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Planellavitrina occulta gen. & spec. nov., a second fossil vitrinid from the Canary Island of La Gomera (Gastropoda, Pulmonata)

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The fossil species *Planellavitrina occulta* gen. nov., spec. nov. is described from the Canary island of La Gomera. Four shells are available, which are flat and have a length of less than 5 mm. The shells are compared with Recent and fossil vitrinid genera. This is the second record of a fossil Vitrinidae species from the Canary Islands.

Key words: Vitrinidae, *Planellavitrina*, taxonomy, new genus and species, fossil, Canary Islands, La Gomera.

INTRODUCTION

While cleaning fossil shells of *Hemicycla* Swainson, 1840, from Barranco de las Rosas and Barranco de los Zarzales (Canary Island of La Gomera), small fossil vitrinid shells of an unknown species were found in the sand originating from the inside of the helicid shells. In 2015, the first fossil vitrinid species from the Canary Islands, i.e. *Insulivitrina ingridae* Margry, 2016, was found (Margry, 2016). The new fossil species is strikingly different from that and other Vitrinidae species in shell shape and size and does not even fit well into any of the described vitrinid genera. It is described below.

SYSTEMATIC PART

Superfamilia Limacoidea Lamarck, 1801

Familia Vitrinidae Fitzinger, 1833

Planellavitrina gen. nov. (Figs 1-7)

Type species. – *Planellavitrina occulta* spec. nov.

Diagnosis. – Shell small and flat, with a conspicuously flattened first whorl. Maximum length probably less

than 5 mm. With a small umbilicus and a wide last whorl. No pits in the protoconch.

Derivatio nominis. – *Planellavitrina* after the flattened (planus), small (-ella) vitrinid shells.

Differentiation. – Despite the lack of anatomical data, a new genus is introduced, which is not clearly most similar conchologically to any of the 19 Vitrinidae genera that are in current use (Forcart, 1954, 1959; Neubert, 1998; Verdcourt, 2005; Giusti et al., 2011; Bank et al., 2016). All the vitrinid genera from the Canary Islands, Madeira and the Azores have species with a larger shell or a different protoconch, that has a wider and higher first whorl. In all those genera the protoconchs have pits, an ornamentation or both; if not, there is a strophostyl columella or a more rounded profile when seen from the dorsal side (Backhuys, 1975; Groh & Hemmen, 1986; Ibáñez et al., 1987; Alonso et al., 1987; Morales et al., 1988; Valido et al., 1990; Valido et al., 1993; Alonso et al., 2000; Valido et al., 2000; Mordan & Martins, 2001; Ibáñez et al., 2001; Seddon, 2008; Valido et al., 2014; Alonso & Ibáñez, 2015; Margry, 2015, 2016). It is not unlikely that *P. occulta* is related most closely to ancestors of the Eurasian mainland. Several vitrinid genera from there have small shells as well. However, these shells are always more globular or have a strophostyl columella (Sysoev & Schileyko, 2009; Giusti et al., 2011; Egorov, 2011). *Planellavitrina* does not have any resemblance with fossil species recorded by Ložek (1964), Zilch (1979), Harzhauser et al. (2014) and Salvador & Rasser (2014). According to Nordsieck (2014), all fossil vitrinids from Eurasia might belong to *Phenacolimax* Stabile, 1859, *Eucobresia* Baker, 1929, *Vitrina* Draparnaud, 1801, *Semilimax* Stabile, 1859 and *Vitrinobrachium* Künkel, 1929. In these taxa, the shells of *Semilimax* and *Vitrinobrachium* also have a flat shape like the fossil *Planellavitrina*, but *Planellavitrina* has a small umbilicus and *Semilimax* and *Vitrinobrachium* have a strophostyl

shell. Even juvenile specimens can be recognised as *Planellavitrina*.

***Planellavitrina occulta* spec. nov. (Figs 1-7)**

Type series, from La Gomera, Canary Islands. – Barranco de las Rosas, northwest of Agulo, between Las Casitas and Ermita de San Marcos (28°11'43 N 17°12'05 W, about 70 m a.s.l.); found 28.xii.2017 in a fossil *Hemicycla* shell from the 'fossil wall' next to the road, without additional data: holotype (Figs 1-4) and one paratype (Fig. 5). Barranco de los Zarzales, north of Pie de la Cuesta, about 2 km northeast of Vallehermoso (28°11'41 N – 17°14'52 W, about 143 m a.s.l.); found 27.iv.2017 in a shell of *Hemicycla merita* Mousson, 1872: 2 paratypes (Figs 6-7). The holotype and paratypes will be deposited in the collection of Naturalis Biodiversity Center, Leiden, The Netherlands.

Description of the holotype (Figs 1-4). – The fossilized shell has a length of 2.92 mm and 1½ whorls; it is oblong and remarkably flat. From the start of the teleoconch on, the shell is slightly wider, forming a saddle on the transition from the protoconch to the teleoconch. This convex 'cheek' is the best visible on the ventral side. The aperture is very wide. The umbilicus is present but small. No ornamentation or pits are visible on the protoconch. A small part of the outer edge is broken off, but the total shape is clearly recognizable. The outer surface shows very thin growthlines. The shell is very fragile. A concholine membrane might have been present but if so it was perished before it could become fossilized.

Derivatio nominis. – The epithet *occulta* (= hidden) is chosen because the holotype and paratypes were hidden in larger fossil *Hemicycla* shells.

Description of the paratypes. – The paratype from Barranco de las Rosas (Fig. 5) has a length of 3.31 mm and 1⅝ whorl. In an attempt to clean this shell, it fell apart. The protoconch has no pits. The two paratypes from Baranco de los Zarzales are very similar to the shells of Barranco de las Rosas. The largest shell (Fig. 6) is 4.55 mm long and has 2 whorls. The part on the transition of the protoconch to the teleoconch is missing. Despite this damage it is possible to see that this paratype is missing the 'cheek' at the beginning of the teleoconch. Some parts of this shell are still glossy. The other paratype (Fig. 7) is juvenile and has only 1¼ whorls.

DISCUSSION

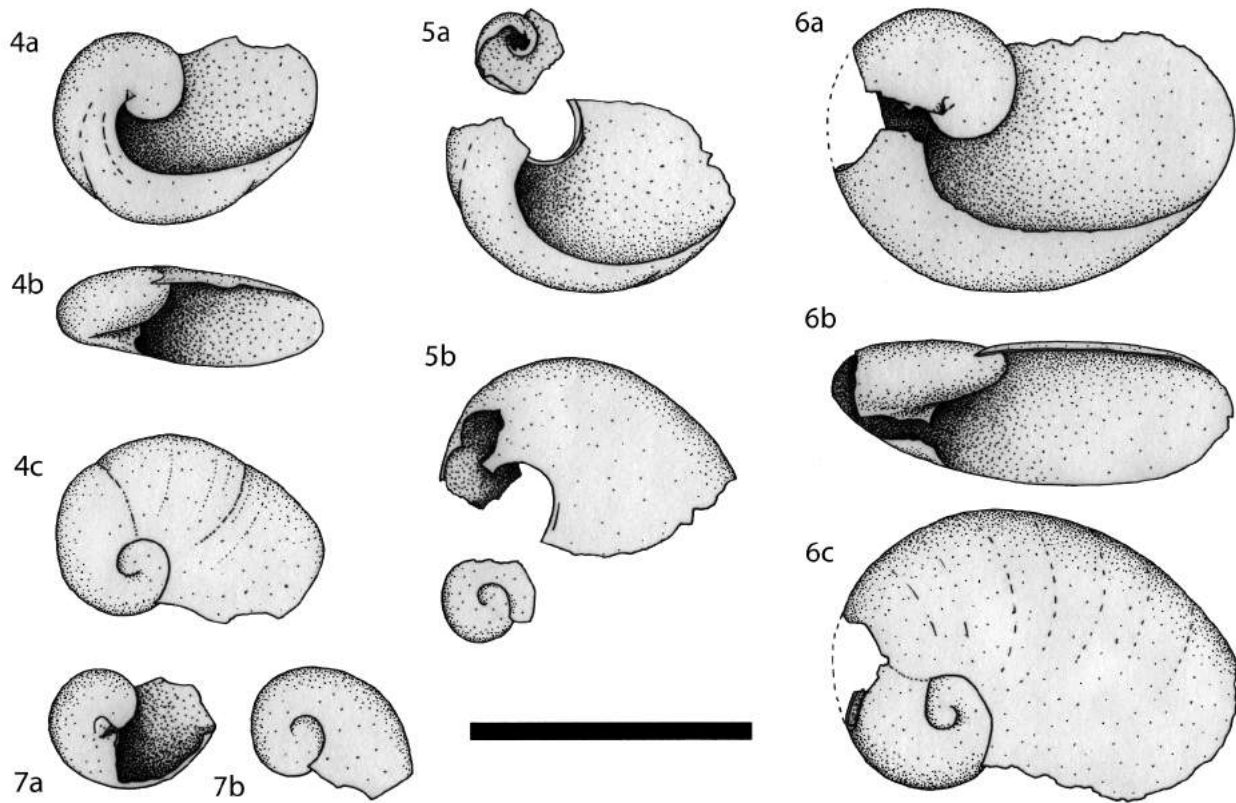
Giusti et al. (2011) studied the phylogeny of Recent Vitrinidae by examining the genital anatomy. For most of the genera they could not find support for monophyly. In their study, the conchological characters of the genera were described after only the type species. However, characters like pits in the proto-



Figs 1-3. Holotype of *Planellavitrina occulta* from the Canary Island of La Gomera. **1**, ventral side; **2**, side view; **3**, dorsal side. Scale bar is 1 mm. Photography T. de Winter.

conch, ornamentation on the protoconch and the presence of an open umbilicus are not characteristic for particular genera but may occur within several genera. The general shape of the shells within a genus can also vary considerably. Despite the lack of the possibility of anatomical research, the description of the new genus *Planellavitrina* is justified by the unique combination of shell characters. Apart from that, a classification of *P. occulta* within one of the vitrinid genera that are currently in use cannot be defended and could easily provoke incorrect conclusions about the historical biogeography of the Vitrinidae.

Eight Recent and two fossil Vitrinidae species are known from de Canary Island of La Gomera.



Figs 4-7. Holotype and paratypes of *Planellavitrina occulta* on the same scale. **4**, Holotype; **a**, ventral side; **b**, side view; **c**, dorsal side; **5**, broken paratype from type locality with separate protoconch; **a**, ventral side; **b**, dorsal side; **6**, adult paratype from Baranco de los Zarzales; **a**, ventral side; **b**, side view; **c**, dorsal side; **7**, juvenile paratype from Baranco de los Zarzales; **a**, ventral side; **b**, dorsal side. Scale bar is 3 mm. Drawing K. Margry.

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REFERENCES

ALONSO, M.R., IBÁÑEZ, M. & MORALES, P., 1987. La familia Vitrinidae en Canarias. II. Revisión de las especies de La Palma y El Hierro, con descripción de una especie nueva (Gas-

- tropoda: Pulmonata). – Archiv für Molluskenkunde 118 (1-3): 63-76.
- ALONSO, M.R., VALIDO, M.J., GROH, K. & IBÁÑEZ, M., 2000. *Plutonina* (*Canarivitrina*), new subgenus, from the Canary Islands, and the phylogenetic relationships of the subfamily Plutoninae (Gastropoda: Limacoidea: Vitrinidae). – Malacologia 42 (1-2): 39-62.
- ALONSO, M.R. & IBÁÑEZ, M., 2015. El material tipo de las especies de moluscos terrestres de Canarias: Familia Vitrinidae (Mollusca, Gastropoda, Stylommatophora). – Vieraea 43: 115-126.
- BACKHUYS, W., 1975. Zoogeography and taxonomy of the land and freshwater molluscs of the Azores: i-xii, 1-350, map 1-97, pls 1-32. Amsterdam (Backhuys & Meesters).
- BANK, R.A., MENKHORST, H.P.M.G. & NEUBERT, E., 2016. Descriptions of new and little-known land snail taxa from Turkey, and establishment of a new genus (Gastropoda, Pulmonata: Lauriidae, Enidae and Vitrinidae). – Basteria 80 (1-3): 5-30.
- EGOROV, R., 2011. Vitrinidae. – Treasure of Russian shells 9: 1-34.
- FORCART, L., 1954. Journey to the high Simien (Northern Ethiopia), 1952-3: Three species of *Phenacolimax* (Gastropoda, Vitrinidae), with notes on the taxonomy of the

- genus. – Zoological Journal of the Linnean Society 43 (290): 113-122.
- FORCART, L., 1959. Revision nordafrikanischer Vitrinidae. – Archiv für Molluskenkunde 88 (1/3): 1-6, Pl 1.
- GIUSTI, F., FIORENTINO, V., BENOCCI, A. & MANGANELLI, G., 2011. A survey of vitrinid land snails (Gastropoda: Pulmonata: Limacoidea). – Malacologia 53 (2): 279-363.
- GROH, K. & HEMMEN, J., 1986. Zur Kenntnis der Vitriniden des Madeira-Archipels Pulmonata: Vitrinidae). – Archiv für Molluskenkunde 116 (4-6): 183-217.
- HARZHAUSER, M., NEUBAUER, T.A., GEORGOPOULOU, E. & HARL, J., 2014. The early Miocene (Burdigalian) mollusc fauna of the North Bohemian Lake (Most Basin). – Bulletin of Geosciences 89 (4): 819-908.
- IBÁÑEZ, M., MORALES, P. & ALONSO, M.R., 1987. La familia Vitrinidae en Canarias. I. Revisión de las especies de Tenerife, con descripción de 2 especies nuevas (Gastropoda: Pulmonata). – Archiv für Molluskenkunde 117 (4-6): 117-149.
- IBÁÑEZ, M., ALONSO, M.R. & VALIDO, M.J., 2001. *Plutonia solemi* new species (Gastropoda: Vitrinidae: Plutoniinae) from La Palma (Canary Islands). – Journal of Conchology 37 (2): 149-157.
- LOŽEK, V., 1964. Quartärmollusken der Tschechoslowakei. – Rozprawy Ústředního Ústavu Geologického 31: 1-374, pls 1-32.
- MARGRY, C.J.P.J., 2015. *Insulivitrina lamarckii* (A. Férussac, 1821) (Gastropoda, Pulmonata, Vitrinidae) on the Canary Island of La Palma. – Basteria 79 (1-3): 17-22.
- MARGRY, C.J.P.J., 2016. *Insulivitrina ingridae* spec. nov., a fossil vitrinid from the Canary Island of La Gomera (Gastropoda, Pulmonata). – Basteria 80 (1-3): 127-131.
- MORALES, P., IBÁÑEZ, M. & ALONSO, M.R., 1988. La familia Vitrinidae en Canarias. III. Tres nuevas especies de La Gomera (Gastropoda: Pulmonata). – Archiv für Molluskenkunde 118 (4-6): 153-166.
- MORDAN, P.B. & MARTINS, A.M.F., 2001. A systematic revision of the vitrinid semislugs of the Azores (Gastropoda: Pulmonata). – Journal of Molluscan Studies 67 (3): 343-368.
- NEUBERT, E., 1998. Annotated checklist of the terrestrial and freshwater molluscs of the Arabian Peninsula with descriptions of new species. – Fauna of Saudi Arabia 17: 333-461.
- NORDSIECK, H., 2014. Annotated check-list of the genera of fossil land snails (Gastropoda: Stylommatophora) of western and central Europe (Cretaceous – Pliocene), with description of new taxa. – Archiv für Molluskenkunde 143 (2): 153-185.
- SALVADOR, R.B. & RASSER, M.W., 2014. The fossil pulmonate snails of Sandelzhausen (Early/Middle Miocene, Germany) (Hygrophila, Punctoidea and limacoids). – Archiv für Molluskenkunde 143 (2): 187-202.
- SEDDON, M.B., 2008. The landsnails of Madeira. An illustrated compendium of the landsnails and slugs of the Madeiran archipelago. – BIOTIR Reports 2: 1-204.
- SYSOEV, A. & SCHILEYKO, A., 2009. Land snails and slugs of Russia and adjacent countries. 1-312, plate 1-142. Pensoft, Moscow.
- VALIDO, M.J., ALONSO, M.R. & IBÁÑEZ, M., 1990. La familia Vitrinidae en Canarias. IV. Revisión de las especies de Gran Canaria, con descripción de 3 especies nuevas (Gastropoda: Pulmonata). – Archiv für Molluskenkunde 120 (1-3): 95-114.
- VALIDO, M., GROH, K., IBÁÑEZ, M. & ALONSO, M.R., 1993. La familia Vitrinidae en Canarias. V. El género *Guerrina* (Gastropoda: Pulmonata). – Archiv für Molluskenkunde 121 (1-6): 117-124.
- VALIDO, M.J., IBÁÑEZ, M. & ALONSO, M.R., 2000. Estado de conservación de los vitrinidos canarios (Gastropoda, Pulmonata: Vitrinidae). – Revista de la Academia Canaria de Ciencias 11 [1999] (3-4): 245-264.
- VALIDO, M.J., YANES, Y., ALONSO, M.R. & IBÁÑEZ, M., 2014. *Insulivitrina raquelae*, a new species of Vitrinidae from La Gomera (Canary Islands) (Gastropoda: Pulmonata: Limacoidea). – Journal of Conchology 41 (6): 701-705.
- VERDCOURT, B., 2005. A new species of *Vitrina* (Gastropoda, Pulmonata, Vitrinidae) from Kenya, with a discussion of the genus in East Africa. – Basteria 69 (4-6): 147-156.
- ZILCH, A., 1979. Die Typen und Typoide des Natur-Museums Senckenberg, 62: Mollusca: Zonitacea: Vitrinidae. – Archiv für Molluskenkunde 110 (1/3): 81-101.