SCIENTIFIC NOTE

First Records of *Corythucha gossypii* (Hemiptera: Tingidae) in Hawaii, Including Notes on Host Plants

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Abstract. *Corythucha gossypii* (Hemiptera: Tingidae) is reported for the first time from Hawaii, on the islands of Oahu, Maui, Kauai, and Hawaii. It has been found feeding on 24 different hosts, representing 9 families, with the greatest number of records from the Fabaceae. Notes on sites of collection, published host plants, and Hawaiian host plants records are included.

The lace bug *Corythucha gossypii* (Fabricius) (Fig. 1), commonly called the "cotton or bean lace bug," has been recorded from the southern United States, from Mexico to Ecuador, and from the West Indies (Drake and Ruhoff 1965; Henry and Froeschner 1988). We are reporting it here for the first time from Hawaii, far from its previously known range. This range expansion is probably best explained by the introduction of a great number of cultivated crops and ornamental host plants into Hawaii, since only five of the host plants (see appendix) we mention below are native to Hawaii.

This insect is a serious pest of beans and cotton, hence the common name "cotton or bean lace bug" (Neal and Schaefer 2000). Cotton lace bug damage can be observed on the plant's foliage, ranging from some leaf stippling to considerable yellowing, to bleaching. This can reduce plant vigor and as a consequence fruit production can be reduced or even prevent fruit from forming when infestations are heavy. In Hawaii, cotton lace bug populations appear to increase during the warmer summer months, and decline with the cooler rainy season. Weather, predation, and current chemical control practices may be keeping lace bug numbers at tolerable levels. There have been no reports in Hawaii of economic losses to crops due to this lace bug.

Aside from feeding on beans and cotton, this lace bug feeds on a large variety of other plants, many of them not botanically related (Leonard and Mills 1931). In Florida, it has the widest host range of any other Florida lace bug (Mead 1989). Hosts frequently belong to the families Fabaceae, Malvaceae, Annonaceae, and Solanaceae. In Hawaii, feeding has been observed on many fabaceous species, especially the ornamental orchid tree, *Bauhinia variegata* (see appendix). However, castor bean (*Ricinus communis*: Euphorbiaceae) is also a major host in Hawaii, as well as in Florida (Mead 1989), Puerto Rico, Virgin Islands, Saint Vincent, Trinidad, Mexico, and Cuba (Leonard and Mills 1931).

The first Hawaiian specimen was collected on *Hibiscus rosa-sinenesis* (Malvaceae) from Kapolei, Oahu, on 26 November 2001. Until now, this lace bug has been collected on four of the Hawaiian Islands, Oahu, Maui, Kauai, and Hawaii. However, it is likely that it occurs on most of the islands, especially if any of the host plants grow there, and if the species has a strong potential to spread by active or passive dispersal.

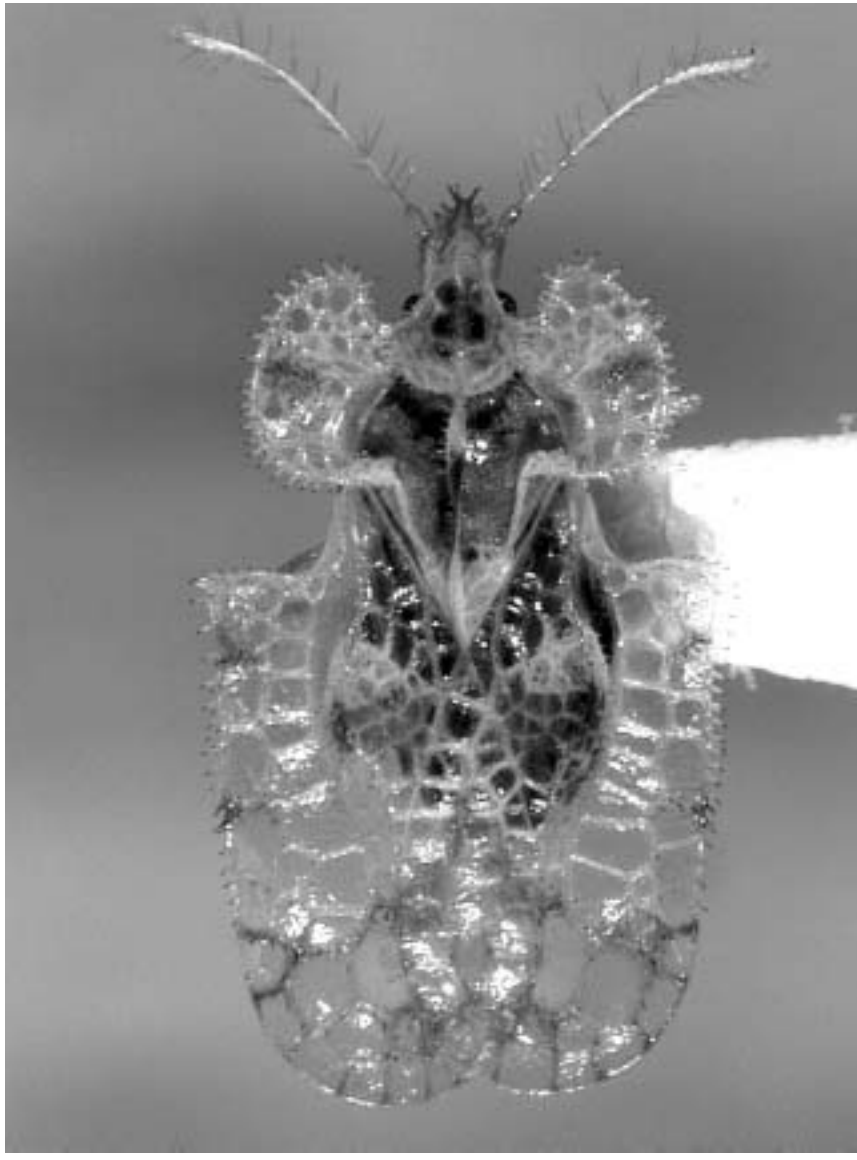

Figure 1. Adult cotton lace bug, *Corythucha gossypii* (Fabricius).

Appendix. List of Host Plants and Collecting Data of the Cotton Lace Bug, *Corythucha gossypii,* in Hawaii.

The following list of specimens of *Corythucha gossypii* collected in Hawaii has been organized by plant family. Plant names preceded by an * are previously unrecorded hosts. Representative specimens are deposited in the insect museums of the Hawaii State Department of Agriculture and of the West Virginia State Department of Agriculture.

Annonaceae
Annona muricata L., soursop. Introduced.
Waialua, Oahu, 12 March 2001, W. Nagamine.

Euphorbiaceae
Ricinus communis L., castor bean. Introduced.
Waialua, Oahu, 12 March 2002, W. Nagamine; Wailuku, Maui, 11 December 2002, M. Fukada; Lihue, Kauai, 1 August 2003, R. Ebesu.

Fabaceae
Bauhinia variegata L., orchid tree. Introduced.
Waipio, Oahu, 27 October 2002, W. Nagamine; Waikaloa, Hawaii, 10 April 2003, R. Hasegawa.
**Canavalia pubescens* Hook & Arn., awikiwiki. Native.
Kahului, Maui, 4 April 2003, M. Fukada.
**Dolichos lablab* L., hyacinth bean, lablab bean. Introduced.
Waialua, Oahu, 26 December 2001, W. Nagamine.
**Erythrina crista-galli* L., wiliwili, cockspur coral tree. Introduced.
Makawao, Maui, 2 July 2003, F. & K. Starr.
**E. orientalis* Murray, Indian coral tree, wiliwili. Introduced.
Kahului, Maui, 30 May 2003, M. Fukada and F. & K. Starr.
**E. sandwicensis* Degener, wiliwili. Native.
Pukalani, Maui, 24 February 2003, M. Fukada.
Erythrina sp.
Pearl City, Oahu, 5 December 2001, R. Heu.
**Macroptilium atropurpureum* (DC.) Urban, purple bushbean, siratro. Introduced.
Waimanalo, Oahu, 21 May 2002, W. Nagamine.
**M. lathyroides* (L.) Urban, wild bush bean. Introduced.
Kahului, Maui, 24 February 2003, M. Fukada.
**Neonotonia wightii* (Wight & Arn.) Lackey, glycine. Introduced.
Waimanalo, Oahu, 15 May 2002, W. Nagamine. Ulupalakua, Maui, 10 February 2003, M. Fukada.
**Pachyrrhizus erosus* Urban, Mexican yam bean. Introduced.
Waialua, Oahu, 26 December 2001, W. Nagamine.
Phaseolus lunatus L., lima bean. Introduced.
Poamoho, Oahu, 11 January 2002, W. Nagamine
**Psophocarpus tetragonolobus* DC., winged bean. Introduced.
Waialua, Oahu, 26 December 2001, W. Nagamine.

Malvaceae
**Hibiscus calyphyllus* Cav., lemon-yellow rose mallow. Introduced.
Kahului, Maui, 17 April 2003, F. & K. Starr.

H. rosa-sinensis L. red hibiscus, rose-of-China. Introduced.
Kapolei, Oahu, 26 November 2001, A. Teraoka; Kahului, Maui, 10 January 2003, M. Fukada.

Moraceae
**Artocarpus altilis* Fosberg, bread fruit. Introduced.
Kahului, Maui, 23 July 2003, M. Fukada.
**Broussonetia papyrifera* (L.), wauke, paper mullberry. Introduced.
Kahului, Maui, 4 April 2003, M. Fukada.

Rutaceae
**Casimiroa edulis* Llave & Lex, white sapote. Introduced.
Ulupalakua, Maui, 10 February 2003, M. Fukada.

Sapindaceae
**Sapindus saponaria* L., a'e, soapberry. Native.
Kahului, Maui, 23 July 2003, M. Fukada.

Solanaceae
Solanum melongena L., eggplant. Introduced.
Poamoho, Oahu, 11 January 2002, W. Nagamine.

Thymelaeaceae
**Wikstroemia monticola* Skottsberg, akia, montane false ohelo. Native.
Makawao, Maui, 1 July 2003, F. & K. Starr.
**Wikstroemia uva-ursi* A. Gray, akia. Native.
Kapolei, Oahu, 26 November 2001, A. Teraoka; Makawao, Maui, 2 July 2003, F. & K. Starr.

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