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New species and new records of linyphiid spiders from the Indo-Malayan Region (Araneae, Linyphiidae)

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Abstract

Linyphiid spiders collected from the Indo-Malayan Region and kept at three European Museums are studied. Twenty-three known species are newly recorded from continental or insular parts of Southeastern Asia and from the Oriental area of India. Seven new species are described: *Asiagone komannai* n. sp. (from Thailand), *Erigone apophysalis* n. sp. and *E. sumatrana* n. sp. (Sumatra, Indonesia), *Gnathonarium luzon* n. sp. (Philippines), *Ketambea acuta* n. sp. (Thailand, Myanmar), *Oedothorax myanmar* n. sp. (Myanmar) and *Theoa malaya* n. sp. (West Malaysia).

Key words: Arachnida, India, Southeastern Asia, Erigoninae, Linyphiinae

Introduction

The Indo-Malayan Region is known to consist of two major parts: the first is Oriental India together with Bangladesh, the second is Southeastern Asia (Holt *et al.* 2012). The linyphiid faunas of both are studied very fragmentarily. Only 34 linyphiid species have hitherto been registered from Oriental India which, incidentally, is commensurate with the number of species (39) of its Palearctic, mountainous part, that is incomparably smaller in area (see Tikader 1970, 1981; Jocqué 1983; Helsdingen 1985a, 1969; Saaristo & Tanasevitch 2003a, 2003b; Benjamin & Hormiga 2009; Tanasevitch 2011, 2015, 2016). Only a single species, *Callitrichia formosana* Oi, 1977, is known from Bangladesh (Okuma *et al.*, 1993). The linyphiid fauna reported from Southeastern Asia is considerably richer, amounting to 133 species (Locket 1982; Millidge & Russell-Smith 1992; Barrion & Litsinger 1995; Millidge 1995; Helsdingen 1969, 1985b; Saaristo & Tanasevitch 2003b; Tu & Li 2004; Tanasevitch 2014a, 2014b). Particularly noteworthy is the excellent work of Zhao & Li (2014) on the linyphiids of Xishuangbanna, Yunnan Province, China, a territory bordering on Myanmar and Laos. That paper is supplied with clear, high-quality illustrations that allow making reliable identifications of local taxa, some of which have already been found in Southeastern Asia proper (Tanasevitch 2016 and the current paper). Altogether, the Indo-Malayan Region's linyphiid fauna is known to comprise no less than 199 species.

The present paper provides descriptions of seven new species, all belonging to known genera, as well as new data on the distribution of linyphiid spiders in Oriental India and Southeastern Asia.

Material and methods

This paper is based on the material collected from different parts of India and Southeastern Asia and kept at the Muséum d'histoire naturelle de Genève, Switzerland (MHNG), the Senckenberg Museum, Frankfurt am Main, Germany (SMF), and the Zoological Museum of the Moscow State University, Moscow, Russia (ZMMU). Sample numbers (for MHNG material) are given in square brackets.

The chaetotaxy of Erigoninae is given in a formula, e.g., 2.2.1.1, which refers to the number of dorsal spines on tibiae I–IV. In non-Erigoninae, the chaetotaxy is given in a different formula, e.g., TiI: 2-1-0-4, TiII–IV: 2-0-0-0; MtI–IV: 0-0-0-0, which means that tibia I has two dorsal spines, one prolateral, no retrolateral and four ventral

spines, tibia II with two dorsal spines only; metatarsi are spineless, the apical spines are disregarded. The sequence of leg segment measurements is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are given in millimeters.

Specimens preserved in 70% ethanol were studied using a MBS-9 stereo microscope and a Wild compound microscope. A Levenhuk C-800 digital camera was used for the execution of some drawings. Images of multiple focal sections were combined using Helicon Focus image stacking software, version 5.1.

The terminology of copulatory organs mainly follows that of Crosby & Bishop (1928), Merrett (1963), Saaristo & Tanasevitch (1996), Tanasevitch (1998, 2014a) and Hormiga (1994, 2000).

Abbreviation

a.s.l.—above sea level

AAC—anterior apophysis of convector *sensu* Tanasevitch (2015)

AUL—apophysis on upper lobe of AAC

C—convector *sensu* Tanasevitch (1998) = lamella *sensu* Merrett (1963)

DAC—distal apophysis of convector *sensu* Tanasevitch (2015)

DSA—distal suprategular apophysis *sensu* Hormiga (2000)

ED—embolic division *sensu* Merrett (1963) = scaphium *sensu* Crosby & Bishop (1928)

E—embolus

EM—embolic membrane, the membrane arising directly from the radix. Hormiga (1994) used the term “embolic membrane” (*sensu* van Helsdingen 1986), instead for the “median membrane” *sensu* van Helsdingen (1965), Saaristo & Tanasevitch (1996), for the membrane that is an outgrowth of the column.

EP—embolus proper *sensu* Saaristo (1971)

FD—fertilization duct

Fe—femur

FG—Fickert’s gland

LLC—lower lobe of AAC

MeRT—mesal radical tooth of ED = mesal tooth *sensu* Crosby & Bishop (1928)

MM—median membrane *sensu* Helsdingen (1965) = embolic membrane *sensu* van Helsdingen (1986) and Hormiga (1994)

MRT—median radical tooth of ED = median tooth *sensu* Crosby & Bishop (1928)

Mt—metatarsus

N.P.—National Park

N.R.—Nature Reserve

PMP—posterior median plate *sensu* Helsdingen *et al.* (1977)

P—paracymbium

PRA—posterior radical apophysis = posterior tooth *sensu* Crosby & Bishop (1928)

R—radix

SD—seminal duct

TA—terminal apophysis

Th—thumb *sensu* Saaristo & Tanasevitch (1996)

Ti—tibia

TmI—position of trichobothrium on metatarsus I

T—tunic of E *sensu* Tanasevitch (2014a)

ULC—upper lobe of AAC

Results

Asiagone Tanasevitch, 2014

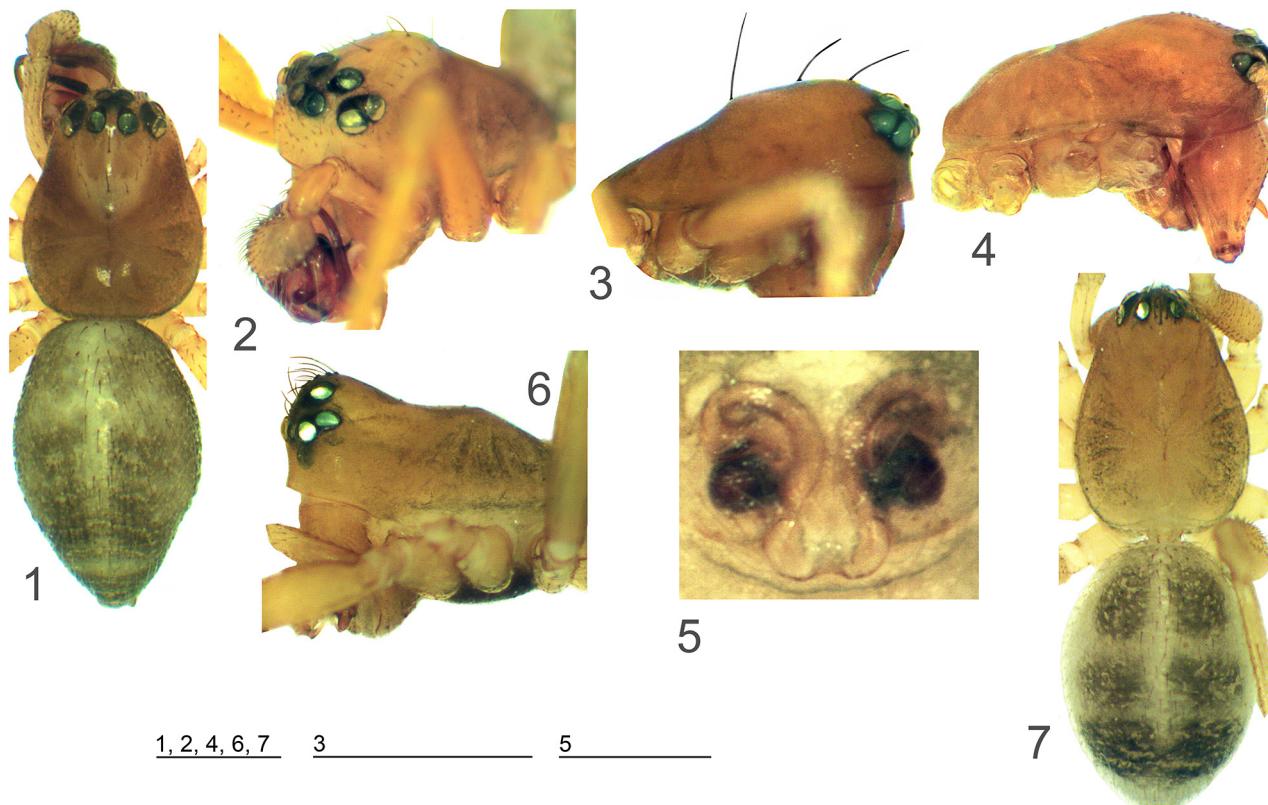
Type species: *Asiagone signifera* Tanasevitch, 2014.

Asiagone komannai new species

Figs 1, 2, 8–13

Holotype male (MHNG), THAILAND, Rayong Province, Klaeng District, Ko Man Nai, 12°36'44"N 101°41'26"E, 5–10 m a.s.l., earth banks in mixed evergreen-deciduous forest; 18.XII.2013; P. Schwendinger leg. [THKH-13/02].

Etymology. The specific name is a noun in apposition referring to the type locality.



FIGURES 1–7. *Asiagone komannai* n. sp., male holotype from Ko Man Nai (1, 2). 1, Habitus. 2, Carapace, frontolateral view. *Erigone sumatrana* n. sp., male paratype from Kersik Tua (3). 3, Carapace, lateral view. *Gnathonarium luzon* n. sp., male holotype (4) and female paratype (5) from Mt Makiling. 4, Carapace, lateral view. 5, Epigynum, ventral view. *Oedothorax myanmar* n. sp., male holotype from Kampetlet (6, 7). 6, Carapace, lateral view. 7, Habitus. Scale bars: 1, 2, 4, 6, 7; 3, 0.5 mm; 5, 0.1 mm.

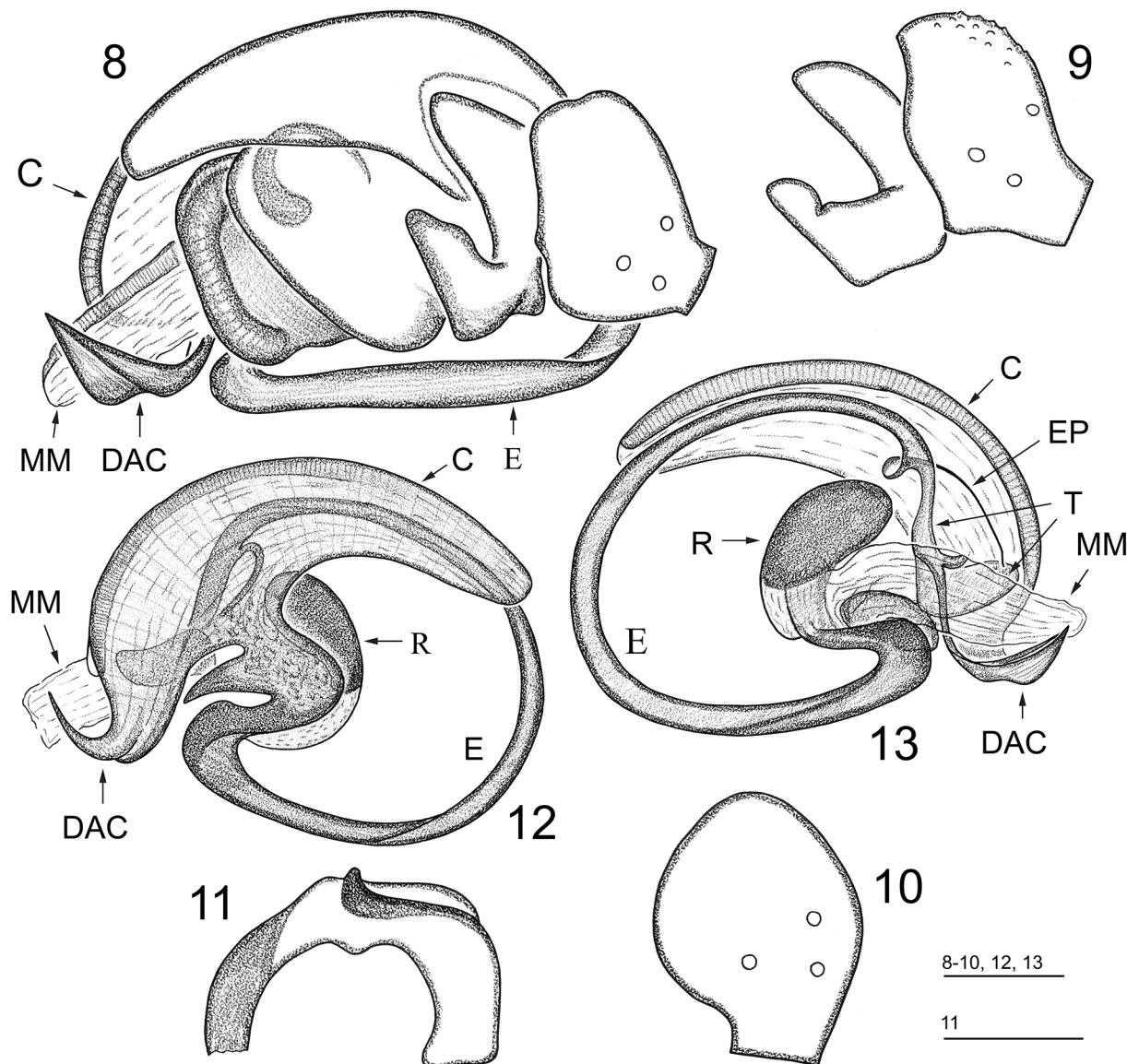
Diagnosis. Based on the palpal conformation, the new species is most similar to the Thai *A. siama* Tanasevitch, 2014, known from the male (Tanasevitch 2014b), but can be distinguished by a egg-shaped palpal tibia, by a narrower embolus, in which an exfoliated tunic distally is divided into several parts, as well as by a thicker paracymbium which lacks a tubercle in its middle part. The shape of the palpal tibia and the embolic division resembles that of *A. perforata* Tanasevitch, 2014 and *A. signifera* Tanasevitch, 2014, both described from Laos (Tanasevitch 2014a). From the former, *A. komannai* n. sp. differs by the absence of a large pit on both sides of the carapace; from the later, by the shape of the exfoliate tunic of the embolus, which in *A. signifera* resembles a “flag”.

Description. Male holotype. Rather large Erigoninae, total length 2.08. Carapace 0.90 long, 0.70 wide, pale brown; head part slightly elevated (Fig. 2) and somewhat lighter than overall carapace colour. Chelicerae unmodified, 0.38 long. Legs pale brownish yellow. Leg I, 3.73 long (0.95+0.25+0.95+0.63), IV, 3.34 long (0.88+0.23+0.85+0.88+0.50). Chaetotaxy 2.2.1.1, length of spines about 1–2 diameters of segment. All metatarsi with a trichobothrium. TmI, 0.36. Palp (Figs 8–13): Tibia relatively small, oval. Paracymbium L-shaped. Distal suprategular apophysis flat, curved, with a hollow in middle part, abruptly truncate apically. Median membrane well-developed, protruding far beyond palp. Radical part of embolic division small, drop-shaped, surrounded by membranous tissue around which connects the convector to the radix. Convector flat, crescent-shaped, with its

outer margin folded forming a gutter to sheath the distal part of the embolus; distal part of convector claw-shaped. Embolus long, forming a loop, distal half embedded inside convector. Distal part of embolus showing an exfoliate tunic leaving the distal half of the embolus proper free, whip-shaped. Abdomen 1.18 long, 0.78 wide, grey dorsally, with a pale longitudinal stripe.

Female. Unknown.

Distribution. Only known from the type locality, a tiny island off the coast of eastern Thailand.



FIGURES 8–13. *Asiagone komannai* n. sp., male holotype from Ko Man Nai. 8, Left palp, retrolateral view. 9, Palpal tibia and paracymbium, retrolateral view. 10, Palpal tibia, dorsal view. 11, Distal suprategular apophysis. 12, 13, Embolic division, different aspects. Scale bars: 0.1 mm.

Atypena cirrifrons (Heimer, 1984)

Material examined. 1 Male, 1 female (ZMMU), INDIA, Orissa, 19.982°N 86.016°E; 8–9.I.2014; K. Tomkovich leg.

Remarks. The species is new to the fauna of India.

Distribution. Vietnam (Heimer 1984), China (Zhu & Sha 1992), Laos, Thailand (Tanasevitch 2014a, 2014b), eastern India.

***Bathyphantes* Menge, 1866**

Type species: *Bathyphantes gracilis* (Blackwall, 1841).

***Bathyphantes paracymbialis* Tanasevitch, 2014**

Material examined. 1 Female (MHNG), MYANMAR, Mandalay Region, Pyin Oo Lwin District, National Kandawgyi Botanical Gardens, 21°59'39"N 96°27'57"E, 1120 m a.s.l., evergreen hill forest; 9.VII.2014; P. Schwendinger leg. [MT-14/02]. 1 female (MHNG), Pyin Oo Lwin District, Pwe Kauk Falls, 22°03'51"N 96°32'10"E, 990 m a.s.l., evergreen gallery forest; 10.VII.2014; P. Schwendinger leg. [MT-14/03]. 1 male (MHNG), INDONESIA, Sumatra, North Sumatra Province, 13 km from Prapat, 1.5 km SE of Kampus Kehutanan Aeknauli, hill forest near road Prapat to Pematangsiantar, 2°42'38"N 98°56'16"E, 1150 m a.s.l.; 30.VI. and 2.VII.2006; P. Schwendinger leg. [Sum-06/30].

Remarks. The species is new to the faunas of Myanmar and Indonesia.

Distribution. Southeastern China (Zhao & Li 2014), Laos, Thailand, West Malaysia (Tanasevitch 2014a, b), Myanmar and Indonesia.

***Batueta* Locket, 1982**

Type species: *Batueta voluta* Locket, 1982.

***Batueta baculum* Tanasevitch, 2014**

Material examined. 2 Males, 2 females (SMF), LAOS, Bokeo Province, Nam Kham National Biodiversity Conservation Area, Ban Na Luang, 20°21'71.7"N 100°41'34.9"E, 499 m a.s.l., disturbed primary forest, leaf litter, sifting, at day; 10.VI.2013; P. Jäger leg. 1 male (MHNG), INDONESIA, Sumatra, North Sumatra Province, on road from Pematangsiantar, 18 km to Prapat, Campus Kehutanan Aeknauli, forest in Bukit Parasat mountains, station "Logging trail #2" of Dr Diehl, pitfall trap #2, under bamboo stand; 12–27.XI.1985; B. Hauser leg. [Sum-85/24]. 1 male (MHNG), Jambi, km 15 road Sungaipenuh to Tapan, 1450 m a.s.l., plant debris in degraded montane *Lithocarpus-Castanopsis* forest, sifting; 9.XI.1989; D. Burckhardt, I. Löbl & D. Agosti leg. [10]. 1 male, 1 female (MHNG), 5 km W of Brastagi, Tongkoh, 1450 m a.s.l., mixed pine forest with many epiphytes, vegetation debris, sifting; 3.XII.1989; D. Burckhardt, I. Löbl & D. Agosti leg. 2 males (MHNG), Sipirok, Dolok Sipirok N.P., near hot springs, ca. 30 km N of Padangsidempuan, 1°33'55"N 99°17'03"E, 1000 m a.s.l., disturbed hill forest; 16.VI.2006; P. Schwendinger leg. [Sum-06/22]. 1 male, 2 females (MHNG), Lumban Rang N.P., near road Prapat to Porsea, 15 km from Prapat, 2°36'14"N 99°02'42"E, 1350 m a.s.l., primary forest; 1.VII.2006; P. Schwendinger leg. [Sum-06/31]. 1 female (MHNG), West Sumatra Province, Panti, 250 m a.s.l., sifting plant debris in lowland swamp forest; 19.XI.1989; D. Burckhardt, I. Löbl & D. Agosti leg. [23]. 2 males, 1 female (MHNG), Batang Palupuh Rafflesia Sanctuary, 12 km N of Bukittinggi, 0°14'32"S 100°21'10"E, primary forest, 900–1100 m a.s.l.; 2–3.VI.2006; P. Schwendinger leg. [Sum-06/05]. 3 males (MHNG), old secondary forest above Harau Canyon, N of Payakumbuh, 0°05'46"S 100°39'58"E, 750 m a.s.l.; 7.VI.2006; P. Schwendinger leg. [Sum-06/11]. 1 male, 1 female (MHNG), primary forest at bottom of Harau Canyon near Echo Point, N of Payakumbuh, 0°06'21"S 100°39'50"E, 500 m a.s.l.; 8.VI.2006; P. Schwendinger leg. [Sum-06/13]. 1 male, 7 females (MHNG), Borneo, EAST MALAYSIA, Sarawak, Mulu National Park, 100 km SEE of Miri, 4°00'N 14°49'E, 200 m a.s.l., Winkler-extraction; 19–24.VIII.2003; A. Schulz leg. [AS/03-7].

Remarks. The species is new to the faunas of Laos, Indonesia and Malaysia.

Distribution. Thailand, West Malaysia (Tanasevitch 2014b), Laos, Indonesia and East Malaysia.

Batueta voluta Locket, 1982

Material examined. 1 Male (ZMMU), VIETNAM, Dong Nai Province, Mada, dipterocarp forest; 20.IV.–10.V.1995; T. Sergeeva leg.

Remarks. The species is new to the fauna of Vietnam.

Distribution. Singapore, West Malaysia (Locket 1982), southern Thailand (Tanasevitch 2014b), Vietnam.

Ceratinopsis Emerton, 1882

Type species: *Ceratinopsis interpres* (O. Pickard-Cambridge, 1874).

Ceratinopsis orientalis Locket, 1982

Material examined. 1 Male (MHNG), INDONESIA, Java, Java Barat, Puncak Pass and Cibodas, Mawati, near Cipanas, after Puncak Pass in direction of Bandung, by hand; 4.VIII.1984; J. Robert leg. [27].

Remarks. The species is new to the fauna of Indonesia.

Distribution. West Malaysia (Locket 1982), Indonesia.

Enguterothrix Denis, 1962

Type species: *Enguterothrix crinipes* Denis, 1962.

Enguterothrix simpulum (Tanasevitch, 2014)

Material examined. 1 Male, 2 females (MHNG), Borneo, EAST MALAYSIA, Sabah, West Coast Residency, Kinabalu N.P., Mt Kinabalu, 1550–1650 m a.s.l., Silau-Silau Trail, *Lithocarpus-Castanopsis* forest, sifting rotten wood and fallen leaves in wet ravine; 24.IV.1987; D. Burckhardt & I. Löbl leg. [2a]. 1 male, 3 females (MHNG), Mt Kinabalu, 1550 m a.s.l.; 29.IV.1987; D. Burckhardt & I. Löbl leg. [8a]. 1 female (MHNG), Mt Kinabalu, 1500 m a.s.l., between “Headquarters” and Liwagu River, sifting mosses, mushrooms and rotten wood, near stream; 25.IV.1987; D. Burckhardt & I. Löbl leg. [3a]. 16 males, 62 females (MHNG), INDONESIA, N part of Bali, Lake Tamblingan, 15 km S of Singaraja, primary mountain forest, 08°15'02"S 115°06'23"E, 1250 m a.s.l.; 18–19.XII.2007; A. Schulz leg. [AS-Ba 07/05].

Remarks. *Apophygone simpulum* was originally described from northern and northeastern Thailand as the type species of a new genus, *Apophygone* Tanasevitch, 2014 (Tanasevitch 2014b). Very soon after that, this genus name was synonymized with *Enguterothrix* Denis, 1962, known from the Afrotropical Region (Democratic Republic of the Congo), see Tanasevitch (2016). The species is new to the faunas of Malaysia and Indonesia.

Distribution. Thailand (Tanasevitch 2014b), East Malaysia and Indonesia.

Erigone Audouin, 1826

Type species: *Linyphia longipalpis* Sundevall, 1830.

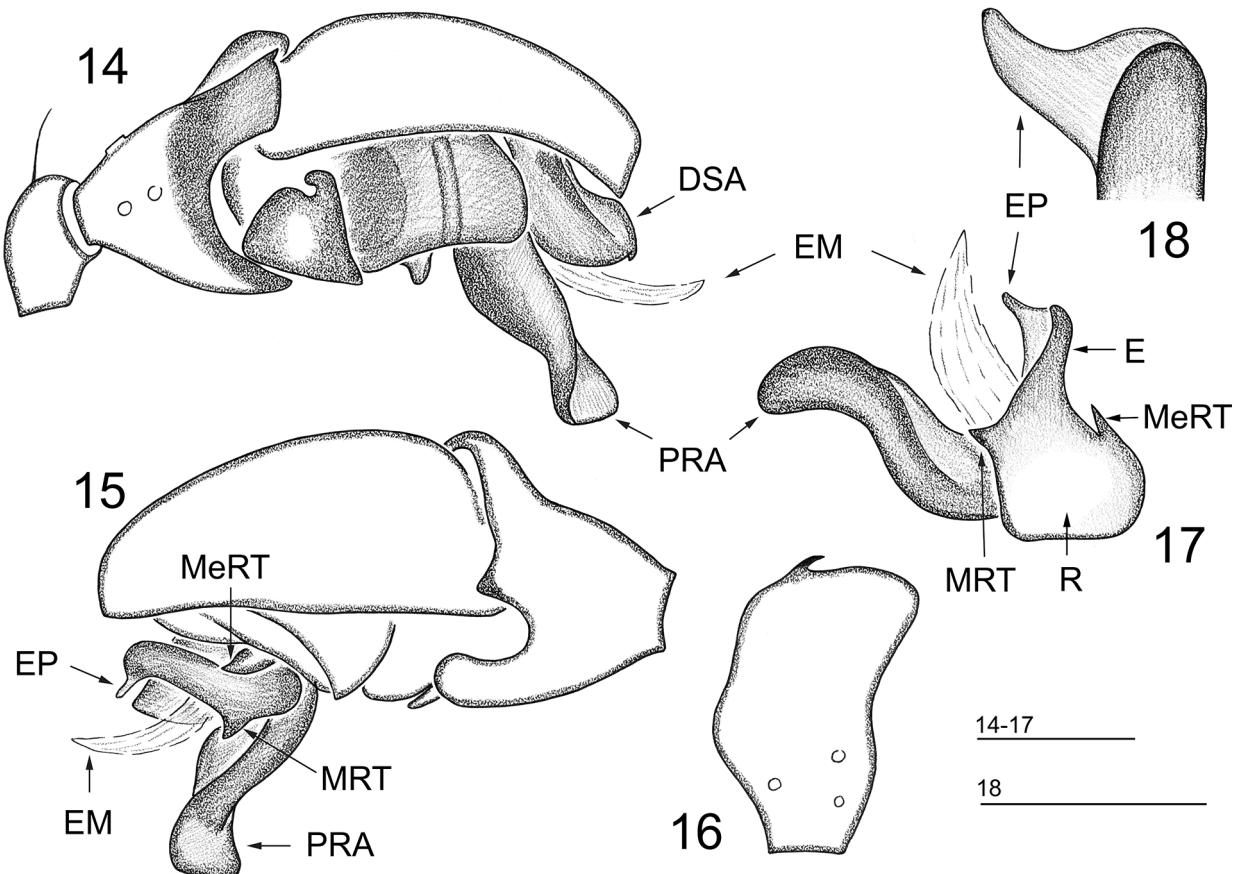
Erigone apophysalis new species

Figs 14–18

Holotype male (MHNG), INDONESIA, Sumatra, Jambi Province, Mt Kerinci, footpath to summit, W of Kersik Tua, 2160 m a.s.l., evergreen hill forest, sifting; 17–18.II.2000; P. Schwendinger leg. [Sum-00/13]. One male paratype (MHNG), collected together with the holotype.

Etymology. The specific name, an adjective, refers to the strongly enlarged posterior radical apophysis of the embolic division.

Diagnosis. The new species is similar to *Erigone sumatrana n. sp.* (see below), and can be distinguished from the Oriental congeners by the shape of a strongly enlarged posterior radical apophysis (posterior tooth *sensu* Crosby & Bishop 1928) of the embolic division, as well as by the unmodified palpal tibia, bearing a small claw-shaped tooth apically. *Erigone apophysalis n. sp.* is also diagnosed by a chaetotaxy formula untypical of the genus, 2.2.1.1 versus 2.2.2.1.



FIGURES 14–18. *Erigone apophysalis n. sp.*, male holotype from Mt Kerinci. 14, 15, Right palp, retrolateral and prolateral views, respectively. 16, Palpal tibia, dorsal view. 17, Embolic division. 18, Apical part of embolus and embolus proper. Scale bars: 14–17, 0.1 mm; 18, 0.05 mm.

Description. Male paratype. Rather small Erigoninae, total length 1.60. Carapace unmodified, 0.85 long, 0.68 wide, reddish-brown, with narrow radial stripes, no teeth at edge of carapace. Chelicerae unmodified, 0.28. long, mastidion very small, no teeth on anterior lateral surface. Legs pale reddish brown. Leg I, 2.19 long ($0.55+0.23+0.58+0.50+0.33$), IV, 2.32 long ($0.63+0.20+0.55+0.50+0.35$). Chaetotaxy 2.2.1.1, length of spines 1.5–2 diameters of segment. TmI, 0.51. Metatarsi IV without trichobothrium. Palp (Figs 14–18): Patella without ventro-apical outgrowth. Palpal tibia slightly elongated, with a small hook-like tooth apically. Paracymbium L-shaped, its distal part expanded. Distal suprategular apophysis relatively long and wide. Embolic division with a thick, long, slightly curved posterior radical apophysis, with a small median and a small mesal radical tooth. Embolic membrane (not *sensu* Hormiga 2000) long and narrow, sabre-shaped. Embolus proper small, directed forward. Abdomen 0.90 long, 0.63 wide, dark grey.

Female. Unknown.

Distribution. Only known from the type locality, a volcano and the highest peak on Sumatra Island.

Erigone bifurca Locket, 1982

Material examined. 1 Male (ZMMU), INDIA, Orissa, 19.982°N 86.016°E; 8–9.I.2014; K. Tomkovich leg. 1 male (MHNG), INDONESIA, Lingga Island, at the foot of Mt Daik, ca. 5 km NW of Daik, 00°12'35.9"S 104°36'58.8"E, 50 m a.s.l., rain forest along stream; 12.VI.2001; P. Schwendinger leg. [SIM-01/02].

Remarks. The species is new to the fauna of India.

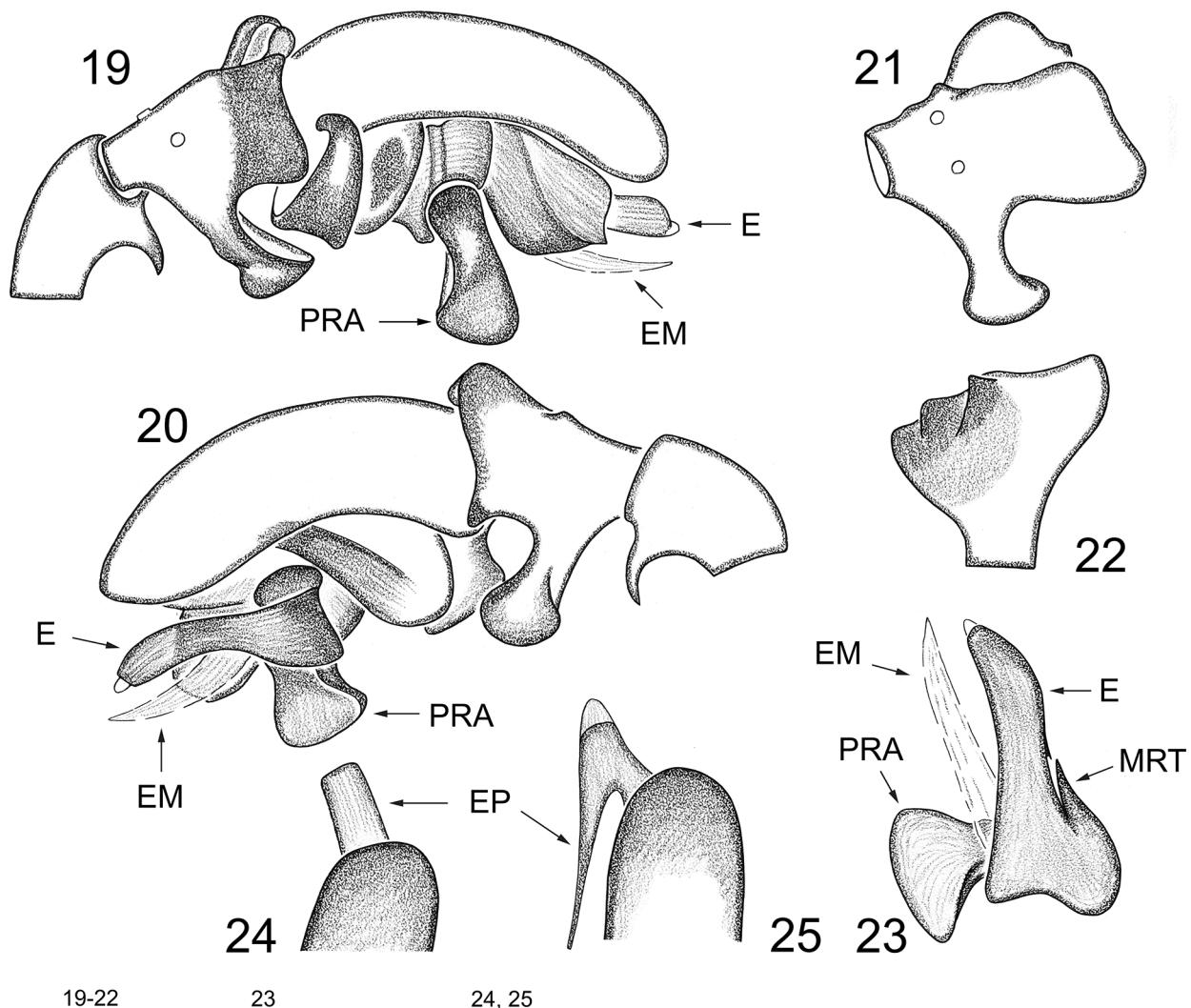
Distribution. West Malaysia, Singapore (Locket 1982), Philippines (Barrión & Litsinger 1995), Anak Krakatoa, Indonesia (Millidge 1995) and India.

Erigone prominens Bösenberg & Strand, 1906

Material examined. 1 Female (SMF), MALAYSIA, West Malaysia, Terengganu, SE Kota Gharu, Kuala Besut; August, 2008; J. Wunderlich leg.

Remarks. The species is new to the fauna of East Malaysia.

Distribution. Cameroon to Japan, New Zealand (World Spider Catalog 2016).



FIGURES 19–25. *Erigone sumatrana* n. sp., male paratype from Mt Kerinci. 19, 20, Right palp, retrolateral and prolateral views, respectively. 21, 22, Palpal tibia, posterolateral and dorsal views, respectively. 23, Embolic division. 24, 25, Apical part of embolus and embolus proper, different aspects. Scale bars: 19–22; 23, 0.1 mm; 24, 25, 0.05 mm.

***Erigone sumatrana* new species**

Figs 3, 19–25

Holotype male (MHNG), INDONESIA, Sumatra, Jambi Province, Mt Kerinci, footpath to summit, W of Kersik Tua, 2160 m a.s.l., evergreen hill forest, sifting; 17–18.II.2000; P. Schwendinger leg. [Sum-00/13]. One male paratype (MHNG), collected together with the holotype.

Etymology. The specific name is an adjective referring to the island where the types were collected.

Diagnosis. The new species is most similar to *Erigone apophysalis* n. sp. (see above), but differs by the presence of a ventro-apical apophysis on the palpal patella, by the peculiar shape of the palpal tibia, by the smaller posterior radical apophysis of the embolic division, as well as by the thin, sharp, backwards-directed embolus. Both new species, *E. apophysalis* n. sp. and *E. sumatrana* n. sp., as well as another Oriental congener, *E. bifurca*, are diagnosed by the untypical chaetotaxy formula, 2.2.1.1 versus 2.2.2.1.

Description. Male paratype. Small Erigoninae, total length 1.38. Carapace convex in anterior part (Fig. 3), 0.73 long, 0.75 wide, reddish brown, no teeth at edge of carapace. Chelicerae 0.35. long, with a mastidion (large tooth on frontal part of paturon) and one tooth (two in holotype) on anterior lateral surface in distal part of chelicera. Legs pale brown. Leg I, 1.86 long (0.55+0.20+0.43+0.39+0.29), IV, 1.77 long (0.55+0.18+0.43+0.35+0.26). Chaetotaxy 2.2.1.1. TmI 0.50. Metatarsi IV without trichobothrium. Palp (Figs 19–25): Ventro-apical apophysis on patella small, pointed, slightly curved. Palpal tibia relatively short and wide, lower outgrowth narrowing medially, roundly expanded distally. Paracymbium L-shaped, its distal part relatively narrow. Distal suprategular apophysis flat and wide. Embolic division with a flat, massive posterior radical apophysis and a small mesal radical tooth. Median radical tooth absent. Embolic membrane long and narrow, sabre-shaped. Embolus proper small, thin, directed backward. Abdomen 0.80 long, 0.55 wide, dark grey.

Female. Unknown.

Distribution. Only known from the type locality on Sumatra.

***Gnathonarium* Karsch, 1881**

Type species: *Gnathonarium dentatum* (Wider, 1834).

***Gnathonarium luzon* new species**

Figs 4, 5, 26–29

Holotype male (SMF, ex Roewer Coll. M907), PHILIPPINES, Luzon Island, Mt Makiling; no date, Bakes leg. Paratypes. 1 Male (without palps and legs), 1 male prosoma with left palp, 1 female (SMF), collected together with the holotype.

Etymology. The specific name is a noun in apposition referring to the island where the types were collected.

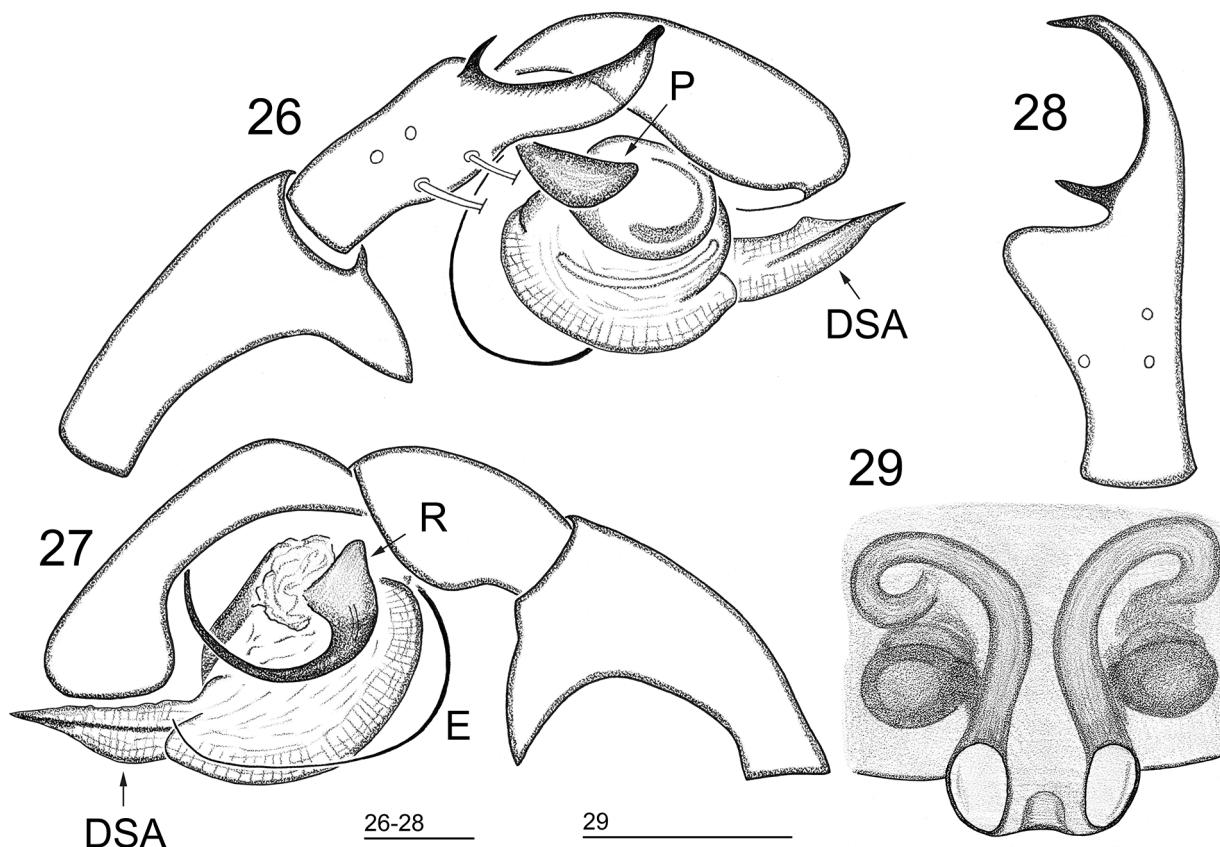
Diagnosis. The species seems to be most similar to *Gnathonarium dentatum* (Wider, 1834), differing by the narrower male palpal tibia, as well as by the narrower posterior part of the epigynum. *Gnathonarium luzon* n. sp. can be distinguished from all congeners by the longest tooth on the male palpal tibia, as well as by the relatively narrow and long seminal ducts of the epigynum.

Description. Male holotype. Large Erigoninae, total length 2.80. Carapace slightly modified, as in Fig. 4, 1.30 long, 1.00 wide, pale reddish brown. Chelicerae massive, 0.53 long, frontal surface beset with small denticles, mastidion present. Legs yellow. Leg I, 5.25 long (1.50+0.35+1.50+1.10++0.80), IV – ? Chaetotaxy unknown, spines mostly lost, but seem to have been 2.2.1.1. TmI unknown: trichobothrium not found. Palp (Figs 24–28): Patella with a ventro-apical conical outgrowth. Tibia with a long crescent-shaped process and a large, narrow, pointed tooth at its base. Tegulum elongated, slightly curved, pale, almost transparent. Distal suprategular apophysis flat, long, pointed apically. Radix small, embolus thin, long, making a loop. Abdomen 1.53 long, 0.88 wide, grey dorsally, with a median white stripe.

Female. Total length 2.88. Carapace unmodified, 1.25 long, 0.95 wide, pale brown. Chelicerae 0.58 long, mastidion absent. Legs yellow. Leg I, 5.67 long (1.53+0.38+1.48+1.50+0.78), IV, 5.33 (1.48+0.35+1.40+1.40+0.70). Chaetotaxy unknown, spines mostly lost, but seem to have been 2.2.1.1. TmI

unknown: trichobothrium not found. Abdomen 1.78 long, 1.15 wide, grey dorsally, with a white longitudinal stripe narrowing backwards and with two white transverse stripes, the latter sometimes merging. Epigynum as in Figs 5, 29. Seminal ducts relatively long and narrow.

Distribution. Only known from the type locality in the Philippines.



FIGURES 26–29. *Gnathonarium luzon n. sp.*, male holotype (26–28) and female paratype from Mt Makiling (29). 26, 27, Right palp, retrolateral and prolateral views, respectively. 28, Palpal tibia, dorsal view. 29, Epigynum, ventral view. Scale bars: 0.1 mm.

Kaestneria Wiehle, 1956

Type species: *Kaestneria dorsalis* (Wider, 1834).

Kaestneria bicultrata Chen & Yin, 2000

Material examined. 1 Male, 1 female (MHNG), INDONESIA, Sumatra, North Sumatra Province, Mt Sibayak, 4 km N of Brastagi, $3^{\circ}13'16''N$ $98^{\circ}29'50''E$, 1600–1650 m a.s.l., primary forest; 6–7.VII.2006; P. Schwendinger leg. [Sum-06/33]. 1 male (MHNG), Jambi Province, Mt Tujuh, footpath to Lake Mt Tujuh, 1500–2000 m a.s.l., evergreen hill forest; 20.II.2000; P. Schwendinger leg. [Sum-00/15]. 1 male (MHNG), Belitung Island, Gunung Tajam, between Gurok Beraye Waterfall ($2^{\circ}47'01''S$ $107^{\circ}51'47''E$) and summit ($2^{\circ}46'40''S$ $107^{\circ}51'37''E$), 150–450 m a.s.l., primary forest; 21–23. and 26.IX.2008; P. Schwendinger leg. [IND-08/03].

Remarks. The species is new to the fauna of Indonesia.

Distribution. Hunan and Yunnan provinces, China (Chen & Yin 2000, Zhao & Li 2014), Indonesia.

***Kenocymbium* Millidge & Russell-Smith, 1992**

Type species: *Kenocymbium deelemaeae* Millidge & Russell-Smith, 1992.

***Kenocymbium deelemaeae* Millidge & Russell-Smith, 1992**

Material examined. 1 Male (SMF), WEST MALAYSIA, Pahang State, Fraser's Hill, Mager and Abu Suradi trail, 3°42'35.13"N 101°44'0.96"E, 1250 m a.s.l., disturbed primary forest, at night, by hand; 10.II.2015; P. Jäger & T. Laufs leg. 2 females (SMF), Fraser's Hill, Jerian Waterfall, 3°43'26.07"N 101°42'36.22"E, 1040 m a.s.l., disturbed primary forest, along trail, at night, by hand; 22.II.2015; P. Jäger & T. Laufs leg.

Type material examined. Male holotype of *Kenocymbium deelemaeae* Millidge & Russell-Smith, 1992 (MHNG), from northern Sumatra.

Remarks. The species is new to the fauna of West Malaysia.

Distribution. Sumatra (Millidge & Russell-Smith 1992), West Malaysia.

***Ketambea* Millidge & Russell-Smith, 1992**

Type species: *Ketambea rostrata* Millidge & Russell-Smith, 1992.

***Ketambea acuta* new species**

Figs 30–36, 39–42

Holotype male (MHNG), THAILAND, Lamphun Province, Mae Tha Distr., Doi Khuntan N.P., 800 m a.s.l.; 23.IX.1994; P. Schwendinger leg. Paratypes. 1 male, 1 female (MHNG), collected together with the holotype. 1 male (MHNG), Lamphun Province, Mae, Tha Distr., Doi Khuntan National Park, 700 m a.s.l.; 22.XI.1994; P. Schwendinger leg. 1 male (SMF), MYANMAR, southern Chin State, above Kampetlet, below Mountain Oasis Resort, 21°11'49.5"N 94°02'25.0"E, 1716 m a.s.l., secondary forest, by hand, at night; 15.V.2014; P. Jäger leg. 1 female (SMF), same locality, at night, by hand; 17.V.2014; P. Jäger leg.

Type material examined. Male holotype of *Ketambea rostrata* Millidge & Russell-Smith, 1992 (MHNG), from northern Sumatra.

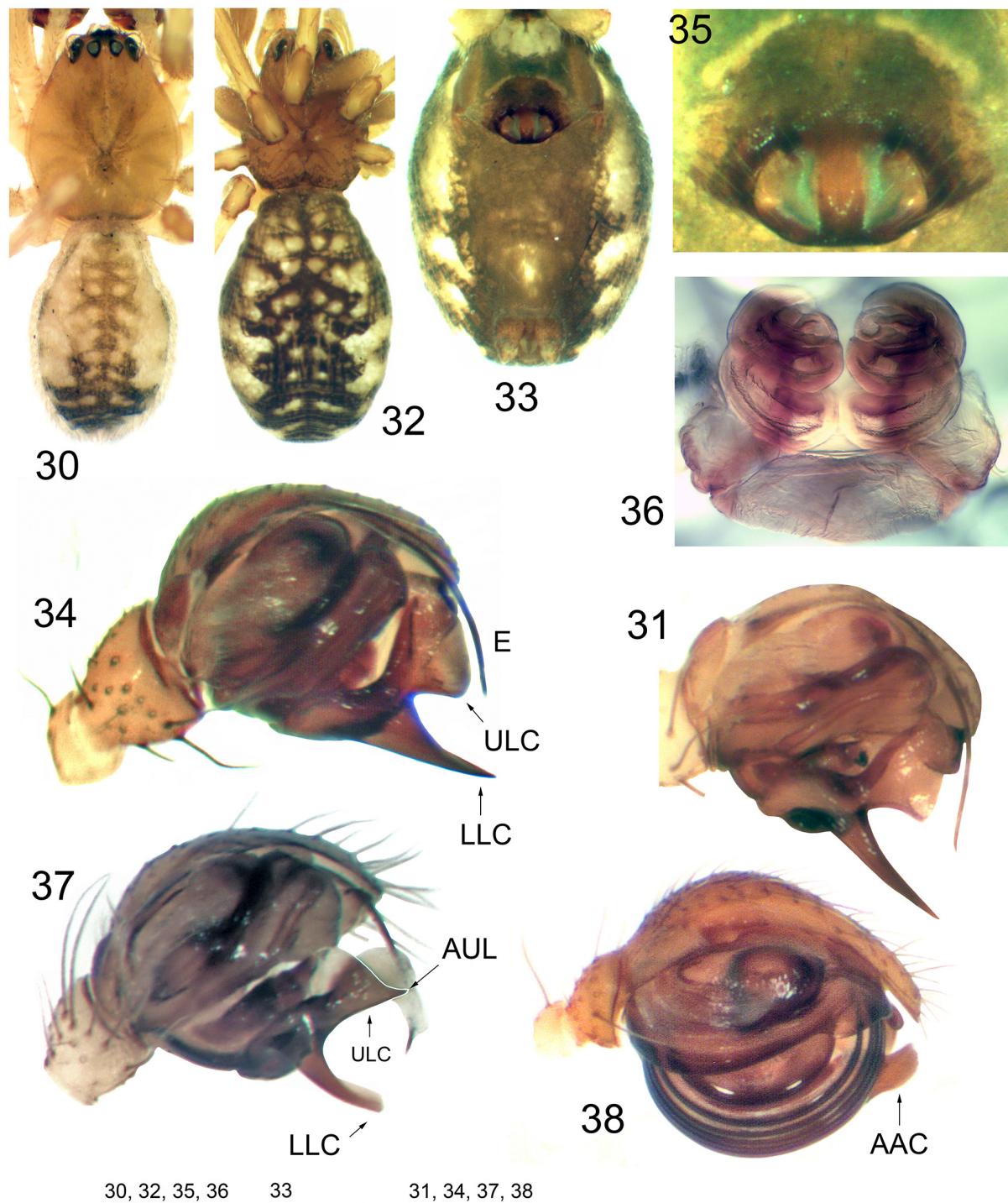
Etymology. The specific name is a Latin adjective that means “pointed, needle-shaped”, referring to the shape of the lower lobe of the anterior apophysis of the convector in the male palp. **Diagnosis.** The new species is very similar to *K. rostrata* Millidge & Russell-Smith, 1992, known from northern Sumatra (Millidge & Russell-Smith 1992), and differs by the much longer outgrowth on the proximal part of the convector, and the absence of a pointed process (AUL in Fig. 37) on the upper lobe of the anterior apophysis of the convector (cp. Figs 31, 34, 39, 40 and Fig. 37). The female of *K. acuta* is distinguished by the wide (*versus* thin in *K. rostrata*) septum which divides the epigynal aperture into two parts, as well as by the oval (*versus* triangular in *K. rostrata*) aperture, and the absence of two pockets anteriorly, while in *K. rostrata* the lateral walls of the epigynum bend towards each other, converging together anteriorly and forming two small pockets.

Description. Male paratype from Doi Khuntan N.P. Rather large Linyphiinae, total length 3.05. Carapace 1.40 long, 1.05 wide, pale brown. Chelicerae 0.65. long, stridulatory furrows well-developed. Legs pale brown, ends of segments darkened. Leg I 5.90 long (1.60+1.50+0.45+1.50+0.85), IV 4.45 long (1.20+0.35+1.00+1.25+0.65). Chaetotaxy. FeI: 1-2-0-0, II-IV: 1-0-0-0; TiI: 2-1-1-0; II: 2-0-1-0, III: 2-0-0-1, IV: 2-0-0-1; MtI-II: 0-0-0-0, MtIII-IV: 1-0-0-0. TmI 0.26. Metatarsi IV without trichobothrium. Palp (Figs 31, 34, 39–41): Tibia very short, with a group of slightly curved spines arranged in a row. Cymbium without posterodorsal outgrowth(s). Paracymbium very small, its distal part curved, thread-like. Embolic division with a large, flat, strongly sclerotized convector, ending up with an apophysis divided into two lobes: lower lobe long, pointed, stylet-shaped; upper one flat, egg-shaped. Embolus long, coiled, its radical part small, well-sclerotized. Median membrane a massive, long, flocculent tissue. Abdomen 1.70 long, 1.00 wide, dorsal pattern as in Fig. 30.

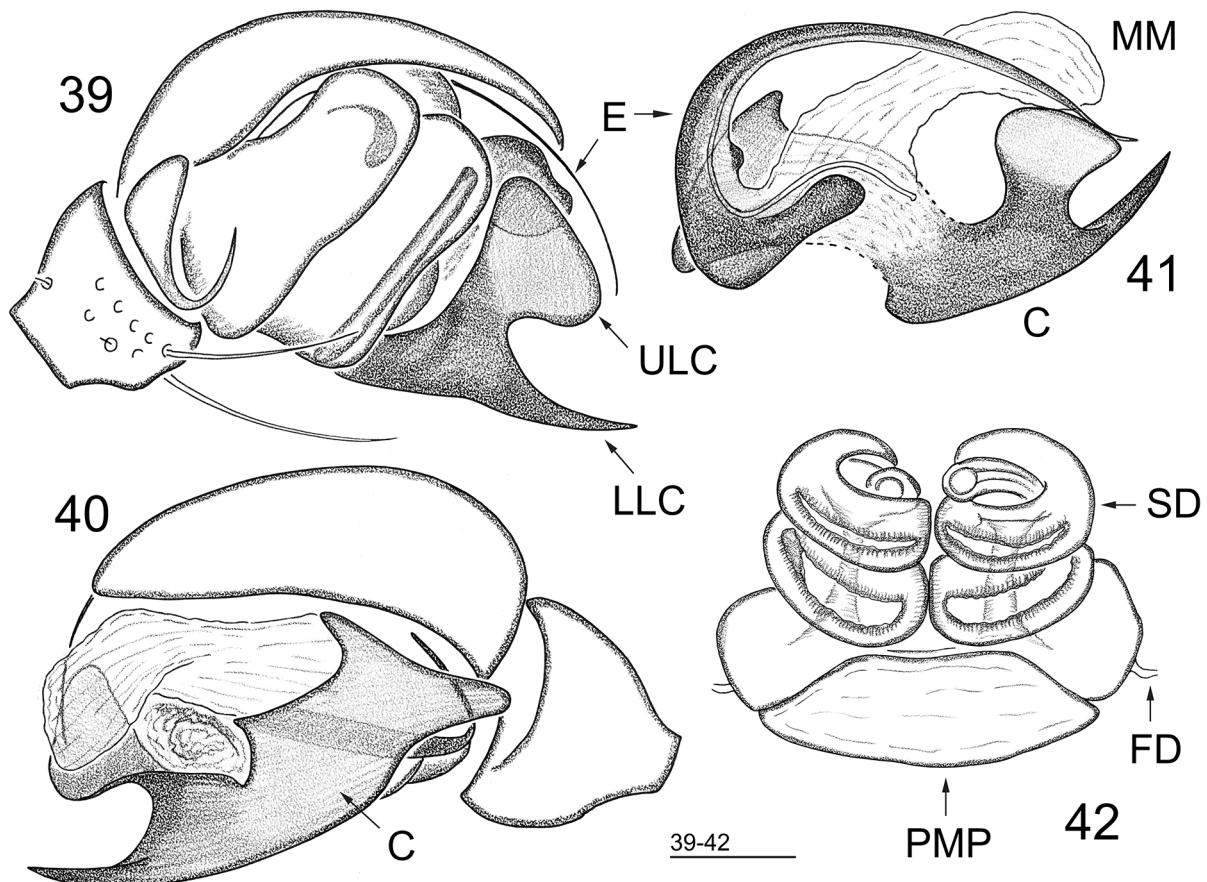
Female paratype from Doi Khuntan N.P. Total length 3.01. Carapace 1.20 long, 0.95 wide. Chelicerae 0.60

long. Leg I 5.43 long ($1.45+0.40+1.35+1.43+0.80$), IV 4.60 long ($1.35+0.35+1.00+1.20+0.70$). TmI 0.24. Abdomen 2.00 long, 1.30 wide, dorsal and ventral patterns as in Fig. 32 and Fig. 33, respectively. Epigynum (Figs 33, 35): aperture oval, septum relatively wide, dividing aperture into two parts. Posterior median plate wide, with a small protuberance in the middle. Vulva (Figs 36, 42): seminal ducts very thick, each making two loops. Leg coloration and chaetotaxy as in male.

Distribution. Thailand and Myanmar.



FIGURES 30–38. *Ketambea acuta* n. sp., male holotype (30, 31) and female paratype (32–36) from Doi Khuntan N.P.; *K. rostrata* Millidge & Russell-Smith, 1992, male holotype, MHNG (37); *Plectembolus quadriflectus* Millidge & Russell-Smith, 1992 (38), male from Maxwell Hill. 30, 32, Habitus. 31, 34, 37, 38, Right palp, retrolateral view. 33, Abdomen, ventral view. 35, Epigynum, ventral view. 36, Vulvae, dorsal view. Note: LLC in Fig. 37 is probably broken. Scale bars: 30, 32, 35, 36; 33, 0.5 mm; 31, 34, 37, 38, 0.1 mm.



FIGURES 39–42. *Ketambea acuta* n. sp., male and female paratypes from Doi Khuntan N.P. 39, 40, Right palp, retrolateral and prolateral views, respectively. 41, Embolic division. 36, Vulvae, dorsal view. Scale bar: 0.1 mm.

Nasoona Locket, 1982

Type species: *Nasoona prominula* Locket, 1982.

Nasoona asocialis (Wunderlich, 1974)

Material examined. 2 Males, 1 female (ZMMU), INDIA, West Bengal, Kalimpong (Lower Tanek), 27.06°N 88.43°E, 450–500 m a.s.l.; 16–30.XI.2013; K. Tomkovich leg. 2 males, 1 female (ZMMU), Meghalaya, Sohra Area, env. of Tyrne, jungle, 25.246°N 91.672°E, 300–400 m a.s.l.; 18–21.VII.2013; K. Tomkovich leg. 1 female (MHNG), MYANMAR, Mandalay Region, Pyin Oo Lwin District, Anisakan village, Anisakan Falls 21°58'46"N 96°23'23"E, 600 m a.s.l., evergreen gallery forest beside waterfall; 8.VII.2014; P. Schwendinger & S. Huber leg. [MT-14/01]. 1 female (MHNG), Pyin Oo Lwin District, National Kandawgyi Botanical Gardens, 21°59'39"N 96°27'57"E, 1120 m a.s.l., evergreen hill forest; 9.VII.2014; P. Schwendinger leg. [MT-14/02]. 1 male, 5 females (MHNG), Pwe Kauk Falls, 22°03'51"N 96°32'10"E, 990 m a.s.l., evergreen gallery forest; 10.VII.2014; P. Schwendinger leg. [MT-14/03]. 1 male (MHNG), INDONESIA, N part of Bali, Lake Tamblingan, 15 km S of Singaraja, primary mountain forest, 08°15'02"S 115°06'23"E, 1250 m a.s.l.; 18–19. XII.2007; A. Schulz leg. [AS-Ba 07/05]. 1 female (SMF), Java, Ijen Mts, Blawan, 950 m a.s.l.; unknown leg.

Remarks. The species is new to the faunas of Myanmar and Indonesia.

Distribution. Nepal, NE India (Wunderlich 1974, Tanasevitch 1998, 2011), Laos, Thailand, West Malaysia (Tanasevitch 2014a), Myanmar and Indonesia.

***Nasoona crucifera* (Thorell, 1895)**

Material examined. 2 Males (ZMMU), INDIA, West Bengal, Kalimpong (Lower Tanek), 27.06°N 88.43°E, 450–500 m a.s.l.; 16–30.XI.2013; K. Tomkovich leg. 1 female (ZMMU) Assam, Chapar, Champamati River, 40 m a.s.l., 26.323°N 90.461°E; 1–3.I.2014; K. Tomkovich leg. 1 male, 1 female (ZMMU), VIETNAM, Dong Nai Province, Mada, dipterocarp forest; 20.IV.–10.V.1995; T. Sergeeva leg. 1 female (MHNG), Lao Cai Province, Sa Pa, Mt Ham Rong, 22°20'01"N 103°50'45"E, 1580 m a.s.l., under group of broadleaf trees on limestone, Berlese extraction in Geneva; 7.VI.2012; P. Schwendinger leg. [VN-12/16]. 4 females (SMF), SINGAPORE, Margaret Drive, 1°18'7.29"N 103°48'11.31"E, 29 m a.s.l., secondary forest, at day, sweep-net; 22.VI.2013; P. Jäger leg. 1 female (MHNG), Borneo, EAST MALAYSIA, Sarawak, road Kuching to Serian, near Kampong Kuap, 18 km of Kuching, secondary forest, sifting, 30 m a.s.l.; 13.XII.1987; leg. C. Lienhard [Sar-87/88]. 1 female (MHNG), INDONESIA, Mapur Island, ca. 5 km NW of Mapur Niang, 01°01'26.6"N 104°47'04.7"E, disturbed rain forest, 10–50 m a.s.l.; 21.VI.2001; P. Schwendinger leg. [SIM-01/05]. 1 male (MHNG), Borneo, South Kalimantan Province, Pagat, ca 6 km E of Barabai, Gunung Batu Benawa, 2°38'40"N 115°24'46"E, 110 m a.s.l., secondary forest on limestone; 11 and 14.X.2008; P. Schwendinger leg. [IND-08/18].

Remarks. The species is new to the faunas of India, Singapore, East Malaysia and Indonesia.

Distribution. Myanmar (Thorell 1895), Laos (Tanasevitch 2014a), Vietnam (Simon 1909), southern China (Han & Zhu 2008), Thailand, West Malaysia (Tanasevitch 2014b), India, Singapore, East Malaysia and Indonesia.

***Nasoona prominula* Locket, 1982**

Material examined. 1 Female (SMF), LAOS, Bolikhamsay Province, Nam Kading Nature Protected Area, Tad Vang Fong Training Centre, 18°20'28.8"N 104°08'37.5"E, 150 m a.s.l., disturbed secondary forest, leaf litter, bark of tree, foliage, by hand, at night; 23.III.2011; P. Jäger & L. Nophasead leg. 4 females (SMF), SINGAPORE, Margaret Drive, 1°18'7.29"N 103°48'11.31"E, 29 m a.s.l., secondary forest, at day, sweep-net; 22.VI.2013; P. Jäger leg.

Remarks. The species is new to the faunas of Laos and Singapore.

Distribution. West Malaysia (Locket 1982), Thailand (Millidge 1995), Laos and Singapore.

***Nasoonaria* Wunderlich & Song, 1995**

Type species: *Nasoonaria sinensis* Wunderlich & Song, 1995.

***Nasoonaria sinensis* Wunderlich & Song, 1995**

Material examined. 1 Male, 2 females (SMF), LAOS, Bokeo Province, Nam Kham NBCA, Logger Camp, 20°22'27.7"N 100°36'28.6"E, 442 m a.s.l., disturbed primary forest, leaf litter, at day, sifting; 10.VI.2013; P. Jäger leg. 4 females (MHNG), THAILAND, Rayong Province, Klaeng Distr., Ko Man Nai, 12°36'44"N 101°41'26"E, 5–10 m a.s.l., earth banks in mixed evergreen-deciduous forest; 18.XII.2013; P. Schwendinger leg. [THKH-13/02]. 2 males (MHNG), INDONESIA, Sumatra, Bengkulu Province, Taba Penanjung Reserve, road Taba Penanjung to Kepahiang, 630–770 m a.s.l., evergreen rain forest, sifting; 27.II.2000; P. Schwendinger leg. [Sum-00/19].

Remarks. The species is new to the fauna of Indonesia.

Distribution. China (Wunderlich & Song 1995), Thailand (Tanasevitch 2014b), Laos (Tanasevitch 2014a), Indonesia.

***Nematogmus* Simon, 1884**

Type species: *Nematogmus sanguinolentus* (Walckenaer, 1841).

Nematogmus asiaticus Tanasevitch, 2014

Material examined. 1 Female (MHNG), INDONESIA, Sumatra, Bengkulu Province, Taba Penanjung Reserve, road Taba Penanjung to Kepahiang, 630–770 m a.s.l., evergreen rain forest, sifting; 27.II.2000; P. Schwendinger leg. [Sum-00/19].

Remarks. The species is new to the fauna of Indonesia.

Distribution. Laos, Thailand (Tanasevitch 2014a), Indonesia.

Neriene Blackwall, 1833

Type species: *Neriene clathrata* (Sundevall, 1830).

Neriene macella (Thorell, 1898)

Material examined. 3 Males, 2 female (SMF), INDIA, Uttarakhand, Dehra Dun, 30°16'59.8"N 77°58'31.4"E, 587 m a.s.l., Wildlife Institute of India, Campus, edge of forest, at wall, by hand, at night; 19.III.2011; P. Jäger & S. Quasin leg. 1 female (SMF), Punjab, Chandigarh, 30°43'01.0"N 76°44'40.7"E, 307 m a.s.l., bus terminal, secondary degraded forest, grass, shrubs, trees, by hand at night; 12.III.2011; P. Jäger leg. 1 male, 2 females (SMF), WEST MALAYSIA, Pahang State, Fraser's Hill, Telecom loop, close to 3°43'6.3"N 101°45'9.86"E, 1300 m a.s.l., secondary forest, embankments along road, at day, by hand and sifting; 10.II.2015; P. Jäger & T. Laufs leg. 1 male (MHNG), INDONESIA, Sumatra, North Sumatra Province, 1.5 km SE of Kampus Kehutanan Aeknauli, near road Prapat to Pematangsiantar, 13 km from Prapat, 2°42'38"N 98°56'16"E, 1150 m a.s.l., hill forest; 30.VI. and 2.VII.2006; P. Schwendinger leg. [Sum-06/30]. 1 male (MHNG), Java, Cibodas, Botanical Garden, 1250–1300 m a.s.l., sifting in the lower part of the garden; 27.XI.1987; C. Lienhard [leg. Sar-87/28]. 1 female (SMF), PHILIPPINES, Leyte Island, Visca, N Baybay, primary forest, 200–500 m a.s.l.; 10.III.1991; W. Schawaller *et al.* leg.

Remarks. The species is new to the faunas of India and the Philippines.

Distribution. Myanmar (Thorell 1898), Thailand (Tanasevitch 2014b), Laos (Tanasevitch 2014a), China (Chen, Li, & Zhao 1995), Sumatra, Indonesia (Simon 1901), West Malaysia (Locket 1982), India and the Philippines.

Oedothorax Bertkau, in Förster & Bertkau, 1883

Type species: *Oedothorax gibbosus* (Blackwall, 1841).

Oedothorax myanmar new species

Figs 6, 7, 43–47

Holotype male (SMF), MYANMAR, southern Chin State, above Kampetlet, below Mountain Oasis Resort, 21°11'43.6"N 94°02'1.1"E, 1585 m a.s.l., secondary forest along stream, by hand & sifting, at day; 17.V.2014; P. Jäger leg.

Etymology. The specific name is a noun in apposition referring to the terra typica of the new species.

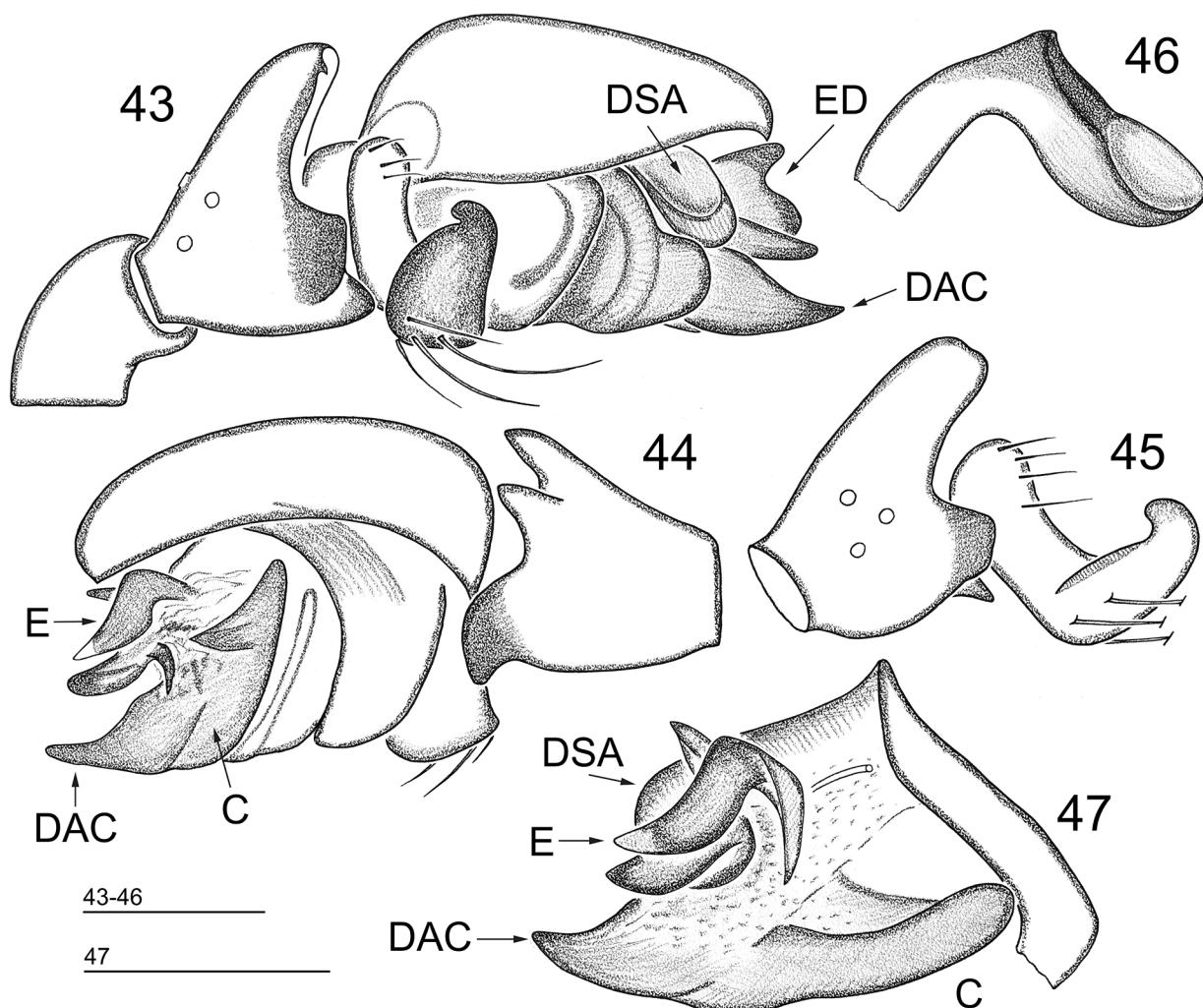
Diagnosis. The new species is diagnosed by the poorly modified carapace, i.e. absence of high elevation(s) or specific structures, by the spoon-shaped distal suprategular apophysis, and small, S-curved embolus. The poorly modified carapace and the conformation of the male palp somewhat resemble those in *O. kodaikanal* Tanasevitch, 2015, from the highlands of Tamil Nadu, India (Tanasevitch 2015). The new species is distinguished from *O. kodaikanal* by a much larger convector that clearly protrudes forward.

Description. Male holotype. Rather large Erigoninae, total length 2.13. Carapace 0.90 long, 0.70 wide, slightly modified: head part slightly elevated and bearing short spines (Fig. 6); pale brown, with indistinct, grey, radial

stripes. Chelicerae unmodified, 0.45 long. Legs yellow. Leg I, 3.00 long ($0.80+0.25+0.75+0.70+0.50$), IV, 3.20 long ($0.85+0.25+0.80+0.85+0.45$). Chaetotaxy 2.2.1.1, length of spines about 1–1.5 diameters of segment. Each metatarsus with a trichobothrium. TmI, 0.50. Palp (Figs 43–47): Tibia elongated, with a very small denticle apically and a wide, rounded, darkened outgrowth retrolaterally. Paracymbium L-shaped, bearing several strong spines on distal lobe. Distal suprategular apophysis with a rounded hollow, spoon-shaped. Distal apophysis of convector well protruded forward. Embolus relatively short, thick, S-curved. Abdomen (Fig. 7): 1.13 long, 0.75 wide, dorsally pale, with three pairs of large, grey, paramedian spots.

Female. Unknown.

Distribution. Only known from the type locality in Myanmar.



FIGURES 43–47. *Oedothorax myanmar* n. sp., male holotype from Kampetlet. 43, 44, Right palp, retrolateral and prolateral views, respectively. 45, Palpal tibia and paracymbium, posterolateral view. 46, Distal suprategular apophysis. 47, Distal suprategular apophysis and embolic division. Scale bars: 0.1 mm.

Ostearius Hull, 1911

Type species: *Ostearius melanopygus* (O. Pickard-Cambridge, 1879).

Ostearius melanopygus (O. Pickard-Cambridge, 1879)

Material examined. 1 Male (MHNG), Borneo, EAST MALAYSIA, Sabah, West Coast Residency, Kinabalu N.P., Laban Rata, 3200 m a.s.l., interception trap; 4–8.V.1987; A. Smetana leg.

Remarks. The species is new to the fauna of East Malaysia.

Distribution. Cosmopolitan (World Spider Catalog 2016).

***Parameioneta* Locket, 1982**

Type species: *Parameioneta spicata* Locket, 1982.

***Parameioneta bishou* Zhao & Li, 2014**

Material examined. 1 Male (MHNG), THAILAND, Surin Province & District, Ban Lak Wo, in and around house, 14°55'02"N 103°27'13"E, 150 m a.s.l.; 20.XII.2013-10.I.2014; P. Schwendinger leg. [TH-13-14/09].

Remarks. The species is new to the fauna of Thailand.

Distribution. Yunnan, China (Zhao & Li 2014), Thailand.

***Plectembolus* Millidge & Russell-Smith, 1992**

Type species: *Plectembolus quadriflectus* Millidge & Russell-Smith, 1992.

***Plectembolus quadriflectus* Millidge & Russell-Smith, 1992**

Fig. 38

Material examined. 1 Male (SMF), WEST MALAYSIA, Pahang State, Fraser's Hill, Mager and Abu Suradi trail, 3°42'35.13"N 101°44'0.96"E, 1250 m a.s.l., disturbed primary forest, at night, by hand; 12.II.2015; P. Jäger & T. Laufs leg. 1 male (MHNG), Perak, Taiping, Maxwell Hill; 7-8.I.1996; P. Schwendinger leg. 1 male (SMF), Borneo, EAST MALAYSIA, ex Roewer Collection, RII/5645.

Type material examined. Male holotype of *Plectembolus quadriflectus* Millidge & Russell-Smith, 1992 (MHNG), from northern Sumatra.

Remarks. The species was hitherto only known from northern Sumatra, Indonesia (Millidge & Russell-Smith 1992). New to the faunas of West and East Malaysia.

Distribution. Indonesia (Millidge & Russell-Smith 1992), West and East Malaysia.

***Pronasoona* Millidge, 1995**

Type species: *Pronasoona sylvatica* Millidge, 1995.

***Pronasoona sylvatica* Millidge, 1995**

Figs 48-53

Material examined. 3 Males, 6 females (MHNG), Borneo, EAST MALAYSIA, Sabah, West Coast Residency, Kinabalu N.P., Poring Hot Springs, 500 m a.s.l., edge of relatively dry *Dipterocarpaceae* forest, sifting rotten wood, mushrooms and dead leaves under trees; 6.V.1987; D. Burckhardt & I. Löbl leg. [14a]. 3 males (MHNG), Poring Hot Springs, 550-600 m a.s.l., *Dipterocarpaceae* forest, sifting rotten wood, leaves, especially bamboo; 9.V.1987; D. Burckhardt & I. Löbl leg. [18a].

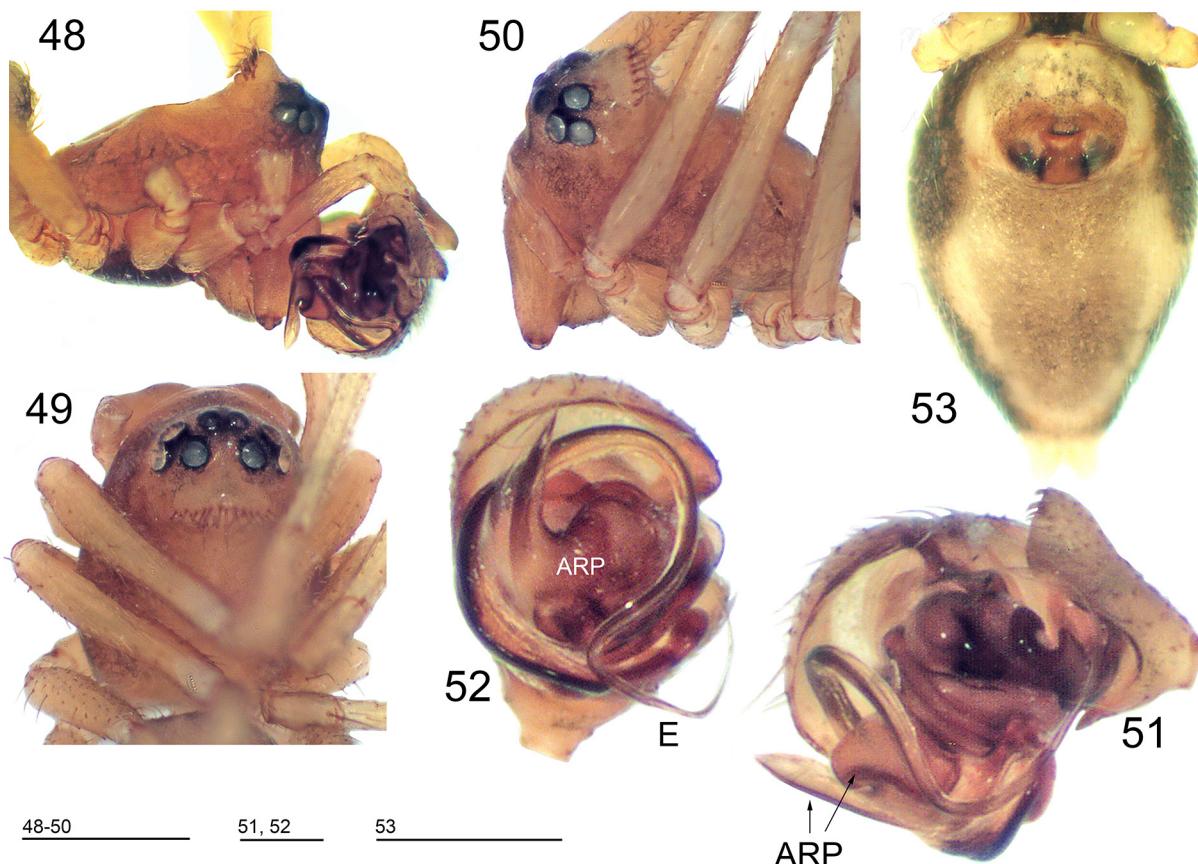
Type material examined. Male holotype and female paratype of *Pronasoona sylvatica* Millidge, 1995 (MHNG), from Kinabalu N.P., Poring Hot Springs.

Remarks. The new material of *P. sylvatica* is all from the type locality.

Taxonomic remarks. Millidge (1995), referring to the close relationship of the genera *Pronasoona* and

Nasoona, pointed out the similarity of their habitus characters (see Figs 48–50, 53). At the same time, he mentioned differences in the palp structure of these genera, but failed to specify any. Nevertheless, the differences are quite significant: the embolic division in *Pronasoona*, in contrast to *Nasoona*, has no convector, but has a large radix with a relatively short tailpiece (see Figs 51, 52). In addition, the embolic division in *Pronasoona*, in contrast to *Nasoona*, shows a hypertrophied and complex anterior radical apophysis that bears several strongly sclerotized or membranous outgrowths.

Distribution. Borneo, East Malaysia (Millidge 1995).



FIGURES 48–53. *Pronasoona sylvatica* Millidge, 1995, male (48–52) and female (53) from Kinabalu N.P. 48–50, Carapace, lateral, dorsal and dorsolateral views, respectively. 51, 52, Left palp, retrolateral and ventral views, respectively. 53, Abdomen, ventral view. Scale bars: 48–50; 53, 0.5 mm; 51, 52, 0.1 mm.

Tapinopa Westring, 1851

Type species: *Tapinopa longidens* (Wider, 1834).

Tapinopa vara Locket, 1982

Material examined. 1 Male (MHNG), INDONESIA, Sumatra, West Sumatra Province, Rimbo Panti N.R., ca. 30 km N of Lubuksikaping, 0°20'46"N 100°04'09"E, 300–400 m a.s.l., primary forest; 11 and 13.VI.2006; P. Schwendinger leg. [Sum-06/18].

Remarks. The species is new to the fauna of Indonesia.

Distribution. Yunnan, China (Zhao & Li 2014), Thailand (Tanasevitch 2014b), West Malaysia (Locket 1982), Indonesia.

Type species: *Theoa tricaudata* (Locket, 1982).

Theoa hamata Tanasevitch, 2014

Material examined. 1 Female (MHNG), THAILAND, Krabi Province, Ao Luk Distr., limestone hill ca. 1km E of Ao Luk Tai, $8^{\circ}22'02''$ N $98^{\circ}44'17''$ E, 60–80 m a.s.l., remnant of semi-evergreen rainforest; 9–10.VI.2009; P. Schwendinger leg. [TH-09/08]. 1 male, 1 female (MHNG), INDONESIA, Sumatra, North Sumatra Province, Deli Serdang, Tinggi Raja N.R., near Negridolok, Tebingtinggi Region, primary forest, soil sample, Berlese extraction, 420 m a.s.l.; 15.XI.1985; B. Hauser leg. [Sum-85/33]. 1 male (MHNG), West Sumatra Province, old secondary forest above Taman Hutan Raya Bung Hatta, near road Padang to Lubuksulasih, $0^{\circ}56'45''$ S $100^{\circ}32'37''$ E, 1100 m a.s.l.; 29–30.V.2006; P. Schwendinger leg. [Sum-06/01]. 1 male, 3 females (MHNG), N of Payakumbuh, above Harau Canyon, $0^{\circ}05'46''$ S $100^{\circ}39'58''$ E, old secondary forest, 750 m a.s.l.; 7.VI.2006; P. Schwendinger leg. [Sum-06/11].

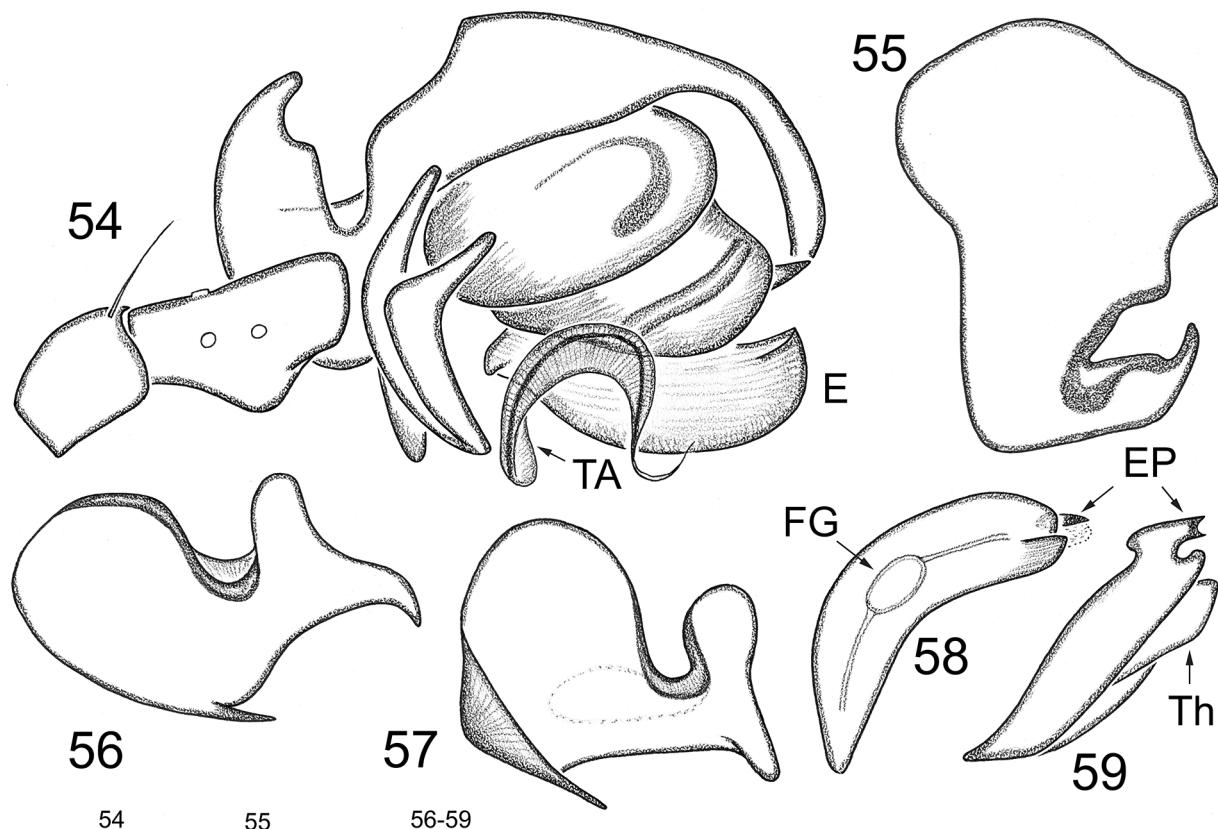
Remarks. The species is new to the fauna of Indonesia.

Distribution. Thailand, Laos (Tanasevitch 2014a, 2014b), Indonesia.

Theoa malaya new species

Figs 54–59

Holotype male (SMF), WEST MALAYSIA, Pahang State, Fraser's Hill, Jerian Waterfall, $3^{\circ}43'26.07''$ N $101^{\circ}42'36.22''$ E, 1040 m a.s.l., disturbed primary forest, leaf litter, sifting, at day; 18.VI.2013; P. Jäger leg. Paratypes. 2 Males (SMF), collected together with the holotype.



FIGURES 54–59. *Theoa malaya* n. sp., male paratype from Fraser's Hill. 54, Right palp, retrolateral view. 55, Cymbium, dorsal view. 56, 57, Terminal apophysis, different aspects. 58, 59, Embolus, different aspects. Scale bars: 0.05 mm.

Etymology. The specific epithet, a name in apposition, refers to the terra typica of the new species.

Diagnosis. The new species is most similar to the Southeast Asian *T. hamata* Tanasevitch, 2014, but can be distinguished by the notched inner edge of the proximal outgrowth of the cymbium, as well as by the presence of a deep notch on the peculiarly curved terminal apophysis.

Description. Male paratype. Small “micronetine”, total length 1.50. Carapace unmodified, 0.63 long, 0.53 wide, pale brown. Chelicerae 0.18 long. Legs yellow, proximal and distal parts of tibiae darkened. Leg I, 2.60 long (0.68+0.17+0.68+0.69+0.38), IV, 2.45 long (0.66+0.15+0.63+0.65+0.36). Chaetotaxy: Til: 2-1-0-0, II-IV: 2-0-0-0; Mtl-IV: 0-0-0-0. TmI 0.16. Metatarsi IV without trichobothrium. Palp (Figs 54–59): Palpal tibia slightly elongated. Cymbium strongly modified, its proximal outgrowth thick and long, bent at right angle and forming a hook-shaped structure. Paracymbium toothless. Lamella characteristicata totally reduced. Terminal apophysis very large, peculiar in shape, superficially like a lamella characteristicata. Embolus with Fickert’s gland inside, thumb present. Abdomen 0.83 long, 0.45 wide, pale, darkened in anterior and posterior parts.

Female. Unknown.

Distribution. Only known from the type locality in West Malaysia.

Theoa tricaudata (Locket, 1982)

Material examined. 2 Males, 2 females (MHNG), THAILAND, Surin Province & District, secondary forest behind Ramkhamhaeng University Surin Campus, 14°55'01"N 103°27'28"E, 150 m a.s.l.; 24.VII.2014; P. Schwendinger leg. [MT-14/11].

Remarks. This is the northernmost known locality of this species.

Distribution. The Seychelles (Saaristo 1995), West Malaysia (Locket 1982), southern Thailand (Tanasevitch 2014b) and northeastern Thailand.

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