

**A new species of the genus *Cribrodyschirius* (Coleoptera: Carabidae:
Scaritinae: Dyschiriini) from Eastern Africa**

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Abstract. *Cribrodyschirius schuelei* sp. nov., a new member of the *C. puncticollis* subgroup, is described, illustrated and compared to the related African taxa. Figures of a similar species, new faunistic data and taxonomic remarks on another known species of the genus are given.

INTRODUCTION

The small dyschiriini genus *Cribrodyschirius* was established by Bruneau de Miré (1952). Its seven species and three subspecies are widely distributed in the continental Africa south of the Sahara Desert; next two species occur in Madagascar and the last one, *C. porosus* (Putzeys, 1877), in the Oriental Region. Fedorenko (1999) and later Bulirsch (2013) revised this genus, partly (re)described its Afrotropical members and provided a distribution list of all the species. The purpose of the present article is the description of another new species and the extension of distribution areas of some species.

MATERIAL AND METHODS

The study of dry-mounted specimens, including measurements and examination of microsculpture, was done at a magnification of 56×. All types and up to 30 specimens of each species of the genus were measured. Standard measurements follow Fedorenko (1996). Length of body is given with accuracy 0.05 mm, other measurements, ratios and means are down to two decimal places. All photographs of new species were prepared with a Nikon D1 digital camera mounted on a Nikon Labophot II binocular microscope equipped with lenses containing diaphragms. Label data of all specimens are quoted verbatim except unified data of findings. Male genitalia (aedeagi) were fixed in euparal or with watersoluble glue.

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

BMNH Natural History Museum, London, United Kingdom;

NHMB Naturhistorisches Museum Basel, Switzerland;

NMPC National Museum, Praha, Czech Republic;

PBPC Petr Bulirsch, private collection, Praha, Czech Republic;

PSHG Peter Schüle, private collection, Herrenberg, Germany.

Other abbreviations:

ASP: apical setiferous puncture(s); BSP: basal (prescutellar) setiferous puncture(s); DSP: dorsal setiferous puncture(s); PHSP: posthumeral setiferous puncture(s); SP: setiferous puncture(s); HT: holotype; PT: paratype(s).

RESULTS

Genus *Cribrodyschirius* Bruneau de Miré, 1952

Type species: *C. baguirmi* Bruneau de Miré, 1952 (a junior synonym to *C. jeanneli* (Basilewsky, 1948))

Bulirsch (2013) in his article split the genus into two groups: Oriental monotypic *C. porosus* group and Afrotropical (incl. Madagascan) *C. puncticollis* group; latter with two subgroups *C. jeanneli* subgroup (with roughly punctured pronotal lateral channel) and *C. puncticollis* subgroup (with not / indistinctly punctured pronotal lateral channel). The new species described below belongs to the *C. puncticollis* subgroup.

Cribrodyschirius schuelei sp. nov.

(Figs. 1, 1a-d)

Type material: Holotype (♂): Tanzania Ruanda area / Ndongosi vill., Mbinda-Rwsuma / rg. 27.xii.2006, under logs, rocks / leg. K. Angelus, (PBPC). Paratypes. (2 ♀♀) with the same labels as HT, (PBPC); (2 ♀♀): Zambia, 14-16.xi.2014, Central Province / Kafue N.P., Mayukuyuku camp / 14°54.915'S 26°3.841'E / P. Schüle leg. -3-, (PSHG, PBPC); (1 ♀): Zambia, 1260 m / Kacheleko, Kafue NP / S 15°00'04'' E26°26'07'' / 21-26.xi.2013, Dung Pitfall / Leg. Smith, R., Takano, H. / & Oram, D. // BMNH(E)/2013-71 / 1463445, (BMNH).

Description. Habitus as in Fig. 1; length 2.65-2.90 mm (mean 2.78 mm, HT 2.75 mm, n=6). Colour dark brownish, with distinct greenish bronze lustre; anterior part of head and elytra at base and especially broadly latero-apically brownish translucent; legs and antennae rusty red, antennae not infuscated apically.

Head. Front margin of clypeus between long lateral lobes regularly, rather strongly emarginate, clypeofrontal area with irregular rests of transverse carina in mid-eye length crossed by moderately long longitudinal carina; latter anteriorly connected with pair of oblique carinae, running latero-basally; structure similar to those of *C. puncticollis* (Péringuey, 1896), figured in Fedorenko (1999, Figs. 1-2) and in Figs. 2-4. Eyes moderately large, not flattened. Antennae moniliform.

Pronotum. Convex, outline moderately strongly, regularly rounded; not attenuated anteriorly; 1.04-1.10 mm (mean 1.07 mm, HT 1.09 mm) times as wide as long, 1.32-1.41 mm (mean 1.36 mm, HT 1.37 mm) times as wide as head; widest in about midlength. Anterior angles not protruding anteriorly, obtuse. Lateral channel very broad, without punctures; reflexed lateral margin disappeared below posterior SP. Surface with moderately deep and moderately dense punctures on disk, latero-apically punctures broadly vanishing.

Elytra. Long ovate, 1.67-1.75 mm (mean 1.71 mm, HT 1.69 mm) times as long as wide, 1.19-1.26 mm (mean 1.22 mm, HT 1.24 mm) times as wide as pronotum; base slightly

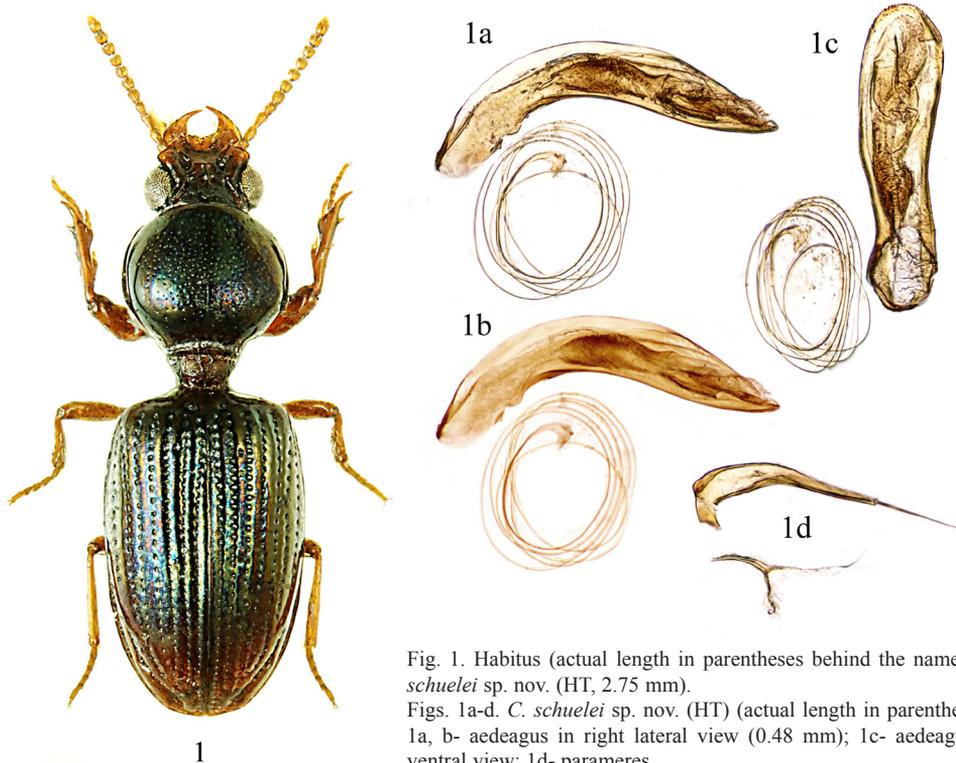


Fig. 1. Habitus (actual length in parentheses behind the name). *C. schuelei* sp. nov. (HT, 2.75 mm).
Figs. 1a-d. *C. schuelei* sp. nov. (HT) (actual length in parentheses): 1a, b- aedeagus in right lateral view (0.48 mm); 1c- aedeagus in ventral view; 1d- parameres.

sloping; outline gently broadened on sides, broadest in about anterior third, much more strongly attenuating towards apex than towards protruding humeri without humeral tooth; suture not depressed at base. Base with moderately large BSP, indistinctly to moderately deeply connected with stria 1. First striae deep, 3(4)-7 moderately deep, with rather deep, dense punctures, inner striae almost not weakened latero-apically, striae 6 and especially 7 disappearing on/before apical inclination; intervals rather strongly vaulted medio-basally, barely latero-apically; lateral channel with very fine punctures. Three PHSP; two DSP; two ASP in deep and finely to moderately roughly punctured apical stria.

Protibia. Apical spine of protibia moderately long, slightly curved downwards, not inwards, spur almost as long as apical spine, slightly curved; distal marginal tooth rather large, sharp, proximal one smaller, sharp.

Aedeagus. As in Figs. 1a-d, length 0.48 mm, apex of median lobe in ventral view broadly rounded.

Differential diagnosis. *C. schuelei* sp. nov. belongs to the *C. puncticollis* group and subgroup. Due to above described structure of the head and the broad, impunctate pronotal channel it is most similar to *C. puncticollis* (Péringuey, 1896), known in two subspecies. *C. schuelei* sp. nov. differs from both especially by the elytra much longer (*C. puncticollis*

has the elytra short ovate, strongly broadened below the humeri, 1.46-1.57 times as long as broad, mean 1.52, n=18). It can be distinguished from *C. p. puncticollis* (Péringuey, 1896), moreover by the finer elytral striae and less vaulted lateral intervals, which are intermediate between both subspecies, and finally, from the two taxa it can be barely distinguished by the form of the median lobe of the aedeagus (as in Figs. 1a-d versus Figs. 2a-c and 3a-c) which is barely shorter compared to the body length and has the apex in the ventral view a bit less broadly rounded.

Name derivation. Patronymic, in honour of our friend Peter Schüle (Herrenberg, Germany), collector of two type specimens.

Distribution: Tanzania, Zambia.

Comment. Bulirsch (2013) preliminary quoted three Tanzanian type specimens within the Material examined of *C. p. puncticollis* as probably aberrant specimens having the elytra much narrower. Later the first author received for identification from Peter Schüle and BMNH another three specimens from two localities in Zambia. After detailed study of all these six specimens we have decided to describe them as a new species.

NEW FINDINGS AND TAXONOMIC REMARKS

Bulirsch (2013) listed the distribution of all *Cribrodyschirius* species. In the meantime, the first author identified several next specimens of this genus. The most important data are quoted below.

Cribrodyschirius puncticollis group: *puncticollis* subgroup

Specimens of this subgroup are easily distinguishable by having the pronotal lateral channel without rough punctures. Its five species (including the new one, described above) and three subspecies occur in the Afrotropical Region included Madagascar.

Cribrodyschirius congoensis basilewskyi Fedorenko, 1991

New material examined: (2 spec.): Central African Rep. / Bamingui-Bangoran Pr. / 35-40 km E Ndele / 30.vi-2.vii.2011, 450-600 m / A. Kudrna Jr. leg. (PBPC); (1 spec.): Equatorial Guinea / Niefang Pr., Mossumu / 5.x.2015, (PBPC); (1 spec.): Moz[ambique]: Cabo Delgado / Taratibu (site 1), P.N. Quirimbas / 320 m, 12°48'57''S 39°41'45''E / 7.i.2013, eastern Miombo / woodlands, light traps / F. & S. Génier & M. Denja; 2013-43, (PBPC); (1 spec.): Gabon / Montes de Cristal / 11.vi.2012, (PBPC).

Distribution: Nigeria, Ivory Coast, Chad, Guinea, Senegal, Togo, Guinea-Bissau, Sierra Leone, Mali, Ethiopia, Ghana, Burkina Faso, Congo, DR Congo, Malawi, Tanzania, Zambia, Namibia, Liberia, Cameroon; first record for Equatorial Guinea, Mozambique, Republic of Central Africa and Gabon.

Cribrodyschirius puncticollis s. l. (Péringuey, 1896)

(Figs. 2-4, 2a-c, 3a-c, 4a-c)

New material examined: (1 ♂): Moz[ambique]: Cabo Delgado / Ravia (site 1), P.N. Quirimbas / 380 m, 12°39'41''S 39°25'22''E / 2.i.2013, eastern Miombo / woodlands, light traps / F. & S. Génier & M. Denja; 2013-28, (PBPC).

Distribution. *C. p. puncticollis*: Republic of South Africa (KwaZulu-Natal, type), Burundi, Tanzania, Zambia, Angola, Democratic Republic of Congo, Zimbabwe, Malawi; *C. p. elgonensis*: Kenya, Tanzania, Democratic Republic of Congo. First record for Mozambique.

Comments. Species of the *C. puncticollis* subgroup have either broad and deep (*C. puncticollis* s.l. and *C. schuelei* sp. nov.) or narrow (remaining species) pronotal lateral channel. As mentioned in Differential diagnosis above, *C. p. puncticollis* (Fig. 2) and *C. p. elgonensis* (Fig. 3) are easily recognizable from *C. schuelei* sp. nov. by having the elytra very short, laterally strongly convex. Above listed male specimen from Mozambique (Fig. 4) cannot be clearly assigned to any existing subspecies. It has the pronotal lateral channel as broad as in *C. puncticollis* and *C. schuelei* sp. nov.; the elytral striae and the intervals are more similar to ssp. *elgonensis* but (compared to both subspecies) it has the elytra slightly narrower (as in Fig. 4 versus Figs. 2-3, the elytra are 1.63 times as long as broad). The latter character partly places the taxon between *C. puncticollis* and *C. schuelei* sp. nov. or even

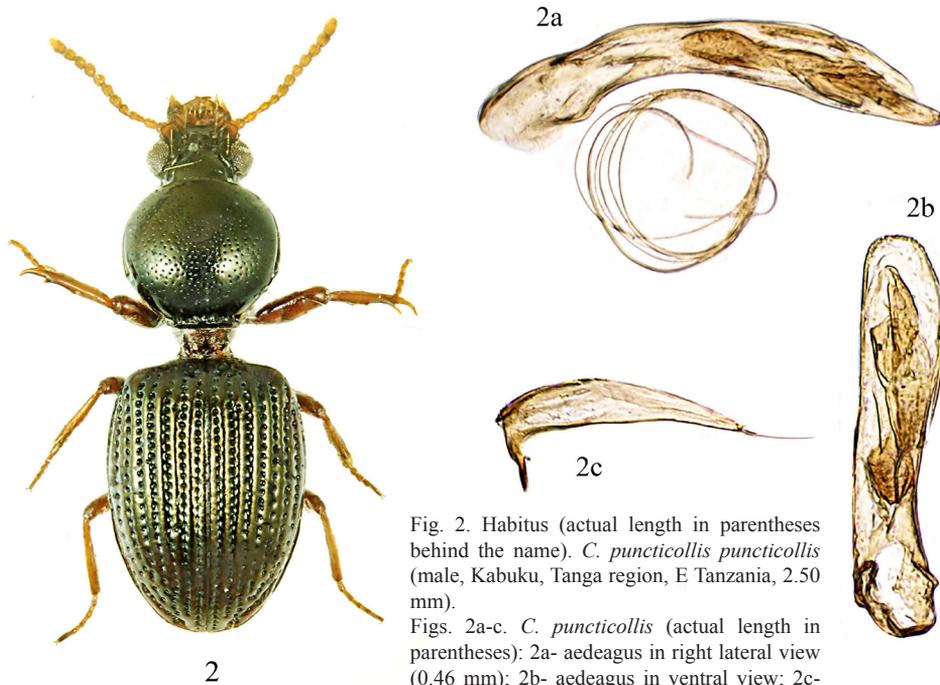


Fig. 2. Habitus (actual length in parentheses behind the name). *C. puncticollis puncticollis* (male, Kabuku, Tanga region, E Tanzania, 2.50 mm).

Figs. 2a-c. *C. puncticollis* (actual length in parentheses): 2a- aedeagus in right lateral view (0.46 mm); 2b- aedeagus in ventral view; 2c- larger paramere.

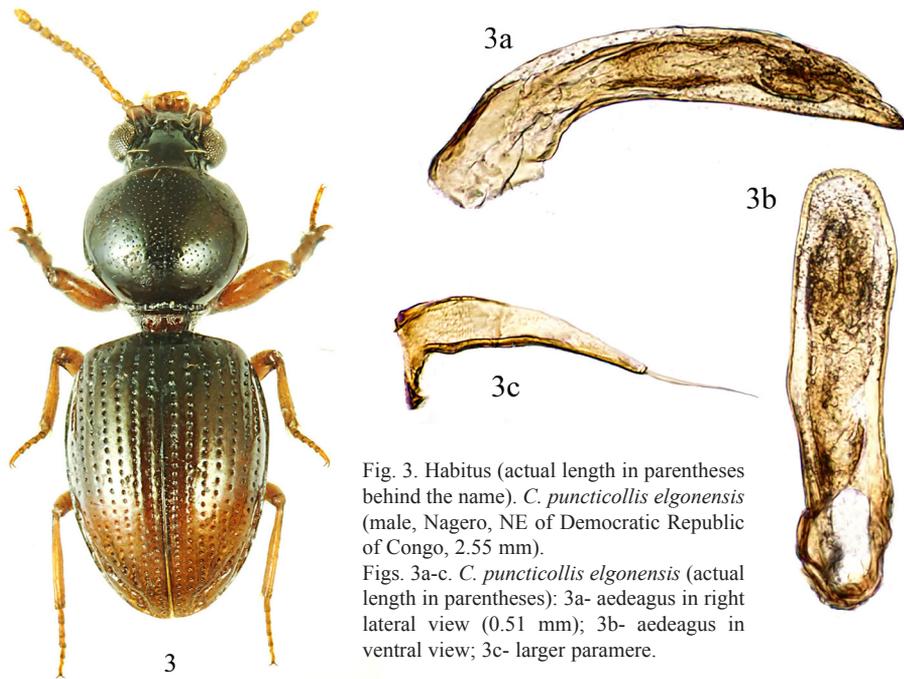


Fig. 3. Habitus (actual length in parentheses behind the name). *C. puncticollis elgonensis* (male, Nagero, NE of Democratic Republic of Congo, 2.55 mm).
Figs. 3a-c. *C. puncticollis elgonensis* (actual length in parentheses): 3a- aedeagus in right lateral view (0.51 mm); 3b- aedeagus in ventral view; 3c- larger paramere.

it could be a separate species. The differences in the shape and the infrastructure of male genitalia are very small (as in Figs. 1a-d, 2a-c, 3a-c versus 4a-c) so it is necessary to collect and study additional specimens before the final decision and in this moment its identification is only preliminary.

Crirodyschirius porosus group

A monotypic Oriental Region species group, having the pronotal lateral channel disappearing below anterior lateral SP.

Crirodyschirius porosus (Putzeys, 1877)

New material examined: (1 spec.): China, S-Yunnan / (Xishuangbanna), 25 km / NW Jing Hong vic. Zhong / Zhi Chang (NNNR), 780m / N22°11.06' E 100°39.05' / rubber plantation, EKL, 12.v.2008, leg. A. Weigel, (PBPC); (2 spec.): Cambodia, 4.i.1998 / Siem Reap / town area // N 13°21'17.8'' / 103°51'18.6'' / light trap, (NHMB, PBPC); (3 spec.): NW Cambodia, Siem Reap / 13°21' N 103°51' E; 20 m / killed by halogen light reflector / 7-11.xi.2002, P. Kočárek leg., (NMPC, PBPC); (1 spec.): East Pakistan [Bangladesh] (EP16) / Chittagong, Nasirabad / H.S., light trap / 25.ix.1970, leg. Fr. Dvořák, (PBPC).

Distribution. Myanmar, Laos, Nepal, India, Vietnam, first record for China (Yunnan), Bangladesh and Cambodia.

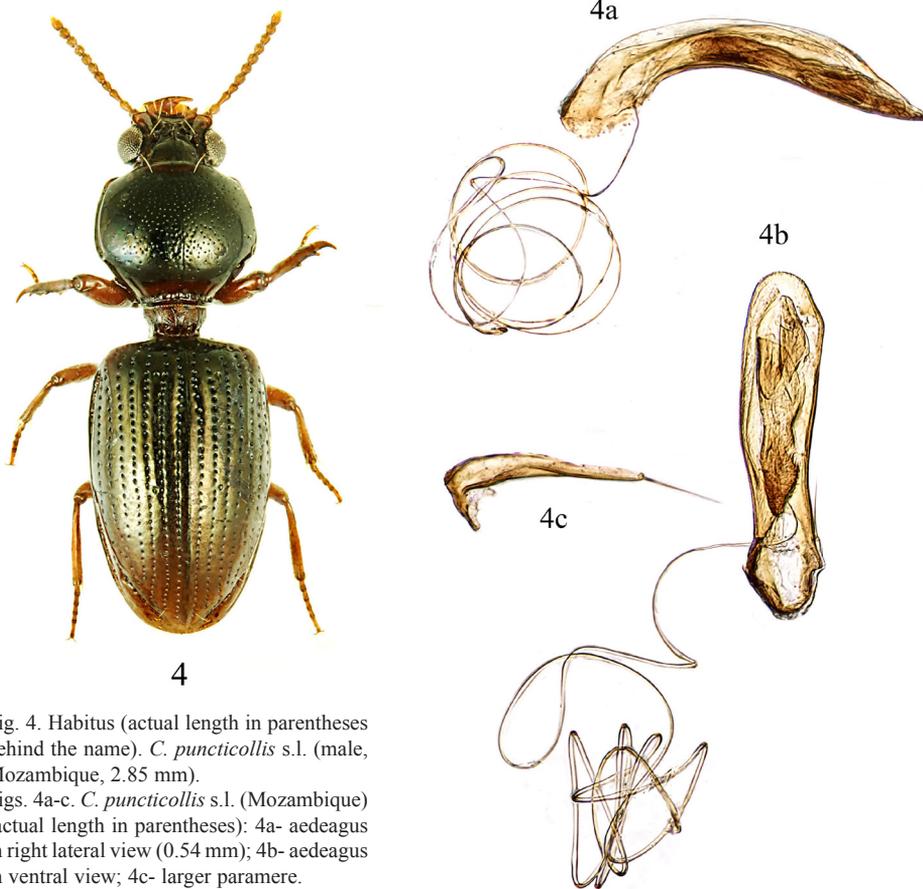


Fig. 4. Habitus (actual length in parentheses behind the name). *C. puncticollis* s.l. (male, Mozambique, 2.85 mm).

Figs. 4a-c. *C. puncticollis* s.l. (Mozambique) (actual length in parentheses): 4a- aedeagus in right lateral view (0.54 mm); 4b- aedeagus in ventral view; 4c- larger paramere.

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