11 June 2012

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

Re: Permit Application No. 17236
(Robert Garrott, Ph.D.,
Montana State University)

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. Garrott is requesting authorization to conduct research on Weddell seals in Antarctica during a five-year period. The proposed activities currently are authorized under permit 1032-1917, which Dr. Garrott is seeking to renew.

RECOMMENDATION

The Marine Mammal Commission recommends that the National Marine Fisheries Service issue the permit, as requested.

RATIONALE

Dr. Garrott proposes to conduct research on Weddell seals in Erebus Bay, Antarctica, with possible extensions throughout McMurdo Sound and into the Ross Sea. He also proposes to continue monitoring the seal population at White Island. The purpose of the proposed activities is to continue a long-term study (since 1967) to evaluate the effects of environmental variability and individual heterogeneity on population dynamics of Weddell seals.

Dr. Garrott would capture, handle, restrain, weigh, sample (skin) and mark with flipper tags 425 adults (300 females and 125 males) and 700 newborn pups of either sex per year. Those seals would be captured using the bagging method of Stirling (1966). Female seals would be weighed each year approximately 1 to 3 days post-parturition. Skin also would be sampled, but only one time during the lifetime of each seal. Dr. Garrott would evaluate a portion of the seals using photogrammetry and instrument 200 newborn pups with temperature sensors. Those sensors are 5 g in mass and are affixed to a flipper tag. The instrumented pups would be recaptured and weighed at 20 days (about halfway through the nursing period) and 35 days (at the end of the nursing cycle)

after birth. The temperature sensor flipper tag would be removed at 35 days. Those tags have been used on Weddell seal pups and have not caused the flipper webbing to tear. In addition, multiple captures of some previously tagged seals (approximately 150 adults and 20 pups) may be necessary to replace tags that are worn, damaged, or lost after initial capture. The proposed activities take approximately 5 minutes only to complete and each seal would be monitored after the activities to ensure no separation of a female and her pup.

Dr. Garrott and his colleagues also would conduct weekly ground surveys to document tagged individuals. The surveys would require approaching seals as close as 0.5 to 2 m to read their tags. In some instances, surveyors can read a sleeping seal's tags without waking it. However, if an individual seal responds aggressively or is clearly disturbed, the surveyor would avoid that seal. During the surveys, Dr. Garrott also would collect whiskers from up to 10 dead Weddell seals to be used for genetic and stable isotope analyses. Although no unintentional mortalities have occurred during the previous 44 years of research on the population ecology of Weddell seals in eastern McMurdo Sound, he requests authorization for up to four unintentional deaths per year (two adults and two pups). Dr. Garrott would perform a complete necropsy on any of those seals and would export from the Antarctic all the tissue samples from those necropsies and research sampling and import them into the United States or Canada. During the proposed activities, Dr. Garrott could harass up to 2,000 Weddell seals (1,300 adults and 700 pups), 10 crabeater seals, and 5 leopard seals per year.

Finally, Dr. Garrott plans to coordinate with other researchers to avoid overlap of activities and to minimize disturbance to any given group of seals. Dr. Garrott also indicated that his Institutional Animal Care and Use Committee has reviewed and approved the proposed research protocols. In addition, he will request the appropriate permits under the Antarctic Conservation Act. Based on all the previously stated information, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the permit, as requested.

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

Timothy J. Ragen, Ph.D.
Executive Director

References

Stirling, I. 1966. A technique for handling live seals. Journal of Mammalogy 47:543–544.