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***Hydraena (Hydraena) isabelae* sp.n.**  
**from the Iberian Peninsula**  
**(Coleoptera: Hydraenidae)**

A. CASTRO & A. HERRERA

**Abstract**

*Hydraena (Hydraena) isabelae* sp.n. (Coleoptera: Hydraenidae) is described from the Sierra Morena (Córdoba, southern Spain). It belongs to the "*Phothydraena*" lineage of *Hydraena* s.str., but it does not appear to be closely related to any of the remaining Iberian species of this lineage.

**Key words:** Coleoptera, Hydraenidae, *Hydraena*, new species, taxonomy, Sierra Morena, Spain.

**Introduction**

BERTHÉLEMY (1986) published a taxonomic revision of the species of the "*Phothydraena*" lineage known until then (see JÄCH et al. 2000 for definition of the "*Phothydraena*" lineage of *Hydraena* s.str. KUGELANN). Subsequently, two additional species belonging to this lineage were described by FRESNEDA & LAGAR (1990) and JÄCH & DÍAZ (2000).

The "*Phothydraena*" lineage currently contains seven species, three of which occur in the Iberian Peninsula (*Hydraena testacea* CURTIS, *H. atrata* DESBROCHES DES LOGES and *H. hernandoi* FRESNEDA & LAGAR).

In a survey of aquatic Coleoptera carried out in the Sierra Morena by the junior author, an undescribed species of the "*Phothydraena*" lineage was found. This new species is described herein.

**Acronyms:**

CBP Coll. Bilton, Plymouth  
CCG Coll. Castro, Guardamar  
CHC Coll. Herrera, Córdoba  
MNCN Museo Nacional de Ciencias Naturales, Madrid  
NMW Naturhistorisches Museum, Wien

***Hydraena (Hydraena) isabelae* sp.n.**

**TYPE LOCALITY:** Arroyo (stream) del Moral, Montoro, Córdoba province, Spain.

**TYPE MATERIAL:** **Holotype** ♂ (MNCN): "ESPAÑA Córdoba \ Montoro, ayo. del Moral \ 13.8.2000 leg. A. Herrera". **Paratypes** (CBP, CCG, CHC, MNCN, NMW): 4 ♀♀: same data as holotype; 3 ♂♂ and 7 ♀♀: "ESPAÑA Córdoba \ Montoro, ayo. del Moral \ 26.8.2000 leg. A. Herrera".

**DIAGNOSIS:** 1.56 - 1.70 mm long. Habitus as in Fig. 1. Colour: General aspect pale, especially in freshly collected specimens. Head dark brown to black with the frons dark brown-reddish.

Pronotum pale brown-reddish, more or less darkened on disc. Elytra pale brown-reddish. Legs and maxillary palps reddish. Distal article of maxillary palps without darkened apex.

Head: Anterior edge of labrum with a deep V-shaped incision. Clypeus finely and densely punctured. Frons with large, not very deep punctures; interstices between punctures smooth, approximately as wide as punctures on disc and more densely packed towards posterior margin. Inner margins of eyes rugose.

Pronotum: Cordiform, distinctly narrowed both anteriorly and, more strongly, posteriorly. Lateral margins concave in posterior half. Pronotal disc with larger and more closely arranged punctures than frons. Interstices between punctures smooth and narrower than puncture diameters. Lateral areas of pronotum rugose, without distinct punctation.

Elytra: Oval, with 12 quite regular series of closely arranged punctures. Distal two or three punctures of 12<sup>th</sup> series larger than the others, especially the apical puncture, which is oval and twice as long as the preceding one (Fig. 2). Interstices smooth and shiny, approximately as wide as punctures. Lateral edge of elytra strongly explanate, with almost same width throughout posterior half, only slightly narrowed near suture. Lateral margin moderately denticulate near base and apex, weakly but distinctly constricted at middle. Elytral apex rounded.

Ventral surface: Metasternum, as in other species of the "*Photodraena*" lineage, bearing two large central plaques joined anteriorly by an inverted Y, and two small supplementary external plaques; space between central plaques wider than diameter of plaques; supplementary plaques short and very narrow, sometimes very difficult to see or obsolete. Intercoxal cavity present. Ventral pubescence sort and dense.

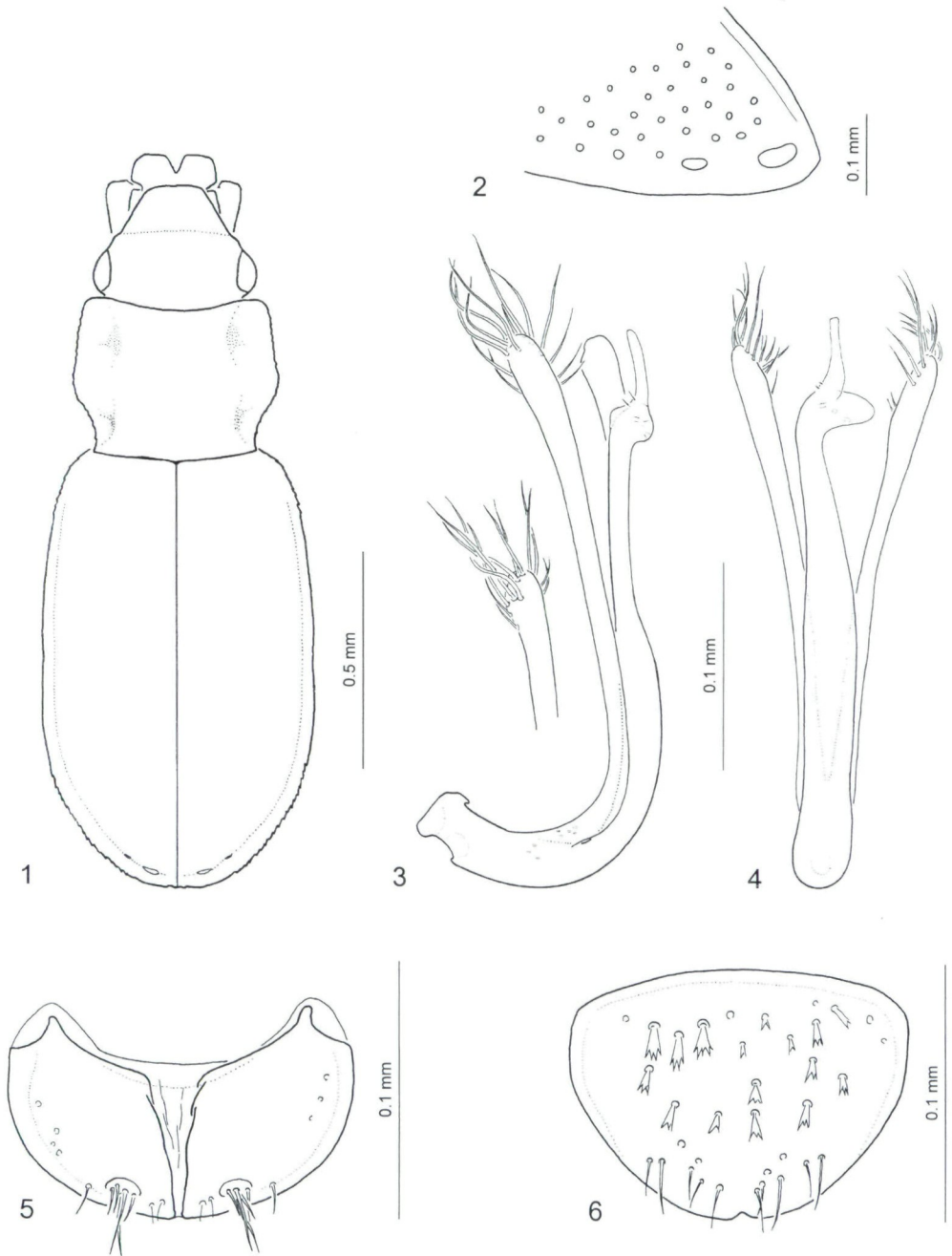
Metasternal wings developed; proportionately, only slightly shorter than in *H. testacea* and *H. hernandoi*.

Male genitalia (Figs. 3, 4): Main piece of aedeagus and terminal lobe not clearly delimited. Main piece, in lateral aspect, strongly curved near base but straight in distal part; in dorsal aspect distinctly curved apically towards right side; with a pair of small subapical setae (apparently, there are other small paired structures on dorsal surface of distal part, but they can not be clearly identified as setae). Distal lobe formed by a membranous hyaline tube. Parameres long and slender; enlarged distally; each with an apical group of setae.

Female: Visible sternum 5 with an arcuate row of setae; these setae proportionately shorter than in *H. testacea* and *H. hernandoi*. Fused gonocoxites and tergite X as in Figs. 5 and 6 respectively. Tergite X having a small apical notch; with a submarginal row of thin and sparsely arranged setae.

ECOLOGICAL NOTES: The new species was found in a temporary mountain stream. All specimens were taken from a small residual pond (about 100 X 60 cm, 30 cm deep) with very eutrophic water (not due to human pollution) and abundant plant debris. Most specimens were found amongst floating leaves; others were caught filtering the free surface of the water. The new species has been collected together with *Hydraena corrugis* d'ORCHYMONT and *H. hernandoi*. Apparently, *H. isabellae* was absent from other nearby residual ponds sampled.

ETYMOLOGY: This species is named after our colleague Isabel del Río Cadenas, who helped to find it and is involved in the conservation of its habitat.



Figs. 1 - 6: *Hydraena isabelae*; 1) habitus, 2) elytral apex, 3) aedeagus, lateral view, 4) same, dorsal view, 5) fused gonocoxites, 6) female tergite X.

## Discussion

*Hydraena isabelae* does not appear to be closely related to any of the other Iberian species of the "*Phothydraena*" lineage. According to the specific characters given in BERTHÉLEMY (1986), the Algerian *H. pallidula* SAINTE-CLAIRE DEVILLE seems to be the species with which *H. isabelae* shares most features. External characters shared by the two species are the small size and pale coloration, the similar shape of the pronotum, the reduction of the external metasternal plaques and the presence of only two or three larger elytral punctures (about five or six in *H. testacea*, *H. atrata* and *H. hernandoi*, four in *H. putearius* JÄCH & DÍAZ and lacking in *H. serricollis* WOLLASTON and *H. paganettii* GANGLBAUER). As for the aedeagus, both species share parameres with only apical setae, without the other setae (or other kinds of projections), which are diversely arranged on the parameres of all the remaining "*Phothydraena*" (see BERTHÉLEMY 1965: Figs. 1 - 4, BERTHÉLEMY 1986: Figs. 31 - 36, FRESNEDA & LAGAR 1990: Figs. 1 - 4, and JÄCH & DÍAZ 2000: Fig. 9 a - c). Additionally, the female tergite X has a single apical notch and a submarginal row of thin setae in both species. Externally, *Hydraena isabelae* can be distinguished from *H. pallidula* mainly by the normal, not clearly reduced eyes and by the pronotum with more densely arranged punctures and smooth, not reticulated interstices between punctures.

Despite the general resemblance, it is risky to deduce a direct relationship between these two species because several features, such as the size and the reduced pigmentation, could be homoplastic. In any case, the relationships among the species of the "*Phothydraena*" lineage are very poorly known and further morphological studies are necessary before conclusions on the phylogenetic position of *H. isabelae* can be made.

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