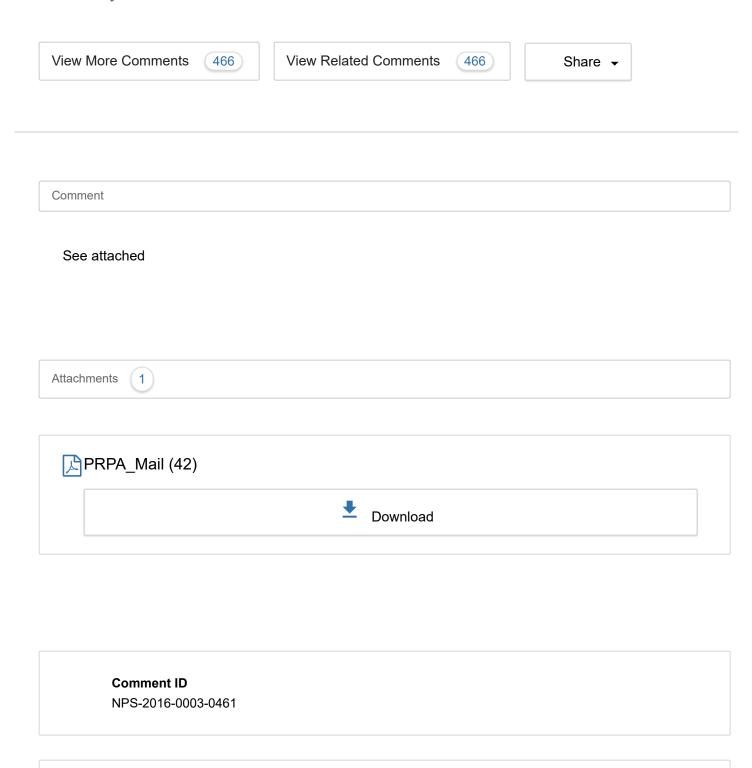
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Best comments

Comments and Suggestions on Proposed Regulations

to Implement the

Paleontological Resources Preservation Act

(Regulation Identifier Number (RIN) 1093-AA16)

by Dr. Lanny H. Fisk, PhD, PG

06 February 2017

<u>Thank you</u> for affording the opportunity to participate in the rulemaking process for the Paleontological Resources Preservation Act (PRPA). I am impressed with the clarity and thoroughness of the proposed regulations, which suggests that a lot of thought, time, and consideration has gone into their preparation. However, that being said, there are improvements possible and necessary. I offer the following comments and suggestions:

- 1. In proposed section 49.5 "Fossilized" is inadequately defined and consequently likely to result in confusion and litigation. I suggest that this definition be modified as follows: Fossilized means preserved by natural processes, such as burial in [delete accumulated] sediments, preservation in ice or amber [add or bitumen], [add or impregnation] or replacement by minerals. which may or may not alter the original organic content. Paleontologists and textbooks in paleontology make a clear distinction between a replacement (which leaves no original organic material) versus a permineralization in which original organic material is preserved by being impregnated with or surrounded by minerals. To illustrate this distinction, replaced petrified wood is *not* identifiable because the cellular structure required to identify the type of tree is destroyed when the original cellulose is replaced by mineral matter. On the other hand, permineralized petrified wood is identifiable because the cellular structure required to identify the type of tree is *not* destroyed when the original cellulose is impregnated or surrounded by mineral matter. Because the former often results in replacement by a variety of colorful minerals (think petrified wood from the Triassic petrified wood from Petrified Forest National Park in Arizona), this replaced wood may have a high commercial value, but because the wood cannot be identified, it has a low scientific value. Petrified woods that have been permineralized are typically not colorful and therefore have a low commercial value, but because the wood can be identified, it has a high scientific value. Under the definition used in proposed section 49.5, it could be argued that permineralized petrified wood is not "fossilized" because it has not been replaced by minerals. It could be argued that by definition in PRPA regulation 49.5, permineralized petrified wood is not a paleontological resource and therefore not protected under PRPA regulations. A revised definition to resolve this potential problem.
- **2.** In proposed section 49.5, a paleontological site means a locality, location, or area where a paleontological resource <u>is</u> found. This definition does not include a locality, location, or area where a paleontological resource <u>was</u> found, but is not currently located. Thus, <u>IF</u> a locality from which a nearly complete *Tyrannous rex* skeleton <u>was</u> discovered, salvaged, and put on

display in a public museum no longer includes a paleontological resource, that locality would by definition no longer be a paleontological site. To navigate around this potential problem, the definition of a paleontological site should include a locality, location, or area where a paleontological resource <u>was or is</u> found. This clarification would make the definition consistent with definitions used by paleontological museum curators.



3. Proposed section 49.60 requires that an applicant for a PRPA permit have "an advanced degree in paleontology or related field of study with a major emphasis in paleontology or equivalent academic training". In my professional opinion, this wording is too flexible and leaves too much discretion to an authorized officer, who may not be a trained paleontologist. It is unreasonable to use the language "an advanced degree in paleontology" when very few universities and colleges in the US do offer such a degree. I would prefer using language such as "an advanced degree in an academic field of study (such as geology, biology, anatomy, etc.) with a major emphasis in paleontology."



- **4.** Proposed section 49.65(b)(6)(ii) requires that a permit application include "Written verification from the proposed repository confirming that it will agree to receive the collection...." As many permittees have experienced, some public museums (such as the University of California Museum of Paleontology at Berkeley) are hesitant, reluctant, or refuse to offer such verification because this verification appears to guarantee that they will accept a fossil collection without knowing its contents. Most museums would like to reserve the right to only accept those items in a collection that are consistent with the museum's mission and purpose. As the Society of Vertebrate Paleontology (SVP) policy document "Conditions of receivership for paleontologic salvage collections" (SVP 1996) states: "Museums are not a dumping ground." This SVP document also states:
 - 1. The repository museum and its curator maintain the right to accept or refuse the materials.
- 2. The materials received must fit with the repository museum's mission and policy statements. Museums would like to reserve the right to accept only those items they choose, and not be tied to an agreement that says in effect "whatever you find, whatever junk you bring us, we will accept and curate it". The verification requirement under section 49.65(b)(6)(ii) would be acceptable *IF* it would allow the repository museum and its curator to accept or refuse portions of a collection based on whether that part of the collection fit with the repository museum's mission and policy statements. The onus should be on the permittee to collect only those fossils that he/she was sure would be accepted by a repository. It should be the permittee's responsibility to ensure that all fossils collected found a home in a public museum. It should not be the agency's responsibility to negotiate a repository for a permittee's fossil collection, nor should it be the public museum's responsibility to accept and curate whatever a permittee collects. There needs to be more flexibility with the verification and the statement should allow a permittee's fossil collection to be deposited into more than one public museum (i.e., not "the repository", but a repository or repositories).



5. Proposed section 49.75(a)(10) states that a permittee must provide the bureau with DI Form 9008 (Repository Receipt for Collections (Paleontology)). Proposed section 49.210(b) states that the permittee <u>or</u> repository must submit DI Form 9008 to the authorized officer. Proposed

section 49.750(a)(9) states that the permittee must provide the bureau with DI Form 9008. To be consistent, I suggest that the permittee provide the bureau with DI Form 9008. The repository should <u>not</u> be responsible for providing DI Form 9008 to the bureau. The words "<u>or</u> repository" should be deleted from section 49.210(b).



- **6.** Proposed section 49.525(b) states "Scientific and commercial values and the cost of response, restoration, and repair are determined under subpart G of this part." To be more accurate, this statement should read "Procedures for determining scientific and commercial values...are provided under subpart G of this part."
- 7. Proposed section 49.525(d)(2) uses the word "recovered". I caution that this word has been used in the past by slippery operators to mean "covered back up" and, therefore, suggest substituting the word salvaged or collected, rather than "recovered".
- **8.** Proposed section 49.525(e) directs the authorized officer to determine "scientific or commercial values". This section should be rewritten to state "<u>both</u> the scientific <u>and</u> commercial values", since both values are necessary.



9. Proposed section 49.805(b) explains that casual collecting of common invertebrate or plant paleontological resources will be allowed on land administered by Reclamation, but <u>only</u> in locations where Reclamation has established a special use area for casual collecting. This regulation should also apply to BLM lands, rather than allowing casual collecting on any and all lands administered by the BLM unless closed to casual collecting. Most casual collectors or amateur paleontologists would probably much prefer to have BLM designate special use areas for casual collecting, increasing the likelihood that their search will be successful, rather than having to wander all over BLM lands trying to locate a paleontological site from which they can casually collect. The PRPA requires the bureaus to provide for a <u>unified federal policy</u> on preserving paleontological resources. As much as possible, the bureaus should develop a unified federal policy. I would prefer to see all DI bureaus (with the obvious exception of NPS) designate special use areas for casual collecting, rather than all four DI bureaus having <u>different policies</u>. In my opinion, the latter approach is <u>not</u> consistent with the intent of PRPA.



10. Proposed section 49.810(a)(1) states that "Common invertebrate or plant paleontological resources are invertebrate or plant fossils that have been established as having ordinary occurrence and wide-spread distribution." Unanswered in this statement is <u>who</u> establishes or determines what is common. To resolve this question, I suggest inserting "have been established by the bureau...."



11. Arguably the most important and most controversial portion of the proposed rules is the definition of casual collecting. Proposed section 49.810(a)(1) defines what are common invertebrate and common plant paleontological resources. However, in practice, a casual collector or an amateur paleontologist would not know what are "common" versus uncommon,

rare, or even new species previously unknown to science. Therefore, it should be the bureaus responsibility to determine and communicate to the casual collector or amateur paleontologist what fossils are "common" in the area. The easiest way to accomplish this task would be for each bureau (again with the exception of NPS) to designate special use areas for casual collecting and post at those localities signage illustrating which fossils are "common" at that locality. This signage should clearly state that any uncommon fossil(s) discovered should be deposited with a "ranger" at the nearest bureau field office. When deposited at the local bureau office, the collector should be asked to fill out a brief locality form, providing as much detail as possible on the collector, the specific locality, and the stratigraphic position from which the specimen(s) were collected. An incentive for depositing uncommon fossils could be provided that often new species are named for the collector.

12. Proposed section 49.810(a)(4) states that casually collected paleontological resources may <u>NOT</u> be used for research. This restriction is unreasonable. What if a casual collector or an amateur paleontologist inadvertently collects a new species previously unknown to science, later recognizes the importance of the specimen, and donates it to a university or public museum for scientific study? In this case the casually collected paleontological resource should certainly <u>NOT</u> be restricted from being used for scientific research.

Again, <u>thank you</u> for affording the opportunity to participate in the PRPA rulemaking process. If anyone has questions on my comments and suggestions or would like to discuss them further, please feel free to contact me directly.

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