

YELLOWSTONE PREDATORS DRAW A BIG CROWD

By NORM BISHOP

THE THIRD BIENNIAL Scientific Conference on the Greater Yellowstone Ecosystem was held at the Mammoth Hot Springs Hotel from Sunday, September 24 through Wednesday, September 27, 1995. Entitled "Greater Yellowstone Predators: Ecology and Conservation in a Changing Landscape," the conference was attended by more than 200 researchers, managers, and the public.

Monday morning, Superintendent Mike Finley welcomed the conferees, and in his opening remarks highlighted the need for all researchers and managers to take an active role in educating the public on how nature really works. His examples included the roles of fire and predators in natural ecosystems. Dan Janzen illustrated his keynote talk on the role of predation in ecosystems with three stories spanning Asia, Australia, the Serengeti, and the New World. Nine speakers then addressed multiple species interactions, from lake trout and cutthroat trout, to red foxes and coyotes, to complex communities of carrion beetles.

At the Superintendent's international luncheon, keynote speaker Stephen Herrero, author of the well-known book *Bear Attacks: Their Causes and Avoidance*, spoke on the topic of "wild love"—the dedication and commitment to the wild that he sees as a common characteristic in wilderness and wildlife researchers throughout the world. Following lunch, four speakers addressed behavior of predators, from mountain lion killing methods to helping behaviors of coyotes to restored wolves. Then a session of natu-

ral history addressed a variety of species: ravens, tiger salamanders, mosquitoes, and mid-sized carnivores (lynx, wolverines, fishers, and martens). Scientists discussed

value of Yellowstone trout, and changing public attitudes toward wolves. Two speakers treated physiological ecology: energetics in marten, and nutritional ecology of bears. Others discussed population dynamics and ecology with two talks relating to bald eagles and one to the influence of ungulate carrion on coyote behavior and demographics.

The first two very busy days of the conference concluded with the poster session, the evening banquet, and the presentation of the A. Sarker Leopold Lecture. Posters, which were displayed for most of the conference, were presented on 11 topics, ranging from aquatic insect predators to a test of the attractiveness to bears of the alternative snowmobile fuel

rape ethyl ester. World renowned wolf biologist L. David Mech presented the A. Sarker Leopold Lecture, "The Value of Long-term Carnivore Studies in National Parks." The proceedings of the conference will be published with details to be printed in the quarterly *Yellowstone Science*.

On Wednesday, both the National Park Service and the Northern Rockies Conservation Cooperative co-hosted a special symposium, "Carnivores in Ecosystems." This symposium featured a series of invited speakers exploring carnivore topics at greater length (only the authors who spoke follow, though many had coauthors). University of California, Santa Cruz, Assistant Professor Steve Minta introduced the symposium with a discussion of Yellowstone as a model system for understanding carnivores, and asking, "Is There a Theory of Carnivore Ecology?" Moderator and Yellowstone Center for Resources Director John Varley



Yellowstone researchers radio collared this large male mountain lion in the Paradise Valley, north of the park, as part of a long-term cougar population dynamics and social ecology study that they reported on at the conference.

techniques of inventorying and monitoring carnivores, and detecting rare or difficult-to-observe mid-sized carnivores.

At a special wolf update session on Monday evening, Yellowstone wolf project leader Mike Phillips presented an overview of the current status of wolf recovery in Yellowstone, and then introduced cinematographer Bob Landis, who showed his footage of the newly arrived Yellowstone wolves interacting with coyotes, grizzly bears, elk, and bison.

The Tuesday morning keynoter, Steve French, M.D., shared recent applications of molecular DNA techniques to predator ecology, systematics, and conservation, especially that of bears. The topic then turned to conservation biology and management with nine speakers discussing management of grizzly bears, gray wolves, and mid-sized predators. Three speakers addressed social science: pelican control in early NPS policy, the economic

PHOTO BY KERRY MURPHY, HORNER WILDLIFE RESEARCH INSTITUTE

introduced the morning session on greater Yellowstone carnivores. *Yellowstone Science* Editor Paul Schullery traced the history of carnivores in the Yellowstone region, Wildlife Biologist Frank Singer quantified the carnivore prey base, and Interagency Grizzly Bear Study Team Leader Dick Knight said the bear population is showing signs of saturation in Yellowstone National Park and that we need to learn how better to manage people in the Yellowstone area. Lion researchers Ian Ross and Kerry Murphy spoke on their respective cougar studies (see photo), and U.S. Fish and Wildlife Service Biologist Ed Bangs listed the big issues in wolf restoration, including their feared impacts on livestock, big game hunting, and public land use practices. Coyote researcher Bob Crabtree listed studies of sympatry between coyotes and wolves, and between coyotes and red fox, showing temporal avoidance in the latter two. Zoology professor from the University of Wyoming Steve Buskirk revealed how mesopredators (small mammals of a few pounds or less) are important aesthetically and spiritually, affect prey populations, scavenge, disperse seeds, and structure populations of nonprey species, including each other.

The afternoon session, entitled "The Utility of Experimental Research for Ecological Theory, Conservation, and Management," focused on theoretical issues. Fred Allendorf, University of Montana Professor and biologist, explored genetic considerations—interbreeding, crossbreeding, and inbreeding—as they affect restoration and management of predators. Jackson Hole elk herd expert Mark Boyce assessed models for conservation and management. Steve Minta spoke on refocusing experimental questions and scales, and offered recommendations for research and management. Minta and conservation biology author Michael Soule assessed carnivore recovery and conservation in North America. The session was summarized by Tim Clark, Director of the Northern Rockies Conservation Cooperative), with final remarks by John Varley. Symposium orga-

nizers also intend to publish these papers in book form with *Yellowstone Science* also carrying news of that publication.

The fourth conference in this series will be held in 1997. In recognition of the 125th anniversary of the creation of Yellowstone National Park, which will be celebrated that year, this conference will focus on

people and their role in greater Yellowstone. Announcements will be forthcoming in about 8 months.

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