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NEW SPECIES OF AGORIUS THORELL, 1877 (ARANEAE: SALTICIDAE) FROM NEW GUINEA

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Agorius baloghi sp. n. is described from Papua New Guinea and New Britain. This is also the first record of the genus from the region. The occurrence of *A. baloghi* in New Britain is the eastern- and southernmost record of the genus. With 14 original drawings.

Key words: Salticidae, *Agorius*, new species, Papua New Guinea, New Britain

INTRODUCTION

The genus *Agorius* was described by THORELL (1887) with *Agorius gracilipes* as type-species, an "ant-like salticid" from Celebes. Later SIMON added several new species (SIMON 1901*b*: *A. cinctus*, *A. constrictus*, *A. semirufus*; SIMON 1903: *A. formicinus*), and separated the genus as a group called *Agorieae* in his monograph of spiders "Histoire naturelle des Araignées" (SIMON 1901*a*) from all other jumping spiders. He mentioned the resemblance to *Diolenius* and *Myrmarachne* during the discussion of *Agorius*'s relationships, according to him *Agorius* is somewhere between these genera ("Les Agorius rappellent á certains égards les Diolenius et les Myrmarachne…" p. 534.; "Les pattes de la 1re paire … rappellent un peu elles des Diolenius…" p. 536).

BADCOCK (1918) found *Agorius gracilipes* THORELL, 1877 again (in Malaya), but neither the drawing nor the description is sufficient to validate his identification, and moreover his specimen seems to be lost ("I couldn't find BADCOCK's specimen in the collection of British Museum (N. H.), where it should be kept." (PRÓSZYNSKI 1968, p. 223)). However, based on BADCOCK's drawings (first leg, female habitus, sternum and coxae) it belongs to *Agorius*.

The type specimen of the genus was redescribed by PRÓSZYNSKI (1968). Now the genus has 6 nominal species (*A. bornensis* EDMUNDS et PRÓSZYNSKI, 2001 was described recently), but many ("dozens of") species are waiting for their discovery (J. PRÓSZYNSKI, C. DEELEMAN-REINHOLD pers. comm.) from various localities (Borneo: Sarawak, Sabah; Sumatra, Singapore, Java, Sumbawa, Sulawesi and Ambon – C. DEELEMAN-REINHOLD pers. comm.). Several of them were illustrated by PRÓSZYNSKI, and his drawings are available online (PRÓSZYNSKI

Salticidae of the World, ver. July 2002) together with the detailed drawings of SIMON's *Agorius* species.

Now I had the opportunity to study several "*Agorius*" (previously identified to genus level by J. BALOGH) specimens from the BALOGH-collection. According to this, all specimens belong to two species, each new to science, only one of them is represented by both sexes, verified as *Agorius* and described here as *Agorius baloghi* sp. n. dedicated to JÁNOS BALOGH, the famous Hungarian oribatid mite specialist, who died recently. The other species does not belong to *Agorius* (the specimens resemble somatically much to *Synagelides palpalis* ZABKA, 1985, but their palpal tibia is not swollen).

MATERIALS AND METHODS

The specimens were studied with methods, set by WANLESS (1978). The drawings were made with *camera lucida* (attached to a stereo- and a light-microscope). All the measurements are given in millimetres.

All specimens are deposited in the Soil Zoological Collection (former Arachnoidea Collection) of the Department of Zoology, Hungarian Natural History Museum (Budapest).

Abbreviations: Co = coxa; Fm = femur; Mt = metatarsus; PLE = posterior lateral eye(s); Pt = patella; OQ = ocular quadrangle; Ta = tarsus; Ti = tibia; Tr = trochanter.

Agorius baloghi sp. n.
(Figs 1–14)

Diagnosis – The males can easily be recognised by the three tibial apophyses of the palp (Figs 9–11), and by the robust embolus, females can be recognised by the large atria of the epigynum (Figs 12–14).

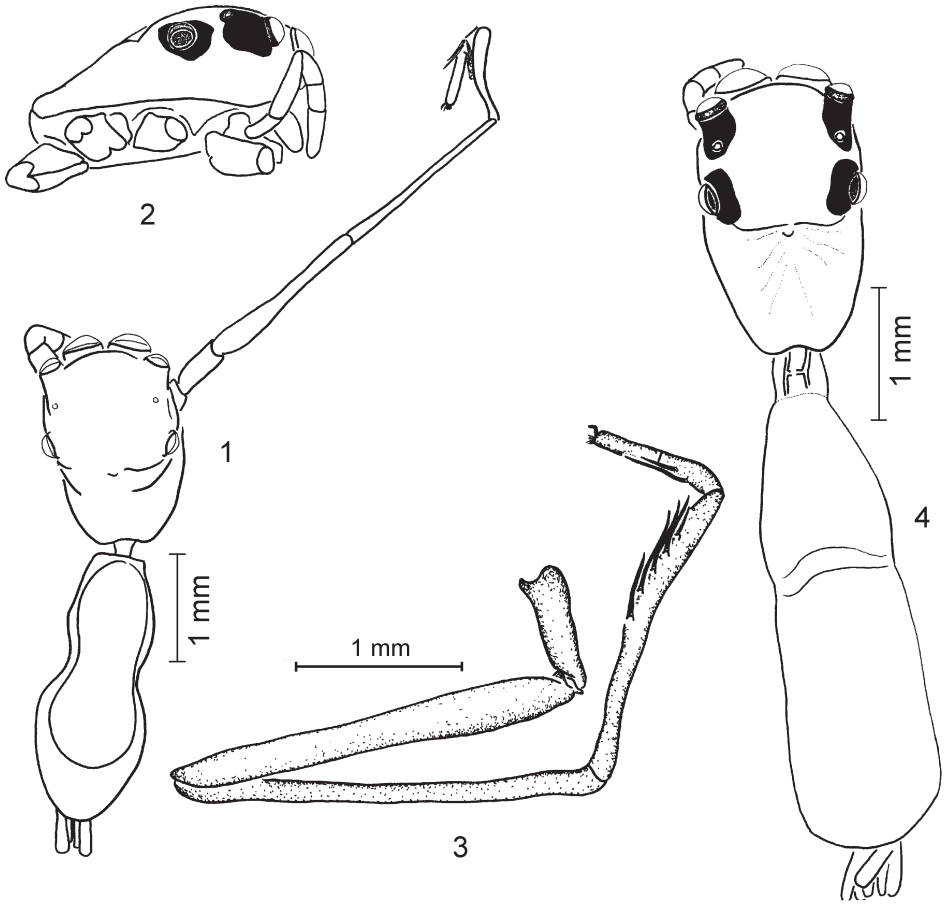
Material examined: Holotype, male from New Guinea: Angoram; NGA-U11 (Hung. Soil Exp. 1969), beaten from tree, leg.: J. BALOGH. Paratypes: male, same data as the holotype; 1 male from Baiyer river NGB-U24, (Hung. Soil Exp. 1969), beaten from tree, leg.: J. BALOGH; 1 female from Kiunga; NGK-U(N)/11 (Hung. Soil Exp. 1969), beaten from tree, leg.: J. BALOGH; 1 female from Lae; NGL-C16 (Hung. Soil Exp. 1968), beaten from tree, leg.: J. BALOGH. New Britain: 1 female from Rabaul; NGR-U25 (Hung. Soil Exp. 1969), beaten from tree, leg.: J. BALOGH

Comparative material: *Synagelides palpalis* ZABKA, 1985 Holotype male from Vietnam: Yen Bai province; Minh Xuan, near Luc Yen; leg.: Gy. Topál & I. Matskási, det.: M. ZABKA, 1 paratype female from Yen Bai province; Minh Xuan, near Luc Yen; leg.: Gy. Topál & I. Matskási, det.: M. ZABKA (see: ZABKA (1985), figs 577–580).

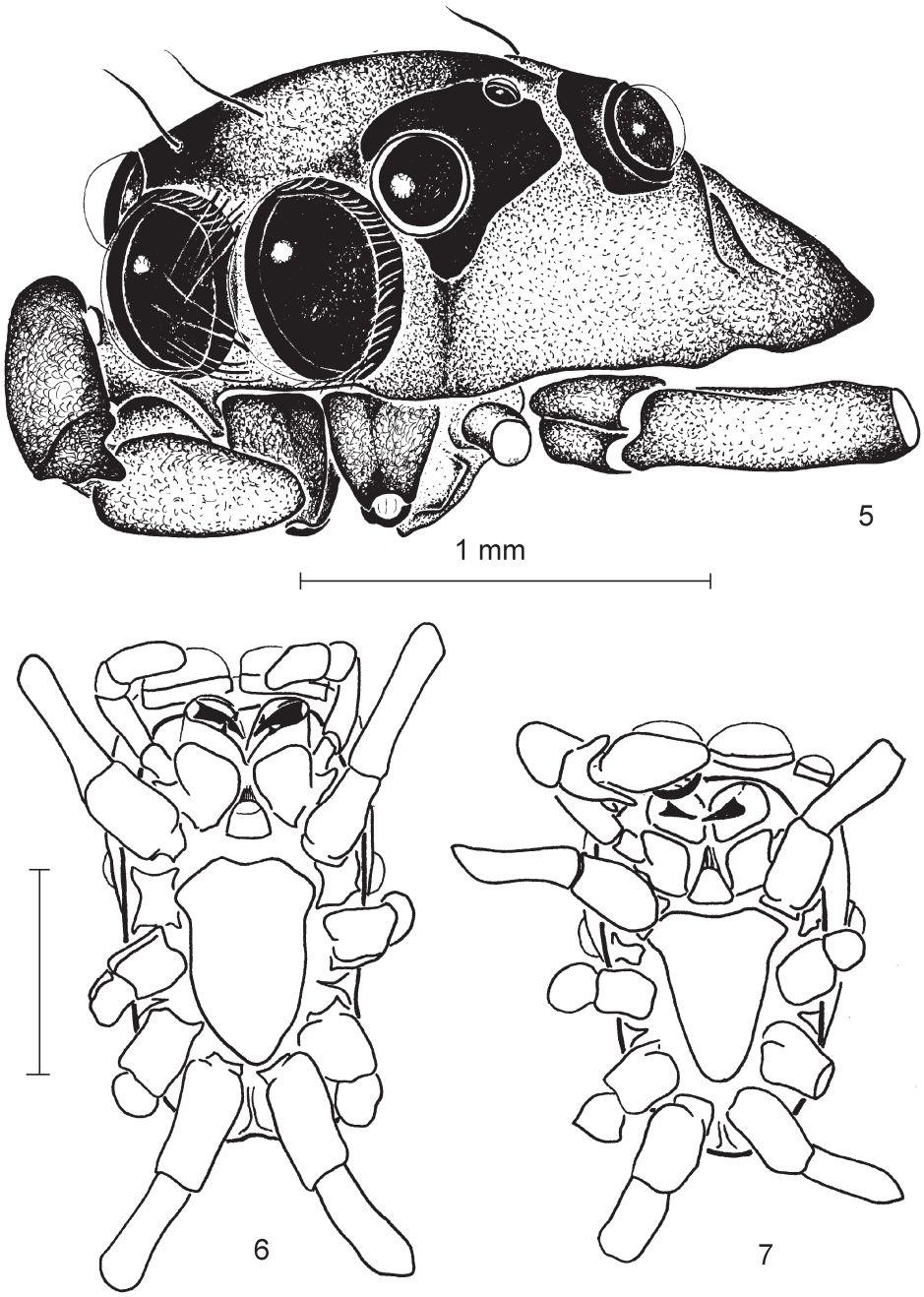
Synagelides sp. 2 males from India: Darjeeling district; Geomti; sifted from mosses on trees, 1981; leg.: GY. TOPÁL, det.: J. PRÓSZYNSKI. (see: PRÓSZYNSKI (1992), figs 175–181).

Male (Figs 1, 5, 7–11): Medium sized spiders. Carapace very low (Fig. 5), with smooth tegument, unicolour, without any colour pattern. Carapace dark brown, amber (or yellow – because colour bleached out in alcohol). Eyes with black surroundings and with sparse white hairs in the eye field. Thoracic region also dark brown (or yellow). Chelicerae small, with one prolateral and one retrolateral tooth (Fig. 7). Gnathocoxae, labium and sternum yellowish brown. Legs yellow. Leg I. and IV. longest, and strongly modified as well (modification and ratio of several leg segments different – see table below): coxae, trochanters and femora longer than on the other legs. Leg I.: patella and tibia long and conspicuous, metatarsus and tarsus small. Leg IV.: patella in "normal" length, tibia and metatarsus long and conspicuous (Figs 1, 8). Abdomen oval, with a constriction in the middle. A dorsal and a ventral scutum also present.

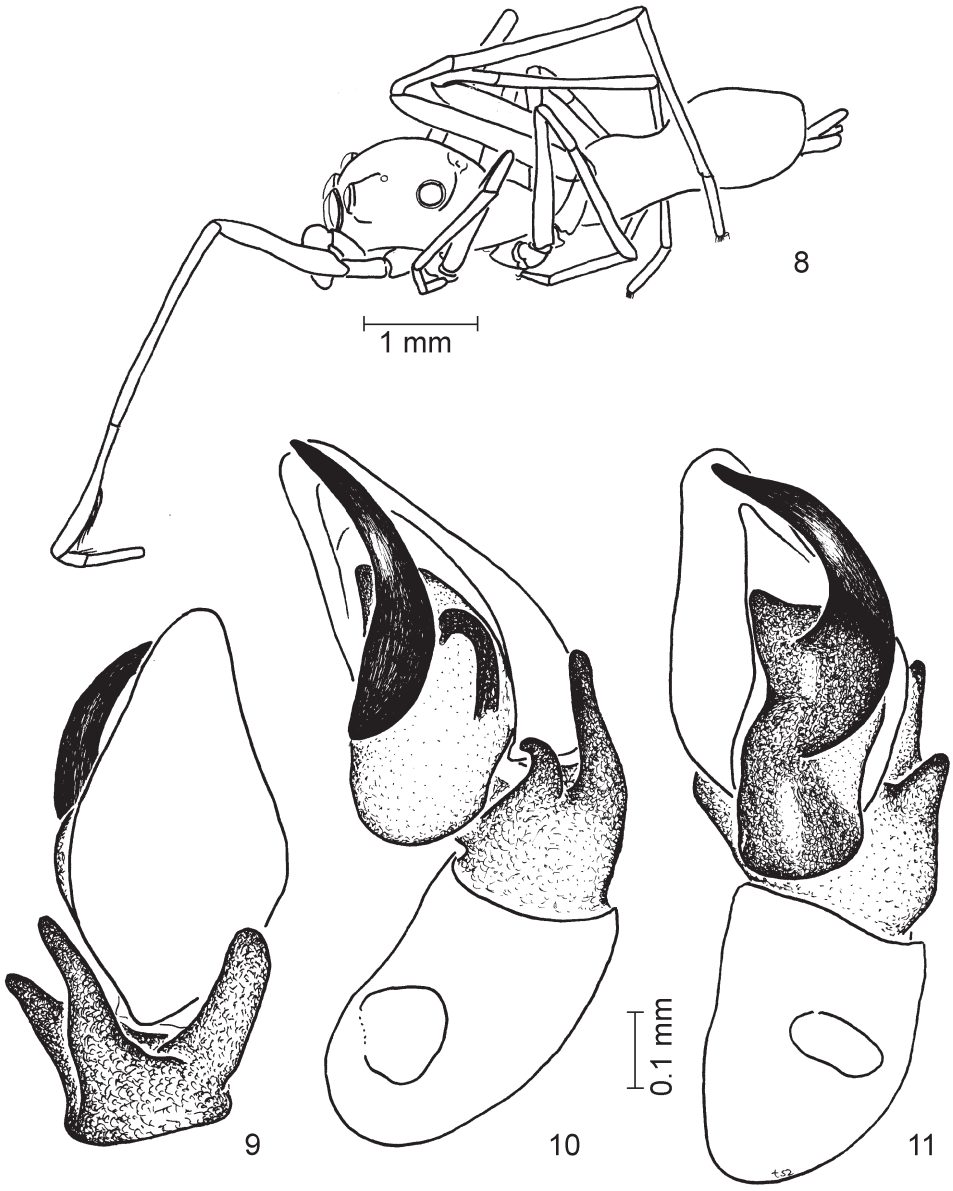
Measurements (holotype). Carapace 2.0 long, 1.2 wide at PLE, 0.65 high at PLE (carapace is not the highest at PLE – see Fig. 1, its most height 0.72). Length of OQ 0.84, anterior width of OQ 0.92, posterior width of OQ 1.08. Fovea curved – not measurable. Clypeus very low. Abdomen 2.0 long, 0.92 at its widest point.



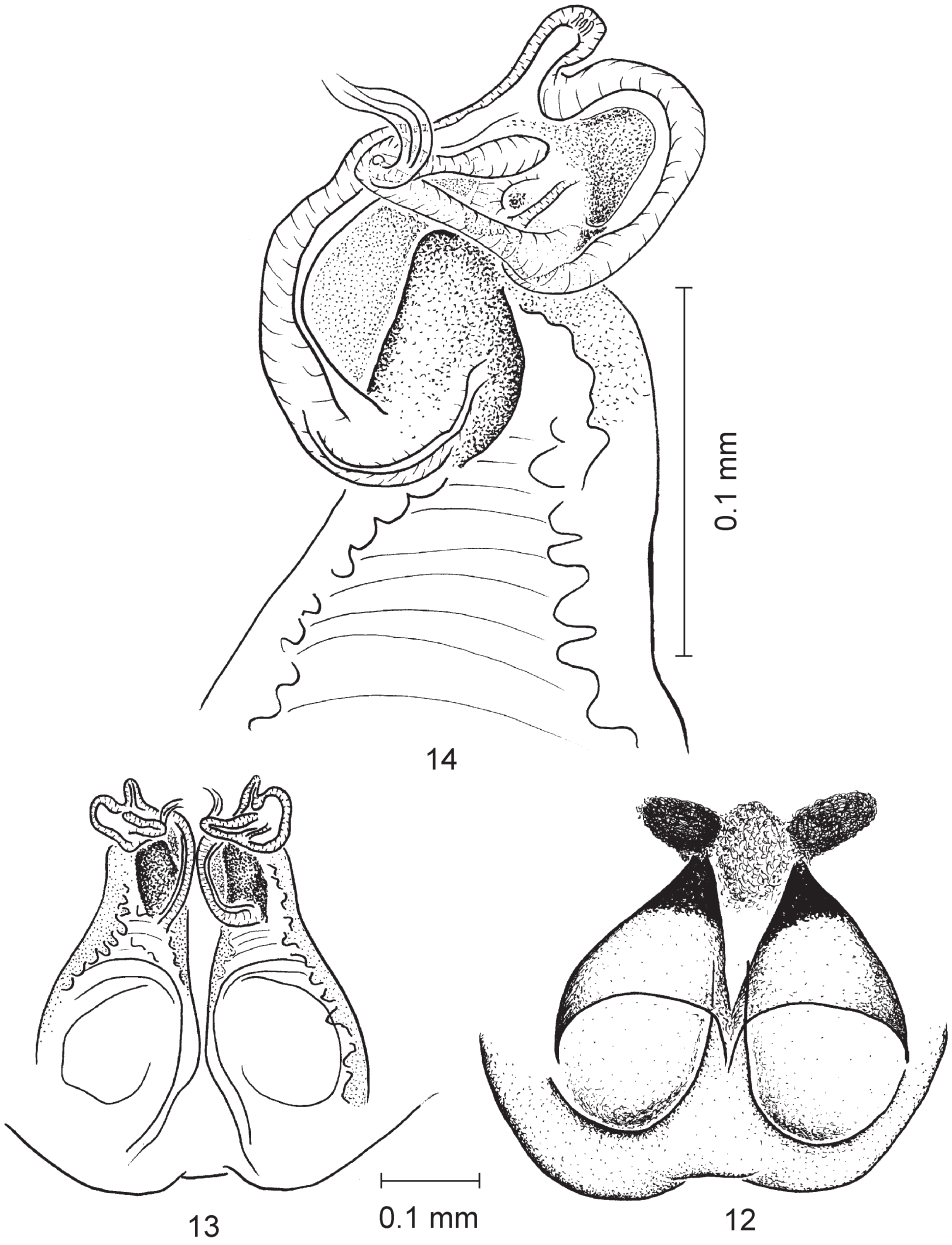
Figs 1–4. *Agorius baloghi* sp. n.: 1 = male, habitus, 2 = female, carapace, lateral view, 3 = female, first leg, 4 = female, habitus



Figs 5–7. *Agorius baloghi* sp. n., carapace: 5 = male, fronto-lateral view, 6 = female, ventral view, 7 = male, ventral view



Figs 8–11. *Agorius baloghi* sp. n., male: 8 = lateral view, 9 = palp, dorsal view, 10 = palp, retrolateral view, 11 = palp, ventral view



Figs 12–14. *Agorius baloghi* sp. n., female: 12 = epigyne, dorsal view, 13 = vulva, dorsal view, 14 = same, enlarged

Length of the leg segments as follows:

	Co	Tr	Fm	Pt	Ti	Mt	Ta
I	0.48	0.64	2.48	2.64	2.0	0.4	0.8
II	0.28	0.16	1.44	0.48	1.2	1.0	0.48
III	0.28	0.2	1.6	0.48	1.32	1.24	0.48
IV	0.48	0.4	2.4	0.8	2.4	2.0	0.72

Leg spination: Spines long and fine, present on tibia and metatarsus of legs I only. Legs II-IV spineless. Ti I with 4 prolateral and 3 retrolateral spines. Mt I with two prolateral spines.

Copulatory organ (Figs 9–11): with rather simple structure. Palpal patella swollen (like *Synagelides*). Tibia with three single apophyses: one retro–, one prolateral, and one dorsal. The dorsal apophysis the longest, slightly curved. Tegulum yellowish brown, sperm–duct visible. Embolus slightly curved, strong and robust.

Female (Figs 2–4, 6, 12–14): Medium sized. Carapace very low (Fig. 2), with smooth tegument, unicolour as males. Carapace dark yellowish - brown. Eyes with black surroundings and with sparse white hairs in the whitish eye field. Thoracic region also dark yellowish - brown (or yellow). Chelicerae small, with one prolateral and one retrolateral tooth (Fig. 6). Gnathocoxae, labium and sternum yellowish brown. Legs yellow. Leg I (Fig. 3) and IV longest, and strongly modified as well: coxae, trochanters and femora longer than on the other legs. Leg I: patella and tibia long and conspicuous, metatarsus and tarsus small. Leg IV: patella in "normal" length, tibia and metatarsus long and conspicious. Abdomen oval, with a smooth constriction in the middle (Fig. 4).

Measurements. Carapace 2.25 long, 1.25 wide at PLE, 0.625 high at PLE (carapace is not the highest at PLE – see Fig. , its most height 0.75). Length of OQ 0.875, anterior width of OQ 1.25, posterior width of OQ 1.125. Fovea curved – not measurable. Clypeus very low. Abdomen 3.5 long, 1.5 at its widest point.

Length of the leg segments as follows:

	Co	Tr	Fm	Pt	Ti	Mt	Ta
I	0.5	0.75	2.5	2.5	1.75	0.25	0.5
II	0.375	0.2	1.5	0.375	1.125	0.875	0.375
III	0.375	0.2	1.5	0.5	1.25	1.25	0.5
IV	0.625	0.625	2.25	0.75	2.125	2.0	0.75

Leg spination: as in males.

Female genitalia: weakly sclerotised, with large atria (Fig. 13). Female vulva small (Figs 12, 14).

Distribution: New Guinea, New Britain (Fig. 15).

Etymology: This species is dedicated to Prof. JÁNOS BALOGH (1913–2002), Hungarian oribatid mite specialist (Acari: Cryptostigmata: Oribatidae), who collected the specimens.

Relationships – According to the female genitalia, this species is considered congeneric with *Agorius gracilipes*. Despite only one sex of the type species of the genus is known, yet *Agorius* has unique somatic features, which makes it possible

to draw its limits: *Agorius* is an ant-like salticid (since the term "ant-like" is quite subjective, I would prefer the following definition – based on MURPHY and MURPHY (2000): "amber-brown to shiny black coloured spiders, with constricted abdomen" with long visible pedicel), with long and thin legs.

The leg segments Pt I, Ti I, Fm IV, Ti IV and Mt IV are especially long, longer than the others trochanters (almost as long as carapace). Ti I curved and with characteristic spines, Mt I very small with long, gracile spines (Figs 1, 3, 6–8) (see e.g. PRÓSZYNSKI (1968), fig. 10).

Agorius is a peculiar genus and SIMON separated it as a genus group. This suprageneric taxon was mentioned by PRÓSZYNSKI (1971) as subfamily Agoriinae SIMON, 1901 (although he proposed to include *Agorius* into the subfamily Synemosinae (F.-P. CAMBRIDGE 1900) which later proved to be polyphyletic). Discussion of the status of suprageneric taxa within the Salticidae is beyond this paper's limits, but the separation of *Agorius* (together with its closest relative

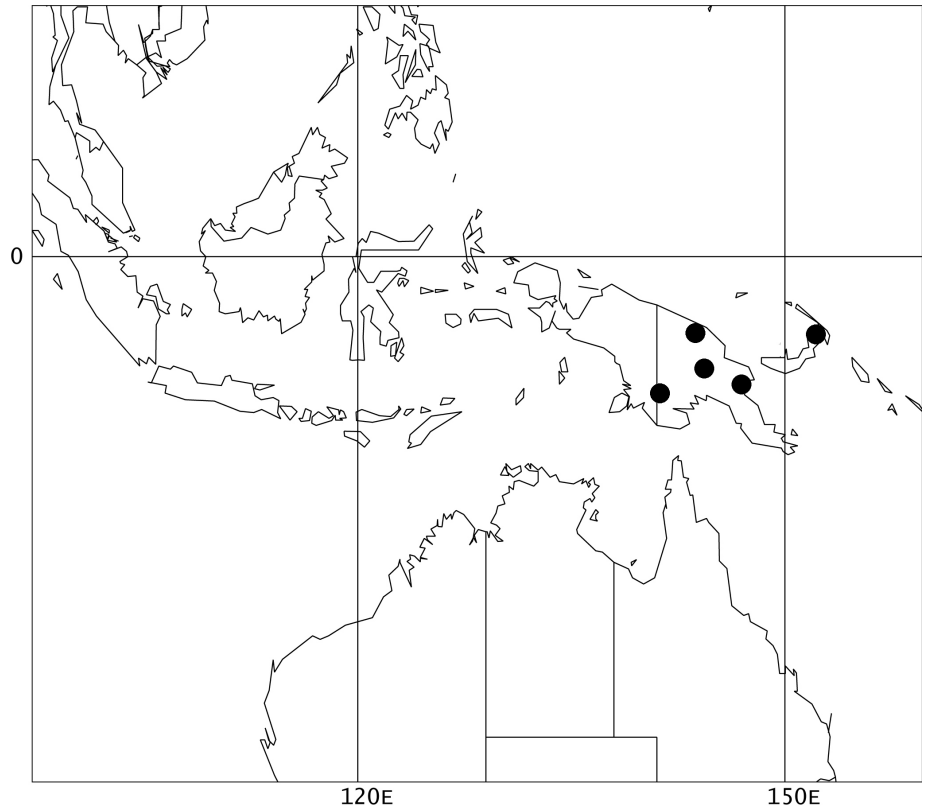


Fig. 15. Distribution of *Agorius baloghi* sp. n.

Synagelides STRAND, 1906) seems to be reasonable. The longer Tr I, IV, the characteristic spines of the first (curved) tibia, the gracile spines on the first metatarsus, the ventrolateral joint of the male palpal patella, the proportion of the first and forth legs limit this group.

Perhaps an Australian genus *Pseudosynagelides* ZABKA, 1991 also could attach to this clade of salticids, but since many species waiting for their description further consideration would requires a total revision of the above mentioned three genera.

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