

The William I. Spencer Conservation Grants Program

2003 GRANT RECIPIENTS

By Winifred B. Kessler, Ph.D.
Chair, Grants-in-Aid Committee

Supporting the development of new knowledge is an important element of the Boone and Crockett Club's mission. The William I. Spencer Conservation Grants Program contributes to this goal by assisting the research of graduate students who have chosen careers in the wildlife profession.

For 2003, the Club decided to continue its focus on Sustainable Use of Wildlife on Private Lands and the Private/Public Land Interface. In a letter to prospective applicants, we explained that the proposals could address the ecological, economic, social, or policy aspects of this theme, and that interdisciplinary proposals would be especially welcomed. The application packets were mailed in July 2002 to all U.S. and Canadian universities with programs in wildlife biology or management.

By the October deadline, we had received 19 applications of which 11 were from Masters students, 7 from Ph.D. students, and 1 from a non-student. These came from 11 states including Arizona, Idaho, Illinois, Montana, Nebraska, North Carolina, Oregon, Texas, Utah, Washington, and Wisconsin. The applications, evaluation criteria, and rating forms were distributed to members of the Grants-in-Aid Committee for evaluation. The criteria were as follows:

- Does the proposal meet the guideline of being relevant to big game biology or management? How responsive is it to this year's theme?
- Does the study address a significant biological, ecological, policy, or social science problem?
- Does the study have scientific merit? That is, will it produce new knowledge or test existing theory or assumptions?
- How well qualified is the proponent and/or the academic supervisor to undertake the study?
- Is there potential for widespread application of findings?
- Are the objectives clearly stated? How sound is the proposed approach with respect to the objectives?

As in the 2002 competition, the selection process was difficult because we had only \$25,000 for distribution. Considering the high quality of projects and students, we can be confident of an excellent return on investment now and for many years to come.

Elk Dynamics in Idaho

Jocelyn L. Aycrigg received a grant of \$8,930 to assist her study titled "Using the metapopulation concept to understand the spatial and temporal population dynamics of elk in Idaho." Jocelyn is pursuing her Ph.D. in Wildlife Resources at the University of Idaho, working under the supervision of Dr. Edward "Oz" Garton. Jocelyn received a B.A. in Environmental, Population, and Organismic Biology from the University of Colorado, and M.S. in Environmental and Forest Biology from the State University of New York. Her Masters research, completed within the College of Environmental Science and Forestry at SUNY, focused on social behavior of white-tailed deer in the central Adirondacks. Jocelyn's past positions include biological consultant with Pacific Gas and Electric Company, GIS analyst and

Jocelyn L. Aycrigg's work addresses the challenge of managing elk on both private and public lands in central Idaho, where some populations are declining and others are increasing.



wildlife biologist at Oak Ridge Associated Universities, gap analysis project coordinator with the Illinois Natural History Survey, and various university teaching and research positions.

Jocelyn's work addresses the challenge of managing elk on both private and public lands in central Idaho, where some populations are declining and others are increasing. The project will investigate spatial dynamics of elk, and attempt to identify factors that explain both patterns (increases and decreases in populations) at the local and regional levels. The resulting information can be put to use in elk management on both private and public lands.

Dynamics of Black Bear Populations

Cecily M. Costello received a grant of \$8,830 toward her study of kinship, population dynamics, and spatial organization of black bears under the supervision of Dr. Jodi Hilty. Cecily is completing this work while enrolled in the Ph.D. program at Montana State University. She is highly experienced in the study of bears, having worked with Yellowstone grizzly bears for the Wyoming Game and Fish Department, followed by a decade of bear research with the Hornocker Wildlife Institute and the Wildlife Conservation Society. (As an interesting note, institute director Maurice Hornocker got his career start with mountain lion research funded by the Boone and Crockett Club Grants-in-Aid Program.)

Cecily's project will investigate the inter-relationships of kinship, sex and age composition, density, immigration, dispersal, and spatial organization for two black bear populations on public and private lands in New Mexico. The study will use data from a field study conducted during 1992-2000, for which Cecily was the principal investigator. Strengths of the study include its relatively long duration (by wildlife research standards), the diversity of habitats and land uses, and the large number of bears examined. Cecily aims to determine population characteristics of resident bears and to understand relationships of bear mortality to bear-human conflict. With such information, managers may be able to improve population composition by adjusting the timing and methods of bear hunting, and to deal more effectively with nuisance bears.

Water Sources for Desert Sheep

James W. Cain, a 2003 Grants-in-Aid student, was awarded an additional \$7,250 toward his study on the Influence of Artificial Water Sources on Desert Bighorn Sheep. James is enrolled in the Ph.D. program at the



University of Arizona, working under the supervision of B&C Professional Member, Dr. Paul Krausman. James holds a M.S. in Biological Science from California State University, Sacramento; and, a B.S. in Biological Science from Colorado State University. His previous research experience is varied, including nest predation studies of willow flycatchers and yellow warblers, hazard assessments associated with bird-aircraft strikes, demography of willow flycatchers, bird mortality associated with wind turbines at Altamont Pass, and other studies.

Most of the support for James' work is being provided by the U.S. Fish & Wildlife Service. The project is examining a longstanding assumption that water is one of the primary factors limiting the distribution and productivity of big game species in the arid southwest. The study objectives are to determine if the presence of artificial water sources influence survivorship, recruitment, productivity, and home range sizes of desert bighorn sheep in southwestern Arizona. This involves experimental closure of selected water sources, and documentation of the effects on survivorship, productivity, recruitment, and home range sizes of desert bighorn. James' project realized good progress in 2002. The 2003 grant will support an additional study component to investigate whether desert bighorn sheep change their diet and increase their consumption of cacti and oth-



TOP: Cecily M. Costello's research aims to determine population characteristics of resident bears and to understand relationships of bear mortality to bear-human conflict. **INSET:** James W. Cain is examining a longstanding assumption that water is one of the primary factors limiting the distribution and productivity of big game species in the arid southwest.

er succulent plants in response to the closure of water catchments.

The development of artificial water sources is an expensive management practice. This study will help substantiate whether the practice actually provides benefits, or should be discontinued in favor of other conservation investments.

The 2004 grants competition will focus on mule deer. We will welcome proposals for studies that investigate causes of the range-wide declines of mule deer, or that contribute to the conservation or restoration of mule deer and their habitats. ■