

Pest Alert

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Florida Department of Agriculture and Consumer Services, Division of Plant Industry
Charles H. Bronson, Commissioner of Agriculture

A Eucalyptus Pest, *Leptocybe invasa* Fisher and LaSalle (Hymenoptera: Eulophidae), Genus and Species New to Florida and North America

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INTRODUCTION: Galls were found on the stems and leaves of a *Eucalyptus* tree in Lauderhill (Broward County, E2008-4347-1; William A. Thiel, USDA, 2 July 2008). It was suspected that the galls were caused by the blue gum chalcid, *Leptocybe invasa* Fisher & LaSalle (Hymenoptera: Eulophidae). Specimens were reared and submitted to Dr. Michael Gates (Systematic Entomology Laboratory, USDA-ARS, Washington DC) for confirmation of identification.

This gall-forming wasp was described from Australia in 2004 (Fisher and LaSalle 2004). Within the past decade, it has become established in the Mediterranean Basin, Sub Saharan and South Africa, India, Southeast Asia and Brazil (Anonymous 2007; Kumar *et al* 2007; Mendel *et al* 2007; Kim *et al* 2008).

DESCRIPTION: The female adult wasp is 1.1-1.4 mm long (Fig. 1). The body is brownish in color with a blue to green metallic sheen. Fore coxae are yellow, mid and hind coxae brown. The scape of the antennae is yellow, with the rest of the segments brown. Males are unknown.

The blue gum chalcid produces galls in the form of distinct swellings on the petioles, leaf midribs and stems on new foliage of both young and mature trees (Fig. 2). Galling causes the leaves to curl and may stunt the growth and weaken the trees; thus *L. invasa* can cause substantial damage or death to young trees. The impact on adult trees is not known.

HOSTS: A species identification of the *Eucalyptus* infected in Florida has not been made to date, due to the lack of flowers needed for species identification on submitted samples. Mendel *et al* (2004) tested 36 species of *Eucalyptus* and found ten to be suitable hosts: *Eucalyptus camaldulensis*, *E. tereticornis*, *E. botryoides*, *E. grandis*, *E. robusta*, *E. saligna*, *E. bridgesiana*, *E. globulus*, *E. gunii* and *E. viminalis*.

BIOLOGY AND ECONOMIC IMPACT: The female wasps insert their eggs into the upper side of the leaves and stems. As the larvae develop, galls begin to form and the green color of the leaves containing the galls turns glossy pink. The glossiness then declines and the galls turn from pink to red. Upon emergence of the wasps, the galls on the leaves turn light brown and the galls on the stems turn reddish brown.

Galls caused by this wasp can result in substantial injury to young trees and can seriously weaken or kill the tree. All new growth is susceptible to damage when large concentrations of these wasps are present. As *Eucalyptus* is used as both an ornamental and commercial tree in Florida, *L. invasa* has the potential of becoming a problematic pest.

Two parasitoids are known for this wasp: *Quadrastichus mendeli* Kim & LaSalle and *Selitrichodes kryceri* Kim & LaSalle (Hymenoptera: Eulophidae: Tetrastichinae), which may offer a potential for biological control (Kim *et al* 2008).

FLORIDA DISTRIBUTION: *Leptocybe invasa* presently is known only from Broward County.



Florida Department of Agriculture and Consumer Services
Adam H. Putnam, Commissioner

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Fig 2. Galls of *Leptocybe invasa* on *Eucalyptus* from Florida
Photo credit: P. Skelley, FDACS/DPI



Fig 1. Adult female wasp of *Leptocybe invasa*.
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