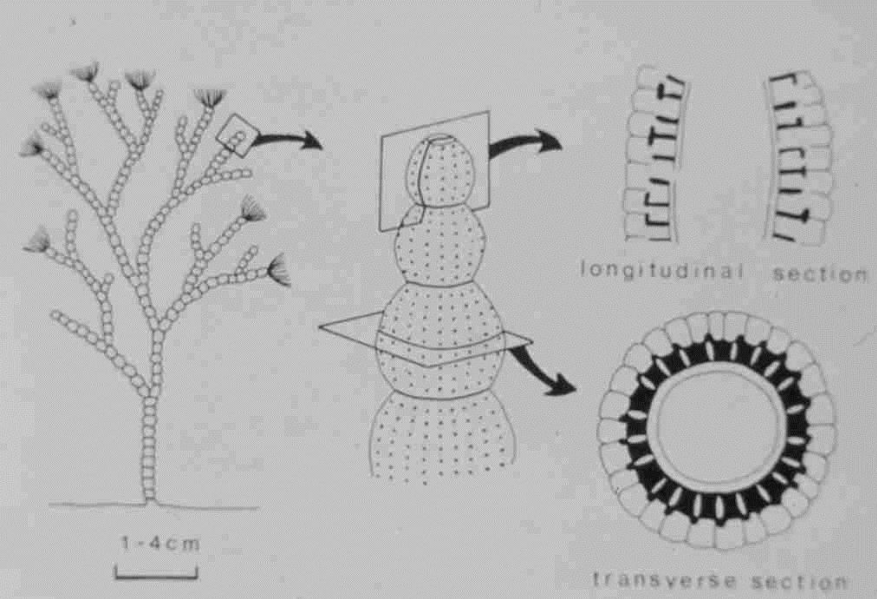


# ALGHE calcaree

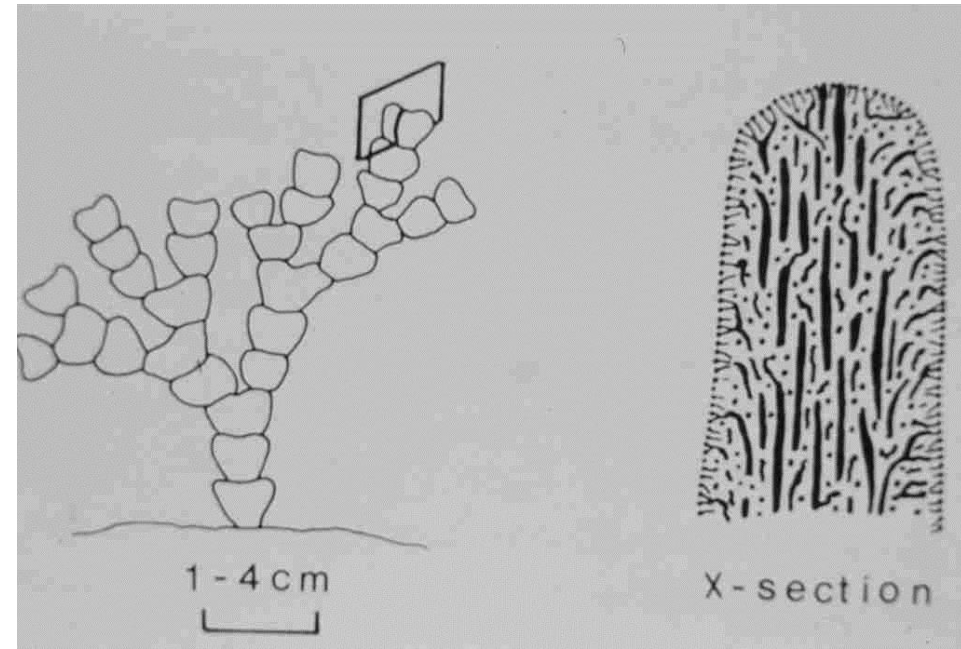
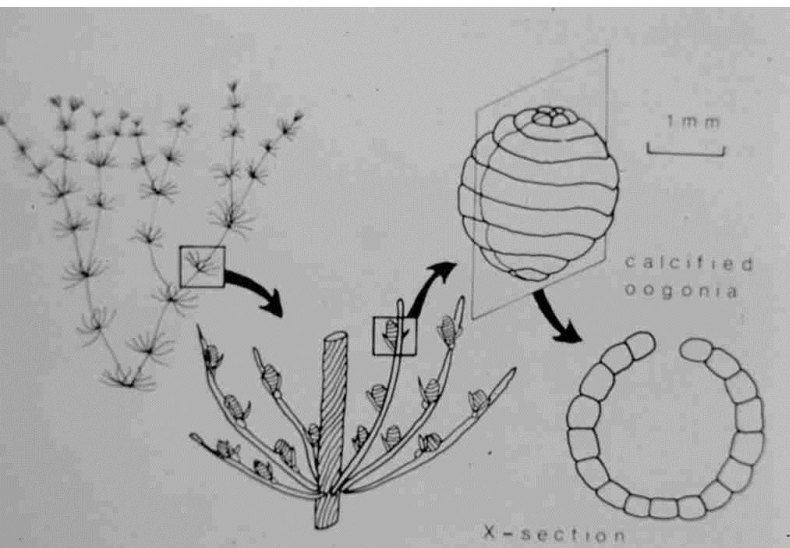
- ROSSE
- VERDI
- GIALLO-VERDI
- BLU-VERDI (CIANOBATTERI)

# ALGHE VERDI



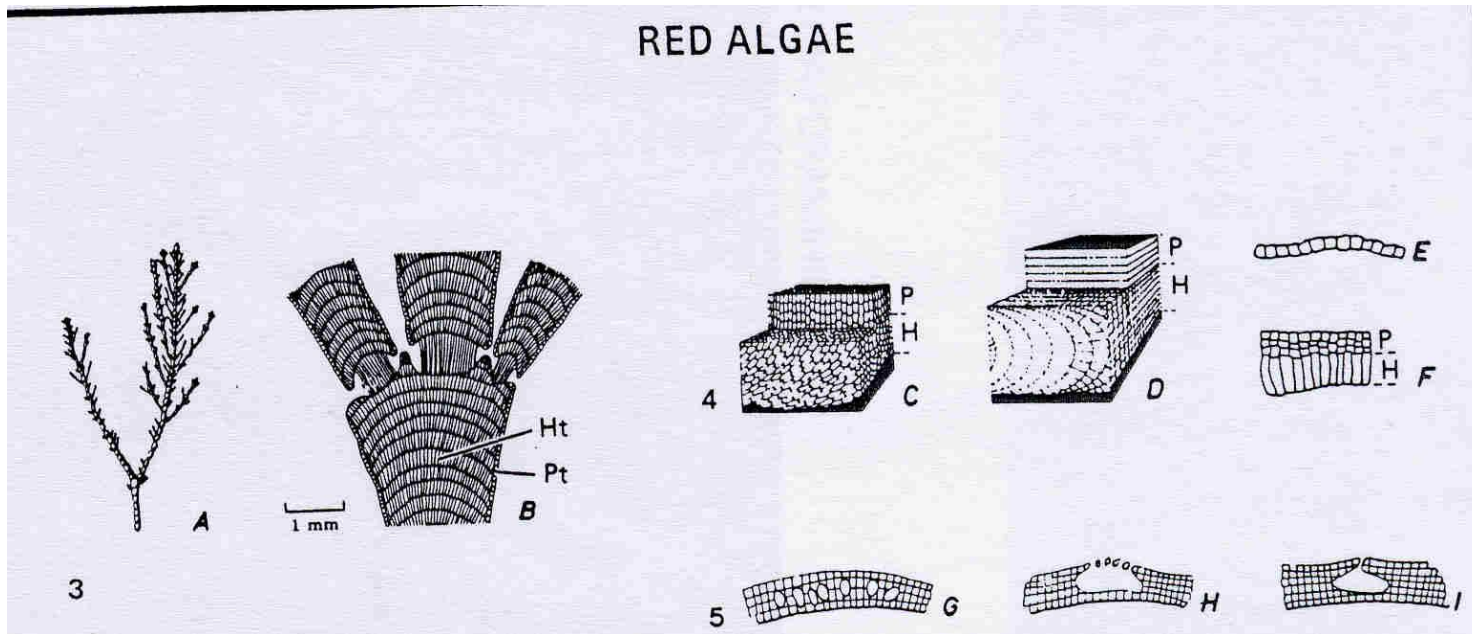
Dasycladaceae: aragonitiche;  
tipiche di acque lagunari protette (aree tropicali)

Codiaceae: aragonitiche; tipica l'Halimeda,  
alga di laguna recifale



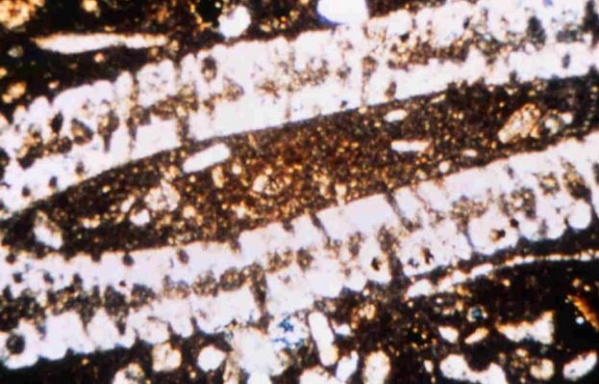
Characeae: LMg; acque dolci e salmastre

# ALGHE ROSSE

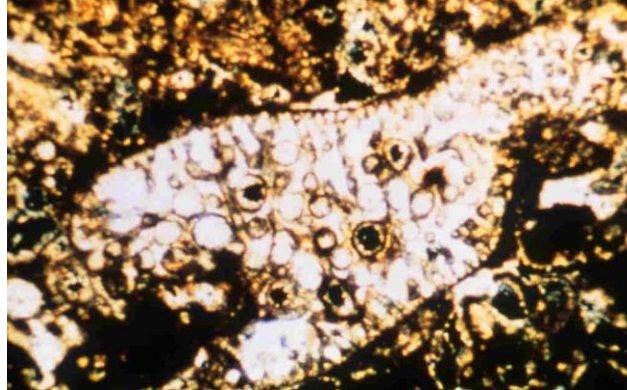


- HMgCa
- Struttura a celle regolari

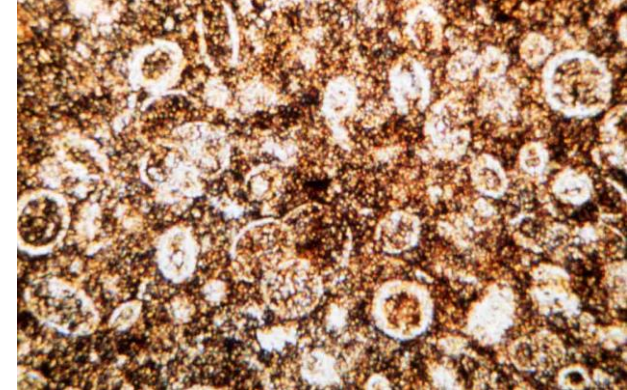
- 2 le famiglie più comuni:
- Solenoporaceae
  - Corallinaceae



**DASYCLADACEA**  
Alga verde; aragonitica



**CODIACEA: HALIMEDA**  
Alga verde; i buchi visibili in ss sono originali  
e sono riempiti da sparite



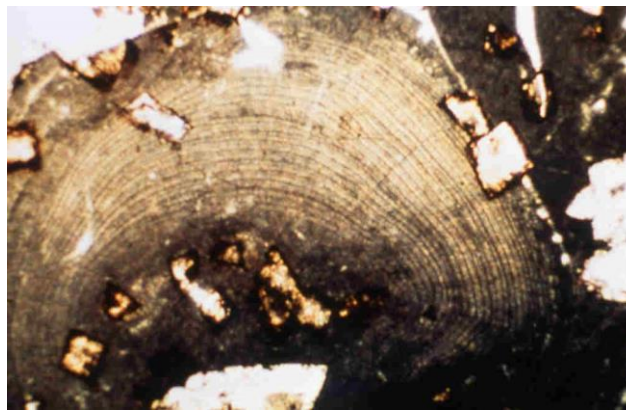
**CALCISFERE**  
Alga verde; forme problematiche

## **ALGHE**

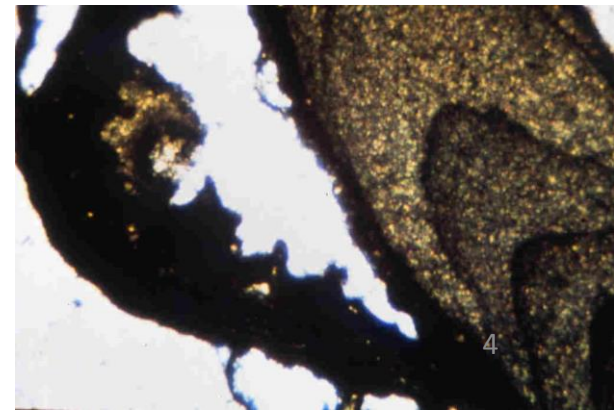
**LITHOTAMNIUM**  
Rodoficea-corallinacea incrostante



**LITHOPHILLUM**  
corallinacea

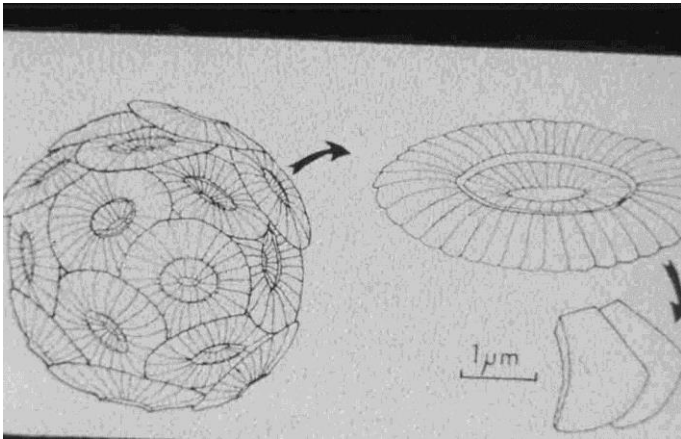


**FRAMMENTO ALGA ROSSA**

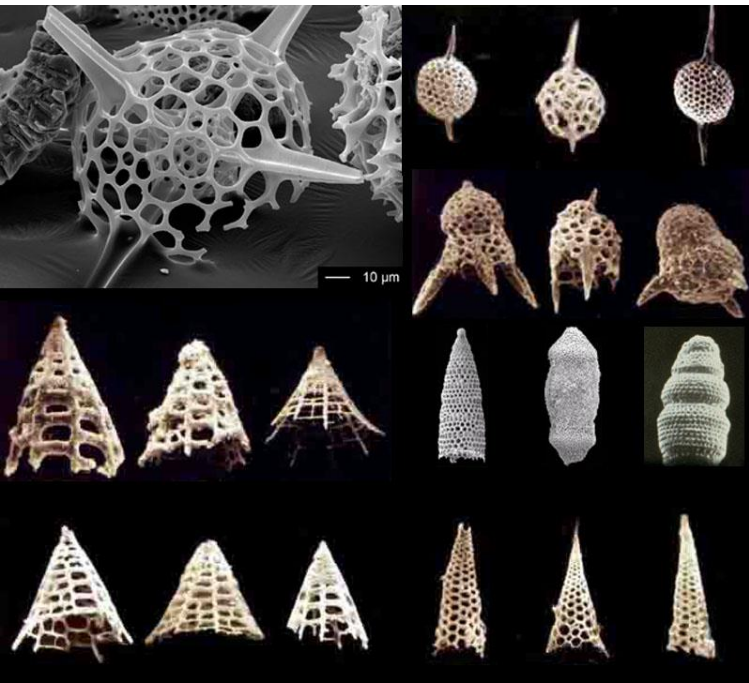


## ALGHE CALCAREE GIALLO-VERDI

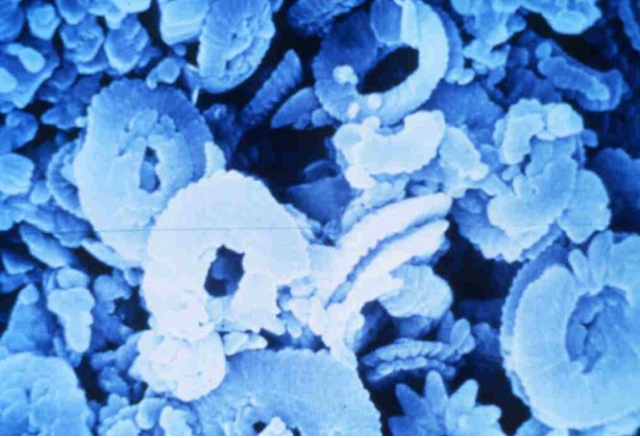
Coccolitoforidi: LMgCa; coccoliti



Altre alghe sono le Diatomee, alghe silicee

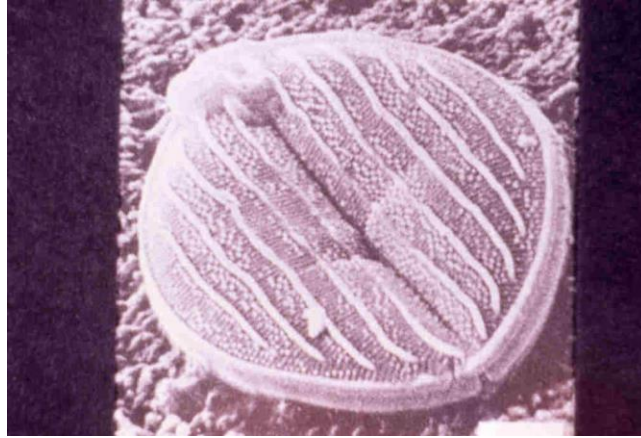


...e i Radiolari, anche questi a guscio siliceo



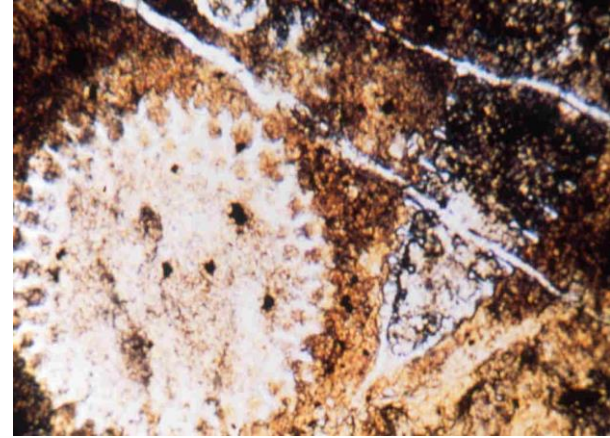
## COCCOLITI

SEM; guscio LMgCa



## DIATOMEAE

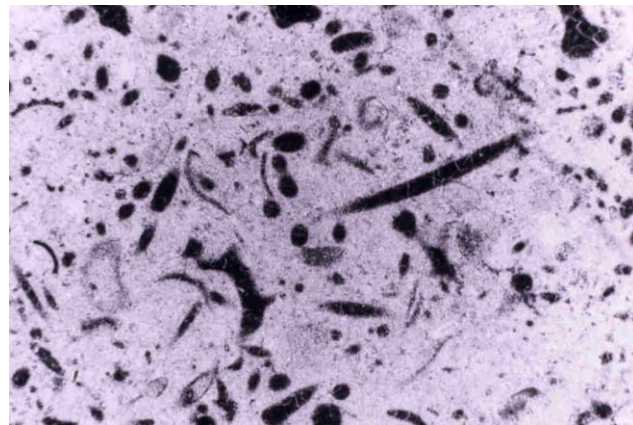
Guscio siliceo



## RADIOLARI

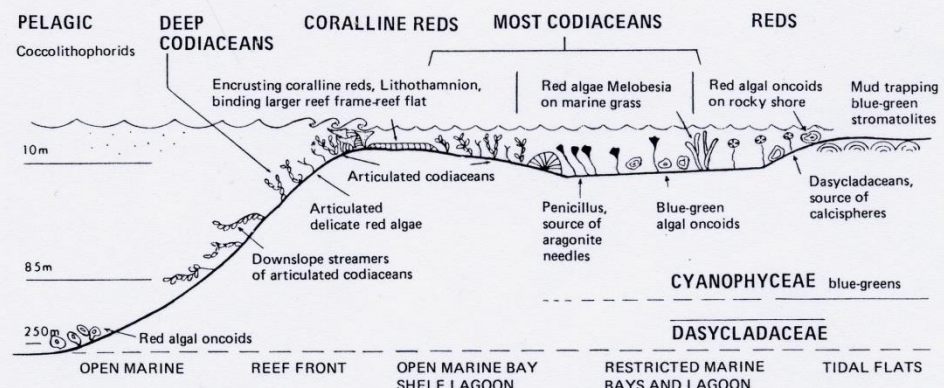
Guscio siliceo

## RADIOLARITE



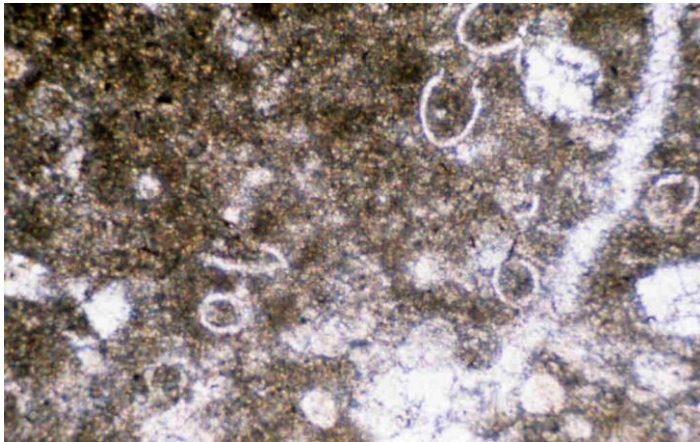
**Table 31.** Ecological factors of Recent calcareous algae

	Salinity	Water temperature	Water Depth	Water Energy	Substrate	Biotope
Cyanophyceae	Freshwater, brackish water, hypersaline, not normal marine	Warm and cold water	Shallowest tidal zones to the greatest depths	Generally low	Mud and sand bottoms (sediment binders); borers in hard grounds	Terrestrial, lacustrine, tidal zone
Chlorophyceae: Codiaceae	Normal marine	Tropical (app. 25° C), few subtropical species	Lower tidal zone, usually < 10 m; to 100 m; range of species dependent on depth	Low, generally quiet waters	Mud and sand bottoms, very few species on hard bottoms	Protected lagoons and deeper fore-reef slope
Dasycladaceae	Usually normal marine, a few species tolerate brackish water and hypersaline environments	Tropical to subtropical; a few species in warm temperate water. Important factor!	Below the tidal zone to about 30 m; max. about 90 m; usually 3–5 m	Low, generally quiet waters (below wave base or in protected lagoons)	Mud and sand bottoms, a few species on hard bottoms (rocks; reef flats)	Protected lagoons, protected reef flats
Charophyceae	Fresh and brackish water, hypersaline	Warm water and cooler water	To about 10 m, usually very shallow	Standing or sluggish water	Mud and sand bottoms	Shores of freshwater lakes; in near-coastal brackish water
Rhodophyceae: Squamariaceae	Normal marine	Warm water (tropics, subtropics)	Lower tidal area down to a few meters below mean sea level, max. about 90 m	Low	Usually hard bottoms	Reef areas, open marine
Corallinaceae	Usually normal marine; only a few species tolerate restricted salinity in coastal areas	Warm and cold water (tropics to polar region); stenothermic species and genera	Tidal zone to 250 m; usually < 25 m; range of species dependent on depth	Varies: a few taxa in high-energy environments, others in low-energy environments	Usually hard grounds (reefs, underwater cliffs), but also soft bottoms or unstable substrates	Open marine platforms and bays with banks or reefs (outer reef margin); shelf slopes (some rhodolites)

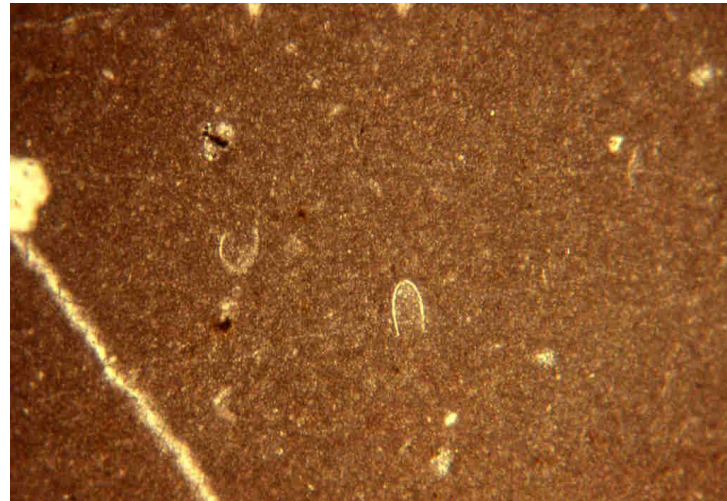


**Fig. 49.** Ecology of calcareous marine algae; depositional environments along an idealized profile of a carbonate shelf margin. After Wilson (1975). This diagram shows only the main areas of spatial distribution for some algal groups. Recent dasycladacean algae, for instance, are also found in various restricted environments (lagoons, protected reef flats, mangrove zones) as well as in near-coastal hard bottoms, where they grow on rocks (see Valet, 1979)

CALPIONELLIDI:  
organismi unicellulari marini



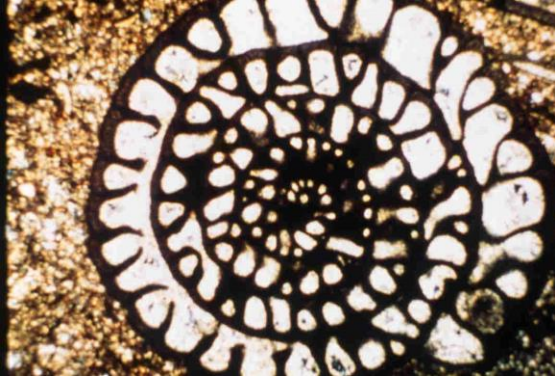
MICRITE A CALPIONELLE



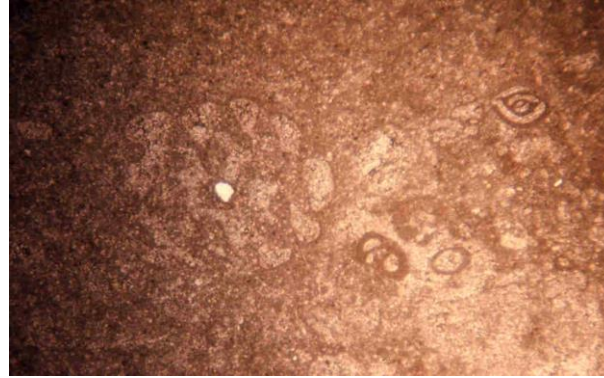


# FORAMINIFERI

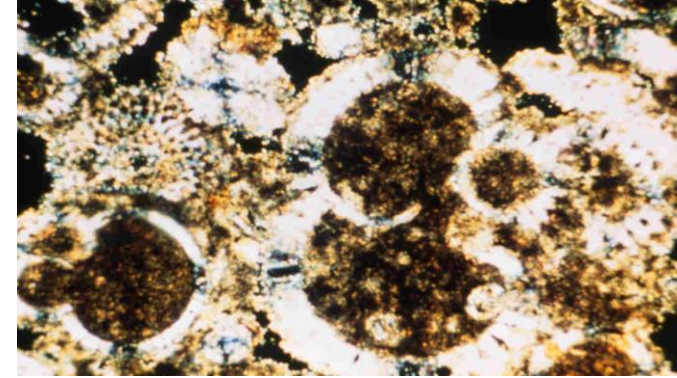
- Planctonici o bentonici
- Guscio:
  - Agglutinato (bentonici)
  - Calcareo : a) Gusci porcellanacei, imperforati
    - b) Gusci ialini, perforati
  - Siliceo (raro)
- Mineralogia: LMgCa, raramente aragonite



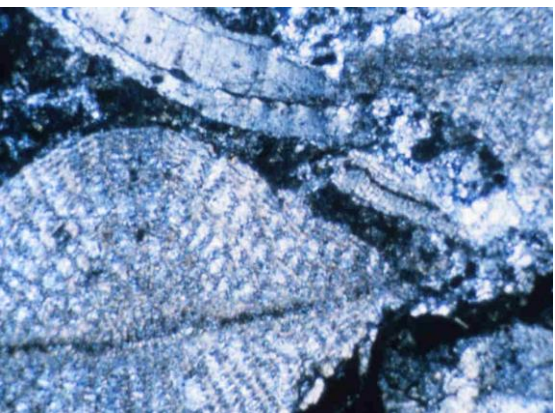
FUSULINA struttura microgranulare



MILIOLIDI porcellanacei



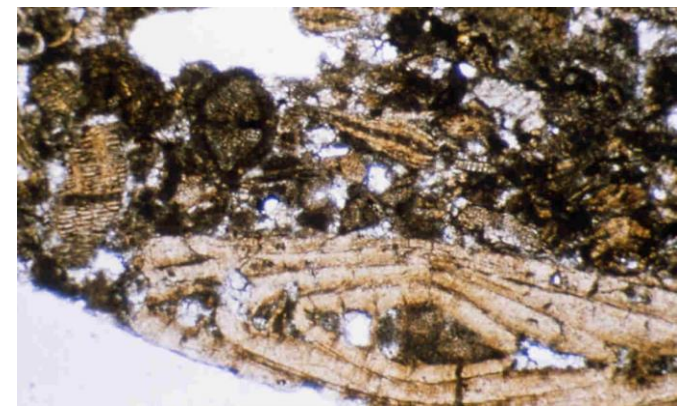
GLOBOROTALIA guscio ialino



ORBITOIDE

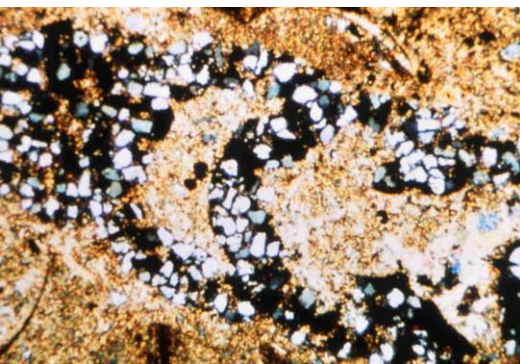


DISCOCYCLINA

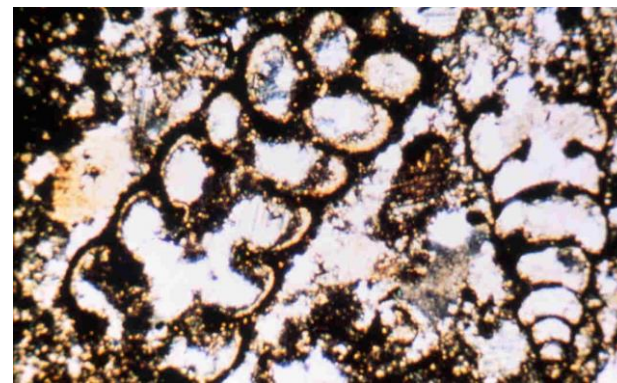


NUMMULITE

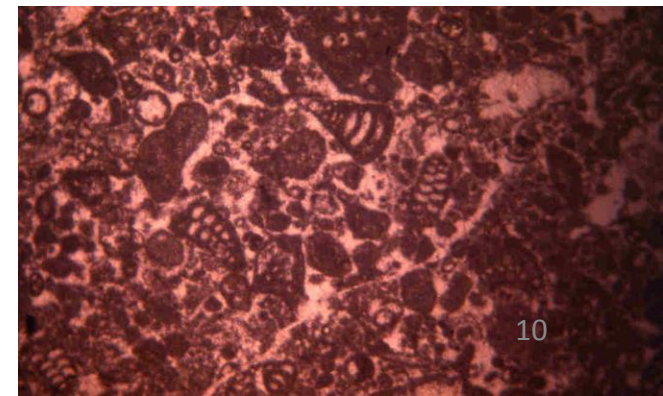
AGGLUTINANTE ARENACEO



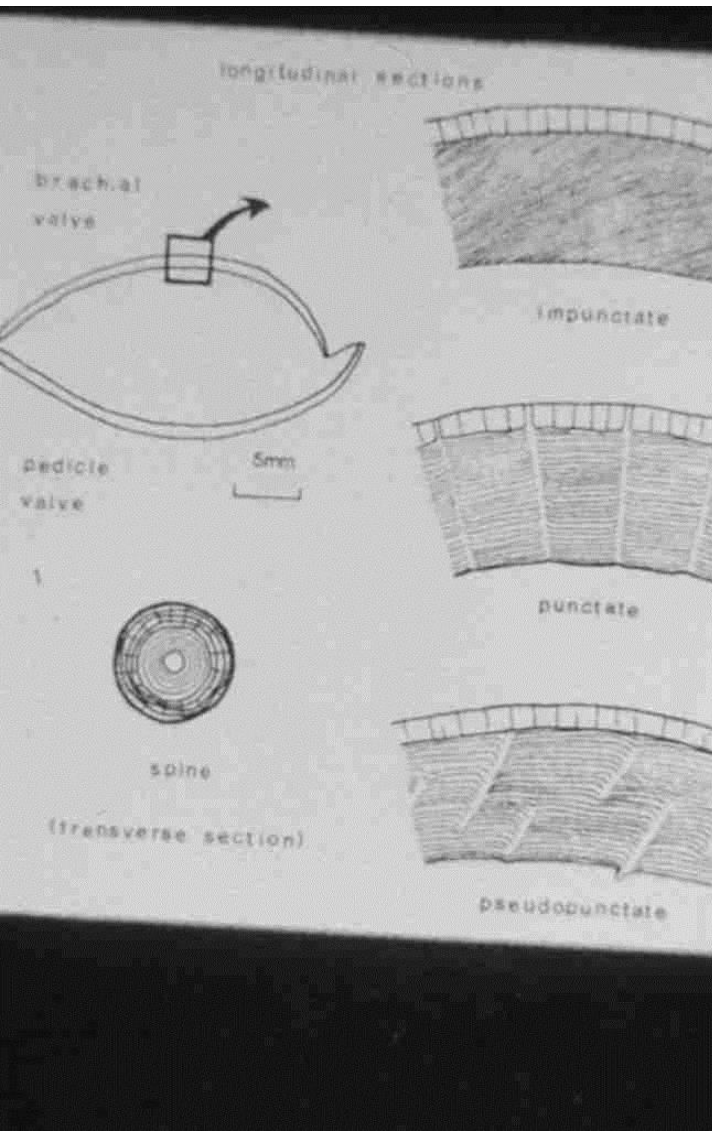
AGGLUTINANTE



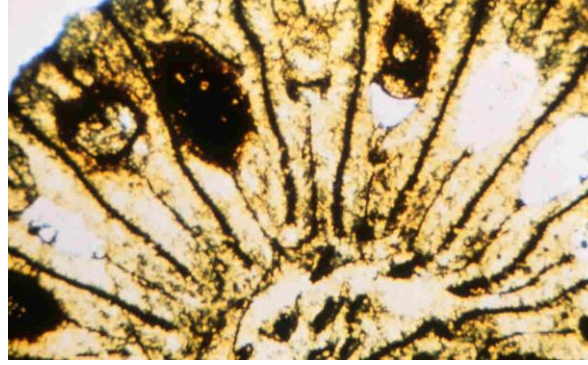
CALCARE A FORAMINIFERI



# BRACHIOPODI



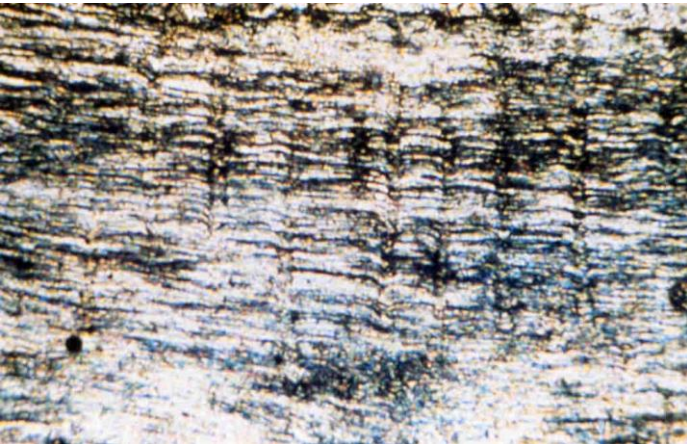
- marini
- bentonici sessili
- struttura fogliata (lamine di calcite disposte a laminette o obliquamente all'andamento del guscio)
- guscio calcitico



## CORALLI

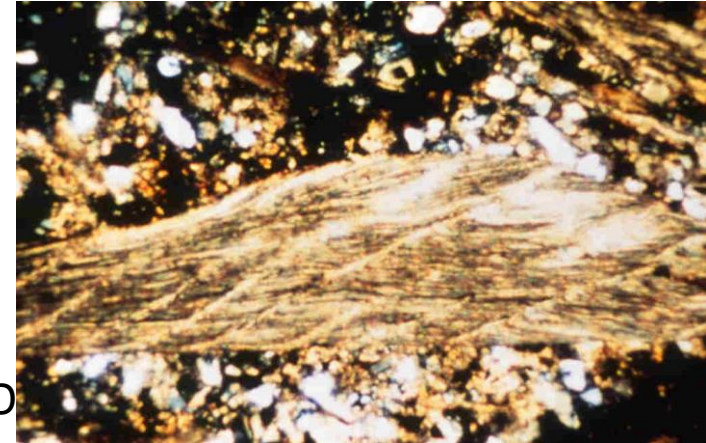
Guscio da aragonitico, HMgCa a calcitico

### CORALLO RUGOSO SOLITARIO



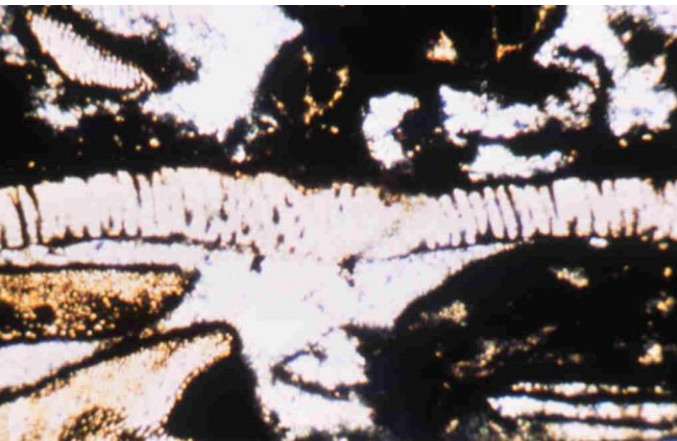
### BRACHIOPODE

struttura fibrosa parallela:  
si vedono le pseudopuncte



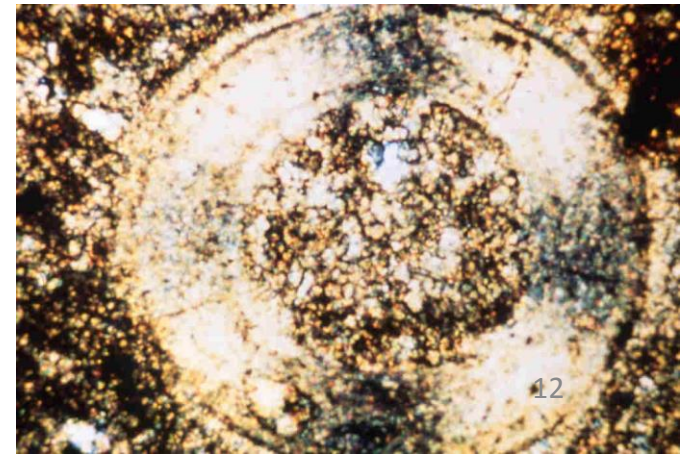
### BRACHIOPODE PSEUDOPUNCTATO

## BRACHIOPODI



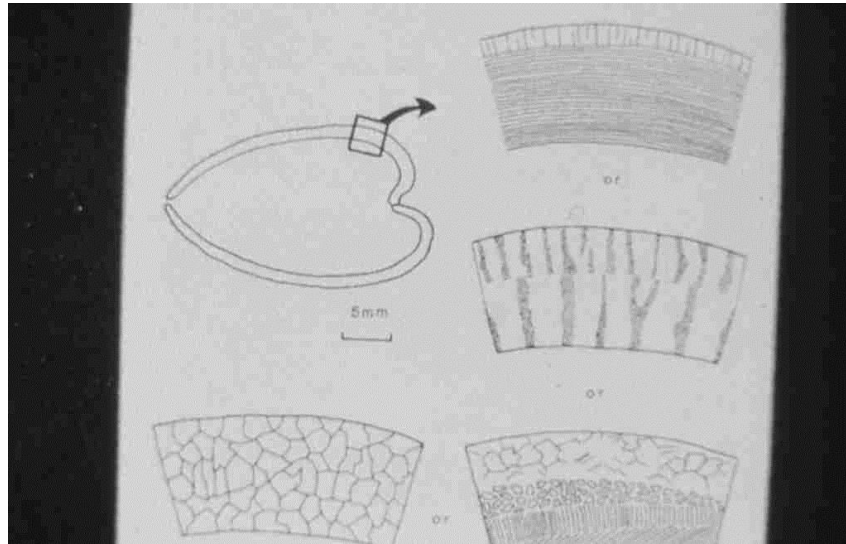
### BRACHIOPODE PUNTATO

spina di  
BRACHIOPODE

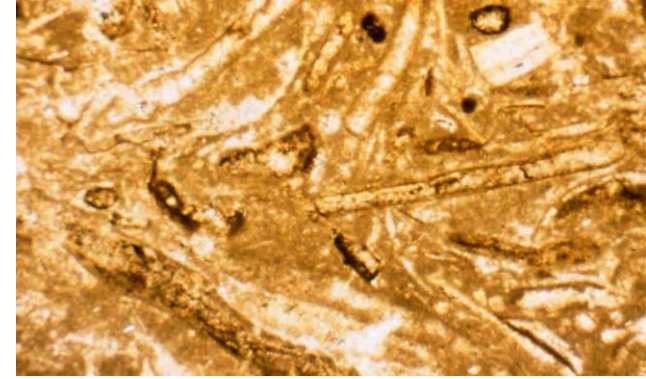
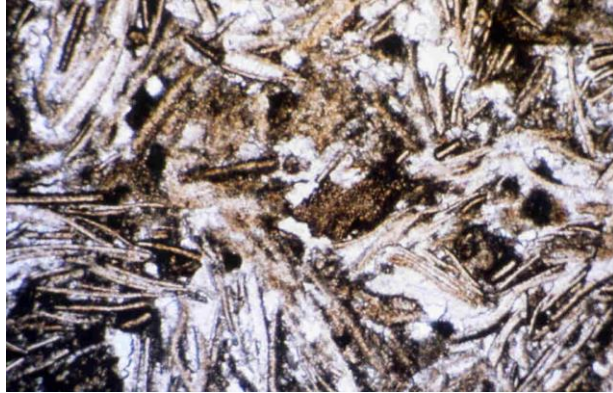


# MOLLUSCHI

## BIVALVI



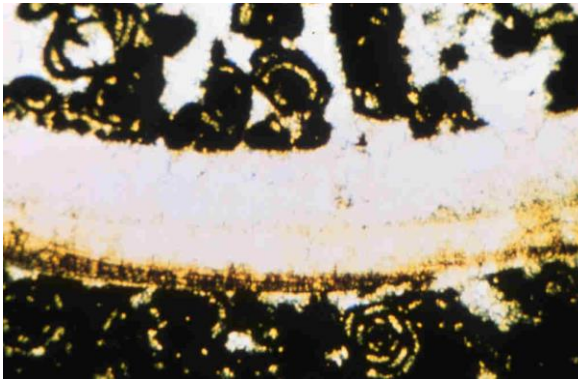
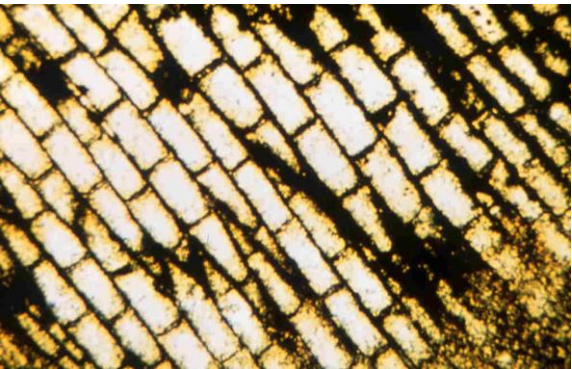
- Presenti in tutti gli ambienti acquatici
- Vario modo di vita (infaunali, epifaunali, planctonici, nectonici ecc)
- guscio quasi sempre aragonitico (struttura a più strati che non viene conservata)



Effetto riparo alla micrite:  
Struttura geopetale

## LAMELLIBRANCHI PELAGICI (PELECIPODI)

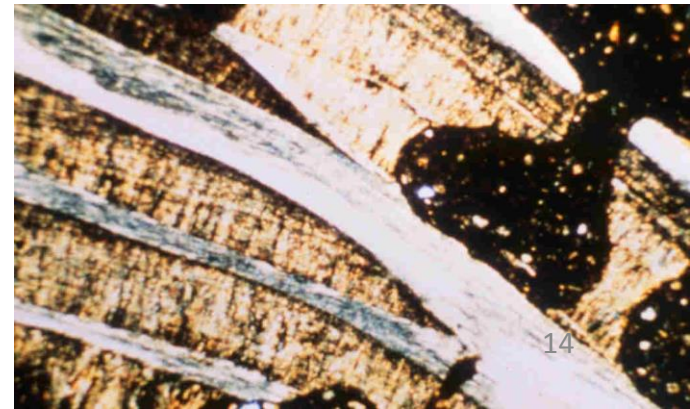
Guscio per lo più aragonitico

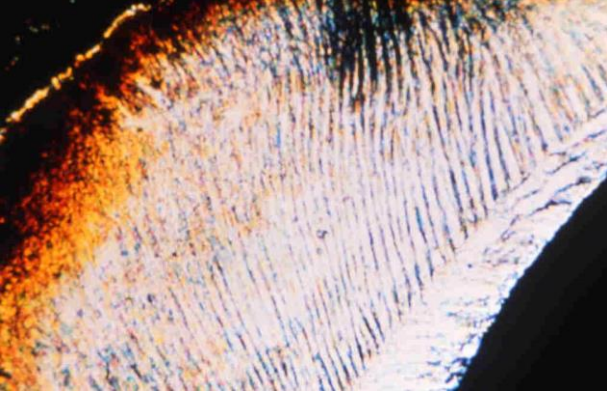


sezione di parete di RUDISTA

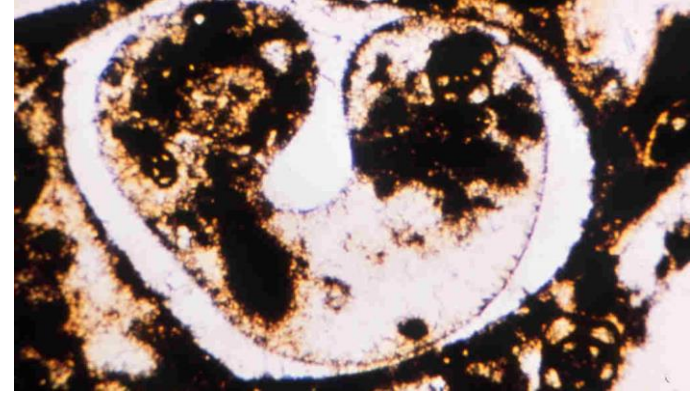
parete di RUDISTA  
Guscio aragonitico

frammento di OSTRICA bucata





Guscio a lamelle incrociate



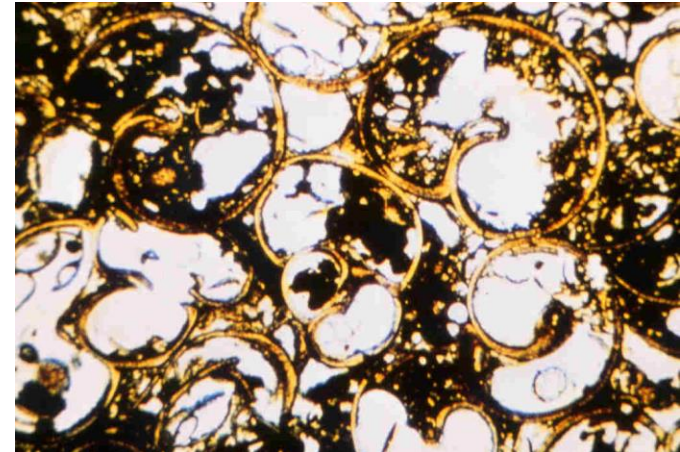
Parete aragonitica calcitizzata

## **GASTEROPODI**

Guscio da aragonitico a calcitico



Parete aragonitica calcitizzata

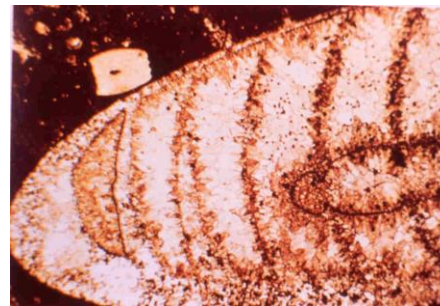


GASTEROPODI d'acqua dolce.  
Guscio aragonitico

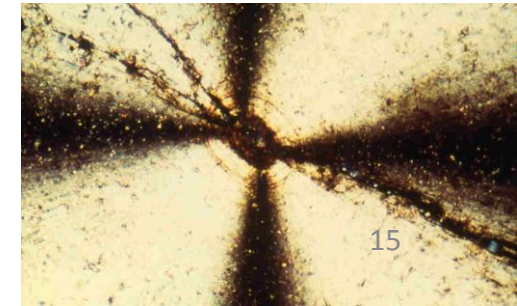
## Sezione di SCAFOPODE



## Sezione di CEFALOPODE



## Rostro BELEMNITE



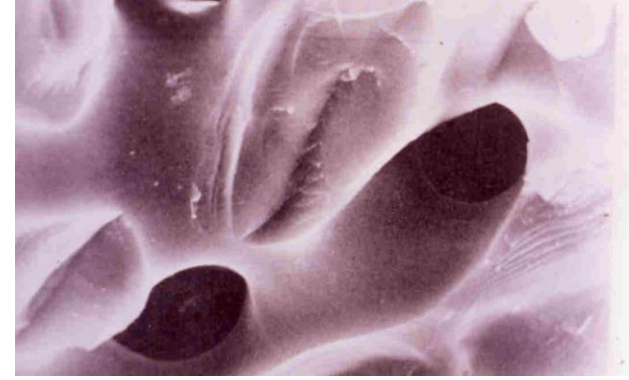
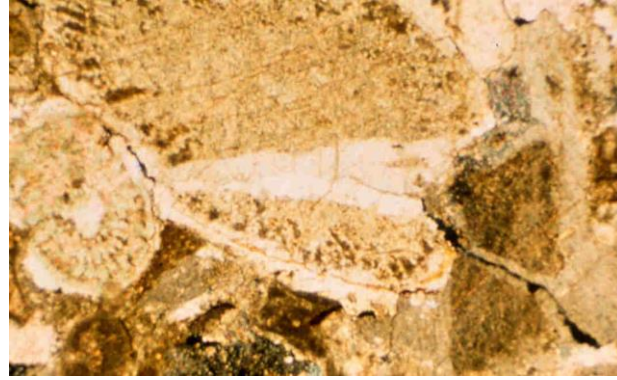
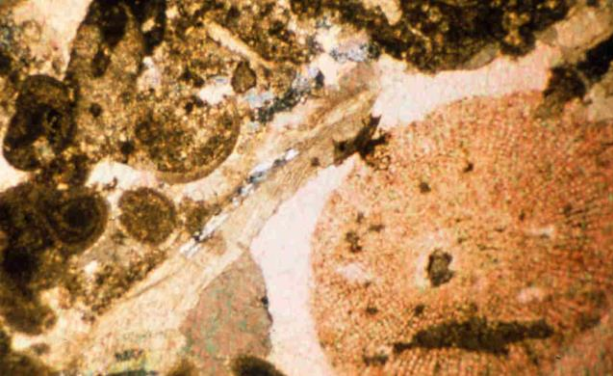
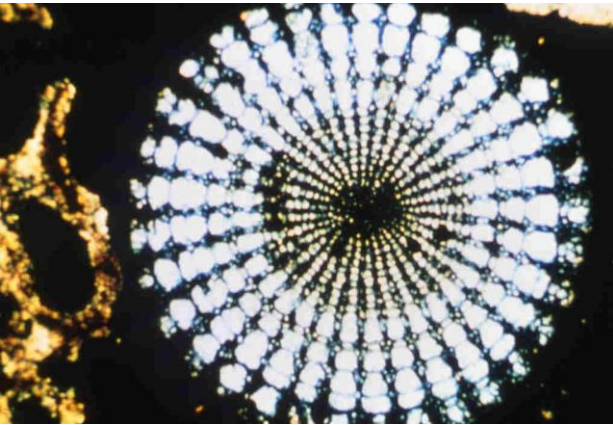


Immagine al SEM

**ECHINIDI (radioli)**

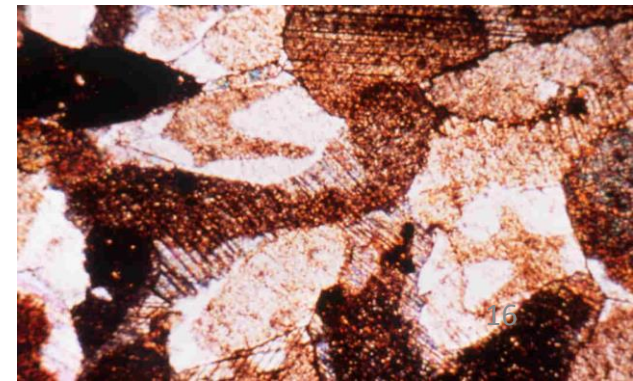
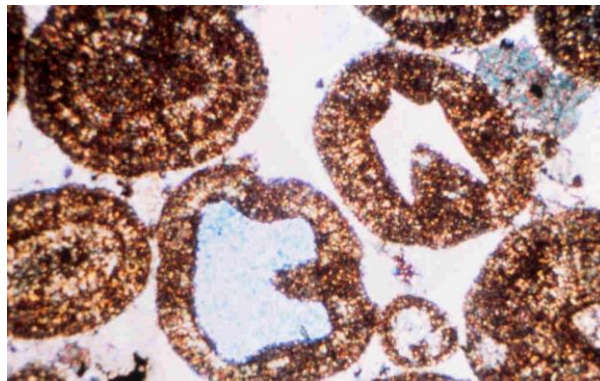
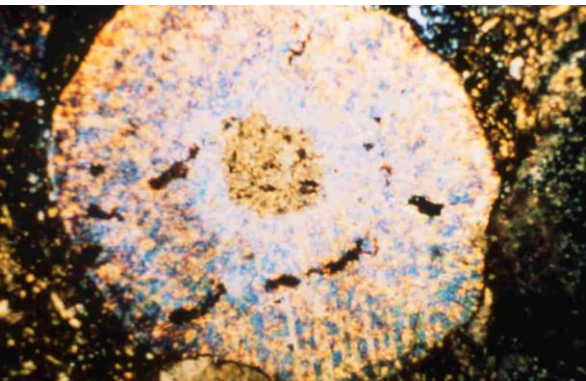


**ECHINODERMI**

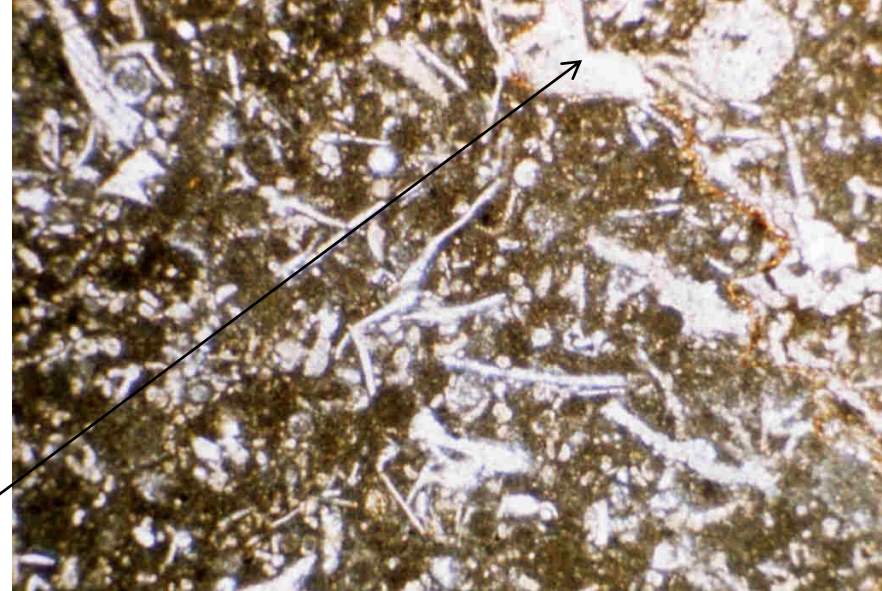
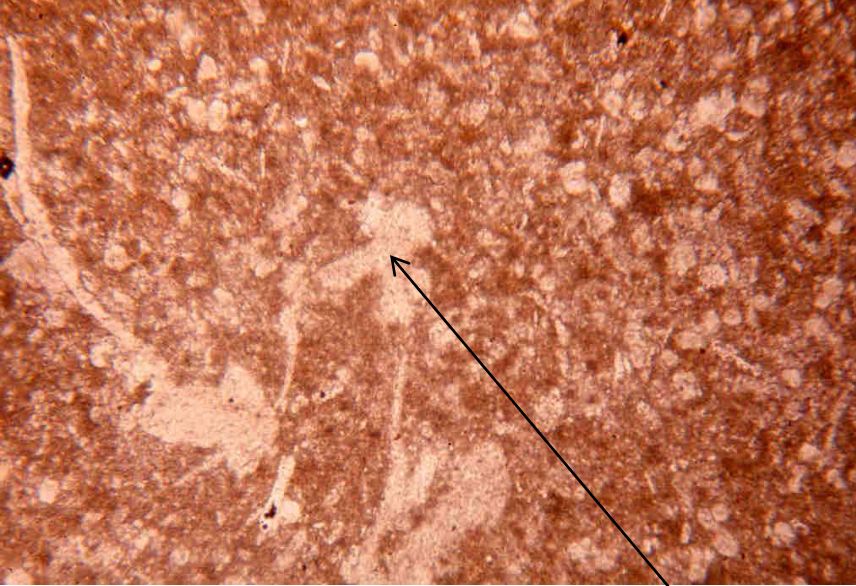
Guscio calcitico

**CRINOIDI**

**entrochi + ooidi**

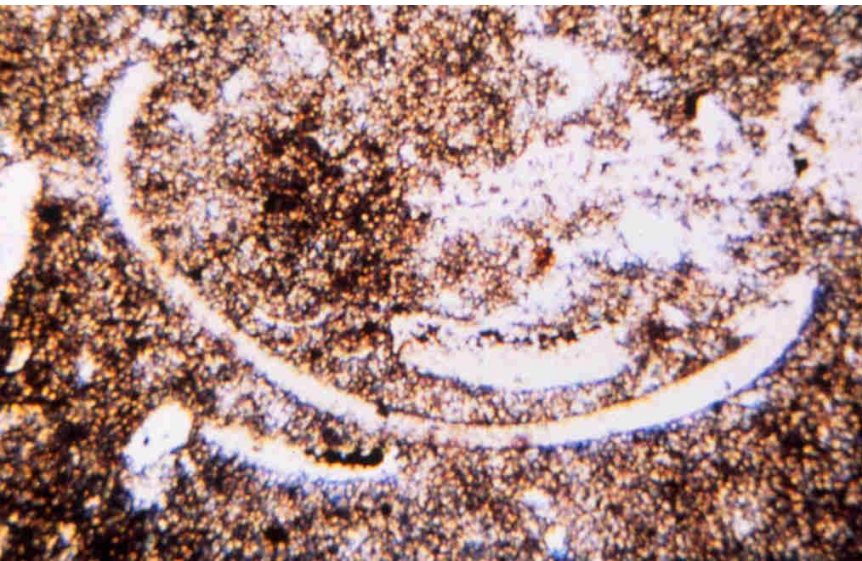






SACCOCOMA (parte del crinoide pelagico)

OSTRACODI guscio calcitico



TRILOBITE

