



Lobate Lac Scale

Paratachardina pseudolobata Kondo & Gullan

(Hemiptera: Kerriidae)

Arborists participating in a tree-climbing competition at Moanalua Gardens noticed a large *Ficus benjamina* tree exhibiting symptoms of stem dieback and defoliation. Samples of stems with a severe sooty mold infestation were brought to the Hawaii Department of Agriculture in October 2012. Upon closer examination, various life stages of a lac scale were found. The scale was identified by G.A. Evans (U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine, National Identification Services) as the lobate lac scale, *Paratachardina pseudolobata* on October 19, 2012.

Description

P. pseudolobata are members of the Kerriidae family, scale insects which produce lac or thick resinous secretions. Immature stages are bright red (Fig. 5), flat, oblong oval, and around 0.4 mm in length. Mature females are a convex x-shape and encased in a dark red-brown covering which can reach around 1.5-2 mm in length and width (Fig. 1-3). This species reproduces by parthenogenesis; no males have ever been observed¹.

Hosts

In Florida alone, the lobate lac scale has been recorded on more 300 native and non-native plant species in more than 50 families. According to Dr. Greg S. Hodges (Florida Department of Agriculture & Consumer Services, Division of Plant Industry), the most favorable hosts of *P. pseudolobata* include *Hibiscus rosa-sinensis*, *Chrysobalanus icaco*, *Ficus* spp., *Myrica cerifera*, *Bucida buceras*, and *Conocarpus erectus*. The lobate lac scale is known to attack agriculturally important crops in Hawaii such as macadamia. In addition, it is very likely that this invasive pest will make its way into natural areas and attack native plant species, as Hawaii provides favorable habitat similar to Florida.

Since its discovery in Hawaii, the lobate lac scale has been recorded from twenty-one plant species, including: *Acacia koa*, *Dodonaea viscosa*, several *Ficus* spp., *Gardenia taitensis*, both native and non-native *Hibiscus* spp., *Mangifera indica*, *Persea americana*, and *Psidium guajava*.

Damage

The lobate lac scale commonly infests the woody branches and main stems (<2 cm in diameter) of dicotyledonous plants¹, but has also been recorded on phoenix palms and dendrobium orchids. Small populations are difficult to detect, as individuals will occur sporadically on stems. However, heavy infestations will lead to stems encrusted with thick layers of sooty mold, defoliation and stem dieback. To date, the Oahu infestations appear to be the highest on *F. benjamina* (Fig. 4-6).



Figure 1. Adult female lobate lac scales, dorsal view.



Figure 2. Side view.



Figure 3. Infestation on hibiscus stems.



Distribution

Florida, Bahamas, Australia: Christmas Island², Puerto Rico³, and Cuba⁴.

In Hawaii, the lobate lac scale has been found only on Oahu, extending from Pearl City to Pawaa, and in Kaneohe. **It has not been found on any other islands.**

Control

In Florida, parasitism of the lobate lac scale has been recorded at <1%¹. When first discovered there, *P. pseudolobata* was misidentified as a native to India and Sri Lanka. Unfortunately, efforts at classical biological control proved to be concentrated in the wrong geographical area, and were unsuccessful⁴.

Pesticides such as imidacloprid root drenches and topical sprays of bifenthrin or imidacloprid have been shown to be effective in Florida⁶.

If you suspect an infestation of the lobate lac scale, please call:

Maui: 873-3949;

Kauai : 274-3072;

Hawaii Island- Hilo: 974-4146, **Kona:** 323-7579;

Oahu: 973-9525 (Please call only if you are not in a known infested area)

Acknowledgments

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Reference

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Figure 4. Sooty mold covering *F. benjamina* stems and foliage.



Figure 5. Adult and stem covered by sooty mold crust and red immature scales.



Figure 6. Dieback of *F. benjamina* branches.