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***SCHIZOMAVELLA PADANA* NOMEN NOVUM  
PRO *LEPRALIA UMBONATA* MANZONI, 1869**

(Bryozoa Gymnolaemata Cheilostomatida Bitectiporidae)

**Riassunto**

Durante un'indagine sui briozoi contenuti nei sedimenti pliocenici della sezione di Monte Padova, affiorante nei pressi di Castell'Arquato in provincia di Piacenza, sono state trovate alcune colonie di una *Schizomavella* che sembrano corrispondere alla *Lepralia umbonata* di Manzoni. Probabilmente quando MANZONI (1869) istituì la sua *Lepralia umbonata*, su esemplari provenienti dalle «colline di Castell'Arquato», non conosceva che il nome *umbonata* era già stato utilizzato da BUSK (1860) per una sua specie. Pertanto essendo risultato che il nome usato da Manzoni non può essere ritenuto valido perché, alla sua istituzione, era un omonimo più recente della specie di Busk, viene proposto per questa specie il nuovo nome *Schizomavella padana* e viene anche data la descrizione delle colonie presunte appartenenti alla specie di Manzoni; inoltre si designa un neotipo dagli esemplari trovati nella sezione di Monte Padova.

**Abstract**

An investigation of bryozoans from Pliocene sediments of the Monte Padova section cropping out near Castell'Arquato (Piacenza Province) resulted in the discovery of some colonies of *Schizomavella* which correspond to *Lepralia umbonata* Manzoni. However, when MANZONI (1869) established *L. umbonata* on specimens from « colline di Castell'Arquato », he was presumably unaware that the name *Lepralia umbonata* was preoccupied by a species erected by BUSK (1860). In absence of the type-material I here propose the new name *Schizomavella padana* for, and present a redescription of Manzoni's species. I also designate a neotype from the specimens obtained from Castell'Arquato (Piacenza Province).

Key words: Bryozoa, Cheilostomatida, *Schizomavella padana* nomen novum, Pliocene, Castell'Arquato.

## Introduction

MANZONI (1869) established *Lepralia umbonata* based on specimens from « coline di Castell'Arquato ». However, the name *Lepralia umbonata* was unavailable due to a species established earlier by BUSK (1860); the specific name *umbonata* of Manzoni is therefore a junior homonym and thus invalid. The only authors subsequently reporting Manzoni's *umbonata* were SEGUENZA (1880) and NEVIANI (1901), while POLUZZI (1975) did not find or recognize this species in the faunas from Castell'Arquato.

Investigations of bryozoan assemblages from Pliocene sediments cropping out in the Monte Padova section, located near Castell'Arquato (Piacenza Province, N. Italy), yielded colonies that can be ascribed to Manzoni's *umbonata*. Unfortunately, the description and figure of MANZONI (1869) are not very specific, and at present none of the type-specimens of the species erected by MANZONI (1869) are known to exist. The attribution of the colonies under consideration to Manzoni's *umbonata* must therefore remain arguable.

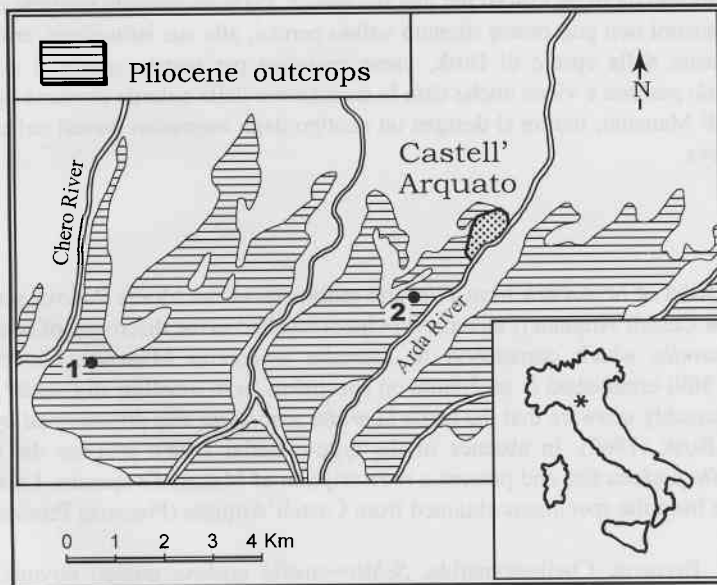


Fig. 1 - Location of the two outcrops containing *Schizomavella padana* in the western Emilia region: 1 - Rio Carbonaro of Lugagnano Val d'Arda (Piacenza Province); 2 - Monte Padova section, Castell'Arquato (Piacenza Province).

Undoubtedly, the strong similarity between these colonies and some species of *Schizomavella* allows me to assign Manzoni's species to the genus *Schizomavella* Canu & Bassler, 1917. The generic characters met by the specimens assigned to Manzoni's *umbonata*, are:

Colony encrusting, unilaminar. Zooecia with frontal shield perforated by pores. Primary orifice sinuate with condyles. Oral spines often present. Ovicell prominent, hyperstomial, perforated by pores. Avicularium adventitious and suboral. After verification that colonies from the Monte Padova section, here considered to be Manzoni's *umbonata*, are not referable to other known *Schizomavella* species, a new specific name is introduced.

### Taxonomic account

*Schizomavella padana* nom. novum  
pro *Lepralia umbonata* Manzoni, 1869

1869 *Lepralia umbonata, mihi* – MANZONI, p. 19, pl. 1, fig. 4.

1880 *Lepralia umbonata* Manzoni – SEGUENZA, p. 205.

1901 *Smittia (Mucronella) umbonata* Manzoni – NEVIANI, p. 214.

*Locus typicus*: Monte Padova section cropping out near Castell'Arquato – Piacenzian (planktic foraminifera zone MP15a) in age (mid-Pliocene).

*Derivatio nominis*: From the Po Basin, in which the Pliocene sediments containing this species were deposited.

### Type material

Neotype and paraneotypes deposited at the Museo Geologico "G. Cortesi" in Castell'Arquato, Piacenza Province, Italy (sample number MG0738).

Original diagnosis and description by MANZONI (1869).

« *Cellulis longitudinaliter seriatim dispositis, ovatis, superne rotundatis, inferne truncatis, depressis, funiculo tenuissimo suturali distinctis, medio umbonatis; marginibus uniseriatim punctatis; superficie punctis canaliculatis subserialibus instructa; apertura terminali, subrotundata; peristomate leviter calloso et prominulo. Ovicellulis inter cellulas raro sparsis, resupinatis, subglobosis, oscure foveolatis.* »

« Il nome che ho dato a questa n. sp. sta a significare una delle sue principali caratteristiche, l'esistenza cioè al di sotto immediatamente della bocca di una grande e molto rilevato papilla, la quale ora vedesi perforata ora integra al suo sommo e sporge sempre in forma di umbone al davanti della bocca. – Inoltre questa sp. mostra le cellule disposte in serie longitudinali, regolarmente alter-

nanti, fra di loro distinte da un cordoncino suturale ben manifesto, coi margini regolarmente punteggiati, e colla superficie ornata di cospicui fori canaliculati e disposti nel senso longitudinale della cellula.»

[Translation of Manzoni's description – The name, assigned to this new species, reflects one of its principal characteristics, it is the existence of a large very raised suboral papilla, which can be pierced or be entire in its vertex, and projecting as an umbo proximal to orifice. Besides, zooecia of this species are arranged in longitudinal alternating series, separated by a well developed rim; edge regularly punctured; surface of frontal shield perforated by conspicuous pit-like pores, which are longitudinally arranged.]

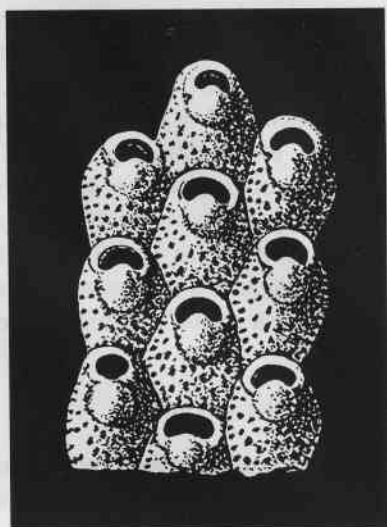


Fig. 2 - Figure 4 on Table 1 of *Lepralia umbonata* Manzoni in "Bryozoi Pliocenici Italiani" (re-marked from the original).

#### Morphometry

Zooecia	length	0.30 – 0.40 mm
	width	0.22 – 0.30 mm
Primary orifice	diameter	0.080 – 0.090 mm
Avicularium	length	0.010 mm
	width	0.018 mm
Ovicell	length	0.18 – 0.20 mm
	width	0.20 – 0.22 mm

#### Description of *Schizomavella padana*

Colony encrusting, unilaminar (or occasionally plurilaminar with a chaotic budding pattern), multiserial. Zooecia oval to tetragonal, in radiating linear series. Frontal shield slightly convex, bordered by a distinct raised rim, with large, raised, suboral, umbo-like mucro which incorporates a small avicularium distally. Frontal shield in neanic zooecia punctured by rare small pores, with small areolar pores and reduced nodularity of the surface. In ephebic zooecia the surface is nodular with large pores centrally and a series of large oblong pores at perimetrical edge. Frontal shield in gerontic zooecia almost flat, secondary calcification

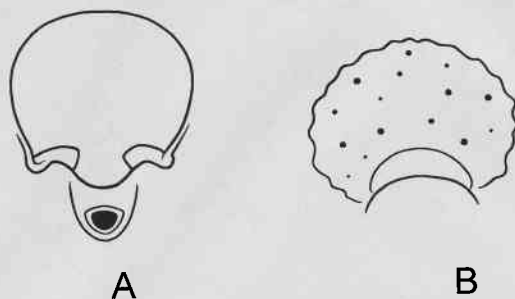


Fig. 3 - *Schizomavella padana*: A - Shape of primary orifice; B - Shape of ovicell.

very thick, nodular, surface punctured by large to medium-sized pit-like pores, secondary orifice then often orbicular and peristomial border toothed with short blunt tubercles, mucro and ovicell immersed due to secondary calcification. Vertical wall with a series of small interzooecial pores at both inferior and superior border. Primary orifice terminal, suborbicular, slightly wider than long, with a symmetrical, median, U-shaped sinus; condyles prominent, subrectangular and smooth. Peristome developed as a steeply raised ridge encircling the orifice in later ontogeny. Two or three small insertions of spines may occasionally be present in distal orifice border in early ontogeny, soon disguised by secondary calcification. A small, ogival, monomorphic, suboral avicularium incorporated into mucro, proximally directed, enclosed within peristome and often almost perpendicular to plane of primary orifice in late ontogeny; with an ogival to semicircular foramen in the palate. Ovicell dependent, prominent, hyperstomial, subhemispheric, slightly flattened frontally, markedly granular and perforated by variously sized pores; the lower part of its proximal wall with a crescentic to sometimes ogival, smooth and imperforated area, which is obscured by the increment of the peristome in later ontogeny.

#### Remarks

NEVIANI (1901: 214) was doubtful concerning the validity of Manzoni's *umbonata* and also considered it « certamente la specie è affine ad alcune varietà di *Mucronella Peachi* Johnst. ». Besides, Neviani added that the specimens of Seguenza « variano dal tipo, per la prominenza molto elevata dell'umbone, e per l'orificio meno ristretto ». POLUZZI (1975: 39), in substitution of the actual determination of *Lepralia umbonata* Manzoni, added a question mark to this name in his list (Table 2) of the species erected by Manzoni.

*Schizomavella padana*, owing to the U-shaped sinus, the shape and position of the condyles, and the ovicell with a smooth crescentic area in its proximal region, can be placed in Group 1 of REVERTER-GIL & FERNANDEZ-PULPEIRO (1996: 261).

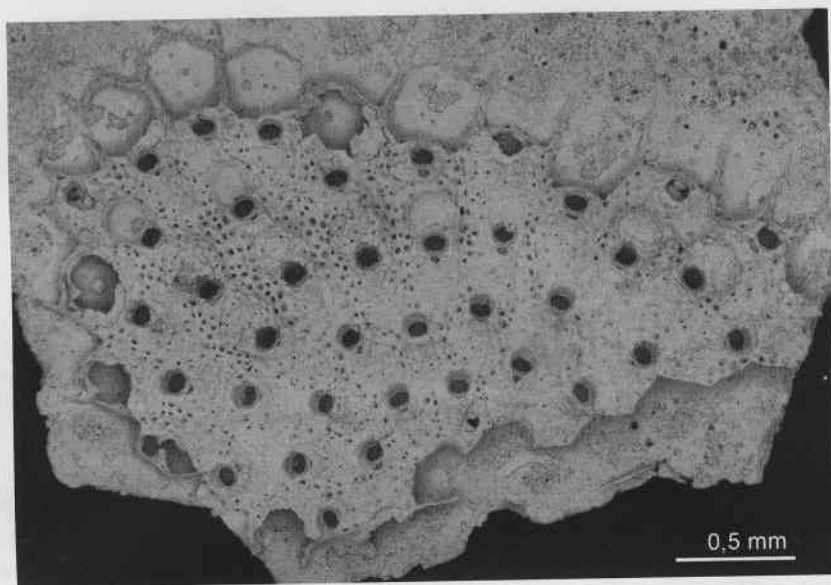


Fig. 4 – *Schizomavella padana*, Monte Padova section: Neotype (MG 0738).

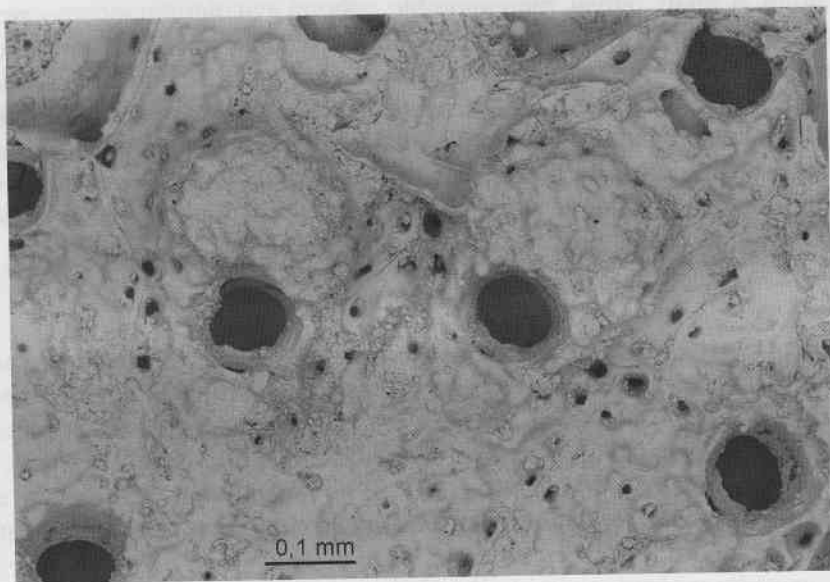


Fig. 5 – *Schizomavella padana*, Monte Padova section: maternal zoecia with ovicell in neotype.

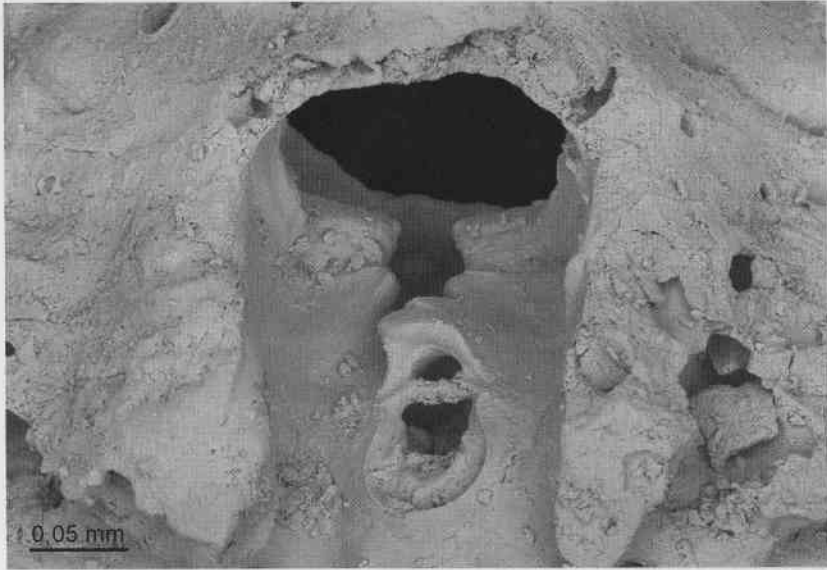


Fig. 6 – *Schizomavella padana*, Monte Padova section: orificial condyles.

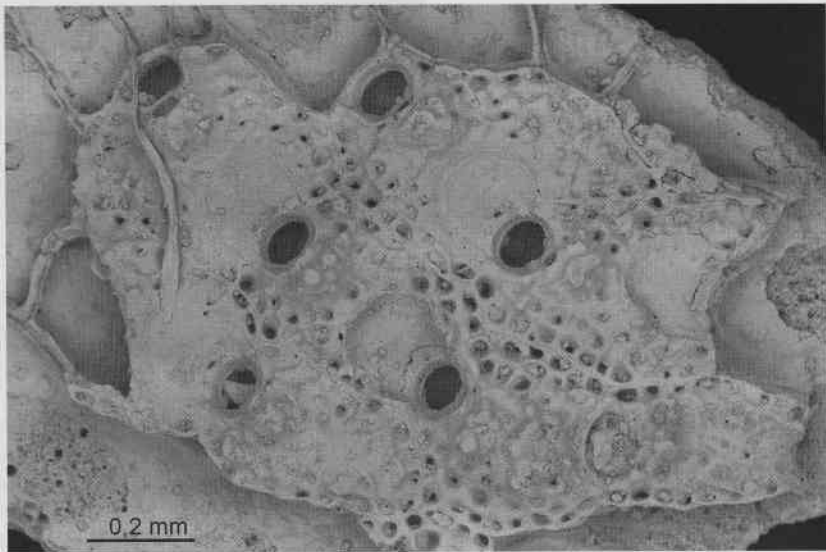


Fig. 7 – *Schizomavella padana*, Monte Padova section: general aspect of ephebastric colony.

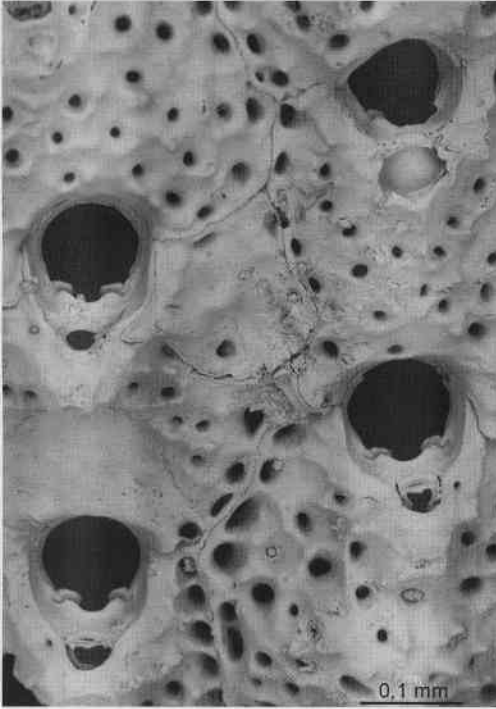
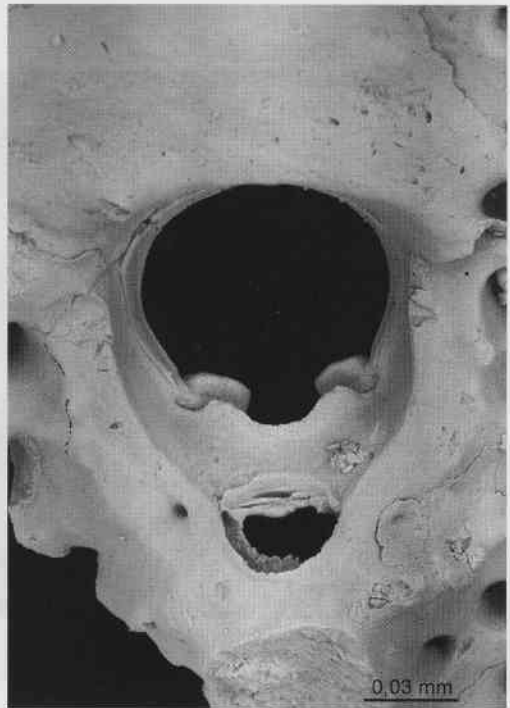


Fig. 8 – *Schizomavella padana*, Monte Padova section: zoecia in ephebaestic colony.



Fig. 9 – *Schizomavella padana*, Monte Padova section: zoecial orifice and avicularian opening.





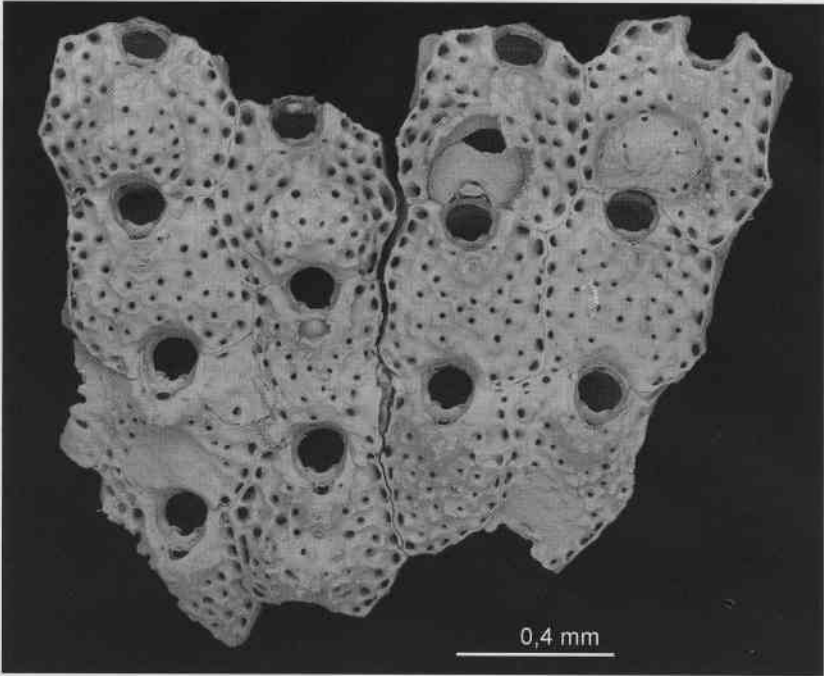


Fig. 10 – *Schizomavella padana*, Monte Padova section: general aspect of ephebaestic colony.

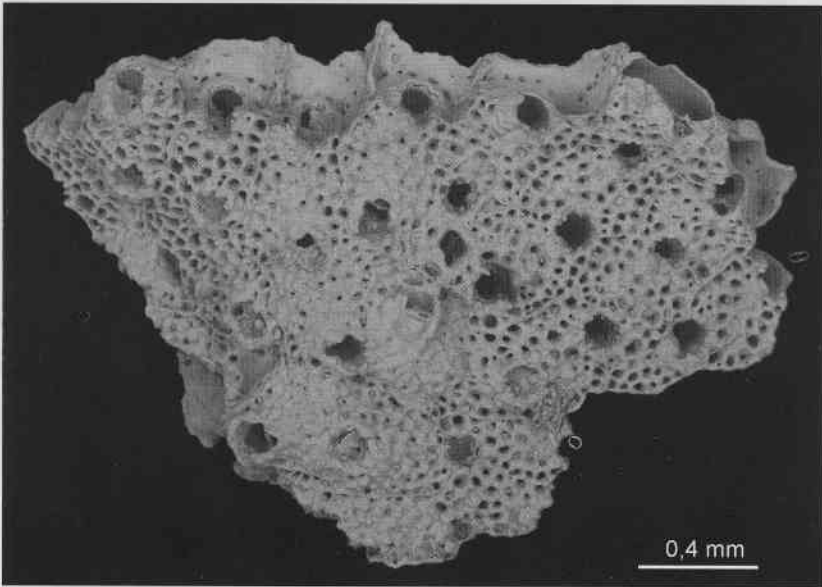


Fig. 11 – *Schizomavella padana*, Monte Padova section: general aspect of gerontastic colony.

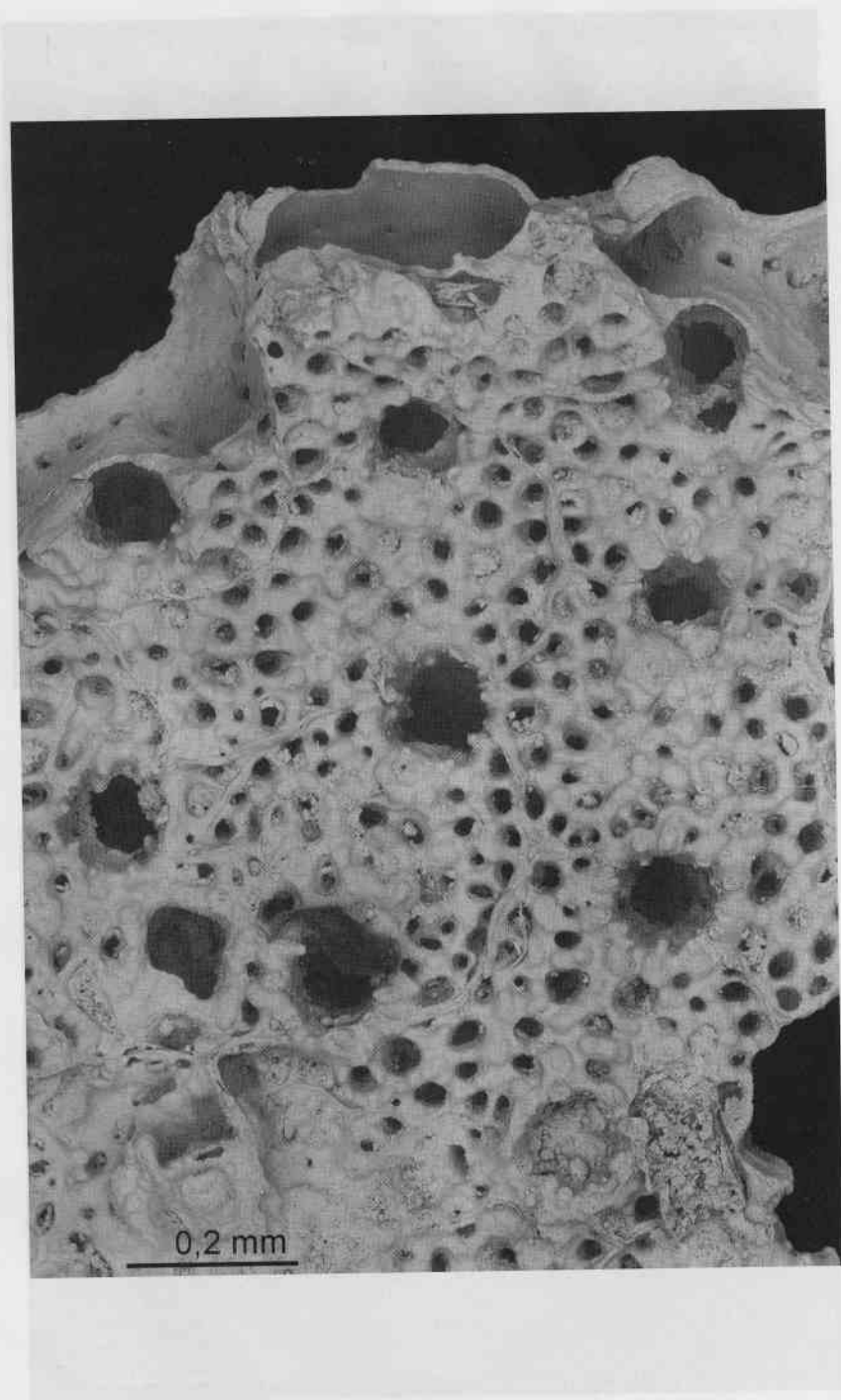


Fig. 12 – *Schizomavella padana*, Monte Padova section: zoecia in gerontastic colony.

Concerning other recent species, *S. padana* is similar to *Schizomavella asymetrica* (Calvet) in HAYWARD & MCKINNEY (2002), as well as to *Schizomavella cuspidata* (Hincks) in REVERTER-GIL & FERNANDEZ-PULPEIRO (1996) and HAYWARD & RYLAND (1999) (*S. cuspidata* of the latter works is regarded as a synonym of *S. asymetrica* by HAYWARD & MCKINNEY, 2002.). However, *S. padana* is different from *S. asymetrica* in the constant presence of a strong umbo, in the formation of only a small, monomorphic, suboral avicularium, and in the different structure of the ovicell surface.

#### Distribution

In two thick layers of Monte Padova section outcropping near Castell'Arquato (Piacenza Province) and in a sandy layer from the lower Piacenzian sediments cropping out in the Rio Carbonaro of Lugagnano Val d'Arda (Piacenza Province).

Ecology. Lower infralittoral and circalittoral.

Stratigraphic distribution. Mid-Pliocene.

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