POLSKA AKADEMIA NAUK
INSTYTUT ZOOLOGICZNY

ANNALES ZOOLOGICI

Tom XXVIII Warszawa, 20 I 1971 Nr 9

Jerzy PRÓSZYŃSKI

# Redescriptions of type-species of genera of *Salticidae* (*Aranei*), VIII–X. Revision of the subfamily *Coccorchestinae*

[With 53 figures in the text]

I used to deal with single representatives of genera — the types of type-species — in this series of papers. This time, however, I happened to have all known species included into subfamily *Coccorchestinae* so the paper increased into revision of the whole subfamily. It is much better to revide whole taxonomic group because of better understanding of value of particular characters and having only the THORELL'S specimens, as I originally had I would never decided to synonimize three *Coccorchestes* species in spite of their apparent similarities. The differences between *C. rufipes* and KULCZYŃSKI'S specimens, however, shown the dimensions of interspecific variation within the genus. Using that difference as a yard-stick I found the differences between *C. rufipes*, *C. subhirsutus* and *C. tarsalis* insignificant.

Unfortunately it is not possible to revide so easily other subfamilies of *Salticidae* because of the number of species they usually contain. The *Coccorchestinae*, however, had only 7 species separated into three genera, out of these I had to synonimize 3 species simmultaneously describing 4 new. The revision, however, has shown that there are no apparent common characters which would justified joining the three genera studied in this paper into single subfamily, especially *Omoedus* seems to be very different. SIMON was apparently wrong installing the three genera into single group *Coccorchestae* turned latter into the subfamily *Coccorchestinae*. The main SIMON'S criterion was of course cheliceral dentition and while *Omoedus* and *Poecilorchestes* are really *Unidentati*, I have discovered that *Coccorchestes* is not — it has a bifid tooth and should be therefore classified into *Fissidentati* group of subfamilies. I have no confidence in the cheliceral dentition criterion myself, but I do not know yet with which criterion to replace it in the not ant-like *Salticidae*.

I am also not convinced by SIMON'S arguments on similarities in shape of cephalothorax in *Coccorchestes* and *Omoedus* (SIMON 1901, figs. 758–767). The posterior wall of the cephalothorax in *Coccorchestes* is concave, hidden beneath the sclerotized roof made by the fringe of the dorsal shield, it is the anterior part of the abdomen which penetrate into that cavity. The same might be also said about *Poecilorchestes* although it is less pronounced. The shape of the cephalothorax in *Omoedus* is different and its posterior wall is keel-shaped and forms

the median vertical ridge penetrating into the vertical depression in the anterior part of the abdomen. The structure of the posterior wall of the cephalothorax and the anterior part of the abdomen is therefore entirely different in these genera. The proportions, however, are remarkably similar.

It is not possible yet to decide whether the three genera are related or not. The solution of the problem of their relationship to other *Salticidae* genera must be deferred until new evidences become available.

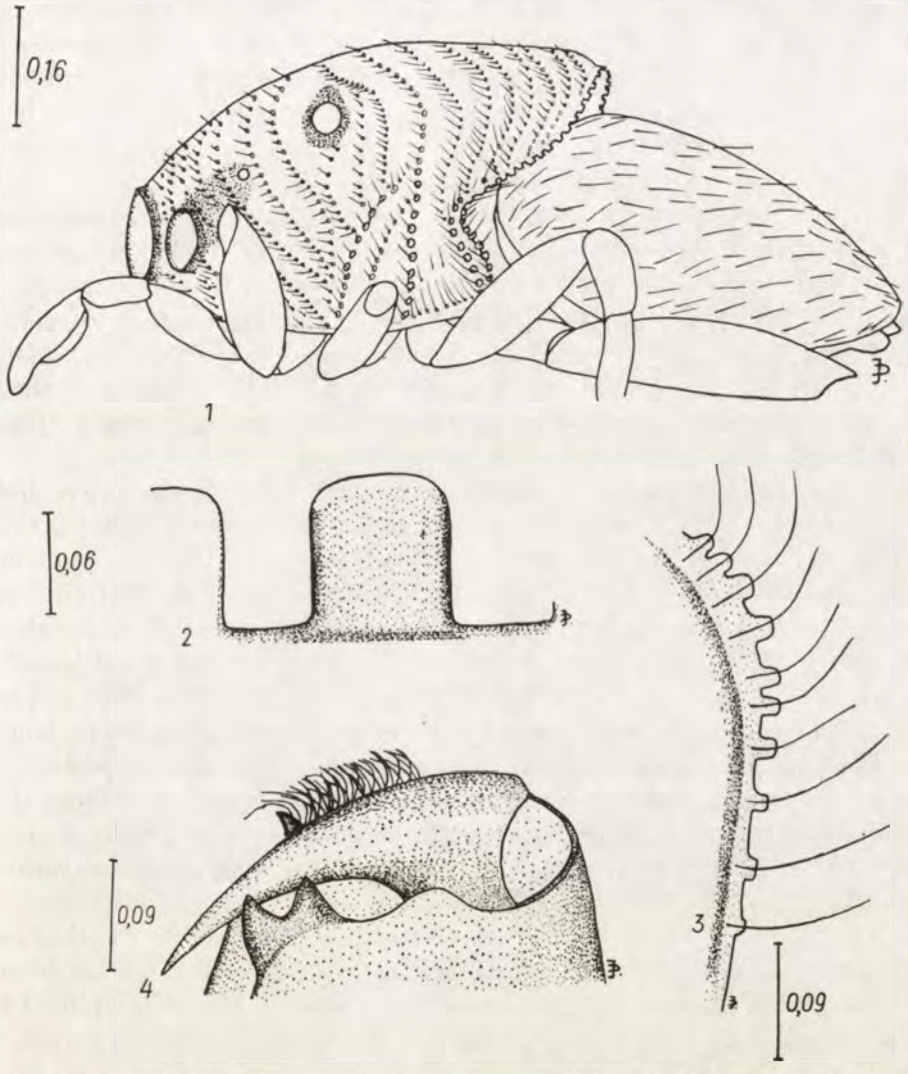
### VIII. Redescription of the genus *Coccorchestes* Thorell, 1881 and description of new species

The genus contains five very peculiar and very similar species differing visibly in the details of the copulatory organs only. For that reason I decided to give detailed description for the genus as a whole, and to give only distinctive characters for the particular species. It must be added that the knowledge of the genus must be still considered superficial because of small number of specimens known and lack of any biological observations. The matching of males and females in those species where both sexes are known is uncertain.

#### Description of the genus

Cephalothorax covered with thick sclerotized, shell-like shield ended posteriorly with a serrated fringe consisting of a number of rectangular sclerotized "teeth" — 20 in *C. blendae* (figs. 1–2). The posterior wall is concave and forms a kind of socket into which enters the anterior part of abdomen. The shape of both abdomen and cephalothorax is very peculiar and can be compared with a tortoise, a coccinellid beetle or better with an armadillo (fig. 1). The texture of the cephalothorax surface is quite rough and apart from the posterior serrated fringe consists of transversal rows of sclerotized wart-like protuberances in the lower parts of lateral walls of cephalothorax and small round depression in the higher parts of the lateral surfaces and on dorsal surface. These warts and depressions are formed around the bases of larger setae and occure also on edges of some segments of legs (fig. 3). The warts resemble to a certain extent the cheliceral teeth and one may wondering if formation of those was not linked originally with some setae or bristles which latter have disappeared during evolution of spiders.

The proportions of cephalothorax are as follows: length of eye field to length of cephalothorax (ratio *a*) 0.41–0.56, width of eye row I to width of eye row III (ratio *b*) 0.92–1.00, length of eye field to width of eyes I (ratio *c*) 0.64–0.76, height of cephalothorax (measured to uppermost point of eyes III) to length of cephalothorax (ratio *h*) 0.53–0.72. The coloration of cephalothorax vary from pale fawn (in immature specimens) to dark brown with surroundings of eyes blackish-brown or black. Thorell described his specimens as black or blackish-brown, so they may be faded now. The warts and round depressions are darker in pale specimens. The clypeus is narrow, the face type II or III (Roewer's symbols).




Figs. 1–4. General features of *Coccorchestes rufipes* THOR.: 1–2 the type-specimen of *C. subhirsutus* THOR., 1 — cephalothorax and abdomen, lateral view, note rows of warts and depressions, 2 — single tooth of the posterior fringe of cephalothorax; 3–4 — the type specimen of *C. tarsalis* THOR., 3 — sclerotized warts of femur I, note the bases of setae inside the warts, 4 — bifid tooth on inner posterior margin of chelicera.

The abdomen is covered dorsally and laterally by the protective sclerotized shield — the scutum which is presumably elastic and compress the abdomen laterally. The scutum is brown, either pale or dark. In some specimens (*C. subhirsutus* type specimen for instance) there are sparse setae over the scutum, abdomen in other specimens is entirely bald. Ventral surface of abdomen is grey or dark grey. The epigynum in females has two round depressions, the

openings are small and invisible without preparation. The copulatory canals are either long and twisted into two loops as in *C. rufipes* and *C. blendae* (figs. 14, 16) or very short and passing immediately into spermathecae as in the three newly described species (figs. 21, 23, 27). The spermathecae are compact heavily sclerotized vesicles, relatively simple in *C. rufipes* and *C. blendae*, more complicated in the newly described species.

Sternum pale brown or fawn. Coxae brownish-fawn or pale fawnish-grey, often with pale whitish ventral surfaces on coxae I and II. Labium and maxillae fawn or brown, white tipped. Chelicerae brown or fawn, so strongly sclerotized that it is almost impossible to deflect one for examination of dentition without smashing it. It is presumably for this reason that SIMON has mistaken the dentition. There is a bifid tooth on the inner posterior margin of chelicera and according to SIMON'S criteria *Coccorchestes* must be considered a "*fissidentati*" Salticid. Pedipalps fawnish-grey or brown.

The copulatory organ in males characterised by an elongated bulbus, lack of a conductor, a stylus either thin and twisted into a coil (*C. rufipes*) or thick and straight or slightly spirally twisted as in two newly described species. The male of *C. blendae* remains unknown, but judging from certain correlation in length and shape of stylus and copulatory canals in females and taking into account resemblances between females of *C. rufipes* and *C. blendae* one may expect that male of *C. blendae* should have an elongated, thin and coiled stylus. Tibial apophysis in *C. rufipes* is short and broad (figs. 5–14), long and hook-like bent (figs. 17–19, 24–25) in the two newly described species.

Legs uniformly brown or fawn, in some species the dorsal surfaces of tarsi and metatarsi are white. The leg formula in both sexes is usually 4, 1, 2, 3, more rarely 4, 1, 3, 2, or 4, 2, 3, 1. The tibia IV to tibia III ratio (ratio *d*) is 1.25–1.47.

I do not know yet what are the relationships of *Coccorchestes* to other genera or group of genera. The genus contains now 5 species, two of which are described by THORELL and another three described here as new. The geographical range is New Guinea and nearby islands. The type-species of the genus is *Coccorchestes rufipes* THORELL, 1881.

### *Coccorchestes rufipes* THORELLI, 1881

Synonyms:

*Coccorchestes subhirsutus* THORELL, 1881,
*Coccorchestes tarsalis* THORELL, 1881.

Material: "*Coccorchestes rufipes* THOR. Wokan ins. Aru [leg.] BECCARI" — 1 ♂, holotype; "*Coccorchestes subhirsutus* THOR. Typus ♂. Golfo Vandammen [N. Guinea] 1875 [leg.] BECCARI" 1 ♂ — holotype; "*Coccorchestes tarsalis* THOR. Andai, N. Guinea [leg.] D'ALBERTIS"[1] — 1 ♂, 1 ♀ — cotypes, "*Coccorchestes tarsalis* THOR. Ramoi, N. Guinea

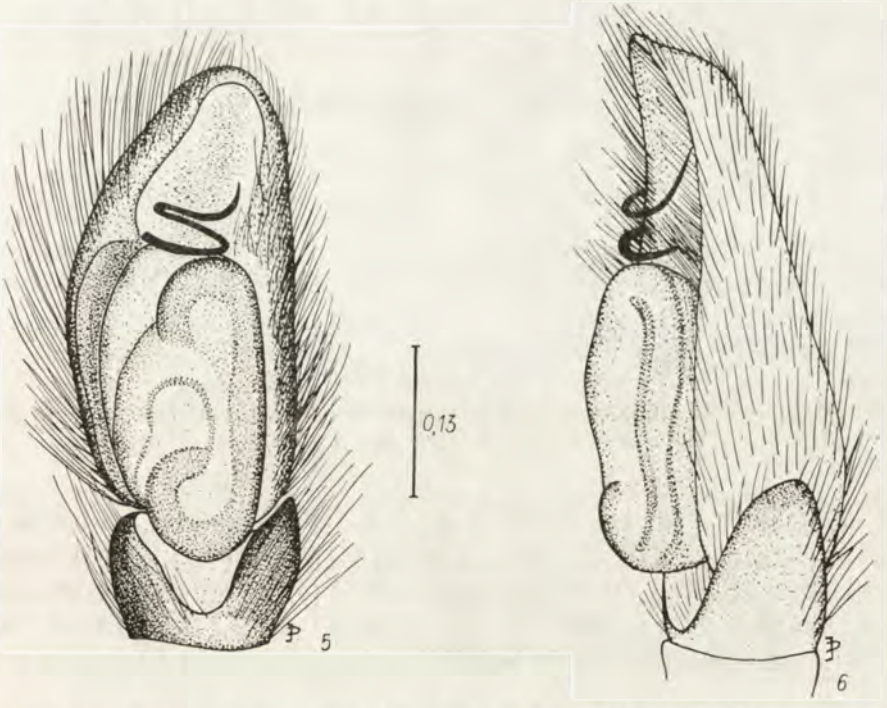
[1] Contrary to the label attached to the specimens THORELL wrote in the original description (1881:680) that these two specimens were collected by BECCARI. There must be some mistake made but I assume that the specimens are the same.

1872, [leg.] L. M. D'ALBERTIS" — 1 ♂ — cotype. All specimens in the T. THORELL collection in MCSN-Genova, Italy.

Remark. The reason for lumping together these three species is lack of any clear cut difference and any other supporting arguments. It can be argued that some proportions in copulatory organ details differ slightly in five studied specimens but that can be easily explained by individual variation. The comparison with newly described species reveals, however, that the specific differences in this genus may be quite striking. It is because of this comparison of differences that I decided to lump together the three species.

## More important characters of male

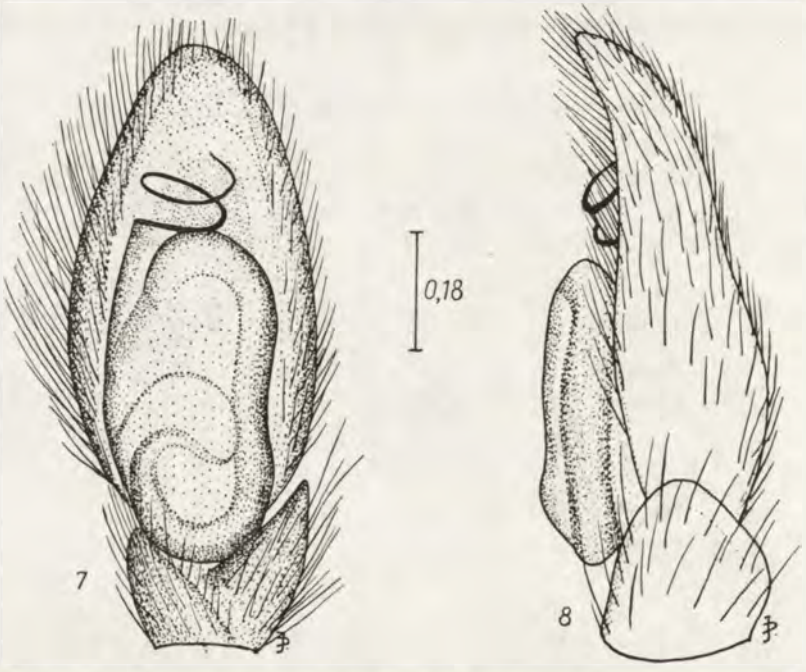
Length of cephalothorax (first measurement — the holotype, then "*C. subhirsutus*" and the Andai and Ramoi specimens of "*C. tarsalis*" 2.92–2.35–2.08–2.35, length of eye field 1.46–1.13–1.03–1.13, width of eye field I 2.00–




Figs. 5–6. *Coccorchestes rufipes* THOR., the type-specimen. Male copulatory organ, ventral and lateral views.

–1.67–1.35–1.62, width of eye field III — 2.10–1.67–1.35–1.62, heighth of cephalothorax (measured to the uppermost point of eye III) ? — 1.40–1.13–1.35. Ratio *a* (length of eye field to length od cephalothorax) 0.50–0.48–0.49–0.48, ratio *b* (width of eye field I to width of eye field III) 0.95–0.96–1.00–1.00, ratio *c* (length of eye field to width of eye field I) 0.73–0.70–0.76–0.70, ratio

*h* (height to length of cephalothorax) — ?–0.60–0.54–0.57. Length of abdomen 2.43–2.02–1.62–1.94. Pedipalpal tibia is short and broad, the stylus thin and twisted into two coils (figs. 5–12). Length of segments of legs: I 0.57–0.59 –0.46–0.43)+(0.84–0.86–0.59–0.73)+(1.03–1.08–0.70–0.86)+(0.81–0.70–0.51–




Figs. 7–8. *Coccorchestes rufipes* Thor., the type-specimen of *C. subhirsutus* Thor. Male copulatory organ, ventral and lateral views.

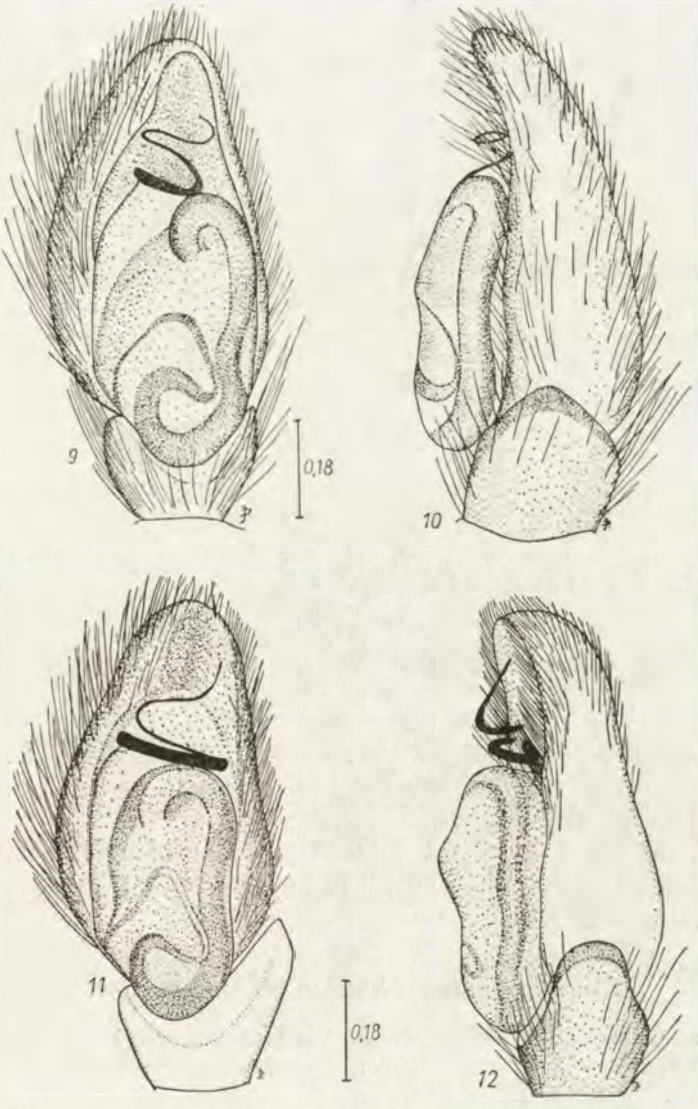
–0.61)+(1.62–1.67–1.35–1.54), II (0.54–0.57–?–?)+(0.81–0.81–?–?)+(0.86–0.84– –0.59–?)+(0.73–0.57–0.40–?)+(1.57–1.54–1.16–?), III (0.65–0.54–0.40–0.43)+ +(0.94–0.81–0.67–0.67)+(0.73–0.70–0.54–0.61)+(0.62–0.49–0.40–0.46)+(1.46– –1.70–1.13–1.21), IV (0.54–?–?–0.49)+(1.05–?–?–0.81)+(1.03–1.03–0.73–0.81) +(0.65–0.49–0.46–0.46)+(1.84–1.78–1.62–1.48). Ratio *d*: 1.40–1.46–1.35–1.33.

## More important characters of female

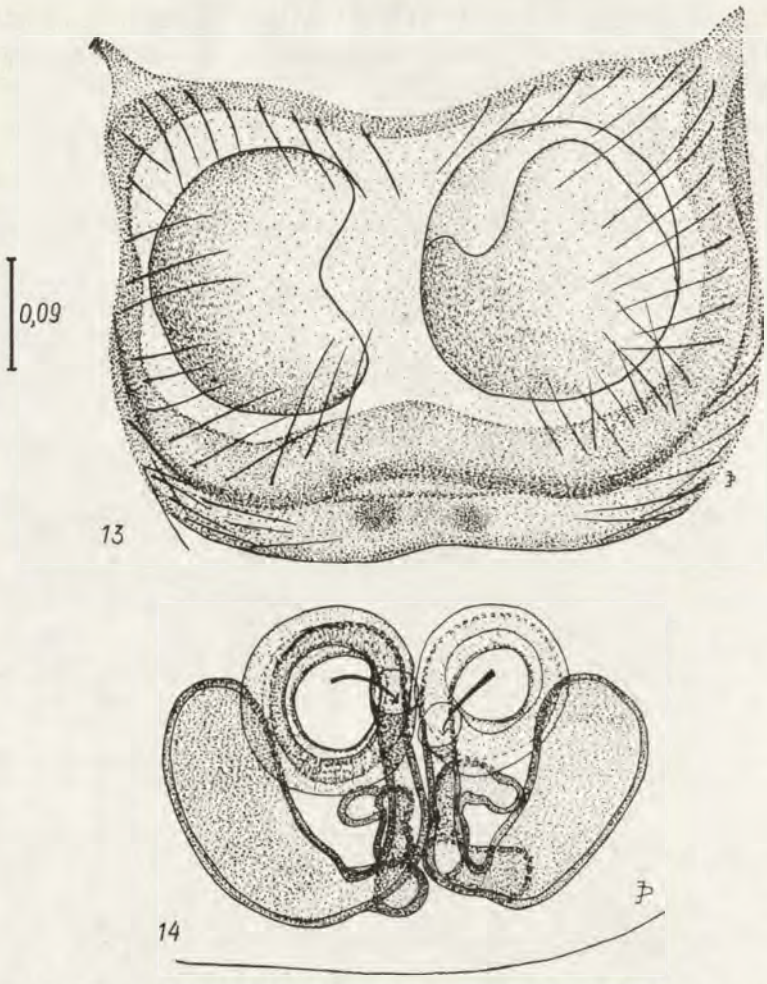
Length of cephalothorax 1.78, length of eye field 0.92, width of eye field I 1.24, width of eye field III 1.27, height of cephalothorax 1.00. Ratios: *a* 0.51, *b* 0.97, *c* 0.74, *h* 0.57. Lengt of abdomen 1.57.

Epigynum large, with two large, round, whitish depressions, weakly sclerotized, dark brown pigmented (fig. 13). Copulatory openings small, located

in the middle of epigynum closely to each other. Copulatory canals twisted into two large coils and join through the straigth portion an elongated vesicle — the spermatheca. The posterior part of spermatheca forms the sclerotized twisted canal originating on the level of junction of copulatory canal with spermatheca, dorsally to it (fig. 14).




Figs. 9–12. *Coccorchestes rufipes* THOR., the type-specimens of *C. tarsalis* THOR. Male copulatory organ, ventral and lateral views: 9–10 — syntype from Ramoi, 11–12 — Andai specimen.




Figs. 13–14. *Coccorchestes rufipes* THOR., the female syntype-specimen of *C. tarsalis* THOR. Epigynum before and after maceration.

Length of segments of legs: I ?+0.43+0.51+0.38+0.97, II 0.38+0.43+ +0.40+0.38+0.86, III 0.40+0.40+0.40+0.32+0.84, IV 0.43+0.62+0.57+ +0.35+1.21. Ratio *d* 1.40.

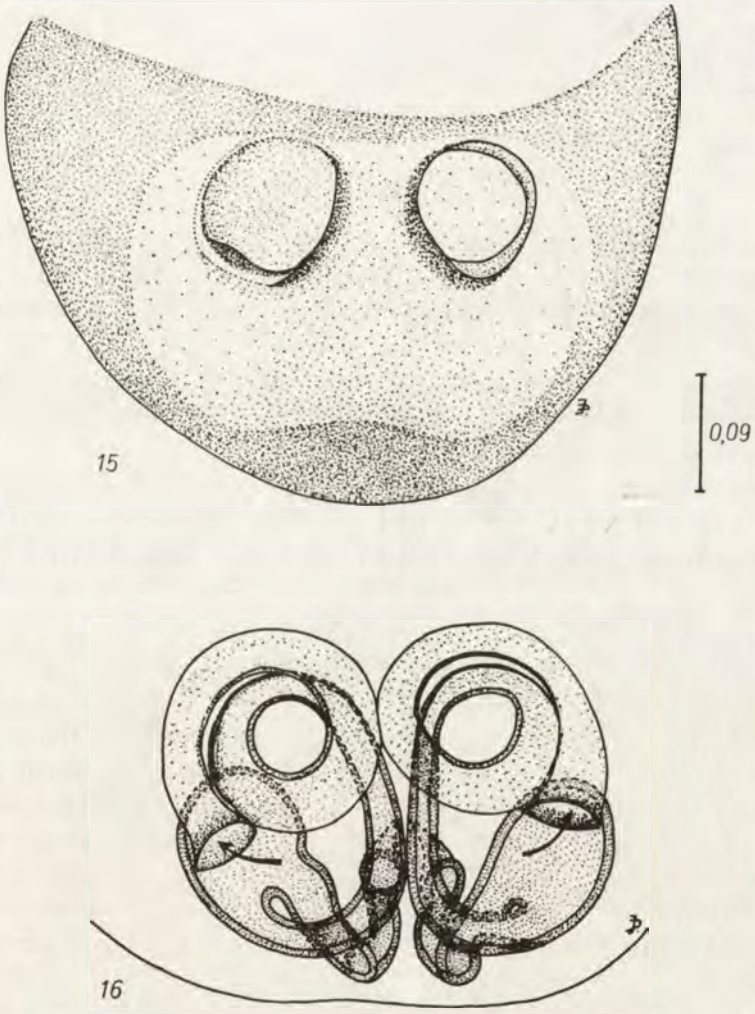
## *Coccorchestes blendae* THORELL, 1881

Material: "*Coccorchestes blendae* THOR. Vandammen [Bay] [N. W. New Guinea]. 1875. [leg.] BECCARI" — 1 ♀ — holotypus; "*Coccorchestes blendae* THOR., Fly River" — 1 juv. ♂. Coll. T. THORELL, MCSN-Genova.

Remark: THORELL mentioned only single female specimen in the original description, which should be therefore considered the holotype. I have no idea how could he identify the im mature male specimen from Fly River as conspecific with the female. I disregard this specimen in my revision because its identification is highly uncertain.

More important characters of female

Length of cephalothorax 2.10, length of eye field 0.86, width of eye field I 1.38, width of eye field III 1.38, height of cephalothorax 1.08. Ratios: *a* 0.41, *b* 1.00, *c* 0.63. Length of abdomen 1.84.




Figs. 15–16. *Coccorchestes blendae* THOR., holotype. Epigynum before and after maceration.

Epigynum crescent-shaped with two small round depressions in the anterior part (fig. 15). Copulatory openings located laterally, copulatory canals twisted into two coils like those in *C. rufipes*, but less tight. Spermatheca somewhat shorter than in *C. rufipes*, its posterior canal-shaped part longer (fig. 16).

Length of segments of legs: I 0.35+0.54+0.54+0.43+1.08, II 0.38+0.43+ +0.46+0.40+0.97, III 0.38+0.54+0.43+0.35+0.94, IV 0.43+0.65+0.54+ +0.35+1.16. Ratio *d* 1.25.

### *Coccorchestes buszkoae* sp. n.[1]

Material: "*Coccorchestes* 1. Is. Tamara. F. 548." — 1 (biggest) ♂ — holotype, 1 ♀ (with prepared epigynum) — allotype, 2 ♂♂, 1 ♀ — paratypes — coll. W. Kulczyński, IZ PAN-Warszawa.

#### More important characters of male

General appearance does not differ from other species of the genus. Length of cephalothorax (measurements of 2 specimens only) 1.60–1.71, length of eye field 0.84–0.90, width of eye field I 1.17–1.20, width of eye field III 1.23–1.23, height of cephalothorax 0.84–0.98. Ratios: *a* 0.53–0.52, *b* 0.95–0.98, *c* 0.71–0.74, *h* 0.53–0.57. Length of abdomen 1.54–1.48.

The copulatory organ differs from the same in *C. rufipes* by having a long and robust tibial apophysis, hook-like bent distally (figs. 17–19). The stylus is thick and flame-like waved, but not coiled.

Length of segments of legs: I (0.36–0.36)+(0.42–0.45)+(0.39–0.36)+(0.81– –0.87), II (0.36–0.36)+(0.45–0.42)+(0.39–0.39)+(0.34–0.34)+(0.78–0.78), III (0.36–0.36)+(0.45–0.45)+(0.36–0.36)+(0.28–0.31)+(0.73–0.76), IV (0.36–0.39) +(0.50–0.56)+(0.48–0.48)+(0.34–0.31)+(0.95–0.98). Ratio *d* 1.31–1.31.

#### More important characters of female

General appearance does not differ from other species of the genus. Length of cephalothorax 1.48–1.60, length of eye field 0.76–0.84, width of eye field I 1.18–1.18, width of eye field III 1.18–1.20, height of cephalothorax 0.90–0.92. Ratios: *a* 0.51–0.53, *b* 1.00–0.98, *c* 0.64–0.71, *h* 0.60–0.58. Length of abdomen 1.74–1.60.

Epigynum with large depressions in the posterior part, separeted by a narrow sclerotized ridge (fig. 20). Spermatheca consists of three sclerotized

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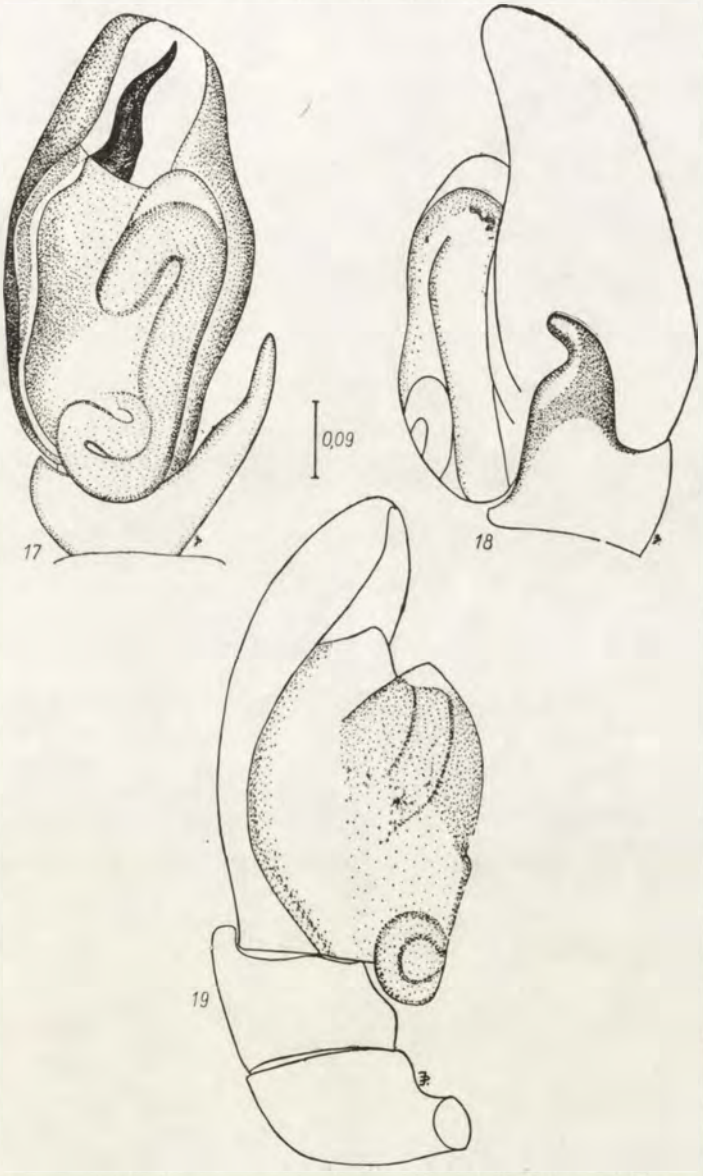
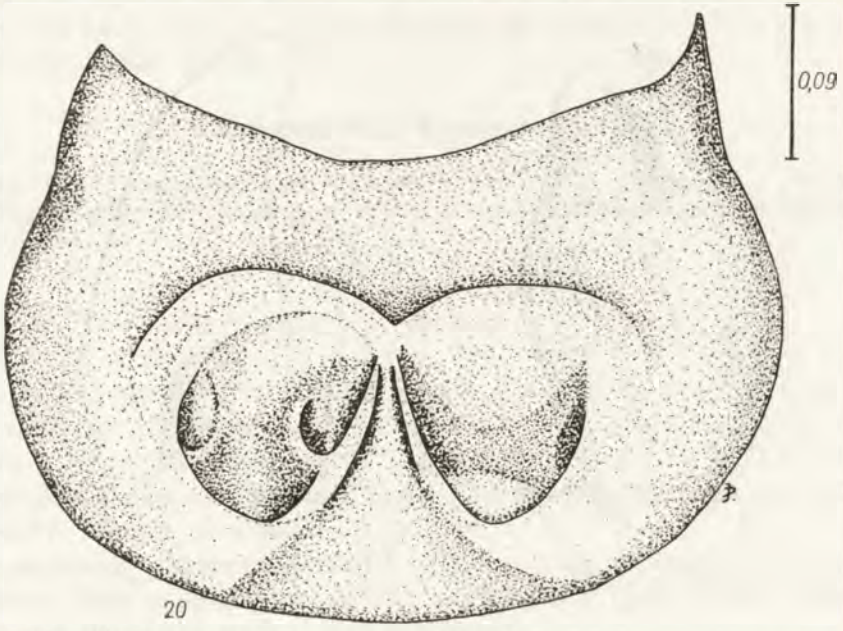
[1] Named in honour of Mrs. Teresa Buszko (pronounce "boo shkoh") senior technician in the Institute of Zoology, Polish Academy of Science, Warszawa, who has been working for 10 years on setting in order the spider collection of W. Kulczyński and handling all technical jobs related to it. During these years she has commanded the best experience and practical knowledge of the collection as well as a good practical knowledge of spiders taxonomy. It is owing to Mrs. T. Buszko's skill and efforts that the collection is accessible now and the number of type-specimens is rediscovered. I am very also much indebted to Mrs. T. Buszko for technical assistance in my research, and especially for doing measurements and calculations for my papers.

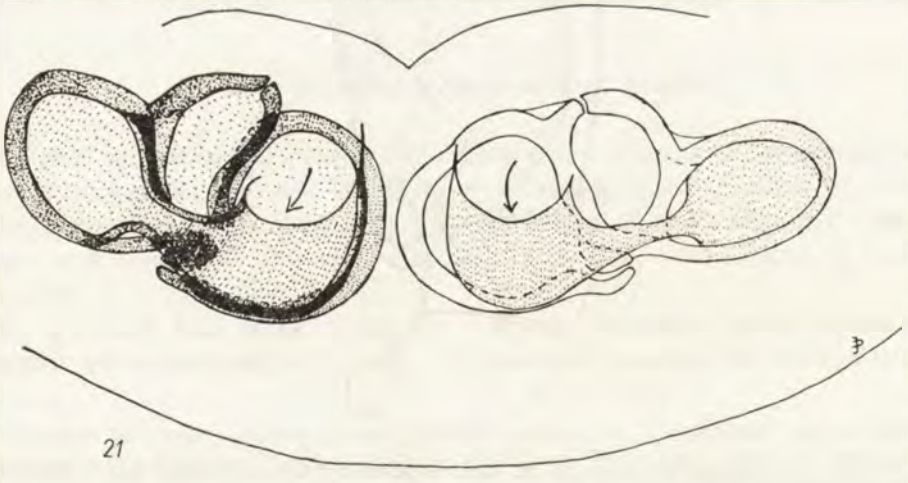



Figs. 17–19. *Coccorchestes buszkoae* sp. n. Male copulatory organ, ventral and lateral views.

chambers, copulatory canal very short, copulatory opening large, located ventrally to the third chamber of spermatheca (fig. 21).

Length of segments of legs: I (0.31–0.34)+(0.42–0.42)+(0.39–0.42)+(0.34–0.36)+(0.78–0.81), II (0.31–0.34)+(0.36–0.39)+(0.34–0.34)+(0.34–0.34)+



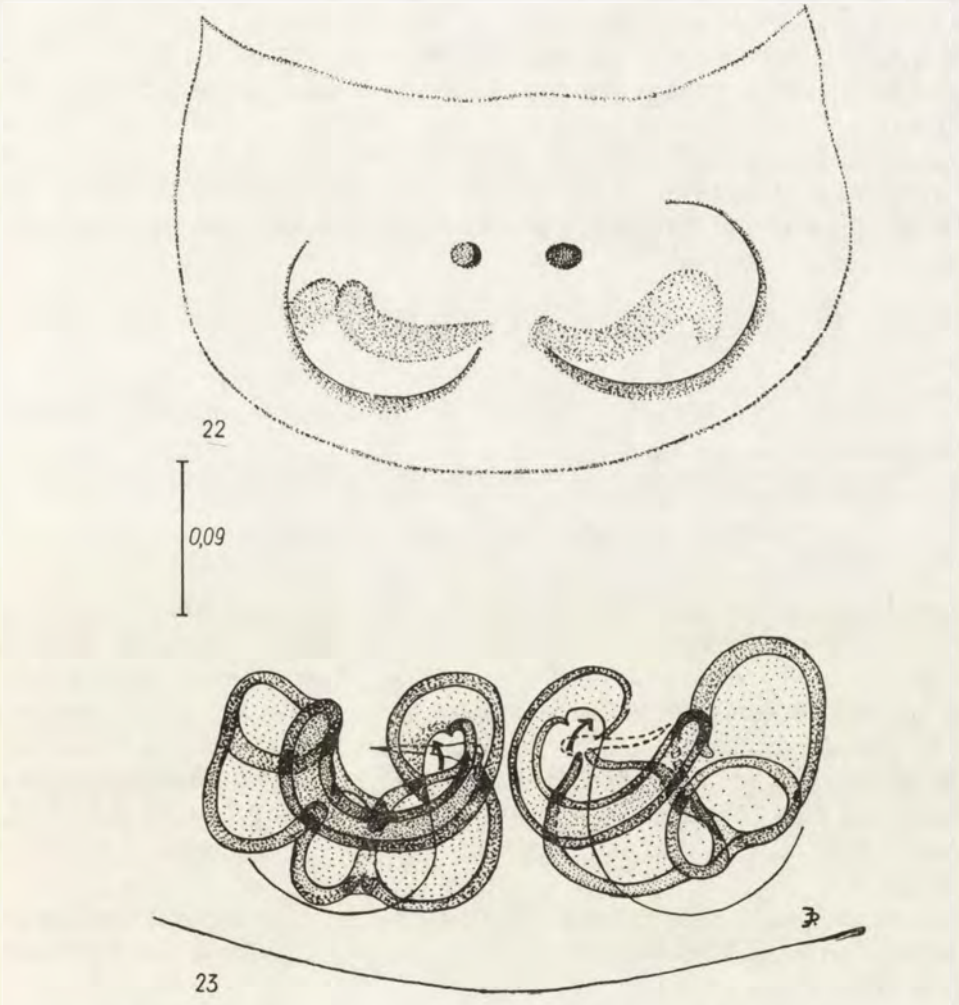

Figs. 20–21. *Coccorchestes buszkoae* sp. n. Epigynum before and after maceration.

+(0.73–0.76), III (0.31–0.31)+(0.39–0.39)+(0.34–0.34)+(0.25–0.28)+(0.73–0.76), IV (0.34–0.36)+(0.50–0.48)+(0.45–0.48)+(0.28–0.34)+(0.95–0.90). Ratio *d* 1.33–1.42.

### *Coccorchestes staregai* sp. n.[1]

Material: "*Coccorchestes* 2. N. Guinea. F. 551" — 1 ♀ — holotype, coll. W. Kulczyński, IZ PAN-Warszawa.

Remark. On his card Kulczyński wrote: "N. Guinea: Sattelberg g. 800–900 m. grzebane IV. 99". It means: "Sattelberg Mt. 800–900 m. altitude, April 1899". The word "grzebane" may mean "dug [out]" or "scratched [out]" — can we understand that the spiders were dug out from soil or forest litter?




Figs. 22–23. *Coccorchestes staregai* sp. n. Epigynum before and after maceration.

[1] Named in honour of my friend and closest collaborator Dr. Wojciech Staręga (pronounce: "stahrengah") with whom I used to discuss every arachnological problem I met across, discussions to which I owe inspiration for and critical check of my recent papers.

General appearance does not differ from other species of the genus. Length of cephalothorax 1.51, length of eye field 0.84, width of eye field I 1.20, width of eye field III 1.26, height of cephalothorax 1.01. Ratios: *a* 0.56, *b* 0.95, *c* 0.70, *h* 0.72. Length of abdomen 1.40.

Epigynum weakly sclerotized in studied specimen, resembling in general outlines *C. buszkoae* but without any distinct ridge between depressions, there are two dark spots in the anterior part of depressed area (fig. 22). Spermatheca consists of 3 to 4 sclerotized chambers arranged along the bent line. The copulatory opening small, located anteriorly to the third (fourth) chamber of spermatheca. Copulatory canal quite long and bent, making half a coil (fig. 28).

Legs fawn, differ from previously described species in having femur IV greyish-brown and lateral surfaces of femur I darker greyish-brown. Tarsi and metatarsi I–IV distally brown, proximally white. Length of segments of legs: I 0.36+0.39+0.48+0.42+0.87, II 0.28+0.36+0.36+0.34+0.76, III 0.42+0.45+0.34+0.28+0.76, IV 0.36+0.50+0.42+0.28+1.06. Ratio *d* 1.25.

Male remains unknown.

### *Coccorchestes jahilnickii* sp. n.[1]

Material: "*Coccorchestes* 3. N. Guinea. F. 552" — 1 ♂ (biggest) — holotype, 1 ♀ (with prepared epigynum) — allotype, 5 ♂♂, 1 ♀ — paratypes — coll. W. Kulczyński, IZ PAN-Warszawa.

More important characters of male

General appearance does not differ from other species of the genus. There is a transparent area on cephalothorax and abdomen in two specimens through which the boundles of white tissues is visible — an artefact presumably. Length of cephalothorax (measurements of 4 specimens only) 1.88–2.41–2.04–2.18, length of eye field 0.95–1.20–1.04–1.12, width of eye field I 1.43–1.65–1.40–1.60, width of eye field III 1.51–1.79–1.48–1.71, height of cephalothorax 1.15–1.46–1.15–1.29. Ratios: *a* 0.51–0.50–0.51–0.51, *b* 0.94–0.92–0.94–0.93, *c* 0.67–0.73–0.74–0.70, *h* 0.61–0.60–0.56–0.59. Length of abdomen 1.90–2.27–1.96–2.27.

Copulatory organ of male differs from other species by having tibial apophysis long, its tip narrow and hook-like bent. Stylus twisted into loose coil, but short and thick (figs. 24–25).

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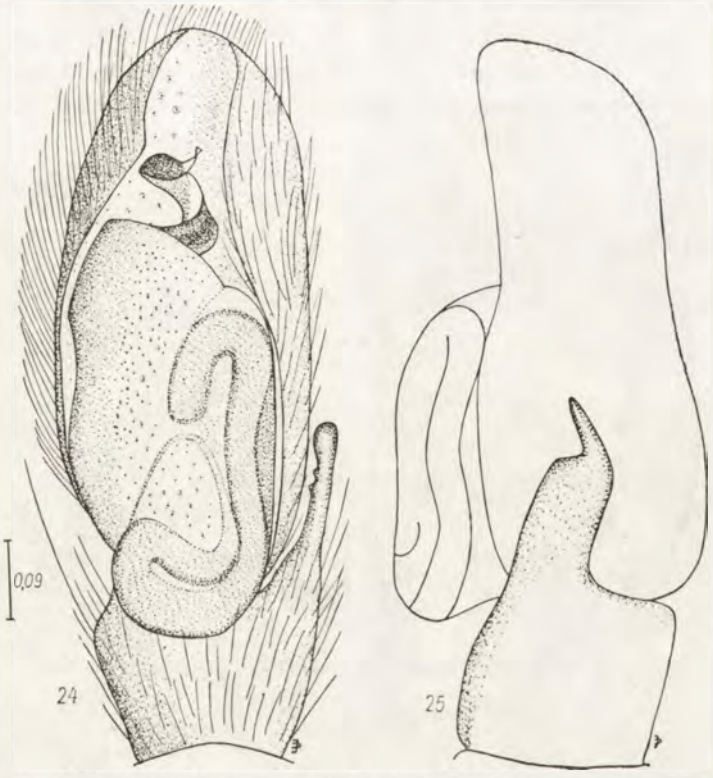
[1] Named in honour of Mr. T. Jahilnicki (pronounce: "yahheelnitski"), my father in law, who being on retirement used to help my work by typing and correcting typescripts of all my scientific papers, thousands of catalogue cards and all my mail, thus saving my time for research work. I estimate that without that kind help my results would have to be cut by half.



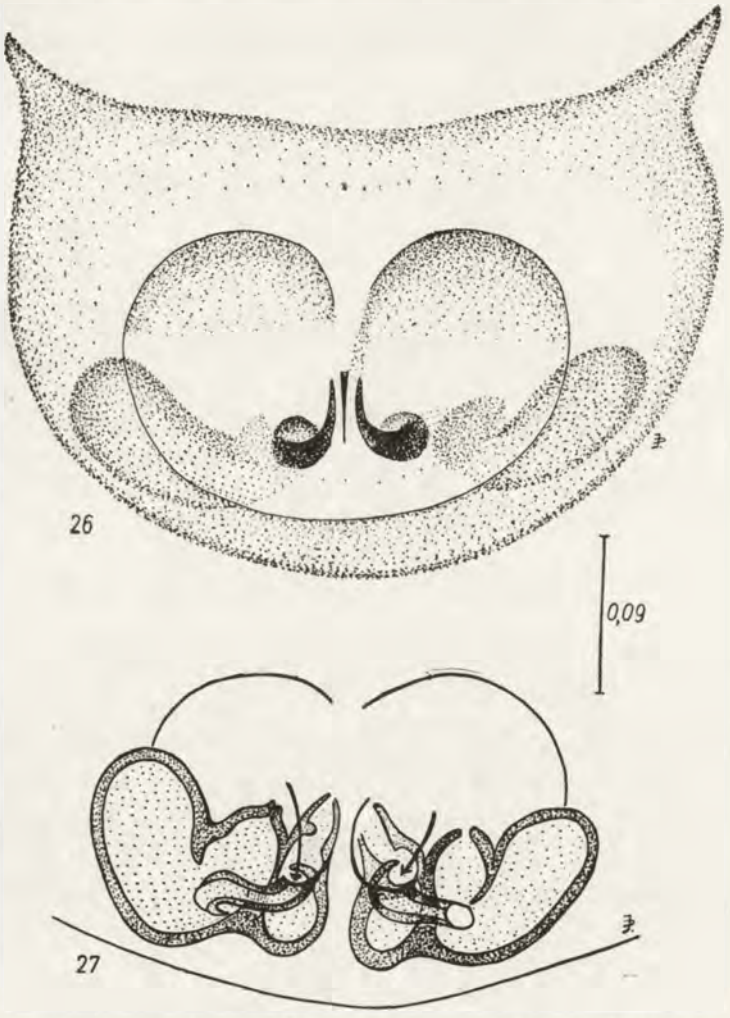

Figs. 24–25. *Coccorchestes jahilnickii* sp. n. Male copulatory organ, ventral and lateral views,

Legs fawn or brown, dorsal surface of tarsi and metatarsi I–IV white, covered with white setae. Length of segments of legs: I (0.42–0.50–0.42–0.45)+ +(0.56–0.70–0.56–0.64)+(0.67–0.84–0.67–0.78)+(0.50–0.67–0.53–0.62)+(1.26– –1.57–1.29–1.40), II (0.39–0.45–0.42–0.42)+(0.53–0.67–0.50–0.62)+(0.50–0.67– –0.50–0.62)+(0.50–0.62–0.48–0.56)+(1.15–1.40–1.20–1.34), III (0.45–0.50–0.42– –0.45)+(0.56–0.76–0.64–0.67)+(0.48–0.62–0.50–0.56)+(0.42–0.50–0.36–0.48)+ +(1.04–1.40–1.09–1.23), IV (0.48–0.53–0.48–0.48)+(0.70–0.92–0.70–0.87)+ +(0.64–0.87–0.67–0.76)+(0.45–0.64–0.42–0.53)+(1.51–1.90–1.57–1.62). Ratio *d* 1.35–1.41–1.33–1.35.

## More important characters of female

General appearance of female does not differ from other species of the genus. Length of cephalothorax 1.85–1.85, length of eye field 0.95–0.98, width of eye field I 1.34–1.32, width of eye field III 1.45–1.37, height of cephalothorax 1.09–1.06. Ratios: *a* 0.51–0.53, *b* 0.92–0.96, *c* 0.71–0.74, *h* 0.59–0.57. Length of abdomen 1.96–1.99.

Epigynum resembles that in *C. buszkoae* but the median ridge is very thin, pointed posteriorly and does not separate completely both depressions, which are connected in the posterior part of epigynum. Copulatory openings located in the middle of epigynum and very strongly sclerotized (fig. 26). Three chambers




Figs. 26–27. *Coccorchestes jahilnickii* sp. n. Epigynum before and after maceration.

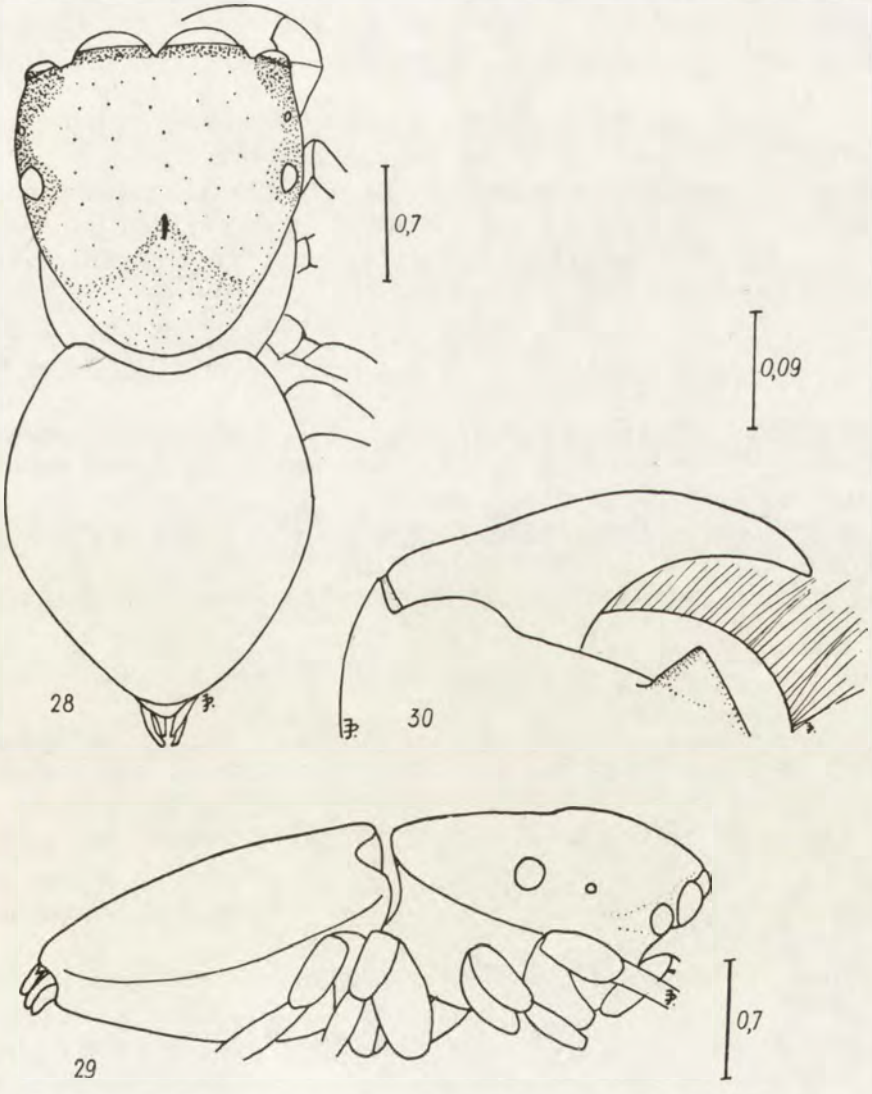
of each spermatheca are rather unequal, short and rather thin copulatory canal joins the second (median) chamber. The third (innermost) chamber is the smallest (fig. 27).

Legs greyish-brown with metatarsi I–IV and central area of dorsal surface of tarsi I–IV white. Length of segments of legs: I (0.36–0.36)+(0.48–0.42)+(0.50–0.53)+(0.45–0.45)+(1.04–1.06), II (0.34–0.36)+(0.42–0.45)+

+(0.45–0.42)+(0.42–0.39)+(0.98–0.98), III (0.39–?)+0.48–?)+(0.42–?)+ +(0.39–?)+(0.92–?), IV (0.42–0.42)+(0.64–0.56)+(0.56–0.59)+(0.39–0.39)+ +(1.32–1.34). Ratio *d* 1.33–?

**IX. Redescription of the genus *Omoedus* THORELL, 1881 and description of a new species**

The genus contains three species, one of which is described here as a new. The most important feature of the genus is peculiar shape of cephalothorax




Figs. 28–30. General features of *Omoedus niger* THOR.: 28 — dorsal view, 29 — lateral view, 30 — single tooth on inner posterior margin of chelicera.

whose dorsal surface is flattened and rounded posteriorly. Posterior and lateral surfaces of cephalothorax are vertical and concave (figs. 28–29). The eye field is short and broad, its lateral margins are parallel. Ratio *a* vary from 0.49 to 0.54 in studied specimens, ratio *b* 0.96–1.01, ratio *c* 0.58–0.65, ratio *h* 0.56–0.60.

Face type III, clypeus narrow. The coloration of cephalothorax is chestnut brown with surroundings of eyes lateral black. Fovea distinct. Abdomen has characteristic depression on the anterior margin corresponding with the shape of the posterior wall of cephalothorax, its coloration is grey or yellowish-grey, ventrally somewhat paler.

Sternum chestnut brown to fawn. Coxae light brown to fawn, anterior two pairs often paler. Maxillary plates and labium fawn, white tipped. Chelicerae dark brown, short, with a single large tooth on inner posterior margin (fig. 30). Pedipalps usually fawn or yellowish.

Copulatory organ in males quite simple, with elongated oval bulbus ornated with meander-shaped canal, stylus short and twisted into single coil arising from the anterior tip of the bulbus. Cymbium elongated. Tibial apophysis prominent and quite long (figs. 34–36, 38–40).

Epigynum in females is indistinct and little conspicuous. Copulatory canals rather straight, short and broad, spermathecae strongly sclerotized consist of a number of coiled chambers (figs. 37, 41, 42).

Legs fawn, with anterior pair usually darker and distal segments of legs II–IV distinctly paler than all remaining segments. Ratio *d* vary usually from 1.24 to 1.33.

The interspecific differences in females are visible only in the copulatory organ structure, especially in its internal structure. I could not find any clear difference in the external appearances of these spiders. The male is known in only one species, two remaining are unknown yet. Judging from analogies seen in females the two remaining males should be rather alike to that of *O. piceus*.

The systematic position of the genus *Omoedus* Thorell, 1881, poses quite an interesting problem. The relation to the genus *Coccorchestes* Thorell, 1881, does not seem to be so apparent as Simon supposed it to be, there are distinct differences both in cheliceral dentition and shape of the body (for more details see preceding chapter). But the structure of male copulatory organs presents analogies to several other genera of *Salticidae* classified at present into different subfamilies.

Studying specimens of European *Chalcoscirtus infimus* (Simon, 1868) and some species classified at present into genus *Euophrys* C. L. Koch, 1834, I was struck by the unusual shape of their male copulatory organ — and especially by meander-shaped spermatic canal visible through the semitransparent wall of their elongated bulbus. I had found the same kind of structure in *Nicylla sundevalli* Thorell, 1892 (Prószyński 1968: 245, ff. 11–13) and now I have dis-

covered quite the same in male of *Omoedus piceus*. Then, incidentally, I have look into excellent paper of Fr. CHRYSANTHUS (1968) on New Guinean *Salticidae* and became surprised to see 10 quite similar copulatory organs. Very close resemblances to *O. piceus* can be seen in *Euryattus porcellatus* THORELL, 1881 (figs. 39–40 in CHRYSANTHUS' paper) and *Sandalodes bernsteini* THORELL, 1881 (figs. 48–49 in CHRYSANTHUS'). Quite close resemblances are visible in *Euryattus bleekeri* (DOLESCHALL, 1859) (fig. 36 in CHRYSANTHUS'). Distinct resemblances can be noted in *Cytaea frontaligera* (THORELL, 1881) (fig. 24 in CHRYSANTHUS'), *Zenodorus durvillii* [*urvillei*] (WALCKENAER, 1837) (fig. 69 in CHRYSANTHUS') and slightly less distinct in *Cytaea mitellata* (THORELL, 1881) (fig. 32 in CHRYSANTHUS'). Some analogies can be traced also in *Cytaea nimbata* (THORELL, 1881) (fig. 28 in CHRYSANTHUS'), *Bathippus macrognathus* (THORELL, 1881) (figs. 54–55 in CHRYSANTHUS'), *Palpelius beccarii* (THORELL, 1881) (figs. 59–60 in CHRYSANTHUS') and in *Mopsus mormon* KARSCH, 1878 (fig. 70 in CHRYSANTHUS'). Main resemblances and analogies in these species are provided by shape and proportions of bulbus and its meandering spermatic canal and also in shape of stylus. The length of tibia and shape of tibial apophysis appear to be very useful taxonomic character in this case.

It is a very tempting hypothesis to unite these and other related species into single taxonomic group but that would mean turning upside down the whole systematic setup of the non ant-like *Salticidae*. Such a hypothesis may appear ultimately true, but it calls for more arguments and especially for more revisional work. Genera *Cytaea* KEYSERLING, 1882, and *Euryattus* THORELL, 1881, are "*fissidentati*" and classified into *Cytaeinae* SIMON, 1903. The remaining genera are "*unidentati*" but *Sandalodes* KEYSERLING, 1883, belongs to *Hyllinae* SIMON, 1901, *Bathippus* THORELL, 1892, *Palpelius* SIMON, 1903, and *Zenodorus* PECKHAM, 1886, are *Plexippinae* SIMON, 1901, *Mopsus* KARSCH, 1878, is classified into *Thyeninae* SIMON, 1903. Two other mentioned genera *Chalcoscirtus* BERTKAU, 1880, and *Euophrys*[1] C. L. KOCH, 1834, are classified into *Sitticinae* SIMON, 1901, and *Heliophaninae* PETRUNKEVITCH, 1928, subfamilies respectively.

I think that these observations justify rising of the question if the above mentioned genera are not, in fact, closely related and whether they should not be placed into a single taxonomic group. The answer, however, has to be deferred until further research will provide new and sufficient evidence.

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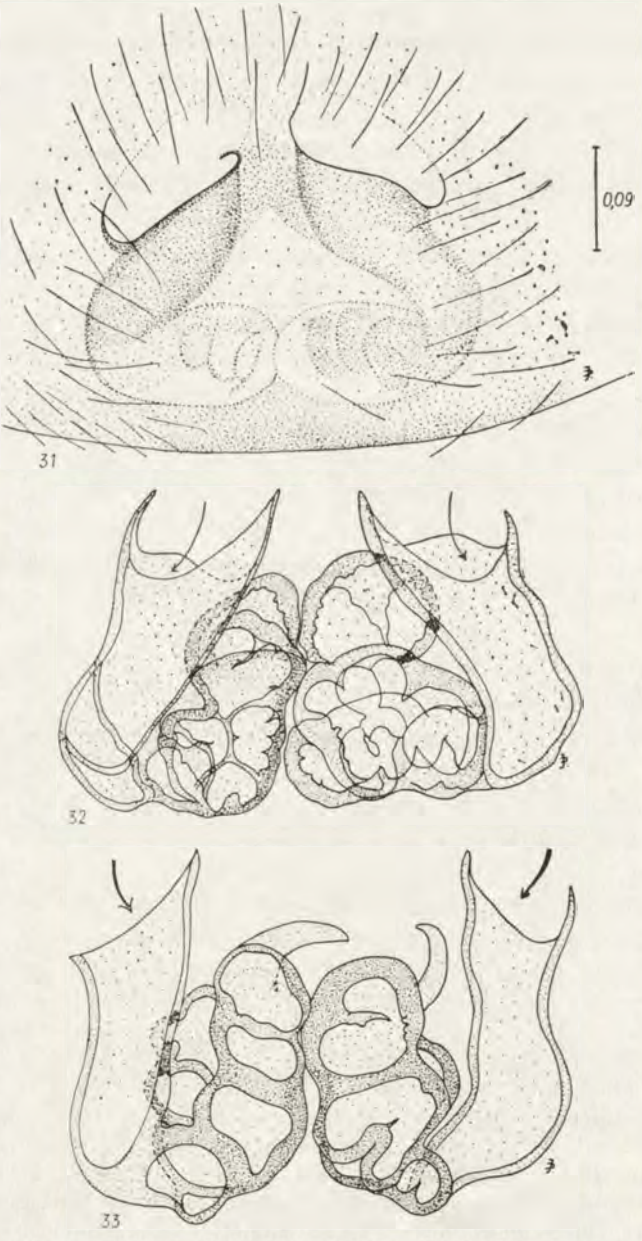
[1] Preparing a Catalogue of Polish Spiders (PRÓSZYŃSKI J., STAREGA W. 1970) with Dr. W. STAREGA we had to check again the scientific problem of proper spelling of "v" or "u" in names like "*Evophrys*" or "*Evarcha*". To our regret we have found ourselves unable to accept learned arguments of BONNET (1945: 133) and decided to stick to "*Euophrys*" and "*Evarcha*" for the simple reason that these names were in that form introduced for the first time in the literature, the usage followed by clear majority of arachnologists. We feel that nomenclatorical problems should be rather simplified than complicated for reasons entirely irrelevant to zoology.

## *Omoedus niger* THORELL, 1881

Material: "2 ♀♀ *Omoedus niger* THOR. Ramoi il. Guin. [New Guinea]. 1872. L. M. D'ALBERTIS" — 1 ♀ (larger) lectotype (new), 1 ♀ paralectotype (new); "*Omoedus* sp. incerta. Ins. Yule [Roro], 1872. D'ALBERTIS" — 1 ♀ (adult but with indistinct epigynum). Coll. T. THORELL, MCSN-Genova.




Figs. 31–33. *Omoedus niger* THOR. Epigynum before and after maceration: 31–32 — holotype, 33 — the "sp. incerta" specimen.

### Description of female

General appearance as in description of the whole genus above. Length of cephalothorax (lectotype — paralectotype — "sp. incerta" specimen) 2.02–1.96–1.92; length of eye field 1.09–1.06–0.97, width of eye field I 1.85–1.74–1.62, width of eye field III 1.85–1.79–1.75, height of cephalothorax 1.20–1.18–1.13. Ratios: *a* 0.54–0.54–0.51, *b* 1.00–0.96–0.92, *c* 0.59–0.61–0.60, *h* 0.60–0.60–0.59. Length of abdomen 2.88–2.24–2.16.

Epigynum indistinct, with two oval, diagonally arranged white depressions in front of sclerotized copulatory openings (fig. 31). Copulatory canals broad, straight and slightly inclined towards the mid-line of the epigynum. Spermathecae heavily sclerotized, consist of a number of sclerotized irregular chambers (figs. 32–33).

Legs brownish. Length of segments of legs: I (0.54–0.43–0.40)+(0.65–0.65–0.54)+(0.62–0.57–0.51)+(0.57–0.57–0.54)+(1.03–1.00–0.89), II (0.40–0.40–?)+(0.65–0.62–?)+(0.59–0.51–?)+(0.54–0.51–?)+(1.03–0.97–?), III (0.46–0.43–?)+(0.81–0.84–?)+(0.62–0.59–?)+(0.62–0.59–?)+(1.24–1.13–?), IV (?–0.49–?)+(?–0.94–?)+(?–0.76–?)+(?–0.57–?)+(1.30–1.24–?). Ratio *d* ?–1.27–?.

### *Omoedus piceus* Simon, 1902.

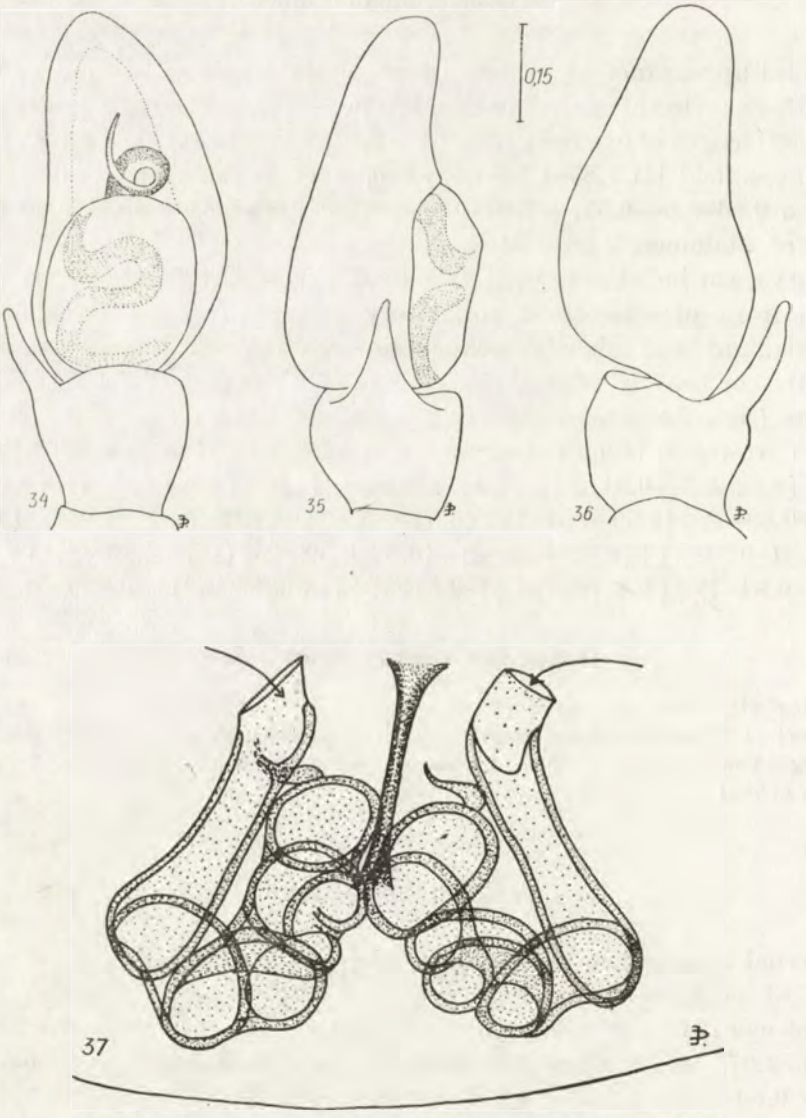
Material: "*Omoedus piceus* Sim. Halmaheda [sic! Halmahera]. 7684" — 1 ♂ lectotype (new), 1 ♀ paralectotype (new) — coll. E. Simon, MNHN-Paris; "*Omoedus niger* Sattelberg [New Guinea] — det. ex coll. W. Kulczyński" — 1 ♂, 1 ♀, 2 juv. — coll. W. Kulczyński — IZ PAN-Warszawa.

### Description of male

External appearance as described above in the description of the genus. Length of cephalothorax (lectotype — Kulczyński's specimen) 2.16–2.48, length of eye field 1.06–1.23, width of eye field I 1.76–2.10, width of eye field III 1.76–2.07, height of cephalothorax 1.20–1.46. Ratios: *a* 0.49–0.51, *b* 1.00–1.01, *c* 0.60–0.59, *h* 0.56–0.60. Length of abdomen 1.57–2.04.

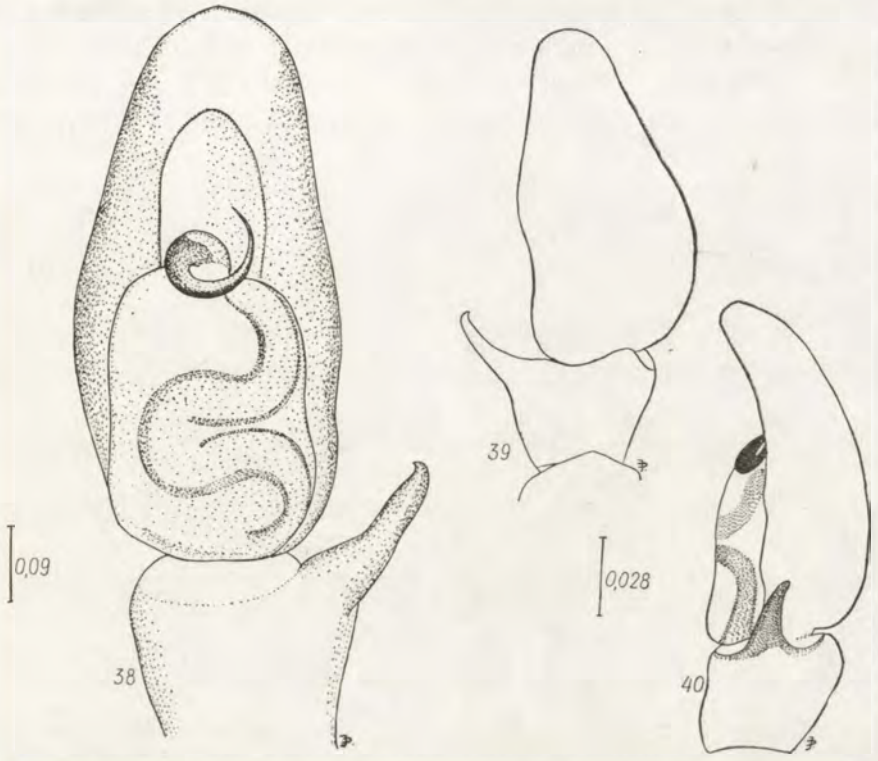
Coxae pale fawn, two anterior pairs darker. Pedipalps fawn with tarsus white tipped dorsally. Cymbium elongate, bulbus oval and elongate with meandering spermatic canal. Stylus short and twisted into single coil. Tibial apophysis long, turned diagonally out of cymbium and slightly bent apically (figs. 34–36, 38–40). There are minor differences between males from Halmahera and Sattelberg Mt. — but these does not seem to be significant.

Legs fawnish brown or fawn. In Kulczyński's specimen leg I darker and longer than, other, tibia and metatarsus I darker brown, coxae, trochanteri, tarsi II–IV and distal halves of metatarsi III–IV — paler. In lectotype specimen leg I does not seems to be so strikingly longer, distal parts of tibiae




Figs. 34–37. *Omoedus piceus* Simon, copulatory organs of the type-specimens: 34–36 — male (lectotype) organ: ventral, lateral and dorsal views, 37 — female's (paralectotype) epigynum after maceration, note sclerotized median ridge.

II–IV are white, metatarsi and tarsi II–IV are yellowish-white. Length of segments of legs: I (0.48–0.73)+(0.64–1.62)+(0.56–1.46)+(0.48–0.98)+(0.98–1.79), II (0.39–0.53)+(0.59–1.04)+(0.45–0.87)+(0.48–0.78)+(0.95–1.43), III (0.50–0.62)+(0.78–1.26)+(0.50–0.90)+(0.48–0.84)+(1.26–1.54), IV (0.50–0.58)+. +(0.92–1.40)+(0.64–1.04)+(0.50–0.70)+(1.32–1.54). Ratio *d* 1.28–1.16. The




Figs. 38–40. *Omoedus piceus* SIMON — KULCZYŃSKI's specimen. Male copulatory organ: ventral, dorsal and lateral views.

measurements of segments of legs in both specimens show striking difference which I cannot explain now, especially that other measurements were comparable. It would be, perhaps, advisable to check the same on a new material.

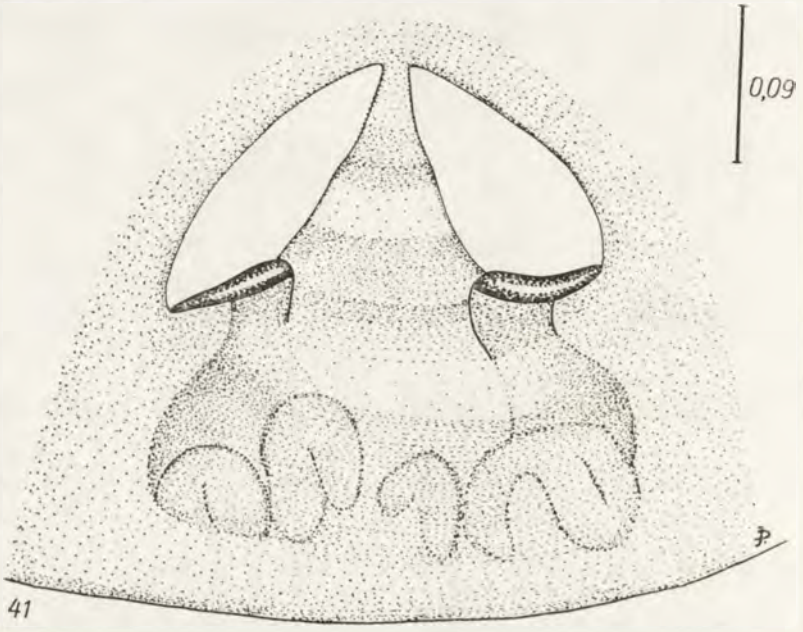
## Description of female

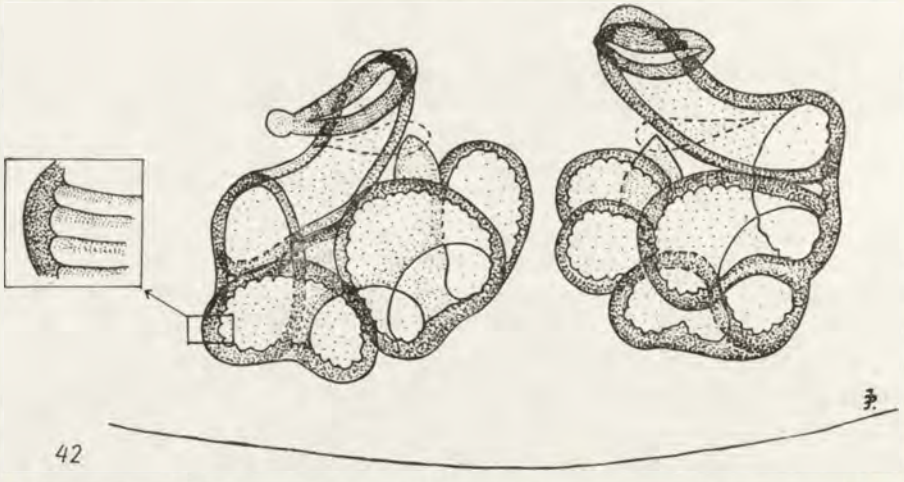
External appearance does agree with the general description of the genus. Length of cephalothorax (paralectotype specimen — KULCZYŃSKI's specimen) 2.18–2.18, length of eye field 1.15–1.15, width of eye field I 1.76–1.96, width of eye field III 1.76–1.96, height of cephalothorax 1.23–1.32. Ratios: *a* 0.52–0.53, *b* 1.00–1.00, *c* 0.65–0.58, *h* 0.56–0.60. Length of abdomen 2.46–2.97.

Epigynum is rather indistinct in studied specimens, its approximate appearance in KULCZYŃSKI's specimen is shown on fig. 41, in paralectotype it is even less distinct. The copulatory canals are barely longer than spermathecae, quite narrow, arranged diagonally and very slightly bent in the middle. The

spermathecae are elongate twisted structures consisting of a number of irregular chambers arranged into a number of irregular coils (figs. 37, 42).

There are certain differences in internal structure of female genital organs in paralectotype and in KULCZYŃSKI'S specimens, especially in presence of




Figs. 41–42. *Omoedus piceus* SIMON — KULCZYŃSKI'S specimen. Epigynum before and after maceration.

a thin septum separating anterior epigynal groove — well visible on preparation of paralectotype's epigynum, but not visible in KULCZYŃSKI'S specimen. While the basic plan of spermathecae and copulatory canals is comparable in both specimens, the details are not exactly the same. But it is difficult to judge the significance of these differences because of lack of any other comparative material.

Legs fawnish-brown, tarsus and metatarsus I slightly darker. Distal parts of tibiae II–IV (and distal area nearest to the joint in metatarsi II–IV in KULCZYŃSKI'S specimen) white, distal halves of metatarsi and whole tarsi II–IV pale yellowish. Length of segments of legs: I (0.48–0.56)+(0.62–0.98)+(0.56–0.90)+(0.48–0.81)+(0.98–1.34), II (0.42–0.48)+(0.56–0.84)+(0.50–0.67)+(0.48–0.70)+(0.98–1.37), III (0.45–0.53)+(0.76–1.06)+(0.59–0.76)+(0.59–0.73)+(1.26–1.34), IV (0.48–0.53)+(0.98–1.23)+(0.73–0.98)+(0.48–0.70)+(1.29–1.51). Ratio *d* 1.24–1.30.

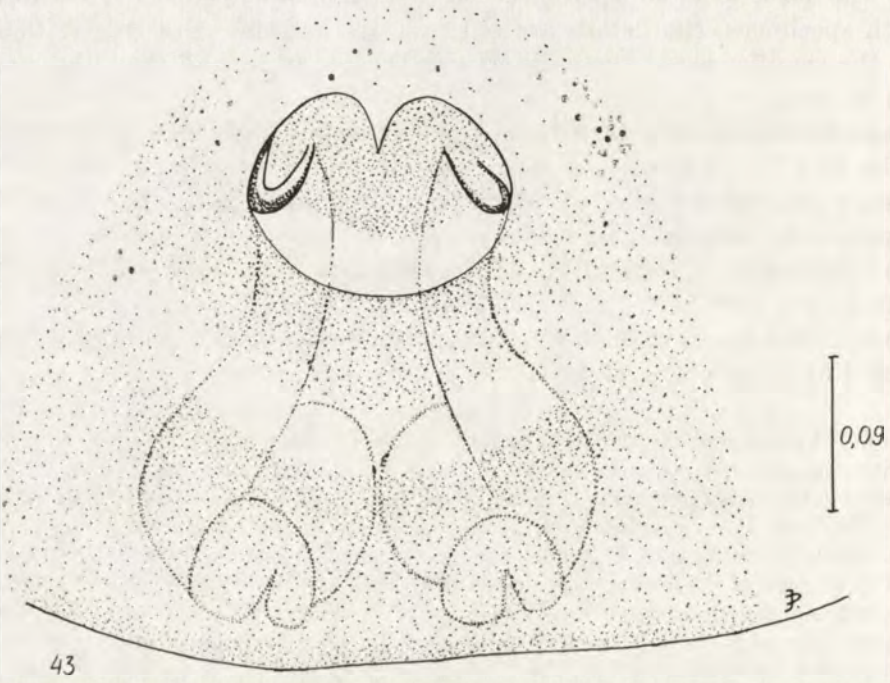
Remark: It is possible that both pairs of specimens from Halmahera and from Sattelberg, New Guinea, are conspecific as I assume now, but it is not entirely sure. The differences and resemblances between them are best shown on figs. 34–42 and discussed in the descriptions above. The most striking differences, however, are shown by measurements of segments of legs. While measurements of cephalothorax are at least comparable, the length of legs is not. The legs of Halmahera specimens are much shorter than in New Guinea specimens and in male specimen they may be even twice shorter, especially in leg I. What can be explanation of these differences: developmental, populational, subspecific, specific? It is impossible to explain that on the basis of single specimens. One aspect of these differences seems to be, however, significant. The length sequence of legs in New Guinea male specimen is I — IV — III — II, in both female specimens is IV — III — I — II. That may be normal and I have observed already in many *Salticidae* that males have anterior legs much stronger developed than female, I assume that it may be a manifestation of a sexual dimorphism. The Halmahera male specimen has, however, a female like sequence IV — III — I — II. Can it be a sexual dimorphism disturbance in that particular specimen? If so the lectotype specimen may be poor representative of the species. But nothing can be said until new evidences become available.

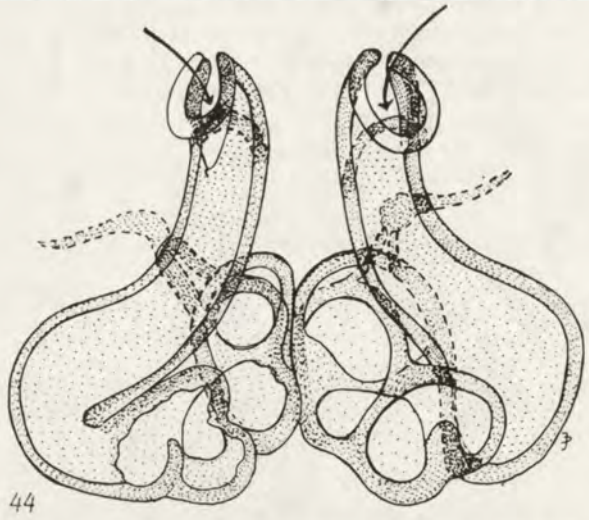
### ***Omoedus kulczynskii*** sp. n.

Material: "*Omoedus* sp. Humboldt baai" — 1 ♀ holotype, coll. W. KULCZYŃSKI, IZ PAN-Warszawa.

#### Description of female

Cephalothorax and abdomen do not differ distinctly from other species of the genus. Length of cephalothorax 2.47, length of eye field 1.21, width of eye field I 1.98, width of eye field III 2.02, height of cephalothorax (eye III) 1.39, length of abdomen 3.42. Ratios: *a* 0.49, *b* 0.98, *c* 0.61, *h* 0.56.




Figs. 43–44. *Omoedus kulczynskii* sp. n. Epigynum before and after maceration.

Epigynum has a single oval groove anteriorly with distinct copulatory openings inside (fig. 39). Copulatory canals longer than in previous species and narrow. Spermathecae heavily sclerotized with complicated and irregular chambers (fig. 40).

Sternum fawn, coxae yellowish-fawn, maxillary plates and labium yellowish-fawn white tipped. Pedipalps yellowish with tarsus and tibia fawn. Legs uniformly fawnish-yellow with tarsus and metatarsus I brown.

Length of segments of legs: I 0.54+0.76+0.67+0.58+1.12, II 0.40+ +0.72+0.58+0.58+1.03, III 0.49+1.03+0.67+0.67+1.30, IV 0.49+1.12+ +0.90+0.67+1.48. Ratio *d* 1.33.

Male unknown.

### X. Redescription of *Poecilorchestes decoratus* Simon, 1901, the only representative of the genus *Poecilorchestes* Simon, 1901

The genus was described on the basis of the single male specimen redescribed here, second specimen, the female, was briefly described by Chrysanthus (1968). There are no more specimens of this species known.

The species can be recognized at first glance by its striking coloration and peculiar shape of the body. Its systematic position is much less clear. It resembles to certain extent the genus *Coccorchestes* by the shape of cephalothorax and abdomen, although that resemblance is certainly less striking than Simon thougth it to be. It differs from *Coccorchestes* by the oversized anterior legs and cheliceral dentition if that character does matter. The structure of male copulatory organ show no analogies to either *Coccorchestes* or *Omoedus*. We must, therefore, deffer decision about the systematic position of the *Poecilorchestes*.

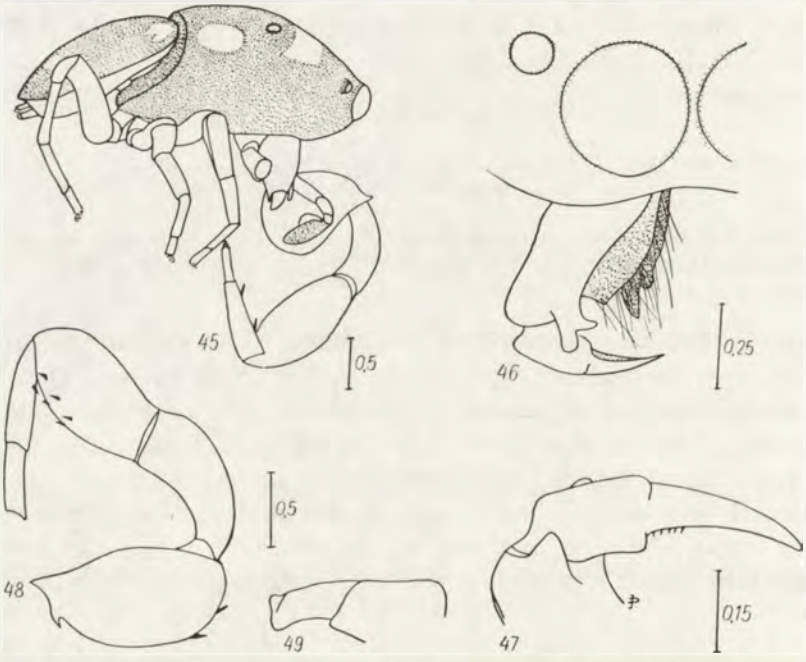
Material: "*Poecilorchestes decoratus* E. S. Dorey [Manokwari, N. New Guinea], 5464" — 1 ♂ — holotype, coll. E. Simon, MNHN-Paris.

#### Description of male

Cephalothorax has very characteristic shape (fig. 45) and ends abruptly with almost vertical and concave posterior wall. The texture of dorsal surface is rough and consists of a number of minute dense depressions and small sclerotized warts. The passage of dorsal into posterior wall is edge-like and armoured into sclerotized depressions and small indistinct conical protuberances, a very distant analogy to sclerotized warts in *Coccorchestes*. The posterior wall is smooth and shining. The coloration of cephalothorax is blackish-brown and there are two pairs of large spots of shining white scales. The face type is intermediate between I and II, the clypeus very narrow, the difference between sizes of eyes lateral and median anterior very big (fig. 46). There is a very peculiar long protuberance on anterior surface of the chelicerae near the fang. Length

of cephalothorax is 1.68, length of eye field 0.92, width of eye field I 1.26, width of eye field III 1.40, height of cephalothorax 1.06. Ratios: *a* 0.55, *b* 0.90, *c* 0.73, *h* 0.63.

Dorsal surface of abdomen covered by sclerotized shield — a scutum, its color is blackish-brown with two pairs of large spots of shining white setae. Lateral and ventral surfaces are soft and warped, colored brownish-grey. Length of abdomen 1.46.

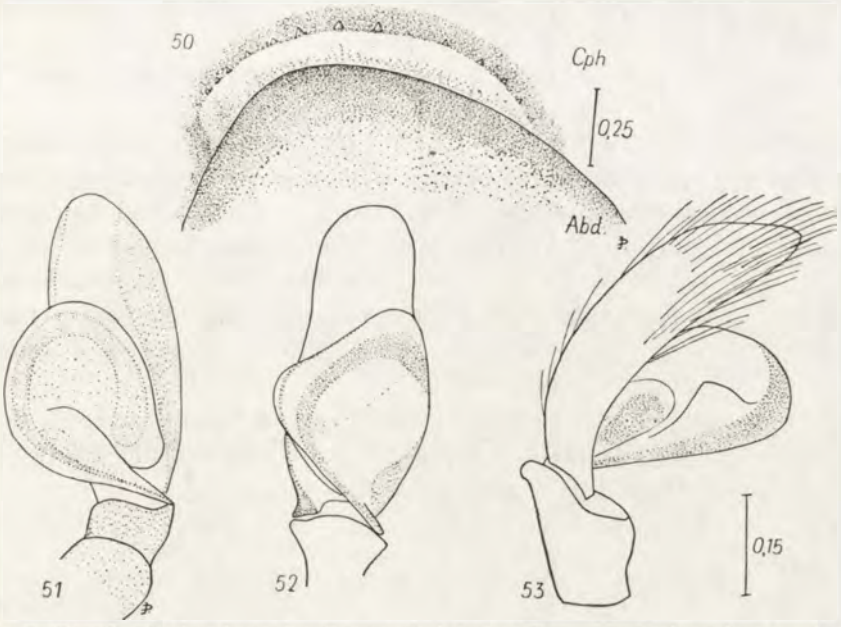



Figs. 45–49. *Poecilorchestes decoratus* Simon, holotype: 45 — lateral view on cephalothorax and abdomen, note proportion of the leg I, 46 — left half of the "face" — eyes and chelicera, 47 — posterior view of chelicera, note size and proportion of the tooth, 48 — leg I, 49 — coxa and trochanter, ventral view.

Sternum, maxillae and labium brown. Coxae brown, unusually long (fig. 49). Chelicerae brown, rather unusual in shape (figs. 46, 47) with single very large tooth located very high on the spot occupied usually by lateral condyle.

Pedipalps brown with tip of cymbium white, copulatory organ very simple and rather unusual in shape. No tibial apophysis (figs. 51–53).

Legs brown with metatarsi and tarsi II–IV yellowish-white. Anterior legs enormously big with femur, patella and tibia swollen, trochanter and coxa unusually long (figs. 45, 48, 49). Length of segments od legs: I 0.50+0.76+0.90+ +1.12+1.12, II 0.35+0.59+0.53+0.48+0.84, III 0.36+0.50+0.42+0.36+ +0.78, IV 0.36+0.56+0.53+0.42+1.06. Ratio *d* 1.27.




Figs. 50–53. *Poecilorchestes decoratus* SIMON, holotype: 50 — posterior view on dorsal posterior edge of cephalothorax and anterior part of abdomen, note rough texture and presence of small sclerotized warts, 51–53 — male copulatory organ, ventro-lateral, ventral and lateral views.

A female specimen from Mindiptana was described by CHRYSANTHUS (1968: 65, figs. 75–77). The external appearance of cephalothorax and abdomen is very similar to male. The internal structure of epigynum is, unfortunately, unknown.

Instytut Zoologiczny PAN
Warszawa, ul. Wilcza 64

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STRESZCZENIE

[Tytuł: Redeskrypcje gatunków typowych rodzajów *Salticidae* (*Aranei*), VIII–X. Rewizja podrodziny *Coccorchestinae*].

Na podstawie dokonanej rewizji autor stwierdza brak pokrewieństwa pomiędzy trzema rodzajami tworzącymi dotychczasową podrodzinę *Coccorchestinae*. Rodzaj *Omoedus* THORELL, 1881 wykazuje uderzające podobieństwa w budowie samczych narządów kopulacyjnych do szeregu gatunków zaliczanych dotychczas do bardzo różnych podrodzin; podobieństwo to sugeruje konieczność krytycznego zbadania podziału nie-mrówkokształtnych *Salticidae* na podrodziny. Pokrewieństw rodzajów *Coccorchestes* THORELL, 1881 i *Poecilorchestes* SIMON, 1901 nie można jeszcze ustalić.

Autor synonimizuje gatunki *Coccorchestes rufipes* THORELL, 1881, *C. subhirsutus* THORELL, 1881 i *C. tarsalis* THORELL, 1881 oraz opisuje 3 nowe gatunki w rodzaju *Coccorchestes* i 1 w rodzaju *Omoedus*.

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РЕЗЮМЕ

[Заглавие: Переописания типовых видов родов *Salticidae* (*Aranei*), VIII–X. Ревизия подсемейства *Coccorchestinae*].

На основании произведенной ревизии автор констатирует отсутвие родственных связей между тремя родами, из которых состояло до настоящего времени подсемейство *Coccorchestinae*. Род *Omoedus* THORELL, 1881 поразительно сходен строением копуляционных органов у самцов с рядом видов, принадлежащих до сих пор к весьма различным подсемействам; это сходство делает необходимым произвести критическую оценку разделения немуравьеобразных *Salticidae* на подсемейства. Родства родов *Coccorchestes* THORELL, 1881 и *Poecilorchestes* SIMON, 1901 пока не удалось установить.

Автор сводит к синонимам следующие виды: *Coccorchestes rufipes* THORELL, 1881, *C. subhirsutus* THORELL, 1881 и *C. tarsalis* THORELL, 1881 и описывает три новых вида из рода *Coccorchestes* и один из рода *Omoedus*.

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Redaktor pracy — dr W. Staręga

Państwowe Wydawnictwo Naukowe — Warszawa 1971
Nakład 1320 + 90 egz. Ark. wyd. 2,25; druk. 1⁷/₈. Papier druk. sat. kl. III, 80 g — Cena zł 12,—
Zam. nr 1179/70 — Wrocławska Drukarnia Naukowa