

Fisher Research and the Kings River Sustainable Forest Ecosystems Project: Current Results and Future Efforts ¹

Brian B. Boroski,² Richard T. Golightly,³ Amie K. Mazzoni,⁴ and Kimberly A. Sager⁵

Abstract

The Kings River Sustainable Forest Ecosystems Project was initiated on the Kings River Ranger District of the Sierra National Forest, California, in 1993, with fieldwork beginning in 1994. Knowledge of the ecology of the fisher (*Martes pennanti*) in the Project area, and in the Sierra Nevada of California in general, is insufficient to develop empirically based management strategies or to respond to the challenge of sustaining viable local populations concurrent with projected human population growth in the Sierra. Using a combination of track-plate surveys, snowtrack searches, and live-trapping, we documented a reproducing population of fishers between 1,067 and 2,438 m in elevation within much of the Project area. Whether survivorship and reproductive rate are sufficient to maintain the population within the Project area is unknown. Given current viability concerns for fishers in the Sierra Nevada, it would be prudent that, concurrent with future research, management activities in the areas occupied by fishers that are outside the forest carnivore network also conserve or promote habitat elements used by fishers.

The Forest and Rangelands Renewable Resources Planning Act of 1974 and the National Forest Management Act of 1976 (NFMA) mandated additions to the process by which the USDA Forest Service manages its public lands (Dana and Fairfax 1980). A key section of the NFMA directed the Secretary of Agriculture to write regulations specifying guidelines that “provided for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” The challenge to meet this provision is significant for National Forests in the Sierra Nevada. Land area developed for human settlement within the mountains could quadruple from 1990 to 2040 as a result of a tripling in the human population within the region (Duane 1996). Ecological ramifications of the mosaic of forest ownership and differing owners’ objectives are many.

Despite substantial efforts (Grenfell and Fasensfest 1979; Zielinski and others 1995b, 1997, 1999), knowledge of the ecology of fishers (*Martes pennanti*) in the Sierra Nevada (*fig. 1*) is insufficient for development of empirically based management strategies that will ensure viable local populations in the face of increased demands on forest resources that will inevitably accompany the projected growth of the human population in the Sierra Nevada (Graber 1996, Ruggiero and others 1994). Ruggiero and others (1994) recommended a comprehensive, programmatic approach of research to acquire the information needed for developing conservation strategies.

The Kings River Sustainable Forest Ecosystems Project (hereafter, the Project) was initiated in 1993 on the Kings River Ranger District of the Sierra National Forest, Fresno County, California, with fieldwork beginning in 1994 (Verner and



Figure 1—Fisher in a pine tree on the study area in the Sierra National Forest.

¹ An abbreviated version of this paper was presented at the Symposium on the Kings River Sustainable Forest Ecosystems Project: Progress and Current Status, January 26, 1998, Clovis, California.

² Senior Wildlife Ecologist, H. T. Harvey and Associates, 423 West Fallbrook, Suite 202, Fresno, CA 93711.

³ Professor, Department of Wildlife, Humboldt State University, Arcata, CA 95521.

⁴ Graduate Student, Department of Biology, California State University, Fresno, CA 93710.

⁵ Student, Department of Wildlife, Humboldt State University, Arcata, CA 95521

