

Jerzy PRÓSZYŃSKI

Revision of the spider genus *Sitticus* SIMON, 1901 (*Araneida*, *Salticidae*),
I. The *terebratus* group

Rewizja rodzaju *Sitticus* SIMON, 1901 (*Araneida*, *Salticidae*), I. Grupa
terebratus

Ревизия рода *Sitticus* SIMON, 1901 (*Araneida*, *Salticidae*), I. Группа
terebratus

[With 23 figures in text]

The genus *Sitticus* SIMON, 1901, consists of about 50 (the exact number cannot be precised yet because of a number of not yet clarified synonyms or presumed synonyms) species mutually related. There are, however, several distinct groups of species more closely related and easily distinguishable by the structural resemblances.

The three species dealt with in the present paper form such a group which I propose to call the *terebratus* group. As *Sitticus terebratus* (CL.) is the type-species of the genus it and its closely related species seems to deserve a special attention. While all these species display characteristic features of the genus, like the group of fused or sometimes separated teeth on the inner anterior edge of the chelicerae (fig. 1), the lack of any teeth on the inner posterior edge (which, speaking more precisely, is not developed), the proportions of the cephalothorax and the eye field (the length of the eye field being less than a half of the length of cephalothorax, the length of the eye field longer than the breadth, the eye field slightly narrowing posteriorly), they can be distinguished easily by the structure of the copulatory organs in males and females.

In males the cymbium is broad and relatively flat, the tibial apophysis rather large and bent, the bulbus round and the stylus encircling it (figs. 4, 5, 8–12, 17–19).



The copulatory opening in females is single or consists of two separate but very closely located openings and can be found in the anterior part of epigynal plates, that location being quite unusual within the genus (figs. 6, 13–16, 20–23). Two copulatory canals run from the opening transversally sideways, then turn backwards near the lateral margins of the epigynum and then form

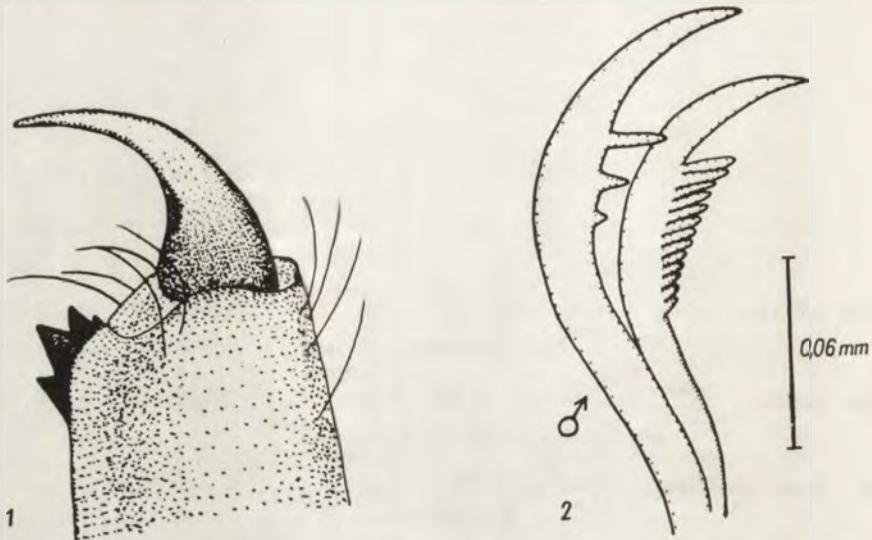


Fig. 1 — 2. *Sitticus terebratus* (Cl.). 1 — characteristic teeth on inner anterior margin of chelicerae, 2 — tarsal claws IV.

a more or less complicated knot of coils after which they end near the copulatory opening. The knot is relatively simple in *S. terebratus* (fig. 7) and very complicated in *S. fasciger* (figs. 14, 16). The knot in *S. finschi* is comparable with that in *S. fasciger* but followed subsequently by 2 sclerotized chambers, presumably spermathecae which are absent in two other species (figs. 22, 23). That structure of the female copulatory organs is quite characteristic for the *terebratus* group and there is no comparable structure among other species of the genus.

There were some suggestions concerning the taxonomic value of the claws on tarsus IV (M. DAHL, 1926) (fig. 2). It seems that these are quite variable and their study is rather inconvenient.

The colour pattern on cephalothorax and abdomen is very variable and its usefulness is doubtful. The variation of abdominal colour pattern in males and females of *S. fasciger* is shown on the fig. 3.

The geographical distribution and environmental requirements of the three species seems to be rather comparable. They do occur in the cool temperate regions of the northern hemisphere — with *S. terebratus* confined to Palaearctic Region — where it is however, quite widely distributed. It has been collected



Fig. 3. Variation of abdominal colour pattern and sizes of abdomen in American specimens of *Sitticus fasciger*. Two upper rows — males, three lower — females.

from France up to the Ussuri Region in Eastern Siberia and from Scandinavia where it reaches the Arctic Circle near Kandalaksha (PALMGREN, 1943) till Black Sea Coast in Bulgaria. The two other species have Holarctic range — with *S. finschi* being a native of both Palaearctic and Nearctic Regions and *S. fasciger* being considered as a recent introduction into North America.

The original home of *S. fasciger* is Eastern Palaearctic Region — and it has been described first from the Summer Imperial Palace near Peking, China, by SIMON, 1880 and then from Darasun, East from Lake Baikal in Siberia as *Attus godlewskii* by KULCZYŃSKI, 1895 (PRÓSZYŃSKI, 1962) — the long distance between both places suggesting rather a wide distribution in that area. The first specimen of the species in the North America has been collected in Bearfort Mt., N. Y., in August 1959 and has been collected in quite a number of localities since.

The details of a distribution of *S. fasciger* in Northern America have been communicated to me privately by Mr. B. CUTLER and Dr. W. J. GERTSCH.

Mr. CUTLER¹ wrote (in a private letter):

“The habitats for various localities are as follows: in New York City — on stone walls, at Greenwood Lake, N. Y. — on rock outcrops (this is the only “natural” occurrence known to me). Gettysburg, Pa. — unknown, Somerville, New Jersey — on a wooden shed, associated with *Sitticus truncorum* (*pubescens* FABR.), Belleville, Ontario in Canada — unknown. La Crosse — Wisconsin — some specimens from a house, other unknown, St. Paul, Minnesota — on stone walls, in buildings and in greenhouses. Minneapolis, Minnesota — on stone wall.

In Minnesota it is apparently very successful in man-made structures. At present it coexists with *Salticus scenicus* on the same wall in New York City as well as in some of the campus greenhouses in St. Paul. At other greenhouses in St. Paul the two occur separately. Where the two coincide, *S. fasciger* outnumbered *S. scenicus* by at least a ten to one ratio”.

As to dispel any possible doubts whether *S. fasciger* is really a recent introduction Mr. CUTLER states that it was not discovered some twelve years ago during research on *Salticidae* conducted in the same spot by a competent student. As it is impossible to overlook such a conspicuous species it had to be absent then.

Dr. W. J. GERTSCH has added some more arguments to the discussion whether *S. fasciger* is really an introduced species. He wrote (from a private

¹ It is a pleasant duty to acknowledge a very kind cooperation and assistance of Mr. B. CUTLER, Dept. of Entomology, Institute of Agriculture, University of Minnesota, St. Paul, Minn., USA, who has lent me all specimens of that species he had and has shared with me all his extensive knowledge of the species. All informations on the distribution and ecology of that species in N. America I owe to personal communications from Mr. B. CUTLER. I should add that Mr. B. CUTLER has resigned from his own plans of reviding the genus *Sitticus* in order to leave that topic entirely for myself. I am really very much indebted to him.

letter): "In reference to *Sitticus fasciger*, I think it is quite clear that this is an introduced species. It was not represented in any collections until very recently and now is relatively abundant in domestic situations in the north-eastern United States and adjacent Canada. You mention Minnesota as an area where it is now common according to CUTLER. I lived for two years in Minneapolis and collected widely all over the state from 1930—1932, and did not find a single example of the species. Its swift dissemination throughout our eastern region is truly remarkable, but I am sure that the whole development represents only a couple of decades. Without hesitation, it is my conviction that the species was not present in most of these areas at the time when several arachnologists were actively collecting. Even now, the distribution is a very local one. I have never taken the species in the area of New Jersey where I live, but it is seemingly abundant in areas within 20 miles of my home".

So, according to my correspondents, *Sitticus fasciger* is a recent introduction to the North America, and came there within last 20 years, presumably from the Eastern Palaearctic Region (China or maybe Korea?). The very rapid expansion of the species over the vast area in USA and its apparent success there ("...outnumbers *S. scenicus* by at least a ten to one ratio.") opens an exciting field for study. Problems of relation of *S. fasciger* to other species occupying the same ecological niches, problems of morphological and genetical variation of the immigrants and their possible departing from the parental East Asiatic stock, shall the migration westward produce a new variation? It would be also very interesting to check out whether there is no *S. fasciger* on the Pacific Coast and to keep an eye on the possibly suitable environments westward from the present western limit of the species as to ascertain more precisely the speed and other features of that peculiar "westward trek".

Sitticus finschi has been reported first from Siberia: Obdorsk (Salekhard, near Ob estuary) by L. KOCH (1879) and from the River Bytantay area (near Verkhoyansk, somewhere between 66°—69° N. and 132°—135° E) by KULCZYŃSKI (1908), both places lying at or behind the Arctic Circle (CHARITONOV, 1932). It has been described from North America as *Evophrys cruciata* EMERTON, 1891 and it was Dr. W. J. GERTSCH¹ who has synonymized that species with *S. finschi*. It was a just synonymization. On its distribution Dr. W. J. GERTSCH wrote (from a private letter): "The species is quite uncommon in North America, but widely distributed from New England to Alaska". I have seen myself the specimens of that species from Edmonton, Alta., and from Itasca Park, Minnesota. H. W. LEVI and L. R. LEVI (1951) quote it from Yellowstone, Wyoming.

¹ I am very much indebted to Dr. W. J. GERTSCH, the American Museum of Natural History, New York, for his very valuable informations on American *Sitticus* species, suggestions and advices which appeared very helpful during my research. He has also lent me rich *Sitticus* material for study and I have consulted many problems and opinions on *Sitticus* with him.

The biology and environmental requirements of the *terebratus* group are rather insufficiently known. *S. terebratus* and *S. fasciger* belongs apparently to the ecological group of *Salticidae* living on exposed to the sun surfaces: on rocks, tree trunks, walls, fences and similar places. Judging from the geographical distribution of *S. finschi* and availability of suitable for a Salticid environments there, one may expect that this species should occur in the similar environment as the two other species, but that assumption needs a confirmation.

SYSTEMATIC PART

Sitticus terebratus (CLERCK, 1758)

Material: — 11 ♀♀, 4 ♂♂ — Zoologisches Museum Berlin; 2 ♂♂ — Naturhistoriska Riksmuseet Stockholm; Rheinprovinz, det. BERTKAU — ♀, ♂ — Senckenberg Museum, Frankfurt a. M.; Bayern, coll. BÖSENBERG — Zool. Mus. Hamburg; Hungary — ♀, ♂ coll. CHYZER, Zool. Mus. Budapest; "*Attus terebratus*" "U₃ 80" [Ussuri] coll. W. KULCZYŃSKI, IZ PAN — Warszawa.

Description of male

Cephalothorax dark brown with lateral margins of the eye field black. Covered with adpressed fine white setae sprinkled with dark brown ones. White setae concentrate on the eye field and below its lateral margins, they form a median longitudinal white stripe on the thorax behind the eye field. There is a row of stout bristles above the eyes I, similar but finer are scattered sparsely over the eye field and on the thorax. Clypeus narrow, pale-fawnish. Face type I. Length of cephalothorax (biggest, smallest and mean of 6 specimens) 2.16—1.88 (1.98), length of eye field 2.38—1.98 (2.07), width of eye field I (on the level of eyes I) 1.35—1.21 (1.27), width of eye field III (on the level of eyes III) 1.19—1.11 (1.15), height of cephalothorax (from the ventral margin of cephalothorax to the upper margin of eye III) 1.03—0.90 (0.96). Ratios: a^1 0.50—0.43 (0.46), b 1.15—1.08 (1.11), c 0.75—0.67 (0.72).

Abdomen dorsally brown, covered with brown and white adpressed setae. White setae concentrate in the central area of the posterior half of the abdomen where they form either a single rhombe-shaped spot, or similar but segmented group of a few reversed V-shaped spots. There is quite a lot of the white setae in the anterior half of the abdomen, sometimes making a pair of distinct small round spots. All that pattern is quite variable. Ventral surface fawnish or greyish-fawnish-yellow. Length of abdomen 2.38—1.98 (2.07).

¹ These ratios are calculated in the following way: a = length of eye field: length of cephalothorax, b = width of eye field I: width of eye field III, c = length of eye field: width of eye field I, d = length of tibia IV to tibia III. See also diagram of measurements — fig. 1 in PRÓSZYŃSKI, (in print).

Sternum fawnish and coxae yellowish, covered with fine white setae. Maxillary plates fawnish, labium brownish, white tipped. Chelicerae typical, with 3 teeth (separated or fused) on anterior inner margin.

Pedipalps thin with the copulatory organ broad and massive. Bulbus almost round and flat with the canal forming a characteristic loop which however may vary in details. Stylus arises in the most posterior part of the bulbus and is followed by a short whitish flap which may be perhaps considered as a vestigial remnant of the conductor (fig. 4). Tibial apophysis long and massive with a strong and smooth hook bent inwards. When looked on in a lateral view it has a small but robust branch forming an irregular fork (fig. 5).

Legs fawnish, with indistinct darker rings on tibiae, metatarsi and patellae. Covered with whitish, greyish and brownish setae. Spines present. Length of segments of legs (tarsus + metatarsus + tibia + patella + femur): I 0.58—0.54(0.58)+0.84—0.72 (0.75)+0.85—0.73 (0.80)+0.76—0.63 (0.68)+1.27—1.13 (1.20), II 0.58—0.54 (0.55)+0.81—0.70 (0.76)+0.81—0.67 (0.76)+0.67—0.59 (0.63)+1.26—1.12 (1.17), III 0.72—0.62 (0.64)+0.94—0.81 (0.86)+0.81—0.65 (0.72)+0.63—0.54 (0.58)+1.26—1.08 (1.16), IV 0.81—0.67 (0.75)+1.21—0.99 (1.09)+1.21—1.00 (1.09)+0.73—0.65 (0.68)+1.61—1.40 (1.52). Ratio d 1.67—1.42 (1.51).

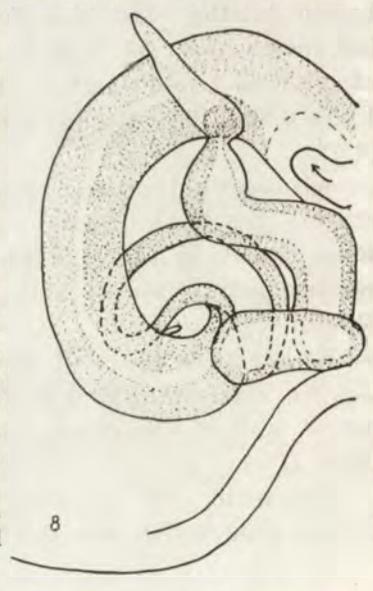
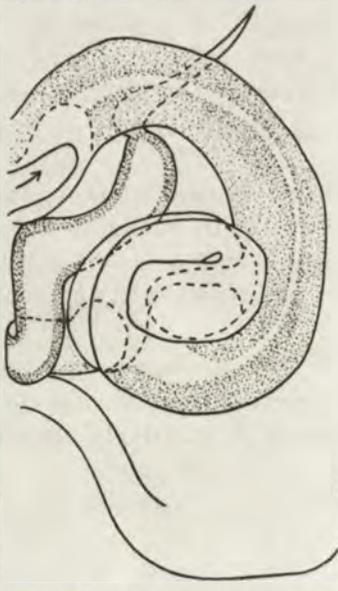
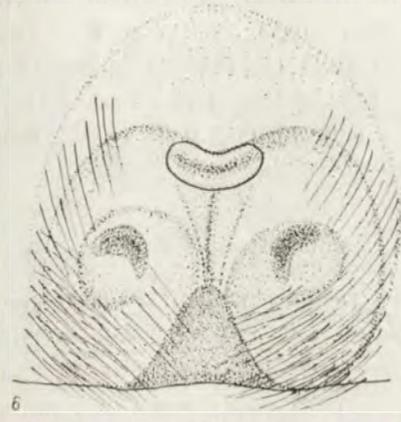
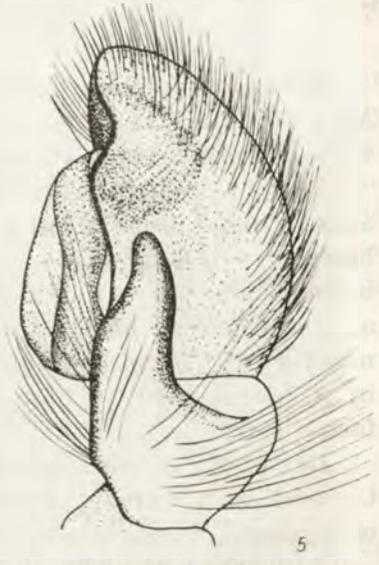
Description of female

Cephalothorax brown or pale brown with darker surrounding of eyes. Covered with short and adpressed whitish setae, often partly bald. There is a row of short bristles above eyes I, similar but finer scattered sparsely over the eye field and thorax. Clypeus pale brown and narrow with a few longer brown bristles stretching forwards. Face type I. Length of cephalothorax (10 specimens) 2.34—1.98 (2.15), length of eye field 0.94—0.72 (0.95), width of eye field I 1.44—1.26 (1.31), width of eye field III 1.35—1.16 (1.22), height 1.08—0.89 (1.05). Ratios: a 0.47—0.34 (0.42), b 1.09—1.03 (1.07), c 0.76—0.55 (0.68).

Abdomen brown covered with short and adpressed brownish setae, the central area of the posterior half of the abdomen with a white spots of white setae, usually in a form of a few reversed "V". Spinnerets olive-fawnish. Ventral surface pale yellowish with an olive shade. Length of abdomen 3.60—2.07 (2.80).

Epigynum flat and round with an elongated single copulatory opening (fig. 6). The vagina and parts of coils usually can be seen through semitransparent wall of epigynum. The knot of copulatory canals is relatively simple (figs. 7, 8).

Sternum grey or yellowish, covered sparsely with short brownish setae. Coxae pale yellow covered with greyish setae.



Figs. 4-8. *Sitticus terebratus* (Cl.). Copulatory organs. 4-5. Male copulatory organ, ventral and lateral view. 6-8. Female: 6 - epigynum, 7 - epigynum after maceration, dorsal view, 8 - the same, ventral view.

Legs pale fawn with indistinct traces of brownish rings on tibiae. Covered with brownish and whitish setae. Length of segments of legs: I 0.59—0.49 (0.53)+0.72—0.54 (0.63)+0.76—0.63 (0.67)+0.81—0.54 (0.68)+1.21—0.90 (1.10), II 0.67—0.49 (0.56)+0.72—0.62 (0.65)+0.72—0.59 (0.66)+0.76—0.62 (0.68)+1.27—0.97 (1.14), III 0.67—0.49 (0.60)+0.85—0.76 (0.78)+0.81—0.62 (0.71)+0.63—0.49 (0.58)+1.27—1.08 (1.16), IV 0.81—0.63 (0.73)+1.12—0.94 (1.06)+1.27—1.03 (1.14)+0.81—0.62 (0.71)+1.71—1.12 (1.49). Ratio d 1.76—1.50 (1.61).

Sitticus fasciger (SIMON, 1880)

Synonyms: *Attus godlewskii* KULCZYŃSKI, 1895; *Sitticus godlewskii*: PRÓSZYŃSKI, 1962; *Sitticus barnesi* CUTLER, 1965.

Material: "1032 *Sit. fasciger* E. S. Peking (C. P.) [COLLIN DE PLANCY]" — 1 ♂, 1 juv. ♂, 8 ♀♀ — syntypes; "7645" and "2.560" "*Sitticus yokohama* (M)" and "20546 *Attul. Japonia* (PKH)" — 2 ♂♂, 2 ♀♀ — coll. E. SIMON, MNHN Paris; "*Attus godlewskii* S. [Darasuń, Transbaikale]" — 1 ♀ holotype, coll. W. KULCZYŃSKI; "*Sitticus barnesi* B. CUTLER New York, USA det. B. CUTLER" — 1 ♀, 1 ♂, paratypes¹ — IZ PAN — Warszawa; USA: New York, New Jersey, Minnesota and Wisconsin States — 10 ♂♂, 9 ♀♀, coll. B. CUTLER, University of Minnesota, St. Paul.

Description of male

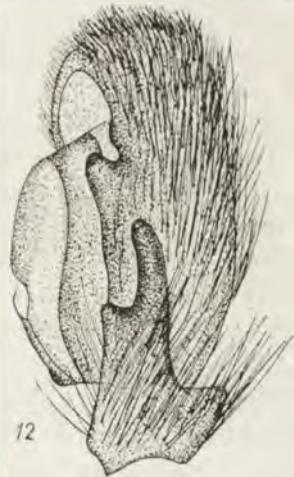
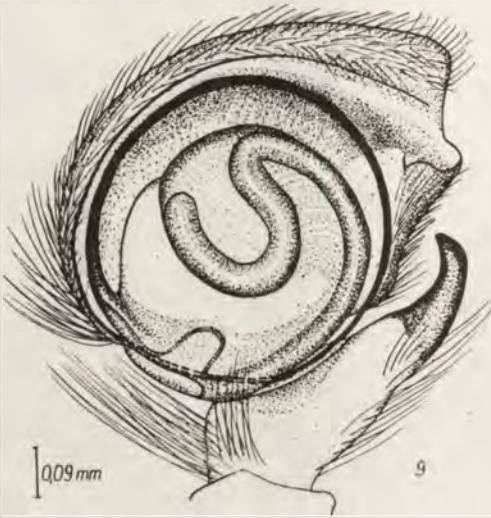
Cephalothorax brown to almost black, eyes surrounded black, covered with whitish adpressed setae forming a longitudinal white spot on the thorax. Eye field covered with dark or dark sprinkled with white setae arranged into bent lines ("halved onion" pattern). There is a row of dark bristles above eyes I and similar but finer bristles are scattered over the eye field and thorax. Length of cephalothorax (syntype specimen in brackets and 11 American specimens — biggest and smallest measurement and a mean of 11 measurements in parentheses) [1.8] 2.02—1.75 (1.90), length of eye field [0.84] 0.84—0.73 (0.78), width of eye field I [1.26] 1.21—1.11 (1.16), width of eye field III [1.20] 1.13—1.05 (1.09). Ratios: a [0.47] 0.46—0.40 (0.41), b [1.05] 1.09—1.02 (1.06), c [0.67] 0.72—0.63 (0.67).

Abdomen dorsally brown, covered with adpressed dark brown setae. There are also white setae forming white spots, that colour pattern is quite variable (fig. 3). Ventral surface pale yellowish-grey. Length of abdomen [1.8] 2.02—1.62 (1.95).

Sternum fawn, coxae greyish-yellow, covered with whitish setae. Maxillary plates and labium pale fawnish, white tipped. Chelicerae pale fawn, with three teeth on anterior inner margin and none on the posterior one.

¹ A gift from Mr. B. CUTLER, for which I wish to express my best thanks here.

Pedipalps. Copulatory organ resembles that in *S. terebratus* but the stylus arises in the half length of the bulbus and encircles it around one and a half times (in *S. terebratus* the stylus makes only a half circle around the bulbus). The loop of the internal canal is located in the anterior part of the bulbus (figs. 9–11).



Figs. 9–12. *Sitlicus fasciger* (SIM.). Male copulatory organs, ventral and lateral views: 9–10 – syntype specimen, 11–12 – American specimen (paratype of *S. barnesi* CUTLER).

Legs yellowish-fawn with indistinct darker rings. Length of segments of legs: I [0.51] 0.70—0.46 (0.53)+[0.48] 0.67—0.58 (0.62)+[0.78] 0.72—0.58 (0.66)+[0.60] 0.65—0.54 (0.58)+[1.02] 1.08—0.84 (0.98), II [0.48] 0.58—0.43 (0.50)+[0.60] 0.62—0.49 (0.56)+[0.60] 0.62—0.49 (0.56)+[0.54] 0.58—0.43 (0.52)+[1.14] 1.05—0.84 (0.98), III [0.54] 0.59—0.46 (0.53)+[0.72] 0.71—0.54 (0.66)+[0.60] 0.60—0.49 (0.54)+[0.48] 0.57—0.43 (0.49)+[1.02] 1.03—0.86 (0.96), IV [0.66] 0.70—0.57 (0.64)+[1.02] 1.03—0.81 (0.99)+[1.14] 1.03—0.86 (0.95)+[0.63] 0.67—0.54 (0.58)+[1.14] 1.48—1.21 (1.33). Ratio \bar{d} [1.90] 2.10—1.51 (1.73).

Description of female

Cephalothorax brown with the surrounding of eyes black and yellowish median longitudinal stripe on the thorax. Covered with brown and white setae. There is some pattern of white spots and lines — but it is quite variable. Length of cephalothorax (syntype specimens in brackets, biggest, smallest and, in parentheses, means of 8 syntype specimens and 10 American specimens) [2.24—1.96 (2.13)] 2.21—1.76 (2.00), length of eye field [0.84—0.78 (0.81)] 0.89—0.73 (0.84), width of eye field I [1.44—1.31 (1.38)] 1.40—1.19 (1.27), width of eye field III [1.35—1.26 (1.31)] 1.30—1.13 (1.19). Ratios: a [0.43—0.35 (0.38)] 0.47—0.38 (0.42), b [1.10—1.00 (1.05)] 1.09—1.02 (1.07), c [0.64—0.54 (0.59)] 0.70—0.59 (0.64).

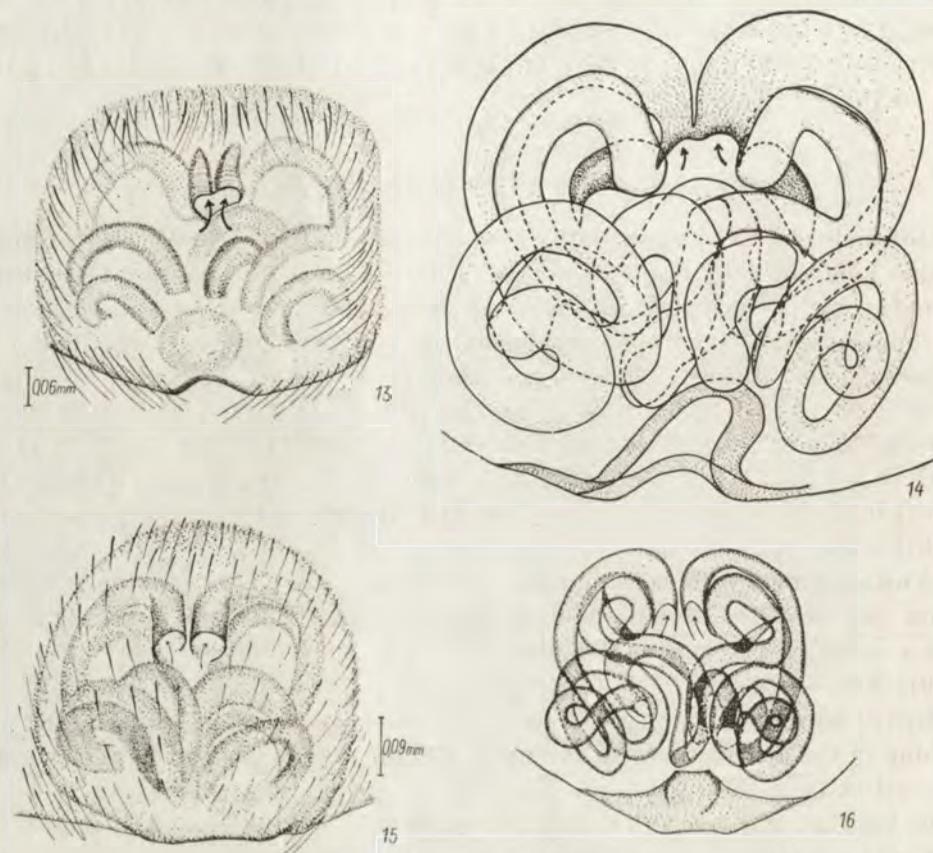
Abdomen dorsally dark brown, with some white spots making a variable colour pattern (fig. 3). Spinnerets fawnish-yellow. Ventral surface whitish with a broad greyish median longitudinal stripe. Length of abdomen [2.52—1.96 (2.29)] 3.02—1.51 (2.27).

Epigynum oval with a single (but sometimes two separate) copulatory opening in the anterior part of the plate. Fragments of coils can be seen through the wall of epigynum (figs. 13, 15). The copulatory canals form very complicated knot of coils (figs. 14, 16), there are no spermathecae developed.

Sternum greyish-fawn, covered sparsely with white thin setae. Coxae greyish-yellow. Maxillary plates and labium fawn, white tipped. Chelicerae yellowish-fawn with a typical for *Sitticus* group of teeth on the inner anterior margin. Pedipalps greyish-brown, covered with long whitish setae.

Legs yellowish-fawn with darker brownish rings. Length of segments of legs (among syntype specimens only measurements of tibiae III and IV were taken from all 8 specimens, all remaining segments were measured on 2 specimens only): I [0.54—0.48] 0.57—0.43 (0.50)+[0.60—0.54] 0.62—0.49 (0.56)+[0.72—0.66] 0.70—0.57 (0.63)+[0.72—0.60] 0.67—0.49 (0.60)+[1.14—1.02] 1.32—0.89 (1.01), II [0.54—0.51] 0.54—0.38 (0.48)+[0.60 both specimens] 0.65—0.49 (0.56)+[0.66—0.60] 0.67—0.51 (0.59)+[0.60 both specimens] 0.62—0.43 (0.56)+[1.08—1.02] 1.05—0.81 (0.97), III [0.60—0.54] 0.62—0.46 (0.55)+[0.72 both specimens] 0.75—0.62 (0.70)+[0.72—0.54 (0.65)]

0.67–0.51 (0.59)+[0.54 both specimens] 0.54–0.38 (0.50)+[1.08–1.14] 1.11–0.86 (0.98), IV [0.72–0.69] 0.72–0.57 (0.66)+[1.14–1.08] 1.08–0.89 (1.01)+[1.20–1.02 (1.12)] 1.11–0.89 (1.04)+[0.78–0.66] 0.73–0.59 (0.67)+[1.53 both specimens] 1.62–1.30 (1.45). Ratio d [1.89–1.58 (1.75)] 1.82–1.69 (1.74).



Figs. 13–16. *Sitticus fasciger* (SIM.). Female copulatory organs before and after maceration, ventral view. 13–14 – syntype specimen, 15–16 – American specimen, paratype of *S. barnesi* CUTLER.

Sitticus finschi (L. KOCH, 1879)

Synonym: *Euophrys cruciatus* EMERTON, 1891.

Material: "Edmonton, Alta., June 1930, det. W. J. GERTSCH" – ♂, ♀, the American Museum of Natural History, New York; "Itasca Park, Minnesota, 5, 27, 34, det. W. J. GERTSCH" – 1 ♀ Dept. of Entomology, University of Minnesota – 1 ♀. Remark: Mr. C. DZIADOSZ, Inst. of Zoology, Warszawa, has informed me about the single specimen of that species, described by KULCZYŃSKI, 1908, kept in the collection of the Institute of Zoology, AN USSR, Leningrad. Unfortunately I could not borrow it, but it has been rather sufficiently described by KULCZYŃSKI.

Description of male

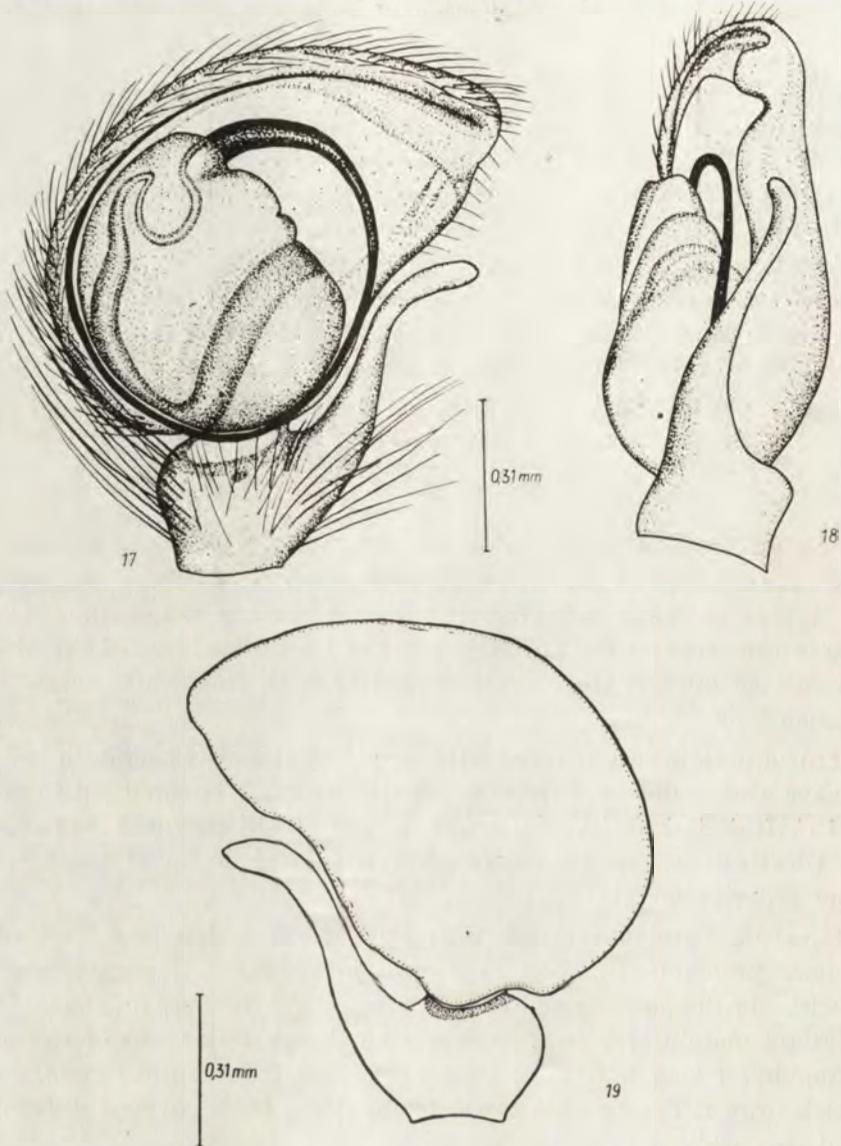
Cephalothorax dark brown, eye field with a copper gleam, eyes surrounded black. Covered with whitish setae, having in some areas an olive-fawnish gleam, the dorsal part of the thorax covered with brown setae. There is a longitudinal stripe of white setae stretching from the posterior margin of the thorax up to the eyes I. The stripe is interrupted, however, on the level of eyes III with a small patch of olive setae. White setae appears on the lower lateral surfaces of the cephalothorax. Eyes I surrounded with white setae, clypeus narrow covered with a long white "beard" — which is lacking in the female specimen. Fine brown bristles form a sparse row above eyes I, concentrate below lateral margins of the eye field and are scattered sparsely on the eye field and the thorax. Length of cephalothorax 2.30, length of eye field 0.96, width of eye field I 1.38, width of eye field III 1.27. Ratios: *a* 0.42, *b* 1.20, *c* 0.69.

Abdomen dorsally greyish, covered with dark brown short setae. There is a longitudinal stripe of white setae, giving off, in the posterior half of the abdomen, a pair of white transversal branches coming diagonally backward. Irregular white spots on the posterior parts of lateral surfaces of the abdomen. Ventral surface fawnish-grey, covered densely with fine white setae. Length of abdomen 2.50.

Sternum dark brown, covered with very fine colourless setae in the centre and thicker white setae near the margins. Coxae fawn, covered with fine white setae. Maxillae fawnish-brown, white tipped. Labium dark brown, white tipped. Chelicerae fawnish-brown with a typical group of black teeth on the inner anterior margin.

Pedipalps. Cymbium broad with the tip elongated and pointed side-wards more pronouncedly than in *S. fasciger*. Alveola triangular and deep. Stylus arises on the anterior end of the bulbus (in *S. fasciger* on the mid length of the lateral margin and in *S. terebratus* on the posterior end of the bulbus). Tibial apophysis long and thin, bent outwardly from bulbus (figs. 17—19). Tibia dark brown. Patella pale fawn, femur dark, both covered dorsally with long and fine white setae.

Legs fawnish-brown with paler rings on metatarsi I—III and two darker rings on tibiae and femora I—IV as well as darker lateral surfaces on patellae I—IV. Covered with whitish and greyish setae and a few brown bristles, spines present. Tarsal tufts I—IV very dense, consist of thick dark setae with expanded white tips. Tarsal claws with several long and distinct teeth — different than in female. Length of segments of legs: I 0.69 + 0.84 + (no measurement of tibia) + 0.77 + 1.23, II 0.65 + 0.99 + 0.77 + 0.73 + 1.19, III 0.69 + 0.81 + 0.77 + 0.58 + 1.15, IV 0.77 + 1.19 + 1.23 + 0.69 + 1.73. Ratio *d* 1.6.



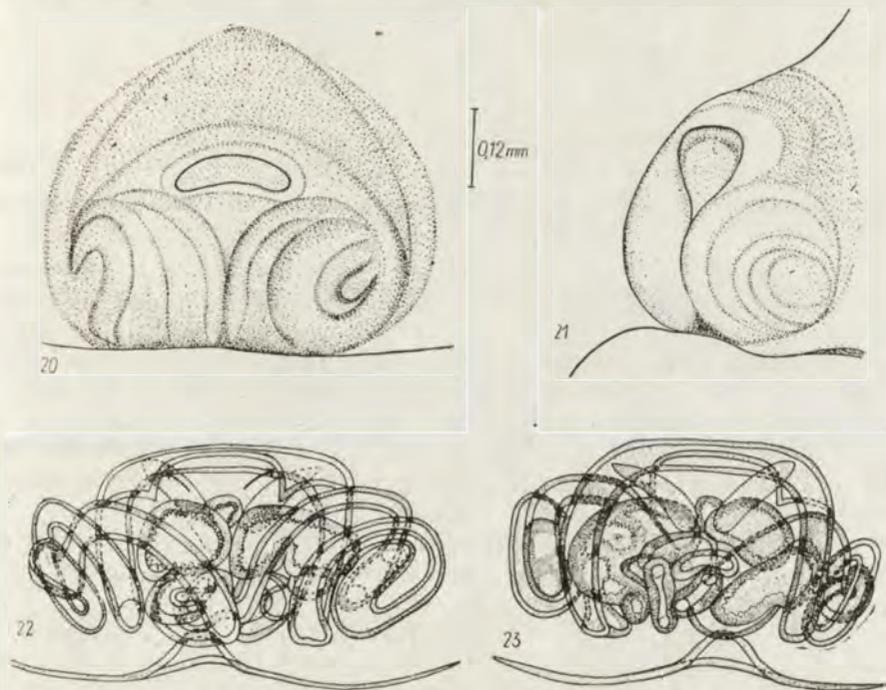
Figs. 17—19. *Sitticus finschi* (L. KOCH). Male copulatory organ, ventral, lateral and dorsal views.

Description of female

Cephalothorax dark brown, eye field black with a copper gleam covered with brownish setae. There is a stripe of white setae running along the mid-line of the eye field and thorax, broken twice at the level of eyes III and ending before reaching the posterior margin of the thorax. There are small patches of white setae near eyes I lateral, eyes II and behind the eyes III. Face type II.

Eyes I surrounded by white setae. On the second specimen that pattern is much less distinct. Length of cephalothorax (two specimens) 2.53—2.32, length of eye field 0.88—0.77, width of eye field I 1.54—1.27, width of eye field III 1.42—1.19. Ratios: a 0.35—0.33, b 1.08—1.07, c 0.57—0.60.

Abdomen dorsally olive-brownish and its general appearance is olive-greyish. Covered with brownish setae sprinkled with white ones. There is a pattern of white dots forming a central pale stripe expanded rhomboidally in the mid-length of the abdomen and broken behind that swollen area by the patches of brown setae. There are numerous brown setae inside the paler stripe and it is surrounded by darker setae. The white dots and patches concentrate on the lateral surfaces of the abdomen and form a paler frame to the dorsal surface. In the second specimen abdomen is dark brown covered sparsely with whitish setae. No distinct colour pattern. Ventral surface olive-greyish covered with short white setae. Length of abdomen 3.46—2.97.



Figs. 20—23. *Sitticus finschi* (L. Koch). Female copulatory organ. 20 — epigynum, ventral view, 21 — the same, ventro-lateral view, 22 — epigynum after maceration, ventral view, 23 — the same, dorsal view.

Epigynum elevated with a semilunar common slit of the copulatory openings. Sclerotized coils of the copulatory canal visible through the wall of epigynum (figs. 20, 21). The copulatory canals form an entangled knot resembling that in *S. fasciger* but there are also developed vesicles of the spermathecae (figs. 22, 23) absent in the previous species.

Sternum uniformly dark brown, with the central area covered with thin white setae, setae along the margins are much thicker and more intensively white. Coxae fawnish (but their soft tissues are partly macerated), covered with white setae. Maxillary plates and labium fawnish-brown, white tipped. Chelicerae fawn with a typical group of teeth on the anterior inner margin. Pedipalps fawn, femur dark brown, covered with whitish setae, there are greyish-brown setae on the tip of the tarsus.

Legs brown with darker rings on tibiae, patellae and femora. Brighter pale-fawn rings on metatarsi I—III and similar but less bright on tarsus and metatarsus IV. Tarsi I—III uniformly dark brown. Tarsal tufts I—IV consist of dark thick setae with swollen white tips. Claws without distinct teeth — cf. those in male. Length of segments of legs: I 0.65—0.49+0.69—0.54+0.77—0.59+0.81—0.59+1.19—0.94, II 0.61—0.51+0.65—0.51+0.69—0.54+0.78—0.57+1.15—0.92, III 0.65—0.57+0.84—0.57+0.77—0.59+0.61—0.46+1.19—0.97, IV 0.77—0.59+1.19—0.92+1.31—0.99+0.84—0.62+1.84—1.43. Ratio \bar{d} 1.70—1.68.

A KEY TO THE *TEREBRATUS* GROUP

Characteristic group of a few teeth (fig. 1), fused or separated, on the anterior inner margin of the chelicerae, posterior inner margin not pronounced and without teeth

- ***Sitticus* Sm.**
1. ♂ — Cymbium broad, the tip of the cymbium expanded and turned sideways (figs. 4, 9, 11, 17, 19). ♀ — Copulatory canals form an entangled knot of loops, spermathecae not developed or poorly developed (figs. 7, 8, 14, 16, 22, 23), copulatory opening in the anterior part of the epigynum (figs. 6, 13, 15, 20)
- ***terebratus* group 2**
- ♂ — Cymbium narrow, its tip pointed forwards. ♀ — Spermathecae well developed, copulatory canals do not form an entangled knot
- **other groups**
2. ♂ — Tibial apophysis robust, bent towards the bulbus (figs. 4, 9, 11). ♀ — No spermathecae (figs. 7, 14, 16). **3**
- ♂ — Tibial apophysis slender, bent outward from the bulbus (figs. 17, 19). ♀ — Spermathecae small and poorly developed, visible on the background of entangled coils lying dorsally to them (figs. 22, 23)
- ***S. finschi* (L. Koch)**
3. ♂ — The stylus arises from the posterior end of the bulbus and makes half a circle around the bulbus (fig. 4). ♀ — The coils of the copulatory canal relatively simple (figs. 7, 8)
- ***S. terebratus* (Cl.)**
- ♂ — The stylus arises from the lateral margin of the bulbus and makes one and a half circle around the bulbus (figs. 9, 11). ♀ — The copulatory canal coils form a very complicated knot (figs. 14, 16).
- ***S. fasciger* (Sm.).**

REFERENCES

- BONNET P. 1945—1961. Bibliographia araneorum. Analyse méthodique de toute la littérature aranéologique jusqu'en 1939. 1—3. Toulouse, T. 1: 832 pp., 28 tt.; T. 2: 5058 pp.; T. 3: 591 pp.
- CHARITONOV D. 1932. Katalog der Russischen Spinnen. Ežeg. zool. Muz. Akad. Nauk SSSR, Leningrad. **32** (supl.), 206 pp.
- CUTLER B. 1965. The jumping spiders of New York City. (*Araneae: Salticidae*). J. N. Y. ent. Soc., New York, **73**: 138—143.
- EMERTON J. H. 1891. New England Spiders of the Family *Attidae*. Trans. Conn. Acad. Arts. Sci., New Haven, **8**: 220—252, tt. 16—21.
- KOCH L. 1879. Uebersicht der von Dr. FINSCH in Westsibirien gesammelten Arachniden. Verh. zool.-bot. Ges., Wien, **28**: 481—490, 4 ff.
- KULCZYŃSKI VI. 1908. *Araneae et Oribatidae* Expeditionum Rossicarum in Insulas Novo-Sibiricas annis 1885—1886 et 1900—1903 susceptarum. In: Résultats scientifiques de l'Expédition Polaire Russe en 1901—1903, sous la direction du Baron E. TOLL. Section E: Zoologie. Vol. I, livre 7. Zap. imp. Akad. Nauk, 8, S.-Peterburg', **18** (7), 97 pp., 3 tt.
- LEVI H. W. et LEVI L. R. 1951. Report on Collection of Spiders and Harvestmen from Wyoming and Neighboring States. Zoologica, New York, **36**: 219—237, 50 ff.
- MARX G. 1892. A contribution to the study of the spider fauna of the Arctic Regions. Proc. ent. Soc., Washington, **2**: 186—200.
- PALMGREN P. 1943. Die Spinnenfauna Finnlands II. Acta zool. fenn., Helsingfors, **36**, 112 pp., 115 ff., 2 tt., 27 maps.
- PRÓSZYŃSKI J. 1962. Redescription of *Sitticus godlewskii* (KULCZYŃSKI, 1895) (*Araneida, Salticidae*) and Remarks on its Systematic Position. Bull. Acad. pol. Sci., Cl. II., Warszawa, **10**: 65—68, 5 ff.
- PRÓSZYŃSKI J. (in print). Systematic revision of the genus *Yllenus* SIMON, 1868 (*Araneida Salticidae*). Ann. zool., Warszawa.
- STRAND E. 1906. Die arktischen *Araneae, Opiliones* und *Chernetes*. Fauna arct., Jena, **4**: 431—478.

STRESZCZENIE

Autor daje rewizję i klucz do oznaczania trzech spokrewnionych gatunków z rodzaju *Sitticus* SIMON, 1901: *S. terebratus* (CLERCK, 1758), *S. fasciger* (SIMON, 1880) i *S. finschi* (L. KOCH, 1879), wyróżniając je jako grupę *terebratus* w obrębie rodzaju. Oprócz analizy cech taksonomicznych oraz budowy narządów kopulacyjnych autor podsumowuje dotychczasowe dane o rozmieszczeniu geograficznym oraz o środowisku tych gatunków.

РЕЗЮМЕ

Автор приводит систематическую ревизию и определительные таблицы трёх близких видов рода *Sitticus* SIMON, 1901: *S. terebratus* (CLERCK, 1758), *S. fasciger* (SIMON, 1880) и *S. finschi* (L. KOCH, 1879), выделяя их как группу *terebratus* в пределах рода. Кроме анализа таксономических признаков и анатомии копуляционного аппарата автор суммирует все данные о географическом распространении и биотопе этих видов.

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