

A new species of *Thaumastocoris* Kirkaldy from Argentina (Heteroptera: Thaumastocoridae: Thaumastocorinae)

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Abstract

Thaumastocoris peregrinus n. sp. from Argentina is described. New morphological characters are studied and compared with other related species. This is the first record of a member of the subfamily Thaumastocorinae (Thaumastocoridae) from the New World.

Key words: Thaumastocorinae, *Thaumastocoris peregrinus*, new species, Neotropics, Argentina

Introduction

The family Thaumastocoridae comprises small phytophagous cimicomorphan bugs (2 to 4.6 mm). Two subfamilies are recognized, the Xylastodorinae with two genera: *Discocoris* Kormilev (South America) and *Xylastodoris* Barber (Cuba and Florida), and the Thaumastocorinae with four genera: *Baclozygum* Bergroth (Tasmania and mainland Australia), *Onymocoris* Drake and Slater (Australia), *Thaumastocoris* Kirkaldy (Australia and South Africa), and *Wechina* Drake and Slater (southern India).

The nominotypical genus *Thaumastocoris* was created by Kirkaldy (1908) for a new species: *T. australicus*. Later, Drake & Slater (1957) described another two new species: *T. hackeri* and *T. petilus*, and Rose (1965) described the fourth species in the genus, *T. macqueeni*. All these species occur in Australia. The only species of the genus recorded outside Australia is *T. australicus*, from South Africa as a recently introduced species (Jacobs & Naser, 2005) (see discussion below).

Schaefer (1969) commented on the phylogenetic relationships of the family and suggested a relationship to the Plokiophilidae; more recently, Schuh and Štys (1991) placed the Thaumastocoridae in a clade together with Miridae + Tingidae.

Whereas the Xylastodorinae feed only on palm trees, the Thaumastocorinae are known

to feed on a variety of dicotyledonous plants (Cassis et al., 1999).

Among the 12 Australian Thaumastocorinae, *B. depressum* Bergroth has been recorded at pest-level populations (Hill 1988, Cassis et al. 1999, Hill & Schaefer 2000), and more recently *T. australicus* has been recorded in Australia and South Africa (Jacobs & Nesar, 2005).

A survey of natural enemies of *Eucalyptus* recently carried out in the surroundings of the Museo de La Plata, Argentina, revealed the presence of an undescribed species of *Thaumastocoris*, which is herein described and illustrated.

Material and methods

Illustrations were made using a Wild M-5 stereomicroscope with a *camera lucida*. The photographs were taken with a Sony DSC-W5 digital camera attached to a microscope. The scanning electron micrographs were made from a specimen mounted on a stub, sputtercoated with gold-palladium alloy, and examined under a Jeol 6360 LV SEM. Measurements are given in millimeters. All figures were drawn from the paratypes and additional material.

The holotype and nine paratypes are deposited in the entomological collection of Museo de Ciencias Naturales de La Plata (MLP) (Argentina), and three paratypes are deposited at the National Museum of Natural History (USNM) (Washington, D.C., USA).

Results

Thaumastocoris peregrinus n. sp.

(Fig. 1–11)

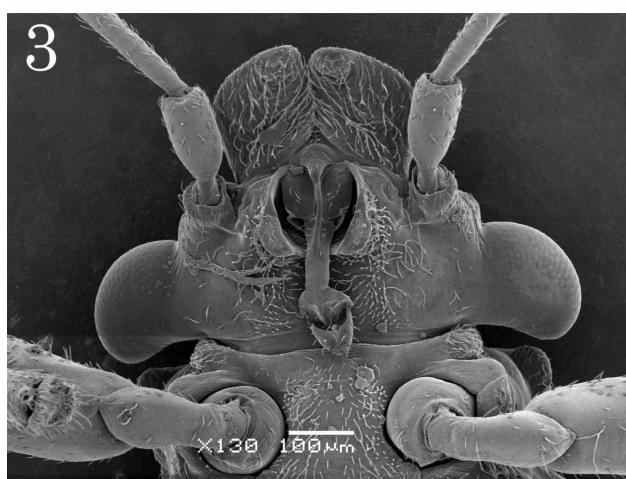
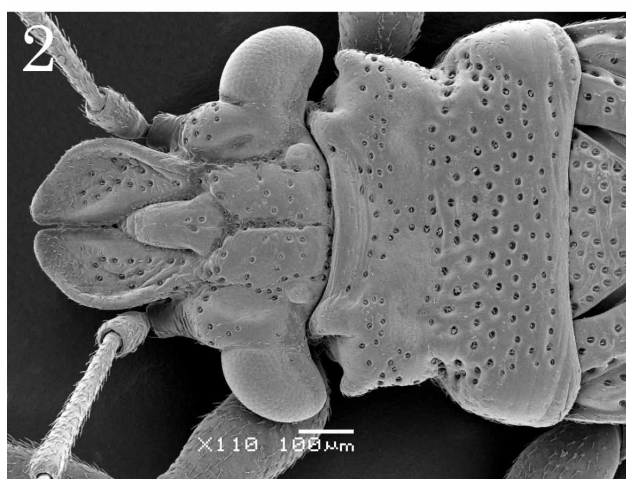
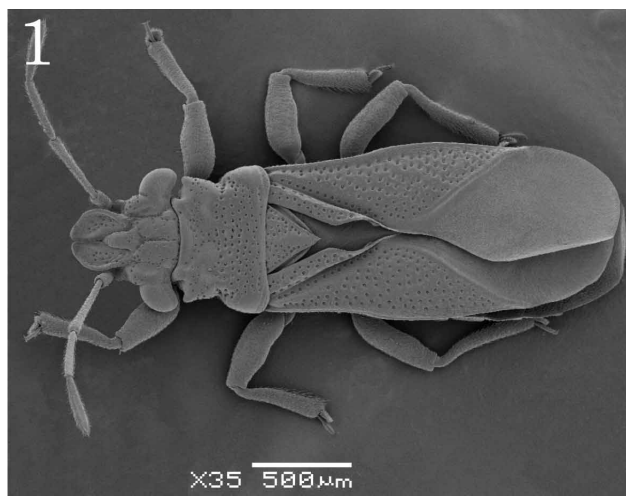
Thaumastocoris australicus: Jacobs & Nesar, 2005: 233 (South Africa)

Diagnosis

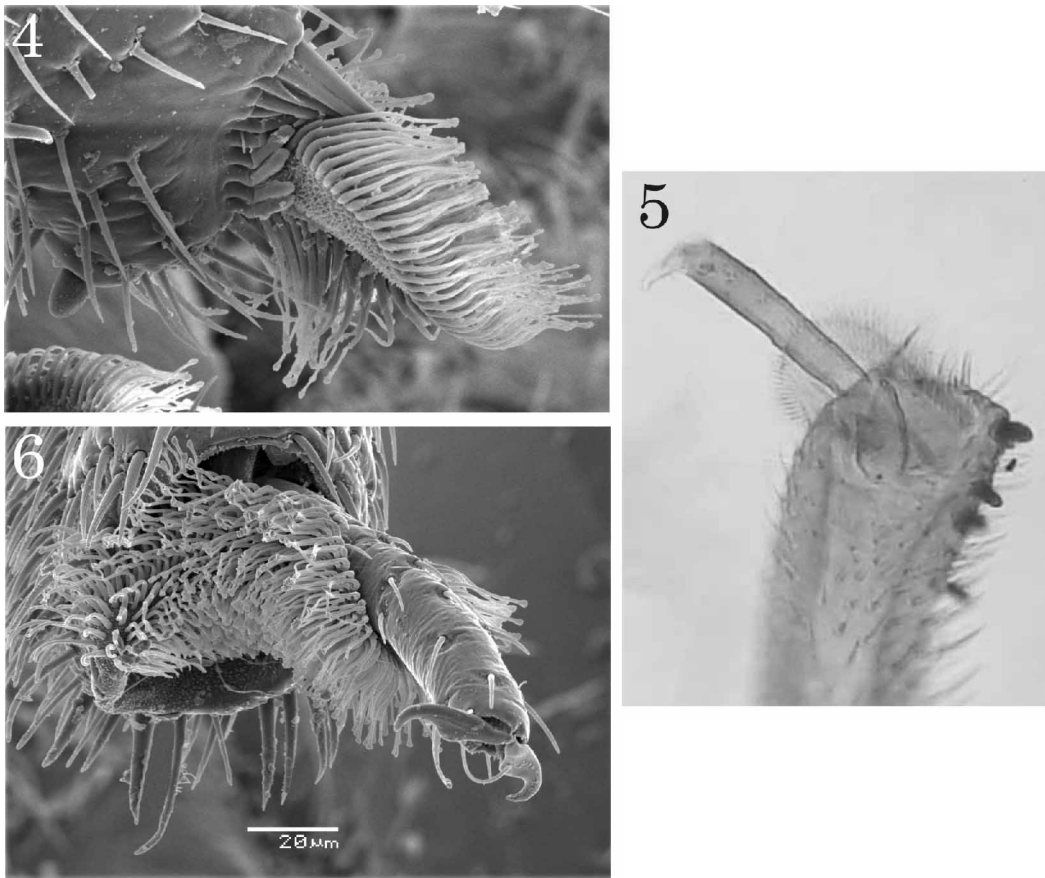
This species can be easily distinguished by the morphology of the pronotum, which has a tubercle on the anterolateral angles of the anterior lobe.

Description

Holotype male (Fig. 1). Total length: 3.00. Width: 0.96. General coloration light brown; shining. Posterior pronotal lobe with blackish central area; apex of third antennal segment and apical half of fourth black; lateral margins of head and jugum, anterior margin of pronotum, median longitudinal stripe on apical half of scutellum, inner margin of clavus, and outer margin of corium whitish. Membrane of hemelytron dull white, narrowly margined with dark brown along corial border. Ventral surface brown, head and legs pale brown.



FIGURES 1–3. *Thaumastocoris peregrinus* n. sp. 1, general view. 2, head and pronotum. 3, head, ventral view.



FIGURES 4–6. *Thaumastocoris peregrinus* n. sp. 4, 5, male fore-tibia and tarsus. 6, male hindtibia and tarsus.

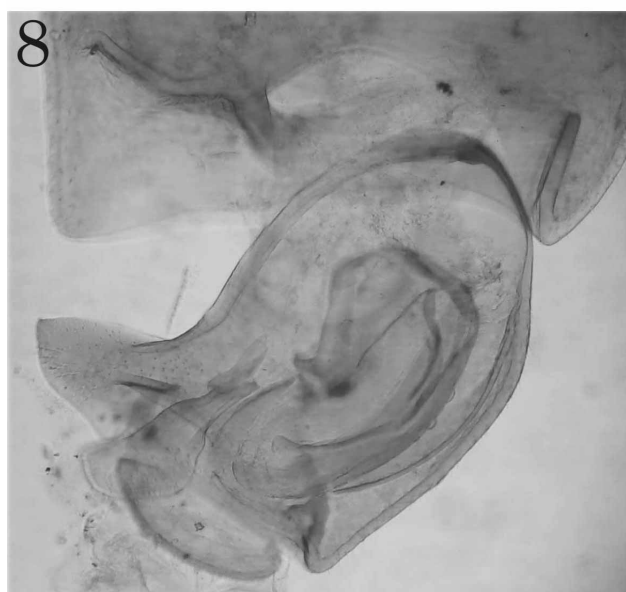
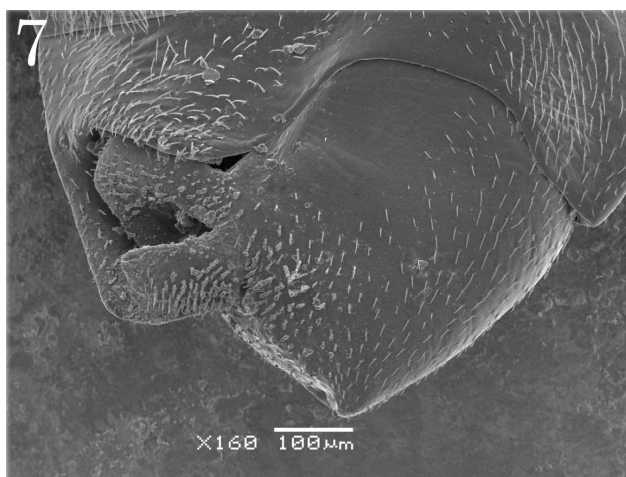
Head, pronotum, scutellum, and hemelytra dorsally with very short setae arising mainly from punctures (Fig. 1). Head ventrally with longer and adpressed setae. Antennae with abundant short semi-decumbent setae. Dorsally strongly punctated except anterior pronotal margin, calli, and median longitudinal stripe on apical half of scutellum. Femora with sparse short whitish adpressed setae, tibiae with dense and longer whitish adpressed setae, thicker and longer on inner margin.

Head (Fig. 2) length: 0.57, width across eyes: 0.76, interocular space: 0.47. Juga long, excavated, outer margin curved, broader and expanded medially. Length of antennal segments: I, 0.14., II, 0.39, III, 0.35, IV, 0.30. Rostrum short, attaining anterior margin of prosternum (Fig.3), rostral length: 0.34.

Thorax: Pronotum (Fig. 2) with anterior collar thick, not readily visible (only distinguishable in cleared specimens), calli very slightly raised, lateral margin of pronotum strongly constricted medially; anterior lobe with a tubercle on the anterolateral angles. Pronotal length: 0.47, front lobe width: 0.68, hind lobe width: 0.77. Scutellar length: 0.28, width of scutellum at base: 0.36. Hemelytra with outer margin of corium slightly expanded

laterally beyond the basal two-fifths. Distance between clavus apex and corium apex 0.71. Legs: fore- and mid-tibiae with three subapical dark teeth on inner margin arranged in a triangle (Figs. 4, 5), tarsi with flattened lobated structure typical of subfamily (Fig. 6)

Genitalia (Fig.7, 8): male genital capsule opening to right side; paramere subquadrangular.



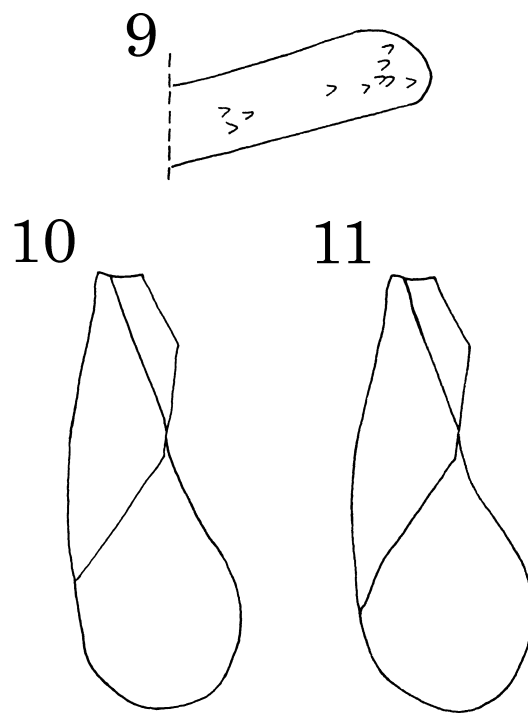
FIGURES 7–8. *Thaumastocoris peregrinus* n. sp. Male genitalia (ventral view).

Female: similar to male but lacking the teeth on fore and mid tibiae, and with prolonged corium (Fig. 10, 11).

Measurements of paratypes

Male (n = 5, 4 paratypes plus holotype): Total length: 2.82–3.02 (mean = 2.96). Width: 0.90–0.95 (mean = 0.94). Head length: 0.53–0.57 (mean = 0.56), width across eyes:

0.73–0.78 (mean = 0.76), interocular space: 0.46–0.49 (mean = 0.47). Length of antennal segments: I, 0.13–0.14 (mean = 0.14), II, 0.39–0.42 (mean = 0.40), III, 0.31–0.35 (mean = 0.33), IV, 0.28–0.31 (mean = 0.30). Rostral length: 0.30–0.34 (mean = 0.32). Pronotal length: 0.44–0.47 (mean = 0.46), frontal lobe width: 0.65–0.70 (mean = 0.67), hind lobe width: 0.74–0.77 (mean = 0.76), scutellar length: 0.27–0.31 (mean = 0.28), width of scutellum at base: 0.35–0.39 (mean = 0.37). Distance between clavus apex — corium apex 0.69–0.75 (mean = 0.71).



FIGURES 9–11. 9, *Thaumastocoris australicus* Kirkaldy. Schematic drawing of the position of teeth in male fore-tibia. 10–11, *Thaumastocoris peregrinus* n. sp. Schematic drawing of hemelytron. 10, male. 11, female.

Female (n = 5): Total length: 2.82–2.97 (mean = 2.89). Width: 0.90–0.95 (mean = 0.93). Head length: 0.53–0.57 (mean = 0.55), width across eyes: 0.75–0.78 (mean = 0.76), interocular space: 0.47–0.49 (mean = 0.48). Length of antennal segments: I, 0.13–0.15 (mean = 0.14), II, 0.37–0.42 (mean = 0.38), III, 0.30–0.37 (mean = 0.34), IV, 0.28–0.33 (mean = 0.31). Rostral length: 0.29–0.32 (mean = 0.30). Pronotal length: 0.43–0.50 (mean = 0.46), frontal lobe width: 0.65–0.68 (mean = 0.67), hind lobe width: 0.76–0.80 (mean = 0.78), scutellar length: 0.25–0.30 (mean = 0.27), width of scutellum at base: 0.37–0.40 (mean = 0.39). Distance between apex clavus–apex corium 0.72–0.81 (mean = 0.78).

Distribution

Argentina, South Africa, Australia (?).

Type data

Holotype male: Argentina, Buenos Aires, La Plata, XI-2005, on *Eucalyptus* sp., Carpintero-Dellapé colls. (MLP), Paratypes: 4 males, 5 females, 1 nymph, same data (MLP); 1 male, 2 females, same data (USNM).

Etymology

Peregrinus from Latin, stranger. The specific epithet refers to its condition as introduced species.

Comments on the host and some phenological aspects

This new species was found sucking leaves of *Eucalyptus viminalis* Labill, *E. tereticornis* Smith, and *E. camandulensis* Dehnh. The collection of this species was made by the authors in the surroundings of the Museo de La Plata, a large urban park with artificial woodlands that comprise mostly exotic species, in November, 2005; the populations were observed to increase noticeably in February and abruptly decline by the last days of March, with the onset of colder weather. It is possible that temperature plays an important role in the growth of populations of this species.

Taxonomic discussion

This species is very similar to *T. australicus*, but it can be easily distinguished by the pronotum, as well as by the fact the male genital capsule opens to the right side, and by the three subapical dark teeth on the inner margin of the fore and mid tibiae; the genital capsule of *T. australicus* opens to the left and the fore and mid tibiae bear more teeth on the inner margin of the distal half. This last character is mentioned here for the first time (Figs. 5, 9).

Jacobs and Naser (2005) reported *T. australicus* damaging *Eucalyptus* trees in South Africa, and gave a photograph of a female in dorsal view. From this photograph it is clear that the pronotum bears a pair of anterolateral tubercles, which are absent in *T. australicus* and in all other known species of the genus, and are identical to the tubercles described here as diagnostic for *T. peregrinus*. For this reason we consider that what Jacob & Naser (2005) have identified in South Africa as *Thaumastocoris australicus* is in fact *T. peregrinus* n. sp.

Corology

Given that the natural occurrence of genus *Thaumastocoris* is restricted to Australia, and *T. peregrinus* n. sp. was found in Argentina sucking leaves of different species of *Eucalyptus*, non-native trees that have been introduced from Australia, we consider that this new species is an undescribed Australian one not yet formally recorded from Australia.

In Argentina the species is so far distributed in northern Buenos Aires province. In addition to the type locality, this species was recorded in the following localities: Talar de

Pacheco, San Isidro, Luján, Castelar, Canning, Longchamps, Avellaneda, Quilmes, Berazategui, Florencio Varela, and Gonnet. The great abundance of specimens of *T. peregrinus* observed last year in northern Buenos Aires province, together with the absence of previous records in the same area suggest that this is a recently introduced species.

This is the first record of the subfamily Thaumastocorinae from the Western Hemisphere.

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