



MARINE MAMMAL COMMISSION

10 May 2023

Ms. Jolie Harrison, 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. 26767
(Sarah Kienle, Ph.D.,
Baylor University)

Dear Ms. Harrison:

The Marine Mammal Commission (the 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. Sarah Kienle is requesting authorization to conduct research on pinnipeds in Antarctica and the Southern Ocean during a five-year period.

Dr. Kienle proposed to conduct research on Antarctic fur seals, crabeater seals, leopard seals, Ross seals, southern elephant seals, and Weddell seals in Antarctica and the Southern Ocean. The purpose of the research is to investigate (1) abundance, distribution, and movement patterns, (2) genetic diversity, and/or (3) ecology, physiology, and health of the various pinniped species. Researchers would harass, observe, photograph/vidiotape¹, capture, handle, restrain, sedate², mark³, sample⁴, conduct procedures⁵ on, and/or attach instruments to numerous individuals of the six pinniped species per year (see the take table for specifics). Dr. Kienle requested up to two mortalities per species per year, which could either be unintentional or intentional⁶, as well as authorization to import, receive, and/or export samples from pinnipeds⁷. Researchers would use various measures to minimize impacts on pinnipeds and also would be required to abide by the National Marine Fisheries Service's (NMFS) standard permit conditions. Dr. Kienle plans to submit updated protocols to her Institutional Animal Care and Use Committee for review and approval after NMFS has issued this permit.

¹ Including via infrared thermography and photogrammetry and by using unmanned aircraft systems and underwater camera equipment.

² Including via remotely-deployed darts.

³ Using flipper tags, bleach, and/or hair dye.

⁴ Including blood, vibrissae, hair, nails, swabs, milk, feces, skin, and/or blubber.

⁵ Including conducting ultrasound, administering Evan's blue dye, and collecting serial blood samples.

⁶ Via euthanasia for humaneness purposes.

⁷ Including from Antarctica, Argentina, Australia, Chile, New Zealand, and South Africa.

Remote sedation

Dr. Kienle proposed to sedate adult and juvenile pinnipeds using remotely-deployed darts and indicated that this method would be used only when other methods of approaching animals to administer sedatives was not possible. Animals would be darted at least 25 m from the water's edge and females with pups would not be remotely sedated. Although the anesthetic drugs administered should allow the animal to swim if it goes into the water, researchers would administer reversal drugs to minimize the chance of drowning. Since remote sedation has inherent risks and administration of reversal drugs may not always be possible, the Commission believes that NMFS should continue to take a precautionary approach, as it has with authorizing remote sedation activities under other pinniped permits. Therefore, the Commission recommends that NMFS condition the permit to require researchers to monitor pinnipeds that have been remotely sedated from the time of darting to time of recovery from sedation and report on (1) their behavioral response and any activities that place them at heightened risk of injury or death and (2) whether any sedated animal entered the water and its fate could not be determined. The Commission further recommends that NMFS condition the permit to halt the use of remote sedation and consult with NMFS and the Commission if three or more pinnipeds are darted and suffer unanticipated adverse effects, including entering the water and either drowning or disappearing so that their fate could not be determined.

Permit review process

Upon review of this and other recent permit applications⁸, the Commission has noticed that NMFS is inconsistently applying criteria to assess whether principal investigators (PIs) and co-investigators (CIs) have sufficient experience to conduct the various proposed procedures. For example, in the Pacific Whale Foundation permit application, NMFS cited a criterion based on a CI having successfully deployed a minimum of 10 tags to authorize him/her to conduct suction-cup tagging unsupervised. Similarly, for the Georgia Department of Marine Resources permit application, NMFS did not plan to authorize a CI with prior experience to conduct biopsy sampling, because he/she had not successfully collected 10 biopsy samples under supervision. However, for the Stellwagen Bank National Marine Sanctuary permit application, NMFS planned to authorize⁹ a CI who had collected only two biopsy samples and deployed four suction-cup tags to conduct those procedures. For Dr. Kienle's application, NMFS plans to authorize a CI to conduct remote biopsy sampling with only eight samples successfully collected from four animals.

When asked about the inconsistencies, NMFS indicated that numerical metrics were used as benchmarks for experience only in specific instances, such as with deep-implant tagging. NMFS stated that it evaluates the qualifications of PIs and CIs on a case-by-case basis and considers all of the available information, including experience with a specific procedure, similar procedures, similar species, and overall field experience. NMFS's review of an individual's qualifications on a case-by-case basis is based on subjective determinations by some permit analysts, while other analysts use objective numerical metrics. These inconsistencies in evaluating qualifications create discrepancies in

⁸ Pacific Whale Foundation #27099, Georgia Department of Marine Resources #26919, and Stellwagen Bank National Marine Sanctuary #27272.

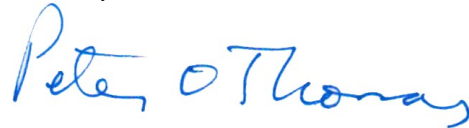
⁹ The applicant ultimately withdrew its request to authorize this CI following the Commission's informal review of and comments on the application.

Ms. Jolie Harrison
10 May 2023
Page 3

the experience of PIs and CIs authorized to conduct the various procedures across permits, affect reviewers' ability to appropriately assess the necessary PI and CI qualifications for a given procedure, and make it difficult for researchers applying for permits to know whether their experience meets NMFS's criteria for authorization. For these reasons, the Commission recommends that NMFS consistently apply objective criteria for assessing whether a PI or CI has sufficient experience to conduct invasive procedures¹⁰ across all permits and permit analysts and clearly communicate those criteria to the researchers.

Please contact me if you have any questions concerning the Commission's recommendations.

Sincerely,



Peter O. Thomas, Ph.D.,
Executive Director

¹⁰ Such as tagging, sedation, surgical implantation of tags, etc.