**Project Title:** Special Supplement to JWD: Field Techniques that Improve Animal Welfare  
**Project Leader:** Kevin Castle, Secretary, American Association of Wildlife Veterinarians (AAWV) and Newsletter Editor, WDA-Wildlife Veterinary Section (WVS)

**Collaborators:**  
Peregrine Wolff, President AAWV  
Sonia Hernandez, Vice-President, AAWV  
Jon Arnemo, Chair, WDA-WVS  
Nadine Lamberski, Treasurer, WDA-WVS and Associate Director, Veterinary Services, San Diego Zoo Safari Park  
Dan Mulcahy, Research Wildlife Veterinarian, United States Geological Survey, Alaska

**Location of Work:** Fort Collins, CO, USA  
**Mechanism for administration of funding:** American Association of Wildlife Veterinarians

**Detailed Budget (Please see attached publication cost estimate provided by Allen Press for JWD):**  
Publication and distribution: $3542  
Total Request: $3,542

**Project purpose as it relates to the mission of WDA:** Animal welfare has become an increasingly important topic of discussion among wildlife disease investigators and managers. Recent changes to legislation and regulation dictate that wildlife researchers adhere to the highest standards of animal care, yet most of the welfare standards available have been extrapolated from domestic species. In recent times, much research has been devoted to developing field techniques that specifically measure the impact of handling, anesthesia and surgical intervention of wildlife species. This Special Supplement would collect the most recent work, from a special session at the 2014 WDA Annual International Conference, and make it widely available to the WDA readership, furthering the WDA mission to disseminate information that will improve wildlife health and welfare to wildlife professionals around the globe.

**Background:** Ensuring the welfare of research subjects is an issue of critical importance for all who are engaged in handling animals, and to the public at large. While initially established to improve the care and welfare of laboratory animals, animal welfare regulations and laws are increasingly being extended to include wildlife. Wildlife researchers are no less concerned about the welfare of the animals they study; however, until recently little guidance on ensuring and improving animal welfare has been available to those conducting field activities. Indeed, a successful outcome of wildlife handling has often been assumed when the animal recovers from anesthesia or other handling activities and apparently resumes normal activities for the duration of the immediate post-handling observation. While certainly a positive outcome, mere survival of handling does not take into account our increasing knowledge of and need for methods to ameliorate other potential impacts to animal well-being, including stress, pain, and
long-term physiological and behavioral effects of handling. Recent literature highlights much needed work on potential impacts of capture and handling on wildlife welfare, including bears (Cattet et al. 2008) and brushtail possums (Cowan et al. 2013). Recent debates on topics such as whether fish feel pain and hence would benefit from analgesia certainly merit additional discussion and data collection (e.g. Allen, 2013). There is an overwhelming need for all wildlife professionals to have a better understanding of these potential impacts, and access to the tools and protocols required to minimize those impacts.

Objectives:
The American Association of Wildlife Veterinarians and the WDA Wildlife Veterinary Section will co-host a session at the 2014 International Annual Conference entitled: Field Techniques that Improve Animal Welfare. Through this forum, we will solicit presentations on this important topic and identify key researchers in this area. Thus we are seeking funds to:

1. Compile a series of evidence-based, peer-reviewed manuscripts based on cutting edge information presented during the aforementioned session
2. Broadly distribute the manuscripts to WDA members via a Special Supplement to the JWD and non-members worldwide via electronic and non-electronic media.

How objectives advance the mission of the WDA:
Conference attendance and participation are primary means by which WDA members can be exposed to recent or cutting edge discussion and discourse. Given the financial and logistical realities faced by many members, however, the overall audience for conference presentations is restricted to the relatively few who can attend the meeting. Therefore, successful completion of the objectives will allow important, science-based information regarding wildlife welfare to be disseminated to WDA members and non-members who may not otherwise have access to such information.

Project timeline:
Call for abstracts for WDA session March 2014
Abstract review and acceptance April 2014
WDA Conference July 2014
Manuscript submission and editorial process October-December 2014
Publication and distribution April-July 2015
Final report written July 2015

Resources and previous accomplishments that demonstrate capacity to complete the project:
The AAWV and WDA-WVS are close partners whose officers and members are committed to improving wildlife health and welfare. Members of these groups will be reviewing presentations proposed for the special session and will be able to use their combined expertise to solicit and identify the individuals most qualified to present during the special session at the WDA meeting and subsequently contribute to this series of papers. Dr. Dan Mulcahy, a world-renowned expert on wildlife welfare issues, author of >80 publications, and who has been chosen to be the AAWV Al Franzmann Cutting Edge Speaker will headline the session. In
addition, officers of AAWV and WVS will help ensure that the information is of the highest quality and clarity by assisting with the peer-review and editorial process.

Matching funds will be used to pay for any additional publication charges (e.g. if additional copies are desired or pages are added) and to pay for one person dedicated to soliciting, organizing, editing, and formatting the manuscripts, because this Special Supplement to JWD will not be handled by the WDA Editorial Board until near its completion, to avoid burdening them with further responsibilities. We have already communicated with Dr. Jim Mills and received support for this endeavor. AAWV will contribute funds in the amount of $1,500 towards the completion of this project, and San Diego Zoo Global will contribute $5,000.

Proposed outcomes:
The outcome will be a Special Supplement to the JWD published in 2015, and will serve as a cohesive reference of real-world, cutting edge guidance and techniques from leading experts in the field on how to identify and ameliorate impacts to wildlife welfare during all phases of capture and handling. The publication that results from this work will be of benefit to all WDA members and wildlife professionals in all countries who deal with animal care and welfare issues. The papers included in the publication will provide detailed information that is not available through the WDA conference proceedings, and the Supplement will be a valuable resource for Institutional Animal Care and Use committees and others who are tasked with making decisions about animal welfare.

References
