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New Research on Diseases of Bighorn Sheep

In my last column I reported that the B&C Conservation Research Grants Program enjoyed a robust response to our request-for-proposals on wildlife diseases. Now I have the pleasure of sharing the successful outcome of that solicitation process.

In all we received 14 eligible proposals from universities in 10 states and two provinces, plus a non-university submission. The proposals addressed a wide range of disease and parasite problems in big game animals, and it was clear that we had many more worthy projects than grant funds available. The selection process commenced with technical peer reviews conducted by five wildlife disease experts from across the U.S., and those evaluations were key in subsequent deliberations by the Conservation Research Grants Committee. The committee considered additional factors such as the Club's particular interests and the prospects for attracting funding partners.

The committee landed on two excellent projects for funding, both addressing important disease issues of bighorn sheep. Karen Fox, DVM, will spearhead a project on "paranasal sinus tumors of bighorn sheep: investigation of an infectious etiology" at Colorado State University. Marjorie Matocq, Ph.D., will study "bighorn sheep disease outbreaks: underlying genetic diversity of declining versus persistent populations" at the University of Nevada. I will describe the first study in the space remaining in this column. The second project, to be conducted in partnership with the Camp Fire Conservation Fund, Inc., and the Pope & Young Club, will be the topic of my column in the next issue of *Fair Chase*.

Dr. Karen Fox is a veterinarian and Ph.D. graduate student at Colorado State University (CSU). Born in Cleveland, Ohio, she began her wildlife disease career at Iowa State University where she was extensively involved in the Animal Ecology Department and completed a bachelor's degree in animal ecology. While there she volunteered with the Wildlife Care Clinic, a student-run facility located at the veterinary campus, and participated in pathology work through the Southeastern Cooperative Wildlife Disease Study in Athens, Georgia. Further experiences working with the Colorado Division of Wildlife in Fort Collins and the Wyoming State Veterinary Lab in Laramie guided her decision to pursue a veterinary degree with the ultimate goal of becoming a wildlife pathologist. She completed her doctor of veterinary medicine degree at CSU in 2007. Now enrolled in a combined veterinary pathology residency and doctorate program at CSU, Karen is working toward board certification in anatomic pathology as well as a doctorate in pathology. She also works closely with the Colorado Division of Wildlife, performing autopsies on diseased animals of many species to detect diseases and provide mortality data to managers.

Karen's Ph.D. project focuses on a new respiratory disease that causes tumors in the nasal sinuses of bighorn sheep in Colorado. It will investigate the hypothesis that the tumors are caused by a transmissible agent. Experiments will be performed on captive bighorn lambs to identify the agents and mechanism for transmission. Study results will have important applications in management; for example, the tumors may be found to have a role in the initiation and persistence of bronchopneumonia in bighorn sheep. Better understanding of transmission will help inform biologists involved in the translocation of sheep between geographic areas in ongoing efforts to augment declining populations. In addition to morbidity concerns, the tumors can diminish trophy quality by invading surrounding bone and causing skull deformities and alterations in horn growth.

I look forward to sharing more on this project as progress is made. For now I'll welcome Karen as the latest researcher of the Conservation Research Grants Program and wish her the best for success in this important work. ■

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