



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240



In Reply Refer To:
FWS/AIA/DMA/PRT-80987B

AUG 23 2016

Dr. Charles E. Murry

[REDACTED]
Seattle, Washington 98109

Dear Dr. Murry:

This letter responds to your November 2, 2015, application for a permit under the U.S. Endangered Species Act (Act) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to import one ear tissue sample from a female black rhinoceros (*Diceros bicornis*) coming from the Eastern Cape Parks & Tourism Agency (ECPTA) in South Africa, for the purpose of scientific research. After careful review and consideration of your application, your request has been denied for the reasons described below.

The black rhinoceros is listed as endangered under the Act and as Appendix I under CITES. The Act prohibits any person, subject to the jurisdiction of the United States, from conducting certain activities with any endangered species listed under the Act [50 CFR 17.21]. These activities include, among others, import, export, take, interstate or foreign commerce, and apply equally to both wild and captive populations. Otherwise prohibited activities may be permitted, but only if the U.S. Fish and Wildlife Service (Service) finds that the activity is for purposes that enhance the propagation or survival of the affected species and is determined to be consistent with the purpose of the Act [Section 10(d)]. The primary purpose of the Act is the conservation and continued existence of wild populations of endangered and threatened species and the ecosystem on which they depend [Section 2]. Therefore, it is a requirement of the Act and its implementing regulations that the proposed activities of the applicant reduces the threat of extinction or benefits the species in the wild. The issuance criteria at 50 CFR 17.22(a)(2) [<http://go.usa.gov/xr6m3>] must be met for a permit to be issued.

Under the Act, permits may be issued to authorize activities involving an endangered species, but only when such permits are for scientific purposes or enhancement of propagation or survival. In order to meet the issuance criteria at 50 CFR 17.22(a)(2)(iv) for an import permit under the Act, you must show how your proposed activities would have a direct or indirect benefit to the species and/or its habitat, or would likely reduce the threat of extinction facing this species in the wild.

Your application included a copy of an agreement between yourself and the ECPTA. According to this document, the purpose for importing this tissue sample is to conduct genetic research with the goal of sequencing the genome of the black rhino. You stated that sequencing the genome of the female rhinoceros would facilitate subsequent studies of biodiversity within the population and among different black rhinoceros subspecies. The research proposal goes on to state that this genetic

information would also be useful for cell biology studies aimed at “understanding the biology of rhino horn growth and heart development.” In addition to stating that sequencing the genome would facilitate conservation efforts, the proposal states that “...stem cell biologists have generated rhinoceros pluripotent stem cells that can give rise to all cell types within the body. Tissue engineers are interested in taking such cells and developing rhino horns in the laboratory. These lab-grown horns could be useful as a substitute for poached horns.”

While the stated purpose of the import—sequencing the genome of the black rhinoceros—may provide benefits to the species in the wild, your application raises the issue of use of the sequencing results to produce “lab-grown” rhino horns. Although your application does not identify your connection with Pembient, a company that has proposed to produce such horns, information we have obtained shows a direct connection between you and the company. Applications involving endangered species must be published in the Federal Register for a 30-day comment period. We received comments documenting that your research is being backed by Pembient (<https://experiment.com/projects/sequencing-the-black-rhinoceros-genome>). In fact, Matthew Markus of Pembient wrote to the South African Department of Environmental Affairs lobbying on your behalf for the issuance of the required CITES export permit.

While Pembient has stated that the purpose of producing artificial rhino horn is to be a substitute for wild-collected horns, thus reducing poaching, the Service has grave concerns over the actual impacts that creating a legal source of rhino horn may have on poaching of wild rhinos. Your own application specifically mentions that part of your research could lead to a better understanding of horn growth. Your application was unclear on the actual use of the sample and whether it is for pure scientific purposes or in relation to the production of artificial horns. Although you state that the information obtained from sequencing the genome could be used for conservation purposes, it does not appear from your curriculum vitae that you have had any direct connection to wildlife conservation efforts in the past. This lack of clarity on the actual purpose of the import makes it difficult for this office to determine if the import would benefit populations of this species in the wild. Therefore, in accordance with regulations found under 50 CFR 17.22(a)(2)(iv), we are unable to consider the issuance of an import permit under the Act for this sample.

In addition to its status under the Act, the black rhinoceros is also listed on Appendix I of CITES. To issue a CITES import permit for an Appendix-I species, the Division of Scientific Authority (DSA) must find that the import is for purposes that would not be detrimental to the survival of the species [50 CFR 23.61(a)] (<http://go.usa.gov/xr6QB>). In addition, the Division of Management Authority (DMA) must find that the import would not be for primarily commercial purposes [50 CFR 23.62] (<http://go.usa.gov/xr6QB>). Positive findings under both criteria must be made in order to authorize the import of an Appendix-I specimen.

In reviewing your application, the DSA was unable to find that the proposed import would not be detrimental to the survival of the species in the wild. The basis of this advice is provided in DSA’s “Record of Advice,” a copy of which is provided for your reference. Because the purpose of the import is unclear and because there is a possible connection to a commercial venture to produce artificial horns, DMA is unable to determine if the specimen to be imported is not going to be used for primarily commercial purposes. Therefore, we are unable to authorize this import under CITES.

As provided in 50 CFR 13.29(a) [<http://go.usa.gov/xYDUk>], you may request reconsideration of our decision to deny your application. Such a request must be submitted in writing with the original

signature of the person requesting reconsideration or by that person's legal representative, must contain a certification statement as provided at 50 CFR 13.12(a)(5) [<http://go.usa.gov/xYDUk>], should refer to your file number, PRT-80987B, and must be received in this office within 45 calendar days of the date of this letter. The reconsideration of the decision to deny your request will be based on the information you provided in your original application. As such, your letter requesting reconsideration must address how our decision to deny your original application was based on a misinterpretation of the information provided in your application, or it must present a clarification of this information. **Should you supply new information that changes the content of your original application, a new application will need to be submitted to this office before such information can be considered.**

If you have any questions, please contact biologist Michael Moore of this office: Division of Management Authority, Branch of Permits, MS:IA, 5275 Leesburg Pike, Falls Church, Virginia 22041-3803 (703-358-2104, x 1983).

Sincerely,



Timothy J. Van Norman, Chief
Branch of Permits
Division of Management Authority