



Two new species of *Putzeysia* (Prosobranchia, Chilodontidae) from the Canary Islands

Dos nuevas especies de *Putzeysia* (Prosobranchia, Chilodontidae) de las islas Canarias

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ABSTRACT

Two new species of the genus *Putzeysia* are described, showing the shell characters, including protoconch and microsculpture; the new species are compared with the only known Mediterranean species for the genus, *P. wiseri*.

RESUMEN

Se describen dos nuevas especies del género *Putzeysia*, presentándose las características de la concha, incluida la protoconcha y la microescultura; las nuevas especies se comparan con la única de este género que se conoce en el mar Mediterráneo, *P. wiseri*.

INTRODUCTION

In Europe, only one species of the genus *Putzeysia* Sullioti, 1889 was known hitherto: *Putzeysia wiseri* (Calcara, 1842), which is well illustrated in GIANNUZZI-SAVELLI, PUSATERI, PALMERI AND EBREO (1994, fig. 263) and ARDOVINI AND COSSIGNANI (1999: 34).

In the material collected in several dredgings in the Canary Islands, numerous shells of a minute species group were found. In ENGL (1994) these specimens were identified as *P. wiseri* in spite of differences in the height/width range. After a more detailed comparison (mainly through scanning electron microscopy) of this material with the Mediterranean species, two closely similar but different species are described as new in the present work.

Abbreviations

MHNS Museo de Historia Natural, Santiago de Compostela
MNCN Museo Nacional de Ciencias Naturales, Madrid
MNHN Museum National d'Histoire Naturelle, Paris
MNHC Museo de la Naturaleza y el Hombre, Santa Cruz de Tenerife
SMNH Seckenberg Museum Natural History,
ZMH Zoologisches Museum, Hamburg
ZMB Zoologisches Museum, Berlin
ZSM Zoologische Staatssammlung, München,
CWE Collection of Winfried Engl

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SYSTEMATICS

Superfamily SEGUENZIOIDEA Verrill, 1884

Family CHILODONTIDAE Wenz, 1938

Subfamily CHILODONTINAE

Genus *Putzeysia* Sullioti, 1889

Type species: *Trochus clathratus* Aradas, 1847 [= *Trochus wiseri* Calcara 1842].

Putzeysia franziskae spec. nov. (Figs. 3, 7, 8, 11-13)

Type material: Holotype (ZSM 20090099)(Figs. 3, 7) and five paratypes (ZSM 20090100). Other paratypes in the following collections: MHNS (1), MNCN (1), MNHC (1), MNHN (1), SMNH (2), ZMH (2), ZMB (2), CWE (100) (all ex CWE, collected from 1975 to 2000).

Type locality: Puerto del Carmen, Lanzarote, Canary Islands, 30-50 m.

Etymology: This species is named after Franziska, the mother of the first author.

Description: Shell (Figs. 3) turbinoid, globose, with 4-4 $\frac{3}{4}$ spiral whorls of a rather quick development, last one rounded, representing more than 60 % of the total height. Protoconch (Fig. 7) with less than one whorl, a diameter of 290 μ m and a nucleus of about 110 μ m. Under strong magnification (Fig. 8) a microsculpture consisting of irregular shapes is observed, as well as 2 fine oblique threads. Teleoconch whorls with axial ribs: 12 on the first whorl, 14-16 on the second, about 30 on the last whorl, which are strongly prosocline, and narrower than the interspaces. The spiral cords are not present on the first teleoconch whorl; near the end of the second a small thread appears in the upper part, crossing over the axial ribs, forming nodules at the crossing points; in the third whorl there are three well defined spiral cords, and, on the last whorls, there are five, the subsutural one smaller and close to the next one. Below the end of the spire, there are five nodulous cords down to the base. The microsculpture (Figs. 11-13) is formed by

small, short and interrupted threads which are present on the whole surface. Aperture rounded, peristome sharp, serrated due to the end of the spiral cords. There is an internal thickening on which 5-7 rounded nodules can be seen. No umbilicus. The columella is straight, with an everted border. Colour dirty white.

Dimensions: The holotype has a height of 3.5 mm.

Distribution: Presently known only from Lanzarote.

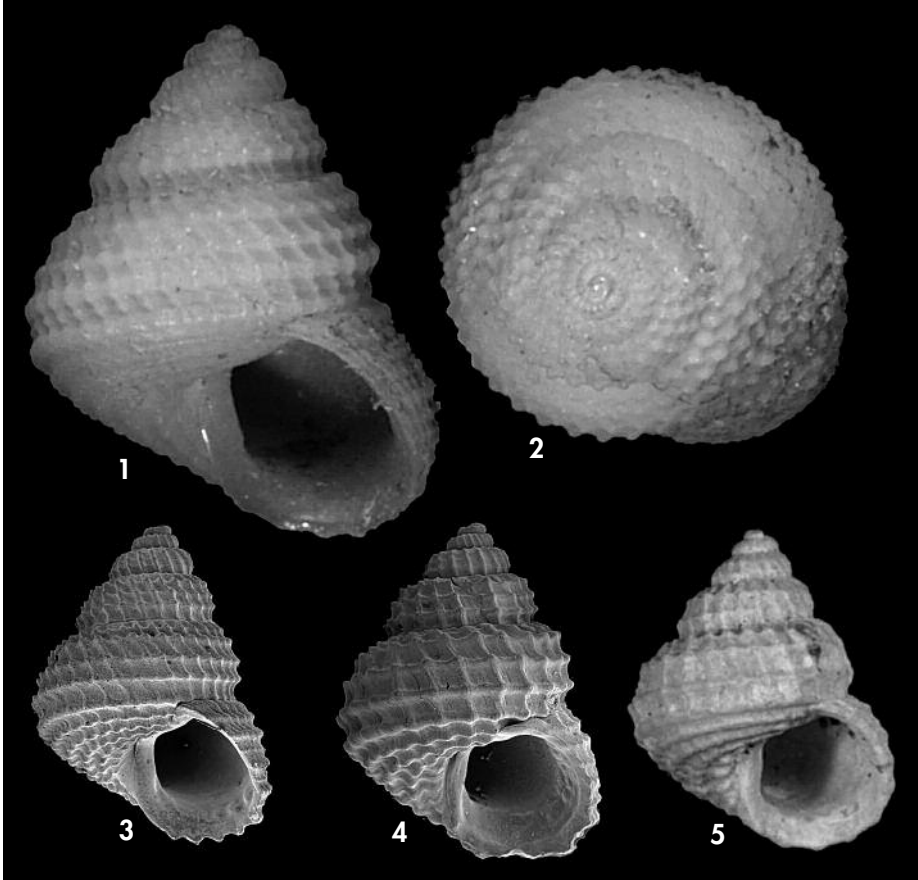
Remarks: The assignation of the present species to the genus *Putzeysia* was based on the description of this genus in WENZ (1938: 282) and the similarity with the European species *P. wiseri* (Calcara, 1842). Anyway, both species are very different because the new one is smaller than *P. wiseri* (which can reach 5.6 mm height: Figs. 1-2); the protoconchs are similar, but that of *P. wiseri* is somewhat larger (310 μ m), less sculptured, the first whorl of the teleoconch has 17 axial ribs (vs. 12), and the microsculpture is denser.

Putzeysia juttae spec. nov. (Figs. 4, 9, 10, 14-16)

Type material: Holotype (ZSM 20090101)(Figs. 4, 13) and five paratypes (ZSM 20090102). Paratypes in the following collections: MHNS (1), MNCN (1), MNHC (1), MNHN (1), SMNH (2), ZMH (2), ZMB (2), CWE (50) (all ex CWE, collected from 1999 to 2000).

Type locality: La Restinga, El Hierro, Canary Islands, 30-60 m.

Etymology: The species is named after Jutta Baumgartel, the wife of the leader of the diving school in acknowledgement for her help to the first author in many aspects of collecting, for the last ten years.

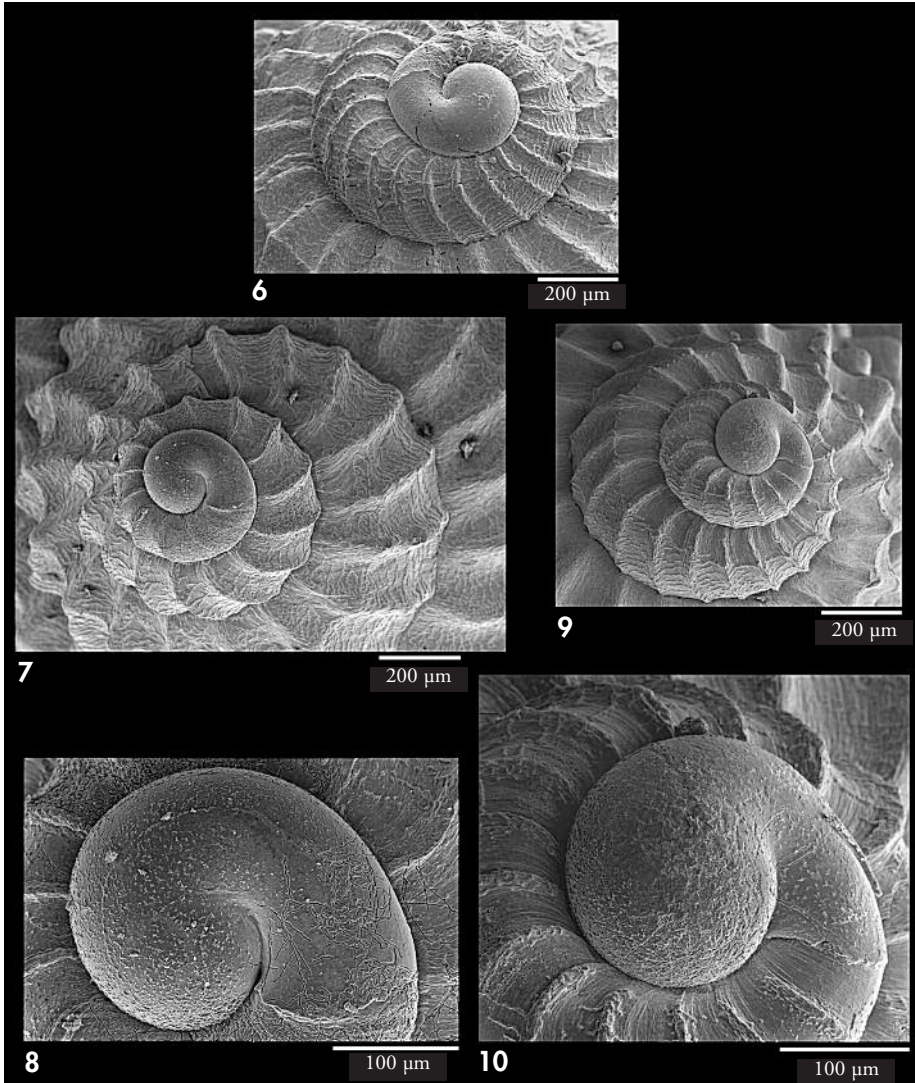


Figures 1-5. Shells of *Putzeysia* spp, all to scale. 1, 2: *Putzeysia wiseri* (Calcara, 1842), 5.6 mm, Banca di Santa Lucia, Livorno, Italy, 400 m (CWE); 3: *P. franziskae* spec. nov. holotype, 3.5 mm, Lanzarote (ZSM); 4: *P. juttæ* spec. nov., holotype, 3.8 mm, El Hierro (ZSM); 5: *P. cf. juttæ*, Los Cancajos, Santa Cruz de La Palma, 40 m (CWE).

Figuras 1-5. Conchas de Putzeysia spp, a la misma escala. 1, 2: Putzeysia wiseri (Calcara, 1842), 5,6 mm, Banca di Santa Lucia, Livorno, Italia, 400 m (CWE); 3: P. franziskae spec. nov. holotipo, 3,5 mm, Lanzarote (ZSM); 4: P. juttæ spec. nov., holotipo, 3,8 mm, El Hierro (ZSM); 5: P. cf. juttæ, Los Cancajos, Santa Cruz de La Palma, 40 m (CWE).

Description: Shell (Fig. 4) turbinoid, globose, with 4-4 $\frac{3}{4}$ spiral whorls of a rather quick development, last one rounded, representing more than 60 % of the total height. Protoconch (Fig. 9) with less than one whorl, a diameter of 270 μ m and a nucleus of about 160 μ m. Under strong magnification (Fig. 10), a microsculpture formed by small irregular projections can be observed. Teleoconch whorls with axial ribs: 16 on the

first whorl, 17-18 on the second, 24-26 on the last whorl, which are strongly prosocline and narrower than the interspaces. The spiral cords are not present on the first teleoconch whorl; near the middle of the second whorl a small thread appears on the upper part, crossing over the axial ribs, forming nodules at the crossing points and increasing slowly; on the third whorl there are three well defined cords and, on the last

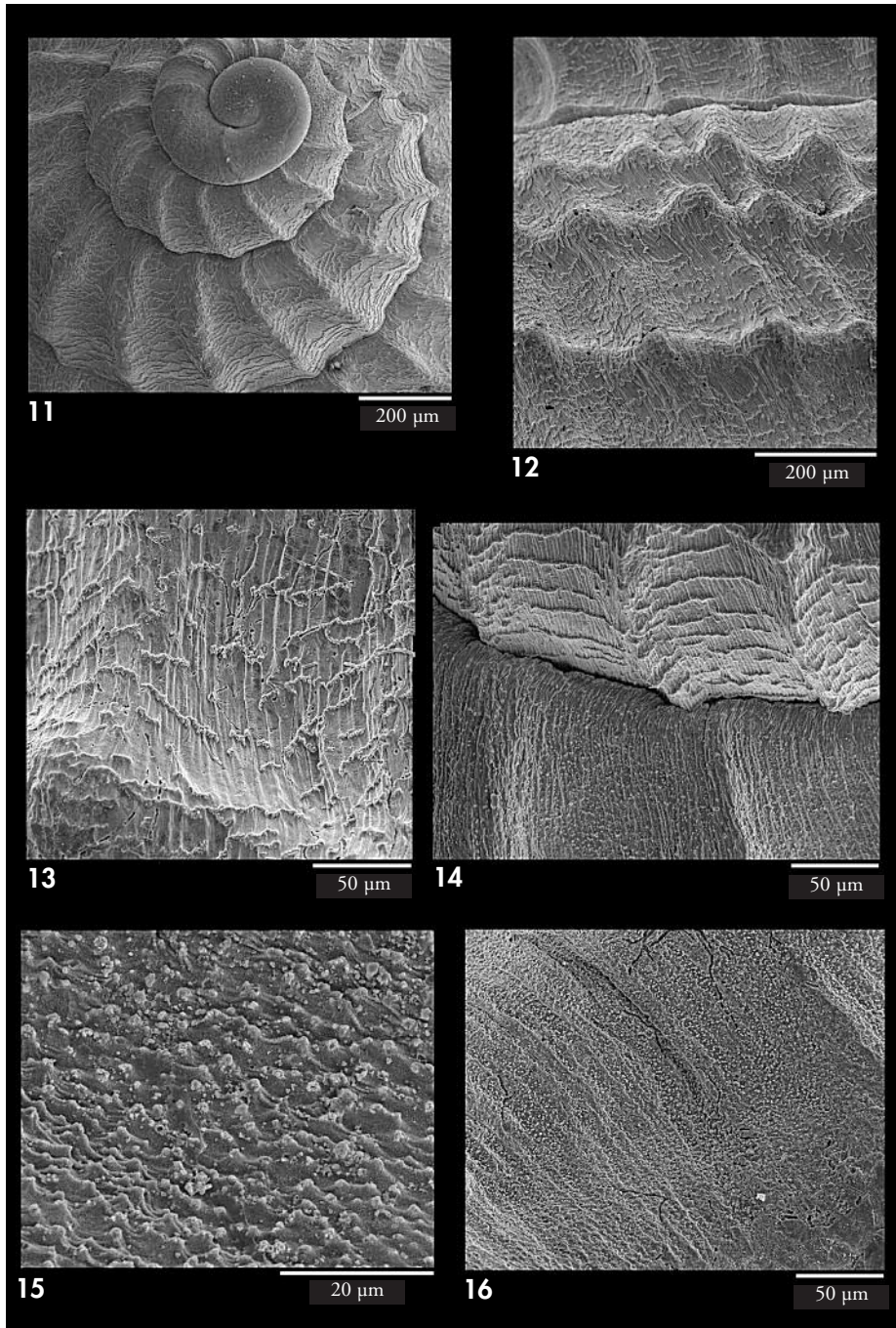


Figures 6-10. Protoconchs. 6: *Putzeysia wiseri* Santa Lucia (Livorno), Italy, 440 m; 7, 8: *P. franziskae* spec. nov. Lanzarote (ZSM); 9, 10: *P. juttae* spec. nov., El Hierro (ZSM).

Figures 6-10. Protoconchas. 6: *Putzeysia wiseri* Santa Lucia (Livorno), Italia, 440 m; 7, 8: *P. franziskae* spec. nov. Lanzarote (ZSM); 9, 10: *P. juttae* spec. nov., El Hierro (ZSM).

whorl, there are five, the subsutural one a little smaller in some shells than the subsequent ones. Below the end of the spire, there are four nodulous cords down to the base. The microsculpture (Figs. 14-16) is formed by small, short and interrupted spiral threads which are

present on the first whorls. On the remaining shell surface numerous growth lines with many prominent tubercles can be seen under strong magnification. Aperture rounded, peristome narrow, serrated due to the ends of the spiral cords. There is an internal thick-



Figures 11-16. Details of microsculpture. 11-13: *P. franziskae* spec. nov., Lanzarote (ZSM); 14-16: *P. juttae* spec. nov., El Hierro (ZSM).

Figuras 11-16. Detalles de microescultura. 11-13: *P. franziskae* spec. nov., Lanzarote (ZSM); 14-16: *P. juttae* spec. nov., El Hierro (ZSM).

ening on which 6-7 rounded nodules can be seen. No umbilicus, but a narrow fissure. The columella is straight forming an everted border. Colour dirty white.

Dimensions: The holotype has a height of 3.8 mm.

Distribution: Known only from El Hierro, although one shell from La Palma (Fig. 5) could belong to this species.

Remarks: *Putzeysia juttæ* spec. nov. is rather similar to *Putzeysia franziskae* spec. nov. and for this reason the differences with *P. wiseri* are the same as those previously mentioned, although it has 15 axial ribs on the first teleoconch whorl. It can be separated from *Putzeysia franziskae* because the latter has more axial ribs and cords at the base; the protoconch has a larger nucleus, and the

microsculpture has a predominance of the very tuberculated axial growth lines instead of the irregular spiral threads which appears in *Putzeysia juttæ*.

The presence of these two different species within one archipelago is surprising, considering that other close trochoid species with a similar protoconch do not show appreciable differences within one island or seamount group. In the genus *Danilia*, Dautzenberg and Fischer (1896) distinguished *Danilia affinis* as a different species from the Azores, but in the Canary islands we find the same species as in continental Europe. Something similar occurs with the genus *Clelandella* (see GOFAS, 2005) which has different species in the Lusitanian bancs and in the Meteor group of seamounts, but shows no differentiation within seamounts or islands of the same group.

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