



# MARINE MAMMAL COMMISSION

24 April 2013

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

Re: Permit Application No. 17751  
(Yoko Mitani, Ph.D.,  
Hokkaido 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. Mitani is requesting authorization to conduct research on killer and gray whales in Alaskan waters during a five-year period.

## **RECOMMENDATION**

The Marine Mammal Commission recommends that the National Marine Fisheries Service issue the permit, but condition it to allow LIMPET tagging only (1) if and when Dr. Andrews attests to Dr. Mitani's proficiency in instrumenting whales with LIMPET tags or (2) if Dr. Andrews or another experienced researcher instruments the whales with the LIMPET tags—the curriculum vitae of any researcher that would instrument the whales with LIMPET tags should be provided to the Service for its approval prior to commencing activities.

## **RATIONALE**

Dr. Mitani proposes to conduct research on killer and gray whales in Alaskan waters, including the Pacific Ocean, Bering Sea, Chukchi Sea, and the Arctic Ocean. The objectives of the research are to examine the distribution and movement patterns of killer and gray whales as part of a larger study investigating the reduction of sea ice in the Arctic through the development of predictive ecosystem models.

Dr. Mitani seeks authorization to observe, photograph, videotape, thermally image, conduct photogrammetry on, acoustically record, and collect prey remains and sloughed skin from up to 1,000 killer and 1,000 gray whales per year. Individuals of all age classes and either sex could be harassed. She would use small (5–10 m) and large (73 m) vessels to photograph, videotape, and conduct photogrammetry on cetaceans at distances of approximately 5 m. To obtain good quality photographs, she would approach individuals no more than 10 times for a total of 60 minutes. She

also could conduct focal follows at distances of 30 m for up to 90 minutes. For monitoring during poor visibility or at night, Dr. Mitani would use thermal imaging. Whales would be approached at a consistent speed from behind or at an angle, depending on the species. She would collect environmental and standard survey data (i.e., species, number, distance/heading, behavior, etc.) during the vessel-based surveys. She would cease activities if the whales exhibit avoidance behavior (i.e., when whales clearly are moving away from the vessel that is approaching them). Dr. Mitani also would cease activities if there is any evidence that the activities may be interfering with female-calf bonding, nursing, reproduction, feeding, or other vital functions. In addition, Dr. Mitani would monitor cetaceans acoustically using a hydrophone deployed from a vessel. She would use hand-held nets to collect prey remains and sloughed skin that would be sent to the Alaska SeaLife Center until they are analyzed. The prey remains would be used to identify specific prey species and the skin could be analyzed for genetics and stable isotope signatures. Dr. Mitani plans to contact researchers at the Service's Northwest and Southwest Fisheries Science Centers to conduct the analyses.

Dr. Mitani and Dr. Russ Andrews (a co-investigator) would instrument with satellite tags (i.e., LIMPET tags) up to 10 juvenile or adult killer whales and 10 juvenile or adult gray whales per year. Those tags are of an improved break-resistant design and would be anchored in the skin at minimal depths. Tags would be deployed via crossbow or modified pneumatic projector at a distance of 2–30 m. Although it is rare that an animal is approached more than two times, Dr. Mitani is requesting to approach an individual up to five times to attach the tag successfully to allow for occasional low success rates. Dr. Mitani and Dr. Andrews would cease immediately any tagging attempt if the whale reacts strongly (i.e., breaching or other high-energy behavior, or rapid evasion). Calves and females with calves less than six months of age would not be tagged. In addition, females with calves greater than six months of age would be approached for tagging only when the calf is more than 5 m from the female or after the calf has dived and does not appear likely to surface immediately in close proximity to the female.

Dr. Mitani has indicated that she has yet to be successful in instrumenting killer whales with LIMPET tags and has had no opportunity to instrument gray whales in Japan. Dr. Andrews has trained her on the appropriate technique in 2012 and plans to provide additional training in instrumenting killer whales in Japan in the next month. In the mean time, she has been practicing the tagging technique from a boat using an in-water simulated dorsal fin target. Although Dr. Mitani is making a considerable effort to obtain the needed training, she may not possess it for the upcoming field season. In addition, Dr. Andrews is unable to join Dr. Mitani during the 2013 field season, but he is attempting to find another experienced researcher who can instrument the whales with LIMPET tags. The Commission believes that, whenever possible, invasive research techniques should be conducted only by researchers experienced and proficient in the proposed research methods. For that reason, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the permit but condition it to allow LIMPET tagging only (1) if and when Dr. Andrews attests to Dr. Mitani's proficiency in instrumenting whales with LIMPET tags or (2) if Dr. Andrews or another experienced researcher instruments the whales with the LIMPET tags. The curriculum vitae of any researcher that would instrument the whales with LIMPET tags should be provided to the Service for its approval prior to commencing activities.

Dr. Mitani would not approach or harass any other marine mammal species during the proposed activities. She also would coordinate her activities with the Southwest Fisheries Science Center and the National Marine Mammal Laboratory. Coordination with the Laboratory would be

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important because researchers would be tagging baleen whales opportunistically during its Arctic Whale Ecology Study cruise in the Chukchi Sea shortly after Dr. Mitani's research cruise.

Because Dr. Mitani is planning to consult with scientists at the National Marine Mammal Laboratory, the Commission believes said consultation would be an appropriate time for her to discuss with those scientists the most appropriate ways to avoid unintended disruption of Alaska Native subsistence hunts. Many of the scientists at the National Marine Mammal Laboratory have developed effective working relationships with Alaska Native hunters and they should be able to advise Dr. Mitani accordingly. The Commission therefore encourages the Service to suggest to Dr. Mitani that she discuss this matter with her contacts at the National Marine Mammal Laboratory.

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,

A handwritten signature in blue ink that reads "Timothy J. Ragen". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Timothy J. Ragen, Ph.D.  
Executive Director