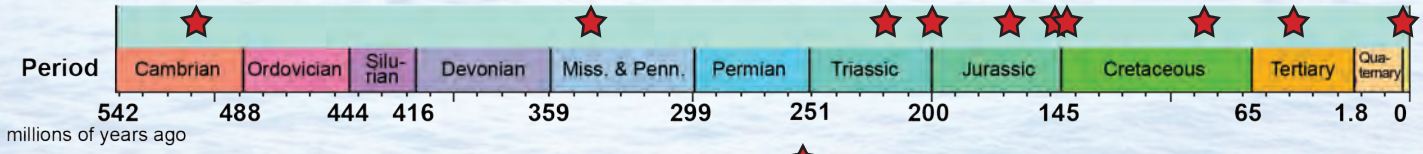
Fossil Environments in Utah

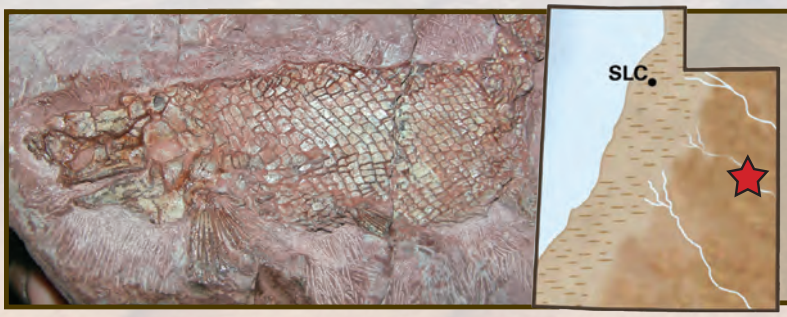
by Carole McCalla



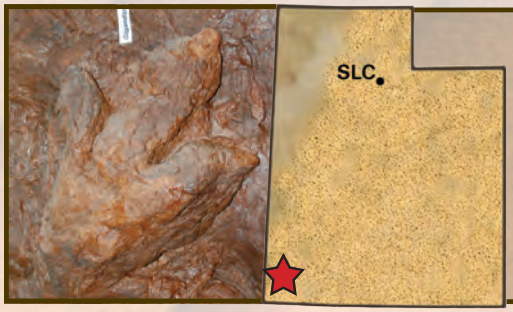
Stars indicate fossil locations (below) and age (above).

Approximately 510 million years ago (mya), during the Cambrian Period, trilobites thrived in the seas that covered western Utah. Trilobites are an extinct class of arthropods. Modern day arthropods include insects, crabs, and spiders. These fossils can be found scattered across western Utah, particularly the House Range in Millard County.

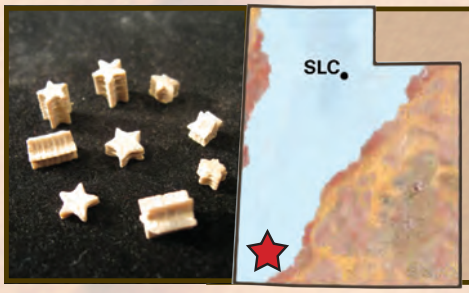
Horn corals were abundant during the Mississippian (~340 mya). During this time, Utah was almost completely covered by a shallow sea. Horn corals are an extinct order of coral known as *Rugosa*. Abundant horn coral fossils can be found in the Confusion Range in Millard County.



During the Triassic Period (~215 mya), central Utah was a transition zone between river flood plains to the southeast and seas to the northwest. Abundant fresh-water deposits yield the fossil remains of primitive fish.



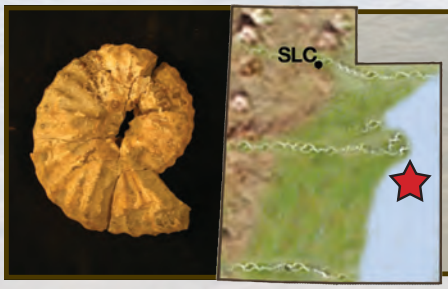
Dinosaurs roamed through Utah during the Jurassic Period, leaving behind footprints in the soft sediments. At the beginning of the Jurassic (~200 mya), Utah was covered by a vast sand dune desert with inter-dune oases. Dinosaur tracks can be found in many areas, including the Moenave Sandstone at the Johnson Farm's tracksite near St. George in Washington County.



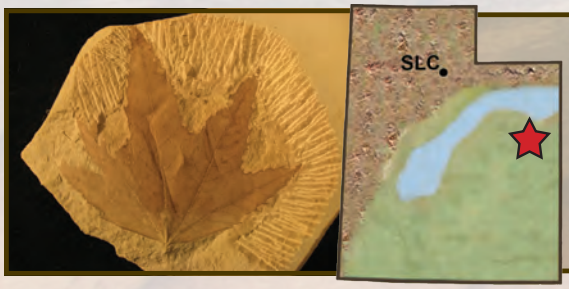
During the Middle Jurassic (~170 mya) a shallow sea extended into Utah from the north and left many fossils, particularly the five-sided *Isocrinus*. Crinoids are still alive today in the seas of the world and are commonly known as sea lilies.

A broad coastal plain covered most of Utah during the Late Jurassic (~150 mya). Forests and lakes provided habitat for dinosaurs such as the Utah state fossil, *Allosaurus,* which dominated the land. Allosaurus was a meat-eating dinosaur that walked on two legs.

Petrified wood from the abundant forests that covered Utah during the Late Jurassic (~145 mya) can be found at Escalante Petrified Forest State Park in southern Utah.



During the Cretaceous (~90 mya), Utah was covered by river plains and coal-forming swamps and an interior seaway to the east. Coal (fossilized plant remains) is Utah's most abundant fossil and can be found throughout central and eastern Utah. The fossilized remains of ammonites can be found in shales that were deposited in the seaway that covered eastern Utah during this time. Ammonites are an extinct group of cephalopods. Ammonites' closest living relatives are the octopus, squid, cuttlefish, and nautilus.



Lush forests and a huge freshwater lake covered part of Utah during the early Tertiary (~50 mya). Plant fossils can be found throughout central and northern Utah in sedimentary rocks of this age.

Several times during the Quaternary (~1.8 mya – 15,000 ya), Utah was covered by glaciers. Ice Age mammals, such as the mammoth, roamed throughout Utah. The photo shows a mammoth tusk that was found near Fillmore, Utah in Lake Bonneville deposits from about the time of the latest glacial event about 15,000 years ago.

UTAH DNR GEOLOGICAL SURVEY

Public Information Series 93
Utah Geological Survey
a division of
Department of Natural Resources
2008