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A new species of *Dactylopisthes* Simon, 1884 from Tajikistan (Aranei: Linyphiidae)

Новый вид *Dactylopisthes* Simon, 1884 из Таджикистана (Aranei: Linyphiidae)

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КЛЮЧЕВЫЕ СЛОВА: таксономия, паукообразные, Палеарктика, Центральная Азия, горная фауна.

ABSTRACT. A new species, *Dactylopisthes ramit* sp.n., is described from low altitudes in the Pamir-Alay mountains of the Republic of Tajikistan. The species seems to be especially similar to both of its Central Asian congeners, *D. locketi* (Tanasevitch, 1983) and *D. mirabilis* (Tanasevitch, 1985), but it differs clearly by certain structural details of the palp and carapace in the male, as well as by the shape of the epigyne in the female.

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РЕЗЮМЕ. Новый вид *Dactylopisthes ramit* sp.n. описан из среднегорий Памиро-Алая, Таджикистан. Вид наиболее близок к двум центральноазиатским представителям рода, *D. locketi* (Tanasevitch, 1983) и *D. mirabilis* (Tanasevitch, 1985), от которых отличается формой карапакса и деталями строения гениталий самца и самки.

Introduction

Dactylopisthes Simon, 1884 is a small erigonine genus currently containing 10 species:

Dactylopisthes digiticeps (Simon, 1881): southern Europe and Ancient Mediterranean [World Spider Catalog, 2023].

D. diphyus (Heimer, 1987): Mongolian Altai, western Mongolia [Heimer, 1987, sub *Diplocephalus d.*; Xinjiang Uygur Autonomous Region, China [Zhu, Zhou, 1988; Hu, Wu, 1989, both sub *Walckenaeria dentata* Zhu et Zhou, 1988; Song *et al.*, 1999]; Tibet Autonomous Region, China [Hu, 2001, sub *W. dentata*]; Tuva, Russia [Marusik *et al.*, 2000].

D. dongnai Tanasevitch, 2018: Vietnam [Tanasevitch, 2018b].

D. khatipara Tanasevitch, 2017: Karachay-Cherkessia Republic, Caucasus, Russia [Tanasevitch, 2017].

D. locketi (Tanasevitch, 1983): Kyrgyzstan and Uzbekistan, western Tian Shan Mts, [Tanasevitch 1983, sub *Tapinocyba l.*; Tanasevitch, 1989].

D. marginalis Tanasevitch, 2018: Thailand [Tanasevitch, 2018a].

D. mirabilis (Tanasevitch, 1985): northern Tian Shan Mts, Kyrgyzstan [Tanasevitch, 1985, sub *Scytiella m.*; Tanasevitch, 1989].

D. mirificus (Georgescu 1976): Romania [Georgescu, 1976, sub *Scytiella m.*], Russian Plain [Ponomarev, 2005; Tanasevitch, Koponen, 2007; Polchaninova, Prokopenko, 2013, etc.); western Kazakhstan [Ponomarev, 2005; Piterkina, 2009].

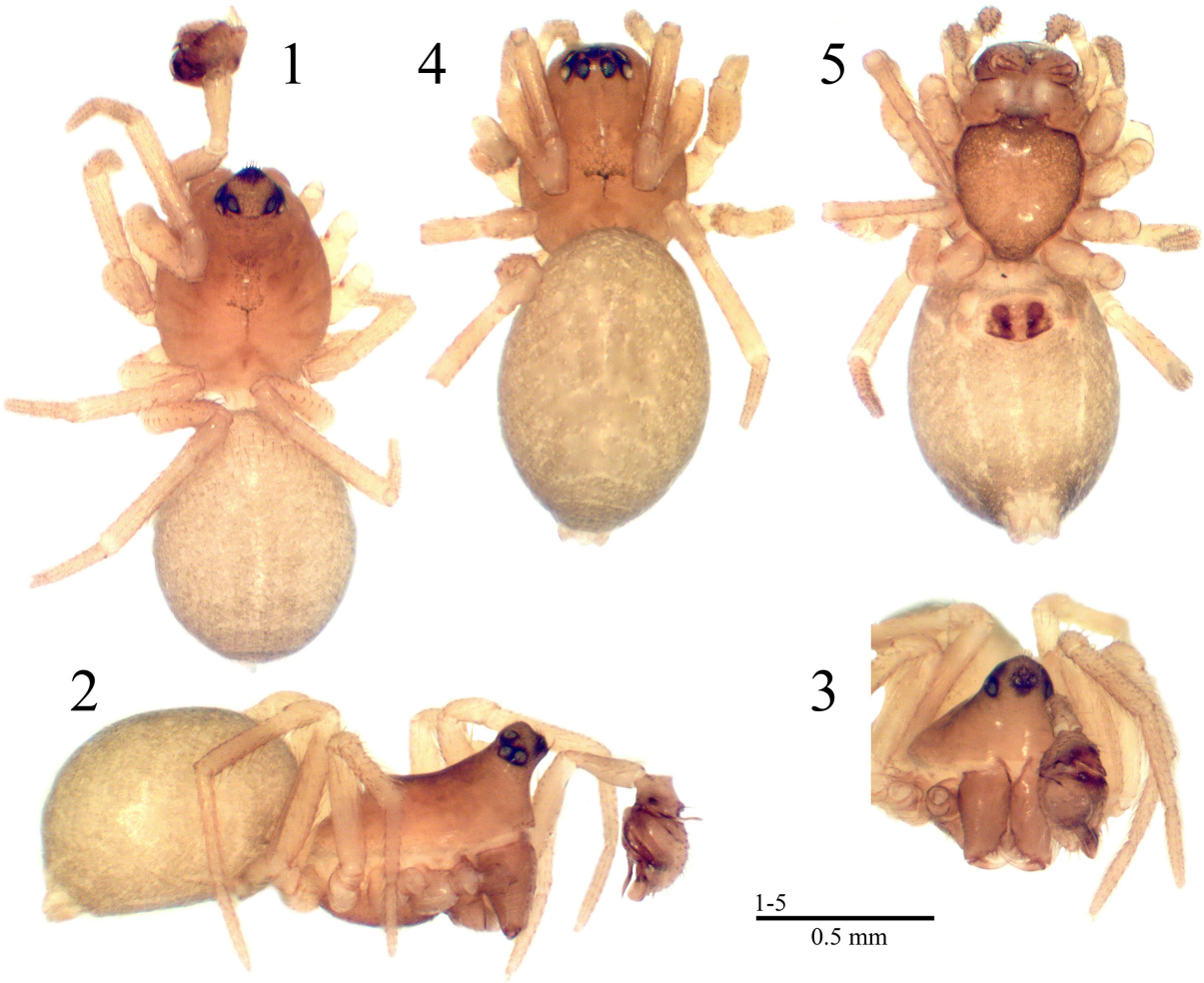
D. separatus Zhao et Li, 2014. As this species was described based on females only, from southern China [Zhao, Li, 2014], its generic position is still unclear.

D. video (Chamberlin et Ivie 1947): East Palaearctic and Nearctic [World Spider Catalog, 2023].

Dactylopisthes ramit sp.n., is a fourth congener to occur in the mountains of Central Asia, coming from the Ramit Nature Reserve, Tajikistan. Its description is the subject of this paper.

Material and methods

This paper is based on specimens kept in the Zoological Museum of Moscow University (ZMMU). A few paratypes will be deposited in the spider collection of the Muséum d'histoire naturelle, Geneva, Switzerland (MHNG). Specimens preserved in 70% ethanol were studied using an MBC-9 stereomicroscope. Drawings were executed with the help of a drawing tube; a Levenhuk C-800 digital camera was used for taking photographs. Leg chaetotaxy is presented in a formula, e.g., 2.2.1.1, which refers to the number of dorsal spines on tibiae I–IV. The sequence of leg segment measurements is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are given in mm. Scale lines in the figures correspond to 0.1 mm unless indicated otherwise.



Figs 1–5. Photographs of ♂ (1–3) and of ♀ paratypes (4, 5) of *Dactylopisthes ramit* sp.n. 1–5 —habitus, 1, 4 — dorsal view, 2 — lateral view, 3 — frontal view, 5 — ventral view.

Рис. 1–5. Фотографии *Dactylopisthes ramit* sp.n., ♂ (1–3) и ♀ (4, 5), паратипы. 1–5 — внешний вид, 1, 4 — вид сверху, 2 — вид сбоку, 3 — вид спереди, 5 — вид снизу.

The terminology of copulatory organs mainly follows that of Merrett [1963] and/or the authors mentioned in the section abbreviations given below. The following abbreviations are used in the text and figures: AR — anterior part of radix; a.s.l. — above sea-level; D — duct; DSA — distal suprategular apophysis *sensu* Hormiga [2000]; E — embolus; LW — lateral wall of epigyne *sensu* Saaristo & Tanasevitch [1996]; MM — median membrane *sensu* van Helsdingen [1965] = embolic membrane *sensu* van Helsdingen [1986], Hormiga [2000]; MT — median tooth of DSA; PR — proximal part of radix; TmI — relative position of trichobothrium on the metatarsus of leg I.

Results

Class Arachnida Cuvier, 1812
Order Araneae Clerck, 1758
Family Linyphiidae Blackwall, 1859
Subfamily Erigoninae Emerton, 1882

Genus *Dactylopisthes* Simon, 1884

TYPE SPECIES: *Dactylopisthes digiticeps* (Simon, 1881), by monotypy.

Dactylopisthes ramit **sp.n.**

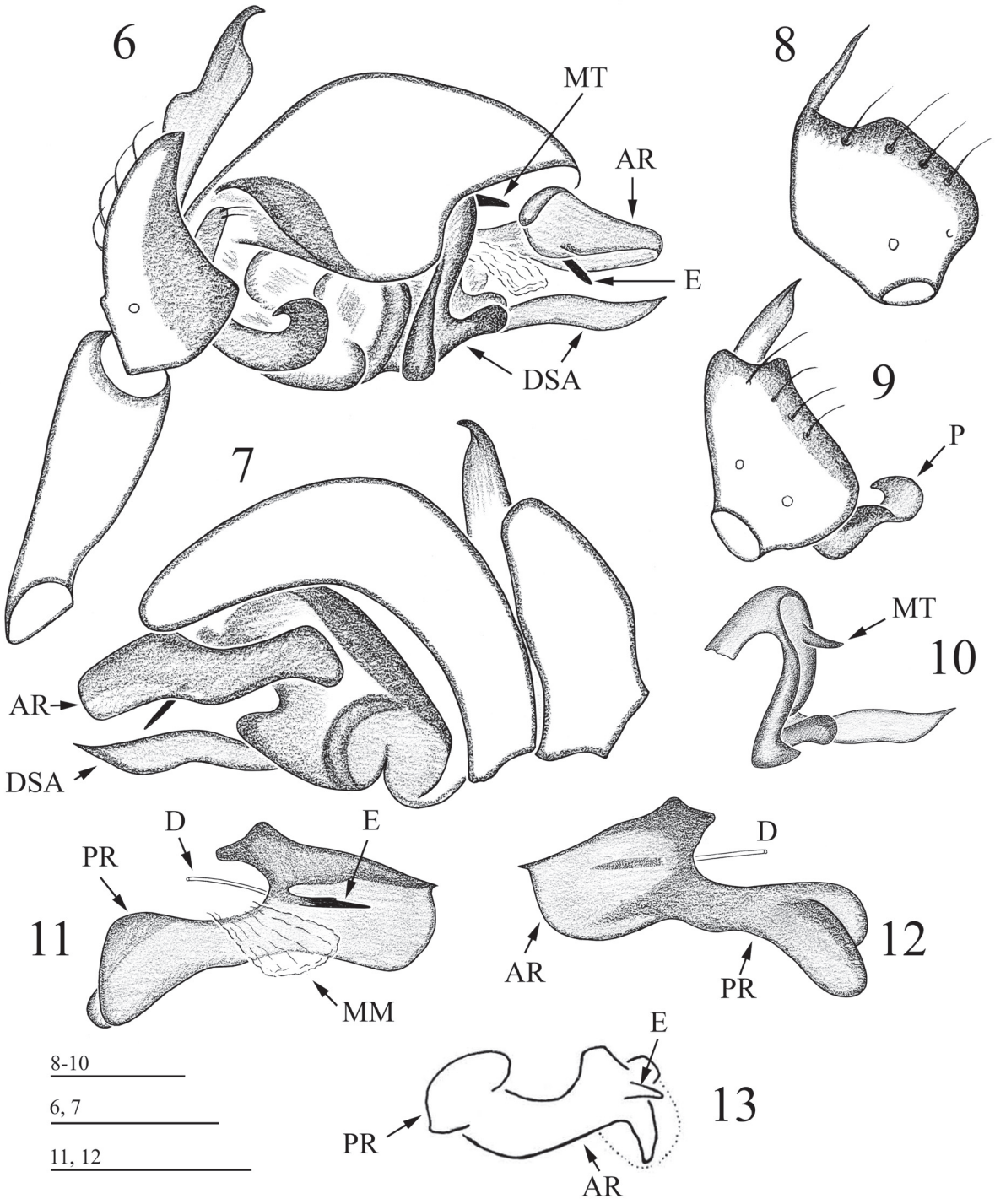
Figs 1–12, 14, 15.

HOLOTYPE ♂ (ZMMU), TAJIKISTAN, Pamir-Alay Mts, Ghissar Mountain Ridge, Ramit (= Romit) Nature Reserve, environs of Sorwo (ca 38.816848°N, 69.486441°E), 1900–2100 m a.s.l., 5–6.X.1986, leg. S. Zonstein.

PARATYPES: 2 ♂♂, 3 ♀♀ (ZMMU), 2 ♂♂, 2 ♀♀ (MHNG), collected together with holotype.

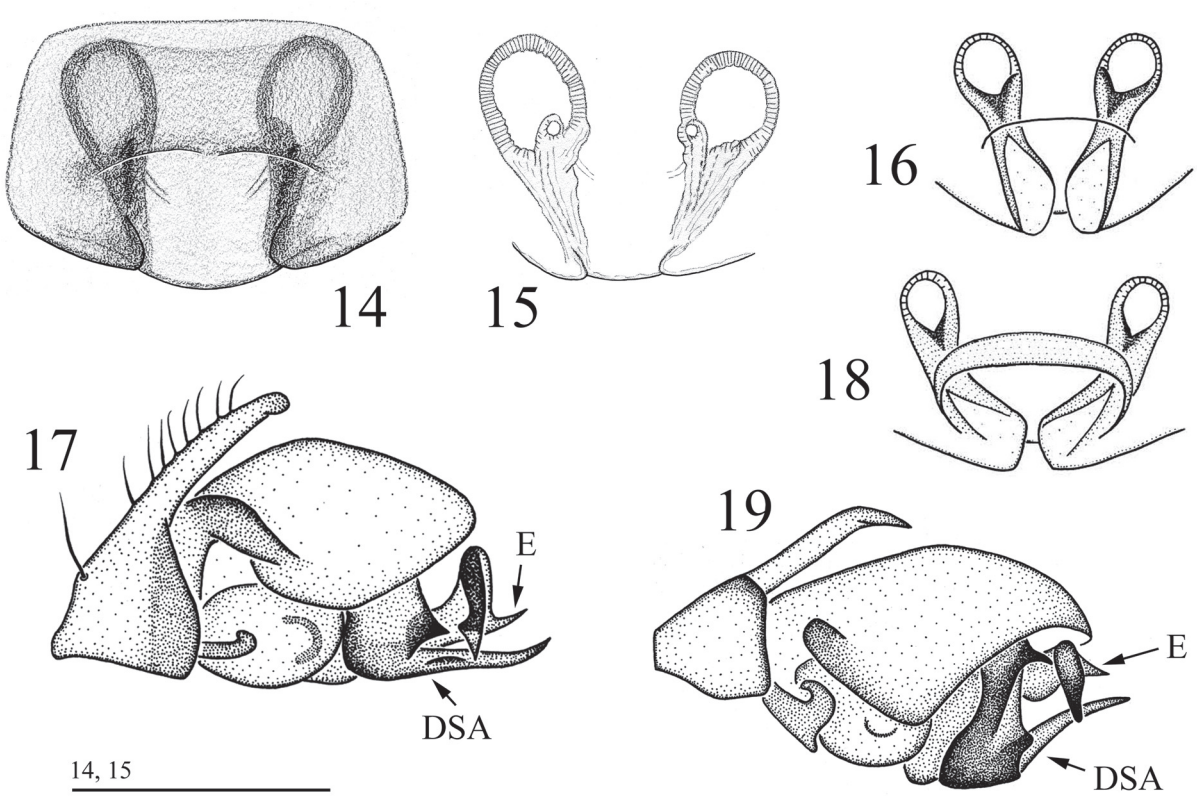
NAME. The name of the species is a noun in apposition referring to the territory of origin, Ramit (the old spelling) Nature Reserve in Tajikistan.

DIAGNOSIS. The new species can be assigned to *Dactylopisthes* because it is very similar to other most of the other congeners by the same chaetotaxy (2.2.1.1) and trichobothriotaxy (I–III), the modified carapace in males (except for two Oriental representatives), by the certain genitalic characters, i.e., a similarly modified palpal tibia, a hypertrophied distal suprategular apophysis, as well as the embolic



Figs 6–13. Details of male palpal structure of *Dactylopisthes ramit* sp.n., ♂ paratype (6–12), and *D. mirabilis* (Tanasevitch, 1985) (13). 6, 7 — right palp, retrolateral and prolateral view, respectively; 8 — palpal tibia, dorsal view; 9 — palpal tibia and paracymbium, postero-lateral view; 10 — distal suprategular apophysis, lateral view; 11, 12 — embolic division, retrolateral and prolateral view, respectively; 13 — embolic division, reproduced from Tanasevitch [1985, fig. 7]. Fig. 13 not to scale.

Рис. 6–13. Детали строения пальпы ♂♂ *Dactylopisthes ramit* sp.n., паратип (6–12) и *D. mirabilis* (Tanasevitch, 1985). 6, 7 — правая пальпа, соответственно ретролатерально и пролатерально; 8 — голень пальпы, вид сверху; 9 — голень пальпы и парацимбиум, вид сзади и сбоку; 10 — дистальный супратегулярный отросток, вид сбоку; 11, 12 — эмболюсный отдел, соответственно ретролатерально и пролатерально; 13 — эмболюсный отдел, воспроизведено из Tanasevitch [1985, рис. 7]. Рис. 13 не в масштабе.



Figs 14–19. Epigynes and palps of *Dactylopisthes ramit* sp.n., ♀ paratype (14, 15); *D. locketi* (Tanasevitch, 1983) (16, 17), and *D. mirabilis* (Tanasevitch, 1985) (18, 19). 14 — epigyne, ventral view; 15, 16, 18 — cleared epigyne, ventral view; 17, 19 — right palp, retrolateral view. 16–19 — reproduced from Tanasevitch [1989, figs 126–130]. Figs 16–19 not to scale.

Рис. 14–19. Гениталии *Dactylopisthes ramit* sp.n., ♀ паратип (14, 15); *D. locketi* (Tanasevitch, 1983) (16, 17) и *D. mirabilis* (Tanasevitch, 1985) (18, 19). 14 — эпигина, вид снизу; 15, 16, 18 — просветлённая эпигина, вид снизу; 17, 19 — правая пальпа, ретролатерально. 16–19 —воспроизведено из Tanasevitch [1989, figs 126–130]. Рис. 16–19 не в масштабе.

division in the male. The conformation of the epigyne, namely, a small and shallow socket, short copulatory ducts with subspherical receptacles, is also similar to other congeners. The new species seems to be especially similar to both Central Asian, montane *D. locketi* and *D. mirabilis*, known from the western and northern Tian Shan Mts, respectively.

The shapes of the slightly modified carapace, as well as the epigyne in *D. ramit* sp.n. are similar to those in *D. locketi*, but the shape of the palpal tibia and the structure of the distal suprategular apophysis resemble those in *D. mirabilis*. The new species is distinguished well from both above species by the flat, blade-shaped distal part of the distal suprategular apophysis (Figs 6, 10 cf. Figs 17, 19), and by the flat distal part of the radix which protrudes well beyond the palp. The position of the embolus in *D. ramit* sp.n. is also different as it starts almost from the middle part of the radix. The female differs by the widely spaced rollers of the lateral walls of the epigyne, as well as by the relatively larger receptacles (Figs 14, 15 cf. Figs 16, 18).

DESCRIPTION. Male (paratype). Habitus as in Figs 1, 2. Total length 1.40. Carapace modified, 0.63 long, 0.50 wide, pale brown to brown, with an indistinct, grey, median spot. Head of carapace elevated, apically bearing a group of short and slightly curved spines, as shown in Figs 1–3. Eyes normal, not enlarged as in Oriental congeners, each rimmed black. Chelicerae unmodified, 0.28 long, stridulatory furrows distinct. Legs yellow to pale brown. Leg I, 1.53 long (0.45 + 0.15 + 0.35 + 0.33 + 0.25); leg IV, 1.70 long (0.48 + 0.15 + 0.43 + 0.36 + 0.28). Chaetotaxy 2.2.1.1, spines 0.5–1 times as long as diameter of corresponding leg segment. Metatarsi I-III each with a trichobothrium. TmI 0.52. Palp (Figs 6–12). Patella elongated, widening anteriad. Tibia modified, with a long retrolateral outgrowth ending with a small hook. Paracymbium L-shaped, proximal part very slender, distal part slightly wider, uncinate apically. Distal suprategular apophysis Z-shaped, with a median tooth at middle, distal part flat, wide, blade-shaped, poorly sclerotized. Embolic division relatively small, its proximal part widened, divided partly into two rounded lobes, distal part wide and flat, protruding far beyond palp. Embolus short, straight. Abdomen (Figs 1, 2) 0.80 long, 0.58 wide, pale grey.

Female. Habitus as in Figs 4, 5. Total length 1.38. Carapace unmodified, as in Fig. 4, 0.63 long, 0.48 wide. Eye size as in male. Chelicerae 0.25 long. Legs yellow to pale brown. Leg I, 1.49 long (0.45 + 0.18 + 0.33 + 0.28 + 0.25); leg IV, 1.61 long (0.48 + 0.15 + 0.40 + 0.33 + 0.25). Chaetotaxy 2.2.1.1, spines 1–1.5 times as long as diameter of corresponding leg segment. Metatarsi I–III each with a trichobothrium. TmI 0.47. Abdomen (Figs 4, 5) 0.88 long, 0.60 wide. Body and leg coloration as in male. Epigyne as in Figs 14, 15. A shallow epigynal cavity framed anteriorly and open posteriorly, receptacles subspherical.

DISTRIBUTION. Known only from the Pamir-Alay Mts, Tajikistan, ranging from 1900 to 2100 m a.s.l.

Discussion

Taking into account the new data, the erigonine genus *Dactylopisthes* currently includes eleven species. Two *Dactylopisthes* from the Oriental Region, *D. dongnai* and *D. marginalis*, formally fit in the generic diagnosis based on the palpal structure, as well as chaeto- and trichobothriotaxy, but the unmodified carapace and, especially, the enlarged eyes raise certain doubts concerning their taxonomic position. Since enlarged eyes are a character very typical of numerous autochthonous Oriental erigonine genera , the similar genitalic conformation might simply reflect parallelisms.

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