

THE IMPORTANCE OF THE GREATER YELLOWSTONE ECOSYSTEM

BY JOHN VARLEY PHOTO BY FAITH MALPELI

Beginning in the late 1860s, the first pioneering scientists entering what would later become known as the Greater Yellowstone were astounded at what they observed. As this news trickled out to the civilized world, more than several scientists made stunning pronouncements often characterizing the area as the world's (or North America's, or our nation's) greatest natural laboratory. Coming from the scientists themselves, who have always been more careful in language use and abuse than most people, this helped make an impression on politicians, policy makers and the public that fostered excitement amongst a society who saw little value in "the worthless wilderness."

By 1872, the excitement led to a coalition of "strange bedfellows," such as the powerful railroad companies, those in the fledgling conservation movement, hunters and fishers, interests campaigning to turn their Territories into States, mining interests, and notably for our purposes, scientists. All came together to support passing a law making the core of the Yellowstone region the world's first national park. Two decades later a similar coalition, this time led by Theodore Roosevelt, created the first national forests arranged in a buffering ring around Yellowstone.

To be sure, the leading reasons for removing this expansive area from the Public Domain—which was at the time a land designation that meant "to be disposed of..." by the federal government—into newly devised protected categories of national parks and forests, was not to establish a national laboratory. But the natural laboratory idea was a reason, and thus a factor in what is now widely seen as far-sighted planning and ingenuity by congress and the executive branches.

Today, with the wisdom that comes from hindsight, history, and a century and a half of scientific discovery, we can celebrate the actions of the forefathers for protecting the great natural laboratory, but we also know that it is even greater than they ever imagined. From the emerging information on the "Yellowstone Hotspot" we now know we have a window to the very core of the earth; from the extreme life in hot pots and geysers we can peek into the very cradle of life on earth and better speculate about life in the universe; from the warp-speed world of biotechnology we have Yellowstone sourced genes that have already improved the lives of millions of people; as the site of the first Euro-American attempt intended to forge compatibility and integration of humans and wildlands, and thus a grand experiment that began in 1872, and continues to unfold today. The outcome of the experiment is unknown but will surely go through its toughest test in the 21st century. And where better to test than in the nation's premier natural and pristine laboratory? It is a place that has changed the least, and maintained its original natural architecture, of any area in the U.S. As proof of this statement we could cite Yellowstone Park's designation and confirmation as a bona fide Federal Laboratory, in the same sense as Lawrence-Livermore or Los Alamos Federal Laboratories.

The net result of these superlatives about the Greater Yellowstone

Ecosystem (GYE) is that people from all around the globe look to the "Mother Park" for guidance, precedence, and frankly, inspiration. The world now has over 2,200 national parks or equivalent reserves and their park managers look to Yellowstone for leadership whenever there is a large challenge. The global nature of our societies and environments means that time is now. A large proportion of the Northern Hemisphere's industrialized world lies along, or in close proximity to the 45th Parallel—half way between the equator and the North Pole—as does the GYE. Consequently, when global climate change or air pollution questions arise, the media and others want to check the pulse and take the temperature in the GYE as a way of checking how serious things really are, and what managers in the area are doing about the problems, and how the public and politicians are reacting. This kind of attention can be burdensome and certainly the managers of the region might like it better if it were otherwise, but the national and global attention is a reality of the GYE (in the past 6 weeks the New York Times has carried two articles and two editorials on GYE topics, which is not atypical).

So while the GYE is a great public attention and focal point, so are the opportunities available to residents and managers of the area. For residents, it might be simply to have one of the most prestigious addresses in the country, or it might lend itself to activism associated with one of the many public issues in the region. For managers, whether they be government, political, or associated with area resorts, it could be viewed as a chance to get your name in the New York Times, or viewed as an awesome responsibility for being one of the stewards of one of the most famous and loved places in the world. Either way, residence in the GYE is something unique and different and because, perhaps, hundreds or thousands of small and large decisions are made monthly that affect the well-being of the area, it makes much sense that they be informed decisions. In our society, the most informed decisions are those that are based on fact, and scientific facts are the coin of this particular realm, and broadly considered the very best facts available. To those who claim scientific facts don't account for human values and are therefore flawed, we would counter that analyzing and characterizing human values is also a scientific pursuit. The best facts account for human values and the scientific evaluation of the natural, physical, and chemical sciences.

So what all of this means is that for nearly a century and a half the GYE has been an important and valued natural laboratory for a host of very good, important, and valued reasons, and while those reasons might evolve, or even change over time, the area's fundamentals are sound and have yet to change significantly. If it can be considered the best and we know that the worst are heavily studied, what better place could we find to scientifically monitor, analyze and define the state of the world's environment?

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