

On the occurrence of *Spirolaxis lamellifer* (Rehder, 1935) in the Mediterranean Sea  
(Gastropoda, Prosobranchia, Architectonicidae)

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*Spirolaxis lamellifer* (Rehder, 1935), first record from the Mediterranean Sea: central Tyrrhenian Sea, coast of Latium, Italy.

Key words: Gastropoda, Architectonicidae, *Spirolaxis lamellifer*, Mediterranean Sea, Italy.

## INTRODUCTION

The genus *Spirolaxis* Monterosato, 1913, was until now thought to be represented in the Mediterranean Sea only by *Spirolaxis clenchi* Jaume & Borro, 1946, which mediterranean occurrence and systematic position has been discussed by Smriglio & Mariottini (1990). In this paper for the first time another interesting species of Architectonicidae J.E. Gray, 1840, is reported from the Mediterranean basin, viz. *Spirolaxis lamellifer* (Rehder, 1935), originally described from Florida. As for the systematic position of this species, we followed Bieler (1993).

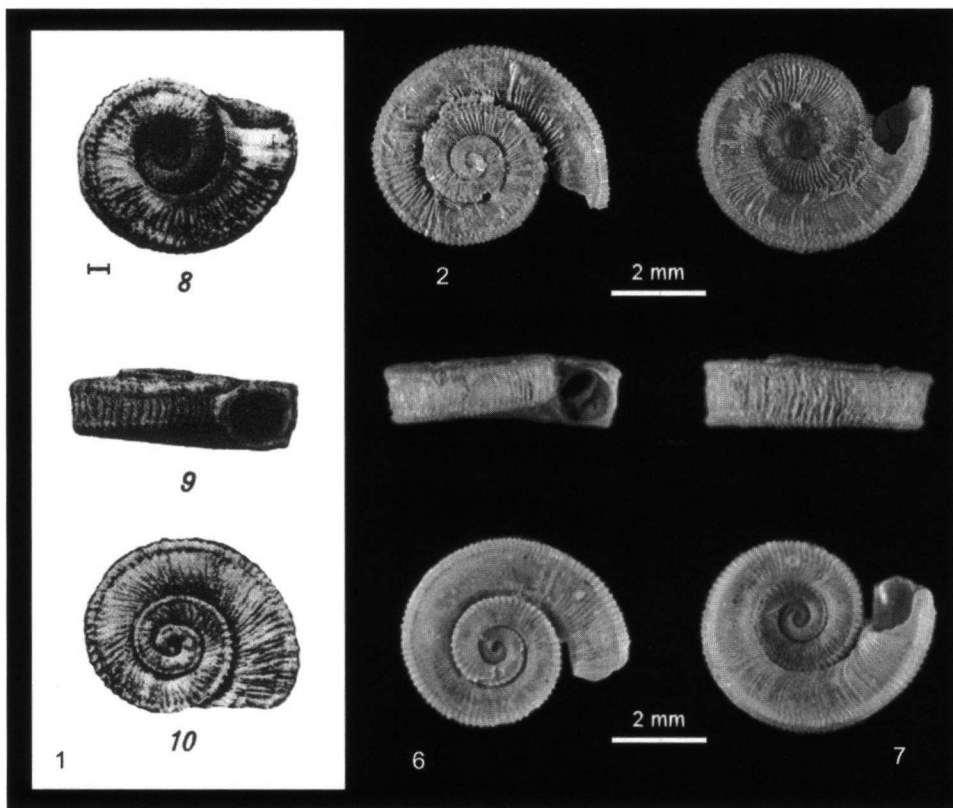
## MATERIAL

The material examined concerned three architectonicid species of the genus *Spirolaxis*; all shells were identified after conchological comparison with original descriptions and illustrations. Two specimens of *Spirolaxis lamellifer* (Rehder, 1935), both lacking soft parts, were collected from the central Tyrrhenian Sea. Specimen A, off the south-coast of Latium [San Felice Circeo (LT)], dredged at a depth of 80-100 m, on a sea bottom hosting the biocoenosis C (sensu Pérès & Picard, 1964), 4.8 mm in width (CR). Specimen B, offshore Ponza Island (LT), dredged at a depth of 160 m, 4.0 mm in width (CS-PM).

Two specimens of *Spirolaxis centrifugus* Monterosato, 1890, offshore Lanzarote Island (Canary Islands, Spain), dredged at a depth of 50 m, collection CS-PM.

Fifty-six specimens of *Spirolaxis clenchi* Jaume & Borro, 1946, central Tyrrhenian Sea, off the coast of Latium (41°51'N 11°28' E), dredged at a depth of 450-600 m (CS-PM).

Abbreviations used for collections: CR, Carlo Rebecchini (Rome, Italy); CS-PM, Carlo Smriglio and Paolo Mariottini (Rome, Italy).



Figs 1-7. *Spirolaxis lamellifer* (Rehder, 1935). 1, original figure by Rehder 1935 (pl. 7 figs 8-10); 2-5, specimen A, central Tyrrhenian Sea, off the southcoast of Latium, 80-100 m; 6-7, specimen B, central Tyrrhenian Sea, offshore Ponza Island, 160 m. 2, 6, apical views; 5, 7, basal views.

## SYSTEMATICS

Family Architectonicidae J.E. Gray, 1840  
Genus *Spirolaxis* Monterosato, 1913

*Spirolaxis lamellifer* (Rehder, 1935) (figs 1-13)

*Pseudomalaxis lamellifera* Rehder, 1935: 128, pl. 7 figs 8-10 (USNM 426235/holotype, "Florida Straits in 205 fathoms").

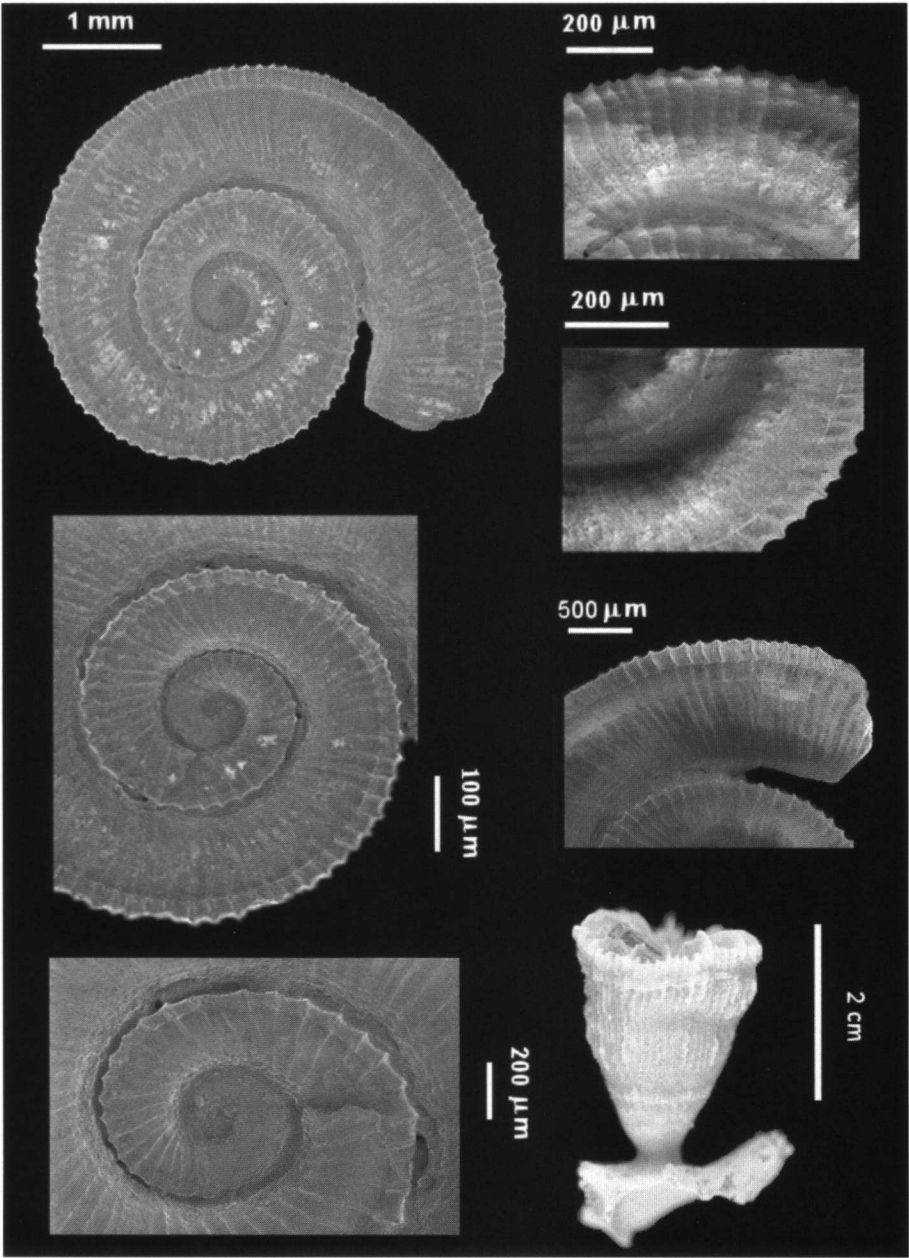
Original description (Rehder, 1935: 128). — "Shell small, discoidal, flattened on the upper surface, broadly umbilicate below, the early whorls slightly exserted above the sur-

face of the last whorl. Color grayish white, the periostracum yellowish brown. Nuclear whorls smoothish, inverted (the nucleus has been broken off since these characters were noted). Postnuclear whorls, of which there are about three, have very faint axial riblets, which gradually increase in strength, as does the subsutural cord, which appears in the early whorls. The last whorl is almost quadrangular, the right angles which bound the peripheral surface marked by cordlike carinae; the upper surface somewhat depressed at the suture, the lower surface rounded at the edge of the umbilicus. The whole surface is sculptured with prominent, rather closely set, retractively curved ribs; they are more prominent, almost nodulose, where they cross the carinae, and they are symmetrically arcuate on the peripheral surface, between the carinae; near the mouth the ribs are more closely and irregularly set, their prominence being largely due to the folding of periostracum. The mouth has been broken away, but the broken aperture is rounded, while the carinae give the outer edge an angular appearance. The unique holotype (U.S.N.M. no. 426235) was dredged in the Florida Straits in 205 fathoms, and measures 3 mm. in width and 1 mm. in height."

## DISCUSSION

The geographical distribution of *S. lamellifer* was previously discussed by Talavera Casanas (1982), Bieler (1983, 1984), and Fernandes & Rolán (1994), all authors indicating that this architectonicid is amphi-atlantic, ranging from the central western (Bahamas, Florida, Northern Brazil) to the central eastern (Spain, Morocco) Atlantic Ocean. Surprisingly, two specimens of *S. lamellifer* (figs 1-7) have been sorted out analyzing sediment samples collected from two spots close together in the central Tyrrhenian Sea off the south-coast of Latium. The shell of *S. lamellifer* at first glance is easy distinguishable from the ones of *S. clenchi* and the allied Atlantic *S. centrifugus* Monterosato, 1890 (the systematic position of these two species has been discussed by Smriglio & Mariottini, 1990). In fact, the body whorls of *S. lamellifer* are always jointed during shell development, so the teleoconch does not show the typical half-moon shaped opening, created by the separation of the initial whorls, typical feature of the other two species mentioned above. Furthermore, *S. lamellifer* shows two strong diagnostic characters that are missing in *S. clenchi* and *S. centrifugus*: 1) the teleoconch sculpture consists of many "curved ribs" (the specific name refers to this feature!); 2) the suture is deeply marked (figs 8-13).

Both mediterranean shells of *S. lamellifer* look very fresh; specimen A still retains the periostracum (figs 2-5). This strongly suggests that this species can be added to the Recent malacofauna of the Mediterranean Sea. The family Architectonicidae includes species invariably feeding upon cnidarians, according to Bieler (1993: 24) "Data and habits and habitats are available for several architectonicid species. All members of the family feed on coelenterates, and their radulae (frequently ptenoglossate-like as in other coelenterate feeders such as Epitoniidae) and alimentary system (with cuticularization) show several specializations". We like to recall the mediterranean record of another interesting architectonicid, *Solatisonax allerii* (Sequenza G., 1876), found feeding on a scleractinian coral by Mifsud (1997), as another well documented case of association (predation/parasitism) between an architectonicid and cnidarians. *Carophyllia smithy* (Stock-Brod.) form *clavus* (fig. 14) can be tentatively assigned as a potential host Madreporaria for *S. lamellifer*, since its common presence in the dredged sediment from which the specimen B (figs 6-7, 8-13) has been obtained.



Figs 8-13. *Spirolaxis lamellifer* (Rehder, 1935). 8-13, specimen A, central Tyrrhenian Sea, off the south-coast of Latium, 80-100 m, details of the sculpture. Fig 14. *Carophyllia smithy* (Stock-Brod.) form *clavus*.

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