

ENDANGERED SPECIES

Wayward Grizzlies Spark Debate

JACKSON, WYOMING—With winter hibernation just around the corner, grizzly bears here are foraging obsessively for their favorite foods: whitebark pine seeds, abandoned elk carcasses, and, sometimes, sheep. This fall, ranchers in the Greater Yellowstone area are on alert for stray grizzlies, for in the past few months a surprising number of bears have wandered onto grazing land outside their normal haunts. In August and September, for example, four bears were suspected of killing 120 sheep southeast of the town square in Jackson, in country without a confirmed grizzly sighting for 40 years. "I was flabbergasted that we took four bears from that location," says Dave Moody, large predator coordinator for the Wyoming Game and Fish Department. "Grizzly bears keep showing up, more and more, in places we haven't seen them," agrees Richard Knight, director of the Inter-agency Grizzly Bear Study Team, who cites other recent unexpected grizzly appearances up to 50 kilometers outside the Yellowstone-centered recovery area.

Conflict between grizzlies and livestock is not new, but the high incidence of stray bears is fueling a stormy debate over whether the number of grizzlies in the contiguous 48 states has increased to the point that they should no longer be listed as a threatened species under the Endangered Species Act (ESA). The U.S. Fish and Wildlife Service (USFWS), which for 21 years has been trying to coax grizzlies back from the edge of extinction, sees the tracks of the wayward bears as signs of impending victory. "The fact that we're seeing these increased conflicts means that there's an increase in the number of bears," says Chris Serveehnn, grizzly bear recovery coordinator for the USFWS. Agrees Knight, "The number of grizzly bears keeps going up. We're close to meeting recovery criteria."

But conservationists counter that the conflicts are not due to a booming bear population, but to deteriorating habitat that is forcing the animals ever farther afield. "An expanding range does not necessarily mean a growing population. The crux of the argument is how many bears we have," says Franz Camenzind, director of the Jackson Hole Alliance for Responsible Planning.

And that's just the problem: Grizzlies are almost impossible to count, because they travel under tree cover and roam home ranges of up to 1600 square kilometers. In the Yellowstone region, managers estimate population each year by counting the number of females with cubs sighted during dozens of observation flights. This year, they have already spotted 33 such groups—more than twice as many as last year, and significantly

higher than the 24 seen 5 years ago. "We're seeing an increasing number of bears, more cubs, and more females with cubs than ever," says Serveehnn. In a recent paper in the *Journal of Wildlife Management*, Knight and a co-worker estimate that a minimum of 280 bears and a maximum of 610 now live in the Greater Yellowstone area; in 1986, the official minimum estimate was only 133 bears.

Those numbers depend on counting meth-



Following his nose. Yellowstone's grizzlies following tempting scents—including that of sheep—are gradually expanding into new ranges, and more are being counted.

ods, however—and the methods are flawed, charges biologist David Mattson with the Biological Resources Division of the U.S. Geological Survey. "It's an artifact of increased search effort—it reflects nothing about the population," he says. After analyzing population data and habitat between 1976 and 1992, Mattson concludes in a paper in press in *Biological Conservation* that the 2% to 5% increase can be ascribed entirely to more flying time and a shift in the bears' behavior, leading them to forage on open slopes where they are easily spotted from the air. "The most defensible analysis of the data suggests that there are no more bears now than there were in 1975"—most likely about 300, he says.

Such wrangles over bear numbers focus on Yellowstone, even though most biologists agree that northern Montana actually has more grizzlies, perhaps 600 to 900. But managers there have had fewer resources with which to monitor bears, and so biologists have focused on Yellowstone for signs of a recovered grizzly population. Indeed, the USFWS is already preparing a joint-agency plan outlining what's needed to manage the bears without the protection of the ESA—a key legal step toward delisting, which would return management responsibility to the states.

Not everyone is convinced that the bears are ready for such a step, however. Even the existing grizzly recovery plan has drawn a legal challenge from about 40 conservation groups, who charge that the plan lacks "objective criteria" for monitoring bear populations and pays too little attention to habitat loss. In fact, shifts in habitat resources may be the real reason behind the increased grizzly-livestock conflicts, says Mattson. For example, recent years have seen sharp decreases in whitebark pine seeds, a critical high-fat food in the fall. This shortage sent more bears foraging in lower elevations, closer to people and sheep, says Mattson. And once bears become accustomed to human food sources, they may continue to prefer them even if the seeds come back, as has happened this year, says Mattson. "Do we have an increasing population, or a slight redistribution of bears as the result of changes in the quality of food available?" he wonders.

But Moody dismisses the idea that scarce resources are driving the grizzlies to wander. "There's no evidence that we have deteriorating conditions in the majority of the occupied habitat," he insists. The bears themselves will soon be slumbering beneath the snow, but this debate isn't likely to be buried with them.

—Bernice Wuethrich

Bernice Wuethrich is a science writer in Washington, D.C.

ENERGY LABS

Livermore Settles Audit for \$2.7 Million

The University of California has paid the U.S. government \$2.7 million after an investigation of Lawrence Livermore National Laboratory found a pattern of shifting money among projects to mask cost overruns. "Mischievous is a kind word for what they were doing," says one investigator. The accounting discrepancies were uncovered during an investigation by the Justice Department, after a 1993 report by the Department of Energy's (DOE's) inspector-general and a 1994 audit by the University of California flagged potential problems. The university runs the 44-

year-old nuclear weapons lab, which is owned by the federal government.

The investigation involved the budget of the lab's applied technology program within the national security directorate. The government alleges that between 1990 and 1993, Livermore managers drew on funds from some projects to cover overruns on others. "Unused money should have been returned to DOE," one investigator says. Program officials also borrowed money from one project to finance other projects awaiting more government funds, a move that is