

РОССИЙСКАЯ АКАДЕМИЯ НАУК  
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RUSSIAN ACADEMY OF SCIENCES  
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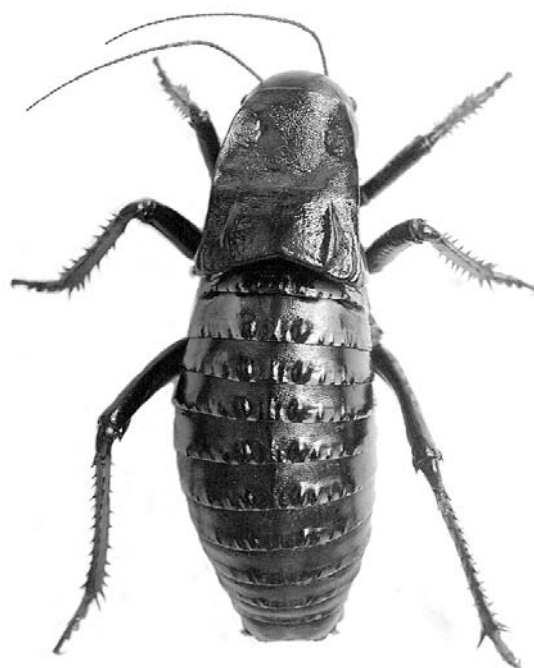


# Кавказский Энтомологический Бюллетень

CAUCASIAN ENTOMOLOGICAL BULLETIN

Том 9. Вып. 2

Vol. 9. No. 2



Ростов-на-Дону  
2013

## A new species of the genus *Tapinoma* Foerster, 1850 (Hymenoptera: Formicidae) from India

### Новый вид рода *Tapinoma* Foerster, 1850 (Hymenoptera: Formicidae) из Индии

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**Key words:** Hymenoptera, Formicidae, *Tapinoma*, India, new species.

**Ключевые слова:** Hymenoptera, Formicidae, *Tapinoma*, Индия, новый вид.

**Abstract.** A new species of the genus *Tapinoma* Foerster, 1850 is described from the North-Western Himalayas, India. *T. himalaica* sp. n. belongs to the *lugubre* species-group, which includes, beside the type species, also *T. wilsoni* Sharaf, Aldawood, 2012. The main distinguishing feature of this species-group is the structure of propodeum. All discussed in this article species have a propodeum with a pointed apex. A new species described here, differs from another known species of this group more narrow head and a longer scape.

**Резюме.** Описан новый вид рода *Tapinoma* Foerster, 1850 из Северо-Западных Гималаев, Индия. *T. himalaica* sp. n. отнесен нами к группе видов *lugubre*, к которой, помимо типового вида, мы также относим *T. wilsoni* Sharaf, Aldawood, 2012. Основным отличительным признаком этой группы видов является строение проподеума. Рассмотренные в данной статье три вида имеют проподеум с заостренной вершиной. Описанный новый вид отличается от всех ранее известных видов группы более узкой головой и более длинным скапусом.

## Introduction

The genus *Tapinoma* Foerster, 1850 – one of the “biggest” genera of subfamily Dolichoderinae, includes 71 extant species [Bolton, 2013] and has a worldwide distribution. Some of species-groups of this genus are in need of revision or revising of taxonomic rank (for example such currents synonyms of the genus *Tapinoma* as *Zatapinoma* Wheeler, 1928 and *Semonius* Forel, 1910 (Dubovikoff’s opinion)). Described below, a new species belongs to the *lugubre* species-group. At present time, this group includes three species: *T. lugubre* Santschi, 1917 (Africa) [Santschi, 1917], *T. wilsoni* Sharaf, Aldawood, 2012 (Saudi Arabia) [Sharaf et al., 2012] and *T. himalaica* sp. n. (India). But it’s possible, few African species of this species-group are still undescribed. One of the main characters of this species-group is shape of

propodeum. All three species has a propodeal angle with a distinct ridge or carina and with high acute end.

## Materials and methods

The specimens were collected using honey bait, winker, beating vegetation and hand picking methods from Shivalik range of the North-Western Himalaya. The digital images were taken with a Nikon SMZ–1500 stereo zoom microscope using Auto-Montage software and were edited with Adobe Photoshop CS5.

Measurements and indices follow Shattuck [1990]: LES (lateral eye space), EW (eye width), ES (eye spread), HW (head width), OOD (occiput-ocular distance), EL (eye length), OCD (ocular-clypeal distance), CL (clypeal length), HL (head length), SL (scape length), PnL (pronotal length), ML (mesonotal length), PpL (propodeal length), CI (cephalic index), OI (ocular index), SI (scape index).

Acronyms of depositories:

BMNH – The Natural History Museum, London (= British Museum Natural History), U.K.;

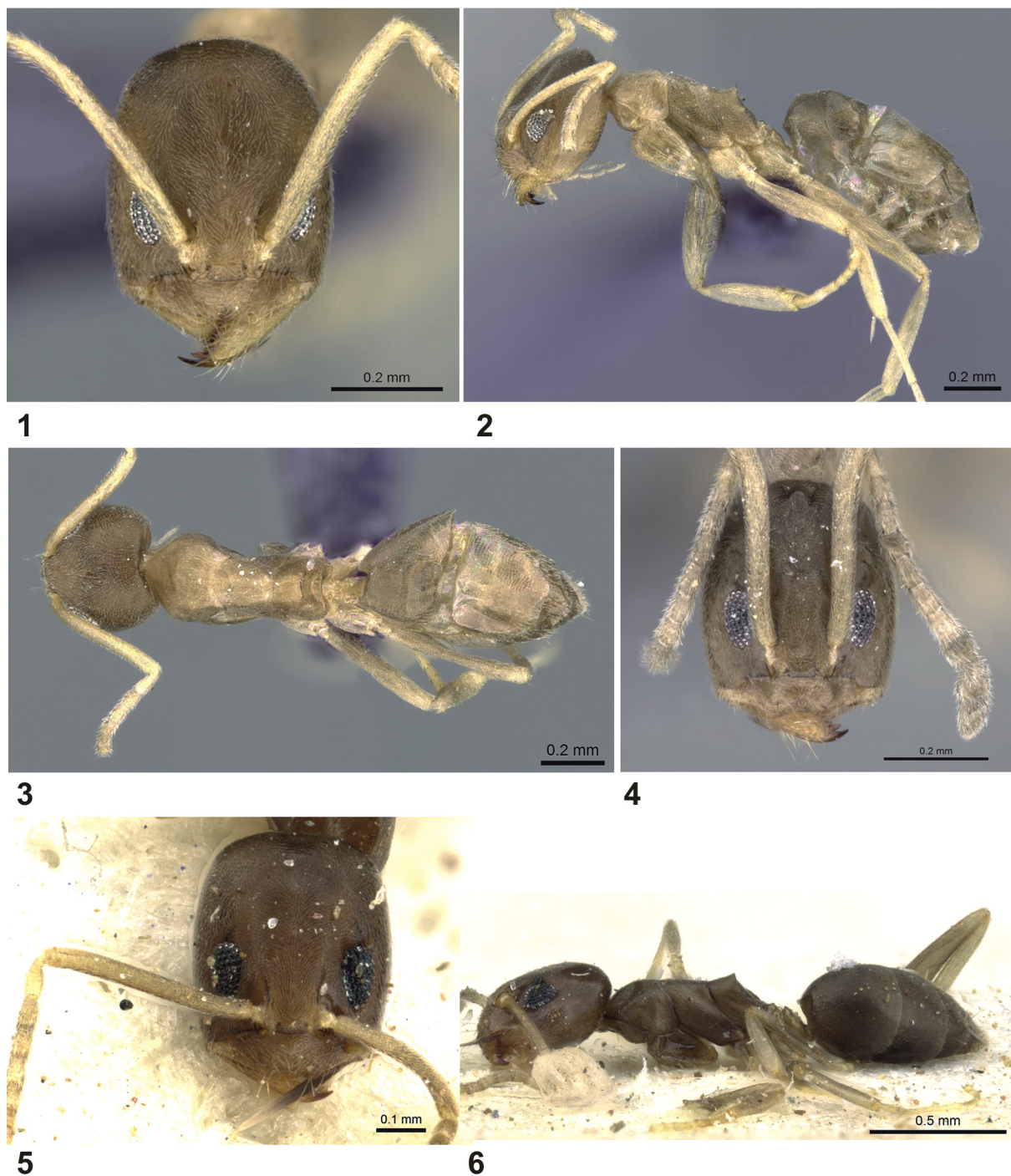
PUPAC – Punjabi University Patiala Ant Collection at Department of Zoology and Environmental Sciences, Punjabi University, Patiala, Punjab, India;

ZISP – Zoological Institute of Russian Academy of Sciences, St. Petersburg, Russia.

*Tapinoma himalaica* sp. n.  
(Color plate 12: figs 1–3)

**Material.** Holotype (worker): India: Himachal Pradesh, Terrace (31.928591°N / 75.931342°E, 420 m alt.), 25.09.2009, honey bait (leg. R. Kumar). Paratypes: 3 (w), Himachal Pradesh, Kotla (560 m alt.), 13.10.2008, beating; 9 (w), Himachal Pradesh, Terrace (420 m alt.), 25.09.2009, honey bait; 3 (w), Terrace (420 m alt.), 25.09.2009, beating; 2 (w), Siholi (550 m alt.), 2.10.2009, winker; 3 (w), Jammu and Kashmir, Ramnagar Wildlife Sanctuary, Manda (400 m alt.), 4.08.2010, hand picking; 2 (w), Punjab, Dharampur (450 m alt.), beating; leg. R. Kumar. Holotype and paratypes are in PUPAC; 1 paratype will be deposited in BMNH; 4 paratypes will be deposited in ZISP.

**Measurements (holotype and followed by the range for 10 paratype workers):** LES 0.05 (0.03–0.05), EW 0.06 (0.06–



Figs 1–6. Species of *lugubre* species-group of the genus *Tapinoma* Foerster, 1850.

1–3 – *T. himalaica* sp. n., paratype worker: 1 – head, full face view; 2 – body, lateral view; 3 – body, dorsal view; 4 – *T. wilsoni* Sharaf, Aldawood, 2012, paratype worker, head, full face view; 5, 6 – *T. lugubre* Santschi, 1917, syntype worker: 5 – head, full face view; 6 – body, lateral view.

Рис. 1–6. Виды группы *lugubre* рода *Tapinoma* Foerster, 1850.

1–3 – *T. himalaica* sp. n., паратип, рабочий: 1 – голова, анфас; 2 – тело, вид сбоку; 3 – тело, вид сверху; 4 – *T. wilsoni* Sharaf, Aldawood, 2012, паратип, рабочий, голова, анфас; 5, 6 – *T. lugubre* Santschi, 1917, синтип, рабочий: 5 – голова, анфас; 6 – тело, вид сбоку.



0.07), ES 0.23 (0.21–0.23), HW 0.41 (0.41–0.42), OOD 0.25 (0.25–0.27), EL 0.13 (0.12–0.13), OCD 0.05 (0.05–0.07), CL 0.12 (0.09–0.1), HL 0.53 (0.52–0.53), SL 0.49 (0.48–0.52), PnL 0.24 (0.24–0.28), ML 0.16 (0.16–0.2), PpL 0.10 (0.10–0.12), CI 0.77 (0.77–0.8), OI 0.46 (0.46–0.53), SI 1.2 (1.16–1.23).

**Description.** Head longer than wide, posterior head margin convex, slightly narrow posteriorly, sides weakly convex, almost parallel, posterolateral corners broadly rounded, vertex convex. Eyes relatively big, longer than wide, anterior on head, with 35–40 ommatidia. Antennae 12-segmented, scapus long, at least surpassing the posterior head margin by 1/3 of its length. Anterolateral clypeal margin even with the mediolateral region; anteromedial clypeal margin concave; posterior clypeal margin even with or anterior to the anterior surfaces of the antennal socket cavities. Anterolateral hypostoma reduced to a thin sclerite; medial hypostoma notch like, absent posteromedially and weakly developed anterolaterally near the anterior corners of the notch. Masticatory margin of mandibles with 7–8 teeth and 2–4 denticles, 3<sup>rd</sup> tooth smaller than 4<sup>th</sup> tooth, apical tooth longer than subapical tooth, basal angle defined by a denticle, basal margin smooth, without denticles. Palp formula 6:4; 1<sup>st</sup> maxillary palp segment smallest and almost equal to half of the length of 2<sup>nd</sup> segment, 2–5 maxillary palp segments almost equal in length, apical segment longer than other segments; all the segments of maxillary palps almost equal in length. Posteroventral pronotum lateral, rounded. Dorsum and declivitous faces of propodeum flat, dorsal face shorter than its declivitous face; propodeal angle with a distinct ridge or carina; with high acute end; dorsum of mesosoma without setae; dorsum of pronotum and mesonotum even; metanotal groove forming a distinct angle between the mesonotum and propodeum; metanotal spiracle present on dorsal surface in lateral view; propodeal spiracles lateral and located posteriorly near the declivitous face. Petiolar scale very small, strongly inclined anteriorly; venter with a well developed lobe. In dorsal view only 4 gastral tergites visible, 1<sup>st</sup> gastral tergite projecting anteriorly, concealing all but the extreme region of the petiole in dorsal view, anteriorly with a groove for the reception of the entire height of the petiole; 5<sup>th</sup> tergite ventral, gaster with 4 apparent tergites; 4<sup>th</sup> sternite keel-shaped posteriorly. Hind tibial spur with well developed barbeles along entire inner surface.

Whole body finely punctured or coriaceous. Anterior clypeal setae 8–10; central pair longer and about the same length as the closed mandibles, lateral setae shorter; frontal carinae present and with 2 pairs of setae; mandibles with numerous long suberect hairs. Number of setae on gaster includes: 1<sup>st</sup> gastral tergite without setae, 2<sup>nd</sup> gastral tergite with 1–2 pairs, 3<sup>rd</sup> and 4<sup>th</sup> with 2–3 pairs of setae. Body covered with fine appressed pubescence. Body brownish yellow with more light appendages.

**Ecology.** This species has been collected from Shivalik Range of the North-Western Himalaya. The area

has patchy forest with a semi-arid type of environment. This species seems to be arboreal.

**Differential diagnosis.** A new species is different from two other species of the *lugubre* species-group by more narrow head (HW 0.41) and very long scapes (SI 1.2). A key of the *lugubre* species-group of the genus *Tapinoma* is given below.

**Etymology.** The name of the new species is derived from geographical area where type specimens were collected.

#### Key to species of the *lugubre* species-group of the genus *Tapinoma* based on worker

- 1 Anteromedial clypeal margin with a wide shallow medial concavity (fig. 5, 6) ..... *T. lugubre*  
– Anteromedial clypeal margin more deeply concave ..... 2
- 2 Head relatively wide and short (CI 0.82). Scape is relatively short, surpassing of posterior margin of head about on 1/4 of its length (SI 0.88) (fig. 4) ..... *T. wilsoni*  
– Head more narrow and long (CI 0.8). Scape is very long, surpassing of posterior margin of head more than 1/3 of its length (SI 1.2) (figs. 1–3) ..... *T. himalaica* **sp. n.**

#### Acknowledgements

We are grateful to AntWeb team ([www.antweb.org](http://www.antweb.org)) for their huge work and personally to Estella Ortega and Zach Lieberman for photos of *Tapinoma* species used in our work. Financial assistance was rendered by Ministry of Environment and Forests of India (Grant No. 14/10/2007–ERS/RE) (for H. Bharti and R. Kumar) and founded as a part of the basic science programs of our institutions.

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