



MARINE MAMMAL COMMISSION

21 November 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

Re: Request for Amendment, Permit No. 14676
(Paul Ponganis, Ph.D.,
University of California at San Diego)

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit amendment request with regard to the goals, policies, and requirements of the Marine Mammal Protection Act. Permit 14676 authorizes tagging studies and physiological research on 20 California sea lions on San Nicolas Island, California, during a five-year period. It also authorizes harassment of sea lions, harbor seals, northern elephant seals, and fur seals incidental to the research activities. The current permit expires on 1 February 2015.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service approve the requested permit amendment, provided that—

- the conditions contained in the original permit remain in effect; and
- the Service advise Dr. Ponganis of the need to have his Institutional Animal Care and Use Committee review and approve the research activities before initiation of those activities.

RATIONALE

Dr. Ponganis currently is authorized to capture, restrain, sedate, collect tissue samples from, catheterize, attach instruments to, and recapture and resample the sea lions at a later date. The purpose of the research is to study the role of blood oxygen store depletion in the dive behavior and foraging ecology of female California sea lions. Dr. Ponganis is requesting an amendment to increase the number of female sea lions that can be included in his research from 20 to 34 for the remainder of the permit. During the first two years of the permit, Dr. Ponganis conducted research on 18 sea lions. Unfortunately, some of the recorders were damaged while the sea lions were at sea and some of the procedures for obtaining blood oxygen profiles were not successful initially but have been refined. This increase would allow him to increase his sample size to obtain more arterial oxygen profiles associated with dive bouts.

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Dr. Ponganis also proposes to investigate the relationship of heart rate and flipper stroke rate patterns on the arterial and venous blood oxygen profiles during deep and shallow dives. He would conduct research on an additional 16 female sea lions during the remainder of the permit using the same capture and sedation procedures that are authorized currently. However, Dr. Ponganis would apply electrocardiogram electrodes to the skin rather than catheterize each individual. The electrode leads and recorder would be secured while the sea lion is sedated. In addition, he would instrument each sea lion with a time-depth recorder/accelerometer and radio transmitter. All instruments would be attached to the dorsal midline region of the sea lion with glue and/or cable ties. If surface leads do not provide reliable data, Dr. Ponganis would insert the leads subcutaneously and secure with sutures and glue. The instruments and leads would be removed when the sea lions are recaptured. Only one type of recording device (e.g., instruments for blood oxygen depletion or heart rate/flipper stroke) would be attached to each individual.

The Marine Mammal Commission recommends that the National Marine Fisheries Service approve the requested permit amendment, provided that the conditions contained in the original permit remain in effect. Additionally, it is unclear if the proposed activities have been reviewed and approved by Dr. Ponganis's Institutional Animal Care and Use Committee, as required by section 2.31 of the Animal and Plant Health Inspection Service's Animal Welfare Act regulations. As such, the Marine Mammal Commission recommends that the National Marine Fisheries Service advise Dr. Ponganis of the need to have his Institutional Animal Care and Use Committee review and approve the research activities before initiation of those activities.

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 recommendations.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director