

Visitor Services Project

Report 14

Shenandoah National Park

Volume 1 of 2



Cooperative Park Studies Unit
University of Idaho

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Visitor Services Project

Report 14

Shenandoah National Park

Volume 1 of 2

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Executive Summary

- This report describes the results of a visitor study at Shenandoah National Park during the weeks of July 26 -August 1 and October 4-10, 1987. Questionnaires were given to 2960 visitor groups and 1017 were returned, a 34% response rate.
- The survey provides a profile of the people who visited Shenandoah. Their general comments about the park are found in Volume 2 of the report; this volume has a summary of their comments.
- Visitors were most likely to be in family groups of two to four people. A majority were visiting Shenandoah for at least their second time. The majority of visitors came from Virginia, Maryland and Pennsylvania.
- Most visitors stayed at least one day. Stopping at overlooks, using gas stations/stores/gift shops, hiking for less than 2 hours and visiting the Big Meadows Visitor Center were the most common activities.
- The sites that received the greatest use (in order) were Big Meadows, Skyland and the Dickey Ridge Visitor Center. Community and state origins from which visitors commonly started from on their arrival day were Front Royal and Virginia respectively. The exits used most by departing visitors were Front Royal and Thornton Gap.
- Information services most used by visitors included brochures and booklets and the wayside/overlook exhibits. Services rated most useful included the brochures and booklets and the ranger-led programs.
- The sources of information about the park that visitors commonly consulted prior to their visit were maps or brochures and their own experience from previous visits.
- Few visitors had difficulty locating the park.
- Visitors to Big Meadows commonly participated in visiting the Visitor Center and in using the gas stations/stores/gift.shops.
- Higher proportions of Fall visitor groups were in a group of 2 people, older than 55 and repeat visitors. There were higher proportions of Summer visitor groups who used gas stations/stores/gift shops, went on ranger-led walks/talks and attended evening slide programs. Higher proportions of Summer visitor groups left the park via Rockfish Gap and used bulletin boards and the ranger-led programs. Higher proportions of Fall visitor groups participated in most of the activities at Big Meadows.
- Visitors made many general comments about their visit to the park.

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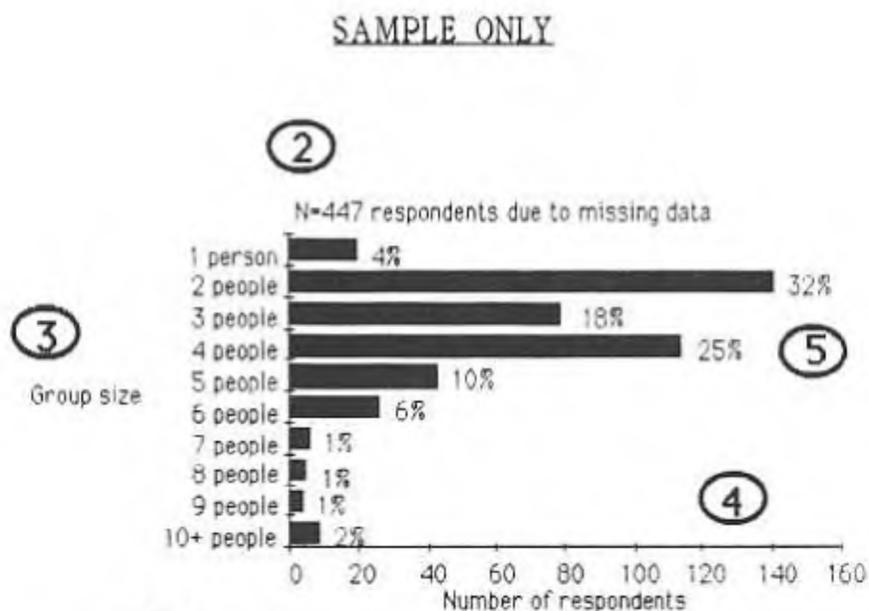
INTRODUCTION

This report describes the results of a visitor mapping study undertaken at Shenandoah National Park (referred to as 'Shenandoah'). The study was conducted during the weeks of July 26- August 1 and October 4-10, 1987 by the Cooperative Park Studies Unit at the University of Idaho, as a part of its Visitor Services Project. A list of Visitor Services Project publications is included on the inside back cover of this report.

After this Introduction, the Methods are presented, along with limitations to the studies. The Results for each season follow, and then significant seasonal variations are discussed. Summaries of visitor comments are next, after which a Menu for Further Analysis is provided to help managers in requesting additional analyses. Finally, Appendix A contains the questionnaire used. Volume 2 of this report contains comments made by visitors who returned the questionnaires.

Many of the graphs in this report are like the example on the following page. The large numbers refer to explanations below the graph.

Introduction (continued)



① **Figure 1: Visitor group sizes**

- 1: The figure title provides a general description of the information contained in the graph and indicates which season the data represent.
- 2: A note above gives the 'N', or number of cases in the sample, and a specific description of the information in the chart.
- 3: The vertical information describes categories.
- 4: The horizontal information shows the number of items that fall into each category. Proportions are shown in some graphs.
- 5: In most graphs, percentages are included to provide additional explanation.

METHODS

General strategy

Questionnaires were distributed to a sample of randomly selected visitors entering Shenandoah during the two study periods of July 26 - August 1 and October 4-10, 1987. Visitors completed the questionnaire during their trip and then returned it by mail. Returned questionnaires were analyzed and this report developed.

Questionnaire design

The questionnaire asked visitors to record where they went, what they did, where they began their trip on their arrival day and which exit they used when departing (see Appendix A for a copy of the questionnaire). The questionnaire followed the standard format used in previous Visitor Services Project studies. Visitors also responded about the sources of park information consulted prior to their visit, whether it was difficult to locate the park, what activities they participated in at Big Meadows and how they rated the park's information and interpretive services. Space was provided for respondents' comments.

Sampling

Visitors were randomly contacted at the four entrance stations to Shenandoah during each station's operating hours. Sampling consisted of approaching vehicles based upon different preselected intervals for each entrance. The sample size was based upon 1986 visitor counts, the park's operating hours and staff availability. A total of 2960 questionnaires were distributed, 1805 during the Summer and 1155 during the Fall.

Questionnaire administration

Each day of the study period interviewers would approach the occupants of each selected vehicle. Visitor groups were greeted, briefly introduced to the purpose of the study, and asked to participate. If they consented, further instructions were given. One adult member of the group was asked to complete the questionnaire.

Data analysis

A cut-off date was established for incoming questionnaires approximately ten weeks after distribution. Questionnaires received within this period were coded and entered into a computer. Frequency distributions and cross-tabulations were calculated using a standard statistical software package. Respondents' comments were summarized and are included in the Results, with copies of the comments provided in Volume 2 of this report.

Sample size, missing data and reporting errors

Most of the information was collected on visitor groups, and some on individual group members. Therefore, the 'N', or number in the sample, varies from figure to figure. For example, Figure 1.1 shows information from 619 respondents representing visitor groups, while Figure 1.3 shows information on 1739 individuals. Each figure contains a note above the graph that specifies which information it illustrates.

Sample size, missing data and reporting errors (continued)

Occasionally, a respondent may not have answered all of the questions in the questionnaire, or may have answered some incorrectly. Unanswered questions create missing data and cause the number in the sample to vary from figure to figure. For example, although 619 Summer questionnaires were returned, Figure 1.5 only shows data for 608 respondents.

Questions answered incorrectly due to carelessness, misunderstanding directions, and so forth, turn up in the data as reporting errors. These create small data inconsistencies. For example, it is possible that some of the visitors' activities occurred outside of the park - they may not have understood to report only those activities done within the park.

Limitations

Like all surveys, this study has limitations which should be taken into account when interpreting the results.

1. All visitors were asked to record sites visited and activities, however, it is not possible to know whether their responses reflect actual behavior. This disadvantage is applicable to all such studies and is reduced by having visitors fill out the questionnaire as they visit the park.
2. The data reflect the use patterns of visitors during the designated study periods. The results do not necessarily apply to visitors using the park during different times of the year.
3. Data are not collected on non-respondents. Thus, it is not known if visitors who returned their questionnaires differ from those who did not.

RESULTS: SUMMER

A. Visitors contacted

One thousand, eight hundred and nine visitor groups were contacted during the summer study period. One thousand, eight hundred and five visitor groups agreed to participate. Thus, the acceptance rate was 99.8%. Six hundred and nineteen visitor groups completed and returned their questionnaires, a 34% response rate. The 99.8% acceptance rate is higher than the average acceptance rate of previous visitor mapping studies (97%). The summer response rate at Shenandoah (34%) was lower than the average response rate for previous visitor mapping studies (40%).

B. Visitor characteristics

Figure 1.1 shows Summer visitor group sizes, which ranged from one to 87 people. The most common group size was two people. Nearly three-quarters of the visitors came in family groups, as shown in Figure 1.2.

Figure 1.3 shows that there was a wide range of age groups represented; the most common were children and middle-aged adults. For 44% of the visitors, this was their first visit to Shenandoah.

Map 1.1 shows that a majority of U.S. visitors originated from the states around Shenandoah (i.e. Maryland, Virginia and Pennsylvania-52%). Three percent of all visitors were from foreign countries (see Map 1.2 and Table 1.1).

B. Visitor characteristics (continued)

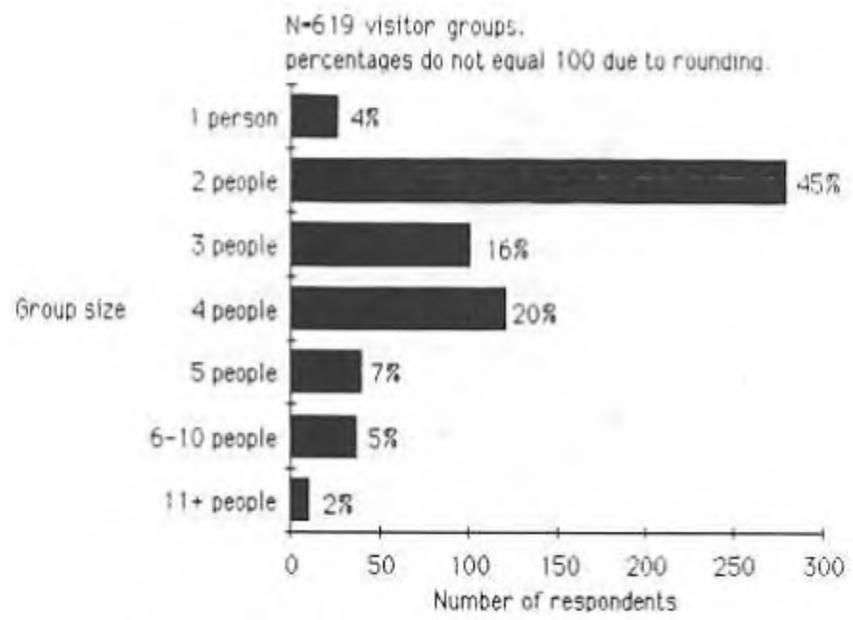


Figure 1.1: Summer visitor group sizes

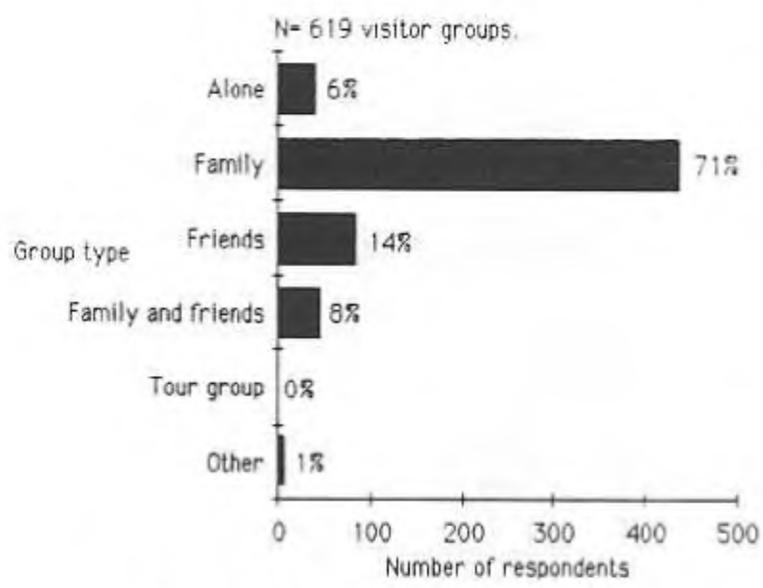


Figure 1.2: Summer visitor group types

B. Visitor characteristics (continued)

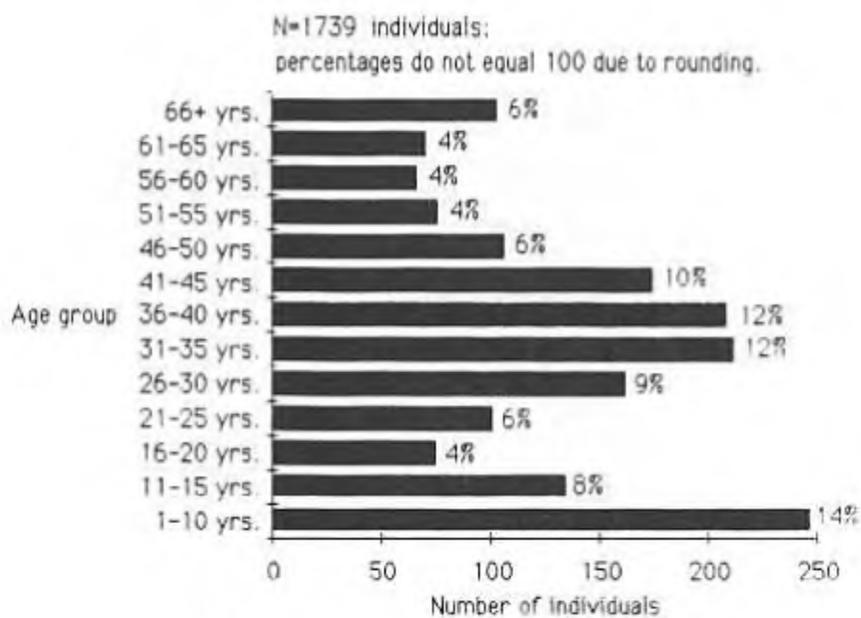


Figure 1.3: Ages of Summer visitors

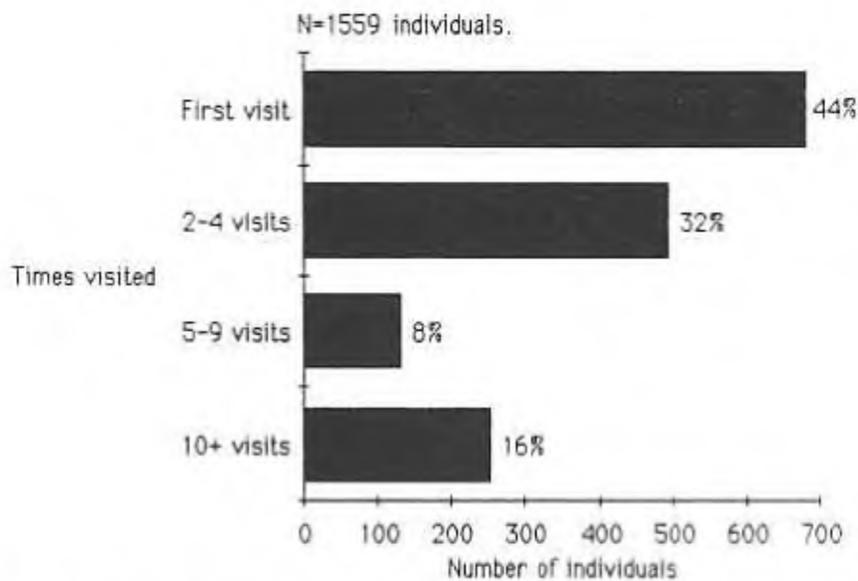
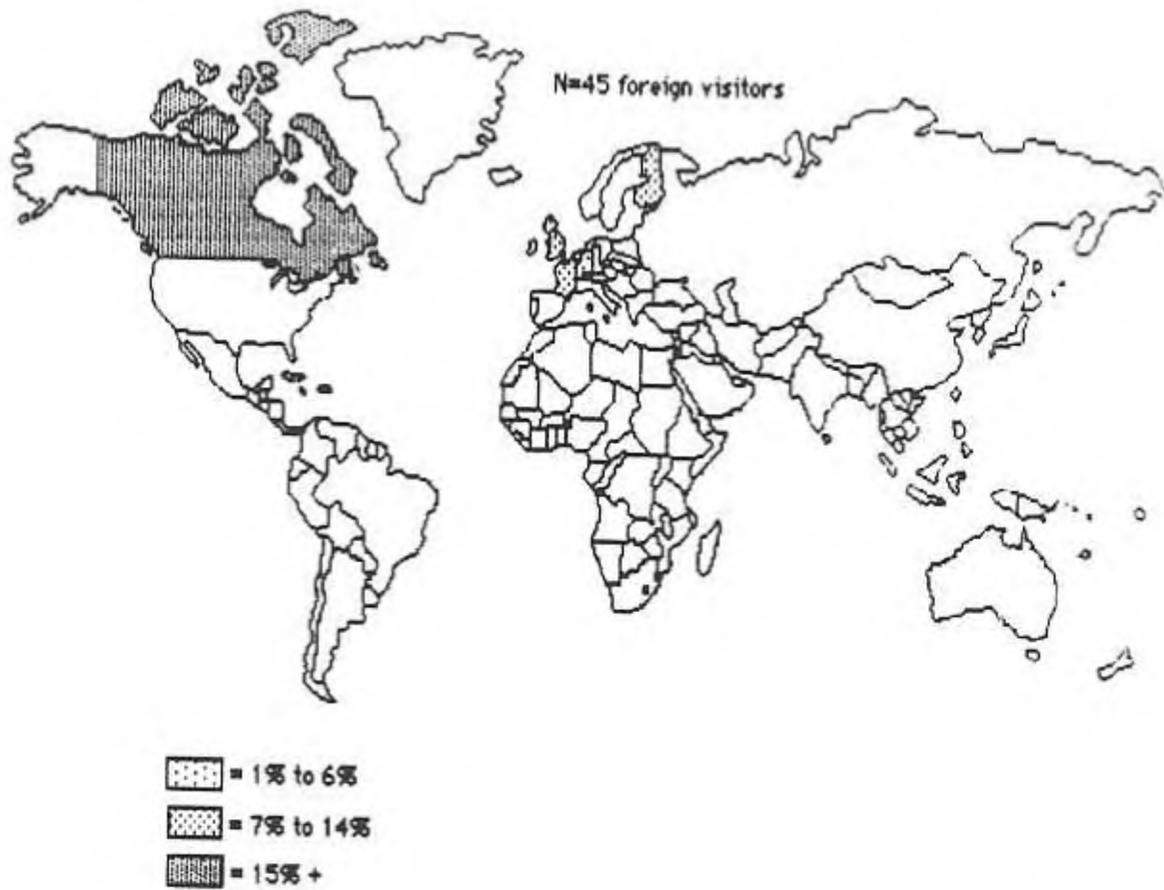


Figure 1.4: Number of visits made by Summer visitors

B. Visitor characteristics (continued)**Map 1.1: Proportion of Summer visitors from each state**

B. Visitor characteristics (continued)



Map 1.2: Proportion of foreign Summer visitors by country

B. Visitor characteristics (continued)

Table 1.1: Proportion of Summer visitors from foreign countries

N=45 foreign visitors.

Country	Number of individuals	% of foreign visitors
<u>North America</u>		47%
Canada	21	
<u>Europe</u>		49%
Belgium	4	
England	4	
France	4	
Germany	5	
Sweden	5	
<u>Middle East/Africa</u>		4%
Israel	1	
Morocco	1	

C. Visitor use of time

Figure 1.5 shows that the most common hour of entry into the park by Summer visitor groups (14%) was from 11:00 a.m.-12:00 noon. Figure 1.6 illustrates that most Summer visitor groups (64%) stayed at Shenandoah for one day. Nineteen percent of the visitors stayed for two days.

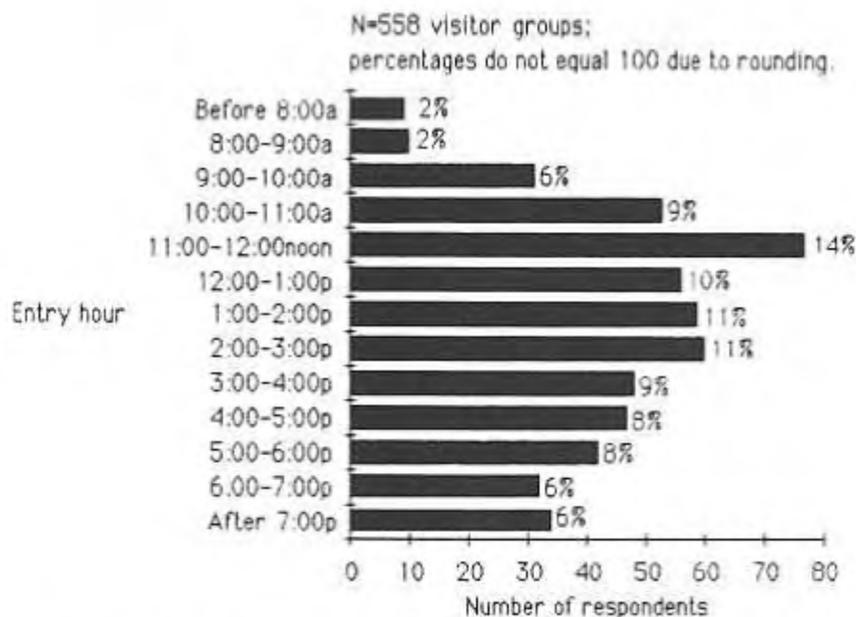
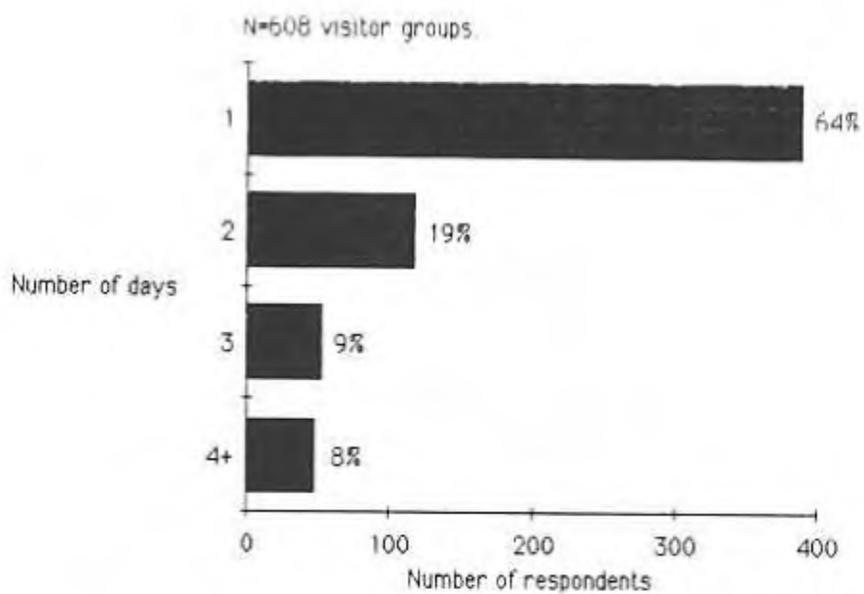


Figure 1.5: Summer visitors entering Shenandoah each hour of the day

C. Visitor use of time (continued)**Figure 1.6: Number of days Summer visitors stayed**

D. Visitor activities

Figure 1.7 shows the proportion of Summer visitor groups who engaged in each activity during their visit. The activities pursued most by visitor groups included stopping at the overlooks (85%), using the gas stations/restaurants/stores (55%), visiting the Big Meadows Visitor Center (37%) and going on a hike for less than 2 hours (37%). Participation was less common for activities such as backcountry camping, fishing and bicycling.

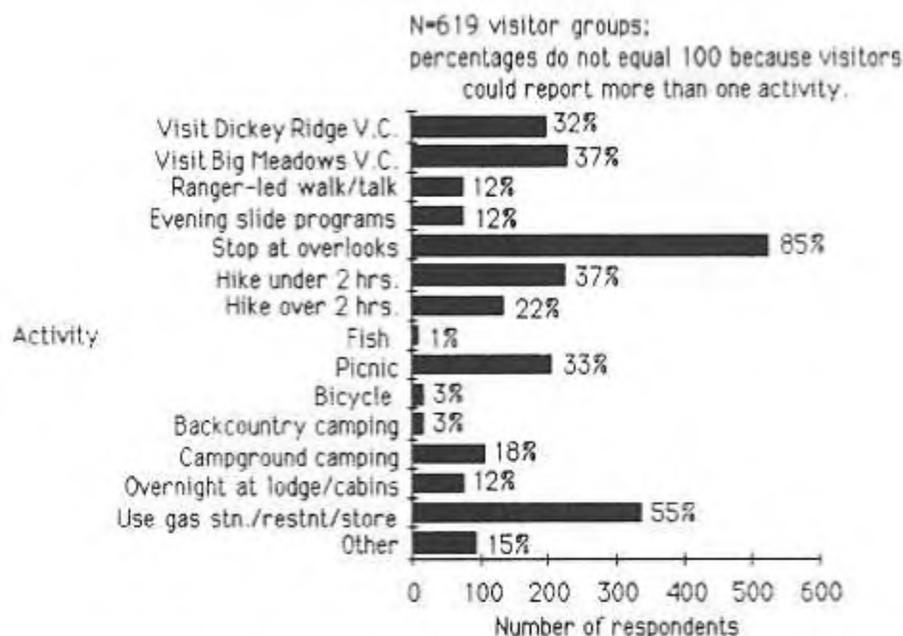


Figure 1.7: Proportion of Summer visitors participating in each activity

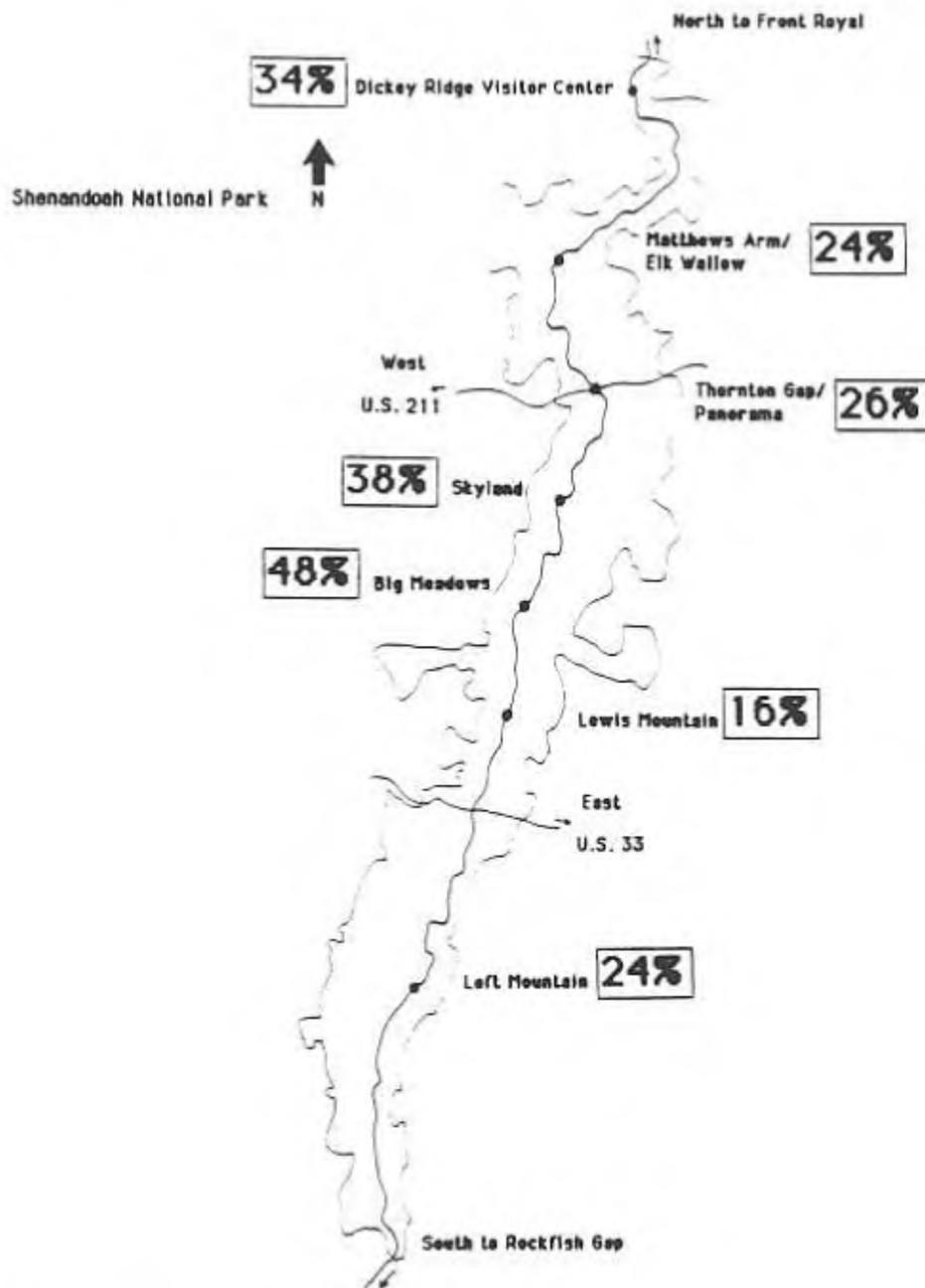
E. Visitor locations

Map 1.3 shows the proportion of Summer visitor groups that stopped at each site. The largest proportion of visitor groups stopped at Big Meadows (48%), Skyland (38%) and the Dickey Ridge Visitor Center (34%).

Map 1.4 shows the proportion of Summer visitor groups who visited each site first. Thirty-six percent of park visitor groups chose to make the Dickey Ridge Visitor Center their first stop, while 19% chose Big Meadows and 16% chose Loft Mountain.

The order in which visitor groups stopped at sites during their visit is shown in Figures 1.8 through 1.14. Figure 1.8 shows visitor groups to Mathews Arm/Elkwallow commonly made it their second stop. Figure 1.9 shows visitor groups to Thornton Gap/Panorama commonly made it one of their first three stops. Figure 1.10 shows visitor groups to Lewis Mountain tended to make it one of the earlier stops of their visit. Figure 1.11 shows visitor groups to Loft Mountain commonly made it the first stop of their visit. As shown in Figure 1.12, Big Meadows' visitor groups commonly made it their first or second stop. Visitor groups to Skyland tended to go there throughout their visit (Figure 1.13). Figure 1.14 shows visitor groups to the Dickey Ridge Visitor Center commonly chose to make it the first stop of their visit.

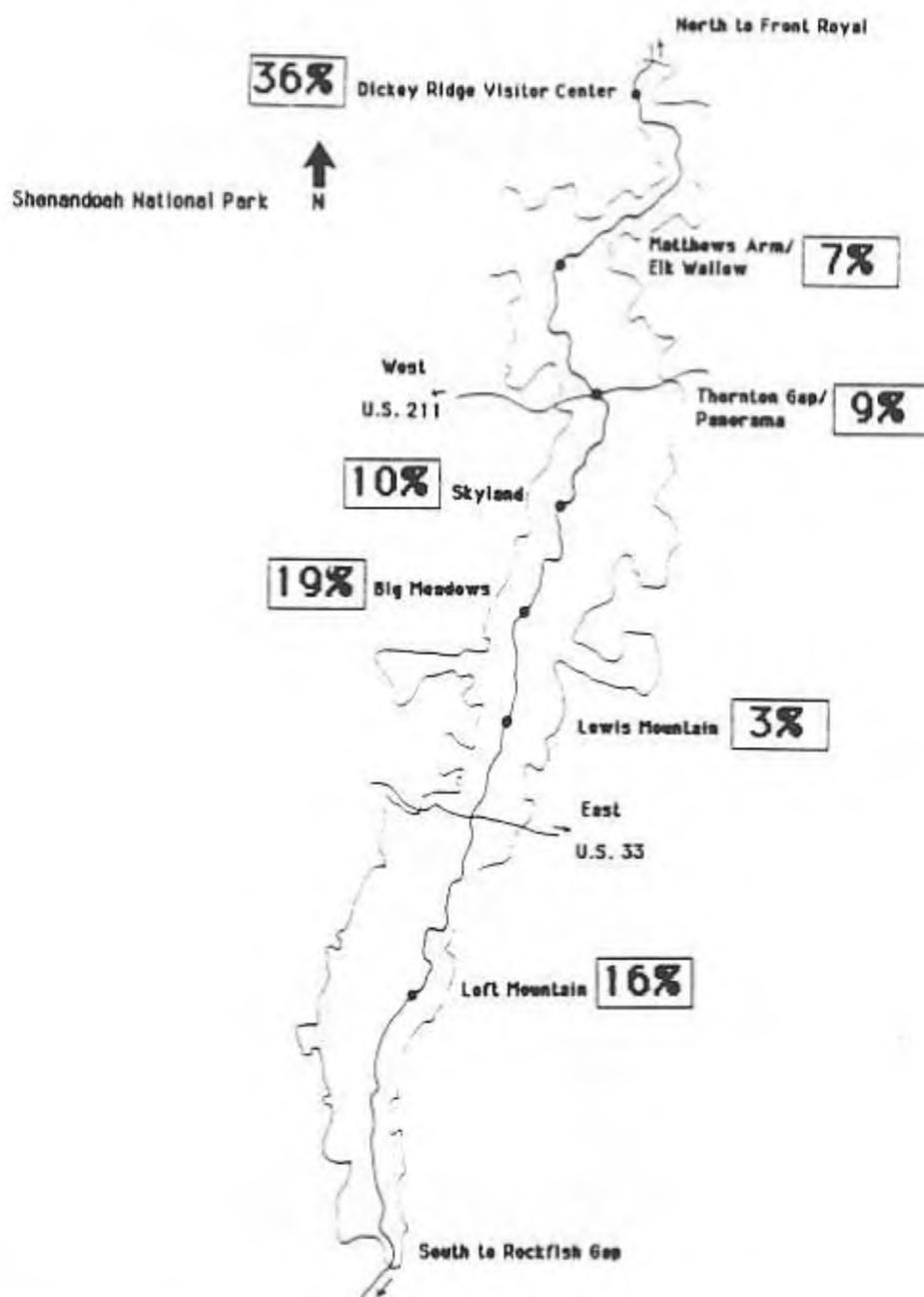
E. Visitor locations (continued)



N=619 visitor groups

Map 1.3: Proportion of all Summer visitors who stopped at each site

E. Visitor locations (continued)



N=372 visitor groups

Map 1.4: Proportion of Summer visitors who stopped at each site first

E. Visitor locations (continued)



Figure 1.8: Order in which Summer visitors stopped at Mathews Arm/Elkwallow

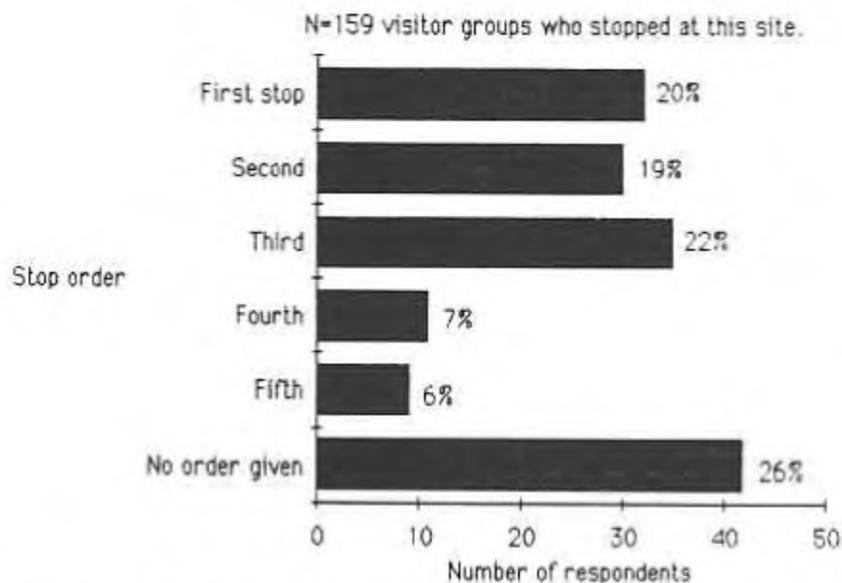


Figure 1.9: Order in which Summer visitors stopped at Thornton Gap/Panorama

E. Visitor locations (continued)

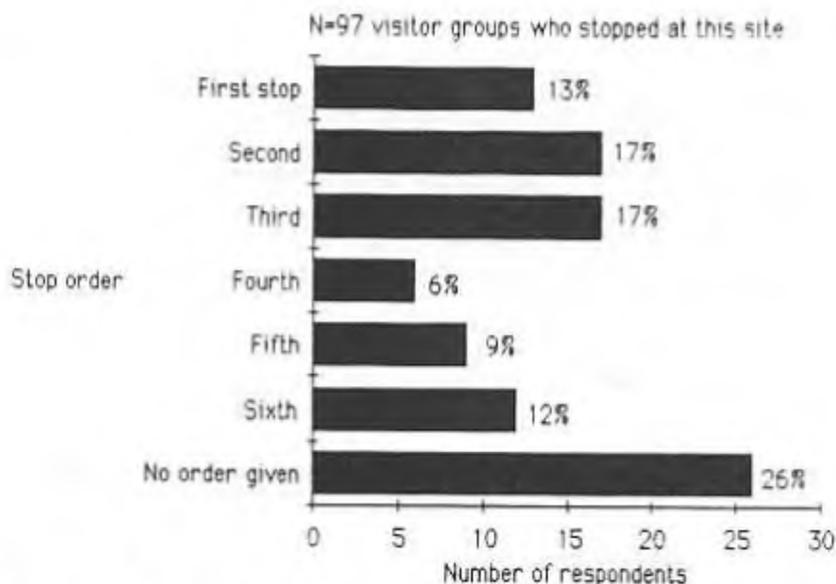


Figure 1.10: Order in which Summer visitors stopped at Lewis Mountain

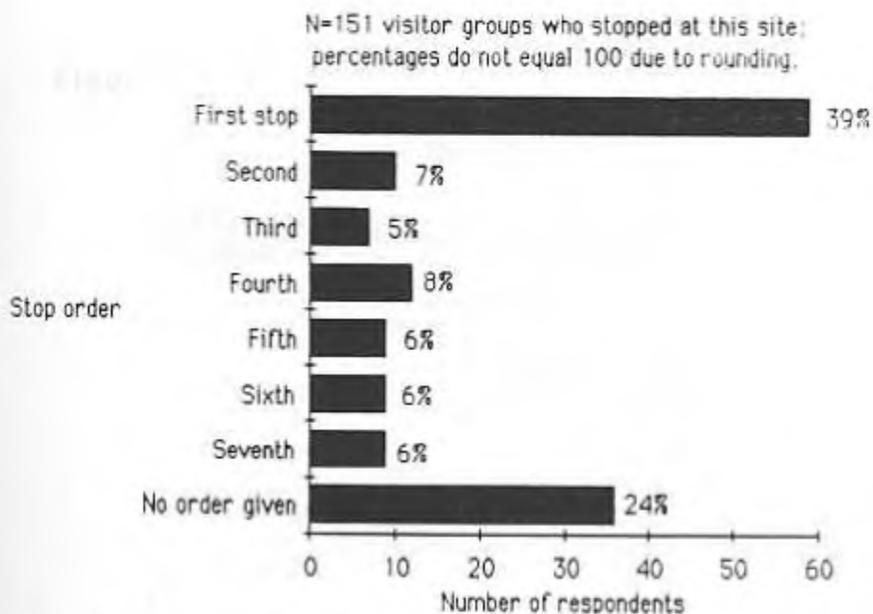


Figure 1.11: Order in which Summer visitors stopped at Loft Mountain

E. Visitor locations (continued)

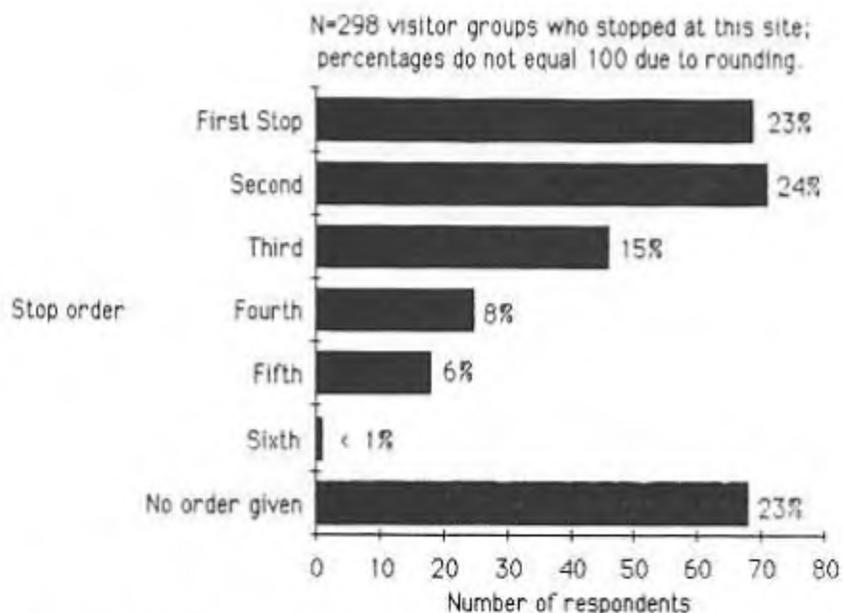


Figure 1.12: Order in which Summer visitors stopped at Big Meadows

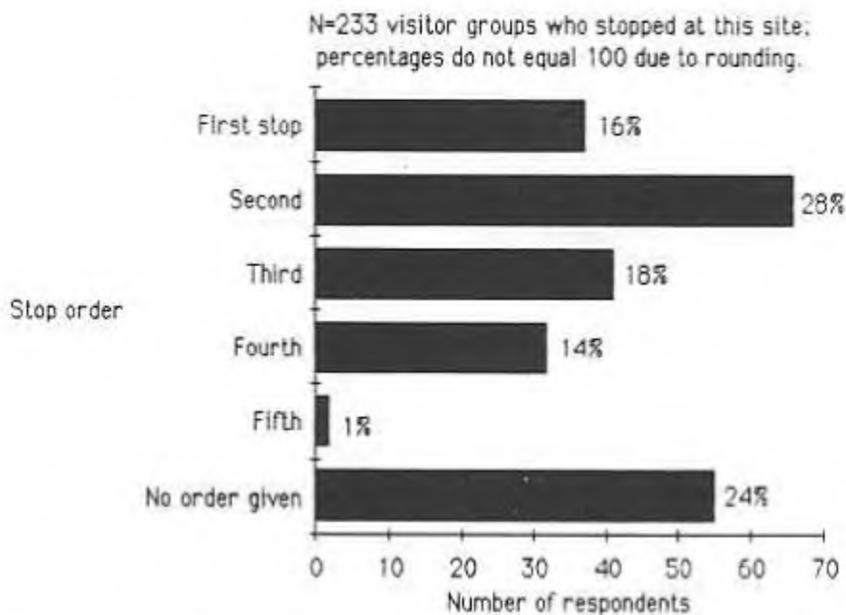


Figure 1.13: Order in which Summer visitors stopped at Skyland

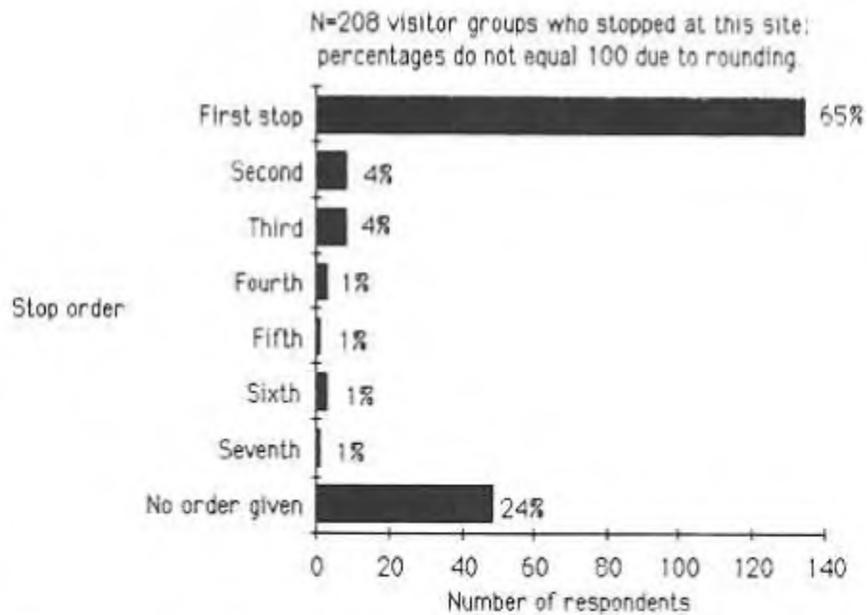
E. Visitor locations (continued)

Figure 1.14: Order in which Summer visitors stopped at the Dickey Ridge Visitor Center

F. Special question 1: Visitor origin on arrival day

The survey asked Summer visitor groups where they started their trip on the day they arrived in the park. They were asked to specify both the nearest town and the state from which they began on that day. Table 1.2 shows that Virginia was the most common state of origin on their arrival day (71%) and Table 1.3 shows that Front Royal was the most common town of origin (18%).

Table 1.2: State of visitor origin on arrival day

N=580 visitor groups

State	Number of respondents	Percent (%)
Virginia	413	71
Maryland	42	7
Pennsylvania	35	6
District of Columbia	23	4
West Virginia	17	3
New Jersey	11	2
Ohio	10	2
North Carolina	9	2
New York	6	1
Tennessee	5	1
Others (1-2 per state)	7	1

F. Special question 1: (continued)

Table 1.3: Place of visitor origin on arrival day

N=590 visitor groups:
percentages do not equal 100 due to rounding.

<u>Community</u>	<u>Number of respondents</u>	<u>Percent (%)</u>
Front Royal	106	18
Charlottesville	39	7
Waynesboro	27	5
Washington, D.C.	25	4
Luray	22	4
Harrisburg	18	3
Elkton	15	3
Williamsburg	12	2
Winchester	11	2
Richmond	11	2
Arlington	10	2
Baltimore	7	1
Sperryville	7	1
Gettysburg	6	1
Others (< 6 respondents/town)	264	44

G. Special question 2: Park exit used by departing visitors

The survey asked Summer visitor groups to specify which exit they used when leaving the park. Figure 1.15 shows the proportion of visitor use for each of the four exits from Shenandoah. Rockfish Gap (29%) and Thornton Gap (28%) were the two most commonly used exits by Summer visitor groups.

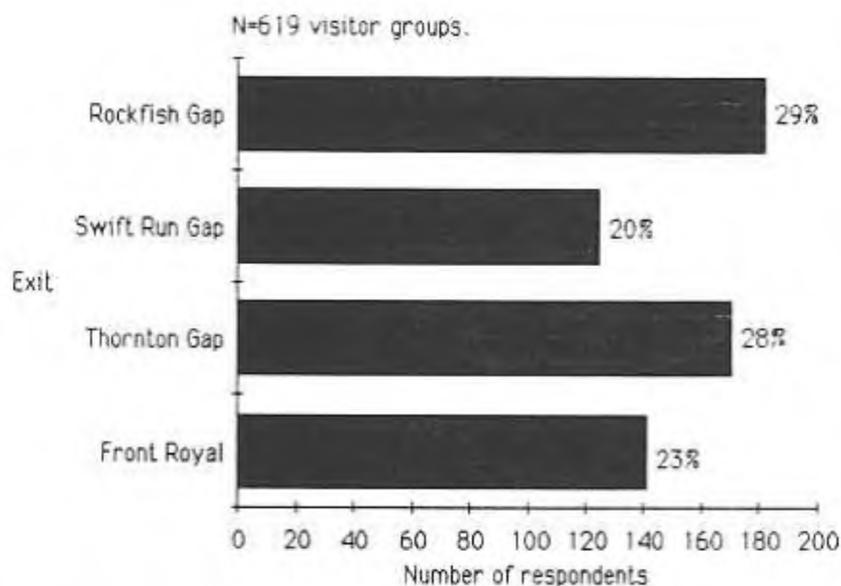


Figure 1.15: Proportion of Summer visitor groups using each park exit

H. Special question 3: Information or interpretive services

The survey asked Summer visitor groups if they used any of the information or interpretation services and how useful each service was to them. A five point scale was provided: 1 - extremely useful, 2 - very useful, 3 - moderately useful, 4 - somewhat useful and 5 - not useful. Figure 1.16 illustrates the proportion of visitor groups that used each service. A majority of visitor groups used the brochures and booklets (60%) and the wayside/overlook exhibits (55%); the Visitor Center exhibits (43%) were also commonly used. The least used service was the ranger-led programs (14%).

Table 1.4 shows how visitor groups rated the usefulness of each service. Services that received the highest average scores were the brochures and booklets, and the ranger-led programs. Services with the lowest scores were Visitor Center films and bulletin boards.

Figures 1.17 through 1.24 show the visitors' ratings of each service's usefulness.

H. Special question 3: (continued)

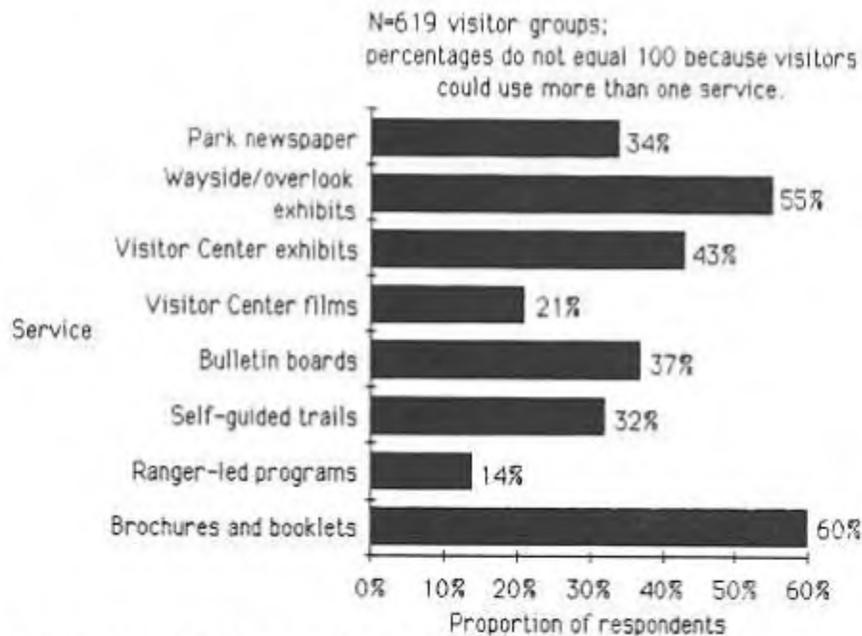


Figure 1.16: Proportion of Summer visitors who used each information or interpretive service

Table 1.4: Usefulness ratings for information or interpretive services

N=619 Summer visitor groups

Service	Average score (1=extremely high)
Brochures and booklets	1.4
Ranger-led programs	1.5
Self-guided trails	1.9
Wayside/overlook exhibits	2.0
Park newspaper	2.0
Visitor Center exhibits	2.0
Bulletin boards	2.1
Visitor Center films	2.2

H. Special question 3: (continued)

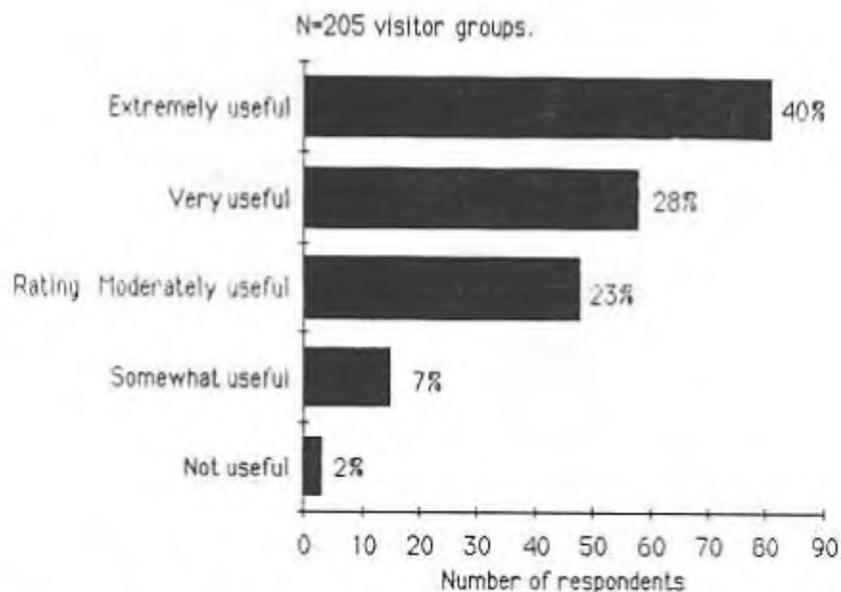


Figure 1.17: Summer visitor ratings of the park newspaper

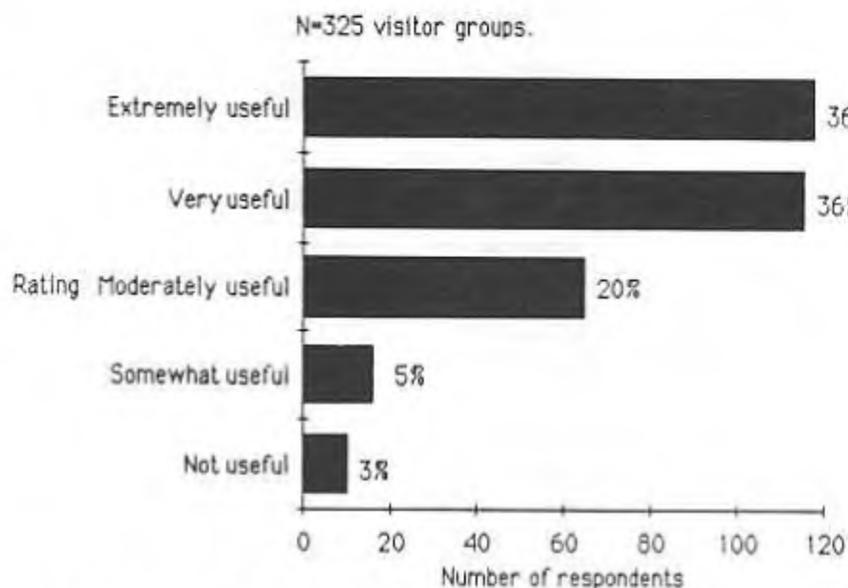


Figure 1.18: Summer visitor ratings of wayside/overlook exhibits

H. Special question 3: (continued)

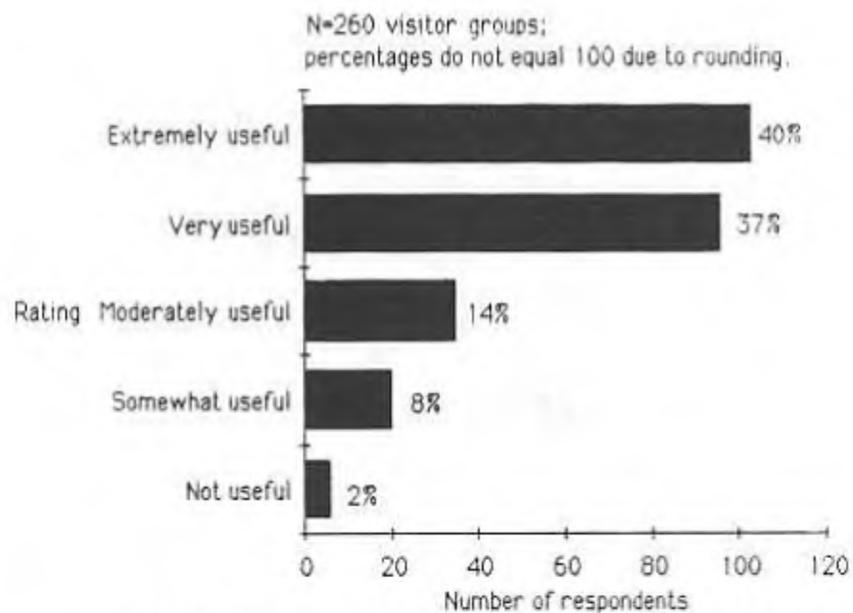


Figure 1.19: Summer visitor ratings of Visitor Center exhibits

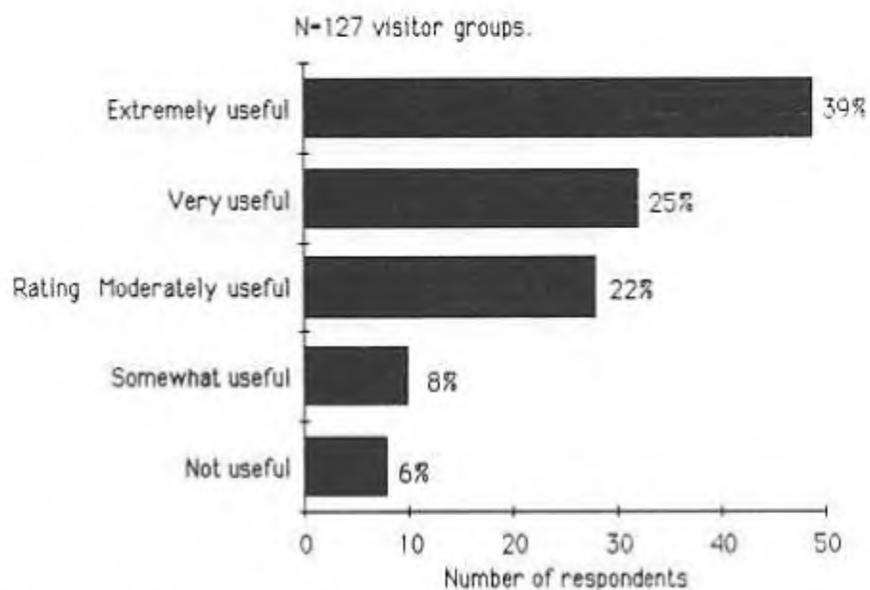


Figure 1.20: Summer visitor ratings of Visitor Center films

H. Special question 3: (continued)

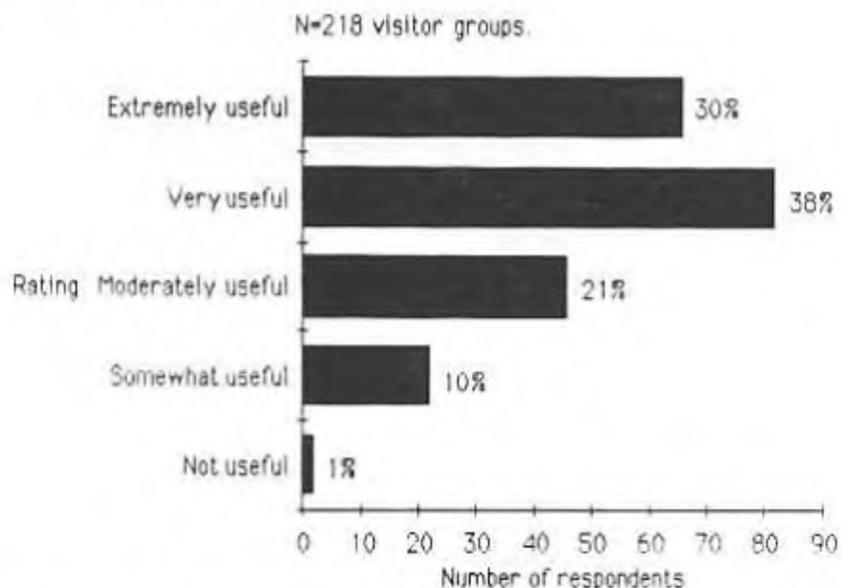


Figure 1.21: Summer visitor ratings of bulletin boards

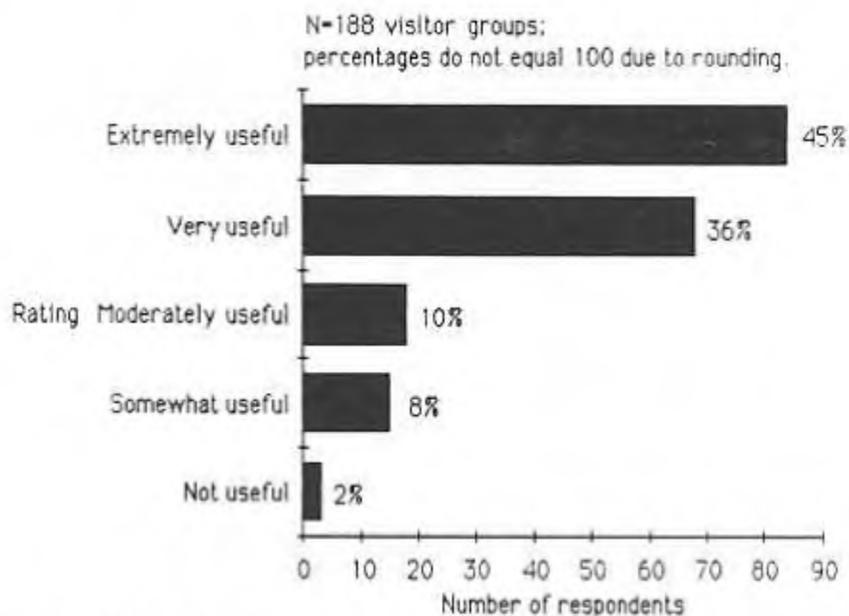


Figure 1.22: Summer visitor ratings of self-guided trails

H. Special question 3: (continued)

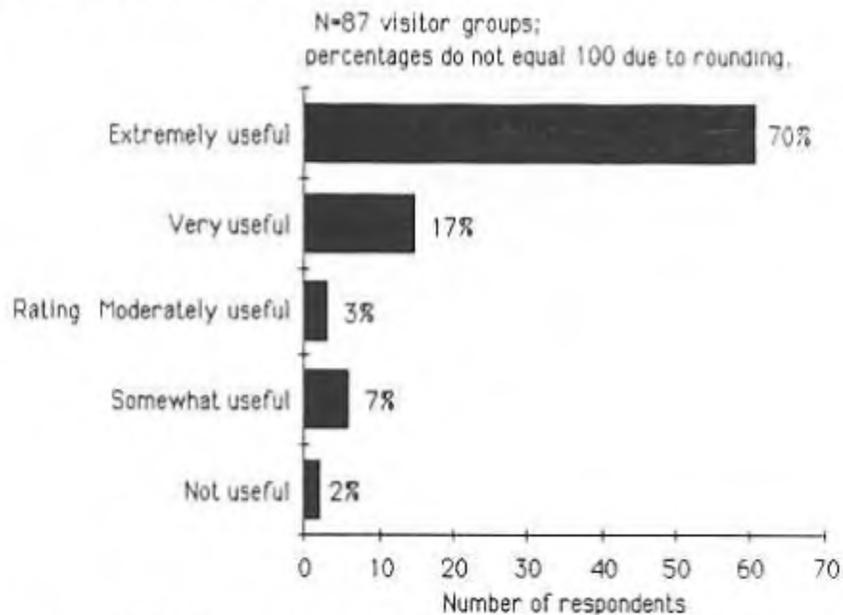


Figure 1.23: Summer visitor ratings of ranger-led programs

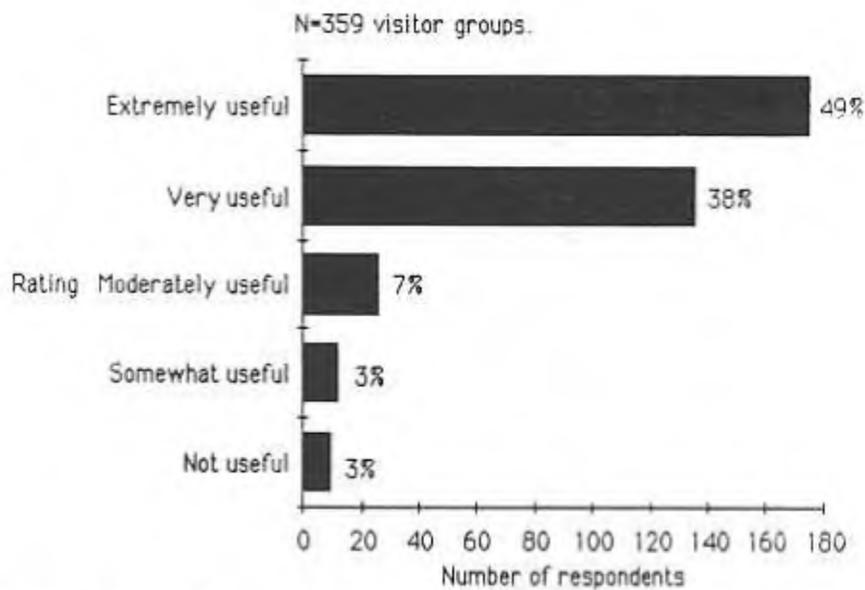


Figure 1.24: Summer visitor ratings of brochures and booklets

I. Special question 4: Park information sources consulted prior to visit

The survey asked Summer visitor groups how they obtained information about the park prior to their visit. Figure 1.25 shows that a majority of visitor groups said that prior visits had given them their park information (58%). The next most common responses were the advice they had received from friends or relatives (35%) and the information received from maps or brochures (31%).

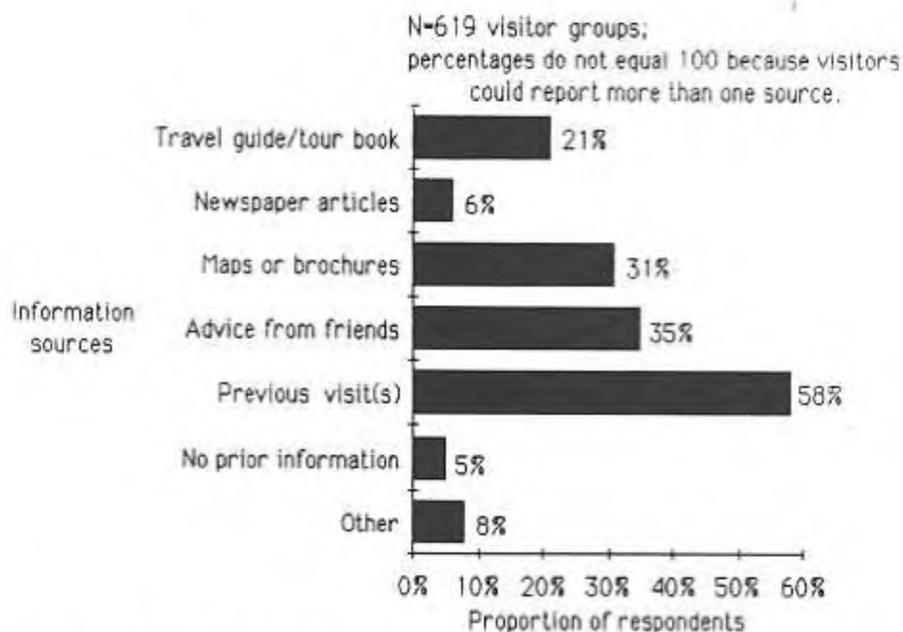


Figure 1.25: Proportion of Summer visitors consulting each information source prior to visit

J. Special question 5: Difficulty locating Shenandoah

The survey asked Summer visitor groups if it was difficult to locate Shenandoah. Two percent said that it was difficult to find the park. These visitors said that there was a lack of signs, signs were misleading as well as the maps and signs being of poor quality. Some of the suggestions given for improving the park location process included additional signage, better maps and signs and better placement of signs.

K. Special question 6: Activity participation at Big Meadows

Summer visitors were asked if they stopped at Big Meadows and in which activities they participated while there. Fifty-three percent of visitor groups stopped at this location. Figure 1.26 shows the proportionate amount of visitor participation in each activity. The two most popular activities included visiting the Visitor Center (36%) and using gas stations/stores/gift shops (32%).



Figure 1.26: Proportion of Summer visitors participating in each activity at Big Meadows

RESULTS: FALL

A. Visitors contacted

One thousand one hundred and sixty-five visitor groups were contacted during the fall study period. One thousand one hundred and fifty-five visitor groups agreed to participate. Thus, the acceptance rate was 99%. Three hundred and ninety-eight visitor groups completed and returned their questionnaires, a 34% response rate. The 99% acceptance rate is higher than the average acceptance rate of previous visitor mapping studies (97%). The fall response rate at Shenandoah (34%) was lower than the average response rate for previous visitor mapping studies (40%).

B. Visitor characteristics

Figure 2.1 shows Fall visitor group sizes, which ranged from one to 45 people. The most common group size was two people (56%). Over three-fifths of the visitors came in family groups, as shown in Figure 2.2.

Figure 2.3 shows that there was a wide range of age groups represented; the most common visitor age groups consisted of adults from 26-35 years old (22%) and those 56 years and older (24%). For 34% of the visitors, this was their first visit to Shenandoah; 36% of the visitors had been to the park 2-4 times.

Map 2.1 shows that the most common U.S. state origins of Shenandoah visitors were Virginia and Maryland (51%). Two percent of all visitors were from foreign countries (see Map 2.2 and Table 2.1).

B. Visitor characteristics (continued)

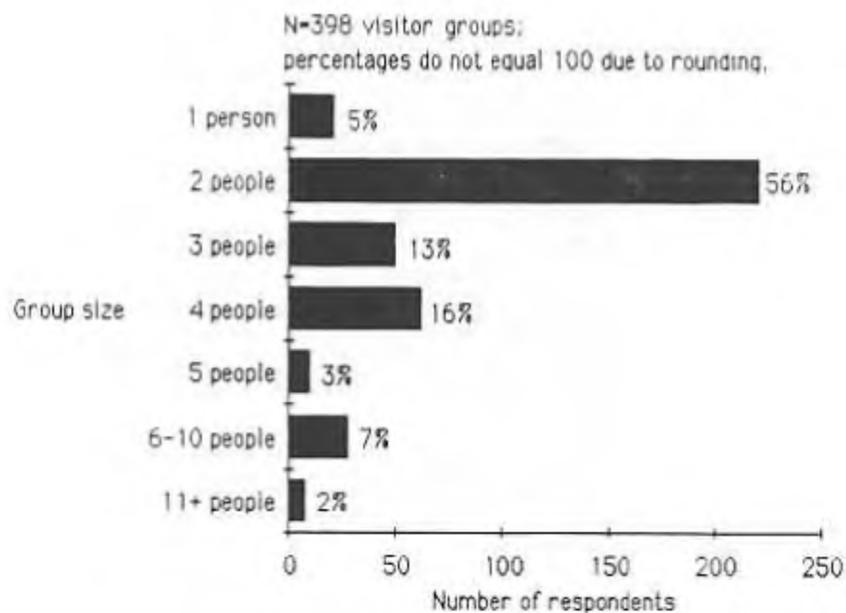


Figure 2.1: Fall visitor group sizes

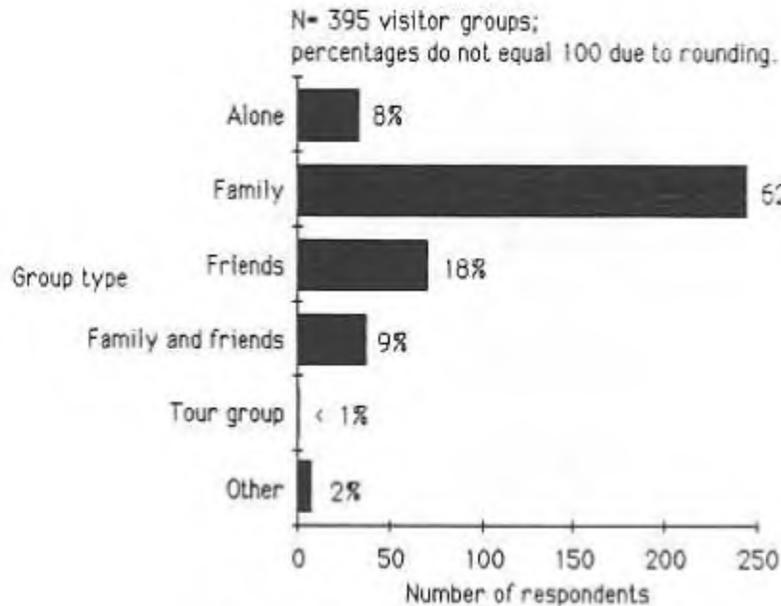


Figure 2.2: Fall visitor group types

B. Visitor characteristics (continued)

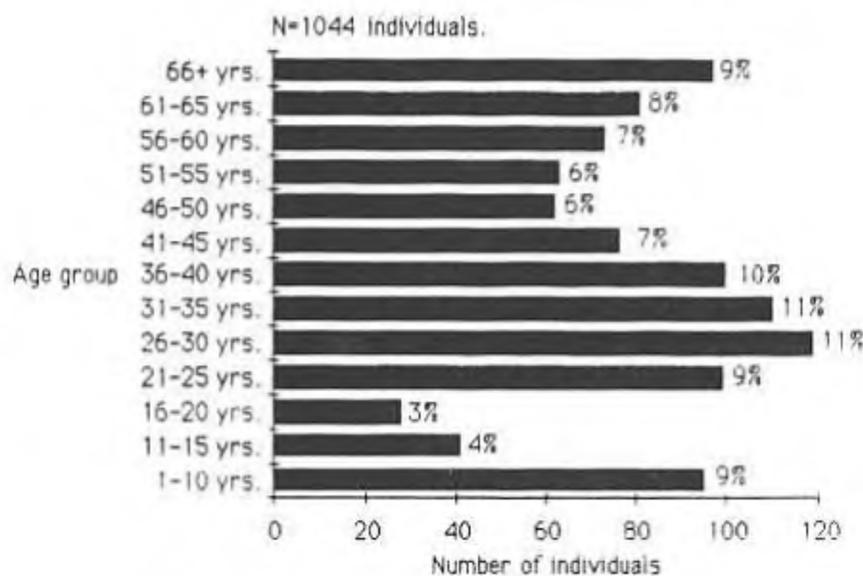


Figure 2.3: Ages of Fall visitors

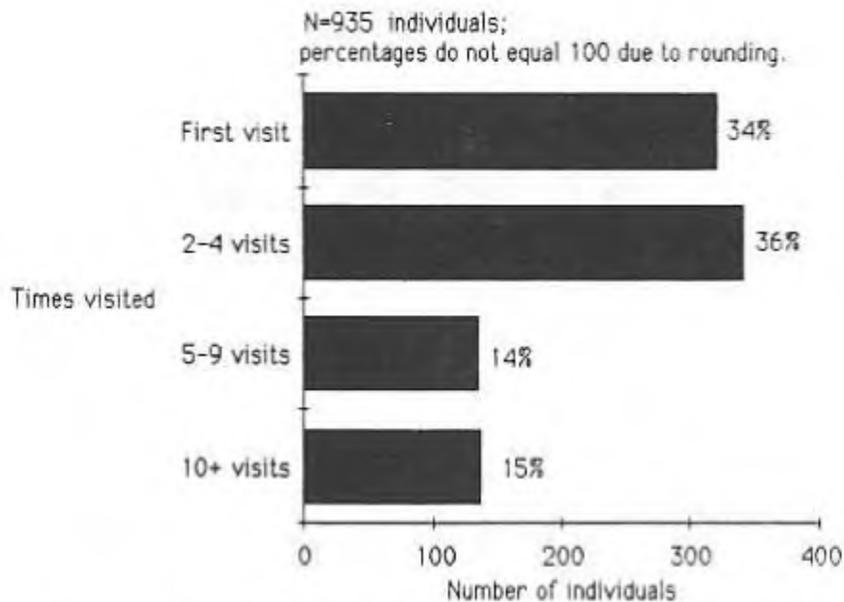
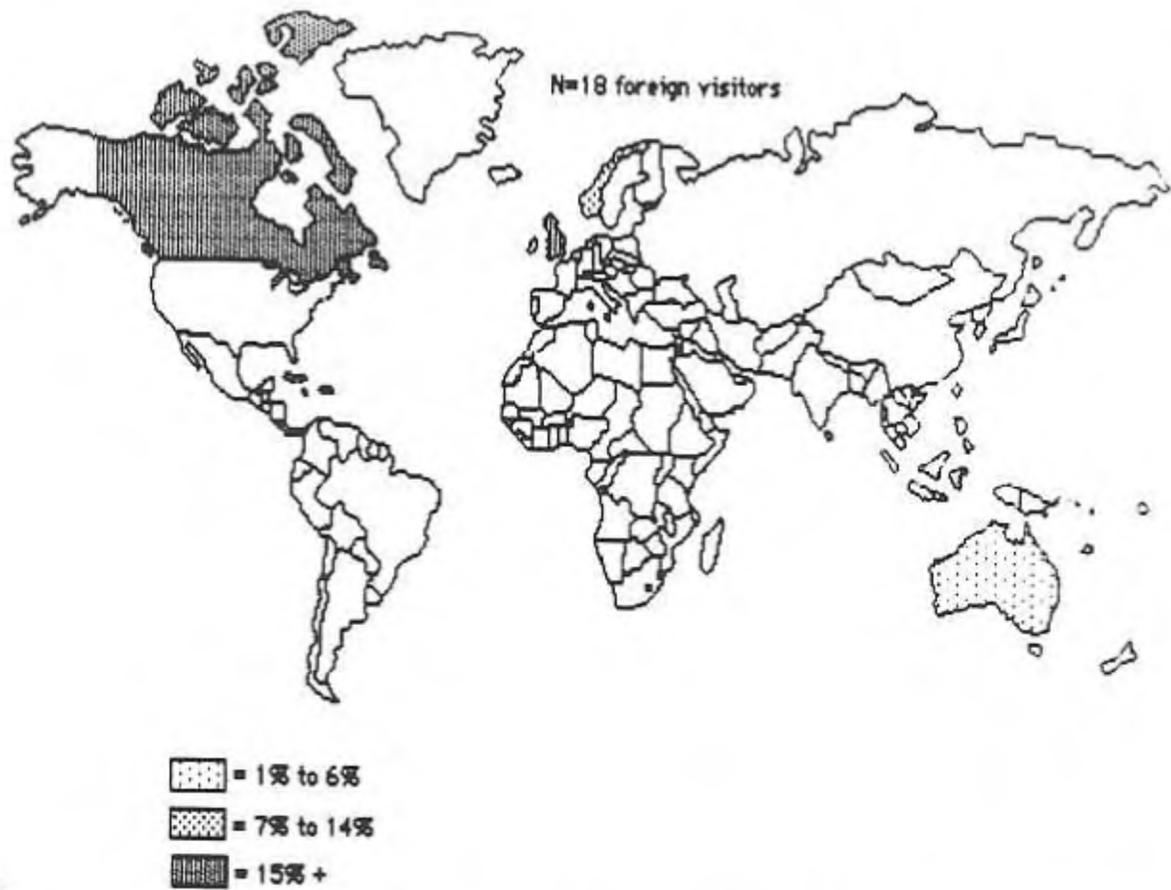


Figure 2.4: Number of visits made by Fall visitors

B. Visitor characteristics (continued)



Map 2.2: Proportion of foreign Fall visitors by country

B. Visitor characteristics (continued)

Table 2.1: Proportion of Fall visitors from foreign countries

N=17 foreign visitors.

Country	Number of individuals	% of foreign visitors
<u>North America</u>		
Canada	9	53%
<u>Europe</u>		
Germany	1	47%
Switzerland	1	
U.K.	6	

C. Visitor use of time

Figure 2.5 shows that Fall visitor groups commonly entered the park from either 10:00 a.m. to 12 noon (25%) or from 1:00-3:00 p.m. (27%).

Figure 2.6 illustrates that most Fall visitor groups (70%) stayed at Shenandoah for one day; 17% stayed two days.

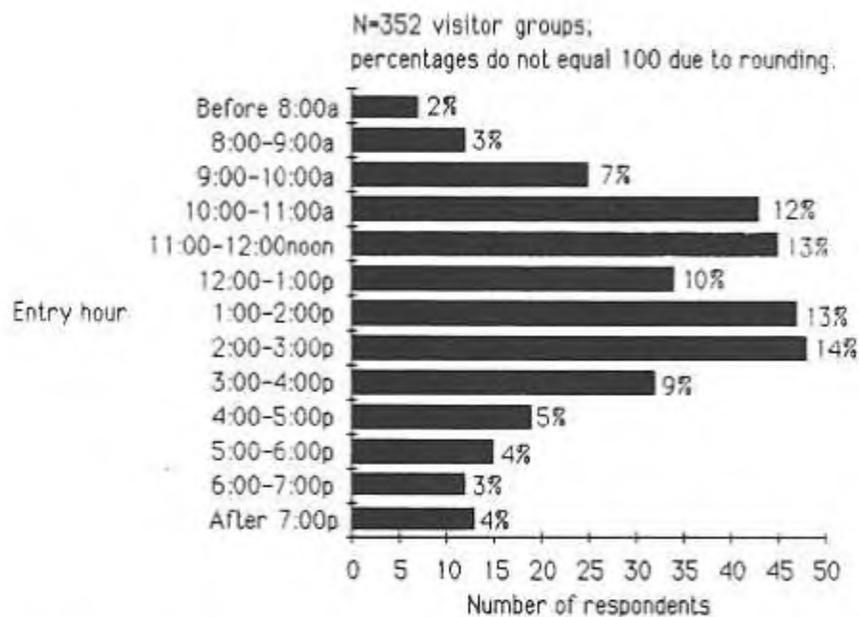
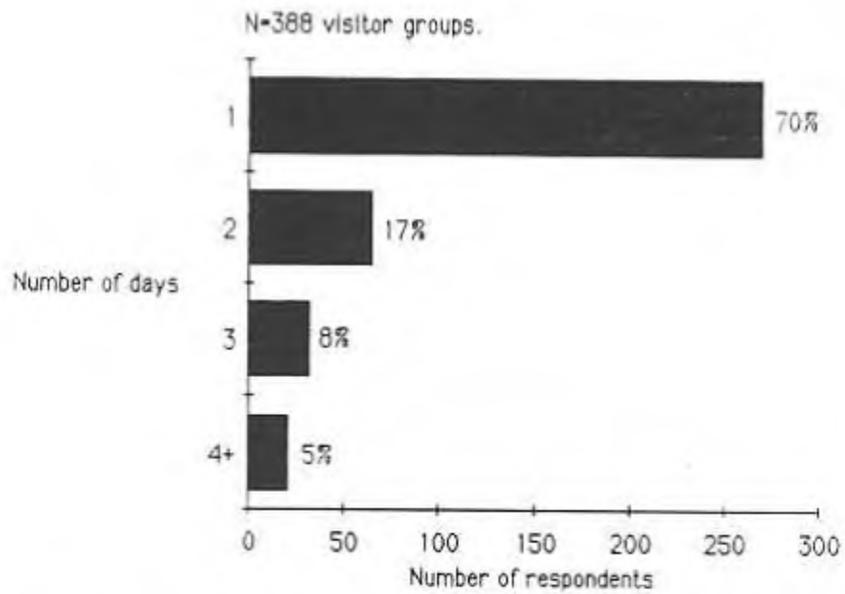


Figure 2.5: Fall visitors entering Shenandoah each hour of the day

C. Visitor use of time (continued)**Figure 2.6: Number of days Fall visitors stayed**

D. Visitor activities

Figure 2.7 shows the proportion of Fall visitor groups who engaged in each activity during their visit. The activities pursued by the majority of visitor groups included stopping at overlooks (89%), using a gas station/store/gift shop (45%), visiting the Big Meadows Visitor Center (33%), picnicking (32%) and hiking for less than 2 hours (32%). Participation was less common in activities such as fishing, bicycling, attending the evening slide program and participating in a ranger-led walk/talk.

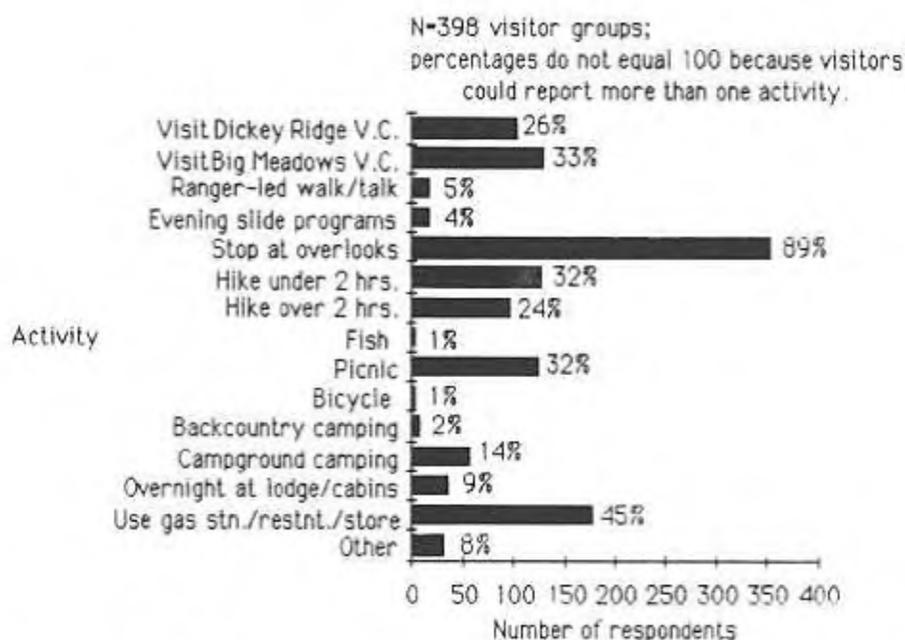


Figure 2.7: Proportion of Fall visitors participating in each activity

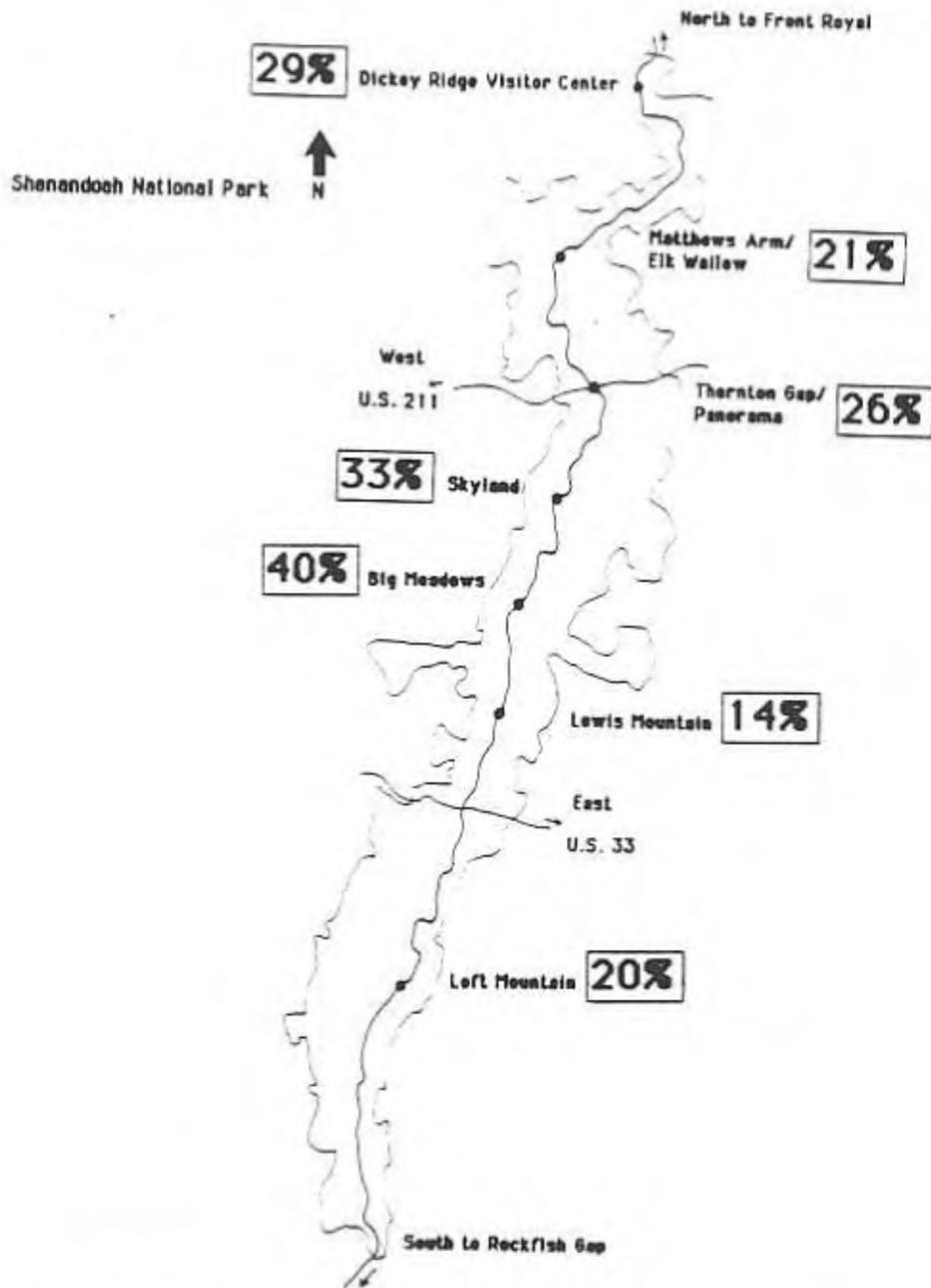
E. Visitor locations

Map 1.3 shows the proportion of Fall visitor groups that stopped at each site. The largest proportion of visitor groups stopped at Big Meadows (40%), Skyland (33%) and the Dickey Ridge Visitor Center (29%).

Map 1.4 shows the proportion of Fall visitor groups who visited each site first. Twenty-eight percent of park visitor groups chose to go to the Dickey Ridge Visitor Center first, while 19% chose to stop at either Big Meadows or Loft Mountain first.

The order in which Fall visitor groups stopped at sites during their visit is shown in Figures 2.8 through 2.14. Figure 2.8 shows visitor groups to Mathews Arm/Elkwallow commonly stopped there early in their visit. Figure 2.9 shows that visitor groups to Thornton Gap/Panorama stopped there from the early to middle part of their visit. Figure 2.10 shows visitor groups to Lewis Mountain stopped there throughout their visit. As shown in Figure 2.11, most of the Loft Mountain visitor groups stopped there first. Figure 2.12 shows visitor groups to Big Meadows commonly stopped there earlier than later in their visit. Figure 2.13 shows visitor groups to Skyland chose to stop there early to mid-visit. Figure 2.14 shows visitor groups to the Dickey Ridge Visitor Center stopped there at the first of their visit.

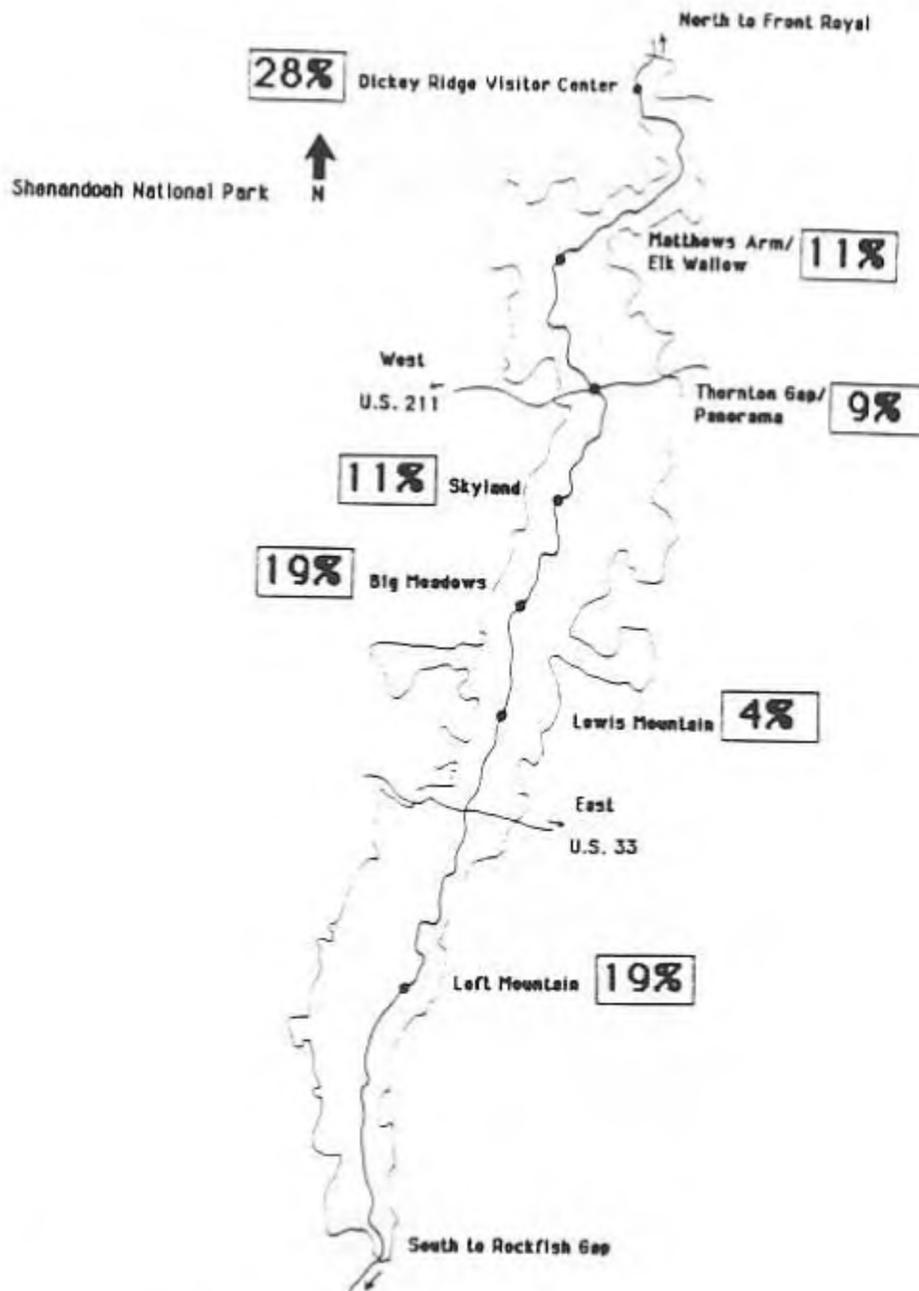
E. Visitor locations (continued)



N=398 visitor groups

Map 2.3: Proportion of all Fall visitors who stopped at each site

E. Visitor locations (continued)



N=227 visitor groups

Map 2.4: Proportion of Fall visitors who stopped at each site first

E. Visitor locations (continued)

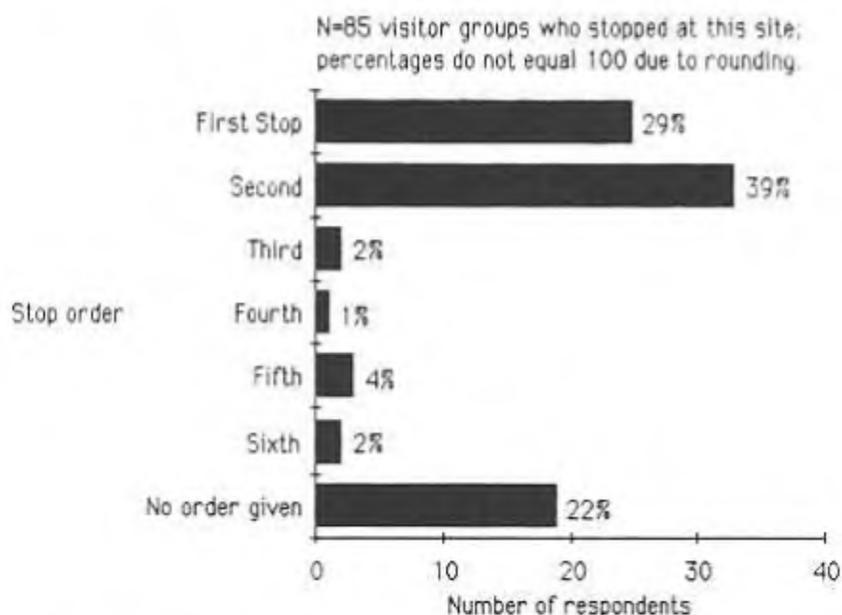


Figure 2.8: Order in which Fall visitors stopped at Mathews Arm/Elkwallow

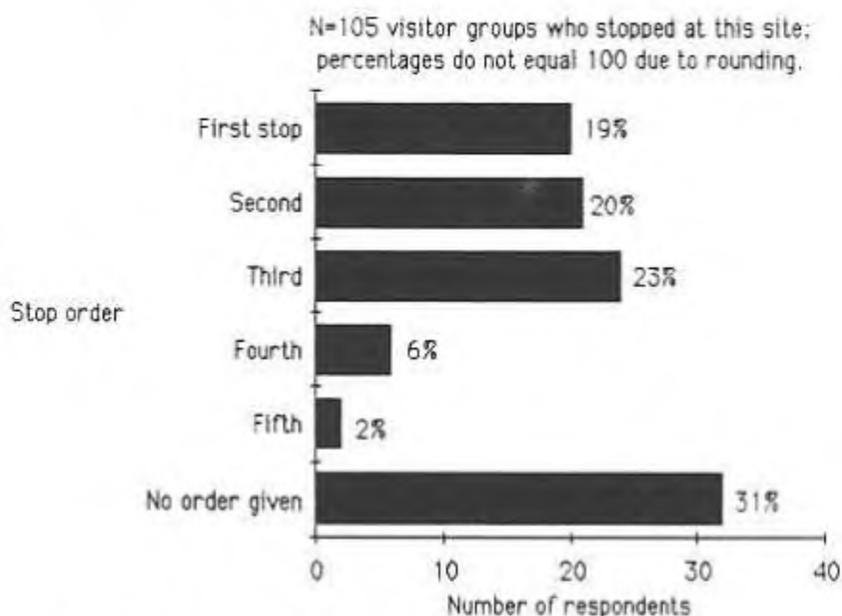


Figure 2.9: Order in which Fall visitors stopped at Thornton Gap/Panorama

E. Visitor locations (continued)

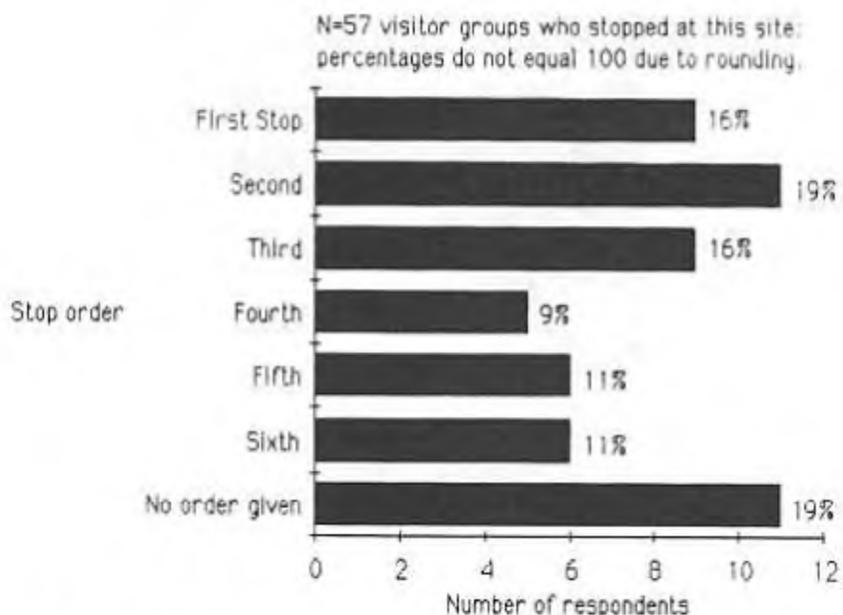


Figure 2.10: Order in which Fall visitors stopped at Lewis Mountain

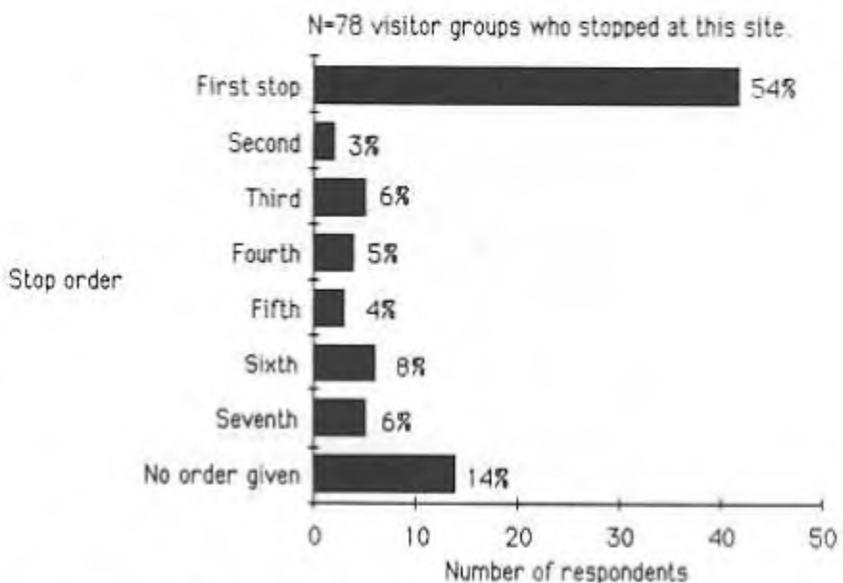


Figure 2.11: Order in which Fall visitors stopped at Loft Mountain

E. Visitor locations (continued)

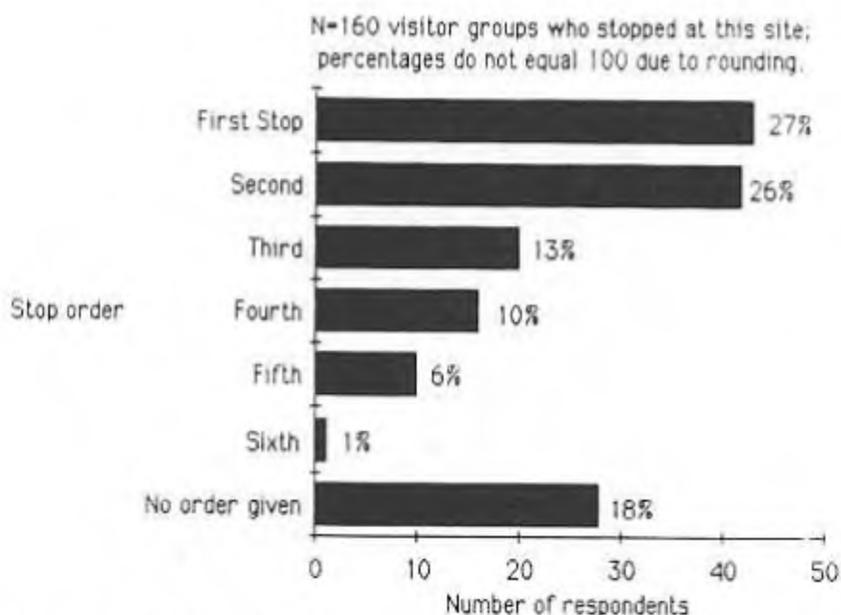


Figure 2.12: Order in which Fall visitors stopped at Big Meadows

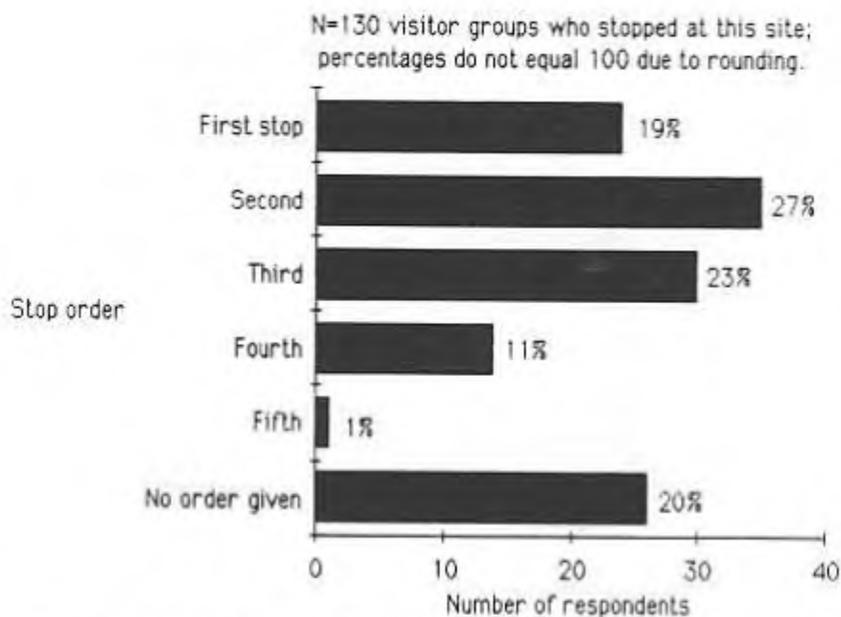


Figure 2.13: Order in which Fall visitors stopped at Skyland

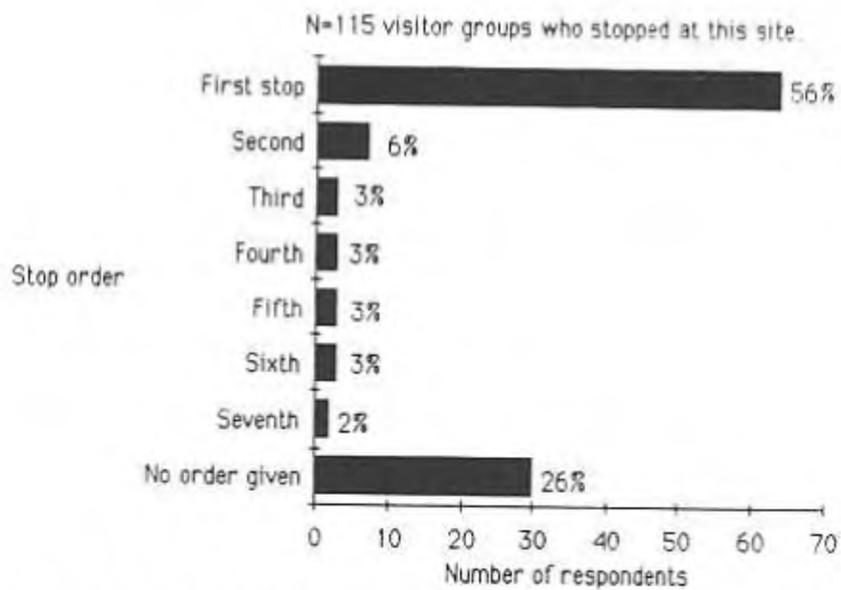
E. Visitor locations (continued)

Figure 2.14: Order in which Fall visitors stopped at the Dickey Ridge Visitor Center

F. Special question 1: Visitor origin on arrival day

The survey asked Fall visitor groups where they started their trip on the day they arrived in the park. They were asked to specify both the nearest town and the state from which they began on that day. Table 2.2 shows that Virginia was the most common state of origin on their arrival day (73%) and Table 2.3 shows that Front Royal was the most common town (16%).

Table 2.2: State of visitor origin on arrival day

N=363 visitor groups;
percentages do not equal 100 due to rounding.

<u>State</u>	<u>Number of respondents</u>	<u>Percent (%)</u>
Virginia	273	73
Maryland	32	9
Pennsylvania	20	5
District of Columbia	17	5
West Virginia	8	2
North Carolina	5	1
Others (1-2 per state)	8	2

F. Special question 1 (continued)

Table 2.3: Place of visitor origin on arrival day

N=384 visitor groups

<u>Community</u>	<u>Number of respondents</u>	<u>Percent (%)</u>
Front Royal	63	16
Waynesboro	29	8
Charlottesville	26	7
Luray	18	5
Washington, D.C.	13	3
Elkton	11	3
Winchester	8	2
Alexandria	8	2
Culpeper	7	2
Virginia Beach	5	1
Staunton	5	1
Others (< 5 respondents/town)	191	50

G. Special question 2: Park exit used by departing visitors

The survey asked Fall visitor groups to specify which exit they used when leaving the park. Figure 2.15 shows the proportion of visitor use for each of the four exits from Shenandoah. Thornton Gap (30%) was the exit most commonly used by visitor groups.

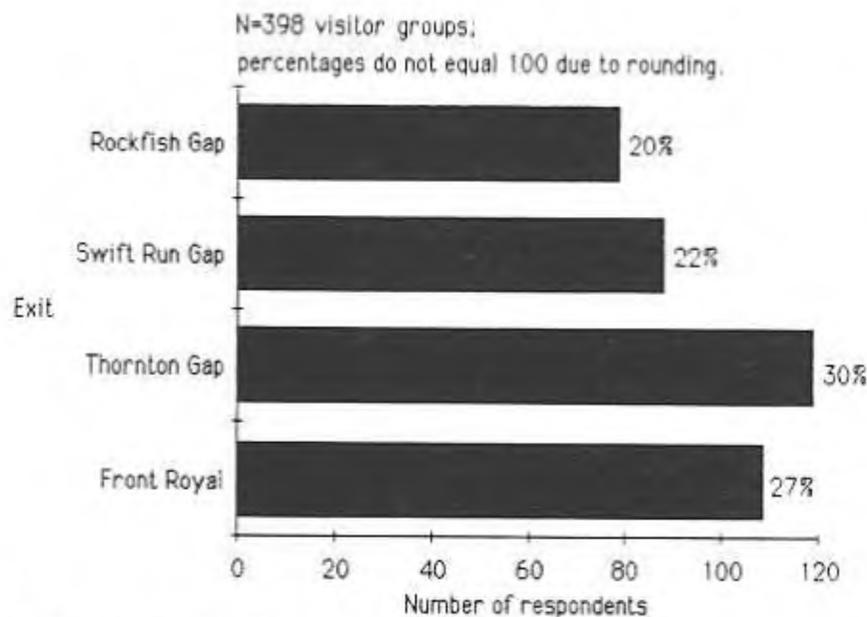


Figure 2.15: Proportion of Fall visitor groups using each park exit

II. Special question 3: Information or interpretive services

The survey asked Fall visitor groups if they used any of the information or interpretation services and how useful each service was to them. A five point scale was provided: 1 - extremely useful, 2 - very useful, 3 - moderately useful, 4 - somewhat useful and 5 - not useful. Figure 2.16 illustrates the proportion of visitor groups that used each service. A majority of all visitor groups used the brochures and booklets (62%) and the wayside/overlook exhibits (54%); the Visitor Center exhibits (38%) were also commonly used. The least used service was the ranger-led programs (6%).

Table 2.4 shows how visitor groups rated the usefulness of each service. Services that received the highest average scores were the ranger-led programs, the self-guided trails and the brochures and booklets. Services with the lowest score were Visitor Center films and bulletin boards.

Figures 2.17 through 2.24 show the visitors' ratings of each service's usefulness.

H. Special question 3: (continued)

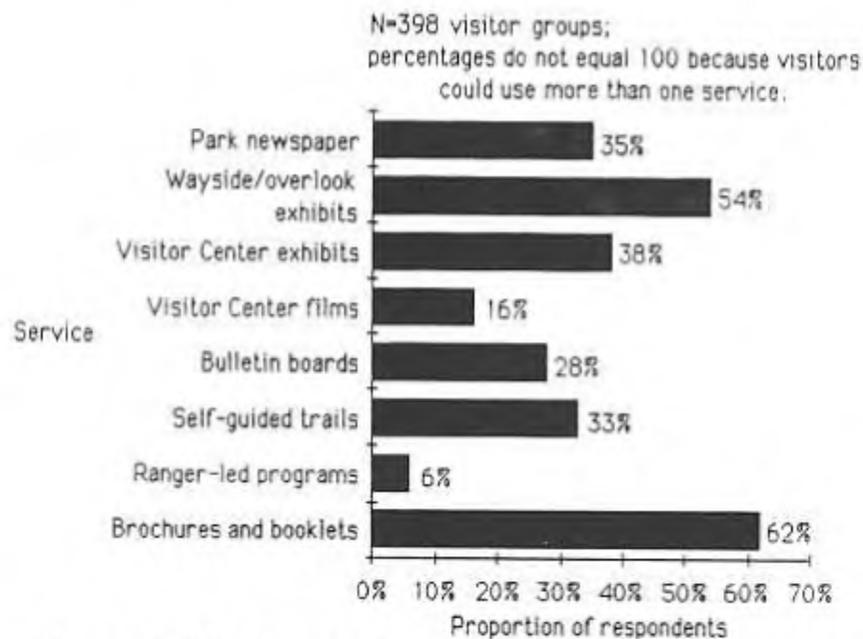


Figure 2.16: Proportion of Fall visitors who used each information or interpretive service

Table 2.4: Usefulness ratings for information or interpretive services

N=398 visitor groups

Service	Average score (1=extremely high)
Ranger-led programs	1.5
Self-guided trails	1.7
Brochures and booklets	1.8
Wayside/overlook exhibits	2.0
Visitor Center exhibits	2.0
Visitor Center films	2.1
Bulletin boards	2.1
Park newspaper	2.3

H. Special question 3: (continued)

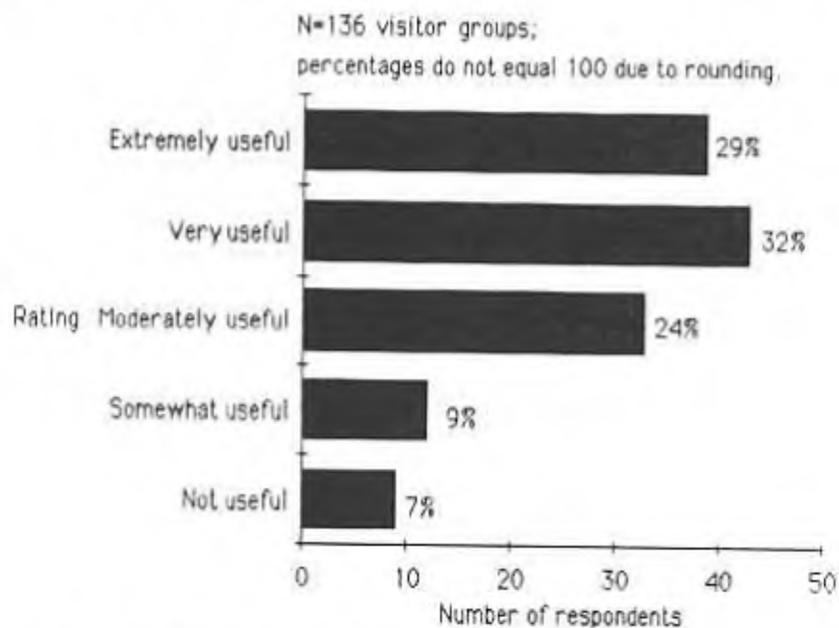


Figure 2.17: Fall visitor ratings of the park newspaper

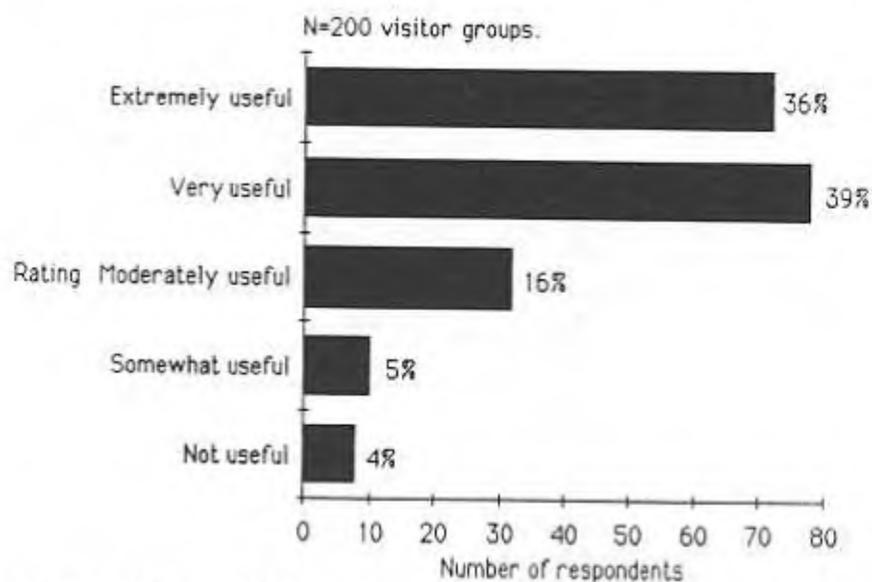


Figure 2.18: Fall visitor ratings of wayside/overlook exhibits

H. Special question 3: (continued)

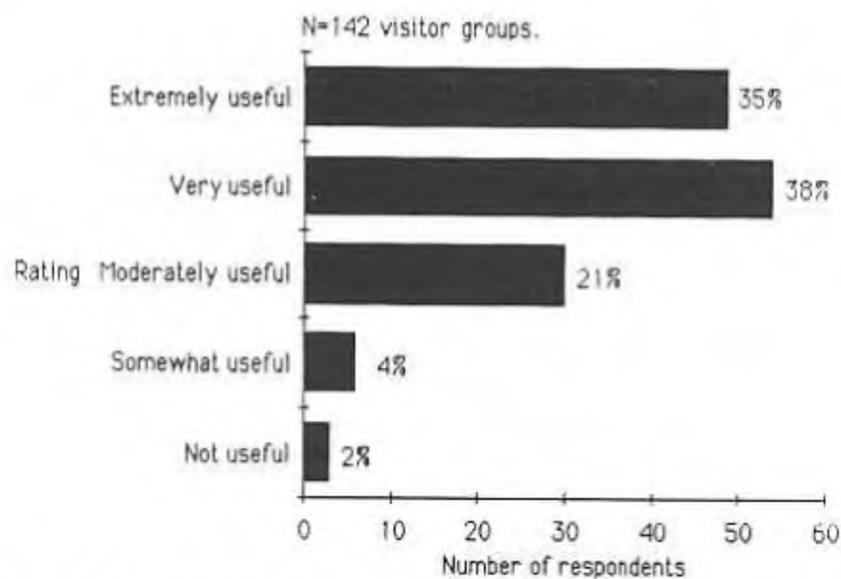


Figure 2.19: Fall visitor ratings of Visitor Center exhibits

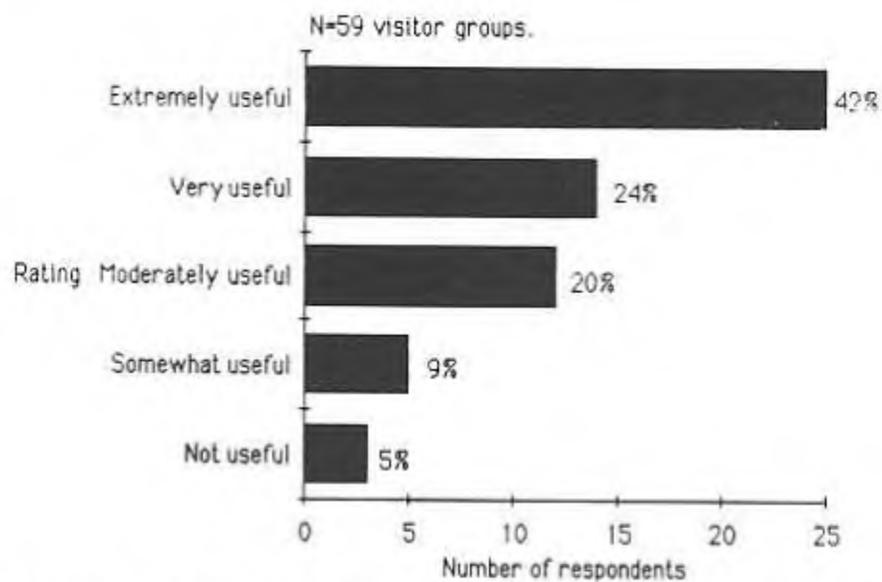


Figure 2.20: Fall visitor ratings of Visitor Center films

H. Special question 3: (continued)

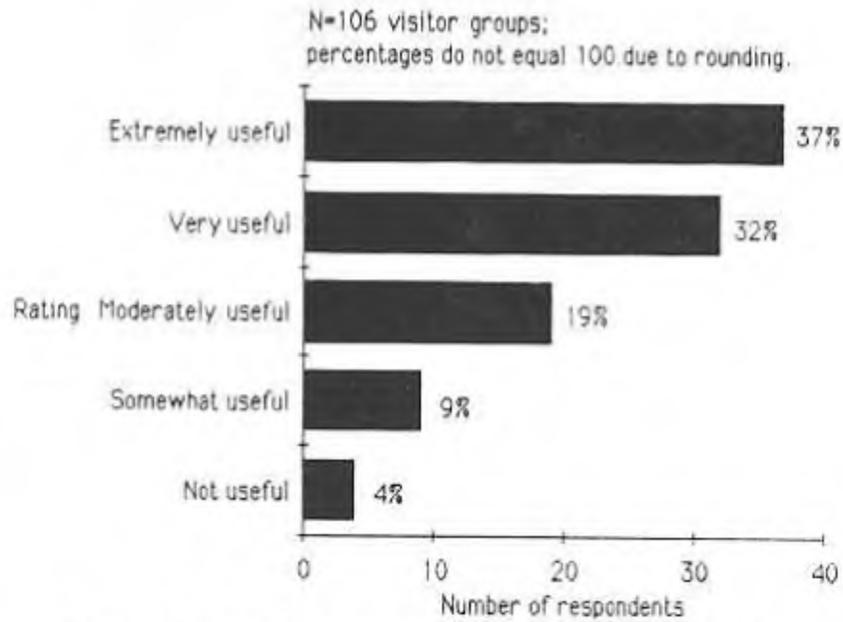


Figure 2.21: Fall visitor ratings of bulletin boards

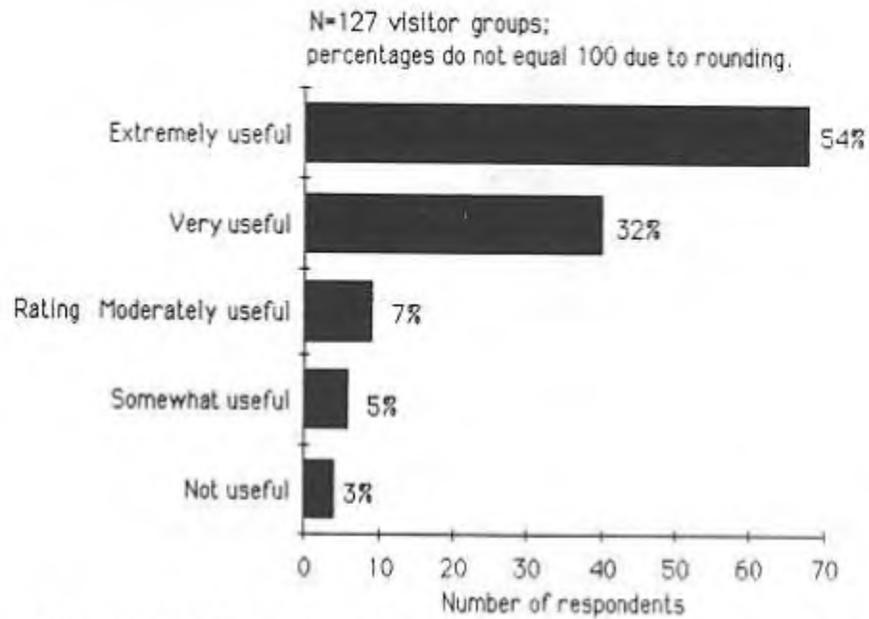


Figure 2.22: Fall visitor ratings of self-guided trails

H. Special question 3: (continued)

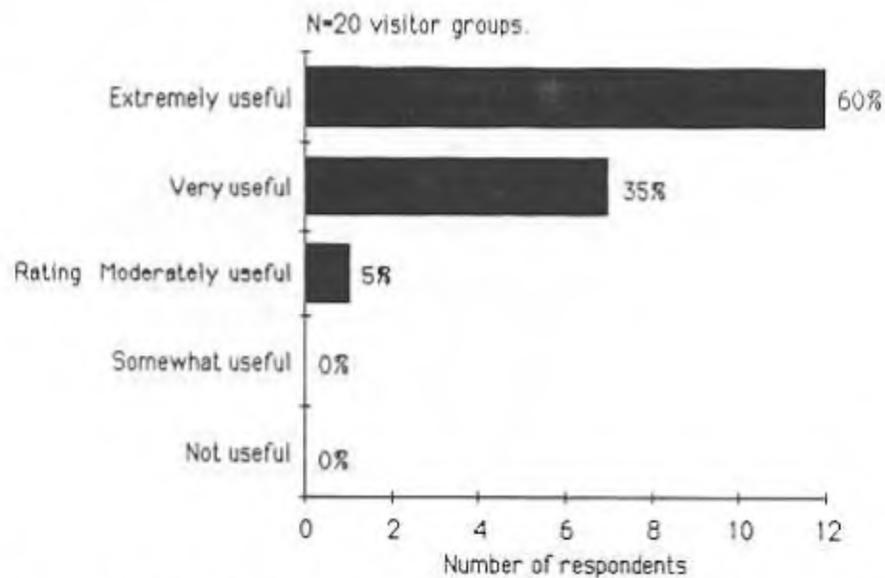


Figure 2.23: Fall visitor ratings of ranger-led programs

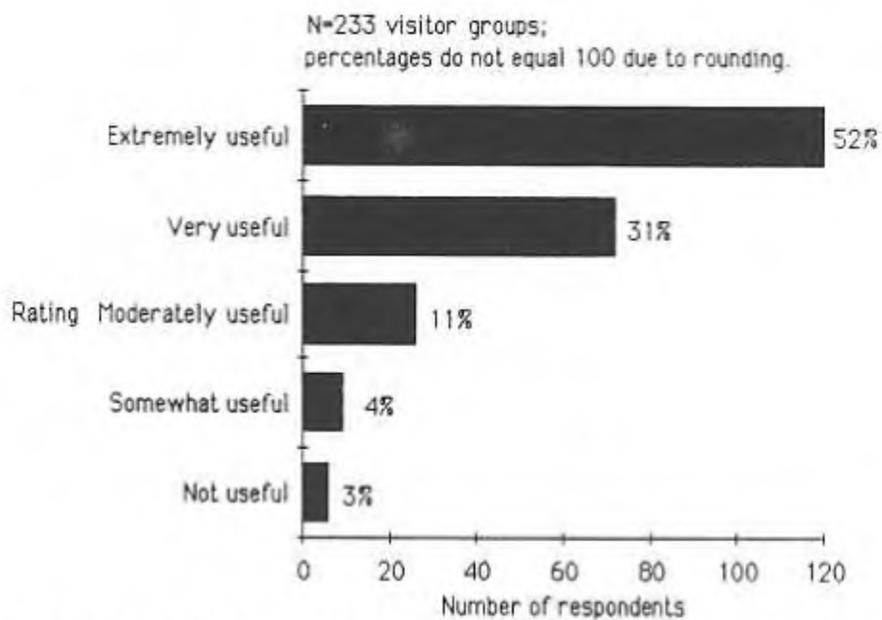


Figure 2.24: Fall visitor ratings of brochures and booklets

I. Special question 4: Park information sources consulted prior to visit

The survey asked Fall visitor groups how they obtained information about the park prior to their visit. Figure 2.25 shows that a majority of visitor groups said that prior visits had given them their park information (62%). The next most common responses were the advice they had received from friends or relatives (31%) and the information received from maps or brochures (31%).

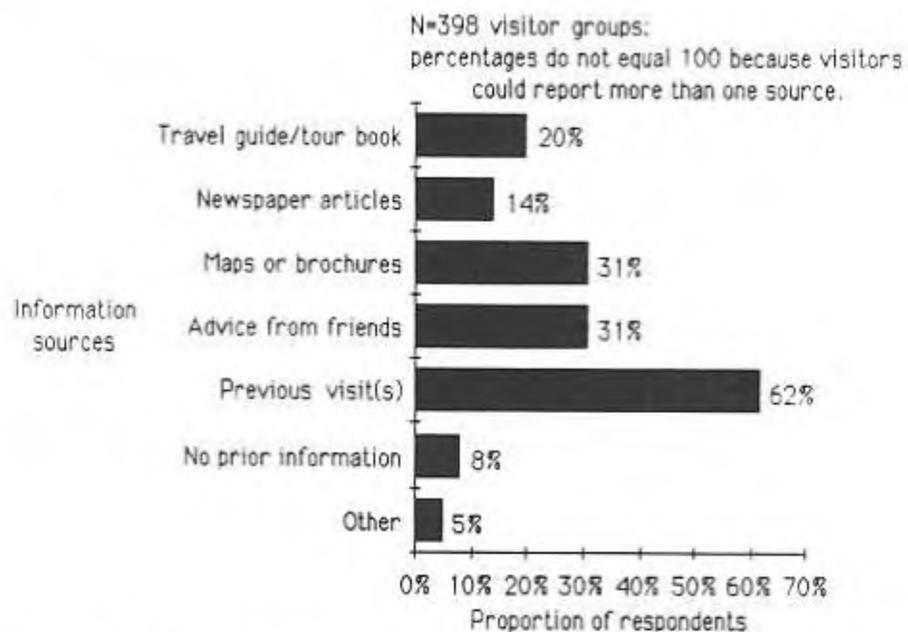


Figure 2.25: Proportion of Fall visitors consulting each information source prior to visit

J. Special question 5: Difficulty locating Shenandoah

The survey asked Fall visitor groups if it was difficult to locate Shenandoah. Three percent said that it was indeed difficult to find the park. These visitors said that there was a lack of signs, signs were misleading as well as the maps and signs being of poor quality. The suggestions given for improving the park location process were similar to those mentioned by Summer visitor groups.

K. Special question 6: Activity participation at Big Meadows

Fall visitors were asked if they stopped at Big Meadows and in which activities they participated while there. Forty-seven percent of visitor groups stopped at this location. Figure 2.26 shows the proportionate amount of visitor participation in each activity. The two most popular activities included visiting the Visitor Center (73%) and using a gas station/store/gift shop (47%).

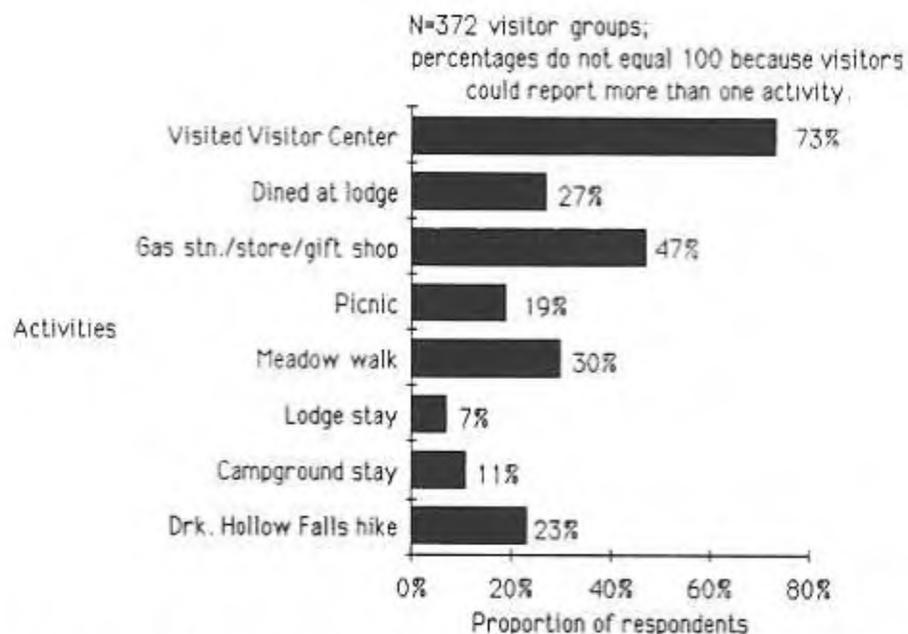


Figure 2.26: Proportion of Fall visitors participating in each activity at Big Meadows

SIGNIFICANT SEASONAL VARIATIONS

This section compares the two seasons' results to highlight where significant seasonal variation existed. This comparison is not done by statistical means, rather by a visual inspection of the graphic results in the preceding chapters. Differences of plus/minus 5% were considered for these comparisons.

Visitor characteristics

There was a higher proportion of Fall visitor groups consisting of two people. There was a smaller proportion of family groups during the fall.

Visitor ages vary between the seasons as well, a smaller proportion of Fall visitors were 1-15 years old and a smaller proportion of Summer visitors were older than 55.

Seasonal variations exist in the number of visits made to the park. A higher proportion of Summer visitors were first time visitors and a higher proportion of Fall visitors had visited 2-4 times.

Visitor use of time

A seasonal difference was noted in the length of stay - a higher proportion of Summer visitor groups tended to stay for more than one day.

Activities

Differences were evident between the seasonal participation in activities. Higher proportions of Summer visitor groups went hiking for under 2 hours and used gas stations/stores/gift shops. Smaller proportions of Fall visitor groups attended ranger-led walks/talks, attended evening slide programs, and visited the Dickey Ridge Visitor Center.

Significant seasonal variations (continued)

Visitor locations

Sites where the proportions of total Summer visitation were significantly higher than Fall visitation included Big Meadows, the Dickey Ridge Visitor Center and Skyland. A higher proportion of Summer visitor groups stopped first at the Dickey Ridge Visitor Center.

Special questions

A higher proportion of Summer visitor groups left the park via the Rockfish Gap exit.

Higher proportions of Summer visitor groups used these park information or interpretive services: the Visitor Center exhibits, the Visitor Center films, the bulletin boards and the ranger-led programs.

A higher proportion of Summer visitor groups indicated that they valued the park newspaper's degree of usefulness more. A higher proportion of Fall visitor groups indicated that they valued the self-guided trails' degree of usefulness more. A higher proportion of Summer visitor groups indicated that they valued the degree of usefulness of the brochures and booklets more.

A higher proportion of Fall visitor groups consulted newspaper articles about the park prior to their visit.

A higher proportion of Summer visitor groups who visited Big Meadows participated in picnicking. Higher proportions of Fall visitor groups who visited Big Meadows participated in the following activities: hiking the Dark Hollow Falls Trail, walking in the meadow, using gas stations/stores/gift shops, eating at the lodge dining room and visiting the Visitor Center.

Table 3 summarizes the seasonal differences discussed above.

Significant seasonal variations (continued)

Table 3: Variation of Shenandoah results by variable and season (proportion compared to other season)

Category	Variable	Summer	Fall
<u>Visitor characteristics:</u>			
Group Size	2 people		Higher
Group Type	Families		Lower
Age Group	1-15 years		Lower
	> 55 years	Lower	
Park Visits	First Time	Higher	
	5-9 times		Higher
<u>Visitor use of time:</u>			
Visit Duration	One Day		Higher
<u>Visitor Activities:</u>			
	Hike less than 2 hours	Higher	
	Use gas station/store/gift shop	Higher	
	Other activities	Higher	
	Ranger-led walk or talk		Lower
	Attend evening slide program		Lower
	Visit Dickey Ridge Visitor Center		Lower
<u>Visitor Locations:</u>			
Total Visitation	Big Meadows	Higher	
	Skyland	Higher	
	Dickey Ridge Visitor Center	Higher	
First Stops			
	Dickey Ridge Visitor Center	Higher	

Significant seasonal variations (continued)

Table 3: Variation of Shenandoah results by variable and season (proportion compared to other season) - Continued

Category	Variable	Summer	Fall
<u>Special Questions:</u>			
Exit Point	Rockfish Gap	Higher	
Services Used	Bulletin Boards	Higher	
	Visitor Center Exhibits	Higher	
	Visitor Center Films	Higher	
	Ranger-led Programs	Higher	
<u>Services Usefulness Rated</u>			
	Park Newspaper	Higher	
	Self-guided trails		Higher
	Booklets and Brochures	Higher	
<u>Information Sources:</u>			
	Newspaper articles		Higher
<u>Activities at Big Meadows:</u>			
	Hike Dark Hollow Falls Trail		Higher
	Walk into meadow		Higher
	Picnic	Higher	
	Use gas station/store/gift shop		Higher
	Eat at lodge dining room		Higher
	Visit Visitor Center		Higher

SUMMARIES OF VISITOR COMMENTS - Introduction

Volume 2 of this report contains unedited comments made by Summer and Fall visitor groups. A summary of these comments appears below, and is also included within Volume 2. Some comments offer specific suggestions regarding what visitors like or dislike, while others contain general impressions. A wide variety of topics are discussed, including natural features, facilities, interpretation services, personnel, and maintenance.

SUMMARY OF VISITOR COMMENTS

SUMMER

Summary of Summer visitor comments (continued)

Visitors answers to question 10: "Is there anything else you would like to tell us about your visit to Shenandoah National Park?"*

Comment	Number
GENERAL COMMENTS	[526]
Enjoyed visit	128
Beautiful or scenic	84
Enjoyed viewing wildlife (especially deer and bear)	61
Would like or plan to re-visit	48
Clean or well maintained	39
Fees too high or inappropriate	29
Just passing through	21
Quiet or relaxing	15
Wished we had more time	15
Well managed	13
Enjoyed hiking	8
Keep it like it is	6
Will recommend to others	5
Points of interest well marked	5
Deer seem to be increasing	5
Other	44
INTERPRETIVE FACILITIES	[36]
Enjoyed interpretive programs	9
Need better information on hiking	7
Other	20
OTHER FACILITIES	[112]
Approve of or appreciate wall reconstruction	13
More showers needed	10
Need more campsites or camping areas	7
Nice campgrounds	6
Food service unsatisfactory	6
Other	70

N = 728. Many visitors made more than one comment.

Summary of Summer visitor comments (continued)

PERSONNEL	[54]
Staff friendly or helpful	35
Staff knowledgeable or informative	9
Other	9

SUMMARY OF VISITOR COMMENTS

FALL

Summary of Fall visitor comments (continued)

Visitors' answers to question 10: "Is there anything else you would like to tell us about your visit to Shenandoah National Park?"*

Comment	Number
GENERAL STATEMENTS	[283]
Enjoyed visit	69
Beautiful or scenic	50
Clean or well maintained	28
Would like or plan to revisit	23
Enjoyed viewing wildlife	16
Enjoyed drive	13
Wished we had more time	13
Just passing through	10
Enjoyed hiking	8
Fees too high or inappropriate	7
Quiet or relaxing	7
Too crowded	5
Other	34
INTERPRETIVE FACILITIES	[15]
OTHER FACILITIES	[61]
Road system excellent or well maintained	7
Like or appreciate stone wall reconstruction	6
Need more restroom facilities	5
Appreciate overlooks	5
Other	38
PERSONNEL	[13]
Staff friendly or helpful	11
Other	2

*N = 372. Many visitors made more than one comment.

MENU FOR FURTHER ANALYSIS

This report contains only some of the information that can be provided by the results of this study. By combining characteristics such as visitor ages, site visited, group size, and so forth, many further analyses can be made. Park personnel may wish to see other tables, graphs, and maps in order to learn more about visitors. This menu is provided so that the requests for further analyses can be done easily. Two kinds of analyses are available:

- 1) Two-way comparisons compare two characteristics at a time. For example, if knowledge is desired about which activities a particular age group engaged in, a comparison of activity by age group could be requested; if knowledge about which expenditure varied the most between group types was required, a comparison of expenditures by group type could be requested.
- 2) Three-way comparisons compare a two-way comparison to a third characteristic. For example, if knowledge was desired about the different activities of visitor group types to each site, a comparison of (activity by group type) by site visited could be requested; if knowledge about which age groups were participating in an activity at a particular site was required, a comparison of (age group by activity) by site visited could be requested.

In the first section of the sample order form found on the page after next is a complete list of the characteristics for which information was collected from the visitors to your park. Below this list is a series of blanks that are provided for specifying the variables that are to be requested in two-way comparisons. Simply select the two variables of interest from the list and write their names in the spaces provided. Please indicate the season of interest and use a separate form for each season requested. Blank order forms are provided for tearing out and completing, as shown in the example.

Menu for further analysis (continued)

To request a three-way comparison, the next section of the order form provides blanks for specifying each of the three characteristics of interest. For example, if a comparison of activity by group type by age group is required, each of these characteristics should be listed in the space provided on the order form.

SAMPLE

Visitor Services Project
 Analysis Order Form - Report 14 (Shenandoah)

Date of request: ___/___/___
 Person requesting analysis: _____
 Phone number (commercial): _____

Use the variable list below to choose the characteristics of interest to be specified in the following requests for two-way and three-way comparisons.

- 1. Group size
- 2. Group type
- 3. Age
- 4. State residence
- 5. Number of visits
- 6. Entry time
- 7. Entry day
- 8. Length of stay
- 9. Activity
- 10. Site visited
- 11. Arrival day origin
- 12. Exit of departure
- 13. Park service usefulness
- 14. Park service ratings
- 15. Prior information sources
- 16. Difficulty locating park
- 17. Big Meadows' activities

1. Indicate the season of interest (please fill out a separate form for each season requested):
 Summer _____ Fall _____

2. Additional two-way comparisons (please write in the appropriate variable names from the above list):

Variable	by	Variable
<i>group type</i>	by	<i>service usefulness</i>
_____	by	_____
_____	by	_____
_____	by	_____

3. Additional three-way comparisons (please describe, listing the three items of interest from the previous list):

Variable	by	Variable	by	Variable
<i>group type</i>	by	<i>activity</i>	by	<i>site visited</i>
_____	by	_____	by	_____
_____	by	_____	by	_____

4. Special Instructions
It may be helpful to know what format you need the purpose for the information, and so forth.

Mail to:
 Cooperative Park Studies Unit
 College of Forestry, Wildlife, and Range Sciences
 University of Idaho
 Moscow, Idaho 83843

Report 14: Order Form (continued)

3. Additional three-way comparisons (please describe, listing the three items of interest from the previous list):

<u>Variable</u>		<u>Variable</u>		<u>Variable</u>
_____	by	_____	by	_____
_____	by	_____	by	_____
_____	by	_____	by	_____

4. Special Instructions

Mail to:
Cooperative Park Studies Unit
College of Forestry, Wildlife, and Range Sciences
University of Idaho
Moscow, Idaho 83843

Report 14: Order Form (continued)

3. Additional three-way comparisons (please describe, listing the three items of interest from the previous list):

<u>Variable</u>		<u>Variable</u>		<u>Variable</u>
_____	by	_____	by	_____
_____	by	_____	by	_____
_____	by	_____	by	_____

4. Special Instructions

Mail to:
Cooperative Park Studies Unit
College of Forestry, Wildlife, and Range Sciences
University of Idaho
Moscow, Idaho 83843

Report 14: Order Form (continued)

3. Additional three-way comparisons (please describe, listing the three items of interest from the previous list):

<u>Variable</u>		<u>Variable</u>		<u>Variable</u>
_____	by	_____	by	_____
_____	by	_____	by	_____
_____	by	_____	by	_____

4. Special Instructions

Mail to:
Cooperative Park Studies Unit
College of Forestry, Wildlife, and Range Sciences
University of Idaho
Moscow, Idaho 83843

Report 14: Order Form (continued)

3. Additional three-way comparisons (please describe, listing the three items of interest from the previous list):

<u>Variable</u>		<u>Variable</u>		<u>Variable</u>
_____	by	_____	by	_____
_____	by	_____	by	_____
_____	by	_____	by	_____

4. Special Instructions

Mail to:
Cooperative Park Studies Unit
College of Forestry, Wildlife, and Range Sciences
University of Idaho
Moscow, Idaho 83843

Report 14: Order Form (continued)

3. Additional three-way comparisons (please describe, listing the three items of interest from the previous list):

<u>Variable</u>		<u>Variable</u>		<u>Variable</u>
_____	by	_____	by	_____
_____	by	_____	by	_____
_____	by	_____	by	_____

4. Special Instructions

Mail to:
Cooperative Park Studies Unit
College of Forestry, Wildlife, and Range Sciences
University of Idaho
Moscow, Idaho 83843

Report 14: Order Form (continued)

3. Additional three-way comparisons (please describe, listing the three items of interest from the previous list):

<u>Variable</u>		<u>Variable</u>		<u>Variable</u>
_____	by	_____	by	_____
_____	by	_____	by	_____
_____	by	_____	by	_____

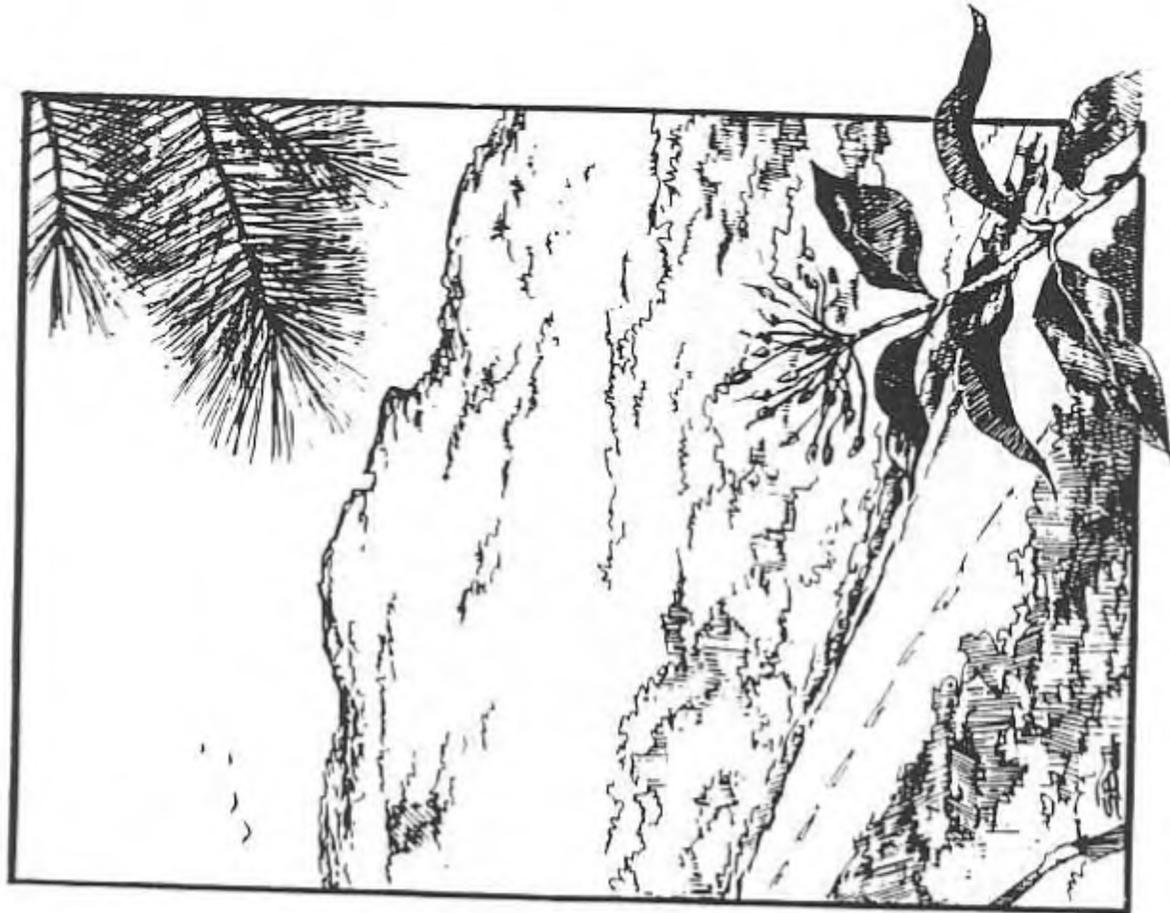
4. Special Instructions

Mail to:
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College of Forestry, Wildlife, and Range Sciences
University of Idaho
Moscow, Idaho 83843

APPENDICES

Appendix A: Questionnaire

Shenandoah Visitor Study



**The
Visitor Services
Project**

UNITED STATES DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Shenandoah National Park
Route 4, Box 292
Luray, Virginia 22835-9051



IN REPLY REFER TO

Dear Visitor:

Thank you for participating in this study. Our goal is to learn about the activities that visitors to Shenandoah enjoy, the places they visit within the park, and to more accurately count visitors.

This questionnaire is only being given to a select number of visitors. Your participation is very important! It should only take a few minutes of your time during your visit to Shenandoah.

When your visit is over, please complete the questionnaire. Then, seal it with the sticker provided on the last page and simply drop it in any U.S. mailbox.

Please be assured that all of the information is confidential. Do not write your name on the questionnaire. If you have any questions, please contact Dr. Gary E. Machlis, Sociology Project Leader, Cooperative Park Studies Unit, University of Idaho, Moscow, Idaho 83843.

We appreciate your help.

Sincerely,

Ronald Wrye

Ronald Wrye,
Superintendent

DIRECTIONS

One person in your group should complete the questionnaire. It should only take a few minutes. When you have completed the questionnaire, please seal it with the sticker provided and drop it in any U.S. mailbox. No postage is needed.

IMPORTANT

When did you first enter Shenandoah National Park this visit?

_____ DAY OF THE WEEK (M,T,W,Th,F,S,Su)

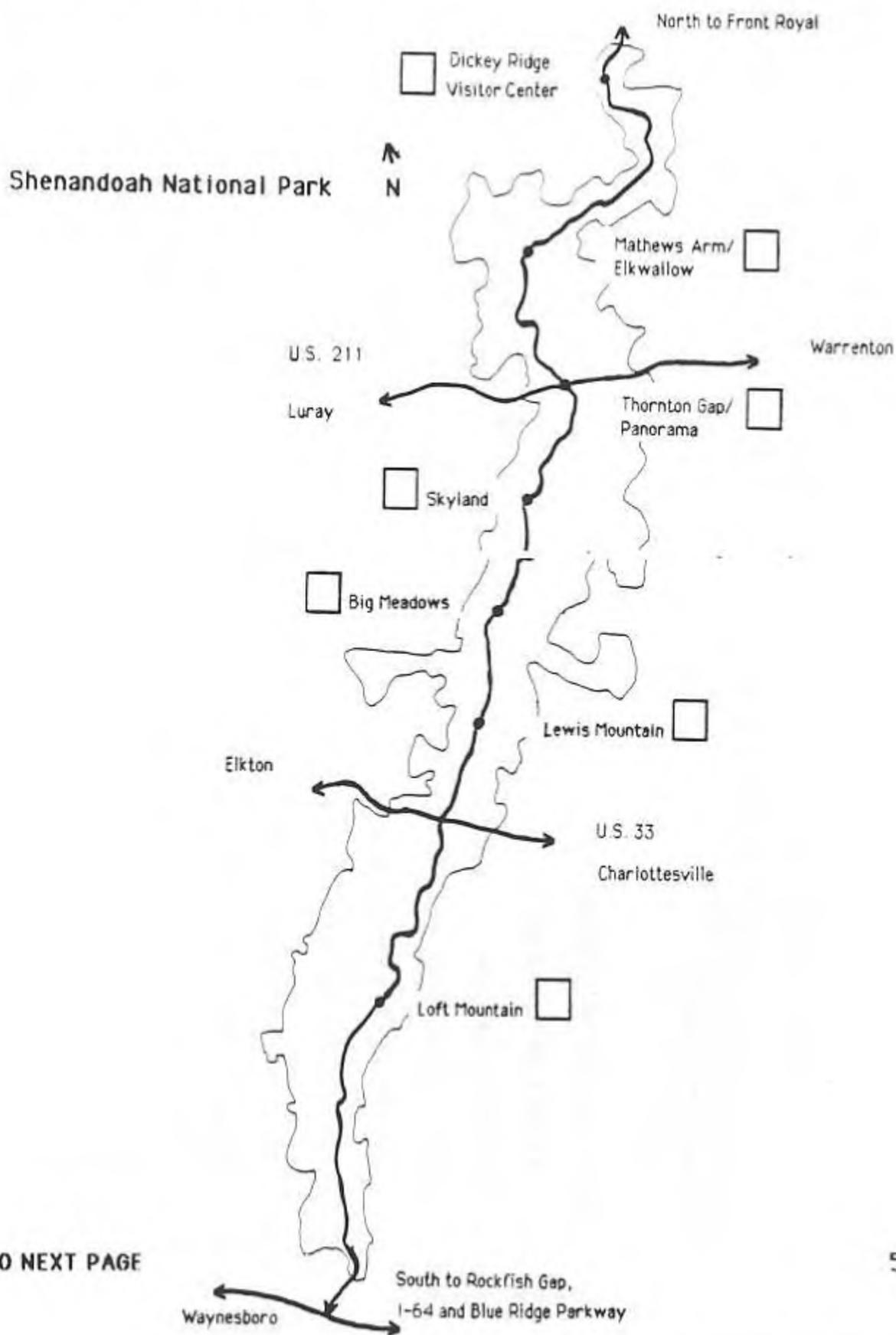
_____ TIME OF DAY _____ am. _____ pm.

PLEASE GO ON TO NEXT PAGE

PLACES YOU VISITED

On the map below, please indicate the order of the places you and your group visited in Shenandoah National Park. Simply write 1st, 2nd, 3rd, and so forth, in the box beside each place you visited.

If you did not visit any of these places, please go to page 6.



PLEASE GO ON TO NEXT PAGE

YOUR ACTIVITIES

On the list below, please check (✓) the activities that you or your group did in Shenandoah National Park.
(Please check all that apply)

- PICNIC
 HIKE FOR LESS THAN 2 HOURS
 HIKE FOR MORE THAN 2 HOURS
 CAMP IN CAMPGROUND
 CAMP IN BACKCOUNTRY
 STAY OVERNIGHT AT LODGE OR CABINS
 VISIT VISITOR CENTER AT DICKEY RIDGE
 VISIT VISITOR CENTER AT BIG MEADOWS
 USE GAS STATION/RESTAURANT/STORE
 STOP AT OVERLOOKS
 FISH
 BICYCLE
 ATTEND RANGER-LED WALK OR TALK
 ATTEND EVENING SLIDE PROGRAM
 OTHER (Please describe: _____)

YOU AND YOUR OPINIONS

We hope you enjoyed your visit to Shenandoah National Park. Below are several questions that will help us learn about the people who participated in the study and their thoughts about the park.

- How many days did you spend in Shenandoah National Park this visit?
 NUMBER OF DAYS
- How many people were in your group?
 NUMBER OF PEOPLE
- What kind of group were you with?
 ALONE
 FAMILY
 FRIENDS
 FAMILY AND FRIENDS
 GUIDED TOUR GROUP
 OTHER GROUP (please describe: _____)

4. For yourself and each member of your group, please indicate:

- 1) your age on your last birthday
- 2) the zip code of your permanent residence (if you are from a country other than the United States, please give the name of that country), and
- 3) the number of times you have visited Shenandoah National Park, including this visit.

AGE ZIP CODE # TIMES VISITED
(country)

YOURSELF _____

MEMBER #2 _____

MEMBER #3 _____

MEMBER #4 _____

MEMBER #5 _____

additional members: _____

5. Where did you start your trip on the day you arrived in Shenandoah National Park?

_____ NEAREST TOWN _____

_____ STATE _____

6. Which exit did you use when leaving Shenandoah National Park? (Check one.)

- _____ FRONT ROYAL (NORTH EXIT)
- _____ THORNTON GAP (U.S. 211)
- _____ SWIFT RUN GAP (U.S. 33)
- _____ ROCKFISH GAP (SOUTH EXIT)

7 a. During this visit did you use any of the following information or services at Shenandoah National Park? (Please check all that apply.)

b. How useful were the services you used? (Please mark each service you checked from 1 to 5 (1=EXTREMELY USEFUL, 2=VERY USEFUL, 3= MODERATELY USEFUL, 4=SOMEWHAT USEFUL, 5=NOT USEFUL) in the column on the right.)

Use service? (✓)	Rating? (#)
_____ PARK NEWSPAPER (Shenandoah Overlook)	_____
_____ WAYSIDE/OVERLOOK EXHIBITS	_____
_____ VISITOR CENTER EXHIBITS	_____
_____ VISITOR CENTER FILMS	_____
_____ BULLETIN BOARDS	_____
_____ SELF-GUIDED TRAILS	_____
_____ RANGER-LED PROGRAMS (talks, walks, etc)	_____
_____ BROCHURES AND BOOKLETS	_____

8. Prior to this visit, how did you and your group get information about Shenandoah National Park? (Please check all that apply.)

- _____ TRAVEL GUIDE/TOUR BOOK (from travel agent, AAA, etc.)
- _____ NEWSPAPER ARTICLES
- _____ MAPS OR BROCHURES (from state, hotel, etc.)
- _____ ADVICE FROM FRIEND OR RELATIVE
- _____ PREVIOUS VISIT(S)
- _____ DID NOT GET INFORMATION PRIOR TO VISIT
- _____ OTHER (Please describe: _____)

9. Did you find it difficult to locate Shenandoah National Park?

_____ YES
 _____ NO

If so, why was it difficult to locate the park?

How could locating the park be improved?

PLEASE GO ON TO NEXT PAGE

10. During this visit to Shenandoah National Park, did you and your group stop at Big Meadows?

_____ YES
 _____ NO

If so, please check the activities that you and your group did at Big Meadows. (Please check all that apply.)

- _____ VISIT VISITOR CENTER
- _____ EAT AT LODGE DINING ROOM
- _____ USE GAS STATION/STORE/GIFT SHOP
- _____ PICNIC
- _____ WALK INTO MEADOW
- _____ STAY IN LODGE
- _____ STAY IN CAMPGROUND
- _____ HIKE DARK HOLLOW FALLS TRAIL

11. Is there anything else you would like to tell us about your visit to Shenandoah National Park?

Thank you for your help! Please seal the questionnaire with the sticker provided and drop it in any U.S. mailbox -- no postage is needed.



Postage and Fees Paid

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Sciences
University of Idaho
Moscow, Idaho 83843