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New records of the oribatid mites (Acari: Sarcoptiformes: Oribatida) for the fauna of Iran

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Oribatid mites are one of the richest acarine groups that occur in soil, litter, moss, lichen, and rarely aquatic environments. They are actively involved in decomposition of organic matters, in nutrient cycling and in soil formation (Pande & Berthet 1973; Bayoumi & Al-Khalifa 1996). Currently, almost 10,000 oribatid species, representing 172 families, have been described (Schatz 2002, 2004; Subías 2004; Norton & Behan-Pelletier 2009), while estimates of the real world oribatid fauna range from 50,000–100,000 species (Schatz & Behan-Pelletier 2008). There is little information on the oribatid mite fauna of Iran. The oribatid mite fauna of rangelands in West Azerbaijan province, Iran, was studied in Ghooshchi, Ghasemloo, Marmishoo and Ordooshahi areas by taking soil samples at three different times (mid-May, mid-August and mid-October) of the year 2012. Soil samples were taken and transferred into the acarology laboratory of Plant Protection Department, Faculty of Agriculture, University of Tabriz. Mites were extracted by using the Berlese funnel and stored in Oudemans solution, cleared in Nesbitt's fluid and mounted in Hoyer's medium on microscopic slides. The slides were placed in the oven at 45–50 °C for 2–3 weeks and then the specimens were examined under a light microscope. Specimens are held in the Acarology laboratory, Department of Plant Protection, Faculty of Agriculture, University of Tabriz, Tabriz, Iran.

In this paper, we report one genus and eight species belonging to five families new to the mite fauna of Iran. The species are listed as follows:

Family Liacaridae Sellnick, 1928

Adoristes (A.) ovatus (Koch, 1839)

Material examined

Soil, one adult specimen in 1600–1750 m a.s.l. (Ghooshchi), mid-May 2012; four adult specimens in 1750–2000 m a.s.l. (Ghooshchi), mid-October 2012; four adult specimens in 1600–1750 m a.s.l. (Ghasemloo) mid-October 2012.

Distribution: Holarctic (Western Palearctic: frequent, eastern Palearctic and USA:

Minnesota) (Subías 2011).

Comment: There was no record of this genus in Iran.

Family Punctoribatidae Thor, 1937

Punctoribates (P.) angulatus Bayartogtokh, Grobler & Cobanoglu, 2000

Material examined

Soil, 423 adult specimens in 1450–1600 m a.s.l. (Ghasemloo), mid-May 2012; six adult specimens in 1450–1600 m a.s.l. (Ghasemloo), mid-August 2012; 185 adult specimens in 1300–1450 m a.s.l. (Ghasemloo), mid-May 2012; four adult specimens in 1300–1450 m a.s.l. (Ghasemloo), mid-August 2012; 118 adult specimens in 1600–1750 m a.s.l. (Ghasemloo), mid-May 2012; four adult specimens in 1600–1750 m a.s.l. (Ghasemloo), mid-August 2012; two adult specimens in 1600–1750 m a.s.l. (Ghasemloo), mid-October 2012; 40 adult specimens in 1750–2000 m a.s.l. (Ghooshchi), mid-May 2012; six adult specimens in 1600–1750 m a.s.l. (Ghooschi) mid-May 2012; 19 adult specimens in 1450–1600 m a.s.l. (Marmishoo) mid-May 2012; 100 adult specimens in 1750–2000 m a.s.l. (Marmishoo), mid-May 2012; one adult specimen in 1750–2000 m a.s.l. (Marmishoo), mid-August 2012; three adult specimens in 1750–2000 m a.s.l. (Marmishoo), mid-October 2012; one adult specimen in 1300–1450 m a.s.l. (Ordooshahi), mid-May 2012; two adult specimens in 1300–1450 m a.s.l. (Ordooshahi), mid-August 2012.

Distribution: Turkey (Subías 2011).

Family Hemileiidae J. & P. Balogh, 1984

Hemileius (Simkinia) ovalis Kulijev, 1968

Material examined

Soil, 18 adult specimens in 1600–1750 m a.s.l. (Ghasemloo), mid-May 2012; seven adult specimens in 1450–1600 m a.s.l. (Ghasemloo) mid-May 2012; four adult specimens in 1600–1750 m a.s.l. (Ghooshchi), mid-May 2012.

Distribution: Southern Palearctic (Subías 2011).

Hemileius (H.) robustus Pérez-Íñigo, 1969

Material examined

Soil, three adult specimens in 1750–2000 m a.s.l. (Ghooshchi), mid-May 2012.

Distribution: Western Mediterranean (Subías 2011).

Family Carabodoidae Koch, 1837

Carabodes (Klapperiches) willmanni Bernini, 1975

Material examined

Soil, 10 adult specimens in 1600–1750 m a.s.l. (Ghasemloo), mid-October 2012; three adult specimens in 1450–1600 m a.s.l. (Ghasemloo), mid-October 2012.

Distribution: Holarctic (Murvanidze, 2008).

Carabodes paraspinosus Kulijev, 1968

Material examined

Soil, two adult specimens in 1600–1750 m a.s.l. (Ghasemloo) mid-October 2012; one adult specimen in 1450–1600 m a.s.l. (Marmishoo), mid-October 2012.

Distribution: Caucasus (Murvanidze 2008).

Austrocarabodes (A.) foliaceisetus georgiensis Murvanidze & Weigmann, 2007

Material examined

Soil, 41 adult specimens in 1450–1600 m a.s.l. (Ghasemloo), mid-May 2012; one adult specimen in 1300–1450 m a.s.l. (Ghasemloo), mid-May 2012; 20 adult specimens in 1750–2000 m a.s.l. (Marmishoo), mid-May 2012; one adult specimen in 1750–2000 (Ghooshchi) mid-May 2012, mid-August 2012; two adult specimens in 1600–1750 m a.s.l. (Ghooshchi), mid-May 2012.

Distribution: Caucasus (Subías 2011).

Family Compactozetidae Luxton, 1988

Eupterotegaeus ornatissimus (Berlese, 1908)

Material examined

Soil, two adult specimens in 1750–2000 m a.s.l. (Marmishoo), mid-October 2012.

Distribution: Holarctic (southern Palearctic, Sakhalin and Canada) (Subías 2011).

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گزارش جدید کنه‌های اریباتید (Acari: Sarcoptiformes: Oribatida) برای فون ایران

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