February 3, 2017

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Re: Docket No. NPS–2016–0003. RIN 1093-AA-16. Comment on proposed Rule on Paleontological Resources Preservation Act of 2009.
By POST and by ELECTRONIC UPLOAD

To Whom It May Concern:

This letter is written by the Southern California Paleontological Society (SCPS), with support from other organizations and professionals concerned with preserving, responsibly collecting, managing, or studying paleontological material. SCPS has nearly 130 dues-paying members and is the sole club devoted exclusively to paleontology in Southern California. Many SCPS members work closely with the Natural History Museum of Los Angeles County (NHM) as volunteers, docents, and fossil preparators or work with the Invertebrate Paleontology Research and Collections Department of the museum assisting with fossil curation. To advance our goals of research and education, SCPS members use their personal collections in presenting programs to Los Angeles and Orange County public elementary schools and community groups. In addition, several SCPS members have donated their extensive collections to the Natural History Museum of Los Angeles County (Invertebrate Paleontology Research and Collections Department); to the Museum of Paleontology, University of California, Berkeley; and to The Biology Bus and Afterschool Center in New York City. We are not unique in this respect. Most Fossil Clubs/Societies work with their local museums and universities, volunteer time, frequently donate specimens and entire collections, and are active in outreach. We are the face of paleontology in our respective communities.

SCPS is a member of both the American Federation of Mineralogical Societies (AFMS) and its regional affiliate, the California Federation of Mineralogical Societies (CFMS). CFMS represents 110 gem-mineral-lapidary-fossil clubs located primarily (but not exclusively) in the State of California. CFMS represents 6,535 dues-paying members in aggregate. AFMS represents seven regional affiliates with 50,460 members in aggregate throughout the United States. CFMS and other AFMS regional federations and their affiliated clubs are signatories to this letter not only because of values shared in common concerning paleontological resources and member participation in avocational paleontology, but also because the proposed regulation under the Paleontological Resources Preservation Act of 2009 (PRPA) addresses in some places provisions of the Federal Land Policy and Management Act of 1976 (FLPMA), which therefore, might be construed to have application to collecting and managing geological and (non-commercial) mineral resources ("rock collecting" or "rockhounding").

PRPA states "Nothing in this subtitle shall be construed to...apply to, or require a permit for, casual collecting of a rock, mineral, or invertebrate or plant fossil that is not protected under this subtitle" (section 63.11 Savings Provision). We respectfully request adding an explicit statement to the Proposed Rule that nothing in Sections 48.8 is intended to apply to hobby collecting of non-fossil rock and mineral specimens. The inclusion of unambiguous language discourages subjective interpretation or inconsistent application of the regulations by different federal agencies or by different field offices despite the explicit intent articulated by PRPA itself.

On behalf of the members of SCPS, our CFMS- and AFMS affiliate clubs, and other paleontology societies and professionals, we respectfully request your consideration of the comments herein concerning the Department of the Interior's proposed regulation under PRPA. First, we fully support the conservation objectives afforded by this landmark Act. We also fully understand and support a comprehensive set of standards applied to managing paleontological resources on public lands and a coordinated approach between the different federal agencies that administer them.

We are encouraged that the proposed regulation demonstrates careful review and thoughtful effort invested in clarifying the objectives of the PRPA. We do have several concerns with the proposed regulation, and we feel some clarification or emendation is necessary to administer the regulation consistently and fairly. Our primary areas of concern are addressed in this letter:

1.) **Aligning the mission and values concerning fossil collecting between the paleontology community and PRPA.**
2.) **Semantic clarification of "invertebrate" and "vertebrate" fossils/fossil collecting.**
3.) **Definition of terms: *casual collect-or/ing, common, reasonable amount*, and *negligible disturbance*.**
4.) **Access to federal lands for casual collecting: permits and prohibitions.**
5.) **Protective designations.**

1.) Aligning the mission and values concerning fossil collecting between the paleontology community and PRPA.

Paleontological resources ("fossils") have importance as both material patrimony and intellectual patrimony. The intent of PRPA is to balance both values. The intellectual values – educational, social, and recreational – flourish only when fossils can be discovered, collected, and studied. PRPA protects such values through accommodation of casual fossil collecting. The proposed regulation is to implement the PRPA of 2009. One stated purpose of this statute was "To ensure that amateur collecting of rocks, minerals, and invertebrate and plant fossils on Federal lands is not affected by this Act." During development of the law, the merits and value of amateur paleontology were recognized, and the final law provides that "casual collecting" without a permit is to be allowed on BLM and National Forest lands, except as determined necessary to limit or restrict it within specific areas for the protection of other values and resources. The proposed regulations conflict with the letter and intent of the 2009 Act, where the BLM proposes prohibiting casual collecting within broad categories of land management area without specific justification, or throughout large areas where the prohibition is not justified by a specific need for the entire area.

The draft EA for the proposed regulation states, "Casual collecting activities are not anticipated to cause adverse impact to paleontological or other natural or cultural resources. However, if the BLM is aware that a paleontological resource may be depleted, the bureau may take action to prevent further depletion of the resource, either by closing the area to casual collection, or by limiting or

restricting the definition of reasonable amount or negligible disturbance for that area." The BLM may exercise discretion to close areas to collecting or to restrict collecting on a case-by-case basis. This provision enables overly broad prohibitions or even universal restrictions that may be unnecessary to protect designated resources. Area-specific management plans need to state the area-specific rules and the justification for them, and those management plans are required to be easily accessible for public reference.

The proposed regulation tips the balance between "material" and "intellectual" at the expense of the latter. In general, the proposed regulation appears to regard *in situ* preservation of fossils as an ideal and collecting as a "damaging" activity, or at least, an activity to be discouraged. However, fossils *in situ* are not necessarily protected by remaining in place. In a dynamic setting near the earth's surface, fossils tend not to maintain equilibrium with an environment that is neither continuously neutral nor sufficiently static to remain intact. Erosion, which exposes fossils at the surface, has a natural destructive force that can quickly damage or destroy them if they are not recovered, especially after emplacement at or near the surface. Regarding their intellectual value, little can be learned about most fossils *in situ*, and accurate identification of invertebrate fossils is often impossible in the field. To protect and preserve both the material and intellectual value of fossils, they need to be found and collected.

The proposed regulation seems to restrict collecting commensurate with misuse, overuse, or abuse associated with "night diggers" or claim jumpers, and not the behavior of responsible hobbyists. Where has the deleterious impact of responsible amateur collectors been demonstrated to justify the degree of restrictions proposed? The paleontological community is small. Are there data to suggest abuse by members of our community has occurred which warrants such severe constraints? The impact of casual collecting, before implementation of the PRPA, was determined to be minimal, and no action was recommended to curb casual collecting. If there is serious abuse/mis-use, we would like to see the data. We do not think that paleontological resources on federal lands have or will disappear through responsible collecting practices. Commercial collecting or other abuse is not casual collecting, and rules exist to prevent or control such commercial enterprise.

The proposed regulation restricts collecting in a manner that is impractical in the field. Where the proposed regulation under PRPA incorporates impractical or onerous restrictions on casual collecting (section 49.810), it actually conflicts with the 2009 statute. Please refer to the published discussion on development of that law, where casual collecting is a protected activity, except when in specific and limited areas it is found to be inconsistent with other goals or values.

We believe that fossil collecting has educational and social value that inspires young people to become our future scientists and stewards of public lands. It provides opportunity to better understand the processes of Nature's laboratory through direct experience of its geologic wonders. It is an activity of exploration and discovery that enriches their knowledge about the geology and paleontological resources of the earth.

Fossil collecting is often thought of as a "gateway science" – when introduced to children, it not only enriches their understanding of the natural world and its geology and paleobiology, but it instills the knowledge that will make them better-informed adults who learn to appreciate society's role in protecting our environment. Fossil collecting has been known to lead enthusiastic children to choose career paths or develop avocational interests in the sciences.

We would like to emphasize that recreational fossil collecting is an activity compatible with the guidelines articulated in the United States Forest Service's document of June, 2010, "A Framework for Sustainable Recreation." The AFMS Code of Ethics is consistent with federal guidelines

concerning recreational use of federal lands. On CFMS affiliate-sponsored field trips, participants sign a waiver adhering to the AFMS Code of Ethics, which stipulates that collecting activities should "cause no willful damage to collecting material" and participants will "...take home only what ... [they] can reasonably use," "practice conservation and ...utilize fully and well the materials...collected and ...recycle...surplus for the pleasure and benefit of others," and "appreciate and protect our heritage of natural resources." On CFMS-sponsored field trips, participants are expected to pack out what they pack in, pick up trash, mind habitat and vulnerable natural features, observe all laws and regulations – in short, we teach and practice responsible stewardship of our public lands.

Finally, we would like to put into perspective the impact the fossil-collecting community has on federal lands. This year, myFOSSIL.org has listed approximately 72 networked fossil clubs and societies in the United States that are devoted to the casual collecting of paleontological resources. In its "Draft Environmental Assessment for Two Definitions for Casual Collecting of Paleontological Resources on BLM-Administered Lands, Proposed 43 Code of Federal Regulations Part 49 Subpart I," the BLM has calculated for purposes of analysis an average membership of 100 members per rock-mineral-fossil club in the United States. Based on this calculus, approximately 7,200 members of fossil-collecting communities potentially visit federal lands each year to collect. Certainly, other recreationists who do not self-identify as "paleontologists" may collect fossils as part of their recreational experience (e.g., rockhounds), but it seems clear that the total number of fossil collectors who visit federal lands is small and their potential impact is small contrasted against the estimated 62.4 million recreation-related visits to public lands in 2015.

2.) Semantic clarification of "invertebrate" and "vertebrate" fossils/fossil collecting.

a) Since plants and certain other fossils are neither "invertebrates" nor "vertebrates", but are still paleontological resources, we ask that the term "invertebrate" be changed or equated to "non-vertebrate" for ease of understanding.

b) We also ask that the terms "non-vertebrate" and "vertebrate" never be conflated together for the sake of administering guidelines concerning collecting of fossils/paleontological materials as a broad category. These important distinctions help to differentiate characteristics and associated values (e.g., pecuniary, rarity, complexity to excavate) of very different materials that should not be managed according to identical one-size-fits-all standards.

3.) Definition of terms: *casual collect-or/-ing, common, reasonable amount*, and *negligible disturbance*.

In general, the criteria for casual collecting are reasonable. However, the critical/operative terms used are vague, and their meanings are subjective. We recommend clearly defining the terms and applying them consistently throughout the regulation. We suggest the emendations or clarifications for specific terms or phrasing discussed below.

> ***Reference 43 CFR, Part 49, Subpart I, §49.810:*** *"What is casual collecting?" (a) Casual collecting means the collecting without a permit of a reasonable amount of common invertebrate or plant paleontological resources for non-commercial personal use, either by surface collection or the use of non-powered hand tools, resulting in only negligible disturbance to the Earth's surface or paleontological or other resources."*
>
> ***§49.810 (a) (2):*** *"Reasonable amount means a maximum of 25 pounds per day per person, not to exceed 100 pounds per year per person. Pooling of individuals' daily amounts to obtain pieces in excess of 25 pounds is not allowed."*

§49.810 (a) (1): "Common invertebrate or plant paleontological resources are invertebrate or plant fossils that have been established as having ordinary occurrence and wide-spread distribution. Not all invertebrate or plant paleontological resources are common."

"Common". Let's begin with the term "common". There is much confusion surrounding the use of this term. The aim of PRPA is to preserve scientifically relevant and important fossil specimens within the public realm (i.e., scientifically relevant specimens should end up in repositories so they can be studied in perpetuity.) All other specimens, not adding to the existing scientific body of knowledge of our planet, many be casually collected. There should be an understanding that "common" means "not scientifically relevant."

"That have been established". The phrase "that have been established" is troublesome – established by whom? It is not feasible for there to be lists of relevant and not relevant specimens to be maintained as these are fluid and change over time.

Being able to determine non-vertebrate identification in the field is also an issue, acknowledged by the rule authors:

In part III, "Section-by-Section Analysis of the Proposed Rule," page 88182 of the *Federal Register*, Vol. 81, No. 235, dated Wednesday, December 7, 2016, the BLM states:

> "It may not always be possible for a collector to identify in the field whether a fossil is common. When in doubt, collectors should err on the side of caution and collect only the resources that they know are common. The bureaus may hold a trained amateur, avocational paleontologist, or professional to a higher standard of knowledge than the general public about whether or not a fossil is common.
>
> "[….] if a knowledgeable collector makes an unanticipated discovery of an uncommon paleontological resource while casually collecting, that collector shall not collect that resource because he or she is not authorized to do so."
>
> "If the collector does collect the uncommon resource without a permit, that collector may be subject to penalties."
>
> "If the collector wishes to pursue collection, he or she must obtain a permit to collect the uncommon resource."

This language is problematic on many levels, because it is inconsistent with the actual manner in which discovery in the field customarily occurs; amateurs as well as professionals are often unable to make an accurate identification in the field. Sometimes identification can only be made later, with the aid of references or after the specimen has been cleaned and prepared.

"Err on the side of caution". We believe that amateur collectors should exercise scrupulous judgement and care in the field, but this admonition effectively discourages collecting by hobbyists. It may even inadvertently limit collecting to professional paleontologists.

As a natural result of continuing erosion, fossils previously buried below the earth's surface are uncovered each year. If amateur collectors should discover an "uncommon" fossil unexpectedly, we think it is neither practical nor advisable to leave the fossil *in situ,* report it to the proper authorities, and then hope it will be retrieved. Should someone return to retrieve it later, the fossil may be difficult to locate, or if found, it may be damaged from exposure.

"Subject to penalties…" In Subpart E, Criminal Penalties, and Subpart F, Civil Penalties, fines and potential imprisonment are listed as the penalties for prohibited acts, such as removing uncommon fossils. Such dire penalties would discourage casual collecting, when such collecting should be encouraged. The paleontological community has clearly benefited from collecting done by amateurs. Such benefits can continue to redound to the paleontological community only if amateur collecting is supported, not penalized. This section fails to provide appropriate recourse for unintended collection of an "uncommon resource".

As discussed previously, we are concerned that the proposed regulation under PRPA may inadvertently discourage or even prohibit collecting by amateurs / casual collectors. A study in 2015 of 15 of the 70+ fossil clubs and societies in the United States revealed 51 peer-review published non-professionals, some having published multiple papers. Extrapolated out, we are looking at hundreds of scientifically important finds and wealth of scientific knowledge added. As currently written, the proposed regulations would effectively disenfranchise this entire group of individuals from collecting/publishing on federal land. Most do not have access to an approved repository and do their research and initial curation at their homes. Upon publication of the find/s they transfer their specimens to a public repository. This activity should be encouraged, not prohibited and threatened with a fine.

To solve all these problems we propose replacing:

> *§49.810 (a) (1): "Common invertebrate or plant paleontological resources are invertebrate or plant fossils that have been established as having ordinary occurrence and wide-spread distribution. Not all invertebrate or plant resources are common."*

With:

> *§49.810 (a)(1): "We recognize that not all non-vertebrate paleontological resources are common however, non-vertebrate paleontological resources will be considered to be common until discovered or determined to be otherwise. When figured, published, or stated to be otherwise, they must then be transferred to a repository."*

And, remove the restriction on "research" from:

> *§49.810 (a) (4): "Non-commercial personal use means a use other than for purchase, sale, financial gain or research."*

To read:

> *§49.810 (a) (4): "Non-commercial personal use means a use other than for purchase, sale or financial gain."*

"Reasonable amount". SCPS members, like the rest of the amateur community, adhere to the AFMS Code of Ethics and do not take more from a collecting site than they can reasonably use. But the "reasonable" amount of material may vary from one site and one situation to another. In many instances, we agree that the weight maximum of 25 pounds may be appropriate. We acknowledge that there may be sensitive sites where an agency might appropriately set a low weight amount. However, as a general standard, the proposed weight limit of 25 pounds is impractical, due to fossils often being imbedded in heavy matrix that cannot be removed in the field. Unique local conditions at any given site are understood best by the local agency. Therefore, we recommend deferring to the local administrative agency to depart from the low limit of 25 pounds and make "reasonable amount" more reasonable for invertebrate fossil collecting: 100 pounds with specimen in matrix or attached to host rock, without a yearly cap. Note: most collectors will not take anywhere near these amounts.

Petrified wood is governed by 43 CFR part 3622, which allows for 25 pounds per day plus one piece of any weight but not to exceed a total of 250 pounds per year. That 43 CFR part 3622 takes precedence over these new regulations (see p. 88175, *Federal Register*) should be made explicit here. How will the differing daily and annual total pounds rules be combined or reconciled if both petrified wood and other fossils are collected by an individual?

"Negligible disturbance". We would like to see the term "negligible disturbance" replaced with "low impact disturbance." This would comport with BLM's standard and aligns with BLM's study (in progress) on Disturbance Caps (est. May 2017, Barstow, CA field office). BLM characterizes amateur rockhounding as a "low impact disturbance" activity contrasted against "high impact disturbance" caused by commercial mining activity. The high and low impact disturbance can be differentiated visually from aerial surveying at different elevations. We recommend applying to invertebrate fossil collecting the same "low impact disturbance" standard used for rock-hounding.

We understand the PRPA was modeled after the Archaeological Resources Protection Act of 1979 (ARPA). While it is a useful model, in some respects the occurrence (deposition) or handling of paleontological and archaeological resources are quite different. Therefore, the regulation should modify the standard appropriate for paleontological material. Because the nature of deposition and exposure of resources can be so different, the standards for "negligible disturbance" and confining "surface disturbing" activity to "1 square yard" are impractical, if not inexplicably arbitrary.

Certainly, concerning sub-paragraph (i), the area limit of "1 square yard" is impractical. Fossil remains are rarely distributed evenly or contiguously. Often, they are found in one thin stratigraphic layer that may have been uplifted, folded, and otherwise changed over time. As a result, the fossil site can have any size, shape, or configuration. Given the nature of deposition, collecting fossils, therefore, often requires trying different areas (slight exploratory digging). The proposed regulation needs to accommodate surface collecting over a larger area than "1 square yard."

The draft EA for the proposed regulations correctly states that the "PRPA requires the bureaus to allow casual collection and to define negligible disturbance." It also discusses a range of spatial areas greater than zero up to five acres. Obviously, one square yard is much closer to zero than to five acres (using rules for geological surveys as a reference is not demonstrably relevant). The draft EA concludes that "Casual collecting activities are not anticipated to cause adverse impact to paleontological or other natural or cultural resources." Therefore, again, it seems unnecessary for the spatial area collectors may examine to hew toward the low-end value (zero). In fact, instead of a quantitative value, we think the "low impact disturbance" standard BLM applies to rock-hounding and limitation applied to collecting using simple hand tools are adequate standards of constraint.

Sub-paragraph (ii) requires that multiple collectors should be separated by a distance of least ten feet. For the aforementioned reasons, this is not possible. A fossiliferous area may be small, and it may have only one small accessible surface exposure. For most of our SCPS collecting trips, we have between 3 and 12 participants. If they were required to spread out according to this proposed rule, many of our participants might be out of range of the fossil site. This situation varies from site to site, from one stratigraphic formation to another, and a one-size-fits-all rule cannot adequately address each situation.

Sub-paragraph (iii) requires that all surface disturbance must be backfilled with the material that was removed to render the disturbance unnoticeable to the casual observer. The AFMS Code of Ethics requires that members backfill holes because those holes may cause injury to wildlife. Whether to protect wildlife or to leave the environment looking untouched, backfilling is certainly a reasonable

requirement unless such backfilling would be dangerous as in the case of infilling on a steep slope that might create a danger of a slide, etc.

We therefore suggest changing:

> *§49.810(a) (3): Negligible disturbance means little or no change to the surface of the land and minimal or no effect to natural and cultural resources, specifically:*
>
> *(i) In no circumstances may the surface disturbance exceed 1 square yard (3 feet x 3 feet) per individual collector;*
>
> *(ii) For multiple collectors, each square yard of surface disturbance must be separated by at least 10 feet;*
>
> *(iii) All areas of surface disturbance must be backfilled with the material that was removed so as to render the disturbance substantially unnoticeable to the casual observer.*

To:

> *§49.810(a) (3): Negligible disturbance means low impact activity equivalent to that currently used in rock-hounding.*
>
> *(i) All areas of surface disturbance must be backfilled with the material that was removed so as to render the disturbance substantially unnoticeable to the casual observer when safe to do so.*

Concerning §49.810(d), any additional "limitations" need to be communicated to the public and to be consistent as interpreted and applied by BLM personnel. They should be clearly written and accessible for public reference, with an explanation of their justification.

Additionally, on **"…surface collection or the use of non-powered hand tools",** we recommend emending the sentence to: "surface collection or the use of non-powered hand tools <u>for shallow excavating (digging) or removing overburden."</u>

4.) Access to federal lands for casual collecting: permits and prohibitions.

> **Reference 43CFR, Part 49, Subpart I, §49.800***: "Is casual collecting allowed on lands administered by NPS or FWS? Casual collecting of paleontological resources is not allowed on lands administered by NPS or FWS. On those lands, collecting must be conducted in accordance with a permit as described in subpart B of this part."*

We recognize that the proposed regulation must conform to the 2009 PRPA statute, but we would like to state that we think there are wildlife refuges where casual collecting is compatible with the goals and purpose of the refuge. One example is the Desert National Wildlife Refuge, administered by the U.S. Fish and Wildlife Service (FWS) and located north of Las Vegas, Nevada. The public is allowed both on- and off-trail throughout most of this vast refuge, and incidental surface collecting of rocks or fossils has not been shown to be negatively impactful to bighorn sheep, which the refuge was established to protect. However, currently, collecting is not allowed.

In addition, the National Park Service (NPS) administers large tracts as National Recreation Areas and is proposing to add substantial acreage around urban areas, such as the "Rim of the Valley" proposal for Los Angeles and Ventura Counties. We believe that casual collecting of rocks and fossils is a recreational activity compatible with other activities allowed in National Recreation Areas. There is a need for publicly accessible areas that enable educational nature study activities near urban populations.

These two aforementioned areas, one administered by FWS and one by NPS, are cited as examples of the need for critical consideration of the policy that currently does not allow any casual

collecting on lands under the administration of these two federal bureaus.

5.) Protective designations.

Land use amendment plans and travel management plans have proliferated in recent years (e.g. DRECP, WMRNP in California). New protective designations have been created (e.g., under DRECP). The development and deployment of Planning 2.0 initiative (in progress) will necessitate review and possible revision of other existing plans to bring them into compliance with Planning 2.0 and consistent with FLPMA or PRPA, as applicable. We understand that WMRNP, for example, will be re-visited to conform to Planning 2.0.

Because the proposed regulation to PRPA will have wide application across the agencies of the federal system, and because there is now so much confusion among the public about what is or is not permissible – and where – we respectfully request preparation of a document listing all the protective designations and accommodation of invertebrate fossil collecting in each one of them.

For the record – contributions of amateur collectors

To demonstrate the invaluable contribution of amateur collectors to the field of paleontology, please consider some important case studies presented below. They attest to the historically productive nature of the relationship between amateur and professional. They attest to the invaluable role amateurs have had in preserving material patrimony and extending intellectual patrimony of paleontological resources.

One of the stated purposes of most paleontological societies, including SCPS, is to encourage responsible stewardship of earth's paleontological resources and to promote scientific research, communication, and public education. The professional paleontological community is small (as mentioned previously). It has a long history of cooperation with and reliance upon amateur paleontologists to be its "boots on the ground."

Over the decades, countless specimens, common and rare alike, have been found by amateurs. For example, the trilobite site in the Marble Mountains fossil bed (located in the Mojave Trails National Monument) was discovered by amateur rockhounds and brought to the attention of paleontologists.

New species have been identified and new localities for known species have been found. What to do in such circumstances? Amateurs frequently share their finds with museums or other repositories. Amateurs publish papers in newsletters, club bulletins, or journals, and they provide specimens for research and educational purposes to the professional community. For example, in SCPS, four former members donated their extensive collections to the Invertebrate Paleontology Research and Collections Department (IP) of NHM. These very knowledgeable amateurs include Harold Meals, Yvonne Albi, June Maxwell, and Father Floyd A. Jenkins. They are among many contributors to the substantial and important invertebrate collection at the Natural History Museum. Harold Meals' collection consisted of many important California Pliocene and Pleistocene fossils, along with the accompanying geological and contextual stratigraphic data, making this collection an important research resource. Yvonne Albi's collection, featuring echinoderms in particular, has been a useful addition to the comparative taxonomic collection. Another current SCPS member, Wayne Bonner, recently offered much of his collection to IP-NHM. His specimens will be of assistance in an ongoing effort to understand diversity of specimens in a collecting site.

Martha Burton Woodhead Williamson, an early amateur fossil enthusiast, collected shells extensively in the late 1800s. She donated this collection to the Los Angeles Museum of Art, History, and

Science in 1912 (today, Natural History Museum). Her collection provided the core resource around which was built the now very significant Invertebrate Paleontology collection. Her collection was important mainly because she collected from localities that are no longer accessible, or have been effaced by urban development. Among other localities, she collected shells from Dead Man's Island in the Port of Los Angeles, an island that was destroyed to build the current port. Visitors still come to NHM-IP Research and Collections in Los Angeles to see and study her collections. The specimens in her collection would be impossible to collect today, so they fill an important gap in the paleontological record of our region. They effectively preserve the legacy of material patrimony that would not be preserved had they been left *in situ* or gone undiscovered.

Members of the more than 70 fossil clubs and societies in the United States share in common the same values and interests in paleontology; although, different groups may have a different focus. They enjoy learning about paleontology, which includes the excitement of discovery through collecting in the field. The SCPS is committed to education and collaboration with the county museums in the Los Angeles area. Another group, the Anza-Borrego Desert Paleontology Society, is composed of volunteers who assist the Anza-Borrego Desert State Park staff in finding, preserving, and protecting park fossils. They are trained volunteers with a specific focus. Another group on the west coast, the North America Research Group (NARG), is well-known for the many significant specimens that its members have found and sometimes, prepared. The range of their finds includes a possible ichthyosaur to a late Miocene whale skull rostrum to a plesiosaur. All these specimens have been placed in museums. The dedicated volunteers of NARG do not limit themselves to "common" invertebrate finds. However, they always notify appropriate authorities whenever a discovery is made and then proceed by permission.

Not only do amateurs find and share their discoveries of new species and new localities, but by the number of specimens they provide, they allow a more accurate statistical analysis of species distribution. We cannot overstate how important it is <u>not to incorporate language into the proposed regulation under the PRPA</u> that marginalizes serious amateur or casual fossil collectors.

We are grateful for the thoughtful drafting of the proposed regulation under the PRPA. We appreciate having the opportunity to provide comments on the Proposed Rule to amend Title 43 of the CFR by adding a new part 49, and we look forward to seeing the interests and values of the community of amateur fossil collectors reflected in the final version of Part 49. We look forward to being given the opportunity to review the next draft and provide input.

Sincerely,

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- Manager for Earth Science Studies, South
  4th Vice President to the American Federation of Mineralogical Societies, Inc., representing
  California Federation of Mineralogical Societies, Inc. (2017)
  1st Vice President (2017)
  California Federation of Mineralogical Societies, Inc.
  Ojai, CA

Fred Ott
- past President
  California Federation of Mineralogical Societies, Inc. (2010)
- Insurance Committee Chairperson (2017)
  California Federation of Mineralogical Societies, Inc.
  PO Box 992
  Shingle Springs, CA 95682

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- Paleontology Resources Specialist
  California Federation of Mineralogical Societies, Inc.
  16643 Chicago Ave.
  Bellflower, CA 90706

Teresa Polly
- President

Jerri Heer
- Secretary
  Southeast Federation of Mineralogical Societies, Inc.
  (86 clubs representing 8,145 members)
  PO Box 51554
  Knoxville, TN 37954

Lori Heinemann
- President
  Pinellas Geological Society
  63 members
  PO Box 1585
  Largo, FL 33779

Chuck Ferrara
- President
  Southwest Florida Fossil Society
  (230 members)
  PO Box 51246
  Punta Gorda, FL, 33951

Eric Odegaard
- President
  Suncoast Gem and Mineral Society
  (93 members)
  PO Box 13245
  St. Petersburg, FL 33733

Jerri Heer
- President
  Tampa Bay Mineral and Science Club
  (151 members)
  PO Box 89146
  Tampa, FL 33689-0402

Tom Mitchell
- President
  The Villages Gem and Mineral Association
  (135 members)
  1885 Doric Avenue
  The Villages, FL 32162

Tom Mitchell
- President
  Tomoka Faceters Guild
  (31 members)
  1885 Doric Avenue
  The Villages, FL 32162

Dr. Richard D. Pankey
- past President (1994 – 1996)
  Contra Costa Mineral and Gem Society
- past President (2007)
  California Federation of Mineralogical Societies, Inc.
- past President (2009 – 2012)
  American Lands Access Association, Inc.
- Federation Director to the California Federation of Mineralogical Societies, Inc. (2004 – 2017)
  Contra Costa Mineral and Gem Society
- Past President (1997 – 1999)
- President (2017)
  North Bay Field Trips
  (14 societies representing ca. 1,000 members)
  PO Box 842
  Concord, CA 94522-0842

John W. Robinson
- President
  Faceters Guild of Southern California
  (15 members)
  Box 5433
  Buena Park, CA 90622

Kelly Plumb
- President
  Contra Costa Mineral and Gem Society
  (95 members)
  PO Box 842
  Concord, CA 94522-0842

Darrell Robb
- President
  Culver City Rock and Mineral Club
  (156 members)
  PO Box 3324
  Culver City, CA 90231

John Raabe
- President
  Palomar Gem & Mineral Club
  (115 - 120 members)
  P.O. Box 1583
  Escondido, CA 92033

Mike Chontofalsky
- Show Chairman
  Southern Illinois Earth Science Club
  (95 members)
  1019 E. Broadway
  Centralia, IL 62801

Jim Kraai
- President
  Central Iowa Mineral Society
  (79 members and families)
  2012 E. 12th St.
  Des Moines, IL 50316

Ed Wagner
- President
  Lincoln Orbit Earth Science Society
  (326 members)
  PO Box 2272
  Springfield, IL 62705

Bill Bar
- President
  Huron Hills Lapidary & Mineral Society
  (54 members)
  227 Barton Shore Drive
  Ann Arbor, MI 48015

Diane Kuzara
- Vice-President
  The Midwest Mineralogical & Lapidary Society
  (93 members)
  20281 Thomas
  Brownstone, MI 48183-4835

Sue Casler
- President
  Central Michigan Lapidary and Mineral Society
  (83 members)
  15785 Park Lake Road
  East Lansing, MI 48823

Sherlynn Everly
- President
  Livingston Gem and Mineral Society
  (222 members)
  9525 Highland Road
  Howell, MI 48843

Vicki Black
- President
  Fossils For Fun
  (46 members)
  PO Box 714
  Fair Oaks, CA 95628

Fred Dexling
- President
  Delvers Gem & Mineral Society
  (39 members)
  1001 W. Lambert Rd. #18
  La Habra, CA 90631

Jack Caufield
- President
  Lodi Gem and Mineral Society
  (17 members)
  PO Box 572
  Lodi, CA 95241-0572

Candace Wiegand
- President
  Mother Lode Mineral Society
  (244 members)
  PO Box 1263
  Modesto, CA 95355

Anita Wald-Tuttle
- President
  Nevada County Gem and Mineral Society
  (96 members)
  PO Box 565
  Nevada City, CA 95959

Jesse Duran
- President

Feather River Lapidary & Mineral Society
(185 members)
PO Box 2645
Oroville, CA 95965

Doug Elliott
- Treasurer

Feather River Lapidary & Mineral Society
PO Box 2645
Oroville, CA 95965

Dan Fountain
- President
  Ishpeming Rock and Mineral Club
  (92 members)
  PO Box 102
  Ishpeming, MI 49849

Dale Fisher
- President
  Anoka County Gem and Mineral Club
  (70 members)
  6301 Rivlyn Ave. NW
  Ramsey, MN 55303

Linda McCall
- President
  North Carolina Fossil Club
  (325 members)
  PO Box 25276
  Raleigh, NC 27611

Jennifer Rhodes
- Director to California Federation of Mineralogical Societies, Inc.
  The Reno Gem & Mineral Society, Inc.
  Reno, NV

Robin DeVisser
- President
  The Reno Gem & Mineral Society, Inc.
  (125 members)
  480 S Rock Blvd.
  Sparks NV 89431

Lannois Neely
- President
  Friends of Paleontology
  (90 members)
  New Mexico Museum of Natural History and Science
  1801 Mountain Road NW
  Albuquerque, NM 87 104

Jack Kallmeyer
- President
  Dry Dredgers
  (220 Members)
  4663 Moselle Dr.
  Liberty Twp, OH 45011

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- President
  Pasadena Lapidary Society
  (150 members)
  PO Box 5025
  Pasadena, CA 91117-0025

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- President
  Santa Lucia Rockhounds
  (88 members)
  PO Box 1672
  Paso Robles, CA 93447-1672

Fred Ott
- President
  The Field Trip Chairman's Association
  (9 member societies)
  PO Box 950
  Placerville, CA 95667

Barbara Terrill
- President
  El Dorado County Mineral and Gem Society
  (275 members)
  PO Box 950
  Placerville, CA 95667

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- Public Lands Representative
  San Diego Mineral & Gem Society, Inc.
- Chair, Public Lands Advisory Committee-South
  California Federation of Mineralogical Societies, Inc.
  27636 Ynez Road L-7230
  Temecula, CA 92591

Shirley Leeson
- past President (1987)
  California Federation of Mineralogical Societies, Inc.
- past President (2008)
  American Federation of Mineralogical Societies, Inc.
- past President (2011–2015)
  American Lands Access Association, Inc.
- President (current)
  San Diego Mineral & Gem Society, Inc.
  (658 members)
  1770 Village Place
  San Diego, CA 92101-1651

Janet Judd
- President
  Hatrockhounds Gem and Mineral Society
  (45 members)
  PO Box 1122
  Hermiston, OR 97838

Rod Shurtleff
- President
  Clackamette Mineral & Gem Corp.
  (169 members)
  PO Box 903
  Oregon City, OR 97045

David Hanna
- past President
  Clackamette Mineral & Gem Corp.
  PO Box 903
  Oregon City, OR 97045

Shellie T. Newell
- President
  Aiken Gem, Mineral and Fossil Society
  (124 members)
  PO Box 267
  Aiken, SC 29802-0267

Harlan Hoogeterp
- President
  Sioux Empire Gem and Mineral Society
  (30 members)
  PO Box 91301
  Sioux Falls, SD 57109-1301

Paul T. Brandes
- Charter Member (1988 – present)
  Mikenauk Rock & Gem Club
- past Vice President (1996-1997)
  Copper Country Rock & Mineral Club
- past Vice President (2013 – 2015)
  Houston Gem & Mineral Society
- president (current)
  Houston Gem & Mineral Society
  (740 Members)
  10805 Brooklet
  Houston, TX 77099

Diane Cook
- President
  Ventura Gem & Mineral Society
  (86 members)
  PO Box 1573
  Ventura, CA 93002

Jerry Turner
- President
  Whittier Gem & Mineral Society
  PO Box 865
  Whittier, CA 90608

Conny Acton
- President
  Santa Rosa Mineral and Gem Society
  (100 members)
  PO Box 1852
  Windsor, CA 95492

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  Division of California Trail Users Coalition,
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  PO Box 1246
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- Geologist
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  St. George, UT 84791

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- President
  Wisconsin Geological Society
  (75 members)
  2507 N. 61st St.
  Milwaukee, WI 53213

Ann Voges
- President
  Oshkosh Earth Science Club
  (34 members)
  PO Box 413
  Oshkosh, WI 54903-0217