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THE FIRST RECORD OF *PSYDROTHRIPS KEWI* (THYSANOPTERA: THRIPIDAE) IN SOUTH AMERICA, WITH NOTES ON ITS DAMAGE ON CALLA LILY (ALISMATALES: ARACEAE)

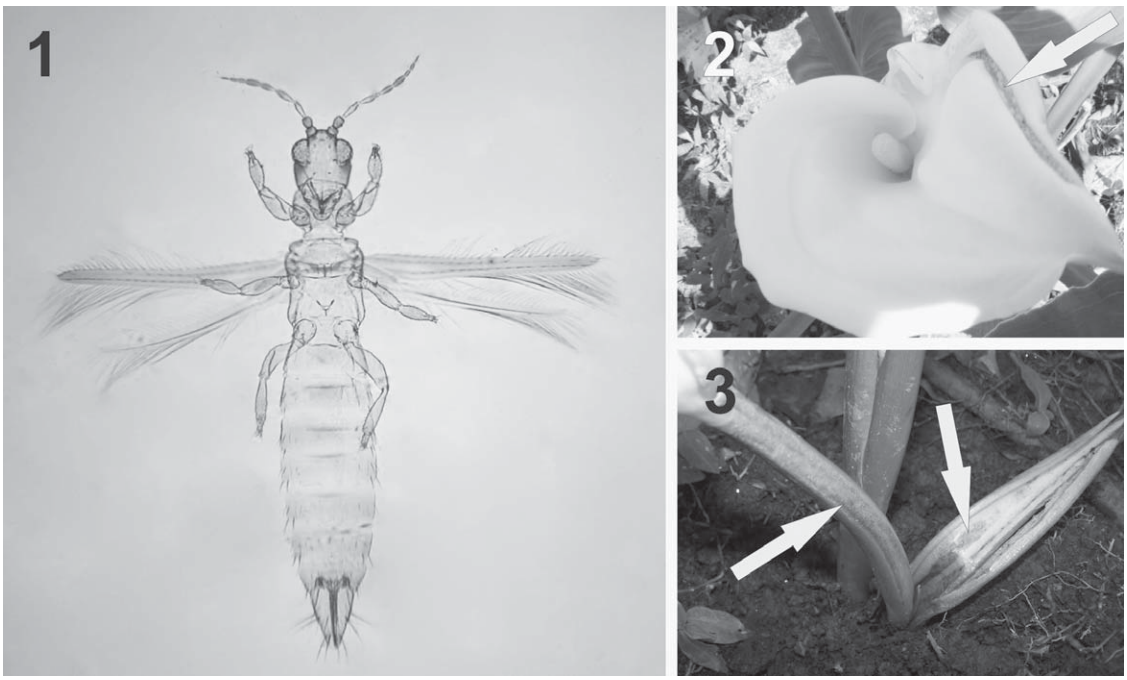
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The genus *Psydrothrips* (Thysanoptera: Thripidae) includes 2 species with nine-segmented antennae associated with Araceae plants (ThripsWiki 2014). Although evidently Neotropical in origin, the type species, *Psydrothrips kewi* Palmer & Mound, was described from a glasshouse in England damaging the leaves of the exotic *Philodendron sinuatum* (Alismatales: Aracaeae) (Mound & Marullo 1996). The other species, *Psydrothrips luteolus* Nakahara & Tsuda, is known only from Hawaii and Florida infesting the young leaves of unrelated Araceae plants such as *Dieffenbachia*, *Epipremnum, Syngonium* and *Spathiphyllum* (Edwards 1995; Nakahara & Tsuda 1995; Moritz et al. 2001). More recently, local producers from Guaramiranga, Ceará state, Northeastern Brazil, reported injuries caused by thrips on the ornamental calla lily (*Zantedeschia aethiopica* (L.) Spreng.; Araceae). This species was subsequently recognized as *P. kewi* (Fig. 1) and we here we provide the first record of this thrips from its original distribution area.

The Araceae family comprises about 110 genera and over 3,700 species, and although also distributed in the Old World tropics and north temperate regions, is most diverse in the New World tropics (Grayum 1990). The family includes many ornamental plants and both *Psydrothrips* species cause significant injuries to leaves and stems (Nakahara & Tsuda 1995). Most Araceae reported as hosts of these thrips are native to the tropical rain forests in Central and South America (e.g. *Dieffenbachia, Philodendron, Syngonium*) and it is likely that *Psydrothrips* shares the same origin. Curiously, *Zantedeschia* and *Epipremnum* are non-native



Figs. 1-3. *Psydrothrips kewi* and *Zantedeschia aethiopica*. **(1)** *P. kewi* female; **(2)** *Z. aethiopica* flower (arrow indicate attacked area); **(3)** *Z. aethiopica* stem (arrows indicate attacked areas).

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to the Americas, and other exotic Araceae species might be used as hosts by these thrips as well.

The area where we surveyed *P. kewi* (S 04° 14'-W 38° 57') is located at an altitude of 865 m and temperature varies between 18 and 30 ºC through the yr. We recorded 73 adults together with immature stages in Jul, Sep and Nov 2013 living on *Z. aethiopica* flowers and stems, and the feeding of these thrips produced scarring and browning of the plant tissues (Figs. 2 and 3). Feeding also occurred within the unopened white spathe soon after the bud emerged from the leaf axil. The injuries caused by *P. kewi* were obvious, and according to producers, about 10% of plants were lost per week at the study site.

Thrips damage on ornamental Araceae was also reported for *Chaetanaphothrips orchidii* on anthurium and *Echinothrips americanus* on *Dieffenbachia* and *Syngonium* (see Hara et al. 2002; Mound 2009). However, these thripids are polyphagous feeders, breeding in many unrelated plant species. Adults of *P. kewi* are particularly easy to recognize and distinguish from these other species by their nine-segmented antennae and bicolored head (Fig. 1). The differences between *P. kewi* and *P. luteolus* are mainly based on color. The head and antennal segments I–II and are yellow in *P. luteolus*, and pronotal posteroangular setae are longer than in *P. kewi* (Nakahara & Tsuda 1995). The geographical distribution of *P. kewi* now includes Brazil, England and Mexico, although the *Philodendron sinuatum* from which the holotype was collected at Kew came from Trinidad (Mound & Marullo 1996). The type series also include 16 females taken in glasshouse on *Philodendron* sp. presumably imported from Brazil, and 35 females from *Philodendron smithii* from Mexico (Palmer & Mound 1985).

The range of Araceae plants on which *P. kewi* may potentially be found is large and not possible to predict. Given its minute size it is particularly easy for *P. kewi* to be transported unseen. Consequently, caution and due care is urged to anyone transporting ornamental Araceae between countries to prevent dispersing this species to new areas.

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SUMMARY

Psydrothrips kewi Palmer & Mound (Thripidae) is recorded from South America for the first time. This thrips is known to attack a few Araceae species used as ornamentals in USA and in glasshouses in England. We report here *P. kewi* damaging leaves, stems and flowers of *Zantedeschia aethiopica* in Northeastern Brazil.

Key Words: bicolored head, glasshouse, invasive species, *Philodendron sinuatum*

RESUMO

O tripes *Psydrothrips kewi* Palmer & Mound (Thripidae) é registrado pela primeira vez para a América do Sul. Esta espécie é conhecida por atacar algumas espécies de Araceae ornamentais nos EUA e em casas de vegetação na Inglaterra. Nós registramos *P. kewi* danificando folhas, ramos e flores de copo-de-leite (*Zantedeschia aethiopica*) no nordeste brasileiro.

Palavras Chave: cabeça bicolorida, casa de vegetação, espécie invasora, *Philodendron sinuatum*

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