

***Hydraena (Haenydra) altamirensis* sp. n. from the Iberian Peninsula (Coleoptera, Hydraenidae)**

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J.A. DIAZ PAZOS and J. GARRIDO GONZALEZ: *Hydraena (Haenydra) altamirensis* sp. n. from the Iberian Peninsula (Coleoptera, Hydraenidae). Aquatic Insects, Vol. 15 (1993), No. 3, pp. 169-175.

On the basis of specimens collected in the river Guadarranque in the Sierra of Altamira (Cáceres), male and female *Hydraena (Haenydra) altamirensis* sp. n. with their respective genitalia, are described and illustrated.

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INTRODUCTION

A series of sampling projects aiming to collect aquatic coleoptera of the Iberian Peninsula in those areas hitherto inadequately surveyed was started in the summer of 1991. As a result of the first expedition, in which different localities of the Comunidad Autónoma of Extremadura were visited, specimens belonging to an undescribed species of the subgenus *Haenydra* were collected and are here named *Hydraena (Haenydra) altamirensis*.

***Hydraena (Haenydra) altamirensis* sp. n.**

Type Material: Holotype (male): River Guadarranque, Sierra de Altamira, Cáceres, Spain, U.T.M. 30SUJ1772, 480 m, 26.06.1991. leg. J. A. Régil and J. A. Díaz. Paratypes: Same data as holotype (1 female designated as allotype); holotype and allotype in coll. Museo Nacional de Ciencias Naturales (Madrid, Spain); 4 males, 6 females in coll. J. A. Díaz, University of Santiago de Compostela (La Coruña, Spain); 1 male, 1 female in coll. J. Garrido, University of Vigo, Campus Orense, (Orense, Spain); 1 male, 1 female in coll. Naturhistorisches Museum in Wien (Vienna, Austria). All the material is kept dry.

Male: Body length (labrum - apex of elytra): 2.07 - 2.24 mm (\bar{x} = 2.18 mm). Pronotum length: 0.46 - 0.41 mm (\bar{x} = 0.48 mm). Pronotum width: 0.61 - 0.66 mm (\bar{x} = 0.63 mm). Elytron length: 1.24 - 1.34 mm (\bar{x} = 1.29 mm).

General colour: Head, pronotum and elytra dark brown to black; legs and maxillary palps reddish brown; antennae testaceous.

Head: The labrum has a deep V-shaped notch in the middle. The clypeus is

finely punctured. Front with a smooth and shiny surface between large punctures.

Pronotum: Hexagonal, with an indented ^{excavado} front margin. The longitudinal side fossae are distinct. Front and back margins with numerous rows of closely-set punctures. Pronotal disk with widely separated longitudinal rows of closely-set punctures with a shining surface between them.

Elytra: In the male the elytra have parallel side margins in their anterior two thirds but these margins converge in the distal third and end by forming a slightly truncated apex. In the female the apex of each elytron is rounded truncate, with a small notch at the suture.

Legs of male (Figs. 2 and 3): The mesotibia is denticulate in the distal half of its ^{inner} side. Metatibia abundantly pilose in the distal half of its inner side.

Male genitalia (Fig. 1). The main piece of the aedeagophore is well sclerotised; in side view (Fig. 1 a) it is evenly curved from the base to the insertion of the terminal mobile piece. From this point till its end it has a jawbone-like appearance. At the level of insertion of the mobile piece there are four setae, three

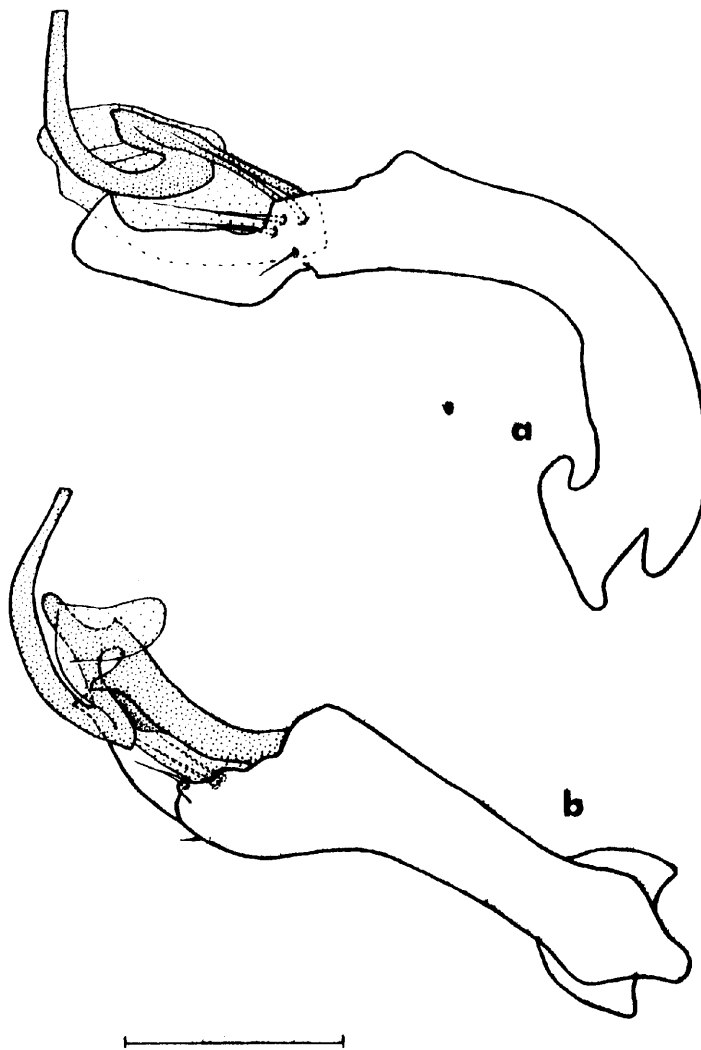


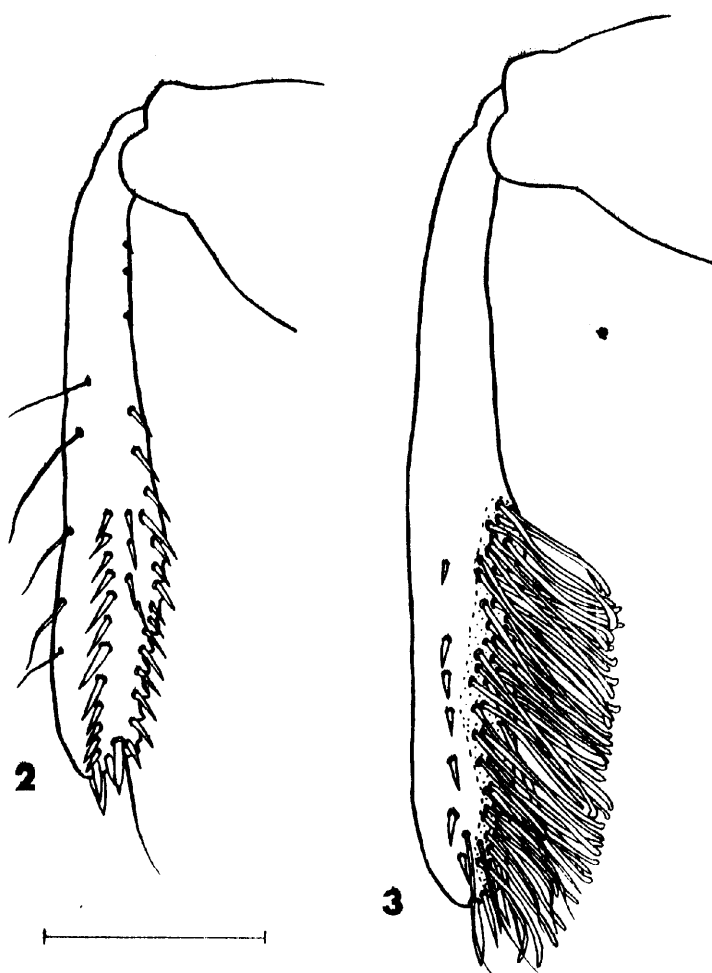
Fig. 1. *Hydraena (Haenydra) altamirensis* sp. n., aedeagus (a, side view; b, ventral view). The scale line is 0.1 mm long.

between the main piece and the terminal mobile piece and one on the right side of the main piece.

The terminal mobile piece consists of a long S-shaped tube, having diverse membranous structures in its basal two thirds (Fig. 1 b).

Female genitalia (Figs. 4-6). Last tergite (Fig. 4): Anterior edge slightly convex, the side margins nearly parallel, converging very slightly at the back. Posterior edge rounded, almost semicircular, with a wide hyaline flange, which is indented in the middle. There are hydrofuge microtrichia, most in the front half of the upper surface. They have a tendency to group together in only one irregular line parallel to the anterior margin on a zone which is more sclerotised than the rest of the piece. The terminal fringe of setae is clearly divided into halves by an intermediate zone lacking thickened setae.

Last sternite (Fig. 5): Side margins of outer plate clearly converging backwards, and an obvious dilatation in its first half just behind the insertion of the condyles. The inner plate has a distinctly convex anterior edge, narrower than that of the outer one. The false central hole of the inner plate is clearly trans-



Figs. 2-3. *Hydraena (Haenydra) altamirensis* sp. n., male; 2, mesotibia of the male; 3, metatibia. The scale line is 0.1 mm long.

verse. This plate also has another false hole in its left front quarter, which under the microscope gives the impression that the piece has been broken very close to the left insertion condyle.

Spermatheca (Fig. 6 A-B): There is a spherical accessory gland, like that of most species of the genus *Hydraena*. The proximal sclerotized portion is horn-shaped. In profile, there is a clear crest-like dorsal protuberance. The intermediate unsclerotized portion is reduced, though clearly visible. The distal portion is hat-shaped with the brims turned up as in the rest of the species of this subgenus. The most outstanding feature of the present species is the strongly and irregularly notched edge. It looks damaged, but it is a constant feature of all spermathecae examined.

ECOLOGICAL NOTES

Hydraena (Haenydra) altamirensis was collected from a water course in which water was partly stagnant or only moderately flowing. The specimens were collected on the rocky bottom of the river and from the gravelly banks. This new species was taken in company of *H. bisulcata* Rey, 1884; *H. cordata* Schaufuss, 1833; *H. corrugis* D'Orchymont, 1934; *H. inapicipalpis* Pic, 1918; *H. stussineri* Kuwert, 1888; *H. exasperata* D'Orchymont, 1935; and *Linmebius gerhardti* Heyden, 1870.

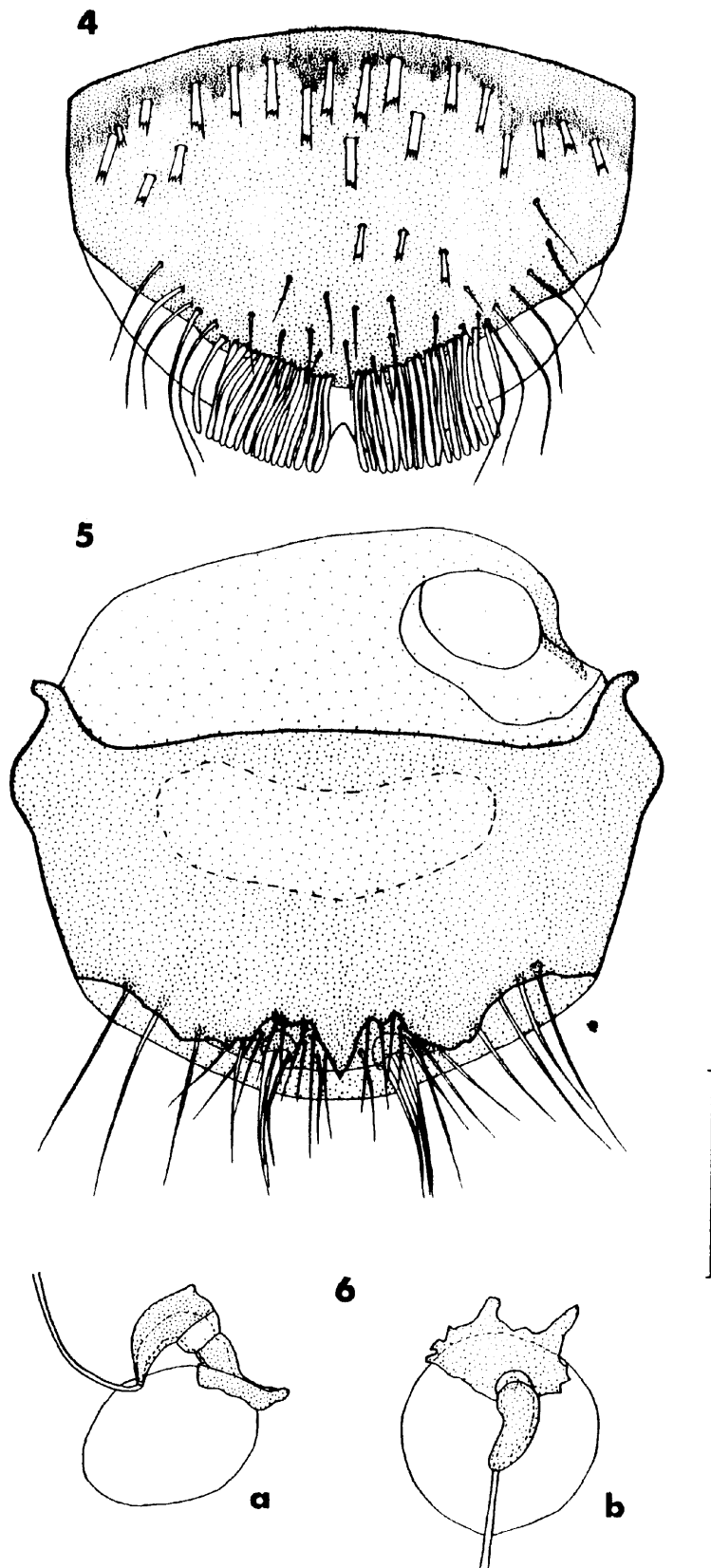
DISCUSSION

According to Valladares and Montes (1991) and Fresneda and Lagar (1990), there are only 15 species of the subgenus *Haenydra* known in the Iberian Peninsula to which *H. altamirensis* is now added. Most of the previously known species were described by D'Orchymont, 1936; Berthélemy and Terra, 1977; Balfour-Browne, 1978; Ferro, 1986; Sáinz-Cantero and Alba-Tercedor 1989; Valladares, 1989; Fresneda and Lagar (1990); Garrido, Valladares and Régil, 1991; Delgado and Soler (in press).

Following the line of thought of Berthélemy (1966) and Berthélemy and Terra (op. cit.), which was accepted by Sáinz-Cantero and Alba-Tercedor (op. cit.), three great groups of species can be distinguished with respect to their phylogenetic relationship. Delgado and Soler (op. cit.) complete this division by adding a fourth group.

Firstly, they consider the species belonging to the *gracilis* group, which are characterized by having a more or less developed recurrent terminal mobile piece. To this group belong *H. gracilis* Germar, 1824; *H. exasperata* D'Orchymont, 1935; *H. emarginata* Rey, 1885; *H. saga* D'Orchymont, 1930; *H. hispanica* Ganglbauer, 1901.

A second group is made up of species having an aedeagophore with a terminal mobile piece in the form of a long and thin tube (*H. truncata* Rey, 1885 and



Figs. 4-6. *Hydraena (Haenydra) altamirensis* sp. n., female; 4, last abdominal tergite; 5, last sternite; 6, spermatheca (a, side view; b, dorsal view). The scale line is 0.05 mm long.

H. iberica D'Orchymont, 1936).

The third group includes those species whose males have the terminal mobile piece very reduced and scarcely apparent. It is probably a simplistic grouping, but it can be accepted at the present moment. *H. producta* Mulsant, 1852, *H. bitruncata* D'Orchymont, 1934, *H. monstruosipes* Ferro, 1986 and *H. polita* Kiesenwetter, 1849 belong to that group.

The fourth group, named *tatii* by Delgado and Soler (op. cit.) is characterized by having an aedeagophore like that of *H. tatii*. To this group belong *H. tatii* Sáinz-Cantero and Alba Tercedor, 1989, *H. manfredjaechi* Delgado and Soler, 1991 and *H. gaditana* Fresneda and Lagar, 1990. Finally, *H. lusitana* Bertélemy and Terra, 1977 is an isolated species with unique structure to its aedeagophore.

H. altamirensis must be included in the same group as *H. truncata* and *H. iberica*, due to the long and narrow tube which constitutes the terminal mobile piece of its aedeagophore. The new species shows a closer relationship to *H. iberica* and in addition both share a dense pilosity on the inner side of the male metatibiae.

The study of the female genitalia of *H. altamirensis* allows us to fully confirm the above relationship since they are very similar to the female genitalia of *H. iberica* (Díaz Pazos and Otero, in press). In this sense both species share the following features:

Last tergite: The hind edge is indented in the middle. The terminal fringe of special setae is clearly divided into two halves.

Last sternite: The front edge of the inner plate is narrower than that of the outer plate. The false central hole of the inner plate is distinctly transverse. There is a false hole in the left front quarter, and an apparent fracture of the edge near the insertion condyle.

Spermatheca: The outside edge of the distal piece is strongly and irregularly indented.

Derivatio nominis: The species is named after the Sierra de Altamira (Cáceres, Spain).

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