Zootaxa 4107 (1): 089–092
http://www.mapress.com/j/zt/

Correspondence

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://doi.org/10.11646/zootaxa.4107.1.6
http://zoobank.org/urn:lsid:zoobank.org:pub:B61B9296-6400-4D5A-8D88-B4525737E4D0

Redescription of *Draposa subhadrae* (Patel & Reddy, 1993) (Araneae: Lycosidae, Pardosinae)

YURI M. MARUSIK[1,2,3] & MIKHAIL M. OMELKO[4,5]

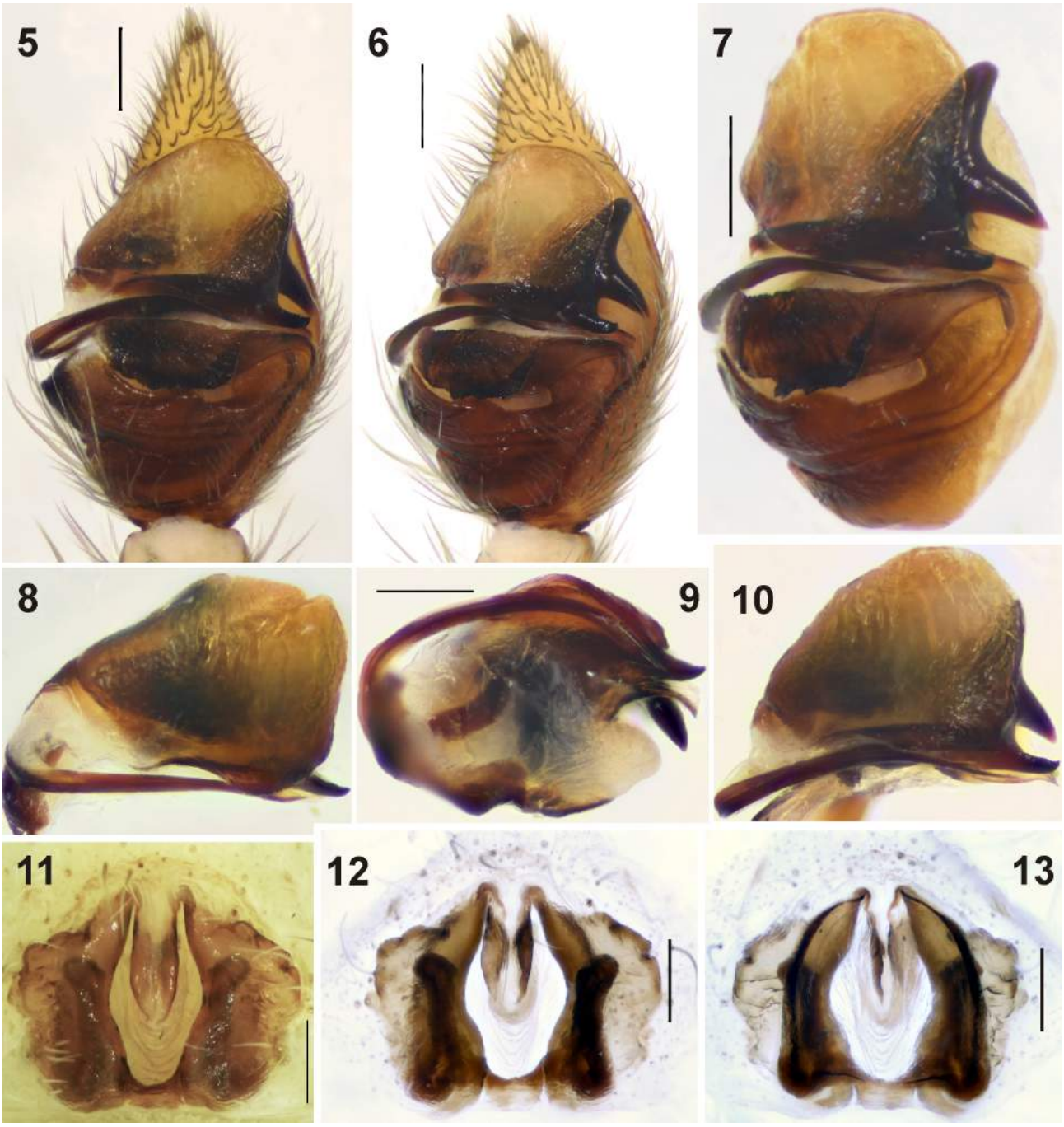
1 Institute for Biological Problems of the North, Portovaya Street 18, Magadan 685000, Russia. yurmar@mail.ru
2 Department of Zoology & Entomology, University of the Free State, Bloemfontein 9300, South Africa
3 Zoological Museum, University of Turku, FI-20014 Turku, Finland. sepkopo@utu.fi
4 Gornotaezhnaya Station FEB RAS, Gornotaezhnoe Vil., Ussuriyski Dist., Primorski krai 692533, Russia. omelkom@gmail.com
5 Far Eastern Federal University, Sukhanova 8, Vladivostok 690950, Russia

Draposa Kronestedt, 2010 is a small genus of Pardosinae spiders. Currently it encompasses 10 species (World Spider Catalog 2016) distributed from Pakistan to Southeast China. Most species of the genus, except for *D. porpaensis* (Gajbe, 2004), are known from both sexes and were described or redescribed by Kronestedt (2010). Two other species, *D. amkhasensis* (Tikader & Malhotra, 1976) and *D. burasantiensis* (Tikader & Malhotra, 1976), both recently transferred to *Draposa* (Dhali *et al.* 2012), are doubtful because their copulatory organs are not properly illustrated and differ from the type species and other species of the genus. The male of *Draposa subhadrae* (Patel & Reddy, 1993) remains known by very poor original drawings because Kronestedt (2010) was not able to study types. While studying material from Sri Lanka collected by us, we found one sample with two females belonging to *D. subhadrae* and two males of *Draposa* having the same colour pattern and size. We concluded that these specimens are conspecific. The goal of this paper is to provide an illustrated redescription of this species.

FIGURES 1–4. *Draposa subhadrae.* 1 male habitus, dorsal; 2 female habitus, dorsal; 3 male prosoma, frontal; 4 male palp, prolateral. Scales: 1–2 1 mm, 3 0.5 mm, 4 0.2 mm.

Accepted by A. Santos: 4 Apr. 2016; published: 29 Apr. 2016

Specimens were photographed using a Canon 70D camera attached to an Olympus SZX16 stereomicroscope and a JEOL JSM-5200 Scanning Electron Microscope at the Zoological Museum, University of Turku. The material examined through SEM were dissected with fine pincers, dehydrated for few minutes in 96% ethanol, air dried on blotting paper, mounted on stubs with sticky cover and then sputter-coated with gold. Digital images were prepared using Zerene Stacker image stacking software (http://zerenesystems.com/cms/stacker). All measurements are given in millimetres (mm). The epigyne was macerated with NaOH aqueous solution.



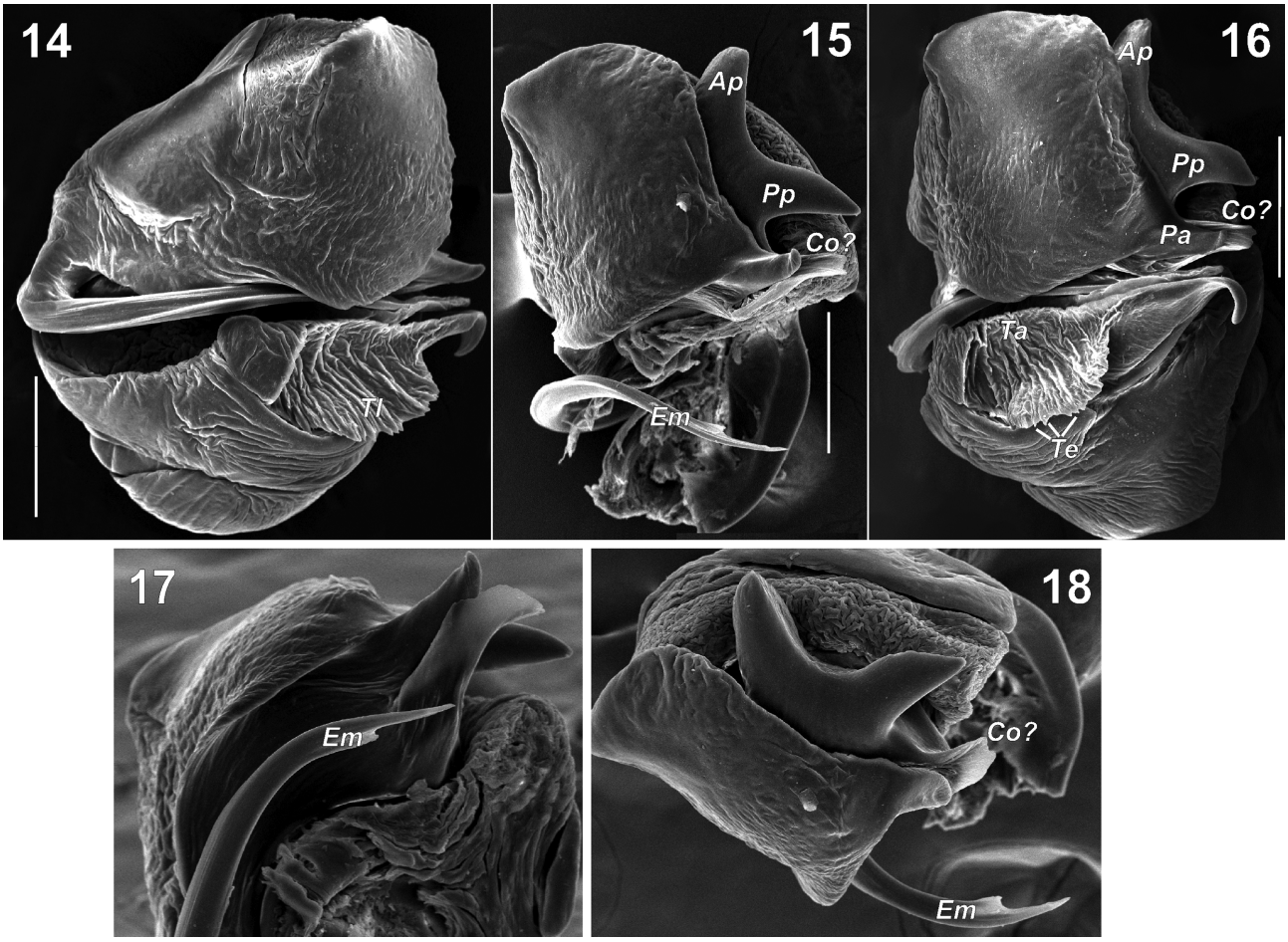
FIGURES 5–13. Male palp (5–10) and epigyne of *Draposa subhadrae.* 5 ventral; 6 ventro-retrolateral; 7 bulb, ventro-retrolateral; 8–10 embolic division, antero-ventral, caudal and ventral; 11 epigyne, intact, ventral; 12–13 after maceration, ventral and dorsal. Scale: 0.2 mm.

Terminology of the copulatory organs in Pardosinae, and in *Draposa* particularly, is doubtful (Kronestedt 2010) and in some cases homology is not clear. We tried to follow Kronestedt (2010) when it was possible to homologize parts and used terms already suggested for certain characters. Abbreviations: d—dorsal, p—prolateral, r—retrolateral, v—ventral.

Specimens treated here belong to the Zoological Museum of the Moscow State University (ZMMU). We thank Seppo Koponen (Zoological Museum, University of Turku) for providing museum facilities. This work was supported in part by the Far Eastern Federal University (Vladivostok) and by the grant of the President of the Russian Federation (MK-6046.2016.4). English of an earlier draft was kindly checked by Robin Leech (Edmonton, Canada).

Draposa subhadrae **(Patel & Reddy, 1993)**
Figs 1–18

Pardosa subhadrae Patel & Reddy, 1993: 128, fig. 5a–g (♂♀).
Draposa subhadrae: Kronestedt 2010: 49, figs 7, 27, 32, 42–43, 53 (♀).



FIGURES 14–18. SEM micrographs of male copulatory bulb of *Draposa subhadrae.* 14 ventro-prolateral; 15 embolic division, retrolateral; 16 ventro-retrolateral; 17–18 embolic division, caudal and retrolateral. 15, 17–18 show modified tip of embolus. Abbreviations: *Ap* apical process of subpaleal sclerite; *Co?* conductor (?), *Em* embolus, *Pa* paleal apophysis; *Pp* middle process of subpaleal sclerite; *Ta* tegular apophysis, *Tl* tegular lamella. Scale: 0.2 mm.

Material examined. 2♂, 2♀ (ZMMU), SRI LANKA, ***Southern Province***, Hambantota District, 6°8'N 81°8'E, 9–10.01.2012 (M.M. Omelko).

Diagnosis. Male of this species differs from *D. atropalpis* (Gravely, 1924), a species with similarly modified embolus, by having three-branched subpaleal sclerite (two-branched in *D. atropalpis*), lack of subapical protrusion of the tegular apophysis, known in all other *Draposa* species, and the lamella of the tegular apophysis with numerous fine teeth. According to Kronested (2010), the female of *D. subhadrae* is most similar to *D. lyrivulva* (Bösenberg & Strand, 1906). These two species can be distinguished by the longer scape in *D. subhadrae*, which is half the length of epigynal atrium, and less than 1/2 of the atrium in similar species.

Description. Male. Total length 5.25, carapace 2.58 long, 2.10 wide. Carapace light yellow with two lateral dark-brown, wavy bands and a median band and poorly distinct broken sublateral stripes formed by dark setae (Fig. 1). Yellow parts of carapace covered with short black and white hairs. Ocular area and eyes black. Chelicerae yellow with dark-

brown longitudinal bands (Fig. 3). Endites and labium yellow. Sternum yellow in one male and black in another. Femur and tibia of male palp with black basal parts; patella yellow. Leg segments except tarsus with blackish spots and half rings. Spination of leg I: femur 3d, 2p, 3r; patella 1p, 1r; tibia 3d, 2p, 2r, 2-2v; metatarsus 2p, 2r, 2-2v. Leg measurements in Table 1.

TABLE 1. Length of male leg segments.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	2.23	0.95	2.13	2.05	1.38	8.73
II	2.20	0.93	2.08	2.10	1.28	8.58
III	2.13	0.88	1.95	2.25	1.10	8.30
IV	2.88	1.03	2.68	3.63	1.53	11.73

Palp as in Figs 4–10 and 14–18. Basal 2/3 of cymbium black, terminal 1/3 yellowish. Tegular apophysis (*Ta*) with wide lamella (*Tl*) armed with numerous fine teeth (*Te*), subapical protrusion of the tegular apophysis absent; subpaleal sclerite with three processes (branches), the apical one (*Ap*), the middle process (*Pp*) and conductor-like (*Co*). Embolus modified, widened in distal part before tapering to apex (Figs 15, 17–18).

Female. Described by Kronestedt (2010). Habitus as in Fig. 2, pattern similar to male but with more distinct sublateral dark stripes. Epigyne as in Figs 11–13; scape thin, about 3 times longer than wide, its length about 2/3 the atrial height; atrium rhomboidal, widest at the middle.

Distribution. The species is known from Southeast India and Sri Lanka (Kronestedt 2010).

References

Bösenberg, W. & Strand, E. (1906) Japanische Spinnen. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 30, 93–422.

Dhali, D.C., Roy, T.K., Sen, S., Saha, S. & Raychaudhuri, D. (2012) Wolf spiders (Araneae: Lycosidae) of the reserve forests of Dooars, West Bengal, India. *Munis Entomology and Zoology*, 7 (2), 1199–1213.

Gajbe, U.A. (2004) Studies on some spiders of the family Lycosidae (Araneae: Arachnida) from Madhya Pradesh, India. *Records of the Zoological Survey of India*, Occasional Paper 221, 1–40.

Gravely, F.H. (1924) Some Indian spiders of the family Lycosidae. *Records of the Indian Museum, Calcutta,* 26, 587–613.

Kronestedt, T. (2010) *Draposa*, a new wolf spider genus from south and southeast Asia (Araneae: Lycosidae). *Zootaxa*, 2637, 31–54. http://dx.doi.org/10.11646/zootaxa.2637.1.2

Patel, B.H. & Reddy, T.S. (1993) On some new species of spiders of the genera *Hippasa* Simon, *Lycosa* Latreille, *Pardosa* Koch and *Trochosa* Koch (family: Lycosidae) from coastal Andhra Pradesh, India. *Records of the Zoological Survey of India,* 90, 121–133.

Tikader, B.K. & Malhotra, M.S. (1976) Studies on some spiders of the genus *Pardosa* Koch from India (family: Lycosidae). *Proceedings of the Indian Academy of Sciences*, 83 (3), 123–131.

World Spider Catalog (2016) Available from: http://wsc.nmbe.ch/ (accessed 8 February 2016)