MARINE MAMMAL COMMISSION

8 July 2011

Mr. P. Michael Payne, Chief
Permits, Conservation, and Education Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Re: Permit Application No. 16314
(Jennifer Lewis, Ph.D.,
Tropical Dolphin Research Foundation)

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit application with regard to the goals, policies, and requirements of the Marine Mammal Protection Act. Dr. Lewis is requesting authorization to conduct research on bottlenose dolphins in the Everglades National Park, Florida, during a five-year period. She previously obtained numerous letters of confirmation under the General Authorization for Scientific Research provision of the Act and was a co-investigator on permit 779-1633.

## RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service issue the permit, provided that it—

- requires Dr. Lewis to provide justification for biopsy sampling, or attempting to biopsy sample, up to 114 individuals from a single strategic stock with an unknown abundance estimate, rather than biopsy sampling 38 individuals from that stock;
- requires that Dr. Lewis not initiate her research until she has provided documentation that her Institutional Animal Care and Use Committee has reviewed and approved the research; and
- advises Dr. Lewis of the potential need to obtain additional permits from the National Park Service to conduct research activities in the park.

## RATIONALE

Dr. Lewis proposes to conduct year-round research on bottlenose dolphins in the Everglades National Park, primarily in Whitewater Bay, Shark River, Ponce de Leon Bay, and Florida Bay. The research would (1) investigate spatial and temporal variation in feeding patterns, (2) investigate mud-ring feeding behavior, and (3) compare feeding patterns and genetic similarities between dolphins in the Everglades National Park and dolphins in the Lower Florida Keys.

Dr. Lewis seeks to observe, photograph, and biopsy sample bottlenose dolphins (Table 1). She would use a vessel to approach the dolphins at a distance of 5–15 m to photograph them using hand-held digital cameras. She also would biopsy sample them using a crossbow. If a calf less than one year of age is present within a group of dolphins, the applicant would not biopsy sample the calf or any other dolphin within that group. She would use a photo-identification catalogue to ensure that an individual dolphin would not be sampled more than once. Biopsy samples would be analyzed for stable isotopes and fatty acids at Florida International University and for genetic composition at the University of Zurich, Switzerland. Dr. Lewis does not anticipate incidental harassment of non-target species and has not requested authorization for such harassment.

Table 1. Requested annual takes of bottlenose dolphins by activity and location.

| Procedure | Location | | | |
|---|---|---|---|---|
| | Whitewater Bay | Shark River | Ponce de Leon Bay | Florida Bay |
| Photograph and observe | 755 | 755 | 755 | 755 |
| Biopsy sample[1] | 38 | 38 | 38 | 38 |

[1] Annual requested takes include misses; that is, a miss will be counted as a take.

Dr. Lewis is requesting to biopsy sample, or attempt to biopsy sample, 38 individuals from each of three sub-areas in the Everglades National Park—Whitewater Bay, Shark River, and Ponce de Leon Bay. With the exception of any coastal biopsy sampling that would occur outside of Ponce de Leon Bay, those three sub-areas are encompassed within the single Whitewater Bay stock, which is listed as a strategic stock under the Marine Mammal Protection Act. Thus, Dr. Lewis could be biopsy sampling nearly 114 individuals from a single strategic stock for which a current abundance estimate is lacking. As such, the Marine Mammal Commission recommends that the National Marine Fisheries Service require Dr. Lewis to provide justification for biopsy sampling, or attempting to biopsy sample, up to 114 individuals from a single strategic stock with an unknown abundance estimate, rather than biopsy sampling 38 individuals from that stock. In addition, Dr. Lewis is requesting to biopsy sample 15 individuals that are known to exhibit mud-ring feeding behavior and 15 individuals that do not exhibit that behavior within Florida Bay. For a robust genetic relatedness analysis, Dr. Lewis would need 30–40 random biopsy samples from the Florida Bay population as a whole and an additional 15 biopsy samples from individuals that are known to exhibit mud-ring feeding behavior. The Commission encourages the Service to advise Dr. Lewis to review her sampling design to ensure that the requested number of biopsy samples to be collected from Florida Bay would be sufficient to address her question of genetic relatedness of mud-ring feeding individuals.

The proposed activities are being reviewed by Florida International University's Institutional Animal Care and Use Committee, as required by the Animal Welfare Act and implementing regulations. For that reason, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the permit, but require that Dr. Lewis not initiate her research until she has provided documentation that her Institutional Animal Care and Use Committee has reviewed and approved the research. Also, Dr. Lewis may need to obtain additional permits to conduct the proposed activities in the Everglades National Park. Therefore, the Marine Mammal

Commission recommends that the National Marine Fisheries Service advise Dr. Lewis of the potential need to obtain additional permits from the National Park Service to conduct research activities in the park.

The Commission believes that the activities for which it has recommended approval are consistent with the purposes and policies of the Marine Mammal Protection Act.

Please contact me if you have any questions concerning the Commission's recommendation.

Sincerely,

Timothy J. Ragen, Ph.D.
Executive Director