

Jerzy PRÓSZYŃSKI

Remarks on *Anarrhotus*, *Epeus* and *Plexippoides*  
(*Araneae*, *Salticidae*)

[With 18 figures in the text]

**Abstract.** Complementary redescription of *Plexippoides* PRÓSZYŃSKI, 1976 and *Plexippoides potanini* PRÓSZYŃSKI, 1976 is given. *Anarrhotus nishitakensis* STRAND, 1907 is redescribed and reclassified into *Plexippoides*. Two species of *Viciria*: *V. tenera* SIMON, 1877 and *V. flavobilineata* (DOLESCHALL, 1859) are transferred into restored genus *Epeus* PECKHAM 1885. A provisional list of species of *Plexippoides* and *Epeus* is compiled. Drawings of palpal organ of type-species of the genus *Anarrhotus* SIMON, 1902 are also given.

*Plexippoides* PRÓSZYŃSKI, 1976

The genus was established by indication of type-species (PRÓSZYŃSKI, 1976: 17) with drawings of type-species and two other species (ff. 424–426, 430–437) and quotation of full labels of specimens in captions to drawings, unfortunately printed far from drawings themselves, on p. 187. All this was rather clumsy and was considered provisional at that time, however large paper planned then to be printed soon was finally never published.

The genus is characterised by peculiar shape of male palpal organ with broad and flattened cymbium, expanded laterally in its posterior part. Cymbium is broader than the diameter of bulbus, the latter usually rounded, at least partially, with a curious, tongue- or ear-like flap and thin embolus encircling it. Tibial apophysis thin and hook-like, extends sideways and touches similar hook on the posterior angle of cymbium, or articulates with its flattened surface. These structures are very characteristic and striking (Figs. 5–6, 10–12, 13–15).

Epigyne difficult to describe and draw, it consists usually of a sclerotised structure forming an ill defined island in the anterior end epigyne, with indistinct openings, usually complicated, these are located on a slope. The remaining part of epigyne is flat, without any external marks, but with fragments of coils visible through the semitransparent wall. Epigyne itself may be surrounded by raised crescent-shaped elevation or by a pigmented field (Figs. 1–2). The internal structure in several species consisting of sclerotised canals making a knot of several loops and then passing into sclerotised vesicles of spermathecae of different size (Fig. 17). The epigyne in *E. tener* looks differently (Figs. 16, 18) and it is not certain yet whether the ♀ is really congeneric with the ♂. The external characters cannot be selected yet for separating this genus from a number of other unrelated. It seems that there is a large number of externally similar *Salticidae* in the Oriental Region, which differ greatly by their genital organs. That part of definition should be therefore deferred until results of more research become available.

The genus was separated originally after study of *Plexippus annulipedis* SAITO, 1939, and as the type species was designed incidentally *Yllenus starmuehlneri* ROEWER, 1955 — then the only species with the type easily available. As it appears now the geographical range of *P. starmuehlneri* is an extremal one and the species seems to be rather specialised. The genus has apparently Oriental distribution, stretching from Indonesia to Japan and from Viet-Nam to Iran, there is a number of studied but not yet described species from Viet-Nam, China (Szechwan), Bhutan and Nepal.

A provisional list of *Plexippoides* species is as follows.

- Plexippoides starmuehlneri* (ROEWER, 1955) (type-species) — Iran
- P. annulipedis* (SAITO, 1939) — Japan
- P. discifer* (SCHENKEL, 1953) — China
- P. doenitzi* (KARSCH, 1879) — Japan
- P. nishitakensis* (STRAND, 1907) — Japan
- P. potanini* PRÓSZYŃSKI, 1976 — China
- P. regius* WESOŁOWSKA, 1981 — Korea

*Plexippoides nishitakensis* (STRAND, 1907), **comb. n.**

*Anarrhotus nishitakensis* STRAND, 1907: 570.

Material: 1♀ — holotype — “*Anarrhotus nishitakensis* STRAND Typus. Nishitake, Hiuga, Kiushiu, VII. 1898. Mus. em. 29. XII. 1898” “Zool. Museum Hamburg Typ. Kat. Araneae Nr. 24” — coll. Inst. f. Zoologie u. Museum, Universität Hamburg.

Comparative material: 1♂ — “14233 *Anarrh[otus] fossulatus* E. S. Singapore” — coll. SIMON — MNHN, Paris.

Specimen similar in general appearance and colour pattern to ♀ of *Plexippoides doenitzi* (KARSCH, 1879) (PRÓSZYŃSKI, 1973: 110–111, ff. 33–38, BOHDANOWICZ, PRÓSZYŃSKI — in preparation) from which it is slightly bigger.

Much faded, with cephalothorax now light fawn with brown eye field, whitish round spot in the fovea area from which a narrowing whitish streak runs up to the thoracic hind margin. There is also indistinct darker radiation-dorsally on thorax. Lower sides whitish. Clypeus whitish, anterior surfaces of proximal parts of chelicerae bulging. Abdomen entirely faded, with partly broken chitinous "skin". Length of cephalothorax 3.61, length of abdomen 5.76 mm. Epigyne comparable with *P. doenitzi* the differences are partly due to different drawing technique (Fig. 11-12), however I have abstained from preparation of the holotype and the internal structure of epigyne cannot be compared, which could presumably solve definitively the problem of possible identity of both species. The significant difference, however, is spination of tibia: 3 pairs of ventral spines on tibia I in both *P. doenitzi* and *P. regius* (from N. Korea) — but as much as 6 on ventral retrolateral edge of tibia I in *P. nishitakensis* and 5 on prolateral one; the proximal pair located very closely to the second pair and more medially. Both *P. doenitzi* and *P. nishitakensis* have also two spines on prolateral surface of tibia I. The importance of these spination characters is unknown to me.

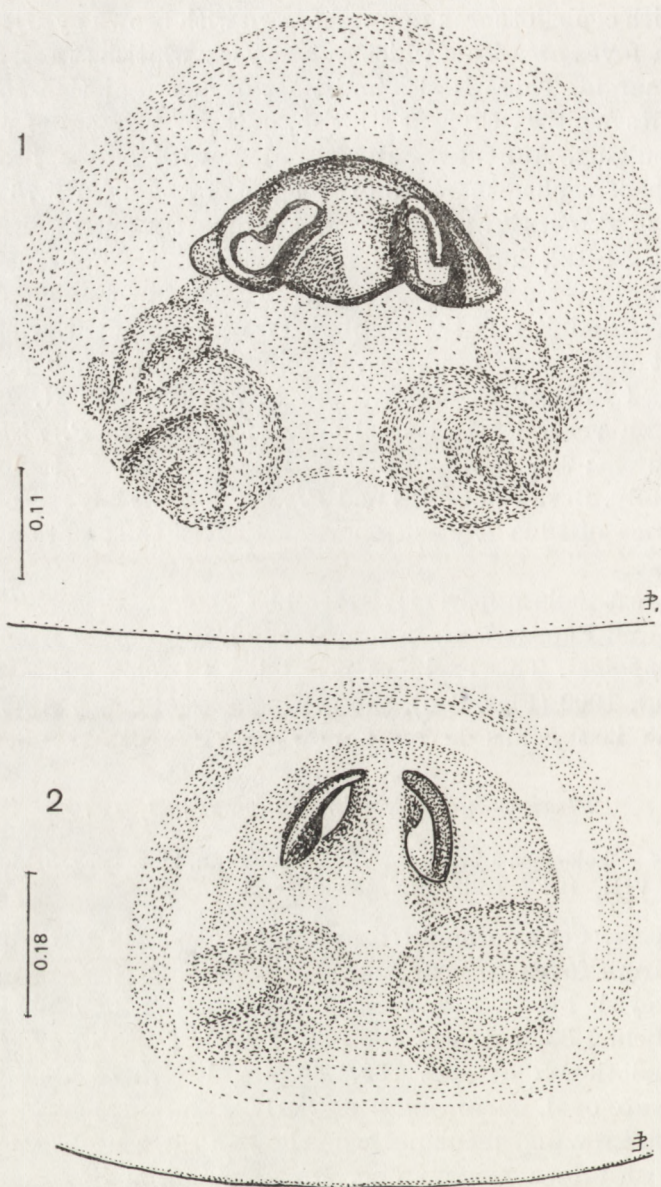
The unknown male apparently resembles that of *P. doenitzi* (drawing in BOHDANOWICZ and PRÓSZYŃSKI, in preparation), if different from it, and other males of *Plexippoides*. This excludes possibility of relationship to *Anarrhotus fossulatus* SIMON, 1902 (Figs. 3-4), the type species of genus *Anarrhotus* SIMON, 1902; thus the last genus becomes now provisionally monotypic.

*Plexippoides potanini* PRÓSZYŃSKI, 1976

Material: 1♂ — holotype, 1 juv. ♀ — "China, Sechwan, "inter pag. Schungu et Tschuiti" POTANIN 1893, VIII, 12" — coll. ZIN, Leningrad.

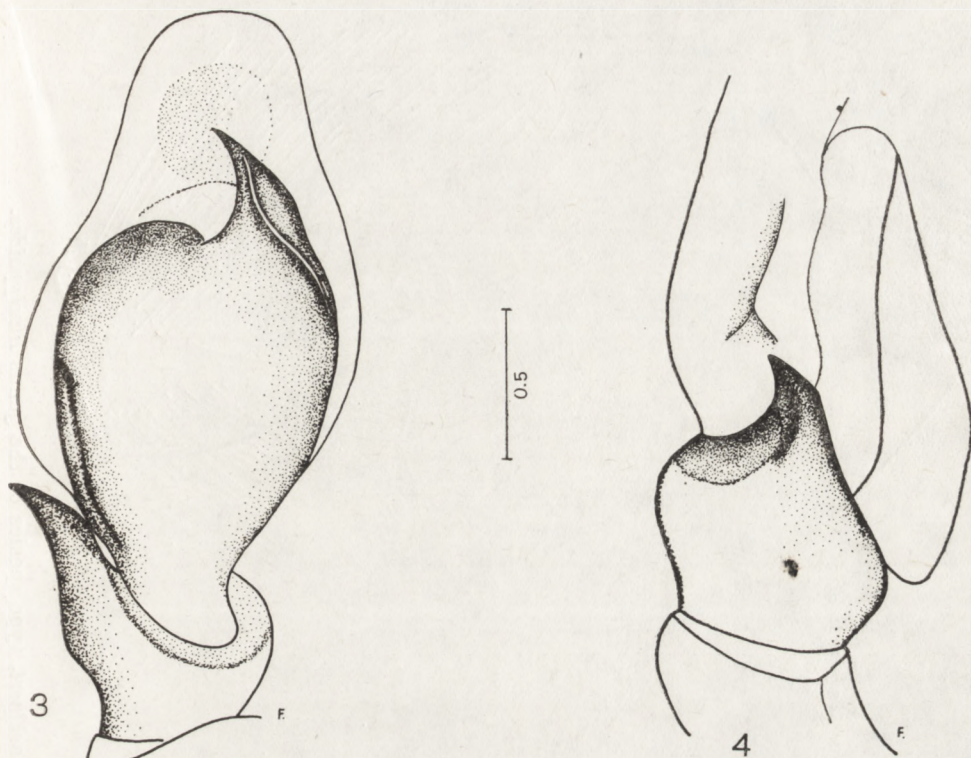
Dorsal aspect. Cephalothorax brown with eye field dark brown, a light yellow streak from fovea to near hindmargin of thorax. Lower belts of sides yellow with greyish brown thin ventral edge. Length of cephalothorax 2.94, length of eye field 1.33, width of eye field I 1.90, width of eye field III 1.80, height of cephalothorax at eyes III 1.52 mm, length of abdomen 3.80 mm. Abdomen elongate oval, narrowing posteriorly with dorsal surface divided into lateral brownish grey and median fawn yellowish fawn streaks, the latter with thin dark greyish brown median line. Broad marginal line around abdomen whitish yellow, sides below it grey mottled yellowish white. Spinnerets long, posterior greyish fawn, remaining yellowish fawn.

Legs dorsally whitish yellow, some segments yellowish fawn. Leg I longer with femur whitish dorsally and ventrally, with brownish lateral surfaces, the prolateral one darker and more intensively brown, with a thin transversal streak of brown running across white ventral surface of femur in about two-fifth of its length apically. Patella to tarsus I light brown, with tibia I as long as femur but rather thin, with short spines — three ventral pairs and a single prolateral.



Figs. 1-2. Epigyne in *Plexippoides nishitakensis* (1) and *P. doenitzi* (2).

Ventral aspect. Chelicerae with single retrolateral tooth. Maxillary plates with external angle slightly flattened and a single small sclerotized flap anteriorly to it (visible in a ventrolateral position). Sternum yellow with brown border, coxae whitish. Abdomen: lung area whitish separated by a grey area pigmented somewhat epigyne-like. Broad median area from epigastric fold to spinnerets grey with two rows of lighter dots along its median line; there is almost black



Figs. 3-4. Palpal organ in *Anarrhotus fossulatus*, type species of the genus *Anarrhotus*.

small dot medially in front of spinnerets. The grey area is delimited by latera whitish narrowing streaks.

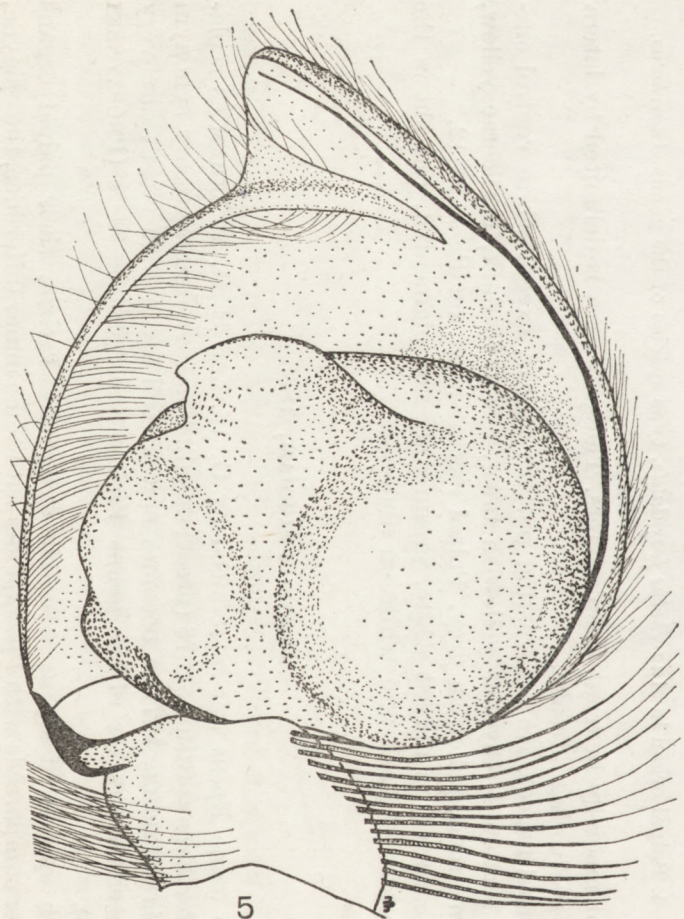
Frontal aspect. No contrasting pattern visible, except white ventral surfaces of femora I. Clypeus yellowish fawn, eye field dark, chelicerae yellow, cymbium broad, yellowish grey. Palpal organ shown on Figs. 10-12.

Immature ♀ is almost white, presumably not pigmented, but shows the same pattern of dark and white on abdomen.

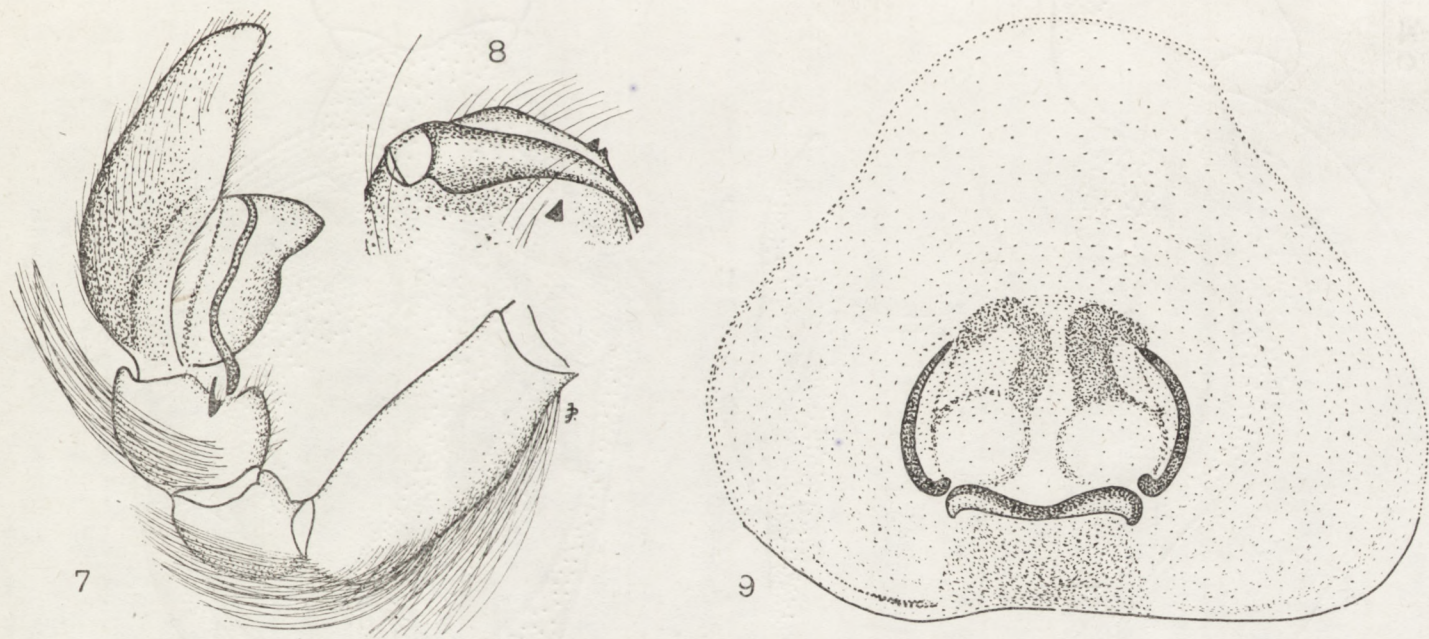
### *Epeus* PECKHAM, 1885

The name *Epeus* was introduced by G. W. and E. G. PECKHAM as replacement for *Evenus* SIMON, 1876 (preoccupied). Considered unnecessary synonym of *Viciria* THORELL, 1877 it becomes now usefull again with recent discovery of composite character of the genus *Viciria* and splitting of it (PRÓSZYŃSKI in print).

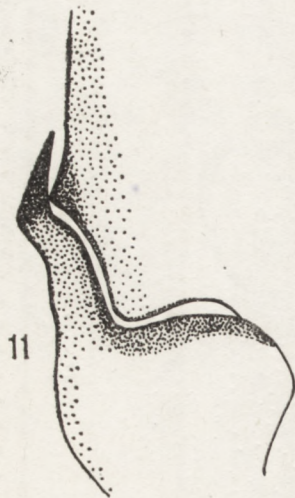
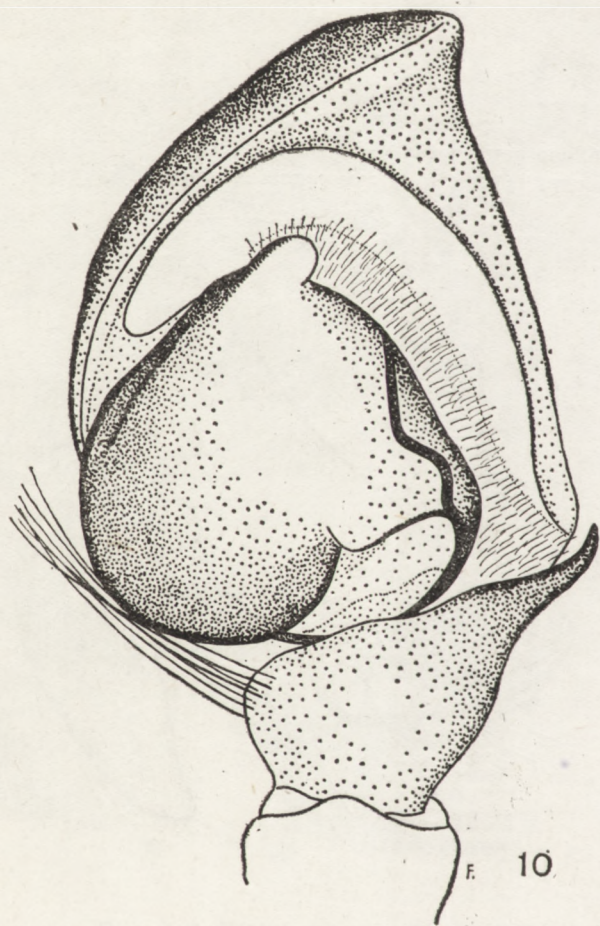
Both species of *Epeus* resemble externally *Viciria*, their palpal organs are rather comparable with *Plexippoides* with some minor difference, the epigyne,



Figs. 5-6. Palpal organ in *Plexippoides starmuehlneri*, type species of the genus *Plexippoides*.

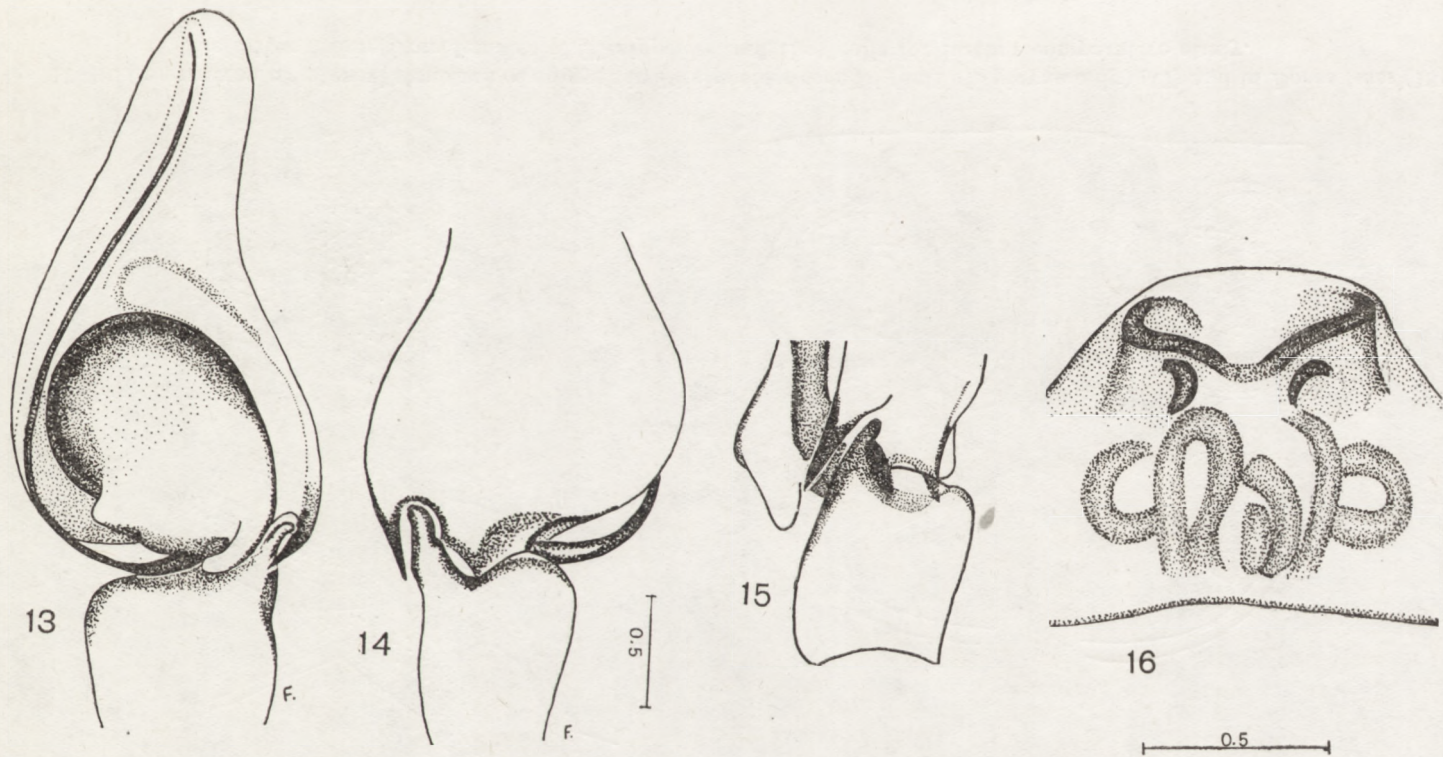


Figs. 7-9. *Plexippoides starmuehlneri*: pedipalp (7), cheliceral dentition (8) and epigyne (9) — judging from the latter, the ♀ may be not congeneric with the ♂.

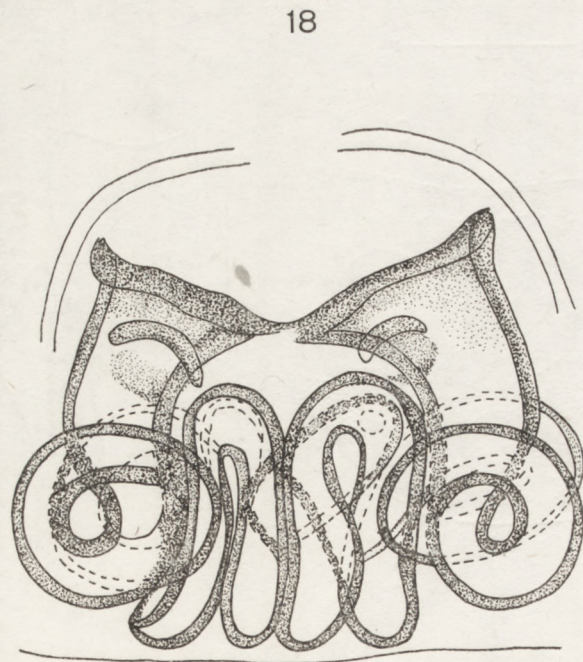
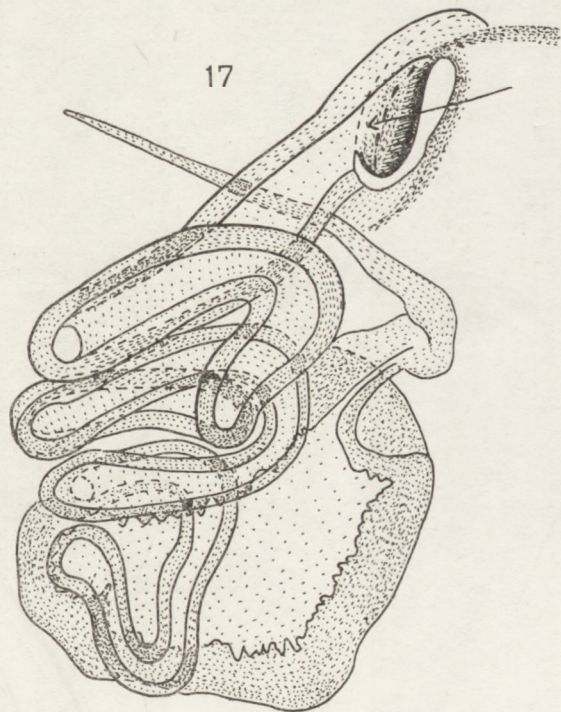


Figs. 10-12. *Plexippoides potanini*, palpal organ.  
<http://rcin.org.pl>





Figs. 13-16. *Epeus tener*: palpal organ (13-15) and epigyne (16).



Figs. 17-18. Comparison of internal structure of epigyne in *Plexippoides doenitzi* (half of epigyne only) (17) and in *Epeus tener* (18). The latter differs from females of *Plexippoides* and that calls for further comparative study.

however, appears different. The finding of systematic position of *Epeus* requires further study. A provisional list of *Epeus* species is as follows:

*Epeus tener* (SIMON, 1877) — Java

*E. flavobilineatus* (DOLESCHALL, 1859) — Java.

*Epeus flavobilineatus* (DOLESCHALL, 1859), **comb. n.**

*Salticus flavobilineatus* DOLESCHALL, 1859: 16,

*Viciria flavobilineata*: THORELL, 1892 et auct. seq.

Material: 7 ♂♂, 10 ♀♀ — "*Viciria flavobilineata* DOL. Jawa: Kagok coll. W. KULCZYŃSKI" — IZ PAN, Warszawa.

Remark. The proposed transfer to the genus *Epeus* is based on examination of specimens which are not types of the species *flavobilineatus*. Thus the reclassification is provisional until identification of studied specimens could be confirmed. *E. flavobilineatus* is closely related to *E. tener* (= *Viciria tenera*) and a few not yet described forms from Viet-Nam (M. ŻABKA — personal communication).

*Epeus tener* (SIMON, 1877), **comb. n.**

*Evenus tener* SIMON, 1877: 59, t. 3, f. 12 (preoccup.)

*Epeus tener*: PECKHAM 1886: 334,

*Viciria tenera*: SIMON, 1903: 742–748 et auct. seq.

Material: 1♂, 1♀ — "20345 *Vic. tenera* E. E. Java: Palab. Tenger/Tr." — coll. E. SIMON, MNHN, Paris.

The palpal organ is shown on Figs. 13–15, epigyne and its internal structure on Figs. 16, 18.

REFERENCES

- BOHDANOWICZ A., PRÓSZYŃSKI J. (in preparation). Systematic studies of East Palaearctic *Salticidae* IV. *Salticidae* of Japan.
- PRÓSZYŃSKI J. (in preparation). Remarks on *Viciria* and *Telamonia* (*Araneae*, *Salticidae*). Ann. Zool., Warszawa, **37**.
- PRÓSZYŃSKI J., 1973. Systematic studies on East Palaearctic *Salticidae* II. Redescriptions of Japanese *Salticidae* of the Zoological Museum in Berlin. Ann. zool., Warszawa, **30**: 97–128, 73 ff.
- PRÓSZYŃSKI J. 1976. Studium systematyczno-zoogeograficzne nad rodziną *Salticidae* (*Aranei*) Regionów Palearktycznego i Nearktycznego. Rozprawy WSP, **6**. Siedlce, 260 pp., 450 ff., 218 maps.
- ROEWER C. F. 1955. Die *Araneae* der Österreichischen Iran-Expedition 1949–1950. S. B. Akad. wiss. math. naturw. Kl., 1, Wien, **164**: 751–782, 29 ff.
- WESOŁOWSKA W. 1981. *Salticidae* (*Aranei*) from North Korea, China and Mongolia. Ann. zool., Warszawa, **36**: 45–83, 112 ff.

Zakład Zoologii WSRP  
ul. Prusa 12, 08-100 Siedlce

## STRESZCZENIE

[Tytuł: Uwagi o *Anarrhotus*, *Epeus* i *Plexippoides* (Araneae, Salticidae)]

Autor podaje rozszerzony opis rodzaju *Plexippoides* PRÓSZYŃSKI, 1976 wraz z przeglądem ważniejszych gatunków. *Anarrotus nishitakensis* STRAND, 1907 przeniesiono do rodzaju *Plexippoides*. Gatunki *Viciria tenera* SIMON, 1977 i *V. flavobilineata* (DOLESCHALL, 1859) przeniesiono do rodzaju *Epeus* PECKHAM, 1885.

## РЕЗЮМЕ

[Заглавие: Заметки о *Anarrhotus*, *Epeus* и *Plexippoides* (Araneae, Salticidae)]

Автор приводит расширенное описание рода *Plexippoides* PRÓSZYŃSKI, 1976, которое сопровождает обзором наиболее важных видов. *Anarrotus nishitakensis* STRAND, 1907 автор переносит в род *Plexippoides*. *Viciria tenera* SIMON, 1877 и *V. flavobilineata* (DOLESCHALL, 1859, переносит в род *Epeus* PECKHAM, 1885.

Redaktor pracy — prof. dr J. Nast