A scenic landscape photograph of a river flowing through a forested valley. The river is the central focus, winding through a lush green forest of tall evergreen trees. In the background, rolling mountains are visible under a clear blue sky with a few wispy clouds. The overall scene is peaceful and natural.

Bob Marshall Wilderness Complex 2003 Visitor Study

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BOB MARSHALL
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Executive Summary

Purpose of study

This purpose of this study was to provide information on the characteristics of Bob Marshall Wilderness Complex (BMWC) use, users, and user attitudes about the wilderness and its management.

Another purpose of the study was to determine trends in the abovementioned characteristics by comparing 2003 results to results from previous visitor studies in the BMWC. This was not pursued because the fires, fire fighting activity and trail closures in and around the BMWC in 2003 made it an atypical year for visitation. Comparisons between 2003 and previous years can be made at a very general level only.

Methods

Summer and fall adult (16 years or older) recreational visitors to the BMWC were the population under study in this research. Sampling of these visitors occurred at the twelve most visited trailheads in the BMWC. Visitors were contacted at these trailheads between June 20 and October 23, 2003. September 8 was considered to be the beginning of the fall season. A sampling design was employed that allowed fieldworkers to maximize efficiency in the field and capture a representative sample of the total visitor population.

Onsite and mail-return questionnaires were used. Fieldworkers contacted 605 visitors. Seven visitors refused to participate. Mail-return questionnaires were mailed to the remaining 598 respondents. The questionnaire was returned by 462 respondents; six questionnaires were returned “undeliverable.” This yielded an overall response rate of 78%. Unfortunately, no outfitted guests were contacted during the fall season.

Analysis

The data were analyzed using four classification variables. These are variables that are believed to influence visitor responses to use, user and attitude questions. The four classification variables are:

- Length of stay: day versus overnight visitors.
- Use of outfitter: outfitted versus non-outfitted visitors.
- Season of use: summer versus fall visitors.
- Mode of travel: hiking versus horseback riding visitors.

Each use, user, or user attitude characteristic was analyzed to determine if there was a statistically significant difference in characteristics linked to these four classification variables. Only statistically significant differences are reported. A complete report of all characteristics is included in a separate technical appendix.

Summary of findings

Visitor Characteristics

Day visitors were more likely than overnight visitors to be from Montana and to have previous experience in the BMWC. The proportion of female day visitors was greater than the proportion of female overnight visitors. There were no significant differences in age or education between day and overnight visitors.

Outfitted visitors were more likely than non-outfitted visitors to be older, from outside of Montana, and have less previous experience in the BMWC. There were no significant differences in sex or education between outfitted and non-outfitted visitors.

Summer visitors were more likely than fall visitors to be from outside Montana and have less previous experience in the BMWC. The proportion of female summer

visitors was greater than the proportion of female fall visitors. There were no significant differences in age or education between summer and fall visitors.

Hiking visitors were more likely than horseback riding visitors to be younger and more educated. There were no significant differences in sex, place of residence, or previous experience in the BMWC.

Visit Characteristics

Day visitors were more likely than overnight visitors to be hikers in smaller parties. When they did ride horses, day use groups were more likely to use fewer horses than overnight groups. Day visitors encountered more other parties per day on their trips than overnight visitors. Day visitors were less likely to participate in photography, fishing, swimming, and hunting. Day visitors were also less likely to be outfitted.

Outfitted visitors were more likely than non-outfitted visitors to be horseback riders in larger parties, staying in the BMWC for longer periods of time. Horseback riding outfitted visitors used more horses or other livestock than horseback riding non-outfitted visitors. Outfitted visitors were more likely to participate in photography, fishing and rafting. Outfitted visitors were less likely to participate in hiking and hunting. There were no significant differences in rates of encounters with other groups between outfitted and non-outfitted visitors.

Summer visitors were more likely than fall visitors to be hikers, in larger groups staying in the BMWC for shorter periods of time. Summer visitors were more likely to participate in photography, nature study, swimming, and rafting. Summer visitors were less likely to participate in hunting. Summer visitors encountered more other parties per day than fall visitors. There were no significant differences in number of livestock used between summer and fall visitors.

Hiking visitors were more likely than horseback riding visitors to be in smaller groups staying for shorter periods of time. Hikers encountered other parties more per day than horseback riding visitors. Hikers were more likely to participate in nature study and swimming. Hikers were less likely to participate in fishing, hunting, and rafting. Hikers were also less likely to be outfitted.

Visitor motivations

BMWC visitors rated “to observe scenic beauty,” “to take in some natural surroundings,” “to have fun,” and “to enjoy the smells and sounds of nature” as the most important reasons for them to visit the Wilderness. Day visitors were more likely than overnight visitors to be motivated by the ability “to take in some natural surroundings” and “to enjoy the smells and sounds of nature.” Summer visitors were more likely than fall visitors to be motivated by the ability “to take in some natural surroundings” and “to enjoy the smells and sounds of nature.” Similarly, hikers were more likely than horseback riders to be motivated by the ability “to take in some natural surroundings” and “to enjoy the smells and sounds of nature.” Hikers were also more likely than horseback riders to be motivated by the ability “to observe scenic beauty.”

Desirability of Management Actions

Visitors rated “signs along the trail explaining natural features or early history” and “a few trees blown down across the trail, maybe one or two per mile” as the most undesirable trail management actions in the Wilderness. “Burying unburnable trash” and “cemented rock fireplaces with metal grates” were rated by visitors as the most undesirable campsite management actions. “Issuing trip permits so visitors could only camp each night in the area assigned to them” was rated by visitors as the most undesirable visitor management action. “Eliminating grazing by visitors’ horses” and “a natural fishery—no stocking and barren lakes left barren” were rated by visitors as the most undesirable resource management actions.

Wilderness Purism

BMWC visitors rated “solitude,” “absence of human-made features,” and “forests, flowers, and wildlife much the same as before the pioneers” as elements of the Wilderness that were most desirable. “Stocking the area with kinds of game animals that were not native to the area,” “private cabins,” and “developed campsites with plank tables, cement fireplaces with metal grates, and outhouses” were elements of the Wilderness that visitors rated most undesirable. The responses indicate that visitor values are in accordance with the ideals of the 1964 Wilderness Act.

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About the Study

This study was conducted to provide information on the characteristics of Bob Marshall Wilderness Complex (BMWC) use, users, and user attitudes about the wilderness and its management. More specifically, the objectives of the study were to:

- survey characteristics of the wilderness visit, including activities, methods of travel within the wilderness, timing of use, length of stay and camping practices;
- survey characteristics of visitors, including types of groups, party size, previous experience, residence, and socioeconomic descriptions; and,
- identify visitor attitudes, including reasons for wilderness visits, satisfaction with wilderness conditions encountered (both resource and social density conditions, and preference of various policies and management actions).

Information on BMWC use, users, and attitudes can assist BMWC managers to more effectively manage use and users. Specifically, understanding wilderness use and users in BMWC is helpful for monitoring the popularity of recreation activities; planning and designing recreation facilities and services; planning budgetary, personnel and other resource needs; effectively conducting public information and education programs; evaluating the efficiency and equity of public outdoor recreation, and determining trends. Understanding commercial recreational use and users is especially useful for managing permit systems and achieving an appropriate level of commercial and non-commercial use of wilderness.

Visitors to BMWC were studied in 2003 in a similar fashion to how they were studied in 1970 (Lucas 1980) and 1982 (Lucas 1985). Having achieved the above primary objectives, a fourth objective of the 2003 study was to determine, to the extent possible, trends since 1970 and 1982 in use, visitor characteristics, and visitor attitudes. However, the summer of 2003 was not a typical year for BMWC. Fires and fire fighting

activity led to direct closures of popular recreation areas, destination and trailheads. Smoke, access limitations, and safety concerns undoubtedly discouraged visitation in areas directly affected as well as across the whole complex. Additionally, other fires in the region (e.g. Glacier National Park) may have displaced or discouraged visitation. It is unclear how fire and fire fighting activity impacted different user groups.

We are confident that our sample represents the use, users, and user attitudes for 2003; however because of the aforementioned uncertainties, these data cannot be generalized in their current state beyond this study period. In other words, comparison between this 2003 study and previous studies is only appropriate at a very general level. Therefore the fourth objective, to determine trends in BMWC use, users and user attitudes, was not pursued in this report. A study of 2004 BMWC visitors is being conducted with the intention to examine the impact of wildland fire and fire fighting activities.

Study Methods

The population under study in this research is summer and fall adult (16 years and older) recreational visitors to BMWC who entered or exited the wilderness via trailheads estimated to receive the heaviest use. The trailheads included: Bear Creek; Beaver Creek; Benchmark; Gibson Reservoir; Headquarters Pass; Indian Meadows; Middle Fork Teton River; Morrison Creek; North Fork Blackfoot River; Owl Creek; Pyramid Pass; and, South Fork Flathead River. Visitors had to have been in or near the Wilderness for three hours or more to be included.

At these twelve sites, sampling occurred during the 2003 summer season between June 20 and September 7. Fall sampling occurred between September 8 and October 23. A detailed sampling schedule is included in the technical appendix.

Trailheads were sampled for four-day weekday blocks of time (Monday through Thursday) and three-day weekend blocks of time (Friday through Sunday). Fieldworkers contacted visitors at these trailheads during evenly distributed six hour periods between eight am and eight pm each day. Trailheads were sampled with probabilities proportional to size. In other words, among the 12 trailheads included in this study, those with higher levels of use were sampled more frequently than those with lower levels of use.¹ This bias towards higher use trailheads was accounted for in the analysis by weighting data *inversely* proportional to size. In other words, data from lower use trailheads were weighted more than data from higher use trailheads.² This sample design allowed fieldworkers to optimize their efficiency and capture a representative sample of the visitor population. This system was used in both the 1970 and 1982 studies.

¹ Previous trailhead use estimates (Lucas 1985) were used to determine use levels at trailheads. These estimates were verified for rank accuracy with current Forest Service managers.

² Weighting was calculated so that the sample size analyzed remained roughly the same as the actual number sampled. The sample sizes reported in each table in the technical appendix is the weighted sample size that was used in each analysis.

On-site and mail-return questionnaires were used. All respondents to the on-site questionnaire were included in the mail-return questionnaire. Fieldworkers contacted 605 visitors. Seven visitors refused to participate. Mail-return questionnaires were mailed to the remaining 598 respondents. An initial mailing was sent to respondents within twelve days of contact. A follow-up postcard was mailed to non-respondents one week after the questionnaire was mailed. A second mailing complete with another copy of the questionnaire was mailed to non-respondents three weeks after the initial mailing. Six mail-return questionnaires were not deliverable. The mail-return questionnaire was completed and returned by 462 respondents. This yielded an overall response rate of 78%.

A non-response bias check was conducted on six key variables including: season of use, use of outfitter, length of stay, mode of travel, education level, and previous experience in BMWC. No significant differences were found between respondents and non-respondents. Results of these tests are shown in the technical appendix.

About the Results

Options are innumerable for reporting results from a study such as this. The results presented below were chosen based on numerous communications with Forest Service personnel. The data are presented using four classification variables. These variables are believed to influence visitor responses to use, user and attitude questions. The four classification variables are:

- Length of stay: day versus overnight visitors.
- Use of outfitter: outfitted versus non-outfitted visitors.
- Season of use: summer versus fall visitors.
- Mode of travel: hiking versus horseback riding visitors.

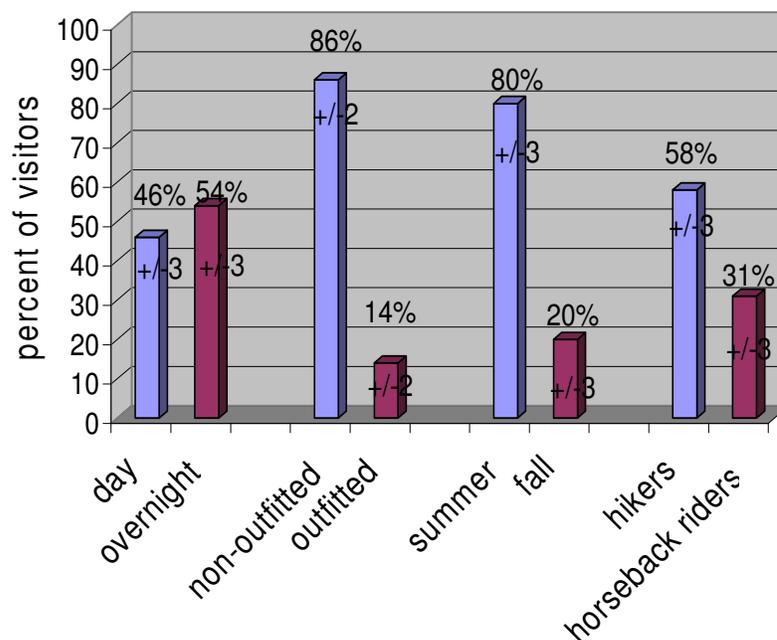
Each use, user, or user attitude characteristic was analyzed to determine if there was a statistically significant difference in characteristics between these four classification variables. For each characteristic, we present descriptive statistics to illustrate the total sample population. Following this we illustrate descriptive statistics and statistical test results for characteristics that showed a statistically significant difference between classification variables. A complete illustration of all characteristics is included in a separate technical appendix.

Who were the 2003 visitors to BMWC?

Respondents were asked numerous questions on both the onsite and mail-return questionnaires that helped to characterize the demographic and other characteristics of visitors to BMWC. These characteristics included: age, sex, level of education, place of residence, and previous experience in BMWC. Wherever possible, results from the onsite questionnaire were used instead of results from the mail-return questionnaire. This was done because more visitors completed the onsite questionnaire (n=598) than completed the mail-return questionnaire (n=462). In some cases, questions about the same characteristic were asked in different ways on the onsite and mail-return questionnaire. This allowed for a more nuanced understanding of the characteristic.

The visitors contacted in this study represent a sample of the entire population of visitors to the BMWC. Figure 1 illustrates the distribution of visitors across the four classification variables (length of stay, use of outfitter, season of use, and mode of travel). There is always a degree of error whenever statistics are computed from a sample of a population. Figure 1 also illustrates the amount of error in the sample population for each of the four classification variables. The amount of error is based on a 90% level of confidence. For example, we are 90% confident that 86% of BMWC visitors were non-outfitted, plus or minus 2%.

Figure 1. Sample population contacted, split by length of stay, use of outfitter, season of use, and mode of travel



Age

The onsite questionnaire asked respondents for their year of birth. There were significant differences in age when visitors were split by use of outfitter and mode of travel. There were no significant differences when visitors were split by length of stay or season of use.

Figure 1a. Age of visitors

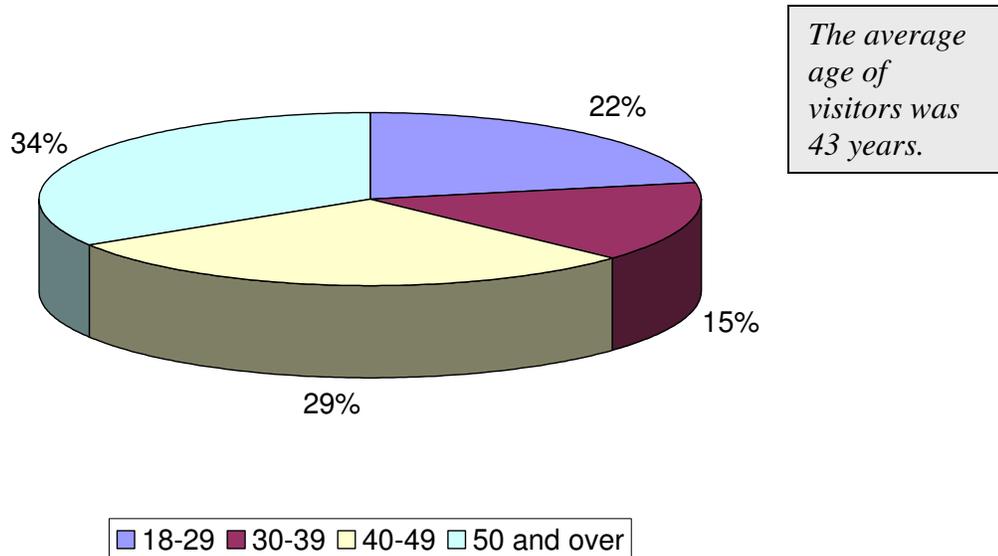


Figure 1b. Average age of visitors in years, split by use of outfitter

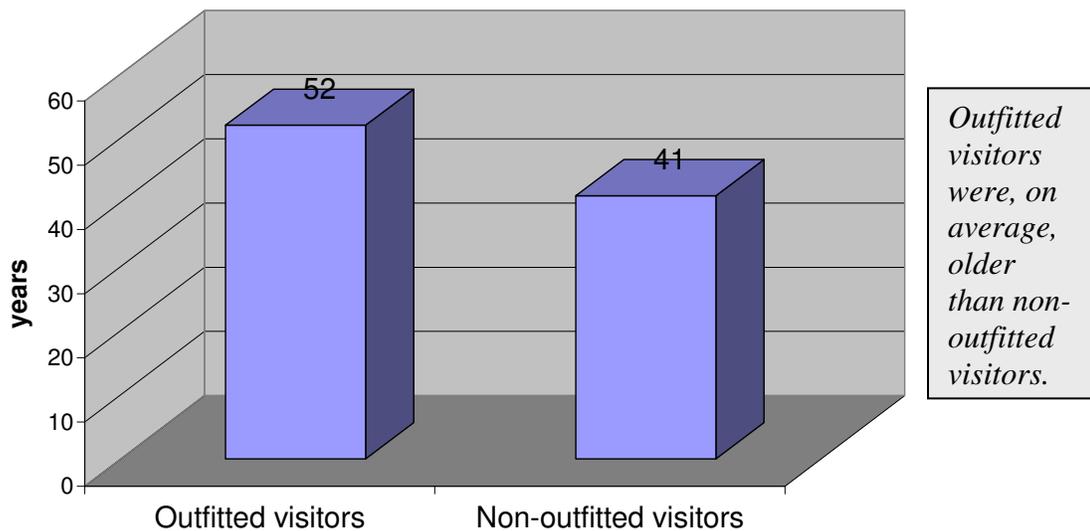
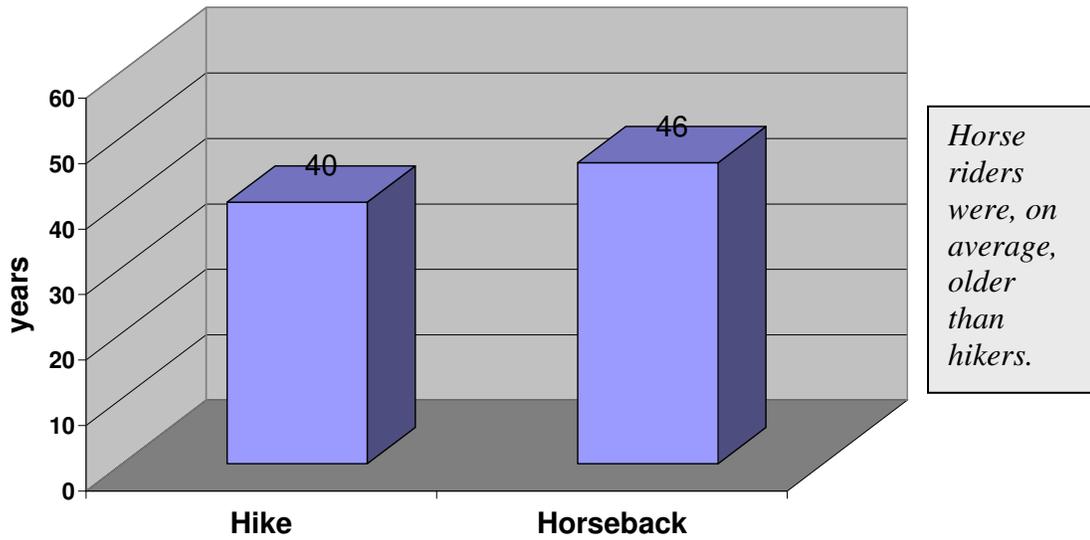


Figure 1c. Average age of visitors in years, split by mode of travel



Sex

Respondents' sex was documented on the onsite questionnaire. There were significant differences in sex when visitors were split by length of stay and season of use. There were no significant differences in sex when visitors were split by use of outfitter or mode of travel.

Figure 2a. Sex of Respondents

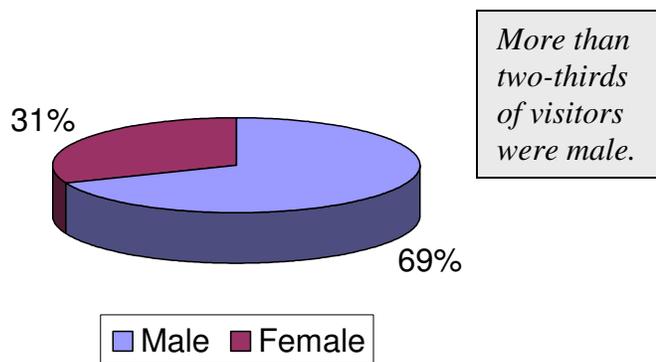


Figure 2b. Sex of visitors, split by length of stay

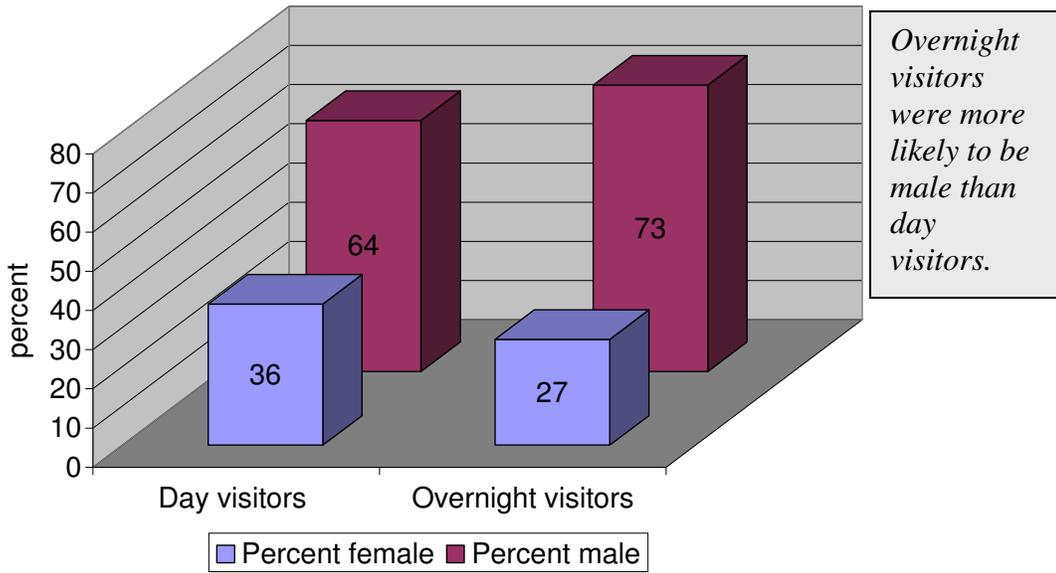
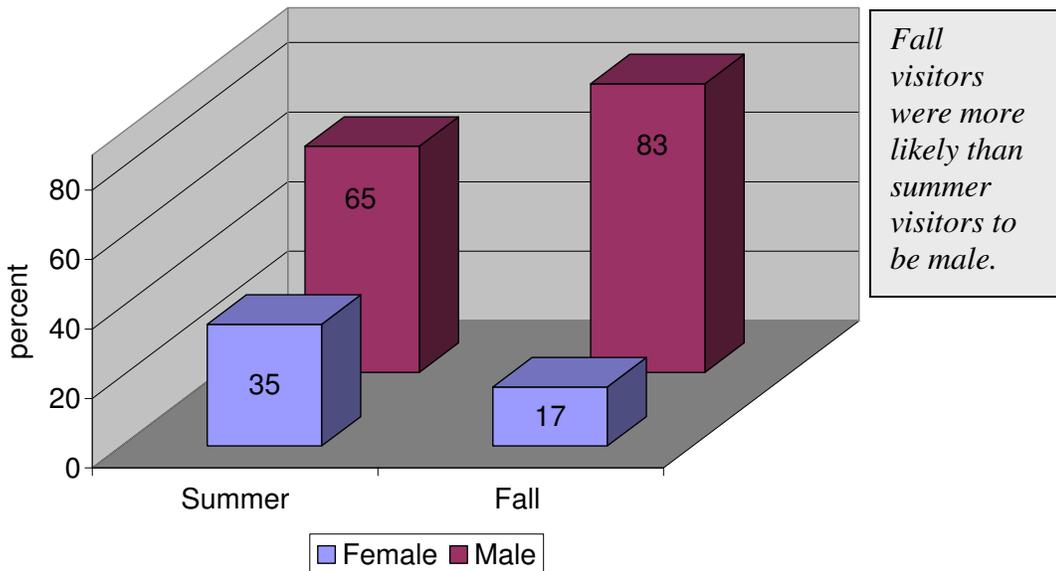


Figure 2c. Sex of visitors, split by season of use



Education

Respondents to the onsite questionnaire were asked to indicate the highest year of school they completed. There were significant differences in education when visitors were split by mode of travel. There were no significant differences in education when visitors were split by length of stay, use of outfitter, or season of use.

Figure 3a. Education level of visitors

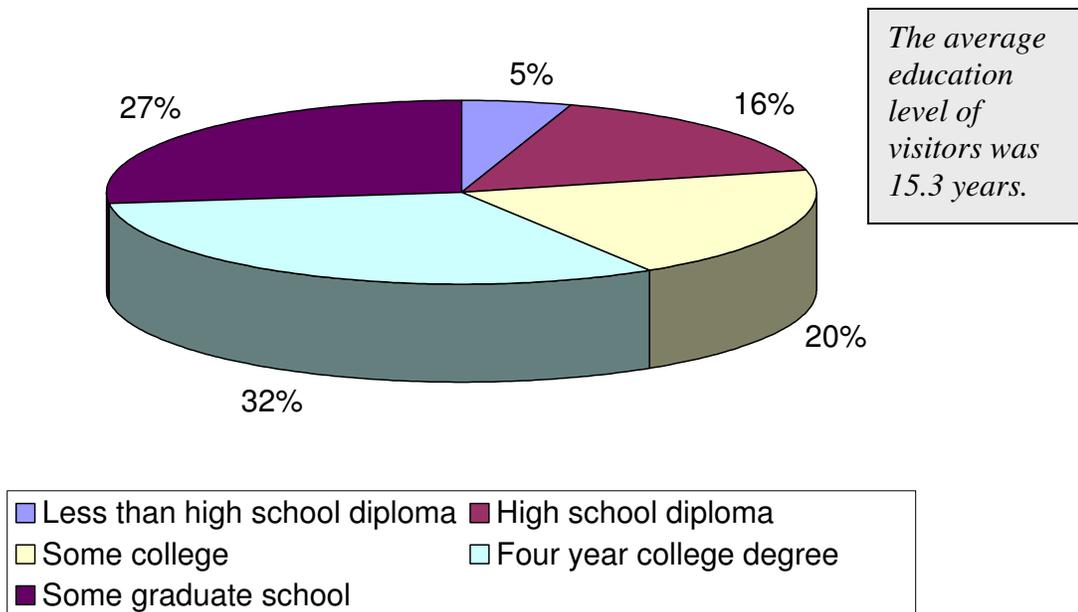
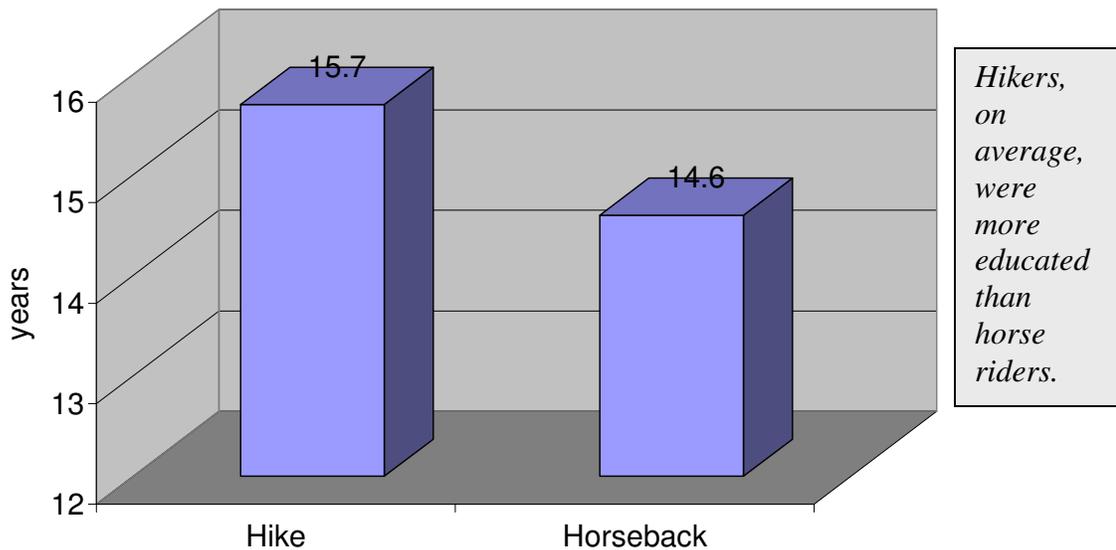


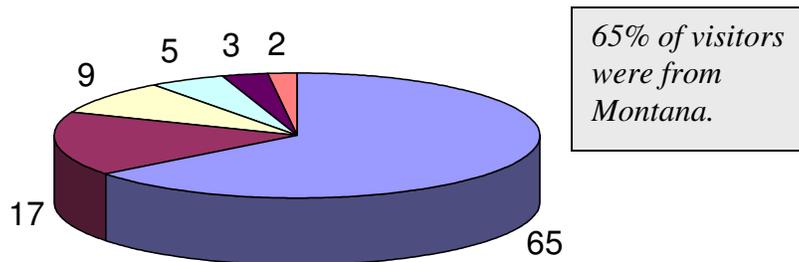
Figure 3b. Average education level in years, split by mode of travel



Place of Residence

The last part of the onsite questionnaire asked respondents to provide their name and mailing address so that we could send them a mail-return questionnaire. The mailing information was also used to analyze visitors' place of residence. Identities and personal information of respondents were kept anonymous and confidential. There were significant differences in place of residence when visitors were split by length of stay, use of outfitter, season of use, and mode of travel.

Figure 4a. Place of residence



65% of visitors were from Montana.

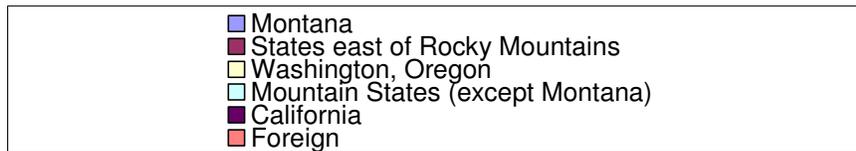
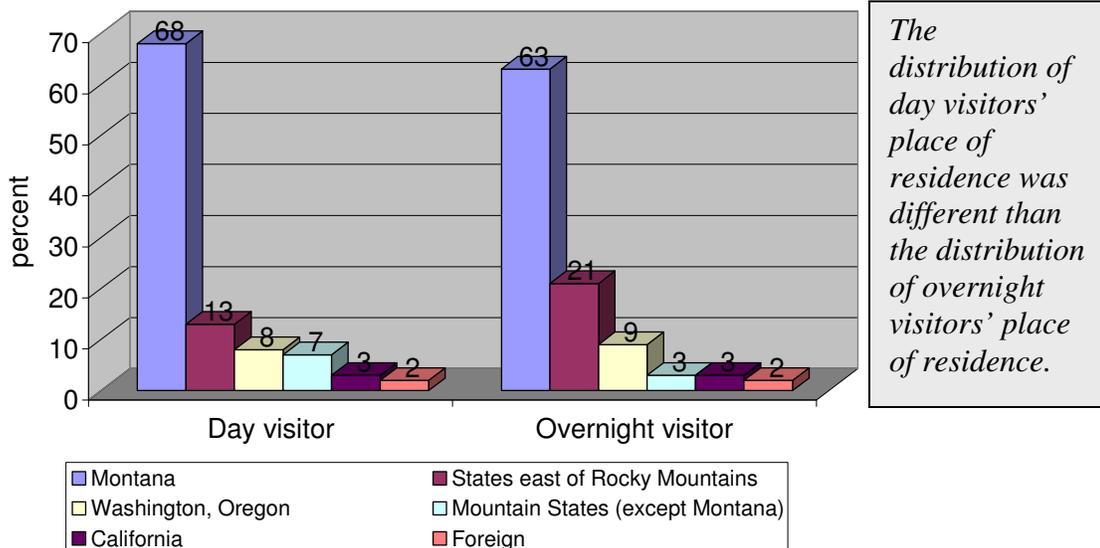


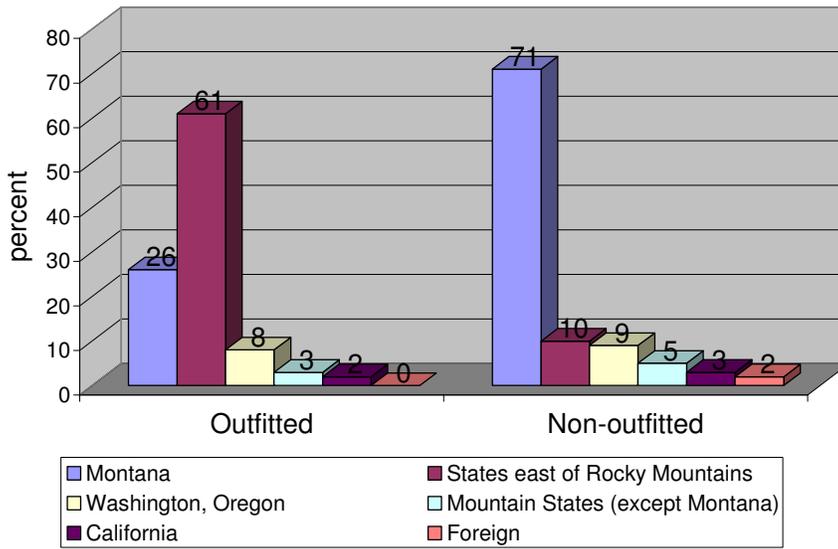
Figure 4b. Place of residence, split by length of stay



The distribution of day visitors' place of residence was different than the distribution of overnight visitors' place of residence.

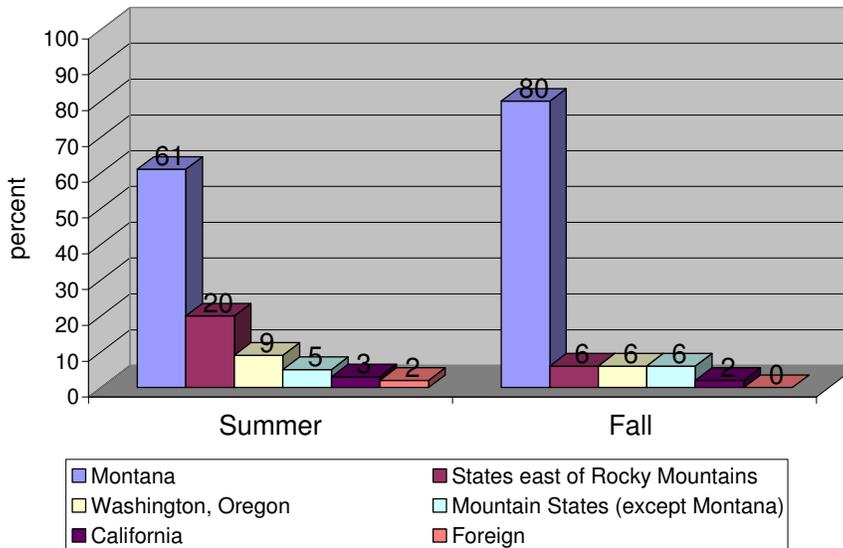


Figure 4c. Place of residence, split by use of outfitter



The distribution of outfitted visitors' place of residence was different than the distribution of non-outfitted visitors' place of residence.

Figure 4d. Place of residence, split by season of use



The distribution of summer visitors' place of residence was different than the distribution of fall visitors' place of residence.

Previous experience

Visitors were asked if they had ever been to the BMWC prior to the trip for which they were being questioned. There were significant differences in previous experience when visitors were split by length of stay, use of outfitter, and season of use. There was not a significant difference when visitors were split by mode of travel.

Figure 5a. Percentage of visitors with previous experience in BMWC

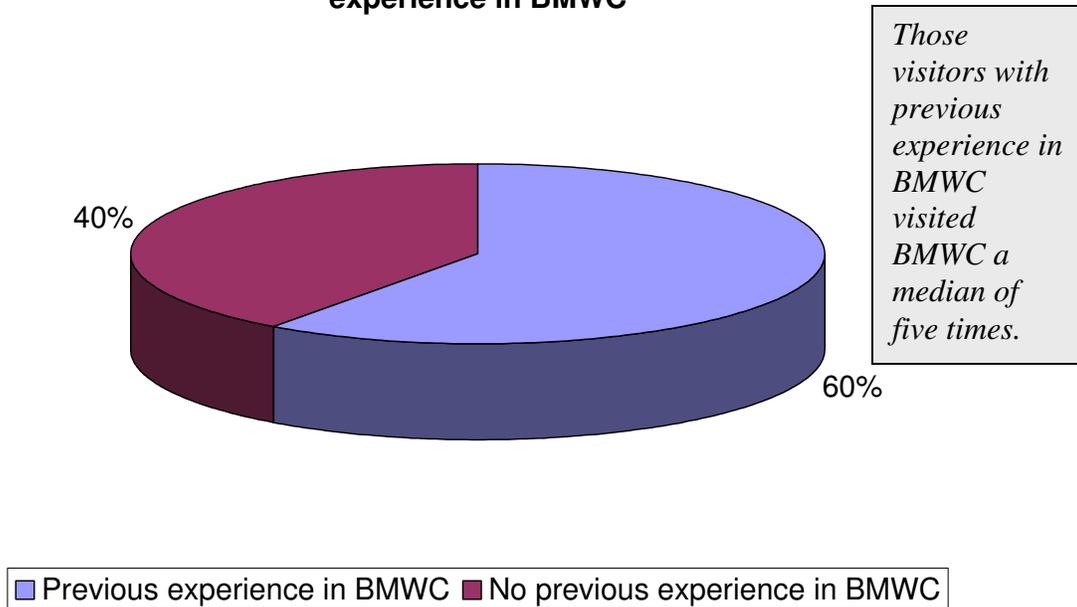


Figure 5b. Percentage of visitors with previous experience, split by length of stay

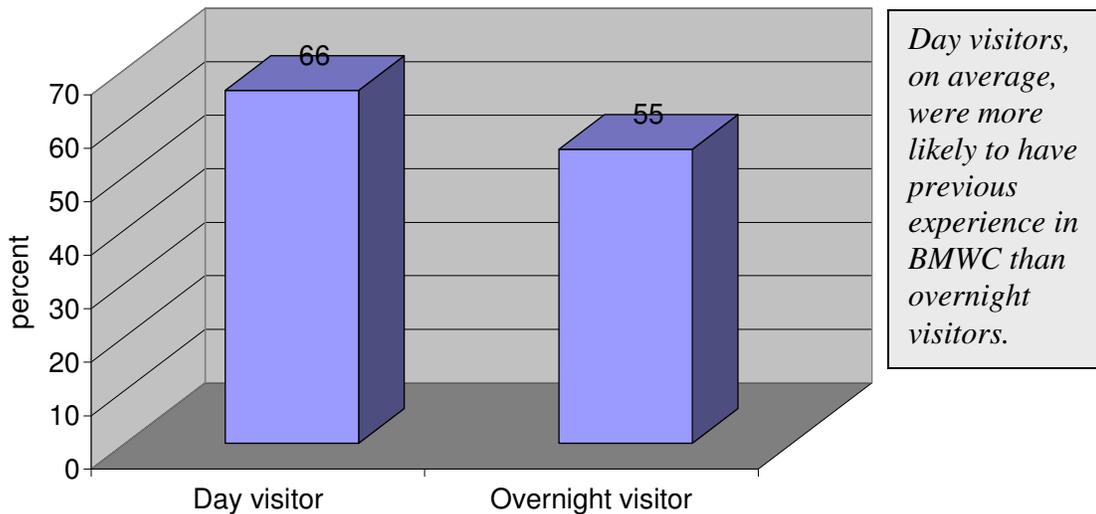


Figure 5c. Percentage of BMWC visitors with previous experience in BMWC, split by use of outfitter

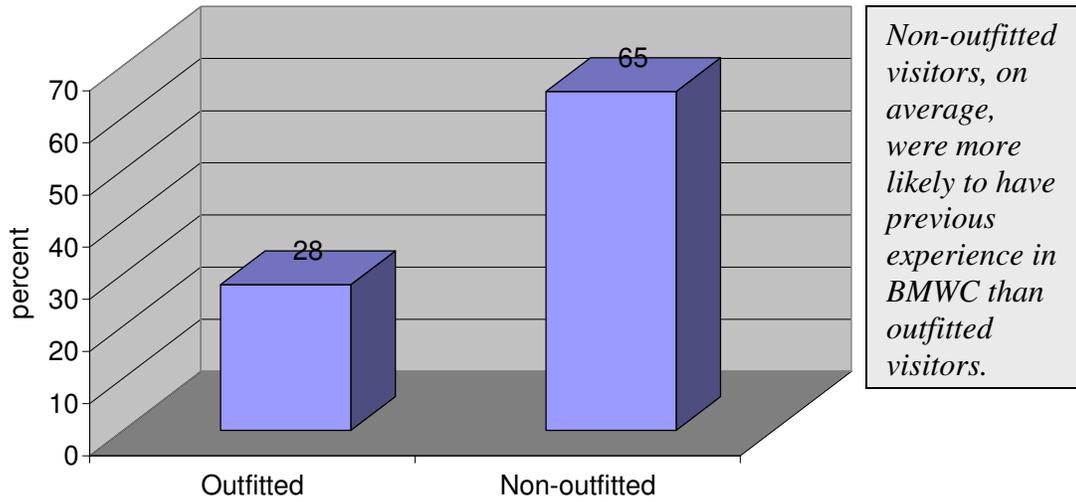
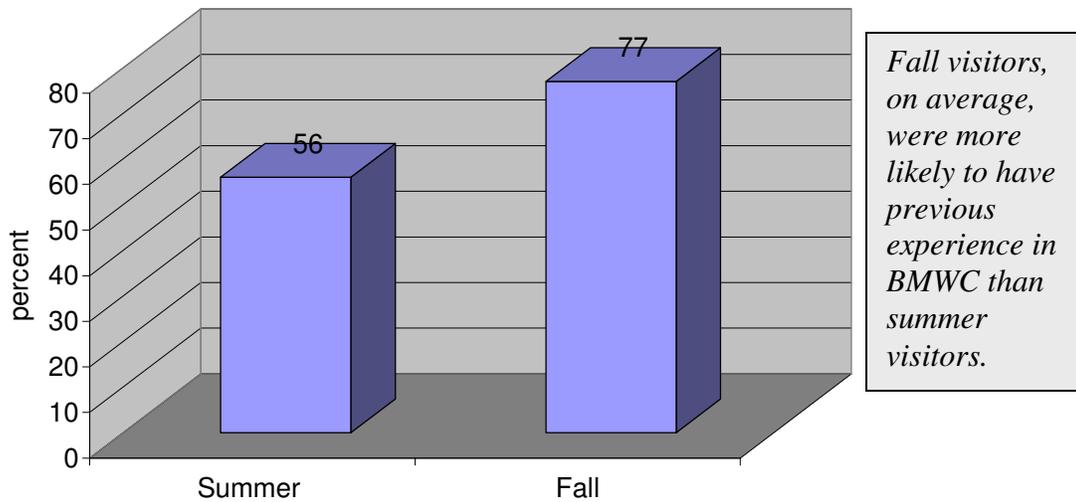


Figure 5d. Percentage of BMWC visitors with previous experience in BMWC, split by season of use



What are the characteristics of a 2003 BMWC visit?

Respondents were asked numerous questions on both the onsite and mail-return questionnaires that helped to illustrate characteristics of visits to BMWC. These characteristics included: party size; mode of travel; number of livestock used; activities participated in; length of stay; use of outfitters; and encounters with other groups. As with the visitor characteristic data, results from the onsite questionnaire were used instead of results from the mail-return questionnaire whenever this was appropriate.

Party size

Respondents were asked how many people were in their party. There were significant differences in party size when visitors were split between length of stay, use of outfitter, season of use, and mode of travel.

Figure 6a. Party size

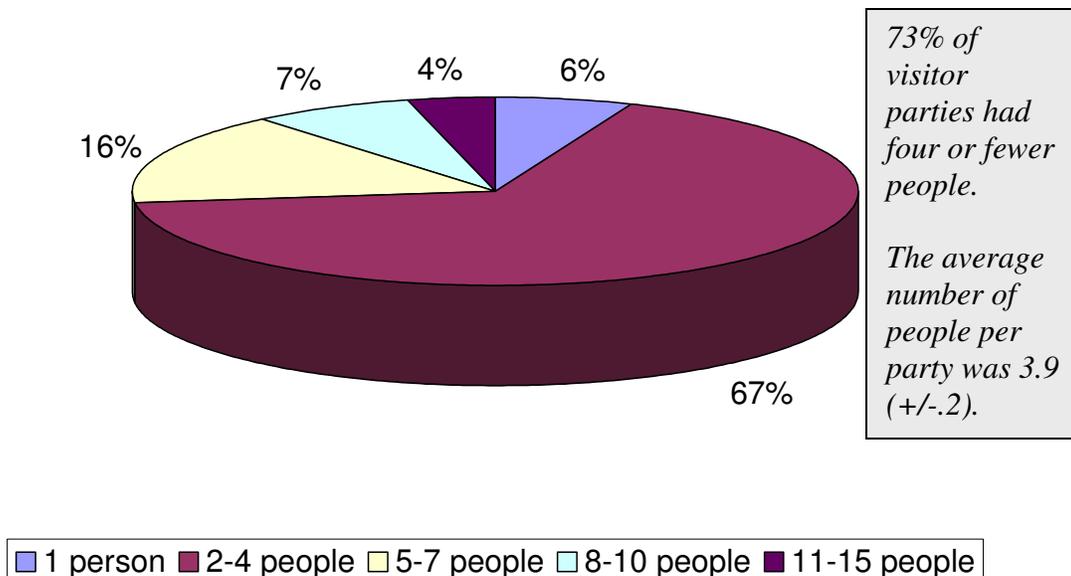


Figure 6b. Party size, split by length of stay

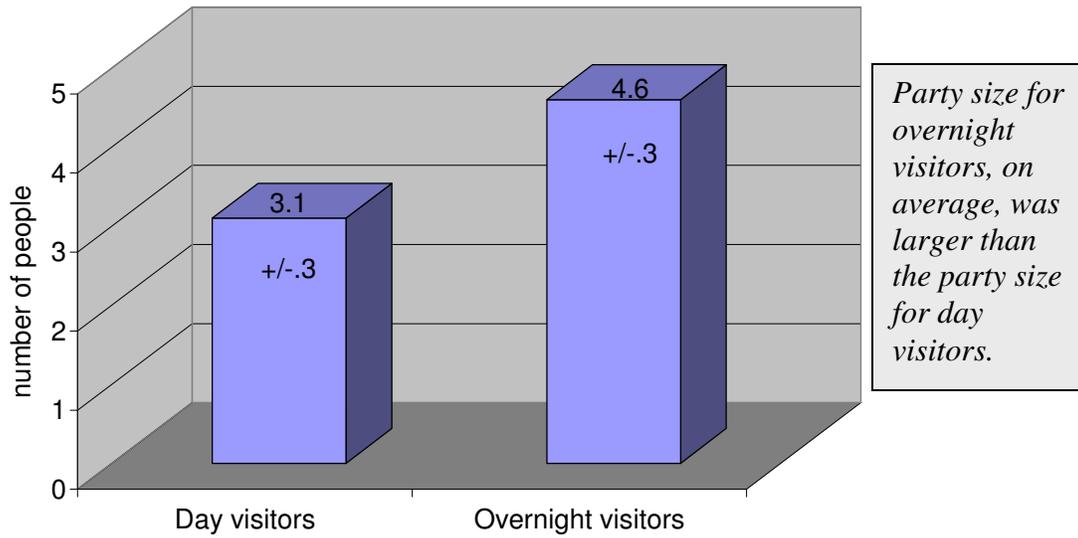


Figure 6c. Party size, split by use of outfitter

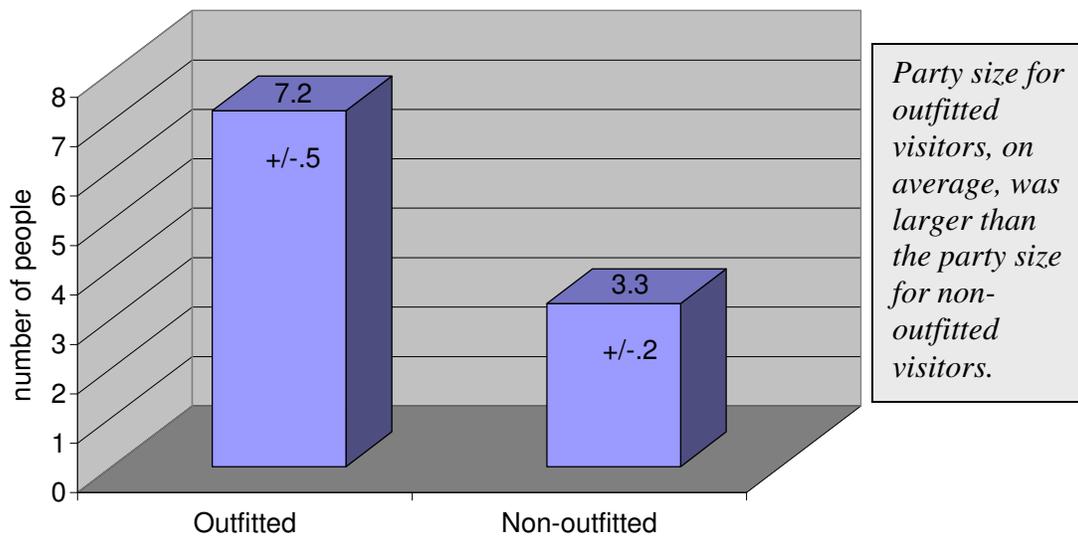


Figure 6d. Party size, split by season of use

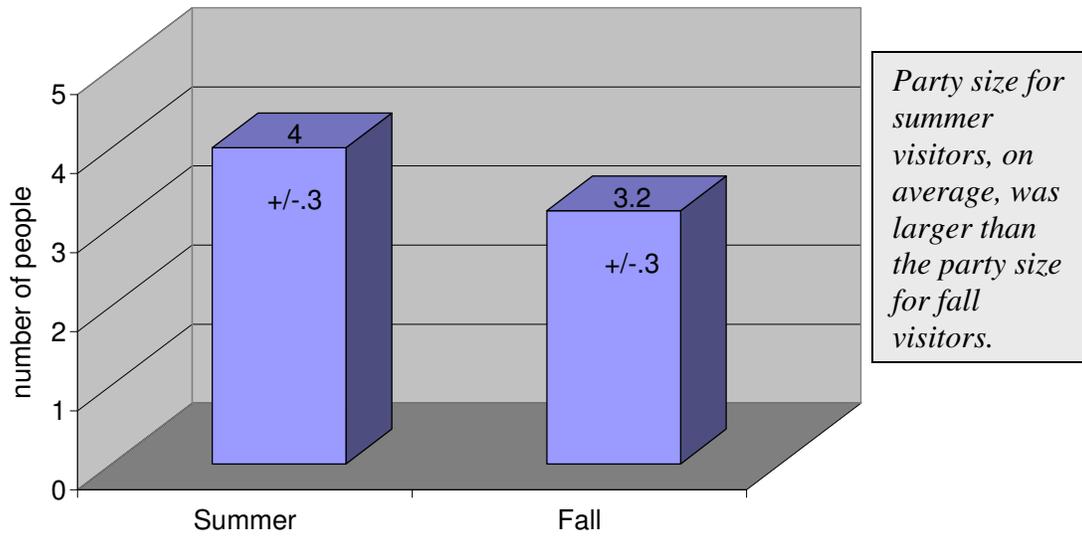
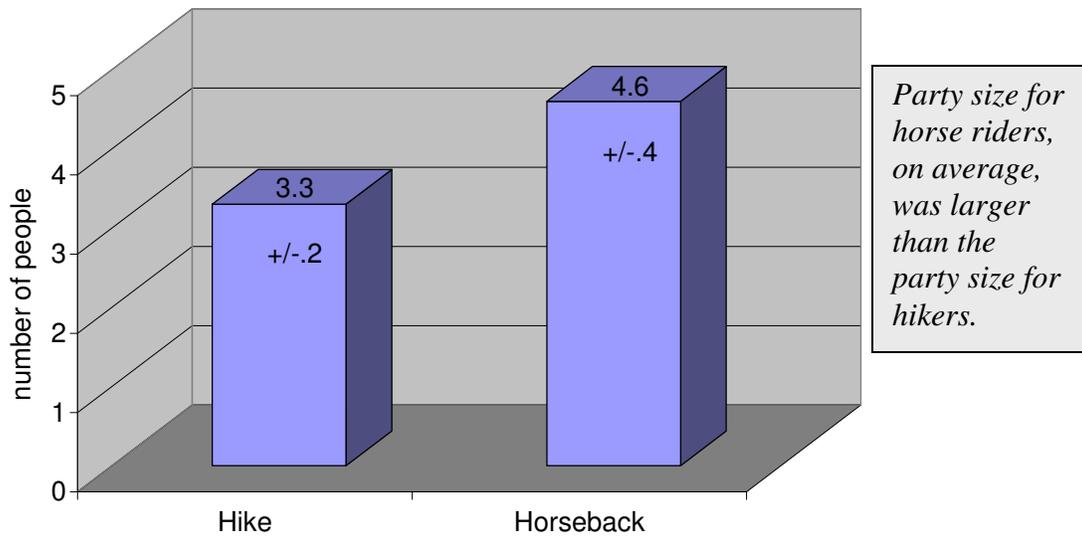


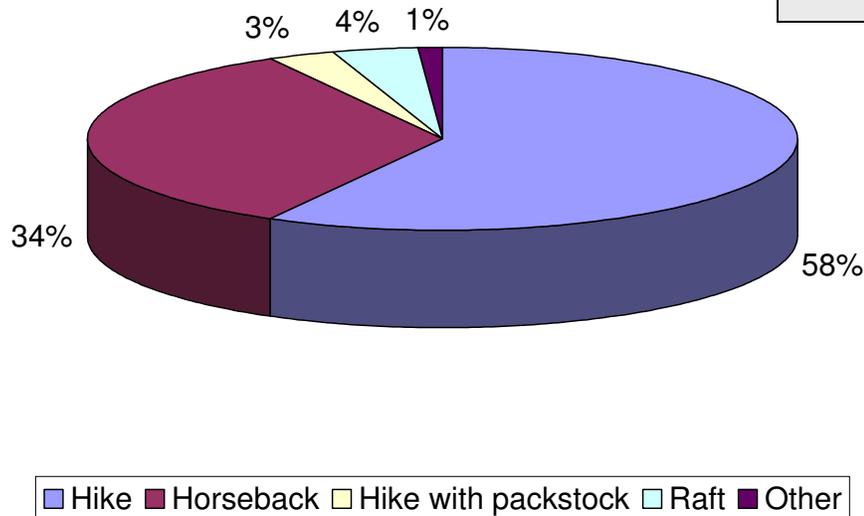
Figure 6e. Party size, split by mode of travel



Mode of travel

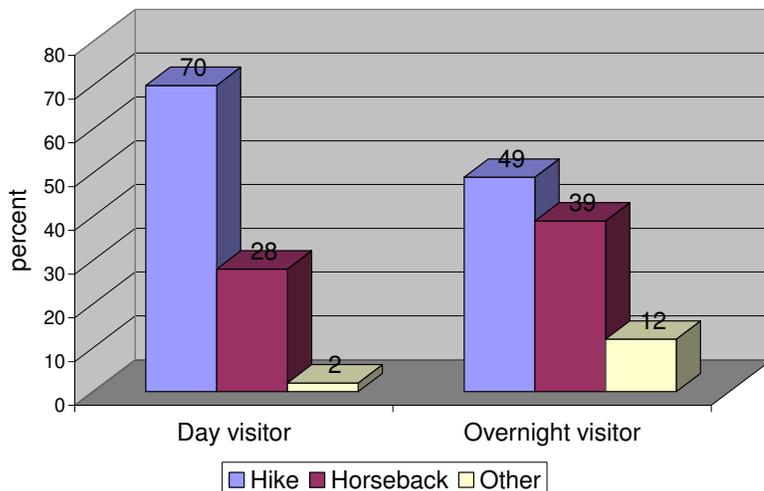
Respondents were asked to indicate their primary mode of travel in the Wilderness. All modes of travel are depicted in Figure 7a. “Raft” and “hike with packstock” were merged into the “other” category in the comparative analyses. Only hikers and horseback riders are used in the comparative analyses. There were significant differences in mode of travel when visitors were split between length of stay, use of outfitter, and season of use.

Figure 7a. Mode of travel



The percentage of hikers was more than double that of horse riders.

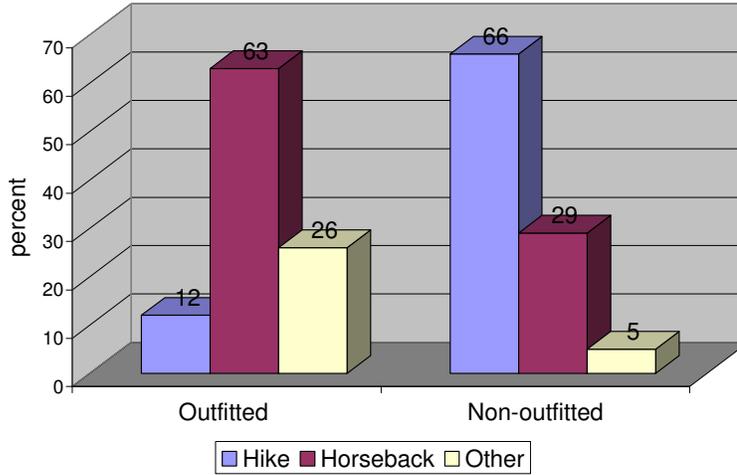
Figure 7b. Mode of travel, split by length of stay



Day visitors, on average, were more likely to hike than overnight visitors.

Overnight visitors, on average, were more likely to ride horses than day visitors.

Figure 7c. Mode of travel, split by use of outfitter

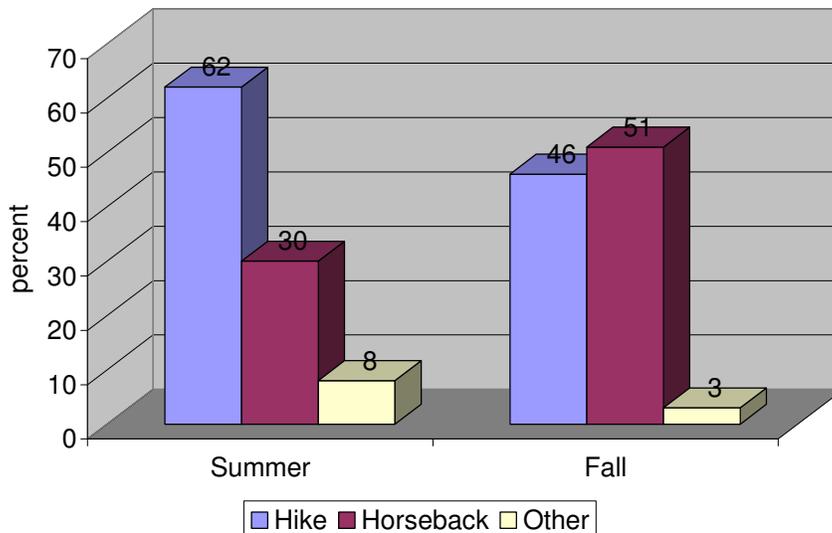


Non-outfitted visitors, on average, were more likely to hike than outfitted visitors.

Outfitted visitors, on average, were more likely to ride horses than non-outfitted visitors.

The other category for outfitted visitors was primarily composed of rafters.

Figure 7d. Mode of travel, split by season of use



Summer visitors, on average, were more likely to hike than fall visitors.

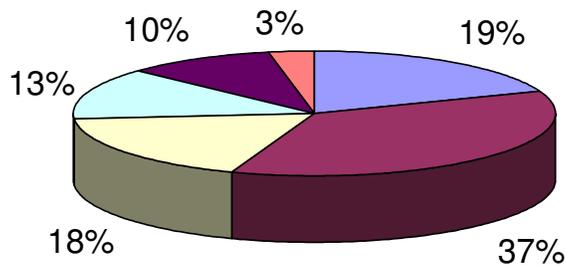
Fall visitors, on average, were more likely to ride horses than summer visitors.

The other category for the fall was composed entirely of hikers with packstock.

Number of livestock

Respondents who were in parties that used horses or other livestock were asked how many horses or other livestock their party used. There were significant differences in number of livestock used when visitors were split by length of stay and use of outfitter. There was not a significant difference between summer and fall visitors.

Figure 8a. Number of livestock in groups that used livestock



The average number of livestock in a group was 7.4 (+/- .8).

74% of groups used ten or fewer livestock.



Figure 8b. Average number of livestock in groups that used livestock, split by length of stay

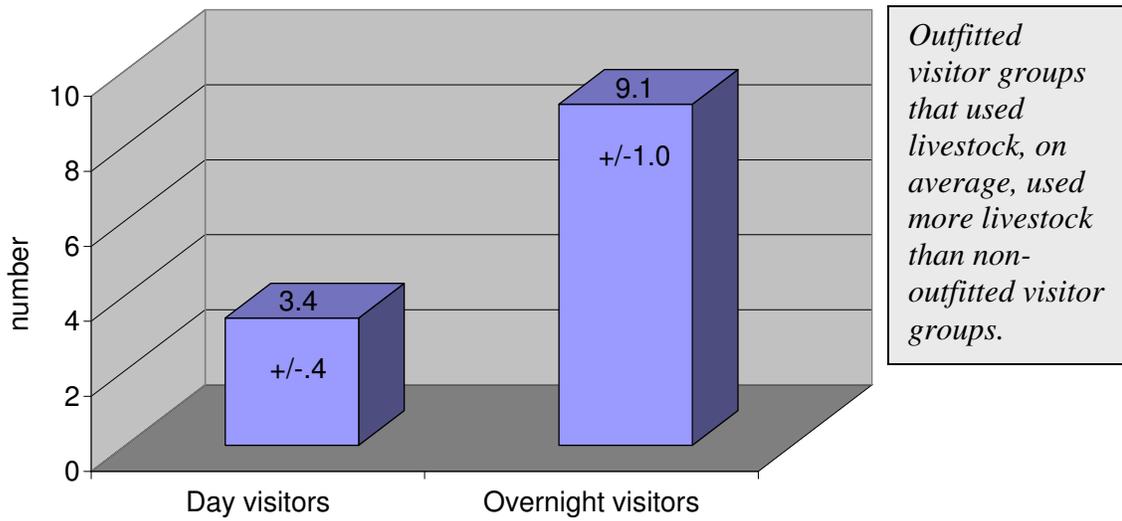
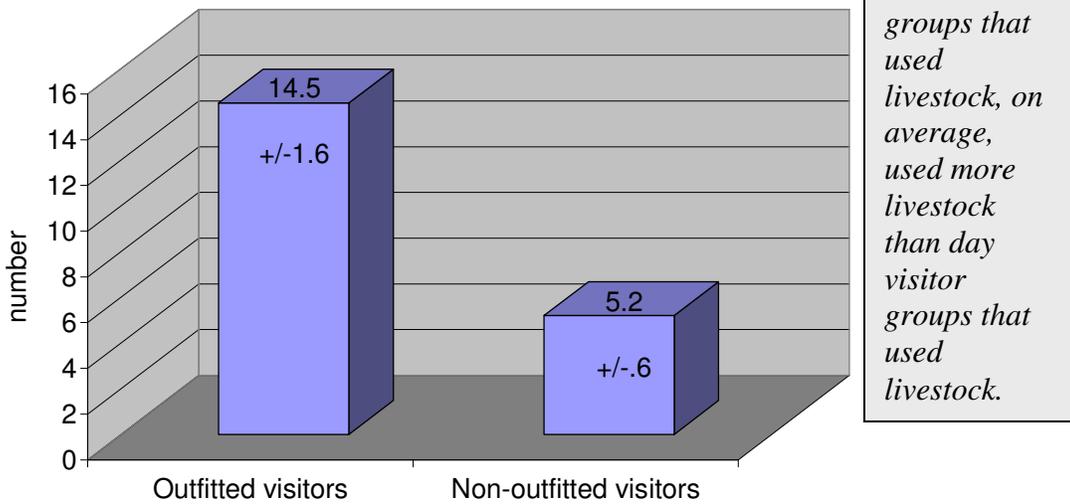


Figure 8c. Average number of livestock in groups that used livestock, split by use of outfitter



Activities

Respondents were asked to identify all of the activities in which they participated in the Wilderness on the specific trip for which they were questioned. Totals equal more than 100 because some respondents participated in more than one activity. There were significant differences in various activities when visitors were split by length of stay, use of outfitter, season of use, and mode of travel.

Figure 9a. Activity participation, in percent

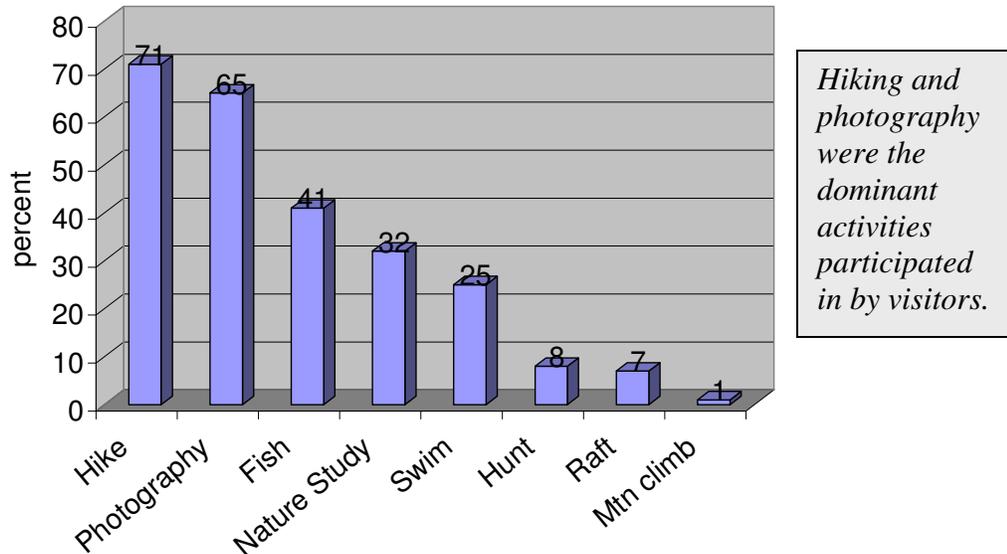


Figure 9b. Activity participation, in percent, split by length of stay

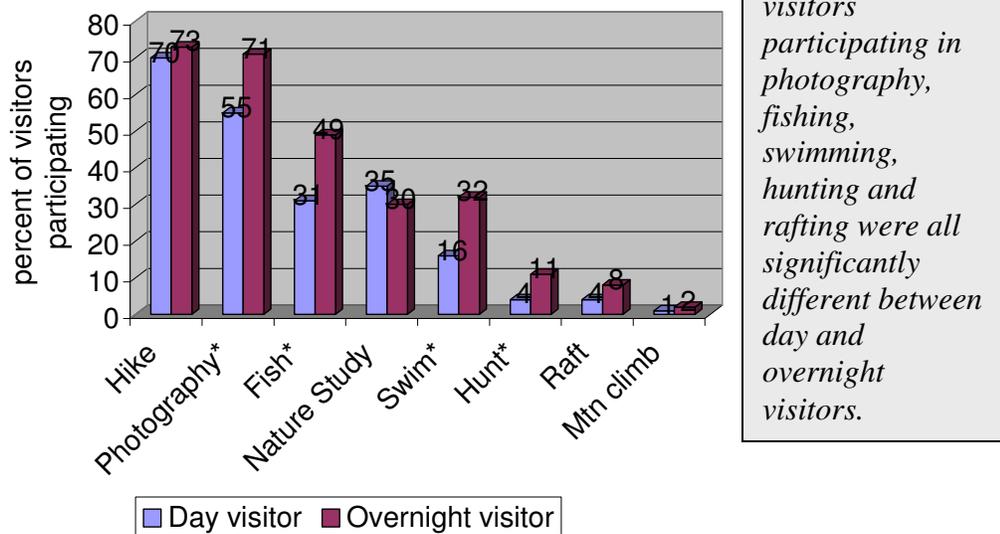
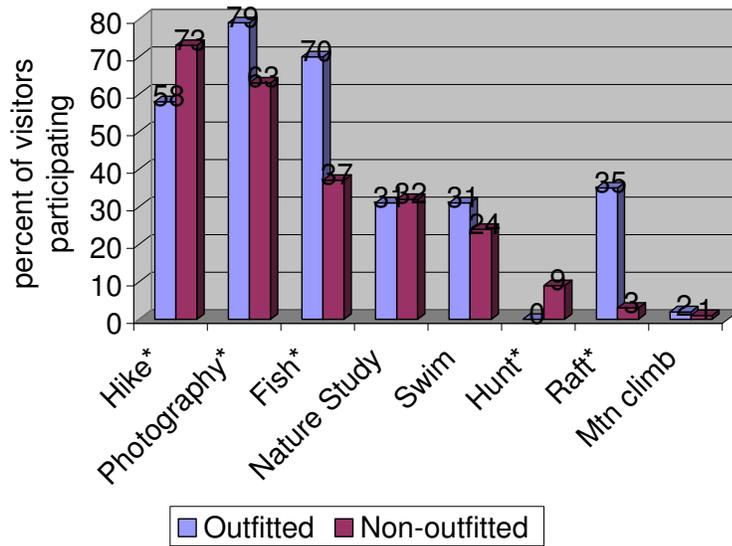
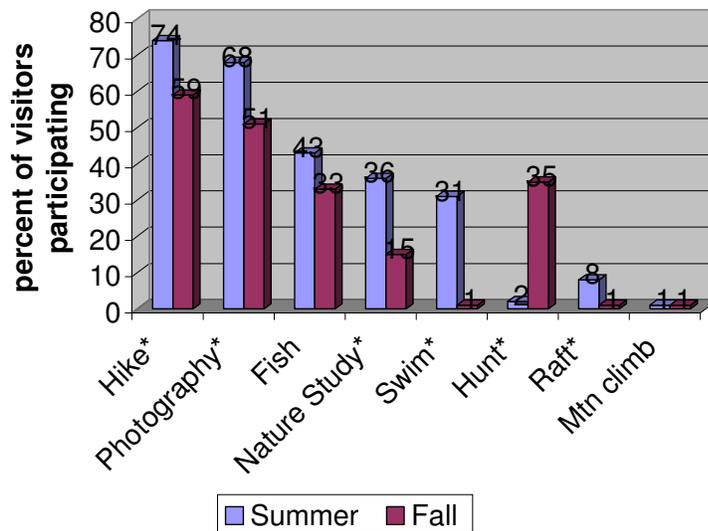


Figure 9c. Activity participation, in percent, split by use of outfitter



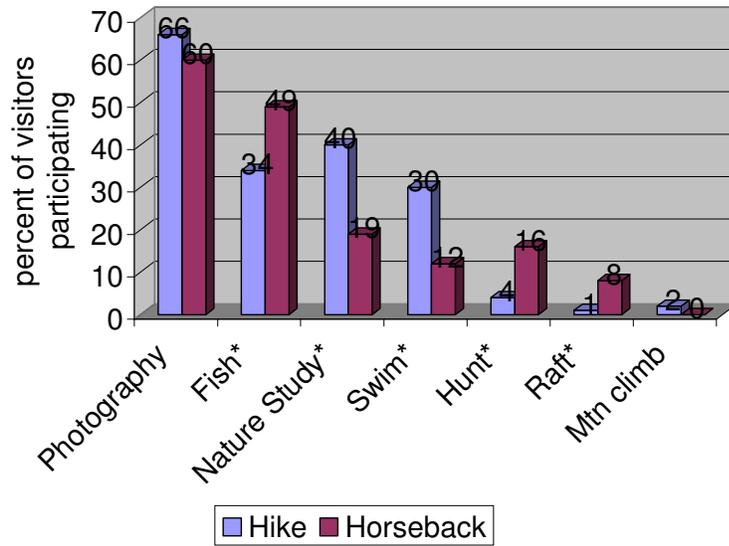
The percent of visitors participating in hiking, photography, fishing, hunting, and rafting were significantly different between outfitted and non-outfitted visitors.

Figure 9d. Activity participation, in percent, split by season of use



The percent of visitors participating in hiking, photography, nature study, swimming and, hunting, rafting were significantly different between summer and fall visitors.

Figure 9e. Activity participation, in percent, split by mode of travel



The percent of visitors participating in fishing, nature study, swimming, hunting and rafting were significantly different between hikers and horseback riders.

Length of stay

Respondents were asked if their party stayed out overnight in the Wilderness, beyond the road, on this particular visit. If respondents did stay out overnight, they were asked to indicate how many nights they spent in the Wilderness. There were significant differences in length of stay when visitors were split by use of outfitter, season of use, and mode of travel.

Figure 10a. Length of stay in nights

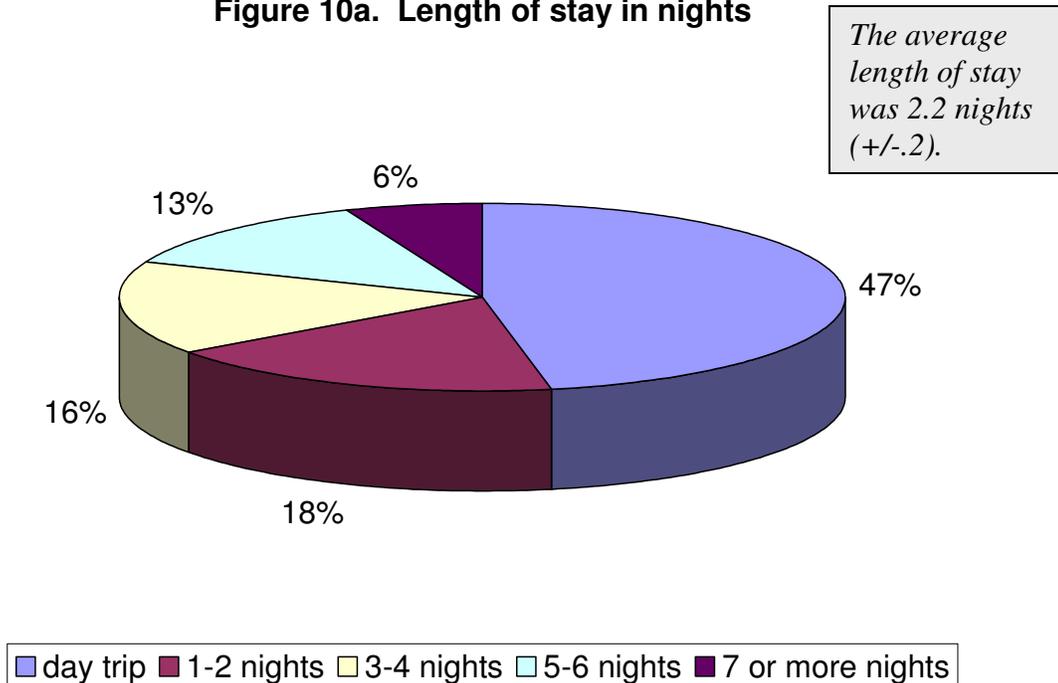


Figure 10b. Average length of stay, split by use of outfitter

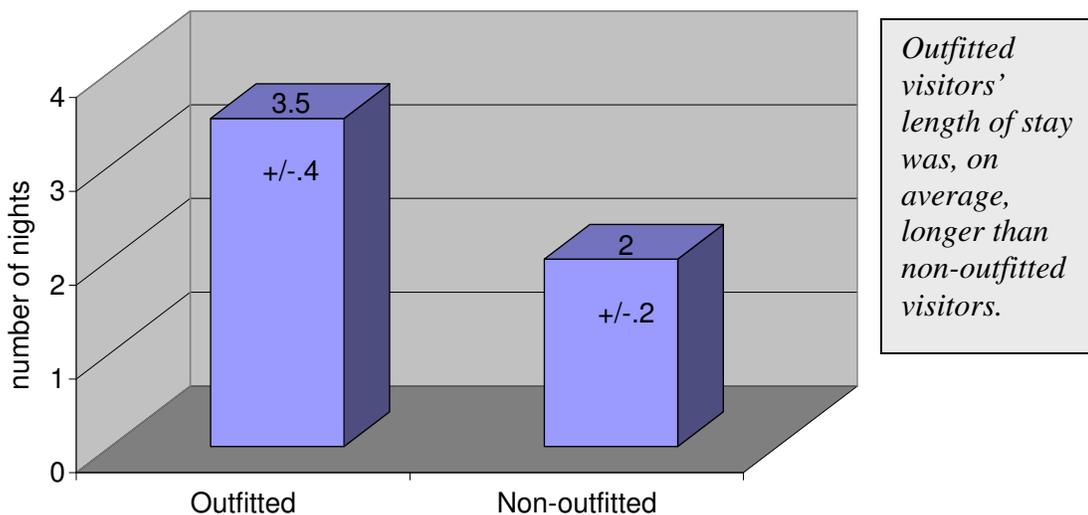


Figure 10c. Average length of stay, split by season of use

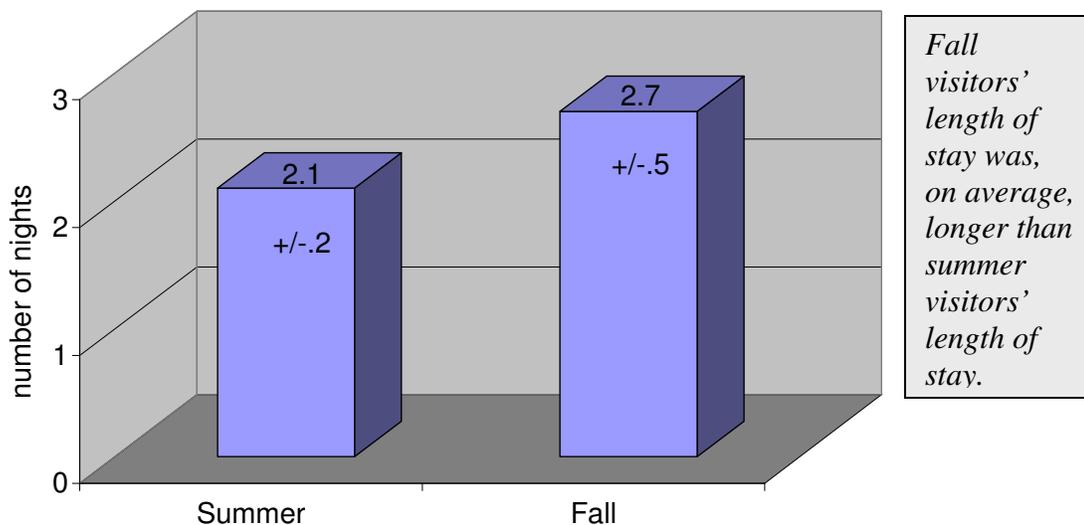
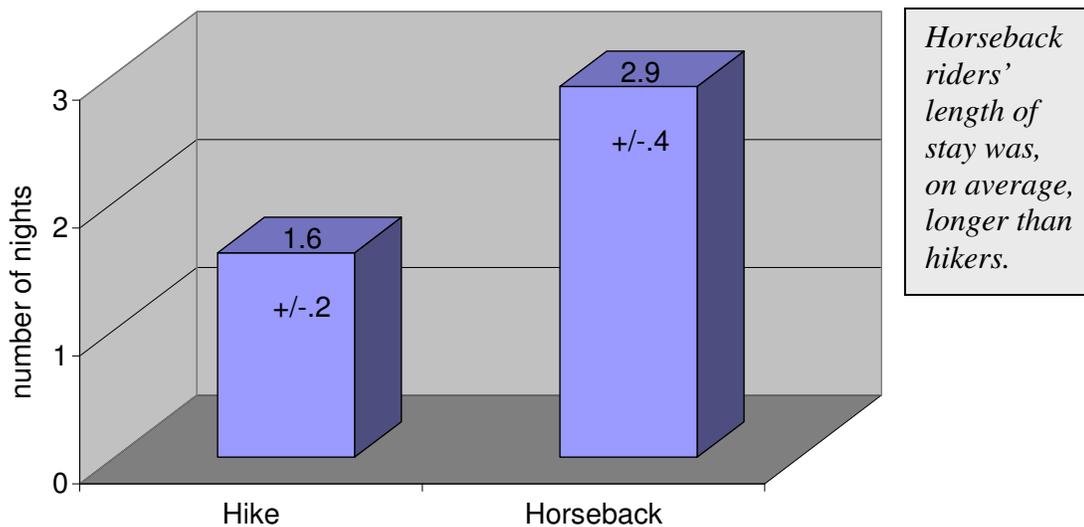


Figure 10d. Average length of stay, split by mode of travel



Outfitter use

Visitors were asked if an outfitter or guide accompanied them on their trip. There were significant differences in outfitter use when visitors were split by length of stay and mode of travel. Unfortunately, no outfitted visitors were contacted during the fall season.

Figure 11a. Outfitted vs. Non-outfitted visitors

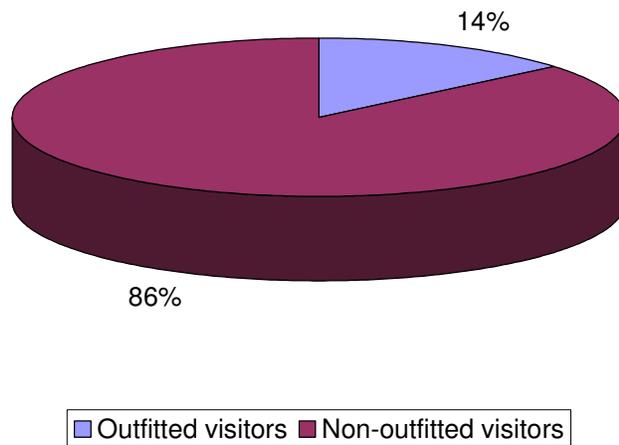


Figure 11b. Outfitter use, split by length of stay

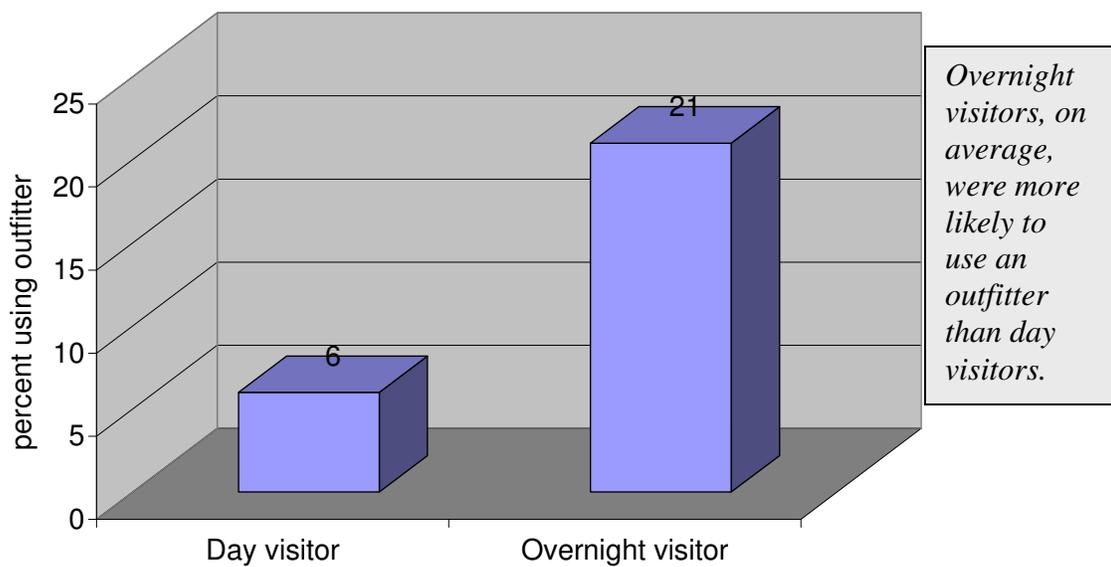
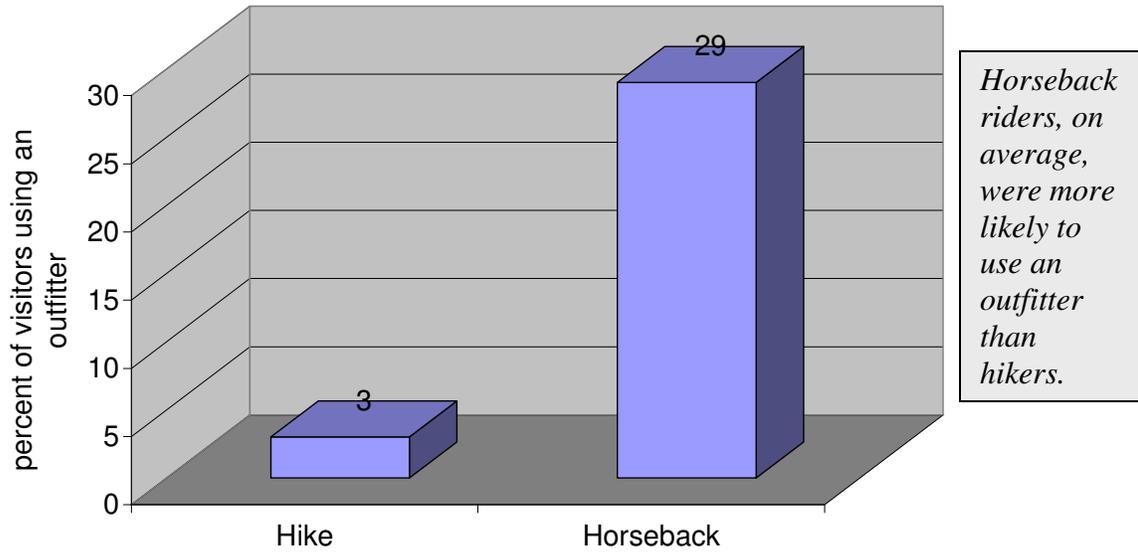


Figure 11c. Outfitter use, split by mode of travel



Encounters

Visitors were asked how many other groups they saw in the Wilderness on the trip about which they were being questioned. They were also asked how many of these were groups of ten or more people and how many of the groups had horses or other livestock. These totals were divided by the number of days each visitor spent in the Wilderness in order to derive the number of groups encountered per day. There were significant differences in encounters with all groups when visitors were split by length of stay, season of use, and mode of travel. There were no significant differences in encounters with large groups or horse or livestock groups when visitors were split by length of stay, season of use, or mode of travel.

Figure 12a. Average number of groups encountered per day

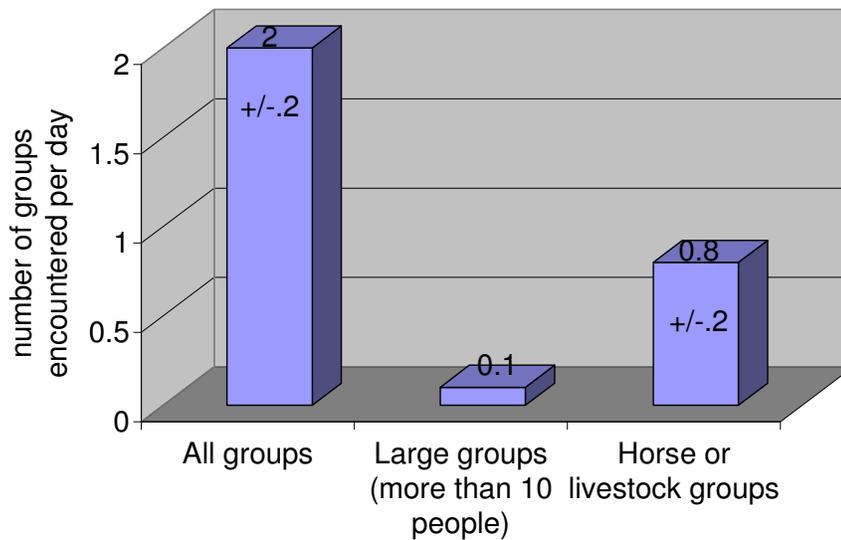


Figure 12b. Average number of all groups encountered, split by length of stay

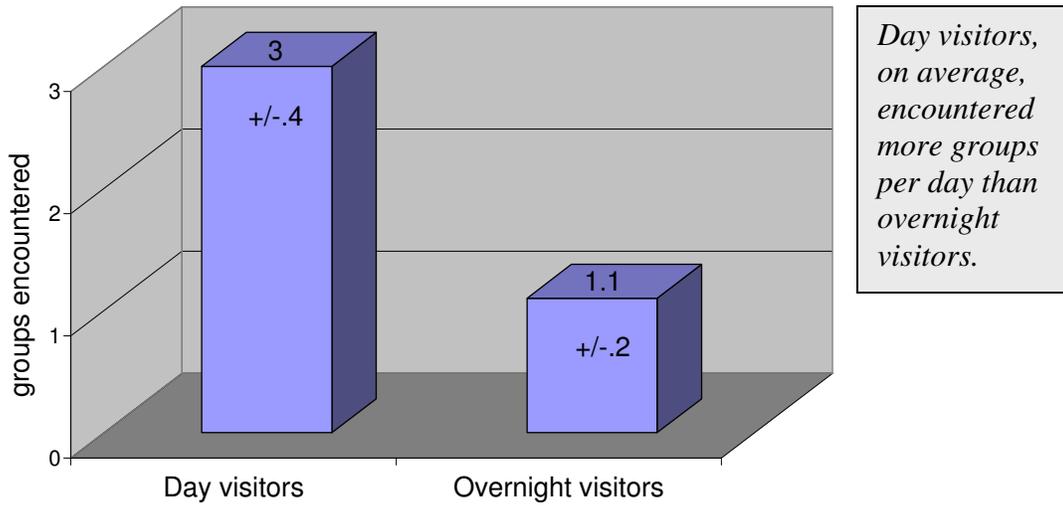


Figure 12c. Average number of all groups encountered, split by season of use

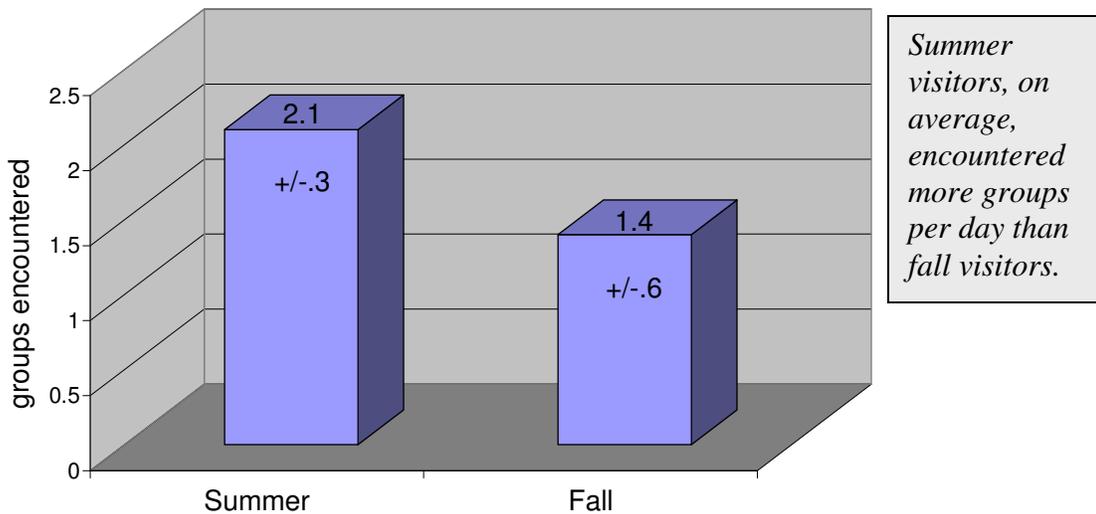
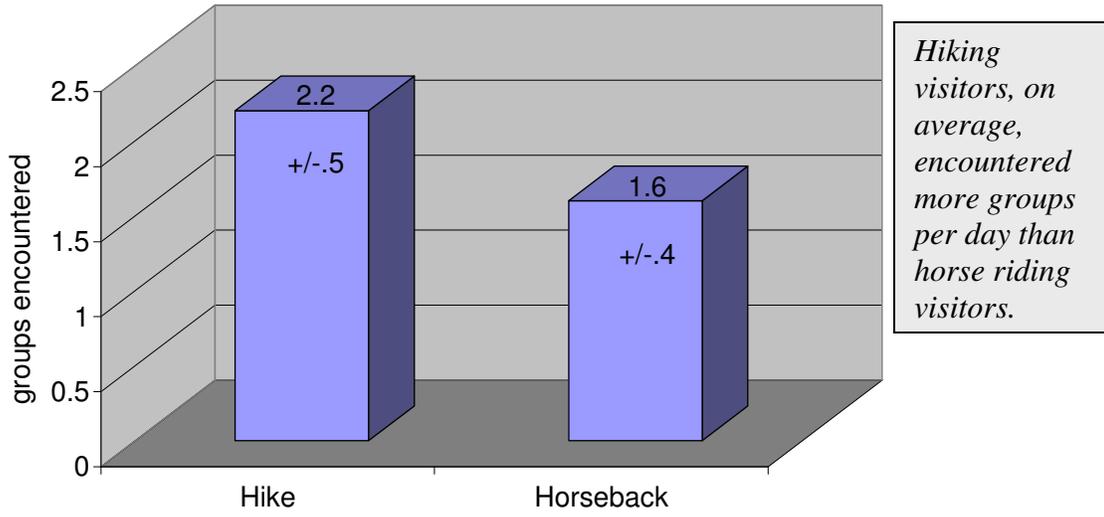


Figure 12d. Average number of all groups encountered, split by mode of travel



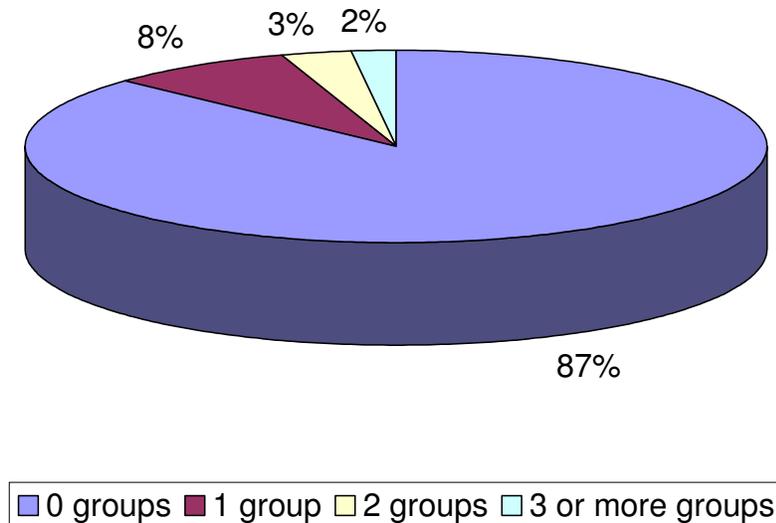
What were 2003 BMWC visitor attitudes?

Visitors were asked numerous questions about their attitudes towards social and physical conditions and management actions.

Campsite conditions

Overnight visitors were asked to report the number of groups they preferred to be camped within sight or sound of them. There were no significant differences in preferred campsite conditions when visitors were split between use of outfitter, season of use, or mode of travel.

Figure 13. Preferred number of other parties camped within sight or sound



Motivations for Visiting Wilderness

Visitors were asked to indicate how important various reasons for visiting Wilderness were to them on their most recent visit. Motivations are listed in Table 1 according to their importance. The most important motivations are listed first and the least important are listed last. Differences for each motivation in length of stay, use of outfitter, season of use, and mode of travel were calculated. Significant differences are in bold font.

Table 1. Motivations for visiting Wilderness, split by length of stay, use of outfitter, season of use, and mode of travel

Motivation	Average score								
	Total	Day visitors	Overnight visitors	Outfitted	Non-outfitted	Summer	Fall	Hike	Horse-back
To observe scenic beauty	5.54	5.58	5.50	5.61	5.53	5.55	5.47	5.64	5.33
So I can take in some natural surroundings	5.38	5.47	5.32	5.25	5.40	5.42	5.22	5.56	5.07
To have fun	5.31	5.25	5.35	5.39	5.29	5.31	5.30	5.29	5.28
To enjoy the smells and sounds of nature	5.06	5.28	4.90	4.95	5.08	5.13	4.81	5.21	4.83
For the adventure	4.71	4.63	4.77	4.73	4.71	4.73	4.65	4.67	4.75
For the solitude	4.70	4.79	4.63	4.16	4.77	4.71	4.66	4.86	4.45
To get away from other people	4.46	4.47	4.45	3.61	4.58	4.45	4.53	4.53	4.33
To be with others who enjoy doing the same things I do	4.30	4.14	4.42	4.16	4.32	4.29	4.33	4.14	4.52
So I could do things with my companions	4.20	4.08	4.29	4.11	4.21	4.22	4.09	4.09	4.33
To learn more about nature	4.05	4.32	3.84	3.85	4.07	4.09	3.89	4.24	3.77
So I can be with friends	3.96	3.70	4.16	4.43	3.89	3.65	3.99	3.76	4.22
To understand the natural world better	3.93	4.19	3.72	3.61	3.97	3.96	3.79	4.16	3.55
To improve my physical health	3.92	4.20	4.08	3.11	4.03	3.95	3.80	4.29	3.20
So my mind could move at a slower pace	3.84	3.72	3.93	3.65	3.86	3.89	3.63	3.87	3.64
To help keep me in shape	3.83	4.13	3.60	3.20	3.92	3.86	3.72	4.12	3.17
To develop my skills and ability	3.55	3.48	3.60	3.25	3.59	3.55	3.54	3.59	3.57
Because I thought it would be a challenge	3.42	3.27	3.53	3.40	3.42	3.45	3.31	3.46	3.26
To help reduce or release some built up tensions	3.38	3.40	3.36	3.00	3.43	3.39	3.34	3.36	3.30
So I could become better at it	3.35	3.36	3.34	2.98	3.40	3.35	3.33	3.39	3.35
Because something exciting is always happening there	3.05	3.15	2.97	2.75	3.09	3.08	2.93	3.08	3.05
To get away from some of the expectations people have of me back home	2.29	2.15	2.39	2.02	2.32	2.33	2.10	2.17	2.53

*score based on six-point scale with one meaning that motivation was “not at all important” and six meaning that motivation was “extremely important.”

Management actions

Visitors were asked how desirable or undesirable they considered various trail, campsite, visitor, and resource management actions. Management actions are listed in Tables 2a through 2d with the least desirable management actions first and the most desirable management actions last.

Table 2a. Desirability of trail management actions (listed in rank order by level of undesirability)

Management Action	Undesirable	Don't care	Desirable	Desirable in more heavily used parts of Wilderness, but not in more lightly used parts
Signs along the trail explaining natural features or early history	38	18	31	12
A few trees blown down across the trail, maybe 1 or 2 per mile	32	53	13	2
Use of chain saws by the administrators to clear trails of trees	28	26	41	5
Bridges over creeks where hikers could get their feet wet	22	34	30	14
Low standard trails (somewhat like a game trail--narrow, grade varies, winding, not the shortest route)	20	29	46	5
Leaving some areas with no trails	19	16	62	3
High standard trails (wide, steady grades, fairly straight)	10	18	36	36
Bridges over rivers that are dangerous for hikers to wade or for horses to ford	8	7	72	13

*Percent of respondents reporting

Table 2b. Desirability of campsite management actions (listed in rank order by level of undesirability)

Management Action	Undesirable	Don't care	Desirable	Desirable in more heavily used parts of Wilderness, but not in more lightly used parts
Burying unburnable trash	78	4	16	2
Cemented rock fireplaces with metal grates	59	20	10	11
Split log picnic tables at campsites	54	23	14	9
Outhouses (pit toilets)	37	28	19	17
Prohibiting camping within 200 feet of lakes, Wild and Scenic Rivers, or streams	36	10	44	11
Pole corrals at campsites for horses	32	33	25	10
Small, loose rock fireplaces (fire rings)	24	29	40	7
Prohibiting wood fires where dead wood is scarce	23	20	53	4
Encouraging visitors to remove fire rings and all evidence of campfires when breaking camp	19	18	61	2
Expect campers to use only dead wood on the ground for campfires	14	12	72	2
A detailed, accurate map	2	6	89	2

*Percent of respondents reporting

Table 2c. Desirability of visitor management actions (listed in rank order by level of undesirability)

Management Action	Undesirable	Don't care	Desirable	Desirable in more heavily used parts of Wilderness, but not in more lightly used parts
Issue trip permits so visitors could only camp each night in the area assigned to them+	71	13	7	9
Closing some areas to use by horse parties+	33	15	50	3
Require all visitors to register when entering+	27	33	37	3
Mandatory human waste pack out policy for boaters on the river+	25	22	46	7
Limiting the size of parties to 12 people+	15	20	61	4
Restricting the number of visitors to an area if it is being used beyond capacity+	15	8	69	9
Allow visitors to catch fish to eat in the Wilderness but not to bring out+	10	20	66	3
Rangers in the backcountry+	9	32	52	7
A guidebook to the Wilderness+	7	26	66	1
Packing unburnable garbage back out of the Wilderness+	3	2	93	2

*Percent of respondents reporting

+ Indicates management actions identified as important by Forest Service

Table 2d. Desirability of resource management actions (listed in rank order by level of undesirability)

Management Action	Undesirable	Don't care	Desirable	Desirable in more heavily used parts of Wilderness, but not in more lightly used parts
Eliminating grazing by visitors' horses (require carrying horse feed)+	34	27	31	8
A natural fishery-no stocking and barren lakes left barren+	33	25	40	2
Natural forest fires started by lightning+	28	22	49	1

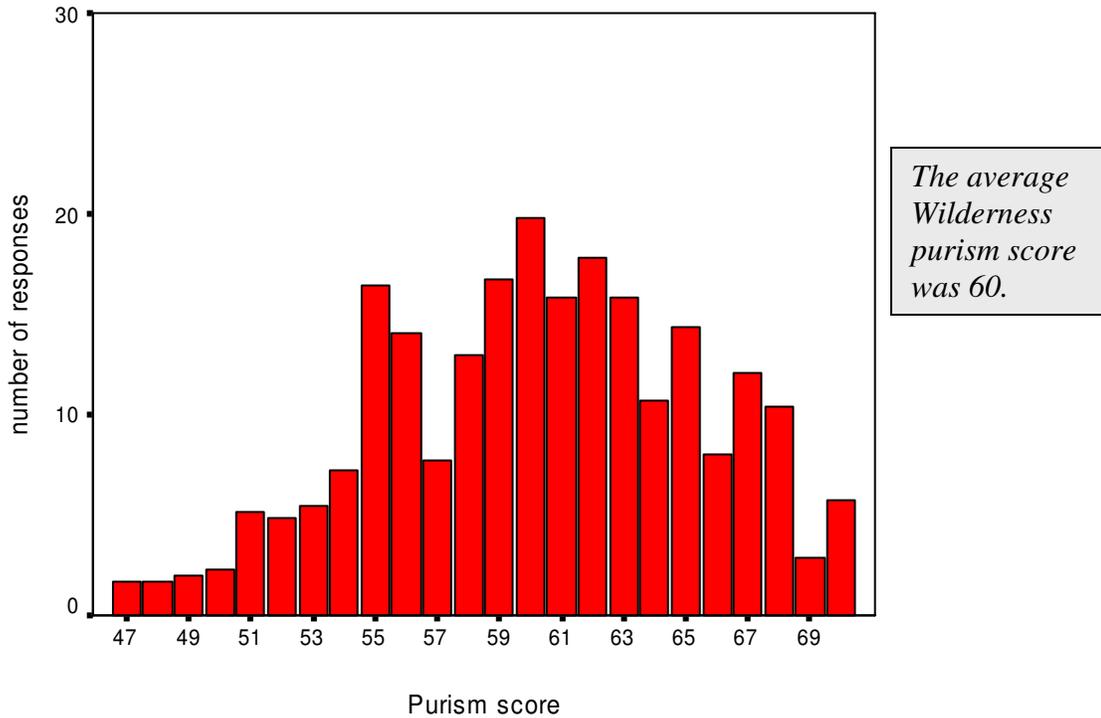
* Percent of respondents reporting

+ Indicates management actions identified as important by Forest Service

Wilderness Purism

Visitors were asked a series of questions concerning the desirability of a range of characteristics of wilderness (see Table 3). These questions use the wilderness purism scale developed by Stankey (1972) to measure the degree to which visitors have attitudes in line with the policy intent of the Wilderness Act. Responses are summed to produce a purism score ranging from 14 (lowest possible level of purism) to 70 (highest possible level of purism). The responses to the purism scale are shown in Figure 14. The mean score on the purism scale is 60 with a standard deviation of 5.16. This average is slightly higher than reported for a sample of wilderness visitors in 1992 to the Cohutta Wilderness in North Carolina, who had a mean of 56 and a standard deviation of approximately 5 (Shaffer and Hammitt, 1995). BMWC visitor responses indicate that visitor values are in accordance with the ideals of the 1964 Wilderness Act.

Figure 14. Wilderness Purism Scale



Visitor responses to Wilderness characteristics are listed in Table 3 with the least desirable characteristics first and the most desirable characteristics last.

Table 3. Desirability of Wilderness Characteristics

How desirable are the following elements:	% undesirable
Stocking the area with kinds of game animals that were not native to the area	81
Developed campsites with plank tables, cement fireplaces with metal grates, and outhouses	79
Stocking the area with kinds of fish that were not native to the area	79
Private cabins	77
Lots of camping equipment to make camping easy and comfortable	70
Gravel roads	67
Lakes behind small human-made dams	60
No motorized travel by visitors	12
Absence of human-made features, except trails	6
Remote from towns or cities	5
Covers a large area (at least 25 sq. miles)	5
Solitude (not seeing many other people except those in your own party)	4
Little evidence of other visitors before you	3
Forests, flowers, and wildlife much the same as before the pioneers	3

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