

A review of the Afrotropical *Gabrius coryndoni* species group (Coleoptera: Staphylinidae: Staphylininae)

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Abstract. The *Gabrius coryndoni* species group distributed in sub-Saharan Africa is defined and reviewed. The species group comprises the following 12 species, of which two are described as new: *Gabrius amadina* sp. nov. (Tanzania), *G. amans* Tottenham, 1962, *G. coryndoni* Cameron, 1942, *G. dolosus* Tottenham, 1956, *G. flexuellus* Tottenham, 1956, *G. huendus* Tottenham, 1956, *Gabrius lepidina* sp. nov. (Democratic Republic of the Congo), *G. lethifer* Tottenham, 1956, *G. negus* Tottenham, 1956, *G. obnixus* Tottenham, 1956, *G. ramifer* Tottenham, 1956, and *G. vulcanus* Cameron, 1956. A key to all known species of the *G. coryndoni* species group is provided and aedeagi of all species are figured.

Key words. Coleoptera, Staphylinidae, Staphylininae, Philonthina, *Gabrius coryndoni* species group, taxonomy, new species, key, Afrotropical Region

Introduction

The genus *Gabrius* Stephens, 1829 belongs to the subtribe Philonthina, in tribe Staphylinini, and is distributed in all major zoogeographical regions. The genus includes more than 80 species in the Afrotropical Region (HERMAN 2001). TOTTENHAM (1956) recognized several species groups based on the morphology of the male genitalia. Members of TOTTENHAM'S (1956) group II are treated herein. The species group is defined and diagnosed and two new species are described.

Material and methods

The following acronyms are used to refer to the collections mentioned:

BMNH	The Natural History Museum, London, United Kingdom (Max Barclay, Roger Booth);
LHPC	Lubomír Hromádka collection, Praha, Czech Republic;
MRAC	Musée Royal d'Afrique Centrale, Tervuren, Belgium (Marc de Meyer);
NMPC	National Museum, Praha, Czech Republic (Jiří Hájek).

A double slash (//) is used to divide separate labels of each type specimen. All measurements were taken from beetles with stretched abdomen. All ratios mentioned in the descriptions are dimensionless but can be converted to lengths in millimetres as follows: 20 units = 1 mm.

The following material of the previously described species of the *G. corydoni* species groups was studied for comparative purposes:

- Gabrius amans* Tottenham, 1962: PARATYPE: ♂ (BMNH): 'Molo, 13.-15.x.1954, V.F.E. Eastop. // PARATYPE *Gabrius amans* Tottenham, det. R.G. Booth, 2011. [white oblong label, handwritten]'.
Gabrius corydoni Cameron, 1942: HOLOTYPE: ♂ (BMNH): 'Kenya, Chyulu Hills, altitude 5600 feet, June 1936, Coryndon Museum //P. (*Gabrius*) *corydoni* Type Cameron [white oblong label, handwritten]'.
Gabrius dolosus Tottenham, 1956: HOLOTYPE: ♂ (BMNH), 'Kenya, Muguga, near Kikuyu, 13.-31.viii.1953, // *Gabrius dolosus* Tottenham, TYPE [ochre oblong label, handwritten], C. E. Tottenham collection 1974-587'.
Gabrius flexuellus Tottenham, 1956: HOLOTYPE: ♂ (BMNH), 'N. W. Rhodesia, Namwala, 31.iii.1913, H. C. Dollman, H. C. Dollman collection, 1919-79 // *Gabrius flexuellus* Tottenham TYPE [white oblong label, handwritten]'.
Gabrius huendus Tottenham, 1956: HOLOTYPE: ♂ (BMNH), 'Transvaal, Rosettenville, v.1952, // *Gabrius huendus* Tottenham, TYPE [ochre oblong label, handwritten], C. E. Tottenham collection B. M. 1974-587'.
Gabrius lethifer Tottenham, 1956: HOLOTYPE: ♂ (BMNH): 'Kenya: Muguga, 13.-31.viii.1953, V. F. Eastop, // *Gabrius lethifer* Tottenham TYPE [ochre oblong label, handwritten], C. E. Tottenham collection, B. M. 1974-587'.
Gabrius negus Tottenham, 1956: HOLOTYPE: ♂ (BMNH): 'Abyssinia: Djem-Djem Forest, ix.1926, J. Omer-Cooper, Brit. Mus. 1927-127. // *Gabrius negus* Tottenham TYPE [ochre oblong label, handwritten]'.
Gabrius obnixus Tottenham, 1956: HOLOTYPE: ♂ (BMNH): 'Salisbury, Mashonaland, [S. Rhodesia] Marshall Collection, // *Gabrius obnixus* Tottenham TYPE [ochre oblong label, handwritten]'.
Gabrius vulcanus Cameron, 1950: 1 ♂ (MRAC): 'Stanleyville, 27.xii.1929, A. Collart, *Gabrius vulcanus* Cameron, Dr. M. Cameron det., 1949'.

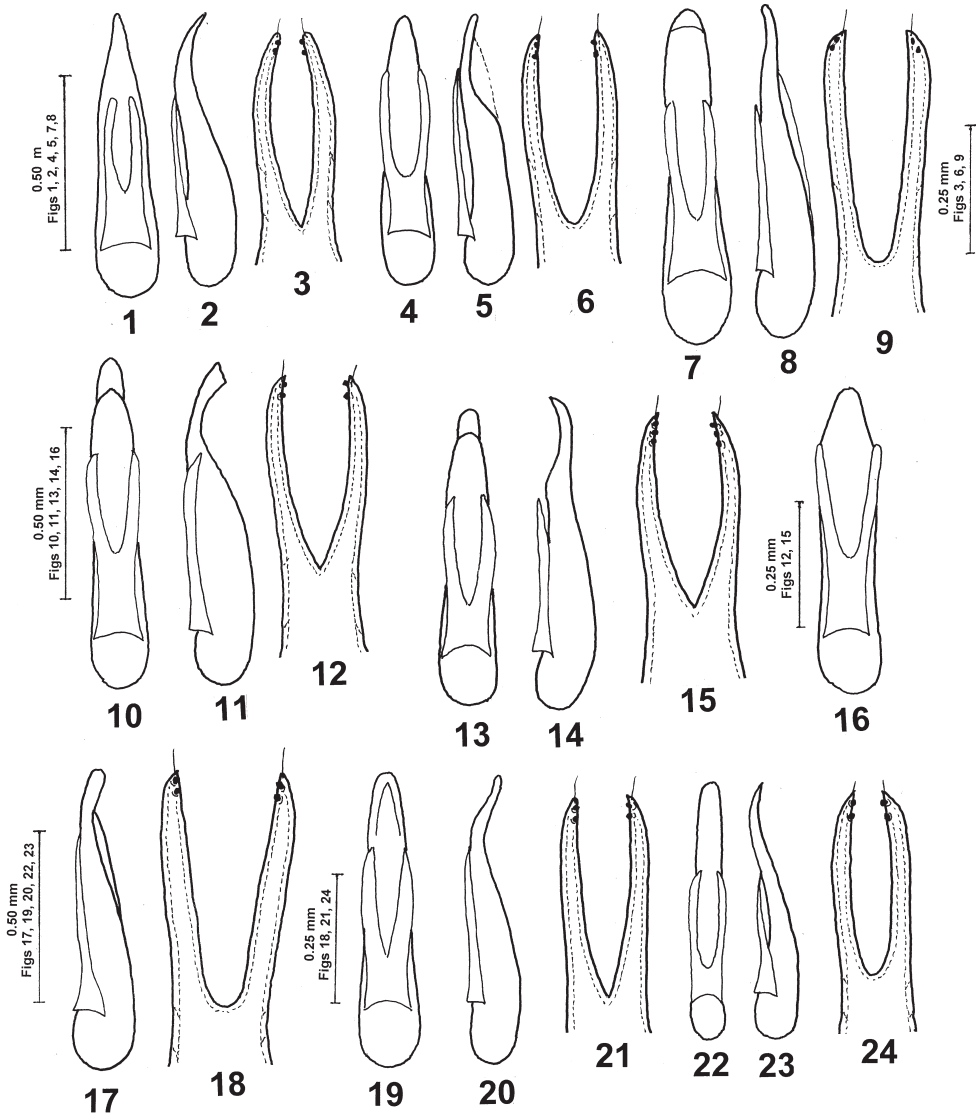
Gabrius corydoni species group

TOTTENHAM (1956: 214) described this group as group II. In all species of this group, the branches of the paramere are very long and arcuate, situated more or less along the outer edges of the median lobe, and they are more than twice as long as the maximum distance between them. By this characteristic, the *Gabrius corydoni* species group may be diagnosed from other Afrotropical species of the genus, in which the paramere is U- or V-shaped. The members of the species group are known only from the Afrotropical Region. Twelve species are included in the species group (distributions of previously described species follow HERMAN (2001)):

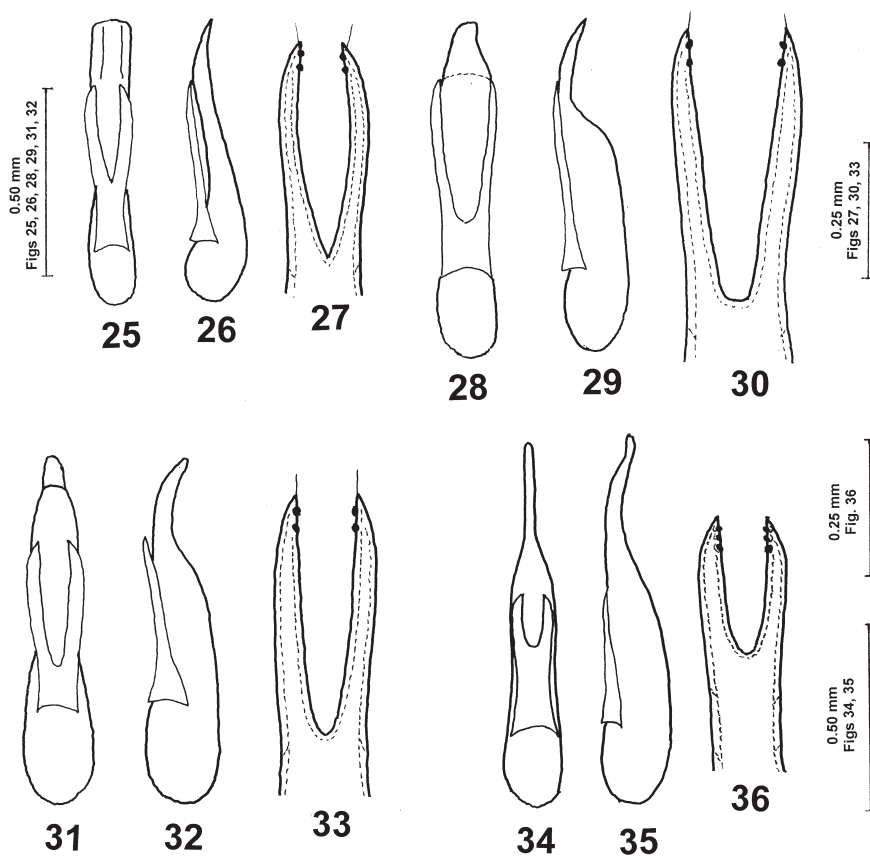
<i>Gabrius amadina</i> sp. nov.	Tanzania
<i>Gabrius amans</i> Tottenham, 1962	Kenya, Tanzania
<i>Gabrius corydoni</i> Cameron, 1942	Kenya
<i>Gabrius dolosus</i> Tottenham, 1956	Kenya
<i>Gabrius flexuellus</i> Tottenham, 1956	Zambia
<i>Gabrius huendus</i> Tottenham, 1956	South Africa
<i>Gabrius lepidina</i> sp. nov.	Democratic Republic of the Congo, Tanzania
<i>Gabrius lethifer</i> Tottenham, 1956	Kenya
<i>Gabrius negus</i> Tottenham, 1956	Ethiopia
<i>Gabrius obnixus</i> Tottenham, 1956	Zimbabwe
<i>Gabrius ramifer</i> Tottenham, 1956	Rwanda
<i>Gabrius vulcanus</i> Cameron, 1950	Democratic Republic of the Congo

Key to species of the *Gabrius coryndoni* species group

- 1 Smaller species, body length 4.0–4.2 mm. 2
 – Larger species, body length 4.6–5.9 mm. 3
- 2 Head square, median lobe with apical part parallel-sided, long and slender, not as wide as width between branches of paramere, in lateral view more elongate (Figs 22–23)
 *G. negus* Tottenham, 1956
 – Head trapezoidal, apical part of median lobe conically narrowed into short obtuse apex (Figs 16–17). *G. lepidina* sp. nov.
- 3 Antennae unicoloured, black or brown. 4
 – Antennae with antennomeres 1 or 1–2 differently coloured than remaining antennomeres. 5
- 4 Antennae black and long, reaching posterior margin of pronotum when reclined, whole body black, legs brown, head slightly wider than long (ratio 18 : 16). Genitalia as in Figs 19–21. *G. lethifer* Tottenham, 1956
 – Antennae brown and short, reaching posterior fourth of pronotum when reclined, pronotum and abdomen brown-black, elytra brown-red, legs yellow, tibiae infusate. Head distinctly wider than long (ratio 20 : 16). Genitalia as in Figs 4–6.
 *G. coryndoni* Cameron, 1942
- 5 Smaller species, body length 4.6–4.9 mm. 6
 – Larger species, body length 5.2–5.8 mm. 9
- 6 Antennae short, reaching midlength of pronotum or posterior fourth of pronotum when reclined. 7
 – Antennae long, reaching posterior fifth or posterior margin of pronotum when reclined. 8
- 7 Antennae reaching midlength of pronotum when reclined. Apical portion of median lobe distinctly narrowed into very long and very narrow apex (Fig. 34).
 *G. amadina* sp. nov.
 – Antennae reaching posterior fourth of pronotum when reclined. Apical portion of median lobe in lateral view (Fig. 11), widened and with truncate apex.
 *G. fleuxellus* Tottenham, 1956
- 8 Antennae reaching posterior fifth of pronotum when reclined. Apical portion of median lobe in lateral view as in Fig. 29. *G. ramifer* Tottenham, 1956
 – Antennae reaching posterior margin of pronotum when reclined. Genitalia as in Figs 13–15. *G. huendus* Tottenham, 1956
- 9 Antennae short, reaching posterior fourth or fifth of pronotum when reclined. 10
 – Antennae long, reaching posterior margin of pronotum when reclined. 11
- 10 Antennae reaching posterior fourth of pronotum when reclined, apex of median lobe (Fig. 31), wider than in following species (compare with Fig. 1).
 *G. vulcanus* Cameron, 1950
 – Antennae reaching posterior fifth of pronotum when reclined, apex of median lobe (Fig. 1) narrower than that in previous species (compare with Fig. 31).
 *G. amans* Tottenham, 1963



Figs 1–24. Genitalia of representatives of the *Gabrius corydoni* group (aedeagus in ventral and lateral views and detail of parameres in ventral view). 1–3 – *G. amans* Tottenham, 1963; 4–6 – *G. corydoni* Cameron, 1942; 7–9 – *G. dolosus* Tottenham, 1956; 10–12 – *G. flexuellus* Tottenham, 1956; 13–15 – *G. huendus* Tottenham, 1956; 16–18 – *G. lepidina* sp. nov.; 19–21 – *G. lethifer* Tottenham, 1956; 22–24 – *G. negus* Tottenham, 1956



Figs 25–36. Genitalia of representatives of the *Gabrius corydoni* group (aedeagus in ventral and lateral views and detail of parameres in ventral view). 25–27 – *G. obnixus* Tottenham, 1956; 28–30 – *G. ramifer* Tottenham, 1956; 31–33 – *G. vulcanus* Cameron, 1950; 34–36 – *G. amadina* sp. nov.

- 11 Elytra wider than long (ratio 27 : 23), median lobe parallel-sided, apex almost straight (Fig. 25). *G. obnixus* Tottenham, 1956
 – Elytra as long as wide, median lobe slightly narrowed towards obtusely rounded apex (Fig. 7). *G. dolosus* Tottenham, 1956

Description of new species

Gabrius amadina sp. nov.

(Figs 34–35)

Type locality. Tanzania, Arusha, Mto-wa-umbu env., 3°22'31"S, 35°51'15"E, 900–1000 m a.s.l.

Type material examined. HOLOTYPE: ♂ (NMPC): 'Tanzania, Arusha, MTO-WA-MBU env., 900–1000 m, 03°22'31"S, 35°51'15"E. May 01, 2010', Milan Kuboň lgt. // Holotype *Gabrius amadina* sp. nov. Hromádka det., 2013, [red oblong label printed]'

Description. Body length 4.9 mm, length of fore body (to end of elytra) 2.5 mm.

Colouration. Head black, pronotum, scutellum and abdomen dark brown, posterior margin of all abdominal tergites narrowly brown-yellow, elytra dark brown-red. Maxillary and labial palpi black, mandibles, antennomere 1 and base of antennomere 2 brown, remaining antennomeres and legs yellow, tibiae darker.

Head wider than long (ratio 18 : 15), slightly narrowed posteriad. Posterior angles markedly rounded, bearing two long black bristles. Interocular area with four coarse punctures arranged in a straight line. Distance between medial punctures five times as large as distance between medial and lateral puncture. Clypeus with shallow rounded depression medially. Eyes flat, shorter than temples (ratio 6 : 8) posterior margin with two punctures. Anterior half of temporal area impunctate, posterior half with scattered punctures. Clypeus with microsculpture consisting of transverse waves, rest of head with traces of very fine microsculpture.

Antennae short, slightly widened distally, reaching midlength of pronotum when reclined. Antennomeres 1–3 and 11 distinctly longer than wide, antennomere 4 slightly longer than wide, antennomere 5 as long as wide, antennomere 6 slightly wider than long, antennomeres 7–10 distinctly wider than long.

Pronotum slightly shorter than wide (ratio 17 : 19), parallel-sided. Anterior angles rounded, bearing several bristles of variable length, posterior margin markedly rounded. Each dorsal row with six coarse punctures, punctures 2–6 equidistant, distance between punctures 1–2 larger than distance between punctures 2–6. Each sublateral row with two punctures, puncture 2 shifted toward lateral margin. Surface with microsculpture similar to that on head. Sides bearing several variably long black bristles.

Scutellum densely and coarsely punctured, diameter of punctures larger than eye-facets, punctures separated by distance smaller than one puncture diameter.

Elytra as long as wide, slightly widened posteriad. Punctuation coarse and relatively sparse. Diameter of punctures larger than those on scutellum, separated by one or one and half puncture diameter in transverse direction. Surface without microsculpture; setation brown-yellow.

Legs. Metatibia longer than metatarsus (ratio 12 : 10), metatarsomere 1 as long as metatarsomere 5, slightly shorter than metatarsomeres 2–3 combined.

Abdomen wide, slightly narrowed anteriorly from visible tergite 3 and distinctly narrowed posteriorly. First three visible tergites with two basal lines, elevated area between lines with scattered punctures. Punctuation of tergites finer and denser than that on elytra. Surface without microsculpture; setation similar to that on elytra.

Differential diagnosis. *Gabrius amadina* sp. nov may be distinguished from the similar *G. amans* by the shorter antennae, coarse and sparse punctuation of the elytra and by the different shape of the aedeagus.

Etymology. The name of this species, a noun in apposition, is the Latin generic name of the African Cut-throat finch *Amadina fasciata* (Gmelin, 1789).

Distribution. Known only from the type locality in Tanzania.

Gabrius lepidina sp. nov.

(Figs 16–18)

Type locality. Democratic Republic of the Congo, Ruwenzori Mts., Kakalari river near Bombi, 1725 m a.s.l.

Type material. HOLOTYPE: ♂ (MRAC): ‘Congo Belge, Massif Ruwenzori riv. Kakalari, affl. Bombi 1725 m, 10.iv.1954, P. Vanschuytbroeck – H. Synave, 7980–84. // Holotype *Gabrius lepidina* sp. nov Hromádka det., 2012, [yellow oblong label, printed]’. PARATYPE: ♂ (LHPC): same label data as in holotype; ♂ (NMPC): ‘Tanzania, Mwanza, 11.x.1969, Ardö leg.’ All paratypes with yellow oblong printed label.

Description. Body length 4.2 mm, length of fore body (to end of elytra) 1.9 mm.

Colouration. Head black-brown, pronotum brown-red, scutellum, elytra and abdomen brown. Maxillary, labial palpi and antennomeres 1–2 yellow-brown, remaining antennomeres brown, legs yellow.

Head trapezoidal, wider than long (ratio 14 : 12.5), posterior margin obtusely rounded, bearing several variably long black bristles. Clypeus with a small rounded depression medially. Eyes flat, slightly shorter than temples (5 : 6), interocular area with four coarse punctures arranged in a straight line. Distance between medial punctures five times as large as distance between medial and lateral puncture. Posterior margin with two fine punctures. Temporal area with scattered punctures. Surface with fine microsculpture consisting of transverse waves.

Antennae reaching posterior margin of pronotum when reclined. Antennomeres 1–3 distinctly longer than wide, antennomeres 4 and 11 slightly longer than wide, antennomeres 5–6 as long as wide, antennomeres 7–10 slightly wider than long.

Pronotum longer than wide (ratio 15 : 13), parallel-sided, anterior angles obtusely rounded, bearing several short bristles, posterior margin markedly rounded. Each dorsal row with six equidistant coarse punctures, each sublateral row with two punctures, puncture 2 slightly shifted toward lateral margin. Surface with microsculpture similar to that on head.

Scutellum very finely and densely punctured, diameter of punctures as large as eye-facets, distance between punctures mostly as large as one puncture diameter.

Elytra as wide as long, slightly widened posteriad. Punctuation coarser than that on scutellum, distance between punctures one puncture diameter, or slightly smaller. Surface without microsculpture; setation brown-yellow.

Legs. Metatibia longer than metatarsus (ratio 12 : 9), metatarsomere 1 shorter than metatarsomere 5, as long as metatarsomeres 2–3 combined.

Abdomen wide, very gradually narrowed posteriad from visible tergite 3. First three visible tergites with two basal lines, elevated area between lines impunctate. Punctuation at base of all tergites finer and denser than that on elytra, becoming sparser towards posterior margin of each tergite. Surface without microsculpture; setation similar to that on elytra.

Male. Aedeagus (Figs 16–18).

Differential diagnosis. *Gabrius lepidina* sp. nov. is quite similar to *G. obnixus*, but differs from the latter by the longer antennae, finer and denser punctuation of the elytra, and by the different shape of the aedeagus.

Etymology. The name of this species, a noun in apposition, is the Latin generic name of the African Pygmy Kingfisher *Lepidina picta* R. B. Sharp, 1871.

Distribution. Democratic Republic of the Congo, Tanzania.

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