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Six new species of *Pandercetes* L. Koch, 1875 (Araneae: Sparassidae: Heteropodinae) from Southeast Asia

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Abstract

Six new species, *Pandercetes batak* **sp. nov.** (♂♀), *P. barisanensis* **sp. nov.** (♀; both from Sumatra, Indonesia), *P. cheemai* **sp. nov.** (♂♀; Laos), *P. mindanaoensis* **sp. nov.** (♂; Philippines, Mindanao), *P. jaegeri* **sp. nov.** (♀) and *P. bataanensis* **sp. nov.** (♀; both from Philippines, Luzon) are described. The genus is recorded from Laos, Philippines and Sumatra for the first time. The discovery of *P. cheemai* **sp. nov.** represents the northernmost record for the genus range. Genus *Pandercetes* is re-diagnosed. For two species, *P. longipes* Thorell, 1881 and *P. peronianus* (Walckenaer, 1837), the distribution data listed in the World Spider Catalog was found to be inaccurate and has now been revised. Detailed descriptions, digital photographs and a distributional map of all new species are provided.

Key words: Aranei, biodiversity, huntsman spiders, Sumatra, Mindanao, Luzon, Laos, taxonomy

Introduction

Sparassidae, commonly known as huntsman spiders, includes 1523 species of 98 genera (WSC 2026). These spiders are predominantly found in tropical regions, although some species occur in the Palearctic. The subfamily Heteropodinae (*sensu lato*) is the largest within Sparassidae, comprising 751 taxa (including subspecies) across 21 genera (Rheims 2021, Gorneau *et al.* 2022, Grall & Jäger 2022, Casas & Rheims 2023). The vast majority of species (616) are included in three genera: *Pseudopoda* Jäger, 2000 (264), *Heteropoda* Latreille, 1804 (211), and *Sinopoda* Jäger, 1999 (141). On the other hand, five genera (*Borniella* Grall & Jäger, 2022; *Martensikara* Jäger, 2021b; *Menarik* Grall & Jäger, 2022; *Micropoda* Grall & Jäger, 2022; and *Tiomaniella* Grall & Jäger, 2022) are monotypic.

Heteropodinae has been the subject of extensive research by Jäger (1999, 2001, 2002, 2006, 2008b, 2020a, 2020b, 2021a, 2024) and several other authors (Davies 1994; Jäger *et al.* 2009; Jäger & Koh 2024; Galvis & Rheims 2018; Jiang *et al.* 2018; Korai & Jäger 2024, Grall & Jäger 2020; Rheims 2010, 2021; Sankaran *et al.* 2015; Zhang *et al.* 2023; Zhong *et al.* 2019b). Although the subfamily remains far from fully studied, taxonomic revisions have been conducted for most genera.

Pandercetes L. Koch, 1875, which includes 16 species and one subspecies (WSC 2025), remains one of the least studied genera within Heteropodinae. Spiders of this genus inhabit trees, where they hunt by lying in ambush on the bark, thanks to the camouflaging coloration of the dorsal side of the cephalothorax and opisthosoma, their flattened body, and tufts of setae on their legs (pers. obs.). *Pandercetes* spiders are distributed across two major zoogeographical realms: the Indomalayan realm (eleven species), and the Australasian realm (six species) (WSC 2025). Notably, three species – *Pandercetes gracilis* (L. Koch, 1875), *P. isopus* Thorell, 1881, and *P. plumipes* (Doleschall, 1859) – are known from both realms (see also discussion).

This genus has never undergone a comprehensive revision. Eleven species were described in the 19th century,

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and the last species was described by Roewer (1938). Regarding known sexes: eight species are known only from females, three species are known only from males, three species are known from both sexes and two species are known exclusively from juvenile specimens, *Pandercetes ochreus* (Hogg, 1922) from Vietnam and *P. palliventris* (Strand, 1911) from New Guinea.

It is worth noting that seven species are only known from textual descriptions and have never been illustrated. Two species (*Pandercetes manoius* Roewer, 1938 and *P. plumosus* Pocock, 1898) are known only from a single schematic black-and-white illustration of their epigyne. No species of the genus have been re-described in recent years; however, four species, including the male of the type species, have been re-illustrated by Jäger (2001, 2002).

By studying collections stored in the Federal Scientific Center of East Asia Terrestrial Biodiversity (Vladivostok, Russia) and the Institute of Systematics and Ecology of Animals, SB RAS (Novosibirsk, Russia), we identified a series of *Pandercetes* specimens collected from different regions of Southeast Asia. The examination of these specimens revealed six *Pandercetes* species that do not match descriptions of currently known species. The main goals of this study are: 1) to provide a modern diagnosis of the genus, 2) to describe six species as new to science, 3) to discuss species distribution and future research perspectives for the genus.

Material and methods

Specimens were photographed using a Nikon DSRi2 camera attached to a Nikon SMZ25 stereomicroscope at the Far Eastern Federal University (Vladivostok, Russia), an Olympus DP74 camera attached to an Olympus SZX16 stereomicroscope at the Altai State University (Barnaul, Russia) and a Fujifilm X-T10 camera with Zeiss Touit 50 mm f/2.8 macro lens. Photographs were taken in dishes filled with alcohol, with soft white paper or cotton at the bottom. In few cases (Figs 1–2, 7–8) photographs of general appearance were taken after the specimens were slightly dried. Digital images were montaged using Zerene Stacker (https://zerenesystems.com/cms/stacker) and Helicon Focus software packages. Living specimens were photographed with Nikon D800 and D850 DSLR cameras with Tamron SP 90mm F2.8 Di VC USD Macro lens. Epigynes were cleared in a boiling KOH/water solution. Distribution map was produced using SimpleMappr (Shorthouse 2010). The coordinates of the collecting localities, which were missing from the original labels, were subsequently restored and are provided in square brackets. All measurements are in millimeters. Length of leg segments were measured on the prolateral side, and are shown as: femur, patella, tibia, metatarsus, tarsus (total length). All examined material is deposited in the Zoological Museum of the Moscow State University, Moscow, Russia (ZMMU; curator K.G. Mikhailov), the Institute of Systematics and Ecology of Animals SB RAS, Novosibirsk, Russia (ISEA; curator G.N. Azarkina) and in the Bioresource Collection of the Federal Scientific Centre of East Asia Terrestrial Biodiversity of the Far East Branch of the Russian Academy of Sciences (IBSS, reg. number 2797657). The format of description follows Fomichev & Omelko (2024). Terminology and abbreviations used in text follows Zhang *et al.* (2023), Grall et Jäger (2020) with some modifications.

Eyes: ALE—anterior lateral eye, AME—anterior median eye, MOA—median ocular area, PLE—posterior lateral eye, PME—posterior median eye.

Leg segments: Fe—femur, Mt—metatarsus, Pa—patella, Ti—tibia, Tr—tarsus.

Spination: d—dorsal, p—prolateral, r—retrolateral, v—ventral.

Copulatory organs: AL—anterior margin of epigyne lateral lobe, C—conductor, CS—cymbial scopula, CT—stem of conductor, dRTA—dorsal retrolateral tibial apophysis, E—embolus, EB—embolic base, EF—epigynal field, ET—embolic tooth/teeth, FB—fusion bubbles, FD—fertilization duct, FW—first winding, IDS—internal duct system, LL—epigyne lateral lobe, LP—lateral projection, MS—median septum, MH—median hook, PL—posterior margin of epigyne lateral lobe, S—spermatheca, Sp—spermophor, T—tegulum, TE—tegular retrolateral extension, vRTA—ventral retrolateral tibial apophysis.

Taxonomy

Sparassidae Bertkau, 1872

Heteropodinae Thorell, 1873

Pandercetes L. Koch, 1875

Pandercetes L. Koch, 1875: 739.
Type species. *Pandercetes gracilis* L. Koch, 1875, from Australia (Queensland).

Diagnosis. Among Heteropodinae genera, males of *Pandercetes* most closely resemble those of *Martensopoda* Jäger, 2006, *Micropoda*, and *Barylestis* Simon, 1909 due to their very long, filiform embolus (flattened in *P. mindanaoensis* **sp. nov.**). They differ from *Martensopoda* by the absence of a cymbial spur (Figs 32, 36, 40; vs. presence, figs 2E, 5E in Sankaran *et al.* 2015) and from both *Martensopoda* and *Micropoda* by lacking an embolic apophysis (Figs 42, 45, 48; vs. presence, figs 2C, 5C in Sankaran *et al.* 2015, fig. 49 in Grall & Jäger 2022). From *Barylestis* they are easily recognized by the coiled embolic tip (Figs 42, 45, 48; vs. slightly curved, figs 14, 28, 30 in Jäger 2002). Females of *Pandercetes* resemble those of *Barylestis* and *Pseudopoda* in having large, fused lateral lobes (LL) of the epigyne. They can be distinguished from *Barylestis* by the absence of epigynal lateral wings (Figs 50, 53, 56, 59, 62; vs. presence, fig. 5 in Jäger 2008a, fig. 8 in Zhong *et al.* 2019a) and from *Pseudopoda* by strongly chitinized first windings (FW) of the epigyne (Figs 52, 55, 58, 61, 64; vs. membranous, figs 20, 24, 27 in Zhang *et al.* 2023).

Distribution. Indomalayan and the Australasian realms: Australia, India, Indonesia, Laos, Malaysia (not officially recorded in the last country according to WSC 2025, but photos of live specimens are shown in Koh & Bay (2019)), Myanmar, Papua New Guinea, Philippines, Vietnam.

Composition. Considering the species described in this study, *Pandercetes* consists of 23 species and subspecies: *P. barisanensis* **sp. nov.**, *P. bataanensis* **sp. nov.**, *P. batak* **sp. nov.**, *P. celatus* Pocock, 1899, *P. celebensis* Merian, 1911, *P. celebensis vulcanicola* Merian, 1911, *P. cheemai* **sp. nov.**, *P. decipiens* Pocock, 1899, *P. gracilis* , *P. isopus*, *P. jaegeri* **sp. nov.**, *P. longipes*, *P. macilentus* Thorell, 1895, *P. malleator* Thorell, 1890, *P. manoius*, *P. mindanaoensis* **sp. nov.**, *P. niger* Merian, 1911, *P. nigrogularis* (Simon, 1897), *P. ochreus*, *P. palliventris*, *P. peronianus*, *P. plumipes* and *P. plumosus*.

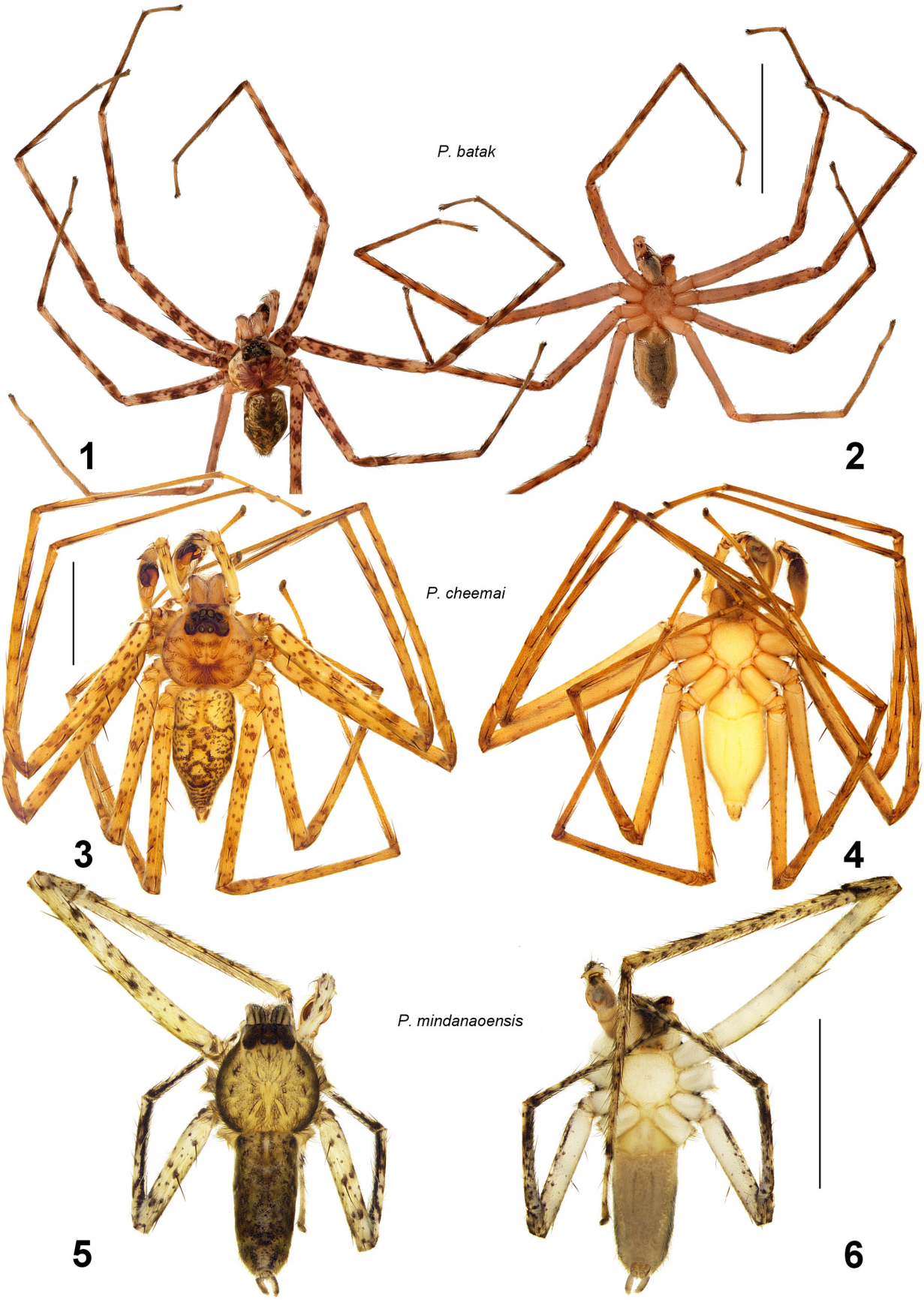
Remarks. As mentioned above, *Pandercetes* is one of the least studied genera of Heteropodinae and has never been revised on either a global or regional scale. The external morphology, structure of the copulatory organs, and biology of spiders in this genus have also not been studied in detail. Fortunately, the male of the type species was well illustrated by Jäger (2001), which allows us to confidently assign the new species described in this paper to *Pandercetes*. The structure of the copulatory organs in both sexes is fairly uniform: males have a very long, filiform embolus coiled at the tip, as well as a large fan-like conductor with long stem (Figs 29–49); females have large lateral lobes of the epigyne that form a long seam with fusion bubbles, very large and often strongly sclerotised first windings, and the internal duct system forming several turns (Figs 50–64).

The external morphology of *Pandercetes* is also consistent: all known species possess a dorsoventrally flattened body, an elevated cephalic region of the carapace (Figs 17–18), and cryptic coloration with green and brown patches (Figs 65–68). Legs bear long setae, sometimes forming tufts. Based on the listed morphological features and our observations, spiders of the genus appear to be adapted to life on tree trunks, where they adopt an ambush strategy, remaining immobile and closely aligned with the bark surface. Females of *Pandercetes* construct flattened egg sacs on tree bark or leaves and guard them (pers. obs., Fig. 66). The claw of the palpal tarsus in females bears very long teeth (Fig. 20), while the claws of the walking legs have short teeth (Fig. 21). The trilobate membrane (located dorsally between the metatarsus and tarsus) consists of median hook and lateral projections of similar size (Fig. 22), as in most Heteropodinae.

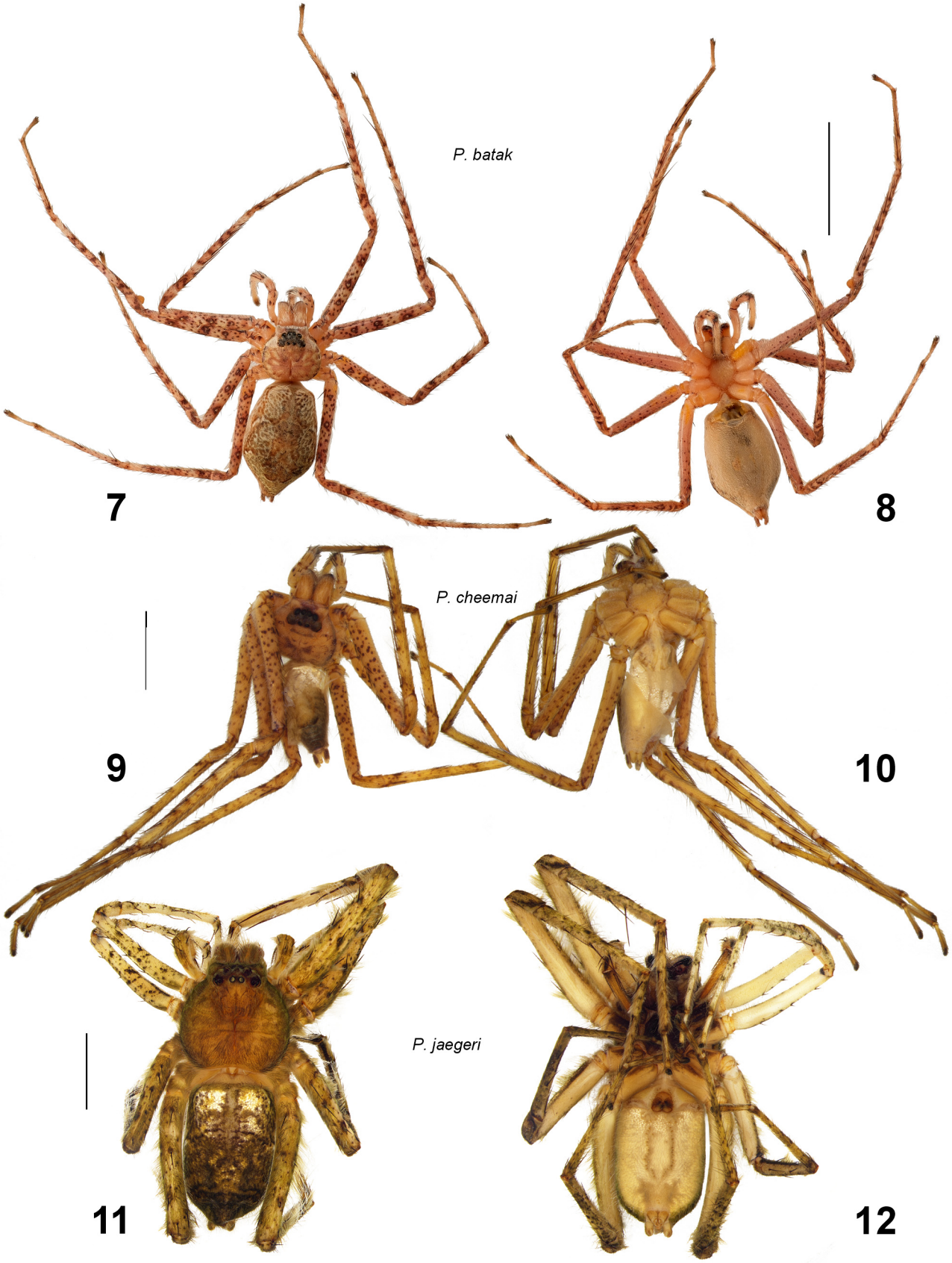
Pandercetes batak sp. nov.

Figs 1–2, 7–8, 29–32, 41–43, 50–52, 69

Type material. Holotype: ♂, **INDONESIA:** ***Aceh Province (Sumatra Island):*** Kedah village, [03°59′N, 97°15′E], 1300–1500 m, 1988 (precise date unknown), unknown collector (ISEA, 001.9325). **Paratype:** ♀, same data as holotype (ISEA, 001.9326).



FIGURES 1–6. *Pandercetes* spp., male habitus (1, 3, 5 dorsal; 2, 4, 6, ventral). 1–2 *Pandercetes batak* **sp. nov.**; 3–4 *P. cheemai* **sp. nov.**; 5–6 *P. mindanaoensis* **sp. nov.** Scale bars: 5 mm.



FIGURES 7–12. *Pandercetes* spp., female habitus (7, 9, 11 dorsal; 8, 10, 12, ventral). 7–8 *Pandercetes batak* **sp. nov.**; 9–10 *P. cheemai* **sp. nov.**; 11–12 *P. jaegeri* **sp. nov.** Scale bars: 5 mm.

Etymology. The specific name is derived from Batak – several Austronesian ethnic groups predominantly found in North Sumatra. Noun in apposition.

Diagnosis. Males of *Pandercetes batak* **sp. nov.** resemble those of *P. cheemai* **sp. nov.** (Figs 33–36) by the conformation of the bulb and the terminal part of embolus (E) forming only 2 coils, but can be distinguished by 1) dRTA with pointed tip in retrolateral view (Fig. 31; vs. tip rounded as in Fig. 35), 2) E originating at 3-o'clock Fig. 42; (vs. 2-o'clock as in Fig. 45), E with single large tooth (ET) at 6 o'clock position (vs. large tooth absent, with series of tiny teeth at 5 o'clock; cf. same Figs). Females of *P. batak* **sp. nov.** resemble those of *P. jaegeri* **sp. nov.** by the strongly curved anterior margins (AL) of epigyne lateral lobes (LL; vs. more or less straight in other species), but differ from the latter as well as all other congeners by 1) epigynal field widened anteriorly (Fig. 50, vs. narrow as in Fig. 56), 2) strongly protruding posterior margins (PL) of lateral lobes (LL) (vs. slightly protruding; cf. same Figs), 3) first windings (FW) separated from each other and running almost parallel (vs. touching each other, forming inverted V; cf. Figs 52 and 58).

Description. Male: Total length 10.6. Carapace: 4.75 long, 4.75 wide. Opisthosoma: 6.15 long, 3.45 wide. Coloration: Carapace dark brown medially, light brown laterally, with thin radial stripes and dark brown edges. Eye field and clypeus dark brown. Chelicerae, labium, endites, sternum and coxae pale yellow. Palps: Fe–Ti pale yellow with dark brown spots; cymbium dark brown proximally, yellow distally. Legs: Fe yellow brown with large and small dark brown spots dorsally and dark brown prolateral stripe; Pa–Mt yellow brown with dark brown large spots dorsally; Tr yellow. Opisthosoma dark gray with silver and yellow spots dorsally. The venter of the opisthosoma dirty yellow with guanine speckles laterally. Spinnerets dark gray dorsally, yellow gray ventrally. Eye sizes and interdistances: AME 0.34, ALE 0.43, PME 0.29, PLE 0.43, AME–AME 0.09, AME–ALE 0.06, PME–PME 0.21, PME–PLE 0.54, AME–PME 0.46, ALE–PLE 0.51. Clypeus height: at AME 0.53, at ALE 0.50. Legs and palp measurements: Palp: 2.6, 1.2, 1.5, -, 2.9 (8.2). Leg I: 9.2, 2.6, 10.1, 8.1, 2.5 (32.5). Leg II: 9.9, 2.6, 10.6, 8.6, 2.6 (34.3). Leg III: 8.0, 2.0, 7.9, 7.6, 2.2 (27.7). Leg IV: 9.2, 2.0, 9.0, 10.1, 2.6 (32.9). Leg formula: 2413. Legs and palp spination: Palp: Fe d3 p1 r1; Pa p1 r1; Ti d1 p3 r1. Leg I: Fe d3 p3 r3; Pa p1 r1; Ti d3 v2-2-2-2-2-2-2; Mt p1 r1 v2-2. Leg II: Fe d3 p3 r3; Pa p1 r1; Ti d3 v2-2-2-2-2-2-2; Mt p1 r1 v2-2. Leg III: Fe d3 p3 r3; Pa p1; Ti d3 v2-2-2-2; Mt p2 r1 v2-2. Leg IV: Fe d3 p3 r2; Pa spineless; Ti d2 p2 r2 v2-2; Mt p2 r1 v2-2. Chelicerae with 3 promarginal and 4 retromarginal teeth.

Male palp as shown in Figs 29–32, 41–43. Tibia ca. 1.6 times longer than wide. Ventral retrolateral tibial apophysis (vRTA) long, hook-like. Dorsal retrolateral tibial apophysis (dRTA) large, with sub-rounded tip in ventral and with pointed tip in retrolateral view. Prolateral side of tibia with three long, stiff, parallel setae, retrolateral side with single one. Cymbium 1.9 times longer than wide, with cymbial scopula (CS) disto-dorsally. Bulb 1.2 times longer than wide (width measured including embolic base). Tegulum (T) large, oval with slightly bulging surface, extended in pro- and retrolateral view. Tegular extension (TE) short, wide, rounded, and directed posteriorly. Spermophor (Sp) clearly visible. Conductor (C) arising from anterior part of bulb, elliptical in shape with long stem, covering the apex of embolus. Embolus (E) long, originating retrolaterally at 3-o'clock, with wide base (EB) and single large tooth at 6-o'clock position. Tip of embolus forming 2 coils.

Female: Total length 16.2. Carapace: 5.5 long, 5.35 wide. Opisthosoma: 10.8 long, 6.7 wide. Coloration: Carapace yellow with brown radial strokes and dark edges. Eye field brown. Clypeus brown medially, yellow laterally. Chelicerae, labium, endites, sternum and coxae yellow. Palps yellow, with dark brown spots. Legs: Fe yellow with dark brown speckles dorsally and three prolateral brown rings on each leg. Pa–Ti yellow with dark brown speckles dorsally. Mt–Tr yellow. Opisthosoma silvery yellow with brown speckles dorsally. The venter of the opisthosoma yellow. Spinnerets gray dorsally, yellow ventrally. Eye sizes and interdistances: AME 0.34, ALE 0.49, PME 0.33, PLE 0.47, AME–AME 0.17, AME–ALE 0.11, PME–PME 0.24, PME–PLE 0.63, AME–PME 0.54, ALE–PLE 0.50. Clypeus height: at AME 0.64, at ALE 0.64. Legs and palp measurements: Palp: 2.7, 1.5, 1.8, -, 3.2 (9.2). Leg I: 8.8, 2.9, 9.3, 7.2, 2.2 (30.4). Leg II: 9.4, 2.9, 9.7, 7.4, 2.3 (31.7). Leg III: 7.7, 2.3, 6.9, 6.8, 2.0 (25.7). Leg IV: 9.2, 2.2, 7.9, 8.9, 2.5 (30.7). Leg formula: 2413. Legs and palp spination: Palp: Fe d3 p1 r1; Pa r1; Ti d1 p3 r2; Ti p3 r3. Leg I: Fe d3 p3 r3; Pa r1; Ti d1 v2-2-2-2-2-2-2; Mt p1 r1 v2-2. Leg II: Fe d3 p3 r3; Pa r1; Ti d1 v2-2-2-2-2-2-2; Mt p1 r1 v2-2. Leg III: Fe d3 p3 r1; Pa spineless; Ti d1 v2-2-2-2; Mt p2 r1 v2-2. Leg IV: Fe d3 p3 r1; Pa spineless; Ti r1 v2-2-1; Mt p1 r1 v2-2. Chelicerae with 3 promarginal and 4 retromarginal teeth.

Epigyne as shown in Figs 50–52. Epigynal field (EF) as long as wide, widened anteriorly. Lateral lobes (LL) large, sclerotized, posteriorly fused forming seam with number of fusion bubbles (FB). Seam length/AL length ratio ca. 0.92. Anterior margins (AL) of LL strongly curved, forming horizontal brace shape. Posterior margins (PL) of

LL strongly extended, rounded. Anterior part of median septum (MS) clearly visible, widened; posterior part hidden under LL. First windings (FW) strongly chitinized slightly curved, widely separated and not forming inverted V. Internal duct system (IDS), poorly visible through cuticle in ventral view, making ca. 3 turns. Spermathecae (S) sub-rounded, strongly chitinized, separated from each other.

Distribution. Known only from the type locality, Indonesia: Sumatra (Fig. 69).

***Pandercetes cheemai* sp. nov.**

Figs 3–4, 9–10, 17–22, 33–36, 44–46, 53–55, 65–66, 69

Type material. Holotype: ♂, **LAOS:** ***Vientiane Province:***, env. of Nam-Lik Eco-Village, 18°36′53.18″N 102°24′31.87″E, 200 m, secondary forest, 16 May–13 June 2016, M.M. Omelko (ZMMU). **Paratype:** ♀, together with the holotype (ZMMU).

Etymology. The species is named in honor of Shavez Cheema, the founder of the non-profit conservation organization 1Stop Borneo, as a token of appreciation for his efforts in wildlife conservation.

Diagnosis. Males of *Pandercetes cheemai* **sp. nov.** resemble those of *P. batak* **sp. nov.** (Figs 29–32) in the conformation of the bulb and the terminal part of the embolus (E), which forms only two coils, but can be distinguished by: 1) dRTA with a rounded tip in retrolateral view (Fig. 35; vs. pointed as in Fig. 31), 2) E originating at the 2-o'clock position (Fig. 45; vs. 3-o'clock as in Fig. 42), and 3) E lacking a single large tooth, instead bearing a series of tiny teeth around the 5-o'clock position (cf. Fig. 45; vs. one large tooth at 6-o'clock as in Fig. 42). Females resemble those of *P. nigrogularis* from Java Island (Indonesia) (Figs 53–55 vs. figs 177, 180 in Jäger 2002) by the straight anterior margins (AL) of epigyne lateral lobes (LL), forming nearly right angle and sub-rounded spermathecae (S), they can be distinguished from those of the latter species by 1) smoothly rounded posterior margins (PL) of LL (Figs 53–55; vs. nearly straight, figs 177, 180 in Jäger 2002), 2) internal duct system (IDS) clearly diverging away from epigyne longitudinal axis (Fig. 55; vs. almost parallel to longitudinal axis, fig. 178 in Jäger 2002).

Description. Male: Total length 10.17. Carapace: 4.46 long, 4.51 wide. Opisthosoma: 6.18 long, 3.11 wide. Coloration: Carapace light brown with dark brown irregular spots in its middle part and edges. Clypeus yellow laterally, gray medially. Chelicerae light brown. Labium and endites brown. Sternum yellow, without pattern. Coxae yellow. Palps: Fe–Pa yellow, Ti yellow with black longitudinal stripe prolaterally, cymbium brown with black spot proximally. Legs: Fe yellow with number of tiny spots dorsally and with few spots ventrally; Pa yellow with spots; Ti yellowish with blurry brown spots; Mt–Tr yellowish. Opisthosoma yellow with number of tiny black spots dorsally, light yellow ventrally. Spinnerets brown ventrally, black dorsally. Eye sizes and interdistances: AME 0.44, ALE 0.45, PME 0.29, PLE 0.44, AME–AME 0.05, AME–ALE 0.04, PME–PME 0.19, PME–PLE 0.51, AME–PME 0.47, ALE–PLE 0.53. Clypeus height at AME 0.38, at ALE 0.44. Legs and palp measurements: Palp: 2.55, 1.02, 1.33, -, 2.79 (7.69). Leg I: 9.69, 2.66, 11.75, 9.80, 2.77 (36.67). Leg II: 10.14, 2.38, 12.07, 10.02, 2.86 (37.47). Leg III: 8.18, 1.75, 8.67, 8.59, 2.23 (29.42). Leg IV: 9.36, 1.87, 9.31, 10.99, 2.37 (33.9). Leg formula: 1243. Legs and palp spination: Palp: Fe d3 p1 r1; Pa p1 r1; Ti d3 p3 r1. Leg I: Fe d3 p3 r3; Pa p1 r1; Ti d3 2-2-2-2-2-2-2v; Mt p1 r1 2-2v. Leg II: Fe d3 p3 r3; Pa p1 r1; Ti d3 2-2-2-2-2-2-2v; Mt p1 r1 2-2v. Leg III: Fe d3 p3 r3; Pa p1; Ti d1 2-2-2-2v; Mt p2 r2 2-2v. Leg IV: d3 p2 r2; Pa spineless; Ti p3 r3 2-2v; Mt p2 r2 2-2v. Chelicerae with 3 promarginal and 4 retromarginal teeth.

Male palp as shown in Figs 33–36, 44–46. Tibia ca. 1.5 times longer than wide. Ventral retrolateral tibial apophysis (vRTA) short, hook-like. Dorsal retrolateral tibial apophysis (dRTA) large, plate-like with a slightly twisted tip, rounded in ventral and triangular with rounded tip in retrolateral view. Prolateral side of tibia with three long, stiff, parallel setae, retrolateral and dorsal sides with one shorter setae. Cymbium 1.2 times longer than wide, with cymbial scopula (CS) disto-dorsally. Bulb 1.3 times longer than wide (width measured including embolic base). Tegulum (T) large, kidney-shaped with flattened surface, extended in pro- and retrolateral view. TE wide, rounded, and directed retrolaterally. Spermophor (Sp) barely visible. Conductor (C) arising from anterior part of bulb, elliptical in shape with long stem, covering the apex of embolus. Embolus (E) long, originating retrolaterally at 2-o'clock, with wide base (EB) and series of tiny teeth (ET) at 4–5-o'clock position. Tip of embolus forming 2 coils.

Female: Total length 11.07. Carapace: 4.86 long, 2.23 wide. Opisthosoma: 8.25 long, 3.06 wide. Coloration: Carapace brown with dark brown irregular spots in its middle part, edges dark brown. Clypeus yellow laterally, gray medially. Chelicerae yellow. Labium and endites brown. Sternum yellow, without pattern. Coxae light brown.

Palps yellow. Legs: Fe yellow with number of tiny spots dorsally and with few spots ventrally; Pa yellow with spots; Ti yellowish with blurry brown spots; Mt–Tr yellowish. Opisthosoma yellow with black spots dorsally (pattern poorly visible owing to bad preservation of specimen), light brown ventrally. Spinnerets light brown ventrally, black dorsally. Eye sizes and interdistances: AME 0.34, ALE 0.51, PME 0.32, PLE 0.49, AME–AME 0.10, AME–ALE 0.06, PME–PME 0.20, PME–PLE 0.54, AME–PME 0.54, ALE–PLE 0.62. Clypeus height: at AME 0.43, at ALE 0.45. Legs and palp measurements: Palp: 2.59, 1.38, 1.87, -, 2.93 (8.77). Leg I: 8.51, 2.63, 10.05, 7.55, 2.22 (30.96). Leg II: 9.19, 2.71, 10.53, 7.87, 2.33 (32.63). Leg III: 7.75, 2.11, 7.69, 7.29, 2.15 (26.99). Leg IV: 8.73, 1.80, 8.80, 9.28, 2.51 (31.12). Leg formula: 1243. Legs and palp spination: Palp: Fe d3 p1 r1; Pa p1 r1; Ti d1 p3 r2; Tr p3 r3. Leg I: Fe d3 p3 r3; Pa spineless; Ti v2-2-2-2-2-2-2; Mt p1 r1 v2-2. Leg II: Fe d3 p3 r3; Pa spineless; Ti v2-2-2-2-2-2-2; Mt r1 v2-2. Leg III: Fe d3 p3 r3; Pa spineless; Ti v2-2-2-2; Mt p1 r1 v2-2. Leg IV: Fe d3 p3 r2; Pa spineless; Ti p1 r1 v1-2; Mt p1 r1 v2-2. Chelicerae with 2 promarginal and 4 retromarginal teeth.

Epigyne as shown in Figs 53–55. Epigynal field (EF) slightly longer than wide, narrowed anteriorly. Lateral lobes (LL) large, sclerotized, posteriorly fused forming seam with number of fusion bubbles (FB). Seam length/AL length ratio ca. 1.5. Anterior margins (AL) of LL straight, forming angle of 80 degrees. Posterior margins (PL) of LL smoothly rounded. Anterior part of median septum (MS) thin, poorly visible; posterior part hidden under LL. First windings (FW) strongly chitinized with almost straight edges, forming inverted V. Internal duct system (IDS), chitinized, visible through cuticle in ventral view, making ca. 4 turns. Spermathecae (S) sub-rounded, touching each other. Fertilization ducts (FD) narrow, long.

Note. The discovery of this species represents the northernmost known record for the whole genus.

Distribution. Known only from the type locality, Laos (Fig. 69).

***Pandercetes mindanaoensis* sp. nov.**

Figs 5–6, 23, 37–40, 47–49, 69

Type material. Holotype: ♂, **PHILIPPINES:** ***Cotabato Province:***, Mindanao Island, Apo Mountain, [7°1'N, 125°13'E], 1350 m, abandoned building, 26–30 January 1995, A.M. Emelyanov (ZMMU).

Etymology. The new species is named after Mindanao Island, where it was collected, adjective.

Diagnosis. *P. mindanaoensis* **sp. nov.** resembles *P. longipes* from Papua New Guinea (Figs 38, 48 vs. fig. 173 in Jäger 2002) by hooked dorsal (dRTA) and thin, pointed ventral retrolateral apophyses (vRTA) in retrolateral view, flattened cymbium and small sized bulb. The new species can be distinguished from the latter by embolus (E) originating at 12-o'clock (Figs 38, 48; vs. 5 o'clock, fig. 173 in Jäger 2002).

Description. Male: Total length 7.53. Carapace: 3.29 long, 3.05 wide. Opisthosoma: 4.27 long, 1.94 wide. Coloration: Carapace light brown with black radial stripes, four spots and black edges. Clypeus with small yellow spot medially, black laterally. Chelicerae yellow with thin black longitudinal stripes. Labium and endites yellow. Sternum yellow, without pattern. Coxae yellow. Palps: Fe–Pa yellowish with tiny black spots, Ti yellow with black longitudinal stripes ventrally and dorsally, cymbium light brown with black spot at its base dorsally. Legs (I and III): Fe yellow with tiny black spots dorsally, yellow ventrally; Pa light brown with black spots; Ti I yellow with tiny black spots dorsally, yellow ventrally; Ti III Mt–Tr yellow with tiny black spots. Opisthosoma dark brown dorsally with poorly visible pattern, uniform gray ventrally. Spinnerets brown ventrally, black dorsally. Eye sizes and interdistances: AME 0.20, ALE 0.28, PME 0.18, PLE 0.26, AME–AME 0.15, AME–ALE 0.08, PME–PME 0.17, PME–PLE 0.41, AME–PME 0.25, ALE–PLE 0.39. Clypeus height: at AME 0.18, at ALE 0.17. Legs and palp measurements: Palp: 1.63, 0.84, 0.58, -, 1.80 (4.85). Leg I: 7.20, 1.93, 8.05, 7.05, 1.72 (25.95). Leg II: absent. Leg III: 3.93, 1.06, 3.25, 3.64, 1.18 (13.06). Leg IV: absent. Legs and palp spination: Palp: Fe d2 p1 r1; Pa p1; Ti d1 p3 r1; Mt -. Leg I: Fe d2 p3 r3; Pa spineless; Ti d3 v2-2-2-2-2-2; Mt p1 r1 v2-2-2. Leg II: absent. Leg III: Fe d2 p3 r3; Pa spineless; Ti p1 r2 v2-2; Mt p1 r1 v2-2. Leg IV: absent. Chelicerae with 2 promarginal and 4 retromarginal teeth.

Male palp as shown in Figs 23, 37–40, 47–49. Tibia ca. 1.3 times longer than wide. vRTA large, straight, with hooked tip. dRTA small, spine-like with pointed tip both in ventral and retrolateral view. Prolateral side of tibia with three long, stiff, parallel setae, retrolateral side with short one, one seta on dorsal side. Cymbium strongly flattened, 2.4 times longer than wide, disto-dorsal cymbial scopula (CS) sparse. Bulb 1.4 times longer than wide. Tegulum (T) kidney-shaped with retrolateral extension (TE). TE narrow, rounded, and directed anteriorly. Spermophor (Sp) visible in ventral view. Conductor (C) arising from anterior part of bulb, sub-rounded with very long stem (CT),

covering the apex of embolus. Embolus (E) very long, flattened, originating anteriorly, with narrow base, without teeth. Tip of embolus forming 3 coils.

Female: unknown.

Distribution. Known only from the type locality, Philippines: Mindanao Island (Fig. 69).

***Pandercetes jaegeri* sp. nov.**

Figs 11–12, 26–28, 56–58, 69

Type material. Holotype: ♀, **PHILIPPINES:** ***Nueva Ecija Province:*** Luzon Island, [15°39'N, 121°16'E], 370 m, 18 February 1995, A.M. Emelyanov (ZMMU).

Etymology. The species is named in honor of the renowned arachnologist Peter Jäger as a token of appreciation for his significant contribution to the study of various spider groups in Southeast Asia.

Diagnosis. Females of *Pandercetes jaegeri* **sp. nov.** resemble those of *P. batak* **sp. nov.** (Figs 56–58 and 50–52) by the strongly curved anterior margins (AL) of epigyne lateral lobes (LL; vs. more or less straight in other species), but differ from the latter by 1) epigynal field narrow anteriorly (Fig. 56, vs. widened, Fig. 50), 2) slightly protruding posterior margins (PL) of lateral lobes (LL) (vs. strongly protruding; cf. same Figs), 3) first windings (FW) touching each other, forming inverted V (Fig. 58, vs. separated from each other and running almost parallel, Fig. 52).

Description. Female: Total length 18.36. Carapace: 7.09 long, 7.41 wide. Opisthosoma: 10.90 long, 5.57 wide. Coloration: Carapace brown with pattern consisting of dark blurry spots, edges dark brown. Clypeus dark brown. Chelicerae dark brown with yellow longitudinal stripe. Labium and endites dark brown. Sternum black. Palps: Fe–Ti light brown with black spots and stripes, Tr brown. Legs: Coxae I black; II–IV black anteriorly, yellow posteriorly (black part decreasing from II to IV). Fe–Ti light brown with number of black spots dorsally, uniform yellow ventrally; Mt light brown with tiny black spots, Tr brown. Opisthosoma dark brown dorsally with white guanine spots in its anterior part; yellow with couple of brown longitudinal stripes and large posterior spot ventrally; dark gray with yellow spots laterally. Spinnerets light brown ventrally and dark gray dorsally. Eye sizes and interdistances: AME 0.41, ALE 0.57, PME 0.40, PLE 0.58, AME–AME 0.15, AME–ALE 0.13, PME–PME 0.23, PME–PLE 0.83, AME–PME 0.54, ALE–PLE 0.72. Clypeus height: at AME 0.42, at ALE 0.45. Legs and palp measurements: Palp: 2.97, 1.55, 1.65, -, 3.83 (10). Leg I: 10.46, 3.24, 10.53, 8.23, 2.53 (34.99). Leg II: 10.53, 3.17, 10.84, 8.10, 2.49 (35.13). Leg III: 7.64, 2.55, 6.40, 6.67, 2.20 (25.46). Leg IV: 9.99, 2.40, 8.25, 8.55, 2.56 (31.75). Leg formula: 1243. Legs and palp spination: Palp: Fe d2 p1 r1; Pa p1 r1; Ti d2 p3 r2; Mt p2 r3. Leg I: Fe d3 p2 r2; Pa spineless; Ti 2-2-2-2v; Mt p1 r1 2-2v. Leg II: Fe d3 p3 r3; Pa r1; Ti 2-2-2-2v; Mt p1 r1 2-2v. Leg III: Fe d3 p2 r2; Pa spineless; Ti 2p 2r 2-2v; Mt p1 r1 2-2v. Leg IV: Fe d3 p2 r1; Pa spineless; Ti 2-2v; Mt p1 r1 2-2v. Femora and tibiae of all legs with tufts (tibiae) or solid brush (femora) consisting of long setae (Figs 26–28). Chelicerae with 3 promarginal and 4 retromarginal teeth.

Epigyne as shown in Figs 56–58. Epigynal field slightly longer than wide, narrowed anteriorly. Lateral lobes (LL) large, sclerotized, posteriorly fused forming seam with number of fusion bubbles (FB). Seam length/AL length ratio ca. 0.96. Anterior margins (AL) of LL curved, forming angle of 40 degrees. Posterior margins (PL) of LL smoothly rounded. Anterior part of median septum (MS) clearly visible, widened, posterior part hidden under LL. First windings (FW) chitinized not stronger than other parts of internal duct system (IDS), semitransparent, with slightly curved edges, forming inverted V. IDS chitinized, visible through cuticle in ventral view, making ca. 4–5 turns. Spermathecae (S) elliptical, separated from each other. Fertilization ducts (FD) narrow, long.

Male: unknown.

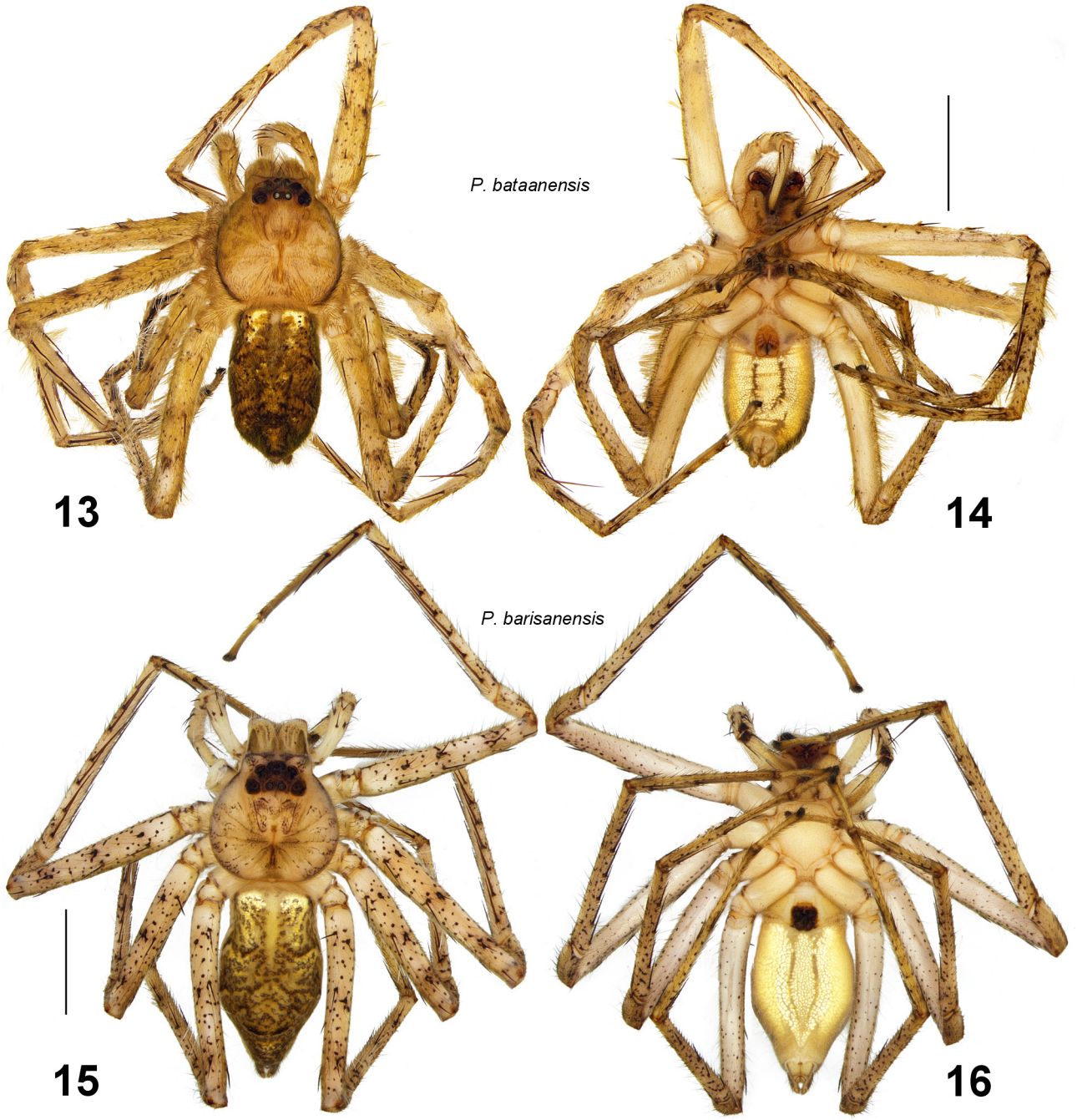
Distribution. Type locality only, Philippines: Luzon Island (Fig. 69).

***Pandercetes bataanensis* sp. nov.**

Figs 13–14, 24–25, 59–61, 69

Type material. Holotype: ♀, **PHILIPPINES:** ***Bataan Province:*** Luzon Island, [14°44'N, 120°25'E], 420 m, 19–20 February 1995, A.M. Emelyanov (ZMMU).

Etymology. The new species is named after Bataan Province on Luzon Island, where it was collected, adjective.



FIGURES 13–16. *Pandercetes* spp., female habitus (13, 15 dorsal; 14, 16 ventral). 13–14 *Pandercetes bataanensis* **sp. nov.**; 15–16 *P. barisanensis* **sp. nov.** Scale bars: 5 mm.

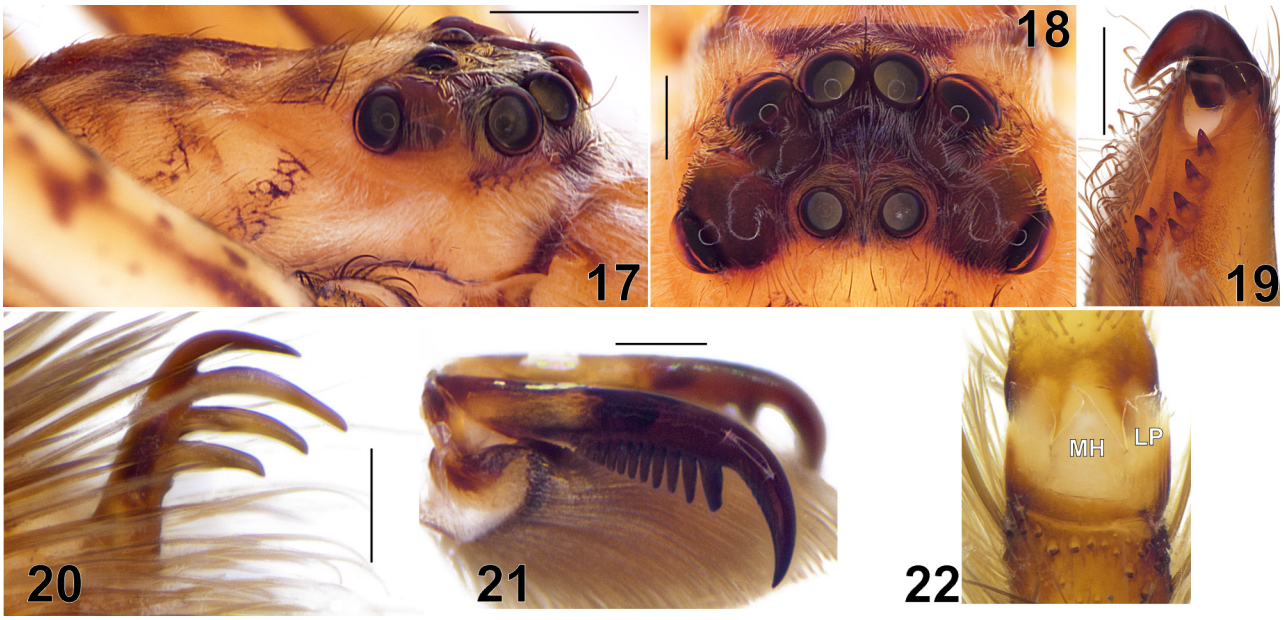
Diagnosis. *Pandercetes bataanensis* **sp. nov.** differs from all illustrated species of the genus, except for the poorly known *P. manoius* and *P. plumosus* (both from New Guinea; the types of the first species are housed in the Royal Belgian Institute of Natural Sciences, Brussels, Belgium, while the location of the types of the second species remains unclear), by its epigynal field (EF), which is significantly longer than wide (ratio 1.4 times vs. 1–1.3). A comparison of the epigyne of the new species with those of the two mentioned species is not possible because they were illustrated with single black-and-white images, their internal structures were not depicted, and both species have never been redescribed. Nevertheless, *P. bataanensis* **sp. nov.** can be distinguished from *P. manoius* by its significantly smaller body size (total length 12.47 mm, carapace length 5.72 mm, opisthosoma length 6.81 mm, and leg I length 29.88 mm vs. 16 mm, 7 mm, 9 mm, and 41 mm, respectively). Females of the new species differ from *P. plumosus* by the pattern on the sternum (vs. uniformly yellow) and the spination of the femora of its legs (d3 p3 r4, d3 p3 r3, d3 p2 r1, and d3 p1 r1 vs. “3, 3, 3”, “3, 3, 3”, “3, 3, 2” and “1 posterior”).

Description. Female: Total length 12.47. Carapace: 5.72 long, 5.53 wide. Opisthosoma: 6.81 long, 4.05 wide. Coloration: Carapace light brown with few dark spots and black edges. Clypeus yellow with two dark gray spots medially. Chelicerae yellow with grayish spots. Labium and endites light brown. Sternum with pattern consisting of black anterior and yellow posterior parts. Palps: all segments uniformly yellow. Legs: Coxae yellow. Fe–Ti light brown with number of black spots dorsally, uniformly yellow ventrally; Mt light brown with tiny black spots, Tr light brown. Opisthosoma dark brown, dorsally with white guanine spots in its anterior part; yellow with couple of brown longitudinal stripes ventrally, gray with yellow spots laterally. Spinnerets light brown ventrally and dark brown dorsally. Eye sizes and interdistances: AME 0.26, ALE 0.42, PME 0.29, PLE 0.44, AME–AME 0.16, AME–ALE 0.16, PME–PME 0.22, PME–PLE 0.72, AME–PME 0.47, ALE–PLE 0.67. Clypeus height: at AME 0.42, at ALE 0.37. Legs and palp measurements: Palp: 2.70, 1.36, 1.50, -, 3.49 (9.05). Leg I: 8.79, 3.00, 9.08, 6.92, 2.09 (29.88). Leg II: 8.44, 2.23, 8.75, 6.65, 1.92 (27.99). Leg III: 6.14, 1.80, 5.32, 5.19, 1.88 (20.33). Leg IV: 8.16, 2.12, 6.66, 6.92, 2.20 (26.06). Leg formula: 1243. Legs and palp spination: Palp: Fe d2 p1 r1; Pa p1 r1; Ti d1 p3 r2; Mt -; Tr p3 r3. Leg I: Fe d3 p3 r4; Pa r1; Ti 2-2-2-2v; Mt p1 r1 2-2v. Leg II: Fe d3 p3 r3; Pa r1; Ti 2-2-2-2v; Mt p1 r1 2-2v. Leg III: Fe d3 p2 r1; Pa -; Ti p1 r1 2-2v; Mt p1 r1 2-2v. Leg IV: Fe d3 p1 r1; Pa -; Ti 1-2v; Mt p1 r1 2-2v. Femora and tibiae of all legs with tufts (tibiae) or solid brush (femora) of long setae (Figs 24–25). Chelicerae with 3 promarginal and 4 retromarginal teeth.

Epigyne as shown in Figs 59–61. Epigynal field (EF) much longer than wide (1.4 times), narrowed anteriorly. Lateral lobes (LL) large, sclerotized, posteriorly fused forming seam with number of fusion bubbles (FB). Seam length/AL length ratio ca. 1.09. Anterior margins (AL) of LL almost straight, forming angle of 40 degrees. Posterior margins (PL) of LL smoothly rounded. Anterior part of median septum (MS) thin, poorly visible; posterior part hidden under LL. First windings (FW) chitinized slightly stronger than other parts of internal duct system (IDS), semitransparent, with straight edges, forming inverted U. IDS chitinized, visible through cuticle in ventral view, making ca. 5 turns. Spermathecae (S) sub-rectangular, slightly separated from each other. Fertilization ducts (FD) narrow.

Male: unknown.

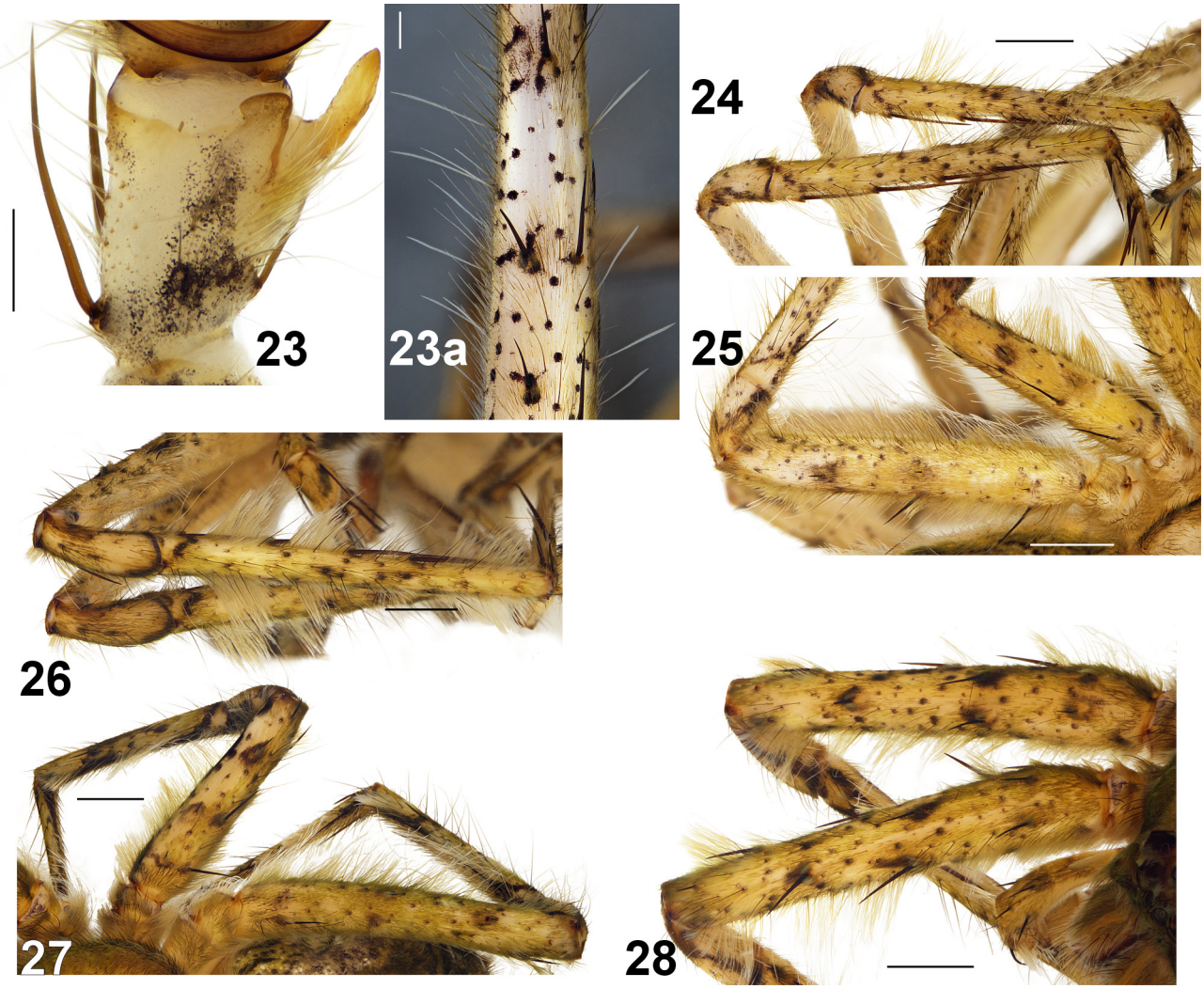
Distribution. Type locality only, Philippines: Luzon Island (Fig. 69).



FIGURES 17–22. *Pandercetes cheemai,* female. 17 Carapace (lateral); 18 Eye field (dorsal); 19 Left chelicera (lateral); 20 Palpal claw (lateral); 21 Leg I claw (lateral); Trilobate membrane (dorsal). Abbreviations: LP – lateral projection, MH – median hook. Scale bars: 17=1 mm; 18=0.5 mm; 19=0.2 mm; 20, 21=0.1 mm.

***Pandercetes barisanensis* sp. nov.**

Figs 15–16, 23a, 62–64, 69



FIGURES 23–28. 23 *P. mindanaoensis* **sp. nov.** (male palpal tibia, ventral); 23a *P. barisanensis* **sp. nov.** (femur I, dorsal); 24–25 *P. bataanensis* **sp. nov.** female (24 tibiae I–II dorsal, 25 femora III–IV prolateral); 26–28 *P. jaegeri* **sp. nov.** female (26 tibia I–II, 27 femora III–IV, femora I–II, all dorsal). Scale bars: 23=0.25 mm; 23a=0.5 mm; 24–28=2 mm.

Type material. Holotype: ♀, **INDONESIA**: ***Aceh Province (Sumatra Island):*** Ketambe village, [03°41′N, 97°39′E], 400–500 m, 1988 (precise date unknown), unknown collector (ZMMU).

Etymology. The specific epithet *barisanensis* refers to the Bukit Barisan mountain range, which extends along the western spine of Sumatra and includes the type locality of the new species. The name is derived from the Indonesian term "Bukit Barisan" meaning "row of hills". Adjective.

Diagnosis. Females of *Pandercetes barisanensis* **sp. nov.** resemble those of *P. batak* **sp. nov.** and *P. cheemai* **sp. nov.** by having seven pairs of ventral spines at tibiae I and II (vs. 4 and 4 or 4 and 2 in *P. jaegeri* **sp. nov.** and *P. bataanensis* **sp. nov.**), but can be distinguished by the strongly chitinised epigynal field (EF), which remains almost non-transparent after maceration (Figs 62–64, vs. less chitinised, Figs 50–55), and by the anterior margins (AL) of the lateral lobes (LL) forming a U-shape (Fig. 62, vs. horizontal brace or V-shape, Figs 50, 53).

Description. Female: Total length 14.48. Carapace: 5.78 long, 5.86 wide. Opisthosoma: 8.74 long, 4.58 wide. Coloration: Carapace light brown with few dark spots and gray edges. Clypeus yellow with small black spots and black lower edge. Chelicerae yellow with grayish triangle spots on lateral sides. Labium and endites yellow. Sternum uniform yellow. Palps: all segments yellow, tarsus with black proximal spot dorsally, tibia with black distal spot dorsally. Legs: Coxae yellow, all other segments except Tr yellow with number of tiny black spots dorsally, uniform yellow ventrally, dorsal sides darker than ventral; Tr uniform light brown. Opisthosoma dark brown dorsally with white guanine spots in its anterior part and number of small yellow spots posteriorly; yellow with couple of thin brown longitudinal stripes ventrally, yellow with gray spots laterally. Spinnerets light brown ventrally and dark

brown dorsally. Eye sizes and interdistances: AME 0.37, ALE 0.50, PME 0.37, PLE 0.50, AME–AME 0.12, AME–ALE 0.96, PME–PME 0.14, PME–PLE 0.67, AME–PME 0.38, ALE–PLE 0.46. Clypeus height: at AME 0.62, at ALE 0.56. Legs and palp measurements: Palp: 2.71, 1.28, 1.87, -, 2.96 (8.82). Leg I: 8.71, 2.87, 9.87, 7.01, 2.22 (30.68). Leg II: 9.29, 2.75, 10.39, 7.79, 2.05 (32.27). Leg III: 7.53, 2.20, 7.03, 6.87, 2.17 (25.80). Leg IV: 9.1, 2.13, 7.66, 8.78, 2.41 (30.08). Leg formula: 2143. Legs and palp spination: Palp: Fe d2(3) p1 r1; Pa p1 r1; Ti d2 p3 r2; Mt -; Tr p3 r3. Leg I: Fe d3 p3 r3; Pa r1; Ti 2-2-2-2-2-2-2v; Mt p1 r1 2-2v. Leg II: Fe d3 p3 r3; Pa r1; Ti 2-2-2-2-2-2-2v; Mt p1 r1 2-2v. Leg III: Fe d3 p3 r2; Pa -; Ti 2-2-1-2-2-1-2v; Mt p1 r1 2-2v. Leg IV: Fe d2 p3 r2; Pa -; Ti 1p 2r 2-2v; Mt p2 r2 2-2v. Tufts or brushes on legs absent but femora as well as lateral sides of abdomen with long white setae widened distally (Fig. 23a). Chelicerae with 3 promarginal and 3-4 retromarginal teeth (3 on left and 4 on right).

Epigyne as shown in Figs 62–64. Epigynal field (EF) slightly longer than wide (1.1 times), strongly chitinized. Lateral lobes (LL) large, concave, posteriorly fused forming seam with poorly visible fusion bubbles (FB). Seam length/AL length ratio ca. 1. Anterior margins (AL) of LL almost straight, forming U-shape. Posterior margins (PL) of LL extended, smoothly rounded. Anterior part of median septum (MS) clearly visible, widened; posterior part hidden under LL. First windings (FW) strongly chitinized with straight edges. Internal duct system (IDS) chitinized, poorly visible through cuticle in ventral view, running ca. 3 turns. Spermathecae (S) strongly chitinized, poorly visible, rounded, separated from each other. Fertilization ducts (FD) invisible.

Male: unknown.

Distribution. Type locality only, Indonesia: Sumatra (Fig. 69).

Pandercetes longipes Thorell, 1881

Fig. 69

P. longipes Thorell, 1881: 312 (♂).
P. longipes: Jäger, 2002: 57, f. 173-176 (♂).

Notes. In WSC (2025), this species is mistakenly listed for Yule Island. However, according to Thorell (1881), the type locality is given as: "*Exemplum singulum valde corrugatum et vitiatum, ad Ansus ins. Jobi a Cel. Beccari captum vidi*" [A single, very wrinkled and damaged specimen was collected at Ansus, Jobi Island, by Cel. Beccari.] Jobi Island, now known as Yapen Island, is located approximately 1400 km northwest of Yule Island.

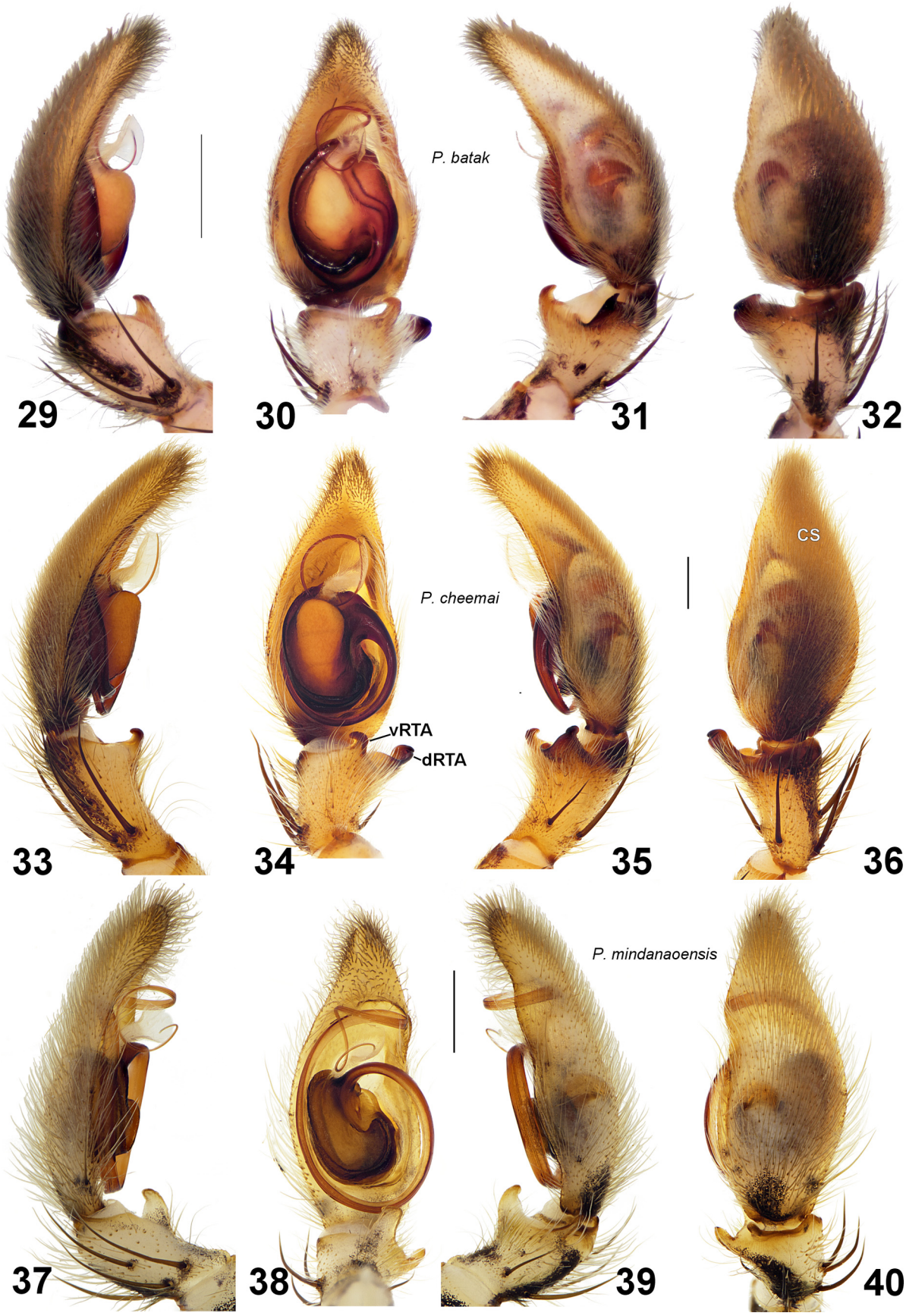
Pandercetes peronianus (Walckenaer, 1837)

Fig. 69

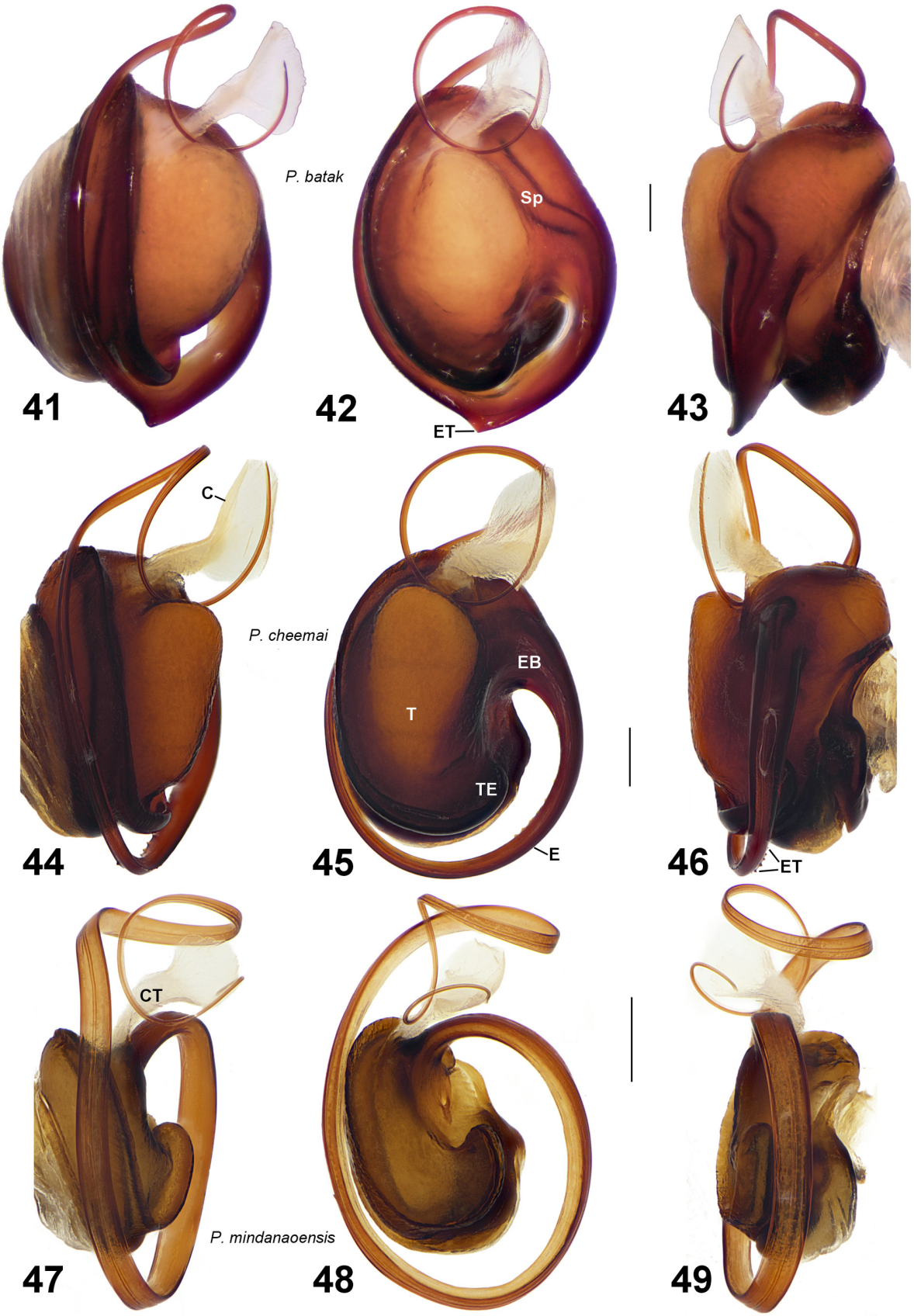
Delena peronianus Walckenaer, 1837: 493 (♂).
Heteropoda peroniana: Simon, 1880: 269.

Notes. The WSC (2025) lists the species for New Zealand. In the original description (Walckenaer 1837), the type locality is given as "*Monde-Maritime, de la Nouvelle-Irlande*". It is evident that this refers to the present-day New Ireland Province in Papua New Guinea.

Simon (1880) later lists the locality for some reason as "Nouvelle-Zélande" (New Zealand), noting that: "Espèce douteuse. Du type de Walckenaer, il ne reste que des débris dont il est impossible de donner une description. *D. peroniana* est peut-être synonyme à *H. venatoria*." [Doubtful species. From Walckenaer's type specimen, only fragments remain, making it impossible to provide a description. *D. peroniana* may be a synonym of *H. venatoria*.]

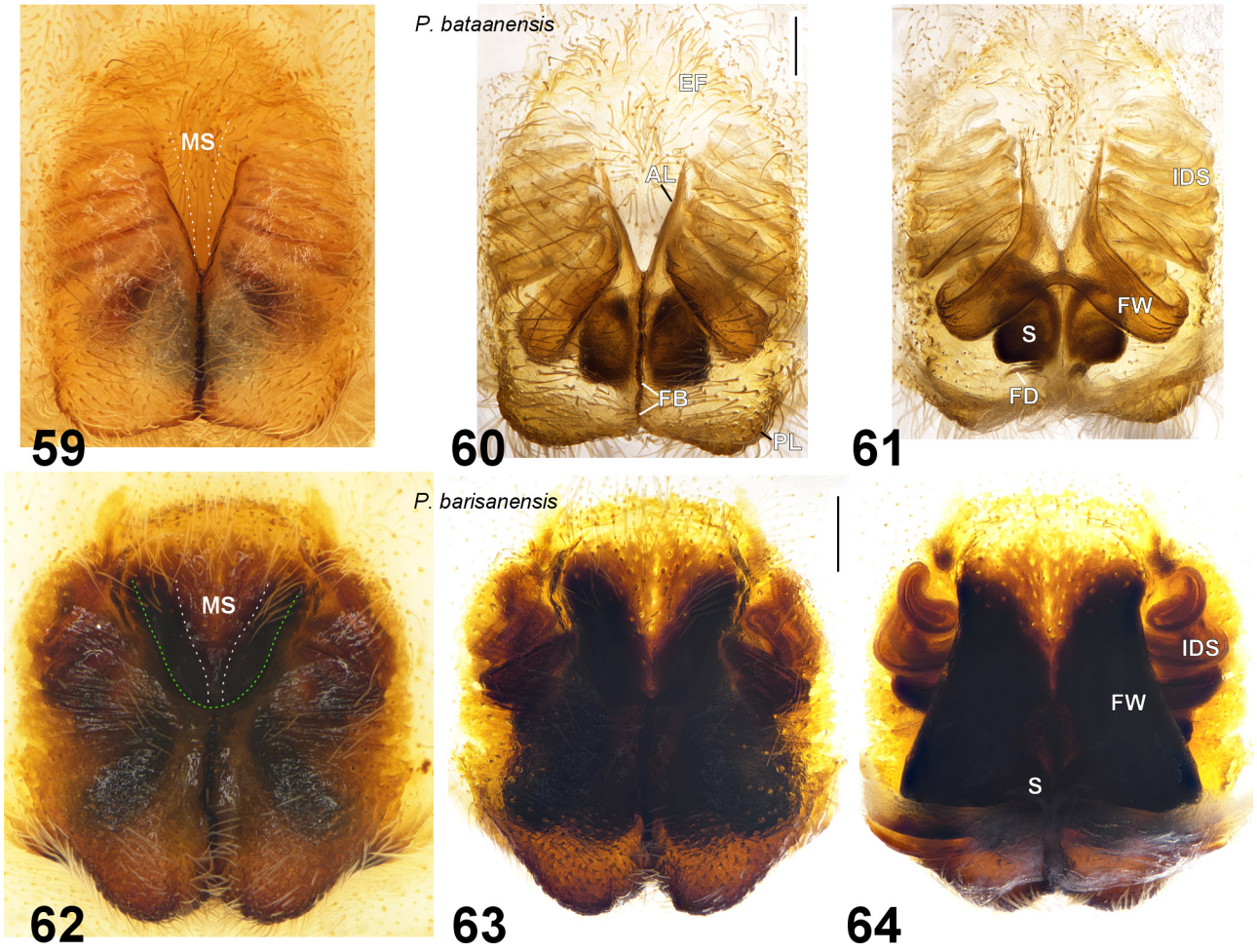


FIGURES 29–40. 29–32 *Pandercetes batak* **sp. nov.**; 33–36 *P. cheemai* **sp. nov.**; 37–40 *P. mindanaoensis* **sp. nov.** Left male palp (29, 33, 37 prolateral; 30, 34, 38 ventral; 31, 35, 39 retrolateral; 32, 36, 40 dorsal). Scale bars: 29–32=1 mm; 33–40=0.25 mm. Abbreviations: CS—cymbial scopula, dRTA—dorsal retrolateral tibial apophysis, vRTA—ventral retrolateral tibial apophysis.



FIGURES 41–49. 41–43 *Pandercetes batak* **sp. nov.**; 44–46 *P cheemai* **sp. nov.**; 47–49 *P mindanaoensis* **sp. nov.** Bulb of left male palp (41, 44, 47 prolateral; 42, 45, 48 ventral; 43, 46, 49 retrolateral). Scale bars: 41–43=0.2 mm; 44–49=0.25 mm. Abbreviations: C—conductor, CT—stem of conductor, E—embolus, EB—embolic base, ET—embolic tooth/teeth, Sp—spermophor, T—tegulum, TE—tegular retrolateral extension.

FIGURES 50–58. 50–52 *Pandercetes batak* **sp. nov.**; 53–55 *P. cheemai* **sp. nov.**; 56–58 *P. jaegeri* **sp. nov.** Epigyne/vulva (50, 53, 56 intact, ventral; 51, 54, 57 macerated, ventral; 52, 55, 58 macerated, dorsal). Scale bars: 50–52=0.2 mm; 53–58=0.25 mm. Abbreviations: AL—anterior margin of epigyne lateral lobe, EF—epigynal field, FB—fusion bubbles, FD—fertilization duct, FW—first winding, IDS—internal duct system, LL—epigyne lateral lobe, MS—median septum, PL—posterior margin of epigyne lateral lobe, S—spermatheca. The white dashed lines indicate the edges of the median septum, green dashed line indicates margins of the epigynal field.



FIGURES 59–64. 59–61 *P. bataanensis* **sp. nov.**; 62–64 *P. barisanensis* **sp. nov.** Epigyne/vulva (59, 62 intact, ventral; 60, 63 macerated, ventral; 61, 64 macerated, dorsal). Scale bars: 0.25 mm. Abbreviations: AL—anterior margin of epigyne lateral lobe, EF—epigynal field, FB—fusion bubbles, FD—fertilization duct, FW—first winding, IDS—internal duct system, LL—epigyne lateral lobe, MS—median septum, PL—posterior margin of epigyne lateral lobe, S—spermatheca. The white dashed lines indicate the edges of the median septum, green dashed line indicates anterior margins of the lateral lobes.

Discussion

With the addition of the new species described in this paper, the genus *Pandercetes* now comprises 23 species. It is important to note, however, that this number does not reflect the actual species richness of the genus, which is clearly much higher. Some currently recognized species, such as *P. malleator* and P. *plumipes*, exhibit extremely disjunct distributions (Fig. 69), suggesting that several distinct species may be hidden under these names. *Pandercetes* is in need of a global revision. In this paper we establish diagnosable species-group taxa that will facilitate the future revisionary work.

The species diversity of this genus remains completely unexplored in certain regions – for example, on the large island of Borneo (Kalimantan). No *Pandercetes* species are still listed for this island (WSC 2025), although these spiders undoubtedly occur there. Photographs of *Pandercetes* from Borneo have been published by Koh & Bay (2019), and the first author has also observed them in the field (Figs 67–68). These spiders are relatively easy to locate and collect at night by inspecting tree trunks and leaves. We believe that the study of *Pandercetes* diversity represents a highly promising field of research, and that many new species are likely to be described in the future.

FIGURES 65–68. *Pandercetes cheemai* **sp. nov.**, female from Laos; 67–68 *Pandercetes* sp., male from Borneo.

Seven *Pandercetes* species (*P. celatus, P. celebensis, P. celebensis vulcanicola, P. decipiens, P. macilentus, P. malleator* and *P. peronianus*) are known only from brief textual descriptions and have never been illustrated or re-examined by modern researchers. This raises the question of potential synonymy with the species described in the present paper. The type specimens of these historically known species are scattered across several European museums – the British Museum of Natural History (London; *P. celatus* and *P. decipiens*), the Naturhistorisches Museum (Basel; *P. celebensis* and *P. celebensis vulcanicola*), and the Museo Civico di Storia Naturale "G. Doria" (Genoa; *P. malleator*) – while the whereabouts of the types of *P. macilentus* and *P. peronianus* remain unknown. Three of these species (*P. celatus, P. decipiens* and *P. peronianus*), occurring in India, Sri Lanka and New Zealand respectively, can be excluded as potential senior synonyms of our new species due to the large geographic distances separating their type localities from the regions sampled in our study. However, from zoogeographical considerations some possibility of synonymy remains for *P. batak* **sp. nov.**, *P. cheemai* **sp. nov.** and *P. barisanensis* **sp. nov.** with *P. macilentus* or *P. malleator* (Fig. 69).

The original descriptions of *P. macilentus* and *P. malleator* date back to the 19th century and lack any information on the copulatory organs, relying instead on general somatic characters and coloration. Since coloration and external appearance are highly conservative within *Pandercetes*, these historical accounts do not allow for a reliable diagnostic comparison with modern material. Furthermore, although the types of these species probably exist (at least for *P. malleator*), they are currently inaccessible for us to examine because they are housed in foreign collections to which we do not have practical access. As the present study does not constitute a full revision of the genus, we explicitly note this limitation. If future examination of the type material during a comprehensive revision shows that any of the species described here are junior synonyms of older names, such a result would represent a normal and expected step in refining the taxonomy of *Pandercetes* and would not undermine nomenclatural stability.

Although *Pandercetes* remains a poorly studied and unrevised genus – with eight species known only from females and three only from males – we describe four species here on the basis of single-sex material: *P. mindanaoensis*

sp. nov. (male), and *P. barisanensis* **sp. nov.**, P. *jaegeri* **sp. nov.**, and P. *bataanensis* **sp. nov.** (females). We consider it highly unlikely that *P. mindanaoensis* **sp. nov.** corresponds to any of the female-only species – *P. celatus*, *P. celebensis*, *P. decipiens*, *P. manoius*, *P. niger*, *P. nigrogularis*, *P. plumipes*, and *P. plumosus* – because all of these taxa (except *P. plumipes*) are known from geographically restricted type localities that lie far away from the type locality of our new Philippine species (India, Indonesia, New Guinea, Myanmar, continental Malaysia, Sri Lanka). The only female-based species with a presumed wide range, *P. plumipes* (Sri Lanka to New Guinea), likewise does not extend to the Philippines. Moreover, the Philippines are known for a high level of spider endemism (Barrion & Litsinger 1995; pers. data), which further reduces the likelihood of conspecificity with continental or neighboring-island taxa.

The two Philippine species described here from females – *P. jaegeri* **sp. nov.** and *P. bataanensis* **sp. nov.** – are, for the same reasons (marked geographic isolation and the archipelago's endemic spider fauna), unlikely to correspond to any of the four species known exclusively from males: *P. celebensis vulcanicola*, *P. longipes*, *P. macilentus*, and *P. peronianus*, described from Indonesia (Sulawesi), New Guinea, Myanmar, and Papua New Guinea.

The case of *P. barisanensis* **sp. nov.** from northern Sumatra is somewhat more complex: in principle, this female might match *P. macilentus*, which is known from a male from Myanmar. Unfortunately, we were unable to ascertain the whereabouts of the type material of *P. macilentus*; without access to the types, a direct morphological comparison between these two taxa is presently impossible. We explicitly note this limitation and emphasize the need for subsequent comparison when appropriate material becomes available.

Here we provide detailed descriptions of the new species, accompanied by comprehensive measurements, spination data, and high-quality illustrations of somatic morphology and copulatory structures. Types are deposited in a publicly accessible collection (ISEA, ZMMU), thus ensuring reproducible identification and facilitating future comparative work.

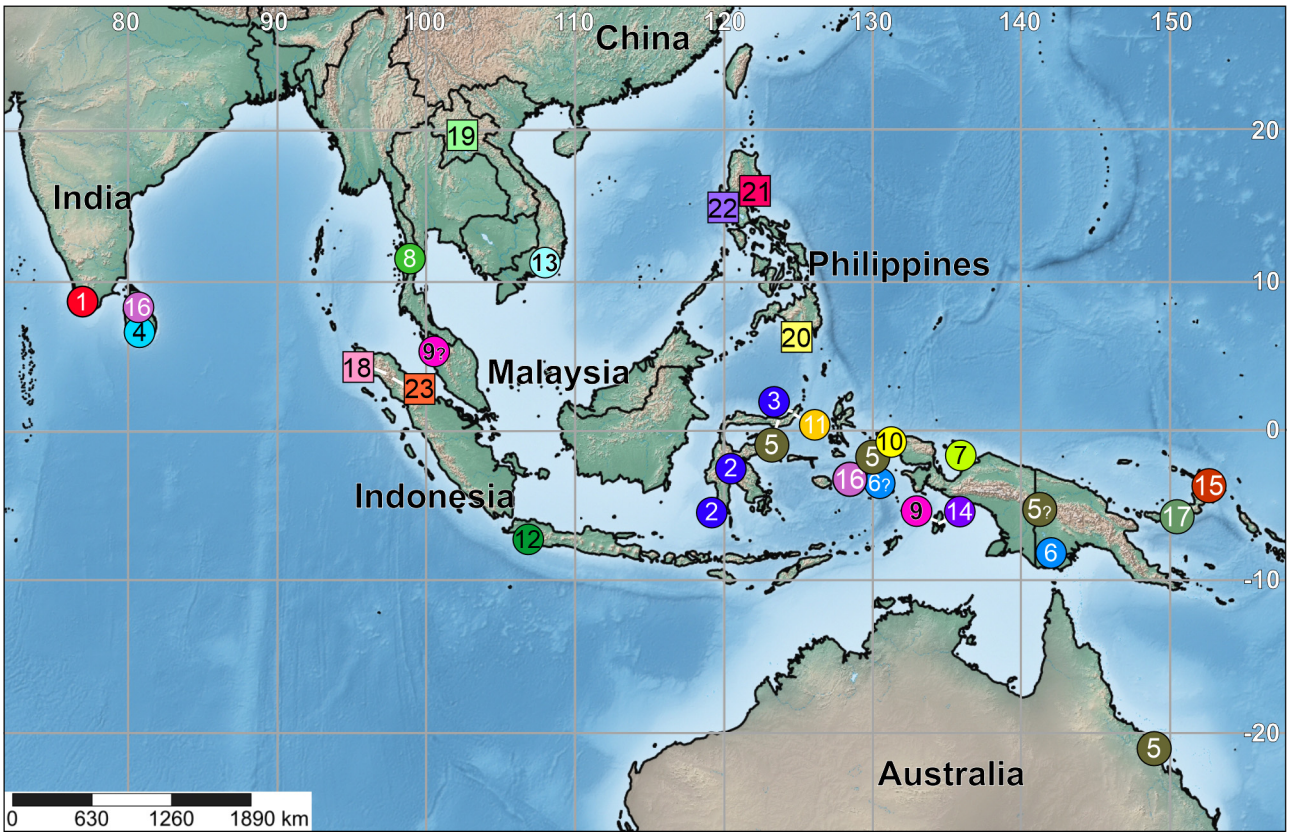


FIGURE 69. Collecting localities of *Pandercetes* spp. in Indomalayan and Australasian Realms: (1) *P. celatus*, (2) *P. celebensis*, (3) *P. celebensis vulcanicola*, (4) *P. decipiens*, (5) *P. gracilis*, (6) *P. isopus*, (7) *P. longipes*, (8) *P. macilentus*, (9) *P. malleator*, (10) *P. manoius*, (11) *P. niger*, (12) *P. nigrogularis*, (13) *P. ochreus*, (14) *P. palliventris*, (15) *P. peronianus*, (16) *P. plumipes*, (17) *P. plumosus*, (18) *P. batak* **sp. nov.**, (19) *P. cheemai* **sp. nov.**, (20) *P. mindanaoensis* **sp. nov.**, (21) *P. jaegeri* **sp. nov.**, (22) *P. bataanensis* **sp. nov.**, (23) *P. barisanensis* **sp. nov.** New species are marked with squares.

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