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The American Physiological Society

9650 Rockville Pike • Bethesda, Maryland 20814-3991 USA • Tel: 301.634.7164 • Fax: 301.634.7241
E-mail: info@the-aps.org • Web: www.the-aps.org

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Daniel M. Ashe
Director, U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, MS 2042-PDM;
Arlington, VA 22203

Re: Docket # FWS-R9-ES-2010-0086; Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List All Chimpanzees (*Pan troglodytes*) as Endangered; *Federal Register* 76:170 (September 1, 2011)

Dear Director Ashe:

The American Physiological Society (APS) appreciates the opportunity to comment on the United States Fish and Wildlife Service status review of captive chimpanzees. The APS is a scholarly association founded in 1887 to advance understanding of how living systems function. Today there are more than 10,000 APS members throughout the U.S. involved in research and education in colleges, universities, medical and veterinary schools, industry, and government. The APS has a long-standing interest in animal welfare and is proud of the continuing leadership role it plays in fostering high standards of animal care.

In this letter, we will address a number of issues pertaining to the petition submitted to the U.S. Fish and Wildlife Service, *To Upgrade Captive Chimpanzees (Pan troglodytes) from Threatened to Endangered Status Pursuant to the Endangered Species Act of 1973, as Amended*, (hereafter, Petition). We intend to show that this Petition fails to substantiate its claims. More specifically, we will disprove its assertion that the administrative exemption for captive chimpanzees in biomedical research "is completely antithetical to the overall purposes of the ESA" and has a negative impact on wild populations by "fueling poaching and trafficking and undermining conservation efforts" (Petition, p. 20). The closed colony of chimpanzees housed in the national primate centers does not fuel poaching or trafficking. They are responsibly managed, well-regulated, and offer a resource of international value that benefits the health of humans and supports wild ape conservation efforts.

Petition Fails to Prove that Research Chimpanzees Are Poorly Maintained

Many of the Petition's assertions regarding research chimpanzees are dated or flawed, such as its claim that breeding of laboratory chimps has been "improperly managed" and "done with little regard for genetic diversity" (Petition, 92, Footnote 53). The first source offered to support this claim is the independent National Research Council report, *Chimpanzees in Research: Strategies for Their Ethical Care, Management, and Use,* which, in fact, asserted the opposite. This report actually states that the five NIH-supported breeding colonies "have excellent records available to allow evaluation of demographic management issues" (ILAR, 48) and "genetic studies have shown that there is substantial genetic variability in the U.S. research chimpanzee population" (ILAR, 61). The credibility of the second source listed is questionable because it is a paper authored by an employee of one of the Petitioners citing a paper written by another employee.

The Petition's claim of pervasive inhumane treatment of chimpanzees at research facilities is also false. The care of chimpanzees in research is regulated under the Animal Welfare Act (AWA) and the Public Health Service Policy on the Care and Use of Laboratory Animals (PHS Policy). The oversight requirements of the AWA (enforced by the U.S. Department of Agriculture) and the PHS Policy (enforced by NIH's Office of Laboratory Animal Welfare) address both the physical needs and psychological well-being of the animals. Research involving chimpanzees must be approved by an Institutional Animal Care and Use Committee before proceeding, and facilities are routinely subject to unannounced inspections by the USDA. Further, all U.S. chimpanzee research facilities have voluntarily sought and earned accreditation from the Association for Assessment and Accreditation of Laboratory Animal Care. As such, they have been deemed ethologically appropriate according to an expert panel commissioned by the Institute of Medicine to review current biomedical and behavioral research needs for chimpanzees (IOM, 27). Since the passage of the Chimpanzee Health Improvement Maintenance and Protection (CHIMP) Act, chimpanzees used or bred to be used in federally funded research are retired to a sanctuary system when no longer suitable for research.

The Petition cites problems at the Coulston Foundation to support its claim of mistreatment, but this facility lost all its federal funding over a decade ago after a rigorous government investigation into its poor husbandry practices and was shut down completely in 2002. Little more than rhetorical confluence ties practices at the defunct Coulston to the Petition's second example, the New Iberia Research Center. The Humane Society of the United States claims to have "revealed over one hundred potential violations of the Animal Welfare Act regarding chimpanzees" at New Iberia (Petition, 91). However, when the USDA concluded its investigation into these allegations, it found only six actual violations, all of which the agency has since certified as having been addressed (Canone, 1).

Modern chimp research facilities, as opposed to the dated and defunct operations described in the Petition, offer indoor-outdoor social housing that is equal to or better than that available at sanctuaries. Chimpanzees in research facilities have the added benefit of government oversight and extensive veterinary staff. Of the sanctuaries, only Chimp Haven is regulated under the Animal Welfare Act and inspected by the USDA while none of the sanctuaries have the level of staffing and expertise found in the research facilities. We refer you to the comments by the National Chimpanzee Resource Consortium, the Association of Primate Veterinarians, and the American College of Laboratory Animal Medicine for additional information on the care provided to chimpanzees in research.

Petition Fails to Prove a Substantial Connection between Research and Other Spheres

In support of its claim of substantial movement of chimpanzees from research to entertainment and private ownership, the Petition offers a collection of anecdotes in Appendix H. Many are decades old and appear to involve chimpanzees captured from the wild prior to the original 1976 listing (NEAVS, 2). As anticipated by the 1990 Final Rule published in *Federal Register* (v. 55, p. 9131), the government-managed research colonies are a closed system and have relied upon a captive breeding program to meet research needs for decades (ILAR, 48).

To summarize, research involving chimpanzees is distinct from entertainment and private ownership in terms of population and regulatory oversight. We will now show why maintaining a chimpanzee research population supports the values of the nations where wild chimpanzees live, international public health, and the purposes of the Endangered Species Act.

Use of Captive Chimpanzees for Research is in Keeping with Range State Values

Far from undermining the credibility of U.S.-based conservation efforts, maintaining chimpanzee research colonies to improve public health supports the values of the range states, as evidenced by conservation treaties they have signed. The Petition cites the 1968 African Convention on the Conservation of Nature and Natural Resources to define the range states' values. However, Article VIII (1)(a) of this Convention specifically carved out an exception to the strict protections for protected species "only if required in the national interest or for *scientific purposes*" [emphasis added]. The Convention also makes a more general exception for public health concerns in Article XVII (2)(b). This commitment to scientific research is reiterated in the 2003 African Convention on the Conservation of Nature and Natural Resources, which updated the 1968 treaty. The 2003 treaty holds it a "fundamental obligation" to implement the conservation objectives of the convention "with due regard to ethical and traditional values as well as *scientific*

knowledge in the interest of present and future generations" (Article IV, emphasis added).

The IOM Panel Recommends Maintenance of Chimpanzee Research Capacity

In 2011, NIH asked the Institute of Medicine (IOM) to assemble an expert panel to evaluate current and future health-related needs for research involving chimpanzees. Its report "Assessing the Necessity of Chimpanzees in Biomedical and Behavioral Research" was released on December 15, 2011. The panel identified 27 extramural and 10 intramural research grants involving chimpanzees (IOM, 21) and reviewed this research to determine whether the involvement of chimpanzees in each study was absolutely *necessary* to answer an important research question, as opposed to whether it was *useful* in doing so. It asked questions such as:

- What is the public health importance of the research question?
- Are non-chimpanzee research models available?
- Are the animals housed in a species-appropriate habitat?
- Could the research be performed ethically in human subjects?
- Would forgoing chimpanzee research significantly slow or prevent important research advancements?

Noting that "the chimpanzee has been a valuable animal model in past research," on the basis of its review, the panel nevertheless recommended that NIH apply more stringent criteria in the future and phase out any current research that does not meet them. All NIH-funded research involving vertebrate animals must be reviewed by an institutional animal care and use committee to determine whether the number and species of animals proposed are appropriate, but the IOM panel recommended additional criteria when the research involves chimpanzees, estimating that about half of currently funded research would be deemed acceptable. The panel also indicated that it believes the need for chimpanzee research will decrease further in the future as new alternatives become available, although additional investment will be needed to develop these technologies (IOM, 5). The panel did not endorse a ban on chimpanzee research. Rather, it said that any current and future research that meets the criteria should continue and cautioned that emerging or re-emerging disease "may present challenges to treatment, prevention, and/or control that defy non-chimpanzee models and available technologies and therefore may require the future use of the chimpanzee" (IOM, 5).

The panel did not conduct a review of non-governmental research, such as that sponsored at U.S. facilities by pharmaceutical companies and academic researchers from other countries. Moreover, its criteria failed to take into account the value of research intended

to benefit the health of chimpanzees themselves, such as efforts to validate the safety of an Ebola vaccine that can be delivered to chimpanzees and other apes in the wild.

For more information on current scientific research involving chimpanzees, please see the comments submitted by the Federation of American Societies for Experimental Biology.

The U.S. Colony is an International Resource

It is widely accepted that the contributions of chimpanzee research, such as the vaccines for hepatitis A and B, have provided health benefits to people around the world. Because there are only two remaining captive chimpanzee research programs in the world, the U.S. chimpanzee colonies function as an international resource. Non-U.S.-based researchers whose proposals are deemed acceptable utilize animals in these colonies. This includes researchers from nations that do not permit chimpanzee research at home. Between 2005 and 2010 organizations based in Italy, Japan, Denmark, Belgium, Spain, and France funded a total of 27 studies involving U.S. chimps (IOM, 23). In addition, one particular study conducted in U.S. chimpanzees with U.K.-based funding was highlighted in the 2011 *Review of Research Using Non-Human Primates*, an independent review of the last decade of non-human primate research funded by U.K.-based funding organizations including the Biotechnology and Biological Sciences Research Council, Medical Research Council, and Wellcome Trust (Bateson, 19). According to the review, this particular study had a minimal impact on the welfare of the animals and a good record of publications and citations to them, indicating that other researchers found the information valuable (Bateson, 19).

The fact that researchers from other countries are coming to the U.S. for chimpanzee research is not an afterthought. Rather, it was an explicit consideration when countries with their own chimpanzee research colonies opted to eliminate them. In 2001, a committee of the Royal Netherlands Academy of Arts and Sciences (KNAW) recommended disbanding a Dutch chimpanzee colony noted that in the event of an emergency situation where chimpanzees were needed, “the large chimpanzee colony which is maintained by NIH in the United States is much better suited to meet the international demand for such research” (KNAW, 5). Similar views were expressed in a 2009 opinion adopted by the Scientific Committee on Health and Environmental Risks (SCHER), which advises the European Commission. Noting the value chimpanzees add to hepatitis research, SCHER pointed out that “in Europe, studies with chimpanzees are not performed, and research groups that are studying this virus must utilize laboratories in [the] USA and other parts of the world to perform the necessary experiments” (SCHER, 17). Later, the same opinion states more specifically that “for development of [hepatitis C] vaccines, it is still necessary to test the efficacy of candidate vaccines in chimpanzees” (SCHER, 24). Thus, maintaining captive research chimpanzee colonies in the U.S. offers

assurance that when there are research needs, the work will be done in well-managed, state-of-the-art facilities with animals bred in captivity.

Research Contributes to Conservation Efforts

The U.S. captive chimpanzee colonies also enable research for the benefit of wild ape populations. Recently, a proof of concept study conducted with six chimpanzees at the New Iberia Research Center in 2011 demonstrated that a potential Ebola vaccine successfully stimulated an immune response and was safe for the vaccinated apes. This development was an important step in an ongoing effort to vaccinate wild gorillas against Ebola, a disease believe to have depleted that population by as much as one third (Cohen, 1). The next step, taken in April of 2011, was to initiate the first-ever trial of a vaccine in wild gorillas (VaccinApe, 1). In addition, behavioral research in captive populations can also provide valuable insights for conservation efforts. According to the 2011 review of British research mentioned above, such studies with U.S. captive chimps were deemed to be "relevant to the conservation of chimpanzees in the wild, particularly as regards the importance of conserving culturally discrete populations" (Bateson, 19).

Access to a captive research colony may also help address newly emerging threats to wild populations. With the encroachment of local human populations, wild apes are exposed to more diseases, some of which are easily transmitted between apes and humans. For example, East Africa human gut fauna have been found in chimps living near human communities and "similarities between the gut fauna of people and primates increases with increasing forest fragmentation" (Plumptre, 2). Even ecotourism, which is credited with helping the economies of range states and helping conservation efforts by providing added protection from poaching, poses serious threats in terms of disease transmission. The International Union for Conservation of Nature's (IUCN) *Eastern Chimpanzee (*Pan troglodytes schweinfurthii*): Status Survey and Conservation Action Plan: 2010–2020*, which seeks to protect up to "96 per cent of known populations of eastern chimpanzees" (Umejei, 1), lists "development of tourism and ecotourism projects" as a high priority (Plumptre, 30). Other efforts encouraging local people to live peacefully with nearby chimpanzees—even giving them food—have had a positive impact on habitat encroachment and other stresses to the chimp population (Ssebuyira, 1). Nevertheless, proximity to humans increases the exposure of wild apes to human diseases. International visitors, although very important economically, pose a particular threat since they are "more likely to be carrying novel diseases that the chimpanzees have never been exposed to" (Plumptre, 2).

Thus, to balance the risks and benefits of human interaction, conservation efforts ought to include plans to study the effects of emerging ape diseases and ways to treat or prevent them. A captive population available for research could be highly beneficial. It would leave open the opportunity for research to accelerate the advancement of human vaccines

and so improve cross-species herd immunity or even facilitate the development of treatments or vaccines of use to both humans and apes, as in the case of the promising Ebola vaccine.

The onerous restrictions that would be set in place by uplisting the U.S. captive research chimpanzee colony would not further the aims of the Endangered Species Act and could be harmful to both human and wild ape health. With the strict guidelines recommended by the IOM panel and swiftly adopted by the NIH, taken in addition to those safeguards already in place, the public can be sure that research chimpanzees are treated with the utmost care and only used when absolutely necessary. We urge you to retain the biomedical research colony under the current special rule so that valuable research into human and ape can continue.

Sincerely,

Joey P. Granger, Ph.D.
President
American Physiological Society

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