Northern Rocky Mountain Science Center

Weekly Highlights for May 2007

I. Departmental/Bureau News

A. Upcoming Events

B. Current

USGS Scientists Provide Expertise on Disease Ecology and Wildlife Health for New Edition of *Yellowstone Science*

USGS disease ecologist, Paul Cross, from the Northern Rocky Mountain Science Center (NoRock), served as guest editor for the new edition of *Yellowstone Science*, where contributing authors explored the role that pathogens play in the ecosystem dynamics of the Greater Yellowstone Ecosystem (GYE). Cross and co-author Glenn Plumb contributed an article titled, "Wildlife health initiatives in Yellowstone," where they discuss how researchers and managers are collaborating to develop a unique wildlife health program that crosses disciplines and boundaries. USGS research zoologist, Stephen Corn, also from NoRock, contributed an article about amphibians and disease where he explores the implications of disease for amphibian populations in the GYE. This issue of *Yellowstone Science* (Volume 15, Number 2) is available on the web at: http://www.nps.gov/yell/planyourvisit/upload/YS15(2)partI.pdf.

Contact: Paul Cross, 406-994-6908, pcross@usgs.gov

Management Implications for Elk Brucellosis in the Greater Yellowstone Ecosystem

Every winter, government agencies feed ~6000 metric tons of hay to elk in the southern Greater Yellowstone Ecosystem (GYE) to limit transmission of *Brucella abortus*, the causative agent of brucellosis, from elk to cattle. Supplemental feeding, however, is likely to increase the transmission of brucellosis in elk, and may be affected by climatic factors, such as snowpack. In this study, USGS scientist Paul Cross and co-authors at the Wyoming Game and Fish Department investigated how artificial feeding and snowpack conditions affect elk brucellosis as determined by antibody tests (i.e. seroprevalence) collected from 1993 to 2006. Over 58% of the variation in brucellosis seroprevalence was associated with the length of the artificial feeding season, while 63% of the inter-annual variation in feeding season was associated with spring snowpack conditions. These data suggest that reduced feeding seasons, either due to climate change or altered management, may result in substantial reductions in brucellosis seroprevalence over the long term. The full citation for this publication is: Cross, Paul C., William H. Edwards, Brandon M. Scurlock, Eric J. Maichak, and Jared D. Rogerson. 2007. Effects of Management and Climate on Elk Brucellosis in the Greater Yellowstone Ecosystem. Ecological Applications 17(4): 957-964.

Contact: Paul Cross, 406-994-6908, pcross@usgs.gov

II. Notable Congressional Activity

None

III. Press Inquiries/Media

USGS scientist Chuck Schwartz, from the Northern Rocky Mountain Science Center, was contacted by Peter Vandergrift, a reporter from the *Livingston Enterprise*, about the role of the Interagency Grizzly Bear Study Team following delisting of grizzly bears in the Greater Yellowstone Ecosystem.

USGS scientist Kate Kendall, from the Northern Rocky Mountain Science Center, was contacted by Becky Lomax, a reporter from the magazine *Montana Living*, regarding an article she is writing about grizzly bear research in Montana for the June issue. Kendall gave updates on the Northern Divide Grizzly Bear Project and the Greater Glacier Bear DNA Project.

USGS scientist Mark Haroldson, from the Northern Rocky Mountain Science Center, was contacted by Brodie Farquhar from the Casper Star Tribune. Haroldson provided both a photo of a grizzly bear in a hair corral and an image of the current estimated grizzly bear distribution in the Greater Yellowstone Ecosystem per Farquhar's request.

IV. FOIA
None