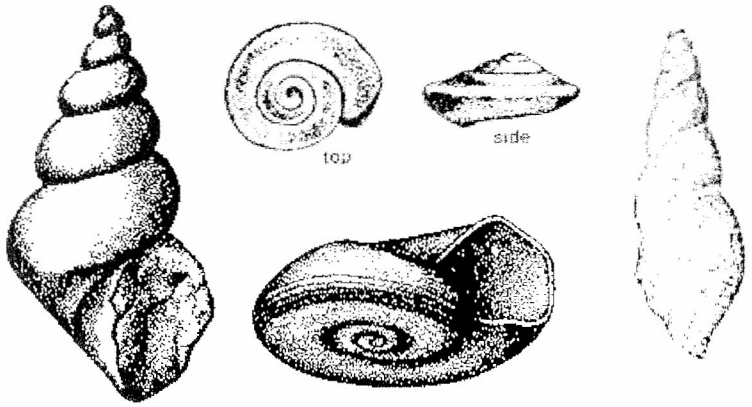
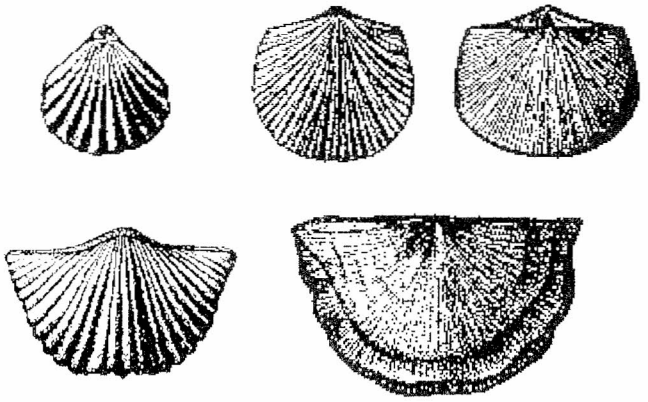
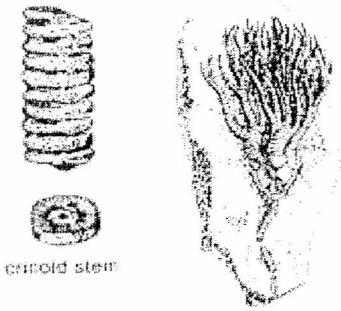
Guide to the Fossils of Presqu'ile Provincial Park



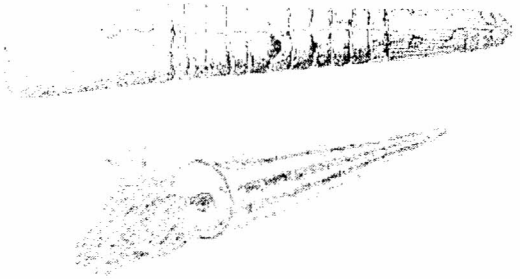
Gastropods



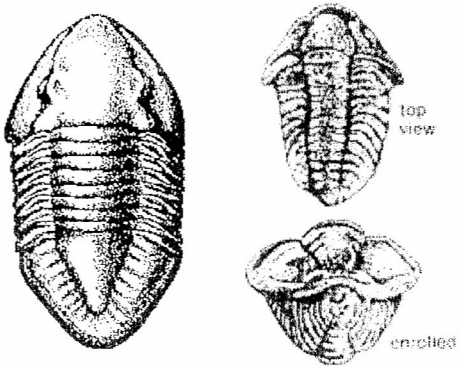
Brachiopods



Crinoids



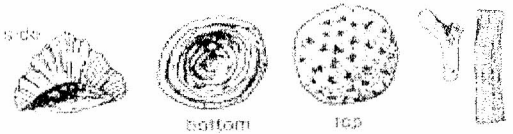
Cephalopods



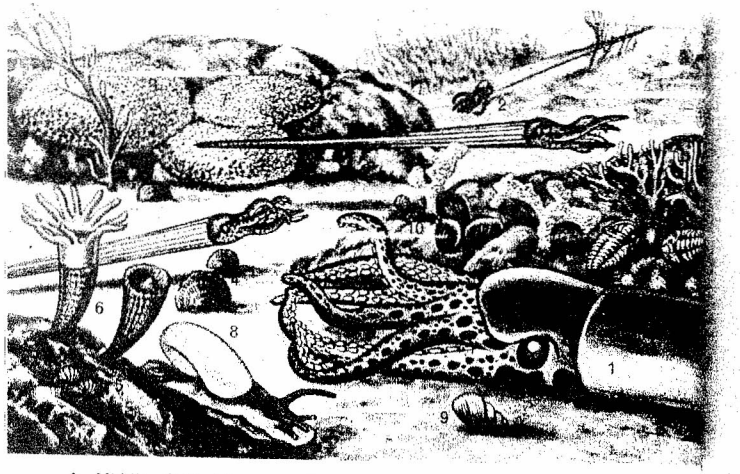
Trilobites

Conulariid

Bivalves



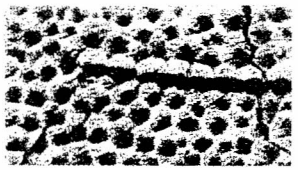
Bryozoans



A Middle Ordovician sea floor, showing straight-shelled, nautiloid cephalopods 1. *Endoceras*, 2. *Sactoceras;* 3. trilobite *Flexicalymene;* brachiopods 4. *Rafinesquina*, 5. *Rhynchotrema;* corals 6. *Streptelasma*, 7. *Favistella;* gastropods 8. *Maclurites*, 9. *Cyclonema*, 10. pelecypod *Byssonychia;* 11. bryozoans *Hallopora.*

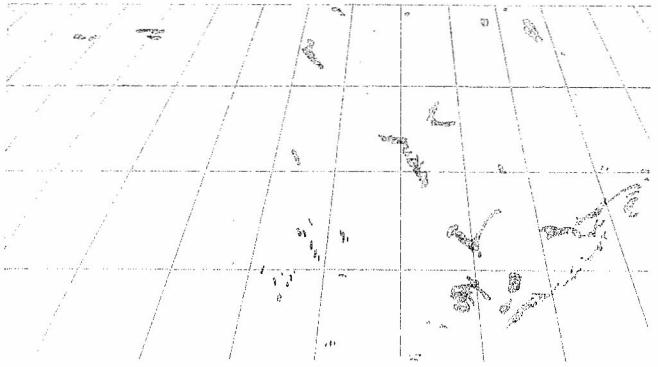
THE ORDOVICIAN PERIOD (425 to 500 million years ago) was named for the Ordovices, an ancient Celtic tribe. The Ordovician Period saw the rise of new animal groups of great importance. Bony fragments from the Middle Ordovician of Colorado and Wyoming are evidence of the oldest vertebrates, but we do not yet know much about these fish-like creatures. Tetracorals, graptolites, echinoids, asteroids, crinoids and bryozoans all appeared for the first time, while the articulate brachiopods (p. 82) far outnumbered the inarticulate. Most of the trilobites were different from those of the Cambrian. Some cephalopods reached a length of 13 feet.

In parts of North America and Europe, Ordovician seas covered areas that had been land during Cambrian times. Volcanoes belched lava locally. Uplift and mountain building occurred in eastern North America. Not all the rocks laid down in those ancient seas contain the same fossils. Limestones and shales around Cincinnati, Ohio, contain beautifully preserved brachiopods, corals, bryozoans, mollusks, trilobites and crinoids. Black shales of the same age in New York, Quebec and Wales contain graptolites and occasional trilobites. Different Ordovician environments enabled different animals to prosper in each region. Most common were shallow-water lime and mud deposits noted for their well-preserved fossils.

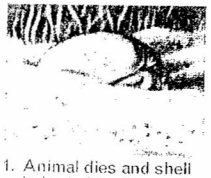


A fragment of bony armor of an ostracoderm fish (*Astraspis*), the oldest known vertebrate. Middle Ordovician, Colorado.

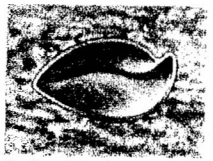
The repeated and widespread invasion of North America by Ordovician seas has produced extensive Ordovician sediments. Outcrops of these rocks occur widely over much of the continent. Some Ordovician sediments are important oil producers, and Ordovician slates are quarried in Vermont.



Outcrops of Ordovician rocks.

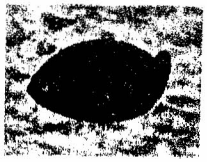


1. Animal dies and shell is buried in the sand.

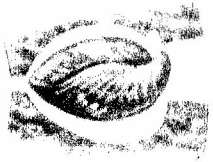


2. Sand hardens to rock. Shell interior unfilled.

3. Shell material dissolved. Cavity wall is mold of shell.

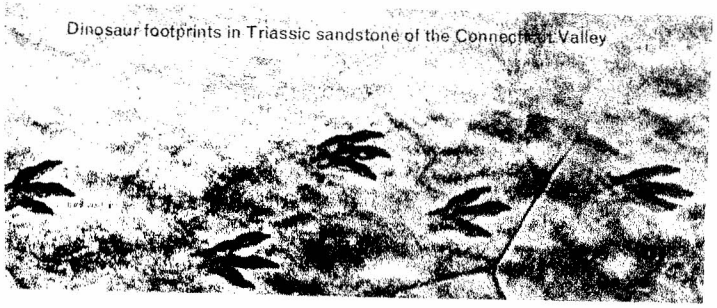


4. Dissolved chemicals fill mold to form cast.



5. Both mold and cast are fossils, replicas of the original surface.

MOLDS AND CASTS Not all fossils are bones, shells and other remains. Some are mere indications of prehistoric life. All the original plant or animal material may be dissolved away so that only a cavity remains—the walls of which are a natural mold of the fossil. Later, dissolved substances may fill the cavity, forming a natural cast of the original. Such casts are common fossil forms. Footprints or trails of animals may harden as a mold. Filled with fresh mud, casts are formed and both may be preserved, as in the red sandstone (Triassic) of the Connecticut Valley which contains tracks of dinosaurs.



Dinosaur footprints in Triassic sandstone of the Connecticut Valley