



MARINE MAMMAL COMMISSION

28 March 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. 15330
(Robin Baird, Ph.D., Cascadia Research)

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. Baird is requesting authorization to conduct research on 40 specified cetacean species, unidentified *Mesoplodon* spp., other unidentified beaked whales, and unidentified species of baleen whales. He also is requesting authorization to take by incidental harassment seven species of pinnipeds. Dr. Baird would conduct his research in all U.S. and international waters in the Pacific Ocean during a five-year period. Some of these activities currently are authorized under permit 731-1774, which he is seeking to renew and amend.

RECOMMENDATIONS

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

- includes a permit condition requiring the applicant to make observations sufficient to detect possible short- and long-term effects of biopsy sampling and tagging and report the effort made and the information collected to the Permit Office;
- ensures that activities to be conducted under this permit and those of other permit holders who might be conducting research on the same species in the same areas are coordinated and, as possible, data and samples shared to avoid duplicative research and unnecessary disturbance of animals; and
- advises the applicant of the need to obtain permits under the Convention on International Trade in Endangered Species of Wild Fauna and Flora authorizing the import or export of marine mammal parts.

RATIONALE

Dr. Baird proposes to conduct research on cetaceans in the Pacific Ocean, including both international waters and the waters of Hawaii, Alaska, Washington, Oregon, California, and other U.S. territories. The purposes of the proposed research are to continue a long-term research project

of more than 20 years to study (1) population size and structure, (2) range and movement patterns, (3) diving and nocturnal behavior, (4) social organization, (5) feeding ecology, and (6) disease.

He seeks authorization to observe, photograph, videotape, and acoustically record numerous individuals of various species of cetaceans each year. (See the take table in the application, detailing the proposed taking.) Researchers under this permit would photograph and videotape cetaceans from both above the water and in the water using pole cameras and divers. No more than three divers would be in the water at any given time, including one photographing the cetaceans, another videotaping them, and a third present for safety purposes only. Dr. Baird would acoustically monitor the cetaceans using a hydrophone deployed from a vessel or attached to a free-floating buoy. He also would collect sloughed skin, feces, and prey from the water, exhaled air, and soft tissues from floating carcasses, which he could import or export for further analyses. The various activities would be conducted from vessels or from fixed-wing aircraft and helicopters.

Dr. Baird proposes to tag and otherwise take a number of individuals from numerous marine mammal species comparable to the number authorized under his previous permit. For purposes of assessing whether a take has occurred and whether authorization is needed, the Service proposes to consider any animal approached within a certain distance as having been taken, regardless of whether the animal reacts to the approach or subsequent activities. As such, the applicant estimated the total number of takes per species for tagging activities based on all anticipated approaches, including successful tagging of an individual, tagging misses (i.e., the tag misses the animal and hits the water), and unsuccessful tagging attempts (i.e., the suction-cup tag does not adhere to the animal or the animal dives before the tag can be attached). Thus, the number of individuals successfully tagged would comprise a subset of the requested takes. If issued, the permit would allow up to the following numbers of cetaceans from endangered or threatened species and one stock proposed for listing under the Endangered Species Act (false killer whale) to be taken each year by the three proposed tagging methods (See application for details regarding other species.):

| Tag type | Whale species ¹ | | | | | | |
|--------------------------------|----------------------------|------------------|-----------------------|------------------|--------------------------|--------------------|------------------------------------------|
| | Blue ² | Fin ² | Humpback ³ | Sei ³ | Southern resident killer | Sperm ³ | Hawaii insular false killer ⁴ |
| Suction-cup | 10 | 10 | 30 | 30 | 30 | 30 | 20 |
| Satellite dart | 10 | 10 | 30 | 30 | 0 | 30 | 35 |
| Physiological suction-cup/dart | 0 | 0 | 0 | 0 | 0 | 0 | 10 |

¹Takes include tagging misses and unsuccessful tagging attempts, in addition to successful tagging attempts.

²Up to two individuals of these species could be tagged with both suction-cup and dart tags.

³Up to six individuals of these species could be tagged with both suction-cup and dart tags.

⁴Up to ten individuals of this species could be tagged with both suction-cup and dart tags.

Suction-cup tags may include VHF transmitters and data loggers that would record and store time, depth, temperature, light levels, GPS locations, acoustic recordings, swim speed, video, and still images. The dart tags would be anchored in the skin at minimal depths, and their main electronic components would not penetrate the skin. Those components would include transmitters (including location-only and location-depth recorders) and data loggers with electrocardiogram electrodes to determine heart rate, interbeat interval rhythm, wave characteristics, Q-T wave timing, and body temperature. Dr. Baird would use two different types of tags if the individuals showed no strong behavioral reaction to the initial tagging. Tags would be deployed via pole, crossbow, or pneumatic projector. Females with calves less than six months of age and calves estimated to be less than one year of age would not be tagged. Dr. Baird would make no more than two tagging attempts per individual per encounter, or four tagging attempts per individual per year. He also would use forward looking infrared imaging to assess the physiological and health impact of remotely-deployed tags on tagged individuals.

In addition, the proposed research could result in Level B harassment of up to 6,000 California sea lions, 6,000 harbor seals, 12,000 Steller sea lions (6,000 each from the eastern and western stocks), 6,000 Guadalupe fur seals, 6,000 northern elephant seals, 6,000 northern fur seals, and 20 Hawaiian monk seals annually. The proposed activities have been reviewed and approved by the applicant'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.

Dr. Baird's research on various cetaceans has been exemplary. He has mastered the use of minimally invasive tags and provided highly useful information on various cetacean species in the North Pacific. He also has been prolific in his writing and has published a considerable number of scientific articles summarizing his research results. His work has been particularly useful in managing and conserving marine mammals that are listed as endangered or threatened, or that are candidates for such listing. For all these reasons, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the permit with the following conditions and stipulations.

The effects of tagging have been a subject of concern and controversy, and much useful information has been provided by scientists monitoring and reporting such effects. To develop a better understanding of whale responses to research activities, and to provide information needed to minimize the probability of adverse effects, the Marine Mammal Commission recommends that the National Marine Fisheries Service include a permit condition requiring the applicant to make observations sufficient to detect possible short- and long-term effects of biopsy sampling and tagging and report the effort made and the information collected to the Permit Office. In addition, the Marine Mammal Commission recommends that the National Marine Fisheries Service ensure that activities to be conducted under this permit and those of other permit holders who might be conducting research on the same species in the same areas are coordinated and, as possible, data and samples shared to avoid duplicative research and unnecessary disturbance of animals. Finally, the importation and exportation of marine mammal parts requires certain authorizations. Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service advise the applicant of the need to obtain permits under the Convention on International Trade in Endangered Species of Wild Fauna and Flora authorizing the import or export of marine mammal parts.

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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,

A handwritten signature in blue ink that reads "Timothy J. Ragen". The signature is written in a cursive style with a large, sweeping "T" and a long, trailing "g".

Timothy J. Ragen, Ph.D.
Executive Director