PROJECT CAT (COUGARS AND TEACHING): INTEGRATING SCIENCE, SCHOOLS AND COMMUNITY IN DEVELOPMENT PLANNING

GARY M. KOEHLER, Wildlife Research Scientist, Washington Department of Fish and Wildlife, 600 Capitol Way N., Olympia, WA 98501 USA, email: koehlgmk@dfw.wa.gov
EVELYN NELSON, Superintendent, Cle Elum-Roslyn School District, 2690 SR 903, Cle Elum, WA 98922, USA, email: Nelsone@cleelum.wednet.edu

Abstract: Complaint reports of cougars (*Puma concolor*) venturing into urban areas, killing livestock and pets, and threatening humans have increased to more than 1,000 reports filed annually in Washington; where in the past 5 years cougars have mauled 2 children. Increased reports are coupled with human population increases of over 1 million in the past decade and an annual loss to development of over 28,000 ha of land. The rural Cle Elum-Roslyn community is experiencing similar growth and development with >5,000 ha of development and over 1,400 new homes planned, but presently with few complaints of cougars. The winter of 2002-2003 marked the beginning of the 2nd year of an 8-year scientific investigation on cougar and ecology by the Washington Department of Fish and Wildlife and data collection and analysis by teachers and students at Cle Elum-Roslyn School District. To date we have captured and marked with GPS collars 4 adult and 2 subadult male and 4 adult female cougars. GPS transmitter collars collect GPS coordinates at 4-hour intervals throughout the year. This data is plotted onto GIS to assess proximity to human residence, planned development, recreational centers, and to assess predation events and habitat use patterns. This investigation is used to engage students in an experiential learning activity whose focus is application of technology and learning about their ecological and social community. Students in kindergarten to senior high help collect and analyze data. Junior-Senior students in Advanced Placement Biology assist with cougar capture and marking efforts and correlate location data with GIS habitat, topographic, and human residence parameters. They will use DNA isolated from cougar scats to determine species and gender of animals depositing scats while 8th grade students analyze scats for contents to correlate food habits with gender of cougars. Elementary students learn plant identification for plotting habitat types and learn animal track identification for reporting locations of carnivores and ungulate prey species near their residence. Students count ungulates along bus routes for long-term monitoring of prey distribution in relation to seasons and development. Students and community member conduct tests of GPS collars to assess influences of vegetative and physiographic conditions on satellite acquisition rate and accuracy. Students are assessed on their abilities to collect qualitative and quantitative data. Community members help collect data and help train students in outdoor and data collection skills. Central Washington University incorporates Project CAT objectives into training teachers. Information on ungulate habitat and cougar travel corridors is shared with community planners to incorporate into planning processes to minimize human-cougar interactions.