

I. Project title

Importation of parasitoids of *Homalodisca* and other Proconiini genera from northwestern Mexico for biological control of glassy-winged sharpshooter

II. Principal investigators and cooperators

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III. List of objectives and description of activities conducted to accomplish each objective

Objective 1-Import to California via UC Riverside quarantine parasitoids of *Homalodisca* spp. and other Proconiini from the Mexican states of Jalisco, Nayarit, Sinaloa, and Sonora.

Objective 2-Systematically document the parasitoid fauna associated with *Homalodisca* spp. and other Proconiini genera in the Mexican states of Jalisco, Nayarit, Sinaloa, and Sonora.

Activities during April-June 2008 were limited to parasitoid colony maintenance at University of California, Riverside. Parasitoid exploration and shipments will resume in July 2008.

IV. Summary of major research accomplishments and results for each objective

The project's results through early fall 2007 were summarized in a research report (pp. 67-69, *Proceedings, 2007 Pierce's Disease Research Symposium, California Department of Food and Agriculture, Sacramento, CA*) and a peer-reviewed paper (*Journal of Insect Science*, in press).

To date, 9 species of Mymaridae and Trichogrammatidae have been collected in northwestern Mexico. These included a new species of *Gonatocerus* reared from *Homalodisca liturata* eggs, and *G. atriclavus*, *G. morrilli*, and *G. novifasciatus*, *Burksiella* sp(p)., *Paracentrobia* sp., *Pseudoligosita* sp., *Ufens ceratus*, and *U. principalis*. Colonies of *G. atriclavus*, *G. novifasciatus* and *Pseudoligosita* sp. were successfully initiated at UCR on eggs of glassywinged sharpshooter. In addition, seven species of Proconiini have been collected: *Cyrtodisca major*, *Homalodisca insolita*, *H. liturata*, *Oncometopia* sp. cf. *clarior*, *O.* sp. cf. *trilobata* Melichar, *O. (Similitopia)* sp.,

Phera centrolineata. *Oncometopia* sp. cf. *clarior*, *O.* sp. cf. *trilobata*, and *O.* (*Similitopia*) sp. appear to be undescribed species.

Additional activities were reported in the previous report, January-March 2008. Two brief trips were made to Mexico, Ahome/El Fuerte, Sinaloa (January) and Merida, Yucatan (March), and details of those trips are available in the previous report.

V. Publications or reports resulting from the project

Triapitsyn, S. V., Bernal, J. S. 2008. Egg parasitoids of Proconiini (Hemiptera: Cicadellidae) in northwestern Mexico, with description of a new species of *Gonatocerus* (Hymenoptera: Mymaridae). *Journal of Insect Science*, in press.

Bernal, J. S., Triapitsyn, S. V., Fu Castillo, A., Rakitov, R., Moya Raygoza, G., Cortez Mondaca, E. 2007. Importation of parasitoids of Homalodisca and other Proconiini genera from northwestern Mexico for biological control of the glassy-winged sharpshooter. In: T. Esser (chief ed.), *Proceedings, 2007 Pierce's Disease Research Symposium*, California Department of Food and Agriculture, Sacramento, CA, pp. 67-69.

VI. Presentations on research

Bernal, J. S., Triapitsyn, S. V., Fu Castillo, A., Moya Raygoza, G., Cortez Mondaca, E. 2007. Importation of parasitoids of Homalodisca and other Proconiini genera from northwestern Mexico for biological control of the glassy-winged sharpshooter. Poster presented at *2007 Pierce's Disease Research Symposium*, San Diego, Dec. 12-14.

VII. Research relevance statement

This project specifically addresses NAS-NRC research recommendation 3.12, "Support for classical biological control (inoculative releases) is preferred over augmentation if inoculative releases result in self-sustaining populations and can be shown to be less costly than augmentation." The project and its objectives will contribute especially to solving the GWSS-*Xylella* problem in California by extending into thus far unexplored areas the search for classical biological control agents for release against GWSS.

VIII. Lay summary of current quarter's results

No collecting efforts were made during the present quarter (April-June 2008) due to JB's teaching and other commitments. Rearing activities at UCR were continued. The project's termination date was moved from June to December 2008, to focus collecting efforts during the summer months, particularly in Jalisco state where Proconiini adults, but not eggs, have been collected.

IX. Status of funds

Approximately \$8,000 is available to support collecting activities, colony maintenance at UCR, and miscellaneous expenditures through December 2008.

X. Summary and status of intellectual property produced during this research project

None produced.