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***Hydraena (Hydraenopsis) pagaluensis* n. sp., the first known
hydraenid from Pagalu island, Gulf of Guinea
(Coleoptera, Hydraenidae)**

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Abstract: The first known species of Hydraenidae from Pagalu island (Equatorial Guinea), *Hydraena (Hydraenopsis) pagaluensis* n. sp., is described. It seems to be most closely related to some species from continental tropical Africa. *Hydraena pagaluensis* n. sp. was found in moss and trickle on rock in the riparian area of streams.

Key words: Taxonomy, Pagalu island, Tropical Africa, *Hydraena*, Hydraenidae, new species.

Introduction

Of the islands of the Gulf of Guinea, Pagalu (also known as Annobon, politically belonging to Equatorial Guinea) is the most distant from continental Africa, and the most southern one. Only two species of aquatic Coleoptera are known from the island of Pagalu: *Coelostoma rutarum* D'ORCHYMONT, 1936 (Hydrophilidae), an Ethiopian species with a wide distribution (MOUCHAMPS 1958), recorded for the first time from Pagalu by BALFOUR-BROWNE (1939a); and *Copelatus annobonensis* BALFOUR-BROWNE, 1939 (Dytiscidae), so far considered to be endemic to the island (BALFOUR-BROWNE 1939b). There is still another species of Hydrophilidae, but terrestrial and likely to be an introduction: *Dactilosternum abdominale* (FABRICIUS, 1792) (RÉGIMBART 1907). Among the unclassified material in the Natural History Museum in London (NHM) a series of specimens of an undescribed *Hydraena* was found. It is the first hydraenid known from Pagalu, and from the islands of the Gulf of Guinea (although in the Museo Nacional de Ciencias Naturales in Madrid there is one female *Hydraenopsis* from Bioko, likely to be an undescribed species). This fact let us to consider the interest of its isolated description, despite the need of a taxonomic revision of the group in which the new species should be included (and of the African species of *Hydraena* in general, which are extremely poorly known).

Hydraenopsis was described by JANSSENS (1972a) as a separated genus, mainly based on characters of the male genitalia (the insertion of the parameres in the middle of the median lobe). PERKINS (1997) considered it to be a synonym of *Hydraena* s.str., based on the study

of the exocrinal secretion delivery system and number of elytral striae. In JÄCH & DÍAZ (1998) these two characters are considered to be of limited phylogenetic value, and *Hydraenopsis* is provisionally considered as a valid subgenus of *Hydraena*. A more detailed phylogenetic study is in preparation (M. A. JÄCH, personal communication, 1999), but in the meanwhile we follow JÄCH & DÍAZ (1998) in considering *Hydraenopsis* a subgenus of *Hydraena*.

Hydraena (Hydraenopsis) pagaluensis n. sp.

Type material: **Holotype** (male) (NHM): "In moss, in \ trickle on rock \ by stream. E3.", "ANNOBON IS: \ 23.xii.1959. \ Cambridge Univ. Exped. \ B.M.1960-51" and holotype label. **Paratypes** (NHM): 18 males, 8 females, same data as holotype, with paratype labels. All males are dissected, with the aedeagus mounted in the card.

Diagnosis: length 1.33–1.47 mm (males), 1.45–1.55 mm (females); width 0.61–0.67 mm (males), 0.63–0.72 mm (females). Body form elongate, compact, maximum width of pronotum slightly smaller than maximum width of elytra. Pronotum and elytra brown, paler at the margins. Head black. Legs and head appendages testaceous, paler than the body; last segment of the palpi with uniform coloration.

Labrum granulated, anterior margin with a shallow median indentation. Clypeus coarsely punctured at sides, middle area shiny, almost unpunctured; anterior margin finely bordered. Frons with a coarser and sparser puncturation than that of clypeus; surface between punctures smooth and shiny. Eyes large, prominent. Pronotum transverse, regularly curved, lateral margins finely serrate, anterior and posterior margins slightly sinuated; surface with coarse, sparse punctures, surface between punctures smooth and shiny. Elytra ca. twice longer than pronotum; margins finely serrate; broad explanate margin ending short before the apex; apex regularly rounded; ten striae between suture and shoulder, very regular, with dense but not contiguous large punctures; punctures of apex of the elytra slightly less strong; interstriae smooth and shiny. Hind wings apparently well developed, much longer than the elytra.

Mentum and submentum smooth and shiny, with very faint, sparse and irregularly spaced setigerous punctures. Gula not clearly delimited. Prosternum with distinct medial keel. Mesosternum laterally bordered, apex truncated. Metasternal plaques densely and finely punctured, with a granulated appearance, covered by long hydrofuge pubescence. Abdominal sternites covered with fine puncturation, space between punctures smooth; surface of abdominal sternites covered by short, recurrent pubescence, with the exception of the last three sternites, which are glabrous.

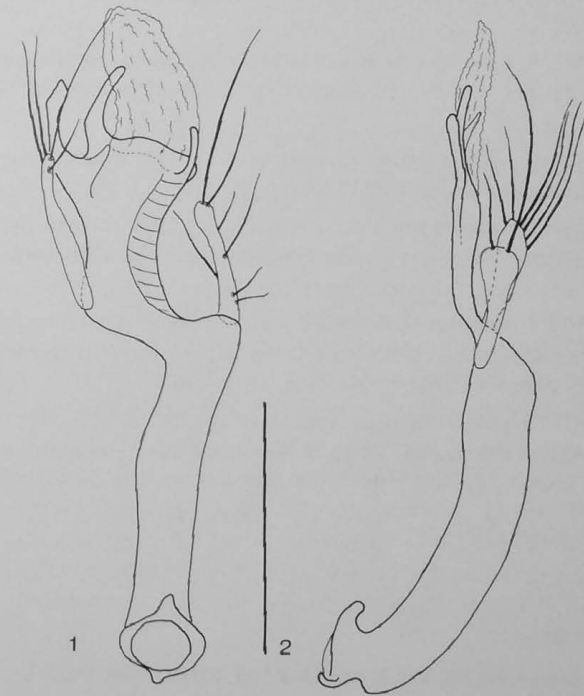
Aedeagus as in Figs 1 and 2. Median lobe strongly sinuated in the middle, with three digitiform expansions and a membranous lamella on the marginal edge. Parameres short, with long setae, inserted at middle of median lobe.

Distribution: So far only known from the type locality (it cannot be discarded that the species is present in continental Africa).

Ecology: According to the label data the specimens were found in moss and in trickle in rock in streams.

Discussion

Hydraena (Hydraenopsis) pagaluensis n. sp. seems most closely related to some Ethiopian species (e.g. *H. accurata* D'ORCHYMONT, 1948 and *H. abdita* D'ORCHYMONT, 1948, from South Africa and Uganda respectively; see D'ORCHYMONT 1948: plate III; or JANSSENS 1972a, 1972b), due to the explanate apex of the median lobe, with digitiform expansions. However, these similarities may be only a superficial resemblance, and at present it is not possible to define with more precision its phylogenetic placement. Clearly, a revision of African *Hydraena* is badly needed to establish species groups and the relationships of this new species, a task out of the scope of this paper.



Figs. 1–2. Aedeagus of *Hydraena (Hydraenopsis) pagaluensis* n. sp. – 1, ventral view. – 2, lateral view. (Scale bar = 0.1 mm).