

U.S. Department of the Interior
National Park Service
Geologic Resources Division



PRESERVING AMERICA'S PALEONTOLOGICAL HERITAGE WITHIN THE U.S. NATIONAL PARK SYSTEM

Vincent L. Santucci
Senior Paleontologist
National Park Service

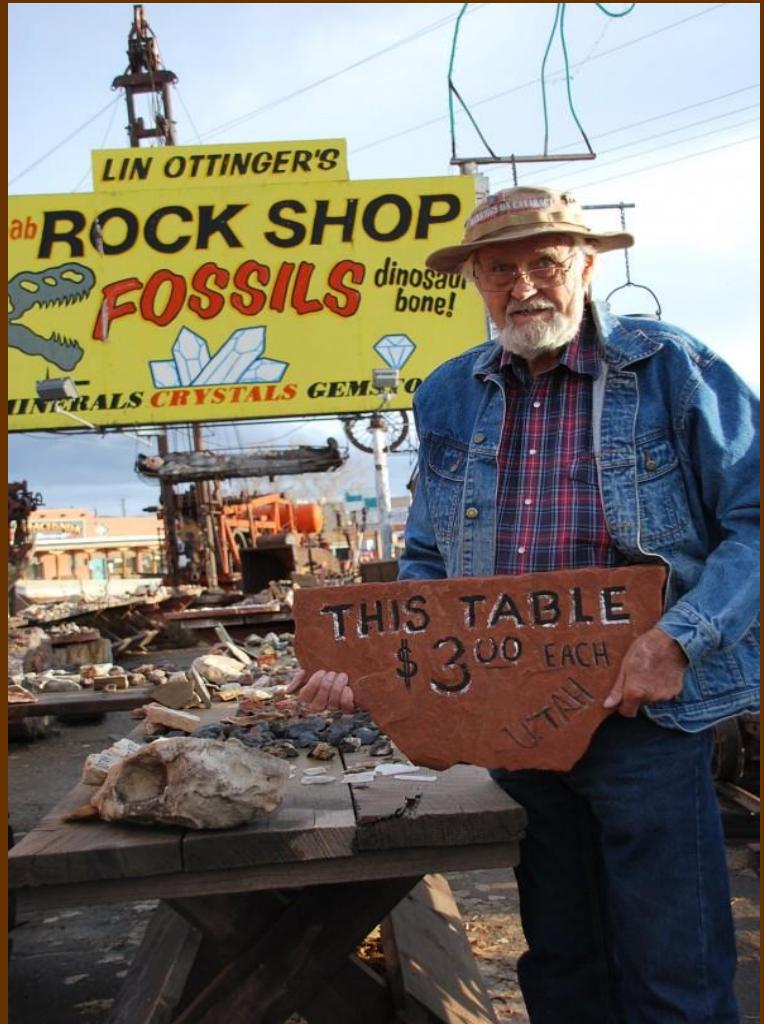
EXPERIENCE YOUR PREHISTORIC AMERICA

PALEONTOLOGICAL HERITAGE

“PALEOHERITAGE”

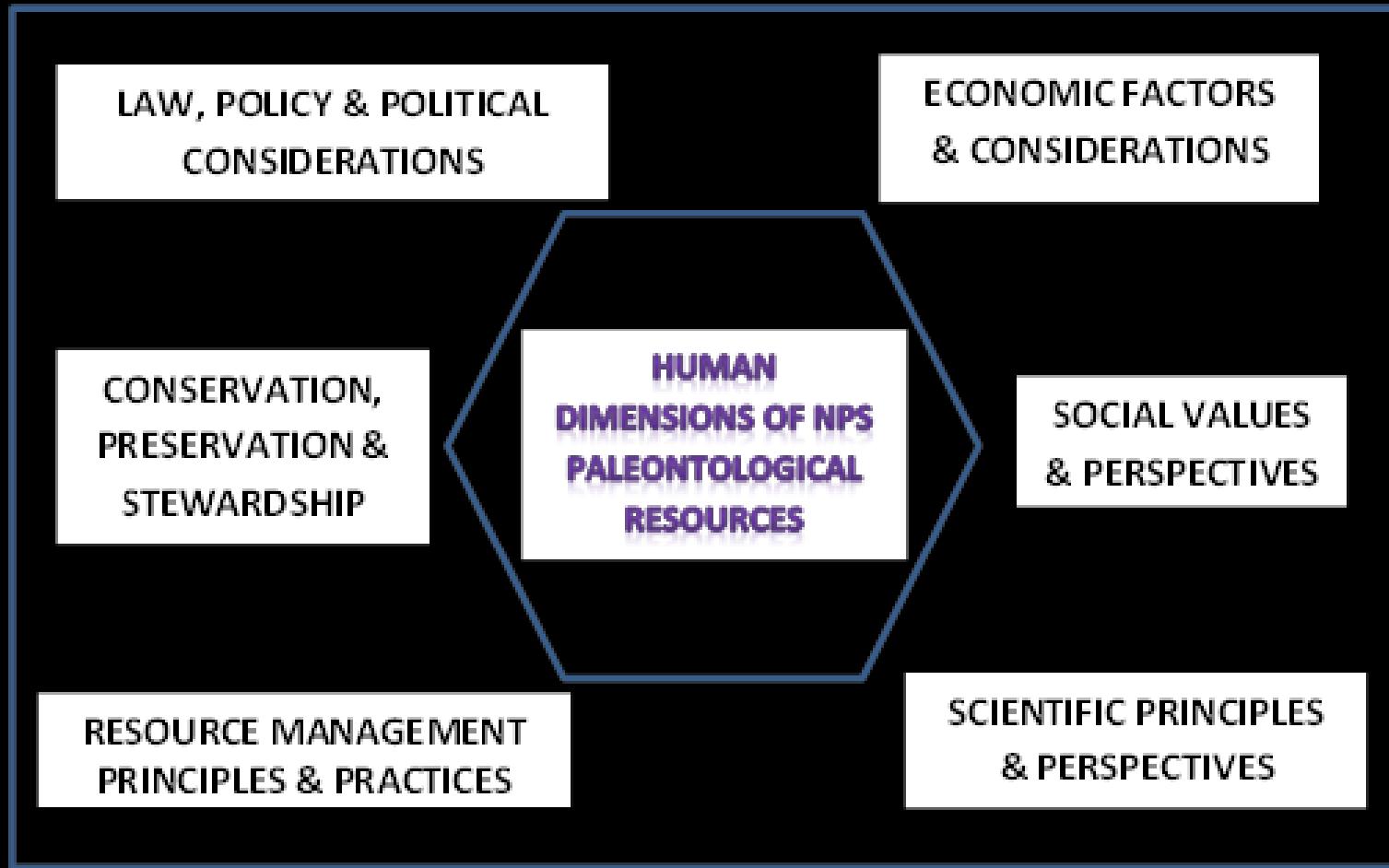
“A term applied collectively to paleontological resources and fossil localities with significant scientific, educational, cultural, historical, aesthetic, recreational, spiritual or other human values.”

WHAT ARE THE RELATIONSHIPS BETWEEN PEOPLE & FOSSILS?



WHAT VALUES DO PEOPLE AScribe TO FOSSILS?

HUMAN DIMENSIONS OF PALEONTOLOGICAL RESOURCES





“... to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

- NPS Organic Act, 1916



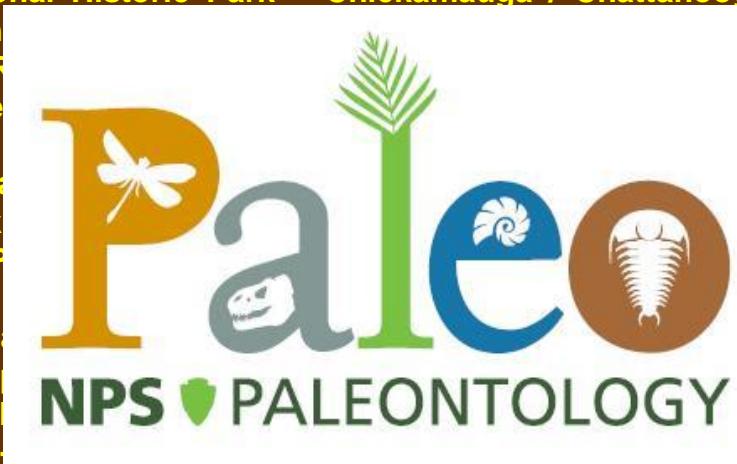
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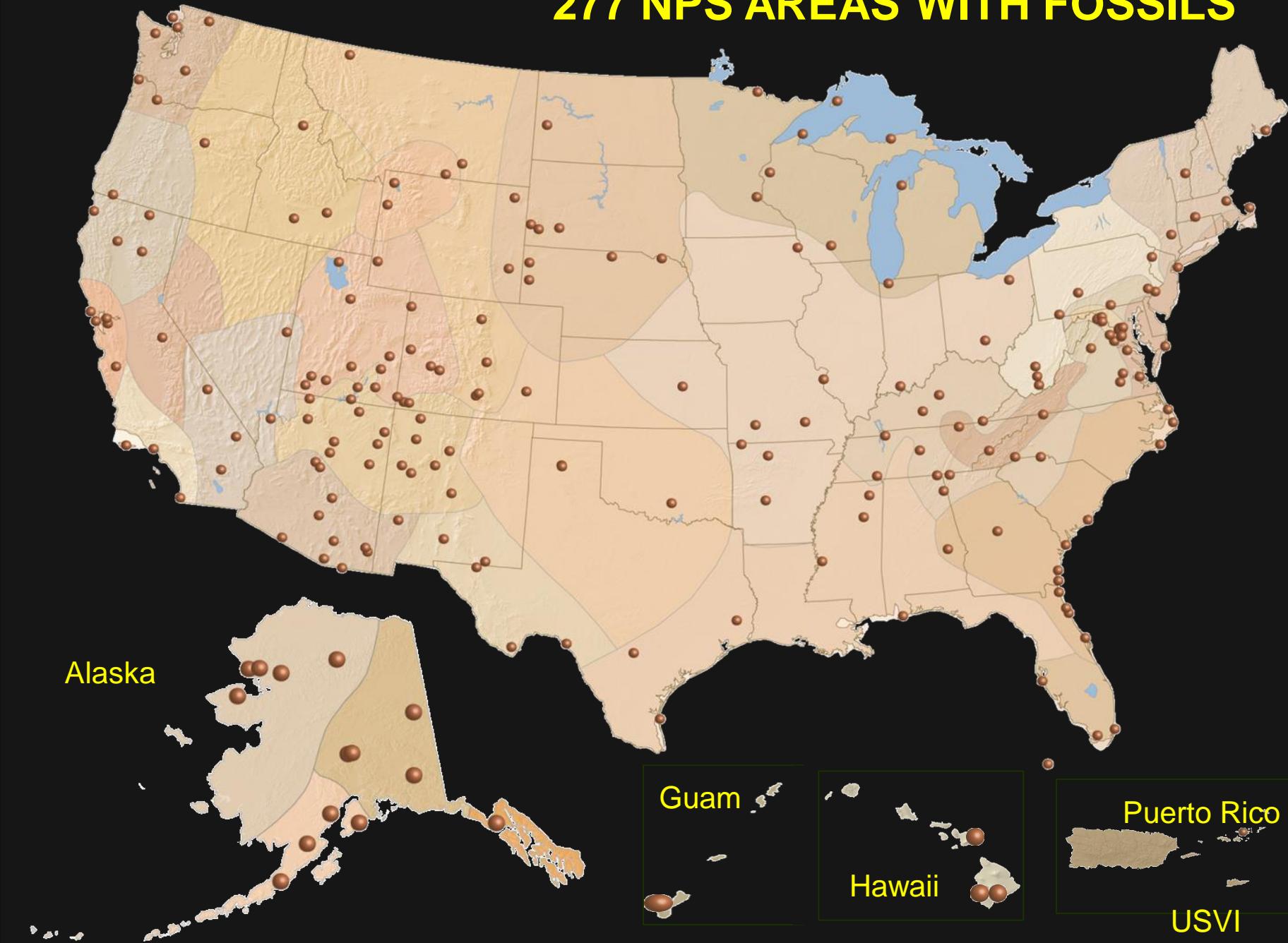


NATIONAL PARK SERVICE PALEONTOLOGY PROGRAM

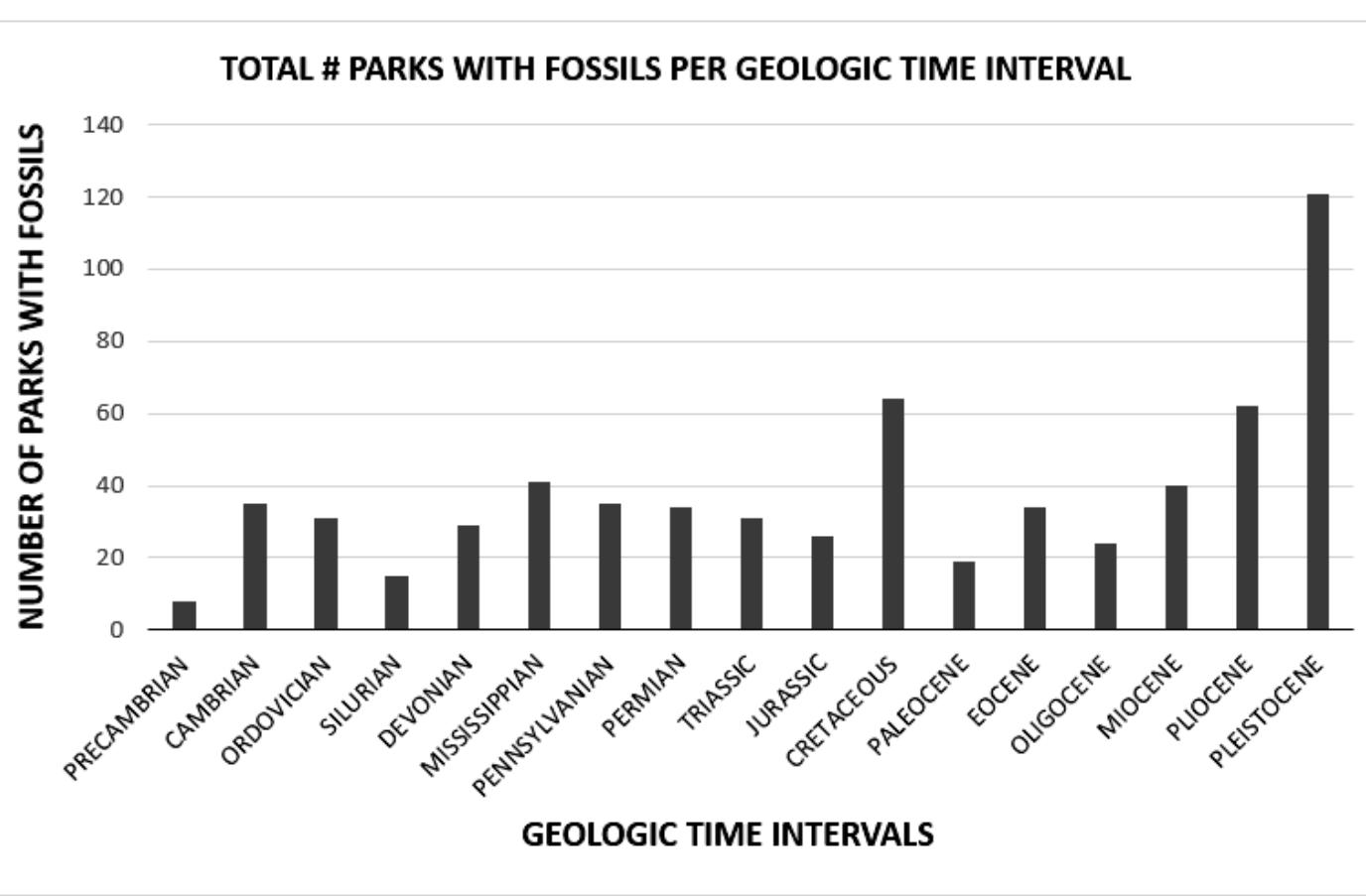
Agate Fossil Beds National Monument – Amistad National Recreation Area - Aniakchak National Monument – Arches National Park – Asseteaque Island National Seashore -- Badlands National Park - Bering Land Bridge National Preserve -- Big Bend National Park – Big South Fork National Recreation Area – Big Thicket National Preserve – Biscayne National Park -- Black Canyon of the Gunnison National Park – Boston Harbor Islands National Recreation Area - Bryce Canyon National Park – Buffalo National River - Cabrillo National Monument – Canyon De Chelly National Monument - Canyonlands National Park – Cape Hattaras National Seashore -- Capitol Reef National Park - Carlsbad Caverns National Park – Cedar Breaks National Monument – Chaco Cultural National Historical Park -- Channel Islands National Park - Chesapeake & Ohio Canal National Historic Park – Chickamauga / Chattanooga National Military Park -- Chickasaw National Recreation Area – Colonial National Historical Park – Curecanti National Recreation Area – Denali National Park & Preserve – Effigy Mounds National Monument -- El Morro National Monument – Fort Laramie National Historic Site – Gates of the Arctic National Park and Preserve – Glacier National Park – Golden Gate National Recreation Area – Great Smoky Mountains National Park – Great Smoky Mountains National Monument - Hot Springs National Park – John Day Fossil Beds National Monument – Kalmiopsis Wilderness – Kenai Fjords National Park & Preserve – Klamath National Forest – Lassen Volcanic National Park – Mammoth Cave National Park – Manassas National Battlefield – Mesa Verde National Park – Mojave National Preserve - Montezuma's Castle National Monument - Natural Bridges National Monument – Navajo National Monument - Niobrara National Scenic Riverway - Olympic National Park - Oregon Caves National Monument – Parashant National Monument - Petrified Forest National Park – Point Reyes National Seashore – Prince William Forest Park – Rainbow Bridge National Monument - Redwoods National Park - Saguaro National Park - Santa Monica Mountains National Recreation Area – Scotts Bluff National Monument - Theodore Roosevelt National Park - Timpanogos Cave National Monument – Tule Springs Fossil Beds National Monument - Waco Mammoth National Monument - Walnut Canyon National Monument - Washington Monument - White Sands National Monument - Wind Cave National Park - Wrangell St. Elias National Park & Preserve - Wupatki National Monument - Yellowstone National Park - Zion National Park



277 NPS AREAS WITH FOSSILS



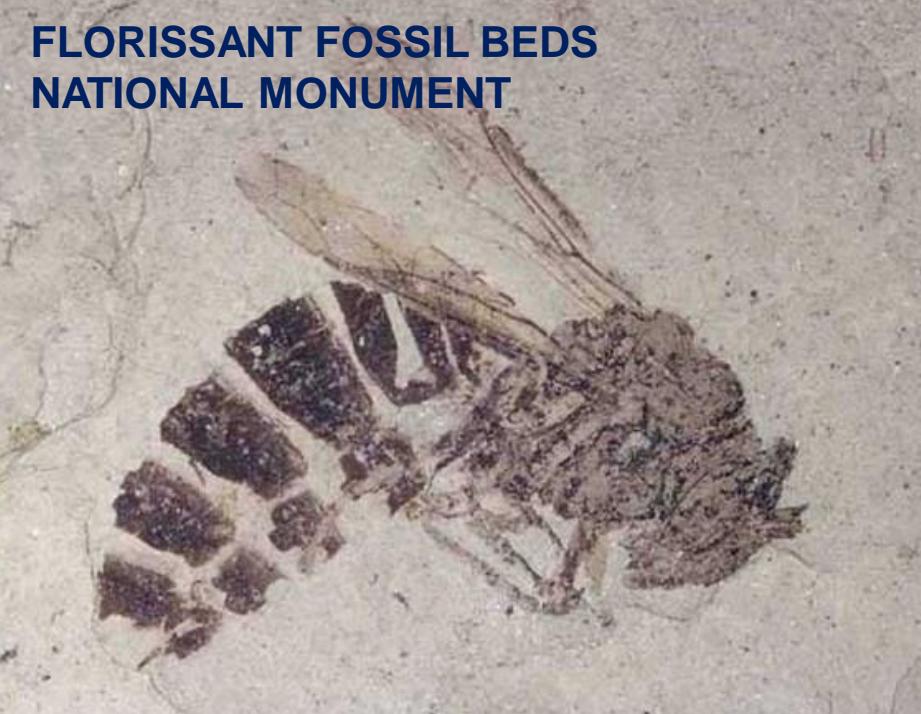
NPS Fossil & Geologic Time



FLORISSANT FOSSIL BEDS
NATIONAL MONUMENT



FLORISSANT FOSSIL BEDS
NATIONAL MONUMENT



BADLANDS NATIONAL PARK



FLORISSANT FOSSIL BEDS
NATIONAL MONUMENT



BADLANDS NATIONAL PARK



PETRIFIED FOREST NATIONAL PARK



FLORISSANT FOSSIL BEDS
NATIONAL MONUMENT



BADLANDS NATIONAL PARK



PETRIFIED FOREST NATIONAL PARK



GRAND CANYON NATIONAL P



National Natural Landmarks



Federal Laws, Regulations, Policies, Guidance Documents



PALEONTOLOGICAL RESOURCES PRESERVATION ACT

- March 30, 2009
- Public Law 111-011
- 16 U.S. Code §§ 470aaa
- 43 Code of Federal Regulations – Part 49

The law and regulations direct the management of fossils based on “scientific principles and expertise,” and outlines procedures “for inventory and monitoring, and public education programs.”

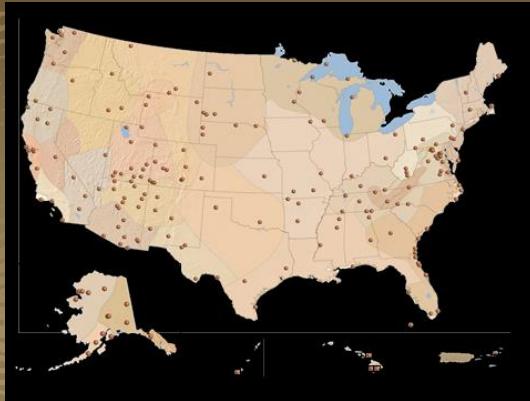
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PROGRAM ADMINISTRATION
RESOURCE MANAGEMENT
INVENTORY & MONITORING
RESEARCH
DATA MANAGEMENT
MUSEUM COLLECTIONS
INTERPRETATION & EDUCATION



LAW & POLICY
RESOURCE PROTECTION
PLANNING
TRAINING
MEDIA RELATIONS
TECHNICAL ASSISTANCE
PARTNERSHIPS

Resource Management, Stewardship, & Protection

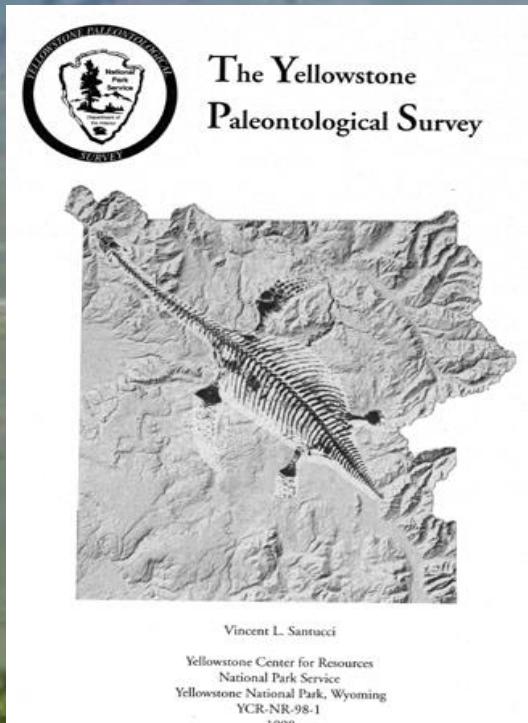


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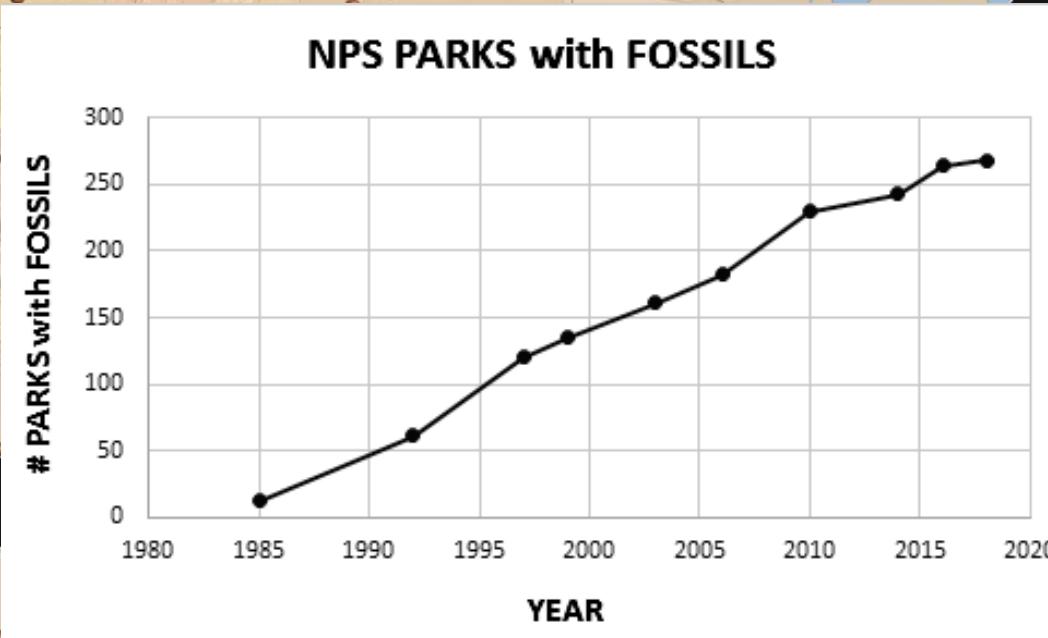
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PALEONTOLOGICAL RESOURCE INVENTORY



277 NPS AREAS WITH FOSSILS



Alaska

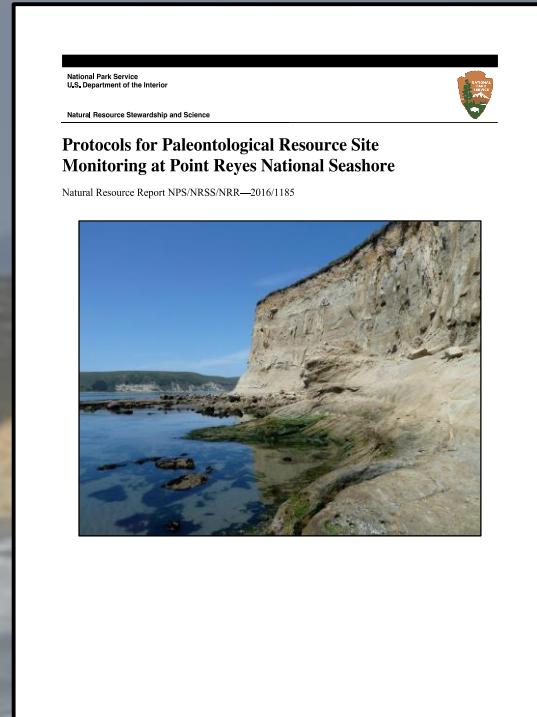
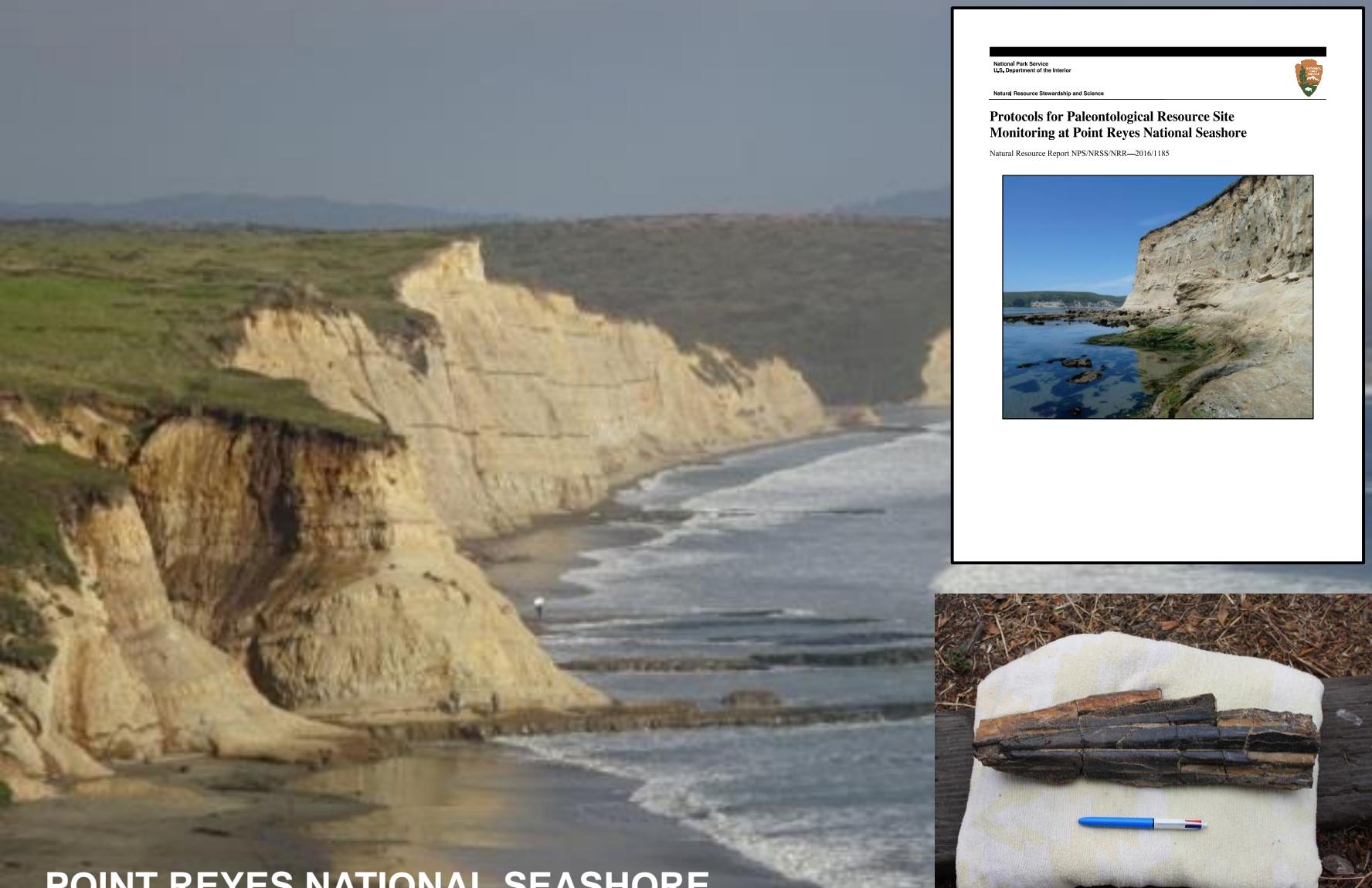
Guam

Hawaii

Puerto Rico

USVI

PALEONTOLOGICAL RESOURCE MONITORING



POINT REYES NATIONAL SEASHORE

Science, Research, Permits, Curation & Collections



PALEONTOLOGICAL RESOURCES PRESERVATION ACT

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- 16 U.S. Code §§ 470aaa

The Secretary shall develop appropriate **plans for the scientific and educational use** of paleontological resources. Any paleontological resource, and any **data and records associated with the resource, collected under a permit**, shall be deposited in an approved repository.

Prehistoric Graveyard



Prehistoric Graveyard



Prehistoric Graveyard



Paleontological Research

- HISTORY OF LIFE & ANCIENT ECOSYSTEMS (EVOLUTION)
- PALEOBIODIVERSITY (PLANTS, INVERTEBRATES, VERTEBRATES))
- CHANGES IN BIODIVERSITY OVER TIME (EVOLUTION / EXTINCTION)
- PROCESSES OF FOSSILIZATION
- RELATIONSHIP BETWEEN FOSSILS AND THE ROCKS THEY ARE PRESERVED
- PALEOECOLOGY AND ANCIENT ENVIRONMENTS
- PALEOBIOGEOGRAPHIC DISTRIBUTION OF LIFE
- INTERACTIONS BETWEEN PREDATORS / PREY
- GEOLOGIC TIME INDICATORS (GEOCHRONOLOGY)
- STRATIGRAPHIC RANGE OF TAXA (BIOSTRATIGRAPHY)

NPS Fossil Collections

NPS PALEONTOLOGY MUSEUM COLLECTIONS

- Total NPS Paleontology Collections: 661,269
- Total Cataloged NPS Paleontology Collections: 620,879
- Total Backlog of NPS Paleontology Specimens: 40,417
- Number of Parks with Paleontology Specimens: 126

NPS HOLOTYPES

- 4876 Total Fossil Holotypes Associated with NPS Areas (Confirmed & Unconfirmed)
- 2314 Confirmed Fossil Holotype Specimens
- 2562 Potential Unconfirmed Fossil Holotype Specimens

MUSEUM REPOSITORIES

- 194 Outside Museum Repositories with Fossils Associated with NPS Areas

Public Education, Interpretation, & Outreach

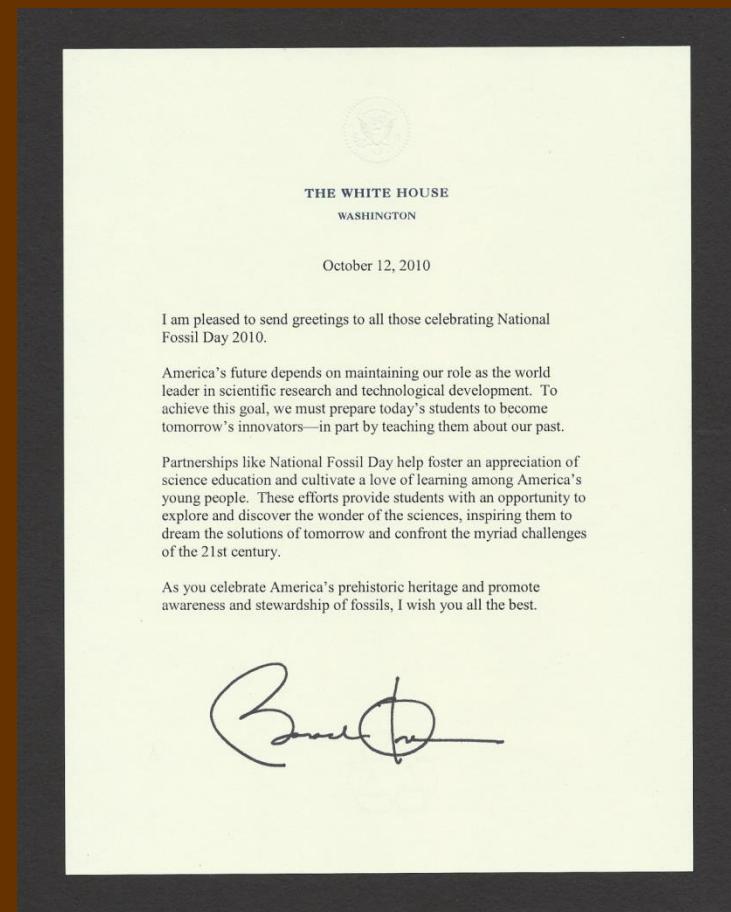
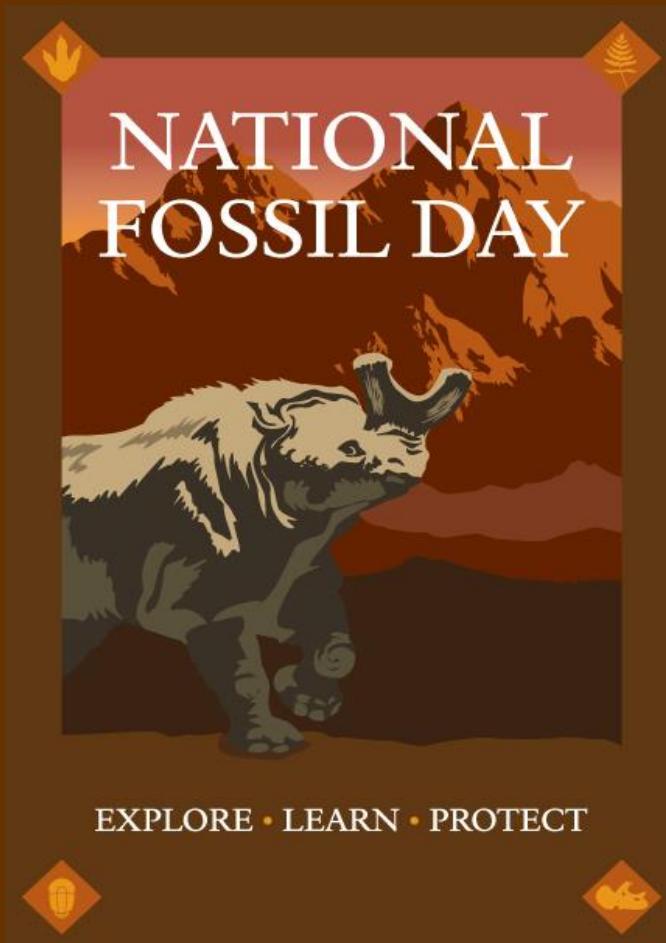


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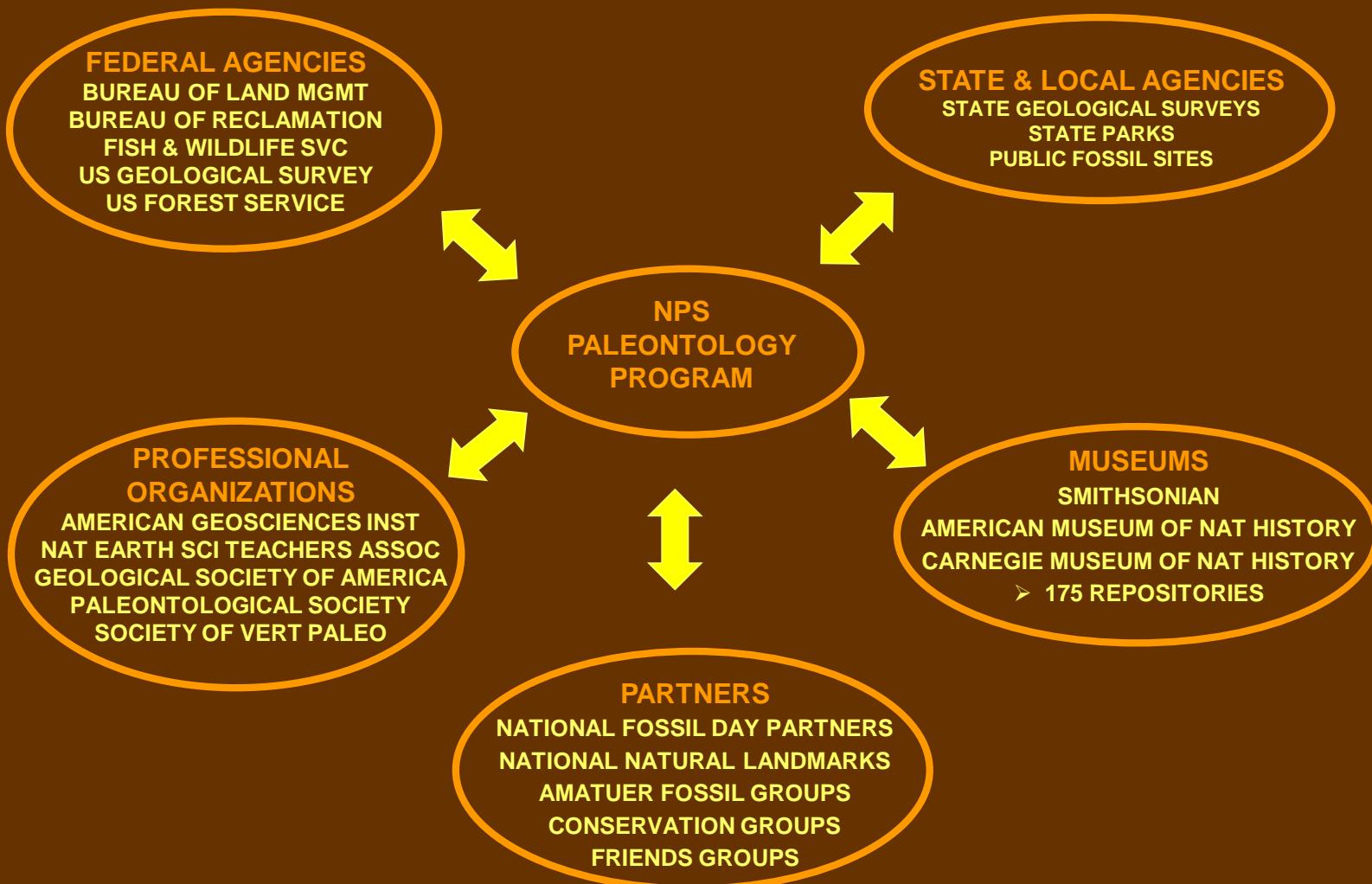
NATIONAL FOSSIL DAY: CELEBRATING THE SCIENTIFIC AND EDUCATIONAL VALUES OF FOSSILS



PALEONTOLOGICAL RESOURCE EDUCATION



PALEONTOLOGICAL HERITAGE COLLABORATION & PARTNERSHIPS





A wide-angle photograph of a night sky over a rugged mountain range. The sky is filled with stars, and the Milky Way galaxy is visible as a bright, glowing band of light. The mountains in the foreground and middle ground are dark and rocky, with some green vegetation on the lower slopes. The overall atmosphere is dark and serene.

**“...for the benefit and
enjoyment of future
generations...”**

Thank You!
America's Geoheritage Workshop II:
Planning Committee & Participants

