

On Oriental species of the genus *Megalopinus* Eichelbaum, 1915: one new species and taxonomical and biogeographical notes (Coleoptera, Staphylinidae, Megalopsidiinae)

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Received 6 February 2024 | Accepted 4 March 2024

Published online at www.soil-organisms.de 1 April 2024 | Printed version 15 April 2024

DOI 10.25674/409

Abstract

One new species, *Megalopinus puthzianus* spec. nov. from the Malacca Peninsula in Malaysia and Thailand, which was previously interpreted as *Megalopinus hirashimai* Naomi, 1986 is described. The species *M. hirashimai* is redescribed and its aedeagus is illustrated for the first time. The synonymy of *Megalopinus tangi* Puthz, 2012 and *Megalopinus lapsus* Mainda, 2022 syn. nov. (replacement name for *M. modestus* Puthz, 2021 nec (Sharp, 1886) is stated. The spelling of *Megalopinus brancuccii* Puthz, 2021 is established as the correct original spelling of this taxon and measurements and elytral punctuation numbers of additional specimens are added. A new record of *Megalopinus creberrimus* (L. Benick, 1941) with deviating coloration is reported from Mindanao (Philippines), and at the same time a new elytral puncture-row is designated: epipleural row - a row directly lateral to the sublateral row. Furthermore, the second male specimen of *Megalopinus rolandmuelleri* Mainda, 2022 is reported from Mindanao, Philippines, with additional measurements and elytral punctuation numbers. Finally, an updated checklist of all extant *Megalopinus* species of the Oriental and Australasian regions is presented.

Keywords Insect taxonomy | beetles | entomology | biodiversity | Malacca Peninsula

1. Introduction

The genus *Megalopinus* Eichelbaum, 1915 was so far known by 75 species in the Oriental and Australasian region according to Mainda (2022). One of these species (*Megalopinus extinctus* Yamamoto & Solodovnikov, 2016) is a fossil from Burmese amber. Usually, only a few or even single specimens of each species are known, which led to missing information on intraspecific variation (Puthz 2012). As will be shown below, careful examination of each individual specimen is of great importance and can lead to the description of previously undiscovered species, new synonyms or improved knowledge of intraspecific variation. It will also be shown, that the study of type material is essential to avoid wrong conclusions, which in the case described below even prevented the description of a new species.

2. Material and methods

Material. The material mentioned below is deposited in the following collections: **CTM** – private collection Tobias Mainda, Greifswald, Germany; **BMNH** – Natural History Museum, London, United Kingdom; **ELKU** – Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka, Japan; **KUM** – Kyushu University Museum, Japan; **MHNB** – Natural History Museum Basel, Switzerland; **MHNG** – Natural History Museum Geneve, Switzerland; **NMPC** – National Museum Natural History, Prague, Czech Republic; **SMNS** – State Natural History Museum Stuttgart, Germany; **SNUC** – Insect Collection of Shanghai Normal University, Shanghai, China.

Methods. The morphological studies were carried out using a stereoscopic microscope (Euromex DZ 1105) and

a compound microscope (Euromex BB.1153.PLI). Images were taken using a Canon EOS R camera. A Mitutoyo 10x ELWD Plan Apo objective was used for the habitus photos. The objective was attached to a Carl Zeiss Jena Sonnar 3.5/135 MC as focus lens. Three SN-1 LED segments from Stonemaster were used for illumination (www.stonemaster-onlineshop.de). Image stacks were created using a Stackmaster macro rail (Stonemaster). The stacks were fused using Helicon Focus v. 7.61 on a MacPro 2019 (Apple Inc.) with a Radeon Pro 6800X MPX GPU.

The images of the aedeagi were obtained using a Touptek microscope camera (ToupCam 14MP). Image stacks were captured with ToupView Lite (MacOS) and processed using Zerene Stacker. The description of the elytral puncture-rows follows Mainda (2022). Only the existing rows are indicated with puncture numbers and no mention is made of the non-existing rows. The description of colors is based on Syme (1821).

The following acronyms are used: **BL** – length of body (except mandibles); **DE** – distance between eyes (in middle of eye length); **dsr** – dorsal row; **EL** – maximal length of elytra; **epr** – epipleural row; **EW** – maximal width of elytra; **FBL** – length of forebody (head, pronotum, elytra); **HW** – head width; **PL** – pronotal length; **PW** – pronotal width; **shr** – subhumeral row; **SL** – sutural length of elytra; **slr** – sublateral row; **ssr** – subsutural row; **ssr-c** – subsutural-complex (consists of ssr and unassignable puncture); **str** – sutural row.

3. Results

Megalopinus hirashimai Naomi, 1986 (Figs 1A–C, 2A–D)

Type material studied: male Holotype ‘Japan, Amami-Ōshima Is., Santaro-Tôge, 26.vii.1954, Y. Hirashima’ / red label ‘HOLOTYPE *Megalopinus hirashimai* Naomi, 1986’ (ELKU). **Additional material studied:** **China:** female, ‘China: Hainan Prov., Ledong County, Jianfengling N. R., 1000 m, 18-V-2011, BI Wen-Xuan leg.’ / ‘*Megalopinus hirashimai* Naomi, det. Puthz 2012’ / ‘coll. Puthz’ (SMNS); ‘Zhejiang: Tianmushan, 1100m, 19.V.2006, Tang’, only photo of the specimen studied (SNUC). **Japan:** male, ‘Ie-Rindo’, Okinawa-Is., 22.iv.1986, S. Nomura / yellow label *Megalopinus hirashimai* Naomi, S. Nomura det. 1996’, aedeagus embedded in Euparal on a transparent platelet [KUM]; female, ‘Nippon: Nansei-shotô, Amami-Ōshima, Tatsugô-chô, Nagakumotôge, S V 1996’ / white label ‘*Megalopinus hirashimai* Naomi, 1986, det. T. Mainda 2024’ (KUM); male, ‘Tete, Tokunoshima Is., Kagoshima pref.’ / ‘4.v.1988, S. Nomura

leg.’ / ‘*Megalopinus hirashimai* Naomi, det. V. Puthz 1995’ / ‘coll. Puthz’, aedeagus embedded in Euparal on a transparent platelet (SMNS). **Taiwan:** male, ‘Chihpen-wenchuan, Taitung Taiwan, c. 400m, 6-8.XI.2000, Hiroshi Sugaya leg.’ / ‘*Megalopinus hirashimai* Naomi det. Puthz 201 (sic!)’, aedeagus embedded in Euparal on a transparent platelet, termite attached on a separate pointed platelet (KUM); male ‘Tai Tung, Taiwan, H. Sugaya leg, termitophilous’ / ‘*Megalopinus hirashimai* Naomi, det. Puthz 2012’ / ‘coll. Puthz’, aedeagus embedded in Euparal on a transparent platelet (SMNS); male, ‘Taiwan, Chiayi Co., Alishan, Rd. 129, km 33,5 (env.)’ / ‘Chashan, ca. 400 m, for. Litter, 13.IV.2009, S. Vit’ / ‘*Megalopinus hirashimai* Naomi, det. Puthz 2012’, aedeagus embedded in Euparal on a transparent platelet (MHNG). **Thailand:** male, ‘W. Thailand: 300m, Thung Yai Wildlife Sanctuary’ / ‘Tak Province, Umphang District, Mae Chan/MaeKiong confluence. 27.iv.-6.v.1988.’ / ‘Oak/bamboo forest, M.J.D. Brendell, B.M.1988-193.’ / ‘Flight interception trap’ / ‘*Megalopinus* sp., det. 1989 G. de Rougemont’ / ‘*Megalopinus hirashimai* Naomi, det. Puthz 2012’ / ‘cf. *Megalopinus hirashimai* Naomi, 1986, det. Mainda, 2024, internal structure of aedeagus missing!’ (BMNH).

Note: In the description of *M. hirashimai* the aedeagus was not illustrated (Naomi 1986). Puthz (2012) thought to have illustrated the aedeagus of this species for the first time, however, not from a type specimen, but using material from Malaysia (Fig. 91: Puthz 2012). Naomi & Nomura (2015) adopted this aedeagus figure, as there seemed to be no doubt about the accuracy.

During the description of two new *Megalopinus* species from the Philippines in 2022 (Mainda 2022), I requested Dr. Arnaud Faille from the State Museum of Natural History Stuttgart (coll. Puthz) to send me specimens of *M. hirashimai* from different countries (e.g., Malaysia, Thailand, Japan, and Taiwan), all previously been identified as *M. hirashimai* – even if they are very different habitually. Therefore, I requested numerous other specimens of *M. hirashimai* from different museums, which were available to Puthz (2012, 2013) and identified by him. The following are the results of this study: specimens from Japan, Taiwan, Laos, China (Hainan, Zhejiang), and western Thailand have a clearly different elytral pattern, elytral punctures and aedeagus to the specimens from Malaysia and southern Thailand; the specimens from Laos are also different from the other specimens in their diminutive size and their aedeagus. Thus, there appear to be three different taxa, all of which were previously considered to be *M. hirashimai*.

To answer the question of which of these three taxa is the ‘true’ *M. hirashimai*, the holotype had to be examined, which was kindly provided to me along with two other Japanese specimens (see above) by Mr. Toshiharu Mita of

Kyushu University, Japan. Examination of the holotype revealed that the ‘true’ *M. hirashimai* is distributed from Japan across Taiwan to China (Hainan, Zhejiang) and as far south as western Thailand (although this record should be viewed with reservation, as the specimen lacks the internal structure of the aedeagus). The specimens from Laos belong to *Megalopinus brancuccii* Puthz, 2021 (see below). On the Malay Peninsula, one so far undescribed species occurs (*Megalopinus puthzianus* spec. nov.), which is described below.

Puthz (2012) described a new species, *Megalopinus nepalensis* Puthz, 2012, and compared it with a species he erroneously misinterpreted as *M. hirashimai*. In reality, Puthz (2012) compared his *M. nepalensis* with *M. puthzianus* spec. nov. In addition, the aedeagus of *M. hirashimai* is herein figured for the first time, and the species is redescribed. In addition, Fig. 91 in Puthz (2012) and Fig. 2D in Naomi & Nomura (2015) do not belong to *M. hirashimai*, but to *M. puthzianus* spec. nov.



Figure 1A–C. Holotype of *Megalopinus hirashimai*, habitus, scale = 1 mm (1A); Aedeagus of *M. hirashimai*, Japan: Tete, without scale (1B); internal sclerites of the aedeagus of the holotype of *M. hirashimai*, without scale (1C).

Redescription of the holotype: Measurements: BL: 2.40 mm, DE: 0.51 mm, FBL: 1.63 mm, EL: 0.65 mm, EW: 0.85 mm, HW: 0.90 mm, PL: 0.58 mm, PW: 0.69 mm, SL: 0.55 mm.

Habitus as in Fig. 1A. Brownish red to orange yellowish (immature specimen), without microsculpture; head chestnut brown; pronotum with light and dark brownish red areas, anterior and posterior margins orange yellowish; elytra light brown with yellowish coloration and three rows of punctures, humeral calli lightened; abdomen yellowish-brown; antennae and legs yellowish.

Head 1.06 times broader than elytra, frons coarsely and very widely punctured, shiny.

Pronotum 1.19 times as broad as long, broadest in anterior third; with four transverse rows of coarse and deep punctures, first (anterior) and second rows disrupted in middle by cluster of irregular punctures, third row disrupted by impunctate Y-shaped area in middle of pronotum, fourth (posterior) row disrupted in middle by cluster of irregular small punctures; punctures always

separate; one large puncture in posteriolateral third on both sides. Each side of pronotum with two larger denticles in anterior half and two very small ones in posterior half.

Elytra (Figs. 1A, 2A) 1.30 times as broad as long; humeral calli prominent. Scutellum with two longitudinal furrows, without punctures; deep, narrow longitudinal impression on both sides of suture. Punctures on left elytron: slr (5), shr (5), dsr (5); punctures on right elytron: slr (5), shr (7), dsr (5). Broadest in middle, posterior and lateral margins convexly rounded.

Abdomen narrower than head, shiny, with distinct paratergites. Basolateral striae of tergite V extends almost to middle of tergite; tergite VII with membranous fringe at posterior margin (metathoracic wings fully developed).

Male: Antennomere XI 2.75 times as long and 1.14 times as wide as antennomere X. Sternite VIII shallowly impressed at posterior margin. Tergite VIII without special characters. Sternite IX spatula-shaped. Tergite X very finely microsculptured. Aedeagus slender (Fig. 1B),



Figure 2A–D. Comparison of elytral coloration in *Megalopinus hirashimai*. Holotype, Japan (2A); Japan, Tete (2B); Taiwan, Chiayi (2C); China, Hainan, photo: Liang Tang (2D). Without scale.

with two larger, dark sclerotized, pointed sclerites and two more transparent sclerites whose distal blunt ends are each bent over and slightly darkened (Fig. 1C). Parameres with around ten apical setae.

Variation ($n = 9$): Measurements in mm: BL: 2.38–2.90 mm, DE: 0.48–0.58 mm, FBL: 1.58–1.80 mm, EL: 0.63–0.75 mm, EW: 0.80–1.00 mm, HW: 0.85–1.00 mm, PL: 0.53–0.63 mm, PW: 0.65–0.80 mm, SL: 0.48–0.73 mm. Punctures on left elytron: slr (2–7), shr (4–9), dsr (4–6); punctures on right elytron: slr (3–5), shr (6–9), dsr (3–9).

Coloration: Brownish-yellow; head darker brown; legs and antennae yellowish; elytra with distinct yellowish coloration (holotype; Tete, Fig. 2B; Taiwan, Taitung). Largely blackish; elytra only posteriorly slightly lightened; without lightened cross band in anterior half (Taiwan, Chiayi; Fig. 2C). Blackish; Elytra with reddish cross band in anterior half and less distinct reddish patches in posterior sutural third (Hainan; Fig. 2D).

Female (specimen from Amani): Antennomere XI 1.70 times as long and 1.20 times as wide as antennomere X. Microsculpture on tergite X more distinct.

Comparative notes: *Megalopinus hirashimai* is related to some smaller species of the *M. acutangulus*-group (see Puthz 2012 for the group definition) with an impunctate sutural third of elytra, relatively broad head and short lateral striae on tergite V. The species is distinguished from *M. nepalensis* by the coloration (Puthz 2012: Fig. 44) and by the longer and more slender internal sclerites of the aedeagus in *M. nepalensis* (Puthz 2012: Fig. 92). It is separated from *M. brancuccii* by the broader shape of the median lobe and the internal structure of the aedeagus in *M. brancuccii* (Puthz 2021: Fig. 3) and by longer lateral striae on tergite V.

***Megalopinus puthzianus* spec. nov.**

(Figs 3, 4A–C)

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Type specimens: male holotype: ‘Thailand: 70m, Sur at Thani P., Khao Sok N. Park, Schwendinger 6.12.91’ / ‘*Megalopinus hirashimai* Naomi, det. Puthz 2012’ / red label ‘male HOLOTYPE *Megalopinus puthzianus* nov. sp., design. Mainda, 2024’, aedeagus embedded in Euparal on a transparent platelet (MHNG). Six paratypes: one male specimen, ‘S-Thailand, Phang Nga Prov., Khao Lak Lamru N.P., rainforest nr. Hdqu., 23–27 III 2002, E. Heiss’ / ‘*Megalopinus hirashimai* Naomi, det. Puthz, 2012’ / ‘coll. Puthz’ / yellow label ‘male PARATYPE *Megalopinus puthzianus* nov. sp., design. Mainda, 2024’, aedeagus embedded in Euparal on a transparent platelet

(SMNS); one female specimen ‘THAILANDE-Trang, Khao Chong, 150 m, 17.VIII.86, leg. P. Schwendinger’ / ‘*Megalopinus hirashimai* Naomi, det. Puthz 2012’ / yellow label ‘female PARATYPE *Megalopinus puthzianus* nov. sp., design. Mainda, 2024’ (MHNG); one male and three female paratypes, ‘Malaysia, Kedah, Pulau Langkawi NW Datai rainforest, 2–10 XI 2002, E. Heiss’ / ‘*Megalopinus hirashimai* Naomi, det. Puthz, 2012’ / ‘coll. Puthz’ / yellow label ‘PARATYPE *Megalopinus puthzianus* nov. sp., design. Mainda, 2024’, male specimen with aedeagus embedded in Euparal on a transparent platelet (one female in cTM; one male, two females in SMNS).

Description: Measurements of the male holotype: BL: 2.55 mm, DE: 0.55 mm, FBL: 1.58 mm, EL: 0.66 mm, EW: 0.93 mm, HW: 0.94 mm, PL: 0.60 mm, PW: 0.75 mm, SL: 0.53 mm.

Habitus as in Fig. 3. Chestnut brown to orange yellowish, without microsculpture; head and pronotum chestnut brown; elytra brown with yellowish crossband in anterior third, three rows of punctures and a few punctures in sutural third; abdomen lighter brown; antennae and legs yellowish.

Head 1.01 times broader than elytra, frons coarsely punctured, shiny.

Pronotum 1.25 times as broad as long, broadest in anterior third; with four transverse rows of coarse and deep punctures, between third and fourth row with impunctate Y-shaped area in middle of pronotum; punctures always separate; one large puncture in posteriolateral third on both sides. Each side of pronotum with two more distinct denticles in anterior half and two very small ones in posterior half.

Elytra 1.41 times as broad as long; humeral calli prominent. Scutellum with two longitudinal furrows, without punctures; deep, narrow longitudinal impression on both sides of suture. Punctures on left elytron: slr (6), shr (8), dsr (6 + 1 near anterior margin), ssr-c (6); punctures on right elytron: slr (3), shr (8), dsr (6 + 1 near anterior margin), ssr-c (4). Broadest in middle, posterior and lateral margins convexly rounded.

Abdomen narrower than head, shiny, with distinct paratergites. Basolateral striae of tergite V in anterior third of tergite, not extending to middle; tergite VII with membranous fringe at posterior margin (metathoracic wings fully developed).

Male: Antennomere XI 3.00 times as long and 1.29 times as wide as antennomere X. Sternite VIII shallowly impressed at posterior margin. Tergite VIII without special features. Sternite IX slightly asymmetrical spatula-shaped. Tergite X shiny, widely punctured. Aedeagus (Fig. 4D) slender, with strong internal sclerites and two proximal fields of elongate denticles; parameres with eight apical setae.

Variation ($n = 7$): Measurements in mm: BL: 2.45–2.75 mm, DE: 0.48–0.58 mm, FBL: 1.50–1.73 mm, EL: 0.60–0.70 mm, EW: 0.88–0.95 mm, HW: 0.84–0.98 mm, PL: 0.55–0.65 mm, PW: 0.68–0.79 mm, SL: 0.48–0.53 mm. Punctures on left elytron: slr (4–10), shr (6–9), dsr (6+1–9+1), ssr-c (2–6); punctures on right elytron: slr (3–6), shr (6–9), dsr (5+1–9+1), ssr-c (1–4).

Coloration: Cross band in anterior third of elytra more or less distinctly connected, sometimes appearing like separate patches (Fig. 4A) or color more reddish (Fig. 4B).

Female (specimen from Malaysia, Kedah): Antennomere XI 3.80 times as long and 1.33 times as wide as antennomere X.

Comparative notes: *Megalopinus puthzianus* spec. nov. is related to some smaller species of the *acutangulus*-group (see Puthz 2012 for the group definition) with a punctate sutural third of elytra, relatively broad head and relatively short lateral striae on tergite V. The species is distinguished from *M. nepalensis* and *M. hirashimai* by the coloration, at least one puncture in sutural third of elytra (ssr-c), shorter lateral striae of tergite V and by the internal structure of the aedeagus. It is separated from *M. brancuccii* by at least one puncture in sutural third of elytra (ssr-c), by the shape of the median lobe and the internal structure of the aedeagus. *Megalopinus puthzianus* spec. nov. is distinguished from *M. creberrimus* by smaller size,



Figure 3. Female paratype of *Megalopinus puthzianus* spec. nov., habitus, Malaysia, Kedah, scale = 1 mm.

different coloration, and lack of a series of punctures along the suture and by the aedeagus.

Etymology: With the choice of the species epithet '*puthzi*anus' (derived from the German surname Puthz, noun), I cordially dedicate this new species to Dr. Volker Puthz (Schlitz, Germany), the world's leading specialist for Euaesthetinae, Megalopsidiinae and Steninae, who kindly supports me in my taxonomic work since years.

Megalopinus tangi Puthz, 2012

Megalopinus lapsus Mainda, 2022 syn. nov.

[= replacement name for *M. modestus* Puthz, 2021 nec *M. modestus* (Sharp, 1886)]

Specimens examined: male holotype of *M. tangi*, photo provided by Dr. Liang Tang; male paratype of *M. tangi*, photo provided by SMNS; male holotype of *M. lapsus*; two males, one female, 'LAO, Phongsaly prov., 21°41'N 102°6'E, PHONGSALY env., 6.-17.v.2004, 1500m, Vít Kubáň leg.' / '*Megalopinus tangi* Puthz, det. Puthz 2013', male specimens with aedeagus embedded in Euparal on

a transparent platelet; female, 'LAO, Phongsaly prov., 21°41-2'N 102°06-8'E, 28.v.-20.vi.2003, PHONGSALY env., 1500m, Vít Kubáň leg.' / '*Megalopinus tangi* Puthz, det. Puthz 2013' (MHNB).

Note: The comparison of the elytra pattern and structures of tergites X of *Megalopinus tangi* Puthz, 2012 (Puthz 2012: Fig. 50) and *Megalopinus lapsus* Mainda, 2022 (Mainda 2022: Fig. 3A) does not reveal any differences that go beyond intraspecific variability. The same applies to the aedeagi of *M. tangi* (Puthz 2012: Fig. 84) and *M. lapsus* (Puthz 2021: Fig. 4). The alleged differences in the shape of the internal sclerites cited by Puthz (2021) result from three-dimensional objects looking slightly different depending on their position in the dissection. The aedeagus figure by Puthz (2021) shows the shape of the sclerites much better than the figure by Puthz (2012).

Megalopinus tangi was described from China (Guangxi) and Thailand (Chiang Mai). Puthz (2013) reported further specimens from northern Laos (Phongsaly Prov.). The holotype of *M. lapsus* syn. nov. was also collected in northern Laos (Houaphanh Prov.).

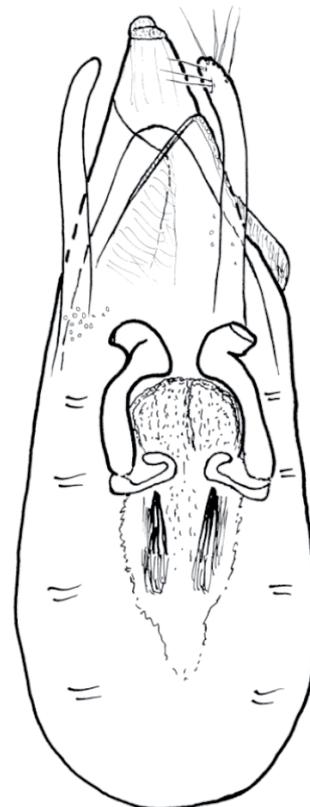
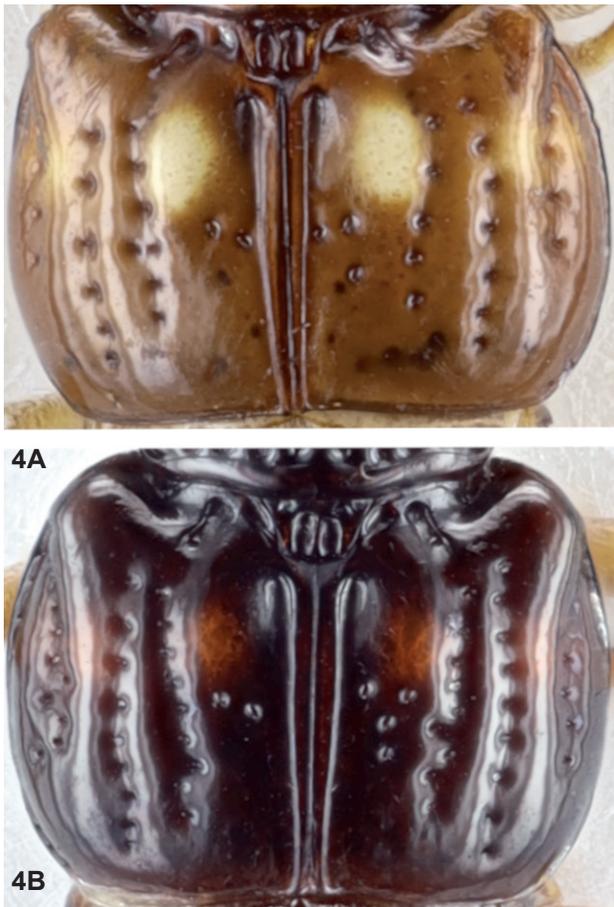


Figure 4. *Megalopinus puthzi*anus spec. nov., elytral coloration of a female paratype of *M. puthzi*anus spec. nov., 'Thailande-Trang' (4A); elytral coloration of a male paratype of *M. puthzi*anus spec. nov., Thailand, Khao Lak Lamru N.P. (4B); aedeagus of *M. puthzi*anus spec. nov. holotype (4C). All without scale.

The lack of morphological differences and the concurring distribution indicate that *M. lapsus* syn. nov. is a younger synonym of *M. tangi*.

***Megalopinus brancuccii* Puthz, 2021**

Megalopinus brancuccii Puthz, 2021: 9 =
Megalopinus brancuccii Puthz, 2021: 9, 10.

Specimens examined: one male, one female, 'Laos, Phongsaly prov., 21°21'N 102°03'E. Ban Sano Mai, 19.-26.v.2004, ~1150m, Vít Kubáň leg.' / '*Megalopinus hirashimai* Naomi, det. Puthz 2013' / '*Megalopinus brancuccii* Puthz, 2021, det. Mainda 2024' (MHNB).

Measurements and elytral punctation: Measurements of male specimen: BL: 3.10 mm, DE: 0.57 mm, FBL: 1.85 mm, EL: 0.75 mm, EW: 1.03 mm, HW: 1.00 mm, PL: 0.54 mm, PW: 0.80 mm, SL: 0.58 mm. Punctures of left elytron: slr (4), shr (6), dsr (7); punctures of right elytron: slr (5), shr (8), dsr (5). Measurements of female specimen: BL: 2.90 mm, DE: 0.55 mm, FBL: 1.73 mm, EL: 0.70 mm, EW: 0.93 mm, HW: 0.95 mm, PL: 0.63 mm, PW: 0.75 mm, SL: 0.55 mm. Punctures of left elytron: slr (4), shr (5), dsr (6); punctures of right elytron: slr (4), shr (7), dsr (5).

Note: Puthz (2021) dedicated this species to its collector, Dr. Michel Brancucci † (1950-2012, Basel, Switzerland). In the abstract of the paper, the species is named *M. brancuccii*, but in the description *M. brancucci*. Since the species epithet is a dedication referring to the surname Brancucci, the spelling with 'cc' is established as the correct original spelling according to Art. 24.2.3 (ICZN 1999). Incidentally, this spelling was also used on the type labels.

***Megalopinus creberrimus* (L. Benick, 1941)**

(Figs 5A, B)

Specimens examined: male, 'Philippines: Mindanao, Dominorog, Bukidnon, Sept. 2022, leg. local collector' / '*Megalopinus creberrimus* (L. Benick, 1941), det. Mainda 2024' (cTM).

Note: The examination of a specimen from Dominorog, Bukidnon in Mindanao Island provides a new distribution record for the species which until now was only known from the islands of Palawan and Borneo (Sabah). The intraspecific color variation of this species was already noted by Puthz (2012). However, other diagnostic characters such as the punctation of the elytra, the lateral striae on tergite V and especially the internal structure of the aedeagus (Puthz 2012: Fig. 85) are more helpful in identifying the specimen as belonging to *M. creberrimus*. The study of this species makes it necessary to designate a further elytral puncture-row (cf. Mainda 2022): epipleural row (epr) for a row directly lateral to the sublateral row (slr), Fig. 5B.



Figure 5. Habitus of *Megalopinus creberrimus*, scale = 1 mm (5A); elytral coloration and puncture rows of *M. creberrimus*, without scale (5B). epipleural row (epr); sublateral row (slr); subhumeral row (shr); dorsal row (dsr); subsutural-complex (ssr-c); sutural row (str).

Description: Habitus as in Fig. 5A. Measurements: BL: 3.30 mm, DE: 0.60 mm, FBL: 2.00 mm, EL: 0.83 mm, EW: 1.08 mm, HW: 1.03 mm, PL: 0.70 mm, PW: 0.85 mm, SL: 0.65 mm. Head and pronotum blackish; elytra with reddish falciform patch in middle of dorsal row on each elytron (Fig. 5B); abdomen dark brown, paratergites slightly lightened, basal striae of tergite V extending at most to middle; antennae and legs yellow. Punctures of left elytron: epr (3), slr (6), shr (5), dsr (7), ssr-c (10), str (9); punctures of right elytron: epr (3), slr (7), shr (7), dsr (6), ssr-c (14), str (9).

Megalopinus rolandmuelleri Mainda, 2022

Specimens examined: 'PHILIPPINES, Mindanao, Davao Oriental, 2.vi.2022, 1 km SW of Catmonan, Catmonan pygmy springs, 6°47.25'N, 126°13.18'E; 100 m, at light near river + night collecting, Hájek, Sekerka & Vondráček leg.' / '*Megalopinus rolandmuelleri* Mainda, 2022, det. Mainda 2023' (NMPC).

Measurement and elytral punctation: BL: 3.00 mm, DE: 0.63 mm, FBL: 2.00 mm, EL: 0.75 mm, EW: 1.10 mm, HW: 1.10 mm, PL: 0.76 mm, PW: 0.88 mm, SL: 0.60 mm. Punctures of left elytron: slr (5), shr (8), dsr (7), ssr (3), str (6); punctures of right elytron: slr (4), shr (8), dsr (6), ssr (3), str (6).

Note: Previously, this species was only known from the two type specimens (male and female). An additional specimen improves the knowledge of the distribution and intraspecific variation of this recently described species.

3.1 Updated checklist of extant Oriental and Australasian *Megalopinus* species

- M. acacia* Steel, 1955 (Australia)
M. alcoides Puthz, 2012 (Indonesia)
M. acutangulus (Waterhouse, 1883) (Indonesia)
M. angustihamus Puthz, 2012 (Malaysia)
M. australicus Puthz, 2012 (Australia)
M. bakeri (Bernhauer, 1926) (Philippines)
M. besucheti Puthz, 2012 (Sri Lanka)
M. borneensis (Cameron, 1933) (Malaysia)
M. brancuccii Puthz, 2021 (Laos)
M. brendelli Puthz, 2012 (Indonesia)
M. bryanti Puthz, 2012 (Malaysia)
M. burckhardti Puthz, 2012 (Indonesia)
M. celebensis Puthz, 2012 (Indonesia)
M. creberrimus (L. Benick, 1941) (Malaysia, Philippines)
M. curvipes Puthz, 2012 (S India)
M. deceptor Puthz, 2012 (Indonesia)
M. decoratus (L. Benick, 1942) (Myanmar)
M. dolosus Puthz, 2012 (Indonesia)
M. drescheri (L. Benick, 1941) (Indonesia)
M. erraticus Puthz, 2012 (Indonesia, Vietnam)
M. fasciatus (L. Benick, 1941) (Indonesia)
M. flavolineatus (Bernhauer, 1926) (Philippines)
M. flavomaculatus Naomi, 1986 (Japan)
M. fungicola Puthz, 2012 (Philippines)
M. gallinaceus Puthz, 2012 (Indonesia)
M. gracilihamus Puthz, 2012 (Indonesia, Malaysia, Thailand)
M. hayeki Puthz, 2013 (Malaysia)
M. helferi (Dormitzer, 1851) (China, India, Indonesia, Malaysia, Myanmar, Singapore, Thailand, Vietnam)
M. hirashimai Naomi, 1986 (China, Japan, Taiwan, Thailand)
M. indifferens Puthz, 2012 (Malaysia)
M. indomalayicus (Bernhauer, 1926) (Indonesia, Singapore)
M. ingeae Mainda, 2022 (Philippines)
M. jambar Naomi & Hirono, 2014 (Japan)
M. japonicus (Nakane, 1957) (Japan)
M. juengeri Puthz, 1990 (Sri Lanka)
M. kalimantanus Puthz, 2012 (Indonesia)
M. kinabalumontis Puthz, 2012 (Malaysia)
M. kubani Puthz, 2014 (Laos)
M. laoticus Puthz, 2013 (Laos)
M. leileri Puthz, 1990 (Laos)
M. loebli Puthz, 1990 (Laos)
M. loeblianus Puthz, 2012 (Thailand)
M. lombokensis Puthz, 2012 (Indonesia)
M. longestriatus Puthz, 2012 (Indonesia)
M. luzonicus (Bernhauer, 1926) (Philippines)
M. malayanus Puthz, 2012 (Malaysia, Singapore)
M. melanesicus spec. Puthz, 2012 (Indonesia, Papua New Guinea)
M. melbournensis (Wilson, 1921) (Australia)
M. mendax Puthz, 2012 (Indonesia)
M. mimus Puthz, 2012 (Indonesia, Malaysia)
M. nepalensis Puthz, 2012 (N India, Nepal)
M. nigerrimus (Cameron, 1938) (Indonesia)
M. nodipennis (MacLeay, 1873) (Australia)
M. palawanensis Puthz, 2012 (Philippines)
M. philippinus (Bernhauer, 1926) (Philippines)
M. polyporicola Puthz, 2012 (Philippines)
M. praeclarus Naomi & Nomura, 2015 (Japan)
M. puthzianus sp. nov. (Malaysia, Thailand)
M. rafflesi Puthz, 2012 (Malaysia, Singapore)
M. rolandmuelleri Mainda, 2022 (Philippines)
M. rougemonti Puthz, 2012 (Indonesia)
M. sabahnus Puthz, 2012 (Malaysia)
M. schwendingeri Puthz, 2012 (Thailand)
M. scolytomimus Puthz, 2012 (Malaysia)

M. sexdentatus (Cameron, 1914) (China, India, Indonesia, Laos, Malaysia, Philippines, Sri Lanka)
M. sulawesicus Puthz, 2012 (Indonesia)
M. sumatranus Puthz, 2012 (Indonesia)
M. taiwanensis Puthz, 2010 (Taiwan)
M. tangi Puthz, 2012 (China, Laos, Thailand)
M. tomishimai Naomi, 1996 (Japan)
M. uniformis (Bernhauer, 1926) (Philippines)
M. vexabilis Puthz, 2012 (Malaysia)
M. violiniformis Puthz, 2012 (Indonesia, Philippines)
M. zwicki Puthz, 2012 (Indonesia, Malaysia)

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4. Acknowledgements

I'm thankful to Toshiharu Mita (Kyushu University, Japan), Beulah Garner and Max Barclay (both Natural History Museum London, United Kingdom), Giulio Cuccodoro (Natural History Museum Geneva, Switzerland), Matthias Borer (Natural History Museum Basel, Switzerland) and Arnaud Faille (State Natural History Museum Stuttgart, Germany) for sending the above mentioned material to me. Moreover, I'm thankful to Liang Tang (Shanghai, China) for providing photos of *M. hirashimai* and to Volker Puthz (Schlitz, Germany) for kindly providing his drawing of the aedeagus of the new *Megalopinus* species. Finally, I would especially like to thank Michael Balke (Zoological State Collection Munich, Germany) for allowing me to use his equipment to take photos of the specimens mentioned above, even though they are no Dytiscidae.

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