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Freyinae, a major new subfamily of Neotropical jumping spiders (Araneae: Salticidae)

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Abstract

Freyinae, **new subfamily**, is described for a group of genera of Neotropical jumping spiders that can be distinguished from other non-ant mimic salticoid Neotropical salticids by having the following three morphological features: a slightly more elongate carapace, a distinctive prolateral tibial macrosetae arrangement (medially placed subdistal and subproximal macrosetae, with a subdorsal medial macroseta in some males), and an unusual dorsoventrally thick tegulum basal division (although one or two of these features are sometimes lost). It includes 20 genera previously considered valid, of which 19 are retained: *Akela* Peckham & Peckham, 1896, *Aphirape* C.L. Koch, 1850, *Asaracus* C.L. Koch, 1846, *Capidava* Simon, 1902, *Chira* Peckham & Peckham, 1896, *Edilemma* Ruiz & Brescovit, 2006, *Eustiromastix* Simon, 1902, *Freya* C.L. Koch, 1850, *Frigga* C.L. Koch, 1850, *Kalcerrytus* Galiano, 2000, *Nycerella* Galiano, 1982, *Onofre* Ruiz & Brescovit, 2007, *Pachomius* Peckham & Peckham, 1896, *Phiale* C.L. Koch, 1846, *Rishaschia* Makhan, 2006, *Sumampattus* Galiano, 1983, *Trydarssus* Galiano, 1995, *Tullgrenella* Mello-Leitão, 1941, and *Wedoquella* Galiano, 1984. *Romitia* Caporiacco, 1947 (and its synonym *Uspachus* Galiano, 1995) is synonymized with *Pachomius*, **new synonymy**. **New genera** described in the subfamily are: *Drizztius*, *Leptofreya*, *Megafreya*, *Philira*, *Tarkas*, *Triggella*, and *Xanthofreya*. The following nomenclatorial changes are made: **New synonyms:** *Freya demarcata* Chamberlin & Ivie, 1936 = *Freya (sub Cyrene) albosignata* (F.O.P.-Cambridge, 1901); *Freya (sub Cyrene) grisea* (F.O.P.-Cambridge, 1901) = *Freya (sub Cyrene) infuscata* (F.O.P.-Cambridge, 1901); *Freya (sub Cyrene) emarginata* (F.O.P.-Cambridge, 1901) and *Nycerella (sub Heraclea) sanguinea paradoxa* (Peckham & Peckham, 1896) = *Nycerella (sub Heraclea) sanguinea* (Peckham & Peckham, 1896); *Pachomius (sub Phiale) maculosus* (Chickering, 1946) = *Phiale (sub Cyrene) bilobata* (F.O.P.-Cambridge, 1901); *Phiale (sub Cyrene) mediocava* (F.O.P.-Cambridge, 1901) = *Freya (sub Cyrene) maculatipes* (F.O.P.-Cambridge, 1901); *Phiale*

(sub Cyrene) simplicicava (F.O.P.-Cambridge, 1901) = *Freya (sub Cyrene) bifurcata* (F.O.P.-Cambridge, 1901). **New combinations:** *Capidava rufithorax* Simon, 1902 = *Drizztius rufithorax*; *Freya frontalis* Banks, 1929 = *Eustiromastix frontalis*; *Chira (sub Attus) spinipes* (Taczanowski, 1872) = *Eustiromastix spinipes*; *Freya (sub Euophrys) ambigua* (C.L. Koch, 1846) = *Leptofreya ambigua*; *Freya (sub Cyrene) bifurcata* (F.O.P.-Cambridge, 1901) = *Leptofreya bifurcata*; *Freya (sub Cyrene) laticava* (F.O.P.-Cambridge, 1901) = *Leptofreya laticava*; *Freya (sub Cyrene) longispina* (F.O.P.-Cambridge, 1901) = *Leptofreya longispina*; *Phiale (sub Cyrene) bilobata* (F.O.P.-Cambridge, 1901) = *Pachomius bilobatus*; *Phiale (sub Cyrene) hieroglyphica* (F.O.P.-Cambridge, 1901) = *Pachomius hieroglyphicus*; *Phiale (sub Cyrene) niveoguttata* (F.O.P.-Cambridge, 1901) = *Pachomius niveoguttatus*; *Romitia (sub Euophrys) albipalpis* (Taczanowski, 1878) = *Pachomius albipalpis*; *Romitia (sub Euophrys) andina* (Taczanowski, 1878) = *Pachomius andinus*; *Romitia (sub Uspachus) bahiensis* (Galiano, 1995) = *Pachomius bahiensis*; *Romitia (sub Uspachus) columbiana* (Galiano, 1995) = *Pachomius columbianus*; *Romitia (sub Uspachus) juquiaensis* (Galiano, 1995) = *Pachomius juquiaensis*; *Romitia (sub Phiale) ministerialis* (C.L. Koch, 1846) = *Pachomius ministerialis*; *Romitia (sub Uspachus) misionensis* (Galiano, 1995) = *Pachomius misionensis*; *Romitia nigra* Caporiacco, 1947 = *Pachomius nigrus*; *Romitia (sub Uspachus) patellaris* (Galiano, 1995) = *Pachomius patellaris*; *Chira (sub Diagondas) micans* (Simon, 1902) = *Philira micans*; *Chira superba* Caporiacco, 1947 = *Philira superba*; *Freya (sub Cyrene) maculatipes* (F.O.P.-Cambridge, 1901) = *Tarkas maculatipes*; *Freya (sub Cyrene) bifida* (F.O.P.-Cambridge, 1901) = *Triggella bifida*; *Freya infuscata* (F.O.P.-Cambridge, 1901) = *Triggella infuscata*; *Freya (sub Cyrene) minuta* (F.O.P.-Cambridge, 1901) = *Triggella minuta*; *Freya (sub Cyrene) albosignata* (F.O.P.-Cambridge, 1901) = *Xanthofreya albosignata*; *Freya arraijanica* Chickering, 1946 = *Xanthofreya arraijanica*; *Phiale (sub Cyrene) bicuspidata* (F.O.P.-Cambridge, 1901) = *Xanthofreya bicuspidata*; *Freya chionopogon* Simon, 1902 = *Xanthofreya chionopogon*; *Freya (sub Heraclea) rustica* (Peckham & Peckham, 1896) = *Xanthofreya rustica*. **Combinations restored:** *Phiale (sub Pachomius) flavescens* (Peckham & Peckham, 1896) = *Pachomius flavescens*; *Phiale (sub Pachomius) similis* (Peckham & Peckham, 1896) = *Pachomius similis*. **Invalid name:** *Freya dyali* Roewer 1951 is an invalid replacement name for *Euophrys trifasciata "*Dyal 1935", which was a redescription of *Euophrys trifasciata* C.L. Koch, 1846, not a homonym. **New species:** *Drizztius geminensis*. **First female descriptions and transfers of mismatched females:** First descriptions for *Asaracus megacephalus* C.L. Koch, 1846, *Capidava biuncata* Simon, 1902, and *Phiale formosa* (Banks, 1909); the true female of *Eustiromastix spinipes* is described, and its mismatched female is identified as the female of *Eustiromastix falcatus* Galiano, 1981; the mismatched female of *Freya (sub Cyrene) prominens* (F.O.P.-Cambridge, 1901) is identified as the female of *Xanthofreya rustica*; the misidentified female of *X. rustica* is identified as the female of *Leptofreya bifurcata*. **Lectotypes:** designated for *Cyrene bifida* F.O.P.-Cambridge, 1901 and *Cyrene formosa* Banks, 1909. **New synapomorphy:** a constricted proximal end of the cymbium of the male palp is an apparent new synapomorphy for Salticoida.

Key words: new terminology

Introduction

The Salticidae is the largest family of spiders in terms of extant described species (5836) and second largest in number of genera (586) (World Spider Catalog 2015). Although this nearly 10:1 ratio of species to genus suggests a well-balanced diversity, in fact, this ratio is misleading. Salticidae is rife with monotypic or poorly diverse genera on one hand, and speciose genera on the other. Many of these genera remain poorly defined and poorly known, in part because of lack of study of the characters distinguishing them, and in part because so much of the species diversity remains to be described, especially in tropical areas. Various authors have attempted to correct this problem at the subfamily or generic level, such as Prószyński (1976), Wanless (1984), Logunov (1992, 1998b, 1999b), Maddison (1996), Wesołowska (1999), and Galiano (2000). Maddison (1996) denoted a "Salticine division" that was based on morphological characters and contained the majority of salticids. Subsequently, Maddison & Hedin (2003) published the first study of salticid phylogeny that was heavily based on molecular analysis, providing a greatly improved organization of genera into higher taxa. The latter paper, which also included distinctive morphological character data, combined the majority of salticids into a single group that they named the Salticoida, which apparently represents the more recently evolved explosive radiation of the family. Further refinements have since been published (Maddison *et al.* 2008; Bodner & Maddison 2012; Maddison *et al.* 2014).

The group of genera included here has been artificially divided among several Old World subfamilies, but these genera in fact compose a unique group. The historical reason for this separation is that earlier authors working on this fauna followed the classification system derived by Simon (1901), largely based on the number of cheliceral retromarginal teeth (>2, 2, or 1; designated pluridentate, fissidentate, and unidentate, respectively), but