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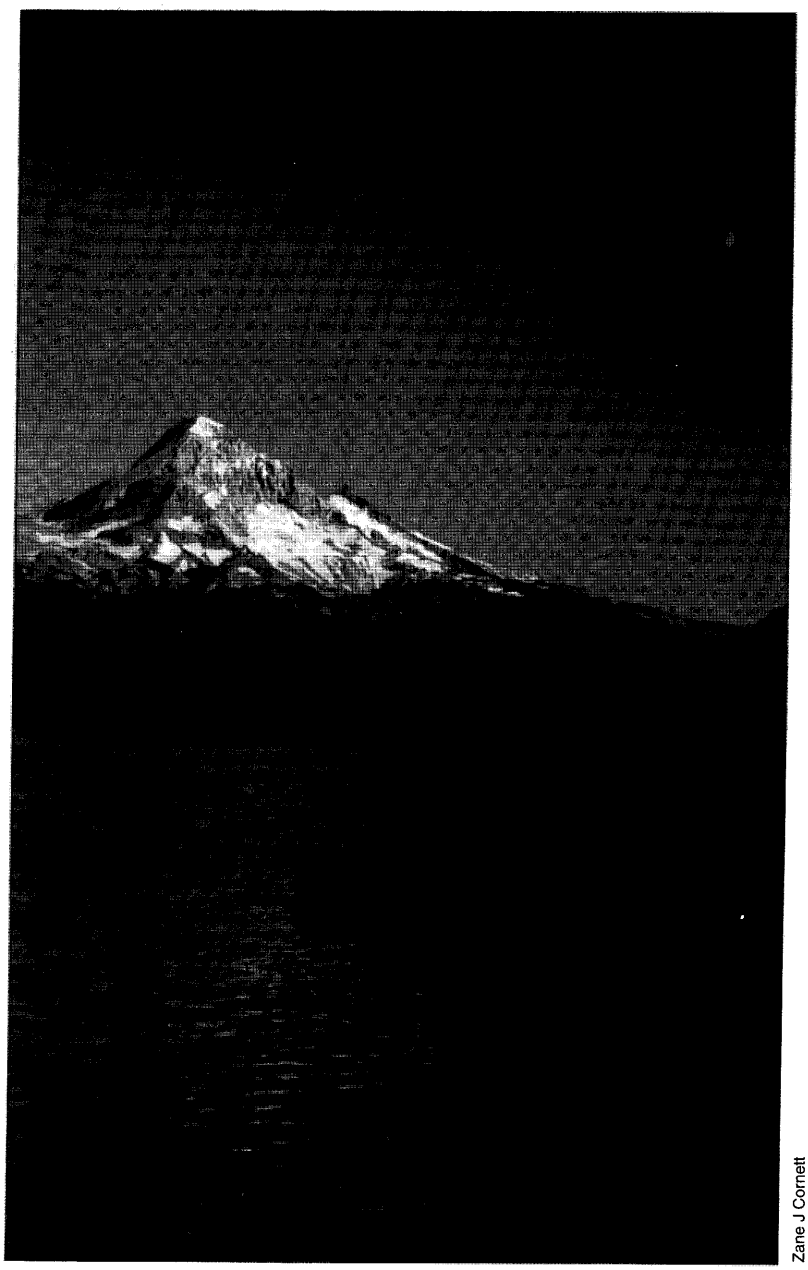
Wilderness Recreation Management

We need more than bandages and toothpaste

By David N. Cole



Zane J Cornett

Our nation has been managing recreational use in wilderness areas for several decades. Much has been accomplished over this period, particularly as a result of extraordinary commitment by seasonal rangers and the depth of their field experience. While these successes are to be celebrated, there is still much to learn. In the spirit of constructive criticism, I would like to point out two persistent and unfortunate tendencies of recreation management programs—tendencies that evoke images of bandages and toothpaste tubes.

Treating the Symptoms

All of us have used bandages to cover cuts and minor abrasions. While they are effective for treating a minor cut, nobody would expect them to heal a traumatic injury. In wilderness recreation management, however, it is not uncommon to treat symptoms rather than attack underlying causes—like applying a bandage to a gaping wound.

The following example is typical. In a particular western wilderness, rangers spend countless hours breaking up fire rings and attempting to revegetate damaged campsites. Both efforts have proven largely unsuccessful. A 1980 survey of campsites at two popular subalpine lakes found 84 fire rings on 219 recognizable campsites. When the survey was repeated in 1991, 145 fire rings were found on 238 campsites—in spite of 11 years of effort to break them up.

In another example, rangers began rehabilitation work in the early 1980s on a handful of heavily impacted campsites. All were within 200 feet of a lake, where camping is not allowed. They scarified the soil to break up compaction and planted plugs of native plants. By 1991, however, most evidence of this work had been destroyed—trampled under the feet of hikers, fishers, and campers.

In both cases, management was trying to change behaviors that are deeply

When addressing a problem such as camping too close to a lake, wilderness managers must consider both the roots of behavior and effects of restricting use.

rooted in tradition—building campfires and camping close to lakes. Most traditions are difficult to change. However, it is a waste of time and money to treat the effects of these behaviors without changing the behaviors themselves. Programs that will generate long-term changes are needed before the bandages (breaking up camping rings and revegetating sites) will cover the scars.

In some places, particularly in the USDA Forest Service, problems are compounded by the reluctance of managers to attack a situation directly by restricting the number of visitors. Legitimate concerns about excessive regulation have led to the concept that direct, regulatory management should be a last resort, implemented only after other options have failed (Hendee et al. 1990). Strict adherence to this principle, however, means that regulatory action will only be taken after significant physical damage has already occurred—when it is extremely difficult to correct. This is like relying on bandages until the situation is so bad that surgery is required.

Shifting Pressure Points

All of us have experienced a toothpaste tube that unexpectedly bursts at the seams when squeezed too hard in one place. In wilderness areas, actions taken to solve a problem in one location can cause unexpected problems all over the place. This usually happens when energies are focused on individual problems or areas without considering the broader context. In our wilderness example, managers attempted to reduce further damage by prohibiting camping close to lakeshores and asking visitors not to camp on heavily affected campsites. However, they did not consider where those users would go. Many obeyed regulations and complied with the requests; but others continued to use the traditional locations. Consequently, the number of altered campsites at the two lakes jumped from 58 in 1975 to 219 in 1980 and 238 in 1991, quadrupling the consequences—even though the actual number of visitors probably did not increase significantly. Actions taken to reduce the damage ended up dramatically increasing the impact because managers did not pay adequate attention to the big picture.

In another example, rangers at a large wilderness with one exceptionally crowded lake basin decided to restrict use

An Army of Wilderness Teachers

The battle for wilderness is not over with congressional designation of wilderness—it is just beginning. Just as challenging is the struggle to keep a wilderness wild after it is designated. Although wilderness managers have many weapons to wield in this struggle, none is as potent as wilderness education—and none is as seldom used. We rarely see the nation's wilderness managers at the trailheads, in the classrooms, and in the cities teaching wilderness ethics and values.

Certainly there is no coordinated and comprehensive national campaign to teach the American people how to enjoy the wilderness without destroying it. Instead, wilderness rangers chase after visitors, discovering and repairing damage after they have moved on. Education, on the other hand, is a preemptive strike. It attacks ignorance and insensitivity, which are the chief threats to wilderness areas and the fundamental cause of most of the damage. All other methods merely try to repair the damage after it is done. Stronger wilderness education programs would dramatically decrease the need for law enforcement and cleanup.

Many federal officials do recognize the value of wilderness education. However, many of the programs have focused on "props": videos, slide shows, posters, displays, brochures, and bulletin boards. Lost in all this activity is the most essential element, the teacher. Although props can be helpful, what wilderness really needs is warm, committed, living human beings who reach out to the public and teach others how to care for the wilderness. One friendly person, teaching no-trace camping at a busy trailhead, is far more effective than a dozen bulletin boards or a thousand glossy brochures. One ranger telling stories, organizing skits, and answering questions in the classroom will be remembered far longer than the most expensive video or slide show.

Who should participate? Every employee in every wilderness program in every part of the country. The highest priority today should be to teach employees to be teachers and give them the time and opportunity to teach. Effective wilderness programs and teachers should keep in mind four basic principles:

Educating the public is a year-round job. The notion that wilderness work is seasonal and field-oriented is pure myth. Wilderness management has no off-season. Winters are for planning, organizing, recruiting, and most importantly teaching.

Education must take place in urban centers. Targeting local schools near ranger stations is inadequate. Managers must study their visitor records, then go to the population centers that produce most of their visitors.

Knowledge of the land creates charisma. The best teachers are those who have actually lived and worked in the wilderness. This is more important than eloquence. The public respects and seeks out those who have lived close to the land even if they are slow of speech. Personal experience lends credibility to their words.

Warmth changes behavior. Wilderness teachers must care about the wilderness visitor as much as the wilderness resource. An attitude that the public is an enemy affecting the wilderness adversely, and the fewer visitors the better, does not produce good teaching. Visitors respond to warm, friendly people.

The future of the National Wilderness Preservation System depends on federal land management agencies creating a cadre of warm individuals who love wilderness, who love people, and who reach out and teach. These teachers are the first line of defense for wilderness areas and the preservation of the wilderness system.

Contributed by James C. Bradley, a former wilderness manager and currently professional staff member, Subcommittee on National Parks and Public Lands, US House of Representatives, Washington, DC.

of that area. Measures included limiting the number of people visiting that location and banning dogs and campfires. While these actions improved conditions in the basin area, managers began to notice an increase in use of and effects on adjoining parts of the wilderness. Before long, they had to restrict activities in other areas. Like the tube of toothpaste, every time they squeezed one place, problems oozed out somewhere else. Now they are looking for some way to halt the spreading effects as more restrictions are needed because of the initial limitations.

Changing the Focal Point

Although the many accomplishments of wilderness recreation managers should be admired, the profession is still hampered by tendencies to confuse symptoms with underlying causes; to focus on short-term solutions; and to give too little attention to holistic and broad perspectives. Perhaps this is to be expected. It is hard for a profession to mature in a few decades, and even now few managers within federal agencies are able to devote their time exclusively to wilderness management. According to a recent survey, only 26 percent of all wilderness areas had a full-time employee with primary responsibility for wilderness management (Reed et al. 1989).

However, part of the lack of progress likely results from the tendency to teach natural resource managers "to do something, usually immediately, for short-term benefits" (Bolle 1991, p. 11). Given all the immediate problems that confront wilderness managers, "can-do" attitudes are to be commended; however, planning, evaluating, and learning are also important. Management programs must be based on a rational planning process that is applied wildernesswide (rather than in a piecemeal fashion) and must incorporate monitoring programs that can relate existing conditions to quantifiable management objectives. Such a broad, wildernesswide perspective should reduce the likelihood that an action taken in one place will unexpectedly aggravate a problem elsewhere.

Investments for the Future

Currently, most wilderness areas are managed without access to baseline or monitoring data on recreational use and its effects. For example, a recent survey found that only 16 percent of wilderness areas had systematic visitation counts. The rest determined this most basic piece of information by compiling random observations or by making "best guesses." Incorporating monitoring into management programs would enable managers to learn from previous mistakes and successes and to evaluate the effectiveness of previous actions. This should direct programs toward long-term solutions and away from symptomatic treatments.

Nevertheless, wilderness management planning is progressing. Limits of Acceptable Change (LAC) and Visitor Impact Management (VIM) are two of the planning frameworks that have been specifically developed for recreation management in wilderness and parks (Stankey et al. 1985, Graefe et al. 1990). Although only 38 percent of all wilderness areas currently have a completed and approved management plan (Reed et al. 1989), 75 percent of Forest Service wilderness areas expect to initiate a LAC-type planning process in the near future (US General Accounting Office 1989).

Further investment in wilderness research and technology transfer is also needed. Wilderness systems are complex webs of interrelated social, ecological, and managerial phenomena. To predict the likely effects of any management intervention, we must develop a better understanding of these relationships. According to Reed et al. (1989), only 37 percent of wilderness areas had any type of current environmental research on fish, wildlife, vegetation, soils, geology, air, water, or ecological processes; and only 14 percent were conducting social research. It is hard to make advances in management when so few resources are being invested in the development of new knowledge.

Good management depends on adequate planning, knowledge, implementation, and monitoring. Traditionally, most wilderness management resources have been allocated to implementation—getting things done on the ground. We must continue this tradition of on-the-ground implementation. However, to improve our management of wilderness recreation, we must also increase investment in planning, acquisition, and dissemination of knowledge. JOF

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