

Latest Threat to Yellowstone: Admirers Are Loving It to Death

By WILLIAM K. STEVENS (NYT) 2289 words

Published: September 13, 1994

A HIKER to the top of Mount Washburn in the heart of Yellowstone National Park may find it hard to believe that the wild land stretching out before him could ever be in serious jeopardy, so eternal does the spectacle seem.

From 10,243 feet, where marmots scurry about above the timberline, distant slopes garbed in evergreen forests alternate with the gold-beige velvet of grassy inclines and alpine meadows. Deep gorges, cascading cataracts and broad rivers cut through a sweeping vista punctuated by blue lakes and bright green mountain marshes. Close up, Yellowstone's incomparable geysers spout and its hot pools bubble, and the land abounds with the elk, bear, moose, deer, antelope, bison and bighorn sheep that have earned it the nickname "America's Serengeti."

The magnificent, world-famous landscape still ranks as the most nearly intact of big American ecosystems outside Alaska. But scientists and conservationists say that even Yellowstone's ecosystem is under increasingly serious threat from human pressure -- much of it, they say, exerted by the region's more committed admirers.

The park itself is merely the protected core of a vast, seamless ecosystem seven times as large. As big as West Virginia, it includes not only the jagged ranges of the Gallatin, Beartooth, Absaroka and Teton Mountains, along with the national forests that carpet their slopes, but also public and private lands that lie beyond them. "Everything in view is part of the greater Yellowstone ecosystem," Jim McKown, the park ranger who lives in his observation post at the top of Mount Washburn, says as he gazes into the distance. It is on private lands far from here, out on the ecosystem's ramparts, that the latest threat to its integrity has appeared. There, scientists and environmentalists say, a private real estate boom fueled by the desire of people to live close to Yellowstone's natural charms is eroding those charms and punching deep salients into the wild.

People "are literally loving the place to death," says Dr. Patrick Jobes, a sociologist at Montana State University in Bozeman, on the northern fringe of the ecosystem, who has joined with ecologists to study interrelationships among the region's people, economy and environment.

Some ecologists fear that unless it is controlled, a proliferation of subdivisions on private land will disrupt rhythms on which the ecosystem's biological health depends. Among the features believed to be at particular risk are these:

*River-valley habitats, which contain some of the ecosystem's richest assortments of

plant and animal species.

*The purity of some of the region's cold, clear rivers and streams.

*Migration routes traveled by elk and other big ungulates as they move from the high country to lower elevations when winter approaches -- not to mention the winter habitat itself, much of which is on private land.

*Habitat of the threatened grizzly bear, the creeping loss of which is already forcing the scarce bears into no-win conflict with people.

This new hazard joins that of mining, logging, grazing and petroleum drilling in national forests and other federally owned lands outside Yellowstone and the adjacent Grand Teton National Park, which are themselves off limits. The latest alarm along these lines involves a plan to open a gold mine near Cooke City, Mont., in the Gallatin National Forest just outside the Yellowstone park borders. Environmentalists and some politicians vehemently object, for fear that poisonous waste, which must be contained forever, will ultimately escape from the mine and ruin some of the ecosystem's most beautiful streams.

But such exploitation of Federal lands may no longer be the most serious threat. Extractive industry has been far eclipsed, economists say, by a new economy founded on outdoor recreation and on the earnings of footloose businesses and residents, especially retirees, attracted by the natural wonders here. The resulting growth in population, development and general human traffic may now be responsible for the most intense ecological pressure.

These new realities are also changing the political equation that has governed the long-running struggle over Yellowstone's future. The dispute has commonly been cast as one between adherents to the status quo, who hold that the land is there for people to exploit, and conservationists, who say the ecological health of this international treasure should come first. Now the conservationists have an economic argument of their own: destroying the natural attractions on which the region's economy is now based would kill the goose that lays the golden egg.

The struggle's center of gravity is shifting perceptibly away from the Federal level, where it has become highly polarized, toward the state and local levels where private land-use decisions are made. There are signs that some early progress is being made toward reconciling the competing claims of ecology and economy. *Getting It Right in Yellowstone*

Conservationists believe the ecosystem is still robust enough that it can be sufficiently protected, and the new regional economy with it. "Not only can we get it right in Yellowstone, not to get it right would be an enormous black eye," said Louisa Willcox, the program director of the Greater Yellowstone Coalition, a decade-old alliance of 110 environmental organizations based in Bozeman.

The boundaries of the ecosystem are necessarily fuzzy, varying according to who defines the system and on what criteria. But clearly the moist, hilly Yellowstone plateau and attendant mountain ranges stand out from the adjacent, drier plains in many ways. They display a rich and characteristic assortment of flora and fauna. The biggest elk population in North America, more than 90,000 strong, lives in greater Yellowstone, as does the largest herd of free-ranging buffalo and one of two main populations of grizzly bears remaining in the contiguous 48 states. The bears, listed by the Federal Government as a threatened species, number about 250 here.

The extensive ranges of elk and bears, whose travels help knit the ecosystem together, are one of its major defining features. So is its rich and characteristic assemblage of plant communities, dominated by forests. Douglas fir blankets lower elevations, lodgepole pine (by far the most common vegetative cover) rules the middle elevations, and Englemann spruce, alpine fir and whitebark pine drape the harsh regions just below the timberline in green festoons misshapen by the wind.

The region contains many smaller-scale ecosystems, and both they and the larger landscape undergo constant change at the hands of naturally recurring forces like insect infestations, lightning-set fires and climatic fluctuations. These rearrange vegetation, destroy old habitats while creating new ones and redirect the wanderings of wildlife. They are the agents of regeneration and biological variety.

Seemingly devastated ridges in Yellowstone testify to the power of the great fires that ecologists say occur unavoidably every two or three centuries. Countless acres of naked lodgepole pines, killed by the unstoppable blazes of 1988, still look gray and lifeless from a distance. But up close, new trees up to two feet tall can be seen poking their heads up.

In ways both subtle and obvious, humans are altering the terms on which these fluxes of nature take place. Much of Yellowstone's plant life, for instance, now consists of exotic Eurasian species that have spread across the continent, often displacing native species; hikers nearing the summit of Mount Washburn are greeted by dandelions, invaders from Europe. In another example, clear-cutting of timber in the national forests has eliminated the soil nutrients ordinarily replenished by fires, eliminated habitat for bird species that nest in dead trees and deprived streams of the logs that help create fish habitat. Logging roads have also cut the habitats of deep-woods animals into fragments. Regiments of hikers and snowmobilers are disturbing the back country in growing numbers.

And the wolf, Yellowstone's top predator and former keystone of its food pyramid, has long since been exterminated from the ecosystem. An experimental attempt to re-introduce it is to be made later this year or early in 1995. 'For Sale' Signs in Rich Ecosystems

Humans' impact on the region's rivers and streams and the species-rich land along them is creating special concern. They appear to be the biologically richest parts of the ecosystem, and they happen to be where people like to congregate and build. Ecologists say stream-side real estate development could foul and heat waters now clean and cold

enough for the region's prized trout -- magnets for droves of well-heeled fly-fishers -- as well as innumerable other aquatic species.

And the development is there. Subdivisions and "for sale" signs dot private property, for instance, along the Yellowstone River south of Livingston, Mont., along the North and South forks of the Shoshone River west of Cody, Wyo., and along the edges of forests outside Bozeman. The Snake River watershed outside Jackson, Wyo., in the ecosystem's southwestern quadrant, has long felt development pressures.

While private lands like these account for less than 20 percent of the ecosystem, their ecological importance is outsized, scientists say. In addition to their potential impact on stream quality, they contain a disproportionate share of riverside and low-elevation habitats for a wide range of wildlife -- from elk, moose and bears to eagles, ospreys, trumpeter swans and countless other birds. One especially big worry: since winter weather is a chief factor in regulating the size of ungulate populations, biologists fear that a return of severe winters would cause high mortality if migration routes from high country in the national forests and parks to lower elevations outside them are blocked by subdivisions and fences.

Already, conflicts between grizzly bears and people are taking place along the developing river corridors west of Cody. Bears forced by this year's hot, dry summer to forage in the valleys (sometimes at residents' garbage cans) are being trapped and released elsewhere. But wildlife officials expect that some will inevitably be killed, as often happens in bear-human confrontations. Even a single death is no minor threat to such a small population.

It seems certain to many scientists that the human impact is substantial, but just how substantial is not known. "Certainly, the impression among those who have lived here 20 or 30 years is that it's just black-and-white clear that the trends are very harmful to the integrity of the system, but there are no good quantitative measures of all that," says Dr. Tim W. Clark, a Yale University conservation biologist who has long lived and worked in Jackson.

Many ecologists and conservationists, including the Greater Yellowstone Coalition, believe the best way to attack the problem is to manage the ecosystem as a whole. The overriding goal would be to maintain its biological diversity and the natural processes that make it function, while allowing ecologically friendly human use of its resources. Rather than emphasizing the management of big animal populations in limited areas of the ecosystem, as has generally been done, the welfare of all species from bugs to bears -- and humans -- would be promoted simultaneously throughout the system.

Many agree that for now, at least, this can be done only at the state and local levels, with Federal help where it seems appropriate. And while a number of local communities have begun to rein in development in general, others have enacted regulations requiring development along rivers to be set back far enough from the bank so that riparian habitat and water quality can be preserved. This effort recently suffered a major setback, however, when county officials rejected such a plan for the Yellowstone River south of

Livingston, where it flows through many miles of private property north of the park. Meanwhile, environmentalists are also negotiating conservation agreements with landowners along some of the ecosystem's rivers. Enlisting Help From Ranchers

On another front, Mike Clark, the executive director of the Greater Yellowstone Coalition, is conducting exploratory discussions with ranchers on ways to protect valuable wildlife habitats. Although grazing has some harmful ecological effects, ranchers have preserved habitats and migration routes for many animal species simply by keeping the lands they own open and undeveloped. The object now is to find ways to enable ranchers to keep their land intact in the face of intense pressure to sell to developers.

"In the Yellowstone area, the breakup of ranches may be the biggest threat to biodiversity there is," said George Frampton, the Assistant Secretary of the Interior for fish, wildlife and parks. "So there, the Federal Government might want to continue to subsidize grazing and keep large tracts of land together because the alternative for wildlife is worse." Typically, ranchlands are an amalgam of public and private property.

Under a law signed last year by President Clinton, the Yellowstone coalition is also instrumental in exchanging tracts of private land lying athwart a major elk migration route within the Gallatin National Forest for other lands outside the ecosystem.

That is how the effort to preserve greater Yellowstone is now proceeding: not according to some grand, all-encompassing blueprint, though blueprints do exist, but step by step, in a hard-slogging campaign at many governmental levels to save the ecosystem one piece at a time.

The ecosystem, an area of approximately 18 million acres, is a network of Federal, state and private lands. The boundaries, originally defined by the 5-million-acre range of the Yellowstone grizzly bear, were established by the Greater Yellowstone Coalition to study and preserve the complex relationships among plants, animals, geology, hydrology, topography and geothermal activities in the region. The map indicates a variety of ways humans have had an impact on the land. (Sources: Greater Yellowstone Coalition; Great Divide Graphics)

[Copyright 2005 The New York Times Company](#)