

Description of a new species of *Diastrophocoleps* Damoiseau (Coleoptera: Brentidae: Cyphagoginae: Cyphagogini) from the Democratic Republic of the Congo

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ABSTRACT

Diastrophocoleps ayalae sp. n. is described based on a single male specimen from the Democratic Republic of the Congo. The new taxon is closely related to *Diastrophocoleps femoralis* (Damoiseau, 1961), but can be distinguished by the shape of the prothorax and the shape of the hind legs. Both species are illustrated. *Diastrophocoleps femoralis* is also recorded for the first time from Cameroon and Central African Republic.

KEYWORDS: Biodiversity, Brentidae, Curculionoidea, new species, new record, taxonomy, weevils, tropical Africa.

RÉSUMÉ

Diastrophocoleps ayalae sp. n. est décrite à partir d'un unique spécimen mâle provenant de la République démocratique du Congo. Ce nouveau taxon est étroitement apparenté à *Diastrophocoleps femoralis* (Damoiseau, 1961), mais s'en distingue par la forme du prothorax et celle des pattes postérieures. Les deux espèces sont illustrées. *Diastrophocoleps femoralis* est également signalée pour la première fois au Cameroun et en République centrafricaine.

MOTS-CLÉS: Biodiversité, Brentidae, charançons, Curculionoidea, nouvelle espèce, nouvelle découverte, taxonomie, Afrique tropicale.

INTRODUCTION

The genus *Diastrophocoleps* was erected by Damoiseau (1967) with *Cormopus femoralis* Damoiseau, 1961 (from the Democratic Republic of the Congo) as the type species. Damoiseau separated the new genus from *Cormopus* Kolbe, 1892, stating that *Diastrophocoleps* has an elongated head with long temples, the rostrum as wide but shorter than the head, the three apical antennal segments longer than those of the funicle, but not forming a broad club as long as the rest of antenna, the hind femora extended well beyond the apex of elytra, forming a club on a lamelliform peduncle and toothed on the posterior surface, the apex of this club extending above the insertion of the hind tibiae, which are twisted somewhat Z-shaped, and the segments of the hind tarsi deformed, being the metatarsi not strongly elongated.

The main diagnostic characters distinguishing *Diastrophocoleps* from *Cormopus* are: the antennal club shorter than the rest of antenna, the toothed underside of the hind femora, and the crenulation on the basal lateral constriction of the prothorax. The last character has been overlooked by Damoiseau (1967).

DOI: [10.5281/zenodo.22814496](https://doi.org/10.5281/zenodo.22814496); ISSN (online) 2224-6304

Received: 26 July 2026 / Revised: 13 August 2026 / Accepted: 15 September 2026

[urn:lsid:zoobank.org:pub:437B3AC8-FF48-48AF-9AF4-D54DFBC6791B](https://zoobank.org/pub:437B3AC8-FF48-48AF-9AF4-D54DFBC6791B)

While studying the Brentidae in my private collection, I came across a male specimen of *Diastrophocoleps* belonging to a new species, described herein.

MATERIALS AND METHODS

The holotype of the new species was examined and compared by myself with the holotype of *D. femoralis* in MRAC in December 2012.

The genitalia dissection was made after boiling the specimen in distilled water for 5 minutes, then removing the abdomen and soaking it in a cold 10% KOH solution for 24 hours. Then, the genital parts were gently cleaned and set on a cardboard, and included in DMHF (dimethyl hydantoin formaldehyde) resin. The cardboard with the genitalia was placed on the same pin under the dissected specimen.

Photographs illustrating the habitus of the new taxon were taken by a Pentax K20D camera mounted on a micrometric photo stand with magnifying lens Rodenstock 1: 4.5–f75; photos of the details were taken with the same camera and Lomo 3.7X lens. The images have been processed with software Combine ZP.

Acronyms of the institutions and private collections used in the article:

DTLC – Dmitry Telnov collection, Riga, Latvia;

EOC – Eylon Orbach collection, Qiryat Tivon, Israel;

MRAC – Musée Royal de l'Afrique Centrale, Tervuren, Belgium;

MZUF – Museo di Storia Naturale, Sezione di Zoologia, Università di Firenze, Italy.

Abbreviations used in the text: AGL – above ground level, Exp. – expedition, MV – mercury vapor, N.P. – national park, Prov. – Province.

TAXONOMY

Family Brentidae Billberg, 1820

Genus *Diastrophocoleps* Damoiseau, 1967

Diastrophocoleps ayalae sp. n.

Figs 1, 3

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Etymology: I am happy to name this beautiful new species of a brentid after Ayala Apelboim, my granddaughter, a smart teenager, from whom I do not stop learning about aspects of youngsters' life and perceptions.

Diagnosis: The male of the new species can be readily distinguished from the closely related species *Diastrophocoleps femoralis* (Fig. 2) by the following characters: anterior margin of pronotum largely concave and not straight as in *D. femoralis*; prothorax thickened and semi-oval, and not thin, long and parallel sided as in *D. femoralis*; basal lateral constriction of prothorax with strong vertical crenulation and not smooth unlike as in *D. femoralis*, where the crenulation is much more superficial; different shape of hind legs, hind metatarsi strongly deformed with large flat lamina (Fig. 3), unlike a slightly deformed and with no lamina in the hind tarsi of *D. femoralis* (Fig. 4).



Figs 1, 2. *Diastrophocoleps* spp. habitus: (1) *D. ayalae*, holotype; (2) *D. femoralis*, habitus. Central African Republic: Ndoki N.P., Camp 1, 2°28'51.0"N 16°13'04.5"E, 5–6.ii.2012, canopy UV light, 35 m AGL, Exp. Sangha 2012, P. Moretto.

Description: Male. Body elongate, uniformly reddish brown.

Measurements (in mm): total length 7.2, largest width (at elytra) 1.2, head including rostrum, 1.3, prothorax 2.6, elytra 3.3, antenna 2.6.

Head: longer than wide (excluding eyes), distinctly separate from neck, upper surface convex, smooth, with tiny setae dispersed on its surface; eyes large, temples longer than eye diameter; rostrum as wide as but shorter than head, flattened dorsoventrally, with medial superficial groove and stronger fovea on very short and parallel sided metarostrum; mesorostrum slightly laterally expanding on antennal insertions; prorostrum slightly longer than metarostrum, anteriorly laterally enlarged, anterior margin largely concave; mandibles small, directed downwards.

Antennae: short, directed backwards and reaching widest part of prothorax; scape short, slightly swollen; 2nd funicular segment shorter than scape, cylindrical, 3rd funicular segment about as long as 2nd; funicular segments 3–8 semi-equal in length, laterally gradually widening asymmetrically towards 8th funicular segment; funicular segments 7th and 8th saw-toothed at rear margin; funicular segments 1–8 bearing long erected setae; 9th funicular segment two times as long and wide as 8th; 10th funicular segment as long as but narrower than 9th; 11th funicular segment cylindro-conical, as wide as 10th, shorter than 9th and 10th together, pointed apically; funicular segments 9–11 with long, dense and erect pubescence and setae, except for glabrous external lateral side.

Prothorax: longer than head and rostrum together, elongated-oval, widest medially, with superficial median longitudinal groove, anteriorly strongly compressed, producing elevated narrow ridge, basally attenuated and with lateral constriction bearing strong vertical crenulation; pronotal surface smooth, superficially punctuated on disk, with sparse short whitish small appressed scales.

Elytra: nearly as long as prothorax and head together, slightly concave at base, rounded at apex; all striae and interstriae present, 3rd and 5th interstriae with some yellowish erect setae.

Legs: short; profemur unarmed, longer than protibia, thick, anteriorly with flat wide lamina overlapping tibia basally in inner side, protibia straight, ending with strong hooked spur and small flat lamina directing downwards; mesofemur unarmed, mesofemur and mesotibia much shorter and slimmer than profemur and protibia; hind leg as in Fig. 3, extending well beyond apex of elytra, hind femora with sharp tooth in distal 1/5.

Underside: Head nearly flat, shiny, laterally with narrow groove under prorostrum, and with two rows of longitudinal long white hairs projecting downwards on external surface of head; prosternum, metasternum and abdominal plate slightly convex, last three visible abdominal segments almost flat.

Genitalia: Parameres long and straight, parallel sided.

Female. Unknown.

Holotype: ♂ **Democratic Republic of the Congo:** Region de Bukavu, Kivu [2°31'S 28°50'E], iv.1982 (MZUF-COL-114048). *Note:* The hind right leg is glued on a piece of cardboard and placed under the specimen; the dissected genitalia are also glued on cardboard and pinned under the hind right leg.

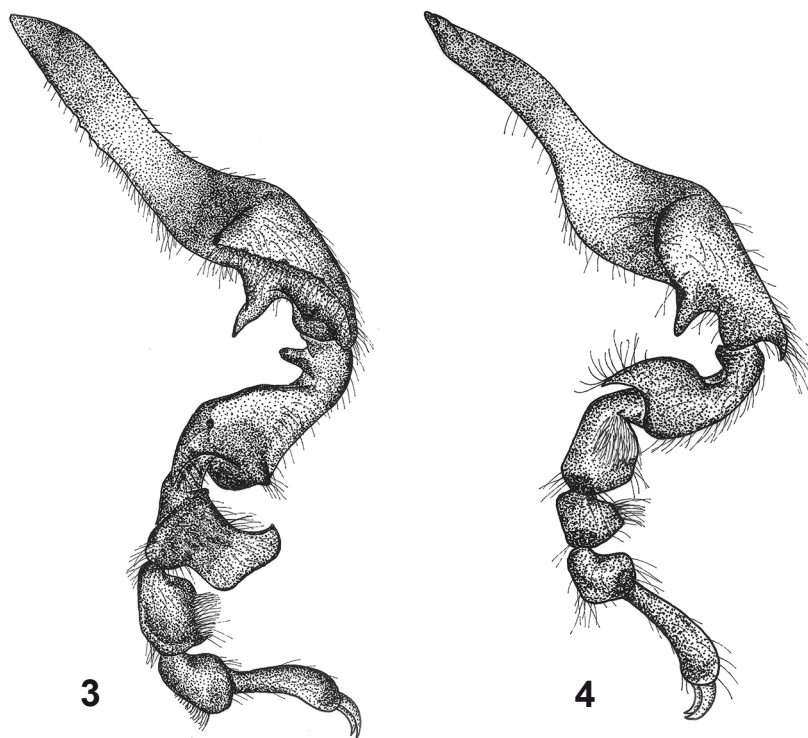
Diastrophocoleps femoralis (Damoiseau, 1961)

Figs 2, 4

Cormopus femoralis Damoiseau, 1961: 278.

Diastrophocoleps femoralis (Damoiseau, 1961): Damoiseau 1967: 42.

Material examined: **Cameroon:** 1 ex., Centre, Ototomo Forest Reserve, 3°39'N 11°18'E, 20–21.ii.1993, T. Bouyer (EOC). **Central African Republic:** 1 ex., Mambere Kadei Prov., 90 km NE Nola, 550–600 m, 10–12.vi.2009, A. Kudrna Jr. (EOC); 1 ex., Ndoki N.P., Camp 1, 2°28'51.0"N 16°13'04.5"E, 5–6.ii.2012, canopy, UV light, 35 m AGL, Exp. Sangha 2012, P. Moretto (EOC); 1 ex., Ndoki N.P., Camp 1, 2°28'51.0"N 16°13'04.5"E, 10–11.ii.2012, canopy, UV light, 35 m AGL, Exp. Sangha 2012,



Figs 3, 4. *Diastrophocoleps* spp., right hind leg: (1) *D. ayalae*, holotype; (2) *D. femoralis*, Central African Republic: Ndoki N.P., Camp 1, 2°28'51.0"N 16°13'04.5"E, 5–6.ii.2012, canopy UV light, 35 m AGL, Exp. Sangha 2012, P. Moretto.

P. Moretto (EOC); 1 ex., Ndoki N.P., Lake 1, 2°48'41.7"N 16°21'55.3"E, 11.ii.2012, canopy UV light, 38 m AGL, 392 m, expédition Sangha 2012 (EOC); 1 ex., Ndoki N.P., lake 1, 2°28'40.5"N 16°13'02.6"E, 466 m, 28.ii.2012, on *Balanites wilsoniana*, Exp. Sangha 2012, G. Duvost & E. Le Couillard (EOC); 1 ex., Ndoki N.P., Lake 1, 2°28'40.5"N 16°13'02.6"E, 28–29.ii.2012, diversified forest, canopy UV light, 45 m AGL, Exp. Sangha 2012, P. Moretto (EOC); 1 ex., Ndoki N.P., Lake 1, 2°28'40.5"N 16°13'02.6"E, 3–4.iii.2012, diversified forest, canopy UV light, 45 m AGL, Exp. Sangha 2012, P. Moretto (EOC); 1 ex., Ndoki N.P., Lake 1, 2°28'40.5"N 16°13'02.6"E, 4–5.iii.2012, diversified forest, UV light, Exp. Sangha 2012, P. Moretto (EOC). **Gabon:** 2♂, Ogooué-Ivindo Prov., Makokou 5–9 km SW, Ivindo N.P., Ipassa forest research station, 0°30'52"N 12°48'21"E, 19–20.vi.2016, 480–540 m, edge of secondary lowland rainforest, MV light, D. Telnov (DTLC); 1♀, Ogooué-Ivindo Prov., Makokou 7.7 km SW, Ivindo N.P., Ipassa forest research station, 0°30'52"N 12°48'21"E, 19–20.vi.2016, 520 m, edge of secondary lowland rainforest, white light trap in canopy, D. Telnov (DTLC); 1♀, Ogooué-Ivindo Prov., Makokou 5–9 km SW, Ivindo N.P., Ipassa forest research station, 0°30'52"N 12°48'21"E, 20–21.vi.2016, 540 m, edge of secondary lowland rainforest, MV light, D. Telnov (DTLC); 1♀, Ogooué-Ivindo Prov., Makokou 5–9 km SW, Ivindo N.P., Ipassa forest research station, 0°30'52"N 12°48'21"E, 20–21.vi.2016, 480–540 m, edge of secondary lowland rainforest, white light trap in canopy, D. Telnov (DTLC); 2♀, Ogooué-Ivindo Prov., Makokou 5–9 km SW, Ivindo N.P., Ipassa forest research station, 0°30'52"N 12°48'21"E, 24–25.vi.2016, 540 m, edge of secondary lowland rainforest, white light trap in canopy, D. Telnov (DTLC).

Distribution: In addition to the Democratic Republic of the Congo, *Diastrophocoleps femoralis* (Damoiseau) has already been recorded from Gabon (Bartolozzi *et al.* 2010). The present study reports this species from Cameroon and Central African Republic for the first time.

ACKNOWLEDGEMENTS

I am grateful to my friend and colleague David Selnekovic (Department of Zoology, Comenius University Bratislava, Slovakia) for taking the photographs, and to Rossella Poggesi (Florence, Italy), who made the wonderful drawings used in this paper. Marc De Meyer and Stephane Hanot (Musée Royal de l'Afrique Centrale, Tervuren, Belgium) kindly allowed me to study the type of *Diastrophocoleps femoralis* under their care. I also thank Dmitry Telnov (NHM, London) and Vladimir Kremitovsky (Brno, Czech Republic), for letting me study their private collections. Together with P. Moretto (Toulon, France) I thank the members of Central African Republic Government and the Authorities who granted the necessary authorizations during the expedition in the Ndoki National Park (Research permit N° 019/UB/DSV2012, from 16 January 2012), and Philippe Annoyer, the manager of the Sangha 2012 expedition. Ariel-Leib-Leonid Friedman (The Steinhardt Museum of Natural History, Tel Aviv University, Israel) was very helpful in final editing of this work. Lastly, I thank Luca Bartolozzi (MZUF) and Enzo Colonnelli (Rome, Italy) for their critical review and important suggestions regarding this work.

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