

Resachus bilardoi sp.n. from Gabon

(Coleoptera: Limnichidae: Limnichinae)

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Abstract

A new species of the genus *Resachus* DELÈVE, 1968 (Coleoptera: Limnichidae: Limnichinae) is described from Gabon: *R. bilardoi* sp.n. The new species is characterized by the head lacking the two oblique frontal sulci and by the morphology of the aedeagus (apex of parameres fused, truncate, and abruptly narrowed, with two short distal projections). The habitus and morphological details of diagnostic importance are illustrated by photographs. A distribution map of all known species of the genus is provided.

Key words: Coleoptera, Limnichidae, Limnichinae, *Resachus*, minute marsh-loving beetles, taxonomy, new species, Afrotropical Region, Gabon.

Introduction

The Afrotropical genus *Resachus* DELÈVE, 1968 includes four known species (DELÈVE 1968, HERNANDO & RIBERA 2006, MATSUMOTO 2020): *R. gilliana* MATSUMOTO, 2020 (Malawi), *R. lineatifrons* DELÈVE, 1968 (Democratic Republic of the Congo, Zambia), *R. schuhi* HERNANDO & RIBERA, 2006 (Madagascar), and *R. striatellus* DELÈVE, 1968 – type species by original designation (Democratic Republic of the Congo, Nigeria). In this paper, a fifth species of *Resachus* is described. The new species differs from all known congeners mainly in the shape of the aedeagus.

Material and methods

Dissections were made using standard techniques (see HERNANDO & RIBERA 2021). Specimens were studied with a Leica M125 C stereomicroscope. Habitus images were taken using a Canon EOS 50D digital camera with attached Canon MP-E 65mm f/2.8 1–5 macro lens. The aedeagus and the last sternite were photographed using a Canon EOS 50D digital camera attached to a Zeiss Axiostar plus compound microscope. Serial images were stacked with Helicon Focus 8.2.3 software. Measurements were taken with a linear ocular micrometer.

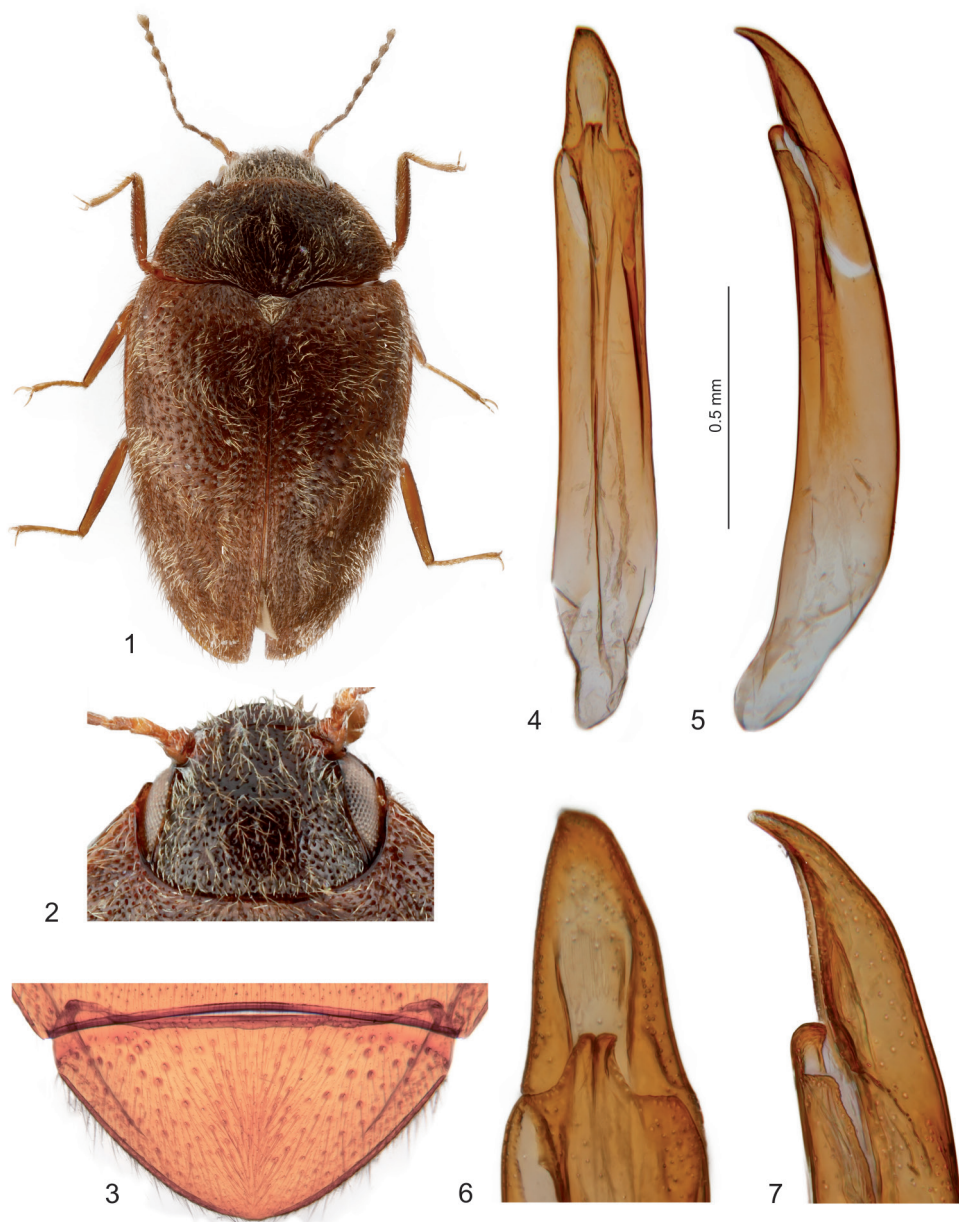
The label data are quoted verbatim; a backslash (\) indicates a line break, and two backslashes (\\) separate different labels.

The holotype is deposited in the Museum of Natural History, La Specola, Firenze, Italy (MNHS).

Resachus bilardoi sp.n.

TYPE LOCALITY: Parc National Moukalaba-Doudou, 2°36.992'S 10°37.031'E, Tchibanga, Gabon.

TYPE MATERIAL: **Holotype** ♂ (MNHS): “GABON, Tchibanga \ P.N. Moukalaba- \ Doudou \ riv. forêt galerie – \ 4.8.[20]14 A.Bilardo \\ riv. forêt galerie – \ 4.8.[20]14 Alt 122 [should be ca. 160] m / S -02° 36,992' \ E 010° 37,031'”, plus red holotype label.



Figs. 1–7: *Resachus bilardoi*: 1) habitus in dorsal view, 2) head in frontal view, 3) last abdominal sternite, 4) aedeagus in ventral view, 5) same, lateral view, 6) apex of aedeagus in ventral view, 7) same, lateral view. Figs. 1–4, 7 not to scale.

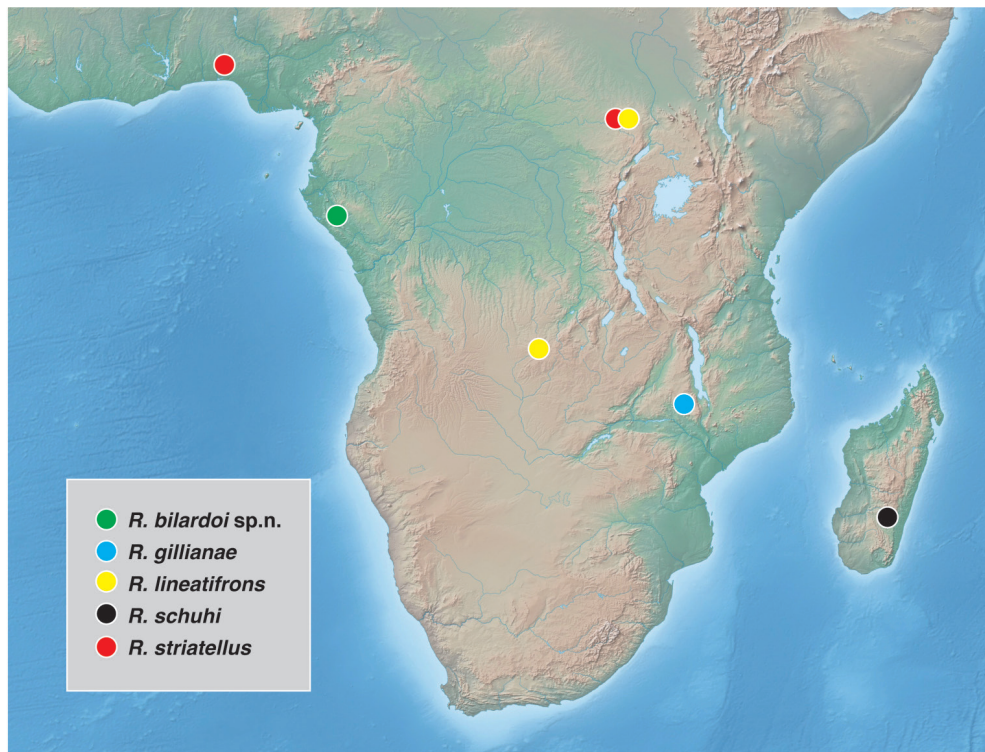


Fig. 8: Geographical distribution of the known species of *Resachus*.

DESCRIPTION: Habitus as in Fig. 1. Body length 3.35 mm (head excluded), maximum width 1.80 mm. Body shape elongate, oval; light brown, appendages paler. Covered with short dense recumbent pubescence, slightly longer and more erect on head and pronotum, forming a zig-zag pattern on the elytra, with variable colour depending on illumination angle.

Head: Partially retracted into pronotum; punctuation coarse and dense, surface between punctures smooth and shiny. Dorsal margin of eyes finely bordered, lacking the two oblique frontal sulci (Fig. 2). Antennae with eleven antennomeres; fully pubescent; antennomeres long and slender. Last segment of maxillary palpi truncate apically.

Pronotum: Transverse, narrower than base of elytra; posterior margin slightly sinuate, lateral margins strongly bordered, anterior margin finely bordered; surface covered with coarse and dense punctuation, surface between punctures smooth and shiny.

Scutellum subtriangular, large, lateral sides slightly curved.

Elytra: Base very convex, humeral callus strong; lateral margins strongly bordered; surface with dense double punctuation, setiferous pores fine and dense, coarse punctures forming irregular lines more clearly visible laterally; surface between punctures smooth and shiny.

Ventral surface flat; metaventricle slightly convex, punctuation coarse and dense, but on disc with finer, more closely spaced punctuation. First three sternites connate, with sparse punctures. Last abdominal sternite (Fig. 3) regularly curved, not emarginate.

Legs long and slender.

Aedeagus (Figs. 4–7) not articulated, strongly sclerotised, long and cylindrical, curved in lateral view; base asymmetrical, with oblique lateral opening; parameres ventral, forming a fused lamina, apex truncate and abruptly narrowed with two short distal projections, a short longitudinal suture is present, not dividing the two projections; apex of median lobe acute, slightly curved ventrad, longer than parameres, with an elongate ventral cavity in the apical region.

Female unknown.

DIAGNOSIS: *Resachus bilardoi* is closely related to *R. striatellus*. In both species the apex of the parameres is fused, without incision or emargination, although *R. bilardoi* appears to have a short longitudinal suture that does not separate the apex of the parameres. However, they can be easily distinguished by the following characters: *R. bilardoi* lacks the two oblique frontal sulci on the head and the apices of the parameres are truncate, while they are pointed in *R. striatellus* (see DELÈVE 1968).

DISTRIBUTION: *Resachus bilardoi* is known only from the type locality in Gabon (Fig. 8).

ETYMOLOGY: This species is named after Armando Bilardo (Cassano Magnago, Varese, Italy), a specialist of Hydradephaga. He has carried out numerous excursions in Africa, especially in Gabon, where he collected the holotype of the new species.

HABITAT: Probably riparian; according to the label data, the holotype was collected in a gallery forest.

Acknowledgements

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