (2015) noticed—as also pointed out by Kottelat (2012)—that the original spelling of the species name was *rupelli* [actually: Rupelli, with regular font and capital R], but that information in Sykes (1839a: 162) showed clearly that the species was named for [Eduard] Rüppell with the explicit dedication "I have dedicated this beautiful little fish to Rüppell, who did me the favor to look over my drawings ..." Rüppell is also mentioned twice on page 159. Sykes's (1839a) paper was reprinted in Sykes (1839b) with exactly the same spelling, but there the species name appears in italics. A third publication by Sykes (1841), based on the same material, also uses the spelling Rupelli for the species, but does not mention Rüppell.

The species name in question has been spelt in different ways in subsequent literature. It was cited as *rupelli* by Günther (1868: 347) and *rupelli* by Kottelat (1990: 20), and listed or described in various combinations with generic names as *rupelli* (Banarescu & Nalbant, 1968: 329); *rupelli* (e.g., Day, 1878: 612; Jayaram, 1991: 200, 201; Arunachalam *et al.*, 2000: 221; Menon, 1987: 30, 158); and *rueppelli* (e.g., Jayaram, 1981: 150, 158; Talwar & Jhingran, 1991: 499; Heda, 2009: 90). Only Menon (1999:183) explicitly adhered to the original spelling *rupelli*.

Both Keskar *et al.* (2015) and Kottelat (2012) affirmed that the spelling *rupelli* must be corrected in accordance with International Code of Zoological Nomenclature ("the Code" below) fourth edition (International Commission on Zoological Nomenclature, 1999), Article 32.5.1: "If there is in the original publication itself without recourse to any external source of information, clear evidence of an inadvertent error, such as a *lapsus calami* or a copyist's or printer's error, it must be corrected. Incorrect Latinisation or use of an inappropriate connecting vowel, are not to be considered inadvertent errors."

Kottelat (2012:11, 93) confirmed the spelling *rupelli* remarking that "The omission of the umlaut is correct; if Sykes had written "Rüppell", ü should have been corrected into *ue*, but as Sykes used "Ruppell", *u* should not be corrected" (page 11); and "*rupelli* is an incorrect original spelling since the species is explicitly named for Rüppell and must be emended into *rupelli*, Code art. 32.5.1.1" (page 93). (The reference to Article 32.5.1.1 is irrelevant here; possibly a lapsus for Article 32.5.1.)

Keskar *et al.* (2015) dismissed Kottelat's correction, proposing instead that the name should be *rueppelli*, remarking that "in Sykes (1839) Rüppell's name is in fact spelt with an umlaut, which may not have been distinct in the copy of Sykes (1839[a]) examined by Kottelat (2012)".

There are two sources of confusion here leading to the mistaken conclusion by Keskar *et al.* (2015). First, Kottelat (2012: 11) used "Ruppell" where he should have used "Rupelli", and he was indeed working from a photocopy where the umlaut was absent from Rüppell's name (M. Kottelat, personal communication). Second, Keskar *et al.* (2015) apparently confounded the name of the species with the name of the person and based their correction on Rüppell instead of the name of the taxon, *Cobitis ruppelli*. Keskar *et al.* are publishing a correction of their 2015 conclusion (Keskar *et al.* 2016), but the case inspires to look deeper into the name of Rüppell, and the treatment of the umlaut sign in the Code.

Starting with the first edition of the Code (International Commission on Zoological Nomenclature, 1961), two Code articles deal with umlauts. An umlaut refers to a change of sound of a vowel. In written German such vowels are marked by a diaeresis or trema (two dots) above the original vowel (ä, ö, ü). In other languages, the diaeresis may have other functions, e.g., marking distinct pronunciation in the French ë, and representing distinct vowels ä and ö in Swedish and Finnish.

Code Article 32.5.2 in the fourth edition (1999) states: "A name published with a diacritic or other mark, ligature, apostrophe, or hyphen, or a species-group name published as separate words of which any is an abbreviation, is to be corrected."

Code Article 32.5.2.1 in the fourth edition (1999) states: “In the case of a diacritic or other mark, the mark concerned is deleted, except that in a name published before 1985 and based upon a German word, the umlaut sign is deleted from a vowel and the letter ‘e’ is to be inserted after that vowel (if there is any doubt that the name is based upon a German word, it is to be so treated).”

This means that if a name published after 1984 contains a diaeresis (or umlaut), it must be deleted, i.e., irrespective of original language an ä becomes a, an ö becomes o, and a ü becomes u. If a species group name published before 1985 contains a diaeresis representing an umlaut and can be considered to be based on a German word, the diacritic mark should be deleted and an e inserted after the vowel. (All diacritic marks in a name not based on a German word must simply be deleted.) The article was copied from the third edition (1985) of the Code. In the first and second editions of the Code (1961, 1964) Article 32(c)(i) is slightly different: “..., and except that when, in a German word, the umlaut sign is deleted from a vowel, the letter ‘e’ is to be inserted after that vowel.” The 1985 text is open to interpretation whether it refers to the umlaut sign in the original word, or to the instance in the scientific name.

The modern editions of the Code (International Commission on Zoological Nomenclature, 1961, 1964, 1985, 1999) differ radically from its predecessor, the *Règles internationales de la nomenclature zoologique* from 1905 (Blanchard, 1906), in which Article 20 stated: “In forming names derived from languages in which the Latin alphabet is used, the exact original spelling, including diacritic marks, is to be retained.” (As translated by Stiles, 1905.) With the article came examples like *Köllikeria*, *Stålia*, and *Ibañezia*. Article 13 of the *Règles* allowed the use in species names of a capital initial letter in names of persons; lower case species names became mandatory only with the first edition of the Code (1961: Article 27). This explains why patronyms in older literature look like they did not follow the present Code. They were actually *Règles* compliant, but the rule has changed.

Although a decision was made in 1953 (Hemming, 1953: 58) to drop diacritics from the *Règles*, including all diaeresis categories, a new edition of the *Règles* was never completed, and the modified rules did not come into effect. Until the first edition of the Code (1961) names like *Cobitis Rüppelli* were fully acceptable. Treatment of diacritic marks were the subject of considerable discussion during the development of the *Règles* and the Code (e.g., Richter, 1948:129), and Article 20 in the *Règles* was moderately successful not least because the required characters were not available to all printers. In the present Code (1999) diacritic marks of any kind are disallowed in Article 27: “No diacritic or other mark (such as an apostrophe), or ligature of the letters *a* and *e* (*æ*) or *o* and *e* (*œ*) is to be used in a scientific name.”

Articles 27, 32.5.2 and 32.5.2.1, however, do not apply to *N. ruppelli* because Sykes demonstrably wrote *rupelli*, i.e., without umlaut. Because the German ü is not represented in Latin, it must be considered reasonable to render it simply as u, to conform to the Latin alphabet. As seen from article 32.5.2.1, replacing ü with u is the current standard, although it is still possible to use ue, ae, and oe in place of umlaut letters in new names. Rüppell may be considered to be a German word as the person in question was German (Eduard Rüppell, 1794–1884), but see below.

As a complicating factor the index to the volume of the *Proceedings of the Zoological Society* containing Sykes (1839a), page 169, refers to *Cobitis Rüppelli* on page 162. The index to a journal volume should not be considered part of the individual works it contains, and should not to be considered a source of corrigenda, unless it is a single-paper volume. If anyway the index would be admitted as part of the publication, and consequently we would have to deal with two different original spellings, however, article 24.2 applies: “When the author, or one of joint authors, of two different original spellings of the same name subsequently uses one of them as valid in a work (including the author’s or publisher’s corrigenda), and neither had previously been selected as the correct spelling by a First Reviser, the author is deemed to be the First Reviser, whether or not the author cites both spellings together (that used as valid becomes the correct original spelling).” The subsequent publication by Sykes (1839b) uses *Rupelli*, and the index does not list the species. This text is, however, only a reprint of Sykes (1839a) and not really a new publication. The next publication by Sykes (1841) is different in format from the 1839 publications but still uses the name *Cobitis Rupelli*. Interestingly, in the index to that particular volume of the *Transactions of the Zoological Society* (page 414) the name is spelt *Ruppelii*. Again, the spelling in the index is irrelevant for deciding on multiple spellings and in this case a spelling different from the original cannot be accepted as an original spelling. In the same volume of the *Transactions* there is incidentally also a paper by Eduard Rüppell, with the author name correctly spelt in the paper, but misspelt Ruppell in the Table of Contents.

Regardless of whether names in an index may be considered part of the work, Sykes consistently used the spelling *Rupelli*. Consequently, because Sykes did not use any name containing an umlaut sign (*RüPELLI*, *RÜPPELLI*, *rüPELLI*, *rÜPPELLI*) that could have motivated the corrected spelling *rueppelli*, Article 32.5.2.1 is irrelevant, and the correct spelling of the name in question is *rupelli*. Both spellings (*rupelli* and *rueppelli*) have been used after 1899 and therefore there is no case for prevailing usage (Article 23.9.1) of one or the other name.

A critical aspect when dealing with Article 32.5.2.1 is how to understand “based on a German word.” In the

French version of the Code (1999) it is expressed as “noms dérivés de l’allemand”, which clearly refers to scientific names originating from words in the German language, and not restricted to words used in Germany or excluding person names. According to Mertens (1949: 9), referring to an “old family tradition” the family of Eduard Rüppell descended from Bourgogne in France, and was known then as Rupel or possibly Ruple. About 1565 they emigrated to Flanders (now in Belgium), and from there in 1567 or 1568 to Strasbourg (Alsace, France). Before the end of the 16th Century, some Rupel family descendants had left Alsace for Hessen (Germany). The family name Ruppel is still frequent in Alsace (Tous les noms de famille, 2016). Mertens (1949) considers Antonius Rupel (1580?–1637), resident of Kammerbach in Hessen, as the earliest ancestor of Eduard Rüppell’s family lineage. Antonius’s grandson was known as Simon Rüppel 1624–1692). The next three generations kept the spelling Rüppel. Simon Rüppell (1759–1812), the father of Eduard Rüppell, was the first to use the spelling Rüppell.

There is no German word Rüppell. The closest is rüpel, designating a rude person (Grimm & Grimm, 1854–1961; Kluge, 2003). Heintze (1903: 167) does not include it in his list of German family names, but has Ruppel and Rübél, apparently derived from rüpel. Whereas Rüppell apparently has been used only as a family name (also written Ruppel and Rüpél); is not included in Heintze’s (1903) list; and apparently is of French origin, it has been used as a family name in Germany at least since Simon Rüppell, born 1759; and with variant spellings in a family living in Germany since the late 16th Century. Variants on Rupel are more widespread, but the spelling Rüppell is apparently not used outside German speaking countries. Rüppell thus qualifies as a German word.

Other fish taxa named for Rüppell. Other fish taxa explicitly or implicitly named for Eduard Rüppell are, in chronological order:

Scolopsides Rupelii Cuvier in Cuvier & Valenciennes, 1830:332; *Ruppelii* in the index, p. xx. Based on *Scolopsis kurite* Rüppell (1828: 9, pl. 2, fig. 3). Rüppell’s name is spelt Ruppel throughout the volume. Kottelat (2013:350) corrected the name to *ruppellii*,

Julis ruppelii Bennett, 1831:128. Bennett refers to Dr. Rüppel and applies the name to “M. Rüppel’s fish”, which is indicated as *Julis aygula* as described in Rüppell (1828:25, pl. 6, fig. 2), and indicates that the fish is named for Eduard Rüppell.

Olistus ? Ruppelii Cuvier in Cuvier & Valenciennes, 1833: xix,144. New name for *Citula ciliaria* Rüppell (1830: 102, pl. 25, fig. 8). The spelling Ruppel is used consistently in this volume. Kottelat (2013: 334) corrected the name to *ruppellii*.

Seriola Ruppelii, Valenciennes in Cuvier & Valenciennes, 1833: xxj, 216. A new name for *Nomeus nigrofasciatus* Rüppell (1829: 82 [error for 92], pl. 24, fig. 1). Kottelat (2013: 337) corrected the name to *ruppellii*.

Acanthurus ruppelii Bennett, 1836:207. The reference to the description of *Acanthurus velifer* in Rüppell (1829) is evidence that the name refers to Eduard Rüppell, although he is referred to only as “Rüpp.” and “Rupp.” in the paper itself.

Rhinobates Ruppellii Swainson, 1838: 185, fig. 24. There is no indication of why the species is so named, but Eduard Rüppell’s work on Red Sea fishes is mentioned on pages 66 and 67. The name must be corrected to *rueppellii*.

Ruppelia Swainson, 1839:184; *Rupellia* on p. 281; *Ruppelia* in the index, page 446. In Opinion 27 (Hemming, 1958), the Commission corrected the two spellings *Ruppelia* and *Rupellia* to *Ruppellia*, referring to articles 19 and 20 of the *Règles* and Opinion 26 on typographical errors in Swainson (1839), considering Swainson’s names to be typographical errors.

Synodontes [sic] Ruppelli Swainson, 1838: 339, fig. 82. The name is not explained, but Rüppell’s work on African fishes is mentioned on pages 66 and 67, and it remains *ruppelli*.

Platysomus (Scyris) Ruppellii Swainson, 1839: 251. Based on “Rüpp. i. pl. 33” [=Rüppell (1830, p. 33, *Scyris indicus*)] and “Indicus. Cuv. pl. 252.” The name must be corrected to *rueppellii*.

Acanthurus (Ctenodon) Ruppelii Swainson, 1839: 256, fig. 74. Based on “Rüpp. 16”, i.e. Rüppell (1829, pl. 16, fig. 1), identified by Rüppell as *Acanthurus sohal* (Forskål, 1775). This description refers to a work by Eduard Rüppell (1829), discussed by Swainson (1838: 66), and referred to in the Index of Swainson (1839: 436). Rüppell’s name is spelt with double l elsewhere in the work (e.g., 1838: 66, 67; 1839: 436), also in *Synodontes ruppelli* (1838: 339) and *Rhinobates Ruppellii* (1838: 185). Kottelat (2013:442) corrected the name to *rueppellii*.

Peloria Ruppelii Cocco, 1844: 10. The name is explained as: “Debbo all’ottimo mio amico Sig. Rüppel ...” and in the introduction (page 2) to the paper Eduard Rüppel is referred to “Né me incuora meno l’incitamento, che mi viene dal nostro ch. amico il sig. Eduardo Rüppel di Franchfort, nome carissimoá cultori delle scienze naturali, il quale le lillustro e grandemente accrebbe co’ suoi viaggi scientifici Nella Numbia, e nell’ Abbissinia.”

In this case the name must refer to a German person corresponding to Eduard Rüppell in all aspects except the spelling of the last name.

Dalophis ruppelliae McClelland, 1844: 213. Dr. Rüppell is mentioned. The ending *-iae* is somewhat unexpected; is

also used in *Muraenesox hamiltoniae* on page 182, of the same paper, but this name is written as *Muraenesox Hamiltonii* on page 203 and *Muraenesox hamiltoni* on page 210; and in *Alabes cuvieriae* on page 221. The only other dedicative genitive names in the paper are *Anguilla Elphinstonei* on pages 179 and 208; *Ptyobranchus hardwickii* on page 222; and *Leptocephalus spalzani* on page 224. The paper features several significant misspellings, e.g., *Conger Mystox* (for *C. Mystax*), page 209; *Muraena helana* (for *M. Helena*), page 214; *Leptognathus oxyrhynchun* (for *L. oxyrhynchus*), page 211; *Strophidon longicaudata* (for *S. longicaudata*), page 215; *Synbranchus immacualta* (for *S. immaculata*), page 220; *Alabes cuvieriae* (for *A. cuvieri* or *cuvieriae*), page 221. Böhlke & Smith (2002) correctly cite the original spelling of the name in the header of their description of the species but in the text they refer to the original spelling as *rueppeliae* and come to the conclusion that it was based on a Latinisation (Ruppellius) of Rüppell and that the feminine ending (*ae*) must be corrected (to *i*). The feminine *-ae* ending cannot be emended, however, because incorrect Latinisations cannot be corrected (Code article 32.5.1), and despite the frequent spelling errors in the paper it is not certain that the *-iae* ending is in error. At the time, the so-called Strickland Code established in 1842 was current as nomenclatural code in zoology, and it considers as genitive endings for person names only *-i* (when ending in a consonant), and *-ii* (when ending in a vowel) (Strickland *et al.*, 1843), and does not mention the *-ae* option. Apparently McClelland was not following those rules.

Ginglymostoma Rüppellii Bleeker, 1852: 60, 83. The synonymy includes a reference to “*Nebrius concolor* Rüpp. N. W. F. Abyss. F. R. M. p. 62 tab. 17 fig. 2.” Apparently named for Eduard Rüppell, the name must be corrected to *rueppellii*.

Dilobomyctere Rüppellii Bibron in Duméril, 1855: 279. The species is based on the description of *Tetraodon Honkenii* by “Rüpp.” At the time, there were not many ichthyologists around, and “Rüpp.” may be taken as evidence that the species was named for Eduard Rüppell. Kottelat (2001: 613) preferred the spelling *rueppellii*. Kottelat (2013: 480) corrected to *rueppellii*. Although standard abbreviations of author names have been abandoned in zoology, they were common particularly in the 19th Century. Such include L. for Carl Linnaeus, Blgr. for George Albert Boulenger, Cuv. for Georges Cuvier, and Gthr. for Albert Günther. The abbreviations were used both in authorship of names, and in abbreviated references. Doubtless, “Rupp.” or “Rüpp.” were short forms for Eduard Rüppell and should always translate to Rüppell.

Monacanthus ruppellii Castelnau, 1855: 97, pl. 47, fig. 2. “Ce *Monacanthus* est confundu, au Muséum de Paris, avec le *Monacanthus pardalis* de Ruppel (Neue Werbelthiere [*sic*], p. 57, pl. 15, fig. 3)” Later: “C'est avec un vrai plaisir que je dédie ce *Monacanthus* au savant voyageur et naturaliste M. Ruppel. There is also one more use of Ruppel on the same page. The species is listed as *Ruppellii* in the index, page 111. I here act as first reviser and select *rueppellii* as the correct spelling.

Caranx ruppellii Günther, 1860: 445; also in the index page 544. Based on *Caranx petaurista* in “Rüpp. Atl. Fische, p. 95. pl. 25, fig. 2.” Clearly to be corrected to *rueppellii*.

Apogon ruppellii Günther, 1859: 236, the name repeated in the index, but not explicitly explained. Three works by Eduard Rüppell appear in the list of references, page x. The name must be corrected to *rueppellii*.

Trachypterus ruppellii Günther, 1861: 304; and in the index, page 582. The description includes details on a specimen donated by “Dr. E. Rüppell”. The name must be corrected to *rueppellii*.

Mugil ruppellii Günther, 1861: 458; and in the index, page 582. The species is based on the description of *Mugil crenilabris* in Rüppell (1828–1830), with explicit reference to “One of Dr. Rüppell’s typical specimens.” The name must be corrected to *rueppellii* (Kottelat, 2013:275).

Brachyalestes ruppellii Günther, 1864: xix, 315, 452. Mention is made in the text of “Rüppell”. The name must be corrected to *rueppellii*.

Julis Rüppellii Klunzinger, 1871: 536. Based on material identified by Rüppell as *Julis purpureus*; a colour description attributed to Rüppell is included. Rüppell is mentioned both with complete name and the abbreviation “Rp” in several places in the paper. The name must be corrected to *rueppellii*. It is not a homonym of *Julis ruppellii* Bennett, 1831.

Ruppelia, Castelnau, 1873: 51, 151, type by monotypy *Ruppelia prolongata* Castelnau, 1873, was “...dedicated to the celebrated traveller and naturalist, Ruppel...” In the annotation to Opinion 27 (Hemming, 1958), *Ruppelia* Castelnau was listed as preoccupied by *Rüppellia* Swainson, 1839. Because Opinion 27 explicitly corrected Swainson’s name from *Ruppelia* to *Rüppellia*, but did not explicitly change Castelnau’s name (although under articles 19 and 20 of the *Règles* it should have been corrected to *Rüppellia*), the Opinion removed the potential homonymy. As of the 1985 Code *Rüppellia* Swainson must be corrected to *Rueppellia*, whereas Castelnau’s name can only be corrected to *Ruppelia* (based on the Latinisation Ruppellius) or *Ruppellia*. Because Castelnau’s name was never replaced while potentially a junior homonym, it cannot be now be rejected (Code article 59.2).

Amphiprion ruppelii Castelnau, 1873:91. "...nearly allied in form to Ruppel's *Amph. Bicinctus*..." Ruppell's name is also spelt Ruppel on pages 51 and 89. Diacritic marks are absent from the whole work.

Gerres Ruppellii Klunzinger, 1884: VI, 47, 48, pl. 5, fig. 6 [= fig. 1b], pl. 13, fig. 2. Explicitly based in part on material described by Ruppell (1830). The name must be corrected to *rueppellii* (Kottelat, 2013: 346).

Barbus Rueppellii Boulenger, 1902: 427. Eduard Ruppell is clearly indicated, and the ü is validly expressed as ue.

Chrysichthys rueppelli Boulenger, 1907: 337, pl. 60, fig. 2. The spelling is repeated on pages 337 and 338, and in the figure legend: and reference to a specimen on a drawing by Ruppell is given on page 337.

Gymnocranius ruppellii Smith, 1941: 441, 445, 449. Replacement name for *Dentex rivulatus* Ruppell, 1838, preoccupied by *Dentex rivulatus* Bennett, 1835.

Pranesus pinguis ruppelli Smith, 1965: 611–615, 617, 631. The description is explicitly based partly on an analysis of syntypes of *Atherina forskalii* Ruppell (1838). Diacritic marks are absent from the paper as a whole. In this case, and some of the other references, the umlaut sign may be missing simply because the printer did not have the type. That is not a printer's error in the meaning of the Code. Both u and ue are acceptable renderings of ü in scientific names, so it does not matter in this regard if the family name Ruppell is spelt with or without umlaut.

Double or single L. In addition to the umlaut problem, Ruppell's name is spelt in different ways, commonly Ruppel and Ruppel. Code article 32.5.1 in the fourth edition (1999) demands correction of names that are obviously misspelt, but only using internal evidence, as cited in full above.

Kottelat (2013) has argued that even where there is no hard internal evidence, an obvious misspelling of a patronym must be corrected. A dedicatory patronym that is misspelt would be embarrassing for the person whose name is misspelt. It would probably also lead to inadvertent automatic corrections by those who know the correct spelling. A typical example is *Apistogramma mendezi* Römer (1994), named for "Brazilian rubber tapper, trade unionist, and ecologist Chico Mendez." The problem here is that the correct name, Francisco Mendes, does not occur in the paper itself. We can only know that the spelling is wrong by connecting global publicity of Francisco "Chico" Mendes, with the identification in the paper of a Brazilian union leader and environmentalist with a similar name.

In the case of species named for Eduard Ruppell, most sources have a clear reference to Ruppell, but his name is spelt in different ways. In Smith's (1941, 1965) papers, there is apparently no inadvertent error involved in dropping the umlaut sign, as the printer may not have been able to print it. In the cases where Ruppell is spelled with single p or single l, there is commonly no way of detecting an error except from external knowledge about Ruppell or variation in spelling within the paper. The example in the Code for article 32.5.1 provides guidance: "If an author in proposing a new species-group name were to state that he or she was naming the species after Linnaeus, yet the name was published as *ninnaei*, it would be an incorrect original spelling to be corrected to *linnaei*." Consequently, under article 32.5.1, if there is no mention of "Ruppell" in the publication, using any spelling, the name may not be eligible for correction if not spelt ruppell-, or rueppell-.

In all cases where a fish is named for Ruppell, it is obvious which spelling is the correct one. There is, however, an exception to using the exact original spelling of a person's name. A name may be intentionally Latinised, and then look different from the original. A patronym ending in -i represents a noun in genitive form of a name ending in -us or simply an unaltered modern name with this genitive ending appended (and which then in a way becomes Latinised as well); whereas a patronym ending in -ii represents a Latin name ending in -ius or simply an unaltered modern name which ends in i with the simple -i genitive ending added).

A good example of Latinisation of a modern name is *Parachromis dovii* (Günther, 1864), named for John M. Dow. In this case, because w is not part of classical Latin, Dow was Latinised to *Dovius*, which becomes *dovii* as a genitive. In the case of Ruppell names ending in -ii, are based on a Latinized form of Ruppell employing the -ius ending. They may be based on the actually existing family name Rupelius or be an independent Latinisation Ruppellius or Rupelius.

The following names have the -ii ending but only one l, and also spells Ruppell's name with one l; we cannot know if the names were based on a Latinised name or simply misspelt: *Olistus Ruppelii* Cuvier; *Julis ruppelii* Bennett; *Seriola Ruppelii* Valenciennes; *Peloria Ruppelii* Cocco; *Monacanthus ruppelii* Castelnau; *Amphiprion ruppelii* Castelnau.

One name has the -ii ending but only one l, and Ruppell's name is correctly spelt; it must not be corrected to *ruppellii*, but remains *rueppelii*: *Acanthurus (Ctenodon) Ruppelii* Swainson.

Acanthurus ruppelii Bennett and *Dilobomyctere Ruppelii* Bibron have the -ii ending but Ruppell's name is not spelt out in full in the publication; we cannot know if the names were based on a Latinised name or simply misspelt.

The genus name *Ruppelia* Swainson was fixed as *Rueppellia* in Opinion 27.

The generic name *Ruppelia* Castelnau appeared in a work in which Ruppell's name is spelled Ruppel; we cannot know if the spelling derives from a Latinisation or an error.

The best rule for dealing with variant spellings of Ruppell's name may be to consider the variants (Ruppel, Ruppel) as errors, and consequently correct the associated species names to *rueppell-* or *ruppell-*, depending on the use

of the umlaut. In most of the cases, however, correcting the name is a pure formality, because besides *Nemachilichthys ruppelli*, only three names are currently considered valid: *Dalophis rüppelliae* McClelland, now *Gymnothorax rueppelliae*; *Apogon rüppellii* Günther, now *Ostorhinchus rueppellii*; and *Chrysiichthys rueppelli* Boulenger. It may even be desirable to maintain the original spelling of junior synonyms to facilitate their recognition.

Relevance of article 32.5.2.1. Anyone having read so far must by now have asked the question about the usefulness of Code article 32.5.2.1. The Strickland Code and the *Règles* permitted or prescribed that geographical and personal names using the Latin alphabet should be spelt as in the original, apparently for one or more of three reasons: (1) modern names would look funny if fully latinised, e.g., Woodward becoming *Vudvardi* (Strickland *et al.*, 1843); (2) dropping the diacritics would make the name unrecognizable, e.g., *Stahli*, is very different from *Stähli* both in look and pronunciation (Blanchard, 1905); and (3) similar-looking names might create unwanted homonyms or distort the name, e.g., confounding different family names Müller, Muller, and Mueller (Richter, 1948). Inasmuch as the current Code has done away with diacritics except one, we cannot reclaim exact original spelling of names using the Latin alphabet but must treat names as arbitrary combinations of letters. It may even be questioned if corrections of misspellings of names originally in the Latin alphabet should be permitted. Similar corrections of transliterated names must then also be permitted and the standard for judging on correct transliteration might then become problematic.

The special ruling on names originally including an ä, ö and/or ü based on a German word, is however, an anachronism. There is no reason today (or was ever before) why the only German language diacritic mark should be observed, and then not also the identical-looking diaereses, umlauts or trema in other languages. The ruling also fails to consider that German (High and Low German) is just one of several languages in northern Europe with the same roots and consequently identification of the origin of a word containing an ä, ö, or ü can be problematic. From an internal Code perspective, it is also potentially problematic that Article 58, which lists words with slightly different spelling that must be considered as identical for the purpose of homonymy, does not consider ue as equivalent to u, oe to ö, or ae to ä when based on a word, or personal or geographic name identical in spelling. As an example, *Julis ruppellii* Bennett and the corrected *Julis rueppellii* Klunzinger are not homonyms in combination with the same generic name; neither would be *ruppelli* and *rueppelli* if referred to the same genus, although that would most likely result in confusion over the two species.

Consequently, and as exemplified by the “Rüppell case”, there is reason to do away with the “German umlaut” in a future edition of the Code.

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References

- Arunachalam, J.A., Johnson, A., Manimekalan, A., Sankaranarayanan & Soranam, R. (2000) Cultivable and ornamental fishes of Western Ghats part of Maharashtra. In: Ponniah, A.G. & Gopalakrishnan, A. (Eds.), *Endemic fish diversity of Western Ghats*. National Bureau of Fish Genetic Resources, Lucknow, pp. 217–222.
- Banarescu, P. & Nalbant, T.T. (1968) Cobitidae (Pisces, Cypriniformes) collected by the German India Expedition. *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, 65, 327–351.
- Bennett, E.T. (1831) The exhibition of the collection of fishes formed at the Mauritius by Mr. Telfair, with characters of new genera and species. *Proceedings of the Committee of Science and Correspondence of the Zoological Society of London*, 1830–1831, 59–61, 126–128, 165–169.
- Bennett, E.T. (1836) Characters of several fishes from the Isle of France. *Proceedings of the Zoological Society of London*, 1835, 206–208.
- Blanchard, R. (1906) Règles internationales de la nomenclature zoologique adoptées par les Congrès internationaux de Zoologie. *Bulletin de la Société zoologique de France*, 31, 15–35.
- Bleeker, P. (1852) Bijdrage tot de kennis der ichthyologische fauna van Singapore. *Natuurkundig Tijdschrift voor Nederlandsch Indië*, 3, 51–86.
- Böhlke, E.B. & Smith, D.G. (2002) Type catalogue of Indo-Pacific Muraenidae. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 152, 89–172.
[http://dx.doi.org/10.1635/0097-3157\(2002\)152\[0089:TCOIPM\]2.0.CO;2](http://dx.doi.org/10.1635/0097-3157(2002)152[0089:TCOIPM]2.0.CO;2)
- Boulenger, G.A. (1902) *Zoology of Egypt: The fishes of the Nile*. Hugh Rees, London, li + 578 pp., 9 pls.
- Boulenger, G.A. (1907) Descriptions of new fishes from the collection made by Mr. E. Degen in Abyssinia. *The Annals and Magazine of Natural History*, 7, 421–439.
- Castelnau, F. de (1855) *Animaux nouveaux ou rares recueillis pendant l'expédition dans les parties centrales de l'Amérique du sud, de Rio de Janeiro à Lima, et de Lima au Pará; exécutée par ordre du gouvernement français pendant les années 1843 à 1847, sous la direction du Comte Francis de Castelnau. Poissons*. P. Bertrand, Paris, xii + 112 pp.
- Castelnau, F.L. (1873) Contribution to the ichthyology of Australia. *Proceedings of the Zoological and Acclimatisation Society of Victoria*, 2, 37–158.
- Cocco, A. (1844) Intorno ad alcuni nuovi pesci del mare di Messina. Lettera del Prof. Anastasio Cocco al signor Augusto Krohn da

- Livonia. *Giornale del Gabinetto Letterario di Messina*, 3, 21–30.
- Cuvier, G. & Valenciennes, A. (1830) *Histoire naturelle des poissons. Tome cinquième*. Lévrault, Paris, Strasbourg & Bruxelles, xxvii + 4 + 499 pp., 41 pls.
- Cuvier, G. & Valenciennes, A. (1833) *Histoire naturelle des poissons. Tome neuvième*. Lévrault, Paris, Strasbourg & Bruxelles, xxix + 2 + 512 pp., 34 pls.
- Duméril, A. (1855) Note sur un travail inédit de Bibron relatif aux poissons plectognathes gymnodontes (diodons et tétrodons). *Revue et Magasin de Zoologie Pure et Appliquée*, Série 2, 7, 274–282.
- Grimm, J. & Grimm, W. (1854–1961) *Deutsches Wörterbuch*. Online version 19 December 2015. Available from: <http://woerterbuchnetz.de/DWB/> (accessed 19 December 2015)
- Günther, A. (1860) *Catalogue of the fishes in the British Museum. Volume Second*. Trustees of the British Museum, London, xxv + x + 586 pp.
- Günther, A. (1861) *Catalogue of the fishes in the British Museum. Volume Third*. Trustees of the British Museum, London, xxi + x + 548 pp.
- Günther, A. (1864) *Catalogue of fishes in the British Museum. Volume Fifth*. Trustees of the British Museum, London, xxii + 455 pp.
- Günther, A. (1868) *Catalogue of fishes in the British Museum. Volume Seventh*. Trustees of the British Museum, London, xx + 512 pp.
- Heda, N. (2009) *Freshwater fishes of central India*. Vigyan Prasar, New Delhi, ix + 169 pp.
- Heintze, A. (1903) *Die deutschen Familiennamen, gesichttlich, geographisch, sprachlich. Zweite verbesserte und sehr vermehrte Auflage*. Waisenhaus, Halle, 266 pp.
- Hemming, A.F. (Ed.) (1953) *Copenhagen decisions on zoological nomenclature*. International Trust for Zoological Nomenclature, London, xxx + 135 pp.
- International Commission on Zoological Nomenclature (1961) *International code of zoological nomenclature adopted by the XV International Congress of Zoology*. International Trust for Zoological Nomenclature, London, xviii+176 pp.
- International Commission on Zoological Nomenclature (1964) *International code of zoological nomenclature adopted by the XV International Congress of Zoology*. International Trust for Zoological Nomenclature, London, xx + 176 pp.
- 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*. International Trust for Zoological Nomenclature, London, University of California Press, Berkeley and Los Angeles, xx + 338 pp.
- International Commission on Zoological Nomenclature (1999) *International code of zoological nomenclature. 4th Edition adopted by the International Union of Biological Sciences*. International Trust for Zoological Nomenclature, London, XXIX + 306 pp.
- Jayaram, K.C. (1981) *The freshwater fishes of India, Pakistan, Bangladesh, Burma and Sri Lanka – a handbook*. Zoological Survey of India, Calcutta, xxii + 475 pp., 17 pls.
- Jayaram, K.C. (1999) *The fresh water fishes of the Indian region*. Narendra Publishing House, Delhi, xvii + 551 pp + 18 pls.
- Keskar, A., Kumkar, P., Katwate, U., Ali, A., Raghavan, R. & Dahanukar, N. (2015) Redescription of *Nemachilichthys rueppelli*, a senior synonym of *N. shimogensis* (Teleostei: Nemacheilidae). *Zootaxa*, 4059 (3), 555–568. <http://dx.doi.org/10.11646/zootaxa.4059.3.7>
- Keskar, A., Kumkar, P., Katwate, U., Ali, A., Raghavan, R. & Dahanukar, N. (2016) Corrigendum: Redescription of *Nemachilichthys rueppelli*, a senior synonym of *N. shimogensis* (Teleostei: Nemacheilidae). *Zootaxa*, 4111 (1), 100. <http://doi.org/10.11646/zootaxa.4111.1.9>
- Kluge, F. (2003) *Etymologisches Wörterbuch der deutschen Sprache, 24 Auflage*. Walter de Gruyter, Berlin, New York, LXXXIX + 1023 pp. [revised by E. Seebold]
- Klunzinger, C.B. (1871) Synopsis der Fische des Rothen Meeres. II. Theil. *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien*, 21, 441–688.
- Klunzinger, C.B. (1884) *Die Fische des Rothen Meeres. Eine kritische Revision mit Bestimmungstabellen. I. Teil. Acanthopteri veri Owen*. E. Schweizerbart'sche Verlagshandlung, Stuttgart, ix + 133 pp., 13 pls.
- Kottelat, M. (1990) *Indochinese nemacheilines*. Verlag Dr. Friedrich Pfeil, München, 262 pp
- Kottelat, M. (2001) Nomenclatural status of names of tetraodontiform fishes based on Bibron's unpublished work. *Zoosystema*, 23, 605–618.
- Kottelat, M. (2012) Conspectus Cobitidum: an inventory of the loaches of the world (Teleostei: Cypriniformes: Cobitoidei). *The Raffles Bulletin of Zoology*, 26 (Supplement), 1–199.
- Kottelat, M. (2013) The fishes of the inland waters of Southeast Asia: A catalogue and core bibliography of the fishes known to occur in freshwaters, mangroves and estuaries. *The Raffles Bulletin of Zoology*, 27 (Supplement), 1–663.
- McClelland, J. (1844) Apodal fishes of Bengal. *Calcutta Journal of Natural History*, 5, 151–226.
- Menon, A.G.K. (1987) *The fauna of India and the adjacent countries. Pisces. Vol. IV. Teleostei - Cobitoidea. Part 1. Homalopteridae*. Zoological Survey of India, Calcutta, x + 259 pp., 16 pls.
- Menon, A.G.K. (1999) Check list – Freshwater fishes of India. *Records of the Zoological Survey of India, Occasional Paper*, 175, i–xxviii + 1 + 1–366.
- Mertens, R. (1949) *Eduard Rüppell. Leben und Werk eines Forschungsreisenden*. Waldemar Kramer, Frankfurt am Main, 388 pp.
- Richter, R. (1948) *Einführung in die zoologische Nomenclatur durch Erläuterung der internationalen Regeln. Zweite, umgearbeitete Auflage*. Dr. Waldemar Kramer, Frankfurt am Main, 252 pp.
- Römer, U. (1994) *Apistogramma mendezi* nov. sp. (Teleostei: Perciformes; Cichlidae): Description of a new dwarf cichlid from the Rio Negro system, Amazonas State, Brazil. *Aqua Journal of Ichthyology and Aquatic Biology*, 1, 1–12.
- Rüppell, E. (1828–1830) *Atlas zu der Reise im nördlichen Afrika von Eduard Rüppell. Erste Abtheilung Zoologie. Fische des rothen Meers*. Senckenbergischen naturforschenden Gesellschaft, Frankfurt am Main, 141 + 3 pp., 35 pls. [pp. 1–26, pls. 1–6 (1828); pp. 27–94, pls. 7–24 (1829); pp. 95–141, pls. 25–35 (1830)]

- Smith, J.L.B. (1941) The genus *Gymnocranius* Klunzinger, with notes on certain rare fishes from Portuguese East Africa. *Transactions of the Royal Society of South Africa*, 28, 441–452.
<http://dx.doi.org/10.1080/00359194009520023>
- Smith, J.L.B. (1965) Fishes of the family Atherinidae of the Red Sea and the Western Indian Ocean with a new freshwater genus and species from Madagascar. *Ichthyological Bulletin*, 31, 601–632, pls. 98–102.
- Stiles, C.W. (1905) The international code of zoological nomenclature as applied to medicine. *Hygienic Laboratory Bulletin*, 24, 5–50.
- Strickland, H.E., Phillips, J., Richardson, J., Owen, R., Jenyns, L., Broderip, W.J., Henslow, S., Schuckard, W.E., Yarrell, W., Darwin, C. & Westwood, J.O. (1843) Series of propositions for rendering the nomenclature of zoology uniform and permanent, being the report of a committee for the consideration of the subject appointed by the British Association for the Advancement of Science. *The Annals and Magazine of Natural History*, 11, 259–275.
<http://dx.doi.org/10.1080/03745484309445300>
- Sykes, W.H. (1839a) On the fishes of the Deccan. *Proceedings of the Zoological Society of London*, 1838, 157–165.
- Sykes, W.H. (1839b) On the fishes of the Deccan. *Annals of Natural History (Magazine of Zoology, Botany, and Geology)*, 4, 54–62.
- Sykes, W.H. (1841) On the fishes of the Dukhun. *Transactions of the Zoological Society of London*, 2, 349–378, pls. 60–67.
- Talwar, P.K. & Jhingran, A.G. (1991) *Inland fishes of India and adjacent countries. Vol. 1.* Oxford & IBH Publishing Co., New Delhi, Bombay, Calcutta, xvii + 39 + 541 pp.
- Tous les noms de famille (2016) Available from: <http://www.nom-famille.com/nom-ruppel.html> (accessed 8 March 2016)