Society of Vertebrate Paleontology

SVP Headquarters • 1600 International Drive, Suite 600
McLean, VA 22102, USA
Phone: +1 (301) 634-7024 • Fax: +1 (703) 506-3266
Email: svp@vertpaleo.org • Web: www.vertpaleo.org
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Subject: Comments from the Society of Vertebrate Paleontology on the draft Resource Management Plan and Environmental Impact Statement for the Grand Staircase-Escalante National Monument.

To U.S. Bureau of Land Management,

The following comments (**Appendix 1**) on the draft Resource Management Plan (**RMP**) and Environmental Impact Statement (**EIS**) for the Grand Staircase-Escalante National Monument (**GSENM**)—DOI-BLM-UT-P010-2022-0006-RMP-EIS (https://eplanning.blm.gov/eplanning-ui/project/2020343/570)—are submitted on behalf of the approximately 2,000 members of the Society of Vertebrate Paleontology (**SVP**: http://vertpaleo.org).

SVP is a non-profit international scientific organization consisting of researchers, educators, students, and enthusiasts, to advance the science of vertebrate paleontology and to support and encourage the discovery, preservation, and protection of vertebrate fossils, fossil sites, and their geological and paleontological contexts. Thus, SVP is an important stakeholder in U.S. national monuments, including GSENM. In fact, about 10% of SVP members have conducted research in GSENM since it was established in 1996, either in the field or in collaboration on specimens reposited in public collections.

Paleontological resources are nonrenewable and irreplaceable once destroyed. Because of the ongoing scientific importance of the monument, SVP is concerned with management changes that would jeopardize sites or that would diminish the effectiveness of scientific research at those sites. Questions concerning our letter and comments should be addressed to any one of us or Drs. M. Allison Stegner and Kenshu Shimada (SVP's Government Affairs Committee) at svp@vertpaleo.org. Thank you for the opportunity to comment.

Yours sincerely,

Margaret E. Lewis, Ph.D.	Stuart S. Sumida, Ph.D.	Jessica M. Theodor, Ph.D.
SVP President	*SVP Vice President*	*Past SVP President*

Appendix 1

SVP's point-by-point comments on BLM's draft RMP and EIS for GSENM.

Preamble

The GSENM was established in 1996 in large part to preserve the unique fossils that had been discovered there over the preceding decade. Twenty additional years of research have pinpointed more than 3,000 scientifically important fossil localities at GSENM. The monument is perhaps best known for its exquisite preservation of Late Cretaceous ecosystems. The Kaiparowits, Wahweap, Straight Cliffs, and Tropic Shale formations include one of the most diverse large herbivorous dinosaur faunas in the world, some of the only Cenomanian- and Santonian-aged mammals anywhere, and the earliest mosasaurs. GSENM also preserves the type section of the Permian-aged Kaibab Limestone, key Triassic faunas from the Moenkopi and Chinle formations, as well as the largest petrified forest outside Arizona, and extensive trackways from the thick sandstone formations of the Jurassic.

SVP's Comments on Draft RMP and EIS

1. The draft RMP and EIS document lists a total of 22 types of resources. Where relevant, SVP's recommendations for each resource type from the perspective of paleontological resource management are presented below along with their section numbers and specific references to alternatives:

Soil Resources
Sections 2.5.2 and 3.2:
Extraction of paleontological resources generally involves some level of ground-disturbing activities, but following an excavation, it is typical for the site to be restored and for any disturbance to be mitigated. Therefore, SVP prefers management alternatives that allow for some temporary soil disturbance and/or make exceptions for scientific research.

Section 2.4.3 Alternatives Comparison

- *Row 21:* Paleontological excavations can disturb soil, and important localities may be located in areas with greater than 30 percent slopes. Therefore, we prefer Alternative B/C, where soil disturbance is avoided, but not prohibited, on slopes greater than 30 percent.
- *Row 22:* To allow for paleontological excavation, we prefer Alternative A. If exceptions were made for the protection of GSENM objects (e.g., through the excavation of paleontological resources) or for scientific research, the other alternatives could be agreeable as well.
- *Row 23:* SVP supports the requirement for a soil health and restoration plan when soil disturbing activities, like paleontological excavation, is allowed. We therefore prefer Alternative B/C/D.

Vegetation

Sections 2.5.3 and 3.3:

Healthy vegetation in the arid environment of GSENM is generally an asset to paleontological resources because it reduces erosion. However, the techniques used for restoration can have serious negative impacts on in situ paleontological resources. We favor an approach to vegetation management that avoids damages to known and potential paleontological sites.

Section 2.4.3 Alternatives Comparison

- *Row 36:* Vegetation management practices such as chaining and fire can damage paleontological resources at or near the surface. Therefore, we prefer Alternatives B/C or D which "could restrict active management of vegetation" (pages "ES-11" and "2-134"), and we are opposed to Alternative A, which would allow chaining, fire, and mechanical techniques without any stated restrictions.

Tribal Interest/Stewardship

Sections 2.4.3, 2.5.7, and 3.7:

SVP supports tribal stewardship and traditional uses of cultural landscapes and other resources in GSENM. If and when the management of paleontological resources overlaps with tribal stewardship and resource use, trained and qualified paleontologists should be consulted so that the significance of tribal cultural heritage can be further enhanced also to encompass scientific significance.

Paleontological and Geological Resources

Sections 2.5.8 and 3.8:

SVP prefers management actions that offer good protection of paleontological resources but also the flexibility to conduct scientific investigations and necessary extractions of paleontological resources by qualified researchers. As noted on page "2-137", devices like jackhammers and rock saws are sometimes needed for paleontological excavations, and we favor an alternative that allows exceptions to this. As noted in section 3.8 "Unless there are research or administrative allowances, this level of noise restriction could limit or eliminate the use of mechanical tools frequently needed for fossil excavations" (e.g., page "3-194"), and we ask that an administrative allowance for exceeding noise levels be included in the final RMP. Likewise, we ask that administrative allowances be granted for exceptions to group size limitations in the case of field crews.

SVP recognizes that "There are currently no provisions for public casual collecting of fossils for hobby or educational purposes" in the monument (page "3-183"). However, we are in favor of the practice of well-managed casual collecting of paleontological resources as an integral part of promoting paleontological and geological education and so would be supportive of the BLM in "developing areas for public casual collecting of paleontological resources, such as common invertebrates, shells, silicified wood, and leaves, on BLM-managed land" (page "3-187"). We strongly encourage the development of "GSENM-specific paleontological guidance documents" (page "3-185") and applaud the rigorous paleontological program at GSENM over the past 23+ years.

Section 2.4.3 Alternatives Comparison

- *Row 79:* Alternative A explicitly states that paleontological resources will be managed to protect and make them accessible for appropriate research. We strongly support access for research and so prefer Alternative A as written. However, if access for research is included in Alternative B/C/D, we would support that option as well, and recommend that provisions for research be stated.

- *Rows 81, 82, 83, and 85:* We prefer Alternative B/C/D, which provides the most robust protection of paleontological resources.
- *Row 84:* We prefer Alternative D, which protects geologic units known to have important paleontological resources.
- *Row 85:* We favor Alternative B/C/D, and recommend adding a bullet point that includes the need for BLM's support for researchers to communicate their research findings through public programs, exhibits, interpretative materials, and scientific publications and presentations targeting both local communities and regional, national, and international audiences.

Livestock Grazing

Sections 2.5.16 and 3.16:

Grazing, especially trampling by livestock and vehicular access to grazing areas can have a negative impact on paleontological resources near the surface. Alternatives that expand the area open to grazing or that increase its intensity are discouraged by SVP, and we prefer alternatives that reduce the acreage available for livestock grazing and/or alternatives that protect paleontological resources from the impacts of grazing.

Section 2.4.3 Alternatives Comparison

- *Row 168:* We prefer Alternative B/C/D which would minimize conflict between grazing and other discretionary uses, like paleontological research.
- *Row 173*: We prefer Alternative D, which has the lowest acreage available for grazing. Likewise, Alternative C, and then B, would be preferred over Alternative A.
- *Row 175*: We prefer Alternative D, which has the lowest AUMs for livestock. Likewise, Alternative C, and then B, would be preferred over Alternative A.
- *Rows 186 and 187*: We prefer Alternative B, C, or D, which would ensure that structural range improvements are consistent with the protection of GSENM objects, including paleontological resources.

Recreation

Sections 2.5.17 and 3.17:

The impacts of recreation on paleontological resources are variable depending on the type of activity and the location. We ask that any allowed recreational activities be consonant with the protection of paleontological resources and that areas with important paleontological sites or high PFYC (4 or 5) but excluded from recreational activities that are likely to result in degradation.

Section 2.4.3 Alternatives Comparison

- *Row 192 and 193:* To protect paleontological resources, as GSENM objects, we prefer Alternative B/C/D.
- *Row 208*: We prefer Alternative B/C/D, which would limit climbing, rappelling, and canyoneering in paleontological sites.
- *Row 213*: Alternative B or C, which allows exceptions to group size limits, are preferred to allow for larger paleontological field crews if necessary.
- *Row 216*: Recreational target shooting has the potential to inadvertently damage paleontological resources. Therefore, we prefer Alternative D, which prohibits all target shooting except in pursuit of game.

- *Row 218*: SRPs should not be issued when paleontological resources could be negatively impacted. Therefore, we prefer Alternative B/C/D.

Travel Management

Sections 2.5.18 and 3.18:

Off-road vehicle use can cause significant damage to paleontological resources near the surface, including those on the surface that are critical for locating sites during surveys. Furthermore, vehicular transport makes it easier for people to purposefully or unwittingly disturb fossil sites or steal material from them, particularly in the absence of increased law enforcement activities or paleontological monitoring. However, research, excavation, and mitigation of paleontological resources can require access by vehicles, especially for moving heavy equipment and/or specimens. SVP prefers alternatives that balance the need to protect GSENM objects like paleontological resources from damage caused by the presence of roads and OHVs, with the need for reasonable access.

Section 2.4.3 Alternatives Comparison

- *Row 221:* To protect paleontological resources, as GSENM objects, we prefer Alternative B/C/D.
- *Row 222*: An adequate transportation system is important for paleontological research and excavation, but protecting those resources is paramount. We favor Alternative B/C/D.
  Row 224: While OHVs have the significant potential to damage paleontological resources, an adequate transportation system is important for paleontological research and excavation. We favor Alternative D which allows for routes that would enhance GSENM objects. We suggest that the following text be added to this alternative: "Reduction of opportunities for motorized travel near significant paleontological resources.
- *Row 229*: Assuming that paleontological research and excavation are considered to enhance the protection of GSENM objects (and we consider that they do), all alternatives are acceptable.
- *Row 230 and 231*: Any road improvements should first ensure that paleontological resources will not be adversely impacted; therefore, Alternatives B/C/D is preferred.

Lands and Realty

Sections 2.5.19 and 3.19:

Less regulated ROWs would make it easier for people to purposefully or unwittingly disturb paleontological sites or remove paleontological resources, particularly in the absence of increased law enforcement activities or paleontological monitoring. Land development and land use typically have a negative impact on paleontological resources. Therefore, SVP prefers alternatives that limit ROWs and land development.

Section 2.4.3 Alternatives Comparison

- *Row 233*: To protect paleontological resources from activities in ROWs and other land uses, we prefer Alternative D, but at minimum Alternatives B or C.
- *Rows 234, 236, 237, and 243*: To protect paleontological resources, we prefer Alternative B/C/D.
- *Row 246*: To protect paleontological resources specifically identified as PFYC 4 or 5, we prefer Alternative D.

Science

Section 2.4.3 Alternatives Comparison

- *Rows 292, 296, and 299*: As a professional society interested in the scientific study of paleontology, we strongly support Alternative B/C/D.
- *Row 295*: Paleontological resources on the landscape are vulnerable to degradation by natural processes (e.g., erosion) and human impacts (e.g., recreation, grazing). Identifying where degradation is taking place most rapidly and taking measures to protect or collect paleontological resources in those areas is critically important. We therefore support Alternative B/C/D.
- *Row 297:* Necessary paleontological field crew sizes are variable and depend on the demands of the particular locality, and so should be flexible. We prefer Alternative B/C/D.

2. Section 4.4 (pages "4-5"–"4.6") describes the GSENM Monument Advisory Committee as "a 15-member committee that includes state and local government officials, tribal members, representatives of the recreation community, local business owners, and private landowners." At least one member should be a qualified paleontologist (Ph.D. in paleontology or related field, or several years experience in paleontological research) to provide advice concerning the rich paleontological resources in GSENM.

3. As a general comment, we recommend that additional staff be hired to coordinate research, surveys, and permitting; that additional funding be allocated for surveys and studies of GSENM paleontological resources; and that additional law enforcement resources be dedicated to enforcing laws and regulations related to paleontology, especially illegal collection or looting.