

Redescription of *Pterotricha loeffleri* (Roewer, 1955) (Aranei: Gnaphosidae: Gnaphosinae)

Переописание *Pterotricha loeffleri* (Roewer, 1955) (Aranei: Gnaphosidae: Gnaphosinae)

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KEY WORDS: Iran, Turkmenistan, Gnaphosidae, *Pterotricha*, *Bobineus*.

КЛЮЧЕВЫЕ СЛОВА: Иран, Туркмения, Gnaphosidae, *Pterotricha*, *Bobineus*.

ABSTRACT. *Pterotricha loeffleri* (Roewer, 1955) is redescribed on the basis of the holotype male from Tehran. A possible female of this species from Bushehr is described for the first time. The potential synonymy of *P. loeffleri* and *P. strandi* Spassky, 1936 from Turkmenistan and the unique characters of *P. loeffleri* are briefly discussed.

РЕЗЮМЕ. Переописана *Pterotricha loeffleri* (Roewer, 1955) на основании голотипа, самца из Тегерана. Самка из Бушера, вероятно принадлежащая к этому же виду, описана впервые. Обсуждаются возможная синонимия *P. loeffleri* and *P. strandi* Spassky, 1936 и уникальные признаки *P. loeffleri*.

Introduction

Roewer [1955] published a survey of spiders collected in Iran by an Austrian expedition in 1949–1950. In this work he described 17 species (Lycosidae 12, Cithaeronidae 1, Thomisidae 2 and Salticidae 2) and two genera, one, *Bobineus* in Cithaeronidae and another, *Hemsenattus* in Salticidae. The later was synonymised with *Aelurillus* Simon, 1884 by Prószyński [1966] and the former was synonymised by Platnick [1990] with *Pterotricha* Kulczyński, 1903, a member of Gnaphosinae. *Bobineus* has a cheliceral keel and greatly elongated anterior lateral spinnerets like in all *Pterotricha*.

Recently we had the opportunity to study the holotype of *Bobineus löffleri* Roewer, 1955, which was found to be rather similar to *Pterotricha strandi* Spassky, 1936, a species known from Turkmenistan. While checking material from Iran we found one fe-

male whose epigyne resembled those of *P. strandi*. Judging from the body size and similar eye pattern it is very likely that this female is conspecific with *P. loeffleri*. The main aims of this paper are as follow: 1) redescription of the male holotype, 2) description of a possible female of this species, 3) discussion of the possible synonymy of *P. loeffleri* and *P. strandi* and 4) discussion of the peculiar affinities of *P. loeffleri*.

Material and methods

Specimens were photographed with an Olympus Camera E-520 camera attached to an Olympus SZX16 stereomicroscope at the Zoological Museum, University of Turku. Digital images were montaged using “CombineZP” image stacking software. The epigyne was cleared in a KOH/water solution. Photographs were taken in dishes with paraffin on the bottom. All measurements are given in millimetres. The holotype male belongs to the Senckenberg Museum (SMF) and the female from Bushehr to the Zoological Museum of Moscow State University (ZMMU). Abbreviations used are as follows: d — dorsal, p — prolateral, r — retrolateral, v — ventral. Metatarsal spines were not included.

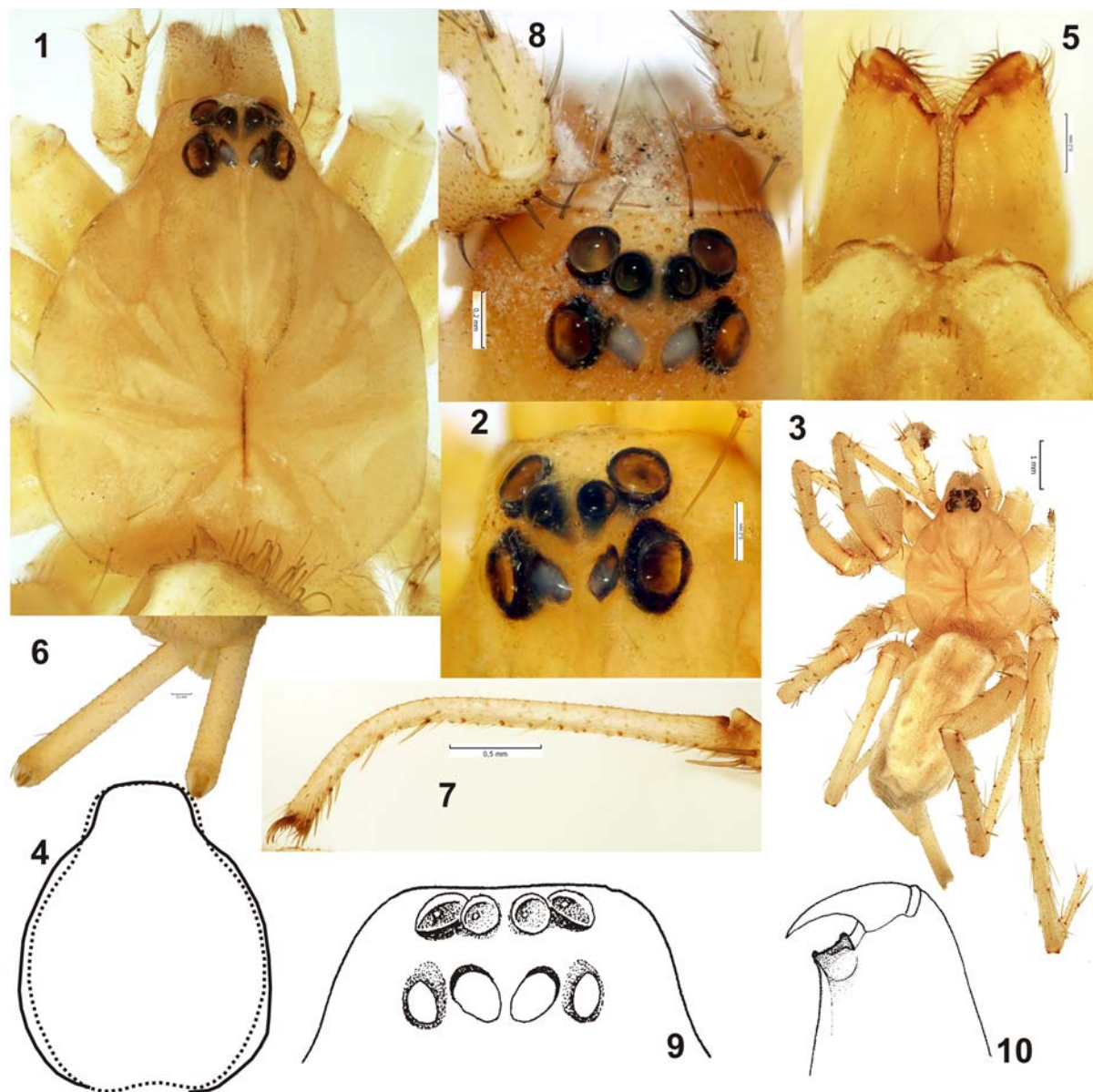
Taxonomy

Pterotricha loeffleri (Roewer, 1955)
Figs 1–7, 11–16.

Bobineus löffleri Roewer, 1955: 774, f. 23a–g (♂).

Bobineus l.: Brignoli, 1983: 584.

P. l.: Platnick, 1990: 39 (transfer through synonymy of *Bobineus*).



Figs 1–10. Somatic characters of *Pterotricha loeffleri* (1–8) and *P. lentiginosa* (4, 9–10): 1 — male carapace, dorsal; 2, 9 — eye pattern in male; 3 — male habitus, dorsal; 4 — outline of male carapace in *P. loeffleri* (solid line) and *P. lentiginosa* (dotted line); 5 — male chelicerae and maxillae; 6 — male spinnerets, dorsal; 7 — male tarsus IV; 8 — female eye pattern; 10 — male chelicera. 4, 9–10 — after Murphy [2007].

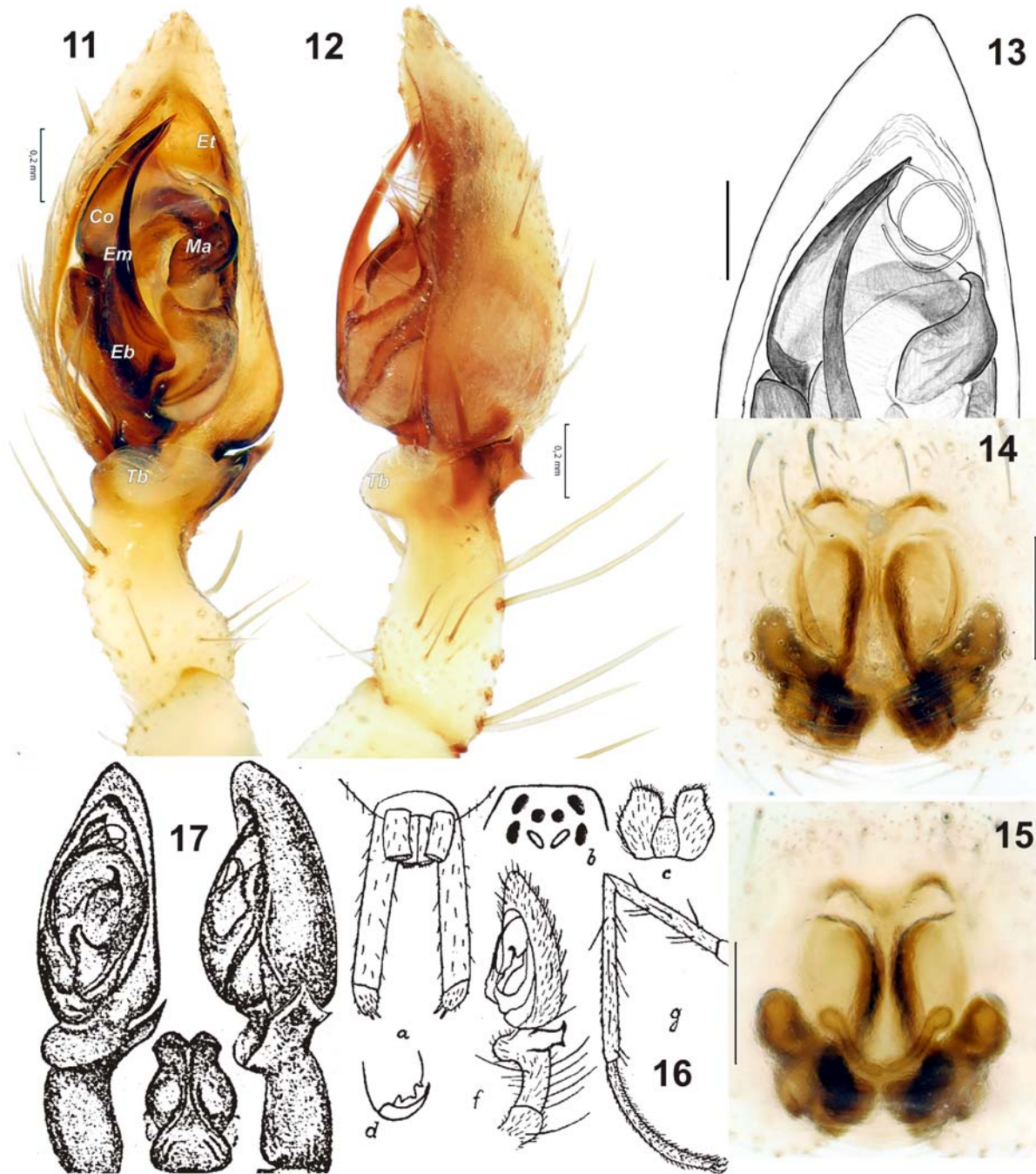
Рис. 1–10. Соматические признаки *Pterotricha loeffleri* (1–8) и *P. lentiginosa* (4, 9–10): 1 — карапакс самца, сверху; 2, 9 — расположение глаз у самца; 3 — внешний вид самца, сверху; 4 — абрис карапакса *P. loeffleri* (сплошная линия) и *P. lentiginosa* (пунктир); 5 — хелицеры и максиллы самца; 6 — паутинные бородавки самца, сверху; 7 — лапка IV самца; 8 — расположение глаз у самки; 10 — хелицера самца. 9–10 — по Murphy [2007].

MATERIAL EXAMINED: Holotype ♂ (SMF) with label “*Bobineus löffleri* n.g. n.sp. 1 ♂ Typ. Teheran, No.290, Arachn. Coll. Rwr.-Lfd. No.11459”.

1 ♀ (ZMMU), Iran, Bushehr, B. Taheni, 6.02.1984 (K.Elmi).

DIAGNOSIS. *Pterotricha loeffleri* can easily be distinguished from other congeners, except for *P. strandi* Spassky, 1936 known from Turkmenistan, by the

square-shaped tibial apophysis with sharply pointed corners. *Pterotricha loeffleri* differs from *P. strandi* by the shape of the median apophysis (*Ma*) and the conductor (*Co*) (cf. Figs 11–12 and 17). Females of the two species differ by the proportion of the septum. In *P. loeffleri* the middle part of the septum is two times narrower than the base, while in *P. strandi* the middle part of the septum is three times narrower than the base.



Figs 11–17. *Pterotricha loeffleri* (11–16) and *P. strandi* (17): 11–12 — male palp, ventral and retrolateral; 13 — tip of palp, ventral; 14 — epigyne after maceration, ventral; 15 — epigyne, dorsal; 16 — original figures by Roewer [1955]; 17 — after Spassky [1936]. Scale 0.2 mm if not otherwise indicated.

Abbreviations: *Co* — conductor, *Eb* — base of embolus, *Em* — middle part of embolus; *Et* — tip of embolus; *Ma* — median apophysis.

Рис. 11–17. *Pterotricha loeffleri* (11–16) и *P. strandi* (17): 11–12 — палпы самца, снизу и ретролатерально; 13 — вершина палпы, снизу; 14 — эпигина после мацерации; 15 — эпигина, сверху; 16 — оригинальные рисунки Roewer [1955]; 17 — по Spassky [1936]. Масштаб 0,2 мм, если не указано иное.

Сокращения: *Co* — кондуктор, *Eb* — основание эмболюса, *Em* — средняя часть эмболюса; *Et* — верхняя часть эмболюса; *Ma* — медиальный отросток.

DESCRIPTION. Male. Total length 7.5. Carapace 3.1 long, 2.45 wide. Carapace light yellow without pattern. Sternum, labium, chelicerae and maxillae yellow. Abdomen yellow without pattern. Legs yellow. Scopula on metatarsi and tarsi indistinct, maybe all hairs fell out. Metatarsi II–IV longer than femora. Tarsi with some strong setae (spines) (Fig. 7), all tarsi flexible.

Spination of legs in male and female (dorsal spines not counted).

	Femur ♂	Tibia ♂	Femur ♀	Tibia ♀
I	1p2r	4p5r3–3v	1p1r	2p3–3v
II	2p2r	3p3r3–3v	2p0r	1p0r3–3
III	2p2r	4p4r3–3v	2p2r	4p3r3–3v
IV	2p2r	4p4r3–3v	2p1r	4p4r3–3v

Leg segment length

♂	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	3.6	1.7	3.25	3.6	2.55	14.7
II	3.0	1.55	3.1	3.55	2.25	13.45
III	3.25	1.45	2.85	3.55	2.15	13.25
IV	4.1	1.7	3.75	5.25	2.5	17.3

Palp as in Figs 11–13, with long tibia having square (rectangle) shaped apophysis, each free angle of which is sharply pointed; tibia with bulge (*Tb*) ventrally; median apophysis (*Ma*) with wide basis and claw-like tip, other outgrowths absent; embolus with wide base (*Eb*), thin and heavily sclerotized median part (*Em*), and weakly sclerotized coiled tip (*Et*); conductor large (*Co*), claw-shaped.

Female. Total length 9.0. carapace 2.88 long, 2.3 wide. Coloration as in the male.

Metatarsi and tarsi with distinct scopula, tarsi as in male, with spine-like hairs and flexible (at least in the terminal 1/3) but not to the same extent as in males due to their relatively shorter length.

Leg segment length

♀	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	2.75	1.33	2.13	2.05	1.75	10.01
II	2.5	1.25	1.88	2.0	1.75	9.38
III	2.25	1.0	1.75	2.2	1.55	8.75
IV	2.88	1.3	2.5	3.15	1.83	11.66

Epigyne as in Figs 14–15, with 2 apical pockets, septum gradually widening from anterior to posterior part, two foveae with distinct lateral, anterior and median margins.

COMMENTS. We consider the female described above conspecific with the male from Tehran (over 700 km away from the type locality) because it has a similar eye pattern, size and coloration.

We were unable to find the types of *P. strandi* described and known from Akhal-Teke in Turkmenistan and to compare them with the holotype male of *P. loeffleri* and the female from Bushehr. The type localities of these two species are separated by over 600 km

and two mountain ranges: Kopet-Dagh and Elburz. Nevertheless it is not impossible that the two names will be synonymised in the future.

It is worth noting that *P. loeffleri* has an unusual eye pattern, different from that in the type species of the genus, *P. lentiginosa* (C.L. Koch, 1837) (cf. Figs 1–2 and 9), and other Gnaphosidae. Its lateral eyes are much larger than the medians. In addition, the cephalic region in this species is very narrow (Fig. 4). There are small differences in the cheliceral keel (cf. Figs 5 and 10), which may represent interspecific variation. The keel is lower in *P. loeffleri* and has distinct teeth on it, while in *P. lentiginosa* the keel is higher and has no teeth on it. We do not know if other *Pterotricha* have flexible tarsi, scopula on tarsi-metatarsi and small spines. It seems that Roewer [1955] placed *Bobineus loeffleri* into Cithaeronidae because of its flexible tarsi, which is one of the key characters of the family [Jocqué & Dippenaar-Schoeman, 2006]. All these differences indicate that in future, after a global revision of *Pterotricha*, *Bobineus* will be resurrected as a subgenus or even a genus.

We have provided the original figures (Fig. 16) of Roewer [1955] just to show his inaccuracies in his drawings of the eyes, chelicera (showing tooth), very long apical part of the anterior spinneret (it is short) and the totally different shape of the maxillae. Inaccuracies in figures should be accounted for while comparing specimens (even types) with illustrations provided in Roewer's papers.

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