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Another new eulimid (Gastropoda Eulimidae) from the Mediterranean Sea: *Vitreolina micalii* n. sp.

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ABSTRACT *Vitreolina micalii* n. sp. (Gastropoda Eulimidae) is here described on materials found in shallow waters along the Northern coast of Catania (Eastern Sicily, Ionian Sea). Findings include both live-taken and empty specimens, whose shell and soft parts have been observed and documented. Further specimens have been found in few other localities of Sicily and Corsica. The new species is morphologically distinguishable by a spiny, smooth shell, similar to some other congeners except for some details, and a sculptured protoconch. The different external chromatism of the soft parts is similar only to *V. perminima*, but it is different in some aspect hereafter discussed. Differences from similar species from Eastern Atlantic and the Indo-Pacific are useful to discard the alien origin of this species in the Mediterranean Sea.

KEY WORDS *Vitreolina*; Eulimidae; Mediterranean Sea; living animal; chromatism; parasite.

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INTRODUCTION

Eulimidae are endo and ecto-parasite gastropods morphologically characterized by an almost smooth, usually uncolored and elongated shell, with imperceptible sutures and a wide variety of forms and dimensions. The correct discrimination of species is almost difficult if based on shell characters only, in particular for species of minute size: this has led to errors and misidentifications. The shells of many species, in fact, are poor of evident morphological characters, being small to very minute in dimensions, with smooth and glossy surface, except for faint growth lines or, in rare cases, an almost imperceptible axial or reticulate mesh and a prolonged thorn-like teleoconch. Differences in protoconch morphology are also very subtle, since no sculpture or other relevant structures are present. A general approach to species of Eulimidae is based on dimensions and general outline of the shell, curvature and number of whorls of the spire and of the apical whorls; the presence of an acute or blunt apex could be useful characters too. The real validity and weight of these few morphological shell characters is not easy to evaluate. Quite the opposite, the chromatism of external soft parts is a good discriminating character to very well distinguish species even similar: as an example, *Vitreolina philippi* (de Rayneval et Ponzi, 1854) and *V. incurva* (Bucquoy, Dautzenberg et Dollfus, 1883), whose shell is very hardly distinguishable by morphological characters only, are consistently different on external soft parts chromatism differences (Scuderi, 2023).

The finding of some living specimens of a small eulimid, whose animal's chromatism appeared

peculiar compared to those of the Mediterranean species, has been firstly tentatively assigned by us to *Curveulima* Laseron, 1955 or to *Vitreolina* Monterosato, 1884. Both these genera are represented by species with colourless, vitreous shell of minute dimensions and numerous whorls with aligned incremental scars forming dips at the imperceptible sutures of whorls, which form a long, arcuated spire and, except rare cases, a pointed apex. Species of *Curveulima* are parasites of crinoids and were grouped together and firstly considered a sub-genus by Warén (1984), than elevated as a real genus in Bouchet & Waren (1986) on the basis of the mouth outline, relatively lengthened and laterally compressed, with the columellar side and its transition zone to the parietal wall thickened and the basal portion more solid than the remaining body-whorl. Species of *Vitreolina* are instead more generalist as host preferences than other eulimids (Warén, 1984): they have been reported feeding upon numerous species of different Echinodermata groups. WoRMS (last access on 14/07/2023) listed 23 species of *Curveulima* and 30 of *Vitreolina* in the world: three species of the former, *C. beneitoi* Peñas et Rolán, 2006, *C. dautzenbergi* (Pallary, 1900), *C. devians* (Monterosato, 1884), and six of the latter, *V. antiflexa* Monterosato, 1884, *V. cionella* Monterrosato, 1878, *V. curva* (Monterosato, 1874), *V. incurva*, *V. perminima* (Jeffreys, 1883), *V. philippi*, are currently reported for the Mediterranean Sea (S.I.M. Sistematica Mediterranea, 2023). Notwithstanding some species, as for example *V. cionella*, which is morphologically quite dissimilar compared to the others, these two genera are the only groups morphologically more similar to the unidentified specimens found. Further and more accurate studies on this latter material have been excluded their identification with one of the known species. Moreover, they also revealed shell characters never observed before in Mediterranean nor in extra-Mediterranean species: for these reasons the species under study is here described as new.

MATERIAL AND METHODS

Collected materials were obtained by sorting out shells from sediments of many different localities of Mediterranean Sea (Fig. 1). Part of the sandy gravel was manually taken during SCUBA divings with air breathing apparatus (ARA), using a hand-towed net of 1 mm mesh size; another part was sampled by a 15 litres Van Veen grab on soft substrates or derived by fishing net's residuals, then sieved on a 1 mm mesh sieve to remove the finest substrate fraction. Living specimens were obtained by handily "brushing" on both shaphilic and photophilic hard substrata, from the surface to -8/10 m depth, with a hand-towed net with a 1 mm mesh size. Molluscs were identified at species level under stereomicroscope; living specimens were maintained alive in sea-water, drawn with gray and colored pencils and then preserved in 90° ethanol. The use of digital pictures and small clips (mpeg file) were also of great help for living collected specimens observations. A complete list is furnished among the studied materials and a map of finding localities is hereafter reported.

Similar species of *Curveulima* and *Vitreolina* were also observed for comparisons (see below).

ABBREVIATIONS AND ACRONYMS. ARA = air breathing apparatus; SEM = scanning electron microscope; W: maximum width (in mm); H = maximum height (in mm); h = height of last whorl; coll. = collection; sh = shell/s without soft parts inside; sp = living collected specimen/s; AGC: Alfio Germanà collection (Catania, Italy); ARC: Agatino Reitano collection (Catania, Italy); AVC Alberto Villari collection (Messina, Italy); DSC: Danilo Scuderi collection (Catania, Italy); MSC: Maurizio Sosso collection (Genoa, Italy); MZUB = Museo Zoologico dell'Università di Bologna, Bologna, Italy.

RESULTS

Systematics

Classis GASTROPODA Cuvier, 1795
Subclassis CAENOGASTROPODA Cox, 1960
Order LITTORINIMORPHA Golikov et Starobogatov, 1975
Superfamilia VANIKOROIDEA J.E. Gray, 1840
Familia EULIMIDAE Philippi, 1853
Genus *Vitreolina* Monterosato, 1884

Type-species: *Vitreolina incurva* (Bucquoy, Dautzenberg et Dollfus, 1883) (type by subsequent designation).

Vitreolina micalii n. sp. (Figs. 3–15)
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TYPE MATERIAL. Holotype (Figs. 3–6, 14, 15), H = 2.07 mm, W = 0.75 mm, and paratype 2 (Fig. 8), subadult, H = 1.2 mm, W = 0.45 mm, both from Italy: S. Giovanni Li Cuti (Catania), brushing on lower side of lava stones placed on volcanic sand, 2m depth, with numerous specimens of not identified Ophiuroida, IX.2013, both in MZUB (collection number: MZUB60433). Paratype 1 (Fig. 7), H = 1.58 mm, W = 0.6 mm, same data of the holotype (DSC); paratype 3 (Fig. 9), H = 1.4 mm, W = 0.5 mm, same data of the holotype (AVC); paratype 4 (Figs. 10, 11), H = 2.05 mm, W = 0.65 mm, same data of the holotype (ARC); paratype 5 (Figs. 12, 13), probably male, H = 1.65 mm, W = 0.6 mm, same data of the holotype (MZUB).

OTHER MATERIAL EXAMINED. The following specimens of *V. micalii* n. sp. were also examined among materials in the collections of the Authors of the present paper. Similar specimens of *Curveulima* and *Vitreolina* were as well as observed for comparisons. Specimens from Taormina's cave have been not cited in Palazzi & Villari (2001) neither as unidentified species.

Catania, Cannizzaro, 40/45 m, shell grit taken during SCUBA divings with ARA, 20 sh (ARC); Catania, Bellatrix, 2 m depth, shell grit, 1 sh (ARC); Catania, Grottazze, 2/3 m depth, shell grit, 2sh (ARC); Catania, S. Tecla, "Grotta del gambero", 24 m depth, 4 sh and 70 m, shell grit 2 sh (ARC); Catania, Rotolo, 50/56 m depth, 25 sh (ARC); Catania, S. Giovanni Li Cuti, 38 m depth, 15 sh (DSC and ARC). Messina, Ganzirri, residual of fishing nets, 60/80 m depth, 1 sh (DSC) and 1 sp (AVC); Messina, Taormina, shell grit collected inside a cave, 20 m depth, 13 sh and shell-grit between stones, 25 m depth, 1 sh (AVC). Trapani, Favignana Island, Cala Rotonda, shell grit 10/20 m depth, 1 sp (DSC). Agrigento, Portopalo di Menfi, shell grit, 4/5 m depth, 13 sh (DSC). Caltanissetta, Gela, shell grit collected by Van Veen grab, 102 m depth, 1 sp (DSC); France, Corsica, Pisciucani, beached shell grit, A. Terlizzi legit, 3 sh. (DSC).

Crinophtheiros comatulicola (Graff, 1875). Italy: Genoa, 100/200 m depth, residuals of fishing nets, on *Anthedon*, 2 sh (DSC ex MSC); Catania,

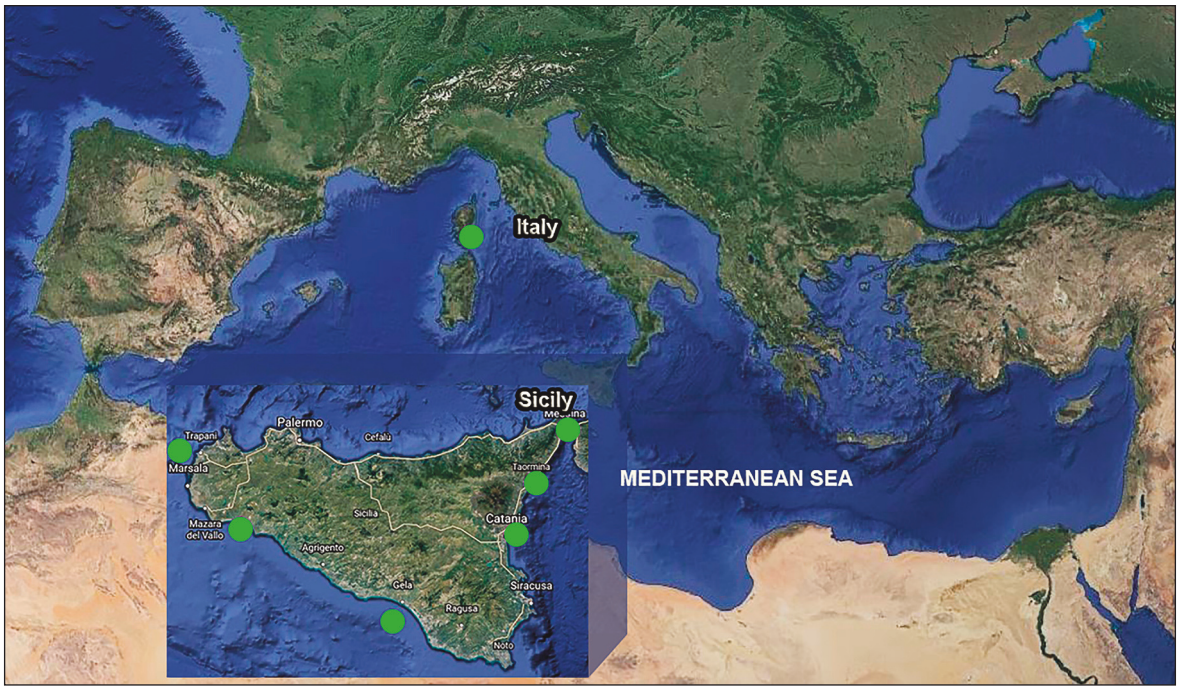


Figure 1. Geographic map of the records (from Google Maps, modified).

gulf, 40 m depth, 1 sp (DSC); Acitrezza (Catania), 60/100 m depth, residuals of fishing nets, on *Anthedon*, 20 sp (DSC).

Curveulima beneitoi Peñas et Rolan, 2006. Italy: Ganzirri (Messina), 100/150 m depth, residuals of fishing nets, 1 sp (DSC); S. Giovanni Li Cuti (Catania), 38 m depth, shell grit, 32 sh. (DSC); Portopalo di Menfi, Agrigento, shell grit, 4/5 m depth, 3 sh (DS).

Curveulima cfr. *dautzenbergi* (Pallary, 1900). Italy: Calabernardo (SR), 1 m depth, brushing on lower side of stones, 1 sp (DSC).

Curveulima dautzenbergi (Pallary, 1900). Italy: Acitrezza (Catania), 60/100 m depth, residuals of fishing nets, on *Anthedon*, 15 sp and 1 sh (DSC); Livorno, Capraia Island, 500 m depth, residuals of fishing nets, 4 sh (AVC).

Curveulima devians (Monterosato, 1884). Italy: S. Giovanni Li Cuti (Catania), 20 m depth, shell grit, 5 sp (DSC).

Vitreolina antiflexa Monterosato, 1884. Italy: Acitrezza (Catania), 60/100 m depth, residuals of fishing nets, 1 sp (DSC); Capomulini (Catania), 40 m depth, Van Veen grab, 1 sh (DSC); Ognina, Catania, 60/100 m depth, residuals of fishing nets, 1 sp (DSC). France: Corsica Island, Figari, beached shell grit, 1 sh (DSC).

Vitreolina cionella (Monterosato, 1878). Italy: Scilla (RC), 52 m depth, sandy gravel manually taken during SCUBA diving with ARA, 1 sh (DSC). France: Corsica, Pisciucani, beached shell grit, 1 sh (DSC).

Vitreolina curva (Monterosato, 1874 ex Jeffreys ms.). Italy: S. Giovanni Li Cuti (Catania), 28 m depth, shell grit, 25 sh (DSC); Catania "Tavernetta", 10/15 m depth, sandy gravel manually taken during SCUBA diving with ARA, ex AGC, 1 sp (DSC); Acitrezza (Catania), 60/100 m depth, residuals of fishing nets, 1 sp (DSC); Aci Castello (Catania), 60/100 m depth, residuals of fishing nets, 1 sh. (DSC); off Ragusa, 100/110 m depth, Van Veen grab, 1 sh (DSC).

Vitreolina incurva (B.D.D., 1883). Italy: Acitrezza (Catania), 60/100 m depth, residuals of fishing nets, 2 sp (DSC); Aci Castello (Catania), 60/100 m depth, residuals of fishing nets, 2 sh. (DSC); Cannizzaro (Catania), 42 m, brushing on stones taken during SCUBA divings with ARA, 1 sp. (DSC). France: Corsica Islands, Figari, beached shell grit, 1 sh (DSC).

Vitreolina perminima (Jeffreys, 1883). Italy: Acitrezza (Catania), 60/100 m depth, residuals of fishing nets, 2 sp (DSC); Ognina, Catania, -60/100 m depth, residuals of fishing nets, 1 sp (DSC); Catania "Armisi", 20 m depth, volcanic sandy gravel between rocks manually taken during SCUBA diving with ARA, 1 sh, (DSC); S. Giovanni Li Cuti (Catania), 20 m depth, shell grit, 2 sh (DSC); S. Giovanni Li Cuti (Catania), 38 m depth, shell grit, 8 sh (DSC); Ganzirri (Messina), 100/150 m depth, residuals of fishing nets, 1 sh (DSC); San Giuliano (Trapani), beached shell grit, 1 sh. (DSC); off Ragusa, 100/110 m depth, Van Veen grab, 1 sh (DSC); Eloro (Siracusa), 6/8 m depth, shell grit, 1 sh (DSC); Ustica, Palermo, "Punta S. Paolo", 20 m depth, shell grit manually taken during SCUBA divings with ARA, 1 sh (DSC); Portopalo di Menfi, Agrigento, shell grit, 4/5 m depth, 16 sh (DSC); Linosa Is., Agrigento, 35 m depth, shell grit manually taken during SCUBA diving with ARA, 1 sh and residuals of fishing nets, 120 m depth, 2 sh and 3 sp (DSC); Lampedusa Island, Agrigento, 8 m depth, shell grit, 1 sh (DSC); Ischia Island (Napoli), 20 m depth, shell grit manually taken during SCUBA diving with ARA, 1 sp and 1 sh (DSC).

Vitreolina philippi (Rayneval et Ponzi, 1854). Italy: Genoa, 4/10 m depth, on shell grit and on *Paracentrotus lividus* (Lamarck, 1816), 12 sp (DSC); S. Giovanni Li Cuti (Catania), 4/10 m depth, on shell grit and on *Paracentrotus lividus* (Lamarck, 1816), 200 sp and 150 sh (DSC); Aci Castello (Catania), 6/8 m depth, shell grit, 4 sh. (DSC); Vendicari (Siracusa), beached shell grit, 10 sh (DSC); Lampedusa Island (Agrigeno), 8 m depth, shell grit, 30 sh (DSC).

DESCRIPTION OF THE HOLOTYPE. Shell (Figs. 3, 4) slender, thin, transparent, with a regularly conical and pointed spire, constituted by 4,5 flat teleoconch whorls, each marked by incremental labial scars with dips at suture, which are aligned in the right side of the shell in frontal view. The protoconch (Figs. 5–6, 13) is pointed, 353 µm high and 227 µm wide, constituted by 3.5 whorls, smooth except for numerous, regularly spaced, opisthocline short pits present under the suture, which become obsolete on the last protoconch whorl; nucleus (Fig. 6) 41 µm high and 84.1 µm wide, completely smooth apart the above mentioned pits and faint incremental lines. The transition protoconch-teleoconch is

marked by the first incremental scar, which is not aligned to all the other scars (Fig. 5). Total height 2.11 mm, of which the last whorl is 48%; maximum width 0.89 mm. The spire of the teleoconch is gently curved to right, while the protoconch whorls are slightly curved to left. The surface of the teleoconch whorls appears smooth under stereo-microscope, but SEM photographs reveal instead short and faint subsutural undulations, which become almost invisible in the last whorl (Fig. 4). These undulations seem to replace in tele-whorls the pits of the protoconch, but they are slightly longer and less numerous in the teleoconch whorls, not even detectable. Thin and almost imperceptible orthocline growth-lines are also present, visible only under strong magnification. Sutures are almost indistinguishable; false suture faint in live-collected specimens, well visible in dead ones. Base outline well rounded, almost wide, not exceeding the peripheral zone of the body-whorl. Aperture 31% of the total height of the shell, oval and relatively large, drop-shaped, rounded in its abapical part, pointed in adapical part, where a conspicuous callus is present in the joining point of the wall of the last whorl to the outer lip (Fig. 10, 11). This latter is thin but robust, orthocline, evenly rounded in lateral view. Columella straight upward and rounded below. Columellar lip thin, continuous to the parietal wall, extended up to connection with the external lip.

The living mollusc (Figs. 14, 15, based on holotype), visible through the vitreous shell even when it is not crawling, in the body-whorl has a yellowish, transparent, background colour and bears two light yellow lines: one just under the suture and another at the base of the body whorl; minute spots of the same color are present in the cephalic tentacles and all around the foot; red rounded stains almost in three rows are present in the mantle. The colour of the rest of visceral mass is black, with brownish rounded spots. Operculum thin, paucispiral, with an eccentric nucleus.

VARIABILITY. All the collected specimens appear almost constant in shell shape and dimensions: only few specimens have an angled outline at the periphery of the last whorl and are slightly shorter (Fig. 12): they are here interpreted as probably male specimens. All the living animals have been shown the same chromatic pattern, resulting very similar each others.

DISTRIBUTION AND BIOLOGY. The new species has been found not uncommon in various localities of the South-Eastern coast of Sicily. The others findings extend its distribution to the Tyrrhenian and Sicilian Channel. Mixed to all the materials collected together with the living specimens of *V. micalii* n.sp. we have found numerous small undetermined Ophiuroids, which could be the possible host of the species.

ETYMOLOGY. The species is dedicated to our friend and malacologist Pasquale Micali (Fano, Italy).

REMARKS. The generic placement of the new species in *Vitreolina* is based on the minute sized and transparent smooth shell, drop-shaped outline of the mouth, rounded and not laterally compressed, and the simply basal portion, of the same thin structure of the remaining of the whorl, without any trace of thickening. The lower depth of finding and the absence of any crinoid species, to which all *Curveulima* species are linked as their host, seem better fitting to representatives of *Vitreolina* than of *Curveulima*.

Currently, the use of *Curveulima* seem almost vague or not fully well defined: the shell morphology is very similar to that of *Vitreolina*, apart from the mentioned shape of the mouth which seem effectively to characterize a group of species

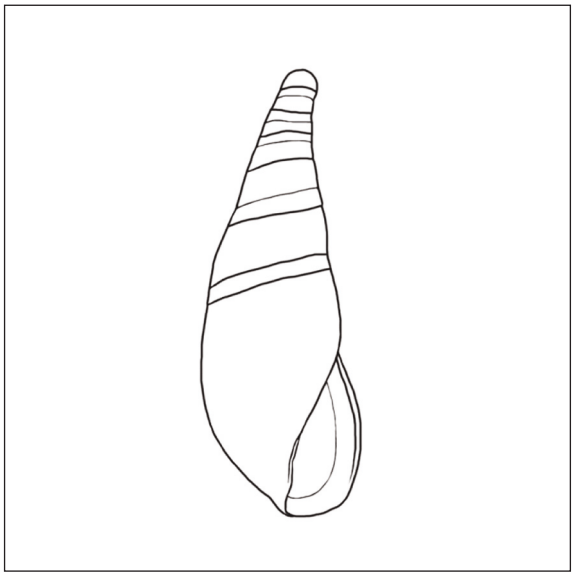


Figure 2. Sketch of shell outline (DSC) of *Curveulima cornuta* type species of *Curveulima*.

with a less rounded outline and a more angled basal portion. However, according to our opinion, some species of *Vitreolina* should be regarded as *Curveulima*, i.e. *V. curva*, more similar to the typetaxon of the genus *C. cornuta* Laseron, 1955 (Fig. 2). Instead *C. beneitoi* has a drop-shaped *Vitreolina*-like peristome, which suggest morphologically a better placement in *Vitreolina*. Moreover, the peculiar mouth outline of *Curveulima* is shared by species of other similar genera, i.e. *Crinophtheiros* Bouchet et Warén, 1986 and is probably linked to the mode of attaching to the host, not representing, alone, a diagnostic character for discriminating such species of eulimids.

Authors of the XIXth century usually did not reported apical or soft parts characters of species of Eulimidae, which often had a "broad meaning" of interpretation of each: modern interpretation of some old taxa could be considered only tentative, as *V. incurva*, type species of the genus (Warén, 1984). An exam of the typical materials is needed to really understand if and at what level a single species could be accepted as a valid species. As an example, a personal exam of a lot constituted by three specimens of "*Eulima*" *distorta* Deshayes in the Aradas collection of Milan revealed the presence of three different species.

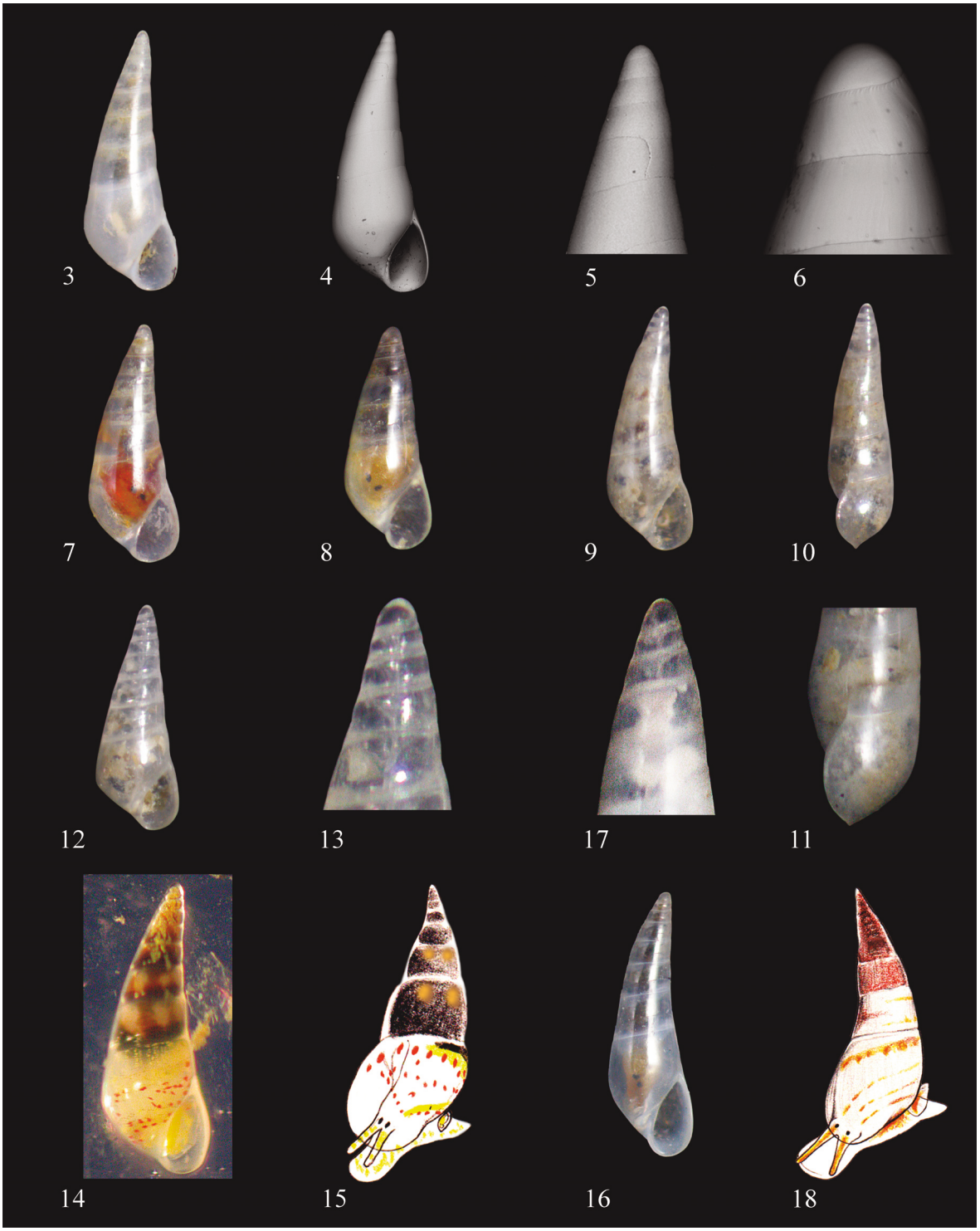
Among Mediterranean species the most similar to *V. micalii* n. sp. as shell outline and external soft parts chromatism is *V. perminima*. The current interpretation of this latter species consists of a small, transparent and smooth shell, only slightly curved to right (Fig. 16), without any traces of minute sculpture at sutures, more elongated mouth, and a smooth acute protoconch (Fig. 17); the chromatism of the living animal (Fig. 18) is the sole in the Mediterranean similar to that of the new species, being almost blackish below all the see-through teleoconch whorls and whitish in the last one and a half, with gray-yellowish lines over the head-foot, the foot and along cephalic tentacles. In *V. micalii* n. sp. the yellow lines are constituted by coalescent little rounded stains and are of a more light colour and differently disposed on the head and the foot. The little red points present on the mantle of *V. micalii* n. sp. are absent in *V. perminima*.

Among other Mediterranean congeners, which anyway show different chromatism of living animal (Scuderi, 2023), only *V. philippi* and *V. incurva* have a similar shell, which is slightly taller and stouter, with first tele-whorls and protoconch well delimited by marked sutures. The protoconch of *V. philippi* is depicted by Penas et al. (2006) and is smooth like those of other *Vitreolina* or *Curveulima* species, as currently documented in literature. The shell of the *V. incurva* is almost indistinguishable from that of *V. philippi*. The chromatism of the living animal is consistently different in both these latter compared species. Species of *Curveulima* are here excluded from comparisons for the above mentioned morphological characters: the only similar species is *C. dautzenbergi*, which is taller and with a more sloped base and a bigger, obtuse protoconch; no traces of micro-sculpture are present on the protoconch or teleoconch. The living animal has no blackish parts, but bigger and more numerous red stains are visible in every whorl through the transparent shell. This species is linked to crinoids of deeper depth habitat. Another similar species is *C. beneitoi* which is shorter, small, with a spire differently curved and a protoconch much more inclined and completely smooth.

Baldovì (2007) reported for Valencia a *Vitreolina* sp. whose shell, compared to that of the new species, is more lengthened, with a more sloped and less rounded base, more elongated mouth and more marked scars, forming under the suture more straight and marked dips; external lip profile more rounded in the middle. The animal is unknown. Finally, he arrived to the conclusion that differences on the observed specimens should be ascribed to the sexual dimorphism of *V. philippi*.

Oliver et al. (2015) reported a *Vitreolina* sp. for Cafarinas Island (Spain), without description of the living animal too, whose shell has a different, more angled outline in the middle of the last whorl.

Albano et al. (2021) dealt with some alien or possible alien eulimids in the Mediterranean Sea, among which *Vitreolina* sp. has a similar shell, even stouter and less cylindrical, with an external lip profile more rounded; the living animal chromatism is different, even if the species figured was stored in preservative liquids, without traces of the blackish parts and the red and yellow stains on the mantle and foot (stains visible in a preserved specimen of *V. philippi* from Crete, Greece, in the same plate).



Figures 3–15. *Vitreolina micalii* n. sp., S. Giovanni Li Cuti (Catania, Italy). Figs. 3–6: holotype, H: 2.07 mm (MZUB60433). Figs. 5, 6: holotype, SEM photographs of the protoconch. Fig. 7: paratype 1, shell, live collected, H: 1.58 mm (DSC). Fig. 8: paratype 2, shell, subadult, live collected, H: 1.2 mm (MZUB60433). Fig. 9: paratype 3, shell, H: 1.4 mm (AVC). Figs. 10, 11: paratype 4, shell and detail of the outer lip seen from the side, H: 2.05 mm (ARC). Figs. 12, 13: paratype 5, shell and detail of the apical whorls, probably male, H: 1.65 mm (MZUB60433). Figs. 14, 15: photograph and drawing of the living animal of holotype (MZUB60433). Figs. 16–18. *Vitreolina perminima*: shell, protoconch and drawing of the living animal of a specimen live collected from Acitrezza (Catania), residuals of fishing nets, H: 2.4 mm (DSC).

Comparisons of the new species with extra-Mediterranean representatives of these genera were performed to exclude or, at least limit, a possible case of alien introduction.

In Canary Islands and Madeira no similar species are reported (Segers et al., 2009).

Some extra-Mediterranean species of *Curveulima* have a "*Vitreolina*-like" appearance and will be compared to the new species. Two Indopacific species, originary from South Africa, have a shell similar to that of the new species: *C. capensis* (Thiele, 1915) is more conical and tapered, with wider and oblong mouth and a more obtuse protoconch; *C. carifa* (Bartsch, 1915) is higher (4.1 mm), formed by more rounded whorls and has a blunter protoconch.

Among extra-Mediterranean species of *Vitreolina*, *V. aurata* (Hirase, 1920) has a more conical shell, with obtuse protoconch and an almost yellowish animal. The Pacific *V. columbiana* (Bartsch, 1917) is bigger (9.5 mm long), more solid and with more whorls (15). Another Pacific species is *V. drangai* (Hertlein & Strong, 1951) which is longer (3.5 mm), has a more arcuated shell and a smaller and more oblong mouth in proportion to the entire shell. The Caraibic *V. maracuya* (Espinosa, Ortea et Magaña, 2001) is longer (6 mm), has a more pointed spire and more rounded whorls, while the living animal seem similar to that of *V. micalii* n. sp., being darker in the earlier whorls and whitish in the head-foot, with rounded, smaller and more numerous stains - presumably red, as the original photograph is black and white and does not allow to differentiate colors. The Californian *V. titubans* (Berry, 1956) has only a shell shape similar to that of the new species, but is longer (7.4 mm) and the scars on the whorls are not aligned. Finally, *V. yod* (Carpenter, 1857) has been described from Mazatlan (Mexico), but Bartsch (1917) curiously reported *Melania distorta* Philippi, 1836 (now accepted as *V. philippi*) and *Eulima distorta* Deshayes, 1823 as synonyms and a geographic distribution, apart Mexico, which ranges from Norway to the Mediterranean. From the original diagnosis and figure, merely reported by Bartsch, it could be argued that this species is smaller (rather 1 mm high) and bears a callus zone at the base around the inner lip. Even though accepted (WoRMS, last access on July 11 2023), this species appears almost doubtful.

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