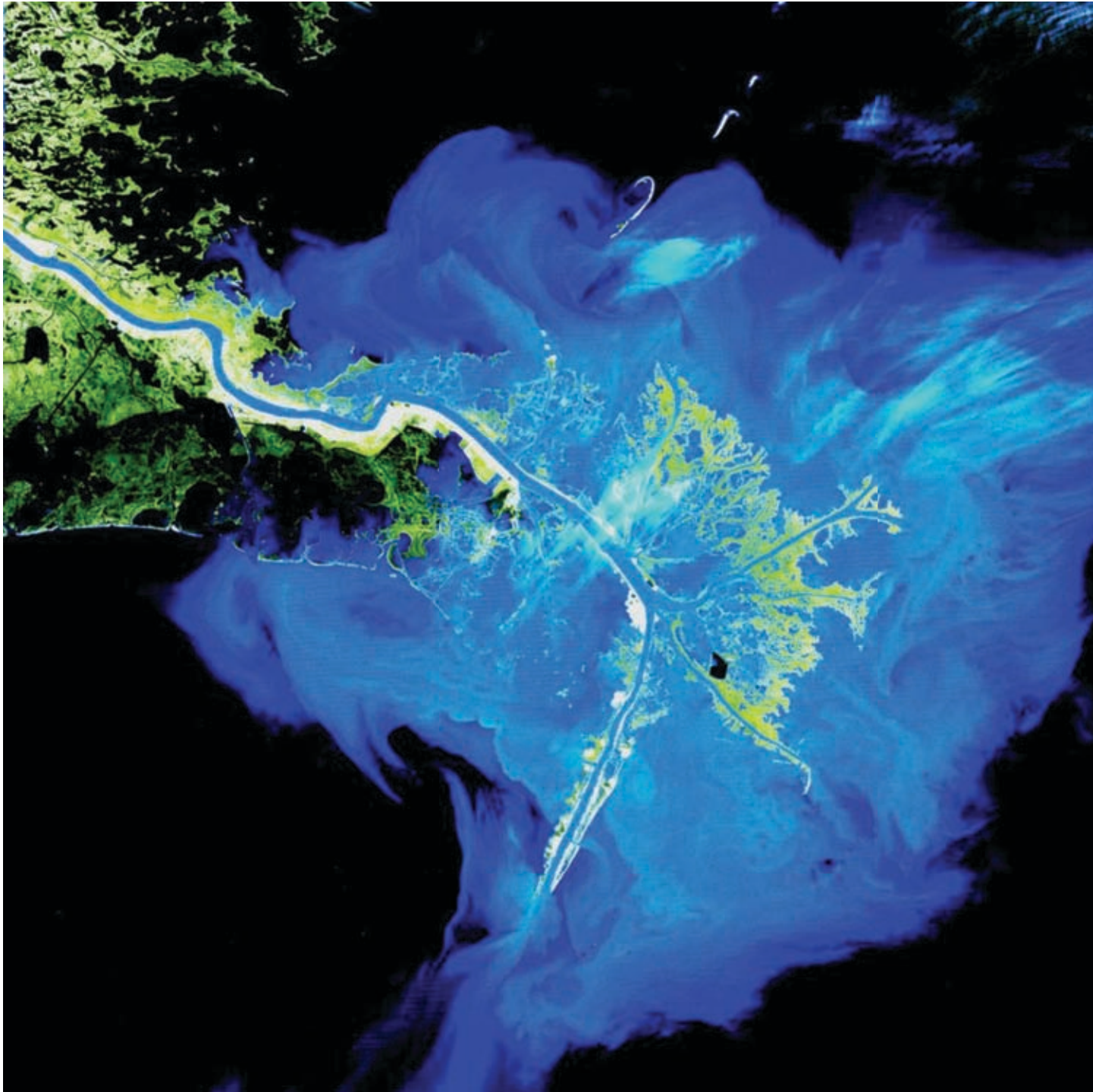
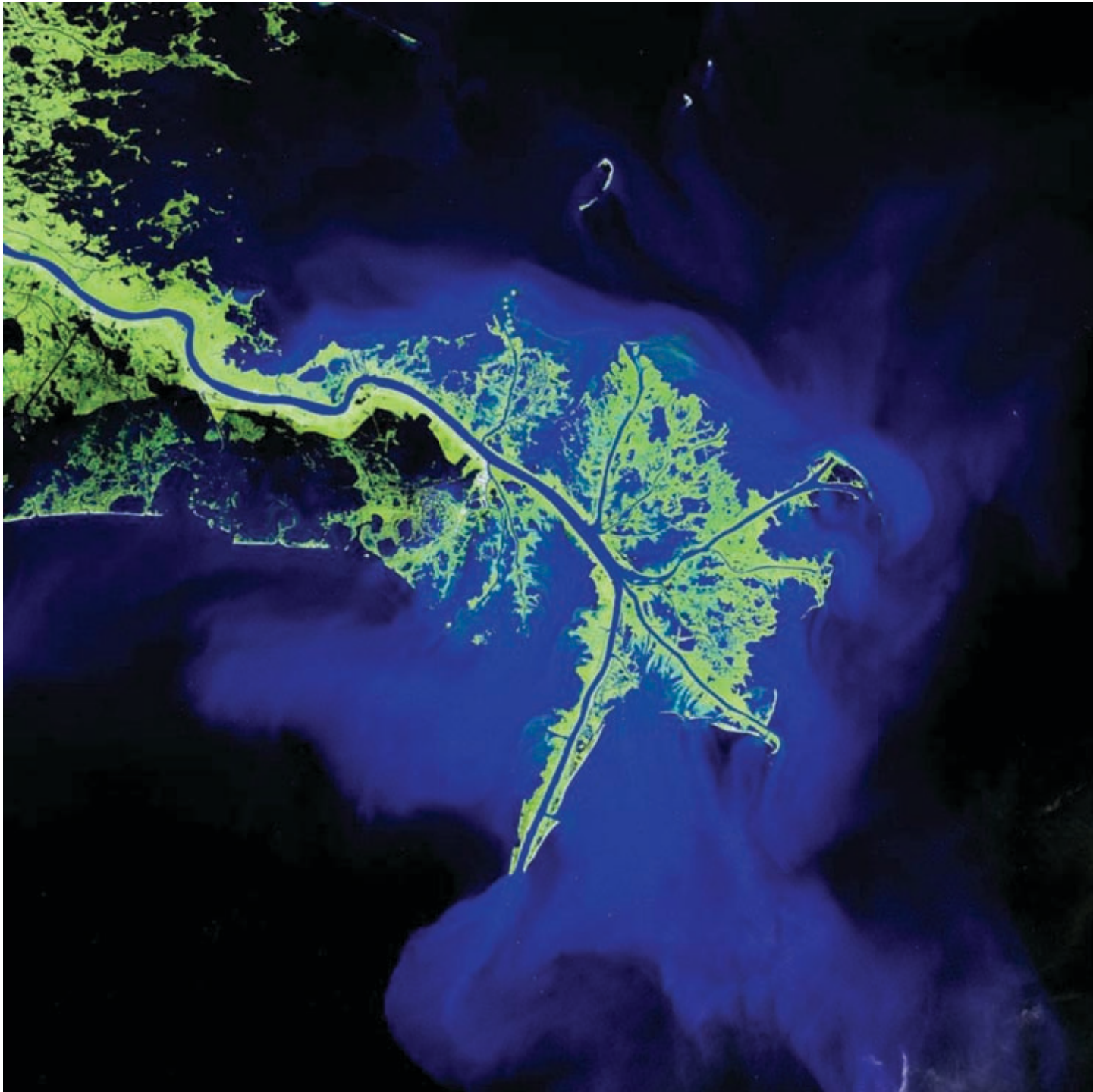


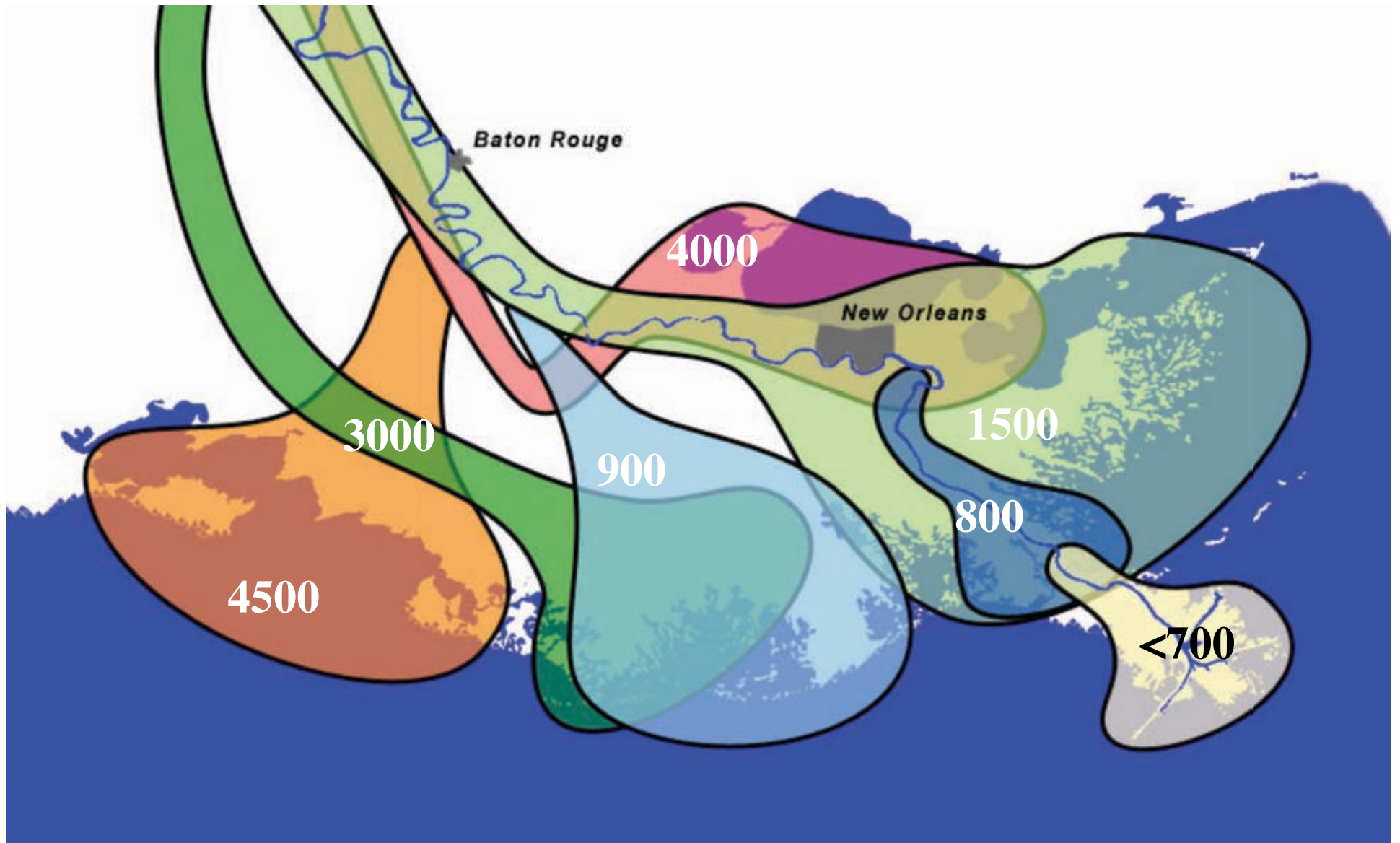
1973



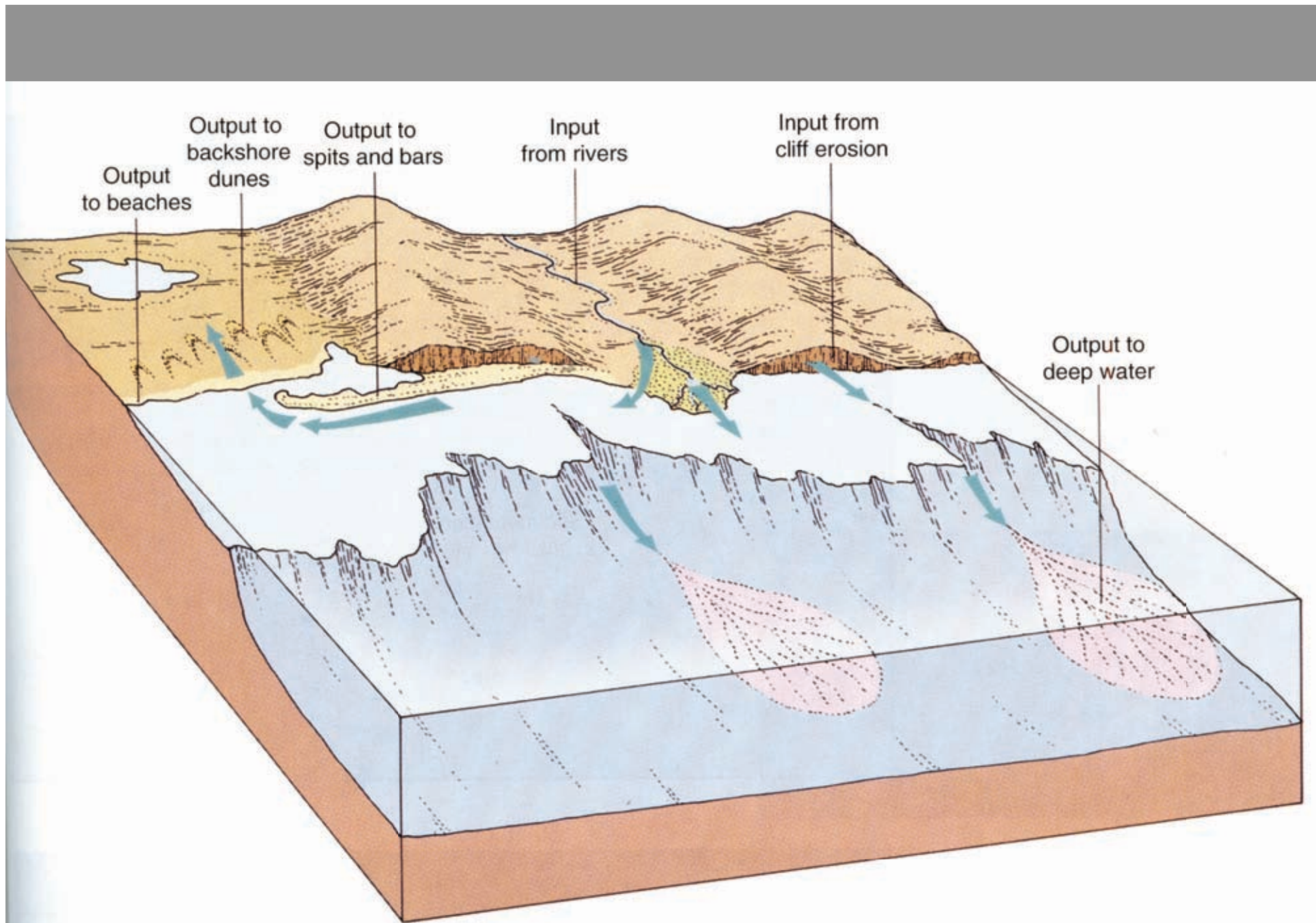
1989

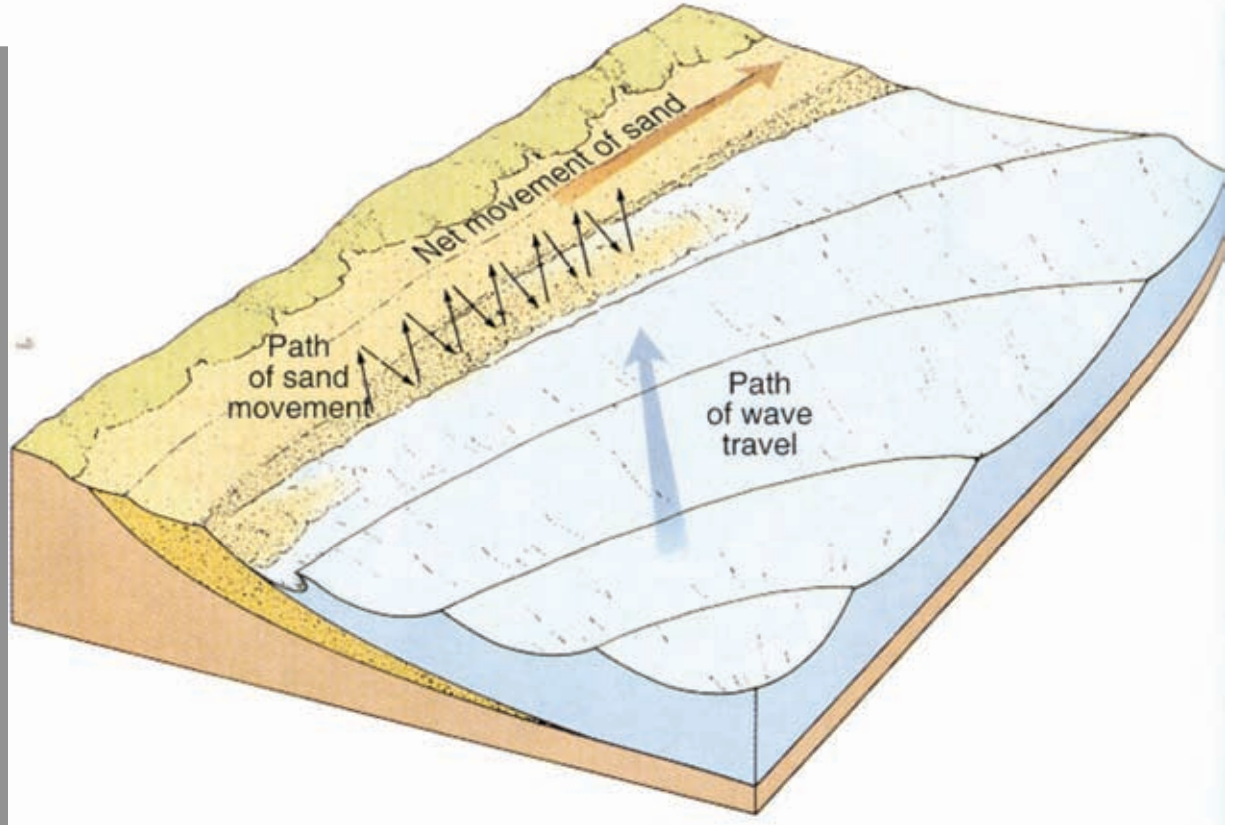
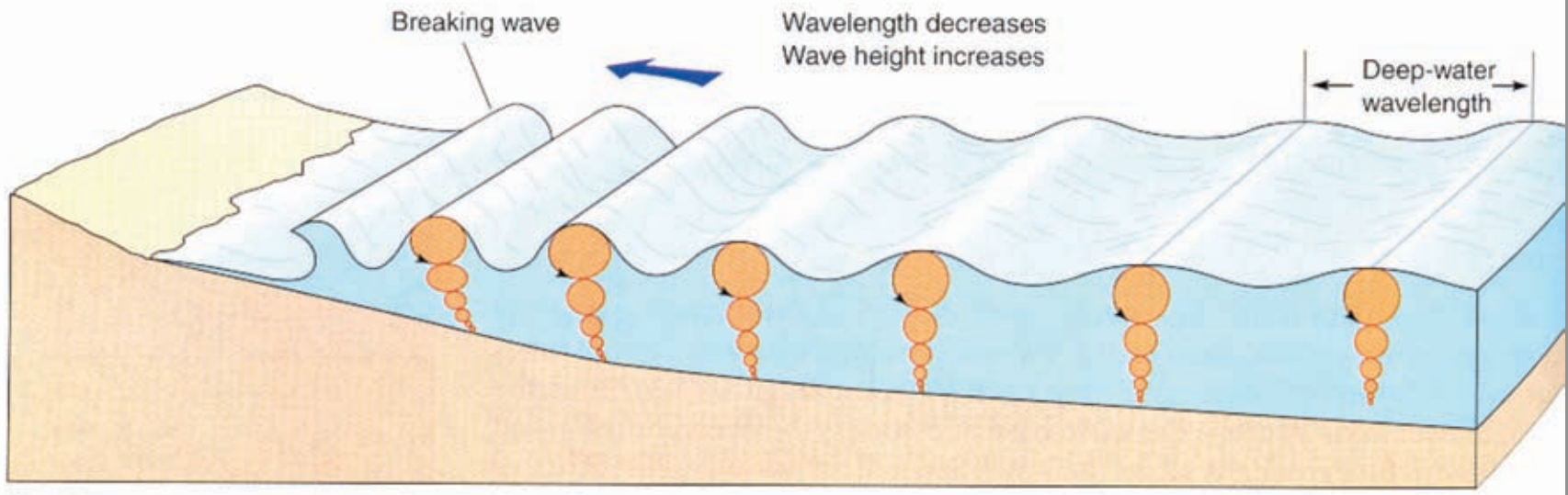


2003



Modern delta built up over past 10,000 years  
-following most recent glaciation

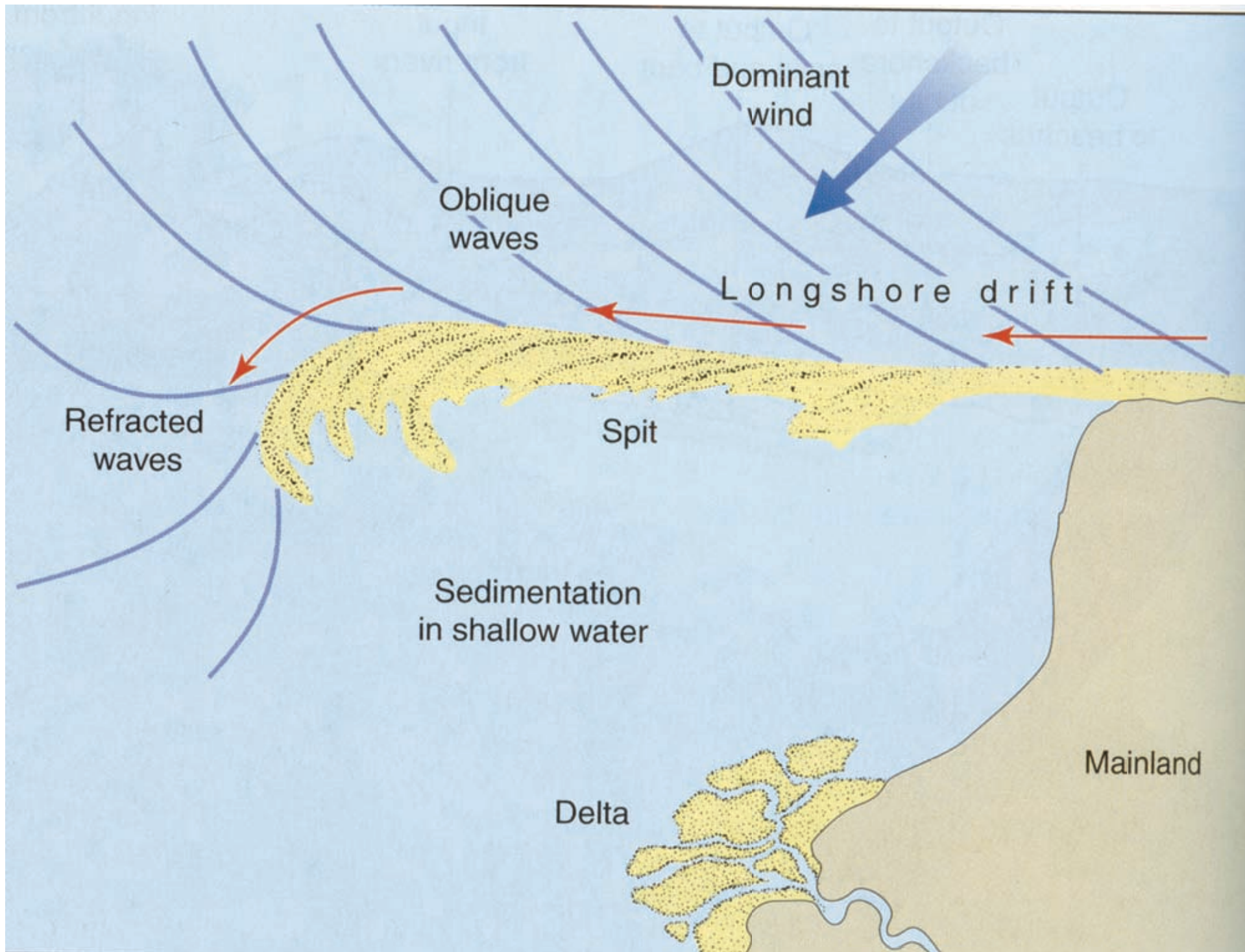


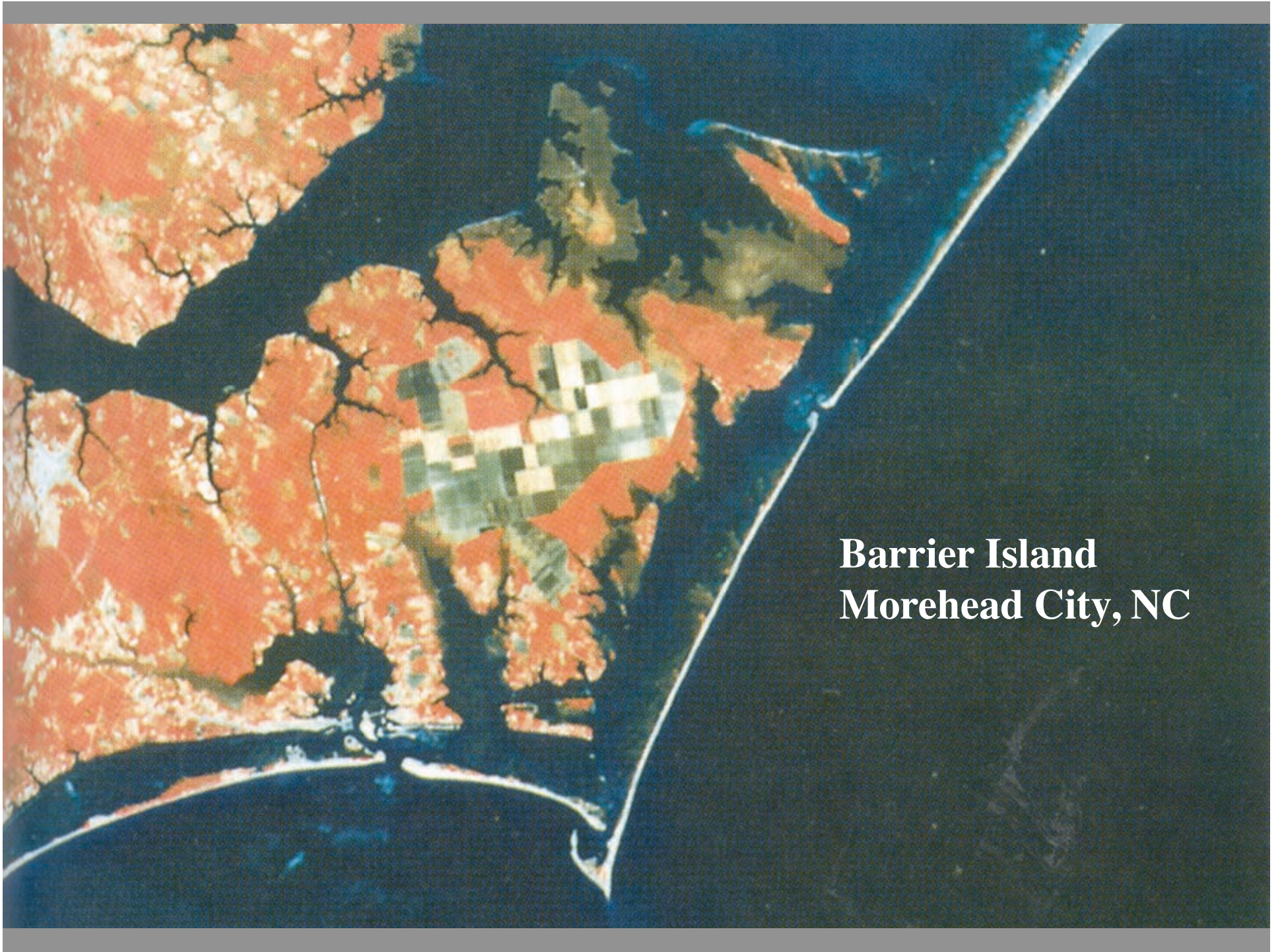








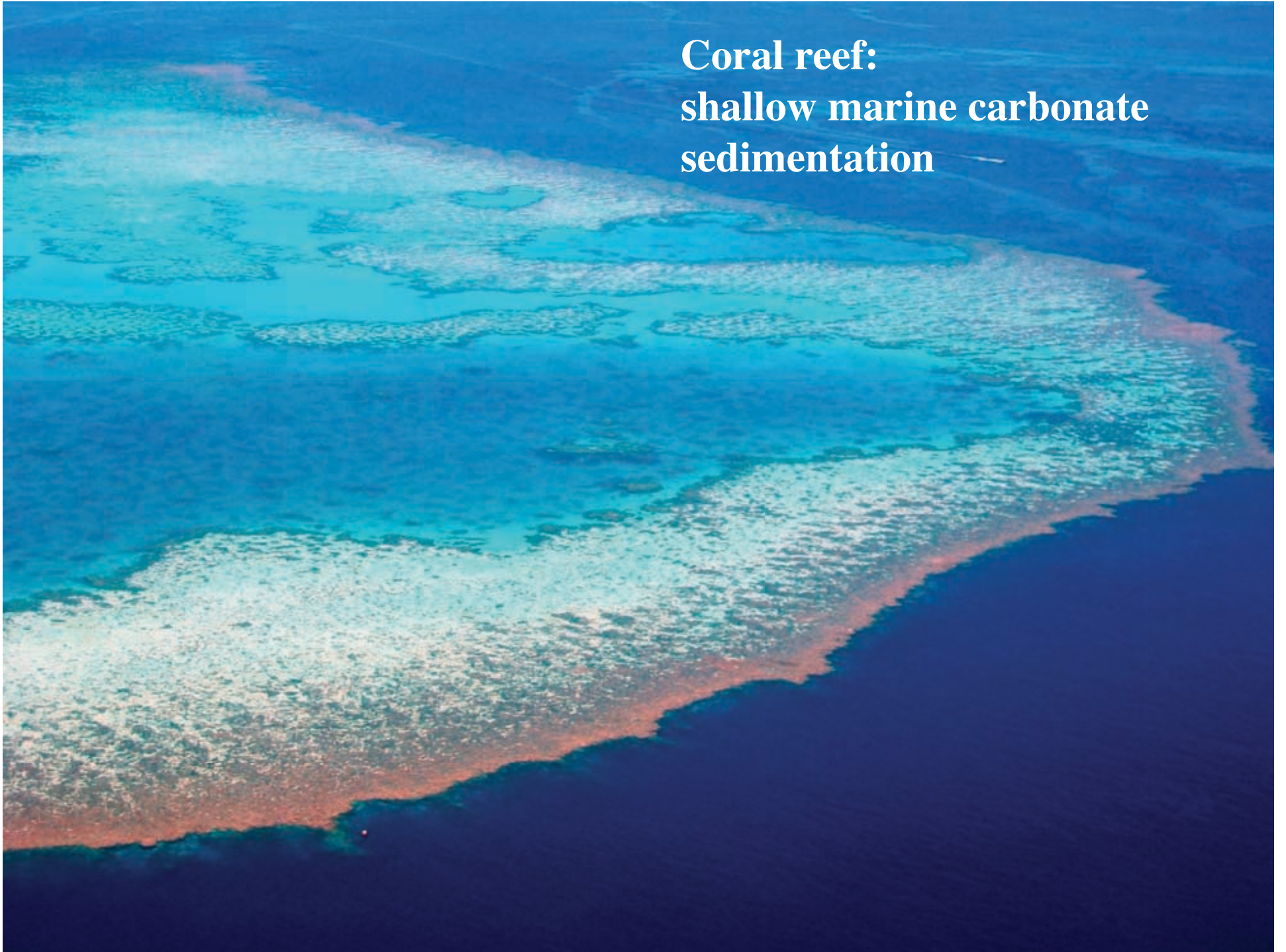




**Barrier Island  
Morehead City, NC**



**Coral reef:  
shallow marine carbonate  
sedimentation**



**Coral: calcite shell**



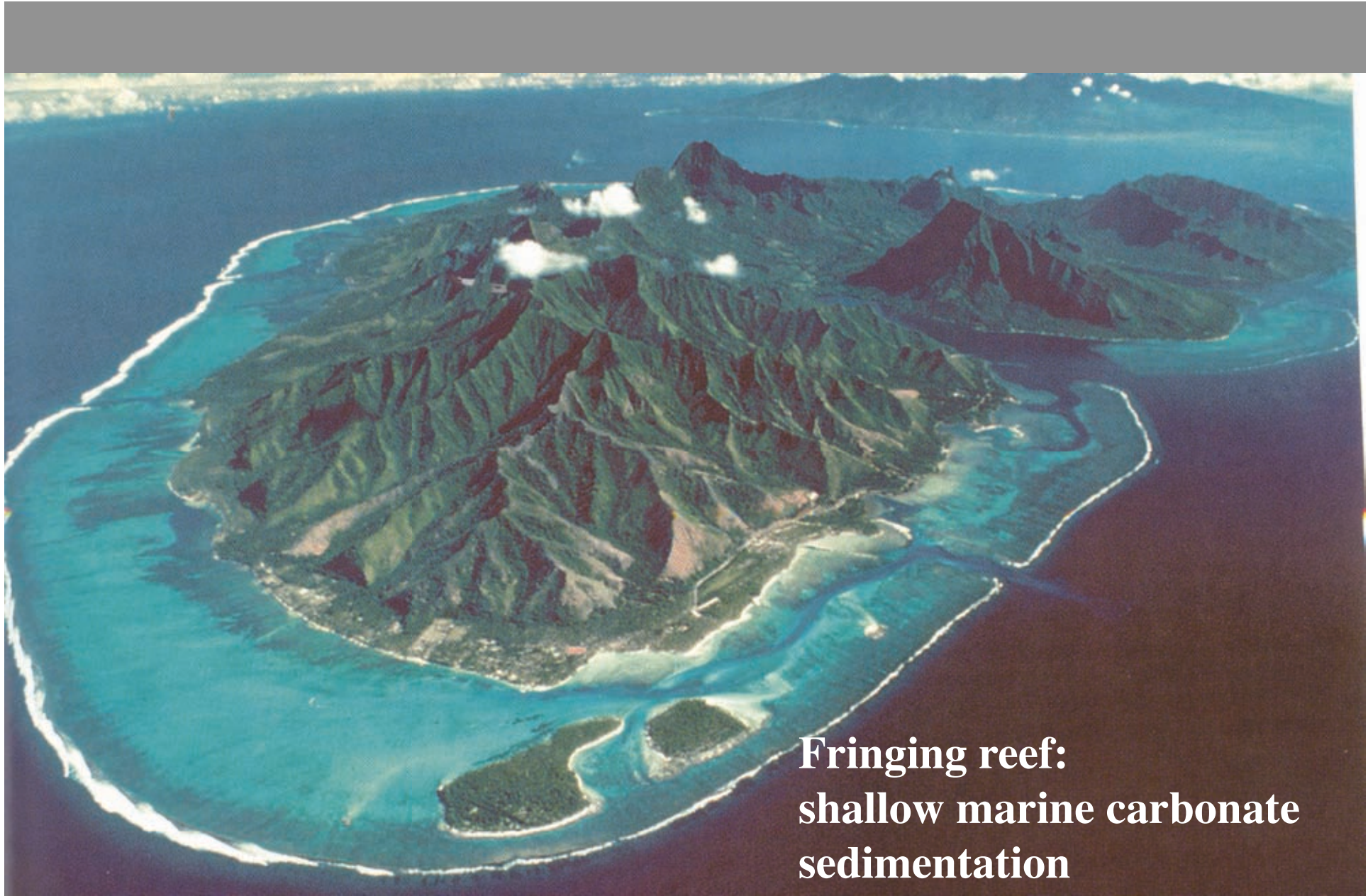
**limestone: shell bed (calcite)**



1/2  
mm

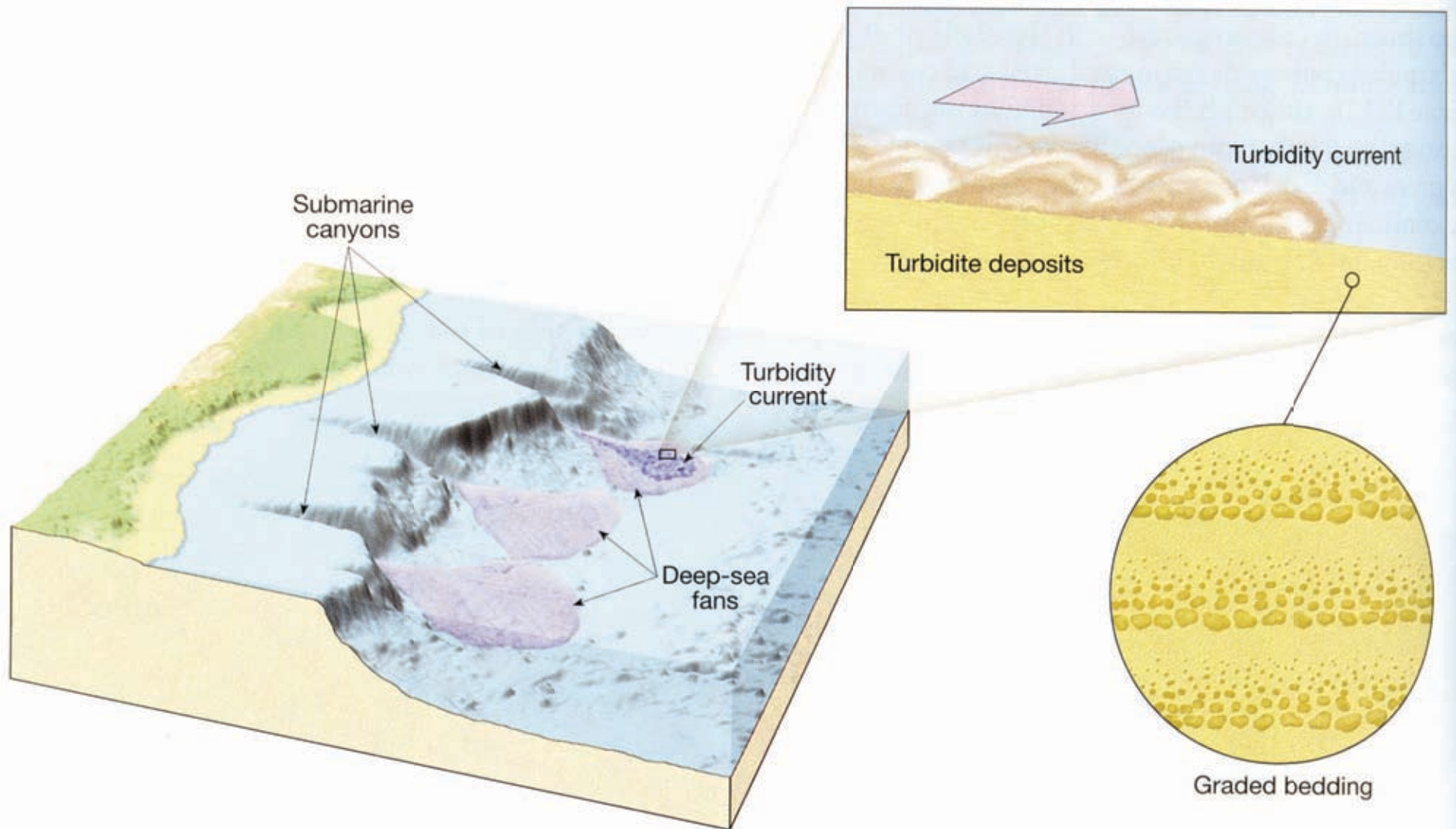
Limestone: calcite shells and  
shell fragments





**Fringing reef:  
shallow marine carbonate  
sedimentation**

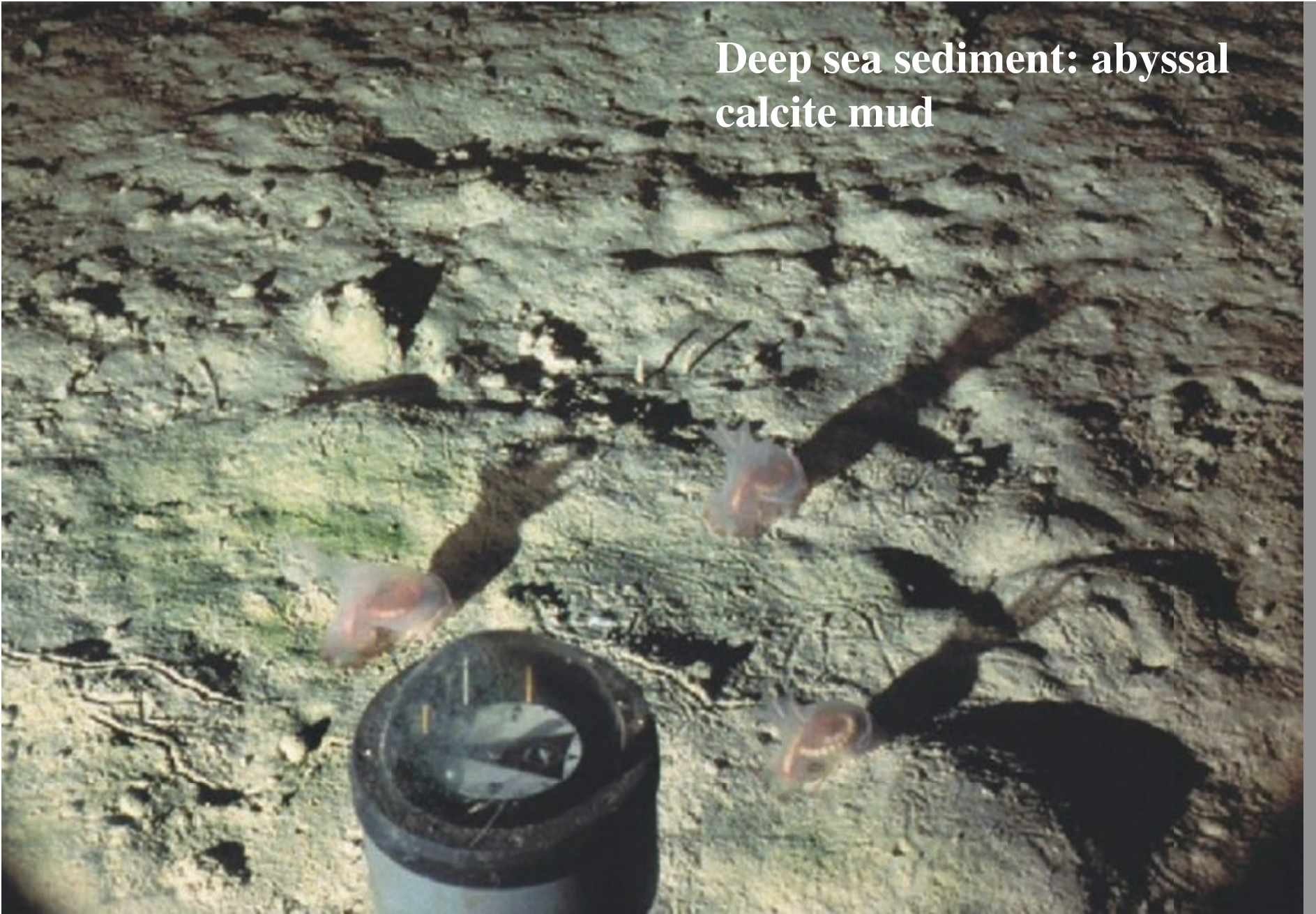








Deep sea sediment: abyssal  
calcite mud



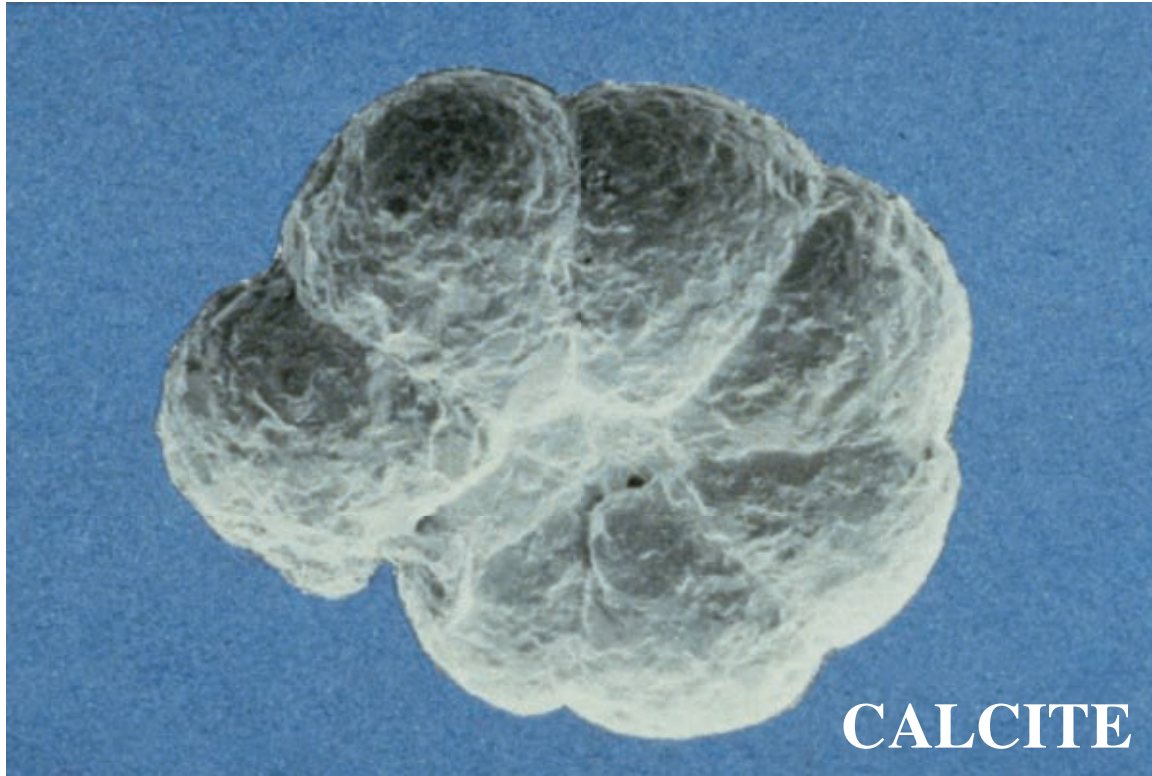
CALCITE



Foraminifera



Living foram

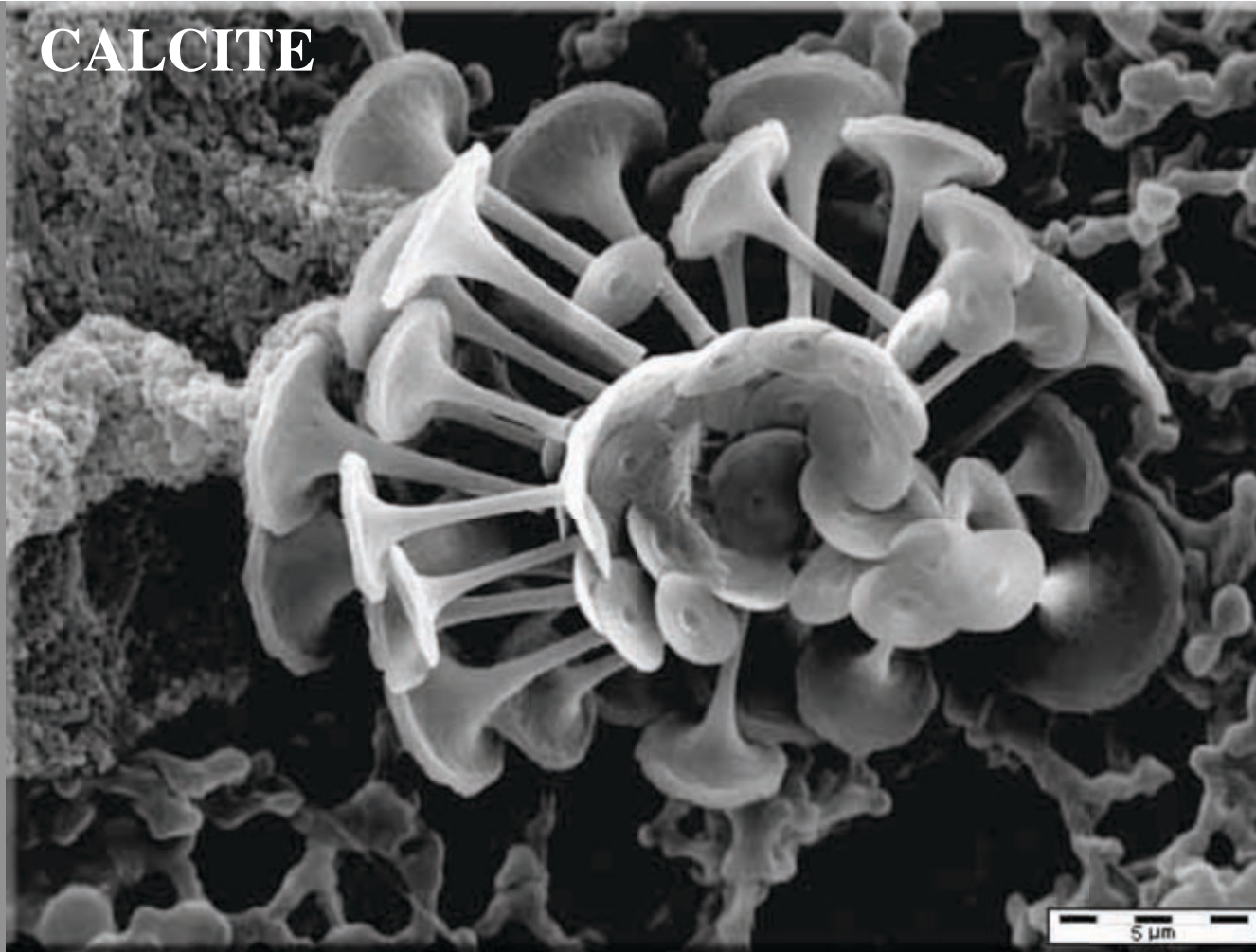


Partially dissolved foram in deep-sea sediment



Coccolithophore -calcareous phytoplankton

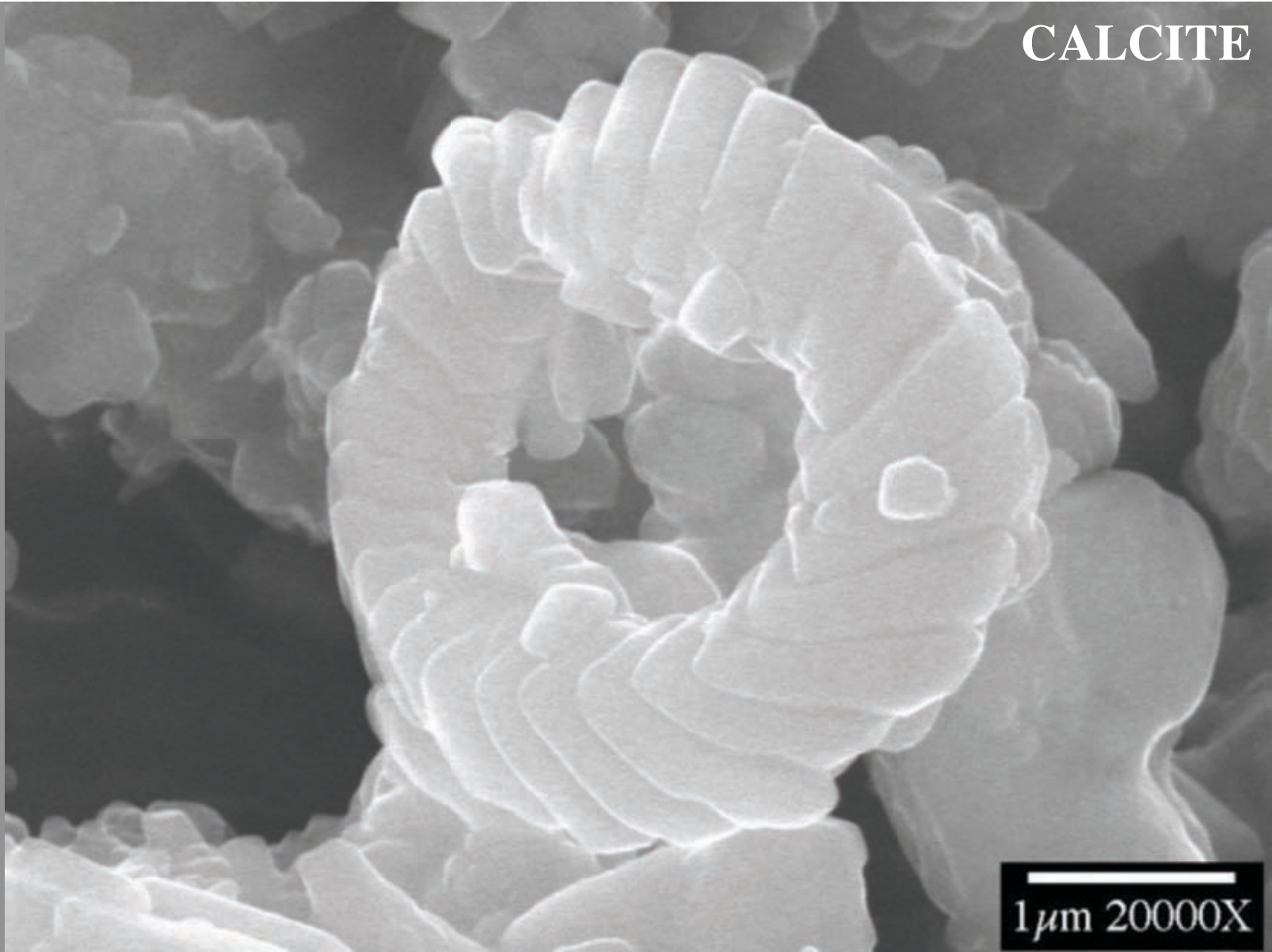
CALCITE



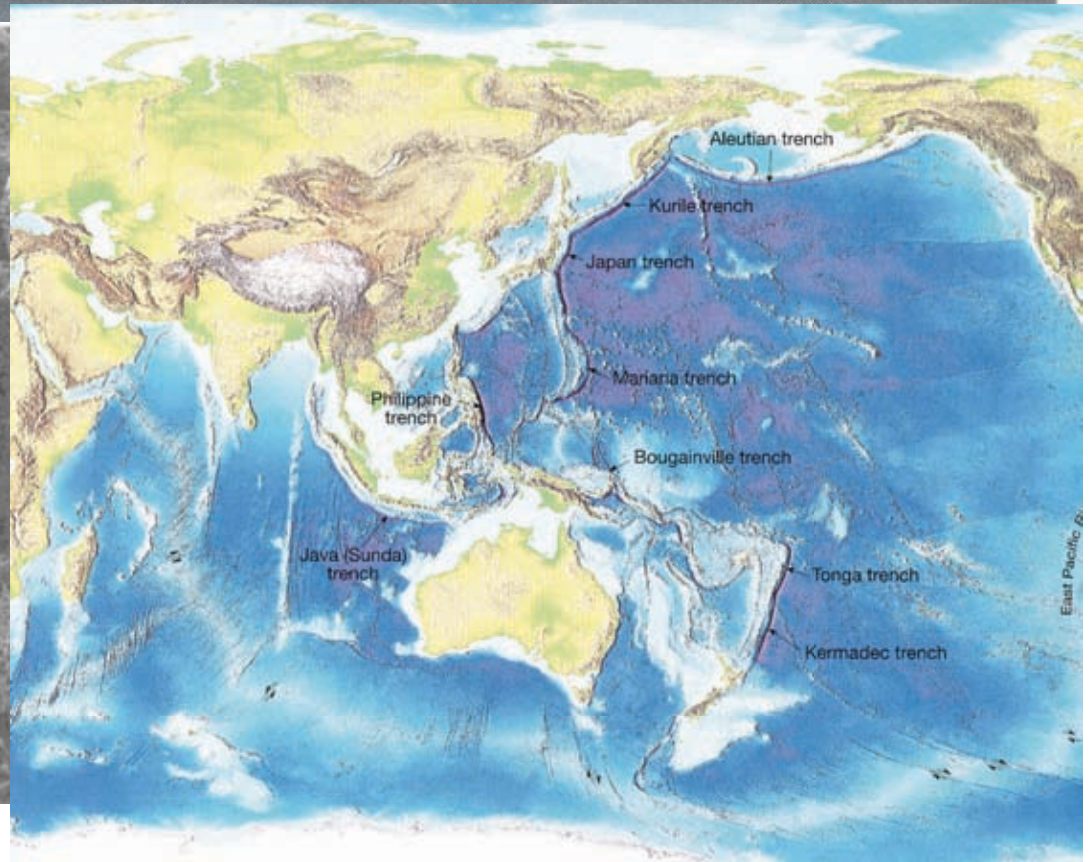
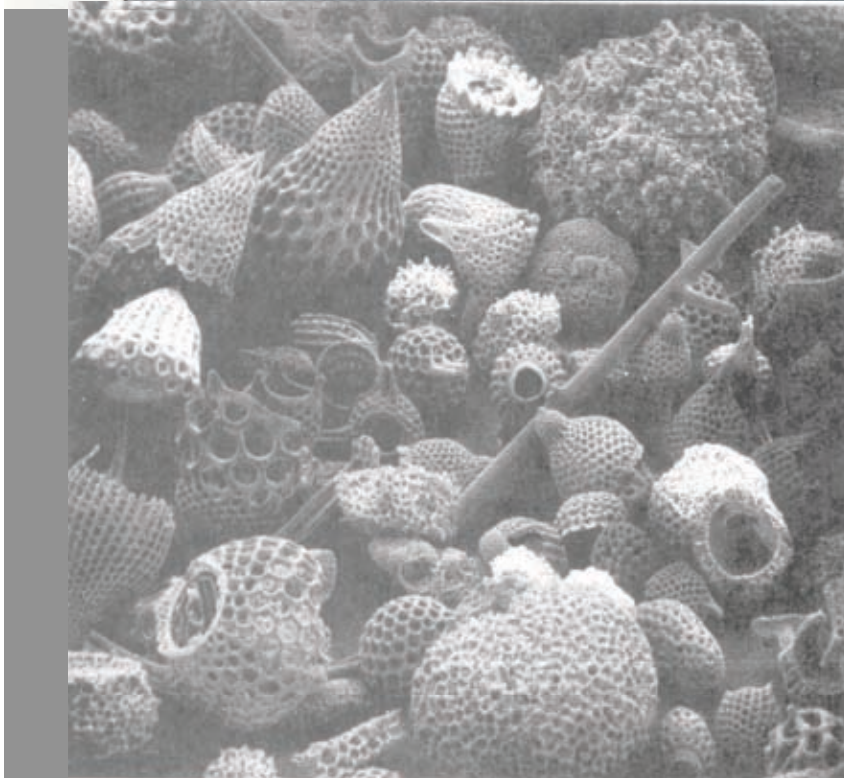
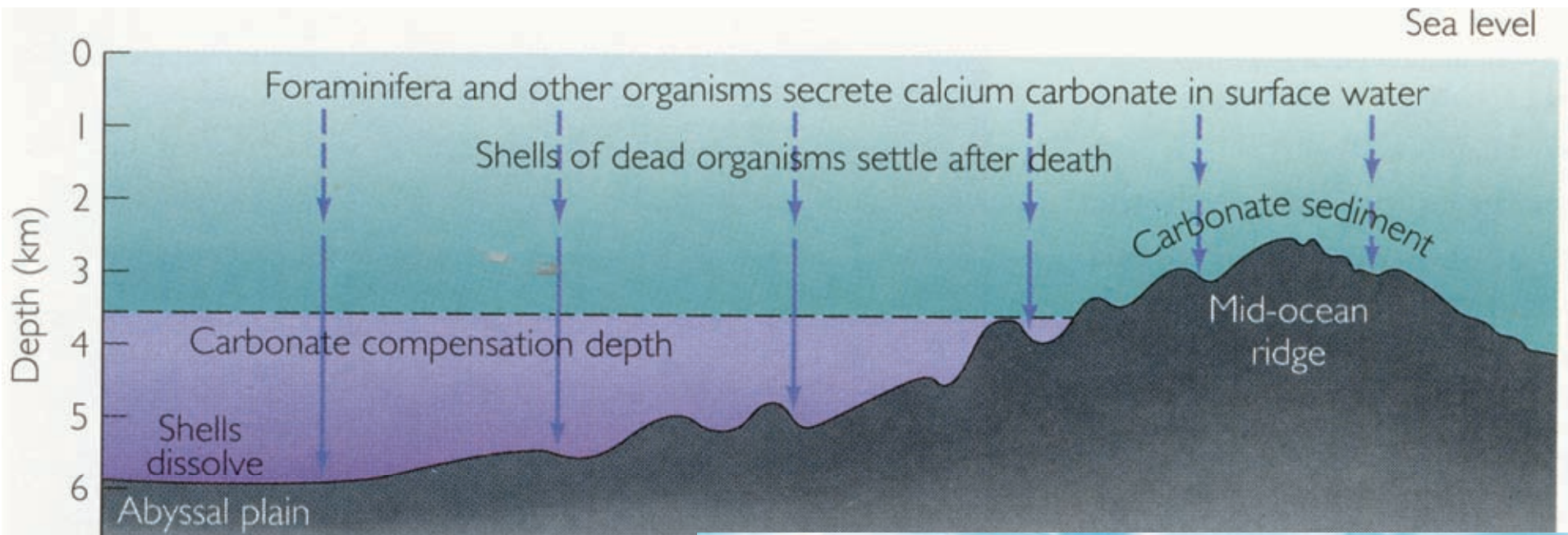
Coccolithophore -calcareous phytoplankton

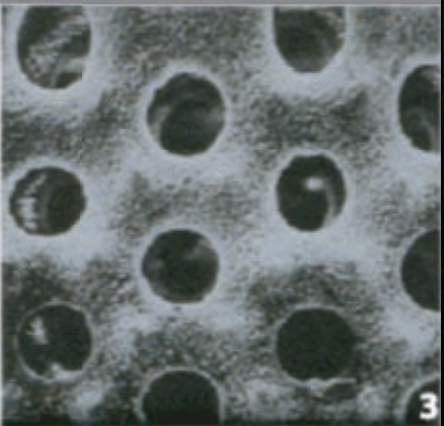
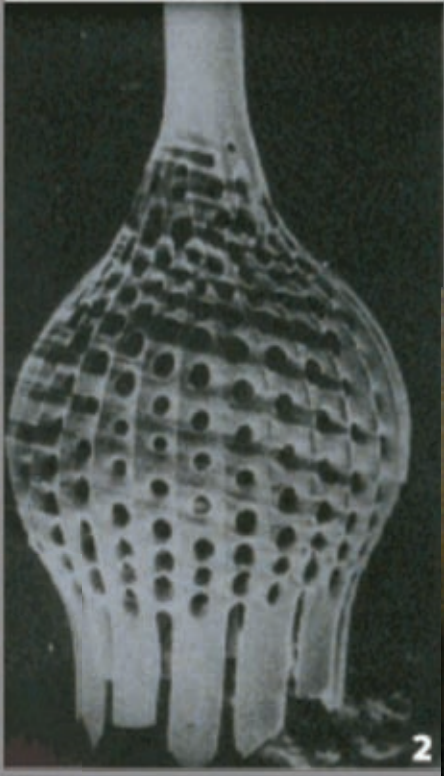
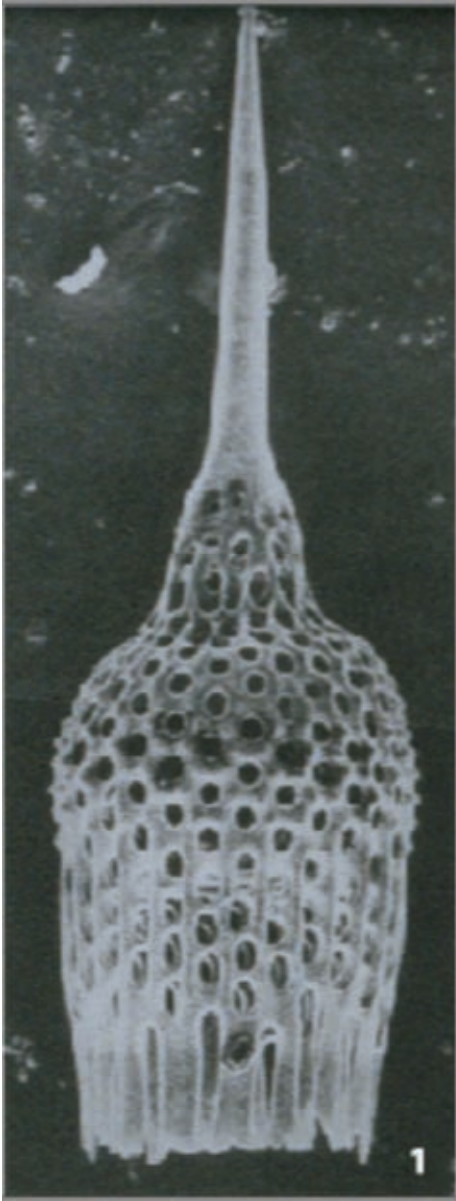


CALCITE

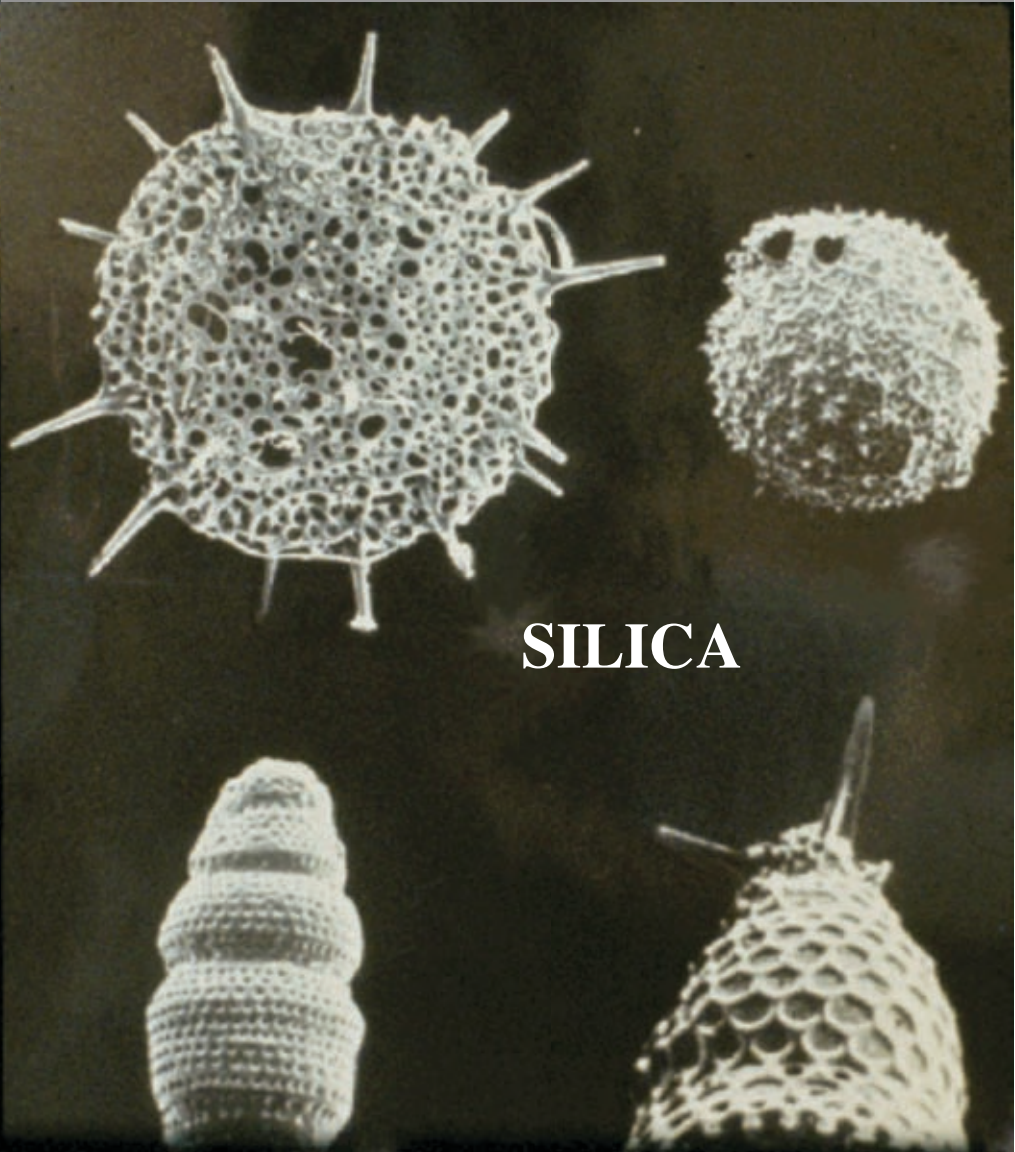


Coccolith in Dover chalk

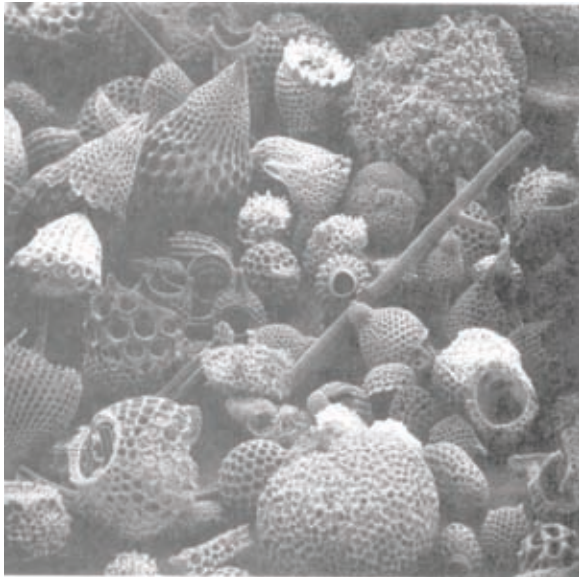




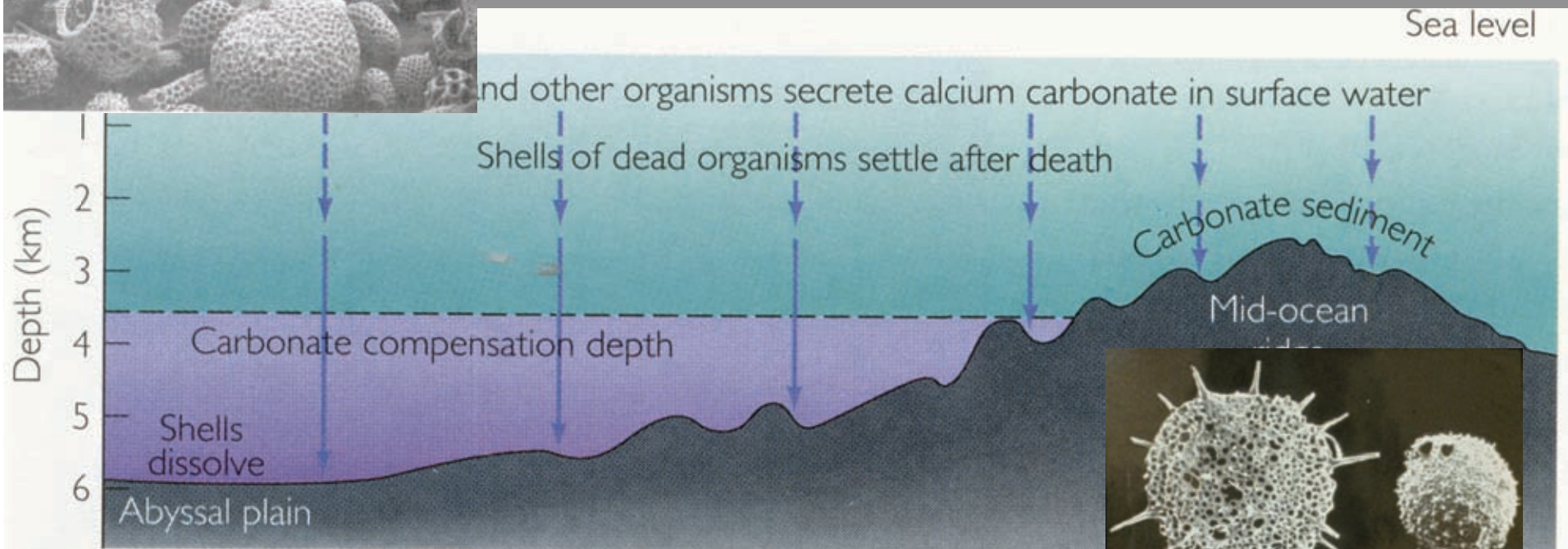
# Radiolaria



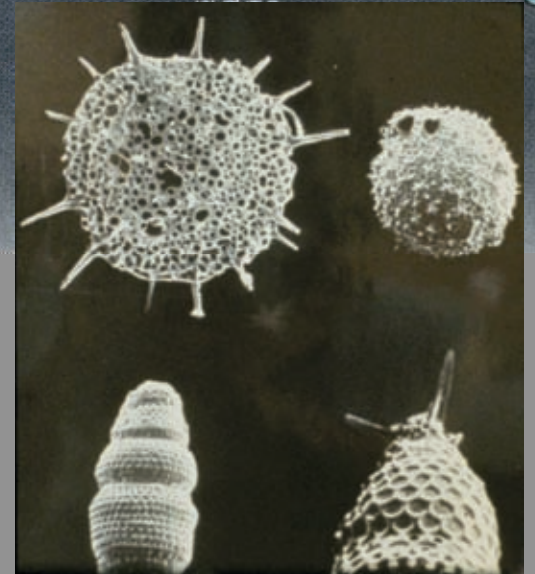
**SILICA**

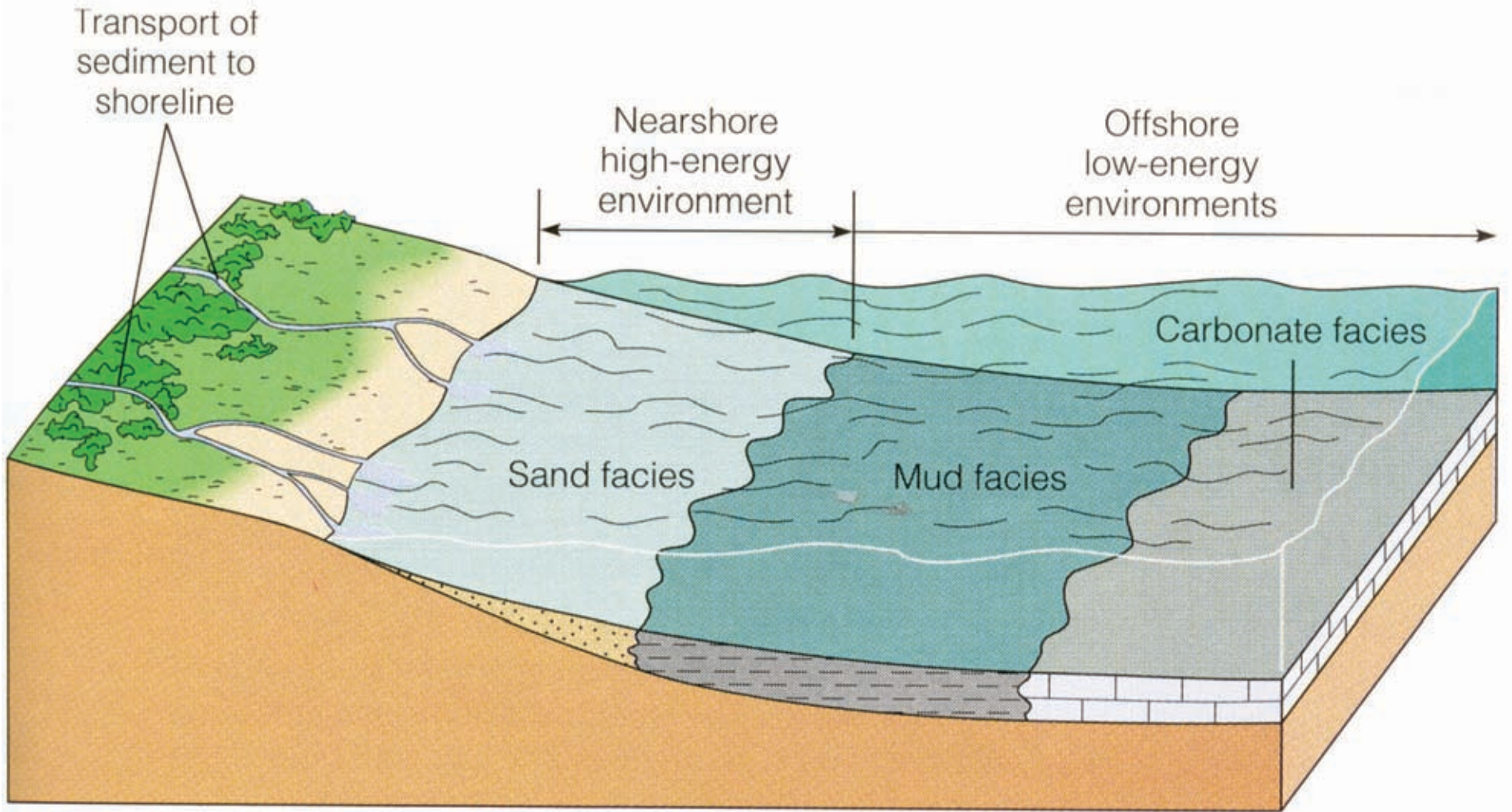


above CCD - water depth  $< \sim 4$  km:  
carbonate mud



below CCD - water depth  $> \sim 4$  km:  
siliceous mud





## Walthers Law:

Sedimentary environments that started out side-by-side will migrate due to changes in sea-level.

The result is a vertical sequence of beds.

The vertical sequence of facies mirrors the original lateral distribution of sedimentary environments.

