New Records and Accounts

A New State Record for the Whitefly
Aleuroglandulus subtilis Bondar in Hawaii

Walter T. Nagamine and Janis N. Garcia
Hawaii Department of Agriculture, Plant Pest Control Branch
1428 S. King St., Honolulu, HI 96822
e-mail: Walter.T.Nagamine@Hawaii.gov, Janis.N.Garcia@Hawaii.gov

Abstract. A whitefly, reported as new to Hawaii during 2006, was tentatively identified as Aleuroglandulus sp. prob. subtilis. A second discovery in 2011 was confirmed as Aleuroglandulus subtilis Bondar (Hemiptera: Aleyrodidae).

Key words: Aleuroglandulus subtilis, Aleuroglandulus emmae, Aleuroglandulus malangae, new state record, Hawaii

An unknown whitefly was collected from a Waiakea Uka, Hawaii island, resident’s Caladium bicolor plant, in October 2006. Digital photos sent to aleyrodid specialist John W. Dooley, Animal and Plant Health Inspection Service, US Department of Agriculture, yielded a tentative identification of Aleuroglandulus sp. prob. subtilis Bondar. However, specimens were not submitted for species confirmation until a second population was discovered in September 2010 in Kailua, Oahu. Whiteflies similar to the 2006 Waiakea Uka collection were infesting Alocasia macrorrhiza leaves at moderate levels. Slide-mounted pupae were subsequently sent to the Systematic Entomology Laboratory, Agricultural Research Service, US Department of Agriculture for identification. A final confirmation of Aleuroglandulus subtilis Bondar (syn. = A. emmae Russell, A. malangae Russell) was made in July 2011 by Gregory A. Evans, Entomologist, USDA, APHIS, PPQ, NIS.

A third local host plant (all three hosts are in the family Araceae), was noted since its initial discovery in Hawaii. In May 2011, A. glandulus was found heavily infesting Xanthosoma sp. leaves in a residential planting on Hawaii island. Aleuroglandulus subtilis is the only species of this genus established in Hawaii.

Light yellow to clear puparium are distinguishable from other species found in Hawaii by their well defined, large prothoracic glands, and a slightly smaller pair of glands located on abdominal segment III. These glands secrete white-pale yellow wax, which form tubular-looking arched structures above the pupae.

According to Dooley (2011), this species is widespread throughout the Nearctic and neotropics. Recorded hosts include species of the families Araceae, Arecaceae, Euphorbiaceae, Fabaceae, Lauraceae, Myrtaceae, Rhamnaceae, and Rubiaceae.

Acknowledgments

We thank John Dooley for his time and effort in the tentative identification of this species, and Greg Evans for his confirmation of this species. We also thank Shin Matayoshi for the first collection of A. glandulus in Hawaii.
Literature Cited


Figure 1. *Aleuroglandulus subtilis* pupae infesting *Alocasia macrorrhiza*.

Figure 2. *Aleuroglandulus subtilis* adult (left) and pupae (right).