

## SEARCH FOR AND COLLECT EGG PARASITOIDS OF GLASSY-WINGED SHARPSHOOTER IN SOUTHEASTERN USA AND NORTHEASTERN MEXICO

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## **INTRODUCTION**

Observations in northeastern Mexico and Texas in 1999 and 2000 revealed presence of *Homalodisca coagulata* (Say) (GWSS) there, but in extremely low densities during winter and spring months (Coronado-Blanco et al. 2000; Triapitsyn & Phillips 2000; Triapitsyn et al. in press). Almost all egg masses of GWSS and other related sharpshooters, such as *Oncometopia* spp., were heavily parasitized. The climate in central part of Tamaulipas, Mexico, is very similar to one in the valleys of southern California, particularly Temecula. Earlier surveys in Florida and Louisiana revealed several species of GWSS egg parasitoids there; some of those species do not occur in California (Triapitsyn et al. 1998).

As a result of the collections made in northeastern Mexico during 2000, quarantine and insectary colonies of three species, *Gonatocerus ashmeadi* Girault, *G. morrilli* (Howard), and *G. triguttatus* Girault (Mymaridae), were established in UC Riverside quarantine and insectary (Morgan et al. 2000; Triapitsyn et al. in press) and later propagated and released against GWSS in California by the California Department of Food and Agriculture (CDFA). Unfortunately, due to unavailability of the host material (i.e., GWSS eggs) during the winter of 2000-2001, the California colonies of *G. triguttatus* and other exotic parasitoids were discontinued.

## **OBJECTIVES**

1. Recollect the target species of GWSS egg parasitoids, particularly *G. triguttatus* Girault, in northeastern Mexico and Texas, clear them through UCR quarantine, and reestablish their cultures (maintained by our cooperators from the CDFA) in southern California for a large-scale classical biological control program against GWSS in California.
2. Search for and collect additional biological control agents, among others *Gonatocerus atriclavus* Girault, *G. fasciatus* Girault, and *Ufens spiritus* Girault (Trichogrammatidae, also known as *Zagella* sp., see Triapitsyn et al. 1998), in the home range of GWSS (southeastern USA and northeastern Mexico) for introduction into California and establishing cultures in UCR quarantine.

## RESULTS AND CONCLUSIONS

Two trips were made to date: 1) to Nuevo León, Tamaulipas, San Luis Potosí and Veracruz, Mexico, in February 2001 (D. Morgan, S. Myartseva, G. Simmons, S. Triapitsyn, and D. Yanega) and 2) to Florida, from Miami to Monticello and Quincy (M. Hoddle and S. Triapitsyn) and College Station, Texas (S. Triapitsyn and V. Berezovskiy) in August 2001. One more trip to Tamaulipas is planned for November 2001. In addition, several shipments of adult egg parasitoids, mainly *G. triguttatus* and *G. morrilli*, were sent to UCR quarantine by W. Jones (material reared from GWSS egg masses in and in the vicinity of Weslaco, TX) as well as extensive material from the exploratory trip to northeastern Mexico in March 2001 by D. Morgan and Ch. Pickett (CDFA) was processed in UCR quarantine. Getting the material from Tamaulipas and Texas early in the season helped in re-establishing a colony of *G. triguttatus* first in UCR quarantine and insectary and then at the CDFA facility in Riverside (D. Morgan).

The following species of egg parasitoids were collected during 2001 and propagated at UCR (if applicable):

Genus and species of egg parasitoid	Originally from: (State, location)	Original host	Propagated on GWSS at UCR quarantine (yes/no)
<i>Gonatocerus ashmeadi</i>	Tamaulipas	<i>H. coagulata</i> , <i>Oncometopia clarior</i>	Yes
	Texas (Weslaco)	<i>H. coagulata</i>	Yes
	Florida	<i>H. coagulata</i>	Yes
<i>Gonatocerus atriclavus</i>	San Luis Potosí, Tamaulipas, Veracruz	<i>Oncometopia</i> spp. including <i>O. clarior</i>	No (failed)
<i>Gonatocerus morrilli</i>	Tamaulipas	<i>Homalodisca</i> sp. and <i>Oncometopia</i> spp.	Yes
	Florida (Apopka)	<i>Oncometopia nigricans</i>	Yes
	Florida (Quincy)	<i>H. coagulata</i>	Yes
	Texas (Weslaco, College Station)	<i>H. coagulata</i>	Yes
<i>Gonatocerus triguttatus</i>	Tamaulipas	<i>H. coagulata</i> , <i>Oncometopia</i> sp.	Yes
	Texas (Weslaco)	<i>H. coagulata</i>	Yes
	Texas (College Station)	<i>H. coagulata</i>	Yes
	Florida (Apopka)	<i>Oncometopia nigricans</i>	Yes
<i>Acmopolynema sema</i>	Florida (Belle Glade)	<i>Homalodisca insolita</i>	Yes
<i>Ufens spiritus</i> (= <i>Zagella</i> )	Florida (Quincy)	<i>H. coagulata</i>	No (failed)
<i>Ufens</i> n. sp.	Tamaulipas	<i>Oncometopia</i> sp.	No (failed)

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