

NEW HOST RECORDS FOR TWO SPECIES
OF *GONATOCERUS* (HYMENOPTERA: MYMARIDAE),
EGG PARASITOIDS OF PROCONIINE SHARPSHOOTERS
(HEMIPTERA: CLYPEORRHYNCHA: CICADELLIDAE), IN PERU

GUILLERMO LOGARZO¹, SERGUEI V. TRIAPITSYN² AND WALKER A. JONES³

¹USDA-ARS, South American Biological Control Laboratory, Hurlingham, Buenos Aires, Argentina

²Department of Entomology, University of California, Riverside, CA 92521

³Beneficial Insects Research Unit, USDA, ARS, Kika de la Garza Subtropical Agricultural Research Center
2413 E. Highway 83, Weslaco, TX 78596

Exploration for egg parasitoids of proconiine sharpshooters (Hemiptera: Clypeorrhyncha: Cicadellidae: Cicadellinae: Proconiini) was conducted by the senior author in Junín State of Peru during May 2002 as part of the ongoing classical biological control program against glassy-winged sharpshooter, *Homalodisca coagulata* (Say), in California (Jones 2001). Adults of *Pseudometopia amblardii* (Signoret), *P. phalaesia* (Distant) and *Oncometopia* n. sp. were collected by hand and caged on Satsuma mandarin, *Citrus reticulata* var. *satsuma* Blanco, trees in the Fundo Genova farm orchard near La Merced, Chanchamayo County, which is surrounded by a tropical jungle. These sentinel egg masses were obtained and marked on the leaves (individual eggs and egg masses of *Oncometopia* n. sp. are much larger than those of *P. amblardii* and *P. phalaesia*) and then were exposed to parasitization for 1-3 days prior to their removal and shipment to University of California, Riverside (UCR) and USDA-APHIS-PPQ Mission (Edinburg, Texas) quarantine laboratories under appropriate importation permits.

Two species in the family Mymaridae (Hymenoptera), both belonging to the *ater* species-group of the genus *Gonatocerus* Nees, which is known to contain egg parasitoids of proconiine sharpshooters in the New World (Triapitsyn et al. 2002), and one species in the family Trichogrammatidae (Hymenoptera) emerged in quarantine from these samples. Four female specimens of this trichogrammatid, an undescribed species belonging to an undetermined genus near *Zagella* Girault, was reared at the UCR facility from an egg mass of *P. amblardii*, or *P. phalaesia*. Its female antennal clava is two-segmented whereas that of *Zagella* species, some of which parasitize eggs of proconiine sharpshooters in Argentina and southeastern USA, are three-segmented (Triapitsyn 2003). According to J. D. Pinto (UCR, pers. comm.), this unnamed genus is quite common and diverse in the Neotropical region. This is the first reported host association for any of its members.

The two mymarids were *G. triguttatus* Girault and an undetermined species of *Gonatocerus* near *ashmeadi* Girault. Two females and one male of

G. triguttatus emerged at UCR quarantine from a single egg mass of *P. amblardii*, or *P. phalaesia*. Previous known host records of *G. triguttatus* include *O. clarior* (Walker), *O. sp.*, and *H. coagulata* in Texas and northeastern Mexico (Triapitsyn & Phillips 2000; Jones 2001; Triapitsyn & Hoddle 2001; Triapitsyn et al. 2002) and also *O. nigricans* (Walker) in central Florida (Triapitsyn et al. 2002). A species very closely related to *G. triguttatus*, *G. metanotalis* (Ogloblin), was reared by the senior author during December 2000 and January 2001 in Misiones, Salta, and Tucumán Provinces of Argentina from sentinel eggs of the proconiine sharpshooter *Tapajosa rubromarginata* (Signoret) on citrus (*Citrus* spp.) leaves. A culture of *G. metanotalis* has been successfully maintained since March 2002 at the USDA-APHIS Mission quarantine laboratory using eggs of a factitious host, *H. coagulata*.

Numerous female and male adults of *G. sp.* near *ashmeadi* emerged from egg masses of all three proconiine sharpshooter species from Peru, varying in body size in direct correlation with the size of the host's egg. This is the first known record of an egg parasitoid attacking a host in the genus *Pseudometopia* Schmidt. Parasitoids were given time to mate and then females were exposed to egg masses of *H. coagulata* on *Euonymus japonica* Thunberg leaves at the UCR and on leaves of three plant species (hibiscus, *Hibiscus rosa-sinensis* L. var. "Brilliant Red", sweet potato, *Ipomoea batatas* (L.) Lamarck, and cowpea, *Vigna unguiculata* (L.) Walpers) at the USDA-APHIS Mission quarantine laboratories, respectively. Colonies of this species were successfully established at both facilities. At UCR quarantine, three full generations were maintained at 20.5-25.5°C and 30-50% RH. Under these conditions, the developmental period of *G. sp.* near *ashmeadi* from egg to adult was 16-18 days. The UCR colony was lost after females of the fourth generation wasps. The two colonies of this species at the USDA-APHIS Mission quarantine were lost in the first and second generations.

Taxonomically (based solely on morphology), *G. sp.* near *ashmeadi* from Peru seems to be con-

specific to an undetermined, and possibly undescribed, species of *Gonatocerus* reared in January 2001 by the senior author in Santa Clara, Salta Province of Argentina from sentinel eggs of *T. rubromarginata* on citrus leaves. Both these forms are definitely different from, but nevertheless related to, *G. ashmeadi* Girault, a common egg parasitoid of *H. coagulata* and other proconiine sharpshooters in the USA and northeastern Mexico (Triapitsyn et al. 2002), and also to an undescribed species of *Gonatocerus* from Tamaulipas, Mexico, which was reported as an unusual form of *G. ashmeadi* by the same authors (S. V. Triapitsyn, unpublished data).

All proconiine sharpshooter and parasitoid specimens resulting from this study were determined by Pedro Lozada (Senasa, Lima, Peru) and S. V. Triapitsyn, respectively; vouchers specimens of the parasitoids are deposited in the Entomology Research Museum, University of California at Riverside, California, and those of proconiine sharpshooters (along with some specimens of *Gonatocerus*) were deposited in Senasa, Lima, Peru.

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SUMMARY

Exploration for egg parasitoids of proconiine sharpshooters was conducted in Junín State of Peru in May 2002. Adults of three leafhopper species, *Pseudometopia amblardii*, *P. phalaesia*, and *Oncometopia* n. sp., were collected and caged on

Satsuma mandarin trees in an orchard near La Merced. Two species of the mymarid wasp genus *Gonatocerus*, *G. triguttatus* and *G. sp.* near *ashmeadi*, emerged from these egg masses, the latter from all three hosts but the former from eggs of *P. amblardii*, or *P. phalaesia*. These are the first known records of egg parasitoids of *Pseudometopia* species and also new host records for both species of *Gonatocerus*. An undetermined trichogrammatid species of a genus near *Zagella* was also reared from an egg mass of *P. amblardii*, or *P. phalaesia*.

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