

A new *Dieuches* from Java (Heteroptera, Rhyparochromidae, Rhyparochromini)*

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Abstract

Dieuches riegeri sp. nov. is described from Java. The taxonomic position of the new species within the genus is discussed.

Keywords: Heteroptera, Rhyparochromidae, *Dieuches*, new species, Java

Kurzfassung

Eine neue *Dieuches*-Art aus Java (Heteroptera, Rhyparochromidae, Rhyparochromini)

Dieuches riegeri sp. nov. wird aus Java beschrieben und ihre taxonomische Position in der Gattung diskutiert.

Authors

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Introduction

The tribe Rhyparochromini is the largest within the seed bug family Rhyparochromidae (Hemiptera, Heteroptera, Lygaeoidea): It contains 47 genera and 356 valid species worldwide. It is very poorly represented in America (SLATER 1986). On the contrary, Africa has the highest species diversity. The Oriental Region is less diverse in species: 19 genera and 96 species have been described so far.

The largest genus in the tribe (also in Rhyparochromidae and Lygaeoidea) is *Dieuches* DOHRN, 1860 with 137 species, distributed throughout the Eastern Hemisphere. The revision of this huge genus was made by EYLES, who described 72 new species (and synonymized 8 species) in his monograph (1973). Since that, only a few new species were described or synonymized in the genus (DECKERT & EYLES 2002; EYLES 1995; TOMOKUNI 1993). In the present paper a further new species is discussed.

Material and methods

The label data of the material examined are cited verbatim, data on different rows are divided by a slash (/), data on different labels by double slash (//); [hw] = preceding text handwritten, [pr] = preceding text printed (marked only if some part of the label handwritten).

External and genital structures were studied with stereoscopic microscope (Olympus 5Z11).

Abbreviations for depositories of specimens: Natural History Museum, London, U.K. (BMNH); Hungarian Natural History Museum, Budapest (HNHM); Royal Belgian Institute of Natural Sciences, Brussels, Belgium (IRSN); Natural History Museum, Berlin, Germany (MFNB); Moravian Museum, Brno, Czech Republic (MMBC); Natural History Museum, Vienna (NHMW); Naturhistoriska Riksmuseet, Stockholm, Sweden (NHRS); National Museum, Prague, Czech Republic (NMPC); Collection E. Heiss, Tirolese Regional Museum (Ferdinandeum), Innsbruck, Austria (TLMF).

Description of the new species

Dieuches riegeri sp. nov.

Holotype: Java / Xántus / back side: Sindang- / laja (hw) (♂, HNHM).

Paratypes: Java / Xántus / back side: Sindang- / laja (hw) (6 ♂, 8 ♀ HNHM, 1 ♂, 1 ♀, BMNH, 1 ♀, MFNB, 1 ♂, 1 ♀, MMBC, 1 ♂, 1 ♀, NHMW, 1 ♀, NHRS, 1 ♂, 1 ♀, NMPC). Java / Xántus (1 ♀, 1 ♂, HNHM). Banjoewangi / JAVA, 1909 / Mac Gillavry (6 ♀, 3 ♂, HNHM). Banjoewangi (hw) / Mc Gillavry / Java (hw) (2 ♀, HNHM). 42 / 57 // E. JACOBSON / Semarang / Java / Juli. 1909 (1 ♀, HNHM). Coll. I. R. Sc. N. B. / Java / Tjikidang / 1902 (1 ♀, 1 ♂, IRSN).

Description

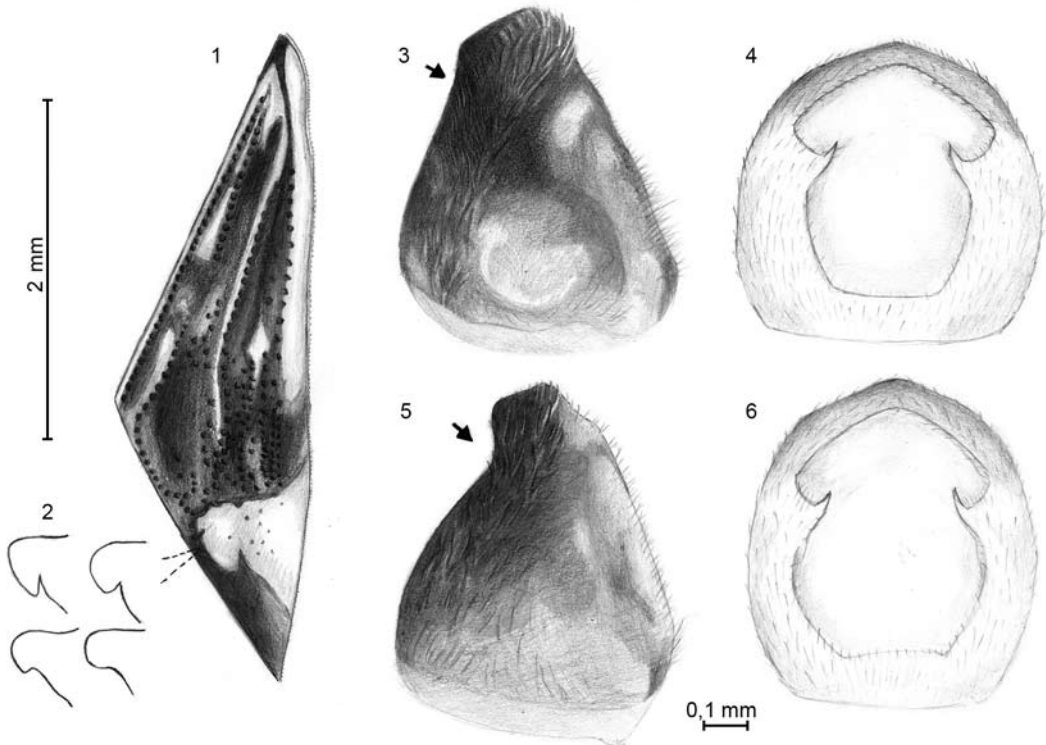
Head impunctate, with short decumbent pubescence (dorsal side without hairs except head). Sides of head between eye and base of antenna diverging, shorter than eye. Antenna with dense short pubescence, segment I with strong setae

* Dem Wanzenforscher CHRISTIAN RIEGER zum 70. Geburtstag gewidmet.

apically. Labium reaching mid coxae. Pronotum longer than broad, anterior lobe significantly longer than posterior one, concave at about half length, lateral carina in anterior part about as broad as antennal segment II, at transverse impression as segment I. Punctures of posterior pronotal lobe, along lateral carina and in collar region strong, on anterior lobe barely visible. Scutellum strongly punctate along lateral margins, medially depressed, behind it finely carinate. Clavus with four slightly irregular rows of punctures, corial punctures also ordered in rows more or less. Membrane with five visible veins, two inner reaching base of membrane. Fore coxae with two teeth. Fore femora with two rows of spines, anteroventral row with a larger spine near apex and 9-10 small spines (3-4 apically and 6-7 basally from large spine), posteroventrally only with fine spines bearing hairs. ♂s with 5-6 fine spines on inner side of fore tibiae and with basal rows of tiny spines on mid femora, too. Abdominal sutures, trichobothria and spiracles as in Rhyparochrominae usual. ♂ pygophore with

single caudal projection, dorsal surface see in figs 5-6.

Coloration: Body dark brown. Antenna dark brown, very base of segment II-III pale, basal 1/3 of segment IV pale, apex light brown. Segment II of labium pale. Lateral margin of pronotum pale except basal part on posterior lobe. Posterior lobe with pale median reaching transverse furrow, with two pale spots near median medially and a pair of pale spots in variable extension anterior of scutellum basally. Sometimes with pale spots at ends of transversal furrow. Scutellum with two pale spots about middle and with pale apex. Inner margin and vein of clavus pale. Corium with pale exocorium and isolated pale subapical spot (figs 1-2). Anterior margin of spot perpendicular to costal margin, innerly curved posteriorly, apical margin concave. Basal half of corium with pale and brown lines along veins. Membrane with subbasal small pale spots on each vein, apex sometimes paler brown. Femora pale brown with apical 2/3 of fore femora, mid femora in apical 1/3 and hind femora in apical half dark brown.



Figures 1, 2, 5, 6. *Dieuches riegeri* sp. nov. – 1: elytra – 2: subapical corial spots – 3, 4: pygophores of *D. siamicus* and 5, 6: of *D. riegeri*.

Tibiae yellow to light brown, apically and tarsi light brown. Sternum dark brown. Abdomen with mostly confluent lateral spots, on ♂s extending from IV to end of VII or half of VI, on ♀s shorter, mostly on segment V and middle of VI.

Measurements (in mm)

Body length: ♂ 9.33-9.85 (holotype: 9.85) ♀ 9.45-10.01, (*siamicus*: ♂ 9.08-10.29, ♀ 10.34). Head length: ♂ 1.35-1.43 (holotype: 1.43) ♀ 1.35-1.48, (*siamicus*: ♂ 1.33-1.43, ♀ 1.45). Maximum width across eyes: ♂ 1.24-1.33 (holotype: 1.33) ♀ 1.22-1.33, (*siamicus*: ♂ 1.19-1.31, ♀ 1.38). Interocular space: ♂ 0.62-0.7 (holotype: 0.7) ♀ 0.66-0.7, (*siamicus*: ♂ 0.63-0.65, ♀ 0.68). Interocellar space: ♂ 0.37-0.41 (holotype: 0.41) ♀ 0.41-0.44, (*siamicus*: ♂ 0.37-0.41, ♀ 0.41). Lengths of antennal segments: I: ♂ 1.18-1.35 (holotype: 1.35) ♀ 1.2-1.28, (*siamicus*: ♂ 1.13-1.35, ♀ 1.33); II: ♂ 2.05-2.25 (holotype: 2.05) ♀ 2.15-2.4, (*siamicus*: ♂ 2.13-2.45, ♀ 2.5); III: ♂ 1.93-2.08 (holotype: 2.0) ♀ 1.95-2.15, (*siamicus*: ♂ 1.98-2.33, ♀ 2.25); IV: ♂ 1.45-2.3 (holotype: 2.23) ♀ 1.95-2.35, (*siamicus*: ♂ 2.08-2.38, ♀ 2.28). Lengths of labium segments I: ♂ 1.13-1.2 (holotype: 1.25) ♀ 1.1-1.2, (*siamicus*: ♂ 1.2-1.38, ♀ 1.38); II: ♂ 1.28-1.38 (holotype: 1.38) ♀ 1.33-1.38, (*siamicus*: ♂ 1.25-1.43, ♀ 1.43); III: ♂ 1.2-1.25 (holotype: 1.25) ♀ 1.18-1.33, (*siamicus*: ♂ 1.03-1.23, ♀ 1.28); IV: ♂ 0.58-0.63 (holotype: 0.63) ♀ 0.58-0.63, (*siamicus*: ♂ 0.55-0.65, ♀ 0.63). Length of pronotum: ♂ 1.85-2.05 (holotype: 1.93)

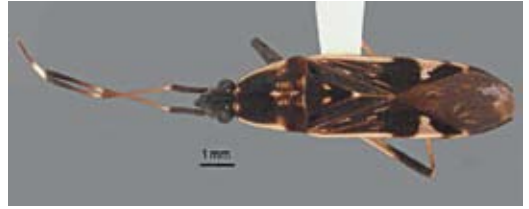
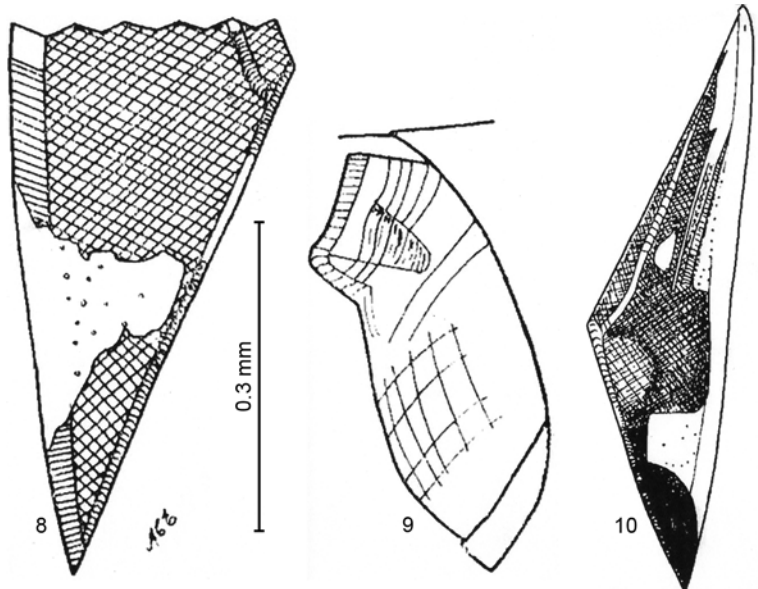


Figure 7. *Dieuches formosus*, holotype (foto: THOMAS J. HENRY).

♀ 1.53-2.03, (*siamicus*: ♂ 1.76-2.2, ♀ 2.0). Maximum width of pronotum: ♂ 2.03-2.3 (holotype: 2.3) ♀ 2.10-2.33, (*siamicus*: ♂ 1.9-2.28, ♀ 2.3). Length of anterior lobe of pronotum: ♂ 1.0-1.2 (holotype: 1.05) ♀ 1.0-1.1, (*siamicus*: ♂ 1.03-1.3, ♀ 1.1). Length of scutellum: ♂ 1.41-1.68 (holotype: 1.58) ♀ 1.33-1.8, (*siamicus*: ♂ 1.4-1.73, ♀ 1.68), width: ♂ 1.03-1.25 (holotype: 1.13) ♀ 1.0-1.35, (*siamicus*: ♂ 0.93-1.28, ♀ 1.2). Length of claval commissure: ♂ 0.78-0.97 (holotype: 0.97) ♀ 0.83-0.95, (*siamicus*: ♂ 0.82-0.95, ♀ 0.97).

Relative measurements

Body length: pronotum width at base: ♂ 11.66-12.63 (holotype: 12.63) ♀ 11.82-12.51 (*siamicus*: ♂ 10.09-12.13, ♀ 11.18). Body length : antenna length: ♂ 1.18-1.44 (holotype: 1.29) ♀ 1.23-1.33, (*siamicus*: ♂ 1.21-1.26, ♀ 1.24). Pronotum width : length: ♂ 1.04-1.22 (holotype: 1.19) ♀ 1.13-1.15 (*siamicus*: ♂ 1.03-1.14), ♀ 1.15). Anterior : pos-



Figures 8-10. The subapical corial spots of (8) *Dieuches formosus*, holotype, male and (10) *D. siamicus* and (9) the genital capsule of *D. formosus*, lateral view (EYLES, 1973).

terior lobe of pronotum: ♂ 1.2-1.5 (holotype: 1.2) ♀ 1.1-1.3, (*siamicus*: ♂ 1.3-1.7, ♀ 1.2). Pronotum width : head width: ♂ 1.63-1.75 (holotype: 1.74) ♀ 1.64-1.8, (*siamicus*: ♂ 1.55-1.79 ♀ 1.67). Head width: length: ♂ 0.9-0.93 (holotype: 0.93) ♀ 0.88-0.95, (*siamicus*: ♂ 0.89-0.95, ♀ 0.95). Scutellum length : length of claval commissure: ♂ 1.63-2.02 (holotype: 1.63) ♀ 1.55-2.1, (*siamicus*: ♂ 1.58-1.89, ♀ 1.73). Length of antennal segments II : I: ♂ 1.52-1.87 (holotype: 1.52) ♀ 1.79-1.88, (*siamicus*: ♂ 1.81-1.9, ♀ 1.89); III : II: ♂ 0.88-0.98 (holotype: 0.98) ♀ 0.9-0.97, (*siamicus*: ♂ 0.89-0.95, ♀ 0.9).

Discussion

D. riegeri sp. nov. is a relatively small species, belonging to the largest group of the genus *Dieuches* which has an isolated, pale subapical corial spot. The key of EYLES (1973) leads to *D. formosus* EYLES, 1973, at the couplet 92 (if we choose the shorter first rostral segment at the couplet 88). However, this species is well separable from *D. riegeri*; because the pronotum is more slender, lateral margin of *D. formosus* is not or barely concave, antennal segments II and III are yellow to light brown basally, with only the apices brown (the new species has nearly unicolorous brown segments). The subapical corial spot is narrow, its apical part is narrower than the hind femora (*D. riegeri* has broader apical part than the hind femora, figs7-9)

The other possibility is choosing the longer first rostral segment at the couplet 88, which leads to the couplet 103 but neither *D. kansuensis* LINDBERG, 1934, nor any of the other mentioned species could fit the morphological marks which are typical for *D. riegeri*.

None of other species known have a similar subapical spot on corium (we have seen the types of all applicable species).

Two *Dieuches* species are known from Java and further four from the Indo-Malayan subregion (between Malaya and Sulawesi). One of the species already known from Java is *D. chinensis* (DALLAS, 1852), which has long erect hairs on dorsum; the other one is *D. eminens* EYLES, 1973, with conically elevated frons in addition to erect hairs.

The third species which resembles Javanese specimens is *D. siamicus* (WALKER, 1872) according to EYLES (1973). This species is very similar to the new one but has the pale subapical corial spot connected with the pale exocorium (and the form of the spot is more or less quadrate, fig.10). However, EYLES wrote about *D. siamicus* specimens from Java and Celebes which have isolated sub-

apical corial spot but are similar otherwise to true *siamicus* specimens. He wrote that "further study is needed to determine their status". These specimens belong undoubtedly to *D. riegeri*, sp. nov. The species are distinct. The main differences – besides the different corial spot – are: *D. siamicus* usually has more developed pale abdominal margin, the fore femur is only in apical half black, the body (especially pronotum) is more slender. The ♂ parameres are very similar but *D. siamicus* has dorsally more flattened pygophore with narrower opening. Both pygophores are covered with short decumbent hairs (figs 3-4).

Ten other *Dieuches* species are known in the area from Myanmar and southern China to the Philippines, but none of them are similar enough to the newly described species.

Etymology. *Dieuches riegeri* is named after Dr. CHRISTIAN RIEGER, the excellent heteropterologist as an honour for his 70th birthday.

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