

## New data on *Siciliaria septemplicata* (R.A. Philippi, 1836) complex (Gastropoda Clausiliidae) from the surroundings of Palermo (NW-Sicily, Italy)

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### ABSTRACT

*Siciliaria septemplicata* (R.A. Philippi, 1836) (Gastropoda Clausiliidae) endemic from northwestern Sicily (Italy) is revised, using shell and genital characters. The diversity of the species complex, the taxonomic history, faunal data and distributional relationships are examined. *Siciliaria septemplicata vincentii* n. ssp. and *S. septemplicata mariastellae* n. ssp. from the surroundings of Palermo are here described.

### KEY WORDS

*Siciliaria*; door snails; new subspecies; taxonomy; biodiversity; Sicily.

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### INTRODUCTION

Since the early 1800s the Palermo surroundings were one of the most studied and cited locality in Sicilian natural science research. The great biodiversity of these natural environments have been the subject of numerous scientific papers and a lot of new taxa were described from localities inside or adjacent to the old city of Palermo. This is also true for land molluscs. Many Italian and European authors, such as Philippi (1836, 1844), Rossmässler (1835–1837), Calcara (1843, 1845), Benoit (1857–1862, 1875, 1882) and Monterosato (1892) listed dozens of living species around Palermo describing new species.

In the present paper we will examine the populations of the *Siciliaria septemplicata*

(Philippi, 1836) complex (Gastropoda Clausiliidae), an endemic species to Palermo surroundings, based on new samples and historical material preserved in museums. An overview of the related taxa is provided; two new subspecies are described and the distributional relationships are discussed; additional molecular genetics data will form the subject of a forthcoming publication.

### MATERIAL AND METHODS

Empty shells and living specimens were collected in the field on sight on the soil, under rocks, and in crevices of limestone walls. Observations on ecology of these organisms were made directly in the field. The shells were cleaned

with an alternate and repeated washing in sodium hypochlorite and hydrogen dioxide for a few minutes, and subsequently brushed under running water with a flat tipped and hard bristles paintbrush. Dry shells have been studied regarding the morphological characters; in order to study and to illustrate genital organs, some specimens were put in water and fixed in 80% ethanol. The bodies were isolated from the shells and dissected under the Optika stereomicroscope using a very fine pointed scalpel, scissors and needles. Photos were taken with a Canon EOS 100D camera. Height and maximum diameter of the shell along with some parts of genitalia were measured (in millimeters) by a digital calipers. Taxonomical references are based on the checklist of the Italian land and freshwater molluscs (Bodon et al., 2021) and MolluscaBase (2022). In the shell description, apertural elements are defined: plicae or lamellae if they consist of elongated spiral structures situated in the palatum or parietum and columella respectively. The part of the cervix beside the basal keel is called cervical swelling or, if more distinct, dorsal keel. For the lower palatal plicae the following terms are used: posterior part = subclaustralis, anterior part = basalis (ALPL). In the anatomical description, proximal denotes the part which is closer to the gonad and distal the part which is closer to the gonopore. The proximal female genitalia, sometimes indicated in the tables, are not described because they are not informative.

The collection localities are listed according to the following scheme: municipality, collecting station, geographic coordinates, altitude, the names of the collectors and the dates of collection, the number of specimens examined and the public/private collections where the samples are stored. Toponyms are reported following the official IGM 1:25,000 cartography of Italy.

The materials used for this study were preserved in the following Museums and private collections: F. Liberto, Cefalù, Italy (CL); Göteborg Natural History Museum, Sweden (GNM); Museo Civico di Zoologia, Rome, Italy (MCZR); Muséum d'Histoire Naturelle de Genève, Switzerland (MHNG); Natural History Museum University of Florence Zoological Section "La Specola", Florence, Italy (MZUF); A. Reitano, Tremestieri Etneo, Italy (CR); Senckenberg Museum Frankfurt, Germany (SMF); I. Sparacio, Palermo, Italy (CS), R. Viviano, Palermo, Italy (CV).

ABBREVIATIONS AND ACRONYMS. A: atrium; ALPP: anterior lower palatal plica (basalis); AP1: distal annular pad; AP2: proximal annular pad; AUPP1 and AUPP2: anterior upper palatal plicae; BC: bursa copulatrix; CL: columellar lamella; D: shell maximum diameter; DBC: diverticulum of the bursa copulatrix; E: epiphallus; ex/x: specimen/s; ELP: epiphallar longitudinal pleats; ex/x: specimen/s; FD: First duct of the bursa copulatrix; FO: free oviduct; G: penial pseudopapilla; H: shell maximum height; HA: aperture maximum height; IPP: inner penial pleats; leg.: legit; L: lunella; m: meter/s; mm: millimeter/s; P: penis; PL: parietal lamella; PP: principal plica; PR: penial retractor muscle; PUPP: posterior upper palatal plica; R2: ribs number on 2 mm of the penultimate whorl; SCL: subcolumellar lamella; SCLA: subclaustralis plica; SD: second duct of the bursa copulatrix; sh: shell/s; SL: spiral lamella; SP: sutural plica; SUL: sulcalis plica; UOS: uterine ovispermiduct; V: vagina; VD: vas deferens; WA: aperture maximum width.

## RESULTS

*Siciliaria septemplicata septemplicata* (R.A. Philippi, 1836) (Figs. 1–9)

*Clausilia septemplicata* - Philippi, 1836: 139, Pl. 8, fig. 22

*Clausilia sericina* - Rossmässler, 1836: 7, Fig. 161

*Clausilia septemplicata* - Calcara, 1840: 15

*Clausilia septemplicata* - Benoît, 1876: 151

*Clausilia (Siciliaria) septemplicata* Var. *nova* Bourg. - Monterosato, 1894: 170

*Clausilia (Delima) allyphanta* - Westerlund, 1894: 192–193

*Clausilia (Siciliaria) septemplicata* - Westerlund, 1901: 41

*Delima (Siciliaria) septemplicata* - A.J. Wagner, 1925: 54–56, Pl. 3, fig. 24

*Delima (Siciliaria) septemplicata septemplicata* - Alzona, 1971: 90

*Charpentieria septemplicata* - Beckmann, 2004: 188

*Siciliaria septemplicata* - Welter-Schultes, 2012: 343

*Siciliaria septemplicata* - Nordsieck, 2013: 6

*Charpentieria septemplicata* - De Mattia, 2017

*Siciliaria septemplicata* - Bodon et al., 2021

*Siciliaria septemplicata* - De Mattia et al., 2021: 38–40, Figs 1.F, 9.1–9.2, 10.1–10.7, 13.9–13.11

EXAMINED MUSEUM MATERIAL. *Clausilia septemplicata*. Possible syntype, SMF 304531, 1 ex H.G. Bronn collection (from Philippi collection - Zoological Institute University Heidelberg n. 957. Panormus).

*Clausilia septemplicata nova* Monterosato, 1894. Syntypes, MCZR-M-6411 (Fig. 7), 8 exx, 2 labels: “Cl. nova Bourg. Palermo / Cl. calcarae Phil.?” - “Clausilia nova. / Bourg. Palermo”. MCZR-M-6416 (Fig. 8), 1 ex, 2 labels: “S. Polo! alle Balate / Palermo 1891” - “Cl. ..., Monts. mss. / = C. nova Bourg. mss. / = C. septemplicata, Benoit Ill. Sist. tav. 4 fig. 20”.

*Clausilia (Delima) allyphanta* Westerlund, 1894. Syntype, GNM-2662 (Fig. 9) 1 ex, 3 labels: “Cl. ally- / phanta W. / Ubi ?” - “Clausilia (Delima) Rev. allyphanta W = *Siciliaria septemplicata* (Philippi) / Syntyp / Ubi ? / 2662” - “= *Siciliaria septemplicata* (Philippi) / H. Nordsick vidi mars 1999”.

MATERIAL EXAMINED. Italy, Sicily, Palermo, Oreto River Valley near Sant'Orsola cemetery, 2.VI.1979, 4 exx (CS 5480); Palermo, Pagliarelli, 10.VI.1980, 2 exx (CS 5481); Palermo, Oreto River Valley near Sant'Orsola cemetery, 10.VI.1980, 5 exx (CS 5482); Palermo, Botanical Garden, 16.XI.1983, 8 exx (CS 5483); Palermo, Villa Malfitano-Whitaker, 38°07'21"N 13°20'29"E, 35 m, from 2011 to 2012, 36 exx (CV); Palermo, Guadagna, Oreto River Valley, 38°05'50"N 13°21'32.52E, 35 m, 12.V.2016, 2 exx (CV); Palermo, Botanical Garden, 38°06'43"N 13°22'25"E, 10 m, 9.IX.2017, 6 exx; idem, 16.X.2020, 7 exx (CV); Palermo, Fossa della Garofala, 38°06'12"N 13°20'40.2"E, 44 m, 21.IX.2017, 6 exx (CV); idem, 38°06'04"N 13°20'40.8"E, 50 m, 24.IV.2019, 2 exx (CV); idem, 38°06'06.20"N 13°20'40.6"E, 47 m, 28.V.2019, 9 exx (CV); Palermo, Altarello, Fondo Micciulla, 38°06'24"N 13°19'55"E, 80 m, 21.V.2021, 6 exx (CV); Palermo, Via Francesco Speciale, 38°6'21.57"N 13°20'4.74"E, 64 m, 11.VII.2002, 2 exx (CR).

*Siciliaria septemplicata prasina* A. Schmidt, 1868 (Figs. 10–16)

*Clausilia proxima* - Benoit, 1859: Pl. 6, Fig. 19

*Clausilia septemplicata* var. *prasina* - A. Schmidt, 1868: 41

*Clausilia prasina* - Benoit, 1876: 151

*Clausilia (Siciliaria) septemplicata* Var. *prasina*, Paulucci, 1878; table p. 13, n 322

*Clausilia septemplicata* Phil. forma *prasina* (Ben.) A. Schm. - Boettger, 1879: 86, Fig. 1727

*Clausilia proxima* - Benoit, 1882: 143

*Clausilia (Siciliaria) septemplicata prasina* - Westerlund, 1901: 41

*Delima (Siciliaria) septemplicata prasina* - Wagner, 1913: Pl. 572, Fig. 14

*Delima (Siciliaria) septemplicata prasina* - Alzona, 1971: 91

*Clausilia (Siciliaria) septemplicata* Var. *prasina* - Cianfanelli et al., 2021: 79, Fig. 56 (Fig. 15)

*Siciliaria septemplicata* - De Mattia, 2021: 38–40, Figs 1.F, 9.1–9.2, 10.1–10.7, 13.9–13.11

EXAMINED MUSEUM MATERIAL. MCZR-M-6419 (Fig. 16), 6 exx, 1 label: “Cl. trinacrina / Benoit / Sferracavallo”.

MHNG-MOLL-109337, Bourguignat collection, 8 exx 1 label: “Clausilia trinacrina Brgt. / Sicile”.

MATERIAL EXAMINED. Italy, Sicily, Palermo, Sferracavallo, Barcarello, 23.VII.1978, 3 exx (CS 5484), idem, 2.IV.1980, 7 exx (CS 5485); Palermo, Monte Cuccio, Poggio del Pineto, 38°08'11.3"N 13°16'35.5"E, 22.V.1985, 12 exx (CS 5486) and 12.IV.2021, 6 exx (CS 5487); Palermo, Caves of Contrada Malatacca-Benfratelli near Cervello Hospital, 20.XII.1985, 11 exx (CS 5488); Palermo, Capo Gallo, Faro, 31.VIII.1991, 5 exx (CS 5489); Palermo, Cozzo Sant'Isidoro, 38°07'21"N 13°17'47.3"E, 125 m, 16.V.2021, 5 shells (CS 5490); Palermo, Monte Gallo, Fossa di Barcarello, 38°12'40"N 13°17'32"E, 30–150 m, from 2013 to 2015, 10 exx (CV); Palermo, Petrazzi, Via Inserra, 38°09'09"N 13°18'17"E, 170–260 m, 07.VI.2016, 1 ex (CV); idem, Cozzo San Croce, 38°08'57"N 13°17'37"E, 380 m, 07.VI.2016, 8 exx (CV); Palermo, Monte Gallo, Fossa di Barcarello, Pizzo dell'Avvoltoio, 38°12'32.6"N 13°17'29.6"E, 180 m, 30.V.2020, 9 exx (CV); Palermo, Capo Gallo, Grotta del Faro, 38°13'22.1"N 13°18'58"E, 75 m, 01.V.2021, 29 exx (CV); Palermo, Capo Gallo near the lighthouse, 38°13'24"N 13°18'52"E, 10–25 m, 01.V.2021, 2 exx, legit R. and A. Viviano (CV); Palermo, Cozzo Sant'Isidoro, 38°07'21"N 13°17'47.3"E, 125 m, 16.V.2021, 8 exx (CV); Palermo, Grotta Molara, 38°8'47.46"N 13°18'17.81"E, 106 m, 10.VII.2002, 3 exx (CR)

4.XII.2003, 6 exx (CR); 5.I.2008, 11 exx (CR); Capo Gallo, near the lighthouse, 38°13'23.56"N 13°18'52.22"E, 10–30 m, 2.VI.1999, 3 exx (CR).

**DESCRIPTION** (*Siciliaria septemplicata septemplicata* from Palermo, Fossa della Garofala). Shell mostly not decollate (Figs. 1–4); measurements (shells not decollate): H = 18–21, W = 4.3–5.1, HA = 5.1–5.5, WA = 3.8–4; red-brown in colour; whorls thinly striated (R2 = 16–22) with papillae scattered along the suture; basal keel slightly raised, dorsal keel indistinct or missing; palatum with: a sutural plica; principal plica twice as long as the sutural plica and surpassing the lunella; two anterior upper palatal plicae, which do not reach the lunella; elongated lower palatal plica fused to lunella; subclaustralis plica present; parietum with superior lamella which surpasses the spiral lamella; inferior lamella very high, internally strongly bent towards the parietum to forms an angle of 90° in vertical view; subcolumellar lamella not visible in frontal view. Clausilium subrectangular, palatal edge of clausilium plate distally slightly receding and more or less pointed, plate gutter-like narrowed, palatal edge against distal end bent upwards and more or less pointed.

Genitalia (Figs. 5, 6) characterized by vagina elongated (3.5–3.6 mm), first duct of the bursa copulatrix slightly longer than the vagina (3.8–3.9 mm); second duct of the bursa copulatrix + bursa copulatrix are elongated (5.1–5.3 mm), subcylindrical, longer than the first duct; the diverticulum of the bursa copulatrix (5.5–5.65 mm) longer than second duct + bursa copulatrix; vas deferent slender, entering the apical portion of epiphallus; the epiphallus is divided by point of insertion of robust penial retractor muscle into a distal portion and a shorter proximal portion with an evident epiphallar ring where start the penis; the penis (3.3–3.45 mm) is wider than epiphallus and sub-cylindrical in shape. The genitals internally show: penial walls with two parallel furrows; a penial pseudopapilla short and oval; the penis-epiphallus transition shows a first distal annular ring and a second proximal annular ring from which the penial pseudopapilla originate; wall of the vagina with transverse-oblique, small, irregular and interrupted pleats.

**DISTRIBUTION AND BIOLOGY.** *Siciliaria septemplicata septemplicata* has a restricted distribution limited to Palermo and some surroundings localities (Fossa della Garofala, Parco,

Boccadifalco). Other populations belonging to *S. septemplicata prasina* are widespread in the mountains south-west of Palermo: San Isidoro, slopes of Monte Cuccio up to 300–400 m, rocky walls in the south-western Palermo mountains to Sferracavallo-Grotta Conza and along the slope of Monte Gallo at low altitudes: Barcarello and Capo Gallo. *Siciliaria septemplicata septemplicata* from Monte Catalfano (Sparacio & Lo Brano, 2006) are to be referred to as *S. calcarae calcarae* (R.A. Philippi, 1844).

*Siciliaria septemplicata s.l.* lives on calcareous and arenaceous soils, in limestone walls, under stones, near caves, in shrub and wood litter, but also in gardens.

De Mattia (2017a) considers *S. septemplicata s.l.* as Near Threatened, but its type form has a much smaller distribution and it is strongly threatened by the urban expansion of the city of Palermo. For these reasons, according to the IUCN criteria, it should be considered as Endangered.

**REMARKS.** Philippi (1836) described *Clausilia septemplicata* from the surroundings of Palermo (“*Prope Panormum*”) and among the distinctive morphological characters he mentions the “*corneo* [horn-like]” color and the presence of evident sutural papillae.

Benoit (1859, plate 6, fig. 19) depicted, but did not described, a similar species and sent it to other malacologists with the name *Clausilia proxima*. Subsequently, Schmidt (1868) based on Benoit’s specimens, describes the var. *prasina*, characterized by a lighter color, as reported verbatim: “*Cl. septempl. var. prasina, nach Parreyss’s Zeugniß zu Cl. prasina Benoit, ist nur durch hellere (isabellgelbe) Farbe von der Grundform verschieden [Cl. septempl. var. prasina, according to Parreys’s testimonies to Cl. prasina Benoit, differs from the type form only in its lighter (Isabelle yellow) color] (Figs. 10–16).*

Benoit (1882) describes *Clausilia proxima = prasina* Schmidt 1868: “*Vive questo mollusco nelle campagne di Palermo...[differisce da septemplicata per] minore dimensione, ..., sempre di colorito corneo pallido, per la deficienza delle papille della sutura, ...Questi caratteri ben marcati la distinguono dalla specie di Philippi [This mollusk lives in the countryside of Palermo ... [differs from septemplicata for] smaller size, ..., always with a pale horn-like color, lack of sutural papillae, ... These well-marked characters distinguish it from Philippi’s species].*

Paulucci (1878) used the name *Clausilia septemPLICATA* Var. *prasina* correlating to the fig. 19 of plate 6 by Benoit (1857–1875), therefore this name should be available from Paulucci (1878) had it not already been described by Schmidt (1868) (Cianfanelli et al., 2021). The specimens studied by Paulucci (1878) and depicted in Cianfanelli et al. (2021: 81, fig. 56) show a typical *S. septemPLICATA prasina* (Fig. 15).

Also Wagner (1913) and Alzona (1971) regarded “*prasina*” as a subspecies of “*septemPLICATA*”. Nordsieck (2013) rightly claimed that “*prasina*” is a copying-mistake of “*proxima*”, caused by illegible labels of Benoit (see also Boettger, 1879 and Benoit, 1875, 1882).

Subsequently, this taxon was regarded, without any differential analysis, as a synonym of *S. septemPLICATA* (Bodon et al., 2021; De Mattia, 2021; Bank & Neubert, 2022).

*Siciliaria septemPLICATA prasina* (Figs. 10–14) differs by type form for thinner and slender shell, lighter color, striae and sutural papillae obsolete, vagina shorter, second duct of bursa copulatrix + bursa copulatrix shorter than the first duct (see also De Mattia et al., 2021), a wider western distribution.

*Clausilia* (*S.*) *septemPLICATA* Var. *nova* Bourg. (see Monterosato, 1894: “*San Polo*”, Palermo) (Figs. 7, 8) and *C. allyphanta* Westerlund, 1894 (Fig. 9) are synonyms of *S. septemPLICATA septemPLICATA* (for the latter taxon see Nordsieck, 2013).

De Mattia et al. (2021) summarize the history of *Clausilia trinacrina* Benoit, 1881 whose typical locality should be Monte Cuccio (De Gregorio, 1895; see also Benoit, 1875). The specimens we have observed from the Monterosato collection (Sferracavallo near Palermo) referring to this taxon (Fig. 16), do not have reference to any types and correspond morphologically to the local populations of *S. septemPLICATA prasina*; also the examined specimens from Bourguignat collection are attributable to *S. septemPLICATA prasina*.

***Siciliaria septemPLICATA vincentii* n. ssp.**

Figs. 17–23 - <https://zoobank.org:act:00726D81-DC31-4A8B-AD10-477EF318C553>

*Siciliaria leucophryna* - Reitano et al., 2012: 565, Fig. 18

*Siciliaria leucophryna* - De Mattia et al., 2021: 43, Fig 12.1

TYPE MATERIAL. Holotype, Italy, Sicily, Palermo, Sferracavallo: Grotta Conza, 38°11'14.8"N 13°16'52.1"E, 18.I.1981, leg. I. Sparacio (MZUF) (Fig. 17). Paratypes, same locality as the holotype, 7 exx (CS 5491) (Figs. 18–23); idem, 11.IX.2003, 12 exx (CS 5492); idem, 1 ex (MCZR); idem, 5.V.2021, 13 exx (CS 5493); idem, 3 exx (CL); idem, 20.VII.2005, 23 exx (CR); idem, 01.II.2008, 17 exx (CR); idem, 31.I.2014, 21 exx (CR).

DESCRIPTION. Shell large, usually not decollated; measurements (shells not decollate): H = 20–23.2 mm, D = 5–5.5 mm, HA = 5.4–5.5, WA = 4.1–4.25 mm; greyish-brown in colour; rib striated (R2 = 10–13); two anterior upper palatal plicae; subclausal plica obsolete; columellar lamella moderately high, internally little developed and scarcely bent towards the parietum and rounded in vertical view; palatal edge of clausilium plate distally scarcely receding; elongated first duct of bursa copulatrix.

DISTRIBUTION AND BIOLOGY. *Siciliaria septemPLICATA vincentii* n. sp. lives on limestone rocks and under stones in a small area near Grotta Conza. It is sympatric to *S. leucophryna leucophryna*. According to the IUCN criteria, it can be classified as Critically Endangered (CR) due to the restricted area in which it lives.

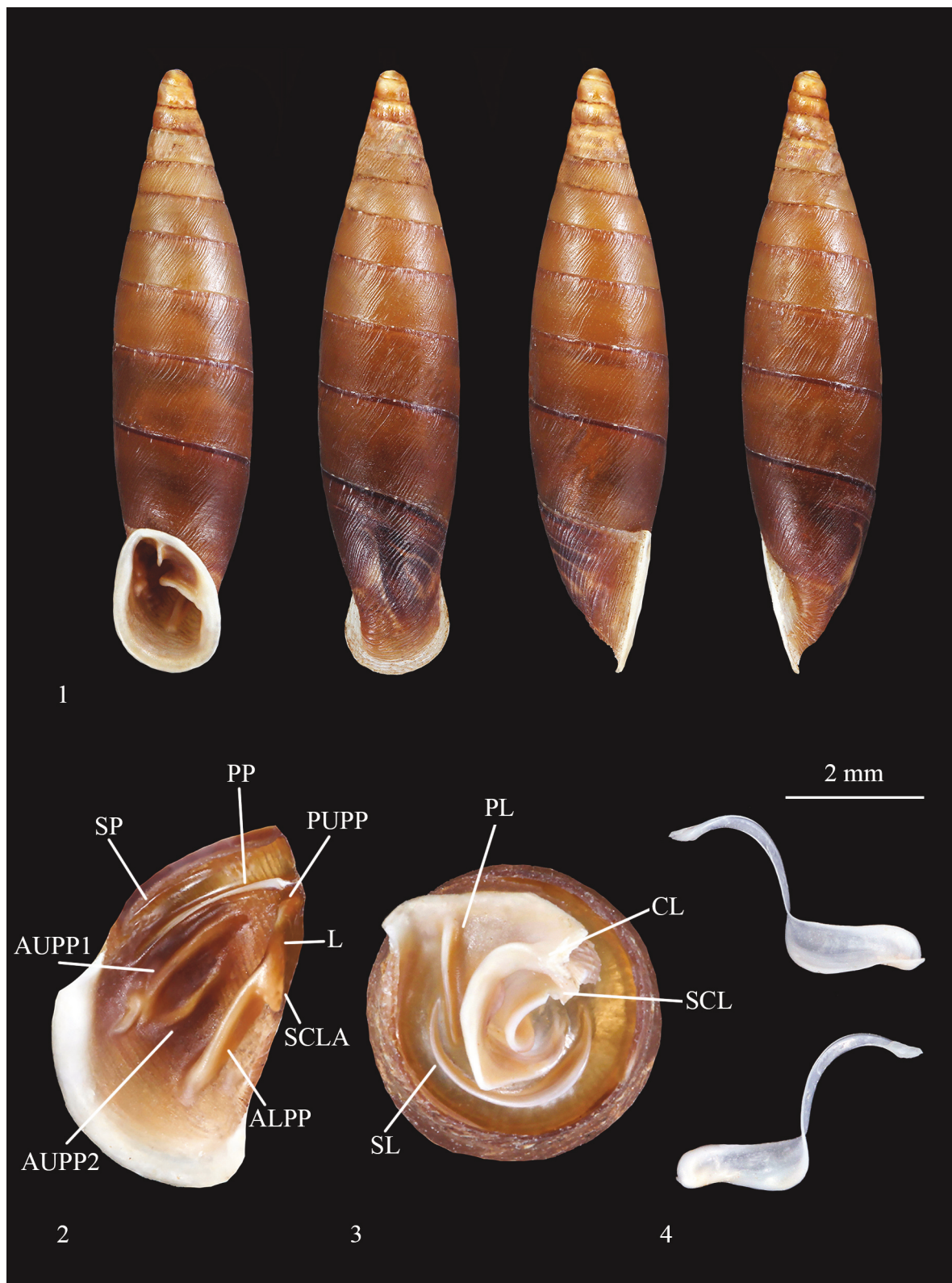
ETYMOLOGY. This new subspecies is dedicated to Vincenzo Di Dio, the director of the nearby Reserve “Isola delle Femmine” (Palermo, Italy).

REMARKS. This new subspecies can be confused with *S. leucophryna leucophryna* due to the greyish-brown, rib-striated shell and the moderately high columellar lamella; however it is easily distinguishable by the presence of two anterior palatal plicae (the lower one absent in *S. leucophryna*). It differs by other *S. septemPLICATA* populations for the bigger shell, the whorls rib-striated, the greyish-brown colour, subclausal plica obsolete, shape of the columellar lamella, longer first duct of bursa copulatrix.

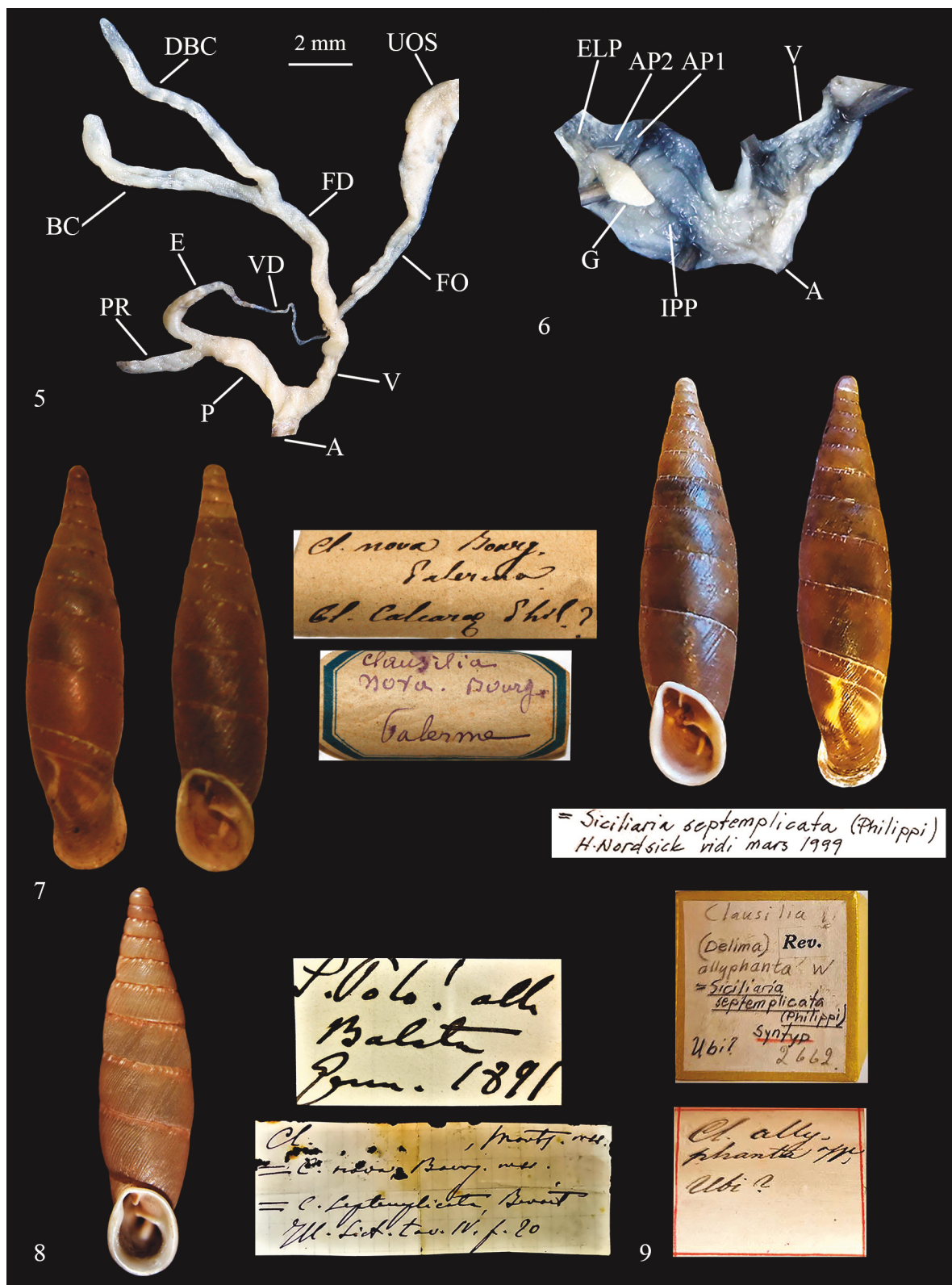
***Siciliaria septemPLICATA mariastellae* n. ssp.**

Figs. 24–30 - <https://zoobank.org:act:77750338-C7F2-4349-A52F-0AD80807D51F>

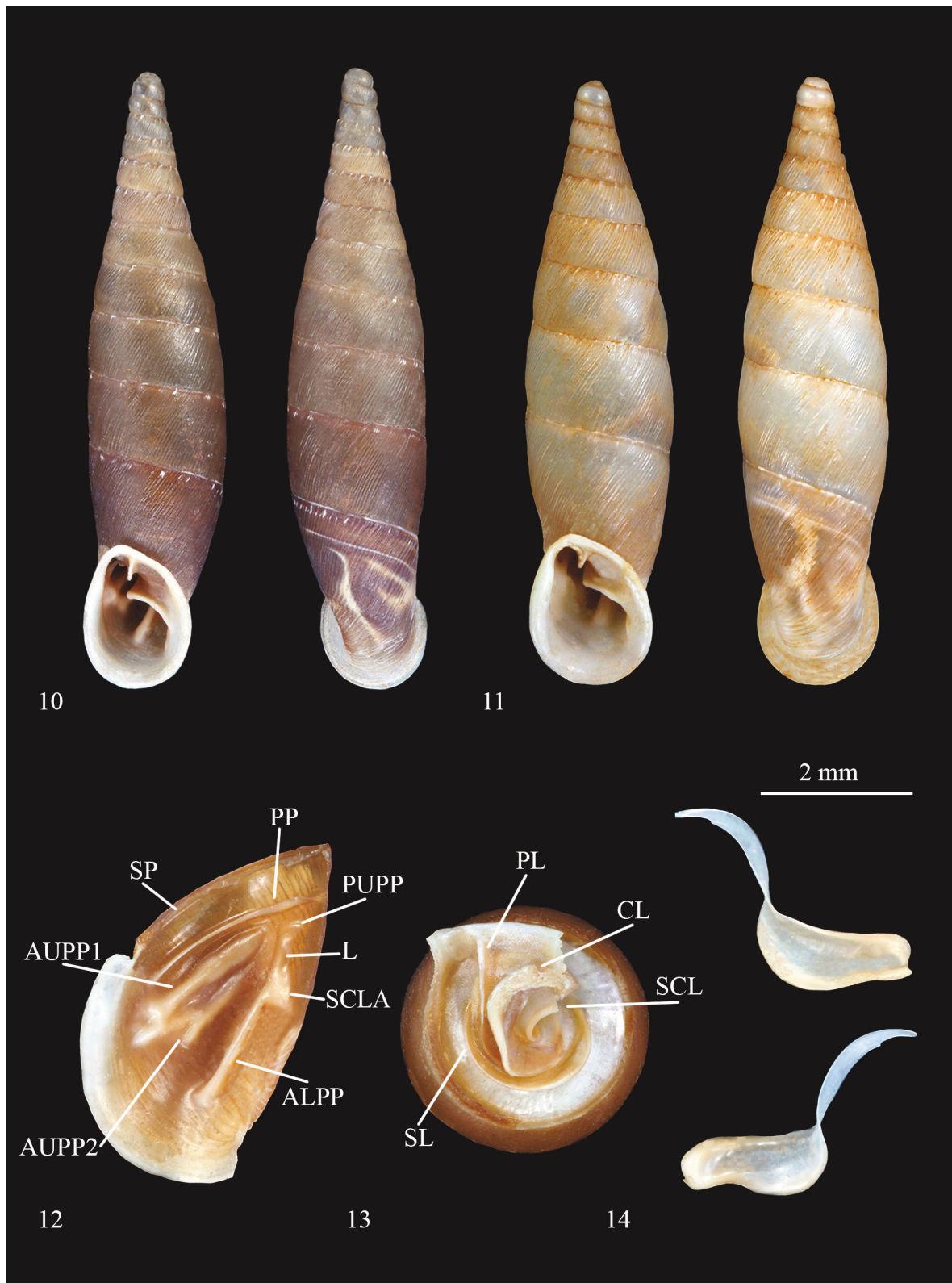
TYPE MATERIAL. Holotype, Italy, Sicily, Palermo, Monte Gallo, Bauso, 38°12'50.4"N 13°18'30.1"E, 16.I.2022, legit I. Sparacio (MCZR) (Fig. 24).



Figures 1–4. *Siciliaria septemplicata septemplicata*, Palermo: Fossa della Garofala.  
 Fig. 1: shell (H = 20.5 mm). Fig. 2: palatum. Fig. 3: Parietum. Fig. 4: clausilium.



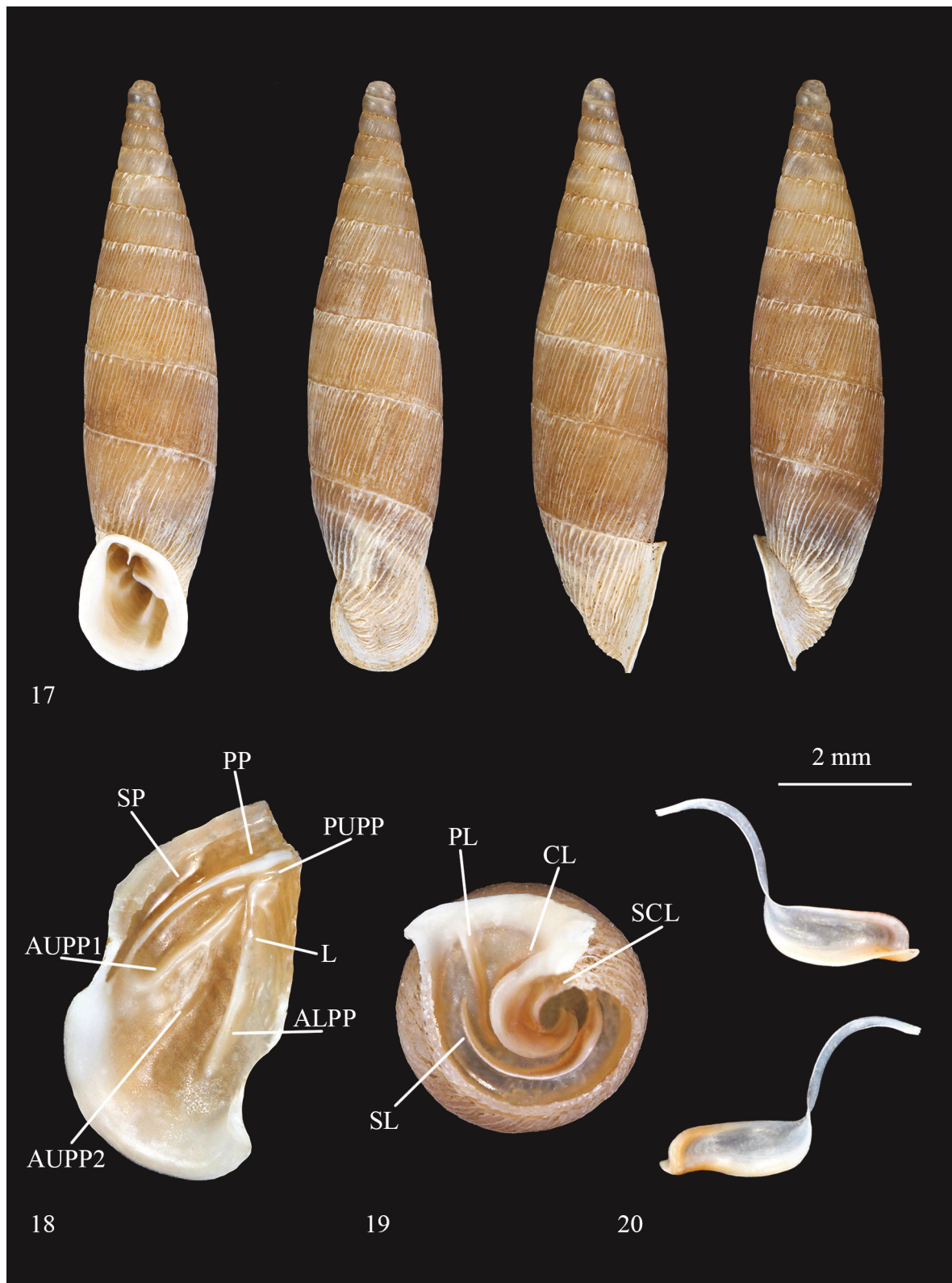
Figures 5, 6. *Siciliaria septemplicata septemplicata*, Palermo: Fossa della Garofala. Fig. 5: genitalia. Fig. 6: inner penis. Figures 7, 8. *Clausilia septemplicata nova*. Fig. 7: MCZR-M-6411. Fig. 8: MCZR-M-6416. Figure 9. *Clausilia allyphanta* Westerlund, 1894 (H = 20 mm) with labels (GNM syntype 2662).



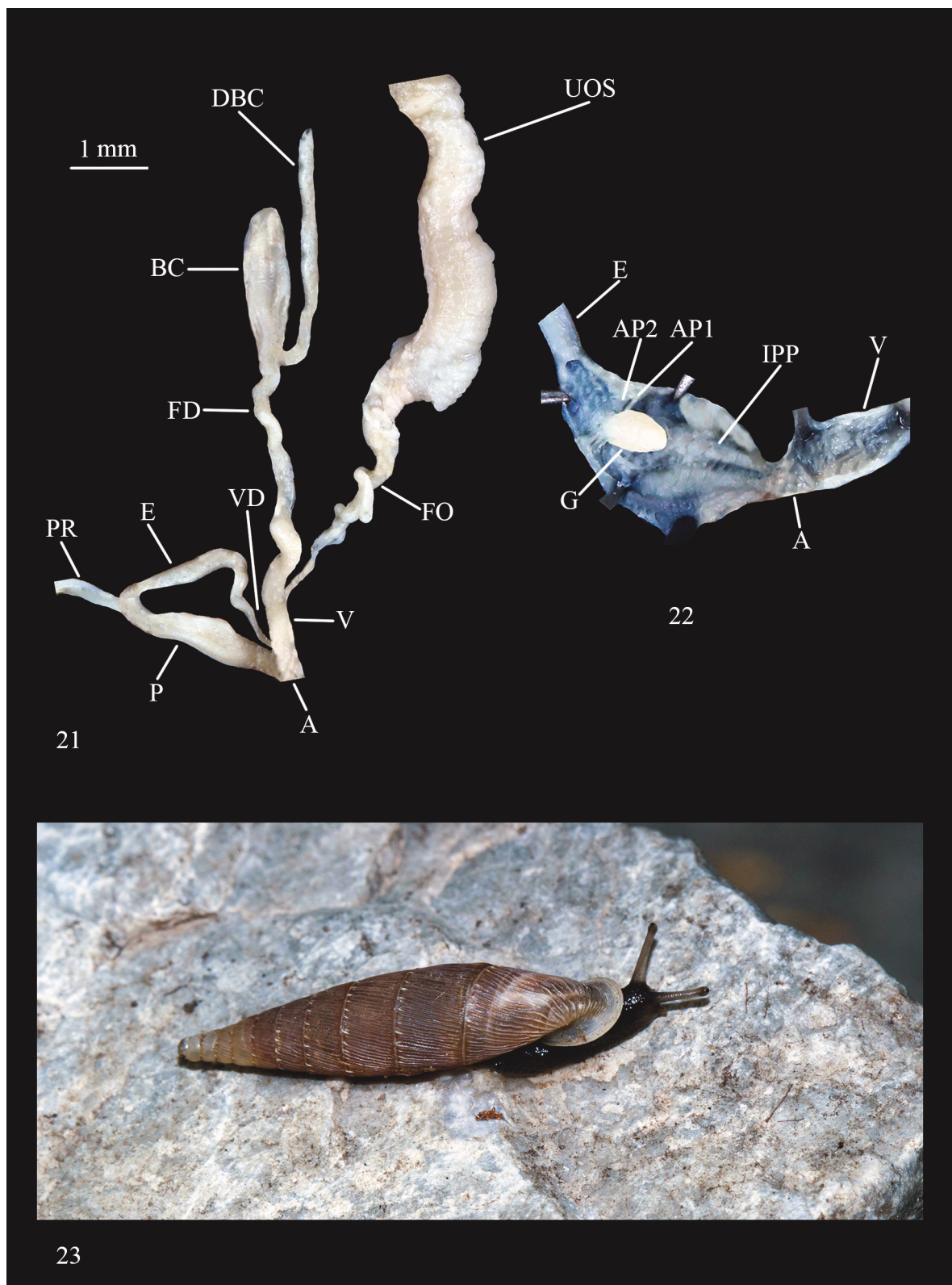
Figures 10–14. *Siciliaria septemPLICATA prasina*. Fig. 10: Barcarello (Sferracavallo, Palermo) H = 19.6 mm. Fig. 11: Grotte di Contrada Malatacca-Benfratelli, Palermo H = 19.4 mm. Fig. 12: idem, palatum. Fig. 13: idem, parietum. Fig. 14: idem, clausilium.



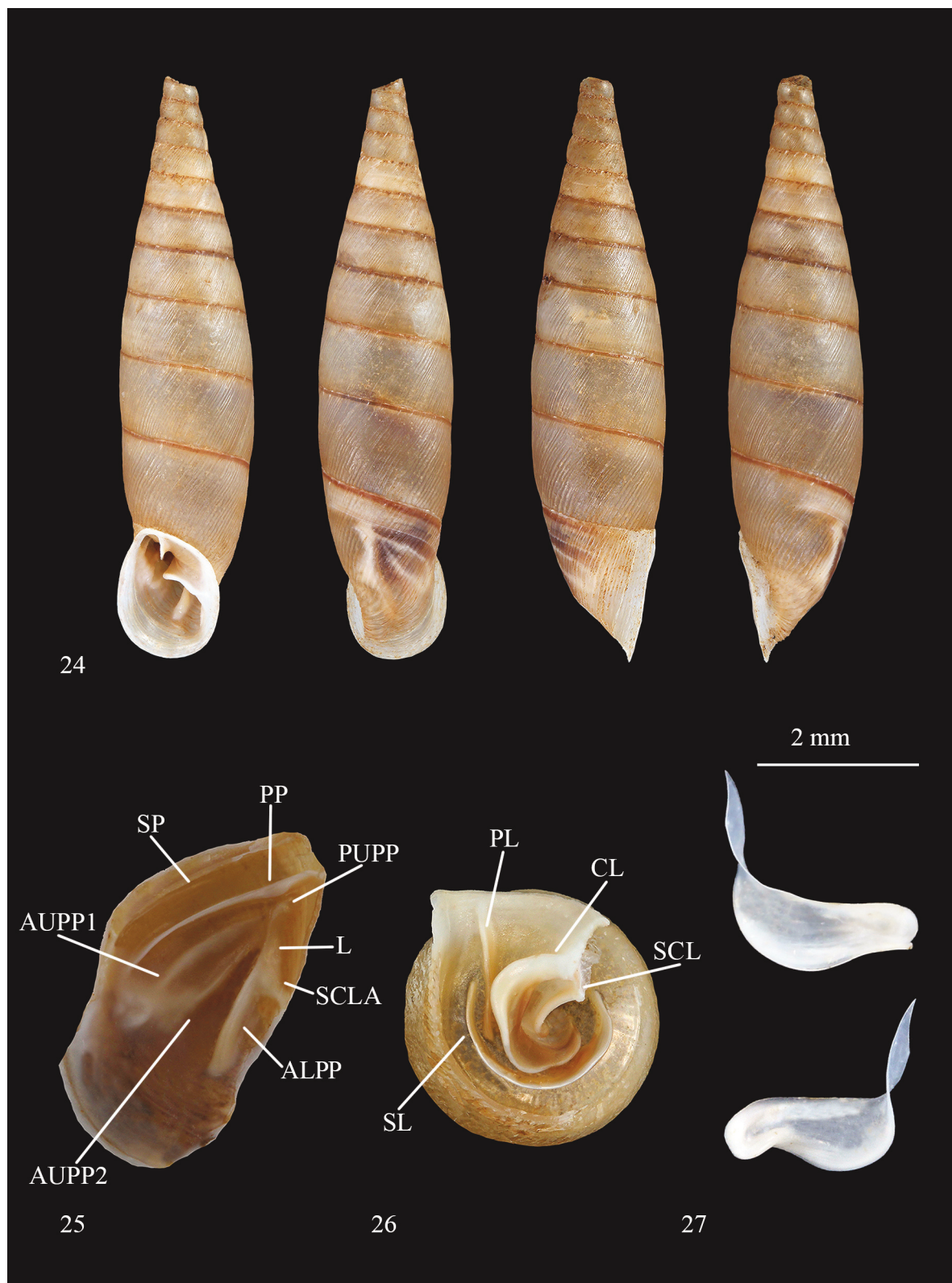
Figures 15, 16. *Siciliaria septemPLICATA prasina*. Fig. 15: specimen from Paulucci collection (Cianfanelli et al., 2021: 81, fig. 56). Fig. 16: *Clausilia trinacrina* (Sferacavalllo) from Monterosato collection (MCZR-M-6419).



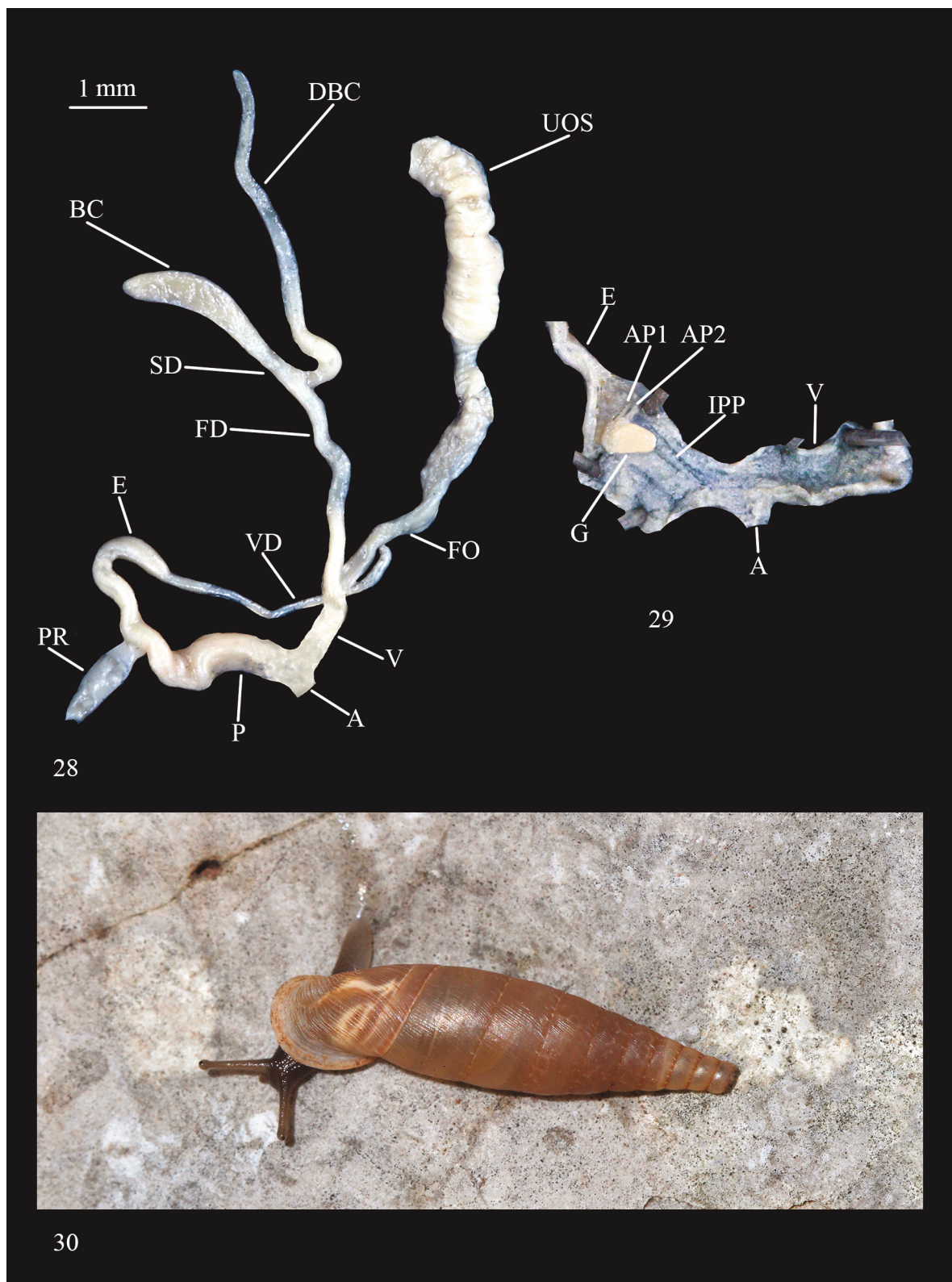
Figures 17–20. *Siciliaria septemPLICATA vincentii* n. ssp. from Grotta della Conza (Sferracavallo, Palermo). Fig. 17: holotype, H = 21.6 mm. Figs. 18–20: paratypes. Fig. 18: palatum. Fig. 19: parietum. Fig. 20: clausilium.



Figures 21–23. *Siciliaria septemPLICATA vincentii* n. ssp. from Grotta della Conza (Sferracavallo, Palermo), paratypes. Fig. 21: genitalia. Fig. 22: inner penis. Fig. 23: living specimen.



Figures 24–27. *Siciliaria septemPLICATA mariastellae* n. ssp. from Monte Gallo (Palermo). Fig. 24: holotype, H = 21.2 mm. Figs. 25–27: paratypes. Fig. 25: palatum. Fig. 26: parietum. Fig. 27: clausilium.



Figures 28–30. *Siciliaria septemPLICATA mariastellae* n. ssp. from Monte Gallo (Palermo), paratypes.

Fig. 28: genitalia. Fig. 29: inner penis. Fig. 30: living specimen.

Paratypes: idem, Monte Gallo, Semaforo, 38°13'02.5"N 13°18'38.2"E, 350 m, 22.IX.1990, 5 exx (CS 5494); idem, 30.XII.2012, 6 exx (CS 5495); idem, 3 exx (CV); idem, 08.I.2016, 7 exx (CV); idem, Monte Gallo, Via del Semaforo, 38°12'53"N 13°18'25"E, 160–390 m, 8.I.2016, 3 exx (CV); idem, Monte Gallo, Bauso, 38°12'50.4"N 13°18'30.1"E, 16.I.2022, 21 exx (CS 5496) (Figs. 25–30); idem, 3 exx (CR); idem, 1 ex (MZUF); idem, Monte Gallo, Piano dello Stinco, 38°13'07"N, 13°18'45"E, 483 m, 30.XII.2012, 2 exx (CL 13740/41).

**DESCRIPTION.** Shell decollated or not; measurements (shells not decollate): H = 19.8–23 mm; D = 5–5.15 mm; HA = 5.1–5.5 mm; WA = 3.9–4 mm; yellowish in colour; striated (R2 = 18–25); sutural papillae very small and scattered or completely absent; dorsal keels slightly distinct; subclaustralis plica present; columellar lamella very high, internally bent towards the parietum, forming a rounded angle in vertical view; palatal edge of clausilium plate proximally broadly curved, distally strongly receding and scarcely pointed.

**DISTRIBUTION AND BIOLOGY.** *Siciliaria septemplex mariastellae* n. ssp. is an endemic subspecies of Monte Gallo, north of Palermo. It lives from 100–200 m of altitude up to the top (527 m, Semaforo). At lower altitudes (Barcarello, Capo Gallo) we found *S. septemplex prasina*.

*Siciliaria septemplex mariastellae* n. ssp. lives on calcareous soil, under stones and vegetal debris, in uncovered places or even in forest areas (*Pinus* sp.).

According to the IUCN criteria, this new subspecies can be classified as Critically Endangered (CR) due to the restricted area in which it lives.

**ETYMOLOGY.** This new taxon is dedicated to Maria Stella Colomba (Urbino, Italy), our dear friend and colleague.

**REMARKS.** *Siciliaria septemplex mariastellae* n. ssp. differs from other *S. septemplex* populations for the yellowish color, reduced sutural papillae, more prominent dorsal keel, the shape of the columellar lamella (less high, less protruding forward and forming an angle of 90° internally in other populations); palatal edge of clausilium plate proximally more curved and distally more receding.

Genetically it is the most diverse population of *S. septemplex* (personal data).

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