Coelostoma (Coelostoma) escalerai n. sp. from Equatorial Guinea (Coleoptera, Hydrophilidae)

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Hernando, C., 1997. *Coelostoma (Coelostoma) escalerai* n. sp. from Equatorial Guinea (Coleoptera, Hydrophilidae). *Misc. Zool.*, 20.1: 97-99.

Coelostoma (Coelostoma) escalerai *n.sp. from Equatorial Guinea (Coleoptera, Hydrophilidae).– Coelostoma (Coelostoma) escalerai* n. sp. is described from Equatorial Guinea (Africa). It can be clearly separated from related species with membranous parameters due to the presence of a strongly developed internal ring in the median lobe of the aedeagus.

Key words: Coleoptera, Hydrophilidae, Sphaeridiinae, *Coelostoma escalerai n. sp.*, Equatorial Guinea, Afrotropical region.

(Rebut: 8 I 97; Acceptació condicional: 11 III 97; Acc. definitiva: 15 IV 97)

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Introduction

The genus *Coelostoma* is one of the most diversified among the Sphaeridiinae, with about 89 species distributed through the Palaearctic, Ethiopic, Oriental and Australian regions (Hansen, 1991). All species have a similar external morphology. The only differences concern characters such as puncturation, colour or small changes in general shape and are difficult to define. However, the male genitalia provides a well-defined and highly diversified set of characters for the separation of the species, and is the only reliable identification in most. The African species of the genus have been studied in a series of papers by different authors (d'Orchymont, 1936; Mouchamps, 1958; Balfour-Browne, 1939, 1940, 1950a, 1950b, 1952, 1959), and their taxonomy is

ISSN: 0211-6529

relatively well known (although the identification of females of many species is still not possible). On revising African material collected by M. Escalera a single specimen of a new species of the genus was discovered, and is described below.

Results

Coelostoma escalerai n. sp.

Type locality
Cabo San Juan, Territorio de Río Muni, Equatorial Guinea.

Type material
Holotype, male (Museo Nacional de Ciencias Naturales, Madrid): 'Cabo San Juan, Río Muni, Guinea Ecuatorial, VII-1901, M. Escalera leg.' and with holotype label.

Description
Total length 2.90 mm. Maximum width 1.95 mm. Convex, with the maximum width in the base of the elytra. Black, with a shiny appearance.

Head.- Semicircular, with a dense, strong puncturation, the surface between the punctures smooth and shiny. Antennae and palpi testaceous. Antennae with nine segments, the last three dilated and pubescent.

Pronotum.- Transverse, with the anterior margin regularly concave, the posterior margin with a double sinuation. Margins finely bordered. Puncturation less dense and less strong than in the head, with the surface between the punctures also smooth and shiny.

Elytra.- Convex, with the maximum width at the base, finely bordered in all their extension. Parasutural stria weak, evident only in its posterior half. Puncturation as on the pronotum, denser at apex.

Ventral surface.- Prosternal process with a strong denticle. Mesosternal process flat, only slightly protruding in the middle, strongly bordered in the anterior margin. Metastenal process fused with the mesosternum, wide and flat in the base, progressively narrower towards the mesosternum, which is smooth and shiny with sparse setiferous pores. Metacoxal plates densely punctured, with a coriaceous appearance, and with hydrophobic pubescence. Abdominal sternites with a fine and dense puncturation, and dense pubescence. Last abdominal sternite emarginated.

Legs.- Brownish, short and robust, with the pro- and mesofemora with sparse hydrophobic pubescence, metafemora glabrous with some setiferous pores. Tibiae with hydrophobic pubescence, more developed in the metatibia.

Aedeagus.- As in figure 1, with three lobes. Parameres membranous, with the external side strongly sinuate, with the apex dilated bilaterally. Median lobe slightly shorter than the parameres, wide, regularly narrower towards the apex, which is truncated. With a strongly developed internal ring, larger than in any other species of the subgenus.

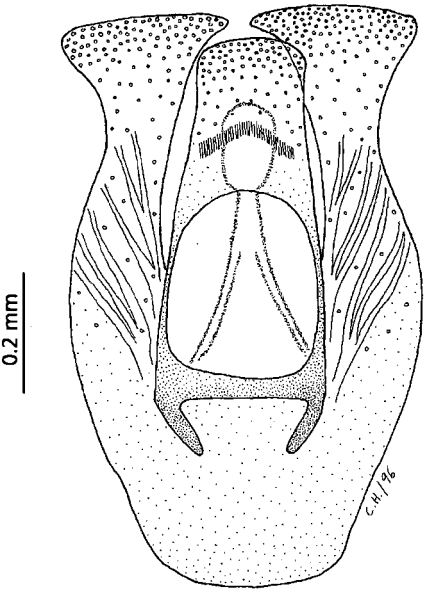

Fig. 1. Male genitalia of *Coelostoma escalerai* n. sp.
Genitalia masculina de Coelostoma escalerai *sp. n.*

Distribution
So far known only from the type locality.

Etymology
The species is named after the renowned entomologist M. M. de la Escalera, collector of the type and one of the pioneers in the study of the insect fauna of the gulf of Guinea.

Discussion

Coelostoma escalerai n. sp. is most closely related with *C. lesnei* d'Orchymont, 1936; *C. conradsi* d'Orchymont, 1936 and *C. assinicum* Mouchamps, 1958.

It can be clearly separated from the former two by its straight median lobe, which is strongly curved in the two species described by d'Orchymont (1936). In addition to this character, the parameres of these species do not have the lateral expansions well developed, in contrast with *C. escalerai* n. sp. Regarding the third species, the apex of the median lobe of *C. assinicum* is evenly rounded, while in *C. escalerai* it is abruptly truncated. The parameres are also different.

Other species with similar structure of the aedeagus, such as *C. proterum* Balfour-Browne, 1951; *C. erinna* Balfour-Browne, 1950, and *C. centrale* Mouchamps, 1958, are less closely related. In all of these species the median lobe has highly developed and diversified lateral expansions, which are absent in *C. escalerai* n. sp.

Although belonging to another subgenus, *C. (Lachnocoelostoma) camerunense* Mouchamps, 1958 has an aedeagus with a similar, but clearly distinct structure.

Acknowledgements

Thanks are due to Dr. Isabel Izquierdo, curator in the Museo Nacional de Ciencias Naturales, for the loan of the Museum's collection of the hydrophilids from Equatorial Guinea, and to Frank Bameul and Ignacio Ribera for their comments on the manuscript.

Resumen

Coelostoma (Coelostoma) escalerai *sp. n. de Guinea Ecuatorial (Coleoptera, Hydrophilidae)*

Se describe *Coelostoma (Coelostoma) escalerai* sp. n. a partir de un ejemplar de Guinea Ecuatorial (África). Esta especie se puede separar claramente de otras próximas que presentan los parámeros membranosos, debido a la presencia de un anillo interno muy desarrollado en el lóbulo medio del edeago. La genitalia masculina se ilustra en la figura 1.

References

Balfour-Browne, J., 1939. Contribution to the study of the Palpicornia. Part III. *Ann. Mag. nat. Hist.,* 11(4): 289-310.

- 1940. Coleoptera Hydrophilidae. *Ruwenzori expedition 1934-5,* 3(6-10): 9-10.
- 1950a. *Exploration du Parc National Albert, mission G. F. de Witte (1933-1935). Fascicule 63, Palpicornia.* Institut des Parcs Nationaux du Congo Belge, Bruxelles.
- 1950b. On the aquatic Coleoptera of Northern Rhodesia (Dytiscidae, Gyrinidae and Palpicornia). *Occasional Papers of the National Museum of Southern Rhodesia,* 2: 359-399.
- 1952. Mission A. Villiers au Togo et au Dahomey (1950). VII. Coléoptères Hydrophilides. *Bull. Inst. fr. Afr. noire,* 14(1): 126-139.
- 1959. Dr. Jan Bechyné expedition to French Guinea, 1951. Hydrophilidae. *Ent. Arb. Mus. Frey,* 10: 302-320.

D'Orchymont, A., 1936. Revision *des Coelostoma* (s. str.) non américains. *Mem. Mus. r. Hist. nat. Belg. 2me sér.,* 7: 1-38.

Hansen, M., 1991. *The hydrophilid beetles. Phylogeny, classification and a revision of the genera (Coleoptera, Hydrophiloidea).* The Royal Spanish Academy of Sciences and Letters, Biologiske Skrifter, Copenhagen.

Mouchamps, R., 1958. Notes sur quelques *Coelostoma* (Brullé) (Coléoptères Hydrophilidae) principalement africains (12me note). *Inst. r. Sci. nat. Belg. Bull.,* 34:1-36.