

A checklist of the subfamily Sticholotinae (Coleoptera: Coccinellidae) of Iran

Reza JAFARI, Mehdi Zare KHORMIZI,
Amir BIRANVAND & Jahanshir SHAKARAMI

Abstract: A checklist of nine species of ladybird beetles from Sticholotinae subfamily (Coleoptera: Coccinellidae) occurring in Iran is presented based on literature studies and a field survey throughout Iran. The species recorded belong to three genera (*Paracoelopterus*, *Serangium* and *Pharoscyrnus*) out of three tribes (Microweiseini, Serangiini and Sticholotidini). The largest and least numbers of species were found in the genera *Pharoscyrnus* and *Serangium*, respectively. Among the species, *Pharoscyrnus ovoideus* and *Serangium montazerii* were the most frequently recorded. Among provinces, Fars province had most records.

Zusammenfassung: Eine Checkliste über neun Arten von Marienkäfern der Unterfamilie Sticholotinae (Coleoptera: Coccinellidae) im Iran basierend auf Literaturstudien und Feldarbeit wird vorgelegt. Die Arten gehören zu drei Gattungen (*Paracoelopterus*, *Serangium* und *Pharoscyrnus*) aus drei Triben (Microweiseini, Serangiini und Sticholotidini). Am artenreichste Gattung ist *Pharoscyrnus* und die artenärmste *Serangium*. Am häufigsten wurden die Arten *Pharoscyrnus ovoideus* und *Serangium montazerii* gesammelt. Unter den Provinzen war Fars diejenige mit den meisten Nachweisen.

Key words: Coleoptera, Coccinellidae, Sticholotidinae, checklist, Palaearctic, Asia, Iran.

Introduction

This publication is an attempt to fill the void regarding the Coccinellidae found in Iran. The earliest study on the Coccinellidae of

Iran were conducted by AFSHAR (1937; 1938; 1944). DUVERGER (1983) listed some faunistic reports on Iranian Coccinellidae. MODARES AWAL (1997) cited 87 valid species of ladybirds in his list of agricultural pests and their natural enemies in Iran. BORUMAND (2000) reported fifty-one valid species of Coccinellidae in his list of Insects of Iran.

Material and Methods

The geographical scope of this checklist covers all 30 Iranian provinces. One of the authors (MZK) conducted an extensive survey for Coccinellids throughout the provinces of Iran in the course of graduate research work (2006–2012). The following checklist is a result of this survey and literature studies. The taxonomic arrangement of taxa is alphabetical for convenience, and does not reflect phylogenetic relationships.

Results and discussion

The checklist of the twelve species is presented below.

Subfamily Sticholotidinae J. Weise, 1901

Tribe Microweiseini Leng, 1920

Paracoelopterus Normand, 1936

1) *Paracoelopterus berytensis* J. Weise, 1884

Fars: 29°68'46.6"N, 52°35'72.5"E (AHMADI & YAZDANI 1993)

Tribe Serangiini Blackwelder, 1945

Serangium Blackburn, 1889

1) *Serangium montazerii* Fürsch, 1995

Guilan: 37°29'71.4"N, 49°56'67.8"E, Golestan: 36°82'37.4"N, 54°40'06.2"E (MONTAZERI & MOSADEGH 1995), Mazandaran: 36°52'41.2"N, 53°06'03.0" (GHAHARI et al. 2004), Zanjan: 36°73'57.0"N, 48°44'61.2"E (VODJANI 1965; NAEEM 1971).

Tribe Sticholotidini J. Weise, 1901

Coelopterus Mulsant & Rey, 1852.

1) *Coelopterus salinus* Mulsant & Rey, 1852

Iran (KOVAR, 2007).

Pharoscymnus Bedel, 1906

- 1) *Pharoscymnus angohranensis* Duverger, 1983
Iran (KOVAR, 2007).
- 2) *Pharoscymnus arabicus* Fürsch, 1979
Fars: 29°68'46.6"N, 52°35'72.5"E (AHMADI & YAZDANI 1993).
- 3) *Pharoscymnus brunneosignatus* Mader, 1949
Khorasane razavi: 36°27'65.5"N, 59°58'62.8"E (EBRAHIMI et al 2012).
- 4) *Pharoscymnus fleischeri* J. Weise, 1883
Iran (KOVAR, 2007).
- 5) *Pharoscymnus flexibilis* (Mulsant, 1853)
Fars: 29°68'46.6"N, 52°35'72.5"E (AHMADI & YAZDANI 1993).
- 6) *Pharoscymnus ovoideus* Sicard, 1929
Fars: 29°68'46.6"N, 52°35'72.5"E (AHMADI & YAZDANI, 1993), Guilan: 37°29'71.4"N, 49°56'67.8"E (HAJIZADEH et al., 2001), Kerman: 30°32'99.3"N, 57°06'62.0"E (KOUHPAYEZADEHESFAHANI & MOSADEGH, 1991).
- 7) *Pharoscymnus pharoides* (Marseul, 1868)
Chaharmahal and Bakhtiari: 32°37'50.8"N, 50°84'79.8"E (BAGHERI & MOSADEGH, 1995), Fars: 29°68'46.6"N, 52°35'72.5"E (AHMADI & YAZDANI 1993).
- 8) *Pharoscymnus setulosus* (Chevrolat, 1861)
Fars: 29°68'46.6"N, 52°35'72.5"E (AHMADI & YAZDANI 1993).
- 9) *Pharoscymnus smirnovi* Dobzhanskiy, 1927
Yazd: 29°48'07.9"N, 54°08'49.9"E (ZARE KHORMIZI et al 2014).

The species belong to three genera (*Paracoelopterus*, *Serangium* and *Pharoscymnus*) and three tribes (Microweisini, Serangiini and Sticholotidini). The largest and least numbers of species were found in the genera *Pharoscymnus* and *Serangium*, respectively. Among species, *Pharoscymnus ovoideus* and *Serangium montazerii* were the most abundant.

Among provinces, Fars province had largest abundance. All species belonging to the Sticholotinae can be potential predators of aphids, mites and coccids, at least in the adult stage (MAGROW 1992). This inventory of Coccinellid species in Iran will help to improve Integrated Pest Management in crops and orchards.

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Authors

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| <p>Reza JAFARI Islamic Azad University Borujerd Branch Borujerd Iran E-Mail: jafari_po@yahoo.com</p> <p>Jahanshir SHAKARAMI Assistant Professor, Department of Plant Protection, Lorestan University, Khorramabad, Iran. E-Mail: shakarami.j@lu.ac.ir</p> | <p>Mehdi Zare KHORMIZI and Amir BIRANVAND Department of Entomology, College of Agricultural Sciences Shiraz Branch, Islamic Azad University, Shiraz Iran E-Mail: persian7002@yahoo.com; Amir.beiran@gmail.com</p> |
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Autor(en)/Author(s): Jafari Reza, Khormizi Mehdi Zare, Biranvand Amir, Shakarami Jahanshir

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