



A new harvestman species (Arachnida: Opiliones: Phalangiidae: *Homolophus*) from Nakhichevan Autonomous Republic (Azerbaijan)

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Abstract: A new harvestman species *Homolophus nakhichevanicus* sp.n of the family Phalangiidae with photos and drawings is described from mountains in territory of Nakhichevan Autonomous Republic, Azerbaijan. This is eighth harvestmen species from this territory.

Key words: Harvestmen, *Homolophus*, new species, Nakhichevan

INTRODUCTION

Nakhichevan Autonomous Republic (Naxçıvan Muxtar Respublikası) is situated in the South-East of the Transcaucasus plateau (Fig. 1). The average height above sea level is 1,450 m. The majority of the territory of Nakhichevan Autonomous Republic is surrounded by the Zangazur and Daralayaz mountain ridges of the Minor Caucasus. The Nakhichevan Autonomous Republic exclave of Azerbaijan, in the north and the east (246 km) borders to Armenia, in the west and south with Turkey (11 km) and Iran (204 km).

Before our (others listed in acknowledgements) explorations only seven harvestman species were known for Nakhichevan fauna (Morin 1937): *Opilio parietinus* (De Geer, 1778), *O. coxipunctus* (Soerensen, 1912), *Phalangium saxatile* C. Koch, 1839 var. *znoiko* Morin, 1937, *Paropilio strandi* Nosek, 1905, *Eudasylobus nigricoxis* Simon, 1878 var. *znoiko* Morin, 1937, *Opilio lederi* Roewer, 1911, *Platybunus nigrovittatus* Simon, 1879. However, some of these statements seems doubtful today and the revision of Morin's material would be needed. Unfortunately, it is not possible, because this collection was lost during the Second World War (report from Odessa State University).

As a result of new exploration of the territory of Nakhichevan, a new species has been found, belonging to the genus *Homolophus* Banks, which differs considerably from all known congeners.

Abbreviation used: ZMUM – Zoological Museum, University of Moscow, Russia; RCNS – Reference collection of N.Snegovaya, Baku, Azerbaijan.

TAXONOMY

***Homolophus* Banks, 1893**

The genus *Homolophus* Banks, 1893, currently includes approximately 20 species (Šilhavý, 1967, 1972; Cokendolpher 1987; Tsurusaki, Tchemeris & Logunov, 2000; Tchemeris 2000; Tchemeris, Logunov & Tsurusaki 1998; Staręga 2003; Snegovaya & Staręga, 2008) from various part of Eurasia (Central Asia, Japan, Siberia, China, etc.). Revision of this genus is needed, because there are some doubtful species (long legged group of species, such as *Homolophus potanini* (Simon, 1895) and some others). Considering the changing diagnosis of

the genus by different authors (Cokendolpher 1987, Tsurusaki, Tchemeris & Logunov 2000, Snegovaya & Starega, 2008), I conclude that the basic difference between *Opilio* and *Homolophus* is in the structure of the penis. According to the generic diagnosis provided by Snegovaya and Starega (2008), the “Penis without lateral incisions or similar structures in the apical part of the shaft; shaft often flattened dorso-ventrally, particularly in distal part; glans cuneiform, in profile mostly triangular with rounded “lower” corner; stylus relatively long”.



Fig. 1. Type locality of *Homolophus nakhichevanicus* sp. n. and the location of its known stands.



Figs 2–5. Habitat of *Homolophus nakhichevanicus* sp. n.; 2–3 – type locality from Babek distr., Sirab Village; 4–5 – Shakhbuz distr., environs of Bichenek Village.

The genus *Homolophus* was incorrectly marked for the first time from the territory of Azerbaijan (*Homolophus azerbaijanicus*, Lenkoran, South Azerbaijan) by Snegovaya & Staręga (2011). Despite this, the taxonomic status of that species needs further study. Species placed in *Homolophus* were earlier noted also from Turkey – *Homolophus turcicus* (Roewer, 1959) and *H. funestus* L. Koch, 1877 (Roewer 1959; Kurt et al. 2008), but the second (*H. funestus*) recognition (Kurt et al.) was probably misidentified.

***Homolophus nakhichevanicus* sp. n.**

(Figs 6–20)

Material. Holotype: 1 ♂ (ZMUM), Nakhichevan, Babek distr., Sirab, 1192 m, 39°18.828'N, 45°31.412'E, 21 June 2011, leg. N. Snegovaya. Paratypes: 1 ♀ (RCNS), Sharur distr., ca 3 km E of Akhura Vill., 39°34'N, 45°11'E, 1400 m, 2 June 2003, leg. H. Aliyev; 2 ♀♀, 1 juv. (RCNS) Sharur distr., Dasharkh Vill., 39°33.629'N, 45°02.53'E, 870 m, 1-4 June 2003, leg. Yu. Marusik; 12 juv. (RCNS), in the same locality, May–June 2003, leg. H. Aliyev; 2 ♂, 1 juv. (RCNS), Shakhbuz distr., environs of Bichenek Vill., 1668 m, 24 June 2012, 39°31.301'N, 45°46.197'E, leg. H. Aliyev (Fig. 1).

Etymology. The species is named after the type locality, Nakhichevan AR (Azerbaijan).

Habitat. This species was collected under stones on sandy slopes (Figs 2–5).

Male. Body 5.7 mm long, 3.2 wide. Body nearly rectangular, covered by large, black-tipped denticles (Figs 6–7). Eye mound low, twice its diameter from the anterior margin of the carapace, without denticles and setae. Anterior margin of cephalothorax with group of large denticles, forming a crown. Venter covered only with setae. Body yellow with dark and light spots of different sizes and shapes. Dorsum with longitudinal row of whitish-yellow dots forming a stripe.

Legs not very long, pair I slightly thickened. All leg segments with longitudinal rows of large denticles, especially femora. Lengths of legs: I 3.5+1.4+3.0+4.4+5.4 = 17.7, II 6.6+2.0+7.0+6.6+11.5 = 33.7, III 3.6+1.5+3.4+4.6+5.4 = 18.5, IV 5.0+1.6+4.5+6.5+7.5 = 25.1.

Chelicera not enlarged, I and II segment dorsally with denticles (Figs 8–9). I segment 2.0, II – 2.25. Pedipalps robust, femur and tibia dorsally and ventrally covered with denticles, patella dorsally with denticles (Figs 10–11). Length of palpal segments: femur 1.5, patella 0.7, tibia 1.1, tarsus 1.75; total length 1.41.

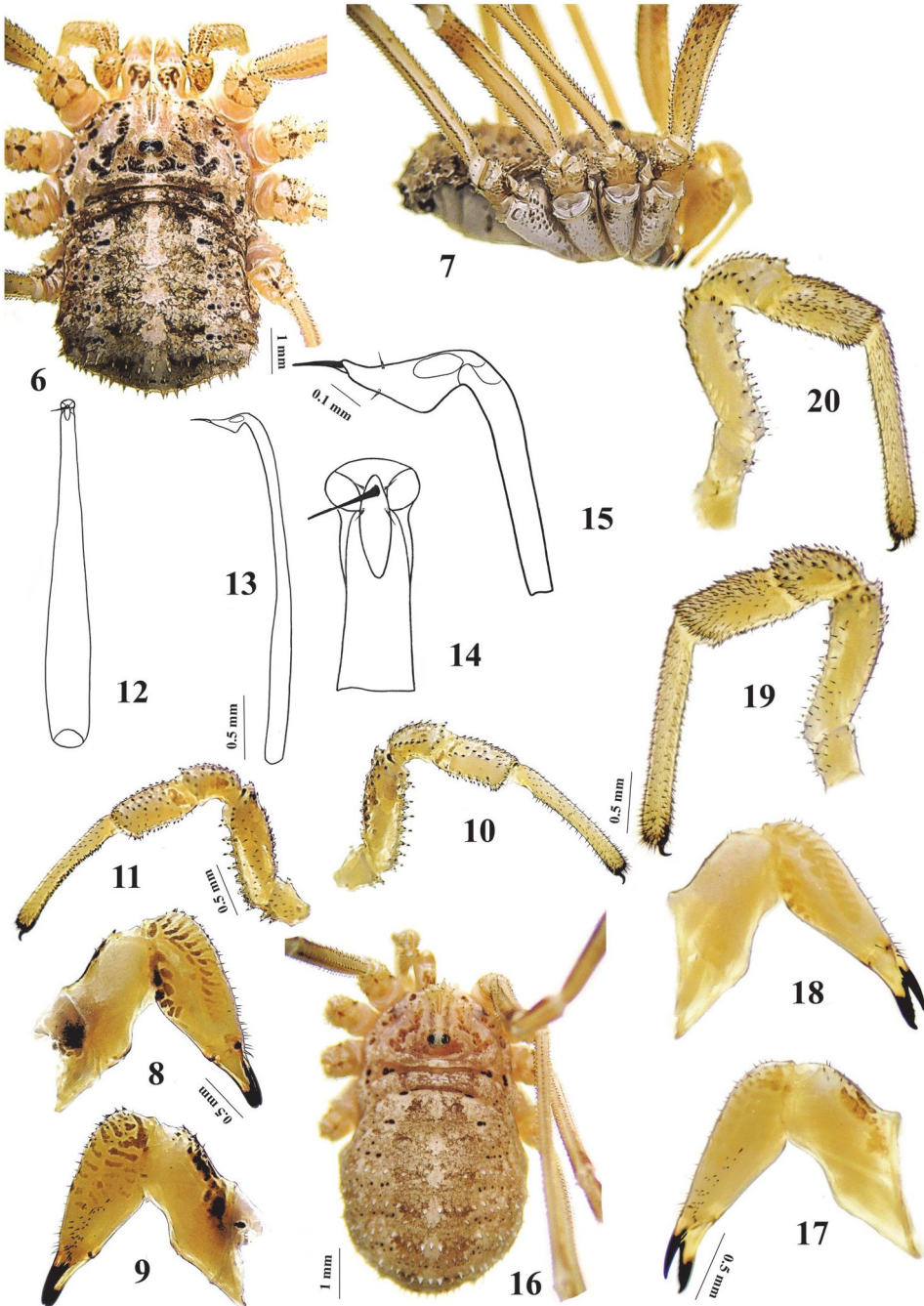
Penis base not very wide, corpus narrowed to top (Figs 12–15). Glans triangular, stylus long. Penis shaft length 2.7, glans – 0.35, stylus – 0.15.

Female. Body 6.6 long, 3.5 wide (Fig. 16). Differs from male in being larger, more roundish body and presence of denticles on eye mound. Chelicera: I segment 1.6, II – 1.8 (Figs. 17-18). Length of palpal segments: femur 1.3, patella 0.6, tibia 0.8, tarsus 1.7 (Figs. 19–20).

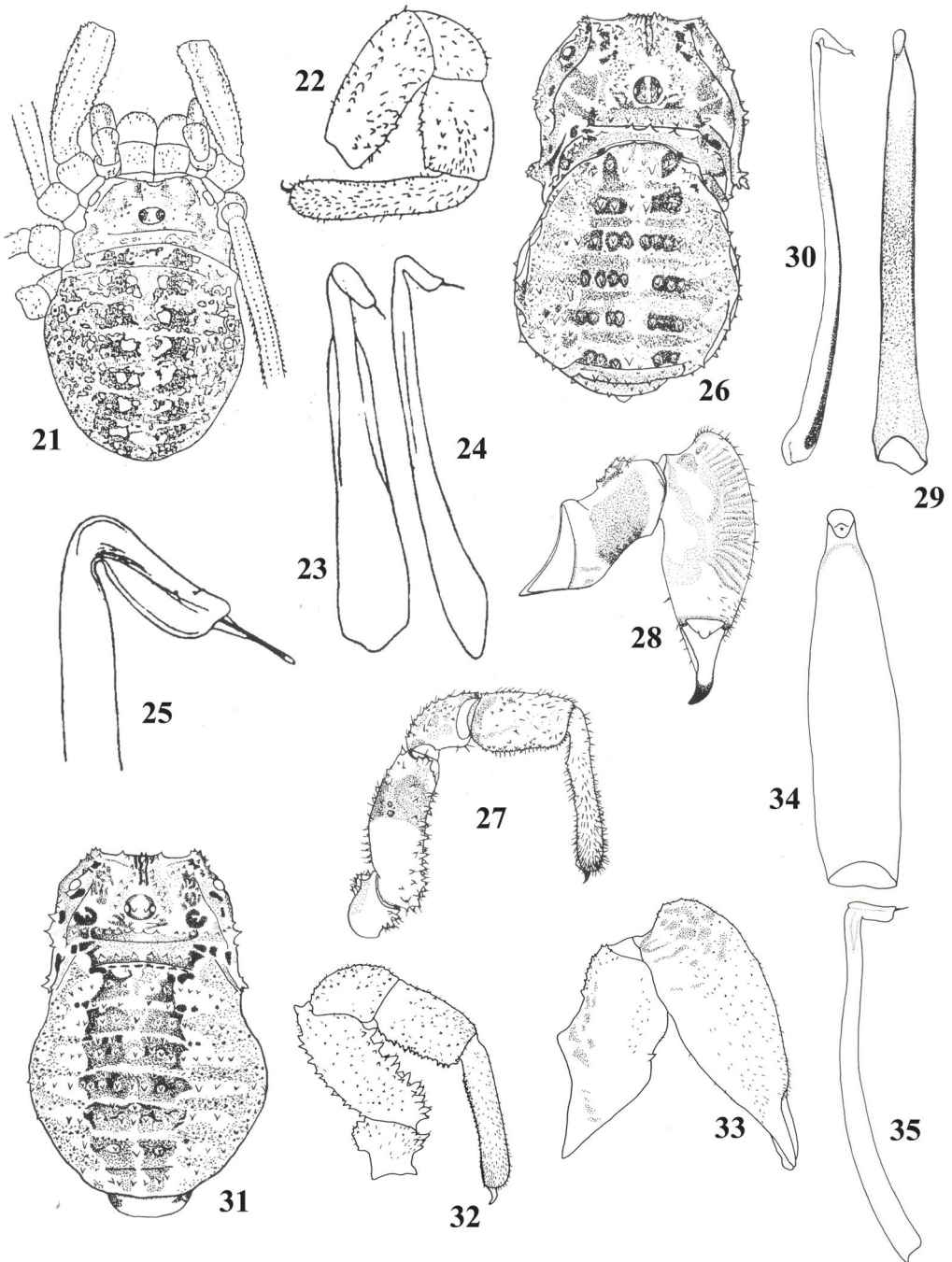
Lengths of legs: I 3.0+1.3+2.5+3.5+4.6 = 14.9, II 6.5+2.0+6.0+5.6+10.2 = 30.3, III 3.5+1.4+2.7+4.0+5.0 = 16.6, IV 5.2+1.5+4.2+6.5+7.8 = 25.2.

Diagnosis. Within the genus *Homolophus*, the present new species belongs to the short legged group of species shown in Figs 21–35, i.e. *Homolophus przewalskii* (Staręga, 1978) (Khakassia, Russia; Kazakhstan), *H. gobiensis* Tsurusaki, Tchemeris et Logunov, 2000 (Mongolia), *H. vladimirae* (Šilhavý, 1967) (Kazakhstan). *H. nakhichevanicus* sp. n. has similar short legs but differs from all of them by its penis structure and other details.

The most similar to the new species is *Homolophus przewalskii* (Figs 26–30), but differs from it by the followings characters: smaller size of the body (length 5.7 versus 9.90 mm), shorter legs, eye mound very low, without denticles in males; anterior margin of cephalothorax with large denticles, forming a crown; chelicerae not very strong; pedipals shorter and segments thinner; glans of penis more triangular with two pair of setae. The new species differs



Figs 6–20. *Homolophus nakhichevanicus* sp. n.; 6–15 – male, 16–20 – female; 6 – body, dorsal view; 7 – body, lateral view; 8 – right chelicera, retrolateral view; 9 – right chelicera, prolateral view; 10 – right pedipalpus, retrolateral view; 11 – right pedipalpus, prolateral view; 12 – ventral view of penis; 13 – lateral view of penis; 14 – glans, ventral view; 15 – glans of penis, lateral view; 16 – body, dorsal view; 17 – right chelicera, prolateral view; 18 – right chelicera, retrolateral view; 19 – right pedipalpus, prolateral view; 20 – right pedipalpus, retrolateral view. Scale bars: 3, 4, 13 – 1 mm; 5–10, 14–17 – 0.5 mm; 11–12 – 0.1 mm.



Figs 21–35. Different species of genus *Homolophus*. 21–25 – *Homolophus vladimirae* (Šilhavý, 1967): 21 – body, dorsal view, 22 – pedipalpus, lateral view, 23 – ventral view of penis, 24 – lateral view of penis, 25 – glans, lateral view; 26–30 – *Homolophus przewalskii* (Starega, 1978): 26 – body, dorsal view, 27 – pedipalpus, lateral view, 28 – chelicerae, lateral view, 29 – ventral view of penis, 30 – lateral view of penis; 31–35 – *Homolophus gobiensis* Tsurusaki, Tcherneris et Logunov, 2000: 31 – body, dorsal view, 32 – pedipalpus, lateral view, 33 – chelicerae, lateral view, 34 – ventral view of penis, 35 – lateral view of penis.

from *H. vladimirae* (Figs 21–25) by less robust chelicerae, presence of large denticles on body surface and the structure of penis (*H. vladimirae* has appendages on the truncus of penis). *H. nakhichevanicus* sp. n. differs from *H. gobiensis* (Figs. 31–35) also by less robust chelicerae and pedipalps and also by other penis structure (in *H. gobiensis*, penis is with thick and short truncus). The least similar to the new species is *H. turcicus* that differs by having shorter legs, presence of more developed denticles on anterior margin of cephalothorax, and by morphology of the penis.

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REFERENCES

- COKENDOLPHER J. C. 1987. On the identity of the genus *Homolophus*: A senior synonym of *Euphalangium* (Opiliones: Phalangiidae). *Acta Arachnologica* 35: 89–96.
- KURT K., DEMIR H., SEYYAR O. & TOPCU A. 2008. Some harvestmen records (Arachnida: Opiliones) from Nigde Province of Turkey. *Serket* 11: 2–6.
- MORIN S. M. 1937. Kavkaz'ki Opiliones – kosari. *Trudi Odes'kogo Deržavnogo Universitetu*, Biologia 2: 209–222.
- ROEWER C. F. 1959. Die Araneae, Solifuga und Opiliones der Sammlungen des Herrn Dr. K. Lindberg aus Griechenland, Creta, Anatolien, Iran und Indien. *Göteborgs Kungliga Vetenskaps- och Vitterhets-Samhälles handlingar*, Göteborg, Ser. B, Matematiska och naturvetenskapliga skrifter, 8 (4): 1–47.
- ŠILHAVÝ V. 1967. Beitrag zur Kenntnis der Weberknecht-fauna des Sowjetischen Zentral-Asien (Arach., Opilionea). *Československá Společnost Entomologická, Praha*, 64 (6): 472–478.
- ŠILHAVÝ V. 1972. Asiatische Arten der Gattung *Euphalangium* Roewer (Arachnida: Opiliones: Phalangiidae). *Senckenbergiana Biologica, Frankfurt*, 53 (1/2): 101–108.
- STAREGA W. 2008. A new *Homolophus* species (Opiliones: Phalangiidae) from Lenkoran zone in Azerbaijan. *Acta Arachnologica* 57 (1): 15–17.
- STAREGA W. 2011. Harvestmen (Arachnida, Opiliones) from Talysh, with description of a new genus and other taxonomical changes. *Fragmenta Faunistica* 54: 47–58.
- STAREGA W. 2003. On the identity and synonymies of some Asiatic Opilioninae (Opiliones: Phalangiidae). *Acta Arachnologica* 52 (2): 91–102.
- TCHMERIS A. N. 2000. Contribution to the knowledge of the harvestman fauna in the Russian Far East and Eastern Siberia (Arachnida: Opiliones). *Arthropoda selecta, Moskva*, 9 (1): 31–49.
- TCHMERIS A. N., LOGUNOV D. V. & TSURUSAKI N. 1998. A contribution to the knowledge of the harvestman fauna of Siberia (Arachnida: Opiliones). *Arthropoda Selecta* 7: 189–199.
- TSURUSAKI N., TCHMERIS A. N. & LOGUNOV D. V. 2000. Two new species of Opiliones from Southern Siberia and Mongolia, with an establishment of a new genus and redefinition of the genus *Homolophus* (Arachnida: Opiliones: Phalangiidae). *Acta Arachnologica* 49 (1): 73–86.

STRESZCZENIE

[Nowy gatunek z rodzaju *Homolophus* (Arachnida: Opiliones: Phalangiidae) z Nakhichevan Autonomous Republic (Azerbaijan)]

Praca zawiera opis nowego gatunku kosarza *Homolophus nakhichevanicus* sp. n. z rodziny Phalangiidae wraz z fotografiami i rysunkami. Okazy tego gatunku znalezione w górach na terytorium Autonomicznej Republiki Nakhichevan (Azerbejdżan). Jest to ósmy gatunek kosarza wykazany z tego obszaru.

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