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Redescriptions of type-species of genera of *Salticidae* (*Araneida*). IV-V¹

Redeskrpcje gatunków typowych rodzajów *Salticidae* (*Araneida*). IV-V¹

Переописания типовых видов родов *Salticidae* (*Araneida*). IV-V¹

[with 12 figures in text]

IV. *Schenkelia modesta* DE LESSERT, 1927

Whilst at the Muséum d'Histoire Naturelle, Genève, I had the opportunity to study the type specimens of the spider *Schenkelia modesta* DE LESSERT, 1927. Although I have found that the original description of DE LESSERT is accurate and matches well the features of the specimens, a redescription of this species is necessary because certain important characters are omitted from the original description.

I wish to acknowledge my deep gratitude to Dr. H. GISIN and Mr. J. C. REGNIER for their kind help and encouragement during my work in Genève.

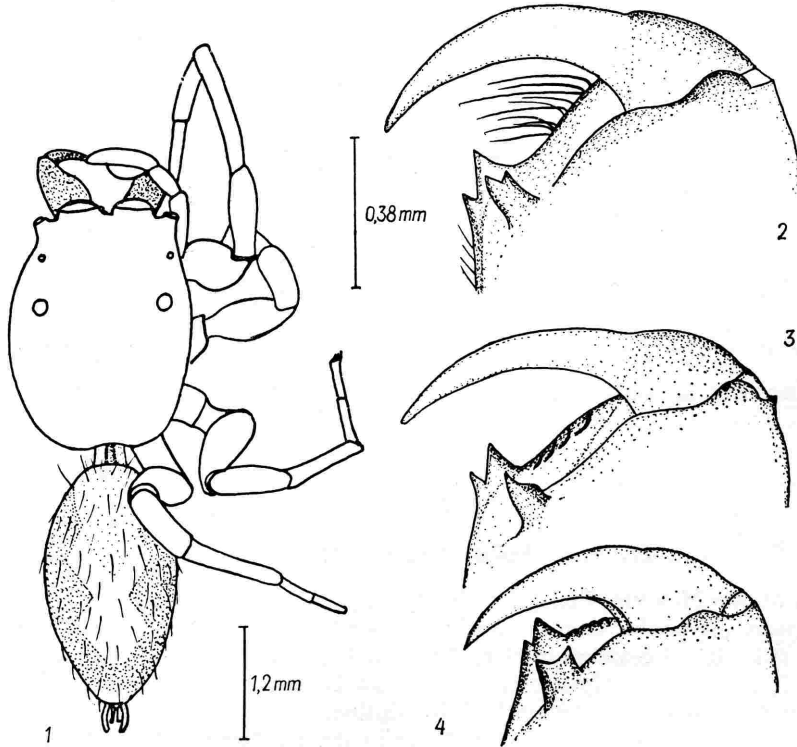
Material: "American Museum Congo Expedition. Types. *Schenkelia modesta* LESS. Localité: Medje etc. ♂♀ Déterminé par R. DE LESSERT" — 5 ♂♂, 5 ♀♀ (coll. Muséum d'Histoire Naturelle, Genève).

Description of male

Cephalothorax brownish or fawnish, with darker areas around the eyes. Covered with short adpressed white setae. White setae are confined to the dorsal surface only, while the lateral surfaces are covered with dark brown

¹ Cf.: [No. I] (*Hemsenattus iranus* ROEWER, 1955) — Senck. biol., Frankfurt a. M., 47: 463–467; [No. II] (*Telamonia festiva* THORELL, 1877) — Doriana, Genova, 4, 175: 1–5; No. III (*Gelotia frenata* THORELL, 1890 and *Policha bimaculata* THORELL, 1890) — Ann. Mus. civ. Stor. nat., Genova 77: 12–20.

setae. There is also a white margin near the ventral edge of the thorax, and remnants of a white median longitudinal streak on the thorax. The clypeus is very narrow; the face of type I (classification of ROEWER, 1965). Length of cephalothorax (3 specimens) 2.88–3.44, length of eye field 1.19–1.44, width of eye field I (on level of eyes I) 1.63–1.88, width of eye field III (on level of eyes III) 1.50–1.81, height of cephalothorax 1.38–1.88. Ratios¹: *a* 0.41–0.42, *b* 1.03–1.08, *c* 0.73–0.77.



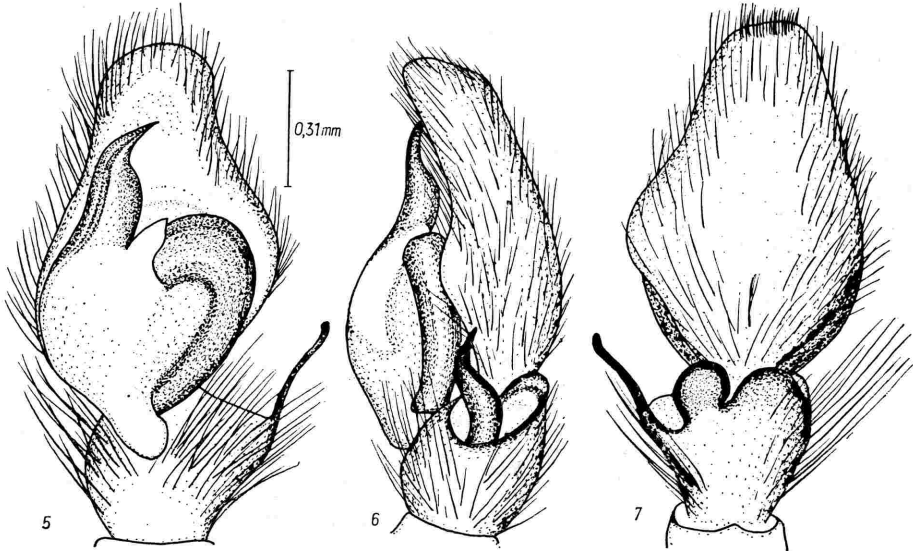
Figs. 1–4. *Schenkelia modesta* LESS.: 1 — male, entire animal, dorsal view, 2–3 — both chelicerae of the same male specimen, 4 — chelicera of female.

Abdomen dorsally brownish with a large whitish spot covering the median part of the anterior $\frac{3}{4}$ of the abdomen, and a thin white margin on the angular posterior tip of the abdomen (fig. 1). Covered with white and brown short adpressed setae. There are stout brownish bristles scattered over the abdomen. There is also a cluster of white bristles on the anterior tip of the abdomen

¹ Ratios: $a = \frac{\text{length of eye field}}{\text{length of cephalothorax}}$, $b = \frac{\text{width of eye field I}}{\text{width of eye field III}}$
 $c = \frac{\text{length of eye field}}{\text{width of eye field I}}$, $d = \frac{\text{length of tibia IV}}{\text{length of tibia III}}$ (PRÓSZYŃSKI, 1968).

of some specimens. Abdomen ventrally — median area greyish-fawn, lateral margins white. Length of abdomen 3.13–3.75.

Sternum fawnish or yellowish. Coxae yellowish. Maxillae and labium fawnish with white tips. Chelicerae fawnish or brownish, elongated, with one bifid tooth on the inner posterior margin and two simple teeth on the anterior margin (fig. 2). There is a good deal of variation in the shape of this characteristic tooth and in one of the specimens (on one chelicera only) the second cone of the tooth is not developed (fig. 3) and it has the appearance of a single tooth which is characteristic for the "*unidentati*" group of subfamilies of the *Salticidae*. It may be assumed that this is due to some developmental deformation and should not give rise to any changes in the systematic alignment of the species. However, it is another example of the undesirability of dividing the family on the basis of a single character — as is done by SIMON.



Figs. 5–7. *Schenkelia modesta* LESS., male, copulatory organ: 5 — ventral view, 6 — lateral view, 7 — dorsal view.

Pedipalps yellowish or fawnish. Copulatory organ without conductor. Bulbus relatively large with a broad canal. Stylus massive, arising from the anterior part of the bulbus (fig. 5). Tibial apophysis in the form of a very thin and undulating sclerotized process (fig. 6). The anterior dorsal edge of the tibia is sclerotized and forms two rounded flaps (fig. 7).

Legs. Colouration varies from uniformly yellowish to fawn with paler rings on legs I and II and pale fawnish rings on legs III and IV. Covered with whitish and brownish setae. Spines well developed; on tibiae I–II there are 3 pairs of ventral and 2 unpaired lateral spines on the anterior surface. Length of the

segments of legs¹: I 0.81–1.06 + 1.25–1.94 + 2.00–2.19 + 1.13–1.63 + 1.69–2.44, II 0.75–1.00 + 1.06–1.69 + 1.06–1.81 + 0.94–1.44 + 1.56–1.94, III 0.94–0.75 + 1.75–1.25 + 1.38–1.06 + 1.25–0.94 + 2.06–1.69, IV 0.94–0.88 + 1.88–1.50 + 1.63–1.25 + 1.19–0.88 + 2.19–1.75. Ratio *d* 1.19–1.18.

Description of female

Cephalothorax fawnish-brown, with a paler, yellowish spot just behind the eye field. Eyes surrounded by darker rings or spots. Covered uniformly with short white setae which lie flat. Clypeus very narrow, face type I. Length of cephalothorax (three specimens): 3.38–2.88, length of eye field 1.38–1.31, width of eye field I 1.81–1.69, width of eye field III 1.78–1.69, height of cephalothorax 1.50–1.38. Ratios: *a* 0.46–0.41, *b* 1.02–1.00, *c* 0.78–0.75.

Abdomen dorsally brownish with a broad median longitudinal whitish stripe which has irregularly serrated borders. This whitish stripe extends from the anterior end of the abdomen back to $\frac{3}{4}$ of its length. The posterior $\frac{1}{4}$ of the abdomen is brown, with a thin white margin to the angular posterior end of it. Covered with short brown and white adpressed setae, the white on the whitish spots, and the brown on the brown ones. There are also small patches of brownish setae scattered over the median whitish stripe, and there are some very small white spots on the brown areas. Longer and stout white setae arise from the anterior tip of the abdomen; whilst similar brown setae are scattered sparsely over the whole abdomen. This pattern as described above, corresponds exactly with four of the specimens studied. In the 5th one, the soft tissues are partly macerated and it is now bald. Abdomen ventrally — median area greyish with a brownish shade. Lateral stripes whitish. Length of abdomen 3.00–4.25.

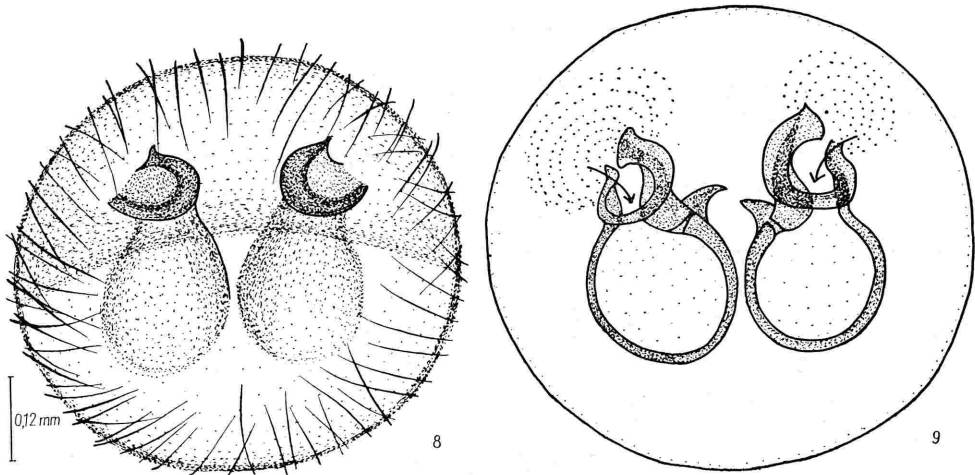
Epigynum. A circular plate with posterior half elevated. There are two copulatory openings on the anterior part of a plate surrounded by horse-shoe shaped and strongly sclerotized borders. Two bulb-like spermathecae are visible through the semitransparent wall of the plate (fig. 8).

Spermathecae (fig. 9) simple, without developed copulatory canals, with the copulatory openings leading directly to the narrowed neck-like anterior part of the spermathecae. The distal parts of the spermathecae are not developed, and the sclerotized fertilization canals arise directly from the anterior part of the spermathecae.

I have been unable to find a vagina on the preparation studied. Possible it may be less sclerotized and opens beneath the posterior edge of the plate, without being firmly attached to it.

Sternum varies from pale yellowish to fawnish. Coxae yellowish. Maxillae and labium pale fawnish or yellowish with white tips. Chelicerae short (unlike in the males where they are distinctly elongated), pale fawnish. There is

¹ Tarsus + metatarsus + tibia + patella + femur.



Figs. 8–9. *Schenkelia modesta* LESS., female, copulatory organ: 8 — epigynum, 9 — epigynum after maceration.

a bifid tooth on the inner posterior margin and two simple teeth on the inner anterior margin (fig. 4). Pedipalp thin and elongated, all segments yellowish, but in two specimens the tibia and tarsus are fawn. Covered with white setae.

Legs yellowish or fawnish. In 2 specimens the two anterior legs are fawn and on one of them there are darker and paler rings on the segments. Spines well developed. There are 3 pairs of ventral and 3 single lateral (on the anterior surface) spines on tibiae I–III. On tibia IV there are 3 pairs of lateral and 3 unpaired ventral spines. All segments are covered with whitish and brownish setae. Length of the segments of legs: I 0.75 (three specimens) +1.06–0.69 +1.13–1.06 +1.13–1.06 +1.75–1.56, II 0.75–0.63 +1.00–0.69 +1.06–1.00 +1.06–0.94 +1.75–1.56, III 0.81–0.75 +1.25–0.94 +1.19–0.69 +1.13–0.81 +1.94–1.31, IV 0.88–0.75 +1.63–1.50 +1.44–1.31 +1.00–0.94 +1.94–1.75. Ratio d 1.91–1.21.

V. *Agorius gracilipes* THORELL, 1877 with remarks on subfamily *Agoriinae* SIMON, 1901

Whilst in Museo Civico di Storia Naturale “Giacomo Doria” in Genoa¹ I had an opportunity to study closely the type specimen of *Agorius gracilipes* THORELL, 1877. It is rather an important specimen because *A. gracilipes* THORELL is a type-species of genus *Agorius* THORELL, 1877 and that in turn a type-genus of the subfamily *Agoriinae*.

The specimen is partly damaged and its colouration changed but as the excellent original description of THORELL is not sufficient now I found it necessary to make drawings, measurements and to write down some characters — as they can be seen now.

Material: “*Agorius gracilipes* THOR. Typus. ♀ Kandari (Selebes) 1874. O. BECCARI” — 1 ♀; Mus. Civ. Stor. nat. Genova.

¹ I wish to express here my thanks due to Professor E. TORTONESE and Dr. Delfa GUIGLIA for their encouragement and assistance.

Description of female

Cephalothorax elongated with transversal depression behind the eye field (fig. 10). Eye field yellow, thorax is brown now but, as its internal tissues are partly macerated and shrunken, the present colouration may be an artefact. Surrounding of eyes I lateral and eyes III is black. Face type I. Length of cephalothorax 2.35 mm, length of eye field 1.51, width of eye field I 1.38, width of eye field III 1.38, height of cephalothorax 1.00. Ratios: *a* 0.64, *b* 1.00, *c* 1.10.

Abdomen yellow, elongated (length 3.24) and narrow, partially smashed.

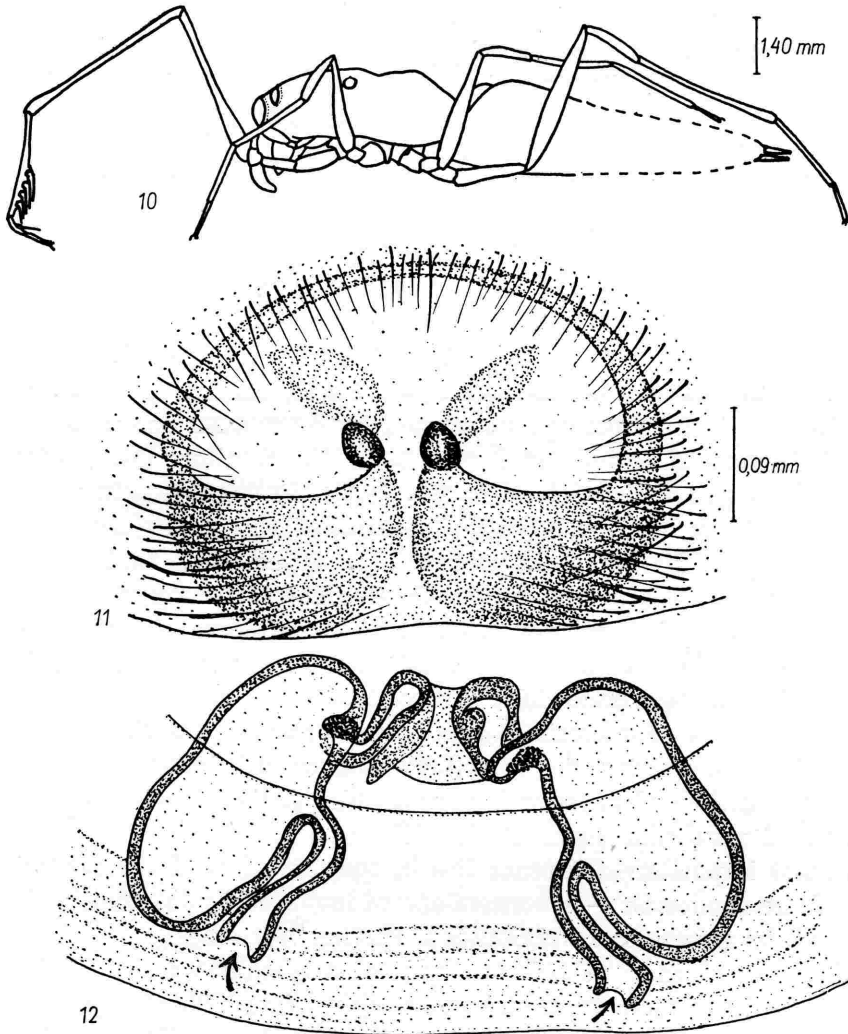
Epigynum poorly sclerotized with darker posterior and paler anterior parts, it has two dark almond shaped spots and is bordered frontally with a dark arch-like bent line (fig. 11).

The spermathecae consist of a pair of simple vesicles and a pair of narrow and short copulatory canals originating from the inconspicuous copulatory openings near the posterior edge of the epigynum. There is a pair of strongly sclerotized canals originating from the distal ends of spermathecae, their walls fuse in the middle of the epigynum (fig. 12). I couldn't see the vagina — presumably because of its poor sclerotization.

Sternum yellowish, elongated and narrow. Coxae fawnish-yellow, the first pair of them widely separated from the other. Maxillae and labium fawnish-yellow, white tipped. Chelicerae yellowish, armoured with a single tooth on the inner posterior margin. Pedipalps yellowish with tarsi somewhat swollen.

Legs thin and elongated, especially the first pair is characteristically long. The most conspicuous is elongation of patella I (2.21 mm) which is almost one and half of the tibia I and almost four time longer than patella II or III. Tibia I is relatively long, the same can be said on trochanter I and trochanter IV is 0.81 long — which is quite unusual. In comparison with that metatarsus I is unusually short — 0.35 — much shorter than metatarsus of any other leg. That elongation of leg I and shortness of its metatarsus have been noticed by THORELL and SIMON and they paid a due attention to it. This is a good taxonomic character but rather of a generic than subfamily level. There are 5 pairs of stout and long yellow spines on the ventral surface of the apical half of the tibia I and 2 single spines on the metatarsus I. There are no other spines on the legs which are covered with sparse and un conspicuous whitish setae. The colouration of the legs is greyish-yellow, with anterior lateral surface of the femur II brownish — there is however no similar darkening on other femora. Length of segments of legs: I 0.41+0.35+1.35+2.21+1.94, II 0.54+0.84+0.97+0.57+1.30, III 0.54+1.08+1.03+0.54+1.32, IV 0.73+1.76+1.67+0.81+1.89. Ratio *d* 1.63.

The male remains unknown.



Figs. 10–12. *Agorius gracilipes* THOR., female: 10 — entire animal, 11 — epigynum, 12 — epigynum after maceration.

BADCOCK (1919) gives quite detailed description of a single ♀ specimen of *Agorius gracilipes* THORELL, 1877 from Malaya but he didn't draw the epigynum so it is impossible to find out whether does it really belong to the same species as the type specimen. Judging from the swelling of the end of abdomen of the specimen he drew, it may be rather *Agorius constrictus* — as drawn by SIMON (1901, fig. 644). Unfortunately I couldn't find the BADCOCK'S specimen in the collection of British Museum (N. H.) where it should be kept.

The reason for an establishment of a higher systematic group like subfamily is simultaneously: a) better way of expression of philogenetical relationships, b) improvement of classification of a number of genera — instead of inventing a key for 200 genera it may be easier to divide these into 4 subfamilies with 50 genera within each of them.

I doubt whether such reasons could be given for retaining of the subfamily *Agoriinae* invented by SIMON in 1901 (as a group *Agoriae*) and modified into *Agoriinae* by PETRUNKEVITCH in 1928. The subfamily contains but single genus *Agorius* THORELL, 1877 with 6 species only. These are poorly known South-East Asiatic spiders (Indonesia, Philippines, Malaya and Celebes) known from a few specimens kept in Zoological Museums in Paris (*A. cinctus* SIMON, 1901, *A. constrictus* SIMON, 1901, *A. formicinus* SIMON, 1903, *A. semirufus* SIMON, 1901 and one more species named by SCHENKEL but presumably not described), Genoa (*A. gracilipes* THORELL, 1877), Hamburg (*A. cinctus* SIMON, 1901) and Vienna (*A. formicinus* SIMON, 1903) (PRÓSZYŃSKI, in print).

The SIMON'S reason for an establishment of the group *Agoriae* was the morphological peculiarity and, presumably, expectation that more species and genera will be discovered in the future. The latter reason has failed, at least up to now, the former does not seem to be sufficient. According to SIMON himself, the *Agorius* resembles to certain extent genera *Diolenius* THORELL, 1870 and also *Myrmarachne* MAC LEAY, 1839 in a shape of cephalothorax, length of thorax, a characteristic depression across an anterior part of thorax, a distribution and a shape of eyes and, to some extent, by a shape of abdomen. Also the elongation of anterior legs resembles *Diolenius* although the development of particular segments is different.

The most important difference lies in the dentition of the posterior inner margin of the chelicerae — a cornerstone of invented by SIMON division of the *Salticidae* into groups and subfamilies. Having but single tooth the *Agorius* must be classified into “*Unidentati*” set of subfamilies while *Diolenius* and *Myrmarachne* have more than one and are therefore “*Pluridentati*”.

It is generally agreed (PETRUNKEVITCH, 1928) that significance of the dentition of chelicerae is purely practical — an easy (though not very convenient) character for identification, in operation mainly because of lack of something better. There is no philogenetic interpretation attached to that dentition.

The case of *Agorius* may be well an argument against that “dentition criterion”. There is quite a lot of common features with *Myrmarachne* and *Diolenius* put aside because of the assumed importance of dentition. And what if dentition will appear less significant?

The genus *Agorius* THORELL, 1877 has never been critically revised and there is a lot of unknown. The details of structure of genital organs are virtually unknown and biometrics none the better. The same can be said about majority of presumably related genera.

Summing up the above it seems that there is no reason for preservation of subfamily *Agoriinae* SIMON, 1901 which denotes exactly the same as genus *Agorius* THORELL, 1877 does. However, because related genera are poorly known and it is not possible yet to determine precisely the systematic position of genus *Agorius* THORELL, the final cancellation of the subfamily should be delayed until further more extensive research on *Salticidae* will throw more light.

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STRESZCZENIE

Autor podaje redeskrypcję typów *Schenkelia modesta* DE LESSERT, 1927 i *Agorius gracilipes* THORELL, 1877 oraz uwagi o pozycji systematycznej rodzaju *Agorius* THORELL, 1877 i podrodziny *Agoriinae* SIMON, 1901.

РЕЗЮМЕ

Автор приводит переописание типов *Schenkelia modesta* DE LESSERT, 1927 и *Agorius gracilipes* THORELL, 1877 а также замечания о систематическом положении рода *Agorius* THORELL, 1877 и подсемейства *Agoriinae* SIMON, 1901.

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