

## A new cribellate amaurobioid spider from Sumatra (Araneae: Agelenidae)

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### Introduction

The cribellate amaurobioid spiders are poorly represented in the Malay region. Up till now, the following species are known from this area: *Amaurobius laminatus* Thorell, 1878 from Ambon (Moluccas), *A. castaneiceps* Simon, 1893 from the Philippines and *A. andamanensis* Tikader, 1977 from the Andaman Islands, *Badumna hirsuta* Thorell, 1890, *B. exilis* Thorell, 1890 and *B. javana* (Strand, 1907) from Java. Furthermore, 3 *Titanoeca* species have been described from this area.

It was therefore a surprise to find four adult specimens of a cribellate amaurobioid spider, unrelated to any of the species mentioned above, among the approximately 15,000 spider specimens sorted so far from the material collected for a faunistic survey of the primary rainforest of the Gunung Leuser area in northern Sumatra.

### *Vytfutia* new genus

Type species: *Vytfutia bedel*, new species

### Definition

Rather small, cribellate spider of agelenid type. Eyes large, covering nearly whole width of head, their distances not exceeding their diameters. AME much the smallest. Fovea deep and short. Chelicerae vertical, not bulging anteriorly, with lateral boss, groove and claw short, with teeth on anterior and posterior rows. Labium and maxillae longer than wide, labium not notched at base, trochanters not notched. Sternum pointed between coxae IV. Three tarsal claws, upper pair pectinate, no scopulae or tufts. Feathery hairs absent, trichobothria present on palpal tibiae and on female palpal tarsi, absent on male palpal cymbium; pro- and retrolateral trichobothria on tibiae, metatarsi and tarsi. Cribellum and calamistrum in course of reduction. Anterior and posterior spinnerets of about equal length, distal segments very short. Tracheal tubes simple, unbranched, limited to abdomen.

Metatarsus I with a tendency to be modified in male; palpal tibia with dorsal protuberances, without ventral carina. Median apophysis simple, membranous, embolus flattened spiniform, conductor small, barely sclerotized. Epigyne a chitinous plate surrounded by a rim, vulva consisting of one pair of round spermathecae and strongly sclerotized, convoluted ducts. No lateral teeth.

### Diagnosis

The genus differs from all other amaurobioid genera by the combination of large eyes in a wide eye area with AM much the smallest, the modified metatarsi I in the

male and the conformation of the genitalia.

### *Vytfutia bedel* n.sp.

#### Material examined

INDONESIA: N. Sumatra, Gunung Leuser, border of National Park at Bohorok in primary rainforest, c. 200 m, in a depression; 1 ♂ holotype, 1 ♀ paratype (RMNH Leiden) "from leaves" 15 Nov. 1983; idem, 1 ♂ paratype, between February and June, no further data; 1 ♀ paratype 2 subad. ♂, 1 subad. ♀ (coll. Deeleman), "from leaves", 27 Aug. 1983, all leg. Suharto Djojosedharmo; idem, 2 juvs., "from leaves", 16 June 1983, leg. P. R. Deeleman; idem, 1 ♀, "in small irregular web in forked branch", 1 Jan. 1984, leg. C. D.-R.; 20 km west of Bohorok, 1400 m, 2 ♀, 1 juv., 27 Nov. 1984, leg. S. D.

#### Description of female

*Measurements* (mm): Total length 4.0, carapace 1.7 × 1.3, width of head 0.8, length chelicera 0.7. The other female does not substantially deviate from these figures.

	Fe	Pa	Ti	Mt	Ta	Total
I	1.6	0.6	1.4	1.2	0.7	5.5
II	1.3	0.6	1.0	1.0	0.6	4.5
III	1.1	0.4	0.7	0.9	0.4	3.5
IV	1.4	0.6	1.0	1.1	0.5	4.6
Palp	0.7	0.3	0.4	—	0.6	2.0

Carapace and chelicerae shiny chestnut brown with darker streaks radiating from fovea. Abdomen pale yellow with dark pattern (Fig. 1), on anterior half one or two pairs of snowy patches. Legs pale, with dark annulations on posterior pairs. Head dorsally rounded, abdomen oval, spinnerets terminal. Abdomen and legs clothed with long hirsute hairs. *Eyes* (Fig. 1): All light, AM one-third diam. of AL; posterior row procurved, laterals contiguous, PM slightly larger than PL, interdistances somewhat variable, PM-PM about half diam., PM-PL a little less than diam. of PL. Clypeus equals one AL eye; clypeus and anterior surface of chelicerae with numerous bristles. Chelicerae (Fig. 10) with 4 closely set teeth in anterior row and 4 in posterior row. Mouthparts as in *Amaurobius* (Fig. 9). *Leg spination*: Femora I-IV d 1-1-1, p 1, r 1. Tibia I v 0-1, p 1-1, r 0-0; tibia II v 0-1, p 1-1, r 0-1; tibia III-IV d 1-0, v 1-1, p 1-1, r 1-1. Metatarsus I v 2-2, p 0, r 0; metatarsus II v 1-1, p 1-1, r 1-1; metatarsus III-IV v 1-1, p 1-1-2, r 1-2. Paired tarsal claws with 5-6 teeth, unpaired claw smooth. Cribellum (Fig. 11) extending over half width of base of spinnerets, the spinning field occupying about the distal third of the surface; median division of spinning field indistinct. Calamistrum of 14 curved hairs in a row extending over middle portion of metatarsus IV. *Epigyne* (Fig. 7): A rounded plate surrounded by a rim; there are two transverse depressions, the ducts open anteriorly. *Vulva* (Fig. 8): Ducts strongly sclerotized, convoluted, distinctly widening posterolaterally to the spermathecae.

#### Description of male

*Measurements* (mm): Total length 3.6, carapace 1.7

× 1.2, width of head 0.7, length chelicerae 0.7. The other male does not differ substantially from these figures.

	Fe	Pa	Ti	Mt	Ta	Total
I	1.7	0.6	1.5	1.5	0.7	6.0
II	1.4	0.6	1.1	1.2	0.6	4.9
III	1.2	0.5	0.9	1.0	0.4	4.0
IV	1.4	0.5	1.1	1.4	0.5	4.9
Palp	0.7	0.5	0.5	—	0.6	2.3

(apophysis excluded)

*Leg spination*: Differs from that of female by presence of a retrolateral spine on tibia I (r 0-1) and in metatarsus I by absence of any ventral spines and presence of one modified retrolateral spine; furthermore, in metatarsus IV the formula for p is 1-2 instead of 1-1-2. Basal part of metatarsus I (Fig. 6) bent into a U-shaped form; this depression is preceded by a very strong, movable spine, extending across the depression, and limited distally by a large triangular tooth. Cribellum extends over only 1/3 width of base of spinnerets, and spinning field is reduced to a narrow marginal band.

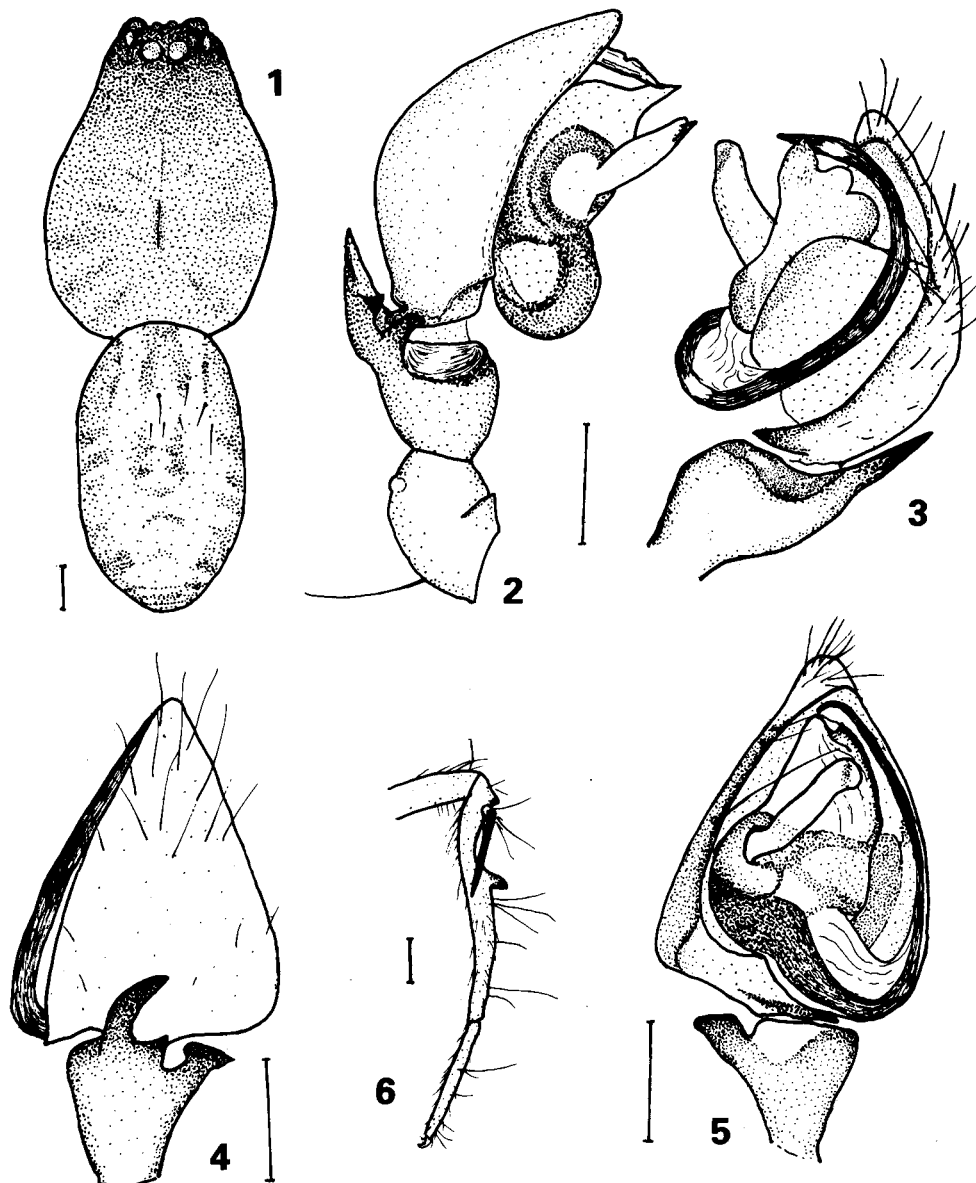
Calamistrum reduced to a few unspecialized hairs in a row. In subadult males, both cribellum and calamistrum are similar to those in female. *Palp* (Figs. 2-5): Femur and patella with 2 dorsal spines; distal-dorsal margin of tibia with 2 protuberances, the largest on internal (prolateral) side. Cymbium short and wide, triangular; embolus long, ribbon-like, with a membrane attached to its base; median apophysis membranous except for a distal patch, conductor essentially membranous, small, with distal concavity supporting embolus.

### Biology

Like so many tropical rainforest spiders, it seems to live in isolated clusters as each time several individuals were taken together.

### Taxonomic position

The assignment of *Vytfutia* to a family in the agelenid-amaurobiid complex is full of pitfalls.



Figs. 1-6: *Vytfutia bedel* n.gen. n.sp., male holotype. 1 Carapace and abdomen; 2 Right palp, lateral view; 3 Idem, mesal view; 4 Idem, dorsal view; 5 Idem, ventral view; 6 Metatarsus and tarsus of right leg I, retrolateral view. Scale lines = 0.2 mm.

In the last twenty years, several new classifications have been proposed for this group. Lehtinen (1967) in a worldwide revision of cribellate and allied spiders divides his super-family Amaurobioidea into six families (p. 310), of which three are ecribellate and three are composed of both cribellate and ecribellate forms. In his Agelenidae he includes only ecribellate spiders. The Amaurobiidae are subdivided into 9 sub-families (op.cit., p. 322-323); only the Matachiinae have tropical Asian representatives. On the basis of Lehtinen's tabulated definitions of amaurobiid sub-families, *Vytfutia* shares characters with the Matachiinae, Amaurobiinae and Phyxelidinae. This classification then does not allow satisfactory placement of *Vytfutia* in the system.

Forster & Wilton (1973) rearrange the cribellate and ecribellate genera of the amaurobioid spiders into an entirely new classification, based mainly on New Zealand species, the majority of which are described as new. They recognize 8 families, two of which are so far endemic to Australia and New Zealand and one (Neolanidae) is endemic to new Zealand. Lehtinen's Matachiinae are split up and *Matachia* is removed from the Amaurobioidea into the Dictynoidea on the basis of the structure of the tracheal system. The family Agelenidae as conceived by Forster & Wilton differs considerably from that defined by Lehtinen and includes, e.g., also cribellate forms. Forster & Wilton's Amaurobiidae corresponds more or less with Lehtinen's Amaurobiinae.

*Vytfutia* cannot readily be fitted into any of Forster & Wilton's families. Its assignment into the Amaurobiidae is precluded, e.g., by the conformation of the median apophysis in the male palp. I agree with Forster & Wilton, however, that the cribellum and calamistrum can no longer serve as a distinctive character at family level, and I think that in spite of

some disagreement in the distribution of the trichobothria *Vytfutia* should be accommodated in the Agelenidae. Its affinities clearly lie towards the south-east, perhaps with the genus *Mahura* Forster & Wilton.

In the modification of the male metatarsi I it resembles some species of the African genus *Haemilla* Simon (= *Phyxelida* Simon), but in these species the device is structurally different and it does not reflect true relationship. Similar sexual dimorphism in the first leg is at present unknown in any other Indo-Australian amaurobioid spider.

#### Etymology

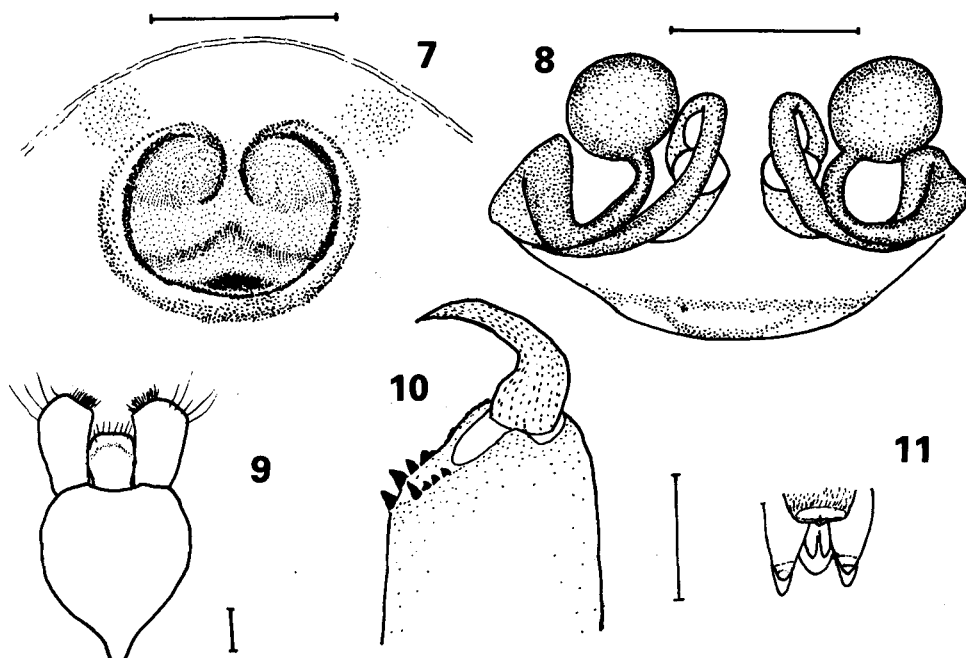
Both the generic and specific names are fantasy.

#### Acknowledgements

I am very grateful to Suharto and Kelly Djojosedharmo for their never-abating hospitality in their fairy home in the rainforest at Bohorok, and to Suharto for his diligent and expert collecting.

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Figs. 7-11: *Vytfutia bedel* n.gen. n.sp., female paratype. **7** Epigyne, ventral view; **8** Vulva, dorsal view; **9** Mouthparts and sternum, ventral view; **10** Left chelicera, ventral view; **11** Cribellum and spinnerets, ventral view. Scale lines = 0.2 mm.