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TWO NEW SPIDERS FROM SUMATRA (ARANEAE, TELEMIDAE AND OCHYROCERATIDAE)

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With 11 text-figures

SUMMARY

Apneumonella jacobsoni n. sp. is described (♀, ♂ unknown; typ. loc.: Fort de Kock, Sumatra, Indonesia); this species, which can be distinguished from all other known Telemids by general morphology, genitalia, chelicerae, etc., is provisionally included in *Apneumonella*; the differential characters between the existing genera of the Telemidae are apparently small, mostly through lack of information, and only future study may allow to decide on their validity and on the position of this and other species.

Speocera krikkeni n. sp. is described (♂ ♀; typ. loc.: Indonesia, N. Sumatra, Mt. Bandahara, Serbolangit Range); the only closely related species seems to be *S. laureata* Komatsu, 1974, from Okinawa, from which it can be distinguished by the ♂ ♀ genitalia.

During a short visit to the Rijksmuseum van Natuurlijke Historie at Leiden I briefly examined the unsorted spider collections and was allowed to take with me some haplogyne specimens for future study.

The two species described here as new are remarkable mostly for zoogeographical reasons. Of the very small family Telemidae it is the first species recorded from tropical Asia; less than ten species of this family have been described from Europe, Japan, tropical Africa, and North and Central America. The second species described here belongs to the Ochyroceratidae and is the first *Speocera* species from tropical Southeast Asia.

TELEMIDAE

Apneumonella jacobsoni n. sp. (figs. 1-6)

Material: 4 ♀ (1 ♀ holotype, 3 ♀ paratypes; all in the collection of the Rijksmuseum van Natuurlijke Historie, Leiden, with the exception of one ♀ paratype, in my personal collection), from Sumatra, Fort de Kock, 920 m, collected in 1926 by E. Jacobson.

Description of ♀ (♂ unknown). — Similar in appearance to the smaller Ochyroceratidae (*Speocera*) or even to some Oonopidae (*Orchestina*); prosoma yellowish (now: colour, if present, surely faded), low, without evident thoracic groove, a star-shaped darkened dot on centre of thorax; 6 eyes (fig. 1); sternum heart-shaped, reticulated brown-mauve; pedipalp, fig. 4; chelicerae, fig. 3. Legs yellowish, spineless. Opisthosoma oval, whitish with irregular traces of brown-mauve; spinnerets and colulus, figs. 2, 5. Vulva (figs. 2, 6) very different from that of the other known species.

Measurements (in mm) (♀ holotype): prosoma 0.40 long, 0.37 wide; opisthosoma 0.50 long. Total length: 0.90.

Legs	Femora	Patellae	Tibiae	Metatarsi	Tarsi	Total
I	0.47	0.11	0.47	0.37	0.27	1.69
II	0.42	0.10	0.38	0.28	0.21	1.39
III	0.36	0.07	0.31	0.25	0.16	1.15
IV	0.48	0.11	0.43	0.37	0.25	1.64

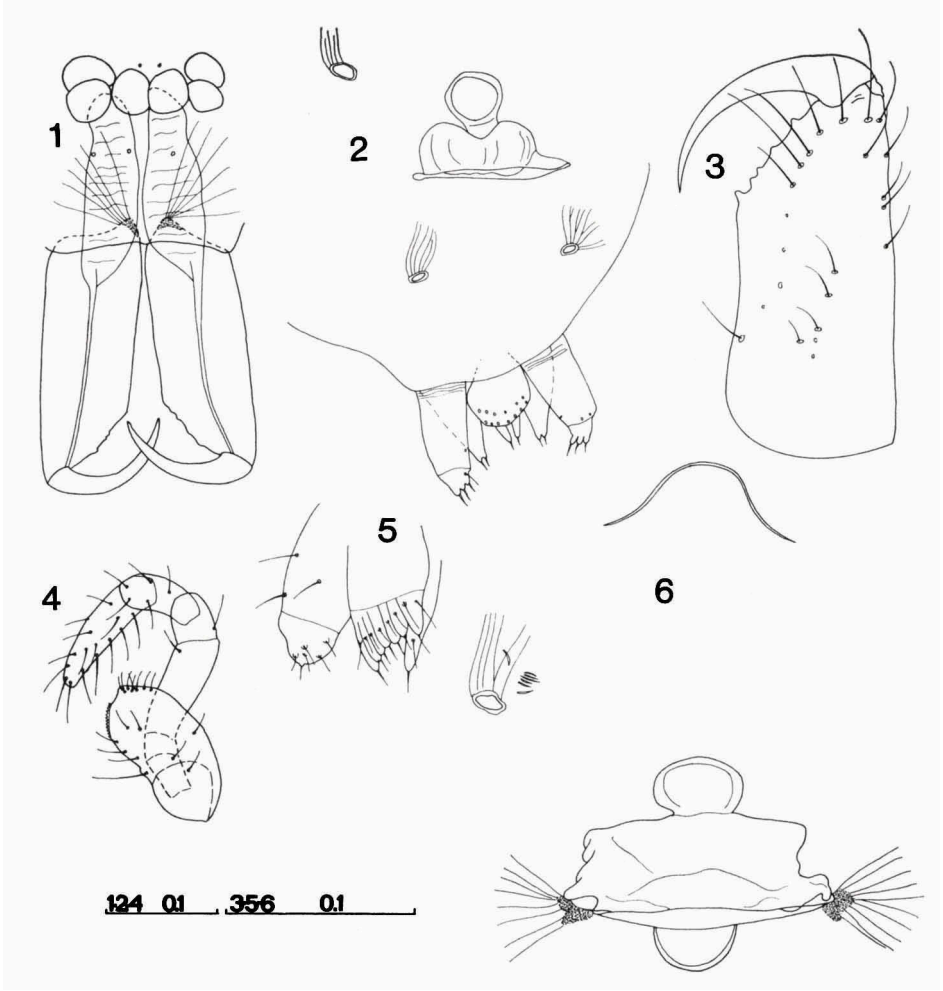
Derivatio nominis. — This species is dedicated to its collector, the well-known entomologist E. Jacobson.

Morphological notes. — There is nothing remarkable in the general appearance pedipalp and gnathocoxae of this species; the chelicerae are simple, with few teeth; poison-glands (fig. 1) are present and relatively well developed; the vulva reminds of that of some Dysderoidea: apparently there is a small posterior "receptacle" while anteriorly a wide atrium communicates with a rounded receptacle; the lips of the genital opening can be moved by muscles attached to the sclerified corners of the atrium. This kind of vulva has apparently nothing in common with that of *Apneumonella oculata* or of *Usofila* sp. (Simon & Fage, 1922; Brignoli, 1973). The lorum of the petiole is poorly developed. The respiratory apparatus consists of tracheae with four separated stigmata (as in the other species). The superior (dorsal) spinnerets have very few visible fusules; the medians have only one evident fusule; the inferior spinnerets are the best developed, with many fusules. The colulus is large and rhomboidal, as always in this family.

Discussion. — The general appearance of this species is very similar to that of some Ochyroceratids (the much larger *Althepus stellatus* also possesses a star-shaped dot on the prosoma) but the chelicerae, the colulus and the respiratory apparatus clearly demonstrate that it belongs to the Telemidae.

From the European *Telema tenella* Simon, 1881, the new species can be distinguished by the presence of eyes and by the genitalia (see Fage, 1913); from *Telema nipponica* (Yaginuma, 1972) it can be separated by the chelicerae and the genitalia (the spermatheca in this last species is an asymmetrical, thick and curved tube (see Yaginuma, 1973)).

Telema mayana Gertsch, 1973, from a cave in Guatemala, was unfortunately described only after the ♀ and not illustrated (a highly unrecommendable practice, especially in the Haplogynae); it can be distinguished from the new species by the chelicerae, the absence of eyes and the coloration



Figs. 1-6. *Apneumonella jacobsoni* n. sp., ♀. Fig. 1: frontal view of the (cleared) prosoma, note the poison-glands; fig. 2: ventral view of the (cleared) opisthosoma of a paratype, the genital region is somewhat different from that of the holotype (fig. 6, better preserved?), note the right anterior and the two posterior stigmata and the rhomboidal colulus; fig. 3: chelicera; fig. 4: pedipalp and gnathocoxa; fig. 5: spinnerets (dorsal view); fig. 6: ventral view of the anterior part of the opisthosoma of the holotype, note the weak lorum, the left anterior stigma and the sclerified corners of the atrium. Scales in mm.

of the abdomen; Gertsch (1973: 155) mentions a "single median genital pouch".

Of the North American *Usofila* (N.B.: this is the original spelling, cf. Marx, 1891: 35; if we ignore the etimology of this name as indicated by Keyserling, I see no reasons for changing it in "*Usophila*") both *U. flava* Chamberlin & Ivie, 1942 (following Chamberlin & Ivie, 1942: 8, = *Loxosceles rufipes*, Chamberlin & Ivie, 1933: 7; = *U. gracilis*, Gertsch, 1935: 22) and *U. oregona* Chamberlin & Ivie, 1942, are much larger than the new species (♀♀ 1.60 and 1.65 mm long, respectively); to the records listed by me (1973) must be added those of *U. oregona* from Wyoming by Levi & Levi (1951) and Lowrie & Gertsch (1955). *Usofila gracilis* Keyserling in Marx, 1891, should also have a "normal" spermatheca (admitting that this species is at least congeneric with the *Usofila* spec. illustrated by myself in 1973). *U. pacifica* (Banks, 1894) is of uncertain status; this species, described from Olympia, Washington, in *Ochyrocera*, is not recognizable from the description. Of the more important characters Banks (1894: 299) writes only "mandibles vertical, barely diverging, quite long, with a row of stiff hairs on the superior margin ... distinct colulus ... region of epigynum swollen, a pale area containing a transverse reddish patch". The combination "*Usofila pacifica*" appears, without discussion, in Chamberlin & Ivie (1942: 8-9). The authors compare it with *U. flava* and *U. oregona*; they seem to have had access to the types or other material as they write that *U. flava* "differs, in the female, by the longer legs, tibia I being about as long as tibia and patella I of *pacifica* "(in the description by Banks no measurements of the legs are given!).

The family is still unknown from South America and Oceania. Of the African species most are still undescribed (see also Brignoli, 1973). *Apneumonella oculata* Fage, 1921, can be distinguished from the new species by the chelicerae and the genitalia (see Simon & Fage, 1922). *Cangoderces lewisi* Harington, 1951, should also be a Telemid, according to De Barros Machado (in litt.). Judging from the description I am also of this opinion: the chelicerae and the colulus are very typical, while the form of the spermatheca was unique up to the discovery of *Apneumonella jacobsoni* (which has similar genitalia, but not fully of the same type).

It is evident from this discussion that no species can be considered to be strictly related with *Apneumonella jacobsoni*; the most similar could possibly be *Cangoderces lewisi*. The difficulty of attributing this species to one of the known genera should be readily understood by the reader: the morphology of the genitalia even could have justified a new genus, but in absence of a male I prefer to abstain from this. Not knowing where to place this species,

I resolve to attribute it provisionally to a known genus and prefer the older *Apneumonella* to the more recent *Cangoderces*.

Some observations on the genera of the Telemidae.— Our information on this family is so scanty that the few arachnologists who published on it in recent times have come to widely different conclusions. Lehtinen (1967: 301) wrote that "the genera *Telema* and *Apneumonella* are most probably not closely related"; Gertsch (1973: 154) on the other hand, firstly wrote that "it became plain to me that the spiders ... assigned to ... *Usophila* were representatives of the family and likely even of the genus *Telema* ..." and, after a few lines, directly referred to "*Telema gracilis*", thus establishing the synonymy of *Usofila* with *Telema* (*U. gracilis* is the generotype).

The problem is a general one: are large, world-wide genera to be preferred in principle to small, geographically "logical" genera, as proposed by some arachnologists? In a very recent paper, Levi criticizes the European arachnologists for the tendency to fragment genera and, with a touch of humour, writes (1974: 268) that "they forget the usefulness to themselves in having all oak trees in the genus *Quercus,* all pines in *Pinus,* and forget that araneologists who study taxonomy produce knowledge used by colleagues in fields other than spider taxonomy".

To this could be answered, in the same style, that it is very practical to put all oaks in *Quercus,* but that it would not be very useful to put in *Quercus* also all palms, willows and fig-trees. "Good" genera are not merely labels and are not at all so artificial as some typological taxonomists seem to believe; a "natural" genus could (and should) be composed in my opinion of one or more "Artenkreise", i.e. of groups of nearly related and more or less primarily allopatric species. What sense does it have to unite in one genus not strictly related species? Possibly only that of simplifying the nomenclature, a relative advantage appreciable only by non-taxonomists who would have to learn few names, but who would obtain — without knowing it — false information on the affinities between the animals of interest to them. As closely related animals normally are similar also from other points of view (biology, ecology, etc.) the damage would not be insignificant.

The eventual differences between *Telema, Apneumonella, Usofila* and *Cangoderces* can not be correctly evaluated at present through lack of information. In my opinion this does not justify establishing synonymies between them. To suppose close relationship between poorly mobile, highly adapted cavernicolous or edaphic species from the Pyrenees, Japan, Tanzania, South Africa, Guatemala, Alaska and the Pacific coast of the USA would be very rash and would correspond (again making a comparison for maintaining in botany) with a synonymy of *Abies, Podocarpus, Thuya* and *Sequoia.*

OCHYROCERATIDAE

Speocera krikkeni n. sp. (figs. 7-11)

Material: N. Sumatra, Serbolangit Range, Mt. Bandahara, bivake, ca. 3°44'N, 97°40'E, 5-10.vii.1972, leg. J. Krikken, no. 24, ca. 1420 m (submontane multistratal evergreen forest), 1 ♂ (holotype). As above, ca. 3°43'N, 97°41'E, 25.vi.-5.vii.1972, leg. J. Krikken, no. 23, ca. 810 m (lowland, multistratal evergreen forest), 1 ♀ (paratype). All preserved in the Rijksmuseum van Natuurlijke Historie at Leiden.

Description of ♂♀. — Prosoma yellowish, somewhat darker in the ♀; 6 eyes in the normal disposition, in a compact group, AME nocturnal, somewhat smaller than the others; sternum wide, heart-shaped, smooth, whitish; chelicerae, figs. 9-10; pedipalp of the ♂, fig. 8; whitish legs. Opisthosoma ovoidal, whitish in the ♂, pale mauve in the ♀; colulus and spinnerets normal; vulva, fig. 11.

Measurements (in mm), ♂: prosoma, 0.41 long, 0.36 wide; opisthosoma, 0.42 long. Total length: 0.83.

Leg	Femur	Patella	Tibia	Metatarsi	Tarsus	Total
I	0.51	0.11	0.50	0.40	0.16	1.67
II	0.42	0.10	0.40	0.34	0.15	1.41
III	0.31	0.07	0.32	0.27	0.13	1.10
IV (lacking)						

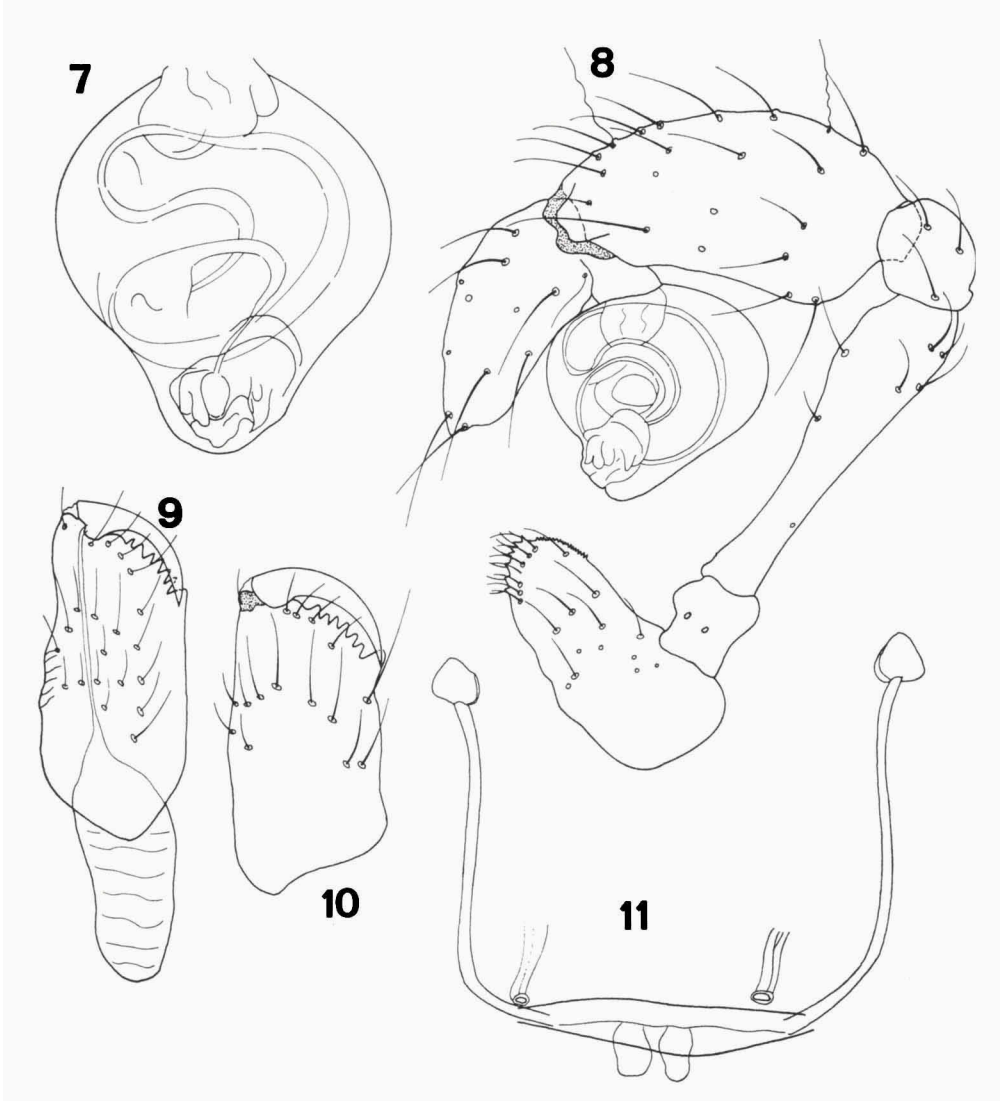
♀: prosoma, 0.45 long, 0.40 wide; opisthosoma 0.56 long. Total length: 1.01.

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I (lacking)						
II	0.41	0.12	0.35	0.32	0.21	1.41
III	0.34	0.11	0.30	0.29	0.18	1.22
IV	0.45	0.12	0.42	0.40	0.21	1.60

Derivatio nominis. — This species is dedicated to its collector, J. Krikken.

Discussion. — Tropical Asia has a rich fauna of Ochyroceratidae (as compared to other regions), in the greater part still undescribed; up to the present there are known to occur in this region 6 *Althepus* (*pictus* Thorell, 1898; *stellatus* (Simon, 1905); *machadoi* Brignoli, 1973; *mulcatus* Brignoli, 1973; *noonadanae* Brignoli, 1973; *incognitus* Brignoli, 1973), 5 *Merizocera* (*cruciata* (Simon, 1893); *picturata* (Simon, 1893); *brincki* Brignoli, 1975; *oryzae* Brignoli, 1975; *elastica* Brignoli, 1975), 2 *Psiloderces* (*egeria* Simon, 1892; *crinita* Fage, 1929), and 2 *Theotima* (*microphthalma* (Simon, 1892); *javana* Simon, 1905). Of these, only the two *Theotima* represent the "micro"-Ochyroceratidae which seem very common in the detritus or in the caves of many tropical countries.

The males of these two species are still unknown; as already noted by Fage (1912), it is not at all certain that they are congeneric with the American *Theotima*. Through lack of information on the ♀ genitalia of many Ochyroceratidae, it is difficult to assign isolated females to the right genus



Figs. 7-11. *Speocera krikkeni* n. sp. Fig. 7: bulbus (terminal region mostly membranous); fig. 8: pedipalp and gnathocoxa of the ♂; fig. 9: chelicera of the ♂ (note the weak stridulating files and the poison gland); fig. 10: chelicera of the ♀ (no stridulating files!); fig. 11: vulva (central part membranous and unclear) and anterior stigmata.

whereas placing of the males is quite easy. Of the two poorly known Oriental *Theotima, Th. javana* (from Buitenzorg, Java) can be distinguished from *S. krikkeni* (or, more exactly, from the ♀ which I consider provisionally conspecific with the ♂ holotype) by the pattern of the prosoma and by the different relations between the segments of the legs (a character considered of some importance by Fage); *Th. microphthalma* (from the Antipolo cave in Luzon, Philippines), is depigmentized and has smaller PL eyes and longer legs.

The geographically (and morphologically) nearest *Speocera* is *S. laureata* Komatsu, 1974, from a cave in Okinawa, practically at the border between the Oriental and the Palearctic regions. The palpus of this species has the same general structure as that of *S. krikkeni*, but the tibia and the bulbus are quite different. The vulva of *S. laureata* (of which Komatsu apparently not illustrated the terminal spermathecae) is of the same type as that of *S. krikkeni*, but has longer ducti.

References

BANKS, N., 1894. Two families of spiders new to the United States. — Ent. News, 5: 298-300.

BRIGNOLI, P. M., 1973. I Telemidae, una famiglia di ragni nuova per il continente americano. — Fragm. Ent., 8: 247-263.

CHAMBERLIN, R. V. & W. IVIE, 1933. Spiders of the Raft River Mountains of Utah. — Bull. Univ. Utah, 23 (4): 1-53.

——, 1942. A hundred new species of American spiders. — Bull. Univ. Utah, 32 (13): 3-82.

FAGE, L., 1912. Etudes sur les araignées cavernicoles. I. Révision des Ochyroceratidae (n. fam.). — Arch. Zool. Expér. Gén., (5) 10 (Biospeologica, 25): 97-162.

——, 1913. Etudes sur les araignées cavernicoles. II. Révision des Leptonetidae. — Arch. Zool. Expér. Gén., 10 (Biospeologica, 29): 479-576.

GERTSCH, W. J., 1935. Spiders from the South Western United States, with descriptions of new species. — Amer. Mus. Nov., 792: 1-31.

——, 1973. A report on cave spiders from Mexico and Central America. — Bull. Ass. Mex. Cave St., 5: 141-163.

HARINGTON, J. S., 1951. A new Leptonetid spider, *Cangoderces lewisi*, n. gen., n. sp., from the Cango Caves, Oudtshoorn. — Ann. Natal Mus., 12: 81-90.

KOMATSU, T., 1974. A new cave spider of the genus *Speocera* from Okinawa. — Acta Arachn. Osaka, 25: 44-46.

LEHTINEN, P. T., 1967. Classification of the Cribellate spiders and some allied families, with notes on the evolution of the suborder Araneomorpha. — Ann. Zool. Fenn., 4: 199-468.

LEVI, H. W. & L. R. LEVI, 1951. Report on a collection of spiders and harvestmen from Wyoming and neighboring states. — Zoologica (New York), 36: 219-237.

LEVI, H. W., 1974. The Orb-weaver genus *Zygiella*. — Bull. Mus. Comp. Zool. Harvard, 146: 267-290.

LOWRIE, D. C. & W. J. GERTSCH, 1955. A list of the spiders of the Grand Teton Park Area, with descriptions of some new North American spiders. — Amer. Mus. Nov., 1736: 1-29.

MARX, G., 1891. A contribution to the knowledge of North American spiders. — Proc. Ent. Soc. Wash., 2 (1): 28-37.

SIMON, E. & L. FAGE, 1922. Araneae des grottes de l'Afrique Orientale. — Arch. Zool. Expér. Gén., 60 (Biospeologica, 44): 523-555.

YAGINUMA, T., 1973. Occurrence of a Telemid spider in Japan. — Bull. Biogeogr. Soc. Japan, 29: 17-27.