

Re-evaluation of the grammatical genders of the names “*Smicromyrme*” and its derivatives, and “*Ephutomma*” (Hymenoptera: Mutillidae)

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Abstract

Contrary to earlier conclusions by two of the authors on the genders of some genus-group names in Mutillidae, it is determined that *Smicromyrme* Thomson, 1870, *Erimyrme* Lelej, 1985, *Nanomyrme* Lelej, 1977b, *Paramyrme* Lelej, 1977a, and *Taiwanomyrme* Tsuneki, 1993 are feminine, and *Ephutomma* Ashmead, 1899 is neuter.

Key words: nomenclature, *Erimyrme*, *Nanomyrme*, *Paramyrme*, *Taiwanomyrme*

Introduction

Lelej & Brothers (2008) published a survey of the names of all genera and subgenera of Mutillidae, including information on availability, publication dates, type species, taxonomic history, validity, sexes known and distribution. In addition, the gender of each name was specified to facilitate the formation of adjectival specific names. There, *Smicromyrme* Thomson, 1870 and several other genera ending in *-myrme* were given as masculine, and *Ephutomma* Ashmead, 1899 as feminine. More recently, DY brought to their attention that these statements were possibly incorrect. This paper explores the issue and presents our conclusions.

Smicromyrme and derivatives

Thomson (1870: 208) described *Smicromyrme* as a new genus to contain a single species, “*Smicromyrme rufipes* (Latr.)”, as one of only two species of Mutillidae found in Sweden (the other being *Mutilla europaea* Linnaeus, 1758). Unfortunately, there is no indication of the etymology or gender of the genus name in the original description (the only specific name associated with it is a noun in apposition which need not agree in gender with the genus name). For almost 50 years after its description, *Smicromyrme* was regarded as a synonym or subgenus of *Mutilla* Linnaeus, 1758, which is clearly feminine. It was only in the late 1910s that *Smicromyrme* became generally accepted as a genus in its own right, perhaps the major work to do so being Bischoff’s (1920–1921) massive monograph of the African Mutillidae. For about 100 years the genus was considered to be feminine, but as part of their survey of genus-group names, Lelej & Brothers (2008) discovered that, according to their reasoning, the name should be considered as masculine. The change has apparently been generally accepted, including in the catalogue of mutillid names compiled by Pagliano *et al.* (2020).

Dalla Torre (1897) gave the etymology of *Smicromyrme* (regarded as a subgenus) as “*σμικρός*, parvus; *μόρμηξ*, formica”, so, conventionally transliterated and translated, “smikros, small; myrmex, ant”. But the name does not

end in *-myrmex*. Accordingly, DJB searched in online Greek dictionaries for “μυρμη” (ignoring the accent on the υ) without success. The conclusion was thus that “myrme” was not a Greek word and definitely not Latin. The International Code of Zoological Nomenclature (the Code, ICZN 1999) deals with the gender of genus-group names formed from words that are neither Latin nor Greek in Article 30.2. Since “myrme” is not a word in a modern European language with genders, the original author did not specify its gender, and it was not originally combined with any adjectival species-group names, it was concluded that Article 30.2.4 would apply: “If no gender was specified or indicated, the name is to be treated as masculine, except that, if the name ends in *-a* the gender is feminine, and if it ends in *-um*, *-on*, or *-u* the gender is neuter.”—hence the conclusion that *Smicromyrme* is masculine. It turns out that the subtleties of some Code articles and of the transliteration of ancient Greek escaped us, leading to this erroneous conclusion.

Article 30.1.2 specifies that “a genus-group name that is or ends in a Greek word transliterated into Latin *without other changes* [our emphasis] takes the gender given for that word in standard Greek dictionaries”. An online search for “μύρμη” (with the accent on the υ) revealed the existence of such a Greek word, a feminine noun (e.g., <https://www.perseus.tufts.edu/hopper/morph?l=mu%2Frmh&la=greek>), but its being very rare in the literature and without any definition (although Google Translate, presumably from modern Greek, states that it means “myrrh”). The Code does not refer to the etymology of Greek and Latin words as having any relevance, the mere existence of such words being the only criterion. Nevertheless, this discovery seemed unsatisfactory in explaining the use of the word for what was effectively considered a small ant.

Article 30.1.3 specifies that “a genus-group name that is a Greek word latinized with change of ending, or with a Latin or latinized suffix, takes the gender normally appropriate to the changed ending or the Latin suffix.” It provides several examples, all dealing with Latin endings derived from the Greek, none of them apparently relevant here, because “myrme” does not have a Latin ending. However, the wording of the Article does not preclude consideration of changes of ending in Greek that are then subsequently transliterated into Latin. In this case, “μύρμη” could be considered as derived from “μύρμηξ” with a changed ending, “-η” instead of “-ηξ”. It turns out that “-η” is a common ending used to create feminine nouns in Ancient Greek (e.g., https://en.wiktionary.org/wiki/-%CE%B7#Ancient_Greek), so it is quite possible that Thomson (1870) feminized “myrmex” to “myrme”, perhaps to agree with the gender of the predominant mutillid genus, *Mutilla*. This appears to be one of two particular endings in Greek that are used “productively” – creating new words from existing words – to produce a feminine word, the other being the ending “-ις” (e.g. https://en.wiktionary.org/wiki/-%CE%B9%CF%82#Ancient_Greek), which transliterates as “-is”, and is commonly used by taxonomists in Greek-based genus-rank names as a feminine ending. We consider it an unfortunate oversight that neither of these Greek endings is given as an example in the Code, even though both would appear to comply fully with the provisions of Article 30.1.3.

Consideration of both previous paragraphs leads to the inevitable conclusion that, under either Article 30.1.2 or 30.1.3 of the Code, the gender of *Smicromyrme* must be considered to be feminine. It is regrettable that we came to the wrong conclusion 17 years ago, leading to changes in spelling of many specific names, but hope that that disruption will not last any longer. It must be noted that the above conclusion applies equally to the other genus-group names ending in *-myrme* which have also erroneously been considered to be masculine, viz., *Erimyrme* Lelej, 1985, *Nanomyrme* Lelej, 1977b, *Paramyrme* Lelej, 1977a, and *Taiwanomyrme* Tsuneki, 1993. The names *Andreimyrme* Lelej, 1995b, *Astomyrme* Schwartz, 1984, *Glossomyrme* Suárez, 1979, *Macromyrme* Lelej, 1984, *Mickelomyrme* Lelej, 1995a, *Odontomyrme* Lelej, 1983, and *Tsunekimyrme* Lelej, 1995b are not affected because they were specified or indicated in their original descriptions to be feminine.

Ephutomma

In a paper aiming to clarify the superfamilies of Hymenoptera and the families of Vespoidea, especially the Thynnidae, Myrmosidae and Mutillidae, Ashmead (1899) described *Ephutomma* as a new genus in the Myrmosidae, designating “*Mutilla incerta* Radowszkowski [= Radoszkowski, 1877]” (a junior homonym of *Mutilla incerta* Spinola, 1841, replaced by *Mutilla turcestanica* Dalla Torre, 1897) as the type species. He provided no indication of the gender of the name. (Lelej & Brothers 2008 provide details of the chequered history of the genus.) At least from Lelej & Kabakov (1980) *Ephutomma* has consistently been treated as feminine, undoubtedly because it ends in “-a”, generally a feminine ending in Latin, including in Lelej’s (2005) catalogue of Palaearctic Mutillidae. Consequently, Lelej & Brothers (2008) also specified it as feminine.

There is a Greek word “ὄμμα”, meaning the eye, in Greek dictionaries (e.g., <https://www.perseus.tufts.edu/hopper/morph?l=o%29%2Fmma&la=greek>), and its gender is neuter. This is obviously the word forming the second part of *Ephutomma* (presumably in reference to the enlarged eyes and ocelli of the males of the type species). The first part of the name (*Ephut-*) may have been derived from that of the mutillid genus *Ephuta* Say, 1836, a name of obscure etymology according to Dalla Torre (1897); it does not occur in dictionaries of Ancient Greek, either as a whole word or truncated. Of course that is of no relevance to determination of the gender of the name, and it is clear that Article 30.1.2 (see above) applies in this case, the ending of the name being an unaltered Greek word properly transliterated into Latin. Accordingly, *Ephutomma* must be considered to be neuter, and adjectival and participial specific names in that genus must therefore have neuter endings, contrary to longstanding practice.

Conclusion

Although there are sporadic suggestions that gender agreement between generic and their adjectival or participial specific names be abandoned, no practical means whereby this could be done without major disruption have yet been proposed. The difficulties posed where endings of specific names change when transferred to genera of a different gender can be minimized by the development of software that can automatically take such changes into account, a situation which is becoming more feasible with the increasing sophistication of such software. The Code has already made provision for the recognition of valid electronic publication under defined conditions (and the next edition of the Code, currently under preparation, will presumably build on the experience gained therefrom), so that electronic solutions for handling gender agreement are likely. Meanwhile, the Code mandates it, and it is therefore important that the genders of genus names are properly determined. It is unfortunate that our attempts to do so for Mutillidae were flawed for the names discussed above, but we hope that our conclusions, that *Smicromyrme* and its derivatives are feminine, and that *Ephutomma* is neuter, will assist in promoting longer-term stability.

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References

- Ashmead, W.H. (1899) Superfamilies in the Hymenoptera and generic synopses of the families Thynnidae, Myrmosidae, and Mutillidae. *Journal of the New York Entomological Society*, 7, 45–60.
- Bischoff, H. (1920–1921) Monographie der Mutilliden Afrikas. *Archiv für Naturgeschichte*, 86A (1–3 & 4–5), 1–480 (1920) & 481–830 (1921).
- Dalla Torre, C.G. de (1897) *Catalogus Hymenopterorum hucusque Descriptorum Systematicus et Synonymicus. Vol. VIII. Fossores (Sphegidae)*. Guilelmi Engelmann, Lipsiae [Leipzig], [4] + viii + 750 pp.
- ICZN (International Commission on Zoological Nomenclature). (1999) *International Code of Zoological Nomenclature. Fourth Edition*. ITZN, London, xxx + 306.
- Lelej, A.S. (1977a) New data on the velvet ant fauna of Mongolia (Hymenoptera, Mutillidae). *Insects of Mongolia*, 5, 526–536. [in Russian]
- Lelej, A.S. (1977b) A new genus and species of the mutillid wasps (Hymenoptera, Mutillidae) from Turkmenia. *Entomologicheskoe Obozrenie*, 56 (1), 195–197. [in Russian]
- Lelej, A.S. (1983) On the velvet ants (Hymenoptera, Mutillidae) of Australia. *Entomologicheskoe Obozrenie*, 62 (3), 612–619. [in Russian]
- Lelej, A.S. (1984) New Palaearctic genera and species of velvet ants (Hymenoptera, Mutillidae). *Entomologicheskoe Obozrenie*, 63 (4), 826–829. [in Russian]
- Lelej, A.S. (1985) *Osy-nemki (Hymenoptera, Mutillidae) Fauny SSSR i Sopredelnykh Stran [The Velvet Ants (Hymenoptera, Mutillidae) of the USSR and Neighbouring Countries]*. Nauka, Leningrad, 268 pp. [in Russian]
- Lelej, A.S. (1995a) A review of Palaearctic and Oriental species of genus *Nemka* Lelej with description of Oriental genus *Mickelomyrme* gen. n. (Hymenoptera, Mutillidae). *Far Eastern Entomologist*, 6, 1–20.

- Lelej, A.S. (1995b) To the knowledge of East Asian species of the tribe Smicromyrmini Bischoff, 1920 (Hymenoptera, Mutillidae) with description of four new genera and eight new species. *Far Eastern Entomologist*, 13, 1–28.
- Lelej, A.S. (2005) *Catalogue of the Mutillidae (Hymenoptera) of the Oriental Region*. Dalnauka, Vladivostok, 252 pp.
- Lelej, A.S. & Brothers, D.J. (2008) The genus-group names of Mutillidae (Hymenoptera) and their type species, with a new genus, new name, new synonymies, new combinations and lectotypifications. *Zootaxa*, 1889 (1), 1–79.
<https://doi.org/10.11646/zootaxa.1889.1.1>
- Lelej, A.S. & Kabakov, O.N. (1980) On Bradynobaenidae and Mutillidae (Hymenoptera) of Afghanistan. *Entomologicheskoe Obozrenie*, 59 (1), 181–196. [in Russian]
- Linnaeus, C. (1758) *Systema Naturae per Regna Tria Naturae, secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis. Tomus I. Editio Decima Reformata*. Laurentii Salvii, Holmiae [Stockholm], [4] + 823 + [5] pp.
<https://doi.org/10.5962/bhl.title.542>
- Pagliano, G., Brothers, D.J., Cambra, R., Lelej, A.S., Lo Cascio, P., Matteini Palmerini, M., Scaramozzino, P.L., Williams, K.A. & Romano, M. (2020) Checklist of names in Mutillidae (Hymenoptera), with illustrations of selected species. *Bollettino del Museo Regionale di Scienze Naturali di Torino*, 36 (1–2), 5–427.
- Radoszkowski, O. (1877) Chrysidiformes, Mutillidae et Sphegidae. *Puteshestvie v Turkestan A.P. Fedtshenko [Voyage au Turkestan d'Alexis Fedtschenko]*, Sankt-Petersburg, Series 14, 2 (5), 1–87, 3 pls. [in Russian]
- Say, T. (1836) Descriptions of new species of North American Hymenoptera, and observation on some already described. *Boston Journal of Natural History*, 1 (3), 209–305.
- Schwartz, F. (1984) Description d'un genre nouveau, disjoint de *Smicromyrme*, et d'une espèce nouvelle du sud de la France (Hymenoptera, Mutillidae). *L'Entomologiste*, 40, 21–25.
- Spinola, M. (1841) Hyménoptères recueillis à Cayenne en 1839 par M. Leprieur, pharmacien de la Marine Royale. Seconde partie. Porte-aiguillons. *Annales de la Société entomologique de France*, 10 (2), 86–149.
- Suárez, F.J. (1979) Una nueva especie del Afganistán y propuesta de un género nuevo para la misma (Hymenoptera, Mutillidae). *Nouvelle Revue d'Entomologie*, 9 (1), 71–77.
- Thomson, C.G. (1870) Öfversigt af Sveriges rofsteklar. *Opuscula Entomologica*, 1 (2), 202–251.
- Tsuneki, K. (1993) On some Taiwanese Mutillidae, collected in 1976 by Mr. T. Murota, with descriptions of new taxa (Hymenoptera). *Special Publications of the Japan Hymenopterists Association*, 41, 39–50.