

## NEW FAUNISTIC RECORDS FOR THE TURKISH HARVESTMEN FAUNA (ARACHNIDA: OPILIONES)

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ABSTRACT: In this study, 31 Opiliones samples were collected from the Niđde province, between 2002 and 2004. Consequently 7 species belonging to 6 genera of 3 families were determined and evaluated faunistically. Among them; 4 species are new for the Turkish harvestman fauna: *Leiobunum rotundum* (Latreille, 1798), *L. rupestre* (Herbst, 1799), *Mitopus morio* (Fabricius, 1779) and *Ischyropsalis helwigii* (Panzer, 1794). The characteristic features, world distributions and some ecological datas regarding all species are also given

KEY WORDS: Arachnida, Opiliones, Turkey, Niđde, new record.

Arachnological studies of Turkey began towards the end of the 19th century. Both Turkish and foreign research made important contributions to the Turkish harvestmen fauna. 6125 species of Opiliones have been described so far in 1638 genera (Hallan, 2005), with only 29 species bring recorded from Turkey (Kulczynski, 1903; Nosek, 1905; Roewer, 1952; Gruber, 1968, 1969, 1976, 1979, 1998; Chevrizov, 1979; Bayram, 1994; Snegovaya, 1999; Bayram et al. 2005; Bayram & orak, 2007; orak & Bayram, 2007). Nevertheless, it is impossible to say that the fauna of Turkey is fully investigated. It needs to be studied more comprehensively.

### METHODS

The studies were carried out in different periods between April and September 2002-2004 in Niđde. Samples were collected with pens and aspirator. Specimens were put into jars, preserved in 70% alcohol. All the specimens were deposited in Arachnology Museum of Niđde University (NUAM). All illustrations were made with a Nikon SMZ-U stereomicroscope with drawing tube. Identification references consulted are: Chevrizov (1979) and Babaşođlu (1999). All measurements are in millimetres.

Niđde province is surrounded on three sides by ranges of the Taurus Mountains, including Mount Hasan and the Melendiz mountains (Fig. 15). Surrounded by mountains and at a fairly high altitude the area has a dry and chilly climate and is exposed to snows brought by cold north

winds in winter. Therefore the hillsides are more or less bare of vegetation, with some forest at the higher altitudes.

## RESULTS

### *Leiobunum rotundum* (Latreille, 1798) (Figs. 1-2)

**Materials:** Niğde: 1 male, Pınarbaşı, 37° 52' N, 35° 60' E, 18.05.2003; 1 male, Altunhisar, 37° 59' N, 34° 22' E, 17.06.2003.

**Description.** Male. Dorsal scutum: carapace length 1.3 abdominal portion length 1.9; Chelicera: basal segment 0.5, distal segment 0.7. Lengths of palp [total length (femur+patella+tibia+tarsus)]: 5.7 (0.6+3.3+0.7+4.1); Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 32.4 (7.9+1.0+6.1+7.3+10.1), II 57.0 (13.5+1.1+11.5+9.9+21), III 32.0 (6.7+0.9+6.0+7.9+10.5), IV 45.1 (10.2+1.0+8.3+11.2+14.4).

**Habitat and distribution:** The specimens were collected from stony places of grassland. Norway, Denmark, Sweden, Belgium, Germany, Netherlands, Austria, Czech Republic, Hungaria, Slovakia, Poland, Slovenia, Canary Islands (Blick & Komposch, 2004; Hallan, 2005; Stol, 2007); Turkey (**New record**).

### *Leiobunum rupestre* (Herbst, 1799) (Fig. 3)

**Materials:** Niğde: 2 females, Sazlıca, 37° 54' N, 34° 37' E, 20.07.2003, 2 females, Fertekek, Özbekde, 37° 58' N, 34° 39' E, 22.08.2003.

**Description.** Female. Dorsal scutum: carapace length 1.4 abdominal portion length 2.7; Chelicera: basal segment 0.5, distal segment 1.1. Lengths of palp [total length (femur+patella+tibia+tarsus)]: 3.2 (1.0+0.3+0.5+1.4); Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 34.8 (8.5+1.2+6.5+8.1+10.5), II 63.2 (13.7+1.4+12.5+11.6+24), III 33.2 (8.0+1.1+6.0+8.0+10.1), IV 46.7 (11.0+1.3+8.4+11.5+14.5).

**Habitat and distribution:** The specimens were collected under stones. Norway, Denmark, Sweden, Finland, Germany, Switzerland, Austria, Czech Republic, Hungaria, Poland, Slovenia (Blick & Komposch, 2004; Hallan, 2005; Stol, 2007); Turkey (**New record**).

### *Mitopus morio* (Fabricius, 1779) (Figs. 4-5)

**Materials:** Niğde: 1 female, Gümüşler, 37° 59' N, 34° 46' E, 22.05.2003; 1 female, Fertekek, 37° 58' N, 34° 40' E, 20.07.2003; 2 females, Kayaardı, 37° 58' N, 34° 37' E, 13.03.1996; 2 females, Bor, 37° 53' N, 34° 33' E, 18.07.2003.

**Description.** Female. Dorsal scutum: carapace length 1.9 abdominal portion length 6.4; Chelicera: basal segment 0.7, distal segment 2.1. Lengths of palp [total length (femur+patella+tibia+tarsus)]: 7.1 (2.4+0.8+1.2+2.7); Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 17.2 (3.0+0.9+2.9+3.5+6.9), II 28.2 (5.1+1.4+4.4+5.1+12.2), III 20.1 (3.4+1.0+3.0+4.8+7.9), IV 27.9 (5.0+1.3+4.0+7.1+10.5).

**Habitat and distribution:** The specimens were collected from orchard and meadow places. Norway, Denmark, Sweden, Finland, Belgium, Netherlands, Germany, Switzerland, Austria, Czech Republic, Hungaria, Slovakia, Poland, Slovenia, The Faroe Islands, Iceland (Blick & Komposch, 2004; Hallan, 2005; Stol, 2007); Turkey (**New record**).

### *Opilio saxatilis* C.L. Koch, 1839 (Figs. 6-7)

**Materials:** Niğde: 2 males, Pınarbaşı, 37° 52' N, 35° 63' E, 13.10.2003; 2 males, Uluğaç village, 38° 25' N, 34° 50' E, 18.09.2003; 3 males, Kemerhisar, 37° 49' N, 34° 34' E, 15.08.2003.

**Description.** Male. Dorsal scutum: carapace length 1.8 abdominal portion length 3.9; Chelicera: basal segment 0.8, distal segment 1.9. Lengths of palp [total length (femur+patella+tibia+tarsus)]: 3.9 (1.1+0.5+0.7+1.6); Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 22.4 (4.2+1.2+4.0+4.4+8.6), II 30.7 (6.2+1.6+4.7+6.4+11.8), III 22.6 (4.1+1.1+3.9+4.8+8.7), IV 30.1 (6.1+1.5+4.6+6.3+11.6).

**Habitat and distribution:** The specimens were collected from stony and meadow places. Denmark, Sweden, Belgium, Netherlands, Germany, Switzerland, Austria, Czech Republic, Hungaria, Slovakia, Poland, Slovenia, Turkey (Blick & Komposch, 2004; Stol, 2007).

***Phalangium opilio* Linnaeus, 1761 (Figs. 8-9)**

**Materials:** Niğde: 2 females, Uluğaç village, 38° 25' N, 34° 50' E, 20.05.2003; 2 females, Ferteke, 37° 58' N, 34° 37' E, 24.05.2003; 1 female, Koyunlu, 37° 58' N, 34° 35' E, 25.06.2003; 3 females, Çamardı, 37° 49' N, 34° 59' E, 29.08.2003; 2 females, Ulukışla, 37° 33' N, 34° 28' E, 29.05.2003.

**Description.** Female. Dorsal scutum: carapace length 3.0 abdominal portion length 6.1; Chelicera: basal segment 1.7, distal segment 3.4. Lengths of palp [total length (femur+patella+tibia+tarsus)]: 17.8 (6.4+1.4+3.4+6.6); Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 24.4 (5.4+1.3+4.7+5.5+7.5), II 35.2 (6.9+1.4+6.2+7.2+13.5), III 25.1 (4.2+1.2+4.2+6.7+8.8), IV 32.6 (6.1+1.5+5.2+9.0+10.8).

**Habitat and distribution:** The specimens were collected from meadow, stones and tree trunk. Norway, Denmark, Sweden, Finland, Belgium, Netherlands, Germany, Switzerland, Austria, Czech Republic, Hungaria, Slovakia, Poland, Slovenia, Turkey (Blick & Komposch, 2004; Hallan, 2005; Stol, 2007).

***Zacheus crista* (Brulle, 1832) (Figs. 10-12)**

**Materials:** Niğde: 1 male, Gümüşler, 37° 59' N, 34° 46' E, 18.06.2003.

**Description.** Male. Dorsal scutum: carapace length 2.5 abdominal portion length 8.4; Chelicera: basal segment 0.8, distal segment 2.2. Lengths of palp [total length (femur+patella+tibia+tarsus)]: 4.3 (1.3+0.6+0.8+1.6); Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 11.7 (2.2+1.0+1.8+2.4+4.3), II 17.5 (3.5+1.2+2.5+3.0+7.3), III 12.2 (2.6+1.0+1.5+2.5+4.6), IV 18.8 (4.0+1.3+2.4+4.6+6.5).

**Habitat and distribution:** The specimens were collected from stony places. Azerbaijan, Belgium, Netherlands, Denmark, Norway, Sweden, Germany, Switzerland, Austria, Czech Republic, Hungaria, Slovakia, Poland, Slovenia, Turkey (Snegovaya, 1999; Blick & Komposch, 2004; Hallan, 2005).

***Ischyropsalis helwigii* (Panzer, 1794) (Figs. 13-14)**

**Materials:** Niğde: 1 male, Ferteke, 37° 58' N, 34° 37' E, 01.07.2003.

**Description.** Male. Dorsal scutum: carapace length 3.3 abdominal portion length 4.0; Chelicera: basal segment 3.2, distal segment 6.5. Lengths of palp [total length (femur+patella+tibia+tarsus)]: 8.8 (2.5+1.2+1.5+3.6); Lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 22.2 (5.0+2.2+3.0+4.6+7.4), II 33.2 (6.3+2.1+5.5+5.8+13.5), III 23.9 (4.0+1.8+3.7+5.6+8.8), IV 34.3 (6.1+1.9+5.0+8.5+12.8).

**Habitat and distribution:** The specimens were collected from soil zone. Alps, Germany, Austria, Czech Republic, Pyrenees, Netherlands, Hungaria, Slovenia, Poland (Blick & Komposch, 2004; Hallan, 2005); Turkey (**New record**).

**LITERATURE CITED**

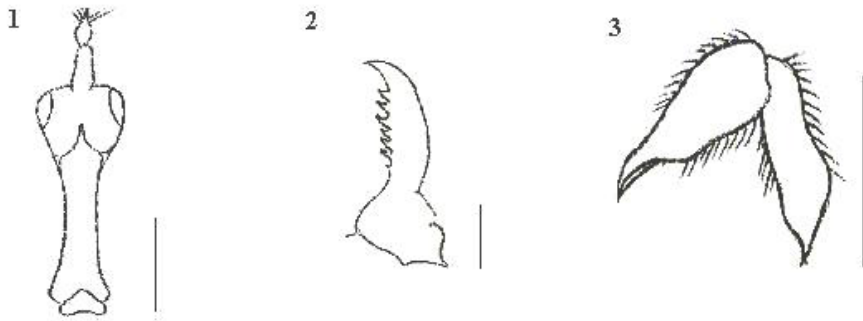
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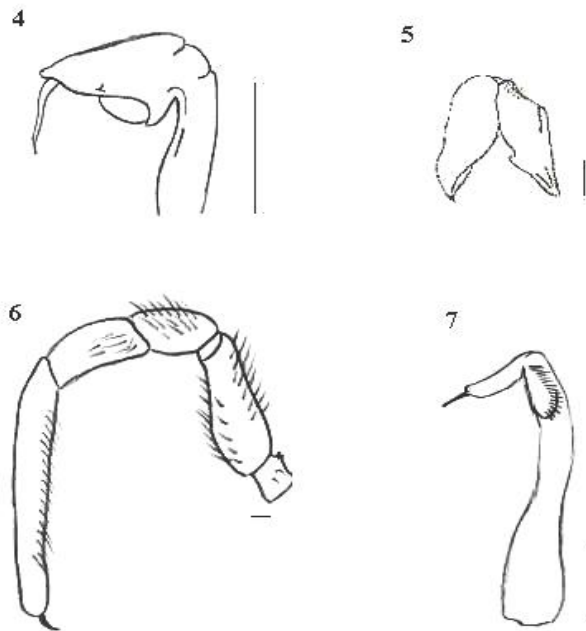
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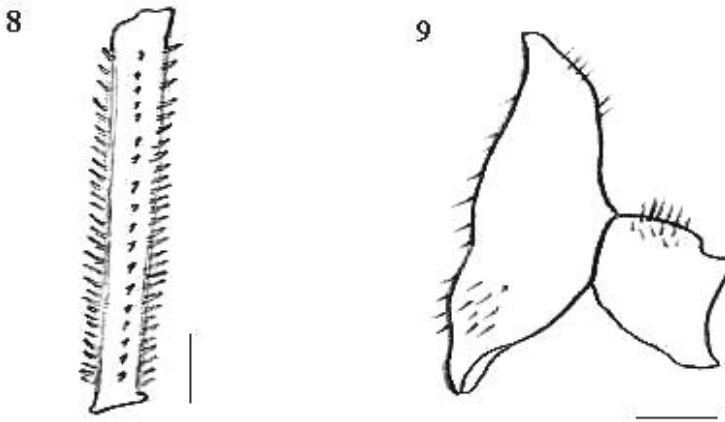
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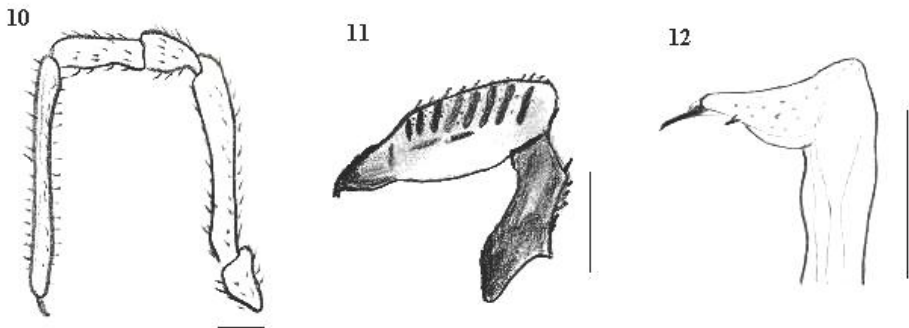
**Figs. 1-3.** *Leobunum rotundum* (♂). (1. penis, 2. pedipalp). *L. rupestre* (♀). (3. chelicera). Scales: 0.5 mm.



**Figs. 4-7.** *Mitopus morio* (♀). (4. penis, 5. chelicera.) *Opilio saxatilis* (♂). (6. pedipalp. 7. penis). Scales: 0.2 mm.

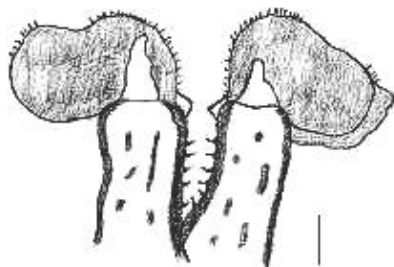


**Figs. 8-9.** *Phalangium opilio* (♀). (8. Leg I, 9. chelicera). Scales: 1 mm.

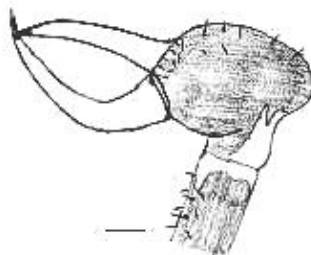


**Figs. 10-12.** *Zacheus crista* (♂). (10. pedipalp, 11. chelicera, 12. penis). Scales: 0.5 mm.

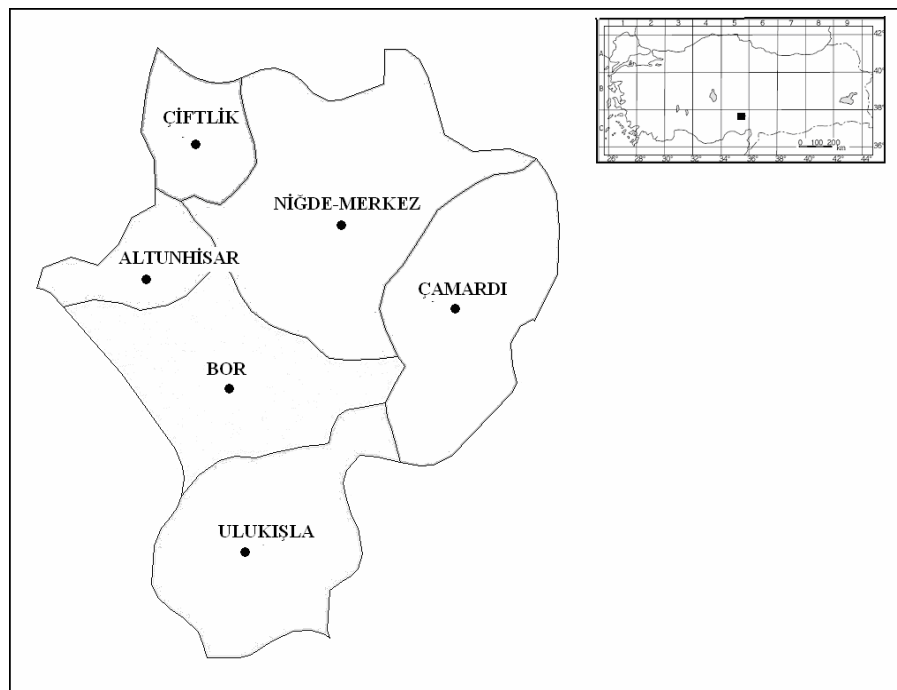
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**Figs. 13-14.** *Ischyropsalis helwigii* (Panzer, 1794) (♂). (chelicera, 13. dorsal view, 14. lateral view). Scales: 1 mm.



**Fig. 15.** Distribution of Niğde Province