



Figure 1. The study at Rocky Mountain National Park used a technique called visitor employed photography. The researchers compared the attitudes of backpackers and day users toward park management, human-habituated wildlife, and human impacts. Both the day user and backpacker groups studied considered park scenery a positive and important feature of their park visit.

Attitudes of backpackers and casual day visitors in Rocky Mountain National Park

By SARAH FLICK AND JONATHAN TAYLOR

THE BIOLOGICAL RESOURCES DIVISION of the U.S. Geological Survey and the National Park Service conducted a study at Rocky Mountain National Park (Colorado) to determine the aspects of the park that were most important to visitors (Taylor et al. 1995a, b). We felt that it would be useful for land managers to know if the needs of certain groups of visitors are being met better than others during trips to the park and whether different groups of visitors are seeking experiences that conflict with each other. Park visitors were grouped into four categories—backpackers, day hikers, car campers, and tourists who were casually visiting for one day (day users). Previously, we had compared the four groups' attitudes towards natural features such as mountain vistas, water bodies, wildlife, and vegetation (Taylor et al. 1995a, b). In this study we compared backpackers' and day users' attitudes about park management, human-habituated wildlife, and human impacts on the environment. We chose backpackers and day users because preliminary analyses determined that these were the two groups that utilized the park most differently from each other.

Methods

During July and September 1993, we passed out 50 single-use, 12-exposure cameras to backpackers and another 50 to day users at the start of their park visit. The participants were asked to photograph the scenes, features, or situations within the park that had the most important effects on their trip. Participants were also given a log in which they recorded, for each photograph, why they had taken it, where it was taken, its subject, and whether the subject had a positive or negative effect on their trip. This method, called visitor employed photography is discussed in Taylor et al. (1995b). Participants were mailed a copy of their photographs, along with a follow-up survey that contained a list of park features that participants rated 1 to 10 on a scale of importance to their experience at the park.

What participants photographed, to some extent, was dependent upon where they went, and on what they happened to see. However, there is a paved road system through several areas of the park, and numerous trails of varying levels of difficulty. There are roads, trails and parking lots adjacent to water, mountain vistas, meadows,

areas where animals congregate, and park buildings. All of the participants, therefore, could be assumed to have access to many of the same sorts of features, and we made some assumptions based on the photographs. For instance, if a person took no photographs of streams they probably did not find streams as important as a person who took six photographs of streams.

Results and discussion

Importance ratings

The park features that participants rated in the follow-up survey according to "importance to [their] experience at the park" can be grouped into two categories: (1) management improvements such as campgrounds, trails, and paved roads, and (2) natural features such as wildlife, lakes, wildflowers, and mountain vistas. The ratings showed that both groups highly valued the natural features (fig. 1), but there were significant differences in how the groups rated two of the management improvements—paved roads and campgrounds. Thirty percent of the day users felt that paved roads were important to their experience at the park while only 11% of the backpackers felt the same. On the other hand, 53% of the



Figure 2 (left). Both groups photographed nearly equal numbers of park management features, but focused on different ones. For example, backpackers photographed more trails; day users more roads.

Figure 3 (below). Backpackers shot far fewer photographs of animals than day users. The data indicate that viewing animals that are accustomed to crowds of humans was an important part of the day users' experience but not of the backpackers'.

backpackers rated paved roads as unimportant, while only 9.5% of the day users did so ($X^2=24.218$, $p<0.001$). Fifty six percent of the day users rated campgrounds as unimportant compared to 14% of the backpackers. One other difference was notable: more day users (35%) than backpackers (19%) felt that well-maintained trails were important.

Management features

Day users and backpackers took almost the same number of photographs of management features (fig. 2; day users $n=68$; backpackers $n=63$), and both took management photographs that were mostly positive (81% for day users, 83% for backpackers), but they valued different aspects of management. For backpackers, the most photographed management features were trails ($n=25$), and for seven of these photographs they wrote that they liked the trail because it was primitive, narrow, or unimproved. Only ten of the day users photographed an unimproved trail, and none of them praised one. Three of them, however, wrote that they appreciated trails that were wide or flat, and two day users photographed trails that they felt should be further developed so that they would be easier to walk on.

Roads/lookouts/parking lots made up the most photographed management feature category for day users ($n=25$). Most of these photographs were positive, praising road smoothness and exciting turns, and the fact that roads and lookouts were in attractive terrain, but five of the day users criticized a road closure and one respon-



dent thought the roads should have higher retaining walls. Backpackers, on the other hand, took no photos of lookouts, and only one road photograph that criticized how close the road had been built to a river. The second most popular of the management features for backpackers were backcountry campsites ($n=12$); buildings were second for day users ($n=12$). No day users photographed campsites and only one backpacker photographed a building.

Mirroring the importance ratings, backpackers did not appreciate management features that intrude on wilderness, but they did like "primitive" trails, and backcountry campgrounds. In almost perfect counterpoint to the backpackers, day users liked improved trails, paved roads and lookouts, various buildings, and any other feature that helped them view large areas of the park easily and in physical comfort.

Wildlife

Virtually all of the wildlife photographs from both groups were positive (fig. 3), but the backpackers shot far fewer photographs of animals. Although both rated wildlife as an important feature of their visit to the park, day users took a total of 115 wildlife photographs while backpackers took 36. The day user average was 2.34 wildlife photos, more than twice as many as the backpacker average of 0.878 ($F=21.904$, $p=0.00001$). This suggests that day users had an easier time getting close enough to animals for a photo opportunity, that they were photographing more animals that were accustomed to humans and cameras than backpackers were, and that the relative tameness of the animals did not bother them. Although backpackers spent much of their time away from the park's crowded

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developed areas, they would have had some easy animal photo opportunities when they went to pick up backcountry permits, or on their way to and from trailheads. The data indicate that viewing animals that are accustomed to crowds of humans was not an important part of the backpackers' experience.

Both groups photographed animals that are partially habituated to humans (fig. 3, page 19). Throughout Rocky Mountain National Park visitors commonly encounter animals that do not flee when they see

five negative comments based on photographs of people feeding animals.

Human impacts on the environment

Backpackers put considerable physical effort into hiking away from the developed "frontcountry." Unless day users hiked vigorously to escape the frontcountry during their brief visits, they presumably spent most of their time within sight and sound of people, paved roads, buildings, or popular trails. Backpackers, however, took more human impact photos (backpackers $n=28$, day users $n=16$), and the mean number of impact photos per person was twice as high

the park easily accessible (such as paved roads and buildings), while day users did. Even though backpackers felt that wildlife, in general, was an important part of their visit, they did not think that human-habituated, roadside wildlife was important enough to their experience to photograph in large numbers. Backpackers also disliked human impacts on the environment much more than day users did, although day users generally spent more time in impacted areas. These results suggest that the backpackers placed a high priority on getting away from other people and the impacts that people have on wilderness and wildlife.

We also hypothesized that backpackers, because of their higher expectations, would have more negative impressions during their visits to the park than day users would. This was true, although both groups who took part in this study were largely pleased with the park and took many more photographs of important, positive experiences than negative experiences. Mountain vistas and water were the most popular photography subjects, not human impacts or negative management features (Taylor et al. 1995a, b). Visitors appreciate Rocky Mountain National Park, but people who visit casually and briefly, spending much of their time driving or taking short dayhikes, may enjoy their visit more than people who care intensely about having an active, wilderness experience. **P_S**

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people, and some animals beg for food. Backpackers shot wildlife photographs from trails and designated backcountry campgrounds; animals that spend time near these areas must be somewhat accustomed to people. However, the day users shot all of their wildlife photographs out of car windows, alongside roads, at lookouts, picnic grounds, or along popular day-hike trails where hundreds or thousands of people per day may easily visit during the summer and fall. Wildlife habituation is probably worse in these locations, and 34 day-user photos actually featured animals sitting in or standing on structures such as lookout railings. Nevertheless, habituated behavior did not detract from most day users' satisfaction that they were seeing animals in what they considered to be a relatively natural habitat.

On 17 photographs, day users commented about the friendliness of the animals. Examples include: "the animals have little fear; they watch us as we watch them;" "it's nice to see wildlife so close by;" "[I am] impressed by [chipmunks'] friendliness and seeming to be so tame;" "we had been hearing about this friendly deer from other hikers on their way down;" "[the deer] is so calm and unafraid. She posed for us, looking right at the camera." An additional seven day users shot positive photographs of people feeding animals and one noted that the "squirrel actually came to get the peanuts from the kids' hand." We recorded

for backpackers (0.683) as for day users (0.327) ($F=5.084$, $p=0.027$). This suggests that day users are somewhat desensitized to impacts such as litter and horse manure, and accept these conditions as part of their experience in a wilderness park more readily than do backpackers. Backpackers took more photos, on average, of all the human impact categories except for trail impacts.

Negative and positive photographs

Over all the photographic categories, day users took a total of 525 positive photos and 28 negative; the backpacker total was 411 positive and 38 negative photos. Backpackers took 60% more negative photographs per person (mean=0.927) than the day users (mean=0.571), indicating that backpackers had a greater number of negative impressions of the park.

Conclusion

We had first hypothesized that backpackers would have a greater desire for pristine nature and solitude than day users would and this hypothesis is supported by some of the results. Although day users and backpackers both indicated that they came to Rocky Mountain National Park to enjoy the natural environment, they had different strategies for doing so that required different, sometimes opposing, park management practices. Backpackers did not appreciate management features that make

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