



Description of male *Risiocnemis moroensis* Hämäläinen 1991 (Odonata: Platycnemididae) from Davao City, Mindanao Island, Philippines

Milton Norman Dejadena Medina¹, Analyn Anzano Cabras¹, Reagan Joseph Torayno Villanueva²

¹Research and Publication Center, University of Mindanao, Davao City Philippines.
Email: mnd_medina@umindanao.edu.ph

¹Math and Science Department, College of Arts and Sciences Education, University of Mindanao, Davao City, 8000 Philippines

Email: ann.cabras24@gmail.com

²D3C Gahol Apartment, Lopez Jaena St., Davao City, 8000, the Philippines
Email: rjtviallnueva@gmail.com

ABSTRACT

Description of the male *Risiocnemis moroensis* (Hämäläinen, 1991) is provided with confirmation of the taxon into appendiculata group is presented.

Indexing terms/Keywords

Odonata; moroensis; Appendiculata group.

Academic Discipline And Sub-Disciplines

Taxonomy, Systematics, Ecology.

SUBJECT CLASSIFICATION

Natural Science

TYPE (METHOD/APPROACH)

Taxonomy and Systematics, Species description

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INTRODUCTION

As part of the biodiversity research extension initiative of the authors, a short expedition was conducted at Sitio Maharlika, Marilog District, Davao City, Philippines. Several odonata species were collected including *Risioenemis moroensis* which only the female was described in 1991 (Hämäläinen, 1991).

Risioenemis a large genus under Platycnemididae is endemic to the Philippines and widely dispersed from Luzon to Mindanao (Hämäläinen, 1991; 1997). The division *Risioenemis* subgenus is based on their penile structure where the subgroup *appendiculata* is distinct for their glans being unspecialized and divided into flat side lobes without flagella (Hämäläinen, 1991). Hämäläinen placed six *Risioenemis* species to *appendiculata* group including *appendiculata* [Brauer], *erythrura* [Brauer], *praeusta* Hämäläinen 1991, *confuse* Hämäläinen 1991, *kiutai* Hämäläinen 1991, and *moroensis* Hämäläinen 1991. *Risioenemis moroensis* is tentatively placed under *appendiculata* group but with some doubt due to unavailability of the male specimen that time. Previously, the known range of *R. moroensis* was in Mt Imbayao, Baungon, Tanalaong River, Bukidnon Province (Hämäläinen, 1991). The accidental discovery of previously undescribed male of *Risioenemis moroensis* in Sitio Maharlika, Marilog District, Davao City will provide the data needed to complete the description of *R. moroensis*, extend its habitat range, and confirm its group classification.

SYSTEMATICS

Materials examined. 3♂: Sitio Maharlika, Marilog District, Davao City Philippines, 5.10.2014, M.N.D. Medina leg. to be deposited at Philippine National Museum (PNM), Manila, Philippines.

DESCRIPTION OF THE MALE

HEAD. Labrum black with brown outer margin. Anteclypeus brown, the rest of the head black.

THORAX. Prothorax median, middle, and posterior lobe matblack; Median lobe raised in the apical part; Middle lobe broad; Posterior lobe simple black. Thorax shoulder stripe black; humeral stripe black relatively large; interpleural stripe black; and metapleural black.

WINGS: Wings clear, hyaline, veins black, venation as of the genus refer to the figure (see Fig. 4), Pnx 20 and 19 forewing and hind wing respectively.

ABDOMEN. Shaped as in *R. erythrura*. S1 light brown with short black patches at the dorsum; S2-S6 dorsal black with ventro-lateral carina and intersegmental region reddish brown; S 7-10 is reddish brown. Cerci –yellow-orange, prominently twice longer than S10, broader than paraproct, cone shaped with blunted tip (Fig. 1-3). Basally have a distinct triangular sub basal process. Paraproct- half the length of cerci, reddish brown elongated with blunted apices (Fig.2).

MEASUREMENTS

Abdomen: S1 to the tip of cerci: 55- 57mm; Hind wing: 30mm

REMARKS

The material being described shared very similar color characteristics with male *R. erythrura* but distinctly larger. Structurally the two is distinct. It differs with *R. kiutai*, found in another island by having cerci twice longer than paraproct; S10 half of the cerci. Penile structure shares the same characteristics with *erythrura* and *appendiculata* hence the taxon is confirmed belonging to *appendiculata* group. Furthermore, this also provided a habitat extension range of the species in Mindanao which was first discovered in Mt Imbayao, Baungon, Tanalaong River, Bukidnon (Hämäläinen, 1991).



Fig. 1. Lateral habitus of male *Risioenemis moroensis*

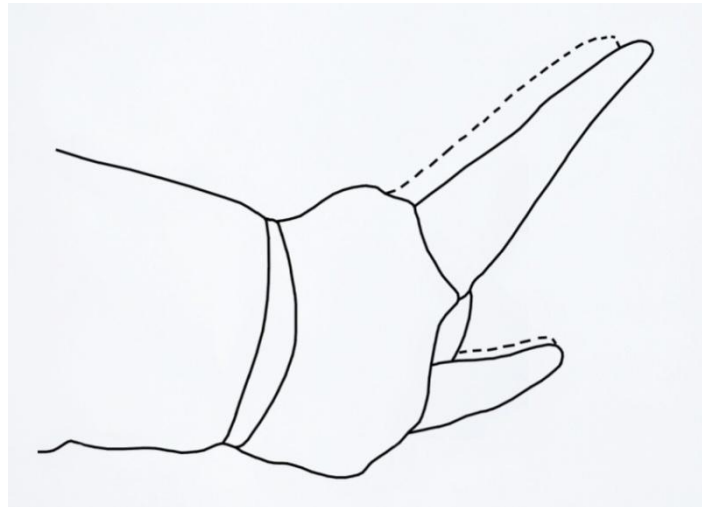


Fig. 2 Lateral view of the cerci and paraproct

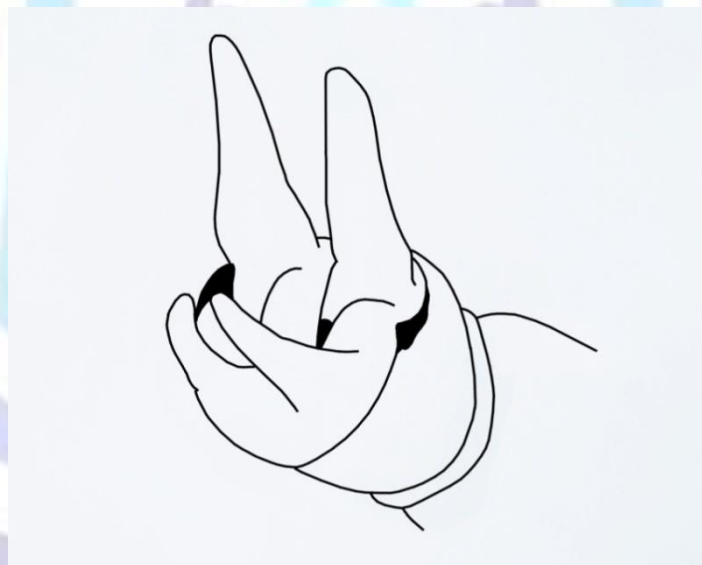


Fig. 3 Oblique caudal view of abdominal apices

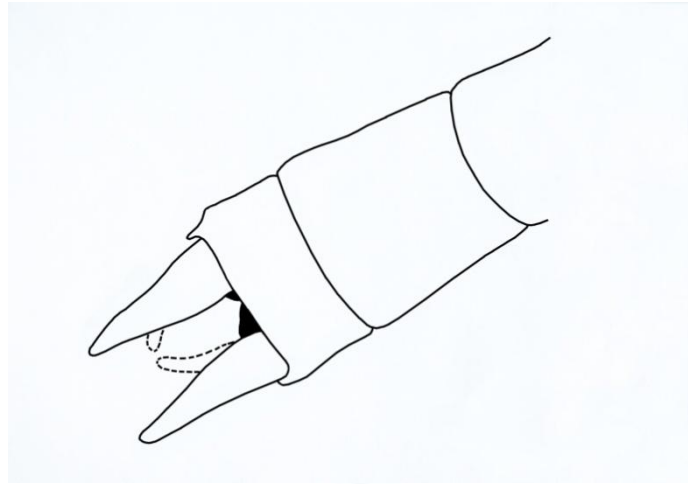


Fig. 4 Slightly oblique dorsal view of cerci

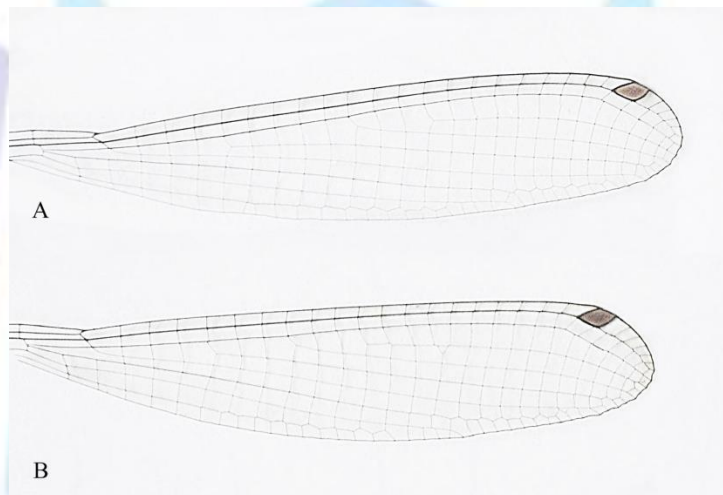


Fig. 5 Fore wings (A), Hind wings (B)

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Author' biography with Photo



Milton Norman Dejadena Medina is a local scientific worker of the University of Mindanao whose work focuses on biodiversity research, education, and conservation particularly in the southeastern part of Mindanao. One of his contribution to science was the discovery of new species of damselfly named *Pericnemis melansoni* in 2013. His recent works include species description and DNA barcoding of endangered species of flora in Mindanao Philippines.

Email: mnd_medina@umindanao.edu.ph



Analyn Anzano Cabras is an educator and local scientific researcher of biodiversity at the University of Mindanao. She is also an avid biodiversity/conservation photographer who documents the mesmerizing and unique Philippine biodiversity especially the understudied insect fauna like Odonatansthrough marrying scientific research and photography.

Email: ann.cabras24@gmail.com



Reagan Joseph Torayno Villanueva is a medical doctor by profession at Southeastern Philippines Mental Hospital but has greatly contributed to the advancement of insect fauna studies in the Philippines especially Odonatans through his various research endeavors and publications. He is an IUCN scientist and has described and named various odonate species from the different parts of the archipelago.

Email: rjtvillanueva@gmail.com