A New Species of the Genus *Homolophus* (Opiliones, Phalangiidae) from Turkey

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A NEW SPECIES OF THE GENUS *HOMOLOPHUS* (OPILIONES, PHALANGIIDAE) FROM TURKEY

Kemal Kurt

ABSTRACT: A new species, *Homolophus snegovayae* sp. nov. (Opiliones, Phalangiidae), is described and illustrated based on a male and females collected in southeast Anatolia, Turkey. Differences between the new species and related species are discussed. Photographs of characteristic structures are also provided.

KEYWORDS: Opiliones, Phalangiidae, *Homolophus*, new species, Turkey

INTRODUCTION

Phalangiidae Latreille, 1802 is a family of harvestmen including 394 species in 55 genera worldwide (Kury 2013). *Homolophus* Banks, 1893 (subfamily Opilioninae C. L. Koch, 1839, family Phalangiidae) is distributed in Afghanistan, Azerbaijan, China, India, Japan, Kazakhstan, Korea, Kyrgyzstan, Mongolia, Nepal, Pakistan, Russia, Sakhalin, Siberia, Tajikistan, Tibet, Turkey, and Uzbekistan. The genus includes approximately 21 species in the world (Banks 1893; Šilhavy 1967, 1972; Cokendolpher 1987; Tchemeris et al., 1998; Tchemeris 2000; Tsurusaki et al., 2000; Starega 2003; Snegovaya and Starega 2008, 2011; Snegovaya 2012; Kurt 2014), of which three occur in Turkey: *H. funestus* L. Koch 1877, *H. turcicus* (Roewer 1959), and *H. nakhichevanicus* Snegovaya, 2012 (Kurt 2014).

A new species of the genus *Homolophus* from the southeast Anatolian region is described herein.

MATERIALS AND METHODS

Samples were collected by hand from under stones in southeast Anatolia, Turkey. The samples were identified using a Leica EZ4 stereomicroscope. Specimens were preserved in 70% ethanol and deposited in the collection of the Arachnological Laboratory of Şiran Vocational School, Gümüşhane University (GUSAL), Turkey. All measurements are given in millimeters. Description of the female includes only features that differ from those of the male.

*Homolophus snegovayae* sp. nov. (Figs. 1–6)

Family **Phalangiidae** Latreille, 1802
Genus **Homolophus** Banks, 1893
Type Species **H. arcticus** Banks, 1893

1 Received on September 10, 2014. Accepted on December 27, 2014.
2 Gümüşhane University, Şiran Vocational High School, TR-29700, Gümüşhane, Turkey.
Mailed on April 30, 2015
**Type Material.** HOLOTYPE: 1♂ (GUSAL), TURKEY: Şırnak province, Silopi district, 13-V-2013, N 37° 20' 10" E 42° 34' 30", 1009 m, leg. E. A. Yağmur and H. Koç.

PARATYPES: 2♀ (GUSAL), 2♀ (AZMM= Alaşehir Zoological Museum, Manisa), same data as holotype.

**Distribution.** The species has been collected in Şırnak Province, Turkey (Fig. 1).

![Fig. 1. Location of Homolophus snegovayae sp. nov. in Turkey.](image)

**Diagnosis:** *Homolophus snegovayae* sp. nov. differs from other species in *Homolophus* by its penis structure and other morphological characters.

**Etymology:** The specific epithet is given in honor of Dr. Nataly Yu. Snegovaya (Zoological Institute NAS of Azerbaijan) who has made great contributions to the knowledge of harvestmen.

**Description:** Body length 5.5, width 3.05; chelicera: basal segment 1.2, distal segment 1.55.

*Body* (Fig. 2). Medium-sized, form as shown in Figure 2. Preocular area of cephalothorax with a mound consisting of several long denticles. Cephalothorax, lateral borders of eye mound, and around opening of odoriferous gland with black-tipped denticles. Level of legs III and IV with three black-tipped denticles. Cephalothorax yellow with irregular black spots. Abdomen dorsally with indistinct light brownish-yellow saddle.

Abdominal tergites with transverse rows of black-tipped denticles and scattered dark brown spots.

*Tuber oculorum* (Fig. 2a, b, c). Eye tubercle low with 4–5 long black-tipped denticles in two rows.
Ventral side. Coxae and abdomen ventrally covered with small black-tipped denticles. Genital operculum with sparse hairs.

Chelicerae (Fig. 3). Normal structure, not enlarged. Basal segment dorsally with several black-tipped denticles, without a ventral spur. Dorsal distal segment with few denticles, entirely setose.

Pedipalp (Fig. 4). Normally structured, strong, and robust. Femur ventrally and apical-dorsally covered with numerous black-tipped denticles and setae; patella dorsally and laterally with black-tipped denticles; tibia with denticles and setae.

Fig. 2. Dorsal view of Homolophus snegovayae sp. nov.: a. Body, dorsal view, male; b. Body, dorsal view, female; c. Cephalothorax, dorsal view, male; d. Abdomen, dorsal view, male.
setae; tarsus only with setae, but male tarsus covered ventrally with microdenticles; tarsal claw smooth.

**Legs** (Fig. 5). Not very long; pairs I and III thicker than II and IV. Coxae laterally and dorsally with black-tipped denticles. Femur, patella, and tibia with longitudinal rows of black-tipped denticles. Metatarsus and tarsus covered with setae but male metatarsus ventrally with black denticles.

**Male genital morphology** (Fig. 6). Penis length 3.2; glans length 0.4. Penis dorsoventrally flattened; truncus not very wide at the base, then widened toward the center, again narrowed at the subapex; glans wedge-shaped; stylus long.

**Coloration.** Body color yellowish brown, with many dark brown spots. Chelicerae, palps and legs yellowish brown.

**Female.** Body length 7.0, width 4.0; chelicera: basal segment 1.32; distal segment 1.68. General appearance is similar to that of the male, but the body is larger and wider (Fig. 2b). Measurements of the male holotype and female paratype are given in Table 1.

**DISCUSSION**

Fig. 4. Pedipalp of *Homolophus snegovayae* sp. nov.: a, b. Pedipalp, lateral view, male; c. Pedipalp, lateral view, female.

Fig. 5. The first pair of legs of *Homolophus snegovayae* sp. nov., female: a. Entire leg, lateral view; b. Femur, patella and tibia, lateral view; c. Metatarsus and tarsus, lateral view.
1967), and *H. nakhichevanicus* Snegovaya, 2012, due to their short legs, are gathered within the same group (Snegovaya, 2012). The differences among these species are given in Table 2. The new species, *H. snegovayae* sp. nov., is the least similar to *H. turcicus*; it differs by having shorter legs (in *H. turcicus* the legs are very long), palp with more developed denticles (in *H. turcicus* palp is poorly equipped), distal segment of chelicerae is without a zebra-like striped pattern (in *H. turcicus* distal segment is with a zebra-like striped pattern), presence of more developed long denticles in dorsal view (*H. turcicus* with small denticles in dorsal view), coxae and abdomen ventrally covered with small denticles (in *H. turcicus* hairs are only ventrally on the body).

ACKNOWLEDGMENTS

I am very grateful to N. Snegovaya (Institute of Zoology NAS of Azerbaijan) for her advice and valuable comments. Also, I thank E.A. Yağmur (Celal Bayar University, Manisa) and H. Koç (Sinop University) for collecting the samples.

LITERATURE CITED


Table 1. Measurements (in mm) of the male holotype (female paratype).

<table>
<thead>
<tr>
<th></th>
<th>Femur</th>
<th>Patella</th>
<th>Tibia</th>
<th>Metatarsus</th>
<th>Tarsus</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palp</td>
<td>1.3(1.26-1.2)</td>
<td>0.5(0.46-0.4)</td>
<td>0.8(0.7-0.6)</td>
<td>-(-)</td>
<td>1.32(1.28-1.2)</td>
<td>3.92(3.7-3.4)</td>
</tr>
<tr>
<td>Leg I</td>
<td>2.5(2.6-2.5)</td>
<td>0.9(1.1-1.0)</td>
<td>2.0(2.2-2.0)</td>
<td>2.7(3.0-2.8)</td>
<td>3.3(3.5-3.2)</td>
<td>11.4(12.4-11.5)</td>
</tr>
<tr>
<td>Leg II</td>
<td>5.0(5.1-4.8)</td>
<td>1.4(1.6-1.5)</td>
<td>4.7(4.75-4.6)</td>
<td>4.2(4.3-4.1)</td>
<td>7.0(7.5-7.3)</td>
<td>22.3(23.25-22.3)</td>
</tr>
<tr>
<td>Leg III</td>
<td>2.6(2.6-2.4)</td>
<td>0.9(1.0-0.9)</td>
<td>2.3(2.4-2.3)</td>
<td>2.2(2.4-2.2)</td>
<td>3.1(3.3-3.0)</td>
<td>11.1(11.7-10.8)</td>
</tr>
<tr>
<td>Leg IV</td>
<td>3.8(3.9-3.7)</td>
<td>1.1(1.2-1.1)</td>
<td>2.8(2.9-2.7)</td>
<td>3.6(3.8-3.6)</td>
<td>4.5(4.9-4.7)</td>
<td>15.8(16.7-15.8)</td>
</tr>
</tbody>
</table>
Table 2. Main diagnostic characters of morphologically related species from the genus *Homolophus*.

<table>
<thead>
<tr>
<th>Characters</th>
<th><em>H. przewalskii</em></th>
<th><em>H. gobiensis</em></th>
<th><em>H. vladimira</em></th>
<th><em>H. nakhichevanicus</em></th>
<th><em>H. snegovayae</em> sp. nov.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chelicerae</td>
<td>strong, distal segment with zebra-like striped pattern (Snegovaya 2012)</td>
<td>short and robust (Tsurusaki, Tchemeris and Logunov 2000)</td>
<td>short, normal structure (Silhavy 1967)</td>
<td>normal structure, not enlarged; distal segment with zebra-like striped pattern (Snegovaya 2012; Kurt 2014)</td>
<td>normal structure, not enlarged; distal segment without zebra-like striped pattern</td>
</tr>
<tr>
<td>Palp</td>
<td>normally structured, strong and robust; femur with ventrally scarce small denticles; patella with setae and granule (Snegovaya 2012)</td>
<td>rather short and thick; femur ventrally with well-developed tubercles; patella with numerous tubercles</td>
<td>short and thick; femur ventrally with sparsely scattered tubercles; patella with setae</td>
<td>normally structured, strong, robust; femur ventrally and dorsally with numerous denticles; patella with denticles (Snegovaya 2012; Kurt 2014)</td>
<td>normally structured, strong and robust; femur ventrally and apically-dorsally with numerous denticles; patella with denticles</td>
</tr>
<tr>
<td>Preocular area</td>
<td>mound-shaped, consisting of numerous denticles (Snegovaya 2012)</td>
<td>mound-shaped, consisting of several denticles (Tsurusaki, Tchemeris and Logunov 2000)</td>
<td>crescent-shaped, consisting of small denticles (Silhavy 1967)</td>
<td>crown-shaped, consisting of a group of large denticles (Snegovaya 2012; Kurt 2014)</td>
<td>mound-shaped, consisting of several long denticles</td>
</tr>
</tbody>
</table>

– *Continued*
Table 2. Main diagnostic characters of morphologically related species from the genus Homolophus. – Continued

<table>
<thead>
<tr>
<th>Characters</th>
<th><em>H. przewalskii</em></th>
<th><em>H. gobiensis</em></th>
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<th><em>H. nakhichevanicus</em></th>
<th><em>H. snegovayae</em> sp. nov.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penis</td>
<td>truncus wide at the base, then narrowed at the subapex; glanstriangular-shaped (Snegovaya 2012)</td>
<td>truncus very wide at the base, widest at center, then narrowed at the subapex, glans rectangular-shaped (Tsurusaki, Tchemeris and Logunov 2000)</td>
<td>truncus wide at the base, then narrowed toward the center, again widened taking a form of small wings; glans rectangular-shaped (Silhavy 19670)</td>
<td>truncus not very wide at the base, then narrowed at the subapex; glans wedge-shaped (Snegovaya 2012; Kurt 2014)</td>
<td>truncus not very wide at the base, then widened toward the center, again narrowed at the subapex; glans wedge-shaped</td>
</tr>
<tr>
<td>Distribution</td>
<td>Russia, Kazakhstan (Snegovaya 2012)</td>
<td>Mongolia (Snegovaya 2012)</td>
<td>Kazakhstan (Snegovaya 2012)</td>
<td>Azerbaijan, Turkey (Snegovaya 2012; Kurt, 2014)</td>
<td>Turkey</td>
</tr>
</tbody>
</table>