



<http://dx.doi.org/10.11646/zootaxa.3904.4.9>

<http://zoobank.org/urn:lsid:zoobank.org:pub:9C8D4827-E4DB-4668-8C5C-CAF141BE9EDA>

## ***Mitragomphus ganzanus* Needham, 1944, a geographically misplaced dragonfly, is a junior synonym of *Gomphidia kirschii* Selys, 1878 (Odonata: Gomphidae)**

ROSSER W. GARRISON<sup>1</sup>, KLAAS-DOUWE B. DIJKSTRA<sup>2</sup>,  
MATTI HÄMÄLÄINEN<sup>2</sup> & REAGAN JOSEPH T. VILLANUEVA<sup>3</sup>

<sup>1</sup>Plant Pest Diagnostic Branch, California Department of Food and Agriculture, Sacramento, United States of America.

E-mail: [rgarrison@cdfa.ca.gov](mailto:rgarrison@cdfa.ca.gov)

<sup>2</sup>Naturalis Biodiversity Center, P.O. Box 9517, 2300 RA, Leiden, The Netherlands.

E-mail: [kd.dijkstra@naturalis.nl](mailto:kd.dijkstra@naturalis.nl); [matti.hamalainen@helsinki.fi](mailto:matti.hamalainen@helsinki.fi)

<sup>3</sup>Forestal Healing Home and Therapeutic Milieu, Forestal Road, Cabantian, Davao City, 8000, Philippines.

E-mail: [rjtvillanueva@gmail.com](mailto:rjtvillanueva@gmail.com)

### **Abstract**

Based on comparison of specimens and descriptions, *Mitragomphus ganzanus* Needham, 1944, described from Braganza [Bragança], Pará State, Brazil, and known only from the holotype, is found to be a junior synonym of *Gomphidia kirschii* Selys, 1878, a species from the Philippines. The monotypic genus *Mitragomphus* Needham, 1944, is synonymized with the genus *Gomphidia* Selys, 1854.

**Key words:** taxonomy, Brazil, Philippines

### **Resumen**

Sobre la base de comparación de ejemplares y descripciones, se encuentra que *Mitragomphus ganzanus* Needham, 1944, descrito de Braganza [Bragança], Estado de Pará, Brasil, y conocido solo sobre la base del holotipo, es un sinónimo junior de *Gomphidia kirschii* Selys, 1878, una especie de Las Filipinas. El género monotípico *Mitragomphus* Needham, 1944, es sinonimizado con el género *Gomphidia* Selys, 1854.

### **Introduction**

Needham (1944) described *Mitragomphus ganzanus* n. gen. & sp. based on a unique male in the USNM from Braganza [Bragança], Pará State, Brazil, Miss H. B. Merrill as collector. Needham's thorough description included a diagnosis commenting on features differing from all other known neotropical Gomphidae. At the time of his description, Needham had accidentally broken both cerci but was able to recover one of these organs. His illustrations show, in addition to the head and ventral view of the epiproct, two outline views of the detached cercus. Belle (1996), based on wing illustrations supplied to him by Dr. Oliver S. Flint, Jr., and reproduced here in Fig. 5, included it together with *Zonophora* under the subfamily Zonophorinae and tribe Zonophorini Belle, 1983 stating that adults of both genera "... of this tribe are unique in having the metaparapteron armed with a strong posterior spine and in having the hind wing with an open anal loop (Schmidt, 1941a)" and "The exuviae referred to *Mitragomphus* by supposition (Belle 1977: 298 [sic! 290]) undoubtedly belongs to another genus since its abdomen has well-developed middorsal hooks (cf. Belle 1992: 19)." No other specimens had been found since the original description, and at the time that Garrison *et al.* (2006) were writing the chapter on the New World Gomphidae, Garrison borrowed and illustrated the holotype male providing illustrations of the wings (copied from Belle 1996), S1, subalar spines of the synthorax, auricle on S2, epiproct in dorsal view, S10 in lateral view, and three views of the detached cercus. Garrison erroneously attempted to place the cercus in its natural position in lateral view on S10 in that volume.

a Philippine specimen of *Gomphidia kirschii* with incorrect labels when describing *Mitragomphus*? Needham & Gyger (1939) also described *Moroagrion danielli*, n. gen. & sp. (Coenagrionidae) from the Philippines, and it was recently (Dijkstra & Kalkman 2013) found to be a junior synonym of the Palearctic *Pyrrhosoma nymphula* (Sulzer, 1776). The holotype labels for *M. ganzanus* give "Miss H[arriet]B[ell]/Merrill" (Fig. 1b) as collector of the specimen. Merrill (1863–1915) did indeed collect in Brazil, and her specimens of *Argia tinctipennis* Selys from "Peixe-Boi, Para, Brazil," were included in Calvert's (1909) account of the Odonata of South America. She is listed in Skinner (1903: 731) as giving a talk on South American Cladocera, and she later sold 500 specimens of insects to the USNM (Rathbun 1911: 98). According to Anderson (2004), Merrill's mentor and colleague, Dr. Edward Asahel Birge of the University of Wisconsin, had suggested she go to South America despite many of her friends cautioning her not to do so. She left for Brazil by ship in early July 1902, collecting there for a year, and she returned to South America staying from 1907 to 1909. Hartridge (1997: 186) provides a chronological listing of Merrill's journeys in South America during 1902 and 1907–1909. In 1902, she visited Pernambuco, Bahia, Rio de Janeiro (Petrópolis), and São Paulo states in Brazil from ca 19 July – 25 September. In 1907–1908, her visits to Pará State included "[Ilha de] Marajó" ("17 August to at least 20 October 1907") the "Botanic Garden, Bosque Park, Igarape, Peixe Boi stream, Val de Camas" (December, 1907), "Rio Aramá" (12–20 November 1908) and the "Amazon River region near Santarem" (12–22 October 1908). There is no mention of Braganza [Bragança], approximately 150 km east of Peixe Boi, in her itinerary. Merrill was a scientist and a keen observer, and she provided living color notes for Calvert's (1909: 145) specimens of *Argia tinctipennis* that were collected at Peixe Boi on 26 & 29 November 1907, just before her notation of "December" in her itinerary. Although it is possible that Merrill might have visited the region near Bragança, we believe that this locality would have been mentioned in her itinerary. We believe that the collector was incorrectly associated with the holotype specimen of *Mitragomphus* and further believe that the specimen was mislabeled as to locality.

This is the second instance of an Old World odonate species described under a different name being incorrectly assigned to the New World. The first was *Skiallagma baueri* Förster, 1906, which was found to be a junior synonym of the Paleotropical *Xiphiagrion cyanomelas* Selys, 1876 (Garrison 2012). Both cases are similar in that *Skiallagma baueri* and *Mitragomphus ganzanus* were known only from the type series, and the authors for both species had previously published on the Odonata fauna of the Old World.

## Acknowledgments

Thanks are due to Oliver S. Flint, Jr., (USNM) for the loan of the holotype of *Mitragomphus ganzanus*, Jerry Louton for information on Harriet B. Merrill and Natalia von Ellenrieder (CDFA) and Dennis Paulson (Seattle) for critical reviews of the manuscript.

## References

- Anderson, G. (2004) *More than petticoats: Remarkable Wisconsin women*. The Globe Pequot Press, xiii + 157 pp.
- Asahina, S. (1980) Notes on the Philippine Odonata in the collection of the National Science Museum, Tokyo, Part 1. *Bulletin of the national Science Museum, Series A, Zoology*, 6 (2), 77–100.
- Belle, J. (1977) Some gomphine material from Surinam, preserved in the Leyden Museum of Natural History, with a note on the larva of *Desmogomphus tigrivensis* Williamson (Anisoptera: Gomphidae). *Odonatologica*, 6 (4), 289–292.
- Belle, J. (1992) Studies on ultimate instar larvae of neotropical Gomphidae, with the description of *Tibiagomphus* gen. nov. (Anisoptera). *Odonatologica*, 21 (1), 1–24.
- Belle, J. (1996) Higher classification of the South-American Gomphidae (Odonata). *Zoologische Mededelingen*, 70, 297–324.
- Calvert, P.P. (1909) Contributions to a knowledge of the Odonata of the Neotropical region, exclusive of Mexico and Central America. *Annals of the Carnegie Museum*, 6 (3), 73–280.
- Dijkstra, K.-D.B. & Kalkman, V.J. (2013) The 'African' genus *Argiagrion* is a Brazilian *Leptagrion* species and the 'Philippine' *Moroagrion* a European *Pyrrhosoma* (Odonata: Coenagrionidae). *International Journal of Odonatology*, 16 (2), 189–191. <http://dx.doi.org/10.1080/13887890.2013.799990>
- Garrison, R.W. (2012) *Skiallagma baueri* Förster 1906, a geographically misplaced damselfly, is a junior synonym of *Xiphiagrion cyanomelas* Selys 1876 (Odonata: Coenagrionidae). *Zootaxa*, 3514, 84–88.
- Garrison, R.W., von Ellenrieder, N. & Louton, J.A. (2006) *Dragonfly genera of the New World: An illustrated and annotated key to the Anisoptera*. The Johns Hopkins University Press, xiv + 368 pp.

- Hämäläinen, M. & Müller, R.A. (1997) Synopsis of the Philippine Odonata, with lists of species recorded from forty islands. *Odonatologica*, 26 (3), 249–315.
- Hartridge, M.L. (1997) *The anandrous journey. Revealing letters to a mentor*. Amherst Press, xviii +214 pp.
- Needham, J.G. (1944) Further studies on Neotropical Gomphinae (Odonata). *Transactions of the American Entomological Society*, 69, 171–224.
- Needham, J.G. & Gyger, M.K. (1937) The Odonata of the Philippines. *Philippine Journal of Science*, 63 (1), 21–101. [plates. 1–10 excl]
- Needham, J.G. & Gyger, M.K. (1939) The Odonata of the Philippines, II Suborder Zygoptera. *Philippine Journal of Science*, 70 (3), 239–314. [plates. 11–22 excl]
- Needham, J.G. & Gyger, M.K. (1941) More Odonata of the Philippines. *Philippine Journal of Science*, 74 (2), 141–151. [plates. 1 excl]
- Rathbun, R. (1911) *Report on the progress and condition of the U. S. National Museum for the year ending June 30, 1910*. U.S. Government Printing Office, 152 pp.
- Schmidt, E. (1941) Revision der Gattung *Zonophora* Selys (Odonata Gomphidae neotrop.). *Deutsche Entomologische Zeitschrift, Jahrgang*, 1941 (1–2), 76–96.
- Selys Longchamps, E. de (1878) Quatrième additions au synopsis des Gomphines. *Bulletin de l'Académie Royale des sciences, des lettres et des beaux-arts de Belgique*, 46 (2), 408–471, 658–698. [1–106 reprint]
- Selys Longchamps, E. de (1882) Odonates des Philippines. *Anales de la Sociedad Española de Historia natural*, 11, 1–32. [plates. 1 excl]
- Skinner, E.B. (1903) Report of the secretary. *Transactions of the Wisconsin Academy of Sciences, Arts, and Letters*, 14, 729–734.
- Villanueva, R.J. (2010) Dragonflies of Polillo Island, Philippines. *International Dragonfly Fund – Report*, 23, 1–24.