

BioScience Focuses Issue on Yellowstone

A "representative sampling of Yellowstone fire articles that had appeared by the summer of 1989 went to all NPS units from Yellowstone Park Supt. Bob Barbee on Aug. 15, 1989. Since that time, an October 1989 issue of **BioScience** (Vol. 39 No. 10) has devoted 44 pages to the fires.

"Fire Impact on Yellowstone," by 13 authors including many NPS scientists, summarizes the findings of the Greater Yellowstone Coordinating Committee (representatives of the 6 NFs and 2 NPs that comprise the Greater Yellowstone Area). The complete report is available from the GY Coordinating Committee, Division of Research, PO Box 168, Yellowstone NP, WY 82190. The report evaluates the ecological impacts and implications of the fires in relation to watersheds, fisheries, wildlife, vegetation, soils, and biological diversity, considers the need for interventions such as reseeding (to prevent erosion), reforestation, and supplemental feeding of ungulates, makes recommendations for short- and long-range programs, and considers alternatives and options for future fire management plans.

Romme and Despain provide "Historical Perspective on the Yellowstone Fires of 1988;" Knight and Wallace discuss "Issues in Landscape Ecology" in the light of the fires; Minshall, Brock and Varley write about "Wildfires and Yellowstone's Stream Ecosystems," and "Drought, Fires, and Large Mammals" are the subjects of an article by Singer, Schreier, Oppenheim, and Garten.

Paul Schullery considers the history of fire policy in the USFS and NPS and the problems arising from the fact that these policies were practically unknown outside of specialized scientific and conservation communities.

"It has proven difficult," he writes, "for the public to separate the scientific interest and aesthetic wonder of their (the fires') ecological effects from the conservation of their political and economic effects."

Clearly, a job for interpretation.

Romme and Despain reconstruct prehistoric fire records, showing that comparable fires occurred in the 1700s, and conclude that the recent 30-odd years of attempted fire exclusion practiced by the USFS and NPS only served to "delay the onset of a major fire event, which probably was inevitable given the nature of the fuels complex that had developed since the last extensive fires in the 1700s."

Knight and Wallace take the landscape perspective, one they present as "necessary in resolving the difficulties of natural area management." They consider temporal and spatial scales in Yellowstone, temporal

and spatial patterns in terrestrial vegetation, shifting animal distribution, land-water-nutrient interactions, and research opportunities.

Minshall, Brock, and Varley maintain that the fires' effects "are likely to be most pronounced in headwaters." Singer, Schreier, Oppenheim, and Garten found 261 large mammals dead directly after the fires - less than 1 percent kill; but winterkill of elk following the fires was 50 percent in one district (the Madison-Firehold winter range, where fire had affected 41 percent of the area); calf weights were down and mortality rates were up significantly the following spring (1989).

In all instances, the authors conclude on a note of recognition that the Yellowstone fires, for all their profoundly jarring notes, represent one of the rare opportunities in the history of modern ecology to examine the effects of fire.

Articles by RMR Chief Scientist Dan Huff and by Yellowstone NP Science Writer Paul Schullery appear in the GWS FORUM (Vol. 6 No. 3) and deal with the public perceptions of the Yellowstone fires. Huff quotes the **Wall Street Journal's** assessment of the fires' management ("mindless bungling") and adds a quote from Thomas McGuane: "Anything that makes the world look better to animals and worse to humans is probably good." Huff ends with another quote, this time from Texas Agriculture Commissioner Jim Hightower, rejecting fence-straddling on the issue as intellectually untenable. "There is nothing in the middle of the road," said Hightower, "but yellow lines and dead armadillos."

Schullery's article deals with "Lessons and Hopes from the Yellowstone Fire Media Event." He concludes that the medium IS the message and that "we must be prepared to work with, not against, the established conventions of modern media." The challenge, says Schullery, "is to inspire readers (and viewers) to a fuller appreciation of what the images really mean."

David Snepenger, an associate professor at Montana State University's college of business, submitted a report on Nov. 6, 1989, on marketing Yellowstone NP after the fires of 1988. According to Schullery and Varley, who forwarded the report to **Park Science**, the majority of respondents to Snepenger's visitor survey thought the park was severely to moderately burned. However those that had been to the park since the fires thought the park was not as burned as those who had not been there.

Snepenger concludes that NPS "needs to present an enduring message to visitors about the role that fire plays in a forest and the managerial guidelines under which the Park Service operates."