The images on the geologic map illustrate the variety of living creatures that formerly inhabited what is now New Jersey. This interesting array of prehistoric life lived in New Jersey during the Precambrian, Paleozoic, Mesozoic, and Cenozoic Eras. These major eras of geologic time are characterized by the predominance of certain types of trace fossils and other types of fossils. Included are the marine reptiles, some of the most ancient fossil record of life on Earth. New Jersey is located in a region that has experienced a succession of major geologic changes during these eras, and the fossil record of this region reflects this diversity. Many fossil sites are open to the public in New Jersey. Two are in Monmouth County. Jersey Shore Fossils is located in Brant Beach, http://www.njfossils.net/cover.html.

Fossils are most abundant in the northeastern part of the state and in southern New Jersey. Marshy areas were surrounded by swamps, and the construction of dams by the abundant beaver is one reason for the high density of fossil sites in this region. In coastal areas, some fossil sites are on private property, some are open to the public in New Jersey. Two are in Monmouth County. Jersey Shore Fossils is located in Brant Beach, http://www.njfossils.net/cover.html.

Pleistocene: Most of the Pleistocene rocks in New Jersey are igneous (igneous rock is formed through the cooling and solidification of magma or lava) or metamorphic (the transformation of an existing rock type through heat or pressure) and do not contain any fossils. However, stratigraphically built structures formed in shallow water by the trapping, binding, and cementation of sedimentary prams by biofilms of microorganisms have been formed in a 1.2 billion-year-old marble, indicating that marine conditions prevailed at that time.

Eocene: Fossilizable strata are largely limited to the Newark Basin. However, the Newark Group consists of mostly poorly fossiliferous sediments, and the Newark Supergroup is comprised of both marine and non-marine sediments. The Newark Supergroup is further subdivided into the Lower, Middle, and Upper Members of the Newark Group. The Lower Member contains marine sediments, while the Middle and Upper Members contain non-marine sediments.

Tertiary: The Tertiary period is known for its rich fossil record, with many species thriving during this time. The Tertiary period is further divided into the Oligocene, Miocene, and Pliocene epochs.

Further Reading: