



## Genera of fungivorous Phlaeothripinae (Thysanoptera) from dead branches and leaf-litter in Australia

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### Abstract

An illustrated key is provided for the identification of 39 genera of Thysanoptera—Phlaeothripinae with species that live in association with dead branches and leaf-litter in Australia and are considered to be fungus-feeding. Seven of these genera are not previously recorded from this continent, including un-named species of *Deplorothrips*, *Malacothrips*, *Mystrorhrips*, *Preeriella* and *Tylothrips*, together with *Azaleothrips lepidus* Okajima and *Terthrothrips ananthakrishnani* Kudo. A brief generic diagnosis is provided for each genus, together with comments on systematic problems and numbers of species.

**Key words:** fungus-feeding, genera, identification key, thrips, Australia

### Introduction

Among the 14 recognised families of extant and fossil Thysanoptera (Mound 2011), involving 6050 species in 830 genera, the Phlaeothripidae is by far the largest, with 3520 species in 460 genera (ThripsWiki 2013). However, in this family recognition and definition of genera are exceptionally difficult for three reasons. Firstly, many of the taxa were described from slide-mounted specimens that are technically of low quality, with character states distorted or not visible (see Mound 2008). Moreover, many authors of thrips taxa have never had access to any extensive reference collection of well-mounted specimens, from which to make deductions concerning patterns of structural and colour variation within and among species. As a result of these two factors, many species have been described from single, damaged, individuals, and with limited attempt to recognise their systematic relationships. Problems inherent in the biology of Phlaeothripidae are perhaps even more important. Species in this family are often polymorphic, with winged and wingless individuals, strong sexual dimorphism, and remarkable patterns of allometry. Large and small individuals even of the same sex can be very different in appearance (Mound 2005; Eow *et al.* 2011; Mound & Tree 2011; Tree & Walter 2012). These patterns of variation create not only problems in recognising species, but also serious difficulties in defining genera. This is particularly important with some long-established genera that have continued to be poorly defined but have come to include a diversity of species. In avoiding adding further species to such poorly defined genera, many authors erect new monotypic genera, such that currently 45% of the 375 genera of Phlaeothripinae include only a single species. A continuing serious impediment to studies on Phlaeothripinae in all countries is the lack of identification keys to genera. The available keys to genera from Europe (Priesner 1964), North America (Stannard 1957, 1968), and China (Han 1997) all involve nomenclature that is now out of date, although more recent keys are available to genera of the Neotropics (Mound & Marullo 1996), Japan (Okajima 2006), and Iran (Minaei 2013).