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The minute, fungus-feeding species of *Sophiothrips* (Thysanoptera, Phlaeothripinae) from Australia and New Zealand

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Abstract

Five new species of *Sophiothrips* are described from mainland Australia, of which one is widespread in the eastern part of the continent, with a second widespread across the northern tropical zone. These species appear to be members of the *breviceps* species-group from the Old World tropics. One of these five is particularly unusual within the genus in that the maxillary stylets are retracted into the head anterior to the postoccipital ridge. A sixth new species is described from Australia that is known only from Norfolk Island, but this is closely related to two species that are endemic to New Zealand. A key is provided to the nine species recognised.

Key words: *Sophiothrips*, fungus-feeding, short maxillary stylets

Introduction

The genus *Sophiothrips* currently comprises 25 species of particularly small, fungus-feeding thrips that form colonies on dead woody twigs. Most known individuals are wingless, and many species exhibit remarkable intra-specific variation in structure, between sexes, between apterae and macropterae, and between large and small males (Mound 1977). This genetically determined structural polymorphism, together with the extensive polyphenism that is associated with body size, is similar to the variation found among species of the worldwide genus *Hoplothrips*. However, species of *Sophiothrips* are distinguished by their unusually short maxillary stylets that are usually not retracted anterior to the postoccipital ridge of the head; that is, in dorsal view the stylets are not visible within the head capsule but are restricted to the mouth cone.

The genus is represented in all of the warm temperate and tropical parts of the world, with five species each from the Neotropical and the Nearctic regions, seven from Asia, four from Africa, three from Australia or New Zealand, and one from southern Europe (ThripsWiki 2014). Two species are presumably endemic to New Zealand (Mound & Walker 1982), and these share with six Neotropical species the condition of having two sensoria on the third antennal segment. In contrast to this southern hemisphere group, the other members of the genus have only a single sensorium on the third antennal segment and are found across the Holarctic and the Old World tropics. Most of these species are considered to be members of the *breviceps* species-group (Mound & Walker 1982), as are five of the new species from Australia described below. A third species that has been recorded from New Zealand, is here recognised as widespread across Australia, and the objective here is to describe a further six new species from this country. One of these is known only from Norfolk Island where it is quite common, and this is closely related to the two endemic New Zealand species. One of the new species is known only from a single sample taken near Canberra, but is particularly interesting because it has longer maxillary stylets than any other member of this genus. One of the new species is widespread across northern Australia, but another of the new species is known only from a single specimen that has a larger tube than any other member of the genus.

Holotypes of the new species described below are in the Australian National Insect Collection, Canberra, with some paratypes in the Queensland Primary Industries Insect Collection, Brisbane. Abbreviations are as follows:

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