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New and little known species of Heteroceridae from Java (Coleoptera: Heteroceridae)

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Abstract

Based on alleged lectotypes and on material identified by R. Charpentier the author discusses the identity (species concepts) of the three Javanese Heteroceridae described by GROUVELLE (1896): *Heterocerus javanicus*, *H. parvulus*, and *H. quinquemaculatus*. *Heterocerus quinquemaculatus* GROUVELLE, 1896 is redescribed and formally transferred to the genus *Augyles*. *Heterocerus javanicus* and *H. parvulus* are believed to be synonyms of *H. philippensis* GROUVELLE, 1896. *Augyles stevei* sp.n., *A. stefani* sp.n., *A. isabelae* sp.n., and *A. rarus* sp.n., all from Java, are described. *Heterocerus virgatus* MAMITZA, 1933 and *A. gabriellae* (MASCAGNI, 1993) are reported from Java for the first time.

Key words: Coleoptera, Heteroceridae, taxonomy, new species, new records, Indonesia, Java.

Introduction

Knowledge of the Heteroceridae of Java is very poor at the present time and is based on only one publication (GROUVELLE 1896), which contains the description of three species (*Heterocerus javanicus*, *H. parvulus*, and *H. quinquemaculatus*). I know of no other references on the heterocerid fauna from Java except the above mentioned work and the citation of these three species in ZAITZEV (1910).

Recently, I was able to study specimens of the Grouvelle collection (MHNP), which were labelled as lectotypes by R. Charpentier. Study of these specimens together with additional material identified by R. Charpentier (MZLU) allows conclusions on the true identity of *Heterocerus javanicus*, *H. parvulus*, and *H. quinquemaculatus*, which are presented below. Unfortunately, I do not know any paper, where the lectotype designations had been published by Charpentier, and it is therefore quite possible that they have never been formally established.

Furthermore, the Heteroceridae collected by Dr. W. Becker in Java in 2003 are treated herein. Four species are new to science and two species are reported from Java for the first time.

The following acronyms are used in the text to indicate the depository of the material examined:

CSU	Coll. S. Skalický, Ústí nad Orlicí, Czech Republic
MHNP	Muséum national d'Histoire naturelle, Paris
MZLU	Museum of Zoology, Lund University, Sweden
NMW	Naturhistorisches Museum Wien, Austria
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany

Separate labels are indicated by double slashes.

Augyles gabriellae (MASCAGNI, 1993)

MATERIAL EXAMINED: 2 ♂♂, 1 ♀ (CSU): "JAVA Pangandaran Nat. Park (lamp) 20.iii.2003 W. Becker lgt".

DISTRIBUTION: Nepal (SKALICKÝ 1998, 2000), Thailand (MASCAGNI 1993), Cambodia (SKALICKÝ 2004), Laos (SKALICKÝ 2000), Java (first record).

Augyles isabelae sp.n.

TYPE MATERIAL: **Holotype** ♂ (CSU): "JAVA Pangandaran Nat. Park (lamp) 20.iii.2003 W. Becker lgt". **Allotype** ♀ (CSU), same data as holotype. **Paratype** ♂ (CSU), same data as holotype.

DESCRIPTION: Holotype ♂: Total length 2.4 mm (incl. labrum); elytra 1.55 mm long, 0.9 mm wide across shoulders. Ground colour brown, elytra with rhubarb-like pattern as in Fig. 1. Mandibles, antennae, spines of tibiae and meso- and metafemur pale brown. Abdomen brown with pale brown lateral margins in three last visible segments. Body shiny. Labrum as wide as long, laterally curved, anterior angles soft serrate in middle part; dense adjacent setae. Mandibles with acute apex, without dorsal subapical tooth. Prostheca with teeth on the dental lobe, without notch. Antennae 11-segmented, with seven-segmented club, antennomeres 1 and 2 with sparse long erect setae. Head finely granular, setae dense, short, yellowish. Clypeus without pair of anterior horns, anterior margin shallowly emarginate. Pronotum as wide as base of elytra, pronotal base completely rimmed; surface finely granular, without larger intermixed punctures; setae fine, adjacent aureate. Scutellum triangular, as wide as long. Elytra without longitudinal furrows, with shallow scutellar depressions and well developed humeral depressions extending obliquely to almost midlength of elytra; setae of elytra short semierect, sparse, aureate. Epipleura without epipleural ridges. Metasternum with post-mesocoxal ridge. Mesosternum with pair of spines in front of each mesocoxa. Protibia with nine stout spines, mesotibiae with nine weak spines, metatibia with uncertain number of thin spines. Abdomen with post-metacoxal ridge. Stridulatory arch marked with shallow striae. Spiculum gastrale 0.6 mm long, V-shaped, arms connected apically. Aedeagus well sclerotized, 0.6 mm long, shape as in Figs. 2–4. Parameres fused together, supporting sheath without border posteriorly. Penis without processus accessorius.

Allotype ♀: Total length 2.8 mm (incl. labrum); elytra 1.7 mm long, 1.05 mm wide across shoulders. Setae of body yellowish, not aureate. Externally similar to male.

DIFFERENTIAL DIAGNOSIS: Shape of body, setae, granulation and other diagnostic characters place this species near *A. saano* MASCAGNI, 1995 described from Nepal. The partially different elytral pattern (see Fig. 1; MASCAGNI 1995a: Fig. 11) does not provide reliable distinguishing characters. Differs from the latter two species in the structure of the male genitalia (see Figs. 2–4; MASCAGNI 1995a: Fig. 12), shape of border of mesosternum (only with tubercle in front of each mesocoxa in *A. saano*) and in the number of tibial spines (only eight on all tibiae in *A. saano*).

ETYMOLOGY: The new species is dedicated in memory of Isabela, my late girlfriend.

Augyles quinquemaculatus (GROUVELLE, 1896) comb.n.

Heterocerus (*Littorimus*) *quinquemaculatus* GROUVELLE 1896: 7.

MATERIAL EXAMINED: Alleged lectotype ♂ (MHNP): "Hekmeyer Ardjoena Java or" [oval label] // "Type" [originally red, at present dilute label] // "Flajom from I esoom Java" // "Lectotypus *Heterocerus quinquemaculatus* ♂ Charpentier 1960" [red hand write label] // "Museum Paris" // "Heterocerus 5-maculatus Notes Grouv.". Aedeagus mounted on slides in Canadian Balsam.

1 ex. (MZLU): "Valck Lucassen Slawi Tegal Java 1909" // "Museum Leiden collectie F. T. Valck Lucassen" // "Heterocerus 5-maculatus Gr. det. R. Charpentier"; 5 exs. (MZLU): "Valck Lucassen Slawi Tegal Java 1909" // "Museum Leiden collectie F. T. Valck Lucassen"; 4 exs. (MZLU): "Djombang Soerabaia" // "Museum Leiden collectie F. T. Valck Lucassen"; 37 exs. (1 CSU, 36 MZLU): "Kadlri. JAVA. deVos." // "Museum Leiden verz. J.J. devos tot Nederveen Cappel"; 1 ex. (MZLU): "Kadlri. JAVA. deVos." // "Museum Leiden verz. J.J. devos tot Nederveen Cappel" // "Heterocerus quinquemaculatus Gr. det. Charpentier 1966".

REDESCRIPTION: Male: Ground colour brown, elytra and pronotum with pale brown pattern as in Fig. 5. Mandibles well developed. Antennae 11-segmented with seven-segmented club. Clypeus without pair of anterior horns. Pronotum slightly wider than base of elytra, pronotal base completely rimmed. Elytra with shallow longitudinal furrows, with shallow humeral depressions. Epipleural ridge absent. Metasternum with post-mesocoxal ridge. Mesosternum with pair of prominent spines in front of each mesocoxa. Post-metacoxal line present. Spiculum gastrale V-shaped, arms connected apically. Aedeagus well developed, shape as in Figs. 6–8. Structure of male genitalia similar to *A. anulatus* (MASCAGNI, 1991) (see Figs. 6–8; MASCAGNI 1991: Fig. 2).

Female: Externally similar to male.

No substantial morphological variability observed in the examined series.

DISTRIBUTION: Java (GROUVELLE 1896).

Augyles rarus sp.n.

TYPE MATERIAL: **Holotype** ♂ (CSU): "JAVA Pangandaran Nat. Park (lamp) 20.iii.2003 W. Becker lgt".

DESCRIPTION: Holotype ♂: Total length 3 mm (incl. labrum); elytra 1.85 mm long, 1.1 mm wide across shoulders. Ground colour brown to black, pronotum and elytra with orange pattern as in Fig. 9. Mandibles, antennae, legs and ventral surface laterally pale brown. Labrum almost square, anterior angle soft serrate in middle part; dense adjacent setae. Mandibles with acute apex, without dorsal subapical tooth. Prostheca with very sparse line of stout teeth on dental lobe, without notch. Antennae 11-segmented, with seven-segmented club, antennomeres 1 and 2 with sparse very long erect setae. Head finely granular, setae dense, short, with intermixed long erect setae above eyes. Clypeus without a pair of anterior horns, anterior margin shallowly emarginate, finely granular, with dense and short setae. Pronotum slightly wider than base of elytra, surface finely microgranular, setae sparse, adjacent, pale with dense setae in anterior margin, pronotal base completely rimmed. Scutellum triangular, pointed, 1.5 times as long as wide. Elytra without longitudinal furrows, with shallow humeral depressions, without scutellar depression. Elytra microgranular with intermixed punctures approximately as large as 0.5 times eye facets. Setae of elytra short, adjacent, sparse, whitish. Epipleura without epipleural ridges. Metasternum with post-mesocoxal ridge. Mesosternum with one prominent spine in front of each mesocoxa. Protibia with 10 stout spines, meso- and metatibia with uncertain number of thin spines, Ventral surface sparsely setose; finely granulate. Abdomen with post-metacoxal ridge. Stridulatory arch underdeveloped without striae. Spiculum gastrale V-shaped, well sclerotized, arms connected apically. Aedeagus well sclerotized, oblong, 0.6 mm long, shape as in Figs. 10–12.

Female unknown.

DIFFERENTIAL DIAGNOSIS: *A. rarus* sp.n. is similar to *A. grohmanni* (MASCAGNI, 1987) in several of characters such as the number of antennomeres, absence of clypeal horns and epipleural ridge, presence of post-mesocoxa and post-metacoxal ridge. It differs in the morphology of male genitalia (see Figs. 10–12; MASCAGNI 1987: Fig. 5). Shape of elytral pattern

is different in *A. rarus*, but this pattern is very variable in *A. grohmanni* and it cannot be regarded as a reliable distinguishing character.

A similar species which differs in the male genitalia is *A. feae* (GROUVELLE, 1896).

ETYMOLOGY: The specific epithet is the Latin adjective *rarus* (rare). It refers to the sparse teeth in the prostheca.

Augyles stefani sp.n.

TYPE MATERIAL: **Holotype** ♂ (CSU): "JAVA Pangandaran Nat. Park (lamp) 20.iii.2003 W. Becker lgt". **Allotype** ♀, same data as holotype. **Paratypes:** 3 ♂♂, 1 ♀ (CSU, 1 ♂ NMW), same data as holotype.

DESCRIPTION: Holotype ♂: Total length 3.1 mm (incl. labrum); elytra 1.85 mm long, 1.1 mm wide across shoulders. Ground colour brown to black, pronotum and elytra with pale brown pattern as in Fig. 13. Mandibles, antennae, legs and ventral surface pale brown. Body shiny. Labrum as wide as long, laterally curved, anterior angles soft serrate in middle part; dense adjacent setae. Mandibles with acute apex, without dorsal subapical tooth. Prostheca with teeth on dental lobe, without notch. Antennae 11-segmented, with seven-segmented club, antennomeres 1 and 2 with sparse long erect setae. Head finely granular, setae dense, short, with intermixed long erect setae above eyes. Clypeus without a pair of anterior horns, anterior margin broadly emarginate, finely granular, with dense and short setae. Pronotum slightly wider than base of elytra, surface finely granular, setae sparse, erect, pale with dense setae in anterior margin, pronotal base completely rimmed. Scutellum triangular, pointed, 1.5 times as long as wide. Elytra without longitudinal furrows, with shallow humeral depressions, without scutellar depression. Elytra regularly granulate with intermixed punctures approximately as large as 0.5 times eye facets. Setae of elytra short, semi-erect, sparse, yellowish. Epipleura without epipleural ridges. Metasternum with post-mesocoxal ridge. Mesosternum with one prominent spine in front of each mesocoxa. Protibia with 10 stout spines, meso- and metatibia with uncertain number of thin spines, partly lost. Ventral surface sparsely setose, finely granulate. Abdomen with post-metacoxal ridge. Stridulatory arch marked with striae. Spiculum gastrale 0.6 mm long, V-shaped, well sclerotized, arms connected apically. Aedeagus well sclerotized, oblong, 0.8 mm long, shape as in Figs. 14–16. Parameres fused together, supporting sheath without border posteriorly, deeply emarginate. Penis with long acute spine and long narrow internal sac.

Allotype ♀: Total length 2.75 mm (incl. labrum); elytra 1.65 mm long, 0.95 mm wide across shoulders. Body generally lighter, ground colour pale brown, pronotum without pattern, elytral pattern as in holotype. Externally similar to male.

DIFFERENTIAL DIAGNOSIS: Due to the shape of the aedeagus (and other characters such as the presence of the post-metacoxal ridge, 11-segmented antennae, clypeus without anterior horns) *A. stefani* sp.n. is near *A. amulatus vendulae* SKALICKÝ, 2000a described from Thailand (nominate subspecies in Cambodia, Vietnam (see MASCAGNI 1991, 1995b) and in Borneo (4 exs. (NMW): "Malaysia, Sabah, 25 km S Sapulut, Batu Punggul limestone pinnacle env. Sifting")). Contrary to the new species *A. a. vendulae* is longer (3.7 mm) and has a different elytral pattern, elytra without larger intermixed punctures, mesosternum only with little spines in front of each mesocoxa and protibia with 11 spines. The main difference is in the morphology of the male genitalia: supporting sheath deeply emarginate and penis with long, well sclerotized spine (not processus accessorius) in *A. stefani* (see Figs. 14–16; SKALICKÝ 2000a: Figs. 14–16).

ETYMOLOGY: This species is named for the late Stefan Schödl, famous expert of Water beetles and ants.

Augyles stevei sp.n.

TYPE MATERIAL: **Holotype** ♂ (CSU): "JAVA Pangandaran Nat. Park (lamp) 20.iii.2003 W. Becker lgt". **Allotype** ♀ (CSU), same data as holotype. **Paratype** ♀ (CSU), same data as holotype.

DESCRIPTION: Holotype ♂: Total length 4.25 mm (incl. labrum); elytra 2.65 mm long, 1.5 mm wide across shoulders. Ground colour black to brown, elytra without colour pattern. Mandibles, antennae, tarsi and knees pale brown, ventral surface brown. Labrum as wide as long, laterally curved, anterior angles with distinct well developed serration. Mandibles strong, asymmetric (see Figs. 17–18), without acute apex, dorsal subapical tooth small. Prostheca without notch, only with fine teeth on dental lobe. Antennae 11-segmented, with seven-segmented club, antennomeres 1 and 2 with sparse long erect setae. Head finely granular, setae sparse, short, intermixed with long erect setae above eyes. Clypeus without pair of anterior horns, anterior margin broadly emarginate, finely granular, with dense, short, pale setae intermixed with long erect ones. Pronotum as wide as base of elytra, pronotal base completely rimmed. Pronotum regularly granular; setae long and sparse. Scutellum triangular, pointed, two times as long as wide. Elytra without longitudinal furrows, with scutellar and well developed humeral depressions. Surface of elytra finely granulate, with intermixed punctures approximately as large as eye facets. Setae on elytra short, semi-erect yellowish, intermixed with long erect ones. Epipleura without epipleural ridges. Ventral surface sparsely setose. Metasternum with post-mesocoxal ridge. Mesosternum neither spinose nor tuberculate in front of each mesocoxa. Post-metacoxal line present. Stridulatory arch marked, without striae. Protibia with 10 stout spines, mesotibiae with nine and metatibiae with eight weak spines. Spiculum gastrale (Fig. 19) 0.9 mm long, V-shaped, arms connected by membrane apically. Aedeagus well sclerotized, oblong, 1.05 mm long, shape as in Figs. 20–22. Parameres pointed and fused together. Penis with two acute spines.

Allotype ♀: Total length 3.75 mm (incl. labrum); elytra 2.55 mm long, 1.5 mm wide across shoulders. Mandibles normally developed. Elytra with indicated longitudinal furrows only. Externally similar to male.

DIFFERENTIAL DIAGNOSIS: Probably related to *A. robustus* MASCAGNI, 2003 described from China (Hainan). It differs from the latter species in the absence of elytral pattern (with pattern in *A. robustus*) and in the morphology of the male genitalia (see Figs. 20–22; MASCAGNI 2003: Figs. 1–2).

ETYMOLOGY: Dedicated to my friend Mr. Steve Schott (Ohio, U.S.A.), American heterocerid specialist.

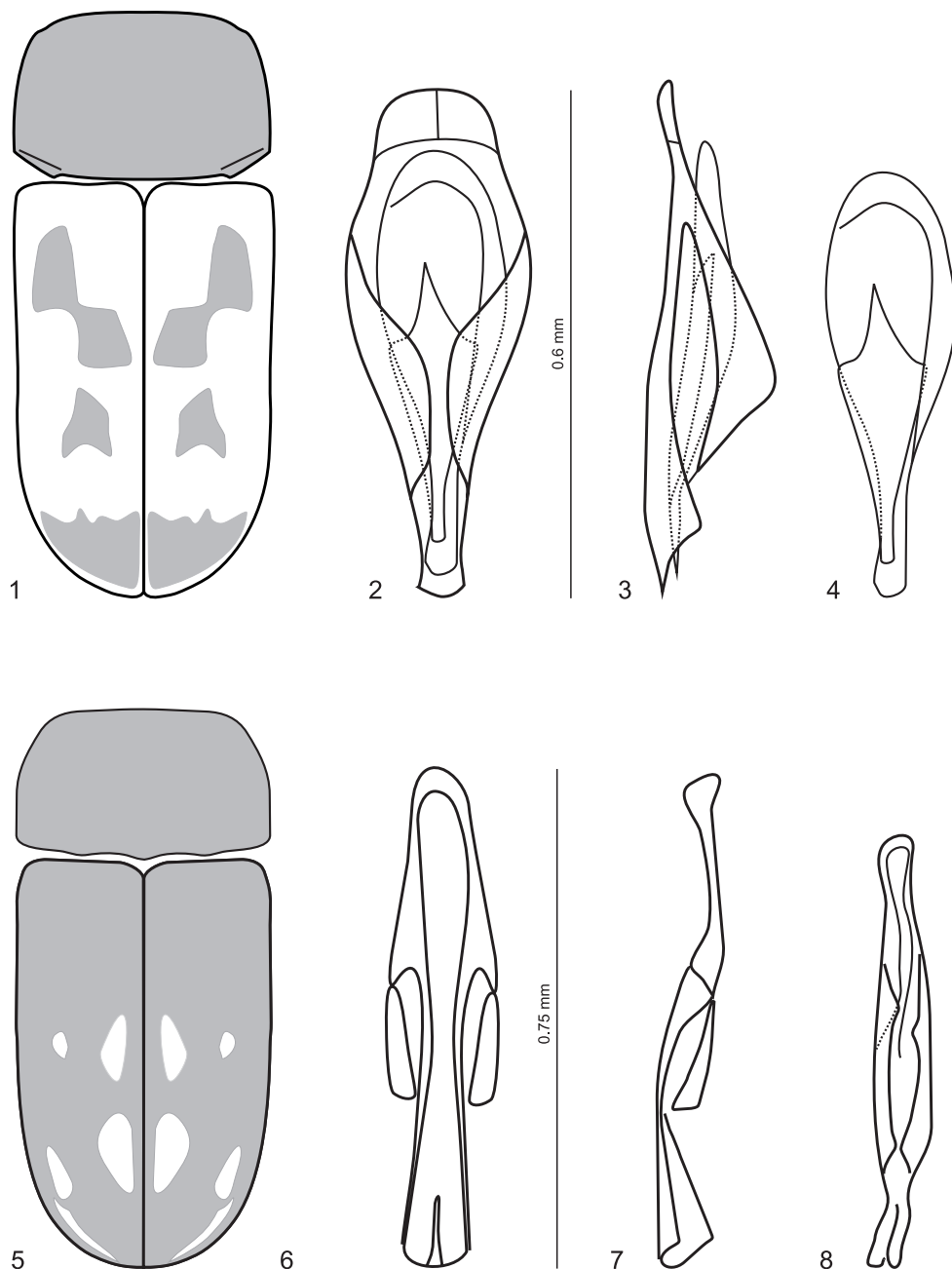
Heterocerus javanicus (GROUVELLE, 1896)

MATERIAL EXAMINED: Alleged lectotype ♂ (MHNP): "Java" // "Hevr Heyer Batavi" [cramped, oval label] // "Type" [red label] // "Museum Paris 1917 coll. Grouvelle" [yellow label] // "Heterocerus javanicus Grouv. " // "Lectotypus Heterocerus javanicus (Gr.) ♂ Charpentier 1960" [red handwritten label] Aedeagus mounted on slides in Canadian Balsam.

1 ♂ (SMNS): "INDONESIA, E JAWA Baluran Nat. P. 50 m Wonorejo 24.5.1994 Bolm leg" [yellow label] // "Heterocerus philippensis javanicus Grou. det. A. Mamitza"; 2 exs. (MZLU): "Valck Lucassen Slawi Tegal Java 1909" // "Museum Leiden collectie F. T. Valck Lucassen"; 1 exs. (MZLU): "Djatibarang Tegal Java" // "Museum Leiden collectie F. T. Valck Lucassen" // "Heterocerus javanicus Gr. Det. R. Charpentier"; 10 exs. (9 MZLU, 1 CSU): "Soreakarta. JAVA, deVos" // "Museum Leiden verz. J.J. devos tot Nederveen Cappel".

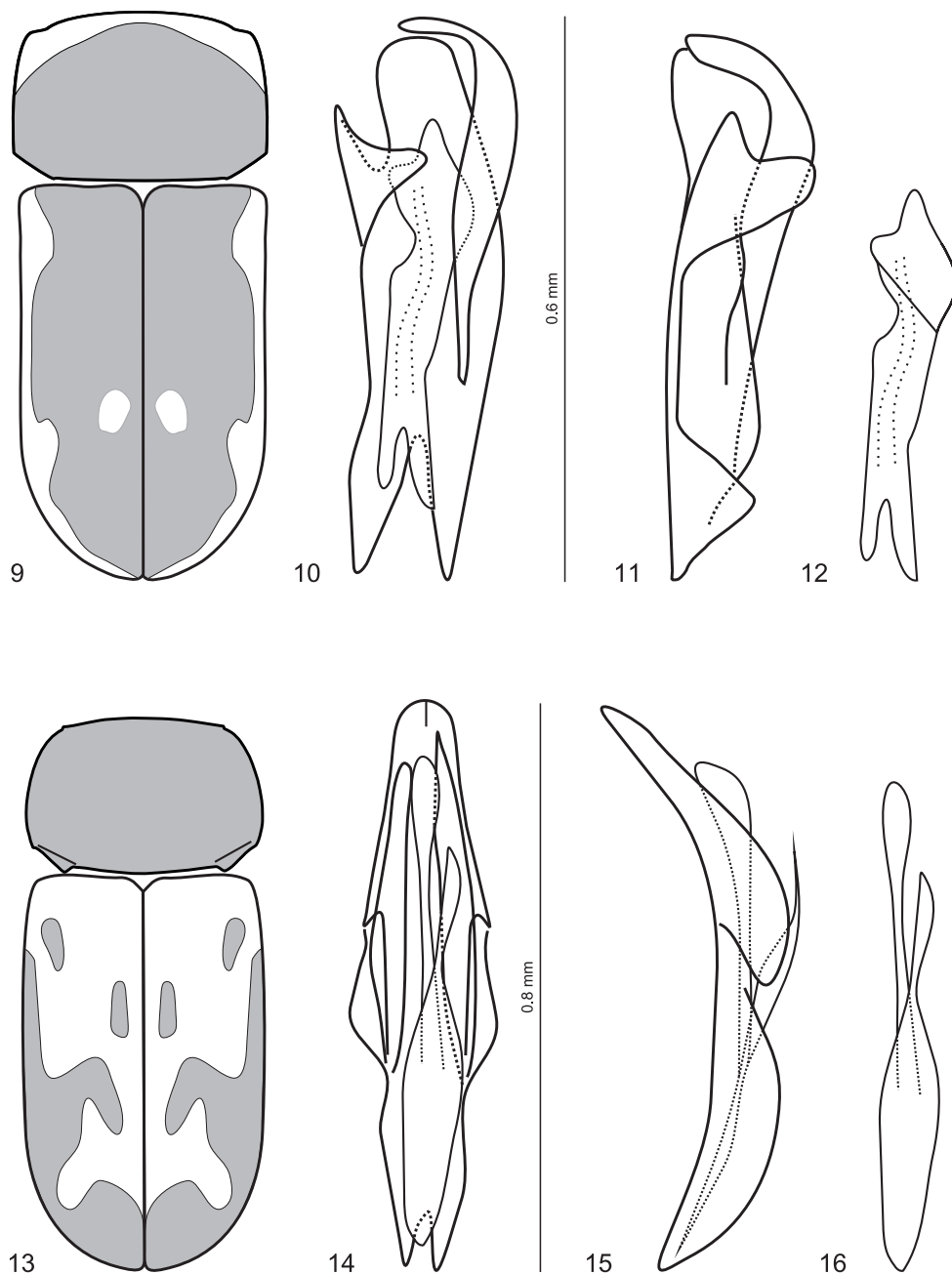
DISTRIBUTION: Java and Sumatra (GROUVELLE 1896).

DISCUSSION: Due to its male genitalia, *H. javanicus* is probably a subspecies of *H. philippensis* GROUVELLE, 1896. More material must be examined to solve this problem.



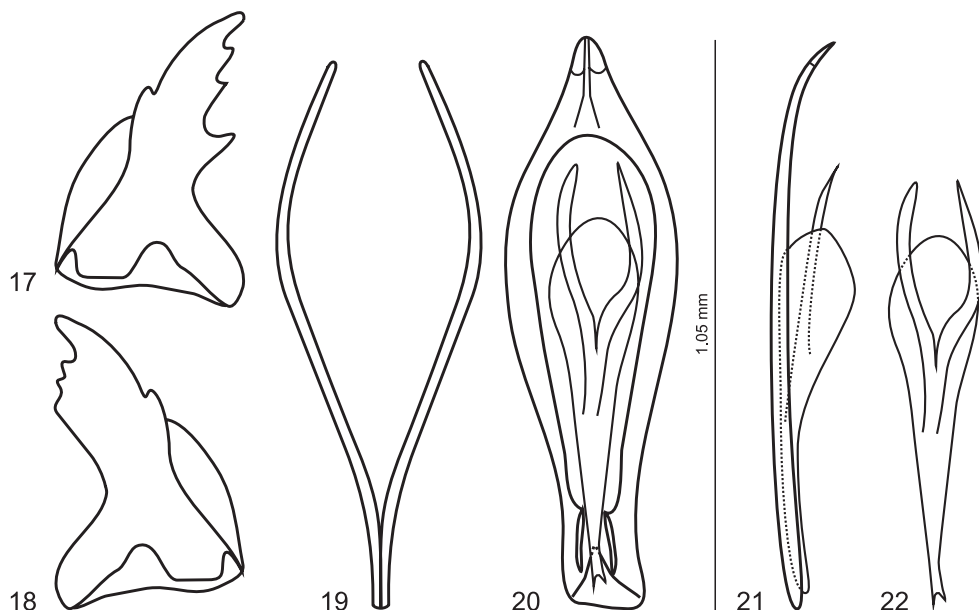
Figs. 1–4: *Augyles isabelae* sp.n., holotype: 1) pronotum and elytra, dorsal view; 2) aedeagus, dorsal view; 3) aedeagus, lateral view; 4) penis, dorsal view. Fig. 1 not to scale.

Figs. 5–8: *Augyles quinquemaculatus*: 5) pronotum and elytra, dorsal view; 6) aedeagus, dorsal view; 7) aedeagus, lateral view; 8) penis, dorsal view. Fig. 5 not to scale.



Figs. 9–12: *Augyles rarus* sp.n., holotype: 9) pronotum and elytra, dorsal view; 10) aedeagus, dorsal view; 11) aedeagus, lateral view; 12) penis, dorsal view. Fig. 9 not to scale.

Figs. 13–16: *Augyles stefani* sp.n., holotype: 13) pronotum and elytra, dorsal view; 14) aedeagus, dorsal view; 15) aedeagus, lateral view; 16) penis, dorsal view. Fig. 13 not to scale.



Figs. 17–22: *Augyles stevei* sp.n., holotype: 17) left mandible, dorsal view, 18) right mandible, dorsal view; 19) spiculum gastrale, dorsal view; 20) aedeagus, dorsal view; 21) aedeagus, lateral view; 22) penis, dorsal view. Figs. 17, 18 not to scale.

Heterocerus parvulus (GROUVELLE, 1896)

TYPE MATERIAL EXAMINED: Alleged lectotype ♂ (MHNP): “Batav” // “Sythoff Batavia” [oval label] // “Type” [red label] // “*Heterocerus parvulus* Grouv.” // “Museum Paris” // “*parvulus* Grouv.” // “Lectotypus *Heterocerus parvulus* (Gr.) ♂ Charpentier 1960” [red handwritten label] // “*Heterocerus javanicus* Gr. Det. Charpentier 1974”. Aedeagus mounted on slides in Canadian Balsam.

DISTRIBUTION: Java (GROUVELLE 1896).

DISCUSSION: Due to the male genitals *H. parvulus* is probably a synonym of *H. javanicus* and/or *H. philippensis*. More material must be examined to solve this problem.

Heterocerus virgatus MAMITZA, 1933

Heterocerus fulvipes MILLER 1995: 41.

MATERIAL EXAMINED: 3 ♂♂, 4 ♀♀ (CSU): “JAVA Pangandaran Nat. Park (lamp) 20.iii.2003 W. Becker lgt” (CSU).

DISTRIBUTION: India (MAMITZA 1933; SKALICKÝ 2004), Nepal (MILLER 1995; SKALICKÝ 2004), China (SKALICKÝ 2004), Myanmar (SKALICKÝ 2000b, 2004), Cambodia (SKALICKÝ 2004), Laos (SKALICKÝ 2004), Java (first record).

Key to the Javanese Heteroceridae

- 1 Post-metacoxal line absent (*Heterocerus*) 2
- Post-metacoxal line present (*Augyles*) 3
- 2 Median lobe with processus accessorius *H. javanicus*
- Median lobe without processus accessorius *H. virgatus*
- 3 Elytra without obvious markings, mesosternum without spines or tubercles in front of each mesocoxa *A. stevei*
- Elytra with obvious markings, mesosternum with spines or tubercles in front of each mesocoxa 4
- 4 Arms of spiculum gastrale connected by membrane *A. gabriellae*
- Arms of spiculum gastrale firmly connected 5
- 5 Parameres and basal piece completely fused together 6
- Paramere flaps distinctly separated from rest of tegmen by complete transverse line 7
- 6 Supporting sheath deeply emarginate, median lobe without spine (Figs. 10–12) *A. rarus*
- Supporting sheath not emarginate, median lobe with spine (Figs. 2–4) *A. isabelae*
- 7 Median lobe simple, without spines or processus accessorius (Figs. 6–8) *A. quinquemaculatus*
- Median lobe with prominent long spine (Figs. 14–16) *A. stefani*

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References

- GROUVELLE, A. 1896: Quelques *Heterocerus* nouveaux des Indes orientales et de l'Amérique. – Notes from the Leyden Museum 18: 3–13.
- MAMITZA, R. 1933: Seven new Indian species of heterocerid Coleoptera. – The Annals and Magazine of Natural History 12: 82–93.
- MASCAGNI, A. 1987: *Heterocerus grohmanni* sp. n. del Burma (Coleoptera: Heteroceridae). – Bollettino della Società entomologica Italiana 119: 51–53.
- MASCAGNI, A. 1991: Contributo alla conoscenza degli Heteroceridae del Burma e della Cambogia con descrizione di *Heterocerus anulatus* n. sp. (Insecta: Coleoptera: Heteroceridae). – Redia 74 (1): 15–28.
- MASCAGNI, A. 1993: Quattro nuove specie ed una nuova sottospecie di Heteroceridae dell'Asia (Coleoptera). – Opuscula Zoologica Fluminensia 112: 1–11.
- MASCAGNI, A. 1995a: Contributo alla conoscenza degli Heteroceridae del Nepal, con descrizione di sei nuove specie (Coleoptera). – Opuscula Zoologica Fluminensia 135: 1–12.
- MASCAGNI, A. 1995b: Heteroceridae: Check list of the Heteroceridae of China and neighbouring countries, and description of two new species (Coleoptera), pp. 341–348. – In Jäch, M.A. & Ji, L. (eds.): Water Beetles of China, Vol. I. – Wien: Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, 410 pp.

- MASCAGNI, A. 2003: Description of three new species, and updated checklists of the Heteroceridae of China and neighbouring countries (Coleoptera: Heteroceridae). – *Koleopterologische Rundschau* 73: 285–296.
- MILLER, W.V. 1995: New Heteroceridae (Coleoptera) from Nepal. – *The Coleopterist's Bulletin* 49: 35–41.
- SKALICKÝ, S. 1998: *Augyles kolibaci* sp.n. from Nepal (Coleoptera: Heteroceridae). – *Klapalekiana* 34: 91–93.
- SKALICKÝ, S. 2000a: New *Augyles* species and subspecies from Laos and Thailand (Coleoptera: Heteroceridae). – *Opuscula Zoologica Fluminensia* 187: 1–11.
- SKALICKÝ, S. 2000b: New species and new faunistic records of Heteroceridae from Myanmar (Coleoptera: Heteroceridae). – *Koleopterologische Rundschau* 70: 185–189.
- SKALICKÝ, S. 2004: Revision of Asian Heteroceridae described by Maminz (1933), with description of four new species of Heteroceridae from Laos and Myanmar (Coleoptera: Heteroceridae). – *Koleopterologische Rundschau* 74: 399–412.
- ZAITZEV, P. 1910: Dryopidae, Cyathoceridae, Georyssidae, Heteroceridae. – In: Schenkling, S. (ed.): *Coleopterorum Catalogus* 17. – Berlin: W. Junk, 68 pp.

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