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# A NEW DISTRIBUTION AND HOST RECORD FOR *GONATOCERUS TRIGUTTATUS* IN FLORIDA, WITH NOTES ON *ACMOPOLYNEMA SEMA* (HYMENOPTERA: MYMARIDAE)

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Triapitsyn et al. (1998) reported results of the 1997 survey of egg parasitoids of the glassy-winged sharpshooter, *Homalodisca coagulata* (Say) (Homoptera: Cicadellidae), in northern Florida. As part of an on-going classical biological control program against *H. coagulata* in California, two of the authors conducted a survey of egg parasitoids of proconiine sharpshooters (Cicadellidae: Cicadellinae: Proconiini) throughout Florida in August 2001 (Triapitsyn & Hoddle 2001). Among several species in the families Mymaridae and Trichogrammatidae (both Hymenoptera) that were collected (Triapitsyn & Hoddle 2001), there were two mymarid species on which the previously unknown information is given below.

All specimens resulting from this study were determined by S. V. Triapitsyn; the vouchers of parasitoid species were deposited in the Entomology Research Museum, University of California at Riverside, California [UCRC] and those of proconiine sharpshooter species were deposited in the California State Collection of Arthropods, California Department of Food and Agriculture, Sacramento, California; also examined was the collection of Mymaridae at the Florida State Collection of Arthropods in Gainesville, Florida [FSCA].

*Gonatocerus triguttatus* Girault, originally described from specimens reared from an egg mass of an unidentified leafhopper on orange, *Citrus sinensis* (L.) Osbeck, in Trinidad (Girault 1916), was reared recently in northeastern Mexico from egg masses of *H. coagulata*, *Oncometopia clarior* (Walker), and an unidentified *Oncometopia* species (Triapitsyn & Phillips 2000, Triapitsyn et al. 2002). *Gonatocerus triguttatus* is also known from eggs of *H. coagulata* in Texas (Jones 2001, Triapitsyn & Hoddle 2001).

In Apopka, Florida, we reared two females of *G. triguttatus* from an egg mass of the black-winged sharpshooter, *Oncometopia nigricans* (Walker), laid in a leaf of crape myrtle, *Lagerstroemia indica* L., in the parking lot of the University of Florida Mid-Florida Research and Education Center. From the same plant and several adjacent crape myrtle trees, we also collected an adult specimen and several nymphs of *O. nigricans*, which is the prevalent proconiine sharpshooter species on woody plants in central and southern Florida, whereas relative abundance of

*H. coagulata* decreases from north-central Florida southward (Timmer et al. 1982), although it is known in southern Florida as far as Homestead (Turner & Pollard 1959).

*Gonatocerus triguttatus* has not been known previously from Florida and *O. nigricans* is a new host record for this parasitoid. Before our discovery, the only known record of an egg parasitoid of *O. nigricans* was by Turner & Pollard (1959) who reported a *Gonatocerus* sp. (as *Lymaenon* sp.) in Plant City, Florida, from eggs of *Oncometopia undata* (Fabricius), that is an obvious misidentification of *O. nigricans* following Young (1968).

Material Examined. USA, Florida, Orange Co., Apopka, 21-VIII-2001, M. S. Hoddle and S. V. Triapitsyn, 2 females (emerged in UCR quarantine 30-VIII-2001 from an egg mass of *O. nigricans* on crape myrtle) [UCRC].

Notes on *Acmopolynema sema* Schauff. This species was described from a large series of type specimens reared from eggs of the johnsongrass sharpshooter, *Homalodisca insolita* (Walker), in Fort Valley, Georgia (Schauff 1981). We reared *A. sema* from egg masses of the same host, laid in Johnson grass, *Sorghum halepense* (L.) Persoon, collected at the grounds of the University of Florida Everglades Research and Education Center in Belle Glade, Florida, on 19-VIII-2001 and brought under permit into UCR quarantine. Numerous specimens of *H. insolita* were collected from the same plants on which the egg masses were found. Following emergence, which began within the sealed containers while we still were in Florida and continued *en masse* in UCR quarantine, female and male parasitoids were given time to mate and then were exposed to *H. coagulata* eggs laid in leaves of *Euonymus japonica* Thunberg on 24-VIII-2001. The first generation ( $n > 100$ ), which consisted of both females and males (the sex ratio was 4.3:1, respectively), was successfully obtained on 10-IX-2001 and exposed to the host on 12-IX-2001. The second generation, which emerged on 29-IX-2001, however, consisted of males only ( $n > 400$ ), thus our colony of *A. sema* was discontinued thereafter. We suspect that this was in response to the fact that *H. coagulata* is not the natural host for this parasitoid, which prefers to attack egg masses of *H. insolita*, a species that feeds and lays eggs on grasses (Turner &

Pollard 1959). To the contrary, *H. coagulata* females strongly prefer woody plants for feeding and oviposition (Turner & Pollard 1959).

Material Examined. USA. Florida. Jefferson Co., Monticello: 24-VII-1979, J. C. Ball, 3 females and 1 male (ex. *H. insolita* eggs on *S. halepense*); 24-VIII-1979, J. C. Ball, 6 females and 4 males (ex. *H. insolita* eggs on Johnson grass); 11-VI-1982, R. F. Mizell, III, 2 females and 1 male (ex. *H. insolita* eggs); VII-1982, R. F. Mizell, III, 2 females (ex. *H. insolita* eggs); 16-VIII-2000, R. López, numerous female and female specimens in ethanol (ex. *H. insolita* eggs on grass) [FSCA]. Palm Beach Co., Belle Glade: 19-VIII-2001, S. V. Triapitsyn and M. S. Hoddle, 72 females and 19 males (emerged in UCR quarantine 24-29-VIII-2001 from egg masses of *H. insolita* on Johnson grass); 19-VIII-2001, S. V. Triapitsyn, 9 females and 1 male (by sweeping on grass) [UCRC].

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#### SUMMARY

A survey of egg parasitoids of proconiine sharpshooters was conducted in Florida, USA, in August 2001. The mymarid wasp *Gonatocerus triguttatus* was reared from an egg mass of *Oncometopia nigricans* laid in a crape myrtle leaf in Apopka, Florida. This discovery is the first known record of *G. triguttatus* from Florida and also a new host record for this parasitoid species. Another mymarid wasp, *Acmopolynema sema*, was reared from egg masses of *Homalodisca insolita* on Johnson grass in Belle Glade, Florida; females of *A. sema* were then exposed to egg masses of a factitious host for this parasitoid, *Homalodisca coagulata*, on *Euonymus japonica* leaves at the UCR quarantine laboratory. A colony of *A. sema* was lost in the second, all male, generation, after the first generation, which included both sexes, had been obtained successfully on *H. coagulata* eggs.

#### REFERENCES CITED

- GIRAULT, A. A. 1916. New miscellaneous chalcidoid Hymenoptera with notes on described species. *Ann. Entomol. Soc. America* 9: 291-308.
- JONES, W. A. 2001. Classical biological control of the glassy-winged sharpshooter, pp. 50-51. *In* Proceedings of the Pierce's Disease Research Symposium, December 5-7, 2001, Coronado Island Marriott Resort, San Diego, California. California Department of Food and Agriculture, Copeland Printing, Sacramento, California, 141 pp.
- SCHAUFF, M. E. 1981. A review of Nearctic species of *Acmopolynema* Ogloblin (Hymenoptera: Mymaridae). *Proc. Entomol. Soc. Washington* 83: 444-460.
- TIMMER, L. W., R. F. LEE, J. C. ALLEN, AND D. P. H. TUCKER 1982. Distribution of sharpshooters in Florida citrus groves. *Environ. Entomol.* 11: 456-460.
- TRIAPITSYN, S. V., L. G. BEZARK, AND D. J. W. MORGAN. 2002. Redescription of *Gonatocerus atriclavus* Girault (Hymenoptera: Mymaridae), with notes on other egg parasitoids of sharpshooters (Homoptera: Cicadellidae: Proconiini) in northeastern Mexico. *Pan-Pacific Entomol.* 78: 34-42.
- TRIAPITSYN, S. V., AND M. S. HODDLE. 2001. Search for and collect egg parasitoids of glassy-winged sharpshooter in southeastern USA and northeastern Mexico, pp. 133-134. *In* Proceedings of the Pierce's Disease Research Symposium, December 5-7, 2001, Coronado Island Marriott Resort, San Diego, California. California Department of Food and Agriculture, Copeland Printing, Sacramento, California, 141 pp.
- TRIAPITSYN, S. V., R. F. MIZELL, III, J. L. BOSSART, AND C. E. CARLTON. 1998. Egg parasitoids of *Homalodisca coagulata* (Homoptera: Cicadellidae). *Florida Entomol.* 81: 241-243.
- TRIAPITSYN, S. V., AND P. A. PHILLIPS. 2000. First host record of *Gonatocerus triguttatus* (Hymenoptera: Mymaridae) from eggs of *Homalodisca coagulata* (Homoptera: Cicadellidae), with notes on the distribution of the host. *Florida Entomol.* 83: 200-203.
- TURNER, W. F., AND H. N. POLLARD. 1959. Life histories and behavior of five insect vectors of phony peach disease. *Tech. Bull. United States Dep. Agric.* 1188, 28 pp.
- YOUNG, D. A. 1968. Taxonomic study of the Cicadellinae (Homoptera, Cicadellidae). Part 1. Proconiini. *United States Nat. Mus. Tech. Bull.* 261, 287 pp.