2009 Wildlife Research: Black and Grizzly Bear Update

BACKGROUND

Two research projects on black and grizzly bears are on-going in the data analysis and manuscript preparation phase. The first was initiated in 2005 in collaboration with Dr. Chuck Schwartz, leader of the USGS Interagency Grizzly Bear Study Team in Bozeman, MT. Earlier, park senior wildlife biologist Steve Cain and Dr. Schwartz secured funding through the NPS USGS-NRPP program to investigate grizzly bear (*Ursus arctos)*-black bear (*Ursus americanus)*-human interactions in Grand Teton National Park (GRTE) where grizzly bears recently recolonized former ranges in the north half of the park. Field work was conducted from 2005-2007.

A second, concurrent study was initiated in 2006, also in collaboration with Dr. Schwartz, funded largely by private donations through the Grand Teton National Park Foundation. This study used the same field techniques but was focused on black bears in the southern half of the park where grizzly presence was rare. Data collection for this study was conducted in 2006 and 2007 by park biological technician Leslie Frattaroli. The concept was to be able to contrast and compare how black bears used the landscape and interacted with people in the high and low grizzly bear density areas.

IGBST photo

Both studies used new downloadable GPS radio collar technology (Schwartz et al. 2009) to follow bears through the landscape on a near-real time basis. Telonics, Inc. spread spectrum collars deployed on bears were downloaded weekly by airplane. Field personnel then visited bear use sites while signs of their activities were still fresh, documenting bear activities and associated habitats.

PROJECT STATUS

Two manuscripts have been completed on the grizzly bear-black bear-human interactions study. One focused on the use of the GPS-SST collars (Schwartz et al. 2009). This paper documented the successful use of this new technology in our study. A second paper about bear activity patterns and the effects of human developments on them (Schwartz et al. *in press*) was completed and submitted for publication in 2009. Highlights from this paper include findings that both species of bears were largely diurnal, had daily bi-modal activity patterns, and altered behavior in response to human activities (were more night active and less day active when near roads and developments). In addition, male grizzlies were more active at night than female grizzlies and black bears, and black bears sympatric with grizzlies modified activity patterns to avoid grizzlies. Analyses of habitat use and response of bears to designated trails are on-going with additional papers expected.

Leslie Frattaroli will analyze and interpret data gathered in the southern study on black bears as part of her master's degree program at Montana State University. This project is ongoing, and Leslie expects to complete her degree program during 2010.

LITERATURE CITED

Schwartz, C. C., S. Podruzny, S. L. Cain, and S. Cherry. 2009. Performance of spread spectrum GPS collars on grizzly and black bears. Journal of Wildlife Management 73:1174-1183.

Schwartz, C. C., S. L. Cain, S. Podruzny, and S. Cherry. *In press*. Contrasting activity patterns of sympatric and allopatric black and grizzly bears. Journal of Wildlife Management.

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