



<http://dx.doi.org/10.11646/zootaxa.3895.4.9>

<http://zoobank.org/urn:lsid:zoobank.org:pub:F10177DE-9C90-4618-8323-D104AE2DE2C4>

## **Pentamymexini, a new tribe for *Pentamymex spinosus*, a remarkable new genus and species of Pentatomidae (Hemiptera: Heteroptera) from Thailand**

DAVID A. RIDER<sup>1</sup> & HARRY BRAILOVSKY<sup>2</sup>

<sup>1</sup>Department of Entomology, North Dakota State University, Fargo, ND 58108-6050, USA

<sup>2</sup>Departamento de Zoología, Instituto de Biología, UNAM, Mexico 04510 D. F. Mexico

<sup>3</sup>Corresponding author. E-mail: david.rider@ndsu.edu

### **Abstract**

*Pentamymex spinosus* new genus, new species is described, and a new tribe is erected for this remarkable insect. This is the first report of ant mimicry in the Pentatomidae.

**Key words:** Stink bug, Ant mimic, systematics, taxonomy

### **Introduction**

The tribal classification of the Pentatominae is currently in a state of chaos. For example, Schuh and Slater (1995) only recognized eight tribes, but in actuality there are over 45 different tribes used by various workers in various parts of the World. Some of these are monotypic, several are regional in nature, several are obviously dumping grounds for taxa of unknown relations, and several others remain undescribed. Several preliminary phylogenetic studies have been made (Gapud 1991, Hasan & Kitching 1993), but each contained critical flaws or was incomplete. Grazia et al. (2008) produced a more rigorous phylogenetic analysis, but dealt primarily with only the families and subfamilies within the Pentatomoidea. As such, no recent tribal classification has been proposed. A thorough phylogenetic study at the tribal level is sorely needed, and is currently being planned. Given this state of chaos concerning the tribal classification, it is with reluctance that we erect a new tribe within the Pentatominae, but the specimen studied for this manuscript is so different from any other pentatomid known, we believe a new tribe is warranted.

### **Pentamymexini, new tribe**

**Description.** Head declivant, not quite vertical. Ocelli present, but relatively small. Antennae five-segmented, first segment relatively short, not reaching apex of head. Bucculae relatively large, each obtusely lobed posteriorly. Prothorax deeply, transversely constricted leaving pronotum in two nearly equal halves; pronotal calli obsolete. Anterolateral pronotal margins rounded, not reflexed or ridged between series of large spines, each humeral angle greatly produced, spinose. Scutellum narrowly triangular, trispinose, with a spine near each basal angle, and another near scutellar apex. Coria slightly constricted basally, and then widening apically, lateral margins distinctly concave; clavi extremely elongate, each extending posteriorly as a narrow sclerite, meeting beyond apex of scutellum. Juncture between coria and hemelytral membrane diffuse, not sharply delineated. Thoracic pleurites nearly vertical; ostiolar peritreme short, auriculate. Posterolateral connexival angles not spinose, except for fifth (fourth visible), each provided with a large spine.

**Comments.** This new genus and species appears to be completely isolated within the Pentatominae.

New Guinean genus with a couple species occurring in northern Australia, and another reaching as far west as Timor. Its species are also black in color with a few spines and ivory marks, giving a vague resemblance to ants (the mimicry is not nearly as striking as in *Pentamyrme*). *Caridophthalmus* is currently placed in the Diemeniini which is characterized in part by a stridulatory area on the abdominal venter; this is lacking in *Pentamyrme*. The stridulatory region in *Caridophthalmus* is not as well defined as in the other diemeniines, and there are other significant differences. Placement of *Caridophthalmus* in the Diemeniini needs further study, but it probably deserves a new tribe to reside in. There are significant differences between *Caridophthalmus* and *Pentamyrme*, however, and the two appear to be remotely related at best. *Caridophthalmus* has the head completely vertical, the eyes are distinctly pedunculate, the antenniferal tubercles are very different, the arrangement of spines and ivory marks are completely different, the armature on the legs is lacking, and the female genitalia is distinctly different. One of the characteristics of *Pentamyrme* deserves further comment. As stated above, the clavus continues along each side of the scutellum as a very thin (narrow) sclerite, the two eventually meeting just beyond the apex of the scutellum. Elongate clavi which meet posterior to the scutellum has not been recorded previously in the Pentatomidae. A similar condition has been recorded in some Acanthosomatidae, Cydnidae (Amnestinae), Saileriolidae, Thaumastellidae, and Urostylididae (Grazia et al. 2008). The structure of the extended clavus in *Pentamyrme* is quite different however, and may not necessarily indicate any type of relatedness. As described the *Pentamyrme* clavus is very slender, nearly lineate, the two meet beyond the apex of the scutellum in more or less a point; the same structure in the above families is broader, meeting in a straight line beyond the scutellar apex.

## Acknowledgments

We thank Jerome Constant (ISNB) for allowing us the opportunity to study this unique specimen. Special thanks go to Ernest Barrera (UNAM) for the photographs used in this study, to Meredith E. Meyer (Fargo, ND) for the included illustrations, and to Jayma Moore (North Dakota State University Electron Microscopy Laboratory) for assembling the photos and illustrations into plates.

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