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A new species of *Apostlethrips* (Thysanoptera, Phlaeothripidae); an Australian genus from grass tussocks

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In most of the warmer parts of the world, a considerable diversity of thrips live only at ground level where they feed on fungi. In Australia, many such Phlaeothripidae species live in leaf-litter (Mound *et al*. 2013; Wang *et al*. 2019), but a different and smaller suite of thrips lives particularly at the base of tussocks of grasses and similar plants (Mound & Minaei 2006; Eow *et al*. 2014; Mound & Tree 2018). One genus in this suite, *Apostlethrips*, has been known only from two species (ThripsWiki 2019), both of which were taken from the base of *Triodia* grasses in the northern parts of Western Australia. The purpose of the present contribution is to describe a third species in this genus, taken from grasses near Darwin. This new species shares with the other two members of the genus the unusual character of a pair of rather stout and capitate ocellar setae (Fig. 1), but it differs in several other character states. As a result, a revised generic diagnosis is provided here. Pronotal setal abbreviations are as follows: am—anteromarginals; aa—anteroangulars; ml—midlaterals; epim—epimerals; pa—posteroangulars.

Apostlethrips Mound & Minaei

Apostlethrips Mound & Minaei, 2006: 2. Type species: *Apostlethrips apostus* Mound & Minaei, by original designation.

Diagnosis: Macropterous, micropterous or apterous, with body surface having little sculpture. Head longer than wide, prolonged in front of bulging eyes, with genae constricted both to base and behind eyes; ocellar and postocular setae stout and weakly capitate; maxillary stylets wide apart, little retracted into head capsule; antennae 8-segmented, III with 0 or 1 sense cones, IV with 2 sense cones. Pronotal epim setae stout and weakly capitate; am, aa, ml and pa setae no more than twice as long as discal setae. Mesonotal spiracles large, often with complex internal sculpture. Metanotum seldom with sculpture medially. Prosternal basantra and ferna developed, mesopresternum slender and transverse. Fore wing of macroptera without duplicated cilia, with three capitate sub-basal setae; microptera wing lobe with one capitate seta. Tergites II–VII without sigmoid wing retaining setae; tergite IX setae capitate. Male sternites without pore plates.

Comments. In contrast to the species of the most common leaf-litter Phlaeothripidae in Australia, *Psalidothrips*, *Zemiathrips* and *Mystrothrips* (Wang *et al*. 2019; Mound 2002; Mound & Tree 2018), the species of *Apostlethrips* have the prosternal basantra developed, the body setae shorter, and little sculpture on the body surface. The capitate ocellar setae are particularly unusual in the three species of this genus.

Key to species of *Apostlethrips*

1. Antennal segment III with one sense cone; antennal segment VII constricted at base; pronotal aa, am and epim setae well-developed, almost twice as long as pronotal discal setae; anal setae as long as tube . . . . . *poaceaeus* **sp.n**.
-. Antennal segment III with no major sense cone; antennal segment VII broadly connected to VI; pronotal aa, am and epim setae no longer than pronotal discal setae; anal setae shorter than apical width of tube. 2
2. Head with one pair of stout ocellar setae; fore tarsus with minute curved tooth in both sexes; tergite IX with 3 pairs of stout setae . . . . . *apostus*
-. Head with three pairs of stout ocellar setae; fore tarsus without a tooth in either sex; tergite IX with at least 6 pairs of stout setae . . . . . *pygus*

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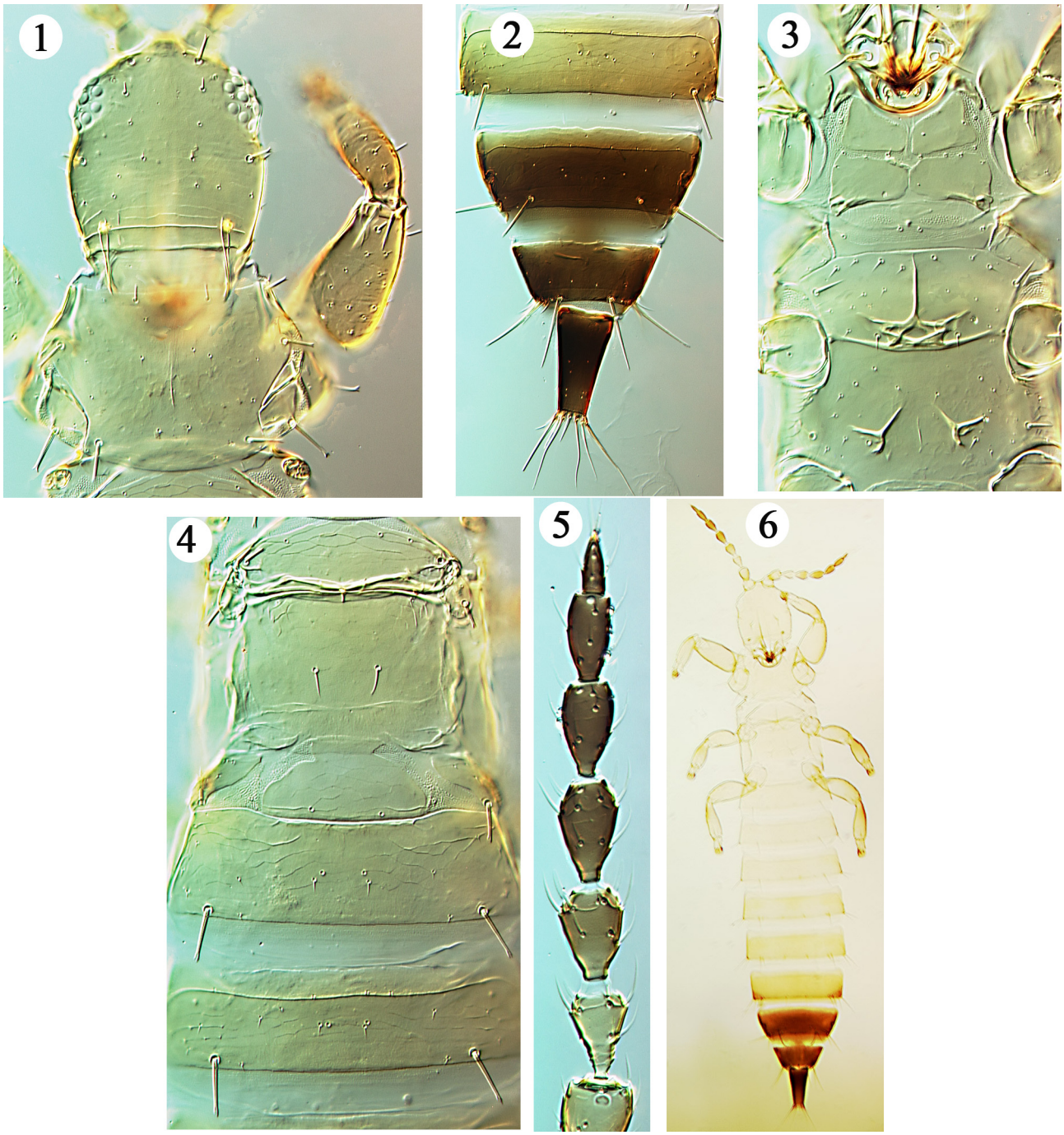

FIGURES 1–6. *Apostlethrips poaceaeus* **sp.n. (1)** Head & pronotum; **(2)** Tergites VII–X; **(3)** Thoracic sternites; **(4)** Pteronota & tergites I–III; **(5)** Male antenna; **(6)** Holotype female.

Apostlethrips poaceaeus sp.n.

Female microptera. Body yellow, abdominal segments VIII–X and posterior margin of VII brown (Figs 2, 6); apex of mouth cone shaded with brown; legs yellow shaded with brown; antennal segment I yellow, II and IV shaded with brown, III largely yellow, V–VIII brown.

Head smooth, with few transverse sculpture lines basally (Fig. 1); genae strongly constricted behind compound eyes but with no strong internal apodeme; ocelli absent, compound eyes with about 15 facets (Fig. 1); postocular setae short and asymmetrically expanded at apex, shorter than eye length; one pair of capitate setae on ocellar region; maxillary stylets wide apart and U-shaped, retracted only into base of head. Antennal segment III with 1 small, thin sense cone, IV with 2 sense cones, III–VII each with pedicel, VIII base clearly narrower than VII apex (Fig. 5).

Pronotum without sculpture (Fig. 1); setae aa, am, ml, epim and pa well-developed, asymmetrically capitate. Mesonotum with weak transverse sculpture, lateral setae capitate (Fig. 4); metanotum almost without sculpture. Mesopresternum broad and boat-shaped, mesoeusternum complete (Fig. 3). Fore tarsal tooth small, all femora and tibiae with blunt setae. Pelta with polygonal sculpture at posterior, campaniform sensilla present (Fig. 4); tergites II–VII each with one pair of minute straight wing-retaining setae close to posterior margin; tergite IX setae S1 shorter than tube, anal setae as long as tube (Fig. 2).

Measurements (holotype female in microns). Body length 1580. Head, length 185; width 163; postocular setae 25, distance between their bases 137; ocellar setae 22, postocellar setae 13. Pronotum, length 140; median width 218; major setae am 18, aa 25, ml 33, epim 45, pa 33. Mesonotum lateral setae 18. Metanotum median setae 22. Tergite IV median marginal setae 43; tergite VIII median setae 47, tergite IX setae S1 75, S2 80. Tube length 115. Anal setae 115. Antennal segments III–VIII length 40, 38, 43, 43, 38, 28.

Male microptera. Similar to female but smaller; tergite IX S2 setae shorter.

Measurements (in microns). Body length 1490. Head, length 168; width 137; postocular setae 20, postocellar setae 8. Pronotum, length 128; median width 180; major setae am 13, aa 18, ml 23, epim 36, pa 33. Tergite VIII median setae 43. Tergite IX setae S1 78, S2 50. Tube length 100; anal setae 92. Antennal segments III–VIII length 38, 38, 42, 37, 35, 28.

Specimens studied. Holotype female microptera. **Australia, Northern Territory**, Litchfield Natural Park, Tolmer Falls, from unknown Poaceae, 7.v.2014 (DJT 1827), in ANIC.

Paratypes: 4 males, same data as holotype; Darwin, East Pt, 1 female, from unidentified green leaves, 5.v.2014 (DJT 1810).

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