

Correspondence

First record of the *Labidostoma caucasicum* (Reck, 1940) (Acari: Labidostomatidae) from Iran

Farnaz Rahbar Shahlan¹, Davood Shirdel^{2*}, Mahdiyar Tabrizi¹ & Michel Bertrand³

1 Department of Plant Protection, Tabriz Branch, Islamic Azad University, Tabriz, Iran

2 Agricultural & Natural Resources Research Center, Tabriz, East Azarbaijan province, Iran; E-mail: dshirdel@yahoo.com

3 UMR 5175 CNRS CEFE Université Montpellier III, Route de Mende, F-34199 Montpellier Cedex 5, France

* Corresponding author

The unique family of Labidostomatidae belongs to Labidostomatina one of the four infraorders forming the suborder Prostigmata (Zhang *et al.* 2011; Bertrand *et al.* 2012). It is one of the most primitive groups of actinotrichid mites (Bertrand *et al.* 2012). The family is a cosmopolitan assemblage of approximately 50 described species of predatory mites (Walter *et al.* 2009).

This family consists of four genera and seven subgenera for about 50 described species (Walter *et al.* 2009; Bertrand *et al.* 2012). Most of them are large mites, heavily sclerotized, living in the upper layers or soil surface; smaller species, blind or with reduced eyes are found deeper or in caves. In overlying organic material, lichens and moss, they prey on collembolans and other small arthropods (Walter *et al.* 2009).

Labidostoma intermedia Bertrand *et al.*, 2012 was reported and described from Iran. This species was collected in the region of Gorgan (Golestan province), Marageh and Shabestar (East Azarbaijan province) and in Khorasan Razavi province of Iran (Bertrand *et al.* 2012; Jalaeian *et al.* 2013). Here, we introduce another representative of the family to the mite fauna of Iran.

During 2012, two specimens of labidostomatid mites were collected in soil of poplar trees in Tabriz (northwestern Iran) by Berlese-Tullgren funnel apparatus. Contemporary, another faunistic survey allowed to collect 10 specimens from soil samples of Ainaloo forests (northwestern Iran). They were cleared in Nesbitt's fluid and mounted in Hoyer's medium on microscopic slides. All of the specimens were identified as *Labidostoma caucasicum* (Reck, 1940).

This species belongs to the subgenus *Labidostoma* (*Labidostoma*) and to the *integrum* species-group: these mites share a lateral line of pores on the sides of the dorsal shield, a famulus spine like on the tarsi I. It can be recognized from other consubgenera by the following characters: the paraxial tooth of fixed digit of chelicerae transformed in a well defined blade, a line of 12 pores behind the fourth pair of coxae on the ventral shield.

First time, *L. caucasicum* was collected from Georgia and described by Reck (1940). After that, Feider & Vasiliu (1970) reported it from Romania and compared the morphology of Romanian specimens of *L. caucasicum* and *L. integrum* Berlese. Based

on Bertrand *et al.* (2012), distribution seems limited between Caucasus and Eastern Mediterranean ridges.

The material examined is deposited in the Acarological Collection, Plant Protection Department, Agricultural & Natural Resources Research Centre, East Azarbaijan province, Iran. Eight microscopic slides of *L. caucasicum* have been sent to Michel Bertrand in France.

References


- Bertrand, M., Bagheri, M., Akbari, A., Yazdanian, M., Irani-Nejad K.H., Shirinbeik Mohajer, S. & Saboori, A. (2012) A new Iranian species of the subgenus *Labidostoma* (Prostigmata: Labidostomatidae), with new biogeographic data on the *integrum* group of species. *Acarologia*, 52(3): 233–245.
- Feider, Z. & Vasiliu, N. (1970) Espèces de Nico-letiellidae (Acariformes) de Roumanie. *In: Livre du Centenaire Emile G. Racovitza (1868-1968)*, Editions de l'Academie de la République socialiste de Roumanie, pp. 371–391.
- Jalaeian, M., Kamali, H. & Bertrand, M. (2013) First record of the family Labidostomatidae (Acari: Prostigmata) from Khorasan Razavi Province, Iran. *In: Joharchi, O. and Saboori, A. (Eds.), Program & Abstract book of the Second International Persian Congress of Acarology, 29–31 August 2013, Karaj, Iran*, p. 16.
- Reck, G.F. (1940) Eine neue *Labidostoma* Art. *Mitt. Georg. Abt. Wissensch., Zoologie. URSS*, 1(6): 435–446.
- Walter, D.E., Lindquist, E.E., Smith, I.M., Cook, D.R., & Krantz, G.W. (2009) Order Trombidiformes. *In: Krantz G.W. & Walter D.E. (Eds.), A Manual of Acarology*, Third edition. Texas Tech University Press, Lubbock, pp. 233–420.
- Zhang, Z.-Q., Fan, Q.-H., Pesic, V., Smith, H., Bochkov, A.V., Khaustov, A.A., Baker, A., Wohltmann, A., Wen, T., Amrine, J.W., Beron, P., LIN, J., Gabrys, G., & Husband, R. (2011) Order Trombidiformes Reuter, 1909. *In: Zhang, Z.-Q. (Ed.), Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness*. Magnolia Press, pp. 129–138.

Received: 21 February 2014

Accepted: 26 March 2014

Published: 15 April 2014

COPYRIGHT

 Rahbar Shahlan *et al.* Persian Journal of Acarology is under free license. This open-access article is distributed under the terms of the Creative Commons-BY-NC-ND which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author and source are credited.

نخستین گزارش گونه *Labidostoma caucasicum* (Reck, 1940) (Acari: Labidostomatidae) از ایران

فرناز رهبر شهلان^۱، داود شیردل^۲، مهدی یار تبریزی^۱ و میشل برتراند^۳

^۱ گروه گیاهپزشکی، دانشگاه آزاد اسلامی واحد تبریز، تبریز، ایران

^۲ مرکز تحقیقات کشاورزی و منابع طبیعی، تبریز، استان آذربایجان شرقی، ایران؛ رایانامه: dshirdel@yahoo.com

^۳ یو ام آر ۵۱۵۷ سی ان آر اس سی ای اف ای دانشگاه مونت پلیه ۳، خیابان منده، اف-۳۴۱۹۹

مونت پلیه سدکس ۵، فرانسه

* نویسنده مسئول مکاتبات

تاریخ دریافت: ۱۳۹۲/۱۲/۲

تاریخ پذیرش: ۱۳۹۳/۱/۶

تاریخ چاپ: ۱۳۹۳/۱/۲۵