

Introduction to The Role and Effect of Fire in Greater Yellowstone

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It's been a once in a career type of experience, to be able to watch the saga of Yellowstone's fires unfold. In the regional office I have been removed just enough from Yellowstone policy and decision-making to be able to watch and wait with relative impunity from personal attack. When the press calls I can always say "you'll have to check with John Varley for the details but this is pretty much the way we see it from here...." So I have enjoyed being some distance from the inflammatory barbs levied by Park Service critics yet been close enough to the action to benefit from the mind stretching stimulated by, perhaps, the biggest controversy in Park Service history so far.

Perhaps not by coincidence, the previous top seed in NPS resource management controversies also originated in Yellowstone. That controversy resulted in the 1963 Leopold Report¹ which has served as the thesis for Park Service resource management for the last quarter century. Some say the Leopold Report is outdated...being based on pre-1950 conventional thought. I would argue that point and contend that a scholarly review of *all* assessments of the resource management policies of the National Park Service conducted in the last 30 years or so—and there have been many, three separate ones were ongoing in 1988—have resulted in essentially the same recommendations. In fact, the recently released NPCA "Gordon Report"² said:

The concept of "naturalness" is not a simple and comprehensive guide for management. It will not anywhere substitute for identification of well-

defined, park-specific, and research-based objectives.

I do not believe that the most often cited "faults" in National Park Service resource management can be rightly attributed to the Leopold recommendations, or to lack of information, or even to inadequate staff and funds. And I will explain.

A 1972 paper by Don Despain on "Fire as an Ecological Force in Yellowstone Ecosystems"³ stated the following:

....it should be pointed out that nature is amoral. Changes or events in a natural area are neither good nor bad, beneficial nor detrimental. Only in man-oriented value systems may these values be applied. Whether a particular event is beneficial or detrimental is dependent on the goals we set for ourselves. We must remember that our goals for a natural area of a national park are "...to conserve, perpetuate, and portray as a composite whole the indigenous aquatic and terrestrial fauna and flora and the scenic landscape." Natural fire is not destructive nor devastating, but quite necessary for the achievement of these goals.

I believe the key point here is the requirement for established goals to serve as a benchmark for determining benefit or detriment.

The Leopold advisory board quoted from a report produced by a committee representing eight nations at the First World Conference on National Parks in 1962. The board strongly concurred with the following statement:

Management is defined as an activity directed toward achieving or main-

taining a given condition in plant and/or animal populations and/or habitats in accordance with the conservation plan for the area. A prior definition of the purposes and objectives of each park is assumed. Management may involve manipulation of the plant and animal communities, or protection from modification or external influences.

Again, the reference is made to purposes and objectives. I firmly believe that it is in this realm that the greatest consternation over national park management has been nurtured.

That early '60s controversy that spawned the Leopold Report was, of course, control of Yellowstone's ungulate populations. I would venture a guess that any of the state game and fish agencies operating in the Yellowstone area would love to have the "problem" of managing, without interference, a herd of 30,000 elk. I also believe that each has the expertise to manage that herd to a given objective be it maximum sustained yield, optimum sex and age class distributions, or even maximum economic yields for recreation. No, these are not the egocentric claims of a frustrated wildlifer turned bureaucrat because I believe those same agencies would find it absolutely impossible to manage that herd through natural processes aloneeven without goals or objectives.

The "maximum sustained yield" goal is one based in fact! That is, measurable parameters. The natural population goal is one based largely in fancy. Sure, a natural population goal could certainly be iterated by a scientist, or group of scientists. But with the continuing controversy over herbivore/range

relationships among scientists, that iteration would necessarily represent a compromise of many viewpoints. Chances are that it might not resemble reality any more than most committee-designed products.

Well, before someone tells me I'm at the wrong symposium I'll return to the subject at hand: fire in the ecosystem. But just as in the ungulate scenario, without an established, understandable, and generally accepted goal we cannot assess the benefit or detriment of the fires of 1988. We can only apply the scientific method to look at measureable effects on ecosystem components and functions.

We will hear many discussions this week of the effects of the fires of 1988 on the various components and processes in the Yellowstone ecosystem. I would challenge you to consider, following each discussion, whether these impacts are good or bad in your own personal perspective. If we remember to do this only a few times I believe we will soon be faithful supporters of Don Despain's claim that nature is amoral and that good and bad reside only in the minds of man. And the benefits or detriments of the fires of '88 can only be measured against a set of objectives, or goals, established for the Yellowstone ecosystem.

It is those goals which, I believe, will and should be re-examined and reshaped for the next century. *But*, if we now accept the "natural process" goal established for Yellowstone over the last couple of decades and we listen to Bill Romme's⁴ fire history of the area, I believe we can have no other opinion except

to vindicate the National Park Service for remaining true to its objective. The Service successfully cooperated with nature as it pulled off a 200-year ecological event in our lifetime in the face of criticism whose incendiary character often exceeded that of the fires themselves. Sure, the *Wall Street Journal* called it mindless bungling....but as writer Thomas McGuane put it: *Anything that makes the world look better to animals and worse to humans is probably good.*

So my only regrets for the Yellowstone fires of '88 are limited to the impacts on last summer's visitors and the property of our park neighbors and the potential for crisis-driven policy changes. Even the cost is defensible. A hundred million or so dollars for a two or three hundred year event equates to a few hundred thousand dollars a year. Yellowstone Park spends more than that for toilet paper and much more than that to dispose of it. And most of us "parkies" still feel the resource should have a slight priority over visitation.

So even America's most trusted federal agency is not perfect. And the argument against "natural process" management is growing! I think history will show this philosophy to be one which dominated the second half of the twentieth century as a reaction to the heavy-handed manipulation policies of the first half of the century. It is an aspiration to what once was but can never be again. It is an attempt to assert man over nature while admonishing that very process. For the mere thought that a "natural ecosystem," that is, one without the *influence* of man, can be maintained by the *protection* of

man is an anthropomorphic and internally conflicting concept.

Again, the "Gordon Report" clarified Leopold et al. by saying:

Ecosystem Management, then, should focus on site-specific efforts to retain key resources directly serving park goals; creative solutions may not fit conventional wisdom about

aquarium metaphor, it is certainly the goldfish bowl of the Park Service with regard to perpetual public scrutiny. More so than any other national park, Yellowstone's management is influenced by the American public.

And for some unexplained, and obviously non-scientific reason, the Park Service switches thinking

the fisheries, politics established the goals. Fishing was to be allowed, encouraged, and managed for high yields of fish and fun. Capable scientists then gathered the information they needed and began to develop the prescriptions to meet those objectives. Application of those prescriptions was closely followed by intensive monitoring of fish, habitat, and fishermen in an effort to hone the program to the very cutting edge for maximizing sustained recreational yield. The program met its goals and was, therefore, deemed successful.

Let's compare quickly our goals for terrestrial population management. Perhaps songstress Doris Day had them in mind in the late '50s when she recorded:

Que sera, sera

What ever will be, will be.

The Future's not ours to see,

Que sera, sera.

I believe our national parks deserve more clearly iterated management objectives. The hunting programs—yes, perhaps even the grazing programs that some national parks have been created with—may be blessings in disguise. For they have provided the scientists and managers with a set of goals or objectives to manage for. And they have provided for the application of effective methods to achieve those objectives.

As you listen to the talks at this symposium, many of you will change or strengthen your own opinions as to whether the Park Service should actively manage ecosystems for obtainable conditions or should be content to guard our boundaries and minimize outside influences. Do not forget that

since many feel "parks are for people," we must always recognize the *inside* influences of our own visitors, entrepreneurial concessionaires, and the constant pressure for park "improvement" projects.

There's a lot of room between the extremities on this issue but I don't think many scientists will support a fence-straddling position as intellectually tenable. As Texas Commissioner of Agriculture, Jim Hightower, was quoted in *Time* magazine last week:

There's nothing in the middle of the road but yellow lines and dead armadillos!

Notes

1. Wildlife Management in the National Parks. March 4, 1963. Special Advisory Board on Wildlife Management for the Secretary of the Interior. A. Starker Leopold, Chairman; Stanley A. Cain; Clarence M. Cottam; Ira N. Gabrielson; and Thomas L. Kimball. IN *Reports of the Special Advisory Board on Wildlife Management for the Secretary of the Interior, 1963-1968*, pp 1-17. Published by the Wildlife Management Institute, Washington, DC. 1969. [Among others]
2. John C. Gordon, Dean of the Yale University School of Forestry and Environmental Studies, and Chairman of the panel appointed to review management policies for the National Park System. The report, commissioned by the National Parks and Conservation Association, was issued March 19, 1989.
3. Despain, Don. G 1972. Fire as an ecological force in Yellowstone ecosystems. Information Paper No. 16, Yellowstone National Park. Duplicated.
4. Romme, W. H. 1982. Fire and landscape diversity in subalpine forests of Yellowstone National Park. *Ecological Monographs* 52:199-221.

