

Description of *Alvania oetyliaca* n. sp. from the Mediterranean Sea (Mollusca Gastropoda Rissoidae)

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ABSTRACT

A new Mediterranean species of the genus *Alvania* Risso, 1826 (Rissooidea Rissoidae) is described: *Alvania oetyliaca* n. sp. All known specimens come from the type locality: Itilo Bay, Peloponnese, Greece. It is compared with the most similar congeners from the Mediterranean Sea: *A. subcrenulata* (Bucquoy, Dautzenberg et Dollfus, 1884), *A. amatii* Oliverio, 1986, *A. nestaresi* Oliverio et Amati, 1990, *A. balearica* Oliver et Templado, 2009, *A. aliciae* Amati, 2014, *A. hirta* Monterosato, 1884 and *A. cancellata* (Da Costa, 1778). It is also compared with *Alvania sleursi* (Amati, 1987) from the Atlantic and *A. laurae* Brunetti et Vecchi, 2012 from the Pleistocene of Italy.

KEY WORDS

Gastropoda; Rissoidae; Mediterranean Sea; *Alvania*; nova species; taxonomy.

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INTRODUCTION

The Mediterranean species of the genus *Alvania* Risso, 1826 (Rissoidae) have shells small for the family, ranging from to 1 mm length of *A. maximilicutiani* Scuderi, 2014 (Scuderi, 2014) to 7 mm length of *A. mamillata* Risso, 1826 (Amati et al., 2017). Their shells are fragile to robust, generally conical-ovate, and with weak to robust clathrate sculpture. They live in a wide variety of environments, from intertidal to deeper algal facies (e.g. Tringali, 2001; Amati, 2012), but also in the aphotic realm, from -1340 m (Gofas, 2007) down to the abyssal depths of -4300 m (Bouchet & Warén, 1993). Geographically, the genus *Alvania* as currently conceived occurs in the north-eastern Atlantic and the Mediterranean Sea, the north-western Atlantic and the Caribbean, the eastern Pacific, the

Indo-west Pacific, the temperate Australia and South Africa (Ponder, 1985). This genus is one of the most diversified groups within the family Rissoidae and is particularly species-rich in the Mediterranean Sea, with over 70 recognized species (Gofas, 2014; Gofas et Le Renard, 2016) including several species-complexes (e.g. *A. lineata* Risso, 1826, *A. scabra* (Philippi, 1844), *A. dictyophora* (Philippi, 1844) and *A. subcrenulata* (Boucquoy, Dautzenberg et Dollfus, 1884). The complex of *A. subcrenulata* has been recently described (Oliverio, 1986; Oliverio & Amati, 1990; Oliver & Templado, 2009; Gofas et al., 2011; Scaperrotta et al., 2010; 2011; 2012; Amati, 2014). A population of the *A. subcrenulata*-complex from Peloponnese, Greece (Ionian Sea) - morphologically distinct from all other known members - is here described as new, and compared with the most similar known species

from the Mediterranean Sea. The new species is also compared with the congener *A. sleursi* (Amati, 1987) from the Azores Island and with the extinct *A. laurae* Brunetti et Vecchi, 2012 from the Lower Pleistocene of Piacenza (Italy).

MATERIAL AND METHODS

The samples studied herein are stored in public and private collections, as detailed below, and all shells have been sorted out of bioclastic sediment samples.

Photographs have been taken with a Sony Cyber-Shot digital camera mounted on a Kyowa KBS stereomicroscope, edited with the Combine-Z software (Hadley, 2006). Scanning Electron Microscope (SEM) photographs were taken at the Interdepartmental Laboratory of Electron Microscopy (LIME, University "Roma Tre", Roma, Italy), by using a Philips XL30. Current systematics is based on the World Register of Marine Species (WoRMS, 2017).

ABBREVIATIONS AND ACRONYMS. BA: Bruno Amati collection (Rome, Italy); CS: Carlo Smriglio collection (Rome, Italy); IN: Italo Nofroni collection (Rome, Italy); IRSN: Institut Royal des Sciences Naturelles de Belgique, Brussels; JT: José Templado collection (Madrid, Spain), MCZR: Museo Civico di Zoologia, Roma; MNHN: Muséum National d'Histoire Naturelle, Paris; MO: Marco Oliverio collection (Rome, Italy); SC: Stefano Chiarelli collection (Vallelaghi, Trento, Italy); SEM: scanning electron microscope; isl/s: island/s; sh: shell/s; v: varix; v.: versus.

RESULTS

Systematics

Superorder CAENOGASTROPODA Cox, 1960
Superfamily RISSOIDEA Gray, 1847
Family RISSOIDAE Gray, 1847
Genus *Alvania* Risso, 1826

Type-species: *Alvania europea* Risso, 1826: 142, pl. IX, fig. 116 = *Alvania cimex* (Linnaeus, 1758) (*Turbo*), by subsequent designation Nevill, 1885: 105.

Alvania oetyliaca n. sp.
(Figs. 1–13; Tables 1–3)

TYPE LOCALITY. South of Itilo Bay, 36°41'19"N, 22°23'11"E, -6 m, Peloponnese (Greece), Ionian Sea (Fig. 20).

TYPE MATERIAL. Holotype (MNHN IM-2000-33612) H. 2.1 mm, W. 1.35 mm (Stefano Chiarelli legit, 18.VIII.1989) (Figs. 1–3, 10–13); 10 paratypes (5 juv.) (SC) (type locality); 2 paratypes (type locality) (BA).

OTHER EXAMINED MATERIAL. 20 sh (type locality) (SC); 2 sh juvenes (type locality) (SC); 3 sh (type locality) (BA).

Alvania amatii Oliverio, 1986. Holotype and 5 paratypes (MCZR); 20 paratypes (MO); 5 paratypes (BA); Aydıncık (Turkey), IX.1990, 6 sh (BA); Bodrum, loc. Gölköy, Muğla (Turkey), -0.5 m, VIII.1992, 2 sh (SC); Fethiye, loc. Balaban, Muğla (Turkey), -44.5 m, VIII.1992, 2 sh (SC); Fethiye, loc. Aquarium, Muğla (Turkey), -27 m, VIII.1992, 63 sh (SC); Zakynthos Isl. (Greece), -2/3 m, 16 sh (BA); Cephalonia Isl., Agia Efimia (Greece), -7/8 m, VIII.1990 1 sh (BA); Rodi Isl. (Greece), 2 sh (BA); Gournia, Crete Isl. (Greece), 9 sh (BA); Crete Isl. (Greece), 3 sh (BA); District of Kirenya (Cyprus), -7 m, VIII.1992, 2 sh (SC); Capo Greco Protaras (Cyprus), IX.2011, 30 sh (BA); Sant'Janni Isl. Maratea, Potenza (Italy), -24 m, 27 sh (BA); Scilla (Italy), -43/44 m, VII.2015, 33 sh (BA); Scilla (Italy), -36 m, XII.1994, 102 sh (SC); Taormina (Italy), -32 m, XI.1998, 113 sh (SC).

Alvania nestaresi Oliverio et Amati, 1990. Holotype and 5 paratypes (MCZR), 15 paratypes (MO), 15 paratypes (BA), Almuñecar, Granada (Spain) -20 m, 5 sh (BA); La Herradura, Granada (Spain) -18/20 m, VIII.1993, 49 sh. (SC); La Herradura, Granada (Spain) -13/14 m, VIII.1994, 11 sh (SC); Getares, Punta Carnero, Cadiz (Spain), beached, 1988, 2 sh (BA); Getares, Algeciras, Cadiz (Spain), beached, VIII.1985, 2 sh (BA); Getares north Algeciras, Cadiz (Spain), beached, IX.1987, 2 sh (BA); Cabo de Palos, Murcia (Spain), 1 sh (BA); Cabo de Gata, Almería (Spain) -4/5 m, VIII.1994, 3 sh (SC); Cadaqués, Girona (Spain) -25 m, 2 sh (BA).

Alvania subcrenulata. Lectotype (ex Dautzenberg collection MNHN n° 24812), 1 paralectotype, St. Raphael (France) Dautzenberg collection

(IRSN, Brussel), 13 paralectotypes, Cannes (France) (Monterosato collection ex Dautzenberg collection, MCZR, L10.22134); Salina Island, Sicily (Italy), -35 m >1000 sh (BA); Castiglione, Livorno (Italy), rock pools, XII.1991, 1 specimen (SC); Scilla, Reggio Calabria (Italy), -36 m, XII.1994, 6 sh (SC); Taormina, Sicily (Italy), -32 m, XI.1998, >100 sh (SC); Cannizzaro, Sicily (Italy), -45/46 m, 22 sh (SC); Porto Istana, Sardinia (Italy), beached, X.1983, >200 sh (SC); Giglio Isl., Grosseto (Italy), -30 m, X.1993, >500 sh (SC); Punta degli Infreschi, Salerno (Italy), -50 m, VII.1994, 5 sh (SC); Getares, Algeciras (Spain), rock pools, VIII.1994, 31 sh (SC); Getares, Algeciras (Spain), -2/3m, VIII.1994, 31 sh (SC).

Alvania balearica Oliver et Templado, 2009. Topotypes, 45 sh, from the Balears (Minorca and Ibiza) and Columbretes (Spain), 10–40 m depth (JT).

Alvania aliciae Amati, 2014: holotype (MNHN IM-2000-27248), 1 paratype: (MNCN 15.05/60121), 1 paratype (MCZR 0228 cabinet of typical material), 5 paratypes (IN), 5 paratypes (MO), 5 paratypes (BA), 1 paratype (CS).

Alvania hirta Monterosato, 1884. Pozzallo -40 m (Italy), VIII.1986 5 sh (BA); Cannizzaro, Sicily (Italy), -30/43 m, 160 sh (BA); Cannizzaro, Sicily (Italy), -45/46 m, >800 sh (SC); Capo Asparano, Sicily (Italy), IX.1985, 67 sh (BA); Vendicari, Sicily (Italy), -28 m, 1 sh (BA); Salina Isl., Sicily (Italy), -35 m, 2002, 60 sh (BA); Marzameni, Franata di levante, Sicily (Italy), -33 m, 14 sh (BA); Island delle Correnti (Italy), -1.5 m, 1 sh (BA); Scilla (Italy), -43/44 m, VII.2015, 29 sh (BA); Scilla (Italy), -42 m, I.1992, 19 sh (SC); Scilla (Italy), -36 m, XII.1994, 62 sh (SC); Taormina, Sicily (Italy), -32 m, XI.1998, >100 sh (SC); Torre di Vendicari, Sicily (Italy), -34 m, VIII.1987, 2 sh (SC).

Alvania cancellata (Da Costa, 1778). Madera Isl., 11 sh (Monterosato coll. ex Watson coll., MCZR L10.22125); Giglio Isl., (Italy) -27/30 m, 20 sh (BA); Castiglione, Livorno (Italy) rock pools, XII.1981, 6 sh (SC); Giglio Isl., (Italy) -30 m, X.1993, 13 sh (SC); Argentario, Argentario Isl., Grosseto (Italy) -6/7 m, XI.1991, 3 sh (SC); Argentario, Cala Grande, Grosseto (Italy) -28.5 m, XI.1990, 11 sh (SC); Argentario, Grosseto (Italy) -31 m, X.1990, 52 sh (SC); S. Stefano Isl., Ventotene Isl. -40 m, 1 sh (BA); Bosa Marina, Sardinia,

3 sh (BA); Lampedusa Isl., 2 sh (BA); Cala Gonone, Dorgali, Sardinia -2/4 m, 2010, 8 sh (BA); Salina Isl. 'Grotta dei gamberetti' -35 m, 2002, 1 sh (BA); S. Pietro Isl., loc. Punta -1/4 m, IX.1996, 4 sh (BA); Capo Asparano, Sicily, IX.1985, 1 sh (BA); Vendicari Isl. (Sicily) -28 m, 6 sh (BA); Scilla -43/44 m, VII.2015, 5 sh (BA); Scilla, Reggio Calabria (Italy), -36 m, XII.1994, 9 sh (SC); Scilla, Reggio Calabria (Italy), -43.5 m, VI.1992, 8 sh (SC); Cannizzaro, Sicily (Italy), -45/46 m, 20 sh (SC); Porto Istana, Sardinia (Italy), beached, X.1983, 5 sh (SC); Umag (Croatia), beached, 43 sh (BA); Lastovo Isl. (Croatia), -50 m, 56 sh (BA); Torre Flavia, -26 m, 1986, 4 sh (BA); La Herradura, Granada (Spain), -13/14m, VIII.1994, 64 sh (SC); Zakynthos Isl. (Greece), -2/3 m, 1990, 2 sh (BA); Fethiye, località Balaban, Muğla (Turchia), -44.5 m, VIII.1992, 7 sh (SC); Fethiye, località Aquarium, Muğla (Turchia), -27 m, VIII.1992, 1 sh (SC).

Alvania sleursi. Holotype (Dautzenberg coll. IRSN), 32 paratypes (Dautzenberg coll. IRSN), 4 paratypes (ex Dautzenberg coll. MCZR), 25 paratypes (Dautzenberg coll. IRSN), 12 paratypes (ex Marie coll., ex Dautzenberg coll. IRSN); Ponta Delgada, Azores Isl., 1 sh (BA).

DESCRIPTION OF THE HOLOTYPE. See Table 1 for ranges of measurements. Shell small for the genus (Figs. 1–3 and 10–13), height 2.10 mm, width 1.35 mm, solid, conical-ovate, with subsquare outline with the first whorls turricolated, height/width ratio 1.55. Protoconch (Fig. 11) paucispiral, with a moderately twisted nucleus, of 1.30 whorls; height 0.33 mm; diameter of the nucleus 0.10 mm; diameter of the first half whorl 0.21 mm; maximum diameter 0.32 mm; sculptured by coarse tubercles randomly arranged. Protoconch-teleoconch boundary well marked. Teleoconch of 3.25 convex whorls, with impressed sutures. Axial and spiral sculpture of the same strength. Axial sculpture of 14 + v thin, orthocline on the first whorls and slightly prosocline ribs on the last whorl, smaller than the interspaces, reaching the base. Axials thickening in the subsutural area on the penultimate whorl and especially on the last whorl, forming small nodules. Shortly before reaching the varix, these nodules turn away from the suture, simulating a spiral cord. Two spiral cords (II and IV) starting immediately after the protoconch-teleoconch boundary. Spiral cords I and III absents. Deep and square interspa-

ces. Last whorl with 6 thin and equidistant spiral cords on the last whorl, 2 over the aperture and 4 slightly thicker on the base. Small tubercles barely acute, at the intersections. Micro sculpture on teleoconch of micro tubercles arranged in spirals (Figs. 12, 13). Umbilical chink absent. Aperture large, pear-shaped, rounded ovate anteriorly, aperture height 0.97 mm, shell height/aperture height ratio 2.16. Large external varix more than twice as broad as the axial ribs, slightly prosocline, with five weak and elongated internal teeth. Columella smooth. Coloration monochrome, white. Operculum and soft parts unknown.

VARIABILITY. See Tables 1–3 for ranges of measurements. Maximum size: 2.41 mm height and width 1.46 mm. External varix with five-six weak and elongated internal teeth. Rare specimens with light brown spiral bands in particularly fresh samples.

ETYMOLOGY. This species is named after the Latin name *Oetylus* (in Greek *Oitylo* = *Oítulo*), of the type locality in the Gulf of Kalamata (most famous as the Gulf of Messenia).

DISTRIBUTION AND BIOLOGY. So far known only from the type locality, Itilo Bay, Peloponnese, Greece, Ionian Sea (Mediterranean Sea). Empty shells were found in bioclastic sediment collected at -6 m by the second author.

REMARKS. In recent decades the checklist of the Hellenic malacofauna has been enriched with new records of species of the genus *Alvania*: *A. schwartziana* Brusina, 1866, *A. fractospira* (Oberling, 1970), *A. colossophilus* Oberling, 1970, *A. hallgassi* Amati et Oliverio, 1985, *A. amatii* Oliverio, 1986, *A. datchaensis* Amati et Oliverio, 1987, *A. settepassii* Amati et Nofroni, 1985, *A. clarae* Nofroni et Pizzini, 1991 and *A. dalmatica* Buzzurro et Prkic, 2007 (e.g. Oberling, 1970; Zenetos et al., 1997; Amati, 2012; Manousis, 2012; Romani, 2014; Romani et al., personal unpublished data).

For the Greek waters, Deshayes (1835) listed under *Rissoa* Desmarest, 1814 only 4 taxa referable to 3 common species of *Alvania* (updated systematic position): *R. lactea* Michaud, 1830; *R. crenulata* Michaud, 1830 [= *A. cancellata* (da Costa, 1778)] sensu Deshayes = *A. cimex* complex; *R. cancellata* Desmarests, 1814 [= *A. cimex* complex]; *Rissoa buc-*

cinoides Deshayes, 1835 = *A. discors* (Allan, 1818). Most recently, Zenetos & Van Aartsen (1995) listed for Rhodes Island 5 *Alvania* species. De Smit & Baba (2000) listed 6 *Alvania* species found in southern Cephalonia and Romani et al. (2017) for the Corfù Island listed 17 *Alvania* species. Koukouras (2010) listed for the Greek waters, 27 taxa of *Alvania* referable to 25 species: *A. consociella* Monterosato, 1884 = *A. lanciae* (Calcara, 1845) e *A. dorbignyi* (Audouin, 1826) = dubious record. Manousis (2012) listed for the Greek waters, 28 species of *Alvania*, two of which belonging to the *A. subcrenulata* group: *Alvania subcrenulata* and *Alvania amatii* Oliverio, 1986.

Comparisons of diagnosis. *Alvania subcrenulata* (Fig. 18, see also Oliverio & Amati, 1990: 85, tav. I, figs. 2 and 4, tav II, fig. 8; Giannuzzi-Savelli et al., 2002: 103, figs. 400, 408c; Gofas et al., 2011: 180, 2 unnumbered figs; Scaperrotta et al., 2012: 56, 5 unnumbered figs; Amati, 2014: 92, 93, figs. 3A–D, 4A–B) differs from *A. oetyliaca* n. sp. by the more slender profile and larger sizes (2.45–3.0 mm height v. height 2.1–2.41 mm); for the number of spiral cords on the last whorl (7–8 v. 6), and above the aperture (3–4 v. 2); the protoconch with tubercles and apical keel v. coarse tubercles randomly arranged.

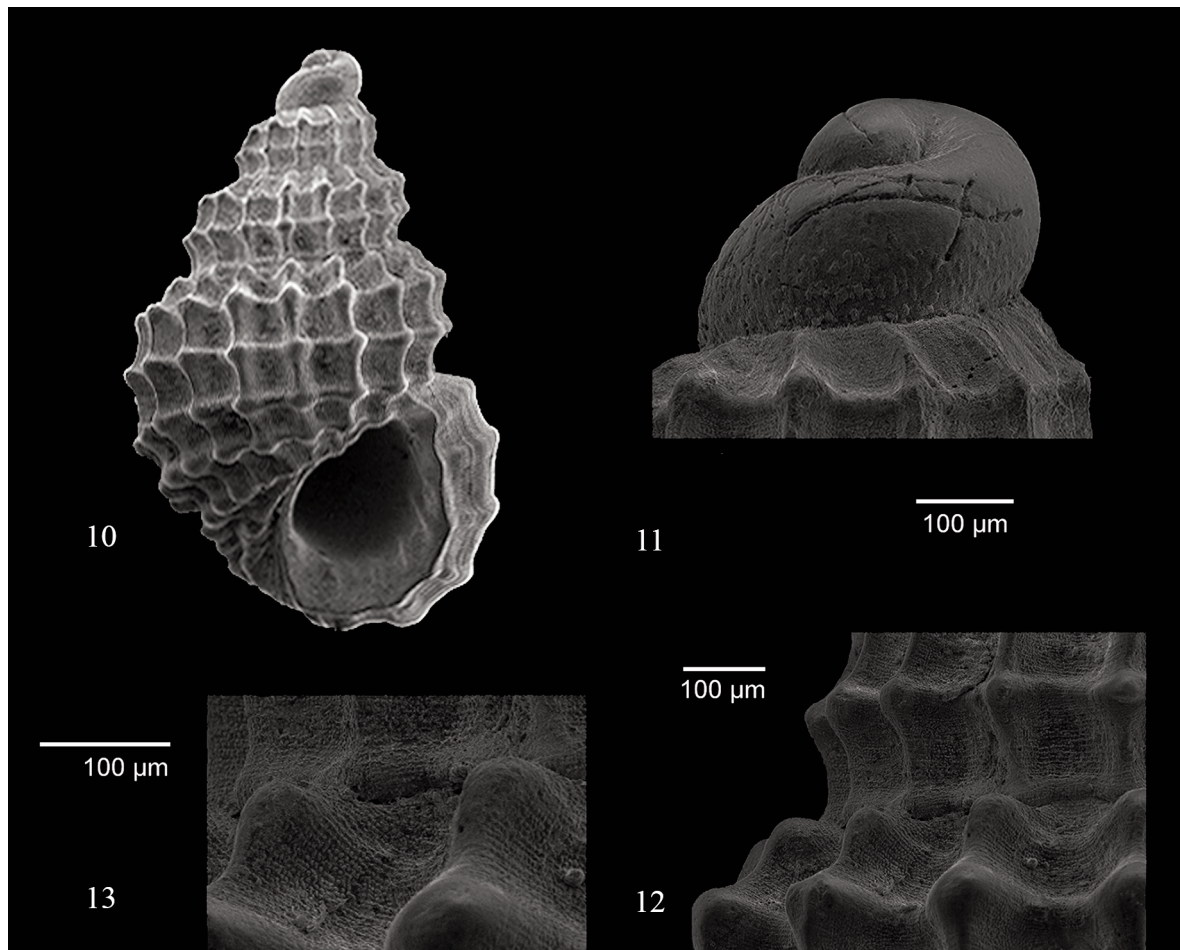
Alvania amatii (see Oliverio, 1986: 33, figs. 1–4; Oliverio & Amati, 1990: 85, tav. I, fig. 5; Giannuzzi-Savelli et al., 2002: 396, figs. 396, 397, 408a; Scaperrotta et al. 2012: 42, 5 unnumbered figs; Amati, 2014: 94, fig. 5D–E; Bitlis-Bakır & Öztürk, 2016: 448, tav. 2, fig. 9; Bitlis-Bakır & Öztürk, 2017: 6, figs. 2A–B) differs from *A. oetyliaca* n. sp. by the slender profile; number of spiral cords on the last whorl (7–8 v. 6), and above the aperture (3–4 v. 2); the protoconch with 4–5 spiral cords v. coarse tubercles randomly arranged.

Alvania nestaresi (see Oliverio & Amati, 1990: 85, tav. I, fig. 5, tav. II, figs. 6, 7; Giannuzzi-Savelli et al., 2002: 101, figs. 392, 395d; Gofas et al., 2011: 180, 3 unnumbered figs.; Scaperrotta et al., 2012: 51, 5 unnumbered figs.; Amati, 2014: 94, fig. 5A) differs from *A. oetyliaca* n. sp. by the more inflated profile; number of spiral cords on the last whorl (8–9 v. 6), and above the aperture (4 v. 2); the protoconch with fewer whorls (1.1–1.2 v. 1.25–1.3) and six spiral cords v. coarse tubercles randomly arranged.

Alvania balearica (Figs. 15, 16, see also Oliver



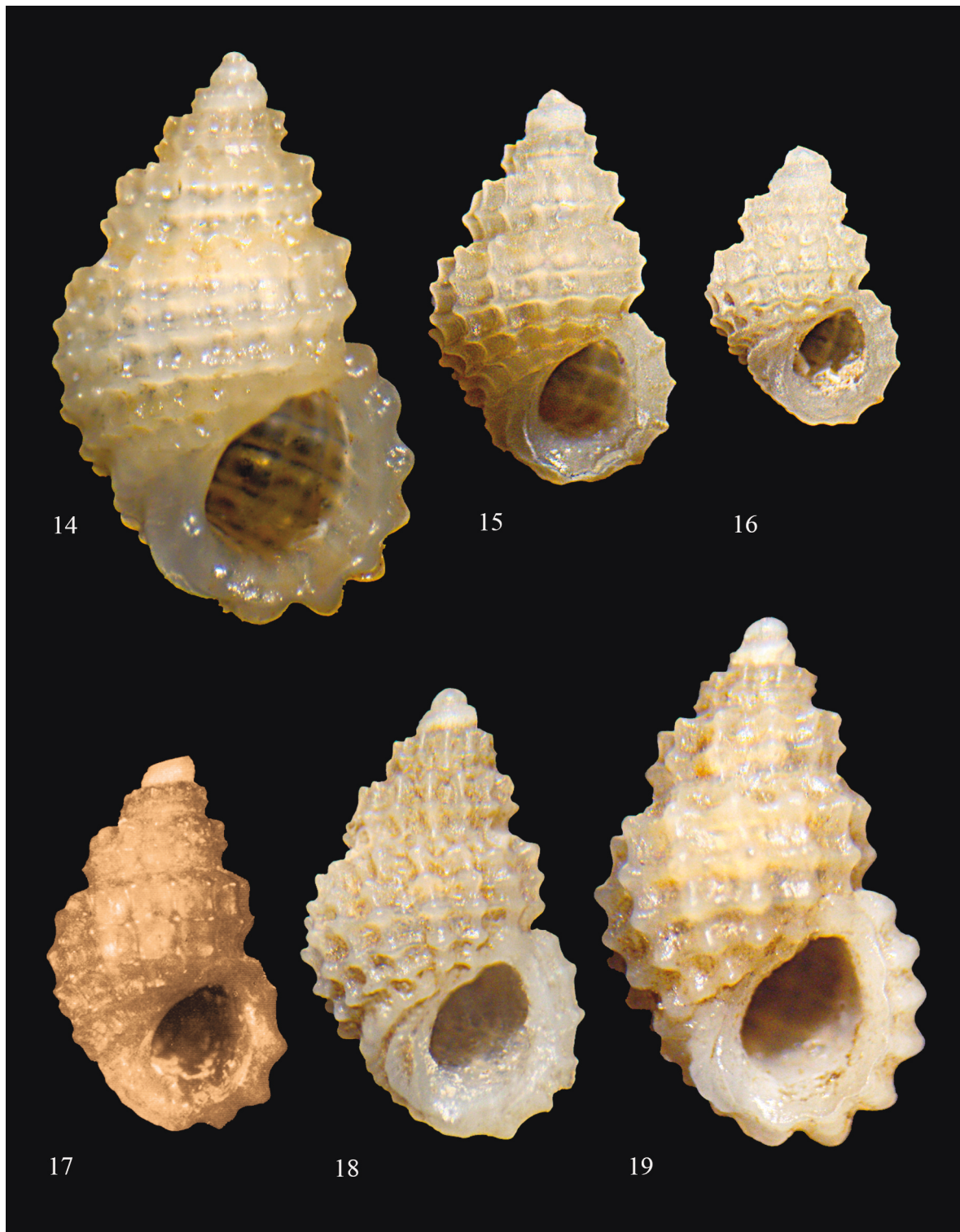
Figures 1–9. *Alvania oetyliaca* n. sp. from the type locality Itilo Bay, Peloponnese, Greece. Figs. 1–3: holotype, height 2.1 mm (MNHN IM-2000-33612). Figs. 4–6: paratype, height 2.1 mm (BA). Figs. 7–9: paratype, height 2.13 mm (SC).



Figures 10–13. *Alvania oetyliaca* n. sp. from type locality Itilo Bay, Peloponnese, Greece (MNHN IM-2000-33612). Fig. 10: holotype in apertural view, height 2.1 mm. Fig. 11: particular of protoconch. Figs. 12, 13: detail of the teleoconch microsculpture.

Teleoconch	1	2	3	4	Min-max	Mean
Height	2.1	2.1	2.13	2.16	2.1-2.16	2.12
Width	1.35	1.32	1.42	1.40	1.32-1.42	1.37
Aperture height	0.97	0.93	1.00	0.93	0.93-1.0	0.96
Height/Width ratio	1.555	1.590	1.500	1.543	1.500-1.590	1.55
Height/aperture height	2.165	2.258	2.130	2.322	2.130-2.322	2.22
N° of whorls	3.25	3.25	3.4	3.2	3.2-3.4	3.27
N° axial ribs on last whorls + varix	14+v	14+v	17+v	13+v	13-17+v	14.5
N° spiral cords on last whorls (above aperture)		6(2)	6(2)	6(2)	6(2)	6(2)
Protoconch	1	2	3	4	Min-max	Mean
Height	0.33	0.30	0.30	0.32	0.30-0.33	0.312
Diameter of nucleus	0.10	0.09	0.09	0.10	0.09-0.10	0.095
Diameter of first half whorl	0.21	0.20	0.20	0.23	0.20-0.23	0.21
Maximum diameter	0.32	0.33	0.30	0.33	0.30-0.33	0.32
N° of whorls	1.30	1.25	1.25	1.25	1.25-1.30	1.26

Table 1. Measurements of the teleoconch and protoconch of *Alvania oetyliaca* n. sp. in mm. Numbers 1: holotype (MNHN IM-2000-33612); number 2: paratype (BA); numbers 3 and 4: paratypes (SC).



Figures 14–19. *Alvania* spp. Fig. 14: *Alvania cancellata* ‘morpho minor’ Madeira Island height 3.3 mm (MCZR). Fig. 15: *Alvania balearica*, Ibiza, Spain height 2.25 mm (JT). Fig. 16: *Alvania balearica* ‘morpho minor’ Ibiza, Spain height 1.62 mm (JT). Fig. 17: *Alvania sleursi*, holotype, S.ta Cruz de Flores -40 m, Azores Island height 2.15 mm (IRSN). Fig. 18: *Alvania subcrenulata*, Salina Island, Sicily, Italy height 2.6 mm (BA). Fig. 19: *Alvania hirta* Monterosato, 1884, Salina Island, Sicily, Italy height 3 mm (BA).

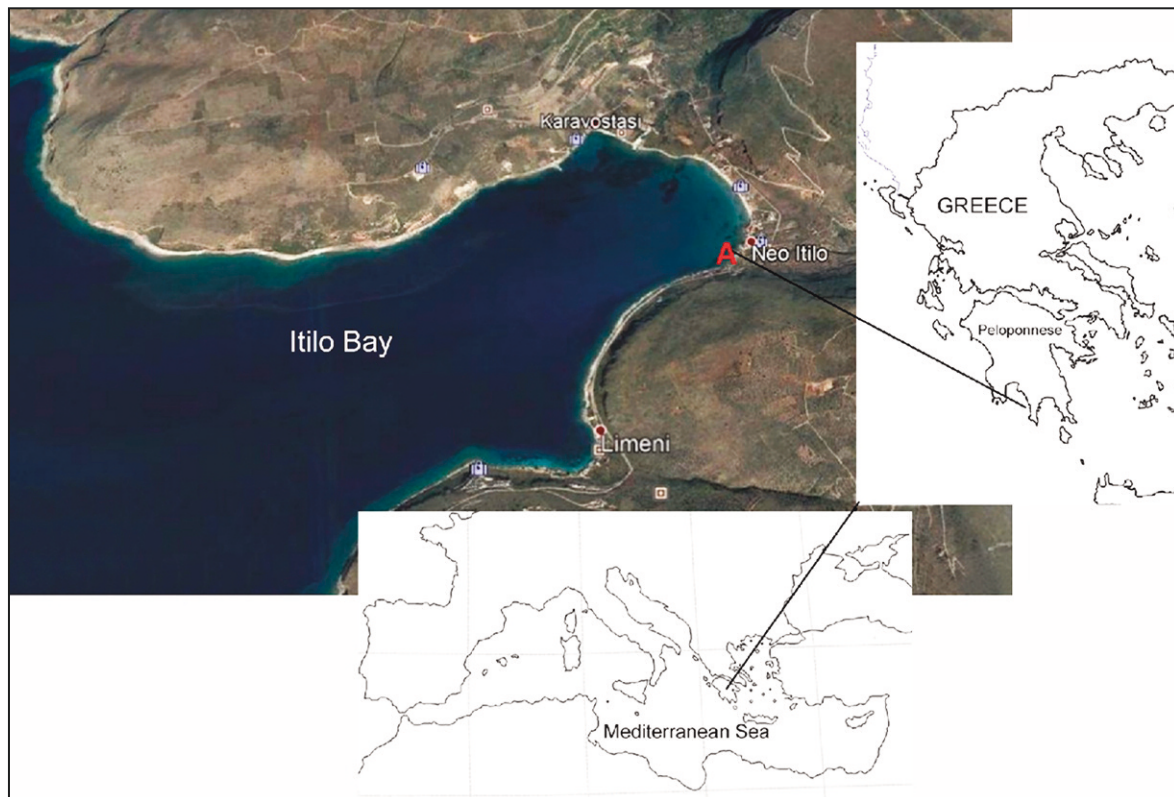


Figure 20. Map showing the type locality (A red) of the *Alvania oetyliaca* n. sp.

Teleoconch	5	6	7	8	9	10	Min-max
N° of whorls	3.75	3.5	3.5	3.5	3.3	3.25	3.25-3.75
N° axial ribs on last whorls + varix	14+v	16+v	13+v	16+v	14+v	14+v	13-17+v
N° spiral cords on last whorls (above aperture)	6(2)	6(2)	6(2)	6(2)	6(2)	6(2)	6(2)

Table 2. Measurements of the teleoconch of *Alvania oetyliaca* n. sp. Numbers 5–10: paratypes (SC).

& Templado, 2009: 59, figs. 1–7; Amati, 2014: 94, figs. 5B–C) has a very similar shell to that of *A. oetyliaca* n. sp.; it differs essentially in the protoconch with 3 principal spiral cords and tubercles v. coarse tubercles randomly arranged.

Alvania alicae (see Amati, 2014: 89, 91, figs. 1A–C, 2A–D) differs from *A. oetyliaca* n. sp. by the slender profile; number of spiral cords on the last whorl (7–8 v. 6), and above the aperture (3–4 v. 2); the protoconch with 6–7 spiral cords v. coarse tubercles randomly arranged.

Alvania hirta (Fig. 19, see also Giannuzzi-Savelli et al., 2002: 103, fig. 399; Scaperrotta et al., 2011: 62, 5 unnumbered figures) differs from *A. oetyliaca* n. sp. by the slender and turricolated profile; more robust spiral cords with more protruding and acute tubercles at the intersection; the more thickened external varix with more prominent tubercles; the protoconch sculptured with micro granules arranged in dense spirals v. coarse tubercles randomly arranged.

Alvania cancellata (Fig. 14, see also Ponder,

Teleoconch	<i>Alvania subcrenulata</i>	<i>Alvania amatii</i>	<i>Alvania nestaresi</i>	<i>Alvania balearica</i>	<i>Alvania aliceae</i>	<i>Alvania oetyliaca</i> n. sp.
Height	2.45-3	1.8-2.5	1.85-2.9	1.6-2.5	2-05-2.8	2.1-2.41
Width	1.6-1.85	1.2-1.55	1.3-1.85	1.07-1.5	1.3-1.6	1.32-1.46
Aperture height	1.2-1.45	0.9-1.0	0.7-1.45	0.75-1.1	0.95-1.2	0.93-1.0
N° of whorls	3.1-3.7	2.7-3.5	2.7-3.7	2.5-3.7	3.1-4.0	3.2-3.4
Coloration	White with or without brownish bands	White with or without brownish bands	Whithis with brownish bands	White with or without brownish bands	White with or without brownish bands	White with or without brownish bands
Profile	Ovate-conical, with rather wide base	Ovate-conical tending to cylindrical	Ovate-conical tending to globular	Ovate-conical tending to turriculated	Ovate-conical, with moderate basal diameter tending to triangular	Ovate-conical, tending to subsquare-turriculated
N° axial ribs on last whorls + varix	13-14 + v	14-17 + v	14-19 + v	11-16 + v	13-15 + v	13-17 + v
N° spiral cords on last whorls above aperture	3-4	3-4	4	2-3 (4)	3-4	2
Spirals last whorls - base	4	4	4-5	4	4	4
Start of III spiral cord	1.2-1.8 whorls	1.3-1.7 whorls	1.5-2.1 whorls	1.5-2.2 whorls	1.8-3 whorls	absent
Start of I spiral cord	1.8-3 whorls	2-3 whorls	1-1.5 whorls	Only on the varix or absent	1.5-2.6 whorls	absent
Tubercles	Medium sized, from slightly to very pronounced	Medium sized, slightly pronounced	Large sized, rounded and slightly pronounced	Medium sized, very pronounced	Small sized, prominent, almost spiny	Small sized, slightly prominent, almost spiny
Protoconch	<i>Alvania subcrenulata</i>	<i>Alvania amatii</i>	<i>Alvania nestaresi</i>	<i>Alvania balearica</i>	<i>Alvania aliceae</i>	<i>Alvania oetyliaca</i> n. sp.
Height	0.27-0.38	0.30-0.32	0.25-0.30	0.30-0.35	0.30-0.35	0.30-0.33
Width	0.10-0.14	0.10-0.12	0.10-0.15	0.06-0.10	0.10-0.12	0.09-0.10
Diameter of first half whorl	0.20-0.22	0.23-0.25	0.20-0.25	0.20-0.25	0.20-0.25	0.20-0.23
Maximum diameter	0.32-0.38	0.35-0.40	0.32-0.37	0.325-0.375	0.35-0.40	0.30-0.33
N° of whorls	1.2-1.4	1-1.3	1.1-1.2	1.2-1.4	1.25-1.3	1.25-1.3
Sculpture	apical keel with tubercles	4-5 spiral cords	6 spiral cords	3 principal spiral cords	6-7 spiral cords	coarse tubercles

Table 3. Measurements of the teleoconch and the protoconch in Mediterranean species of the *Alvania subcrenulata* complex, in mm.

1985: 139, figs. A–C; Giannuzzi-Savelli et al., 2002: 102, figs. 398, 408b; Ávila, 2005: 268, 269, tav. III, figs. 1–12; Gofas, 2007: 790, figs. 5A–B; Garilli & Parrinello, 2010: 169, fig. G; Scaperrotta et al., 2011: 56, 5 unnumbered figs.; Gofas et al., 2011: 178, 3 unnumbered figs.; Bitlis-Bakır & Öztürk, 2016: 448, tav. 2, fig. 12; Bitlis-Bakır & Öztürk, 2017: 6, figs. 2I–J) differs from *A. oetyliaca* n. sp. by the larger size (H 3.1–5.0 mm v. H 2.1–2.41 mm); the multispiral protoconch v. paucispiral protoconch; and a visible columellar tubercle, absent in *A. oetyliaca* n. sp.

Alvania sleursi (Fig. 17, see also Amati, 1987: 30, figs. 1, 2; Gofas, 1990: 128, figs. 39–42; Ávila, 2005: 279, pl. VIII, figs. 1–12; de Frias Martins et al., 2009: 41, pl. IX, figs. 141, 142) has the shell very similar to that of *A. oetyliaca* n. sp.; it differs essentially for the twisted protoconch of 1.1–1.3 slightly convex whorls, with 5–6 evident spiral cords v. protoconch with a moderately twisted nucleus, sculptured by coarse tubercles randomly arranged.

Alvania laurae (see Brunetti & Vecchi, 2012: 45, figs. 3A–C; Brunetti & Vecchi, 2014: 116, tables 1c–d) of the Lower Pleistocene of Piacenza (Italy) has the shell very similar to that of *A. oetyliaca* n. sp. It differs in its convex outline v. subsquare outline with the first whorls turricolated in *A. oetyliaca* n. sp. The protoconch of *A. laurae* is initially sculptured by 5 fine cords, increasing to 9 on the last part v. sculpted by coarse tubercles arranged randomly; the protoconch of *A. laurae* is larger: number of whorls 1.2, diameter of nucleus 0.125 mm, diameter of first half whorl 0.275 mm, maximum diameter 0.4225 mm, height 0.368 mm (Brunetti & Vecchi, 2012) v. number of whorls 1.25–1.3, diameter of nucleus 0.09–0.10 mm, diameter of first half whorl 0.20–0.23 mm, maximum diameter 0.30–0.33 mm, height 0.30–0.33 mm in *Alvania oetyliaca* n. sp.

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