



The genus *Neuroscelio* Dodd (Hymenoptera: Platygasteridae s.l.) reviewed: new species, distributional update, and discussion of relationships

ALEJANDRO A. VALERIO^a, LUBOMÍR MASNER^b, ANDREW D. AUSTIN^c & NORMAN F. JOHNSON^d

^aDepartment of Entomology, The Ohio State University, 1315 Kinnear Road, Columbus, Ohio 43212, USA;

e-mail: avalerio_13@hotmail.com; urn:lsid:zoobank.org:author:E4B936BE-5F7D-4A22-B9E7-D237BBDE45EB

^bAgriculture and Agri-Food Canada, K.W. Neatby Building, Ottawa, Ontario K1A 0C6, Canada; e-mail: lmasner@gmail.com;

urn:lsid:zoobank.org:author:FA505310-F606-4F6C-AIDF-74B9A0055B2E

^cAustralian Centre for Evolutionary Biology and Biodiversity, School of Earth and Environmental Sciences, Darling Building, The University of Adelaide, SA 5005, Australia; urn:lsid:zoobank.org:pub:4FBE9CB9-3B71-4DFB-BCE0-781664A31929

^dDepartment of Entomology, The Ohio State University, 1315 Kinnear Road, Columbus, Ohio 43212, USA;

e-mail: Johnson.2@osu.edu; urn:lsid:zoobank.org:author:3508C4FF-F027-445F-8417-90AB4AB8FE0D

urn:lsid:zoobank.org:pub:D755A250-60F2-479A-AB5F-B8C3C411FF84

Abstract

The genus *Neuroscelio* Dodd is revised and two new species are described: *N. lagunai* n. sp. (Australia) and *N. orientalis* n. sp. (Vietnam). An update to the identification key for *Neuroscelio* species is presented. The male of *N. doddi* Galloway, Masner & Austin is described, the first record of this sex for the genus. The geographic distribution of *Neuroscelio* is expanded to include South Australia and New South Wales in Australia, and the Oriental region. The relationships of *Neuroscelio* are discussed: the genus is removed from the tribe Gryonini. It does not appear to be closely related to any extant genera but is similar in several morphological aspects to the Eocene genus *Brachyscelio* Brues and the Cretaceous genus *Cenomanoscelio* Schlüter.

Key words: Hymenoptera, key, egg-parasitoid, phylogeny

Introduction

The genus *Neuroscelio* (Hymenoptera: Platygasteridae s.l.) was described by Dodd (1913) on the basis of a single female specimen swept from forest in North Queensland (modern-day Gordonvale, previously known as “Nelson” at the time of collecting by A.A. Girault in 1913). To date, the genus has only been recorded from Australia. It was not treated in Masner’s (1976) synopsis of world genera of Scelionidae, but Galloway & Austin (1984) included it in their key to Australian genera and presented a brief diagnosis. They reported that the condition of the holotype of the only described species, *N. nervalis* Dodd, was too poor for them to offer any comment on its taxonomic placement. Subsequently, Galloway *et al.* (1992) redescribed the genus by correlating freshly collected female specimens of several species with the type. They reported that the genus was widely distributed in Queensland, extended its known range to include southwestern Western Australia, and described four new species.

Galloway *et al.* (1992) placed *Neuroscelio* within the tribe Gryonini on the basis of the “stocky form of the body and the structure of the metasoma, viz. large T1 and T2; T3–T6 narrow; T7 in female external, well-sclerotized, with distinct cerci, articulating with T6, and not extruded with the ovipositor.” As additional evidence for this placement, they also noted the similarity with other gryonine genera in the robustness of the ovipositor system, in particular the size of the proximal arms, the reduction in number of palpal segments, and the presence of a distal brush of sensilla on the gonopods. However, Murphy *et al.* (2007), using molecular