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Development of a Cetacean Tagging Best Practices Guidelines Document

Russel D. Andrews
University of Alaska Fairbanks and the Alaska Sealife Center
P.O. Box 1329
Seward, AK 99664
phone: (907) 224-6344 fax: (907) 224-6371 email: russa@alaskasealife.edu

Award Number: N000141010601
http://www.alaskasealife.org

LONG-TERM GOALS

Despite the strong public interest in whales and dolphins, our understanding of their biology and our ability to manage their populations and mitigate our impacts upon them is constrained by the difficulty of observing animals that spend most of their time beneath the surface of the ocean. This challenge can be at least partly overcome by the application of telemetry tags to cetaceans. With an ever increasing need for the information that can only be provided by tagging studies, such research will become more and more common, and new scientists will likely adopt these tools, especially as advancements are made and the telemetry tags become more readily available through commercial vendors. These new adopters of cetacean tagging methods, as well as established tagging practitioners, must strive to apply knowledge and expertise that reflects the current state of the art in this field, or "best practice." The main goal of this project is to develop a cetacean tagging best practices guidelines document through the coordination and collaboration of experienced cetacean tagging researchers and veterinarians and make it widely available to all interested parties. The published report will serve as an informational resource to assist researchers, veterinarians, animal care committee members and regulatory agency staff in the interpretation and implementation of current standards of practice and promote the training of specialists in this area.

OBJECTIVES

1. Develop a "Best Practices Guidelines" document for cetacean tagging studies.

- 1.1. Identify the most relevant types of cetacean tagging methodologies based on input from cetacean researchers most familiar with current standards of practice and veterinarian specialists in cetacean biology.
- 1.2. Obtain information about the most up-to-date scientific and responsible use developments used in cetacean tagging studies.
- 1.3. Translate best evidence into best practice.
- 1.4. Prepare a report to serve as an informational resource to assist researchers, veterinarians, IACUC members and regulatory agency staff in the interpretation and implementation of current standards of practice and promote the training of specialists in this area.

APPROACH

We will seek to identify, summarize, and evaluate the best evidence and most current data on cetacean tagging so as to translate best evidence into best practice. This will be done in a collaborative process by convening a committee of volunteers with expertise in the areas of general cetacean biology, cetacean tagging, cetacean veterinary medicine, and telemetry technology. As an outcome of the recent ONR Cetacean Tag Design Workshop (ONR 2009), a group of volunteers have already been identified and have agreed to participate. We will identify the appropriate topics to include in the cetacean tagging guidelines and sub-committees will be assigned to tackle these topics separately. Each sub-committee will have a mix of specialists to ensure that scientific goals, experimental design and animal use and well-being are considered when determining best practices. We will make use of recent recommendations on these topics that have been provided in cetacean tagging and ethics workshop reports (Wells et al., 2005; Weller 2008; Gales et al, 2009; ONR 2009).

In order to maintain relevance and to conform to the requirement of "refinement" of practices of animal care, we will create a living document that can be regularly updated. I anticipate that we will create a dated document that could be published as a technical report or perhaps as a journal article, but we will also explore avenues for establishing a web site that would host the best practices guidelines and that could be modified by specialists via a moderated forum. We have already begun discussions with the Ethics committee of the Society for Marine Mammalogy to determine whether the Society would be the appropriate host for such a site.

WORK COMPLETED

The initial work consisted of a review of similar "best practices" manuals and the query of practioners in disclipines with clear guidelines to gain insight into how to structure our anticipated document. For Objective #1, "Identify the most relevant types of cetacean tagging methodologies", I have worked to identify the most relevant types of cetacean tagging methodologies based on input from cetacean researchers most familiar with current standards of practice and veterinarian specialists in cetacean biology. Based upon discussions at the recent ONR Cetacean Tag Design Workshop, one approach would be to categorize tag types by their attachment techniques (ONR 2009). Guidelines general to all of these tag types would also be prepared, such as sample size determinations, need for follow-up studies, and close boat approach methodology. I have prepared questionaire for this objective and it will be sent out to individuals with the experience to help finalize this categorization. For Objective #2 "Obtain information about the most up-to-date new scientific and responsible use developments used in cetacean tagging studies", a literature search has been conducted and a list created that will be disseminated to the committee volunteers for thorough evaluation. Literature reviews of published and grey literature will be composed and form the basis of the next step.

RESULTS

A statement of work for the preparation of the "Best Practices Guidelines" document for cetacean tagging studies, along with a relevant literature list has been prepared. The next step is to send it out to a committee of individuals with expertise in the areas of general cetacean biology, cetacean tagging, cetacean veterinary medicine, and telemetry technology that have volunteered to contribute to these best practices guidelines. Then we will begin to translate best evidence into best practice. Through a collaborative process, each subcommittee will digest the evidence presented in the literature and strive to reach a consensus on the current "best practices" for each topic area. This will lead to the

preparation of a final report on Best Practices Guidelines for Cetacean Tagging. The published report will be prepared to serve as an informational resource to assist researchers, veterinarians, IACUC members and regulatory agency staff in the interpretation and implementation of current standards of practice and promote the training of specialists in this area. Some type of moderated "living document" will also be prepared along with the mechanism to keep it up to date.

IMPACT/APPLICATIONS

Understanding the potential for impacts of naval activities on protected species of marine mammals, as well as estimating the number of individuals potentially impacted and mitigating such impacts, all requires information on movements and habitat use, work that will be facilitated by the ability of researchers to track movements, monitor behavior, and determine distribution of species of interest using tagging methods. It is incumbent upon researchers in the field using tag technology to use the best practices when handling animals and attaching various telemetry packages. For new biologists entering the field of cetacean tagging or biologists working in more remote areas of the world, the best practices for cetacean tagging may not be available and/or may not be obvious. With an ever-increasing need for the information that can only be provided by tagging studies, such research will become more and more common, especially with refinements in methods and technology and the availability of commercial solutions. A "Best Practices Guidelines" document will be a valuable asset for researchers in the field and an important reference on acceptable practices and 'tools of the trade' for animal care committees, government agencies charged with regulating cetacean research, and funding agencies.

RELATED PROJECTS

None.

REFERENCES

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