

***Antireicheia chinensis* sp. nov. of the subtribe Reicheiina
(Coleoptera: Carabidae: Scaritinae)
from the south-eastern China**

Petr BULIRSCH¹⁾, Paolo MAGRINI²⁾ & Fenglong JIA³⁾

¹⁾ Milánská 461, CZ-109 00 Praha 111, Czech Republic; e-mail: p.bulirsch@seznam.cz

²⁾ via Gianfilippo Braccini 7, I-50141 Firenze, Italy; e-mail: duvalius@paolomagrini.it

³⁾ Institute of Entomology, Life Science School, Sun Yat-sen University, Guangzhou, 510275, Guangdong, China; e-mail: lssjfl@mail.sysu.edu.cn

Abstract. *Antireicheia chinensis* sp. nov., an anophthalmic species of the subtribe Reicheiina, is described from south-eastern China. The new species is illustrated, including its aedeagus and female styli, and compared with *A. margolata* Balkenohl, 2005, preliminarily included in the genus *Antireicheia* Basilewsky, 1951, and the two remaining East Asian anophthalmic species of the subtribe: *Laoreicheia bulirschi* Balkenohl, 2005 and *Reicheia moritai* Balkenohl, 2005.

Key words. Coleoptera, Carabidae, Scaritinae, Clivinini, Reicheiina, *Antireicheia*, *Laoreicheia*, *Reicheia*, anophthalmic species, taxonomy, new species, China

Introduction

The anophthalmic species of the subtribe Reicheiina of the tribe Clivinini are predominantly known from the type series and are collected mostly by sifting forest leaf litter or hand-picked from under large stones deeply embedded into the ground. Oriental Clivinini were reviewed by BALKENOHL (2001), complete Reicheiina were revised by JEANNEL (1957), and an overview of their anophthalmic genera was recently given by GREBENNIKOV et al. (2009). According to the latter authors the majority of the anophthalmic genera of this subtribe are known from the Mediterranean Region with most of the remaining taxa inhabiting the Afrotropical Region. BALKENOHL (2005) described the first three anophthalmic species from the Oriental Region: for *Laoreicheia bulirschi* Balkenohl, 2005 he created a new monotypic genus, while the next two species, *Reicheia moritai* Balkenohl, 2005 and *Antireicheia margolata* Balkenohl, 2005, were provisionally assigned to existing genera; the former to the genus with several species inhabiting the Mediterranean Area and the latter to the exclusively anophthalmic

genus occurring in south, east, west Africa and east Madagascar. BALKENOHL (2005) quoted in 'Remark' within the description of *A. margolata* that 'assignment into the genus has been done provisionally because it is considered the new species may belong to a new not yet established genus as well'.

Material and methods

The specimens were dry-mounted and studied, including measurements and examination of the microsculpture, at a magnification of 56 \times . All specimens of each species were measured. Length of body is given with 0.05 mm accuracy; other measurements including ratios and means are down to two decimal places. Label locality data of all specimens are quoted verbatim except standardized dates; a slash (/) is used to divide data on different lines, a double slash (//) divides data on different labels. Aedeagi and stylomeres of the new species were slide-mounted in Euparal. All photographs were prepared with a Nikon D1 digital camera mounted on a Nikon Labophot II binocular microscope equipped with lenses containing diaphragms.

The following taxa were studied for the differential diagnosis:

Antireicheia margolata Balkenohl, 2005: HOLOTYPE: ♀ (AMNH), Vietnam, Quang Nam Province, 25 km south-west of Tra My, 15°12'14"N; 108°02'13"E, 850 m a.s.l.

Laoreicheia bulirschii Balkenohl, 2005: HOLOTYPE: ♀ (PBPC), Southern Laos, Champasak Province, Bolaven plateau, km 35 of route No. 23 Pakse-Paksong, Bonitou env., 15°10.4'N, 106°05.8'E, 800 m a.s.l.

Reicheia moritai Balkenohl, 2005: HOLOTYPE: ♂ (DWBG), Japan, Tone-gawa River, near Toride.

The following abbreviations are used to indicate the depository of specimens:

AMNH American Museum of Natural History, New York, USA;
DWBG David Wrase collection, Berlin, Germany;
NMPC National Museum, Praha, Czech Republic;
PBPC Petr Bulirsch collection, Praha, Czech Republic;
SYSU Entomological Collection of Sun Yat-sen University, Guangzhou, China.

Other abbreviations: HT – Holotype(s); BSP – basal (prescutellar) setiferous puncture(s); DSP – dorsal setiferous puncture(s).

Results

Antireicheia chinensis sp. nov.

(Figs 1–6)

Type locality. Southern China, Guangdong province, western of the Qixing, Heishiding nature reserve, 23°27.9'N 111°54.3'E, 190–260 m a.s.l.

Type material. HOLOTYPE: ♂, CHINA: GUANGDONG: 'CHINA: Guangdong prov. / [MF16]; W of Qixing, 1–3.v. / 2011; Heishiding nat. res. / 23°27.9'N 111°54.3'E, 190– / 260m / Fikáček & Hájek lgt. // sifting of moist leaf litter in / the dried-up streambeds / and along the streams in / the primary lowland forest' (NMPC). PARATYPES: 2 spec. with the same label data as holotype (1 ♂ SYSU, 1 ♀ PBPC).

Description. Habitus as in Fig. 1. Colour rusty brown, antennae and mouth-parts yellowish; length 2.10–2.15 mm (HT 2.15 mm, n = 3).

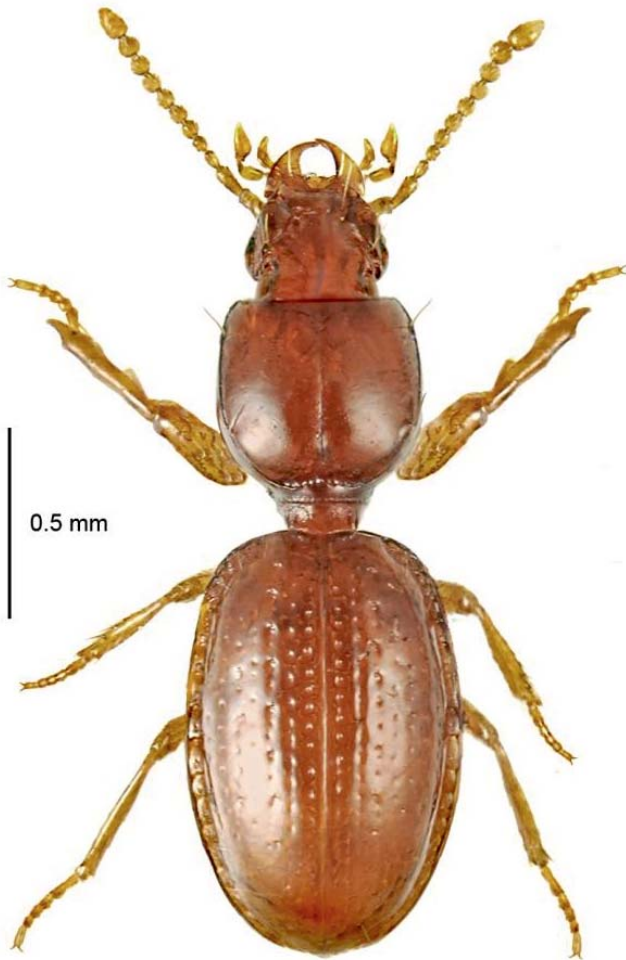
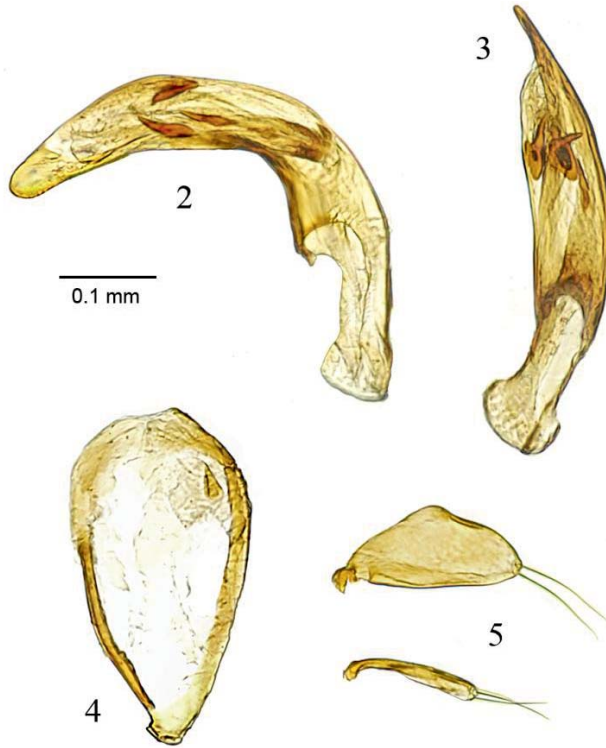


Fig. 1. *Antireicheia chinensis* sp. nov., habitus of male holotype (body length 2.15 mm).

Head. Rather broad, neck broad; anterior margin of clypeus between moderately protruding, blunt lateral lobes rather slightly emarginated; impressions of clypeus oblique, broad and deep, longitudinal carina short and thin. Genal posterior angles shortly rounded; moderately vaulted supraantennal plates separated from genae by rather deep and broad furrow; carina of prolonged supraantennal plates blunt. Remnant of eye discernable as small, strongly protruded, unfacetted field in anterolateral margin of long, moderately vaulted genae, surrounded by irregular ring of dark pigment. Vertex distinctly, regularly reticulated. Antennae with antennomere 2 as long as 3 and 4 combined, antennomeres 6–10 moniliform.



Figs 2–5. *Antireicheia chinensis* sp. nov. 2 – aedeagus of holotype in left lateral view; 3 – aedeagus of holotype in ventral view; 4 – urite; 5 – parameres of holotype.



Fig. 6. *Antireicheia chinensis* sp. nov., stylomeres of paratype.

Pronotum. Moderately convex, shiny, reticulation irregular, indistinct; slightly vaulted in lateral view, outline between lateral pores very slightly rounded, not attenuated anteriorly; 0.97–1.01 (HT 1.01) times as long as wide, 1.43–1.44 (HT 1.43) times as wide as head; widest below midlength. Reflexed lateral margin entire, extended from obtuse, not protruded anterior angles to base, distinct in basal part, lateral channel deep below flange. Median line distinctly impressed, disappearing just before basal furrow, anterior transverse impression irregular, just recognisable. Basal part (flange) very small, slightly produced posteriorly. Proepisterna clearly visible from above in apical half.

Elytra. Convex, very slightly ovate, in lateral view disc convex, 1.62–1.64 (HT 1.64) times as long as wide, 1.29–1.33 (HT 1.33) times as wide as pronotum, 2.10–2.16 (HT 2.16) times as long as pronotum; humeri slightly protruded, base distinctly sloping; outline regularly broadened on sides, lateral channel very broad, its margin with 3–4 very fine, just recognisable humeral teeth; broadest slightly before midlength; suture broadly depressed at base. Base with very blunt, indistinct tubercle, BSP large. Striae 1–3(4) rather fine on disc, disappearing latero-basally and apically, striae 4(5)–7 consisting of rows of few sparse punctures in about middle third of elytral length. Intervals flat, only first intervals in basal part very slightly vaulted. Third interval with 5–7 and fifth interval with 1–3 very fine DSP.

Aedeagus as in Figs 2–3. Apex of median lobe in lateral view long and slightly narrowed apically, narrowly rounded; in ventral view long and very narrow, as in Fig. 3. Urite as in Fig. 4, paramerae bisetose, as in Fig. 5.

Styli as in Fig. 6. Apical spine very long, evenly curved.

Differential diagnosis. *Antireicheia chinensis* sp. nov. differs from *A. margolata*, the only known Oriental species of this genus, in having broader head with more distinct microreticulation, pronotum not attenuated anteriorly, and in distinctly narrower elytra with much deeper striae with much coarser punctuation and with DSP also in the fifth interval.

Both remaining anophthalmic members of the subtribe Reicheiina from south-eastern Asia belong to different genera. The new species can be easily distinguished from *Laoreicheia bulirschii* especially by the missing pair of paramedian setae on the disc of pronotum and from *Reicheia moritai* chiefly by pronotal episterna being invisible from above and by having a very different median lobe of the aedeagus (see Figs 2–5 for *A. chinensis* sp. nov. and BALKENOHL (2005: Fig. 5) for *R. moritai*).

Etymology. The name is derived from the name of the country where the species was collected; adjective.

Collection circumstances. All specimens were collected by sifting of moist leaf litter in the primary lowland forest (M. Fikáček, pers. comm.).

Distribution. China: Guangdong Province.

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References

- BALKENOHL M. 2001: *Key and catalogue of the tribe Clivinini from the Oriental Realm, with revisions of the genera Thliboclivina Kult and Trilophidius Jeannel (Insecta, Coleoptera, Carabidae, Scarititae)*. Pensoft Publishers, Sofia, Moscow, 83 pp.
- BALKENOHL M. 2005: First records of Reicheiina species from the Oriental Region and Japan. (Coleoptera, Carabidae, Scarititae, Clivinini). *Coleoptera* **9**: 1–10.
- GREBENNIKOV V., BULIRSCH P. & MAGRINI P. 2009: Discovery of Antireicheia in Cameroon with description of four new species and discussion on phylogeny and distribution of endogean Reicheiina (Coleoptera: Carabidae: Scaritinae: Clivinini). *Zootaxa* **2292**: 1–14.
- JEANNEL R. 1957: Révision des petits Scaritides endogés voisin de Reicheia Saulcy. *Revue Française d'Entomologie* **24**: 129–212.