

A NEW *ANAGRUS* (HYMENOPTERA: MYMARIDAE) FROM ARGENTINA,
AN EGG PARASITOID OF *DELPHACODES SITAREA*
(HEMIPTERA: ARCHAEORRHYNCHA: DELPHACIDAE)

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In a review of the Argentine species of the fairyfly genus *Anagrus* Haliday (Hymenoptera: Mymaridae), Triapitsyn (2000) keyed, diagnosed, and illustrated an unnamed species (called *A. sp. E*) from Buenos Aires, Misiones, Neuquén, and Santiago del Estero Provinces of Argentina. It was not described as new then because all the specimens were improperly slide-mounted and had no host association data. Recently, the junior author reared a large series of individuals of *Anagrus* near San Miguel de Tucumán from eggs of the planthopper *Delphacodes sitarea* Remes Lenicov and Tesón (Hemiptera: Archaeorrhyncha: Delphacidae) laid in pasture or lawn grass, *Stenotaphrum secundatum* (Walter) Kuntze (Poaceae). These specimens were sent for identification to the senior author, who found them to be conspecific with *A. sp. E* of Triapitsyn (2000). Availability of fresh, reared specimens of this species has enabled us to describe it herein as *A. (Anagrus) miriamae* sp. nov.

Terms for morphological features are those of Gibson (1997). Measurements are given in micrometers (μm) as length or, where appropriate, as length/width. Abbreviations (codens) for depositories of specimens are as follows: CNCI, Canadian National Collection of Insects, Ottawa, Ontario, Canada; IEFA, E. Chiappini collection, Istituto di Entomologia e Patologia Vegetale, Università Cattolica del Sacro Cuore, Piacenza, Italy; IMLA, Fundación e Instituto Miguel Lillo, San Miguel de Tucumán, Tucumán, Argentina; MLPA, Museo de La Plata, La Plata, Argentina; UCRC, Entomology Research Museum, University of California, Riverside, California, USA. An

abbreviation used in the text is: F = funicle (in females) or flagellar (in males) antennal segment.

Anagrus (Anagrus) miriamae S. Triapitsyn and Virla,
sp. nov.
(Figs. 1, 2)

Anagrus (Anagrus) sp. E; Triapitsyn, 2000: 220-221.

Types. Holotype female [IMLA] on slide, labeled: 1. "ARGENTINA: Tucumán, Las Talitas, ix.1999, E. Virla. Ex. eggs of *Delphacodes sitarea*. Mounted by V. Berezovskiy 2000 Canada balsam"; 2. "*Anagrus (Anagrus) miriamae* S. Triapitsyn & Virla HOLOTYPE ♀". Paratypes: 25 females and 3 males on cards or points [CNCI, IEFA, IMLA, MLPA, UCRC] and 2 females and 2 males on slides [IMLA, UCRC], all same data as the holotype. Other material from Argentina, stored in MLPA (Triapitsyn 2000), is not included in the type series because those slide-mounted specimens are in poor condition.

Description (holotype and paratypes, $n = 3$).

Female: Color. Body and appendages more or less uniformly light brown to brown except scape, pedicel, and F1 pale; eye and ocelli pink. Head a little wider than mesosoma. Antenna (Fig. 1) much shorter than body. Scape 2.9-3.0 \times as long as wide; pedicel much longer than F1; all funicle segments longer than wide, F1 shortest and F2 longest, F3-F6 subequal in length, longitudinal sensilla on F3 (1), F4 (1), F5 (usually 2, as in holotype, but sometimes 1), F6 (2); clava about 3.5 \times

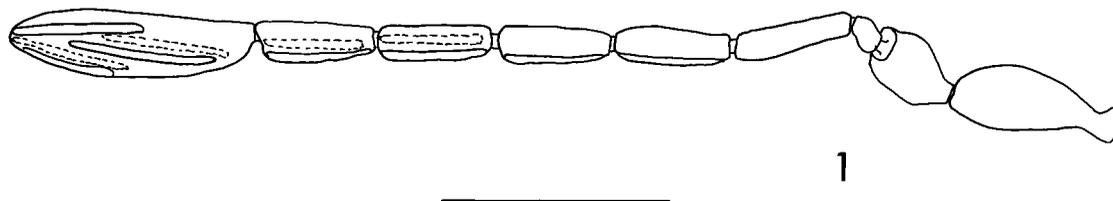


Figure 1. *Anagrus (Anagrus) miriamae* S. Triapitsyn and Virla, **sp. nov.**, antenna, female (holotype). Scale bar = 0.1 mm.

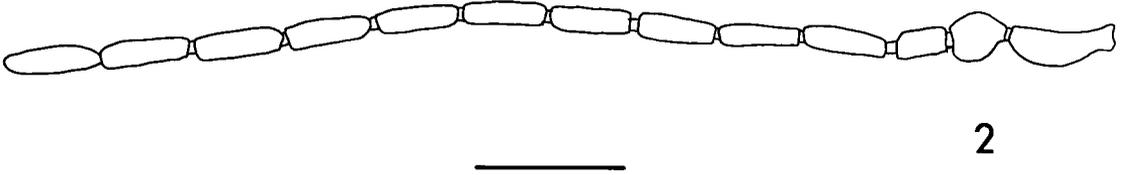


Figure 2. *Anagrus (Anagrus) miriamae* S. Triapitsyn and Virla, **sp. nov.**, antenna, male (paratype). Scale bar = 0.1 mm.

as long as wide (in lateral view), with 5 longitudinal sensilla, 3 of them subapical.

Mesosoma: Mesoscutum with a pair of adnotaular setae. Forewing narrow (see Fig. 18, p. 220 in Triapitsyn 2000), $8.4-9.3 \times$ as long as wide; distal macrochaeta $1.5-2.0 \times$ length of proximal macrochaeta; longest marginal cilia about $3 \times$ maximal width of blade; disc hyaline, with several rows of microtrichia beyond venation not leaving any distinct bare area apically, only 1 such row behind and immediately beyond stigmal vein. Hind wing about $25 \times$ as long as wide; disc hyaline, with microtrichia only along margins; longest marginal cilia $7-8 \times$ maximal width of blade.

Metasoma: Gaster longer than mesosoma. Ovipositor occupying about $4/5$ length of gaster, not reaching or barely reaching tip of mesophragma anteriorly and slightly exerted beyond apex of gaster posteriorly (exserted part of ovipositor $1/10$ to $1/7$ of its total length); ovipositor length/foretibia length ratio $2.5-2.9:1$. External plate of ovipositor with 3 setae.

Measurements (holotype): Body (length, taken before slide-mounting): 644; head (length, taken before slide-mounting): 122; mesosoma: 227; metasoma: 336; ovipositor: 315. Antenna: scape: 76; pedicel: 39; F1: 20; F2: 57; F3: 52; F4: 51; F5: 50; F6: 52; clava: 104. Forewing: 545/61; longest marginal cilia: 188. Hind wing: 509/20; longest marginal cilia: 149. Legs (given as femur, tibia, tarsus): fore: 127, 118, 166; middle: 112, 161, 161; hind: 121, 185, 173.

Male: Similar to female except for normally sexually dimorphic characters such as antenna (Fig. 2) and genitalia (Fig. 3); the latter are typical in shape and structure for the *incarnatus* group species as discussed by Chiappini & Mazzoni (2000). Coloration of body a little darker than in female (dusky).

Diagnosis

The new taxon, which belongs to the *incarnatus* species group of the nominate subgenus of *Anagrus* as defined by Chiappini et al. (1996), appears to be most closely related to the widespread New World species *A. flaveolus* Waterhouse, a well-known egg parasitoid of several economically important planthoppers (Triapitsyn 1997, 2002), and also to the common Palaearctic species *A. ni-*

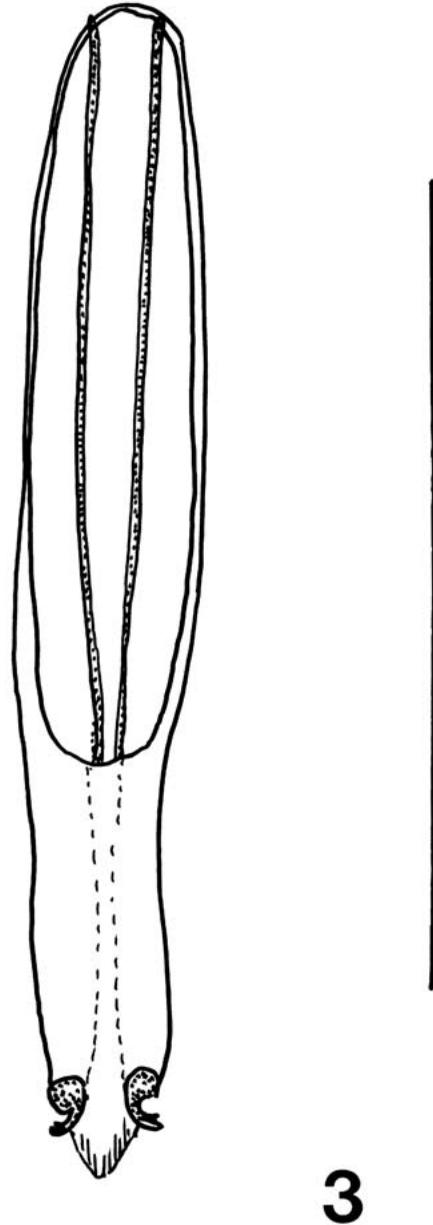


Fig. 3. *Anagrus (Anagrus) miriamae* S. Triapitsyn and Virla, **sp. nov.**, genitalia, male (paratype). Scale bar = 0.1 mm.

griceps (Smits van Burgst). It differs from *A. flavellus* in having a longitudinal sensillum on F3 and usually two, not one, longitudinal sensilla on F5 of the female antenna. The forewing of *A. miriamae* sp. nov. differs from the forewing of *A. nigriceps* in having just one, not two, rows of microtrichia on the blade behind and immediately beyond the stigmal vein. Females of the new species can be recognized with the key by Triapitsyn (2000).

Etymology

This species is named in honor of Miriam Virla, the junior author's wife, who generously helped with field work.

Distribution

Known from the type locality in Tucumán as well as from several other provinces in Argentina (Triapitsyn 2000). The host planthopper is widely distributed in Argentina where it was found in low densities mostly on grasses and also on corn, wheat, sorghum and other commercial crops (Remes Lenicov & Tesón 1979; Remes Lenicov & Virla 1993).

We thank Vladimir V. Berezovskiy (UCRC) for help with specimen preparation and line drawings.

SUMMARY

A new species of the mymarid wasp genus *Anagrus* Haliday is described from the Province of Tucumán, Argentina. The type series of *A. (Anagrus) miriamae* S. Triapitsyn and Virla sp. nov. was reared from eggs of the planthopper *Delphacodes sitarea* Remes Lenicov and Tesón on a

common pasture and lawn grass, *Stenotaphrum secundatum* (Walter) Kuntze. Both the parasitoid and its host are widely distributed in Argentina.

REFERENCES CITED

- CHIAPPINI, E., AND E. MAZZONI. 2000. Differing morphology and ultrastructure of the male copulatory apparatus in species-groups of *Anagrus* Haliday (Hymenoptera: Mymaridae). *J. Nat. Hist.* 34: 1661-1676.
- CHIAPPINI, E., S. V. TRIAPITSYN, AND A. DONEV. 1996. Key to the Holarctic species of *Anagrus* Haliday (Hymenoptera: Mymaridae) with a review of the Nearctic and Palaearctic (other than European) species and descriptions of new taxa. *J. Nat. Hist.* 30: 551-595.
- GIBSON, G. A. P. 1997. Chapter 2. Morphology and terminology, pp. 16-44. *In* G. A. P. Gibson, J. T. Huber, and J. B. Woolley [eds.], *Annotated Keys to the Genera of Nearctic Chalcidoidea* (Hymenoptera). NRC Research Press, Ottawa, Ontario, Canada, 794 pp.
- REMES LENICOV, A. M. M. DE, AND A. TESÓN. 1979. Contribución al estudio de los fulgóricos argentinos II (Homoptera). *Neotropica* 25 (73): 69-76.
- REMES LENICOV, A. M. M. DE, AND E. VIRLA. 1993. Homópteros auquenorrincos asociados al cultivo de trigo en la República Argentina. I. Análisis preliminar de la importancia relativa de las especies. *Stud. Neotropical Fauna Environ.* 28 (4): 211-222.
- TRIAPITSYN, S. V. 1997. The genus *Anagrus* (Hymenoptera: Mymaridae) in America south of the United States: a review. *Ceiba* 38: 1-12.
- TRIAPITSYN, S. V. 2000 (1999). A review of the species of *Anagrus* Haliday, 1833 (Hymenoptera: Mymaridae), collected by A. A. Ogloblin in Argentina. *Russian Entomol. J.* 8 (3): 213-222.
- TRIAPITSYN, S. V. 2002. Descriptive notes on a new and other little known species of *Anagrus* Haliday, 1833 (Hymenoptera: Mymaridae) from the New World tropics and subtropics. *Entomotropica* 17: 213-223.