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Editorial

Reporting Animal Care and Use Authorization in Manuscripts Published in Journals of The Wildlife Society

One of The Wildlife Society's (TWS) fundamental principles is using science in policy and management decisions (Use of Science in Policy and Management Decisions; http://wildlife.org/wp-content/uploads/2015/04/SP_UseofScience1.pdf, accessed 4 May 2015). That principle considers science to be reliable knowledge resulting from a structured activity or process designed to generate such knowledge (*sensu* Romesburg 1981). For the most part, from the perspective of TWS, this knowledge is derived from wildlife research and monitoring, which can be defined broadly as increasing understanding of social, ecological, and environmental factors affecting wildlife populations and habitat. A critically important part of generating that science often involves animals as research subjects. Ethical treatment of these animals is also critically important and has been addressed in recent publications (Bayne et al. 2010, Sykes et al. 2012, Wallace and Curzer 2013, Animal Behaviour 2014) and within TWS position statements concerning animal welfare and wildlife conservation (Animal Rights Philosophy and Wildlife Conservation; http://wildlife.org/wp-content/uploads/2015/04/SP_AnimalRights1.pdf, accessed 4 May 2015) and responsible use of wildlife (Responsible Human Use of Wildlife; http://wildlife.org/wp-content/uploads/2015/04/SP_Responsible-HumanUseofWildlife1.pdf, accessed 4 May 2015). Both of these position statements affirm that use of animals in wildlife research requires that animals be treated ethically and humanely, in a manner that is sustainable, and that their use in research improves "...potential opportunities to protect and perpetuate wildlife, understand its habitat needs, and improve its economic, cultural, and social importance knowledge." Contained in these TWS position statements are 2 issues relevant to conducting research on wildlife and publication of research results in TWS journals.

First, use of animals in research implicitly imparts responsibility on investigators to treat their animal subjects ethically and humanely. In response to this ethical requirement, governments have promulgated regulations and research institutions have developed processes for approving protocols for use of animals in research. However, most of these regulations and protocol-approval processes focus on research involving laboratory-housed or agricultural animals, and thus have only limited relevance to wildlife. To adapt United States regulations and guidelines regarding use of laboratory animals in research such that they are applicable to wildlife, the National Science Foundation requested that taxon-specific societies (e.g., the American Society of Mammalogists; Sykes et al. 2012) develop guidelines for using wild vertebrates in research. Resulting guidelines from taxon-specific societies have been used to inform university Institutional Animal Care and Use Committees in the United States that approve research protocols involving vertebrate animals, including wildlife. Similar regulations and guidelines exist in Canada (Canadian Council on Animal Care 2003; http://www.ccac.ca), Europe, Australia, and New Zealand (see Animal Behaviour 2014), although nonacademic and nongovernmental organizations (both inside and outside North America) may not have established such protocols. However, regardless of funding origin or research location, authors who submit manuscripts reporting study results for consideration for publication in TWS journals are expected to have followed these taxon-specific guidelines, conducted research under appropriate permits, and adhered to applicable regulations when using animals. This expectation is clearly indicated in the TWS Code of Ethics (http://wildlife.org/governance/code-of-ethics/, accessed 5 May 2015), which asserts that TWS members will "exercise high standards in the care and use of live vertebrate animals used for research, in accordance with accepted professional guidelines for the respective classes of animals under study."

Second, from the perspective of TWS, use of vertebrate animals in wildlife research must have potential to result in reliable knowledge, and that knowledge must have potential to contribute to wildlife conservation. Recent discussions of these responsibilities (e.g., Animal Behaviour 2014) highlight the need to weigh benefits (i.e., potential to gain reliable knowledge to further conservation) against costs (i.e., potential for adverse effects to study animals and their ecosystems) when considering and designing research involving wildlife. The Wildlife Society's Code of Ethics also addresses this aspect of use of animals in research by expecting members to "recognize research and scientific management of wildlife species, their environments, and their stakeholders as primary goals." That is, the purpose of wildlife research is to provide the basis for scientific management of wildlife and their environments, and to benefit society.

Current Reporting Requirements for TWS Journals

To address issues related to use of vertebrate animals in wildlife research, TWS's scientific journals require adherence to recognized guidelines and regulations related to animal care and use. Currently, author guidelines for the *Journal of Wildlife Management* (http://mc.manuscriptcentral.com/societyimages/jwm/JWMGuidelines2011Final.pdf, accessed 7 May 2015) and *Wildlife Monographs* (http://mc.manuscriptcentral.com/societyimages/jwm/WM%20MonographGuidelinesFINAL.pdf, accessed 7 May 2015) include the following instructions:

"Appropriate documentation that proper animal care and use was applied when using live vertebrate animals for research should be provided when required by organizations or institutions supporting the research. Examples include an Institutional Animal Care and Use Protocol number (as designated by most U.S. universities), the number of the permit or license issued to hold animals (such as with private breeders), or a statement that procedures were part of a study plan approved by the agency. This policy covers all vertebrate animals, including mammals, birds, reptiles, amphibians, and fish."

Author instructions in the *Wildlife Society Bulletin* (http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291938-5463a/homepage/ForAuthors.html, accessed 7 May 2015) are less detailed but convey the same expectation:

"Animal Care Use Committee or Human Subjects Review Committee approval numbers go in this section. [METHODS (or, if applicable, MATERIAL AND METHODS)]"

Lack of authorial adherence to regulations and guidelines for use of animals in research, or reporting research results that do not potentially result in reliable knowledge with implications for wildlife conservation, can be grounds for manuscript rejection from TWS journals. Current author instructions are probably adequate for research conducted by scientists associated with North American research institutions or with federal, state, and provincial natural resources management and research agencies, regardless of funding or geographical origin of the research. However, it is unclear how applicable these instructions are for research initiated by institutions and organizations outside of North America, especially in countries that lack regulations governing use of animals in research; therefore, further guidance may be necessary. Additionally, failure of authors to assert their adherence to applicable regulations and guidelines and/or failure to report applicable authorizations (e.g., permits) in manuscripts submitted to TWS journals could result in unnecessary challenges to published work. For example, results of 1 research project conducted outside of North America were recently published in the Wildlife Society Bulletin without explicit legal authorization for trapping animals (although the research was conducted under valid license). This lack of explicit authorization provided opening for a subsequent challenge to the ethics of the research through an inquiry to the publisher questioning whether capture of wild animals described in the manuscript was conducted legally. Therefore, to explicitly address policy related to manuscripts submitted to TWS journals that incorporate results of studies of vertebrate animals, below, I have outlined expectations for research published in TWS journals relative to animal care and use.

Requirements for Manuscripts Submitted to TWS Journals

Manuscripts that report findings of wildlife research submitted for consideration for publication in TWS journals should address both issues that are fundamental to TWS regarding use of vertebrate animals in research. First, vertebrate animals used in wildlife research must be treated ethically and humanely, and researchers must adhere to regulations and follow guidelines related to use of vertebrate animals in research; adherence to relevant regulations and guidelines must be explicitly stated and given proper reference in manuscripts submitted for consideration for publication. Second, the research itself should provide reliable knowledge that potentially could further wildlife conservation and increase the value of wildlife to society. Guidelines for authors for the *Journal of Wildlife Management*, *Wildlife Monographs*, and the *Wildlife Society Bulletin* will be revised to make these requirements explicit. Manuscripts submitted for consideration for publication that do not address these issues may be returned to authors with a request that these issues be addressed before the manuscript can be considered further; in some cases, such manuscripts may be rejected. These requirements apply to manuscripts reporting results of studies that directly involve vertebrate animals, including observational studies. Manuscripts reporting summaries and/or analyses of data derived from studies of vertebrate animals conducted by others, for example as part of agency monitoring programs (e.g., Breeding Bird Survey data) or other similar efforts, are expected to include authorial assertion that the original data collection followed protocols and guidelines related to use of vertebrate animals in effect at the time the data were collected. In instances (e.g., historical surveys) when there were no review requirements for use of vertebrate animals in research in effect at the time data were collected, authors are expected to provide an assessment of whether animals were treated humanely and ethically and guidelines accepted at the time data were followed.

Taxon-Specific Guidelines for Using Wild Vertebrates in Research (All Accessed 7 May 2015)

Below is a partial list of taxon-specific guidelines for use of wild vertebrates in research. Note that these URLs may be updated and guidelines revised. For example, none of the links to these documents in Animal Behaviour (2014) were correct when accessed on 7 May 2015. Additional information about use of animals in wildlife research and issues related specifically to field studies of wildlife are presented in a recent issue of ILAR Journal (Wallace and Curzer 2013) and guidelines specific to Canada are available from the Canadian Council on Animal Care (2003; http://

www.ccac.ca). Authors submitting manuscripts to TWS journals that report results of studies that use vertebrate animals are encouraged to locate and adhere to the most recent taxon-specific guidelines.

- Mammals (American Society of Mammalogists): http://www.mammalsociety.org/uploads/committee_files/Sikes%20et%20al%202011.pdf
- Birds (North American Ornithological Council): http://www.nmnh.si.edu/BIRDNET/guide/
- Fish (American Fisheries Society): http://fisheries.org/guide-for-the-use-of-fishes-in-research
- Reptiles and amphibians (American Society of Ichthyologists and Herpetologists): http://www.asih.org/sites/default/files/documents/resources/guidelinesherpsresearch2004.pdf; (the Herpetologists' League): http://www.herpetologistsleague.org/dox/ethics.pdf

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