Savarna miser Bristowe, 1952

Bristowe, W. S. 1952. The arachnid fauna of the Batu Caves in Malaya. Ann. Mag. Nat. Hist. 12(5): 697-707.

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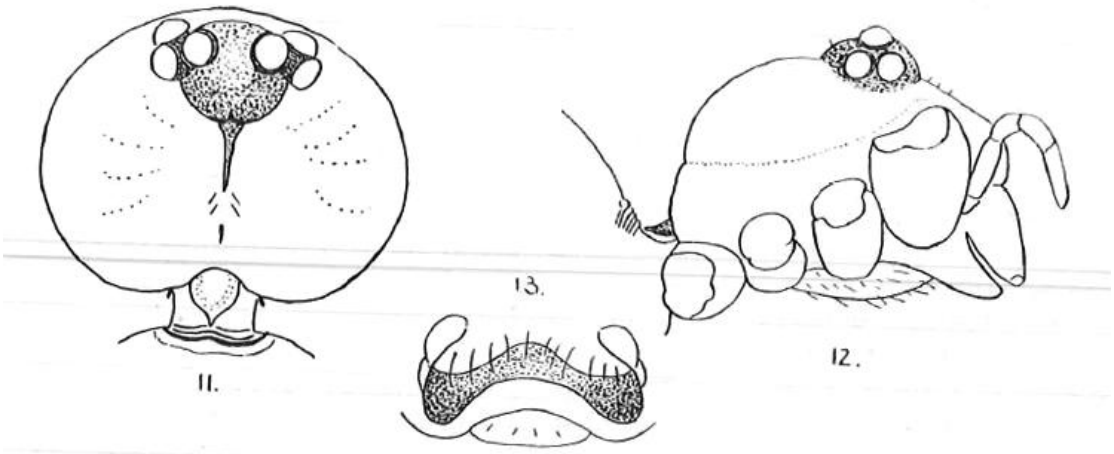
(8) *Spermophora miser*, sp. nov.

Several females and two immature males were found in their flimsy webs in wall crevices. The female is 3 mm. There are six eyes in two

Figs. 11–13.



Spermophora miser, sp. nov. (11) Female cephalothorax from above, showing shape, eyes and stridulating apparatus. (12) Cephalothorax from the side. (13) Female vulva.

groups of three separated by less than twice the diameter of the innermost eyes. The eyes do not differ greatly in size.

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The cephalothorax is broader than long, rounded anteriorly and with a concave posterior margin. The cephalic region is dark in colour, raised, and clearly distinct from the thoracic region, which is pale cream. The median fovea is linear and distinct. From the concave posterior margin of the cephalothorax a broad process, curving posteriorly to a point, opposes indistinct chitinous ridges on the anterior portion of the abdomen. Together these represent a stridulatory apparatus of a type new to the family but remarkably like that described by Pocock in *Cambridgea antipodiana* (Agelenidae).

The sternum is dark brown, shiny, sparsely clothed with stiff hairs and broadly truncate posteriorly.

The cheliceræ are provided with a stout tooth.

The palpus is very short, with the tarsus distinctly longer than the tibia.

The legs are very long and fine. They are thickly clothed with rows of fine spines.

The abdomen is higher than long. For the most part it is pale, with darker spots or blotches developing posteriorly. In some specimens a white blotch occurs above the spinnerets. The abdomen is clothed with fine hair and the spinnerets are on a prominent tubercle.

Roewer, C. F. 1963. Über einige neue Arachniden (Opiliones und Araneae) der orientalischen und australischen Region. Senck. biol. 44(3): 223-230.

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Spermophora baso n. sp. (Taf. 18 Fig. 17-18).

♂: Länge des Körpers (Cephalothorax + Abdomen) = 3·2 (1·3 + 1·9) mm.

Mit den Merkmalen der Gattung (vgl. SIMON 1893, Hist. nat. Ar., 1 (2): 471): VM fehlend; VS und HM kreisrund und gleichgroß, HS schräg-oval, ihr Längsmesser doppelt so groß wie Durchmesser der VS und HM. — Cheliceren (Fig. 18): 1. Glied frontal-lateral im basalen Drittel mit einem stumpfen, rückgekrümmten Hörnchen. — Palpen: Form und Bewehrung der Glieder, sowie Ausbildung des Bulbus nebst Anhänger siehe Fig. 17. — Beine gleichmäßig behaart, besonders die Femora. — Abdomen subglobulär.

Färbung und Zeichnung: Cephalothorax rostgelb, mit schwarzer Medianlinie vom Augenfeld bis zum Hinterand des Thoracalteiles, fast kahl-glänzend; Clypeus vor dem Augenfeld schwärzlich-braun; Abdomen einfarbig grau und fahl behaart.

Sumatra: Höhle bei Baso — 1♂ (Holotypus), E. JACOBSON leg. X. 1913 — RII/13853/122.

Pl. 18

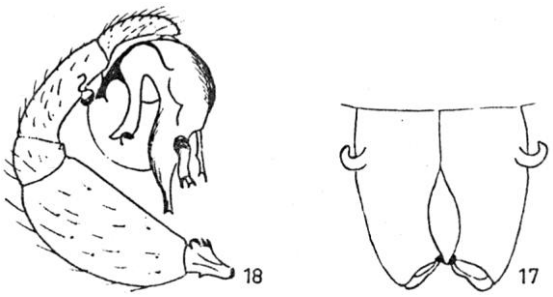

Fig. 17-18. *Spermophora baso* n. sp. (♂) — 17) Cheliceren frontal; 18) linker Palpus medial.

Brignoli, P. M. 1983. A catalogue of Araneae described between 1940 and 1981. Manchester Univ. Press. 755 pp.

p. 171

♀ **misera** Bristowe, 1952 — Malaya
S. m. Bristowe, 1952: 704, f. 11-12 (D ♀).

Murphy, F., Murphy J. 2000. An Introduction to the Spiders of South East Asia. Malaysian Nature Society, Kuala Lumpur. 624 pp., 32 plates.

...

Huber, B. A. 2001. The pholcids of Australia (Araneae; Pholcidae): Taxonomy, biogeography, and relationships. Bull. Amer. Mus. Nat. Hist. 260: 1-144.

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S. baso Roewer from Sumatra and *S. tessellata* Simon from Malaysia are close relatives and certainly not *Spermophora* (types examined), but they

p. 126

probably represent a new genus;

Huber BA. 2005. Revision of the genus *Spermophora* Hentz in Southeast Asia and on the Pacific Islands, with descriptions of three new genera (Araneae: Pholcidae). Zoologische Mededelingen 79-2(4): 61-172.

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Savarna baso (Roewer, 1963) comb. nov.
(figs 127, 128, 135-137)

Spermophora baso Roewer, 1963: 229, figs 17-18.

Type material.—Male holotype from Sumatra, cave near Baso (100°28'E, 0°17'S), x.1913 (E. Jacobson), in SMF (RII/13853/122; left palp mounted on slide), together with a female prosoma, examined.

Note.—Roewer (1963) described only the male and did not mention further specimens, but the vial also contains a prosoma that is probably from an adult female.

Diagnosis.—Distinguished from *S. tessellata* by the shapes of procursus and bulbal apophyses, by the paired clypeal projections (fig. 127), and by the much thicker palpal femur (figs 135, 136); from *S. thaleban* by the shapes of procursus, bulbal apophysis, and the modified clypeus.

Description.—Male (holotype). Total length 2.65 (2.90 with clypeus), carapace width 1.20. Leg 1: 25.1 (6.5 + 0.5 + 6.1 + 9.6 + 2.4), tibia 2: 3.8, tibia 3: 2.8, tibia 4: 3.9; tibia 1 L/d: 43. Habitus as in figures 127 and 128. Carapace and legs ochre-yellow, sternum ochre-yellow to light brown, abdomen pale ochre-grey. Ocular area slightly elevated, distinctly separated from carapace, thoracic furrow distinct and deep; distance PME-PME 240 μm; diameter PME 105 μm; distance PME-ALE ~20 μm; AME absent. Clypeus with pair of unsclerotized rounded frontal projections (fig. 127). Sternum wider than long (0.80/0.67). Chelicerae as in fig. 137, with only one pair of projections proximally. Palps as in figures 135 and 136; trochanter with long distally hooked projection lying against femur, procursus complex but apparently without hinged process, bulb with proximal sclerite and single but complex process ('embolar division'). Retrolateral trichobothrium of tibia 1 at 8%; legs without spines, vertical hairs, and curved hairs; tarsus 1 with >30 pseudosegments, distally quite distinct.

Female. In general similar to male, but without clypeal apophyses. Carapace width 1.10, tibia 1: 5.9. Abdomen missing.

Distribution.—Known from type locality only (fig. 171).

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Incertae sedis

S. dubia Kulczynski, 1911
S. elongata Yin & Wang, 1981
S. faveauxi Lawrence, 1967
S. maculata Keyserling, 1891
S. miser Bristowe, 1952
S. thorelli Roewer, 1942

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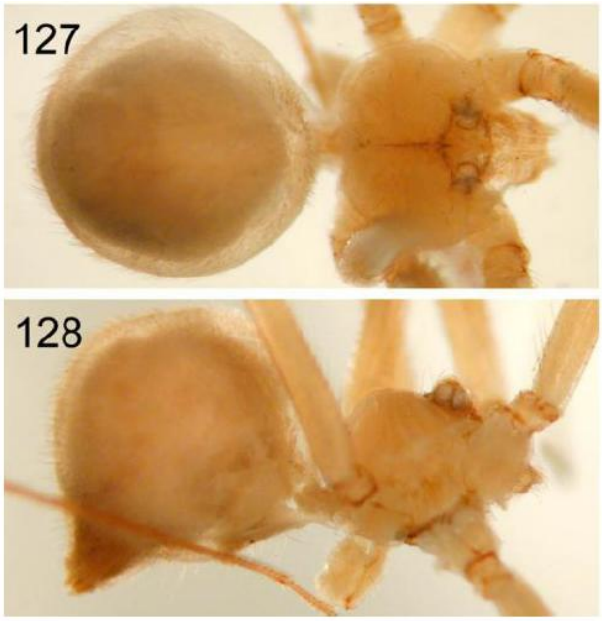

Figs 124-130. *Savarna* n. gen., spp. 127-128, *S. baso* (Roewer) n. comb., male habitus, dorsal and lateral views;

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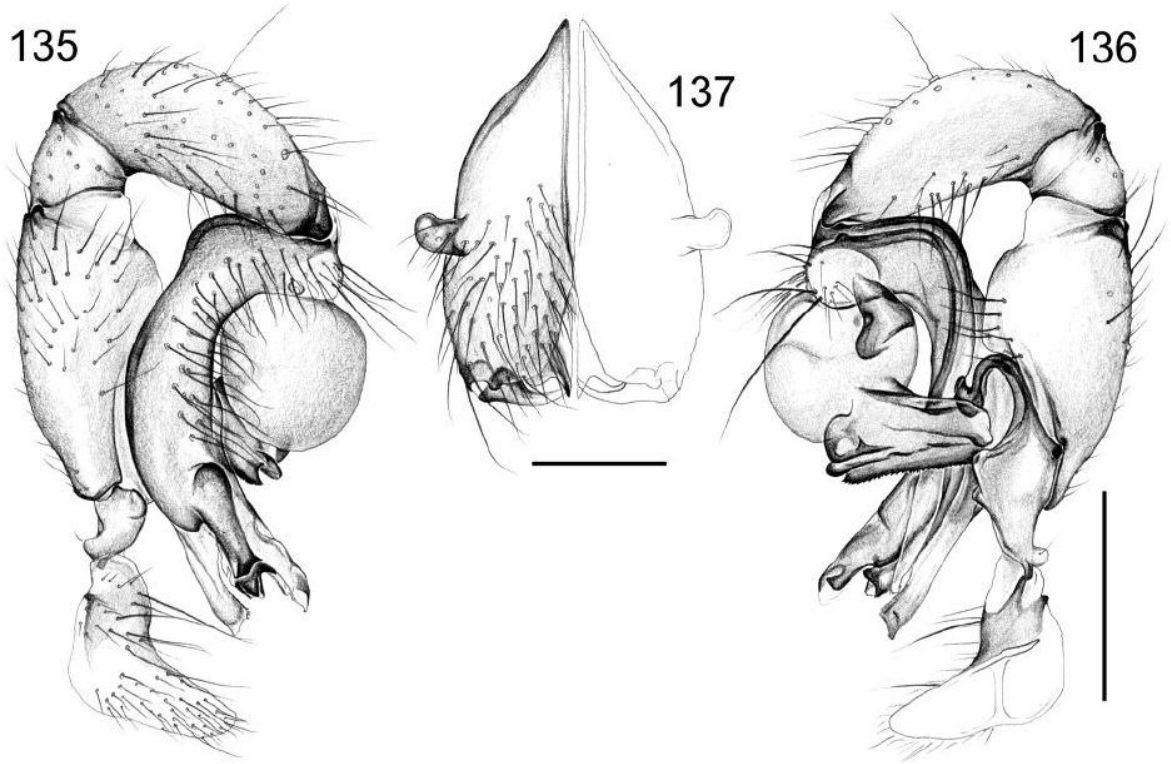

Figs 135-140. *S. baso* (Roewer) n. comb. (135-137), 135-136, right male palp in retrolateral (135) and prolateral (136) views; 137, male chelicerae, frontal view;

Scale lines: 0.5 (135, 136, 138, 139), 0.2 (137, 140).

Huber, B. A., Petcharad, B., Bumrungsri, S. 2015. Revision of the enigmatic Southeast Asian spider genus *Savarna* (Araneae, Pholcidae). European Journal of Taxonomy 160: 1-23.

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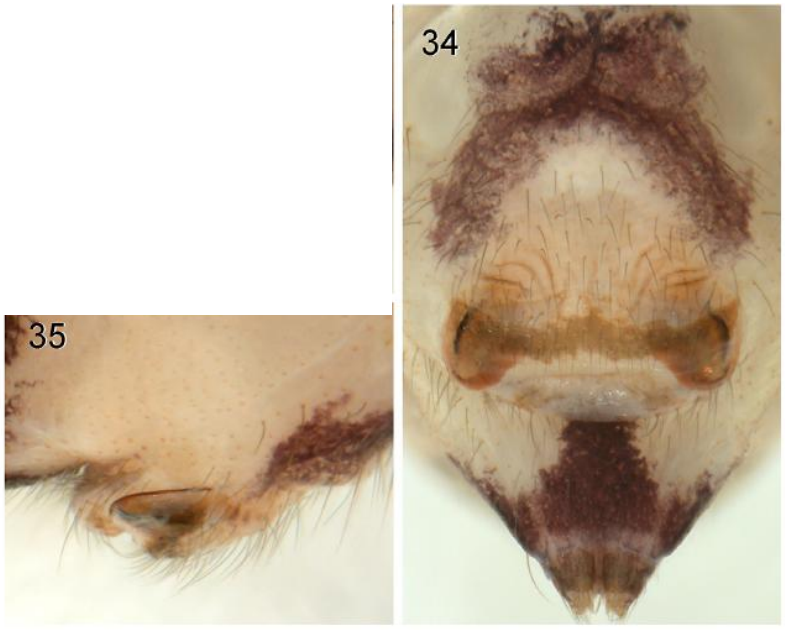

Figs 28–35. Epigyna, ventral and lateral views. — **28–29**. *Savarna kaeo* sp. nov. — **30–31**. *S. thaleban* Huber, 2005. — **32–33**. *S. tessellata* (Simon, 190

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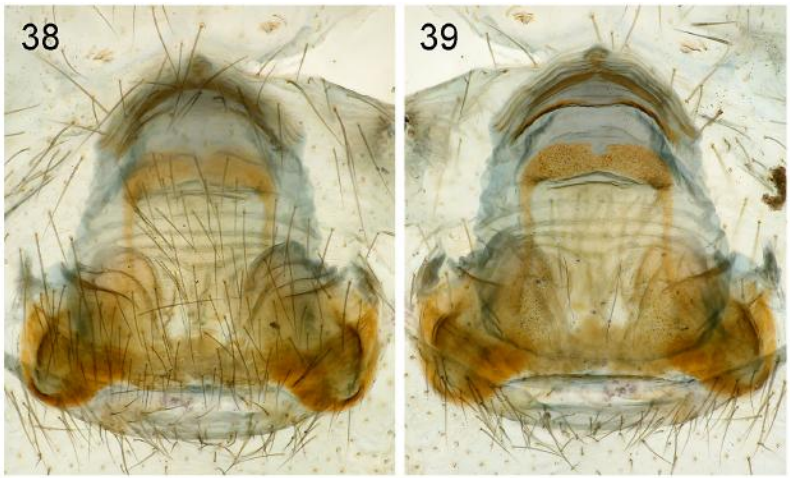

Figs 36–43. Cleared and stained female genitalia, ventral and dorsal views. — **38–39**. *S. miser* (Bristowe, 1952).

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Savarna miser (Bristowe, 1952), comb. nov.
Figs 34–35, 38–39, 74–85

Spermophora miser Bristowe, 1952: 704, figs 11–13 (♀).
Spermophora baso Roewer, 1963: 229, pl. 18, figs 17–18 (♂). **New synonymy**.

Spermophora miser – Huber 2005: 85 (considered as *incertae sedis*).
Savarna baso – Huber 2005: 78, figs 127–128, 135–137 (♂).

Justification of synonymy

The holotype of *S. baso* was compared directly with fresh specimens of *S. miser* originating from the type locality. The males were found to be identical in all relevant genital structures (*cf.* Figs 77–80).

Diagnosis

Easily distinguished from known congeners by morphology of male palp (strongly curved ventral trochanter apophysis; shapes of procursus and bulbal process; Figs 81–82), and by female external and internal genitalia (posterior margin of epigynal plate with pair of semicircular extensions; without median process as in *S. kraburiensis*; pore plates contiguous; Figs 34–35, 38–39, 84–85). From most species (except *S. tessellata*) also distinguihsed by absence of black marks laterally on carapace (Figs 74, 75); from *S. tessellata* also by paired male clypeus apophyses (unpaired in *S. tessellata*) and less elongated male palpal tibia.

Type material

Spermophora miser. MALAYSIA: Unknown number of female syntypes and two juveniles, Selangor, Kuala Lumpur, Batu Caves [3°14.3' N, 101°41.0' E], "in flimsy webs in wall crevices", Nov. 1930–Jan. 1931, W.S. Bristowe leg., possibly lost (apparently not in the Natural History Museum, London), not examined.

Spermophora baso. INDONESIA: ♂, holotype (left palp mounted on slide); 1 ♀, paratype, prosoma; Sumatra, Sumatera Barat (West Sumatra), cave near Baso [0°14.9' S, 100°29.0' E], Oct. 1913, E. Jacobson leg., but see Addendum; SMF (RII/13853/122), examined (in 2004 and again for the present study).

Other material examined

MALAYSIA: 3 ♂♂, 3 ♀♀, in pure ethanol, Selangor, Kuala Lumpur, Batu Caves (3°14.34' N, 101°40.97' E), 90 m a.s.l., cave, at day, by hand, 23 Feb. 2015, P. Jäger & T. Laufs leg. (SMF).

Redescription

Male (Batu Caves, type locality)

Measurements. Total body length 2.2, carapace width 1.1. Leg 1: 22.2 (5.5 + 0.4 + 5.4 + 8.8 + 2.1), all other legs detached; tibia 1 L/d: 47. Distance PME-PME 185 µm, diameter PME 105 µm, distance PME-ALE 35 µm; AME absent.

Color. Carapace pale ochre; ocular area and clypeus dark brown; sternum black; legs light brown, with darker rings on femora (subdistally) and tibiae (proximally and subdistally); abdomen pale gray, with dark subcuticular marks lying above deeper white marks, with distinct ventral pattern consisting of three interconnected black marks.

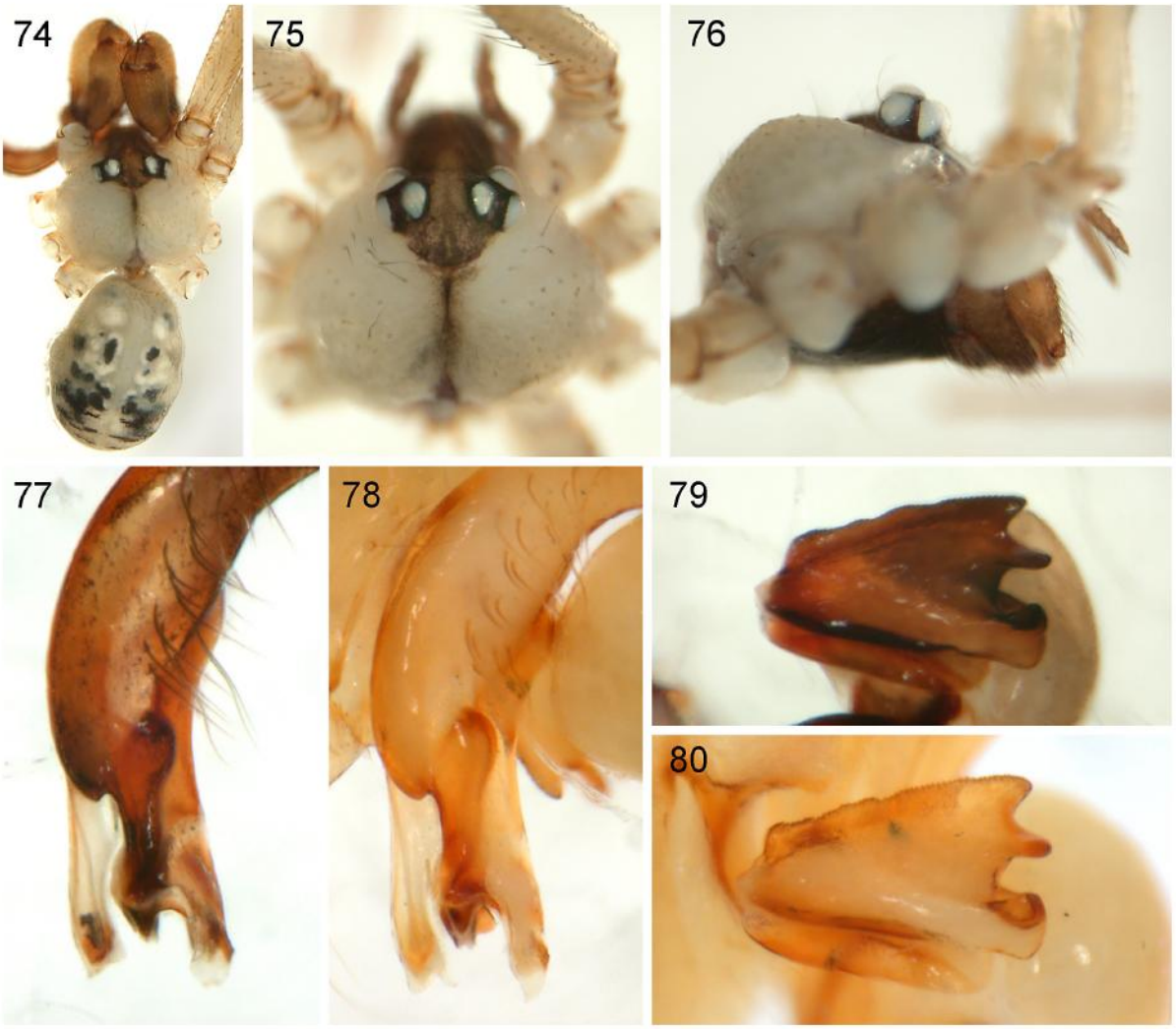
Body. Habitus as in Fig. 74; ocular area elevated, each triad on short hump directed toward lateral; carapace with deep median furrow; clypeus with pair of rounded processes at rim, similar to *S. kaeo* sp. nov. but smaller (*cf.* Fig. 20); sternum wider than long (0.78/0.54), unmodified. Chelicerae as in Fig. 83, with pair of lateral processes, directed slightly toward posterior; without stridulatory ridges.

Palps. As in Figs 81–82; coxa unmodified; trochanter with small retrolateral and ventral processes and distinctive long ventral apophysis, proximally attached to femur, distally strongly curved; procursus distally complex, with distinctive membranous and sclerotized elements; bulb with large proximal sclerite, with single complex process (Fig. 79) apparently containing sperm duct.

LEGS. Without spines; with vertical hairs in higher than usual density on all tibiae; without curved hairs; retrolateral trichobothrium on tibia 1 at 9%; prolateral trichobothrium absent on tibia 1, present on other tibiae; tarsal pseudosegments indistinct, about 15 visible distally on tarsus 1.

Male (variation)

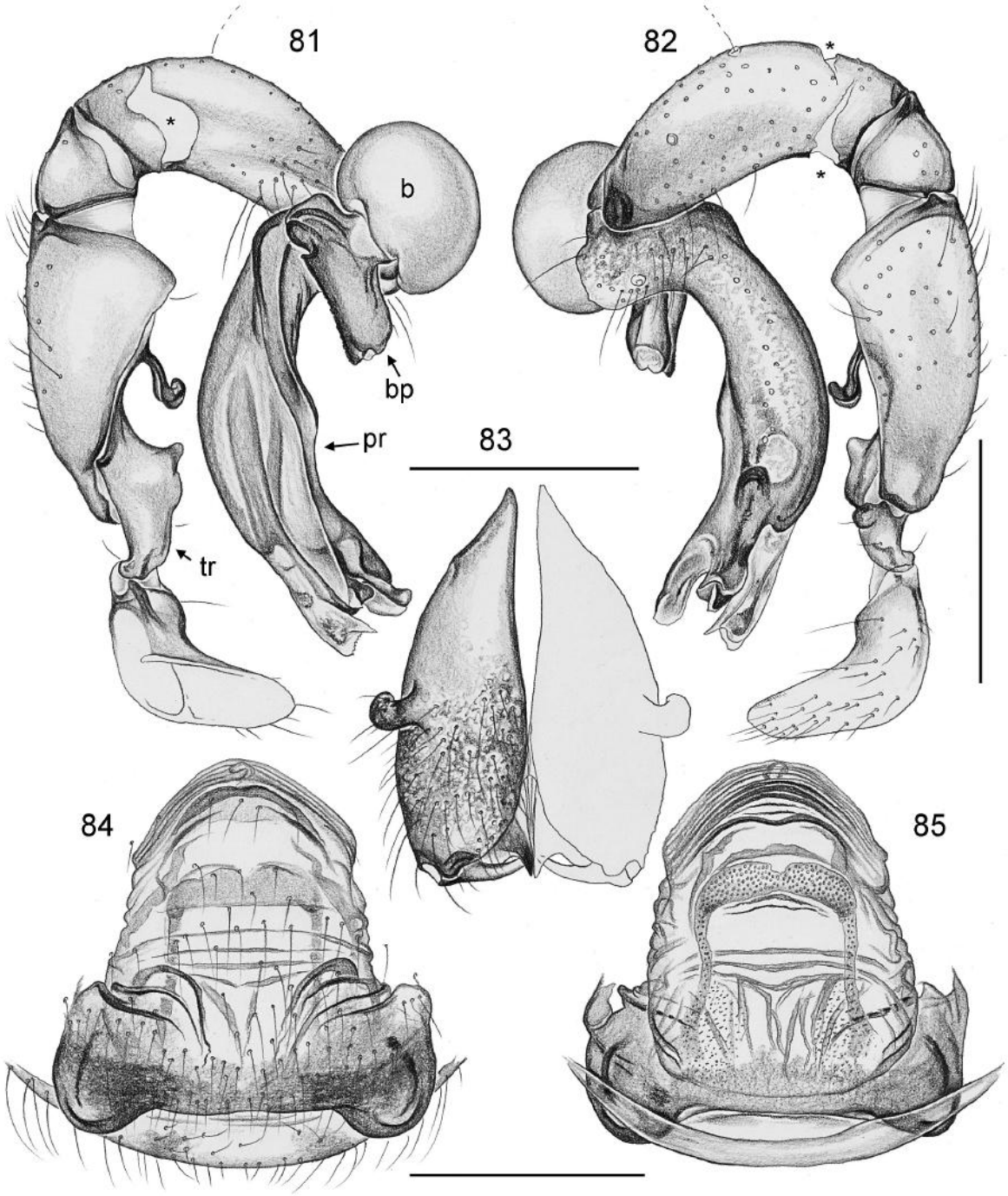
The holotype of *S. baso* is strongly bleached (*cf.* figs 127–128 in Huber 2005), but the distinctive male genital structures are indistinguishable from those of males from the type locality (Figs 77–80). In the fresh material from the type locality, all bulbs are rotated away from their natural position, which explains the differences between the palps of *S. baso* illustrated in Huber (2005) and the palps illustrated herein.



Figs 74–80. *Savarna miser* (Bristowe, 1952). **74**. ♂ from Batu Caves, dorsal view. **75–76**. ♀ from Batu Caves, prosoma in dorsal and lateral views. **77–78**. Right procursi, retrolateral views, ♂♂ from Batu Caves (77) and from cave near Baso (holotype of *Spermophora baso* Roewer, 1963; 78). **79–80**. Right bulbal processes, ♂♂ from Batu Caves (79) and from cave near Baso (holotype of *Spermophora baso* Roewer, 1963; 80). At varying scales.

Female

In general similar to male; eye triads closer together (PME-PME distance: 150 µm); clypeus unmodified; leg tibiae with usual low density of vertical hairs. Tibia 1: 5.4 (missing or detached in other specimens). Epigynum slightly protruding (Fig. 35), with wide transversal sclerotized plate with pair of semicircular



Figs 81–85. *Savarna miser* (Bristowe, 1952). **81–82**. Left male palp, prolateral and retrolateral views (b = genital bulb; bp = bulbal process; pr = procursus; tr = trochanter; asterisks = broken tibia). **83**. Male chelicerae, frontal view. **84–85**. Cleared female genitalia, ventral and dorsal views. Scale bars: 83 = 0.3 mm; 81–82, 84–85 = 0.5 mm.

posterior extensions (Figs 34, 38, 84); internal genitalia as in Figs 39 and 85, pore plates contiguous (whether the sclerotized bars extending toward posterior are also provided with pores is not clear).

Distribution

Known from two localities in mainland Malaysia and Sumatra (Fig. 1); but see Addendum.

Addendum

On the type locality of *Spermophora baso* Roewer, 1963:

During the proofing stage of the present paper (in October 2015), the first author visited Baso Cave in Central Sumatra, the supposed type locality of *Spermophora baso* Roewer, 1963 [= *Savarna miser*

(Bristowe, 1952)]. The result of this visit, together with other circumstantial evidence, suggests that Roewer's locality information is wrong:

1. Despite intensive search, no *Savarna* was found in or at Baso Cave. The cave (entrance at 0.2478° S, 100.4830° E, ~760 m a.s.l.) is used for extracting sand by boat and manual work but appears to be in good condition. Large numbers of bats, swifts, crickets, millipedes, and several families of spiders were observed in the cave. It seems unlikely that *Savarna miser* has disappeared due to environmental degradation.

2. *Savarna* has not been found at any other locality in Sumatra, including another cave 13 km E of Baso Cave (Ngalau Indah Cave, entrance at 0.2549° S, 100.6036° E, ~630 m a.s.l., visited by the first author in Oct. 2015) and numerous other localities visited by several collectors in North, Central, and South Sumatra. This makes the male holotype of *Spermophora baso* the only specimen of *Savarna* supposedly originating from outside the Malay Peninsula.

3. It has been noted before (Herversen & Martens 1972) that in Roewer's arachnid collection wrong localities are given for numerous type specimens. The authors remain silent about possible origins of these errors but they strongly suggest that all of Roewer's locality data need to be reevaluated with particular skepticism ("…grundsätzlich besonders kritisch zu beurteilen").

4. It is remarkable that the type localities of *Savarna miser* (Bristowe, 1952) and of its junior synonym *Savarna baso* (Roewer, 1963) have fairly similar names: Batu Cave and Baso Cave. Whether this similarity has anything to do with the origin of the labeling error is unknown, but it seems much more likely that the actual type locality of *Savarna baso* is indeed Batu Cave in Kuala Lumpur rather than Baso Cave in Sumatra.