

## Australian species of spore-feeding Thysanoptera in the genera *Carentothrips* and *Nesothrips* (Thysanoptera: Idolothripinae)

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### Abstract

The species from Australia in the genera *Carentothrips* and *Nesothrips* are reviewed and an illustrated key is provided. *Carentothrips* is distinguished based on the unusual form of the maxillary palps. Two species, *badius* Hood **comb.n.** and *capricornis* Mound **comb.n.**, are transferred to *Nesothrips* from *Carentothrips*; and *Nesothrips melimus* Mound **syn.n.** is synonymised with *Carentothrips miskoi* Mound. In *Carentothrips* the following six new species are described: *alienatus* sp.n., *calami* sp.n., *horni* sp.n., *palumai* sp.n., *snowi* sp.n., *tasmanica* sp.n.; while *flavitibia* Moulton **stat.rev.** is recalled from synonymy with *C. mjobergi* (Karny). In *Nesothrips* four new species are described: *barrowi* sp.n., *brigalowi* sp.n., *coorongi* sp.n., *rossi* sp.n.; while *rhizophorae* (Girault) **syn.n.** is placed as a synonym of *minor* Bagnall.

**Key words:** spore-feeding thrips, Australia, leaf-litter, Idolothripinae, *Carentothrips*, *Nesothrips*

### Introduction

Species in the two genera *Carentothrips* and *Nesothrips* live mainly on dead branches, with a few in leaf-litter and some at the base of grasses. Currently, these comprise 23% of the species known from Australia in the Thysanoptera subfamily Idolothripinae, all of which are considered to feed on fungal spores (Mound & Palmer 1983). More than 70% of the species in the first of these genera are described from Australia, and more than 40% of species in the second from either Australia or New Zealand. In both genera, most of the remaining species are from various Pacific Ocean territories, with a few described from further North into the Oriental Region (ThripsWiki 2014).

These two genera are considered to be closely-related within the subtribe Diceratothripina (Mound & Palmer 1983). Of the 11 genera placed in Diceratothripina, six comprise only one or two species. Of the larger genera, *Diceratothrips* is entirely Neotropical, whereas *Acallurothrips* and *Neosmerinthothrips* are both pantropical. Despite the structural diversity amongst these genera, each of the species usually has four sensoria on the fourth antennal segment, the maxillary stylets rather wide apart within the head, the metathoracic sternopleural sutures present, and the tube without any prominent lateral setae.

*Carentothrips* and *Nesothrips* have remained unsatisfactorily distinguished from each other, based on a difference in the orientation of the maxillary stylets within the head (Mound & Palmer 1983). Most species referred to *Nesothrips* have these stylets wide apart and arranged in a V-shape (Figs 47–55). In contrast, species referred to *Carentothrips* have the stylets closer together and often parallel or subparallel within the head (Figs 1–5). However, this is not a functionally reliable difference. The stylets are easily moved from their position during the process of slide mounting for study, and the stylet-position in several species of *Carentothrips* might equally well be interpreted as widely U-shaped when the head is depressed. An additional problem is that some short-bodied species in the two genera, such as *Nesothrips propinquus* and *Carentothrips miskoi*, are very similar in general appearance, possibly as a result of sharing a similar habitat. In these species the tergites are shorter than the sternites on the median abdominal segments, and this correlates with the behaviour of both species in suddenly

***Nesothrips yanchepi* Mound, 1974a: 71**

(Fig. 58)

This species remains known only from the original series of two females and one male taken from sedges in Western Australia just north of Perth. It is similar to *carveri* and *minor*, but with the third antennal segment less slender at the base and extensively yellow (Fig. 58). The single male paratype has enlarged fore femora and large fore tarsal tooth.

**Diagnosis.** Micropterous, body and legs dark brown, hind femora and hind tibiae yellow only at extreme apices, tarsi yellow; head as long as wide, postocellar setae acute and arising on tangent between posterior margins of hind ocelli; postocular setae long and acute; pronotal am and aa setae small and acute, ml, epim and pa well-developed; metanotum with equiangular reticulation laterally but smooth medially; pelta with large median lobe and broadly joined lateral lobes; tergites II–VII with wing-retaining setae very long and straight, discal area with one pair of small setae medially; tergite IX setae about 0.6 as long as tube.

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