SELECTED NATIONAL PARKS
AND MONUMENTS WITH FOSSILS
AGATE FOSSIL BEDS NATIONAL MONUMENT, SOUTHWESTERN UTAH
ARCHES NATIONAL PARK, UTAH
BADLANDS NATIONAL PARK, SOUTHERN SOUTH DAKOTA
BERING LAND BRIDGE NATIONAL PRESERVE, ALASKA
BIG BEND NATIONAL PARK, WEST TEXAS
CARLSBAD Caverns NATIONAL PARK, NEW MEXICO
CHANNEL ISLANDS NATIONAL PARK, CALIFORNIA
CHESAPEAKE AND OHIO CANAL NATIONAL HISTORICAL PARK, MARYLAND, WEST VIRGINIA, AND DISTRICT OF COLUMBIA
CHICKASAW NATIONAL RECREATION AREA, OKLAHOMA
DEATH VALLEY NATIONAL PARK, CALIFORNIA AND NEVADA
DELAWARE WATER GAP NATIONAL RECREATION AREA, PENNSYLVANIA AND NEW JERSEY
DINOSAUR NATIONAL MONUMENT, UTAH AND COLORADO
FLORISSANT FOSSIL BEDS NATIONAL MONUMENT, COLORADO
FOSSIL BUTTE NATIONAL MONUMENT, WYOMING
GLACIER NATIONAL PARK, MONTANA
GLEN CANYON NATIONAL RECREATION AREA, UTAH AND ARIZONA
GRAND CANYON-PARASHANT NATIONAL MONUMENT, ARIZONA
GUADALUPE MOUNTAINS NATIONAL PARK, TEXAS
HAGERMAN FOSSIL BEDS NATIONAL MONUMENT, IDAHO
JOHN DAY FOSSIL BEDS NATIONAL MONUMENT, OREGON
JOSHUA TREE NATIONAL PARK, CALIFORNIA
LINCOLN MEMORIAL, DISTRICT OF COLUMBIA
MAMMOTH CAVE NATIONAL PARK, KENTUCKY
NEW RIVER GORGE NATIONAL RIVER, WEST VIRGINIA
OREGON CAVES NATIONAL MONUMENT, OREGON
PETRIFIED FOREST NATIONAL PARK, ARIZONA
TALLGRASS PRAIRIE NATIONAL PRESERVE, KANSAS
VALLEY FORGE NATIONAL HISTORICAL PARK, PENNSYLVANIA
VICKSBURG NATIONAL MILITARY PARK, MISSISSIPPI
YELLOWSTONE NATIONAL PARK, WYOMING, MONTANA, AND IDAHO
YUKON-CHARLEY RIVERS NATIONAL PRESERVE, ALASKA
ZION NATIONAL PARK, UTAH
The National Park Service conserves a great diversity of ancient life preserved as fossils. Collectively, fossils discovered in parks span geologic time from primitive algae found high in the mountains of Glacier National Park, Montana, to the remains of ice-age animals known from caves in the Grand Canyon, Arizona. Fossils are found in national park areas from coast to coast, from Texas to the tundra of Alaska, and from the Caribbean to the south Pacific islands. Parks provide visitors with opportunities to observe fossils in a natural state, within rocks, and to learn about ancient animals, plants, and the ecosystems they inhabited.

WHAT IS A FOSSIL?

A fossil is any evidence of past life preserved in a geologic context, such as within rock or sediment. There are two main types of fossils—body fossils, which are the physical remains of an organism such as the shell of an oyster or the teeth of a saber-tooth cat, and trace fossils, which are evidence of an ancient organism’s activity or behavior, such as a dinosaur’s footprint or an insect’s burrow.

Most fossils are found in sedimentary rocks, which are formed out of sand, silt, and other sediment that becomes compacted and cemented together over time. Understanding how these rocks formed and the ancient environments they represent allows geologists to decipher Earth’s record of evolving life on an ever-changing planet.

WHAT IS A PALEONTOLOGIST?

PALEONTOLOGISTS are scientists who study fossils to understand past animals and plants, ancient ecosystems, and climate change. Paleontologists discover fossils in the field, record where they were found, and sometimes bring them back to the lab for identification and description. Using fossils as clues, paleontologists piece together stories from Earth’s history of changing life, landscapes, and climate.

FOSSILS THROUGH GEOLOGIC TIME

THE GEOLOGIC TIME SCALE is a way of organizing Earth’s 4.6 billion-year history. The time scale is divided into four large periods of time—the Precambrian, Paleozoic Era, Mesozoic Era, and Cenozoic Era. National parks preserve fossils from each of these time blocks.

THE PRECAMBRIAN (PRIOR TO 542 MILLION YEARS AGO) was the “Age of Early Life.” Soft-bodied creatures like worms and jellyfish lived in the world’s oceans. The land remained barren. Common Precambrian fossils include mats of algae called stromatolites, microorganisms, and simple animals. Death Valley, Glacier, and Grand Canyon national parks, and several others, preserve Precambrian fossils.

THE PALEozoIC (542 TO 251 MILLION YEARS AGO) was the “Age of Fishes.” Fish diversified and marine organisms were very abundant. Common Paleozoic fossils include trilobites and cephalopods such as squid, as well as insects and ferns. The greatest mass extinction in Earth’s history ended this era.

THE MIEsozoIC ERA (251 TO 65.5 MILLION YEARS AGO) was the “Age of Reptiles.” Dinosaurs, crocodiles, and pterosaurs ruled the land and air. As climate changed, sea levels rose worldwide and seas expanded across the center of North America. Large marine reptiles such as plesiosaurs, along with the coiled-shell ammonites, flourished in these seas. Common Mesozoic fossils include dinosaur bones and teeth and diverse plant fossils. Big Bend National Park, Petrified Forest National Park, Dinosaur National Monument, and several other parks preserve Mesozoic fossils.

THE CENOZOIC ERA (65.5 MILLION YEARS AGO THROUGH TODAY) is the “Age of Mammals.” Birds and mammals rose in prominence after the extinction of giant reptiles. Common Cenozoic fossils include gazelle camarasores and early horses, as well as ice-age fossils like wooly mammoths. Caves can preserve the remains of ice-age animals that died in them or were transported there after death. Badlands National Park, Agate Fossil Beds, Fossil Forest Beds, Fossil Butte, Hagerman Fossil Beds, and John Day Fossil Beds national monuments, and many more parks preserve Cenozoic fossils.

NATIONAL PARK SERVICE STEWARDSHIP OF FOSSILS

At least 243 National Park Service areas preserve fossils (see map). At a national park, you can stand in the exact spot where a fossil tree was rooted or where a fossil animal walked millions of years ago. Some parks also preserve fossils in building stones or in association with American Indian artifacts.

Some national parks work with paleontologists to maintain fossils for scientific study and public education. It is exciting to find a fossil, but important to protect it. If you find a fossil in a park, leave the fossil where it is, take a photo, and share your discovery with a park ranger. Removing fossils from the sites where they were found will result in most of the interesting and valuable information about those fossils being lost forever. For more information about fossils in national parks, please visit http://nature.nps.gov/geology/paleontology/.

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