

# On the taxonomic position of *Helix cypria* var. *major* MARTENS, 1889 (Gastropoda: Zonitidae)

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## Abstract

This contribution shows that "var. *major*" MARTENS, 1889 of *Helix cypria* L. PFEIFFER, 1847 belongs to the subgenus *Longiphallus* (gen. *Oxychilus*) and deserves the rank of independent species.

**Key words:** Mollusca, Pulmonata, Zonitidae, new combination, Greece

## Zusammenfassung

In diesem Beitrag wird gezeigt, dass "var. *major*" MARTENS, 1889 von *Helix cypria* L. PFEIFFER, 1847 zur Untergattung *Longiphallus* (Gattung *Oxychilus*) gehört und eine eigenständige Art ist.

## Introduction

During a research stay in the mollusk collection of the Naturhistorisches Museum Wien (NHMW) several unidentified pulmonate snails were studied. One specimen from Greece (Ikaria Island) was identified as *Helix cypria* var. *major*. It is redescribed and its taxonomic position reappraised.

## Material and methods

One subadult specimen of *Oxychilus cyprius* var. *major* found in the collection of the Naturhistorisches Museum Wien was dissected and drawings of the reproductive tract were made using a Wild M5 stereo microscope equipped with a camera lucida.

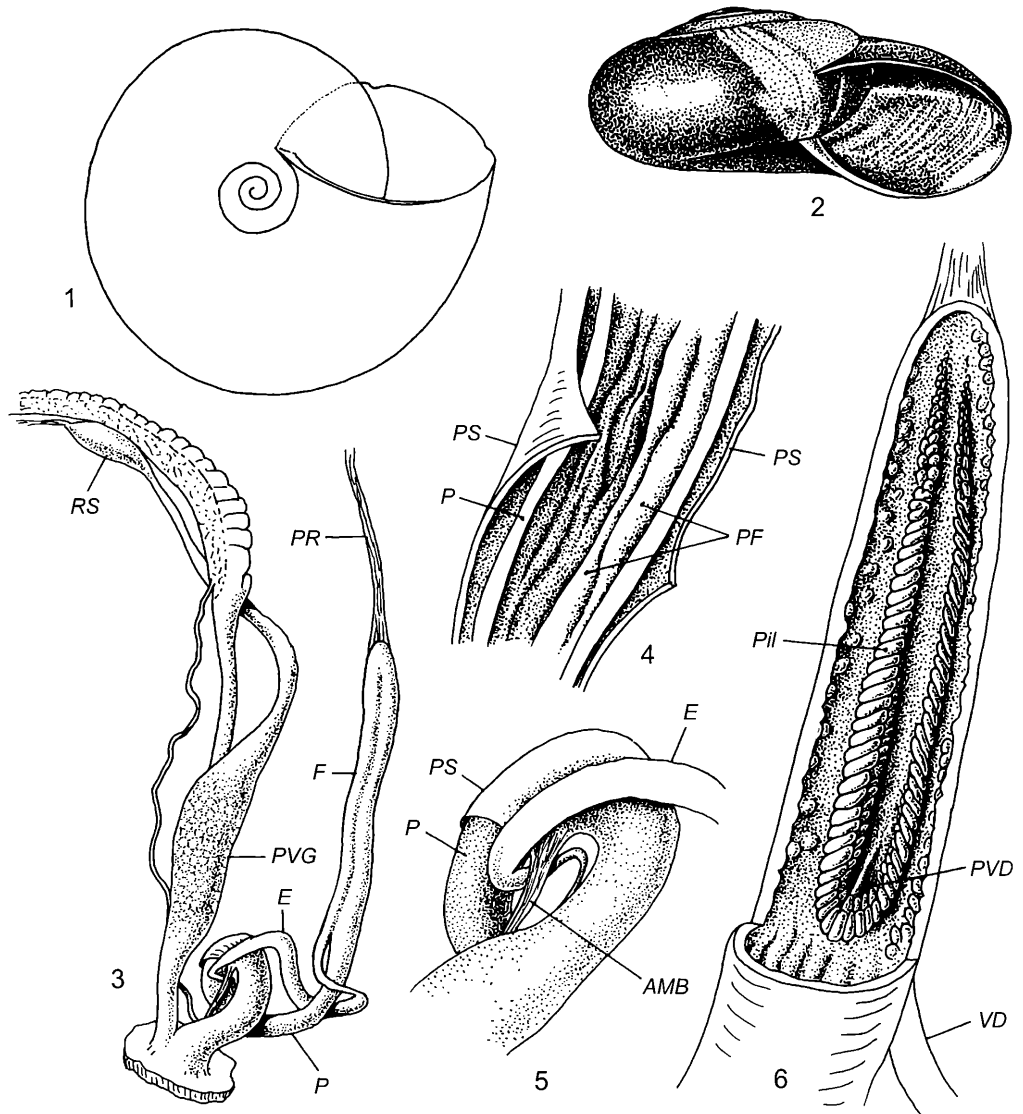
### *Oxychilus (Longiphallus) major* (MARTENS, 1889) comb.n.

*Hyalina cypria* var. *major* MARTENS, 1889: 189.

**Material:** 1 nearly adult specimen from "Insel Ikaria, Umg[ebung] v[on] Evidilos, 28.V.1987", coll. K. Bilek & E. Kritscher, det. A. Schileyko. NHMW 106174.

**Locus typicus,** restricted by RIEDEL (1983: 273): "Nikaria (= die ägäische Insel Ikaria), überdies aus Samos - am Berg Kerki und aus Kalymnos angegeben"

**Redescription.** Shell much depressed, thin, translucent, shining, of 5.5 rather quickly increasing, strongly flattened whorls. Color yellowish-corneous, lighter on basal side.



Figs. 1–6. *Oxychilus (Longiphallus) major* (MARTENS, 1889). Shell from Ikaria Island, surroundings of Evdilos (Greece). NHMW 106 174 in ventral (1) and lateral (2) view; 3, reproductive tract; 4, interior of penis; 5, part of penis showing contact vas deferens with epiphallus and additional muscular band; 6, interior of flagellum. *AMB*, additional muscular band; *E*, epiphallus; *F*, flagellum; *P*, penis; *PF*, principal folds; *Pil*, double pilaster in flagellum; *PR*, penial retractor; *PS*, penis sheath; *PVD*, pore of vas deferens; *PVG*, perivaginal gland; *RS*, reservoir of spermatheca; *VD*, vas deferens.

Embryonic whorls glabrous; subsequent whorls with much smoothed, irregular radial wrinklets becoming weaker on basal surface. Aperture broad, ovate, with thin, simple margins; columellar margin slightly expanded. Umbilicus rather wide, quite perspective. Dimensions of dissected specimen: shell height 11.4, diameter 25.1 mm.

The original description (given by Martens in comparison with nominative form) is: "Bis 24 mm im Durchmesser, dunkler rothbräunlich gefärbt, unten heller, im übrigen übereinstimmend"

Vas deferens long, thin, entering epiphallus apically through rather abrupt widening. Epiphallus elongate-fusiform, entering very long flagellum at sharp angle. Penis rather long, somewhat convoluted, basal 1/3 of its length surrounded by a thin sheath; additional weak muscular band branched off from upper edge of penis sheath and attached to its basal part. Distalmost part of vas deferens passes between this band and penis. Internally, penis with smoothed, irregular longitudinal folds, two of them larger than the others (principal folds). Vas deferens entering flagellum through a small pore embraced from beneath by double U-shaped pilaster; arms of pilaster run upward to blind end of flagellum. The pilaster consists of a series of close-set, elongated tubercles that become smaller and less regular toward blind end. Except for pilaster, inner surface of flagellum bears numerous rounded tubercles. Within vas deferens, a small axial fold passes through pore; upper end of this fold is visible between arms of above-mentioned U-shaped pilaster. Penial retractor dense, attached to flagellum apically. Free oviduct long, vagina of approximately same length, surrounded by well-developed perivaginal gland. Spermathecal stalk a rather long, spindle-shaped reservoir not reaching albumen gland and supplied with apical ligament.

### Discussion

GIUSTI & MANGANELLI (1999, 2002) have some doubt that the current subdivision of the genus *Oxychilus* into subgenera is natural. They are probably correct, but this short note is not the appropriate place to discuss this complex issue and I would prefer to follow the current system.

RIEDEL (1983: 273) placed *Hyalina cypria* var. *major* MARTENS, 1889 in synonymy of the species described as *Hyalina draparnaldi* var. *syriaca* KOBELT, 1878 (i.e. *Oxychilus syriacus*). *Oxychilus syriacus*, in turn, belongs to the subgenus *Hiramia* PALLARY, 1939 (type species – *Hyalinia renaniana* PALLARY, 1939, by original designation). That subgenus is characterized by the presence of a small lateral flagellar caecum supplied with its own additional muscular band, which is connected with the penial retractor attached to the flagellum apically (RIEDEL 1959: 153-155). Note that Riedel originally placed *O. syriacus* in the subgenus *Schistophallus* but later, in 1962, transferred it to the subgenus *Hiramia*.

Then, RIEDEL (1991: 104-105) provided a description of the reproductive tract of *Oxychilus cyprius* (L. PFEIFFER, 1847) and referred it to the subgenus *Hiramia* PALLARY, 1939 as well.

As is evident from the above description and illustration, "var. *major*" belongs to the subgenus *Longiphallus* RIEDEL, 1958 (type species – *Helix filicum* KRYNICKI, 1838, by original designation). The anatomical diagnosis of the subgenus *Longiphallus* is as follows: " die Innenwandungen des grossen und langen terminalen Flagellums mit breiten, wulstartigen Längsfalten, die durch Quer- oder Schrägfurchen segmentiert sind. Penisretraktor gewöhnlich kurz und breit, von einer kompakten, nicht faserigen Konsis-

tenz. Die perivaginale Drüse gross, reicht weit auf den Truncus receptaculi." (RIEDEL, 1980: 91). I dissected several adult specimens of *O. filicum* from the Talysh Mts. (south-eastern Transcaucasus) (SCHILEYKO 2003: 1441, fig. 1875) and found some insubstantial differences between this species and *O. major*: the penial retractor in *O. filicum* is shorter and thicker than in *O. major*, and the additional muscular band connecting the upper edge of the penis sheath with its basal part is absent in *O. filicum*. The first difference evidently reflects the fact that my specimen of *O. major* is not quite adult, whereas the presence of the above-mentioned additional band is, most likely, a species character of *O. major*.

Thus, the taxon under discussion deserves the rank of independent species: *Oxychilus (Longiphallus) major* (MARTENS, 1889).

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