# New species and new records of Allopachria ZIMMERMANN, 1924 and Microdytes BALFOUR-BROWNE, 1946 from China, India, Laos, and Vietnam

(Coleoptera: Dytiscidae)

G. WEWALKA, Z. JIANG & J. HÁJEK

#### Abstract

Seven new species of the genera *Allopachria Zimmermann*, 1924 and *Microdytes* Balfour-Browne, 1946 (Coleoptera: Dytiscidae) are described: *Allopachria brancuccii* sp.n. (Laos), *A. laotica* sp.n. (Laos), *A. stefaniae* sp.n. (Laos), *Microdytes cattienensis* sp.n. (Vietnam), *M. danxiashanensis* sp.n. (China: Guangdong), *M. dinghuensis* sp.n. (China: Guangdong), and *M. jinggangensis* sp.n. (China: Jiangxi). Habitus and male genitalia of the new species are illustrated. *Allopachria wangi* WEWALKA & NILSSON, 1994 is recorded for the first time from Continental China (Guangdong). First records for four provinces and one autonomous region of China are provided for four species of *Allopachria* and three species of *Microdytes*. In addition, three species of *Microdytes* are newly recorded from two Indian states and one province of Laos.

Key words: Coleoptera, Dytiscidae, taxonomy, new species, new records, China, Vietnam, Laos, India.

#### Introduction

Allopachria ZIMMERMANN, 1924 and Microdytes BALFOUR-BROWNE, 1946 are predominantly Oriental genera of hyphydrine diving beetles. They are usually associated with forest springs and streams. While Allopachria species prefer calm parts of watercourses with accumulated debris and decaying leaves, Microdytes can be found also among the gravel in (often very small) side pools, and even in puddles in spray zones of waterfalls, in hygropetric habitats on vertical cliffs, or in small lakes.

After the revision of the genus *Allopachria* by WEWALKA (2000), further 15 species have been described by WEWALKA (2010), BIAN & JI (2010, 2012), BIAN et al. (2013), JI et al. (2014) and JIANG et al. (2024). With the three new species described in the present paper, the genus currently includes 50 species.

*Microdytes* was taxonomically revised by WEWALKA (1997) and subsequently updated by WEWALKA (2011), who listed 45 species. Subsequently, seven additional species have been described by BIAN et al. (2015), SHETH et al. (2021) and OKADA et al. (2023). With the four new species described in the present paper the genus now includes 56 species.

#### Material and methods

The specimens studied are deposited in the following institutions and private collections:

CGW Coll. Günther Wewalka, Vienna, Austria
CJS Coll. Jaroslav Šťastný, Liberec, Czechia
CMM Coll. Michaël Manuel, Paris, France

IAECAS Institute of Applied Ecology, Chinese Academy of Science, Shenyang, China

IZCAS Institute of Zoology, Chinese Academy of Science, Beijing, China

NMB Naturhistorisches Museum Basel, Switzerland

NMPC National Museum of the Czech Republik, Prague, Czechia

NMW Naturhistorisches Museum Wien, Vienna, Austria

SYSU Biological Museum, Sun Yat-Sen University, Guangzhou, China

Label data of type specimens are cited between quotation marks. Comments of the authors are given between square brackets.

The terminology to denote the orientation of the genitalia follows MILLER & NILSSON (2003). Abbreviations: TL (total length of beetle); TL-H (total length without head); EL (elytral length); MWH (maximum width of head); MPW (maximum pronotal width); MEW (maximum elytral width).

Male genitalia were studied in dry condition and drawings were made with the help of a drawing tube (Wild # 308700).

Additional information on the CWBS (China Water Beetle Survey) localities and habitats of some of the Chinese species was obtained from JÄCH & JI (1998, 2003).

# **Descriptions of new species**

## Allopachria brancuccii sp.n.

TYPE LOCALITY: Laos, Bokeo Province, Bokeo Nature Reserve, ca. 20°27–28'N 100°45'E.

TYPE MATERIAL: **Holotype**  $\sigma$  (NMB): "LAOS, Bokeo prov., 5 km W Ban Toup, Bokeo Nature Reserve, 500-700 m, 20°27-28' N / 100°45' E, 4.-18. V. 2011", "NHMB Basel, **Laos 2011** Expedition, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan", " $\sigma$ " [printed white labels], "HOLOTYPUS Allopachria brancuccii sp.n. Wewalka, Jiang & Hájek 2025" [printed red label]. **Paratypes**: 5  $\varphi \varphi$  (CGW: 1  $\varphi$ , NMB: 2  $\varphi \varphi$ , NMPC: 1  $\varphi$ , NMW: 1  $\varphi$  [0012926]): same locality data as holotype. The paratypes are provided with red paratype labels.

DESCRIPTION: Holotype: Habitus (Fig. 1): Body regularly oblong-oval, broadest shortly behind middle; moderately convex; pronotum and head moderately broad; lateral margins of pronotum moderately curved. Measurements: TL 2.20 mm, TL-H 1.90 mm, EL 1.40 mm, MWH 0.90 mm, MPW 1.4 mm, MEW 1.50 mm.

Colouration (Fig. 1): Head yellowish-brown, narrowly dark brown along eyes. Pronotum dark brown, slightly paler at lateral margins. Elytron dark brown with distinct yellowish-brown markings: A transverse band close to base not reaching suture and a subapical lateral spot. Ventral surface completely reddish-brown. Antennae, palpi and legs reddish-brown.

Structures and surface sculpture: Head: Clypeus regularly rounded, margin with an indistinct bead in middle; head in anterior half very finely and very sparsely punctate, in posterior half with coarser, denser and irregular punctation, with coarser punctures along medial margin of eyes and in two dimples near fronto-clypeal suture; with distinct microreticulation in anterior half. Pronotum: Lateral margins distinctly bordered; punctation quite irregular in size and distribution, with additional coarse, navel like punctures in posterior half; without microreticulation. Elytron: Punctation moderately fine punctation almost regular in size and distribution, without a discal longitudinal row of punctures; highly polished; without microreticulation. Ventral surface: Punctation on metacoxae, metaventrite and abdominal ventrites sparse, irregular in size and distribution; without microreticulation.

Male: Protarsomere 1 minimally enlarged; pro- and mesotibiae slightly broadened. Antennae not modified. Median lobe in ventral view in apical two thirds evenly tapering to narrowly rounded apex (Fig. 8a), in lateral view almost straight in apical two thirds (Fig. 8b); lateral lobe in lateral view elongate, triangular and moderately curved, with short apical setation (Fig. 8c).

Female: Identical with male in habitus; without enlarged protarsomeres and broadened pro- and mesotibiae.

Variation: Colouration quite constant; in some specimens the subapical yellowish-brown spot is slightly smaller. Measurements: TL 2.10–2.30 mm, TL-H 1.80–2.00 mm, EL 1.40–1.60 mm, MWH 0.80–0.90 mm, MPW 1.20–1.40 mm, MEW 1.30–1.50 mm.

AFFINITIES: *Allopachria brancuccii* is very similar to *A. laotica* but differs in the yellowish-brown head, the more distinct preapical elytral spots, the more oblong-oval habitus and the male genital. It also resembles *A. dudgeoni* WEWALKA, 2000 in colouration and size but can be distinguished by the larger yellowish-brown preapical elytral spots, a less broad habitus, missing a discal longitudinal row of punctures on the elytron, by the less broadened male pro- and mesotibiae and by the male genitalia (see WEWALKA 2000: figs. 56, 88).

ETYMOLOGY: This species is dedicated to the late Dr. Michel Brancucci (NMB). The name is a proper noun in the genitive case.

HABITAT: Specimens were collected in puddles near small brooks, in old secondary forest.

DISTRIBUTION (Fig. 18): Laos: Bokeo Province.

## Allopachria laotica sp.n.

TYPE LOCALITY: Laos, Bokeo Province, Bokeo Nature Reserve, ca. 20°27–28'N 100°45'E.

TYPE MATERIAL: **Holotype** & (NMB): "LAOS, Bokeo prov., 5 km W Ban Toup, Bokeo Nature Reserve, 500-700 m, 20°27-28' N / 100°45' E, 4.-18. V. 2011", "NHMB Basel, **Laos 2011** Expedition: M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan", "&" [printed white labels], "HOLOTYPUS Allopachria laotica sp.n. Wewalka, Jiang & Hájek 2025" [printed red label].

DESCRIPTION: Habitus (Fig. 2): Body regularly oval, broadest shortly behind middle; moderately convex; pronotum and head moderately broad; lateral margins of pronotum moderately curved. Measurements: TL 2.10 mm, TL-H 1.90 mm, EL 1.40 mm, MWH 0.90 mm, MPW 1.4 mm, MEW 1.50 mm.

Colouration (Fig. 2): Head dark brown, paler on clypeus. Pronotum dark brown, slightly paler at lateral margins. Elytron dark brown with a distinct yellowish-brown transverse band close to base not reaching suture and an obtuse reddish-brown subapical lateral spot. Ventral surface completely reddish-brown. Antennae, palpi and legs reddish-brown.

Structures and surface sculpture: Head: Clypeus regularly rounded, margin with an indistinct bead in middle; head in anterior half very finely and very sparsely punctate, in posterior half with coarser, denser and irregular punctation, with coarser punctures along medial margin of eyes and in two dimples near fronto-clypeal suture; with distinct microreticulation in anterior half. Pronotum: Lateral margins distinctly bordered; punctation quite irregular in size and distribution; with additional coarse, navel like punctures in posterior half; without microreticulation. Elytron: Punctation moderately fine, almost regular in size and distribution, with a fine discal longitudinal row of punctures; highly polished; without microreticulation. Ventral surface: Punctation on metacoxae and metaventrite fine and very sparse, on abdominal ventrites stronger and denser; metacoxae with fine longitudinal wrinkles; without microreticulation.

Male: Protarsomere 1 minimally enlarged. Median lobe in ventral view evenly broad in middle part; apex broadly rounded (Fig. 9a), in lateral view almost straight in apical two thirds (Fig. 9b); lateral lobe in lateral view elongate, slender and moderately curved, with a distinct membranous lobe at apex (Fig. 9c).

Female: Unknown.

AFFINITIES: *Allopachria laotica* closely resembles *A. liselotteae* WEWALKA, 2000 in habitus, colouration and size but can be distinguished by the male genitalia. In *A. liselotteae* the median lobe in ventral view is slenderer in middle part, and the lateral lobes are distinctly broader (see WEWALKA 2000: figs. 51, 83). *Allopachria laotica* is also very similar to *A. brancuccii*, but the latter differs in the dark brown head, the less distinct preapical elytral spots, the less oblong-oval habitus and the male genitalia (see Figs. 1–2, 8–9).

ETYMOLOGY: This species is named after Laos, the country of its origin. The name is used as an adjective.

HABITAT: Specimens were collected in puddles near small brooks, in old secondary forest.

DISTRIBUTION (Fig. 18): Laos: Bokeo Province.

# Allopachria stefaniae sp.n.

TYPE LOCALITY: Laos, Xieng Khouang Province, 30 km NE Phonsavan, ca. 19°37–38'N 103°20'E.

TYPE MATERIAL: **Holotype** ♂ (NMB): "LAOS-NE, Xieng Khouang prov., 19°37-8'N 103°20'E, 30km NE Phonsavan: Ban Na Lam→ Phou Sane Mt.,1300-1500 m, 10-30.v.2009, M.Brancucci leg.", "NHMB Basel, NMPC Prague **Laos 2009** Expedition: M. Brancucci, M. Geiser, Z. Kraus, D. Hauck V. Kubáň", "♂" [printed white labels], "HOLOTYPUS Allopachria stefaniae sp.n. Wewalka, Jiang & Hájek 2025" [printed red label]. **Paratype** ♀ (CGW): same locality data as holotype. The paratype is provided with a red paratype label.

DESCRIPTION: Holotype: Habitus (Fig. 3): Body broad-oval, slightly attenuated to apex, broadest shortly behind middle; distinctly convex; pronotum and head moderately broad; lateral margins of pronotum almost straight in posterior half. Measurements: TL 2.50 mm, TL-H 2.20 mm, EL 1.70 mm, MWH 1.10 mm, MPW 1.5 mm, MEW 1.70 mm.

Colouration (Fig. 3): Head dark reddish-brown, slightly paler on anterior half and along eyes. Pronotum dark reddish-brown to dark brown. Elytron dark brown with a distinct yellowish-brown marking forming a transverse band at base not reaching suture. Ventral surface: Head, pronotal and elytral epipleura as well as apex of last abdominal ventrite reddish-brown, rest dark reddish-brown. Antennae and palpi yellowish-brown; anterior and middle legs predominantly reddish-brown; posterior legs dark reddish-brown.

Structures and surface sculpture: Head: Clypeus regularly rounded, margin without bead; head in anterior half very finely and very sparsely punctate, in posterior half with coarser and denser punctation, with coarser punctures along medial margin of eyes and in two dimples near frontoclypeal suture; with distinct microreticulation in anterior half. Pronotum: Lateral margins distinctly bordered; punctation quite irregular in size and distribution, with additional coarser, navel like punctures in posterior half; without microreticulation. Elytron: Punctation moderately fine, almost regular in size and distribution; without a discal longitudinal row of punctures; highly polished; without microreticulation. Ventral surface: Punctation on metacoxae, metaventrite and abdominal ventrites sparse and irregular in distribution; with few irregular wrinkles in anterior part of metacoxae; without microreticulation.

Male: Protarsomeres slightly modified (Fig. 10d). Antennae not modified. Median lobe in ventral view evenly broad in basal two thirds and steadily tapering to narrowly rounded apex (Fig. 10a), in lateral view almost straight in apical two thirds and slightly bent at pointed apex (Fig. 10b); lateral lobe in lateral view elongate, without setation (Fig. 10c).

Female: Identical with male in habitus; without modified protarsomeres.

Variation: The female paratype has the same measurements and similar colouration, but the yellowish-brown transverse band at the elytral base is not reaching the lateral margin and has an

additional vague yellowish-brown subapical spot. Surface sculpture and structures are very similar, but the elytron has a regular longitudinal row of punctures on disc in anterior third.

AFFINITIES: *Allopachria stefaniae* closely resembles *A. vietnamica* WEWALKA, 2000 in habitus, size, colouration and surface sculpture and in the simple aedeagus, but in *A. vietnamica* the clypeal margin is distinctly beaded, and the elytron possesses a distinct reddish-brown subapical spot; in ventral view, the aedeagal median lobe is continuously attenuated to the apex, and the lateral lobes are broader and shorter (see WEWALKA 2000: figs. 60, 92). *Allopachria stefaniae* is also similar to *A. sausai* WEWALKA, 2000 in size, habitus, surface sculpture and male genitalia (see WEWALKA 2000: figs. 60, 92), but the latter differs in the colouration of the head, which is pale reddish-brown, and in the elytron, which has a distinct subapical and a small postmedian reddish-brown spot near the suture (see WEWALKA 2000: fig. 27).

ETYMOLOGY: This species is dedicated to Mag. Stefanie Bramböck (Vienna, Austria). The name is a proper noun in the genitive case.

HABITAT: Specimens were collected in puddles near small brooks in secondary forest.

DISTRIBUTION (Fig. 18): Laos: Xieng Khouang Province.

# Microdytes cattienensis sp.n.

TYPE LOCALITY: Vietnam, Nam Cat Tien National Park, 11°25'22"N 107°25'44"E.

TYPE MATERIAL: **Holotype** & (NMPC): "S VIETNAM, 1-15.v.1994 Nam Cat Tien N.P. 11°25'22"N107°25'44"E 119m, P.Pacholátko lgt.", "&", "*MICRODYTES feryi* Wewalka 2011 or sp. nov.? Jiří Hájek det. 2021" [printed white labels], "HOLOTYPUS Microdytes cattienensis sp.n. Wewalka, Jiang & Hájek 2025" [printed red label].

DESCRIPTION: Habitus (Fig. 4): Body oblong-oval, slightly attenuated to apex, broadest almost in middle; moderately convex; pronotum and head moderately broad; lateral margins of pronotum regularly and moderately curved. Measurements: TL 2.00 mm, TL-H 1.80 mm, EL 1.40 mm, MWH 0.90 mm, MPW 1.15 mm, MEW 1.35 mm.

Colouration (Fig. 4): Head reddish-brown, dark reddish-brown on vertex and medially of eyes, and with darker spots near insertion of antennae. Pronotum dark reddish-brown, dark brow along posterior margin. Elytron dark brown with quite distinct yellowish-brown markings forming a transverse band near base not reaching suture, a round spot near suture slightly posteriorly from elytral mid-length, a triangular post-median lateral spot, a triangular spot near apex and a band at lateral margin connecting the subbasal and the post-median spot. Ventral surface: Head, propleuron, pronotal and elytral epipleura as well as apical three abdominal ventrites reddish-brown, rest dark reddish-brown. Legs, antennae and palpi yellowish-brown to reddish-brown.

Structures and surface sculpture: Head: Clypeus subtruncate, margin without bead; punctation on head fine and moderately dense, with coarser punctures on vertex, along medial margins of eyes and in transverse lateral grooves near fronto-clypeal suture; without microreticulation. Pronotum: Lateral margins finely bordered; punctation moderately strong, quite irregular in distribution, with coarser punctures along posterior margin; without microreticulation. Elytron with stronger and finer punctures quite irregularly distributed, becoming gradually finer and sparser towards lateral margin, with a regular longitudinal row of punctures on disc in anterior third; highly polished; without microreticulation. Ventral surface: Metacoxae and metaventrite coarsely and sparsely punctate; abdomen with fine and very sparse punctation; without microreticulation.

Male: Pro- and mesotarsomeres and antennae not modified. Median lobe in ventral view broad, with four lobes, the medial ones with thin appendages (Fig. 11a), in lateral view only the lateral lobe can be seen (Fig. 11b); lateral lobe in lateral view with two ventral bulgy extensions and a dentiform appendage at apex, without setation (Fig. 11c).

Female: Unknown.

AFFINITIES: *Microdytes cattienensis* closely resembles *M. schoedli* WEWALKA, 1997 in habitus, size, colouration and surface sculpture, and has an extraordinary broad aedeagus, but in *M. schoedli*, the median lobe is only bilobate; the lateral lobes (parameres) are significantly different (see WEWALKA 1997: figs. 50, 78), and the elytral punctation is strong and dense. *Microdytes cattienensis* is also very similar to *M. feryi* WEWALKA, 2011 in habitus, colouration and surface sculpture but differs in smaller size and aedeagus. In *M. feryi*, the median lobe is also very broad but with two broad lateral lobes and two short and slender median lobes, and the lateral lobes are different (see WEWALKA 2011: fig. 10). From other species of *Microdytes* with coarse metacoxal punctation and similar size, habitus and colouration, e.g., *M. belli* BALFOUR-BROWNE, 1946, *M. championi* BALFOUR-BROWNE, 1946 and *M. maculatus* (MOTSCHULSKY, 1857), *M. cattienensis* can be separated by the different male genitalia (see WEWALKA 1997: figs. 33, 36, 42, 62, 65, 71).

ETYMOLOGY: This species is named after the type locality, Cat Tien National Park, in southern Vietnam. The name is used as an adjective.

HABITAT: Unknown.

DISTRIBUTION (Fig. 19): Vietnam: Cat Tien National Park, Dong Nai Province.

# Microdytes danxiashanensis sp.n.

TYPE LOCALITY: China, Guangdong Province, Danxiashan, ca. 25°1'N 113°44'E.

TYPE MATERIAL: **Holotype** ♂ (SYSU): "广东丹霞山 [Guangdong, Danxiashan] 22.VII.2011 采集人: 赵爽 [collector: Shuang Zhao]", "♂" [printed white labels], "HOLOTYPE *MICRODYTES danxiashanensis* sp. nov. Wewalka, Jiang & Hájek det. 2025" [printed red label]. **Paratypes**: 15 exs. (SYSU): same label data as holotype; 1 ex. (SYSU): "广东丹霞山 [Guangdong, Danxiashan Mt.] 2008. 5. 23 采集人: 贾凤龙 [collector: Fenglong Jia]"; 1 ♂ (SYSU): "广东丹霞山锦石岩 [Guangdong, Danxiashan Mt., Jinshiyan] 潮湿岩壁 [wet rock] 2011.vii.22 采集人: 贾凤龙 [collector: Fenglong Jia]", "China, Guangdong, Danxiashan, Jinshiyan, wet rock, 2011.vii.22 Leg. Fenglong Jia"; 27 exs. (CGW: 6 exs., CMM: 1 ex., NMPC: 18 exs., NMW: 2 exs. [0012927–28]): "**CHINA**, GUANGDONG prov. 30 km NE Shaoguan, Duanshi vill. **Danxia Shan** NP (stream, pools) 25°02.7′N, 113°43.8′E, 125 m Jiří Hájek leg., 4-5.v.2011". The paratypes are provided with printed red paratype labels.

DESCRIPTION: Holotype: Habitus (Fig. 5): Body regularly oval, broadest slightly behind middle; moderately convex; pronotum quite broad; lateral margins of pronotum regularly and moderately curved. Measurements: TL 1.77 mm, TL-H 1.54 mm, EL 1.31 mm, MWH 0.75 mm, MPW 1.02 mm, MEW 1.19 mm.

Colouration (Fig. 5): Head reddish-brown, dark brown along eyes and narrowly so at clypeal margin, with darker spots near insertion of antennae. Pronotum uniformly dark brown. Elytron reddish-brown with vague dark reddish-brown markings forming a longitudinal band along suture. Ventral surface: Head, elytral epipleura and apical abdominal ventrite reddish-brown, rest dark brown. Legs, antennae and palpi yellowish-brown to reddish-brown.

Structures and surface sculpture: Head: Clypeus subtruncate, margin without bead; head finely and sparsely punctate, with coarser punctures along medial margins of eyes and in two transverse lateral grooves near fronto-clypeal suture; with distinct microreticulation. Pronotum: Lateral margins finely bordered; punctation irregular in size and distribution, with coarser punctures along anterior and posterior margin; without microreticulation. Elytron finely, sparsely, and quite regularly punctate; with a longitudinal row of more impressed punctures on disc in anterior half; highly polished; without microreticulation. Ventral surface: Punctation on metacoxae, metaventrite and abdomen fine, very sparse and irregular in distribution; without microreticulation.

Male: Protarsomere 1 minimally enlarged. Antennae not modified. Median lobe in ventral view arrow-shaped (Fig. 12a), in lateral view S-shaped with triangular apex (Fig. 12b); lateral lobe in lateral view lens-shaped, with fine setation in apical half (Fig. 12c).

Female: Identical with male in habitus; without modified protarsomeres.

Variation: Colouration of head varies from pale reddish-brown to dark reddish-brown; colouration of pronotum varies from dark reddish-brown to dark brown; elytral markings more or less distinct. Measurements: TL 1.70–1.80 mm, TL-H 1.50–1.60 mm, EL 1.30–1.35 mm, MWH 0.70–0.80 mm, MPW 1.00–1.10 mm, MEW 1.15–1.25 mm.

AFFINITIES: *Microdytes danxiashanensis* resembles *M. sinensis* WEWALKA, 1997 in the fine metacoxal punctation and colouration, but it is larger, and the median lobe is significantly slenderer in ventral aspect (see WEWALKA 1997: fig. 56). *Microdytes danxiashanensis* is also similar to *M. nilssoni* WEWALKA, 1997 and *M. jinggangensis* in colouration and surface sculpture, but in the two latter species the median lobe is different (see WEWALKA 1997: fig. 45). The median lobe of *M. danxiashanensis* is similar to that of *M. bistroemi* WEWALKA, 1997 and *M. dinghuensis* sp.n., but the two latter species are smaller and have narrower pronota. The median lobe of *M. shaverdoae* WEWALKA, 2011 also resembles that of *M. danxiashanensis*, but the elytral markings are different.

ETYMOLOGY: This species is named after the type locality, the Danxiashan UNESCO Global Geopark, in the Chinese province of Guangdong. The name is used as an adjective.

HABITAT: Specimens collected by J. Hájek were found among gravel in seepages or minute puddles of very small forest streamlets.

DISTRIBUTION (Fig. 19): China: Guangdong.

## Microdytes dinghuensis sp.n.

TYPE LOCALITY: China, Guangdong Province, Zhaoqing Prefecture, Zhaoqing County, Dinghu Mountain National Nature Reserve, core area, above Qingyun Temple, ca. 280 m a.s.l.; 23°10'17"N 112°32'18"E (Fig. 15).

TYPE MATERIAL: **Holotype**  $\sigma$  (IAECAS): "CHINA: Guangdong Prov. Dinghu Nat. Res (core area), ca. 280 m", "23°10'17"N 112°32'18"E 28.X.2001 (CWBS 449) leg. Jäch & Komarek", " $\sigma$ " [printed white labels], "HOLOTYPUS Microdytes dinghuensis sp.n. Wewalka, Jiang & Hájek 2025" [printed red label]. **Paratypes**: 1  $\sigma$ , 2  $\varphi$   $\varphi$  (CGW: 1  $\varphi$ , NMW: 1  $\sigma$ , 1  $\varphi$  [0012929–30]): same locality data as holotype. The paratypes are provided with printed red paratype labels.

DESCRIPTION: Holotype: Habitus (Fig. 6): body regularly oval, broadest slightly behind middle; moderately convex; pronotum and head moderately broad; lateral margins of pronotum regularly and moderately curved. Measurements: TL 1.60 mm, TL-H 1.40 mm, EL 1.10 mm, MWH 0.70 mm, MPW 0.90 mm, MEW 1.10 mm.

Colouration (Fig. 6): Head reddish-brown, slightly darker near eyes. Pronotum uniformly dark brown. Elytron reddish-brown along base and lateral side, with indistinct dark reddish-brown markings on disc. Ventral surface: head reddish-brown, rest dark brown. Legs, antennae and palpi yellowish-brown to reddish-brown.

Structures and surface sculpture: Head: Clypeus subtruncate, margin without bead; head finely and sparsely punctate, with coarser punctures along medial margins of eyes and in two transverse lateral groves near fronto-clypeal suture; without microreticulation. Pronotum: Lateral margins finely bordered; punctation sparse and irregular in size and distribution, with coarser punctures along posterior margin; without microreticulation. Elytron: Punctures of two kinds, sparse and irregular in distribution; highly polished; without microreticulation. Ventral surface: Punctation

on metacoxae, metaventrite and abdomen fine, sparse and irregular in distribution; without microreticulation.

Male: Protarsomere 1 minimally enlarged. Antennae not modified. Median lobe in ventral view arrow-shaped (Fig. 13a), in lateral view S-shaped with triangular apex (Fig. 13b); lateral lobe in lateral view lens-shaped, without setation (Fig. 13c).

Female: Identical with male in habitus; without modified protarsomeres.

Variation: Colouration quite constant. Measurements: TL 1.50–1.60 mm, TL-H 1.30–1.40 mm, EL 1.00–1.10 mm, MWH 0.70 mm, MPW 0.90–1.00 mm, MEW 1.00–1.10 mm.

AFFINITIES: *Microdytes dinghuensis* resembles *M. sinensis* in habitus, size, colouration and surface sculpture, but in the latter the head is microreticulate, the punctation on pronotum and elytra is more regular, and the aedeagal median lobe is significantly broader in ventral aspect (see WEWALKA 1997: fig. 56). *Microdytes dinghuensis* is also similar to *M. nilssoni* and *M. jinggangensis* in habitus, colouration and surface sculpture, but in the two latter species the head is microreticulate and the median lobe is different (see WEWALKA 1997: fig. 45). From other species of *Microdytes* with fine metacoxal punctation and similar size, habitus and colouration, e.g., *M. bistroemi*, *M. uenoi* SATÔ, 1972 and *M. zetteli* WEWALKA, 1997, the new species can be separated by the different male genitalia (see WEWALKA 1997: figs. 34, 58–59, 63, 86–87).

ETYMOLOGY: This species is named after the type locality, the Dinghu Mountain National Nature Reserve (Guangdong, China), the first nature reserve in China, established in 1956. The name is used as an adjective.

HABITAT: Specimens were collected in a small stream, ca. 1.5–2.0 m wide, with sandstone bottom in dense primary forest at about 280 m a.s.l. (Fig. 15).

DISTRIBUTION (Fig. 19): China: Guangdong.

## Microdytes jinggangensis sp.n.

TYPE LOCALITY: China, Jiangxi Province, Jinggang Mountains, vicinity of Baiyinhu village; 26°36.8'N, 114°11.1'E (Fig. 16).

TYPE MATERIAL: Holotype & (NMPC): "CHINA, JIANGXI prov., 23-29.iv.2011 Jinggang Shan Mts. BAIYINHU vill. env. (stream valley; wet rock; at light) 26°36.8'N, 114°11.1'E, 800 m M. Fikáček & J. Hájek leg.", "&" [printed white labels], "HOLOTYPUS Microdytes jinggangensis sp.n. Wewalka, Jiang & Hájek 2025" [printed red label]. Paratypes: 1 & (CGW): same locality data as holotype; 3 exs. (NMPC): "CHINA, JIANGXI prov., 25.iv.2011 Jinggang Shan Mts. JINGZHUSHAN (stream valley) 26°31.0'N, 114°05.9'E, 640 m M. Fikáček & J. Hájek leg." [one ♂ with additional information: "MF06", collected together with Jia & Song, and with an additional label: "pools at the small stony stream partly overgrown with filamentous algae and grass, isolated pools at the side of a small stony stream with accumulated leaves"]; 10 exs. (SYSU): "江西井冈山荆竹山 [Jiangxi, Jinggangshan Mts., Jingzhushan] 风景区 [scenic area], 910 m 25.IV.2011 采集人: 赵爽 [collector: Shuang Zhao]", "CHINA: Jiangxi prov. Jinggangshan Mts. Jingzhushan,910 m 26°31.0'N, 114°05.9'E"; 7 exs. (CGW: 2 exs., NMPC: 5: exs.): "CHINA, JIANGXI prov., 26.iv.2011 Jinggang Shan Mts. XIANGZHOU vill. env. (rice fields; forested stream valley) 26°35.5'N, 114°16.0'E, 374 m M. Fikáček & J. Hájek leg."; 12 exs. (SYSU): "江西井冈山湘洲 [Jiangxi, Jinggangshan Mts., Xiangzhou] 26. IV.2011 采集人: 赵爽 [collector: Shuang Zhao]", "Jinggangshan, Xiangzhou , 349m 26°36'20.26"N 114°16'20.33"E"; 13 exs. (CGW: 2 exs., CMM: 1 ex., NMPC: 8 exs., NMW: 2 exs. [0012931-32]): "CHINA, JIANGXI prov., 28.iv.2011 Jinggang Shan Mts. HUYANGTA (fen, stream) 26°29.9'N, 114°07.3'E, 1490 m M. Fikáček & J. Hájek leg."; 8 exs. (CGW: 1 ex., IZCAS: 1 ex., NMPC: 6 exs.): "CHINA, FUJIAN Prov. Wuyishan Mts. NNR, Sangang vill. env., 23.v.-3.vi.2018 27°45.1'N, 117°40.9'E, 760 m forest stream; flood debris J. Hájek, D. Král, J. Růžička L. Sekerka". The paratypes are provided with printed red paratype labels.

DESCRIPTION: Holotype: Habitus (Fig. 7): Body regularly oval, slightly attenuated to apex, broadest almost in middle; moderately convex; pronotum and head moderately broad; lateral

margins of pronotum regularly and moderately curved. Measurements: TL 1.65 mm, TL-H 1.45 mm, EL 1.10 mm, MWH 0.75 mm, MPW 1.00 mm, MEW 1.10 mm.

Colouration (Fig. 7): Head reddish-brown, dark brown along eyes and narrowly so at clypeal margin, with darker spots near insertion of antennae. Pronotum uniformly dark reddish-brown. Elytron dark brown with vague reddish-brown markings forming a transverse band near base, a post-median lateral spot, a triangular spot near apex and a line along suture. Ventral surface: Head, pronotal and elytral epipleura as well as apical abdominal ventrite reddish-brown, rest dark brown. Legs, antennae and palpi yellowish-brown to reddish-brown.

Structures and surface sculpture: Head: Clypeus subtruncate, margin without bead; punctation on head fine and sparse, with coarser punctures on vertex, along medial margins of eyes and in two dimples near fronto-clypeal suture; with distinct microreticulation. Pronotum: Lateral margins finely bordered; punctation fine and sparse, with coarser punctures along anterior and posterior margin, and with short longitudinal wrinkles along posterior margin; without microreticulation. Elytron: Punctation fine, sparse and irregular in distribution; with a longitudinal row of more impressed punctures on disc in anterior half; highly polished; without microreticulation. Ventral surface: Punctation on metacoxae, metaventrite and abdomen fine, sparse and irregular in distribution; without microreticulation.

Male: Pro- and mesotarsomeres 1 minimally enlarged, with tuft of setae. Antennae not modified. Median lobe in ventral view shovel-shaped (Fig. 14a), in lateral view arrow-shaped (Fig. 14b); lateral lobe in lateral view lens-shaped, with a distinct membranous lobe at apex, with fine setation in apical half (Fig. 14c).

Female: Identical with male in habitus, without modified protarsomeres.

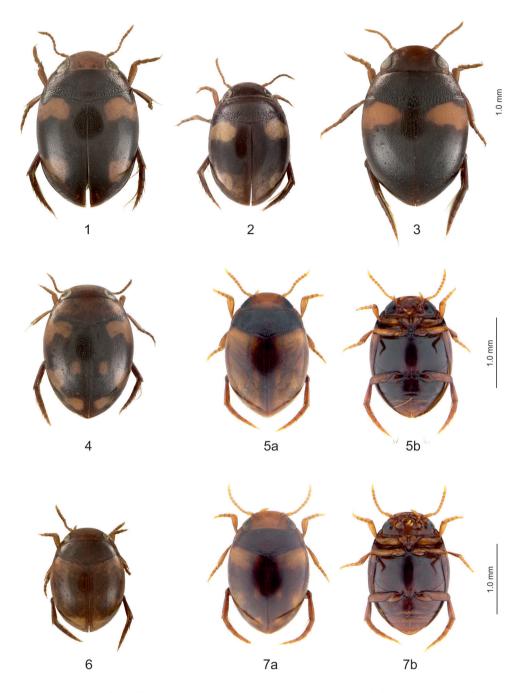
Variation: Colouration of head varies from pale reddish-brown to dark reddish-brown; colouration of pronotum varies from dark reddish-brown to dark brown; elytral markings more or less distinct. Measurements: TL 1.60–1.80 mm, TL-H 1.35–1.55 mm, EL 1.00–1.15 mm, MWH 0.70–0.75 mm, MPW 0.90–1.00 mm, MEW 1.05–1.15 mm.

AFFINITIES: *Microdytes jinggangensis* very much resembles *M. nilssoni* in habitus, size, colouration and surface sculpture, and has a similar aedeagus but in *M. nilssoni* the median lobe is significantly longer and slenderer in ventral and lateral aspect, and lateral lobes possess setae on the ventral margin (see WEWALKA 1997: figs. 45, 74). *Microdytes jinggangensis* is also very similar to *M. sinensis* in habitus, colouration and surface sculpture but differs on average in smaller size and in aedeagal characters. In *M. sinensis*, the median lobe is slenderer in ventral and lateral aspect (see WEWALKA 1997: fig. 56). From other species of *Microdytes* with fine metacoxal punctation and similar size, habitus and colouration, e.g., *M. bistroemi*, *M. uenoi* and *M. zetteli*, *M. jinggangensis* can be separated by the different male genitalia (see WEWALKA 1997: figs. 34, 58–59, 63, 86–87).

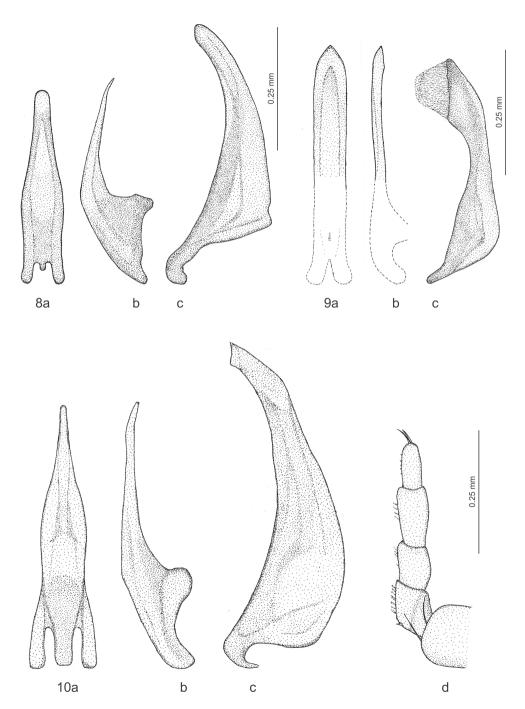
ETYMOLOGY: This species is named after the type locality, the Jinggang Mountains, in the Jiangxi Province of China. The name is used as an adjective.

HABITAT: At the type locality, the specimens were collected among gravel and debris in calm pools of a small stony stream (Fig. 16); at other localities in the Jinggang Mountains, specimens were found also in small side pools of various forest streams. In the Wuyishan, this species was collected among accumulated decaying leaves in calm parts of a larger forest stream (Fig. 17). Specimens were collected at elevations ranging from ca. 370–1490 m a.s.l.

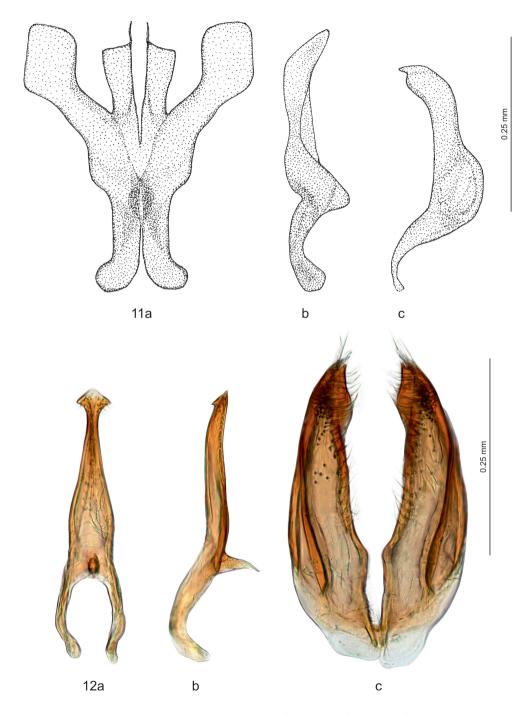
DISTRIBUTION (Fig. 19): China: Fujian, Jiangxi.



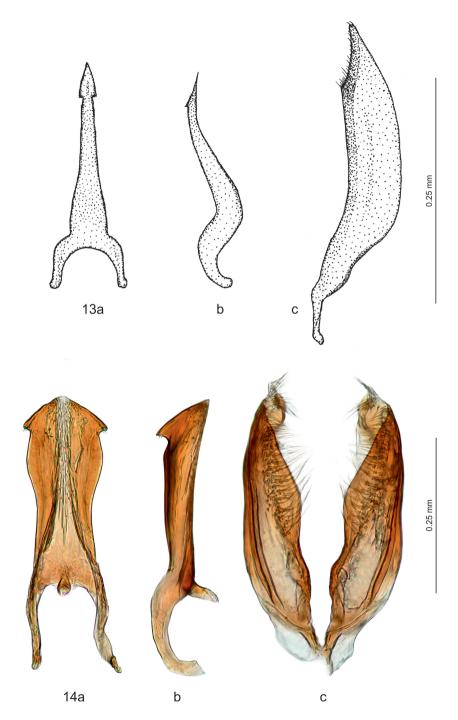
Figs. 1–7: Habitus of 1) *Allopachria brancuccii*, paratype  $\circ$ , 2) *A. laotica*, holotype  $\circ$ , 3) *A. stefaniae*, holotype  $\circ$ , 4) *Microdytes cattienensis*, holotype  $\circ$ , 5) *M. danxiashanensis*, paratype  $\circ$  (a: dorsal, b: ventral view), 6) *M. dinghuensis*, paratype  $\circ$ , 7) *M. jinggangensis*, paratype  $\circ$  (a: dorsal, b: ventral view). Photographs by H. Schillhammer (1–4, 6) and Z. Jiang (5, 7).



Figs. 8–10: Male genitalia (a–b: median lobe in ventral and lateral view, c: left paramere in lateral view, d: right male protarsomeres); 8) *Allopachria brancuccii*, 9) *A. laotica*, 10) *A. stefaniae*. Drawings by G. Wewalka.



Figs. 11–12: Line drawings (11) and photographs (12) of male genitalia (a–b: median lobe in ventral and lateral view, c: left paramere in lateral view); 11) *Microdytes cattienensis*, 12) *M. danxiashanensis*. Drawings by G. Wewalka, photographs by Z. Jiang.



Figs. 13–14: Line drawings (13) and photographs (14) of male genitalia (a–b: median lobe in ventral and lateral view, c: left paramere in lateral view); 13) *M. dinghuensis*, 14) *M. jinggangensis*. Drawings by G. Wewalka, photographs by Z. Jiang.



Fig. 15: Type locality of *Microdytes dinghuensis*: China, Guangdong, core area of Dinghu Mountain National Nature Reserve. Photograph by M.A. Jäch.

### New records

## Allopachria grandis BIAN & JI, 2010

Allopachria grandis Bian & Ji 2010: 61; Jiang et al. 2024: 300; Nilsson & Hájek 2025a: 204, 2025b: 48.

#### MATERIAL EXAMINED:

CHINA: Fujian Prov.: 7 exs. (NMPC): Wuyishan National Nature Reserve, Sangang vill. env. (forest stream; flood debris), 27°45.1'N 117°40.9'E, 760 m, 24.V.–3.VI.2018, leg. J. Hájek, D. Král, J. Růžička & L. Sekerka; 6 exs. (NMPC): Wuyishan National Nature Reserve, Guadun vill. env. (mixed forest with bamboo; in stream), 27°44.6'N 117°38.1'E, 1335 m, 29.V.2018, leg. J. Hájek, D. Král, J. Růžička & L. Sekerka; 7 exs. (NMPC): Wuyishan National Nature Reserve, Dazhulan (river valley, mixed forest with bamboo; in river), 27°41.8–42.1'N 117°38.6–9'E, 880–915 m, 27.V. and 1.VI.2018, leg. J. Hájek, D. Král, J. Růžička & L. Sekerka.

Jijangxi Prov.: 3 φ φ (CGW: 1 φ, NMPC: 2 φ φ): Jinggang Shan, Baiyinhu vill. env. (stream valley; wet rock; at light), 26°36.81'N 114°11.1'E, 880 m, 23.–29.IV.2011, leg. M. Fikáček & J. Hájek.

DISTRIBUTION (Fig. 18): China: Fujian (first record), Jiangxi.

## Allopachria longvanensis JI, GUO & BIAN, 2014

Allopachria longyanensis JI et al. 2014: 194; JIANG et al. 2024: 300; NILSSON & HÁJEK 2025a: 204, 2025b: 48.

#### MATERIAL EXAMINED:

CHINA: Zhejiang Prov.: 11 exs. (NMPC): Tianmu Mountain, forest stream near entrance of the UNESCO Biosphere Reserve, 30°18.9'N 119°26.4'E, 340 m, 29.VI.-6.VII.2017, leg. J. Hájek & J. Růžička.

DISTRIBUTION (Fig. 18): China: Fujian, Zhejiang (first record).



Figs. 16–17: Habitats of *Microdytes jinggangensis*: 16) China, Jiangxi, Jinggang Shan, Baiyinhu (type locality), 17) China, Fujian, Wuyi Shan, Sangang. Photographs by Z. Jiang.

# Allopachria miaowangi WEWALKA, 2010

Allopachria miaowangi WEWALKA 2010: 29; JIANG et al. 2024: 294, 300; NILSSON & HÁJEK 2025a: 204, 2025b: 48. Allopachria dieterlei WEWALKA, 2000: BIAN & JI 2010: 64 (misidentification).

#### MATERIAL EXAMINED:

CHINA: Fujian Prov.: 3 & A, 4 & Q (NMPC): Wuyishan National Nature Reserve, Guadun vill. env. (mixed forest with bamboo; in stream), 27°44.6'N 117°38.1'E, 1335 m, 29.V.2018, leg. J. Hájek, D. Král, J. Růžička & L. Sekerka.

DISTRIBUTION (Fig. 18): China: Fujian (first record), Hunan, Jiangxi, Zhejiang.

# Allopachria wangi WEWALKA & NILSSON, 1994

Allopachria wangi WEWALKA & NILSSON in NILSSON & WEWALKA 1994: 991; NILSSON et al. 1995: 362; BISTRÖM et al. 1997: 76; JIANG et al. 2024: 301; NILSSON & HÁJEK 2025a: 205, 2025b: 48.

#### MATERIAL EXAMINED:

CHINA: Guangdong Prov.: 1 ♀ (NMW): Zhaoqing Pref., 50 km E Fengkai, Heishiding Nature Reserve, Qixing River, ca. 10–15 m wide, flowing through deep valley with more or less natural forest, 23°27'45.6"N 111°54'42.6"E, ca. 180 m, 31.X. or 2.XI.2001, leg. M.A. Jäch & A. Komarek (CWBS 455).

REMARKS: Although only a female specimen is available to us, based on large body size, the entirely microreticulate pronotum and elytra, and elytral lateral border being not visible from above, we have no doubt about its identity.

DISTRIBUTION (Fig. 18): Continental China (first record): Guangdong; Taiwan.

## Allopachria wuzhifengensis BIAN & JI, 2010

Allopachria wuzhifengensis BIAN & JI 2010: 60; JIANG et al. 2024: 301; NILSSON & HÁJEK 2025a: 205, 2025b: 48.

# MATERIAL EXAMINED:

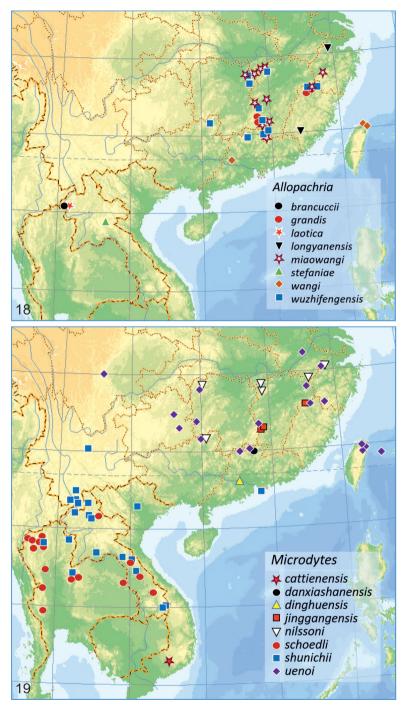
CHINA: Fujian Prov.: 4 ♀ ♀ (NMPC): Wuyi Mountains, Sangang vill. env. (forest stream; flood debris), 27°45.1'N 117°40.9'E, 760 m, 24.V.–3.VI.2018, leg. J. Hájek, D. Král, J. Růžička & L. Sekerka; 2 ♀ ♀ (NMPC): Wuyi Mountains, Guadun vill. env. (mixed forest with bamboo; in stream), 27°44.6'N 117°38.1'E, 1335 m, 29.V.2018, leg. J. Hájek, D. Král, J. Růžička & L. Sekerka; 1 ♀ (NMW): Jianyuan Pref., Wuyi Mountains, Chong'an City Reg., 1 km W Wuyi Gong vill., residual pools in dry riverbed in steep valley, crystalline rock, 250 m, 15. & 18.I.1997, leg. L. Ji & M. Wang (CWBS 240); 1 ♀ (NMW): Jianyuan Pref., Wuyi Mountains, Chong'an City Region, 3 km W Da'an Town, small stream in steep valley, >0.5 m wide, rock pools and waterfalls, section with coarse crystalline gravel, densely shaded by forest, water very cold, ca. 500 m, 19.I.1997, leg. L. Ji & M. Wang (CWBS 250).

Guangdong Prov.: 1 φ (NMW): Shaoguan Pref., Nanling National Park, Yao Shan, ca. 25 km NE Chengjia vill., stream, left tributary of Chengjia River, ca. 2–3 m wide, with large boulders and waterfalls, on steep slope, flowing through degraded primary forest, 24°51′51″N 112°54′43″E, 640 m, 4.II.2001, leg. M.A. Jäch & A. Komarek (CWBS 465); 2 φ φ (CGW, NMW): Shaoguan Pref., ca 45 km SE Shixing, stream, right tributary of Shui River, ca. 2–3 m wide, flowing through primary forest, 24°47′28″N 114°15′56″E, ca. 200 m, 8.II.2001, leg. M.A. Jäch & A. Komarek (CWBS 482).

Guangxi Autonomous Region: 1 ç (NMPC): ca. 2 km S of Longsheng Hot Spring, Pangxie Gou (forested gorge; stream, wet rocks), 25°53.0'N 110°12.6'E, 370 m, 13.–14.iv.2013, leg. M. Fikáček, J. Hájek & J. Růžička.

REMARKS: Although only female specimens are available to us, based on the large body size, pronotum and elytra without sculpture, and typical colouration, we have no doubt about the identity of the specimens from Fujian, Guangdong and Guangxi.

DISTRIBUTION (Fig. 18): China: Fujian (first record), Guangdong (first record), Guangxi (first record), Hunan, Jiangxi.



Figs. 18–19: Geographical distribution of 18) Allopachria brancuccii, A. laotica, A. grandis, A. longyanensis, A. miaowangi, A. stefaniae, A. wangi, and A. wuzhifengensis, 19) M. cattienensis, M. danxiashanensis, M. dinghuensis, M. jinggangensis, M. nilssoni, M. schoedli, M. shunichii, and M. uenoi.

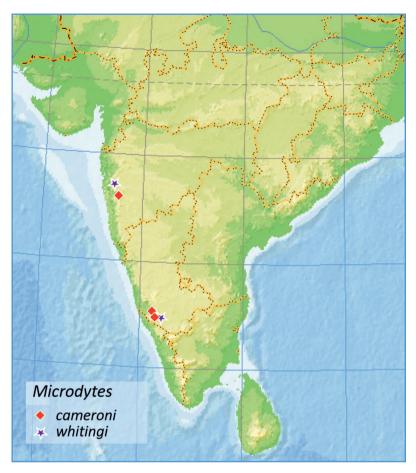


Fig. 20: Geographical distribution of *Microdytes cameroni* and *M. whitingi*.

## Microdytes cameroni MILLER & WEWALKA, 2010

Microdytes cameroni Miller & Wewalka 2010: 29; Wewalka 2011: 35; Nilsson & Hájek 2025a: 218.

## MATERIAL EXAMINED:

INDIA: Maharashtra: 1  $_{\phi}$  (NMPC): Mahabaleshwar env., 70 km SSW of Pune, ca. 17°55'N 73°39'E, 1400 m, 30.IX.–2.X.2005, leg. J. Bezděk.

DISTRIBUTION (Fig. 20): India: Karnataka, Maharashtra (first record).

# Microdytes nilssoni WEWALKA, 1997

Microdytes nilssoni Wewalka 1997: 30, 1998: 64, 2011: 30; Nilsson & Hájek 2025a: 219, 2025b: 50.

#### MATERIAL EXAMINED:

CHINA: Zhejiang Prov.: 4 exs. (NMPC): Tianmu Mountain, forest stream near entrance of the UNESCO Biosphere Reserve, 30°18.9'N 119°26.4'E, 340 m, 29.VI.-6.VII.2017, leg. J. Hájek & J. Růžička.

DISTRIBUTION (Fig. 19): China: Anhui, Guangxi, Hubei, Hunan, Zhejiang (first record).

# Microdytes schoedli WEWALKA, 1997

Microdytes schoedli Wewalka 1997: 33, 2011: 31; Okada et al. 2023: 108; Nilsson & Hájek 2025a: 219.

#### MATERIAL EXAMINED:

LAOS: Luang Prabang Prov.: 1 &, 2 Q Q (CJS): S of Muang Ngoi, 24.–26.II.2011, leg. J. Šťastný.

DISTRIBUTION (Fig. 19): Laos: Luang Prabang (first record), Khammouane, Savannakhet, Sekong provinces; Thailand: Chiang Mai, Kanchanaburi, Lampang, Mae Hong Son, Mukdahan, Phetchabun, and Tak provinces.

### Microdytes shunichii SATÔ, 1995

Microdytes shunichii Satô 1995: 313; Wewalka 1997: 38, 2011: 33; Okada et al. 2023: 110; Nilsson & Hájek 2025a: 219, 2025b: 50.

Microdytes holzmanni WEWALKA & WANG 1998: 66.

Microdytes holzmannorum NILSSON 2007: 51.

## MATERIAL EXAMINED:

CHINA: Guangxi Autonomous Region: 12 exs. (NMPC): Shiwandashan National Forest Park (forested river valley), 21°54.3'N 107°54.2'E, 290–360 m, 5.–9.IV.2013, leg. M. Fikáček, J. Hájek & J. Růžička.

DISTRIBUTION (Fig. 19): China: Guangxi (first record), Hong Kong, Yunnan; Laos: Attapeu, Khammouane, Luang Namtha, Luang Prabang, Oudomxay, Phongsali, Savannakhet, Vientiane provinces; Thailand: Chiang Mai, Nan, Petchabun provinces; Vietnam: Vinh Phuc Province.

## Microdytes uenoi SATÔ, 1972

Microdytes uenoi Satô 1972: 49, 1981: 68; Wewalka 1997: 40, 1998: 66, 2011: 34; Mori & Kitayama 2002: 57; Bian et al. 2015: 470; Nilsson & Hájek 2025a: 220, 2025b: 50.

#### MATERIAL EXAMINED:

CHINA: Guangdong Prov.: 10 exs. (NMPC): 30 km NE Shaoguan, Duanshi vill., Danxia Shan NP (stream, pools), 25°2.7'N 113°43.8'E, 125 m, 4.–5.V.2011, leg. J. Hájek; 15 exs. (NMPC), Nanling National Nature Reserve, Dadongshan (flood debris in stream below fall), 24°56.0'N 112°42.9'E, 690 m, 18.–21.IV.2013, leg. J. Hájek & J. Růžička.

Guangxi Autonomous Region: 12 exs. (NMPC): ca. 2 km S of Longsheng Hot Spring, Pangxie Gou (forested gorge; stream, wet rocks), 25°53.0'N 110°12.6'E, 370 m, 13.–14.IV.2013, leg. M. Fikáček, J. Hájek & J. Růžička.

Jiangxi Prov.: 1 σ (NMPC): Jinggang Mts., Baiyinhu vill. env. (stream valley; wet rock), 26°36.8'N 114°11.1'E, 800 m, 23.–29.IV.2011, leg. M. Fikáček & J. Hájek; 3 σσ, 4 φφ (NMPC): Jinggang Mts., Xiping (stream valley), 26°33.7'N 114°12.2'E, 915 m, 24.IV.2011, leg. M. Fikáček & J. Hájek.

DISTRIBUTION (Fig. 19): China: Anhui, Fujian, Guangdong (first record), Guangxi (first record), Guizhou, Hunan, Jiangxi (first record), Sichuan, Taiwan, Zhejiang; Japan: Okinawa Pref. (Ryukyu Islands: Iriomote).

### Microdytes whitingi MILLER & WEWALKA, 2010

Microdytes whitingi Miller & Wewalka 2010: 31; Wewalka 2011: 35; Nilsson & Hájek 2025a: 220.

#### MATERIAL EXAMINED:

INDIA: Karnataka: 1 ç (NMW): Kodagu (formerly Coorg) District, a few hundred meters west of Kakkabe, ca. 12°15'29"N 75°38'17"E, ca. 920 m, larger stream (Ettukadu Hole), ca. 5 m wide, with large boulders, rocky bed with some stones and gravel in riffles, silt in pools, 25.XII.1998, leg. D. Boukal (loc. 21).

REMARKS: This specimen has been collected just a little further upstream of the type locality of *Microdytes cameroni* (small tributary of the Ettukadu Hole, ca. 0.5 m wide, Boukal loc. 17).

DISTRIBUTION (Fig. 20): India: Karnataka (first record), Maharashtra.

#### Discussion

Four species of *Allopachria* are now known from Laos: *A. jirii* WEWALKA, 2010 and the three new species described above. Together with the three new species described above, the number of the Chinese species of *Microdytes* has increased to 19. *Microdytes cattienensis* is, besides *M. shunichii* SATÔ, 1995, the second *Microdytes* species known from Vietnam.

Several female specimens of *Allopachria* and *Microdytes* examined by the authors could not be assigned to described species, which prompts that the number of species in both genera is much higher than known today. Female specimens belonging to at least nine species of *Allopachria* from China: Anhui (NMW), Fujian (NMW), Guangdong (NMPC), Guangxi (NMPC), Hainan (NMW), Hunan (NMW), Yunnan (NMW), and Bhutan (see BRANCUCCI & WEWALKA 2007) currently cannot be assigned to described species. Four female specimens of *Microdytes* from the Philippines (Luzon, NMW), from Vietnam (Lam Dong Province, NMPC), from Laos (Khammouane Province, NMPC, and Bolikhamsay Province, NMB) probably represent new species.

## Acknowledgements

We thank Manfred A. Jäch (NMW) and the late Michel Brancucci (NMB) for providing study material as well as Isabelle Zürcher (NMB) and Michael Geiser (London, UK) for information on the habitats of *Allopachria brancuccii*, *A. laotica* and *A. stefaniae*. David Boukal (České Budějovice, Czechia) is thanked for detailed information on the locality of *Microdytes whitingi*. We are obliged to Harald Schillhammer (NMW) for the habitus photographs of five species; the photograph of the type locality of *Microdytes dinghuensis* was provided by M.A. Jäch.

The work of J. Hájek was supported by the Ministry of Culture of the Czech Republic (DKRVO 2024-2028/5.I.b, National Museum, 00023272).

## References

- BALFOUR-BROWNE, J. 1946: *Microdytes* gen. nov. Dytiscidarum (Hyphydrini). Journal of the Bombay Natural History Society 46: 106–108.
- BIAN, D., GUO, C. & JI, L. 2013: *Allopachria yiae* sp. n. from Chongqing, China (Coleoptera: Dytiscidae: Hydroporinae). Zootaxa 3681: 85–88.
- BIAN, D. & JI, L. 2010: Allopachria Zimmermann, 1924 from Jiangxi, China, with descriptions of two new species (Coleoptera: Dytiscidae). – Zootaxa 2350: 59–65.
- BIAN, D. & JI, L. 2012: Notes on Chinese *Allopachria* Zimmermann, with descriptions of two new species from Guangxi (Coleoptera: Dytiscidae). Zootaxa 3151: 28–34.
- BIAN, D., ZHANG, Y. & JI, L. 2015: *Microdytes huangyongensis* sp. n. and new records of *Allopachria* Zimmermann, 1924 from Zhejiang Province, China (Coleoptera: Dytiscidae). Zootaxa 4040: 469–471.
- BISTRÖM, O., NILSSON, A.N. & WEWALKA, G. 1997: A systematic review of the tribes Hyphydrini Sharp and Pachydrini n. trib. (Coleoptera, Dytiscidae). Entomologica Fennica 8: 57–82.
- Brancucci, M. & Wewalka, G. 2007: Dytiscidae collected by M.A. Jäch in Bhutan, 2005 (Coleoptera: Dytiscidae). Koleopterologische Rundschau 77: 81–87.
- JÄCH, M.A. & JI, L. 1998: China water beetle survey (1995–1998), pp. 1–23. In Jäch, M.A. & Ji, L. (eds.): Water beetles of China. Vol. II. Wien: Zoologisch Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, 371 pp.

- JÄCH, M.A. & JI, L. 2003: China water beetle survey (1999–2001), pp. 1–20. In Jäch, M.A. & JI, L. (eds.): Water beetles of China. Vol. III. Wien: Zoologisch Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, VI + 572 pp.
- JI, L., GUO, C. & BIAN, D. 2014: Allopachria longyanensis sp. n. from China (Coleoptera: Dytiscidae). Zootaxa 3755 (2): 194–196.
- JIANG, Z., CHEN, Y., HAN, L., JIA, F. & WANG, B. 2024: Allopachria nigrocatta sp. nov. from Guangxi, with a key and checklist of Chinese species and additional records of Allopachria Zimmermann, 1924 from China (Coleoptera, Dytiscidae, Hydroporinae, Hyphydrini). ZooKeys 1219: 287–302.
- MILLER, K.B. & NILSSON, A.N. 2003: Homology and terminology: Communicating information about rotated structures in water beetles. Latissimus 17: 1–4.
- MILLER, K.B. & WEWALKA, G. 2010: *Microdytes* Balfour-Browne of India with description of three new species (Coleoptera: Dytiscidae: Hydroporinae). Zootaxa 2420: 26–36.
- MORI, M. & KITAYAMA, A. 2002: Dytiscoidea of Japan. Osaka: Kankyo-Kagaku Ltd., 232 pp. [in Japanese].
- NILSSON, A.N. 2007: Some necessary corrections of the spelling of species-group names within the family Dytiscidae (Coleoptera). Zootaxa 1615: 49–54.
- NILSSON, A.N. & HÁJEK, J. 2025a: A world catalogue of the family Dytiscidae, or the diving beetles (Coleoptera, Adephaga). Version 1.I.2025, 329 pp. https://waterbeetles.eu/documents/W CAT Dytiscidae 2025.pdf
- NILSSON, A.N. & HÁJEK, J. 2025b: Catalogue of Palearctic Dytiscidae (Coleoptera). Internet version 2025-01-01, 92 pp. https://waterbeetles.eu/documents/PAL CAT Dytiscidae 2025.pdf
- NILSSON, A.N. & WEWALKA, G. 1994: Two new species of the genera *Allopachria* and *Agabus* from Taiwan (Coleoptera, Dytiscidae). Linzer Biologische Beiträge 26: 991–998.
- NILSSON, A.N., WEWALKA, G., WANG, L.-J. & SATÔ, M. 1995: An annotated list of Dytiscidae (Coleoptera) recorded from Taiwan. Beiträge zur Entomologie 45: 357–374.
- OKADA, R., JAITRONG, W. & WEWALKA, G. 2023: A review of *Microdytes J. Balfour-Browne*, 1946 from Thailand, Laos, and Cambodia with descriptions of five new species and new records (Coleoptera, Dytiscidae). ZooKeys 1159: 87–119.
- SATÔ, M. 1972: New dytiscid beetles from Japan. Annotationes Zoologicae Japonenses 45: 49–59.
- SATÔ, M. 1981: Notes on the genus *Microdytes* (Coleoptera, Dytiscidae) and its ally from Nepal. Annotationes Zoologicae Japonenses 54: 67–72.
- SATÔ, M. 1995: A new species of the genus *Microdytes* (Coleoptera, Dytiscidae) from Northern Vietnam.

   Special Bulletin of the Japanese Society of Coleopterology 4: 313–315.
- SHETH, S.D., GHATE, H.V., DAHANUKAR, N. & HÁJEK, J. 2021: The first hygropetric species of Microdytes J. Balfour-Browne, 1946 (Coleoptera: Dytiscidae) from the Western Ghats, India. – Oriental Insects 55 (2): 254–266.
- WEWALKA, G. 1997: Taxonomic revision of *Microdytes* Balfour-Browne (Coleoptera: Dytiscidae). Koleopterologische Rundschau 67: 13–51.
- WEWALKA, G. 1998: Dytiscidae: I. The Chinese species of *Microdytes* Balfour-Browne with description of a new species (Coleoptera), pp. 61–67. In Jäch, M.A. & Ji, L. (eds.): Water beetles of China. Vol. II. Wien: Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, 371 pp.
- WEWALKA, G. 2000: Taxonomic revision of *Allopachria* (Coleoptera: Dytiscidae). Entomological Problems 31: 97–128.
- WEWALKA, G. 2010: New species and new records of *Allopachria Zimmermann* (Coleoptera: Dytiscidae). Koleopterologische Rundschau 80: 25–42.

WEWALKA, G. 2011: New species, new records and taxonomic updates on *Microdytes* Balfour-Browne, 1946. – Koleopterologische Rundschau 81: 21–39.

WEWALKA, G. & WANG, L.-J. 1998: Three new species of *Microdytes* Balfour-Browne from Laos and Borneo (Coleoptera: Dytiscidae). – Koleopterologische Rundschau 68: 65–69.

#### Prof. Dr. Günther WEWALKA

Starkfriedgasse 16, A – 1190 Wien, Austria;

Naturhistorisches Museum Wien, Burgring 7, A – 1010 Wien, Austria (g.wewalka@gmx.at)

#### Zhuoyin JIANG, PhD candidate

Department of Entomology, College of Plant Protection, Nanjing Agricultural University, Nanjing 210095, China and Department of Entomology, College of Life Sciences, Sun Yat-sen University, Guangzhou 510275, China (zhuoyin jiang@126.com)

#### Dr. Jiří HÁJEK

Department of Entomology, National Museum, Cirkusová 1740, CZ – 193 00 Praha 9 – Horní Počernice, Czechia (jiri.hajek@nm.cz)

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