Fisher decline documented in California

July 5 2011

Two fisher kits being weighed by researchers on California's Hoopa Valley Indian Reservation. A WCS study documented a region-wide decline of these important predators. Credit: WCS

The Hoopa Valley Tribe, in cooperation with the Wildlife Conservation Society and the University of Massachusetts, reported a 73-percent decline in the density of fishers—a house-cat sized member of the weasel family and candidate for endangered species listing—on the Hoopa Valley Indian Reservation in northwestern California between 1998 and 2005.

The scientists speculate that changes in prey habitat, disease, and increases in predation – especially by bobcat – may be responsible for

the population decline observed on the reservation. However, additional efforts are needed to determine trends in fisher populations and expand monitoring to other regions.

The study appears in the June edition of the online journal The Wildlife Society Bulletin. Co-authors on the study include Sean M. Matthews of WCS, J. Mark Higley and J. Scott Yaeger of the Wildlife Department of Hoopa Tribal Forestry, and Todd K. Fuller of the University of Massachusetts Department of Environmental Conservation.

Study data were collected using a mark-resight method, where fishers were captured, ear-tagged to identify individuals, and subsequently photographed at remote camera stations.

Study authors also report that different methods currently used by scientists to evaluate populations of fishers can produce different results and lead managers to ill-informed conclusions about population status. Mark-resight methods have long been held as the gold standard of wildlife population monitoring, yet are costly and labor-intensive.

WCS Conservation Biologist Sean Matthews said, "It is critical to understand the status of a population when making decisions about species conservation. Our study further demonstrates the importance in monitoring populations of imperiled species and the limitations of some methods in detecting large changes in population size."

Mark Higley, the Hoopa Tribe's wildlife biologist, said, "For the study of at-risk or sensitive populations, defensible, large-scale occupancy estimation or mark–recapture methods should be used to monitor changes in populations and to determine trends. Snapshots in time such as the two presented in the paper, give us some important insights, but do not tell the whole story. Long term demographic and occupancy monitoring studies may allow for modeling cause and effect factors such

as changes in habitat, climate change, disease exposure, and increases in larger predators. These data are a cornerstone in evaluating extinction risk, identifying population-level threats, and determining the success of conservation measures."

Provided by Wildlife Conservation Society