SPIDERS FROM THE PHILIPPINES IV. A NEW *OGULNIUS* AND NOTES ON SOME OTHER ORIENTAL AND JAPANESE THERIDIOSOMATIDAE (ARANEAE)

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Synopsis

BRIGNOLI, P. M., (Istituto di Zoologia dell' Università di L'Aquila, Italy) : Spiders from the Philippines IV. A new *Ogulnius* and notes on some other Oriental and Japanese Theridiosomatidae (Araneae). *Acta arachnol.*, 30 : 9-19 (1981).

The Oriental and Japanese Theridiosomatidae are passed in review; on the types or other material are illustrated *Ogulnius obtectus* O. Pickard CAMBRIDGE, 1882 (♀ ; type-species) ; *O. pullus* BÖSENBERG et STRAND, 1906 (♀) ; *Theridiosoma epeiroides* BÖSENBERG et STRAND, 1906 (♀) ; *Wendilgarda assamensis* FAGE, 1924 (♂♀ ; probably not belonging to *Wendilgarda* KEYSERLING, 1886) ; *Phricotelus stelliger* SIMON, 1895 (♀ ; possibly belonging to the Mysmenidae) ; *Spheropistha melanosoma* YAGINUMA, 1957 (♂♀ ; belonging without doubt to the Theridiidae). *Ogulnius yaginumai* n. sp. is described (♀ ; Philippines, Palawan Island) ; by the genitalia congenerical with the other examined *Ogulnius*, distinguishable from the other Far Eastern species by colour and morphology of the genitalia or of the abdomen.

Introduction

In many recent papers, following the modern trend of splitting the traditionally accepted spider families, the Theridiosomatidae are considered an independent family. I am unable at this moment to decide if there are sufficient reasons for this, specially because we know still very little on many Araneidae (in which there are probably groups related with the Theridiosomatidae).

Until now, the only modern diagnosis of this group is that, somewhat unsatisfying, published by ARCHER (1953); it is true that the Theridiosomatidae

can be usually easily identified by their large male genitalia, complicated vulvae and specially by the two fossettes at the sides of the labium, but it is not sure that these characters are not shared with other groups.

WUNDERLICH (1980) has described in some detail the fossettes, which, already observed by ARCHER (op. cit), were seen by myself in all species of this group that I could examine (BRIGNOLI, 1972a, 1972b, 1979).

I publish here some notes on material I examined during the preparation of papers on other families.

For the loan of types or unstudied material I thank Dr. M. GRASSHOFF (Senckenberg Museum, Frankfurt, SMF), Mr. M. HUBERT (Muséum National d'Histoire Naturelle, Paris, MHNP), Dr. B. PETERSEN and Dr. S. L. TUXEN (Zoologisk Museum, Kjøbenhavn, ZMK), Mrs. SMITH (Hope Department of Entomology, Oxford, HDBO) and Prof. Dr. T. YAGINUMA (Otemon Gakuin University, Osaka, YO); my wife Micha has helped me in the preparation of the illustrations.

From the examination of large unstudied collections from Ceylon and Indonesia the Theridiosomatidae appear to be very common in the Oriental region, but until now only a handful of species has been described. A few species are since long known from Japan: until now it was impossible to decide if these Japanese species were related with the Western Palaearctic, Nearctic, or Oriental Theridiosomatidae.

Before to publish my original observations, it shall be useful to pass shortly in review the until now known Oriental species.

i. *Theridiosoma* O. PICKARD-CAMBRIDGE, 1879 (type-species: *Theridion gemmosum* L. KOCH, 1877 from Europe): the best available illustrations of the type-species are still those of WIEHLE (1931); as in most species the bulbus has a very large tegulum, a short embolus and a long, splinter-like (ARCHER, 1953) median apophysis. The vulva (WIEHLE, 1967) has a large bursa which communicates with short copulation ducts. Three Far Eastern species have been described: the Japanese *Th. epeiroides* BÖSENBERG et STRAND, 1960, of which the male is unknown and which may belong to this genus (see later); *Th. picteti* SIMON, 1893 (see BRIGNOLI, 1972b) has a long, pointed embolus and a short and stumpy median apophysis and should not be near to the type-species. *Th. fasciatum* WORKMAN, 1896 has a well marked fossette on the epigyne (an uncommon feature in this family); the illustration of the bulbus is incomplete, but its structure does not appear similar to that of the type-species. *Th. nebulosum*

SIMON, 1901 has a fossette on the epigyne, like *fasciatum*.

ii. *Andasta* SIMON, 1893 (type-species: *A. semiargentea* SIMON, 1893 from Ceylon): the most remarkable character of this genus is the complication of the region near the embolus (BRIGNOLI,1972b); the bulbus is similar to that of *Theridiosoma*, but not to a point that a synonymy (proposed by WUNDERLICH, 1976) would seem justified. The vulva has more or less the same structure as in *Theridiosoma*. *A. lycosina* SIMON, 1901 has a pointed abdomen and a "hook" on the epigyne; *A. genevensium* BRIGNOLI, 1972 has no "hook" and a very complicated vulva.

iii. *Helvidia* THORELL, 1890 (type-species: *H. scabricula* THORELL, 1890 from Sumatra): according to LEVI (1972), who managed to examine the type, this genus belongs to the Theridiidae and not to the Theridiosomatidae or Araneidae (where it was usually listed).

iv. *Phricotelus* SIMON, 1895 (type-species: *Ph. stelliger* SIMON, 1895 from Ceylon): LEVI (1972) proposed to transfer this genus to the "Symphytognathidae"; I have examined the type (see later) which is remarkable only by the curiously shaped terminal part of the abdomen; I shall discuss the position of this genus in another paper in preparation on my Singhalese material.

v. *Ogulnius* O. PICKARD-CAMBRIDGE, 1882 (type-species: *O. obtectus* O. PICKARD-CAMBRIDGE, 1882 from Brazil): no Oriental species had been described on this genus, but two from Japan (see later); it appears to include very small spiders, with short legs, and a characteristic vulva (no males of this genus have been described until now).

vi. *Wendilgarda* KEYSERLING, 1886 (type-species: *W. mexicana* KEYSERLING, 1886 from Mexico): notwithstanding the paper by ARCHER (1953), we know little on this genus, which, judging by the South American species I know (BRIGNOLI, 1972b), should be surely different from *Theridiosoma*, *Andasta* and *Ogulnius*. The only known Oriental species, *W. assamensis* FAGE, 1924 (see later) has little to do with the American species.

vii. *Spheropistha* YAGINUMA, 1957 (type-species: *S. melanosoma* YAGINUMA, 1957 from Japan): no Oriental species is known of this genus, which LEVI & LEVI (1962) proposed to transfer to the Theridiosomatidae, without explaining in detail the reasons for this decision. YAGINUMA (1971) continued to list it in the Theridiidae, where it actually belongs, also in my opinion (see later).

Ogulnius obtectus O. PICKARD-CAMBRIDGE, 1882

Brazil, Amazonas, TRAILL leg., 2 ♀♀ (Lectotype, Paralectotype; HDEO). Description-♀ (♂ unknown): prosoma and legs now yellowish; opisthosoma whitish; prosoma pear-shaped, wide, somewhat elevated in the ocular region; anterior eyes in a straight line, posterior eyes in a recurved line; AME and PME larger than the rest; ALE nearer to PLE; PME separated from each other more than the AME from each other; AME separated from the ALE by the diameter of the ALE; PME separated from the PLE by the diameter of the PLE; clypeus shorter than the chelicerae; labium triangular, small, wider than long, on its sides there are the typical fossettes; sternum very wide, smooth; chelicerae not examined in detail; pedipalp normal; legs with many hairs, but no spines; opisthosoma roundish, smooth, with dorsally four small

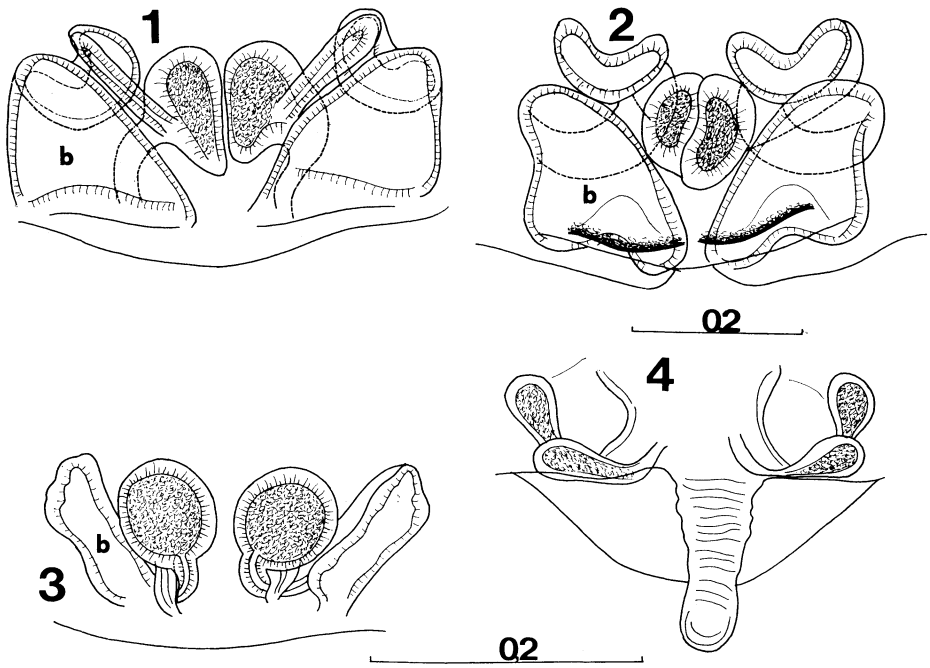


Fig. 1. *Ogulnius pullus* BÖSENBERG et STRAND, 1906: vulva.
Fig. 2. *Ogulnius obtectus* O. PICKARD-CAMBRIDGE, 1882: vulva.
Fig. 3. *Ogulnius yaginumai* n. sp.: vulva.
Fig. 4. *Phricotelus stelliger* SIMON, 1895: epigyne and vulva.
(In Figs. 1-3, "b"(=bursa)means the proximal, membranous part of the copulation duct.)

sclerified points; normal spinnerets, small colulus; vulva, s. Fig. 2 (no true epigyne). Measurements (in mm): prosoma 0,60 long, 0,55 wide; opisthosoma 1,10 long. Total length: 1,70.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0. 39	0. 17	0. 17	0. 20	0. 15	1. 08
II	0. 35	0. 15	0. 15	0. 19	0. 15	0. 99
III	0. 22	0. 12	0. 14	0. 16	0. 15	0. 79
IV	0. 40	0. 17	0. 25	0. 25	0. 19	1. 26

Remarks: I have redescribed here this species because it is the type-species of *Ogulnius;* by the vulva it is evidently related with the Japanese and Oriental species.

Ogulnius pullus Bösenberg et Strand, 1906

Saga, Japan, 1882, W. Dönitz leg., 1♀ (Holotype; SMF 4165).
—Iwawaki, Osaka Pref., 3. VIII. 1937, T. Yaginuma leg., 1♀ (YO).
—Yoshihara, Kôchi Pref., 10. VIII. 1954, T. Yaginuma leg., 1♀ (YO).
—Hiwa-chô, Hiroshima Pref., 10. VII. 1957, Fujiwara leg., 1♀ (YO).
—Kamigaito, Wakayama Pref., 31. VII. 1957, T. Yaginuma leg., 1♀ (YO).
Notes: the holotype is now completely bleached; it is a small spider (prosoma 1.05 mm long, 0.90 wide) with no easily visible epigyne; the vulva is evidently similar to that of *O. obtectus* (which was quite astonishing for me for biogeographical reasons) (Fig. 2). A coloured illustration of this species was published by Yaginuma (1971, pl. 11, fig. 70).

I have been unable to obtain from the SMF the type of *O. agnoscus* Strand 1918, from Japan (see later).

Ogulnius yaginumai n. sp.

Philppines, Palawan Island, Mantalingajan, Tagembung, 1150 m, 15. IX. 1961, Noona Dan Exp. leg., 1♀ (Holotype; ZMK). Description-♀ (♂ unknown): prosoma yellowish, evidently pear-shaped; eight adequal eyes (PME dark), in two linea, anterior line recurved, posterior line straight, anterior eyes near to each othor, posterior eyes separated by less of their diameters; clypeus very short, straight; labium wider than long, with at its sides the typical fossettes; sternum wide, with many hairs truncated, separating coxae IV by more than their diame-

ter; chelicerae with 3-0 teeth; pedipalp with no claw; legs, yellowish, stumpy, with many hairs but no spines; tarsal claws like in *Spheropistha melanosoma;* opisthosoma greyish, like in *S. melanosoma;* large colulus; vulva, s. Fig. 3; no visible epigyne. Measurements (in mm): prosoma 0,60 long, 0,52 wide; opisthosoma 1,44 long. Total length: 2,04.

Legs	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0. 37	0. 22	0. 23	0. 25	0. 16	1. 23
II	0. 35	0. 19	0. 22	0. 25	0. 15	1. 16
III	0. 20	0. 15	0. 12	0. 19	0. 14	0. 80
IV	0. 30	0. 19	0. 22	0. 20	0. 15	1. 06

Derivation of the specific name: I dedicate this species to Dr. Takeo YAGINUMA with my —belated— wishes for his 60 th birthday.

Discussion: By general morphology this species is somewhat near to *Spheropistha melanosoma* YAGINUMA, 1957, but externally there is no relatively well developed epigyne as in this species. As the vulva of *O. yaginumai* n. sp. is of the same type of that of *O. obtectus,* I decided to attribute this species to *Ogulnius.*

From *O. agnoscus* STRAND, 1918 (from Japan), which has never been properly described, but only illustrated, it can be distinguished by the AME which, in this species, are much larger than the other eyes.

From the other Oriental and Japanese Theridiosomatidae *O. yaginumai* can be distinguished either by the genitalia (*Andasta, Wendilgarda*), by the colour (*Theridiosoma*) or by the form of the abdomen (*Phricotelus*).

Phricotelus stelliger SIMON, 1895

Ceylon, 3 ♀♀, 1 ♀ abdomen (Lectotype, Paralectotypes; MHNP Ar 1068). Notes: prosoma not modified; ANE dark, a little larger than the rest; clypeus very short (shorter than the diameter of the AME); small labium, wider than long, evidently rebordered; sternum very wide, truncated; chelicerae not examined in detail, apparently not modified; pedipalp without a claw; short legs, with few feeble spines; opisthosoma very modified (see SIMON, 1895), ending with 2 small "horns"; colulus not visible; vulva and epigyne, s. Fig. 4.

I am not completely sure on the position of this species, which does not correspond to most Theridiosomatidae I know; by the genitalia it could belong

to the Mysmenidae.

Wendilgarda assamensis Fage 1924

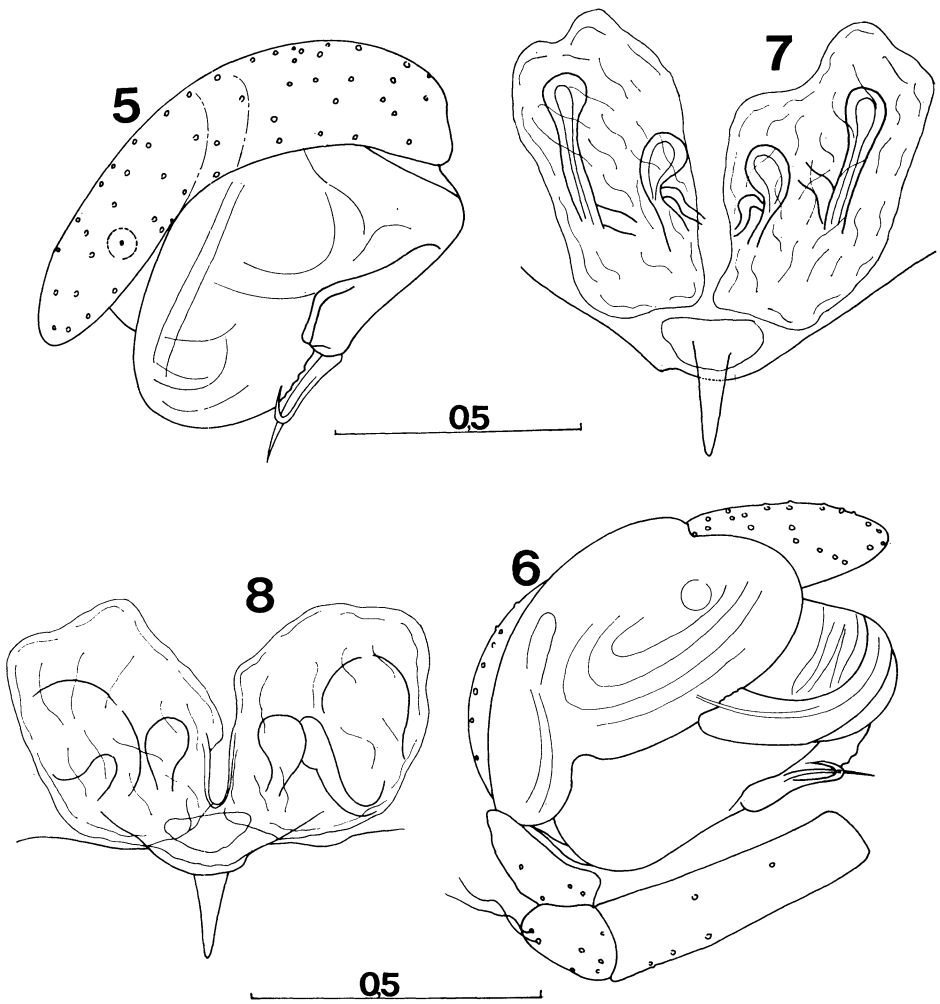
Siju Cave, Garo Hills, Assam, India, 1♂, 1♀ (♂Lectotype, ♀Paralectotype; MHNP; "*Vendilgarda*" on the original label: unjustified emended spelling).
Notes: prosoma of the ♂ somewhat elevated, AME dark, a little larger than the rest; clypeus much higher than the AME; labium triangular, a little wider than long, not clearly rebordered; sternum triangular, with a small point, with the typical fossettes at the sides of the labium; chelicerae, long and strong with few teeth on the superior margin; legs relatively long (first two pairs evidently longer than pairs III and IV), femora I a little larger than femora II-IV, metatarsi and tarsi I-IV with many strong spiniform setae; opisthosoma oval, with small triangular colulus. The ♀ is similar to the ♂, but clypeus is not so high and the prosoma not evidently elevated. Genitalia, see Fgs. 5-8; bulbus with a large tegulum, embolus short; vulva with a large bursa, apparently with two receptacles on each side (the only known individual was not in very good conditions and the examination of the vulva was difficult.

This species does not appear to be related with the American *Wendilgarda*, specially by the structure of the female genitalia (Figs. 7-8); before creating a new genus for it, I prefer to wait on the redescriptions of the type-species of the many poorly known African and American genera.

Theridiosoma epeiroides Bösenberg et Strand, 1906

Yamaguchi Pref. Japan, 10. VII. 1962, Murai leg., 1 ♀ (YO).
Sounkyo, Hokkaido, 7. VII. 1954, T. Yaginuma leg., 1 ♀ (YO).

Notes: the type of this species came from Kompira; Saga, it is apparently no more existing in the SMF. Yaginuma (1971, pl. 11, fig. 69) has published a coloured illustration of this species, which has quite characteristic genitalia (the male is still unknown) (Figs. 9-10): there is a relatively developed epigyne, with two lateral "horns"; the two spermathecae are practically fused with each other, properly speaking there are no copulation ducts as the bottom of the epigyne forms on each side a "pocket" (bursa) which communicates with the spermatheca; there are two very short fertilization ducts. As a whole, this structure is not very dissimilar from that of the type-species.

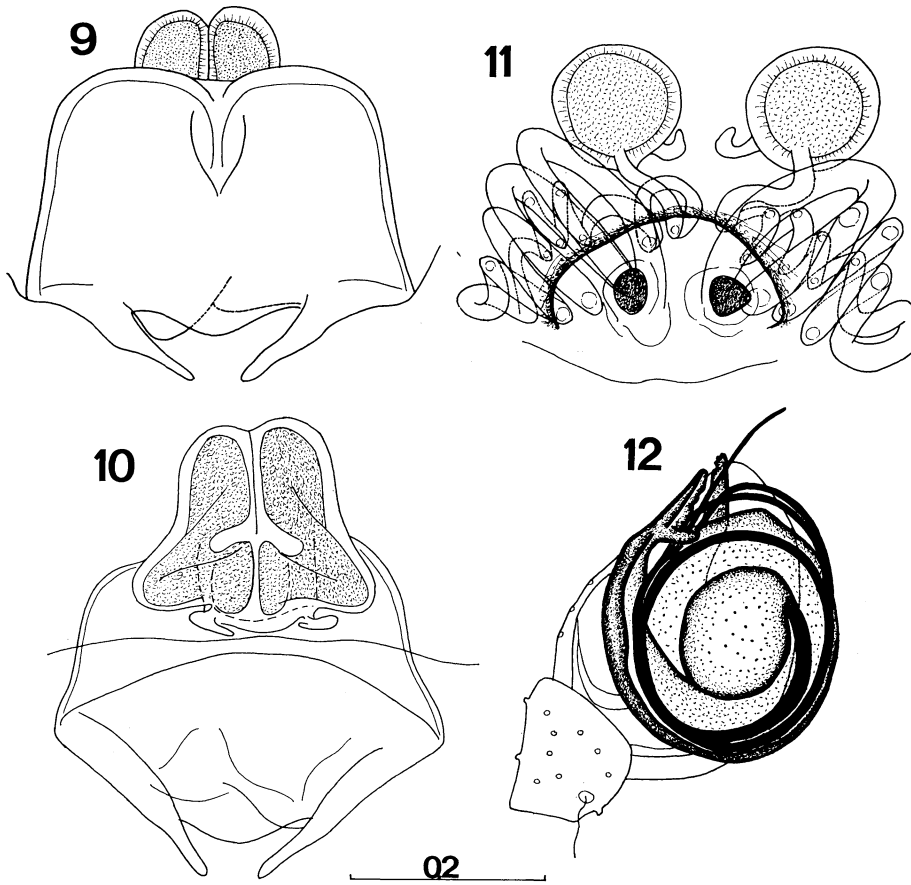


Figs. 5-6. *Wendilgarda assamensis* FAGE, 1924: bulbus of the male, internally and externally.

Figs. 7-8. *Wendilgarda assamensis* FAGE, 1924: vulva, from the outside and from the inside (in the only existing female the large, membranous bursa which surrounds the spermatheca could not be fully cleared).

Spheropistha melanosoma YAGINUMA, 1957

Ohkawa-mura, Kôchi Pref., Japan, 29. VII. 1953, NAKAHIRA leg., 1 ♀ (Holotype, YO).—Tomisato, Wakayama Pref., 2. VIII. 1972, GOTO leg., 1 ♀ (YO)—Ugakei,



Figs. 9-10. *Theridiosoma epeiroides* BÖSENBERG et STRAND, 1906: epigyne (and vulva) externally and internally.
Figs. 11-12. *Spheropistha melanosoma* YAGINUMA, 1957: epigyne and vulva; bulbus of the male.

Mie Pref., 19. VIII. 1962, OHTA leg., 1 ♂ (YO).

Notes: this remarkable species, of which, thanks to Prof. Dr. T. YAGINUMA I was able to examine also the hithertò undescribed male, belongs most evidently, by the structure of its genitalia, to the Theridiidae. The vulva is structurally very simple, with long, coiled copulation ducts, roundish spermathecae and short fertilization ducts (Fig. 11); the bulbus has an extremely long, coiled embolus which is supported by a semicircular conductor (Fig. 12). I do not

know sufficiently well the Theridiidae for trying to establish the affinities of this genus and many suggestions and hypotheses of LEVI & LEVI (1962) can no more be accepted (few, if any, arachnologists would now consider of phylogenetic importance a character as "no colulus"); I limit myself therefore to note a certain, probably only superficial, similarity between the genitalia of *Spheropistha* and those of *Latrodectus*.

The male has the cephalic region elevated; also the AME are markedly elevated; there are on the prosoma a transversal fovea and a few furrows on the sides. The abdomen is dorsally sclerotized; the scutum is oval, brown-blackish (the rest of the abdomen is black); two white spots are on the posterior declivity, near the spinnerets; the legs are yellowish, with no spines. The sternum is wide, subtriangular, brown-blackish.

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