



## ***Crotonothrips polyalthiae* sp.n. (Thysanoptera: Phlaeothripidae), a leaf-galling pest of the Asian amenity tree, *Polyalthia longifolia***

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### **Abstract**

A new species of Phlaeothripinae, *Crotonothrips polyalthiae*, is described as inducing leaf galls in Indonesia and Peninsular Malaysia on the widespread Asian tree *Polyalthia longifolia*. This is the fifteenth species to be placed in the genus *Crotonothrips*, the others being from India, but with one from Japan. The new species has exceptionally elongate maxillary stylets and mouth cone. The taxonomy and systematics of the Indian species are noted to require further study.

**Key words:** leaf-galls, thrips, Phlaeothripidae, new species

### **Introduction**

*Polyalthia longifolia* is a small tree of the Family Annonaceae that is native to India and Sri Lanka. Common names applied to this tree, such as Budha Pine and Indian Fir, reflect its elegant pyramidal form and slender, pendant, leaves (Fig. 4). It has become popular among horticulturalists in many tropical countries, and in Singapore one cultivar has the common name “Temple Pillar” on account of being almost cylindrical in shape. The tree is planted widely in Southeast Asian countries in public spaces including parks, university campuses, and along streets, but the leaves are subject to attack by a leaf-galling species of thrips from the family Phlaeothripidae. In Makassar, Indonesia, the satisfactory development of the tree is now recognised as being inhibited by the activities of these leaf-rolling gall thrips that sometimes occur in large numbers. Similar galls have been found on this tree species at sites around Kuala Lumpur in Peninsular Malaysia, and there is anecdotal evidence that similar galls occur on the tree in Java. The damage caused by this thrips is of increasing economic importance, and the purpose of this article is to provide a name for the insect in order to facilitate reports that are in preparation on its biology and control.

Many species of Phlaeothripidae in Asia are reported as inducing, or as living in, leaf galls on a wide variety of plants. The literature concerning such associations in India is summarised by Ananthakrishnan & Raman (1989), with earlier studies in Indonesia published by Karny & Docters van Leeuwen-Reijnvaan (1913), and also by Karny (1914–1916). Although some thrips galls are complex in their structure, the most common form involves a leaf folding along its mid-rib, or else rolling in toward the mid line from one or both margins. Galls of this type are particularly common on the leaves of *Ficus* species, induced by *Gynaikothrips* species. The thrips species described here induces the leaves of *Polyalthia longifolia* to partially fold longitudinally, but without forming the neat, flat fold that is common on *Ficus* species. On *Polyalthia*, the areas of the lamina nearest the leaf midrib become adpressed, thus enclosing the feeding site of the thrips (Fig. 2), but the margins of the lamina remain free whilst the leaf becomes distorted into various irregular shapes (Fig. 1). These galls are initiated by the feeding of adult thrips and, as in other species of Phlaeothripidae, females deposit their eggs superficially and do not insert them into the leaf tissues (Fig. 3).