

Two New Records of the Genus *Minniza* Simon (Pseudoscorpiones: Olpiidae) from Iran

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Abstract: Recent collections of pseudoscorpions in Fars Province-southern Iran resulted two new country records, *Minniza gallagheri* Mahnert and *M. nigrimanus* Mahnert. The species are illustrated and also, some notes on the morphometric ranges and the morphological characters of each species are given here.

Keywords: Arachnida, pseudoscorpions, new country records, Fars Province, Iran, Oman.

1. INTRODUCTION

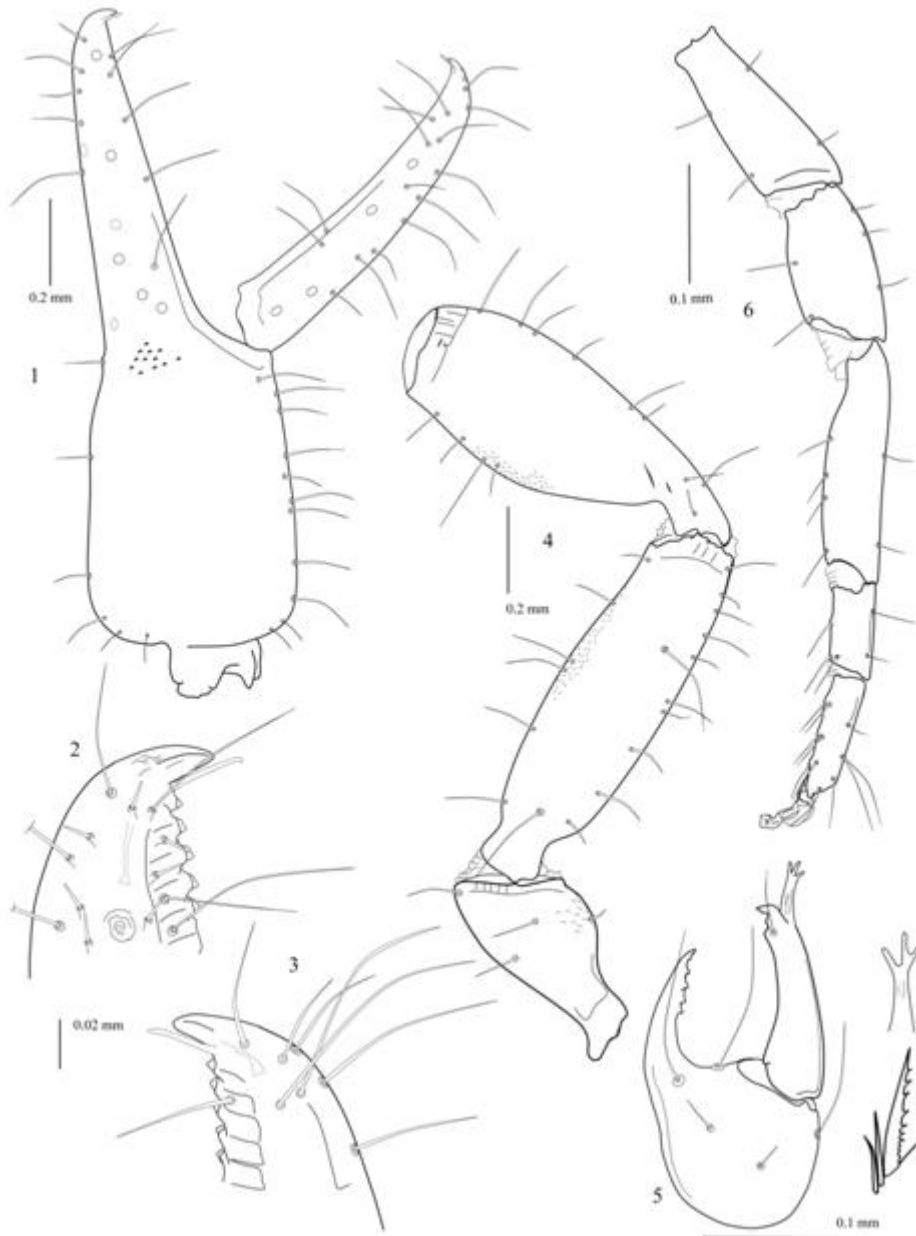
The genus *Minniza* Simon, 1881 currently contains 23 species which are mostly distributed in the old world [1] and can be easily identified by the following combination of characters: body large, abdomen long and vermiform, carapace distinctly longer than wide and carapace with two distinct transverse furrows.

Minniza persica persica Beier, 1951, *M. persica deminuta* Beier, 1951, *M. syriaca* Beier, 1951 and *M. babylonica* Beier, 1931 were previously reported from Iran by Beier [2, 3]. Mahnert [4] considered *M. syriaca* as subjective junior synonym of *M. babylonica*. Consequently, *M. p. deminuta* was regarded as a junior synonym of the species *M. persica* by Nassirkhani & Shoushtari [5] who have ignored the differences of the relative lengths of the pedipalpal patella and femur proposed by Mahnert [4] to separate *M. p. deminuta* and *M. p. persica*.

Two species, *M. gallagheri* Mahnert 1991 and *M. nigrimanus* Mahnert, 1991 are here recorded for the first time from Iran. Also, their mensuration and illustrations are given.

2. MATERIALS AND METHODS

The specimens used in this study were directly collected by hand, preserved in ethanol 70%, cleared by lactic acid 60%, and permanently mounted on dished glass microscope slides in Swan's fluid. The specimens which are deposited in the Acarology Laboratory, Islamic Azad University of Arak (IAUA) examined by using an Olympus BH-2 compound microscope, measured with an ocular graticule, and illustrated with the aid of a drawing tube attachment. Morphological terminology and mensuration follow Chamberlin [6] and Harvey [7].



Figures 1-6. *Minniza gallagheri* Mahnert 1991, ♀: 1. right chela, lateral aspect; 2. tip of fixed chelal finger (showing venom apparatus and a number of sensory setae); 3. tip of movable finger (showing venom apparatus); 4. basal segments of pedipalp, dorsal aspect; 5. chelicera, galea and rallum (serrulae omitted), dorsal aspect; 6. leg I (trochanter omitted).

Minniza gallagheri Mahnert, 1991: 181-182, figs 30-32.

Family Olpiidae Banks, 1895

Subfamily Olpiinae Banks, 1895

Genus *Minniza* Simon, 1881

Minniza gallagheri Mahnert 1991

3. MATERIAL EXAMINED

IRAN: Fars Province: 1 ♀, Seyyedan [altitude 2010 m], mountain habitat, under stone, July 8 2014, M. Nassirkhani (IAUA).

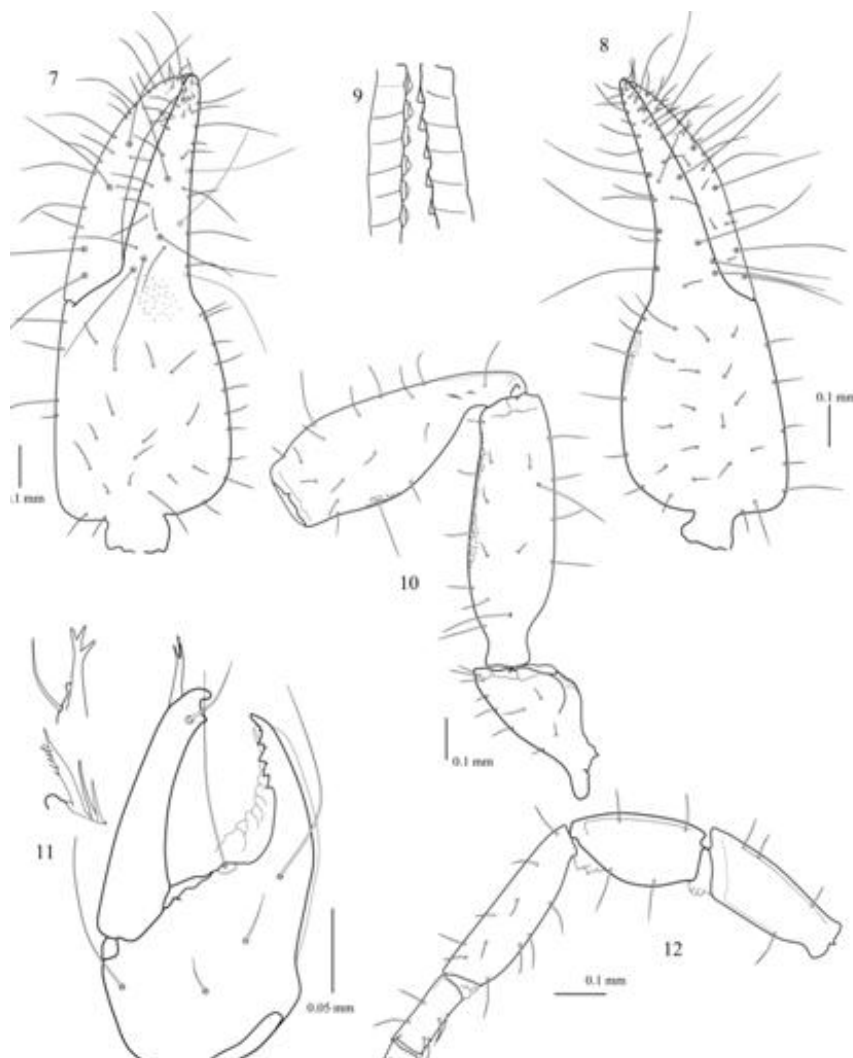
Dimensions in mm: *Carapace*: 1.13/0.60. *Pedipalp*: trochanter 0.50/0.23; femur 0.89/0.25; patella 0.85/0.31; chela (with pedicel) 1.50/0.45; chela (without pedicel) L. 1.40; hand (with pedicel) L.0.73; movable finger L. 0.79. *Leg I*: trochanter 0.15/0.15; femur 0.33/0.13; patella 0.26/0.14; tibia

0.38/0.09; metatarsus 0.14/0.06; tarsus 0.17/0.05. *Leg IV*: trochanter 0.22/0.17; femur 0.21/0.13; patella 0.65/0.23; femur + patella 0.77; tibia 0.57/0.12; metatarsus 0.21/0.08; tarsus 0.24/0.06.

4. RESULTS AND DISCUSSION

Minniza gallagheri Mahnert, 1991, which was previously only known from Oman [1], is here reported for the first time from Iran. A number of differences can be noted between the original description and the Iranian specimen, but they are not sufficient for recognizing a new species. The specimen from Iran is slightly stouter than the types, e.g. in the latter, the pedipalpal femur ratio is 3.90-4.30x, patella 3.00-3.30x, and chela (with pedicel) 3.80-4.20x [4], whereas those of the Iranian specimen are 3.56x, 2.74x, and 3.34x respectively.

Additionally, there are 29-32 cusped teeth on the fixed chelal finger of the types, while the Iranian specimen bears 37. Another observable difference is found in the position of trichobothrium *isb* on the fixed chelal finger, which is located closer to *esb* than to *ist* in the types (judging from Mahnert [4]: Figs 31-32), but slightly closer to *ist* than to *esb* in the Iranian specimen (Fig. 1).



Minniza nigrimanus Mahnert, 1991

Figures 7-12. *Minniza nigrimanus* Mahnert, 1991, ♂: 7. left chela, lateral aspect; 8. right chela, dorsal aspect; 9. chelal teeth; 10. basal segments of pedipalp, dorsal aspect; 11. chelicera, galea and rallum (serrula exterior omitted); 12. leg I (trochanter omitted).

Minniza nigrimanus Mahnert, 1991: 182-183, figs 33-36.

5. MATERIAL EXAMINED

IRAN: Kerman Province: 1♂, Anar [30°52'57"N, 55°18'43"E, altitude 1400 m], leaf litter, April 26 2015, M. Nassirkhani (IAUA).

Dimensions in mm: *Carapace*: 0.87/0.52. *Pedipalp*: trochanter 0.39/0.20; femur 0.66/0.21; patella 0.65/0.26; chela (with pedicel) 1.15/0.42; chela (without pedicel) L. 1.05; hand (with pedicel) L.0.60; movable finger L. 0.60. *Leg I*: femur 0.26/0.10; patella 0.21/0.11; tibia 0.30/0.08; metatarsus 0.12/0.05; tarsus 0.14/0.04. *Leg IV*: femur 0.17/0.11; patella 0.54/0.19; femur + patella 0.62; tibia 0.46/0.11; metatarsus 0.17/0.07; tarsus 0.18/0.06.

6. RESULT AND DISCUSSION

Minniza nigrimanus Mahnert, 1991 which was originally reported from Oman by Mahnert [4], is here recorded from Iran for the first time. The Iranian specimen possesses 33 cusped teeth on the fixed chelal finger (29-32 in the types) and 27 (24-25 in the types) on the movable finger. The carapace of the specimen from Iran bears 20 setae (4:4:4:4:4), whereas the types have 4:6:4:4:4. The chela of the Iranian specimen is stouter than that of the types of *M. nigrimanus* from Oman, e.g. the chela (with pedicel) is 2.74x longer than broad, as opposed to 3.00-3.20x in the types. Also, Iranian specimen has the movable chelal finger as long as the hand (with pedicel), whereas it is longer than the hand (with pedicel) in the types [4].

Based on the shape and coloration of the chela, which are used for separating *M. nigrimanus* from *M. babylonica* and considering the range morphometric variation in the species, the male from Iran is attributed to *M. nigrimanus*.

CONFLICT OF INTEREST STATEMENT

The author declares that he has no competing interest and has not a financial relationship with the organization that sponsored the research.

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