

# USDA Forest Service Pacific Southwest Research Station

CALIFORNIA – ALBANY-ARCATA-DAVIS-FRESNO-PLACERVILLE-REDDING-RIVERSIDE

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SCIENCE THAT MAKES A DIFFERENCE

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## Forest Service Researchers Rescue Sierra Nevada Fisher Kit

*FRESNO, CA*, September 10, 2009—One afternoon last May, Rebecca Green was unaware she was to become a rescuer. As a biological technician for the USDA Forest Service Pacific Southwest Research Station's Kings River Fisher Project (KRFP), she spends each day in the Sierra National Forest locating radio-collared fishers; mid-sized forest carnivores related to martens and wolverines. Each spring, the KRFP crew tracks adult females that may have given birth to kits in their forest dens.

On this particular May afternoon, Rebecca pulled off the road and turned on the tracking equipment to locate F04, an adult female fisher. Instead of hearing the typical beat per second, she heard a faster pulse, indicating that the collar had not moved for 8 hours, triggering the mortality switch. Often this means that the fisher has managed to slip the collar off, leaving it lying on the forest floor or in some tree hollow, but sometimes it means that the animal has died. The KRFP crew has to work quickly to determine which the case is before scavengers destroy any evidence pointing to a cause of death. In this case, Rebecca also knew that F04 was a mother, her den recently located and the presence of at least one kit documented.

Within the hour, it was verified that F04 had indeed been killed by larger predator not far from her den. Rebecca immediately contacted the project supervisors, and the equipment needed to extract a baby fisher from a tree cavity in the woods was assembled. As the sun began to set and it started to rain, the kit would be hard pressed to survive the night without the warmth and nurturing of its mother. Efficient climbers, female fishers occupy dens deep in tree cavities high above the forest floor to keep their young safe from predators. Retrieving this kit was not going to be easy, but knowing the location meant they had a chance. As the rain grew heavier, crew members hiked to the den and over the next four hours Dr. Thompson was able to climb the tree, verify via camera that the lone kit was still alive, and chisel a hole large enough to extract it. It was taken to the Fresno-Chaffee Zoo in the early morning hours, where Dr. Lewis Wright waited, prepared to accept and care for the orphan.

Over the next three months, the male kit was hand raised by the zoo staff. While its eyes were still closed, the kit was fed four times daily. Once its eyes opened, the kit was kept in a solitary quarantine facility to limit human contact and reduce risks of infectious disease. While this may seem a rough beginning, Dr. Wright was aware that the priority was to return the animal to the forest and that minimizing human contact would increase his overall chance of survival.



**F04 peeks out from den in 2007.**

On July 27, Dr. Wright brought the animal back to the forest and was met by KRFP crew who placed it in a large, enclosed pen they had built on the edge of F04's old territory. The pen is constructed to allow KRPF crew members to approach unseen to deliver food items and is equipped with surveillance cameras to monitor the kit's health and to record his progress in learning how to hunt. In late September, when young fishers typically leave their mother, if he has successfully learned to hunt a variety of prey, the pen door will be opened and the young fisher will be allowed to return to the forest. M22 will wear a radio collar, similar to his mother's, enabling the KRFP crew to monitor his movements and document his success. It's a tough world out there for young fishers, particularly males, but this young orphan has managed to survive the death of his mother and we hope for the best once he leaves our protection.

Fishers are solitary wide-ranging animals capable of traveling 5-10 miles in a day and agile enough to move easily throughout the forest canopy, leaping between limbs in pursuit of squirrels



**M22 in new pen looking at camera**

or to escape predators. Weighing between 5 and 10 pounds, they are efficient predators, capable of catching and killing nearly any animal their size or smaller. Once found in coniferous forests from British Columbia to the southern California, fishers in the Pacific states are now limited to several small, isolated populations. In California, they are only found in the Klamath/Siskiyou region near the Oregon border, in the coastal forests near Arcata, and south of Yosemite National Park. Their decline throughout the 20<sup>th</sup> century has been related to a combination of trapping and habitat loss following the gold rush, logging, and development. Currently, fishers are listed as a candidate species under the California Endangered Species Act, meaning that they are seen as warranting protection and their status is currently being reviewed.

Fishers' problems are further complicated by their reliance on dense forests for den and resting sites, cover, and movement. Fires in these forests have been suppressed for many decades and as a result, these forests are filled with small trees, shrubs, and downed logs; conditions that lead to the large fires now seen and feared every summer. This puts public land managers such as the US Forest Service in a bind; they need to find ways to reduce the amount of fuel in the forest in order to lower the risk of wildfire and protect people and property while at the same time not harming threatened species such as the fisher or spotted owl that rely on these dense forests.

To find a way out of this catch-22, the US Forest Service Pacific Southwest Research Station initiated the Kings River Fisher Project (KRFP) in 2007. Under the supervision of Dr. Craig Thompson and Dr. Kathryn Purcell, the KRFP crew uses a combination of live trapping, radio-telemetry, scat-detection dog surveys, and remote cameras to document the fisher density, habitat use, movement, reproduction, and survival on the Sierra National Forest. Through a combination of daily fieldwork and laboratory analysis, they are identifying what aspects of a forest landscape are important to fishers and looking to answer questions such as how the fuel loads can be reduced while maintaining a healthy Sierra fisher population. Once researchers understand how fishers use the forest landscape, they can help guide land managers to strategically reduce fuel loads in ways that may reduce the spread of a wildfire but not stop a young fisher from establishing his or her own territory.

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