

## Redescription of a poorly known spider species, *Xysticus kulczynskii* Wierzbicki 1902 (Araneae: Thomisidae)

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**Abstract** — A poorly known species, *Xysticus kulczynskii* Wierzbicki 1902, is redescribed on the basis of material newly collected from Azerbaijan and Iran. The male is described for the first time. A diagnosis distinguishing the species from the European *X. ferrugineus* Menge 1876 is provided.

**Key words** — *Xysticus kulczynskii*, redescription, Azerbaijan, Iran

### Introduction

Although the thomisid fauna of the ex-USSR can be considered relatively well studied, there are a number of poorly known species of uncertain taxonomic status, many of which are so far known only from the original description. *Xysticus kulczynskii* Wierzbicki 1902 is a good example of this. Having been described on the basis of a single female from Azerbaijan (Wierzbicki 1902), this species has so far been known only from the type locality. No attention has been paid to it until recently, when Azarkina & Logunov (2001) assumed that *X. kulczynskii* could be a member of the *cristatus* species group. Newly collected material from both Azerbaijan and Iran have allowed us to clarify the taxonomic status of this obscure species.

Specimens for this study were borrowed from, or are distributed among, the following museums and personal collections: MMUM — The Manchester Museum, the University of Manchester, Manchester, UK (Dr D. V. Logunov); MNHN — Museum National d'Histoire Naturelle, Paris, France (Dr C. Rollard); NHMW — The Arachnoidea Collection, Naturhistorisches Museum, Wien (Dr J. Gruber); PCCK — Personal collection of Dr Christian Komposch, Graz, Austria; ZMUM — The Zoological Museum of the Moscow State University, Moscow, Russia (Dr K. G. Mikhailov).

The format of the description and the terminology follows Ono (1988). All measurements are in mm.

*Xysticus kulczynskii* Wierzbicki 1902  
(Figs. 1–3, 7, 9, 11–12, 15–19)

*Xysticus kulczynskii* Wierzbicki 1902, p. 475, pl. 5, fig. 3 (D♀;

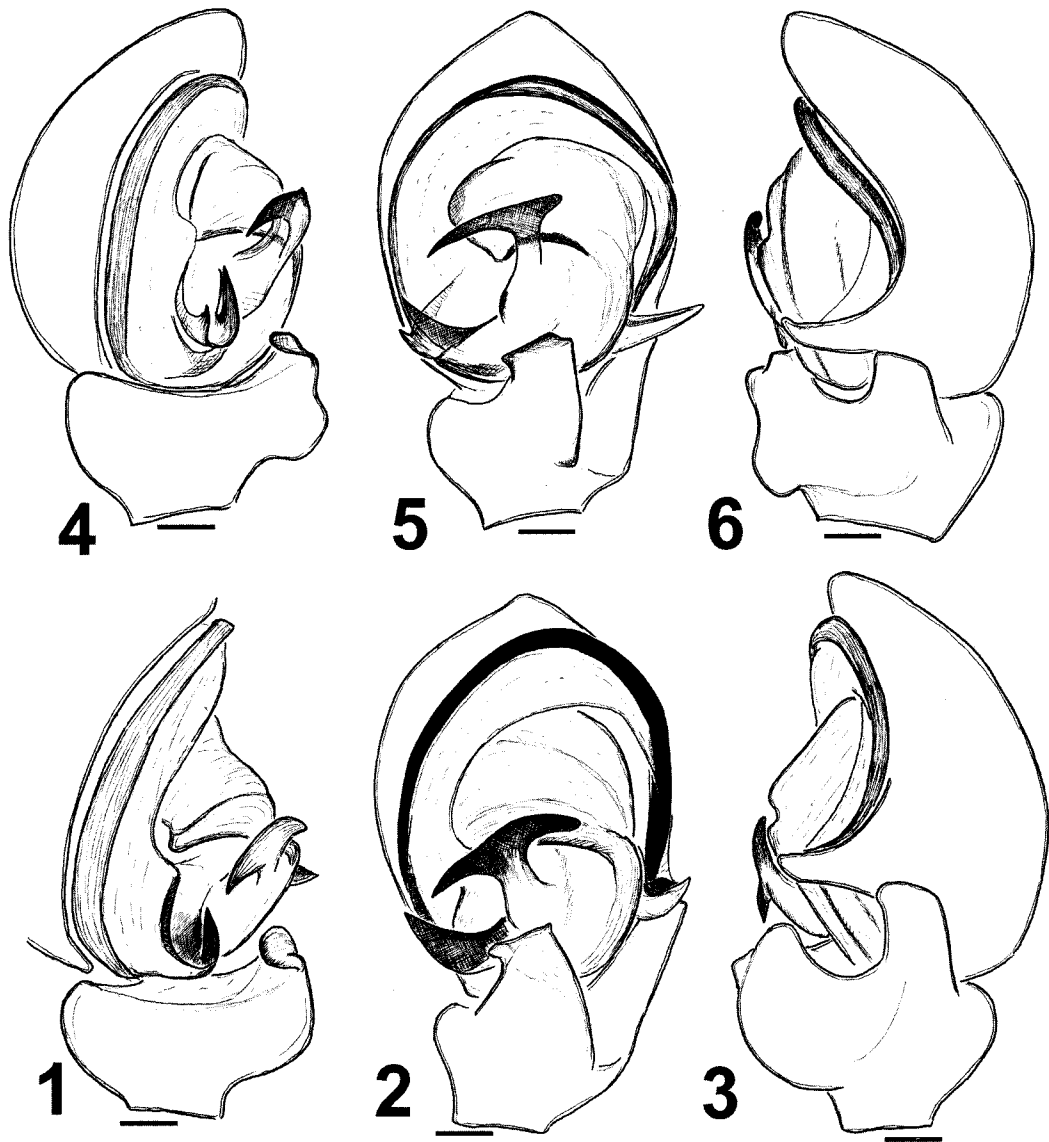
the ♀ holotype was not located and re-examined).

*X. kulczynskii*: Charitonov 1932, p. 158; Bonnet 1959, p. 4882; Roewer 1954, p. 902; Mikhailov 1996, p. 128; Ibid. 1997, p. 201; Platnick 2002, www; Azarkina & Logunov 2001, p. 138.

**Material examined.** AZERBAIJAN: 2♂, 1♀ (MMUM), 1♂ (MNHN), Lenkoran Area, near Avrora (ca 38°40'N, 48°52'E), 23–28.04.2001, Yu. M. Marusik; 1♂, 1♀ (ZMUM), 1♂, 1♀ (NHMW), 1♂ (ZMUM), Astara Distr., Istisu, ca 10 km W of Astara (ca 38°27'N, 48°47'E), near Iran frontier, 25.04.2001, Yu. M. Marusik & E. Guseinov; 2♂, 2♀ (ZMUM), Siyazan Distr., ca 70 km N of Baku, Galaalty (ca 40°48'N, 49°12'E), ca 1000 m a.s.l., 19.04.2001, Yu. M. Marusik. — IRAN: 1♂ (PCCK; det. by E. Jantscher), Golestan, NP Golestan, Tange Gol (937, 22.163/55, 56.228), 700 m a.s.l., 18–19.5.2001, Ch. Wieser.

**Comparative material:** *Xysticus ferrugineus* Menge 1876 (Figs. 4–6, 8, 10, 13–14, 20–23): FRANCE (?): 2♂, 3♀ (MNHN, 870), “Alpes M<sup>e</sup>, 5<sup>a</sup> Agnis, 7. III. 1904” (label illegible, but this is apparently the Alpes Maritimes in the SE part of France).

**Diagnosis.** *X. kulczynskii* belongs to the *cristatus* group, as the apical tegular apophysis of its male palp bears a small basal tooth (arrowed in Fig. 11) like in most other members of this species group. This species is most closely related to *X. ferrugineus* (see Figs. 4–6, 8, 10, 13–14, 20–23) and *X. spasskyi* Utotchkin 1968 (see Utotchkin 1968: figs. 27–29, 79, 80, ♂ sub *X. umbrinus*; Ovtsharenko 1979: fig. 21). The males of *X. kulczynskii* can easily be distinguished from the both latter species by the stronger lateral branch of the median tegular apophysis (cf. Figs. 2, 7, 11 and 5, 8, 13); from *X. ferrugineus*, they also differ in the shape of the tutaculum



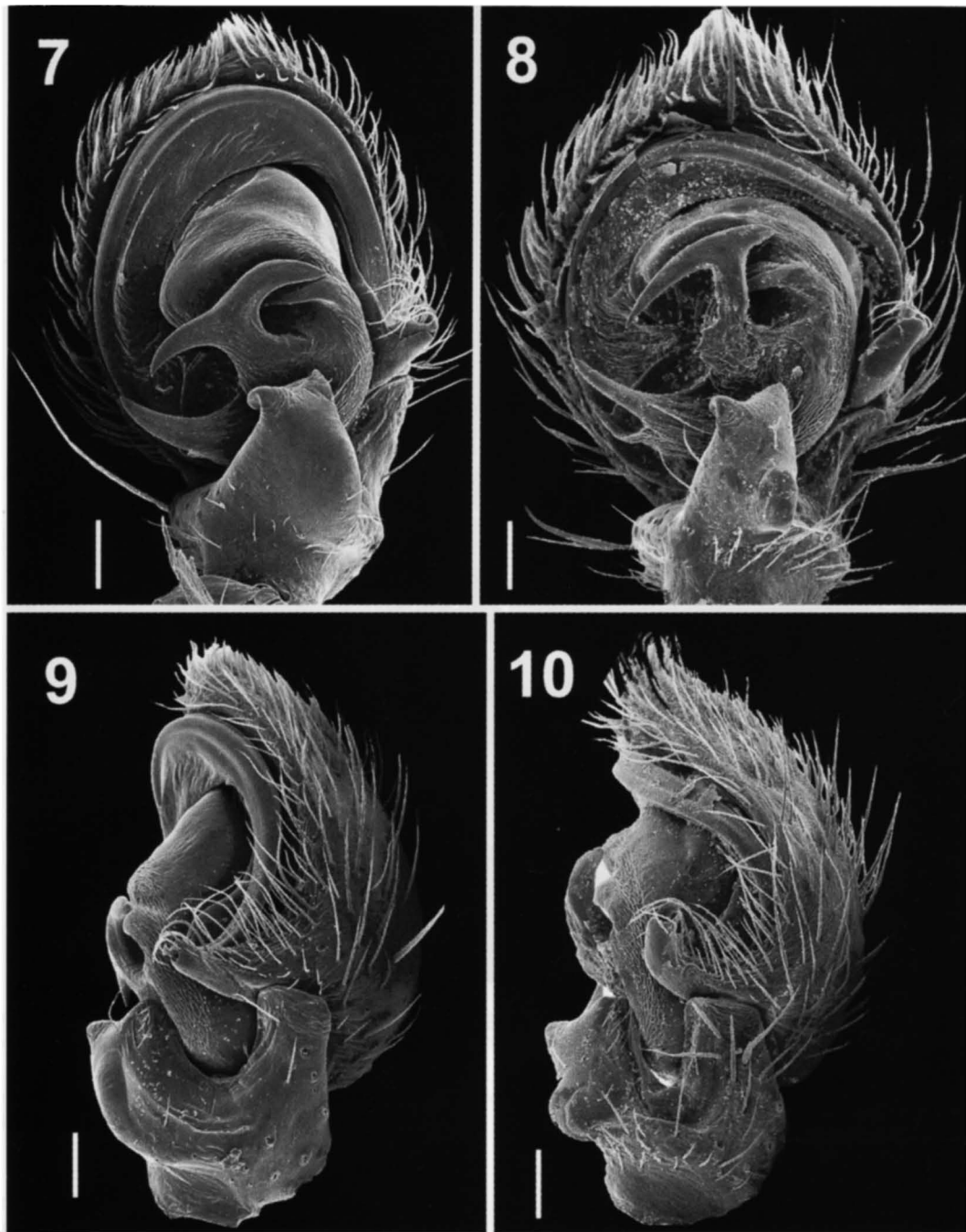
**Figs. 1-4.** Left male palps of *Xysticus kulczynskii* (1-3) (from Lenkoran, Avrora) and *X. ferrugineus* (4-6) (from France). — 1, 4, median view; 2, 5, ventral view; 3, 6, retrolateral view. Scale: 0.1 mm.

and the ventral tibial apophysis (cf. Figs. 3, 9 and 6, 10), while from *X. spasskyi* in the obtuse rather than the sharp-ened retrolateral tibial apophysis (cf. Fig. 9 and Utotchkin 1968: fig. 29). The females of *X. kulczynskii* differ from those of *X. ferrugineus* in the shape of median septum of the epigyne (cf. Figs. 15-17 and 21-23), which is situated in a shallow depression (raised in *X. ferrugineus*), and the tube-shaped insemination ducts (sac-shaped in *X. ferrugineus*) (cf. Figs. 19 and 20). Compared to females of *X. spasskyi*, those of *X. kulczynskii* differ in having a pair of ovoid fossae (lacking in the former species; see Utotchkin 1968: fig. 78); the spermathecae of *X. spasskyi* remains unstudied, thus cannot be thoroughly compared.

In the structure of the median tegular apophysis (the extended lateral branch), the males of *X. kulczynskii* are similar to those of *X. hedini* Schenkel 1936 (see Logunov 1995:

figs. 3 A-C), but can be distinguished by the smaller ventral tibial apophysis, as well as by the shape of both the tutaculum and the retrolateral tibial apophysis (Figs. 3, 9).

*Comments.* *X. kulczynskii* was described by Wierzbicki (1902) on the basis of a single female from Gusar (=Kusary), Azerbaijan; with no further records having been reported so far. We have been unable to trace and re-examine the ♀ holotype, which seemed to have been kept in Lvov (Ukraine); at least the type is absent from the collections of the Institute of Zoology in Kiev (E. Perkovsky, personal communication). However, the female of *X. kulczynskii* is diagnosed by the rather characteristic epigyne having two fossae and the median apophysis situated in a shallow epigynal depression (Figs. 15-17); both characters are unknown in other congeners of the *cristatus* group. Thus, even on the basis of only the original figure of Wierzbicki (1902:



**Figs. 7-10.** Left male palps of *Xysticus kulczynskii* (7, 9) (from Lenkoran, Avrora) and *X. ferrugineus* (8, 10) (from France). — 7-8, ventral view; 9-10, retrolateral view. Scale: 0.1 mm.

fig. 3; cf. Figs. 15 and 18) it is safe to conclude that we are dealing with *X. kulczynskii* rather than another related species.

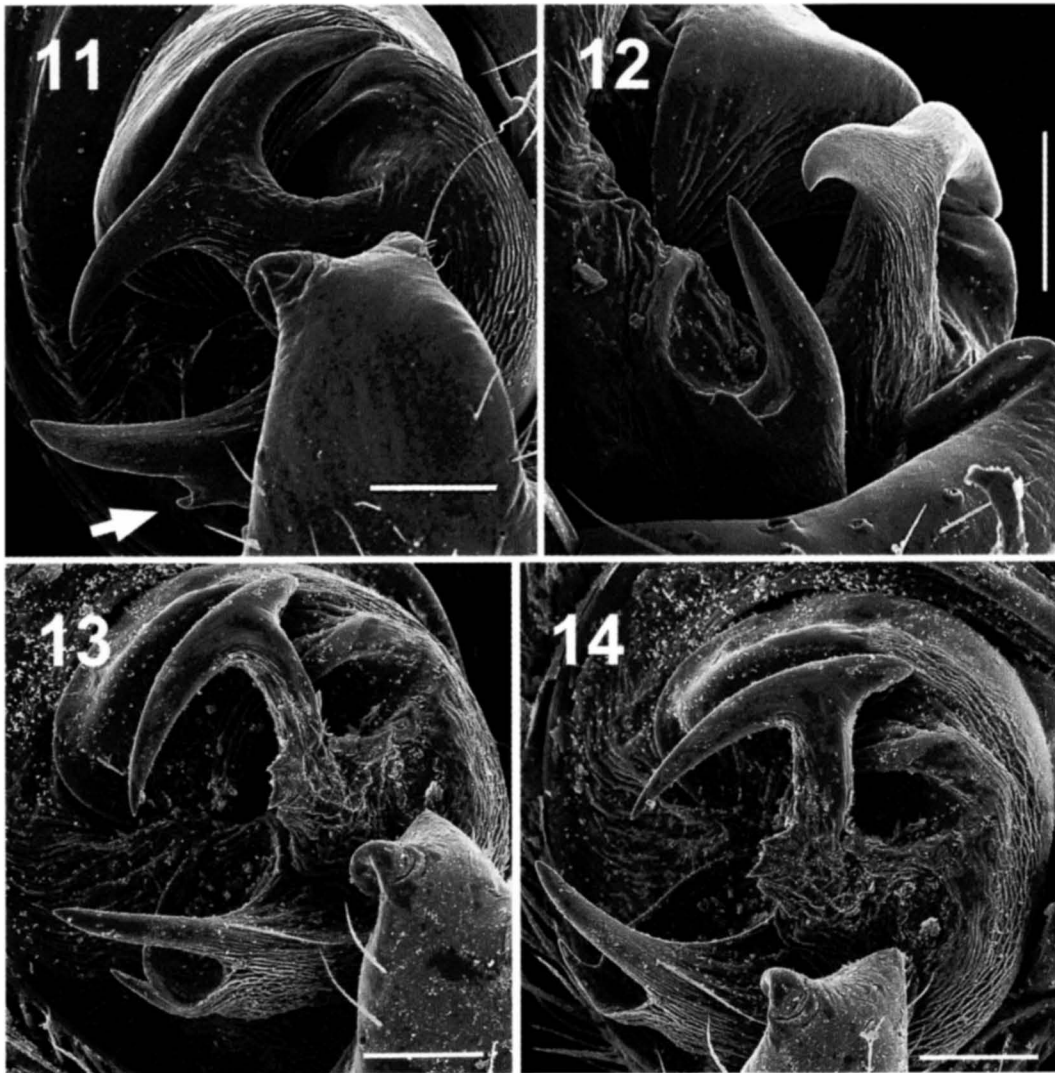
*Distribution.* Azerbaijan and Iran (Wierzbicki 1902; present data).

*Description* (♂♀ from Lenkoran Area, Avrora). Measurements (♂/♀). Carapace: 2.05/2.80 long, 1.95/2.75 wide. Abdomen: 2.00/3.90 long, 1.75/3.25 wide. Clypeus 0.17/0.29 long, chelicera 0.66/0.86 long. Eye sizes and interdistances: MOA-WA 0.49/0.63, MOA-WP 0.49/0.66,

MOA-L 0.48/0.55, AME 0.09/0.13, ALE 0.16/0.23, PME 0.09/0.11, PLE 0.13/0.17, AME-AME 0.30/0.43, AME-ALE 0.16/0.21, PME-PME 0.31/0.43, PME-PLE 0.36/0.56.

**Legs measurements:**

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	1.95/2.38	0.85/1.03	1.53/1.68	1.50/1.50	0.85/0.95
II	1.93/2.45	0.80/1.00	1.50/1.70	1.50/1.50	0.88/0.95
III	1.45/1.78	0.65/0.78	1.23/1.25	0.90/0.90	0.63/0.78
IV	1.48/2.05	0.60/0.93	1.08/1.28	1.00/1.18	0.60/0.70



**Figs. 11–14.** Median and apical tegular apophyses of the male palps of *Xysticus kulczynskii* (11–12) (from Lenkoran, Avrora) and *X. ferrugineus* (13–14) (from France). — 11, 14, ventral view; 12–13, ventral-median view. Scale: 0.1 mm. Arrowed is a small tooth of the apical tegular apophysis.

**Coloration.** Male. Carapace yellow-brown, with a wide median brownish cream band and V-shaped white figure. Sternum yellow, with numerous brown dots. Maxillae and labium yellowish brown. Abdomen: dorsum dark brown, with a characteristic white, fir-tree-shaped median band (as in all *Xysticus*); venter dark brown, with white patches. Book-lung covers yellow. Spinnerets yellow-brown. All legs yellow, with irregular brown patches, but femora I and II entirely dark brown (almost black), while patellae I and II yellow-brown. Spination of leg I: Fm d 0-0-1-1-1, pr 9 spines, Tb pr 1-1-1, rt 0-1-0, v 2-2-2-2 ap, Mt pr and rt 0-1-1 ap, v 0-2-2-2 ap. Palpal structure as in Figs. 1-3, 7, 9, 11-12.

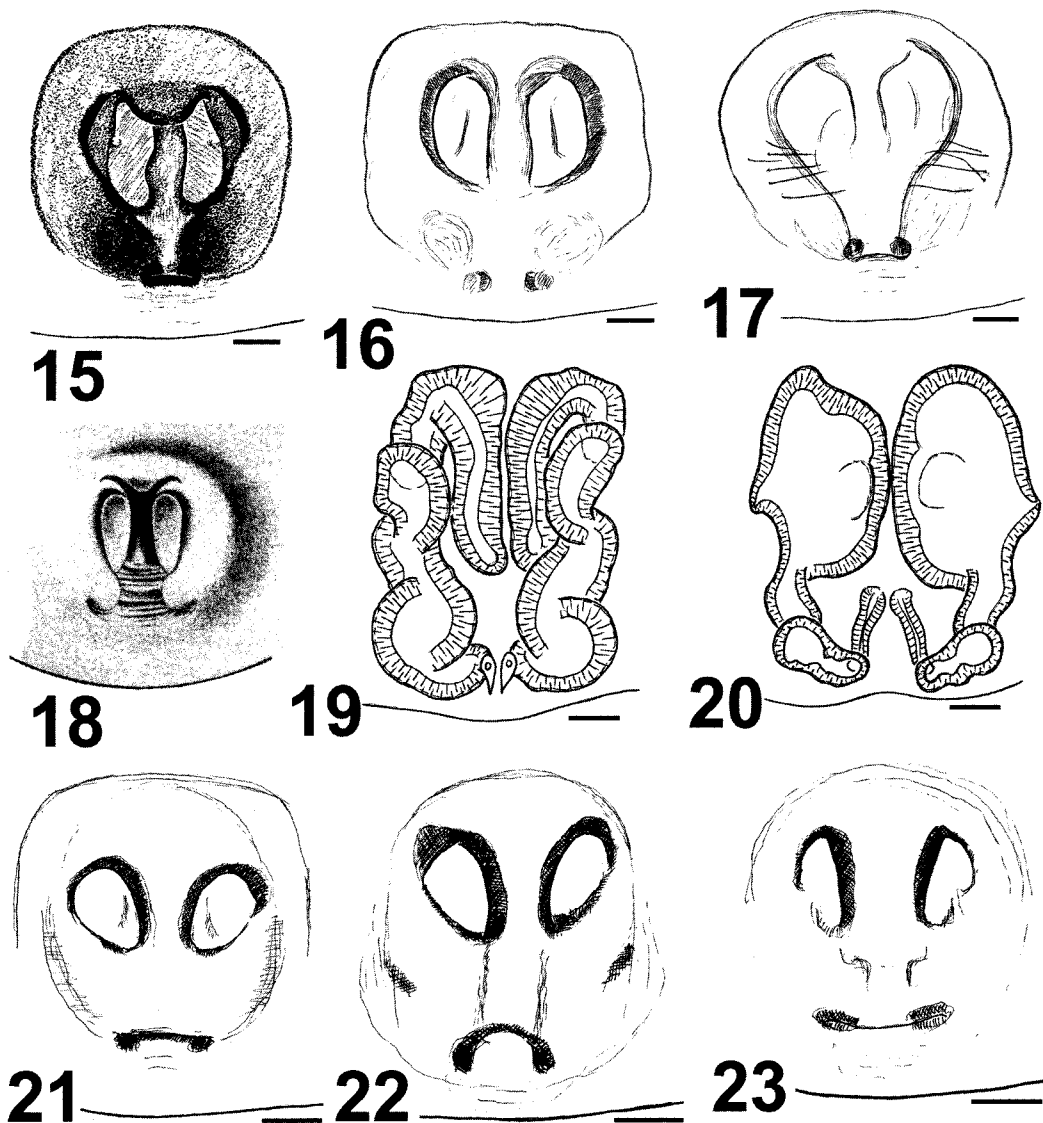
**Female.** Coloration as in male, but lighter (elsewhere light yellow-brown instead of dark brown). Spination of leg I: Fm d 0-1-0, pr 1-1-1, Tb v 2-2-2-2 ap, Mt pr 1-1-1 ap, rt 0-0-1, v 1-2-2-2 ap. Epigyne and spermathecae as in Figs.

15-19.

**Note.** The orthography of the author's name has been used in different ways, viz. Wierzbicki (in Mikhailov 1996, 1997), Werjbitzky (in Platnick 2001) or Verzhbitskii (in Azarkina & Logunov 2001). This author was of Polish origin and therefore we have used a different spelling of his name, Wierzbicki, as it should be spelled in Polish (J. Prószyński, personal communication).

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**Figs. 15-23.** Female copulatory organs of *Xysticus kulczyinskii* (15-19) (15, 16, 19, from Lenkoran, Avrora; 17, from Galaalty; 18, the original figure 3 from Wierzbicki 1902) and *X. ferrugineus* (20-23) (from France). — 15-18, 21-23, epigyne; 19-20, spermathecae. Scale: 0.1 mm.

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