

FOCUS GROUP REPORT: FRONT-END EVALUATION OF EXHIBIT IDEAS FOR PARADISE VISITOR CENTER

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Introduction

A front end evaluation study was conducted on Saturday, July 7, 2001 at Jackson Visitor Center, at the Paradise area of Mount Rainier National Park (MORA). The purpose of the study was to find out what park visitors know and want to know about Paradise flower meadows and related ecology, as well as Mount Rainier volcanology and geology. The findings of the study will inform the design of exhibits for a proposed Visitor Center at Paradise.

Methodology

The research plan called for 3 focus groups with 10 participants each. These were to be homogeneous groups: one made up of park visitors from the Puget Sound area, a second composed of visitors from elsewhere in Washington, and a third consisting of visitors from other states. Alice Parman, who facilitated the focus groups, was also responsible for recruiting participants, with the assistance of retired MORA ranger John Wilcox.

With the approval of park staff, Parman and Wilcox recruited focus group participants at Friday evening ranger talks, held at Cougar Rock Campground and at Paradise Inn. On Saturday, Wilcox recruited from 9 a.m. to 2 p.m. at Jackson Visitor Center, joined by Parman when she was not facilitating the three focus groups that were scheduled for 11 a.m., 1 p.m., and 3 p.m.

The results of our recruitment efforts were disappointing. Together, Wilcox and Parman approached several hundred visitors with an invitation to give 45 minutes of their time to help plan exhibits for a new visitor center. Only 13 agreed to participate. Despite the low turnout, retaining the structure of three scheduled focus groups was essential, because we had made appointments with five visitors on Friday evening. The eight visitors recruited on Saturday at Jackson Visitor Center were willing to participate in the next available focus group. To adhere strictly to the planned geographic homogeneity would have meant losing some of these willing participants. Parman decided on the spot that the total number of participants was more important than the numeric distribution or geographic origin of participants within the three scheduled focus groups.

(Recruitment efforts were hampered by our inability to offer some kind of incentive. Current NPS regulations prohibit researchers from rewarding participants with gift certificates, cash, etc. NPS researchers are working to get this regulation changed. Even if we had been able to provide an incentive, it might still have been difficult to recruit participants. Most visitors who declined to participate gave plausible reasons: they were about to go on a hike, travel to another part of the park, or leave the region.)

The focus groups were held in the Ranger Station room in the basement of the Jackson Visitor Center. The room afforded relative privacy and comfortable seating that seemed to put participants at ease. Frequent radio communications were somewhat distracting,

however. Given the challenges of recruiting participants, it was heartening to see how interested and engaged the 13 participants were.

Results

• Description of participants

Three focus groups were held. The first group was made up of four visitors from the Puget Sound area. The second group consisted of two visitors from the Puget Sound area. The third group was composed of one visitor from elsewhere in Washington, and six from out of state (Oregon, Florida). The participant total was 13, including four social groups. Estimated ages of the participants ranged from two teenagers (who came with their parents) to a woman in her late 70s. The group included first-time visitors, frequent visitors, and a cook at the National Park Inn.

• What are the most important things about Paradise and Mount Rainier for these visitors?

A number of visitors mentioned the mountain itself: its awesome presence in the region, its importance in the regional ecology and economy, and its place in the Cascade chain of volcanoes. Several talked enthusiastically about hiking the trails, especially at Paradise, to see the flower meadows. The diversity of environments was also mentioned as an important characteristic of Mount Rainier National Park.

“I think we’re just really lucky to have a mountain like that.”

“I see it every day when I drive to work.”

“The mountain is part of the whole ecology of the area, not just a spot where you go to enjoy a couple of hours.”

“Being able to do these trails has made me appreciate the environment much more.”

“The best part is the trails. I like seeing some of the exhibits here, but...”

“It’s just so fun to see, in such a natural setting, how beautiful nature can be... You just drive in the park and wow! you couldn’t have planted this more beautiful.”

• What information would these visitors like to get from an exhibit at Paradise?

Visitors were interested in more information about the trails, including good directions. A suggestion for a trail rating system keyed to age and ability levels met with enthusiastic support. Another suggestion was for self-guided, computer-based information systems where visitors can “browse the park,” organized by interest areas. Several visitors called for an increased Native presence in the form of stories about the mountain, and information about how Native people used the plants in the meadows. One visitor mentioned the fragility of the meadows and the need to reinforce people staying on the trails. Hands-on exhibits, more information about scientific studies of heather communities, tracing a drop of water from the top of the mountain to the Nisqually delta, animals/bears, and exhibits on old growth forest were also mentioned.

“There should be more information on the trails; the abilities, what you may see there..and maybe rate them in some way. [some trails] are not really appropriate for some children.”

“Because I’ve done hiking on the trails... I’m able to tell visitors about the trails. The rangers tell you if there’s too much snow, if it’s icy, but you don’t get any more information.”

“Maybe a person should ask some questions, but a person who comes here for the first time wouldn’t know what to ask anyway.”

“Everyone is familiar with technology, they can browse the park. Break it up into certain aspects: trees, forest, glaciers, wildlife, plant life... So parties can go to different stations and visit what’s interesting to them... Separate things by interest, instead of all in one spot, like the ranger desk. I wouldn’t get rid of that; everyone wants to talk to a ranger.”

“More of a Native presence would be good. We come from Hood River; we know the stories about Wy’east. I don’t know the stories about this mountain.”

“How Native people used the plants. There’s a wonderful book you can get at the bookstore, with all this information. These plants were all part of a life here.”

• **What is special about the Paradise flower meadows for these visitors?**

The beauty of the meadows, and the unique assemblage of species, make the meadows a sight worth seeing, several visitors said. One visitor mentioned the short growing season. Two were interested in how the meadows might recover if an eruption or mudflow occurred. One visitor had heard from a ranger that the meadows had been forest once and might be forest again; she tied this to global warming and was interested in learning more, including how global warming affects glaciers.

“They’re gorgeous.”

“I would definitely recommend it as a place to see.”

“If this mountain did blow up, what would happen afterwards?”

“These meadows will eventually be covered up with forests..Maybe in the 1700s it was all covered with mountain snow, and it’s been warming since then. It’s kind of neat to get a longer perspective on global warming. It’s a trend that may or may not have anything to do with people. I heard that most glaciers in the world are getting smaller. I don’t know if these are or not.”

• **How do these visitors feel that NPS and park users can best preserve the Paradise meadows for the future?**

Participants had a number of suggestions for physically keeping people on the trails, including wire fences, issuing tickets, and (in jest) beating errant visitors with big sticks. They mentioned a number of messages that could be conveyed by exhibits, including photographs of trampled vegetation, information about the flowers’ short growing season, and the multiplier effect of huge numbers of visitors on “just one” footprint or picked flower. Visitors felt it was important to aim these messages at children and at international visitors (who might have different cultural traditions concerning picking flowers in a national park). One visitor suggested that NPS staff survey people who go off the trails to understand their motivations. Another visitor stressed that it is important to highlight positive behaviors that are permitted, rather than focus on what is forbidden. The availability of seeds and starts for purchase, and touchable plants within easy reach of the parking lot, were also suggested. There was lively discussion of how to reach visitors before they hike the trails, including getting people out of their cars and into buses.

“Go around with big sticks.”

“Isn’t there any way to give people a ticket?”

“Examples of what [trampled vegetation] looks like.”
“Photographs of what happens, what the impact is.”

“Multiply one footprint by the number of visitors who go through here.”
“If everyone took just one flower there would be no flowers left.”
“Message: Death of a Flower... These flowers are so small, easy to miss.”
“Show a foot descending on a flower.”
“Animals have that sense of they’re alive, you have to make that jump to flowers being living beings.”
“Signs along the road in other languages. I think the people I saw picking flowers were French.”

“It’s hard to talk to people who step off the trails, but it would be interesting to find out what their reasons were. ‘Did you notice that we requested you to stay on the trails, and if so, what were your reasons?’ There could be lots of reasons—they didn’t see the sign, or were thinking of something else. I don’t think it’s malicious. They’re not thinking.”

“I work with kids, and rather than say don’t, figure out what they *can* do. At the zoo there’s a sign, ‘Let the animals feed themselves.’ Find the analogy for flowers.”
“A live exhibit out front where people can touch, especially Western anemone, mouse on a stick. Focus on things you can do. You can smell it, you can take pictures, you can touch it gently.”
“Have a place where people can buy seeds and grow their own.”
“They sell candy bars up here, why don’t they sell flowers? People are looking for real flowers, not pressed flowers.”

“What if they banned all cars from Paradise. The further you get from the road, the less wear and tear, the less trash. The slobs are also lazy, if they have to walk any distance they won’t bother.”
“People could be bused in and they would get interpretation.”

• **Do these visitors think that Mount Rainier poses any dangers to people in this region? What kinds of dangers?**

All participants seemed aware of a variety of dangers. Lahars were specifically mentioned by half the group, with reference to signs displayed in campgrounds and information included in ranger talks. One participant expressed concern about the lack of an evacuation plan, and felt that information about such a plan should be communicated in the exhibits. Visitors also mentioned dangers associated with hiking and climbing, such as lack of equipment, weather changes, sunburn, snow blindness, bears and cougars. In one group, a participant’s proposal that RMI rent day hiking equipment packs to visitors received enthusiastic support. Several visitors tied geohazards to questions about what the mountain might look like after a lahar or eruption, with specific reference to Mount St. Helens. Other visitors thought it would be helpful to tie information about geohazards to specific hiking trails. Other hazards mentioned by participants included crevasses, avalanches, and mosquitoes. One participant said she preferred to focus on the mountain’s aliveness rather than to think of it as dangerous.

[lahar] “I think everyone’s pretty aware of that. You can’t miss the signs.”
“We camped at Sunshine Point and noticed a poster about lahars. We all know what happened with Mount St. Helens. We decided it would be too late if we heard the freight train.”

“There are sirens in Orting to warn the community. We were surprised when we looked at the map and saw where the mud went.”

“There’s a sense of danger. This is the one that’s going to have a mudslide or an earthquake. You hear it again and again in the videos. There’s not necessarily going to be any warning. It’ll start sliding. It’s every 500 years and the last one was 500 years ago.”

“An eruption is not nearly as likely as a mudflow. In February everyone asked, ‘Did the mountain blow?’ There’s no evacuation plan. There is no provision in case of a disaster. You’re on your own. There needs to be one, and there need to be exhibits that show the plan.”

“At Mount St. Helens you see what happened, but here nothing’s happened in a while. Compare photos of Mount St. Helens before it blew, it looked kind of like Mount Rainier.”

“At Mount St. Helens, they kept trying to tell us what it looked like before. Here, I’m wondering what would it look like *after*.”

“There’s nothing in the current visitor center that does basic preparedness for just day hiking.”

“RMI could rent out day hiking equipment. What if someone forgot a day pack. Give people a chance to rent or purchase items like a water bottle, sunscreen.”

“People come for a day or two and they had no idea they were going to do any trails. You change your mind. ‘We gotta do this!’ It’s very inspiring.”

“I would appreciate hiking more if I knew more geology.”

“The mountain is alive. As we get closer to that aliveness, I’m not that focused on dangers. If I go, I’d just as soon go here. Native spirituality is a good role model here.”

• **What does each of these words mean to these visitors?**

—**Volcano**

Three visitors mentioned that Mount St. Helens gives people in this region a sense of a volcano’s power. But two of the visitors don’t think of Mount Rainier as a volcano, even though they know that it is one. Visitors noted that the mountain hasn’t erupted yet, and that it could erupt right now. Each volcano is different, one person said. A former teacher remembered that her students understood that a volcano was a special kind of mountain. One participant said that for him, the term “volcano” always brought volcanologist Dave Johnston to mind. He had been Johnston’s housemate and friend, knew his girlfriend and his family. He mentioned that Dave Johnston and family members were misrepresented in a feature film that was made about Mount St. Helens. One visitor suggested that a seismic readout could be interesting to visitors.

“Mount St. Helens gave everyone in the Northwest a clear sense of a volcano’s power.”

“Mount St. Helens. You think of danger from the mountain, you think of mudflows. You think of volcano danger, like Hawaiian volcanoes with lava.”

“I’ve heard Mount Rainier described as a volcano more since the Mount St. Helens eruption. They’re monitoring Mount Rainier.”

“Each one is unique. Mount Adams and Rainier are totally different.”

“It looks very serene; I don’t think of it as a volcano.”

"I don't think of it as a volcano." "To a certain degree I do. It's always moving, there's always some kind of activity."

"Seismic readout to see what happened last night while you were sleeping."

—Glacier

Visitors proposed various definitions of glaciers and remarked that they combine beauty with danger. They expressed interest in the age of the glaciers in the park and their possible connection to the Ice Ages. One visitor described the mountain ridges formed by glacial action.

"A place where there's snow and ice and it's cold enough all the time or most of the time so that it doesn't all melt, but stays like ice."

"Humungous amounts of ice sliding downward."

"The first thing I think of is danger. There is a beauty about it, but primarily dangerous."

"Glaciers are unpredictable, but very beautiful."

"Have they been there forever?"

"How old are they?"

"Are they connected to the Ice Age?"

"All the ridges stick up because they weren't covered by glaciers."

—Plate tectonics

Several visitors had attended a ranger talk on plate tectonics the previous evening. They gave examples and proposed definitions. One visitor acknowledged that he didn't really understand the concept. Animation and computer graphics were proposed as effective ways to convey information about plate tectonics. The February 2001 earthquake, formation of the Cascades and the Olympics, and continental drift were also mentioned. Two visitors referred to spiritual aspects of the topic.

"The ranger did a good job. He had people take different roles to show what happens."

"I thought the ranger game was stupid."

"You stack plates till they can't take it any more, and collapse like a house of cards."

"Plates that are shifting, one plate under another, it causes pushing up."

"The plates just float on top of the magma."

"I really feel very ignorant about it."

"Animation can show plate tectonics in action. Something short. The ranger talk was too long, he started losing people."

"I think any age group likes this approach. Especially for a complicated topic like plate tectonics. The present exhibits are static; this is the MTV age."

"Use computer graphics to show how it works. Show different magnitude earthquakes. Kids select the magnitude, then see the result via animation. 'We'll turn this up to a 9!'"

"The earthquake in February. We felt it. It lasted a long time. They were both in Seattle for the 64? quake. The recent one was long. This one was more rolling, the other had more sound, kind of a grinding, roaring sound."

“Show how the plates have been pushing up, scraped off sediment to form the Olympics, then rose up to form the Cascades.”

“If you look at the globe, you can see how the continents fit together.”

“Plate tectonics is the pulse, the heartbeat of the earth.”

“I would like to see presentation of more spiritual, metaphysical aspects.”

—Mudflow

As noted earlier in the discussion of dangers, these visitors showed a clear understanding of the danger of mudflows and a grasp of the “run fast uphill” idea. Yet they seemed uncertain how to put the safety instructions into practice. Visitors compared lahar warnings at MORA to tsunami warning signs at the coast. Two visitors suggested that motion or animation could be used to convey information about mudflows in the exhibits.

“Run fast, run uphill. Run fast uphill.”

“They’re more of a danger here than anything.”

“Try to get up 160 feet in..no time given. We felt we couldn’t get 160 feet up.”

“In what direction would you go if you’re up here? But what if you’re not near anything that ‘s up.”

“Is the Nisqually area conducive to mudflows?”

“Anything that moves catches everyone’s eye, and this is a perfect example. A model that does something. Kids can see that, they don’t have to have someone reading, they can see the example and understand it. Visual stuff, but keep it inside in the exhibits. They can come to the visitor center to get the big picture of the park.”

“Use video of mudflows, such as Mount St. Helens. How much water is in all the ice in the glaciers. When the volcano erupts, water is ejected from the glaciers, and contributes to the mudflows. It’s hard to think of all that melting that quickly.”

—Subalpine meadows

There wasn’t much to add to the earlier discussion of meadows. No one offered a definition of “subalpine.” People reiterated the beauty and fragility of the meadows, and the short growing season. One visitor commented on the paradox that the meadow plants are very hardy, yet easily injured.

“There’s something about them. I can just go up there and stay for hours with a book.”

“The plants must have to be incredibly hardy, yet stepping on them harms their reproductive parts.”

—Lichen

Visitors attempted to describe lichen but most acknowledged they really didn’t know what it was. One visitor said that he had seen a David Attenborough TV program on lichen and that they are a very old life form. Another visitor called for exhibits to tell a story where every organism, even mosquitoes, seems important. One participant had heard about glacier worms on a ranger walk and was interested to know what they looked like.

“Is it a plant?”

"I've heard the term, it's white, grows on trees. Similar to a moss."

"It's a combination of animals and plants. The ranger told us just this morning."

"It's like pollination, you know the word, but you don't know exactly what it is."

"Tell a story where every species, even mosquitoes, seem important. We hate them, but they're a major food source for birds. Lichen's main function is to break rock down."

"I heard about glacier worms, would have liked to see what they look like."

"Don't eat pink snow!"

—Pollination

Most of these visitors associated pollination with pollinators, including insects, hummingbirds, and animals. Three visitors mentioned the interdependence of flowers and animals, including one who remarked on the specialization of flowers for a particular pollinator. One person expressed concern about bee mites, and exclaimed at how different the world would be without bees. One participant said he wasn't sure about the meaning of pollination. Another associated pollination with a resource protection message.

"Insects, wildlife brushing on them."

"Bees, butterflies, and other creatures that visit the flower, helps the pollination process."

"Hummingbirds like red. And they probably like something a little narrower that other pollinators can't get into."

"I think it's interesting how flowers can be specialized for one type of insect. If something happens to that insect, something is going to happen to that plant."

"Hoverflies look like bees." "A lot of people are afraid of bees. Invite visitors to look at bees. Flies have 2 wings. Try to get people to identify the critters."

"How different the world would be without bees." "We wouldn't be here." "How different the world would be without mosquitoes." "Well, I can't go that far."

"Don't pick the flowers. Animals depend on flowers for food."

• Food web

Visitors associated this concept with "food chain," which was more familiar to them. Two visitors noted that humans are part of the web. One participant suggested showing how one organism relates to another, then building up to a multi-organism web. Another person suggested connecting the Paradise meadow ecosystem to old growth forest ecology somehow.

"One animal eats another."

"It's similar to food chain. The interdependence of the food supply. I'm not quite sure how that would be different."

"It's all chained up together, so if you don't let the flower grow, you might not get your hamburger."

"We need this food web to be healthy for us to stay healthy too. We can't take ourselves out of it, we're part of it."

“Young kids are pretty concrete. A display that starts somewhere on the web and showing how one organism relates to another, and gradually build up to animals that eat pretty much whatever they want.”

“Connect Paradise ecology to old growth forest ecology. Somehow make a connection. Pollinators, birds that range among these ecosystems. Bears—seen near the summit, they get around.”

- **Implications for design**

—Suggestions that can be readily incorporated in the present design:

- Key trail information to age and ability levels.

- Provide images of trampled vegetation.

- Use theme of “Death of a Flower.” Show visitors that flowers are living beings.

- Provide multilingual messages about resource protection.

- Tie Paradise ecology to old growth ecology in some way

- Interpret global warming in relationship to the Paradise meadows and to glaciers in the park.

- Reference Mount St. Helens in geological interpretation, especially in reference to “before and after” appearance of the mountains.

- Incorporate history of ice ages into readerboard time line, and relate ice ages to glaciers in the park.

- Refer to recent Northwest earthquakes (especially 1964, 2001).

- Tie geological interpretation in the exhibit to specific trails that visitors can hike.

- Incorporate Native perspectives into interpretation of flower meadows, geology.

- Define all technical terms and unfamiliar scientific terms (e.g. lichen, plate tectonics, pollination, food web) and provide examples from Paradise and Mount Rainier.

—Suggestions that would entail design modifications:

- Computer graphics, animations to show processes of plate tectonics and geohazards..

—Suggestions outside the scope of the design that would reinforce key messages

- Rentable day packs with the 10 essentials.

- Seeds and starts to purchase and take home.