TAXONOMICAL CLARIFICATION OF HELIX SEMIPICTA
HIDALGO, 1870 (GASTROPODA, PULMONATA: HYGROMIIDAE)

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Abstract With the aim of clarifying the taxonomical status of Helix semipicta Hidalgo, 1870 its locus typicus has been sampled intensively and the specimens collected have been compared with the syntypes deposited in the Museo Nacional de Ciencias Naturales in Madrid. Furthermore the shell and the reproductive system of Helix semipicta have been compared to specimens of Helicella cistorum (Morelet, 1845), the most similar Iberian hygromide, and the conclusion that Helix semipicta Hidalgo, 1870 is a junior synonym of Helix cistorum Morelet, 1845, has been made, further amplifying the known distribution of this species.

Key words Helix semipicta, Helicella cistorum, Hygromiidae, synonymy, Iberian Peninsula.

INTRODUCTION

Helix semipicta was described by Hidalgo in 1870 and whose locus typicus is “Alcaraz” (Albacete, Spain). Puente (1994) situates it in the group of Iberian species incertae sedis and Templado, Baratech, Calvo, Villena & Aparicio (1993) include it in the Familia Hygromiidae given the morphology of the shell, upon not knowing its anatomy.

The authors have intensively sampled the type locality collecting specimens and have studied the syntypes deposited in the Museo Nacional de Ciencias Naturales in Madrid (MNCN) and material from other collections, with the objective of clarifying its taxonomical status. The Musée National d’Histoire Naturelle in Paris possesses deposited one more syntype (Fisher-Piette, 1950; Templado et al., 1993). From those syntypes the lectotype of Helix semipicta has been selected. The study of the reproductive system of the specimens collected in the locus typicus has been carried out and it has been compared with specimens of Helix cistorum Morelet, 1845 (currently Helicella cistorum), an endemic species of the Iberian Peninsula and the closest within the Familia Hygromiidae, which proceed from the Ortí de Zárate and Ana I. Puente collections.

MATERIAL AND METHODS

Given that the name “Alcaraz” is applied as much to a city as to a mountain range, both in the province of Albacete, the whole mountain range of Alcaraz just as, more intensively, the surroundings of the city with the same name, have been sampled. Of the 27 points sampled Helix semipicta has only been found in the “Cerro de los Pizarrosos del Aljibe, road from Reolid to Salobre, km 2” (UTM: 30SWH368728). The specimens (one live and 14 shells) have been localised at the base of the thicket vegetation in a solid of quartzite at 1000 m altitude, and are found deposited in the Museu Valencià d’Història Natural in Valencia (MVHN, nº 801) (Fig. 1a).

In turn the syntypes of Helix semipicta from the Hidalgo collection have been revised, deposited in the Museo Nacional de Ciencias Naturales in Madrid in two lots, nº 15.05/...
Fig. 1  

A *Helicella cistorum* (Morelet, 1845) collected at the type locality of *Helix semipicta* (MVHN, nº801), 11.1 mm diameter.  
B *Helicella cistorum* (Morelet, 1845). A. I. Puente leg. (MVHN, nº802), 10.7 mm diameter.  
C *Helicella cistorum* (Morelet, 1845). Ortiz de Zárate leg. Siro de Fez col. (MVHN, nº640), 9.9 mm diameter. The presence of the epiphragm can still be observed in the opening.  
D-F Lectotype of *Helix semipicta* Hidalgo, 1870 (MNCN, nº 15.05/2756), 8.90 mm diameter.  
G Paralectotype of *Helix semipicta* (MNCN, nº 15.05/2756), 8.92 mm diameter.  
H Paralectotype of *Helix semipicta* (MNCN, nº 15.05/2756), 8.73 mm diameter.
Also material of *Helicella cistorum* (Morelet, 1845), has been studied, proceeding from the collection of Ana I. Puente (Fig. 1b), conserved in 70º alcohol from the locality of La Cruz in Linares (Jaén, UTM: VH4422) (MVHN, nº802) (Puente, 1994) and a sample composed of a single specimen collected by Antonio Ortiz de Zárate and deposited in the Siro de Fez collection of the MVHN (nº640) from the locality of Aracena (Huelva, UTM: QB19) (Ortiz de Zárate & Ortiz de Zárate, 1961) (Fig. 1c). Furthermore a study of the reproductive system of the specimen collected alive in Alcaraz has been made following the usual dissection methodology (Muñoz, 1992; Puente, 1994; Arrébola, 1995; Martínez-Ortí, 1999).

**RESULTS AND DISCUSSION**

**THE STUDY OF THE TYPE SERIES OF *HELIX SEMIPICTA* HIDALGO, 1870**

The two revised samples, 15.05/2756 and nº 15.05/2757, correspond to the type series of *Helix semipicta* deposited in the MNCN in Madrid, both proceeding from the Hidalgo collection. The authors have named, as a lectotype of this species, the specimen that comes from the sample 15.05/2756 (Figs 1d-f). Its dimensions are 5.33 mm high and 8.90 mm in diameter. The rest of the specimens from both samples deposited in this museum, just as the specimen that the Musée National de Sciences Naturales in Paris (MNHN) possesses, correspond to paralectotypes (Figs 1g-h).

The conchological comparison of the sample collected by the authors in the *locus typicus* of *Helix semipicta* and the syntypes of this species, deposited in the MNCN, indicate that all the material corresponds to the same taxon. What stands out is the variability observed in the shell’s ornamentation in *Helix semipicta*, as specimens have been found that present a slight ribbing and others that present this clearly marked, as well as specimens that do not present careening, or that present it not very marked, until others which are very careened (Fig 1h). In the description of *Helix semipicta* Hidalgo (1870) does not refer to this last characteristic. However Morelet (1845), in the description of *Helix cistorum*, signals that the shells are subcareened, a characteristic that some specimens of *Helix semipicta* (Figs 1g-h) do present.

Furthermore the syntypes of *Helix semipicta* (Figs 1d-h) and those collected by the authors (Fig. 1a), have been compared to specimens of *Helicella cistorum* (Morelet, 1845), that come from the Ana I. Puente (Fig. 1b) and Ortiz de Zárate (Fig. 1c) collections, and their conchological characteristics coincide completely.

The reproductive system study of the specimen collected live has provided greater
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information and has allowed its assignment to the Genus Helicella, Férussac 1821. The obtained morphology is well characterised and corresponds to that which Helicella cistorum (Morelet, 1845) presents (Fig. 2). This has been verified with the reproductive system study of the samples of this species provided by Ana I. Puente and that coincides also with the figures of the genitalia of Helicella cistorum in Ortiz de Zárate (1950), Muñoz (1992), Puente (1994) and Arrébola (1995).

**CONCLUSIONS**

In agreement with the authors’ observations on the materials’ morphology of the shell and of the reproductive system of Helix semipicta Hidalgo, 1870 proceeding from Alcaraz, and its comparison to Helicella cistorum (Morelet, 1845) presents (Fig. 2). This has been verified with the reproductive system study of the samples of this species provided by Ana I. Puente and that coincides also with the figures of the genitalia of Helicella cistorum in Ortiz de Zárate (1950), Muñoz (1992), Puente (1994) and Arrébola (1995).

**Helicella cistorum** is an endemic species of the Iberian Peninsula that extends to Alemtejo (locus typicus) and the west of the Algarve (Portugal) and through the Spanish provinces of Badajoz, Cáceres, South West of Madrid, Toledo, Ciudad Real, Córdoba, Jaén and Huelva (Muñoz, 1992; Puente, 1994; Arrébola, 1995) (Fig. 3). Therefore the locality of “Alcaraz”, locus typicus of Helix semipicta Hidalgo, 1870, constitutes the
first citing of *Helicella cistorum* for the province of Albacete and it is the most oriental locality of the known distribution area of this species, besides being the sample found at the greatest altitude up to now.

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