

## ***Resachus* DELÈVE: new faunistic records, and description of a new species from Madagascar (Coleoptera: Limnichidae)**

C. HERNANDO & I. RIBERA

### Abstract

*Resachus schuhi* sp.n. (Coleoptera: Limnichidae) is described from Madagascar. New faunistic records are provided for *Resachus lineatifrons* DELÈVE (Zambia), and *Resachus striatellus* DELÈVE (Nigeria). A key to the species of *Resachus* DELÈVE is presented.

**Key words:** Coleoptera, Limnichidae, *Resachus*, key, new species, new records, Afrotropical Region.

### Introduction

The limnichid genus *Resachus* was described by DELÈVE (1968) for two species: *Resachus striatellus* DELÈVE and *R. lineatifrons* DELÈVE, both from the Democratic Republic of the Congo (Zaire). The little available information from DELÈVE (1968) and label data seem to suggest that these species are linked to decaying wood and vegetation on the shore of small ponds or streams in gallery forest. Some specimens were also collected at light (DELÈVE 1968). There is no other published work with original information on this genus.

*Resachus* is included in the *Mandersia* group of genera as defined in HERNANDO & RIBERA (2005), being apparently very close to the Palearctic and Oriental *Cacothryptus* SHARP, both in its external and genital morphology. The two genera can be clearly separated by the two oblique frontal sulci of *Resachus*. Additionally, in *Resachus* the medial lobe of the aedeagus does not have a longitudinal sulcus and has a large ventral excavation, occupying most of the apical region (Fig. 3, see HERNANDO & RIBERA 2005 for a key to the genera included in the *Mandersia* group).

Among the unidentified material in the collections of the NHM and the NMW we found an undescribed species from Madagascar and some interesting new records of the other two species of the genus, which are presented below. We also include a key for the separation of the three known species of *Resachus*.

#### Acronyms:

NHM    Natural History Museum, London, UK  
 NMW    Naturhistorisches Museum Wien, Austria

### Key to species of *Resachus*

- 1    Punctures of irregular series on elytra strong, clearly visible on entire surface. Fused parameres of aedeagus with acuminate apex ..... *striatellus*
- Punctures of irregular series on elytra weakly impressed, clearly visible only marginally. Fused parameres of aedeagus with emarginate apex (Fig. 3) ..... 2

- 2 Smaller (<3.5 mm, head not included). Median lobe of aedeagus only slightly longer than parameres; apical emargination of fused parameres short (see DELÈVE 1968: Fig. 78)... *lineatifrons*
- Larger (>4 mm, head not included). Median lobe of aedeagus clearly longer than parameres (Figs. 2–3); apical emargination of fused parameres deep (Fig. 3)..... *schuhi* sp.n.

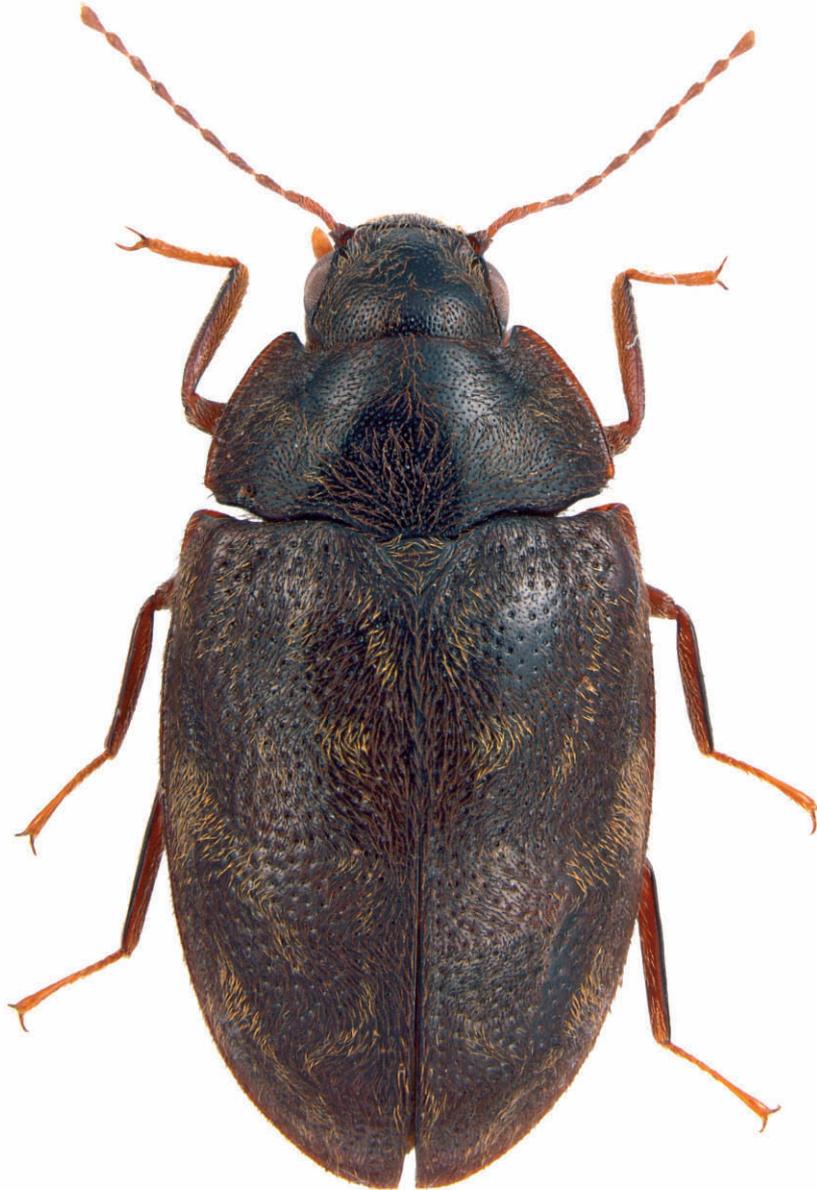


Fig. 1: Habitus of *Resachus schuhi*, holotype.

***Resachus schuhi* sp.n.**

TYPE LOCALITY: Fianarantsoa, near Ranomafana, central Madagascar.

TYPE MATERIAL: **Holotype** ♂ (NMW): “MADAGASCAR: Fianarantsoa \ Ranomafana env. 950m \ 26.10.2001 lg. Schuh (10)”, and holotype label. **Paratype** (NMW): 1 ♀, with same data as holotype, with paratype label.

**DIAGNOSIS:** Habitus as in Fig. 1. Body length 4.5 mm (head excluded), maximum width 2.5 mm. Body shape elongate, oval; dark brown, appendices paler. Covered with short, dense recumbent pubescence; slightly longer and more erect in head and pronotum; forming a zig-zag pattern on elytra, with variable colour depending on incidence angle of light.

**Head:** partially inserted in pronotum; punctuation strong and dispersed, surface between punctures smooth and shiny. Dorsal margin of eyes strongly bordered, with a small excavation by the insertion of antennae, from which two shallow longitudinal sulci originate, convergent posteriad. Antennae with eleven antennomeres, reaching posterior margin of pronotum; 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 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.

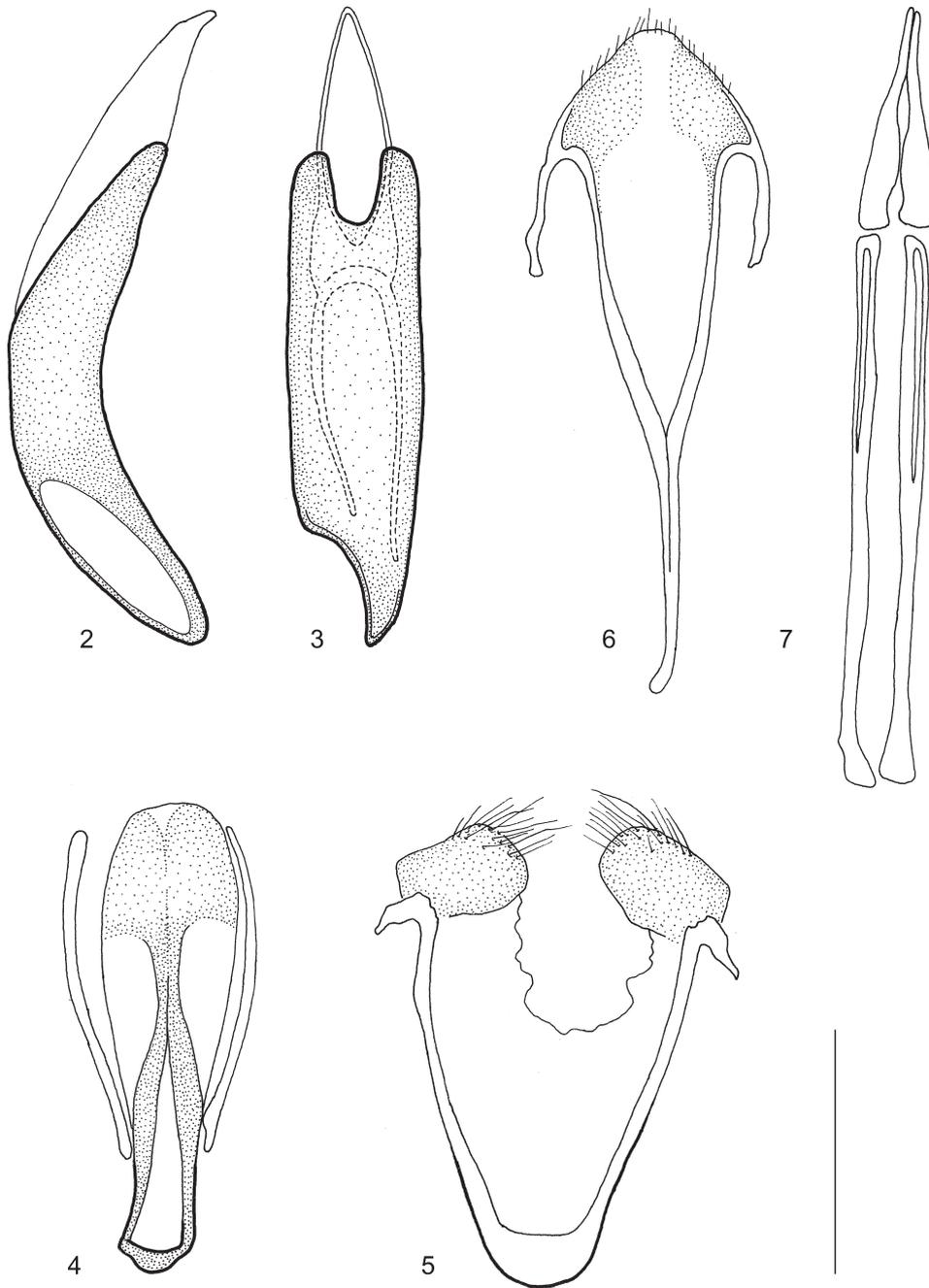
**Ventral surface:** flat; metaventricle slightly convex, with sparse punctures. First three sternites connate, with sparse punctures. Last abdominal sternite with a short, acute point, not emarginate. Legs long and slender.

**Sexual dimorphism:** male: 4<sup>th</sup> abdominal sternite with glandular pores. Last abdominal sternite shorter than in females. Aedeagus (Figs. 2–3) not articulated, strongly sclerotised, long and cylindrical, curved in lateral view; base asymmetrical, with oblique lateral opening; parameres ventral, fused forming a lamina with a deep apical emargination; apex of median lobe acute, longer than parameres, with an elongate ventral excavation in the apical region. Ninth genital segment (Fig. 4) wide and long, surface membranous except base, which is narrow and strongly sclerotised; lateral appendices (parameres) robust and strongly sclerotised, articulated with genital segment at base. Eighth sternite (Fig. 5) U-shaped, apex with membranous expansions with long setae. Female: ovipositor long, gonocoxites strongly acuminate apically (Fig. 7). Spiculum ventrale as long as ovipositor, manubrium long, distal plaque membranous, with two lateral expansions (Fig. 6).

**DIFFERENTIAL DIAGNOSIS:** *Resachus schuhi* sp.n. can be easily separated from the two known species by its larger size, its more robust and convex shape, the body punctuation and the male genitalia (see key above). For its elytral punctuation *Resachus schuhi* sp.n. could be said to be closer to *Resachus lineatifrons*, although the male genitalia of the two species are clearly different (see DELÈVE 1968: Fig. 78).

**ETYMOLOGY:** Named after Rudolf (Rudi) Schuh (NMW), Colydiinae specialist and collector of the new species.

**DISTRIBUTION:** So far known only from the type locality.



Figs. 2–7: *Resachus schuhi*, 2–3) aedeagus, lateral (2) and ventral (3) view; 4) male 9<sup>th</sup> genital segment; 5) male 8<sup>th</sup> sternite; 6) female spiculum ventrale; 7) gonocoxite. Scale bar = 0.5 mm.

***Resachus lineatifrons* DELÈVE**

ZAMBIA: 4 exs. (NHM): “N. RHODESIA, Mwinilunga District, Ikelenge nr. Kalene, Zambezi rapids. E. Pinhey, 3. v. 1963, M.V. Light trap. B.M. 1963-742”.

Previously only reported from the type locality, Garamba National Park, Democratic Republic of the Congo (DELÈVE 1968).

***Resachus striatellus* DELÈVE**

NIGERIA: 2 exs. (NHM): “Ibadan, At light, 27.xi.1955. G. H. Caswell Coll. B. M. 1956-673”.

Previously only reported from the type locality, Garamba National Park, Democratic Republic of the Congo (DELÈVE 1968).

**Acknowledgements**

We thank Rudolf Schuh, Manfred A. Jäch (NMW), Stuart Hyne and Max L. Barclay (NHM) for making available this interesting material for study. Financial support of the European Community’s programme “Structuring the European Research Area” under SYNTHESYS at the Naturhistorisches Museum Wien, AT-TAF 217, is greatly acknowledged by I. Ribera.

The photograph of the habitus of the holotype of *Resachus schuhi* was kindly provided by Harald Schillhamer (NMW).

**References**

DELÈVE, J. 1968: Contribution à l’étude des “Dryopoidea”. Les Limnichidae d’Afrique (Coleoptera Limnichidae). – Bulletin et Annales de la Société Royale d’Entomologie de Belgique 104: 212–274.

HERNANDO, C. & RIBERA, I. 2005: *Pseudothryptus*, a new genus of Limnichidae (Coleoptera) for *Cacothryptus multiseriatus* Champion. – Entomological Problems 35 (2): 131–135.

Carles HERNANDO

Museu de Ciències Naturals de la Ciutadella, Passeig Picasso s/n, Parc de la Ciutadella, E – 08003 Barcelona, Catalonia, Spain (c\_hernando@telefonica.net)

Ignacio RIBERA

Departamento de Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, E – 28006 Madrid, Spain (i.ribera@mncn.csic.es)