

A new species of *Erythmelus* Enock, 1909 (Hymenoptera: Mymaridae), egg parasitoid of *Acanthocheila armigera* (Stål, 1858) (Hemiptera: Tingidae) in Brazil

Новый вид *Erythmelus* Enock, 1909 (Hymenoptera: Mymaridae), паразитоид яиц *Acanthocheila armigera* (Stål, 1858) (Hemiptera: Tingidae) в Бразилии

Serguei V. Triapitsyn\*, Patricio Fidalgo\*\*  
С.В. Тряпицын\*, П. Фидальго\*\*

\*Department of Entomology, University of California, Riverside, California 92521 USA.

\*\*PROIMI, San Miguel de Tucumán, Tucumán Argentina.

KEY WORDS: Hymenoptera, Mymaridae, *Erythmelus*, taxonomy.

КЛЮЧЕВЫЕ СЛОВА: Hymenoptera, Mymaridae, *Erythmelus*, таксономия.

ABSTRACT: A new species of the fairyfly genus *Erythmelus* Enock, 1909 (Mymaridae) is described and illustrated. The type series of *E. (Parallelaptera) vladimir* S. Triapitsyn & Fidalgo sp.n. was reared in Viçosa, Minas Gerais, Brazil, from eggs of the lacebug *Acanthocheila armigera* (Stål, 1858) (Tingidae). The new species is characterized by a partial to complete fusion of the first two funicle segments of the female antenna.

РЕЗЮМЕ: В статье описан новый вид наездника-мимариды из рода *Erythmelus* Enock, 1909 (Mymaridae). Типовая серия *E. (Parallelaptera) vladimir* S. Triapitsyn & Fidalgo sp.n. была выведена из яиц клопа-кружевницы *Acanthocheila armigera* (Stål, 1858) (Tingidae). Новый вид характеризуется частичным или полным слиянием первых двух члеников жгутика усика самки.

### Introduction

Several years ago, Dr. Gabriel A. R. Melo sent for identification to the junior author several specimens of a mymarid species that he reared in Viçosa, Minas Gerais, Brazil, from eggs of the lacebug *Acanthocheila armigera* (Stål, 1858) (Tingidae). Recently, it was determined that these specimens represent a new, undescribed, species that we place in the subgenus *Parallelaptera* Enock, 1909 of *Erythmelus* Enock, 1909.

Subba Rao [1989] keyed most of the described species of *Parallelaptera*, which he regarded as a valid genus. Later, Trjapitzin [1993] described one new species from Turkmenistan and reviewed *Parallelaptera* as the *panis* species group within *Erythmelus*, thus accepting the earlier synonymy of *Parallelaptera* under *Erythmelus* by Schauff [1984]. The relationships within *Erythmelus* will be discussed elsewhere along with the forth-

coming revision of *Parallelaptera* species [S.V. Triapitsyn, in prep.]; here we would like only to mention that we follow Beardsley & Huber [2000] in treating *Parallelaptera* as a subgenus of *Erythmelus*.

The terminology used follows Schauff [1984]. Acronyms for depositories are as follows: IMLA, Fundación e Instituto Miguel Lillo, San Miguel de Tucumán, Argentina; MLPA, Museo de La Plata, La Plata, Argentina; UCRC, University of California, Riverside, USA. All measurements (length/width) are given in microns (µm). Abbreviation used: F = funicle segment of a female antenna.

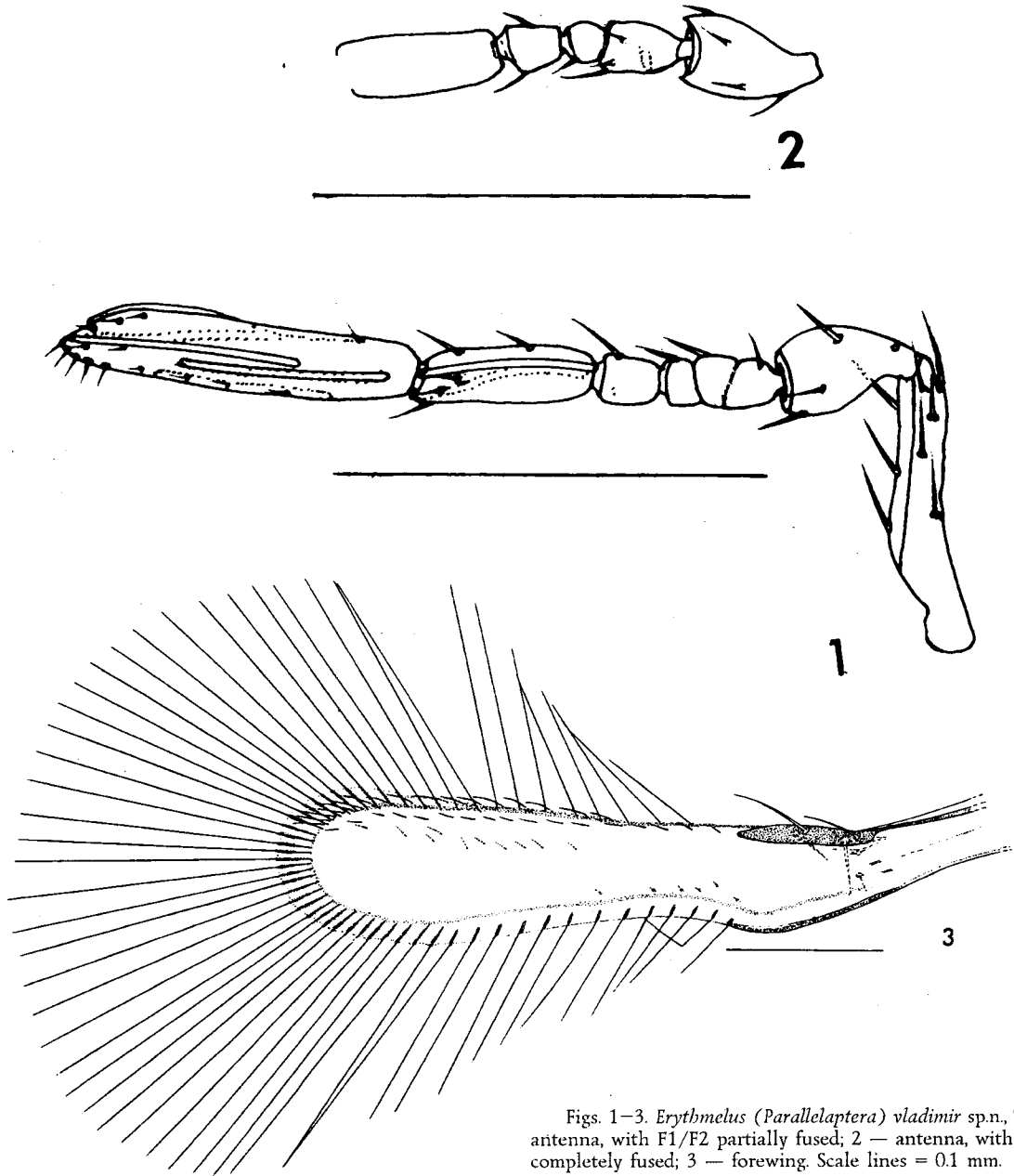
*Erythmelus (Parallelaptera) vladimir* S. Triapitsyn & Fidalgo, sp.n.

Figs 1–3.

Type material. **Holotype** female on point, labeled: 1. "BRAZIL: Minas Gerais, Viçosa, 11.i.1992, G. Melo & F. Melo. Ex. parasitized eggs of *Acanthocheila armigera* (Tingidae) Mata do Paraíso"; 2. "*Erythmelus vladimir* S. Triapitsyn & Fidalgo HOLOTYPE ♀ [IMLA]". Holotype deposited in IMLA. **Paratypes**, same data as the holotype, all females: 1 on slide [IMLA]; 1 on point [MLPA]; 1 on point and 1 on slide [UCRC].

Female. Body and appendages light brown (specimens somewhat faded during long storage in ethanol) except for the following parts that are brown to dark brown: head, pronotum, anterior half of mesoscutum, and posterior half of gaster. Eyes pink.

Head about as wide as mesosoma (width about 140), almost triangular in lateral view. Eyes large, broadly separated. Antenna (Figs. 1–2) inserted at mid level of eyes; radicle not clearly separated from scape; pedicel long, more than half length of scape; F1 and F2 either partially (Fig. 1) or completely (Fig. 2) fused, sometimes in the same specimen, so that funicle appears 4-segmented in dry specimens; F1–F3 very small, subequal in length, about as long as wide; F4 slightly longer than F3; F1–F4 without sensilla, their combined length equals to that of F5, which is longest of funicle and bears 2 sensory ridges; club about as long as funicle, with 5 sensory ridges.



Figs. 1-3. *Erythmelus (Paralleleptera) vladimir* sp.n., ♀: 1 — antenna, with F1/F2 partially fused; 2 — antenna, with F1/F2 completely fused; 3 — forewing. Scale lines = 0.1 mm.

Рис. 1-3. *Erythmelus (Paralleleptera) vladimir* sp.n., ♀: 1 — усик, F1/F2 частично сросшиеся; 2 — усик, F1/F2 полностью сросшиеся; 3 — переднее крыло. Масштаб 0,1 мм.

Mesosoma about as long as metasoma, smooth except posterior scutellum with fine longitudinal sculpture; mesoscutum with a pair of adnotaular setae; posterior scutellum about as long as wide; mesophragma projecting slightly into metasoma. Forewing (Fig. 3) with subparallel margins, posterior margin slightly curved inward just beyond apex of venation; marginal vein with hypochaeta very close to proximal macrochaeta, reaching posterior margin of forewing; distal macrochaeta about 2 times as long as proximal macrochaeta; proximal macrochaeta only slightly shorter than distal macrochaeta. Forewing blade hairless except for one incomplete row of 7 to 9 microtrichia along posterior margin just beyond level of

apex of venation and another, irregular, row of 10 or 11 microtrichia along posterior margin at wing's apex. Hindwing narrow, about same length as forewing; blade bare except for a few microtrichia arranged in two incomplete rows.

Metasoma sessile; gaster rounded; ovipositor occupying about 3/4 of its length, not exerted, and completely enclosed in hypopygium as typical for the genus.

Measurements (n=2, paratypes on slides): Body: 310-386. Antenna: scape + radicle: 65-68; pedicel: 35-36; F1 + F2: 18-21; F3: 11-12; F4: 14-16; F5: 42-43; club: 88-89. Forewing: 365-380/62; marginal + stigmal veins: 69-70; proximal macrochaeta: 26-32; distal macrochaeta: 35-43;

hypochaeta: 28–34; longest fringe seta: 172–183. Hindwing: 370–372/21–22; longest fringe seta: 120–124. Legs (given as femur, tibia, tarsus): fore 110–120, 95–99, 96–99; middle 110–120, 113, 102–110; hind 100–109, 117–120, 110–117. Ovipositor: 131–139.

Male unknown.

**DIAGNOSIS.** The new species, clearly belongs to the well-defined group within *Erythmelus* Enock, 1909 that was described as the genus *Paralleaptera* by Enock [1909]. It differs from all other described species of *Erythmelus* by having F1 and F2 of the female antenna partially or completely fused, so that funicle appears 4-segmented in dry specimens. *Erythmelus (Paralleaptera) teleonemiae* (Subba Rao, 1984), known from India and Iraq [Trjapitzin, 1993], is the closest to the new species morphologically, and it is also known from tingid eggs [Subba Rao, 1984].

**ETYMOLOGY.** This species is named to honor Mr. Vladimir V. Berezovskiy, thus acknowledging his enthusiasm and outstanding skills in slide-mounting of the fairy flies.

**DISTRIBUTION.** Known only from the type locality in Brazil.

**HOST.** *Acanthocheila armigera* (Stål, 1858) (Tingidae).

**ACKNOWLEDGMENTS.** We thank Dr. Gabriel A. R. Melo (Universidade de São Paulo, Ribeirão Preto, São Paulo, Brazil) for collecting the specimens and making them avail-

able for this study, Dr. John T. Huber (Canadian Forestry Service, Ottawa, Ontario, Canada) for valuable advice, and Mr. Vladimir V. Berezovskiy (UCRC) for point- and slide-mounting the type series of the new species.

## References

- Beardsley, J. W. & Huber, J. T. 2000. Key to genera of Mymaridae in the Hawaiian Islands, with notes on some of the species (Hymenoptera: Chalcidoidea) // Proceedings of the Hawaiian Entomological Society. Vol.34. P.1–22.
- Enock, F. 1909. XI. New genera of British Mymaridae (Haliday) // The Transactions of the Entomological Society of London. P.449–459. Pl.XII–XV.
- Schauff, M. E. 1984. The Holarctic genera of Mymaridae (Hymenoptera: Chalcidoidea) // Memoirs of the Entomological Society of Washington. No.12. P.1–67.
- Subba Rao, B. R. 1984. Descriptions of new species of Oriental Mymaridae and Aphelinidae (Hymenoptera: Chalcidoidea) // Proceedings of the Indian Academy of Sciences. Animal Sciences. Vol.93. No.3. P.251–262.
- Subba Rao, B. R. 1989. On a collection of Indian Mymaridae (Chalcidoidea: Hymenoptera) // Hexapoda. Vol.1. P.139–186.
- Trjapitzin, S. V. 1993. A new *Erythmelus* (Hymenoptera: Mymaridae) from central Asia, an egg parasitoid of *Circulifer* spp. (Homoptera: Cicadellidae) // Entomological News. Vol.104. No.5. P.267–271.