

NOTA BREVE - SHORT NOTE

AMPHIBLESTRUM (AVICULAMPHIBLESTRUM) RUGGEROI SP. N., SUBGEN. N. (BRYOZOA) FROM THE WESTERN MEDITERRANEAN SEA

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Received April 4, 1999; accepted September 6, 1999

Key-words: Bryozoa, new taxa, deep-sea, Recent, Mediterranean.

Riassunto. *Amphiblestrum (Aviculamphiblestrum) ruggeroi* sp.n. viene descritta e per essa viene creato un nuovo sottogenere all'interno del genere *Amphiblestrum*. La specie proviene da fondi circalitorali profondi ed epibatiali del Canale di Sicilia e da località del Mediterraneo nord-occidentale. Il nuovo sottogenere è creato per distinguere, all'interno del genere *Amphiblestrum*, specie che hanno oltre ai tipici aviculari avventizi, anche grandi aviculari interzoociali, entrambi sviluppati a partire da *dietellae*.

Abstract. A new species and a new subgenus *Amphiblestrum (Aviculamphiblestrum) ruggeroi* sp.n. are described from deep circalittoral-epibathyal bottoms from the Sicily Strait and the north-western Mediterranean. The new subgenus is created to distinguish, within *Amphiblestrum*, species with both gymnocystal adventitious and large interzooidal avicularia, both originating from basal pore chambers.

Introduction.

During the study of some fossil and Recent species belonging to the genus *Amphiblestrum* Gray, 1848, the examination of specimens from the Mediterranean lead to the discovery of a new species. It roughly resembles *Amphiblestrum auritum* (Hincks) from

Atlantic-Mediterranean shallow water environments (see Rosso, in press). However, the new species, besides gymnocystal adventitious avicularia, shows also large interzooidal avicularia, a feature not recorded, until now, for species referred to this genus. The generic attribution of the present new species and the introduction of a new subgenus *Aviculamphiblestrum* within *Amphiblestrum* Gray, 1848 is discussed.

Systematic PaleontologyClass *Gymnolaemata* Allman, 1856Order *Cheilostomatida* Busk, 1852Suborder *Anascina* Levinsen, 1909Family *Calloporidae* Norman, 1903Genus *Amphiblestrum* Gray, 1848Subgenus *Aviculamphiblestrum* subgen. n.

Etymology. From "avicularium" and *Amphiblestrum* - referring to the presence of additional interzooidal avicularia.

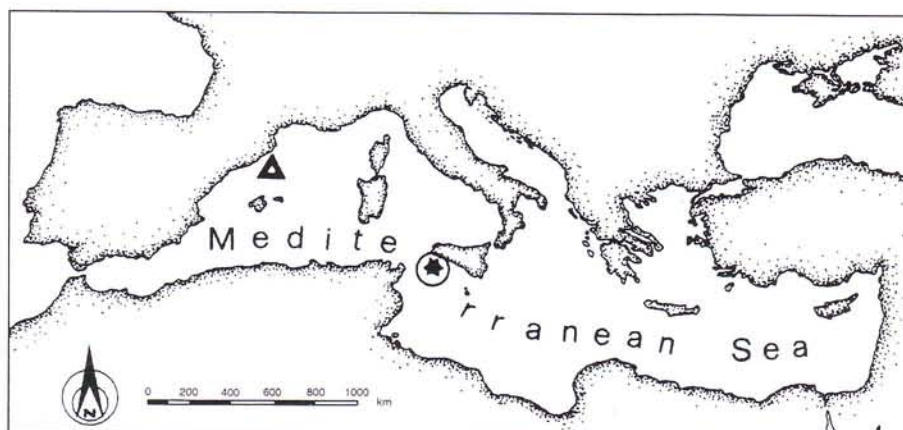


Fig. 1 - Distribution of *Amphiblestrum (Aviculamphiblestrum) ruggeroi* sp. n., subgen. n. Encircled star = studied samples; triangle = other localities.

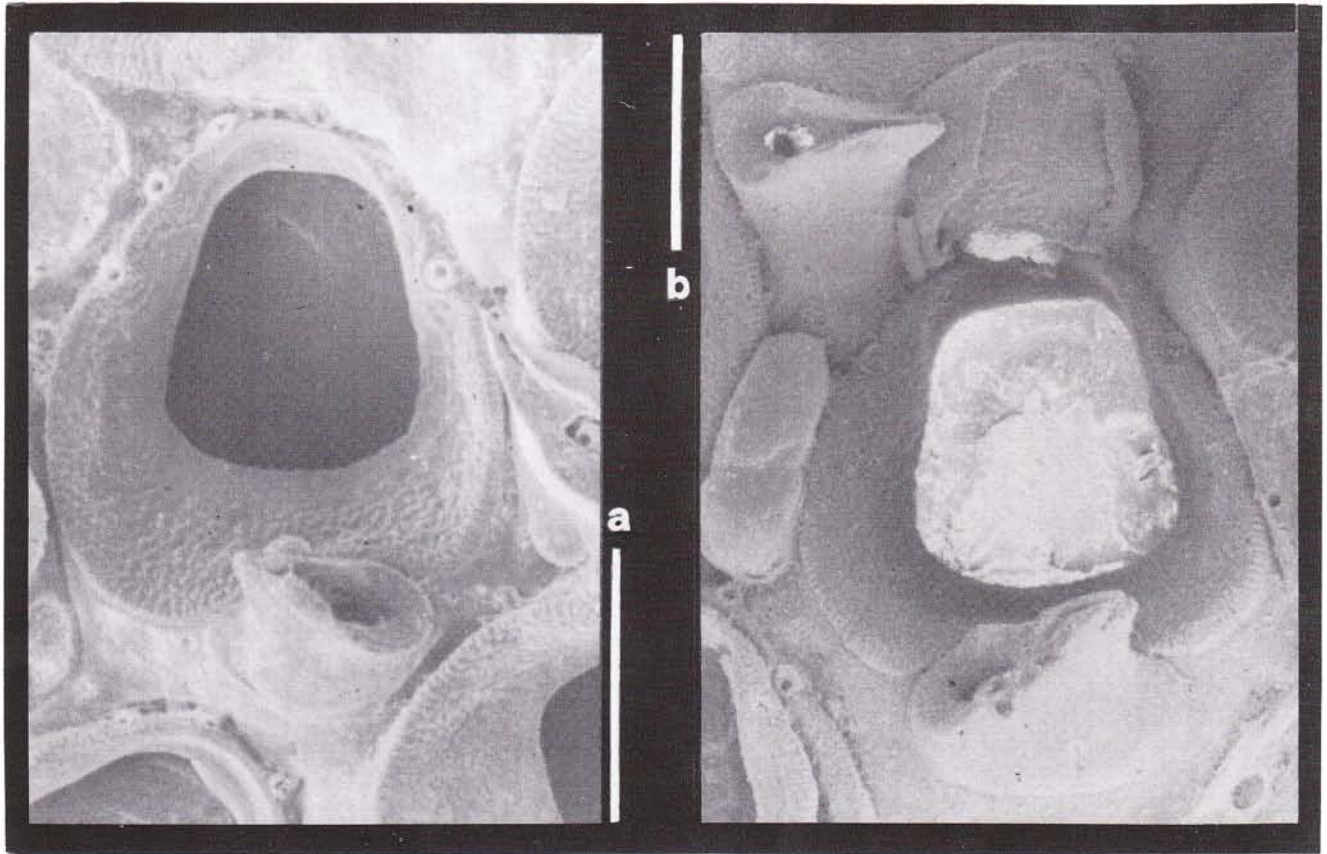


Fig. 2a-b - *Amphiblestrum* (*Aviculamphiblestrum*) *ruggeroi* sp. n., subgen. n. Holotype. Periancestrular zooid (a) with six marginal spines and the proximal avicularium and a mature zooid (b) with four oral spines persisting in presence of the ovicell. Note the peculiar position of the avicularium. Sicily Strait, Sample CR-90-8. Scale bar = 200 μ m.

Diagnosis. As the genus, but with the addition of interzooidal avicularia, besides the gymnocystal adventitious ones, both originating from basal pore-chambers.

Remarks. As for the species: see above.

***Amphiblestrum* (*Aviculamphiblestrum*) *ruggeroi* sp. n.**

(Fig. 2-4)

1988 *Amphiblestrum minax* - Zabala & Maluquer, pl. 3B.

1988 non *Amphiblestrum minax* - Zabala & Maluquer, p. 82, fig. 93.

1993 *Amphiblestrum* sp. Di Geronimo et al., tab. 3.

1993 *Amphiblestrum flemingi*, Zabala et al., p. 68, fig. 2.

Material. Specimens come from Post-Würmian thanatocoenoses (Fig. 1), collected from 201 (sample CR-90-15) to 212 m (sample CR-90-8), on and near the Graham Bank, in the Sicily Straits (Di Geronimo et al., 1993).

Etymology. From the Author son's name: Ruggero.

Types. The selected holotype is a colony encrusting a valve of *Neopycnodonte cochlear* (Poli) on a Scleractinian calyx of *Dendrophyllia cornigera* (Lamoroux). Paratypes: one large and five young small colonies from the same sample. They all are dead and originate from st. CR-90-8, 212m, 37° 14.38'N; 12° 42.31' E. Types are housed in the Palaeontological Museum of Catania University (PMC) and are labelled PMC. B9. 26-2-1998.

Description. Colony encrusting, flat. Zooids oval to pyriform (Figs. 2a, b), 425-566 (512, N = 10) μ m

long and 288-517 (384, N = 10) μ m large, contiguous but well separated by grooves. Area oval to pyriform, occupying 4/5 of the total length, marked by a thin crenellate raised rim. Opesia oval to subquadrangular, rarely with almost midway constrictions. Six to four distal thin spines (see Fig. 2), four persisting on ovicellate zooids with the distal pair close to the orifice of the ovicell. Cryptocyst finely granular, narrow and steeply rising from the distal edge of the opesia; proximally large and grading into the rim. Gymnocyst smooth, steeply dipping away from the rim, only proximally produced, partly obscured by the avicularium it supports.

A single gymnocystal columnar avicularium proximally located, occupying one third of the zooidal width (Figs. 2a, b); the sharply triangular rostrum slanted transversely or distal-laterally upwards; condyles stout; cross-bar absent; opesium elliptical. Zooids placed distally to an ovicell with one, often two, gymnocystal avicularia, lateral or disto-lateral, symmetrically and transversely placed to the ovicell; the rostra pointing towards the middle forming a "roof".

Interzooidal avicularia more often near the colony boundary (Figs. 3a, b), polygonal c.a. one half the length of the autozooids, often as wide as an autozooid. Ros-

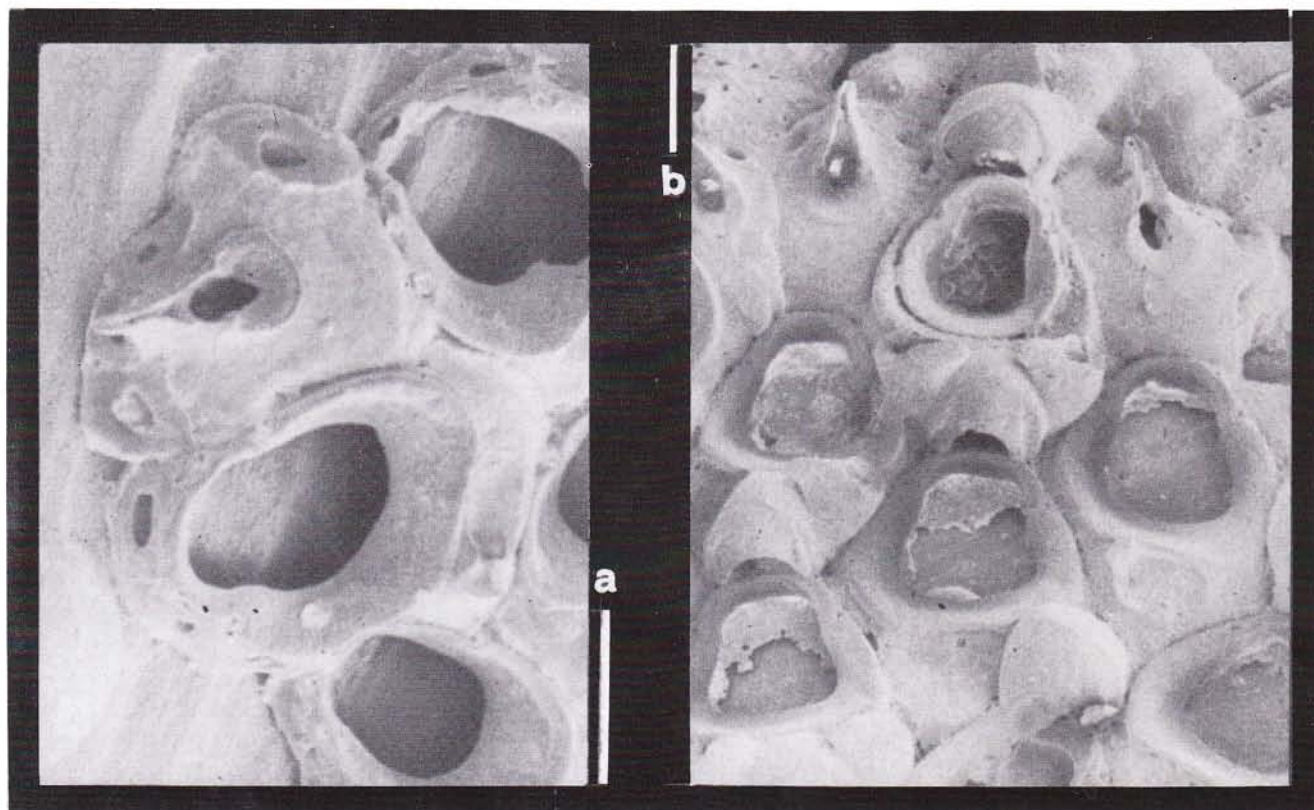


Fig. 3a-b - *Amphiblestrum* (*Aviculamphiblestrum*) *ruggeroi* sp. n., subgen. n. Holotype. Interzooidal avicularium at the colony edge and (b) another sector showing several interzooidal avicularia and an ovicell overarched by two converging adventitious avicularia. Sicily Strait, Sample CR-90-8. Scale bar = 200 μ m.

trum horizontally lying, long, straight with thin, raised walls; the apex curving downwards. Mandibular pivot blunt. Oral shelf wide, opesium elliptical, proximally bordered by a finely granular, concave rim.

Ovicell globular, prominent, seemingly not closed by the operculum, with a frontal, finely granular crescentic area separated by a raised suture from the marginal smooth ectoecium (Figs. 2b, 3b).

Ancestrula (Figs. 4a, b) smaller than other zooids (340 μ m long and 250 μ m wide) but similar in shape, with nine spines, budding a first distal zooid and two secondary disto-lateral ones, each having six spines, the more proximal pair at the beginning of the opesium. New zooids are budded contemporaneously in distal and latero-proximal directions allowing the colony to achieve a rounded outline. The three first budded zooids lack the gymnocystal avicularium.

Remarks. Colonies are very similar to species of the genus *Amphiblestrum* Gray, 1848 for most of their characters. Nevertheless, they have interzooidal avicularia, a very important diagnostic feature (cf. Gordon, 1984). Such avicularia actually originate from basal pore chambers (see Fig. 3a). This condition is shared with smaller, frontal adventitious avicularia of the same species and also with those described in other species

referred to *Amphiblestrum* such as *A. flemingi* (Busk) from the NE Atlantic. The new subgenus *Aviculamphiblestrum* is, thus, introduced, within *Amphiblestrum*, to stress the presence of large interzooidal avicularia besides the small gymnostal ones, both having a common origin and different position and size. This also happens in species of *Chaperiopsis* Uttley, 1949, such as *C. multifida* (Busk) (Gordon, pers. com.) and *Callopora* Gray, 1848, such as *C. smitti* (Kluge). Within the genus *Amphiblestrum*, this peculiar feature is presently known only for *A. ruggeroi*. Large interzooidal avicularia develop from lateral or disto-lateral basal pore chambers, attain large sizes, almost similar to those of zooids, and show a random location among the zooids, although they are more common near the colony margins. Mandibles were not observed but they are presumably straight and pointed as, in the Family Calloporidae, mandibles are usually quite close in shape to their skeletal rostra (Winston, pers. com.).

The specimen figured by Zabala & Maluquer (1988: fig. 3B) and Zabala et al. (1993) have been synonymised with *A. ruggeroi* as it seems to share with the present species all diagnostic features. Zabala et al. (1993), indeed, doubtfully referred their material to *A. flemingi* (Busk) stressing differences in the number of

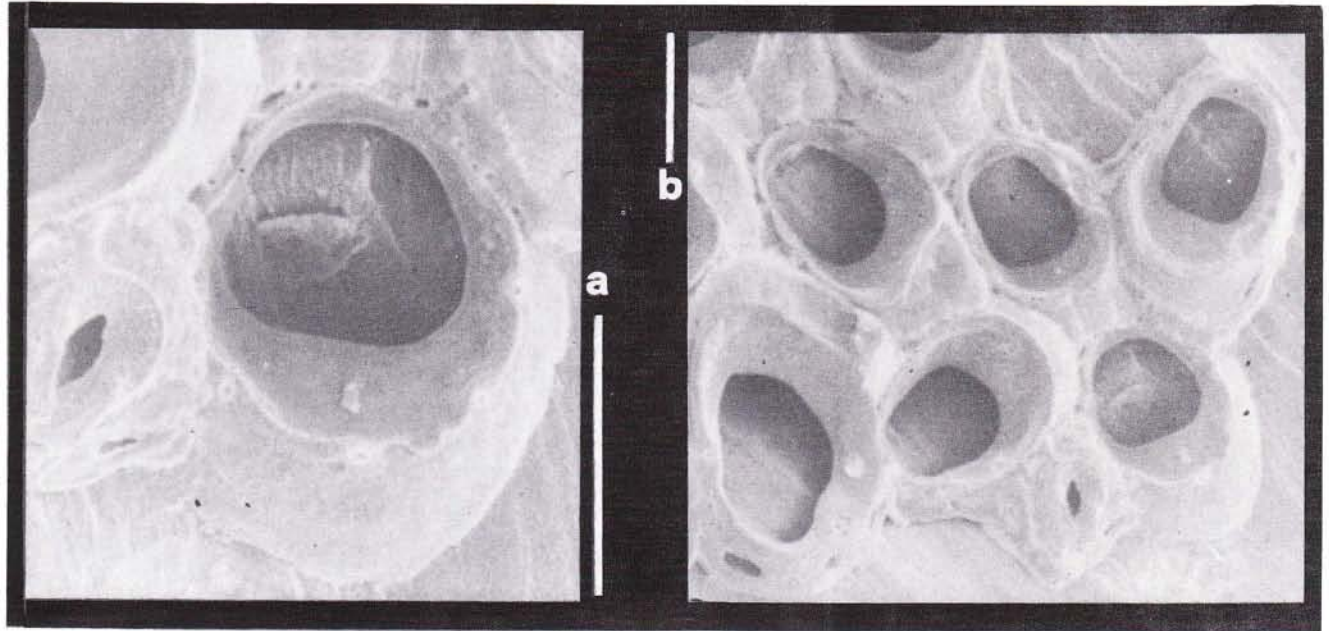


Fig. 4a-b - *Amphiblestrum* (*Aviculamphiblestrum*) *ruggeroi* sp. n., subgen. n. A paratype. Ancestrula (a) and periancestrular area (b) showing first astogenetic budding pattern. Note the interzoooidal avicularium laterally budded from the ancestrula. Sicily Strait, Sample CR-90-8. Scale bar = 200 μ m.

spines (4, rarely 6), the absence of the proximal giant spine, the shape of the opesium and that of the ovicell frontal area. All these characters are obvious from photos and they are shared with *A. ruggeroi*. Moreover, the figured ovicells show distal single or paired avicularia transversely placed to form the "roof" peculiar to *A. ruggeroi* and not described for any other species in the genus. The specimen from the Zabala collection figured by López de la Cuadra & García Gomez (1994) is different and actually belongs to *A. flemingi* (Busk).

Distribution. The species was found in two samples from Sicily Straits, between 201 (sample 15) and 212 m (sample 8) (Di Geronimo et al., 1993). Specimens were all dead, when sampled. Community is rich and diversified in the former and extremely scant in the latter. Thanatocoenoses (i. e. skeletal remains present in the bottom sediment) are more rich and diversified. Both testify the mixing of outer shelf (deep circalittoral) rocky bottom organisms or skeletons (belonging to the rocky offshore assemblage) with faunas peculiar to upper slope (epibathyal) muds (bathyal mud assemblage). Samples contain small branches of the gorgonacean *Corallium rubrum* (Linnaeus), large fragments of the scleractinian *Dendrophyllia cornigera* (Lamoroux) and large valves of the mollusc *Neopycnodonte cochlear* (Poli). Living bryozoans are scant but diversified comprising both rigid erect species (*Annectocyma tubulosa*, *Entalophoroecia deflexa*, *E. gracilis*) and unilaminar species among which *Puellina* (*Cribrilaria*) *innominata*, *P. (Glabrilaria) pedunculata*, *Escharina hyndmanni*, *E. vulgaris* and *Crassimarginatella solidula* encrusting large

molluscan and scleractinian skeletons. Dead specimens mainly belong to erect species: *Tervia irregularis*, *Hornera frondiculata*, *H. lichenoides*, *Palmicellaria cf. elegans*, *Sertella couchi biaviculata*, *S. septentrionalis*, *Tessaradoma boreale* and *Scrupocellaria delili*. Encrusting taxa are also common: *Puellina* (*Cribrilaria*) *innominata*, *P. (C.) radiata*, *Crassimarginatella solidula* and *Escharina vulgaris*.

A. ruggeroi is also present in the Blanes Canyon from 180-350m where colonies encrust a partly alive colony of the deep-sea scleractinian *Madrepora oculata* (Zabala et al., 1993).

The species is, therefore, known only from deep-sea (lower circalittoral to epibathyal) sites from the Western Mediterranean.

Acknowledgements.

I am grateful to: Dr. C. M. López de la Cuadra (Dep. Fisiología y Biología Animal, Sevilla), Dr. J. Winston (American Museum of Natural History, New York) for useful information; Dr. D. P. Gordon (New Zealand Oceanographic Institute, Wellington), Dr. J.-G. Harmelin (Station Marine d'Endoume, Marseille) for discussions and suggestions. I would also thank Mr. O. Torrisi (Istituto Internazionale Vulcanologia, CNR, Catania) for SEM assistance. Paper financially supported by Min. Ris. Agr. Al. For. (Prof. Di Geronimo) and MURST (Rosso).

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