23 December 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: Request for Amendment, Permit No. 14241
(Peter Tyack, Ph.D.)

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 14241 authorizes Dr. Tyack to conduct research on numerous species of cetaceans and unidentified *Mesoplodon* spp. in the Atlantic Ocean and Mediterranean Sea. The current permit expires on 31 July 2014. Dr Tyack is requesting to add procedures, focal species, and a new project in the Pacific Ocean and move some takes from one region to another.

**RECOMMENDATIONS**

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

- the conditions currently contained in the permit as amended remain in effect; and
- the Service advise Dr. Tyack of the need to have his Institutional Animal Care and Use Committee (IACUC) review and approve the research protocol modifications prior to initiating those activities.

**RATIONALE**

The purpose of Dr. Tyack's research is to investigate the behavior, sound production, and responses of the species listed in the permit to mid-frequency sound at received levels of up to 180 dB re 1 µPa. Authorized activities include behavioral observations, photo-identification, biopsy sampling, tagging, vocalization recordings, and sound playback studies. Dr. Tyack is authorized to conduct the specified activities on adults and juveniles of either sex. However, he is not authorized to tag or conduct playback studies on cetacean calves less than one year of age and females accompanied by neonate calves.

Dr. Tyack is requesting five changes to his permit, including—

(1) adding a new procedure to mark cetaceans with zinc oxide via paintballs;

(2) adding satellite dart tagging of long-finned pilot whales in waters west of Gibraltar in the eastern North Atlantic Ocean;
(3) moving some of the playback takes authorized for the Mediterranean Sea and eastern North Atlantic Ocean to waters near Cape Hatteras;
(4) adding Atlantic spotted dolphins to research activities in waters off of Georgia, South Carolina, North Carolina, and Virginia;
(5) adding waters off Florida to his tagging project; and
(6) adding a new project to conduct research activities on Baird's beaked whales, Cuvier's beaked whales, unidentified *Mesoplodon* spp., Risso's dolphins, and killer whales in the Pacific Ocean.

**Marking with zinc oxide**

Dr. Tyack's permit currently allows for marking cetaceans with zinc oxide using a biopsy dart or tagging pole. Marking with zinc oxide allows for visual tracking and reduces the number of animals that need to be tagged within a group. However, not all animals are biopsy darted and pole tagging necessitates an approach to within 4 m. Because the approach must be slow and cautious, marking animals with zinc via the pole technique can take a long time, prolongs the period of close approaches, and reduces the time available for observations. To reduce the time needed to mark animals and reduce disturbance by close approach, Dr. Tyack proposes to mark cetaceans with zinc oxide using paintballs that are remotely launched. He would use as few paintballs as necessary for a distinct mark and would cease using paintballs if any adverse reactions are observed.

**Adding satellite dart tagging to long-finned pilot whales**

To study the vocal repertoire of specific individuals of and groups within a resident population, Dr. Tyack proposes to instrument five long-finned pilot whales per year with satellite dart tags in waters west of Gibraltar. He would remotely attach a tag to one individual in each of several groups using a crossbow. Juveniles and adults of either sex could be tagged. The tags have been used extensively on pilot whales in this area and in Hawaii with no long-term problems.

**Moving some takes associated with playback studies**

Dr. Tyack is authorized to take up to 20 long- and 20 short-finned pilot whales during playback studies in the Mediterranean Sea and North Atlantic Ocean. He is requesting to use some of those takes in the waters off Cape Hatteras. The number of overall takes would not increase from 20 per species, but those takes could occur in either location. In addition, Dr. Tyack would not conduct playback studies when any other marine mammal species is present.

**Adding Atlantic spotted dolphins**

To augment vocal communication and foraging ecology data, Dr. Tyack proposes to add 40 takes of spotted dolphins per year in the waters off Georgia, South Carolina, North Carolina, and Virginia. Juveniles and adults of either sex could be biopsy sampled or tagged. He also has requested to harass 3,720 spotted dolphins per year incidental to behavioral observations, photo-identification, and vocalization recordings.

**Adding waters off Florida to his tagging project**

Dr. Tyack proposes to add the waters off Florida's Atlantic coast to the possible tagging locations for his east coast project. He would tag cetaceans in this area to study the risks of entanglement as they travel through the mid-Atlantic states. Dr. Tyack proposes no changes to the numbers, species, or stocks of marine mammals that the current permit, as amended, authorizes him to take.

**Adding a new project in the Pacific Ocean**

Finally, Dr. Tyack proposes to conduct research on 40 Baird's beaked whales, 20 Cuvier's beaked whales, 20 unidentified *Mesoplodon* spp., 20 Risso's dolphins, and 20 offshore killer whales from Baja to Alaska (see take table 4 in the application). He also proposes to mark an additional 40 Baird's beaked whales with zinc oxide. The main purpose of that study is to investigate parental care of young individuals by males, primarily for Baird's beaked whales. For that purpose, Dr. Tyack would tag adult males and juveniles simultaneously. In addition, he proposes to tag the other odontocetes to study their foraging ecology and social behavior because they potentially forage on similar prey as Baird's beaked whales. Juveniles and adults of either sex could be biopsy sampled or tagged. He has requested authorization to harass 1,300 Baird's beaked whales, 780 Cuvier's beaked whales, 1,300 unidentified *Mesoplodon* spp., 4,340 Risso's dolphins, and 1,867 offshore killer whales incidental to behavioral observations, photo-identification, and vocalization recordings.

The Marine Mammal Commission recommends that the National Marine Fisheries Service amend Permit No. 14241 as requested, provided that the conditions currently contained in the permit as amended remain in effect. The application did not indicate whether the activities proposed in the amendment request have been reviewed and approved by Dr. Tyack's IACUC. Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service advise Dr. Tyack of the need to have his IACUC review and approve the research protocol modifications prior to initiating 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 these comments and recommendations.

Sincerely,

Timothy J. Ragen

Timothy J. Ragen, Ph.D.
Executive Director