

***Savarna kaeo* Huber et al., 2015**

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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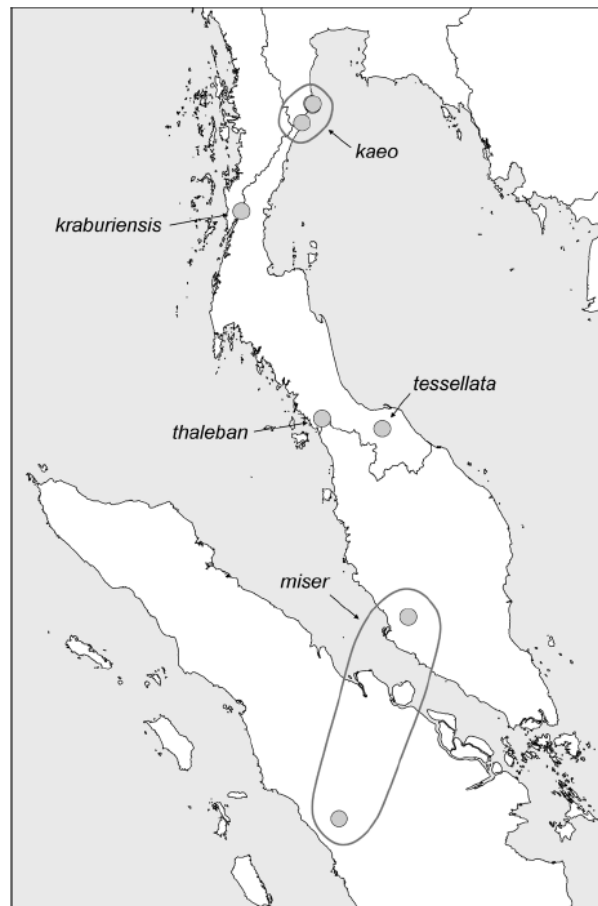


Fig 1. Known distribution of the genus *Savarna*; but see Addendum.

Savarna kaeo sp. nov.

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Figs 2–4, 14–29, 36–37

Diagnosis

Easily distinguished from known congeners by morphology of male palp (shapes of procurus and bulbal process; Figs 14–15), and by female external and internal genitalia (epigynal plate more or less divided medially, without median process as in *S. kraburiensis*; Figs 17, 27–29). From *S. miser* and *S. tessellata* also distinguished by distinct black marks laterally on carapace (Figs 2–4).

Etymology

The species name is derived from the type locality; noun in apposition.

Material examined

Holotype

THAILAND: ♂, Prachuap Khiri Khan, Khao Sam Roi Yot National Park, Tham Kaeo (12°12.2' N, 99°59.5' E), 60 m a.s.l., in and around cave, 14 Mar. 2015, B.A. Huber & B. Petcharad leg., ZFMK (Ar 12983).

Paratypes

THAILAND: 7 ♂♂, 17 ♀♀, same data as holotype, ZFMK (Ar 12984, 12985); 3 ♂♂, 3 ♀♀, same data as holotype, PSUZC.

Other material

THAILAND: Prachuap Khiri Khan, Khao Sam Roi Yot National Park, Tham Kaeo, 3 ♀♀, 2 juvs, in pure ethanol, same data as holotype, ZFMK (Mal 372); 4 ♂♂, 8 ♀♀, Tham Sai (12°10.78' N, 100°00.44' E), 80 m a.s.l., in and around cave, 14 Mar. 2015, B.A. Huber & B. Petcharad leg., ZFMK (Ar 12986, 12987); 4 ♀♀, 2 juvs, in pure ethanol, same data as preceding, in cave, ZFMK (Mal 370); 1 ♀, 2 juvs, in pure ethanol, same data as preceding, outside cave, ZFMK (Mal 371); 1 ♂, 1 ♀, near Tham Phraya Nakhon (12°12.0' N, 100°00.8' E), 40 m a.s.l., among rocks in forest near cave, 14 Mar. 2015, B.A. Huber & B. Petcharad leg., ZFMK (Ar 12988); 4 ♂♂, 4 ♀♀, Khao Sam Roi Yot, among rocks and stones, 8 Dec. 1990, C.L. Deeleman-Reinhold leg., RMNH. – 4 ♂♂, 3 ♀♀, Reclining Buddha Cave (11°51.84' N, 99°49.40' E), 70 m a.s.l., in cave, 13 Mar. 2015, B.A. Huber & B. Petcharad leg., ZFMK (Ar 12989, 12990); 2 ♀♀, in pure ethanol, same data as preceding, ZFMK (Mal 366).

Description

Male (holotype)

MEASUREMENTS. Total body length 2.7, carapace width 1.1. Leg 1: 24.1 (6.2 + 0.4 + 5.9 + 9.4 + 2.2), tibia 2: 3.7, tibia 3: 2.6, tibia 4: 3.6; tibia 1 L/d: 56. Distance PME-PME 200 µm, diameter PME 95 µm, distance PME-ALE 35 µm; AME absent.

COLOR. Carapace pale ochre, with wide dark lateral margins; ocular area and clypeus also dark brown; sternum black; legs light ochre, with darker rings on femora (subdistally) and tibiae (proximally); abdomen 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. 2; ocular area elevated, each triad on short hump directed toward lateral; carapace with deep median furrow (Fig. 19); clypeus with pair of rounded processes at rim provided with strong and long hairs (Figs 19–20); sternum wider than long (0.72/0.48), unmodified. Chelicerae as in Fig. 16, with pair of lateral processes directed slightly toward posterior; without stridulatory ridges. ALS as in female (*cf.* Fig. 24). Gonopore without epiandrous spigots (Fig. 26).

PALPS. As in Figs 14–15; coxa unmodified; trochanter with small dorsal process and distinctive ventral apophysis proximally attached to femur (Fig. 21); ventral side of femur apparently largely membranous; tarsal organ capsulate (Fig. 25); procurus distally complex (Figs 22–23), with distinctive membranous and sclerotized elements; bulb with large proximal sclerite, with single complex process apparently containing sperm duct (Figs 14, 22).



Figs 2–7. Live specimens. — 2–4. *Savarna kaeo* sp. nov. ♂♂ from Reclining Buddha Cave and from Tham Sai (2, 4); ♀ with eggsac from Tham Sai (3).

LEGS. With short spines in single ventral rows on femora 1–3 and tibiae 1–2 (femur 1: ~40 on distal half; femur 2: ~20 on distal half; femur 3: ~10 distally; tibia 1: ~80 over entire length; tibia 2: ~50 over entire length); with vertical hairs in higher than usual density on all tibiae (especially tibiae 2–4); without curved hairs; retrolateral trichobothrium on tibia 1 at 8%; prolateral trichobothrium absent on tibia 1, present on other tibiae; tarsal pseudosegments indistinct, only about 10 visible distally on tarsus 1.

Male (variation)

Numbers of spines on legs variable, femur 3 spines absent in most males; small males with fewer and thinner spines. Tibia 1 in 16 other males: 4.9–6.4 (mean 5.6).

Female

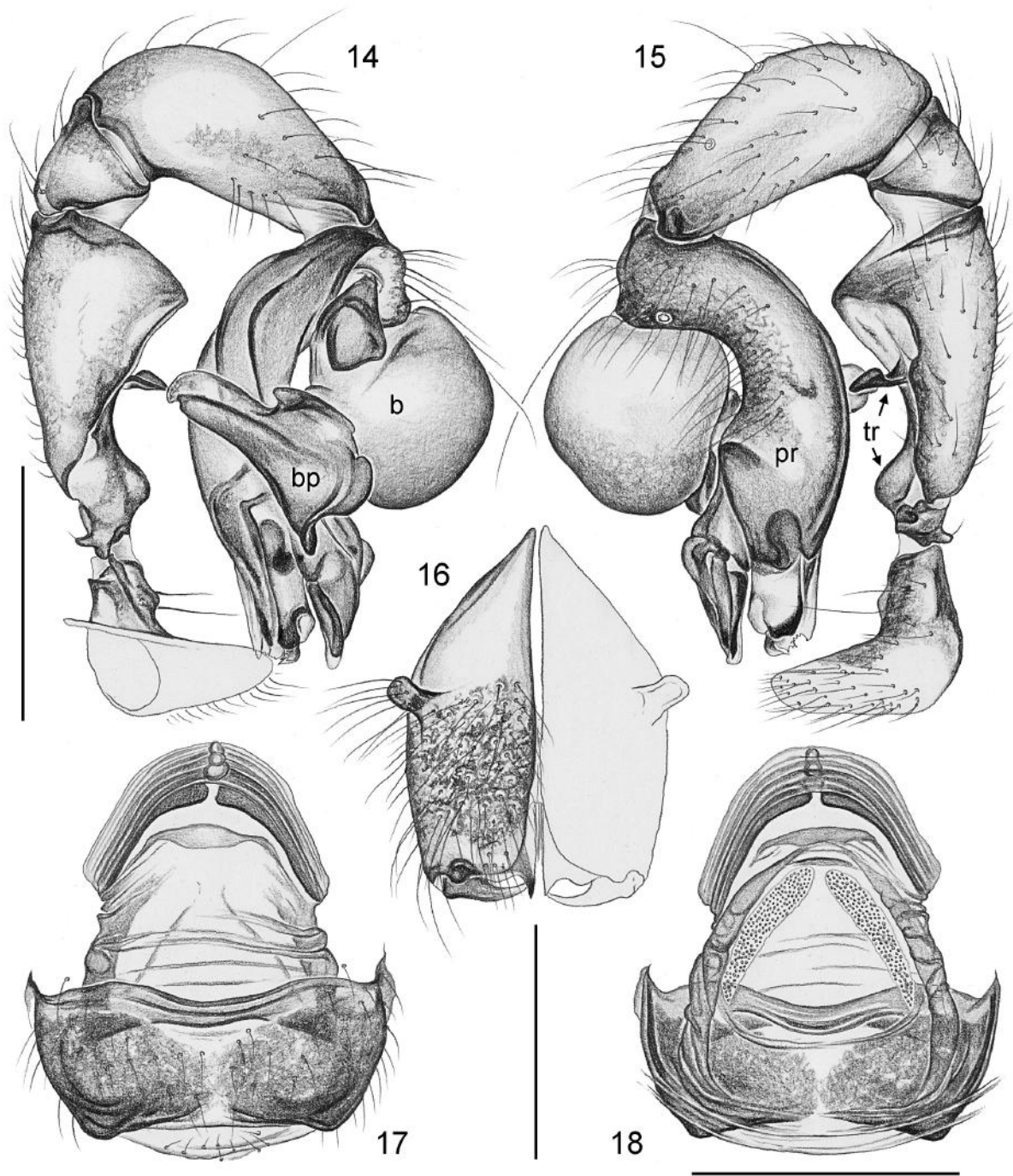
In general similar to male (Fig. 3); eye triads closer together (PME-PME distance: 140 μm); clypeus unmodified; legs without spines and with usual low number of vertical hairs. Tibia 1 in 24 females: 4.0–5.5 (mean 4.8). Epigynum slightly protruding toward posterior (Fig. 29), with wide transversal sclerotized plate with rounded humps laterally (Figs 17, 27–28), plate more or less divided medially (Figs 28, 36; variable even within localities); internal genitalia as in Figs 18 and 37. ALS with only two spigots each (Fig. 24).

Natural history

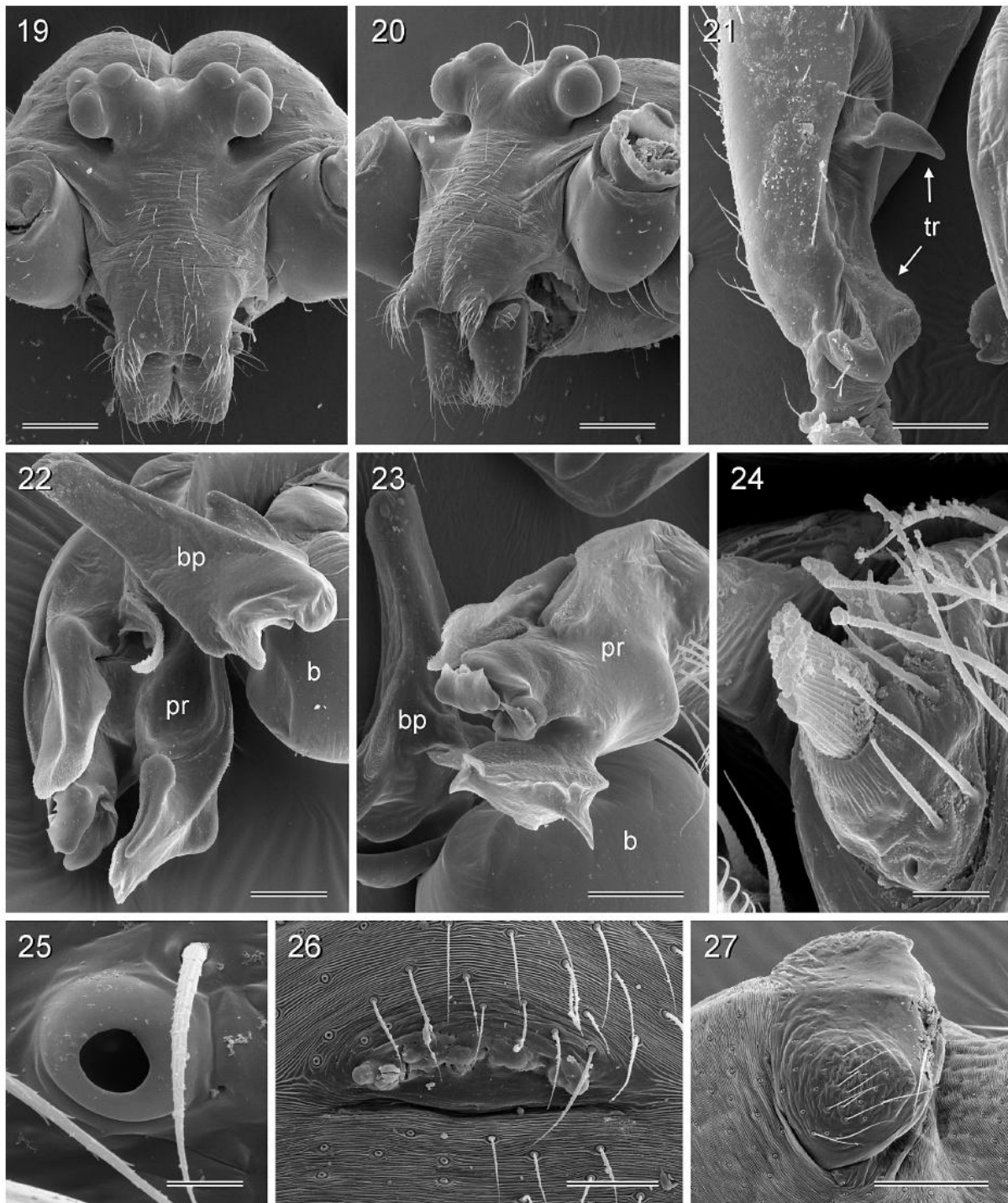
Spiders were found both inside caves (twilight zone) and outside caves if large rocks provided sufficient shade (Tham Kaeo; Tham Phraya Nakhon). When disturbed, the spiders first vibrated, and then dropped to the ground, remaining motionless.

Distribution

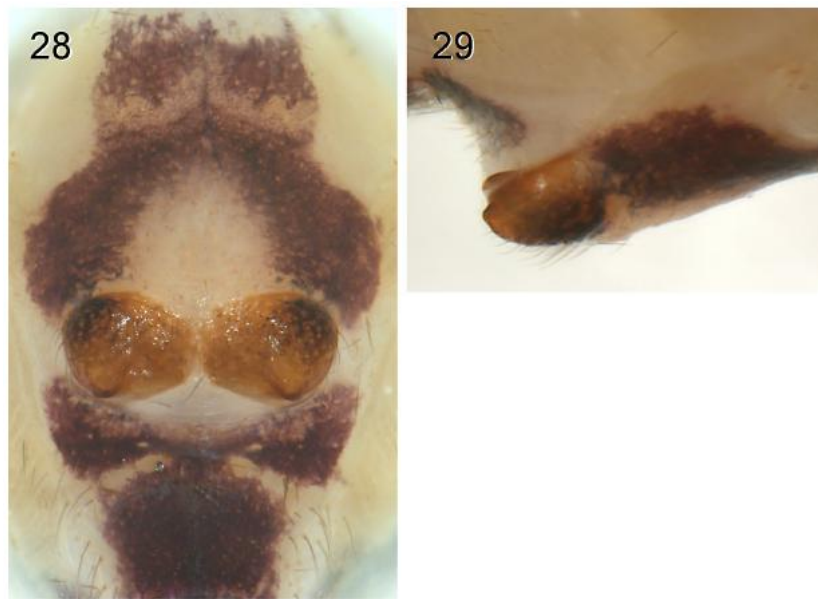
Known from several localities in southern Thailand (Fig. 1).



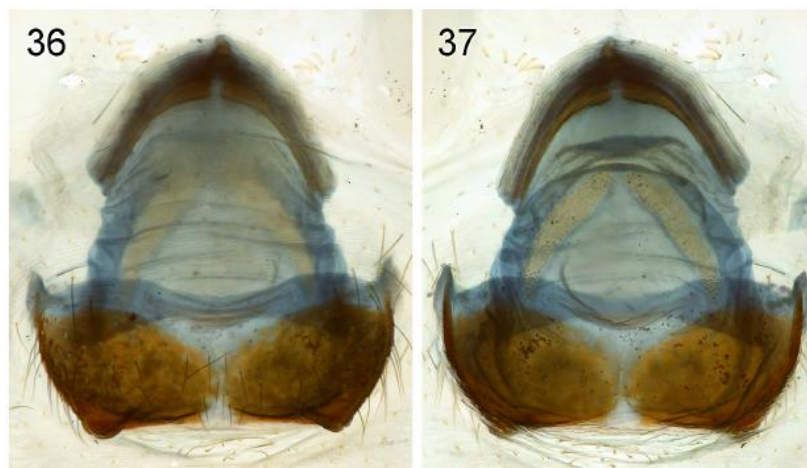
Figs 14–18. *Savarna kaeo* sp. nov. 14–15. Left male palp, prolateral and retrolateral views (b = genital bulb; bp = bulbal process; pr = procurus; tr = trochanter). 16. Male chelicerae, frontal view. 17–18. Cleared female genitalia, ventral and dorsal views. Scale bars: 16 = 0.3 mm; 14–15, 17–18 = 0.5 mm.



Figs 19–27. *Savarna kaeo* sp. nov. **19–20.** Male prosoma, frontal and oblique frontal views. **21.** Right male palpal trochanter (tr) and femur, retrolateral view. **22.** Left procursus (pr) and bulbal process (bp), prolatero-distal view (b = bulb). **23.** Right procursus (pr) and bulbal process (bp), retrolatero-distal view (b = bulb). **24.** Female ALS. **25.** Male palpal tarsal organ. **26.** Male gonopore. **27.** Epigynum, ventrolateral view. Scale bars: 24–25 = 10 μ m; 26 = 80 μ m; 21–23 = 100 μ m; 19–20, 27 = 200 μ m.



Figs 28–35. Epigyna, ventral and lateral views. — **28–29.** *Savarna kaeo* sp. nov.



Figs 36–43. Cleared and stained female genitalia, ventral and dorsal views. — **36–37.** *Savarna kaeo* sp. nov. —