The Long-Leaved Wattle Bud Galling Wasp

(Trichilogaster acaciaelongifoliae)

A natural enemy of **LONG-LEAVED WATTLE** *(Acacia longifolia)* in South Africa

Description

Adult females are tiny wasps (up to 3 mm long) with brown heads and prominent bright red eyes. The abdomen is brown and black while the thorax and legs are mostly brown and the wings are dusky with few veins. Males are smaller and darker than females

Life Cycle

Adults females live for only 3-4 days. They lay large numbers of eggs which are inserted in batches of up to 15 into immature flower buds and, occasionally, vegetative buds of long-leaved wattle. The eggs hatch in early spring. Chemicals secreted by the young grubs induce bud galling. The grubs live and feed in hollow chambers within these galls, and pupate early in the summering when the galls are at their largest. Adults chew their way to the surface of the gall in November/December and disperse in search of buds in which to deposit their eggs.

Feeding Damage

Grubs feed directly on the plant tissues within the galls, and cause indirect damage by inducing plants to produce excess tissue which only benefits the insects (protecting them from climatic extremes and predators). Besides preventing seed formation, the galls drain the plant of resources so that normal growth is stunted and, in some cases, plants are killed.

Impact on Long-Leaved Wattle

This wasp substantially reduces the number of seeds that are produced each year. It slows the rate of spread of the weed and, in the long-term, limits regeneration of plants in areas that have burned. In addition, the debilitating effects of the wasps reduce the amount of foliage on the plants so that: more light reaches the soil for other plant species. Wild fires are less intense and; long-leaved wattle trees are more susceptible to environmental stresses such as drought. The seeds of long-leaved wattle are attacked by a second biological control agent, the seed-beetle *Melanterius ventralis*. Before the introduction of these biocontrol agents into South Africa, long leaved wattle was regularly rated among the countries most damaging weed species. Nowadays, long-leaved wattle is seldom mentioned as a problem species and is considered to be under excellent biological control.

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Adult female gall wasp

Dissected gall with two grubs (white) and a pupa (black) in cells

Trichilogaster *galls on a wattle stem*

Galls on long-leaved wattle plants

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Additional information is available. Phone: Weedbuster Toll-free Helpline: 0800 005 376
Website: PPRI website is located via links from the Agricultural Research Council website: www.arc.agric.za

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