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Testimony
Before the Committee on Resources,
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Oversight Hearing on
*"Transparency and Sound Science Gone Extinct?: The Impacts of the Obama
Administration's Closed-Door Settlements on Endangered Species and People."*
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"A democracy requires accountability, and accountability requires transparency."

Barack Obama (from *Memorandum For The
Heads Of Executive Departments And Agencies*,
on the subject of the Freedom of Information Act)

My qualifications.

I am an independent scientist with 33 years of experience in conservation, research and management of threatened and endangered wildlife. Having worked on many species, including peregrine falcons; California condors; desert, Sierra Nevada, and Rocky Mountain bighorn sheep; argali sheep of Asia; meadow jumping mice; sage grouse; delta smelt and African elephants, I am well aware of the scientific issues surrounding species listing and recovery. I earned a Ph.D. from Cornell University in Ecology and Evolutionary Biology; a master's degree from Yale University in Wildlife Ecology; and a bachelor's degree in Biology and Natural History from the University of California Santa Cruz, and postdoctoral experience included research at University of Colorado, Boulder and as a visiting scientist at the Center for Reproduction of Endangered Species at the San Diego Zoo. After five years as Curator of Vertebrate Zoology at the Denver Museum of Nature & Science, I served as a consulting Science Advisor to the Office of the Assistant Secretary of the Interior in Washington, D.C. I am member of the Caprinae Specialist Group at the International Union for the Conservation of Nature (IUCN) and serve as a science advisor to the Council for Environmental Science, Accuracy, and Reliability (CESAR). I consult on endangered species scientific issues and conduct scientific research with Wildlife Science International, Inc.

I bring to your attention two key transparency issues with the implementation of the U.S. Endangered Species Act. These are issues that undermine legitimate conservation efforts, waste scarce conservation dollars, and impose ineffective regulatory burdens on the public. In the worst cases, they can harm the very species they were intended to protect. I also provide potential solutions that I think both sides of the aisle may find agreement on.

Issue 1: Most ESA decisions are not based upon publicly available data.

The U.S. Endangered Species Act (US-ESA) requires the U.S. Fish and Wildlife Service (USFWS) make decisions to list species as threatened or endangered, and enact regulatory actions to aid the recovery of species, "*solely on the basis of the best scientific and commercial data available*" (16 U.S.C. 1531 et seq.). Although referred to as *data*, the USFWS actually relies on published and unpublished studies, and professional opinion, rather than the underlying *data* the cited studies are based upon (see <http://www.fws.gov/informationquality/> and the Department of Interior's Scientific Integrity policies (DOI 2011)). Despite having adopted the Office and Management and Budget Information Quality Guidelines which require transparency in studies used in regulatory decision making, currently, neither the USFW, nor the National Marine Fisheries Service have a requirement that data relied upon in decision-making be publicly available.

Resource agency reliance on the papers and reports which summarize results and contain the opinions of scientists, rather than the underlying *data*, as specifically required by the ESA, has created an untenable situation where:

- 1) Far-reaching ESA listing and regulatory decisions are being made without an opportunity to independently analyze the underlying data and assumptions upon which the cited studies are based.
- 2) Resource agencies have effectively replaced the scientific method in implementation of the ESA (i.e., data, hypothesis testing, and reproducible results) with the opinions expressed by the authors of the cited studies, especially when those opinions are erroneously represented as if they were rigorously tested against the data.

What are the effects of this lack of transparency on the public? When data are not publicly accessible, legitimate scientific inquiry is effectively eliminated as no third party can independently reproduce the results. This action puts the evidentiary basis of some resource agency decisions outside the realm of science and in clear violation of the Information Quality Act. Furthermore, it has the effect of concentrating power, money, and regulatory authority in the hands of those who control access to the data (Ramey 2012).

For affected members of the public, whether they are hikers, horseback riders, hunters, farmers, or industry, when regulations are imposed (via ESA listing, critical habitat designations, or biological opinions) but the data are not public, it is analogous to being accused of a crime, but the accused is never allowed to see the evidence. That is neither transparent nor is it democratic; it relies on authority.

There are sound reasons to question such authority. Key studies used in decision making on the greater sage grouse, Gunnison sage grouse, boreal toad, Prebles meadow jumping mouse, coastal California gnatcatcher, delta smelt, desert bighorn sheep, and hookless cactus have one or more of the following: mathematical errors, missing data, errors of omission, biased sampling, undocumented methods, simulated data used when more

accurate empirical data were available, discrepancies between reported results and data, misrepresentation of methods, arbitrarily shifting thresholds, inaccurate mapping, selective use of data, subjective interpretation of results, fabricated data substituted for missing data, or no data at all. Clearly, the agency's scientific peer review process that should have caught these errors is not as effective as it is portrayed to be.

It has been my experience that when data has not been provided to the agencies, then obtaining access to data held by researchers, even after publication, can be difficult, if not impossible. As the following responses to data requests illustrate, seeking data can frequently resemble a shell game:

"It is very possible that this data set does not exist any longer."

"The USFWS data was deliberately provided in a format that would not facilitate a detailed analysis by those unfamiliar with the manner in which it was collected."

"Unfortunately we cannot provide you with the raw data you have requested at this time."

"We categorically do not release this information to anyone including the United States Fish & Wildlife Service and the California Department of Fish and Game."

While some researchers have been responsive to data requests, others simply ignore our data requests altogether. Some researchers apparently feel a need to control access to the data, determining if, when, and to whom it will be released, sometimes years after the data were collected. However, many of these studies were permitted and/or funded by the USFWS (or other source of federal funding) through grants, contracts, or cooperative agreements. Therefore, it follows that the data should be public, yet there is no consistent requirement from the USFWS that the data be public or provided to the agency.

This problem is more widespread than one might initially think. In a notable case, colleagues at the California Fish and Game (CDFG) had to track down and net-gun endangered desert bighorn sheep from a helicopter so they could manually download data from the GPS radio collars (that provide precise locations at regular time intervals). They were forced into this extreme course of action because a researcher had reset the access codes on the collars so only *he* could download the data remotely, and the researcher refused to share the data with the CDFG who needed it for management of the population (Dr. V. Bleich, CDFG retired and K. Brennen, pers. comm). Funding for purchase of the GPS radio collars was provided by the USFWS for use by the researcher.

In two other cases (coastal California gnatcatcher and desert bighorn sheep in the Peninsular Ranges) a court order was required to obtain the data.

Clearly, the public interest in having timely access to data overrides perceived ownership of data by some researchers. As noted by ESA scholars, Fischman and Meretsky (2001):

"In addition to the rapid responses often needed to recover endangered species, most research in conservation biology is also distinguished by a dependence on government resources. The funding for research; the scientific permits allowing researchers to collect, harass, or harm animals; the permission for access to public lands; and the regulation controlling activities to ensure continued existence of imperiled species all point to the pervasive public interest in the resulting information. This public claim for access countervails the customary control researchers exert over data they collect."

In my experience, recovery of threatened and endangered species is most effective when there is active scientific debate and discussion about the best courses of action to identify and ameliorate threats, and how to devise more effective conservation measures. Such urgency requires open and timely access to data.

A solution to this issue is neither difficult, nor costly. There are publicly accessible data repositories (i.e. GenBank for DNA sequences and Dryad for general purpose data archiving <http://datadryad.org/>), as well as traditional museum and library archives where data may be archived without charge. All that is needed is a requirement the data be archived prior to the agency relying on the report or paper in its decision making, and that the data (both raw and final data sets) and methods are provided in sufficient detail to allow third party reproduction.

Are there situations where public access to data should be limited, such as revealing the locations of endangered species? In most cases, this threat is overstated. However, in those situations where there is a legitimate concern (i.e., where poaching has been clearly documented), the risk should be weighed against the potential benefits of more effective management aiding species recovery. If the risk of disclosure is real, then the solution is to allow only "*narrowly drafted exceptions to the general rule of open access*" as "*broad exceptions tempt agencies and other decision-makers to shield their programs from criticism*" (Fischman and Meretsky 2001).

Issue #2: Peer review is not a panacea.

Peer review is a useful but imperfect filter on information quality. However, it is not a substitute for public access to the underlying data that allows for an independent, third party review.

Despite the best of intentions, there are no guarantees that peer reviewers will be provided access to data, or that if data is provided, it will be used in developing their review. As previously noted, peer reviewers do not always catch errors of significance. Moreover, as detailed in my previous testimony to the Committee (Ramey 2007), if there was a bias or selective presentation of information by the USFWS to peer reviewers, the outcome of the peer review can be less than objective. And finally, despite agency assurances, there is no guarantee that reviewers be will free of conflict of interest or will deliver an impartial assessment. The reasons for this are summarized in the following excerpt from my recent paper, *On The Origin of Specious Species* (Ramey 2012):

"The problems that lead to these issues [with peer review] are three fold. First, the number of experts involved with a particular species is often limited. Whole careers are sometimes dedicated to the study of a species (or subspecies or population), and a listing can produce what is perceived as needed "protection" for that species under the ESA. Additionally, ESA listings can have the effect of putting these experts into positions of power, money, and authority, through their roles on Recovery Teams, Habitat Conservation Plans, and consulting as USFWS "approved biologists." Because few ESA-listed species are ever delisted, this guarantees a virtual lifetime of employment on one's favorite species. Thus, experts used in peer review may also be advocates, or have an emotional, ideological, or financial stake in the proposed listing. "

"Second, a network of individuals who work on a particular species (or issues common to several species) can form powerful "species cartels." These social networks can influence the peer review process, provide a united front to advocate for particular decisions, and repress the publication of information that does not agree with their positions." It has been my experience that the FWS and NMFS typically rely on species specialists, which exacerbates this problem.

"And third, the use of other federal biologists in peer review, especially those from the USFWS and the USGS-Biological Resources Division (USGS-BRD), cannot be viewed as conflict free. The increasing codependency of the USFWS and USGS-BRD, results in a growing and previously unrecognized conflict of interest in science used in support of ESA decisions and the use of USGS biologists as peer reviewers on information used in ESA decisions. This extends to the role of USGS biologists who serve as editors and reviewers for scientific journals, and who peer review highly influential scientific information used in ESA decisions."

To avoid the pitfalls of peer review described above, the solutions are relatively straightforward:

- 1) To ensure that peer reviews are transparent, conducted in an objective and consistent manner, that the underlying data are both available and analyzed by reviewers, and that potential conflicts of interest are clearly identified, accountability is required: make failure to comply with Information Quality Act an arbitrary and capricious action on the part of the agency.
- 2) Ensure that that all agency sponsored and administered peer reviews, including those conducted internally by biologists at the USGS, be public information if they are relied upon by the USFWS or NMFS.
- 3) Require that the USFWS and NMFS identify and make available online all information including contrary information that it has received.

Conclusions.

The American people pay for data collection and research on threatened and endangered species through grants, contracts, cooperative agreements, and administration of research permits. They pay the salaries of agency staff who collect data, author, edit, and publish papers based upon those data. They, for the most part, are willingly regulated based on those data. It is essential that the American people have the right to full access to those data in a timely manner, as it is in the public interest. A requirement that data and methods be provided in sufficient detail to allow third party reproduction would raise the bar on the quality and reproducibility of the science used in ESA decisions and benefit species recovery. Failure to ensure this level of transparency will undermine the effectiveness of the very programs that the data were gathered for in the first place.

It should not take a subpoena (or intrepid, net-gun toting state biologists leaping from helicopters) to obtain data that should be public under the ESA.

Accountability is needed in the implementation of Information Quality Act, particularly in regard to public access to data and the peer review process.

Qualified third party reviews have the potential to reduce the workload of agencies, and improve the caliber of regulatory actions.

The ongoing "bio-blitzkrieg" of ESA listing petitions, lawsuits, and settlement agreements does a disservice to bona-fide conservation efforts. Every time another species is added to the list of threatened and endangered species, or a new deadline is imposed by litigants, the resources to recover species becomes more thinly spread. Throwing more money at the problem is not the solution, nor is allowing decision making by fiat. The solution is to ensure that the scientific evaluations are done properly the first time, and that means relying upon data and objective application of the scientific method, as required by the ESA.

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