



The American genus *Dactuliothrips* (Thysanoptera: Aeolothripidae) with three new species

VERONICA PEREYRA¹ & CARLOS MANUEL DE BORBÓN²

¹CONICET-Instituto Superior de Entomología “Dr. Abraham Willink”, Tucumán, Argentina. E-mail: vpereyra@csnat.unt.edu.ar

²EEA Mendoza INTA, San Martín 3853, (5507) Luján de Cuyo, Mendoza, ARGENTINA. E-mail: cborbon@mendoza.inta.gov.ar

Abstract

Three new species of *Dactuliothrips* Moulton are described, two from Mendoza, Argentina and one from Southern California, USA: *D. prosopis* sp.n. from *Prosopis alpataco* (Fabaceae), *D. monttea* sp.n. from *Monttea aphylla* (Scrophulariaceae), and *D. ephedra* sp.n. from *Ephedra* sp. (Ephedraceae). A revised diagnosis and an illustrated identification key to the nine recognized species of *Dactuliothrips* are also provided. Pictures and notes about the host plants for the species from Argentina are included, together with new records for *D. kaszabi* from Argentina.

Key words: Aeolothripidae, Systematics, Terebrantia, Thysanoptera

Introduction

Some of the problems for Thysanoptera taxonomy include a lack of (1) connection between studies of taxa from different regions, (2) understanding of the intraspecific and interspecific variation between the members of the group, (3) knowledge about the relationships between thrips and their host plants. Thus, a large number of the new genera and species that have been described in the last decades are poorly supported by real morphological synapomorphies, and therefore in several cases newly described taxa are synonymous with previously described taxa. Deeper morphological and field studies that find diagnostic characters and establish the host plant for the species under study are needed to better define taxa.

The American genus *Dactuliothrips* belongs to the Aeolothripidae family but was originally described as a part of the Melanthripidae (Moulton 1931; Bailey 1937). It is a small genus with six previously described species: four species found in Southwestern USA and two species found in North and South Argentina. Morphological and molecular phylogenetics studies later recovered *Dactuliothrips* as a member of Aeolothripidae (Buckman *et al.* 2013; Marullo & Mound 1994). Characters that support this hypothesis are the presence of a reduced female sternite VIII with two pairs of supernumerary setae associated; wings with pale bands; and linear sensoria on antennal segments III–IV (oval to circular in *Dactuliothrips* species). In contrast, Melanthripidae shows either fore tibial spurs, projections on first antennal segment, or projections on anterior margin of head; transverse sensoria on apex of antennal segments III & IV; and females with a pair of lobes on the posterior margin of abdominal sternite VII with two associated setae – none of which are found in *Dactuliothrips* (Mound & Morris 2003). Characters usually employed to distinguish species in *Dactuliothrips* are antenna coloration, numbers and development of spurs on fore femora, length and number of head and pronotum setae, and presence of claws on fore tibiae (Bailey 1939; Pelikán 1964). To define the new species in this work, new characters are also described such as microtrichia patterns on the head, thorax, and abdomen, as well as the development of the ridge on abdominal tergite I on males. Here we describe three new *Dactuliothrips* species; two from Mendoza, Argentina and one from southern California, USA, and provide an illustrated identification key to the nine species of the genus.

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References

- Bailey, S.F. (1937) The genus *Dactuliothrips* Moulton. *Pan-Pacific Entomologist*, 13, 121–126.
- Bailey, S.F. (1939) A new species of thrips from the Mojave Desert. *Pan-Pacific Entomologist*, 15, 168–172.
- Buckman, R.S., Mound, L.A. & Whiting, M.F. (2013) Phylogeny of thrips (Insecta: Thysanoptera) based on five molecular loci. *Systematic Entomology*, 38, 123–133.
<http://dx.doi.org/10.1111/j.1365-3113.2012.00650.x>
- de Borbón, C.M. (2005) Los trips del suborden Terebrantia de la provincia de Mendoza. Ed. INTA, 38 pp.
- De Santis, L., Gallego De Sureda, A.E. & Merlo, E.Z. (1980) Estudio sinóptico de los tisanopteros Argentinos (Insecta). *Obra del centenario de Museo de La Plata*, 6, 91–166.
- Hoddle, M.S., Mound, L.A. & Paris, D.L. (2012) *Thrips of California*. CBIT Publishing, Queensland. Available from: http://keys.lucidcentral.org/keys/v3/thrips_of_california/Thrips_of_California.html (Accessed 31 January 2013)
- Marullo, R. & Mound, L.A. (1994) Su una classificazione sopra-generia della famiglia Aeolothripidae (Thysanoptera). *Atti XVII Congresso nazionale italiano di Entomologia, Udino*, 1994, 87–90.
- Moulton, D. (1931) An interesting new California thrips. *Pan-Pacific Entomologist*, 7, 173–174.
- Mound, L.A. & Marullo, R. (1996) The Thrips of Central and South America: An Introduction. *Memoirs on Entomology, International*, 6, 1–488.
- Mound, L.A. & Morris, D. (2003) The morphological background to Thysanoptera phylogeny. *Entomologische Abhandlungen*, 61 (2), 151–153.
- Pelikán, J. (1964) The Zoological results of Gy. Topál's collecting in South Argentina.10. Thysanoptera. *Annales Historico-Naturales Musei Nationalis Hungarici*, 56, 267–270.
- Tapia, E.A. (1953) Especie nueva de *Dactuliothrips* (Thysanoptera). *Revista de la Sociedad Entomológica Argentina*, 16 (3), 77–79.
- ThripsWiki (2013) ThripsWiki - providing information on the World's thrips. Available from: <http://thrips.info/wiki/> (Accessed 26 May 2013)