MARINE MAMMAL COMMISSION

21 December 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 20910-3225

Re: Permit Application No. 17670
(Northeast Fisheries Science Center)

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. The Northeast Fisheries Science Center is seeking a permit to conduct research on pinnipeds along the U.S. east coast during a five-year period. Some of the requested activities currently are authorized under permit 775-1875 that expires 15 January 2013.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested permit, but condition it to—

- limit authorization for extracting teeth to experienced researchers only and require the Center to submit the researchers' curricula vitae to the Service prior to conducting the proposed activities;
- limit the total (five-year) number of unintentional deaths to 1 percent of the individuals captured, although the Service should include some variability in the annual limit to allow research to continue under unfavorable conditions (e.g., up to two harbor seal pups per year not to exceed five harbor seal pups during the five-year period); and
- require that the Center scientists coordinate activities to be conducted under this permit with those of other permit holders or Canadian researchers who might be conducting research on the same species in the same areas and, as possible, share data and samples to avoid duplicative research and unnecessary disturbance of animals.

RATIONALE

The Northeast Fisheries Science Center proposes to conduct research year-round on harbor, gray, harp, and hooded seals within and proximal to waters of the U.S. Exclusive Economic Zone from North Carolina to Maine and to Canadian waters in the Gulf of Maine. The objectives are to continue long-term research to (1) determine stock structure, (2) estimate abundance and

distribution, (3) determine movement patterns and habitat use, (4) study foraging ecology, (5) assess health, and (6) determine the effects of natural and anthropogenic factors.

Center scientists would harass, capture, handle, restrain, administer drugs to, measure, weigh, mark/tag, sample, and conduct ultrasound measurements of blubber thickness on 375 harbor seals (275 non-pups and 100 pups), 650 gray seals (50 non-pups and 600 pups), 20 subadult harp seals, and 5 subadult hooded seals of either sex during the five-year period. They would use salmon, dip, hoop, and poly-filament gill nets to capture the seals. Scientists would attempt to capture only harbor seal pups approximately 5 days of age and older without an umbilicus attached and gray seal pups approximately 18 days of age and older. If they captured dependent pups inadvertently during non-pup captures, they would return those pups immediately to the water in the vicinity of the mother. They expect captured harbor seal pups to call frequently to their mothers, which would help scientists (and the pups) locate the mothers, encourage the mothers to remain in the vicinity of the pups, and help re-unite mothers and pups after the pups are released. Although Center scientists would like to recapture seals for follow-up studies, they estimate that, each year, they would not be able to recapture more than two seals for such purpose because of the difficulty of capturing specific individuals. The scientists would mark each captured harbor seal with plastic flipper tags and a portion of the seals with brightly colored plastic head tags and/or bleach. If a seal is recaptured, the scientists would reattach or replace the original tags only if they were lost or damaged.

The scientists also would collect blood, hair, blubber, skin/tissue, swabs, and vibrissae. In addition, they propose to collect one incisor or post-canine tooth from each non-pup that is captured. The Center did indicate that neither the primary investigator nor any of the co-investigators have experience extracting teeth from live pinnipeds. However, the Center further clarified that only experienced collaborators would extract teeth (e.g., researchers from Canada's Department of Fisheries, the National Marine Mammal Laboratory, or other research organizations). The Commission concurs with the need for demonstrated experience with such procedures and believes that the Service should condition the permit accordingly. Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested permit but condition it to limit authorization for extracting teeth to experienced researchers only and require the Center to submit the researchers' curricula vitae to the Service prior to conducting the proposed activities.

The Center also proposes to use epoxy or flipper tags to attach instruments to the pelage of the head, between the shoulders, or to the flippers of 375 harbor seals (275 non-pups and 100 pups), 630 gray seals (30 non-pups and 600 pups), 20 subadult harp seals, and 5 subadult hooded seals during the five-year period. The instruments would weigh less than 2 percent of the seal's body mass and could include VHF transmitters, satellite transmitters, GPS transmitters, satellite-linked depth recorders, and ultrasonic transmitters. Instruments would be allowed to fall off during the next molt. In general, the scientists would attach only one instrument to each seal, but they request permission to attach up to three instruments of different types. The scientists would not instrument unweaned gray seal pups (less than approximately 18 days of age) or neonate harbor seal pups (5 days of age or less with an umbilicus attached) but could instrument females with such pups.

Center scientists would conduct aerial surveys up to 30 times per year using fixed-wing aircraft flown at a minimum altitude of 200 m. They could use unmanned aerial vehicles to monitor specific haul-out sites as well. Those vehicles would fly at an altitude of no less than 100 m.

Scientists also would conduct vessel surveys using a small boat up to 8 m in length. They would observe and photograph seals at their haul-out sites but remain at least 100 m from those sites while taking photographs. They would collect standard survey information, including data on species, number, behavior, and environmental conditions.

On an opportunistic basis, the scientists would collect feces and spew from haul-out sites to determine seal prey species. The Center also would collect tissue samples, parts, and whole carcasses from up to 60 harbor seals and 60 gray seals (30 non-pups and 30 pups of each species) per year. The Center is proposing to import and export pinniped parts (i.e., hard and soft tissue, blood, extracted DNA, and whole dead animals or parts thereof) to and from any country but primarily to and from Canada, Denmark, Norway, Sweden, and the United Kingdom. They would import only samples obtained by legal means. The Center would request copies of authorizations, permits, and other required documentation, for each sample to be imported.

The Center is requesting authorization to harass up to 58,500 harbor seals, 71,100 gray seals, 220 harp seals, and 55 hooded seals per year incidental to aerial and vessel surveys, scat and carcass collections, and capture activities. Because some captured seals may be severely injured or sick or in a declining physiological state leading towards death, the Center also is requesting to euthanize up to two gray and two harbor seals (one non-pup and one pup) and one harp and one hooded seal per year. If a veterinarian or veterinary technician is not present, other qualified personnel trained by the veterinarian or veterinary technician would euthanize the animal. In addition, the Center is requesting authorization for the unintentional death of up to six harbor seals and six gray seals (three non-pups and three pups of each species) and one harp and one hooded seal per year. Based on the requested number of takes, scientists could unintentionally kill up to 3 percent of the harbor seal pups and 6 percent of the gray seal non-pups that they capture and handle. Those percentages are relatively high for the proposed capture methods (i.e., salmon, hoop, dip, and tended tangle nets) compared to other methods (i.e., setting a beach seine net using multiple boats). Some seals may die during handling when they are under stress or if they are compromised by an underlying medical condition. However, the mortality rate from handling harbor seals generally has been less than 1 percent of the individuals captured (Jeffries et al. 1993, Harvey unpubl. data). Because scientists have been capturing and handling harbor seals with relatively fewer unintentional mortalities, the Marine Mammal Commission recommends that the National Marine Fisheries Service condition the permit to limit the total (five-year) number of unintentional deaths to 1 percent of the individuals captured, although the Service should include some variability in the annual limit to allow research to continue under unfavorable conditions (e.g., up to two harbor seal pups per year not to exceed five harbor seal pups during the five-year period).

The Center has indicated that its Institutional Animal Care and Use Committee has reviewed and approved the proposed research protocols. In addition, the Center has obtained authorizations for its capture and tagging activities and scat collections in the pertinent national seashore and wildlife refuges.

The Center generally conducts its research activities collaboratively with researchers from the Center for Coastal Studies, Woods Hole Oceanographic Institution, University of New England, New England Aquarium, International Fund for Animal Welfare, Alaska SeaLife Center, and the Swedish Museum of Natural History to minimize disturbance and duplicative effort. However, the amount of collaboration with Canadian scientists is not clear. To encourage such collaboration and

minimize unnecessary effects on the subject pinniped species, the Marine Mammal Commission recommends that the National Marine Fisheries Service condition the permit to require that the Center scientists coordinate activities to be conducted under this permit with those of other permit holders or Canadian researchers who might be conducting research on the same species in the same areas and, as possible, share data and samples to avoid duplicative research and unnecessary disturbance of animals.

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

References

Jefferies, S.J., R.F. Brown, and J.T. Harvey. 1993. Methods of capturing, handling, and tagging harbor seals. Aquatic Mammals 19(1):21–25.