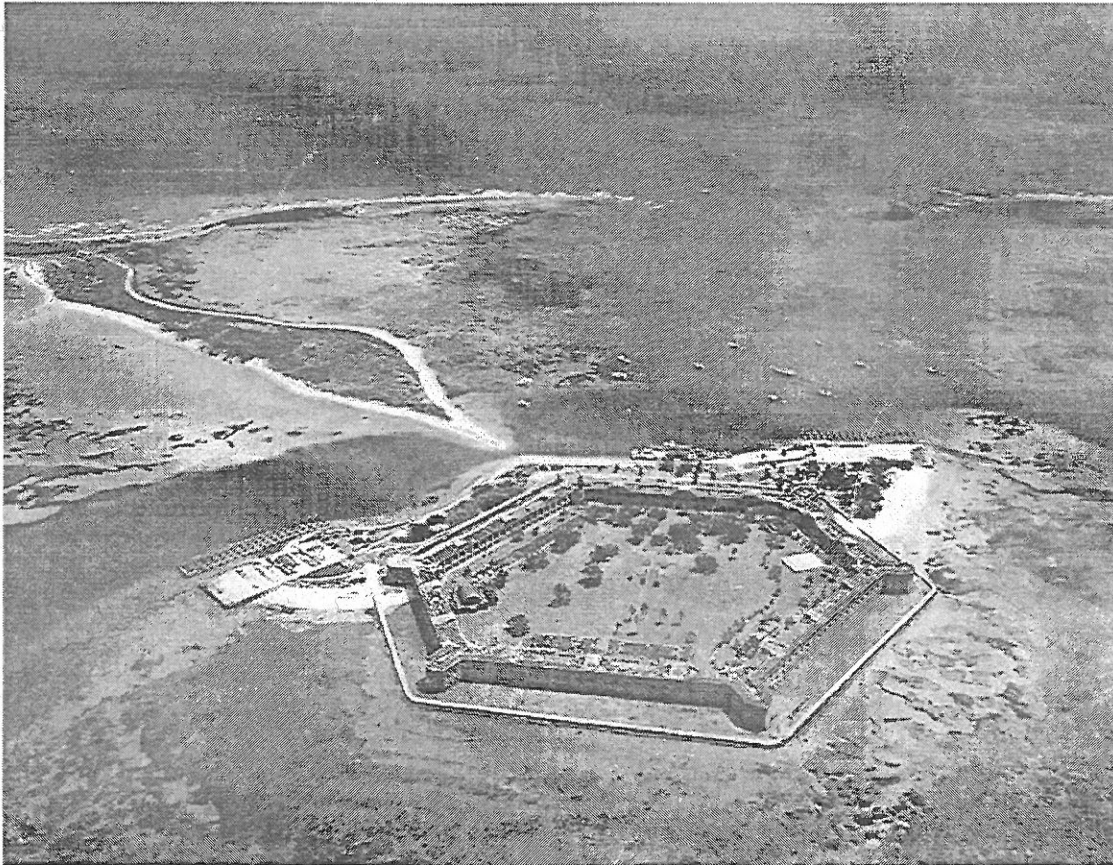




National Park Service
U.S. Department of the Interior

Visitor Services Project



Dry Tortugas National Park Visitor Study

Spring 2002

Report 132



University of Idaho



**National Park Service
U.S. Department of the Interior**

Visitor Services Project

Dry Tortugas National Park

Visitor Study Spring 2002

Yen Le

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Visitor Services Project
Report 132

April 2003

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Visitor Services Project
Dry Tortugas National Park
Report Summary

- This report describes the results of a visitor study at Dry Tortugas National Park during March 20-26, 2002. A total of 400 questionnaires were distributed to visitors. Visitors returned 311 questionnaires for a 77.8% response rate.
- This report profiles Dry Tortugas National Park visitors. A separate appendix contains visitors' comments about their visit. This report and the appendix include summaries of those comments.
- Forty-eight percent of visitor groups were in groups of two; thirty percent were in groups of three or four. Fifty-nine percent of the visitor groups were family groups. Sixty percent of visitors were aged 36-65 years and 15% were aged 15 or younger.
- United States visitors were from Florida (22%), New York (10%), Pennsylvania (5%), 36 other states and Washington, D.C. Four percent of all visitors were international, with 44% of those from Canada, 16% from Holland, and 9% from Japan.
- On this visit, most visitors (94%) were visiting the park for the first time in the last 12 months. In the last 2 to 5 years, 74% of visitors did not visit, 16% of visitors visited the park once and 8% visited the park 2 times or more. Eighty percent of visitors spent less than one day at Dry Tortugas NP.
- On this visit, the most common activities were snorkeling (74%), self-guided tour of fort (62%) and swimming at beach (60%). The most important activities to visitors were camping, ranger-guided tour of fort, and snorkeling. Most visitors arrived by ferry (69%), 11% by seaplane and 10% by commercial charter boat.
- The most common reasons for visiting Dry Tortugas on this visit were learning about history (78%) and snorkeling/diving (77%). When asked the primary reason for visiting South Florida, 56% came to visit the Florida Keys, while 16% came to visit Dry Tortugas NP.
- The most used sources of information about the park prior to visiting were friends or relatives (40%), and internet—website other than the park home page (32%).
- The most commonly visited locations in the park were Garden Key and fort (98%), Loggerhead Key (7%), and natural/cultural zone area (7%). The most common fishing location was Garden Key and fort (95%).
- When asked which resources/qualities were most important to protect at Dry Tortugas NP, visitors gave coral reefs, water quality and flow, endangered species and healthy fish populations the highest importance ratings.
- With regard to use, importance and quality of services and facilities, it is important to note the number of visitor groups that responded to each question. The most used visitor services and facilities were restrooms (89%) and beach/swim areas (83%). The most important services/facilities were the campground (95%), restrooms (89%) and beach/swim area (85%). The best quality service/facilities were ranger-guided interpretive programs (93%), beach/swim area (86%) and park brochure/map (85%).
- The average visitor group expenditure in and outside the park (Florida Keys, Miami area and Naples area) was \$1,626. The average per capita expenditure was \$554. The median visitor group expenditure (50% of group spent more, 50% spent less) was \$1,010. Twenty-one percent of groups spent between \$1 and \$400 in total expenditures in Dry Tortugas NP. Of the total expenditures by groups, 34% was for lodging, and 20% was for other transportation expenses.
- Most visitor groups (93%) rated the overall quality of visitor services at Dry Tortugas NP as "very good" or "good." No visitor groups rated the overall quality of visitor services as "very poor."

For more information about the Visitor Services Project, please contact the University of Idaho Park Studies Unit; phone (208) 885-7863 or visit the following web site: http://www.psu.uidaho.edu
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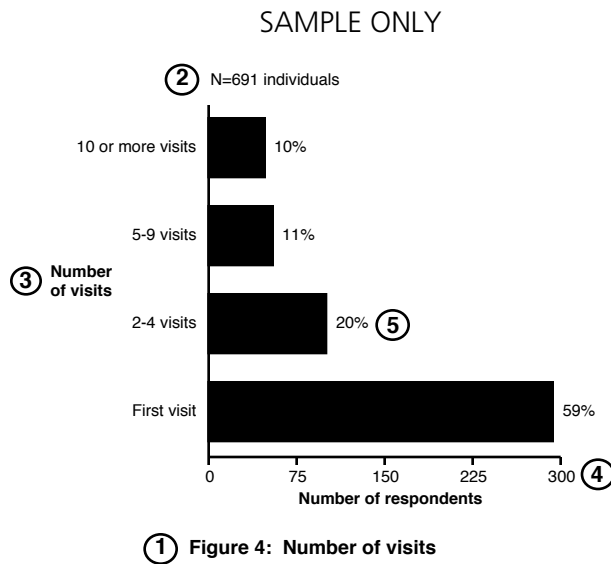
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INTRODUCTION

This report describes the results of a study of visitors at Dry Tortugas National Park (NP). This visitor study was conducted March 20-26, 2002 by the National Park Service (NPS) Visitor Services Project (VSP), part of the Park Studies Unit at the University of Idaho.

The report is organized into four sections. The **Methods** section discusses the procedures and limitations of the study. The **Results** section provides summary information for each question in the questionnaire and includes a summary of visitor comments. An **Additional Analysis** section is included to help managers request additional analyses. The final section includes a copy of the **Questionnaire**. The separate appendix includes comment summaries and visitors' unedited comments.

Most of this report's graphs resemble the example below. The large numbers refer to explanations following the graph.



- 1: The Figure title describes the graph's information.
- 2: Listed above the graph, the 'N' shows the number of visitors responding and a description of the chart's information. Interpret data with an 'N' of less than 30 with **CAUTION!** as the results may be unreliable.
- 3: Vertical information describes categories.
- 4: Horizontal information shows the number or proportions in each category.
- 5: In most graphs, percentages provide additional information.

METHODS

Questionnaire design and administration

The questionnaire for this visitor study was designed using a standard format that has been developed in previous Visitor Services Project studies. Some of the questions were comparable with VSP studies conducted at other parks. Other questions were customized for Dry Tortugas NP.

Interviews were conducted with, and questionnaires were distributed to, a sample of visitors who arrived at Dry Tortugas NP during the period from March 20-26, 2002. Questionnaires were distributed at three locations: the dock house, Sally Port, and on the beach.

Visitor groups were greeted, briefly introduced to the purpose of the study, and asked to participate. If visitors agreed, an interview, lasting approximately two minutes, was used to determine group size, group type, and the age of the adult who would complete the questionnaire. These individuals were then given a questionnaire and asked their names, addresses and telephone numbers in order to mail them a reminder/thank you postcard. Visitor groups were asked to complete the questionnaire during or after their visit and then return it by mail.

Two weeks following the survey, a reminder-thank you postcard was mailed to all participants. Replacement questionnaires were mailed to participants who had not returned their questionnaires four weeks after the survey. Seven weeks after the survey, second replacement questionnaires were mailed to visitors who still had not returned their questionnaires.

Data analysis

Returned questionnaires were coded and the information was entered into a computer using a standard statistical software package—Statistical Analysis System (SAS). Frequency distributions and cross-tabulations were calculated for the coded data, and responses to open-ended questions were categorized and summarized.

Sample size, missing data and reporting errors

This study collected information on both visitor groups and individual group members. Thus, the sample size ("N"), varies from Figure to Figure. For example, while Figure 1 shows information for 309 visitor groups, Figure 5 presents data for 927 individuals. A note above each graph specifies the information illustrated.

Occasionally, a respondent may not have answered all of the questions, or may have answered some incorrectly. Unanswered questions result in missing data and cause the number in the sample to vary from Figure to Figure. For example, although 311 questionnaires were returned by Dry Tortugas NP visitors, Figure 1 shows data for only 309 respondents.

**Sample size,
missing data
and reporting
errors
(continued)**

Questions answered incorrectly due to carelessness, misunderstanding directions, and so forth turn up in the data as reporting errors. These create small data inconsistencies.

Like all surveys, this study has limitations that should be considered when interpreting the results.

Limitations

1. It is not possible to know whether visitor responses reflect actual behavior. This disadvantage applies to all such studies and is reduced by having visitors fill out the questionnaire soon after they visit the park.

2. The data reflect visitor use patterns of visitors to the selected sites during the study period of March 20 - 26, 2002. The results do not necessarily apply to visitors during other times of the year.

3. Caution is advised when interpreting any data with a sample size of less than 30, as the results may be unreliable. Whenever the sample size is less than 30, the word "**CAUTION!**" is included in the graph, figure or table.

Weather conditions during the visitor study were typical of March in the Dry Tortugas NP area, with warm, sunny days and occasionally partly cloudy with a few showers or winds. Visitor comments about weather conditions are presented in a separate section of this report.

**Special
conditions**

During the survey period, dock maintenance construction was underway. The construction and noise may have affected visitors' experience, as noted in some of the visitor comments in this report.

For historical context, the ferries to Dry Tortugas NP began consistently operating in 1995-96 but on a less frequent, slower and smaller scale than in 2002. Since 1999, two high speed ferries, the "Yankee Freedom II" and "Fast Cat," have operated, each of which can carry about 100 passengers. Each ferry trip between Key West and Dry Tortugas NP takes approximately 2-1/2 hours.

RESULTS

Visitors contacted

At Dry Tortugas NP, 431 visitor groups were contacted, and 400 of these groups (92.8%) accepted questionnaires. Questionnaires were completed and returned by 311 visitor groups, resulting in a 77.8% response rate for this study.

Table 1 compares age and group size information collected from the total sample of visitors contacted with that from those who actually returned questionnaires. Based on the variables of respondent age and visitor group size, non-response bias was judged to be slightly significant for group size. The group sizes reported by actual respondents were higher than the group sizes reported during the initial interview. This may be due to underreporting of group size during the initial interview or that visitors may have interpreted the questions differently. Group size data should be treated with some caution, and other data that may differ by group size should be examined carefully.

Table 1: Comparison of total sample and actual respondents

Variable	Total sample		Actual respondents	
	N	Avg.	N	Avg.
Age of respondents	397	45.4	308	46.6
Group size	382	3.6	309	5.1

Demographics

Figure 1 shows visitor group sizes, which ranged from one person to 100 people. Forty-eight percent of visitor groups consisted of two people, while 11% consisted of three people and another 19% consisted of four people.

Fifty-nine percent of visitor groups were made up of family members, 24% were made up of friends, and 8% traveled with their families and friends (see Figure 2). Groups listing themselves as "other" for group type included school groups, spouses, and partners. Visitors were asked whether they were with a guided tour group or an educational/ school group. Among them only 2% of visitors were with an educational/ school group while 42% of visitors said they came to the park with a guided tour group (see Figure 3 and 4).

**Demographics
(continued)**

Fifty-two percent of individuals were male; 48% were female (see Figure 5).

Forty-eight percent of the visitors were in the 31-55 age group (see Figure 6). Another 15% of visitors were in the 15 or younger age group. Visitors were asked to list the number of visits they had made to the park including this visit during the past 12 months and from two to five years ago. Ninety-four percent of visitors indicated they had visited only once in the past 12 months, while about 6% said they had visited more than once (see Figure 7). During the past two to five years, 16% had visited once, and 7% had visited between two and four times (see Figure 8).

Most respondents (94%) said no group members had disabilities or impairments that affected their visit to Dry Tortugas NP. Of those with disabilities or impairments, 61% indicate mobility problems, 17% indicate hearing problems, and 11% indicates visual problems (see Figure 9). Of those who listed disabilities or impairments, 29% encountered access/service problems (see Figure 10). Those access/service problems included not being able to access the fort's top floor, not being able to hear the guide and difficulty in getting out of the water.

International visitors to Dry Tortugas NP comprised four percent of the total visitation. The countries most often represented were Canada (44%), Holland (16%) and Japan (9%), as shown in Table 2. The largest proportions of United States visitors were from Florida (22%), New York (10%), and Pennsylvania (5%). Smaller proportions of U.S. visitors came from another 36 states and Washington, D.C. (see Map 1 and Table 3).

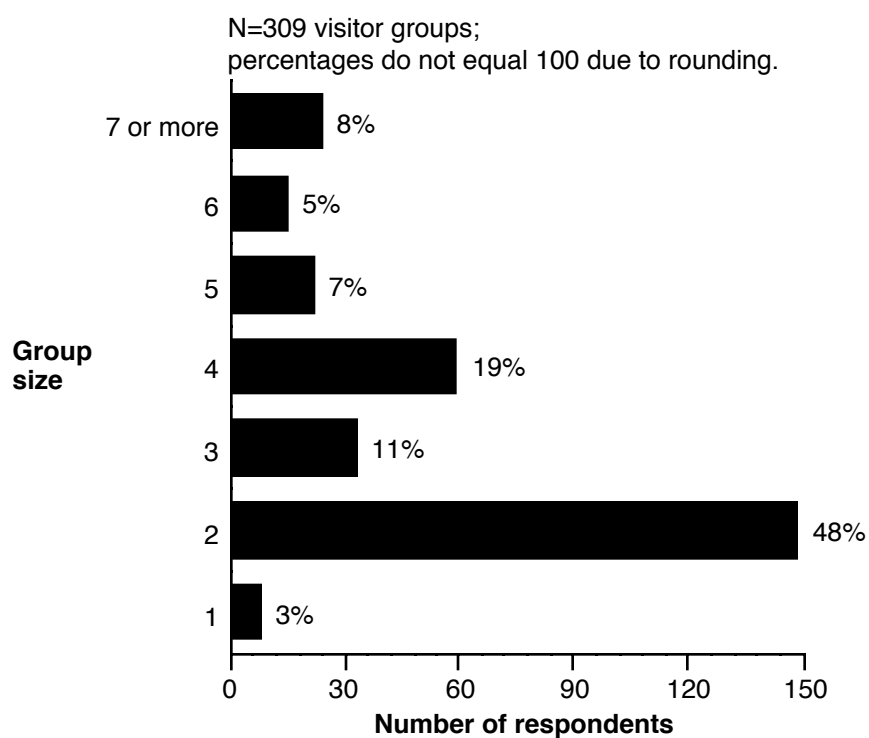


Figure 1: Visitor group sizes

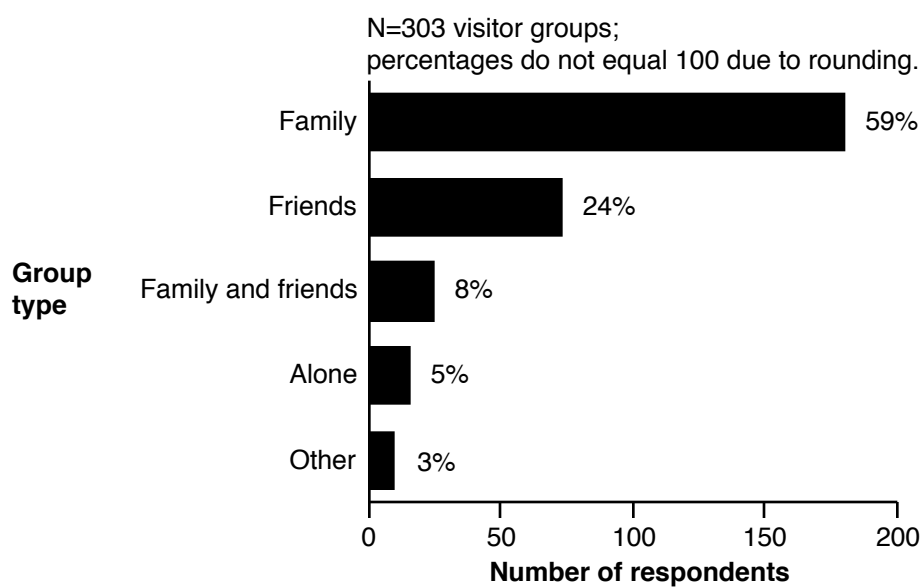


Figure 2: Visitor group types

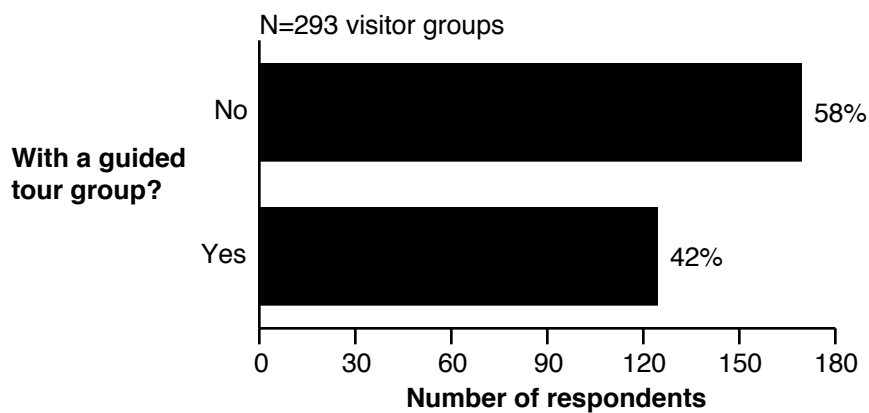


Figure 3: Visitors with a guided tour group

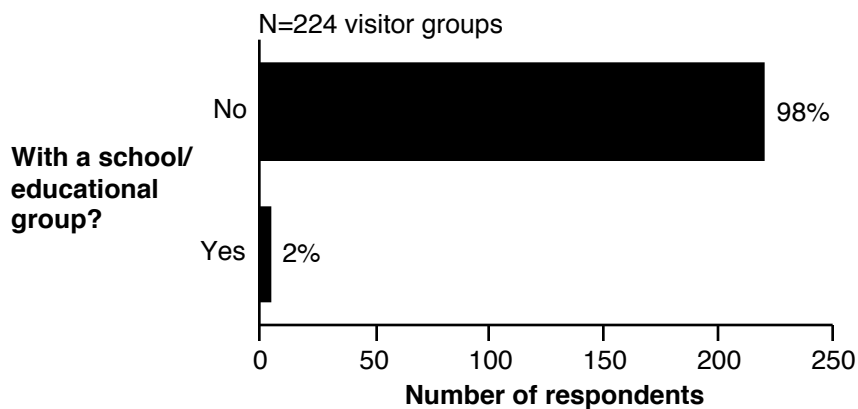


Figure 4: Visitors with an educational/school group

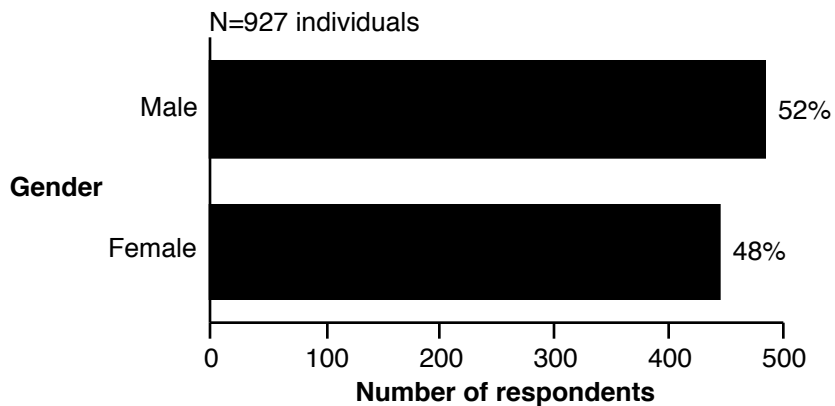


Figure 5: Visitor gender

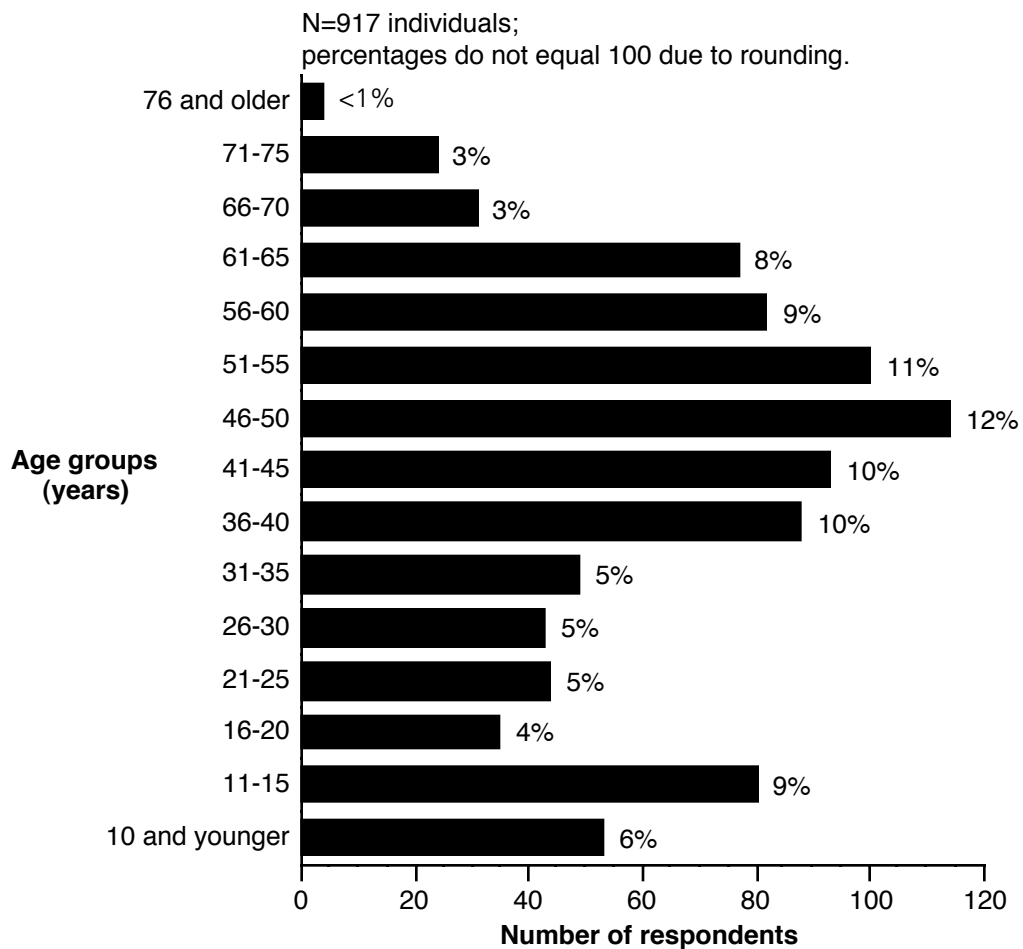


Figure 6: Visitor ages

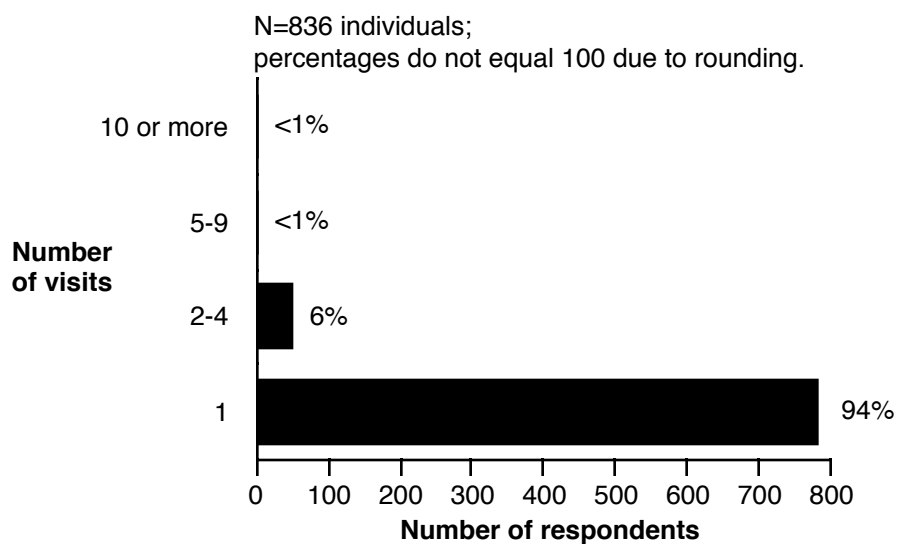


Figure 7: Number of visits in past 12 months including this visit

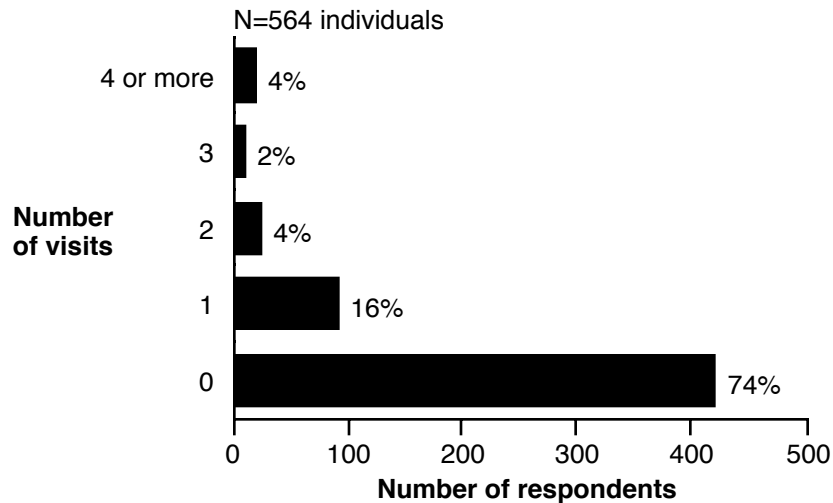


Figure 8: Number of visits during past 2-5 years

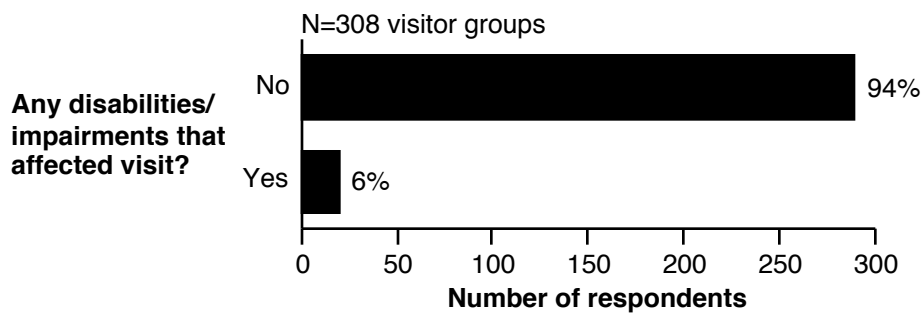


Figure 9: Groups with members with disabilities/impairments

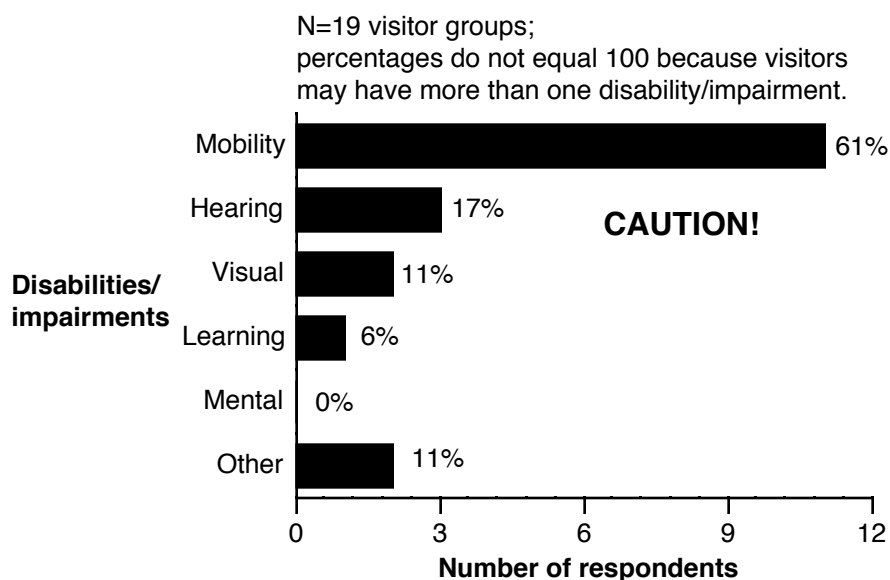


Figure 10: Visitor disabilities/impairments

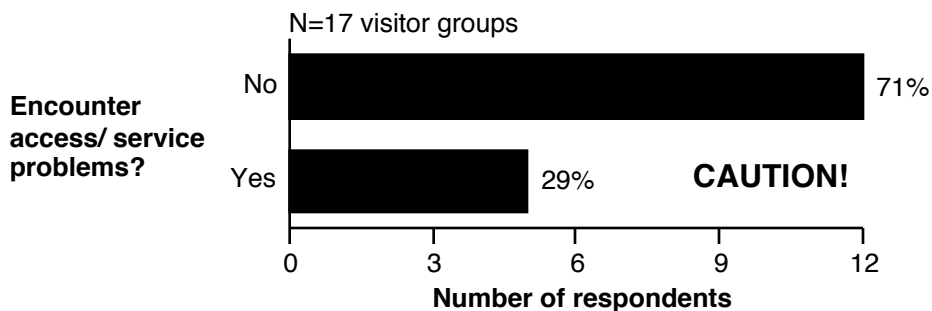
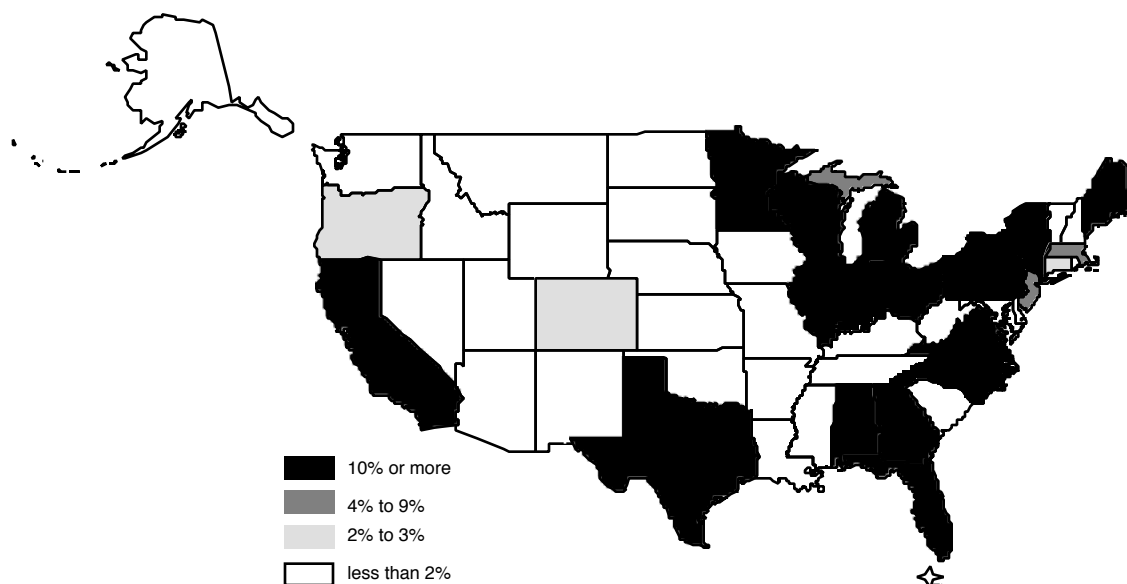


Figure 11: Access/service problems in park for visitors with disabilities or impairments

Table 2: International visitors by country of residence

percentages do not equal 100 due to rounding.

Country	Number of individuals	Percent of international visitors	Percent of total visitors
		N=32 individuals	N=873 individuals
Canada	14	44	2
Holland	5	16	<1
Japan	3	9	<1
Poland	2	6	<1
Scotland	2	6	<1
Bahrain	1	3	<1
Czechoslovakia	1	3	<1
Denmark	1	3	<1
England	1	3	<1
Germany	1	3	<1
Saudi Arabia	1	3	<1



Map 1: Proportion of United States visitors by state of residence

Table 3: United State visitors by state of residence

percentages do not equal 100 due to rounding

State	Number of individuals	Percent of U.S visitors	Percent of total visitors
		N=841 individuals	N=873 individuals
Florida	184	22	21
New York	82	10	9
Pennsylvania	44	5	5
Michigan	40	5	5
Minnesota	40	5	5
California	39	5	5
Illinois	38	5	4
Massachusetts	37	4	4
New Jersey	31	4	4
Texas	24	3	3
Georgia	20	3	2
Ohio	19	2	2
Oregon	19	2	2
Indiana	18	2	2
Connecticut	17	2	2
Wisconsin	17	2	2
Alabama	16	2	2
Virginia	15	2	2
North Carolina	14	2	2
Colorado	13	2	1
Maine	13	2	1
18 other states and Washington, D.C.	101	13	12

Length of stay

Visitor groups were asked how much time they spent at Dry Tortugas NP. The length of stay ranged from one to fourteen days. Eighty percent spent less than one day (less than 24 hours), while 10% spent two to three days (see Figure 12).

As shown in Figure 13, among those visitors who stayed less than 24 hours, 73% spent four to five hours.

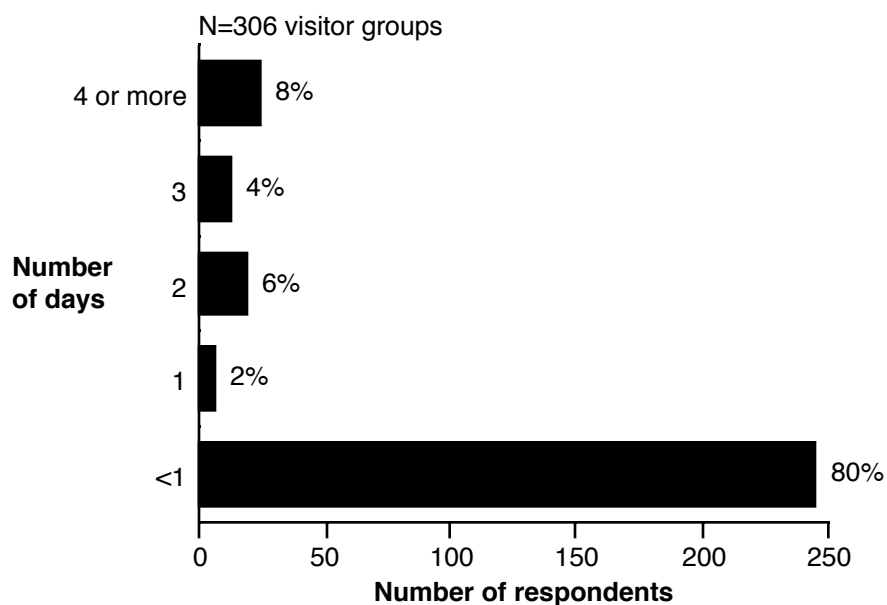


Figure 12: Days spent in Dry Tortugas NP

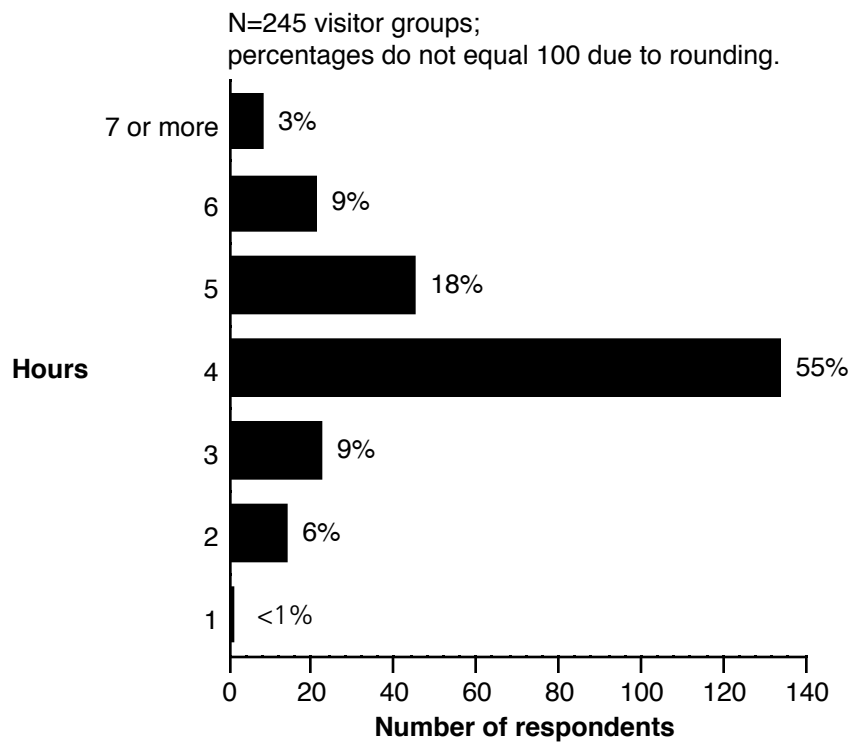


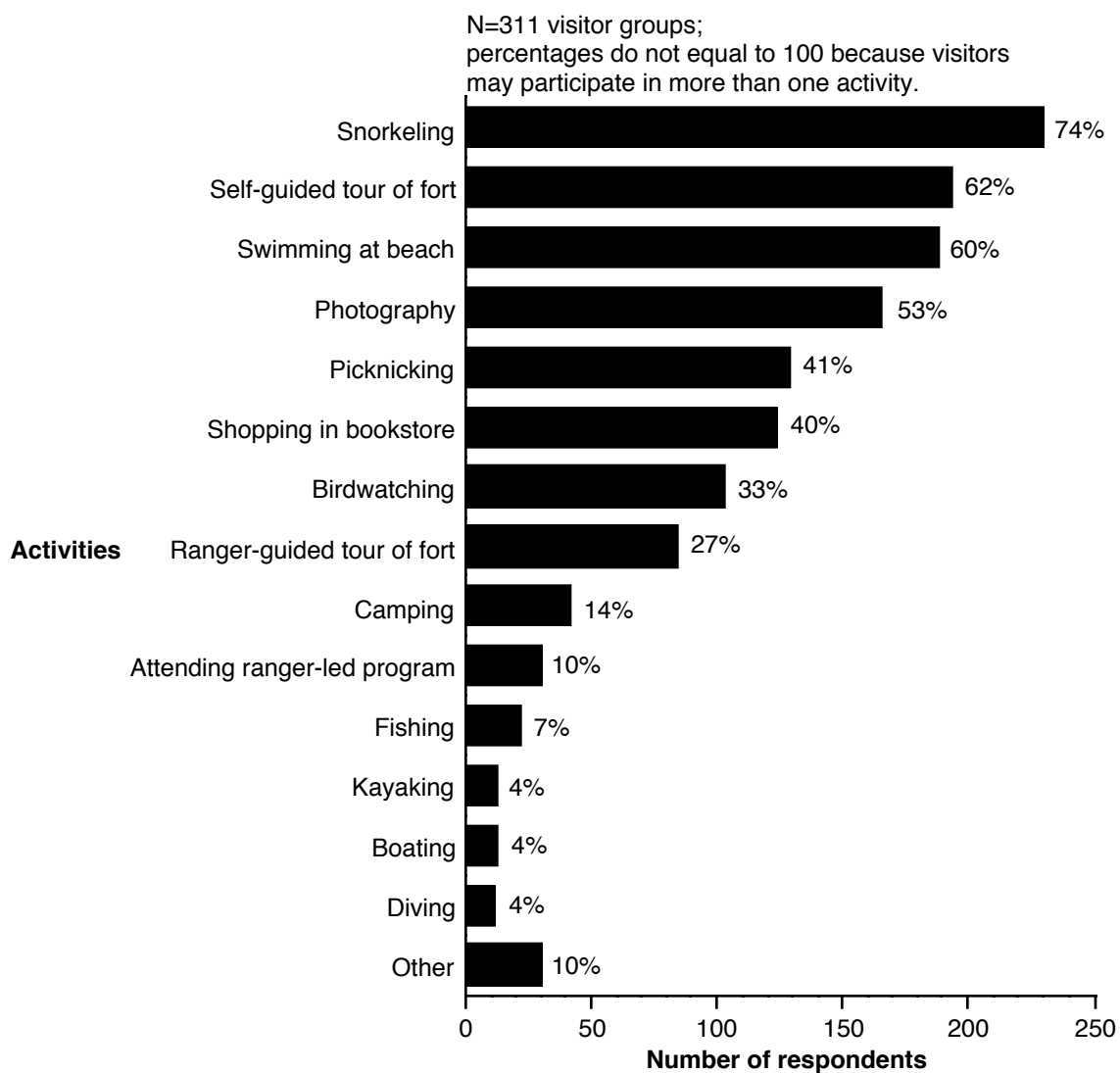
Figure 13: Hours spent at Dry Tortugas NP by visitors who spent less than 24 hours

Activities

Figure 14 shows the proportions of visitor groups that participated in a variety of activities at Dry Tortugas NP. The most common activities were snorkeling (74%), taking a self-guided tour of fort (62%), and swimming at beach (60%). "Other" types of activities participated in were touring the fort with boat crew, walking to view nature, relaxing, stargazing, and lying on the beach.

For the activity of fishing, visitors were asked what kind of fishing they participated in. As shown in Figure 16, among 22 visitor groups who participated in fishing, 77% did dock/shore fishing, another 36% fished from private boats and none of them used charter boat fishing. NOTE: questionnaires were distributed only to visitors who disembarked at Garden Key.

Visitors were also asked to rate the importance of the activities that they participated in on a scale from 1 (not important) to 5 (extremely important) to them and their group. Figures 15-30 show the importance ratings for each activity as rated by visitors that participated in that activity. Those activities receiving the highest proportion of "extremely important" or "very important" ratings included camping (90%), ranger-guided tour of fort (78%), snorkeling (75%), and taking a self-guided tour of fort (72%). The highest proportions of "not important" ratings were for boating (25%), shopping in bookstore (16%), and fishing (15%).

**Figure 14: Visitor activities**

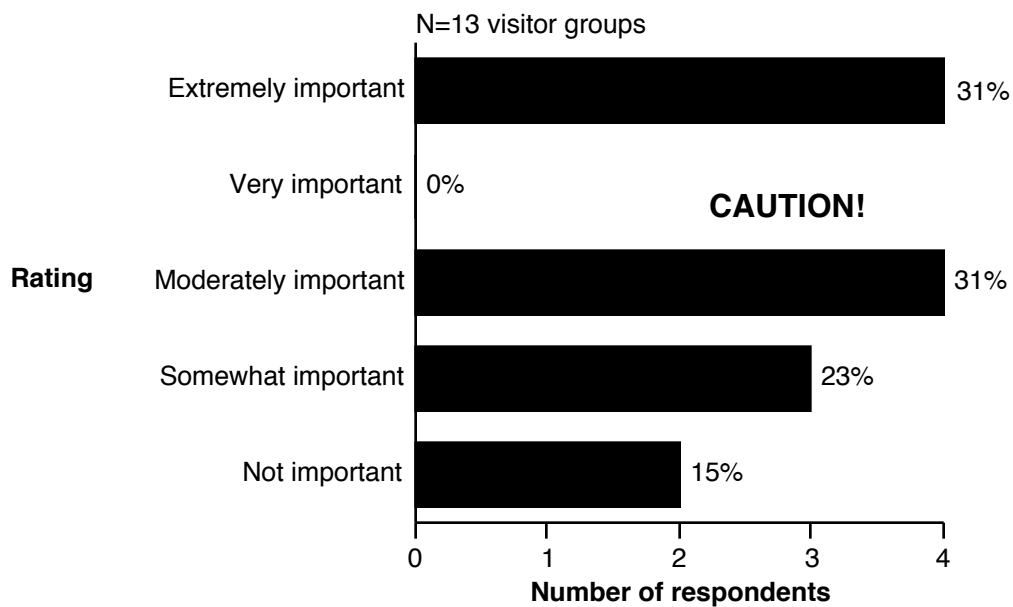


Figure 16: Importance of activity: fishing

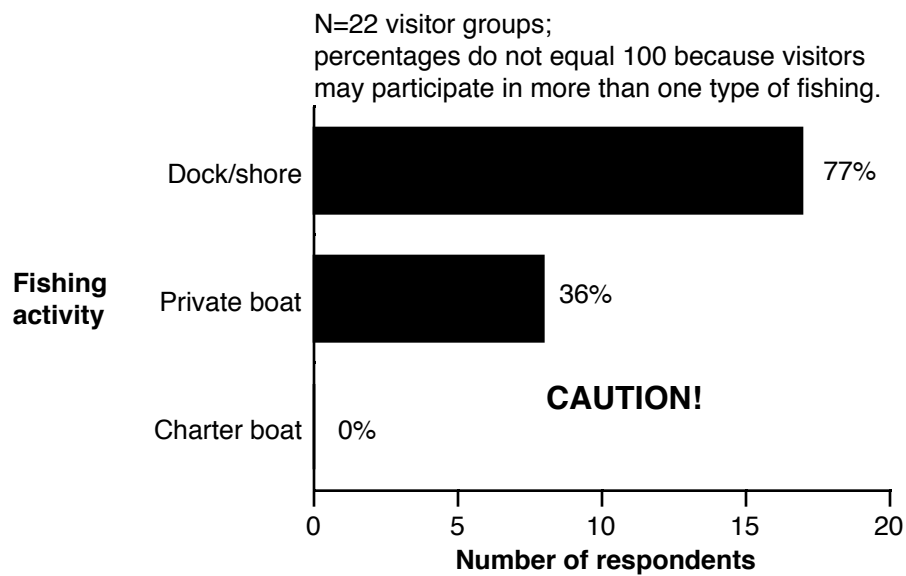


Figure 16: Types of fishing activity

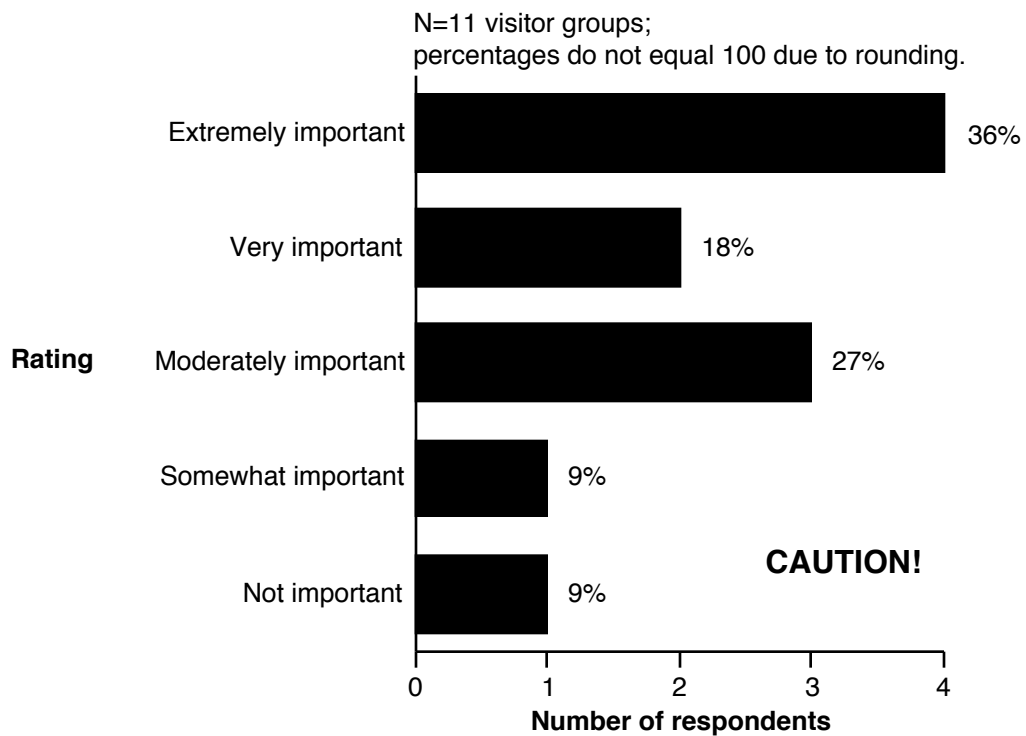


Figure 17: Importance of activity: Diving

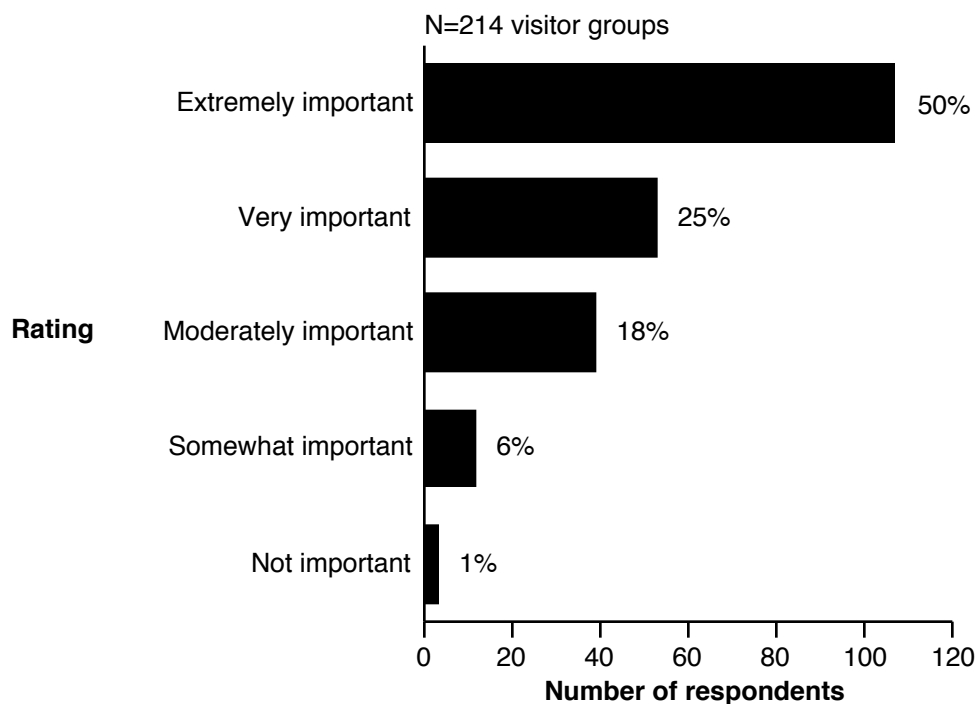


Figure 18: Importance of activity: Snorkeling

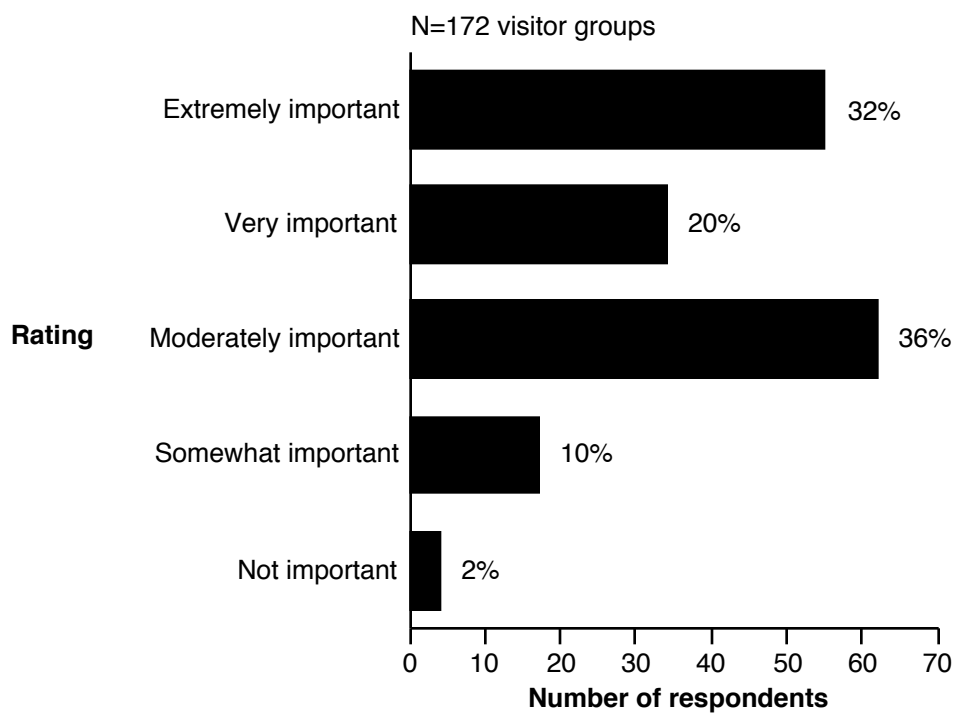


Figure 19: Importance of activity: Swimming at beach

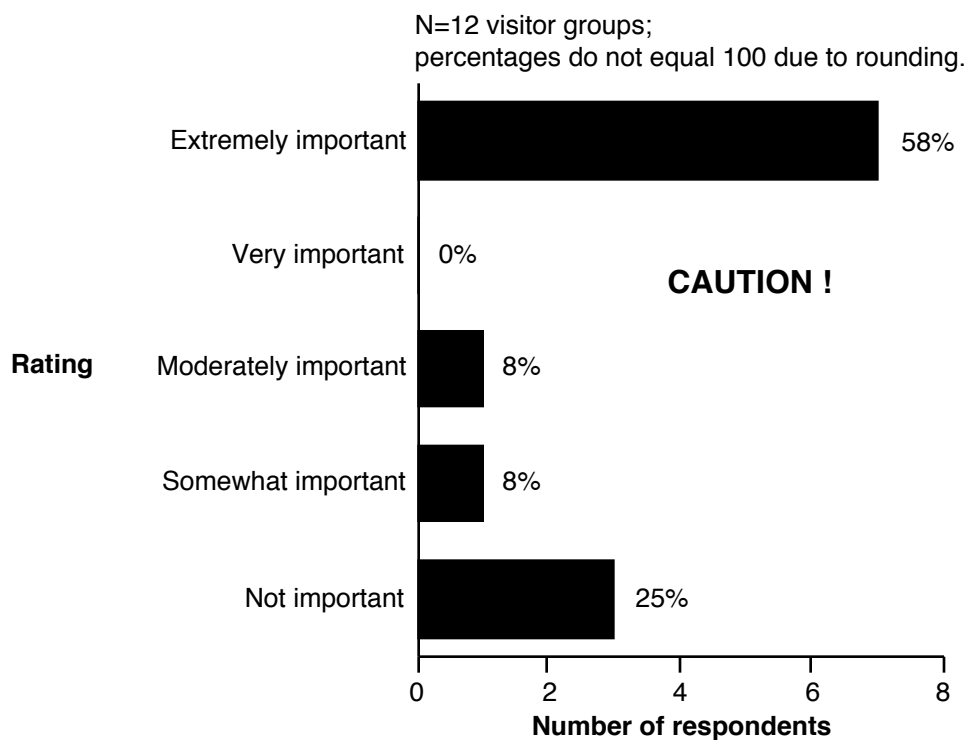


Figure 20: Importance of activity: Boating

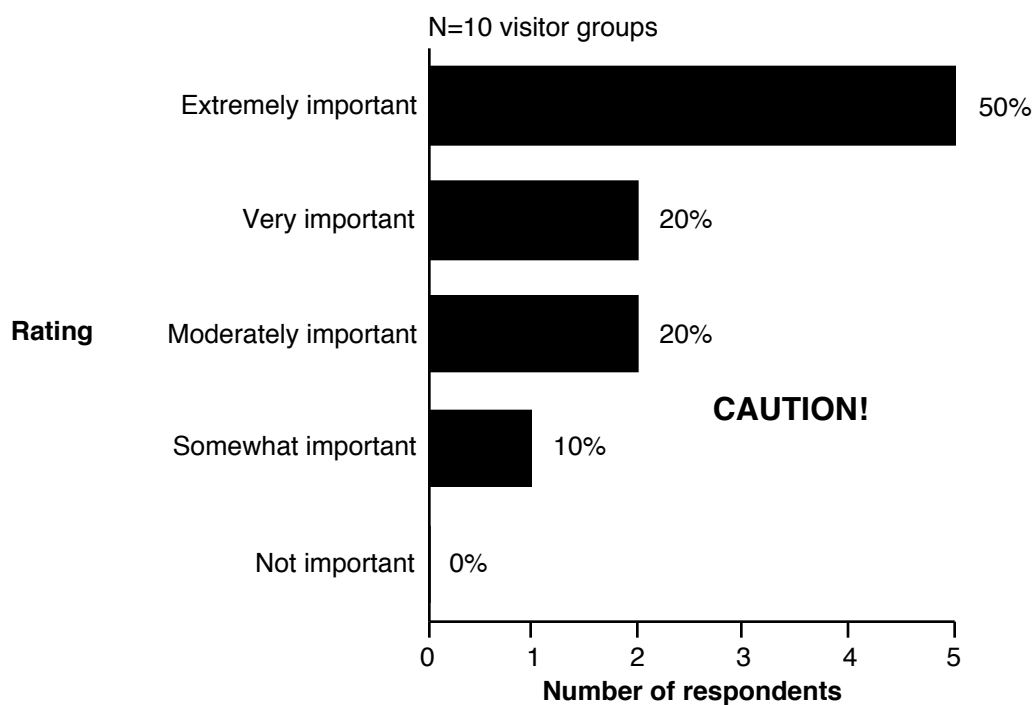


Figure 21: Importance of activity: Kayaking

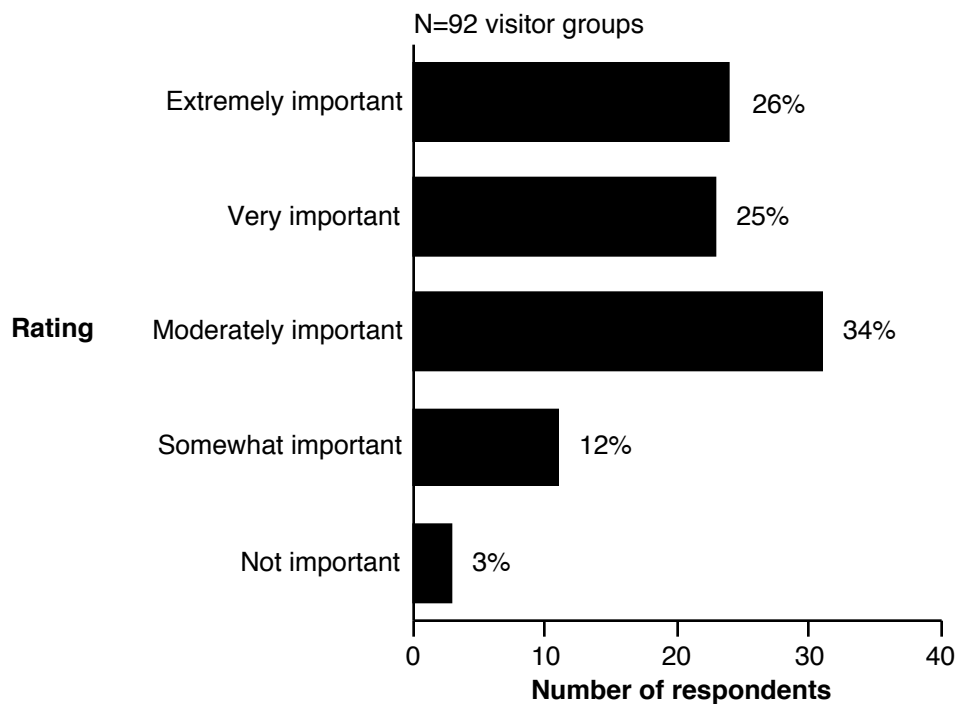


Figure 22: Importance of activity: Birdwatching

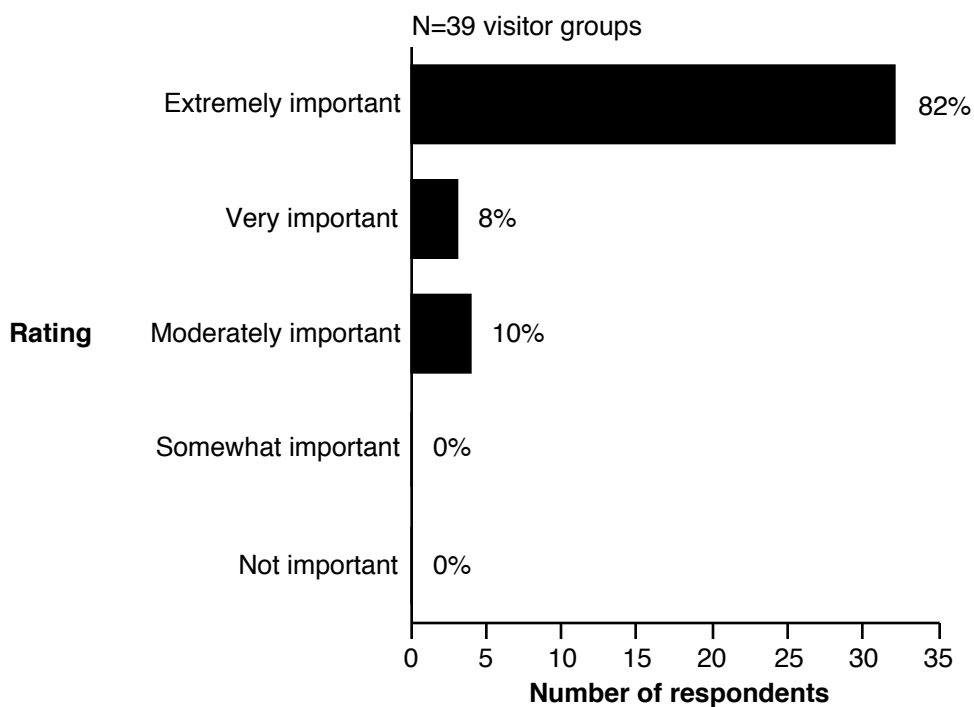


Figure 23: Importance of activity: Camping

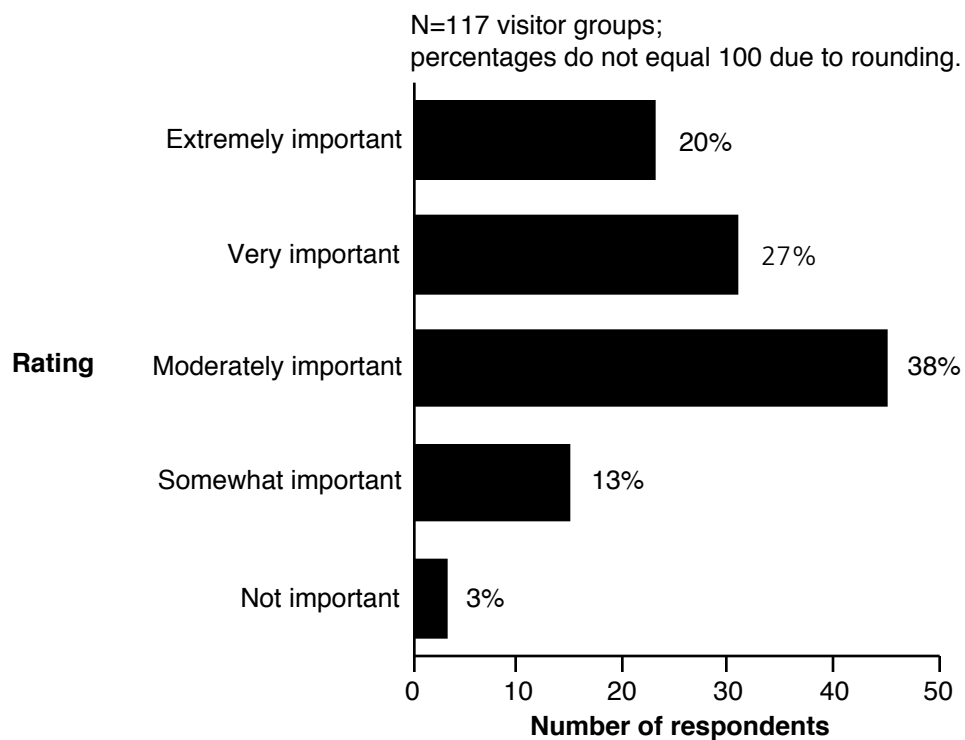


Figure 24: Importance of activity: Picnicking

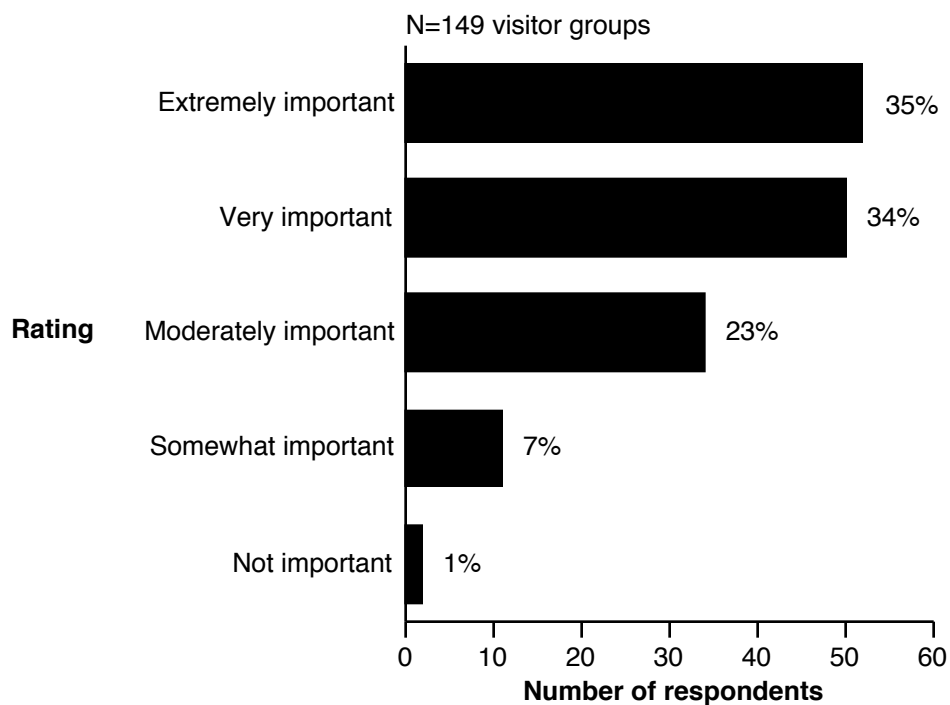


Figure 24: Importance of activity: Photography

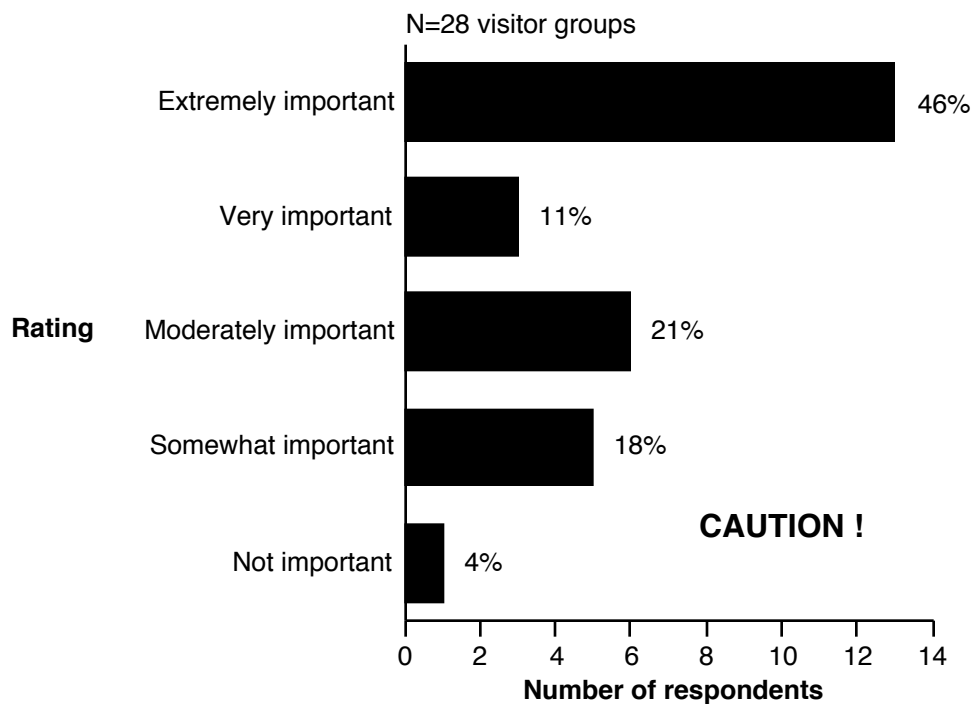


Figure 26: Importance of activity: Attending ranger-led evening program

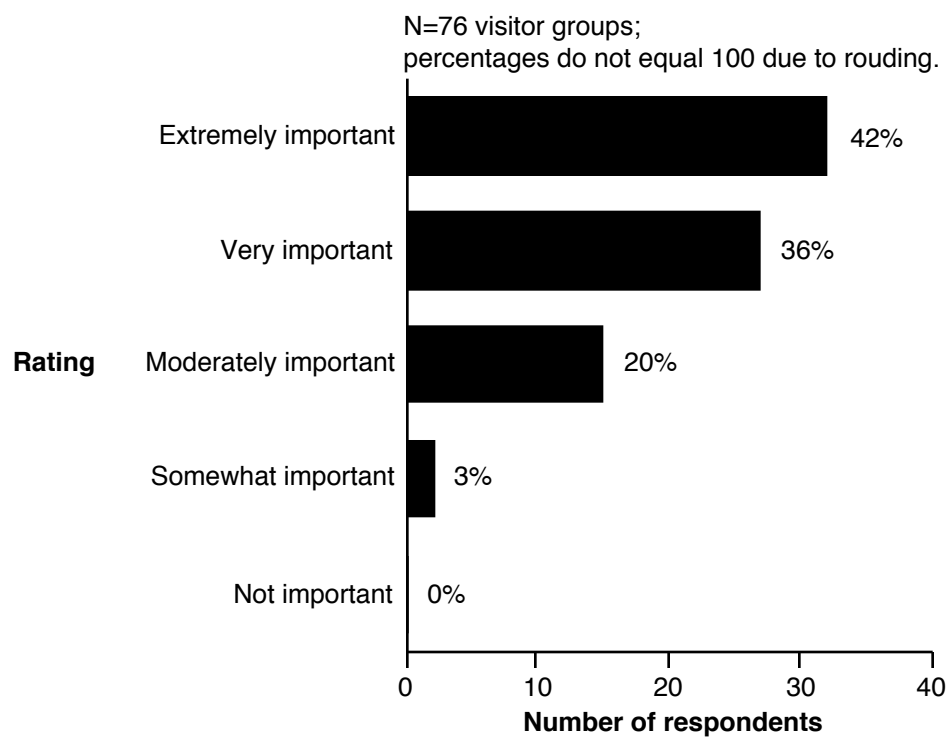


Figure 27: Importance of activity: Ranger-guided tour of fort

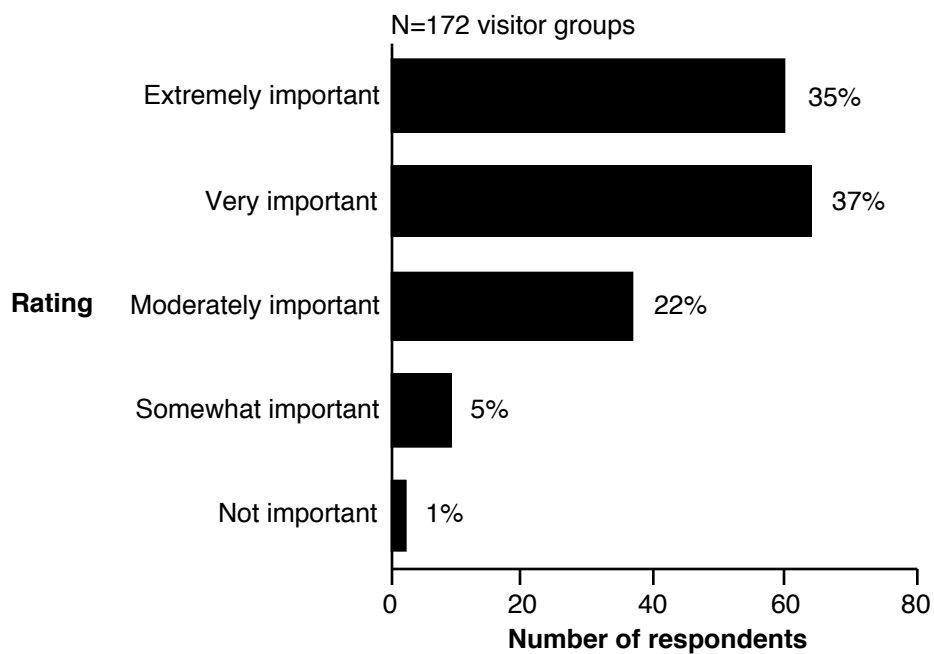


Figure 28: Importance of activity: Self-guided tour of fort

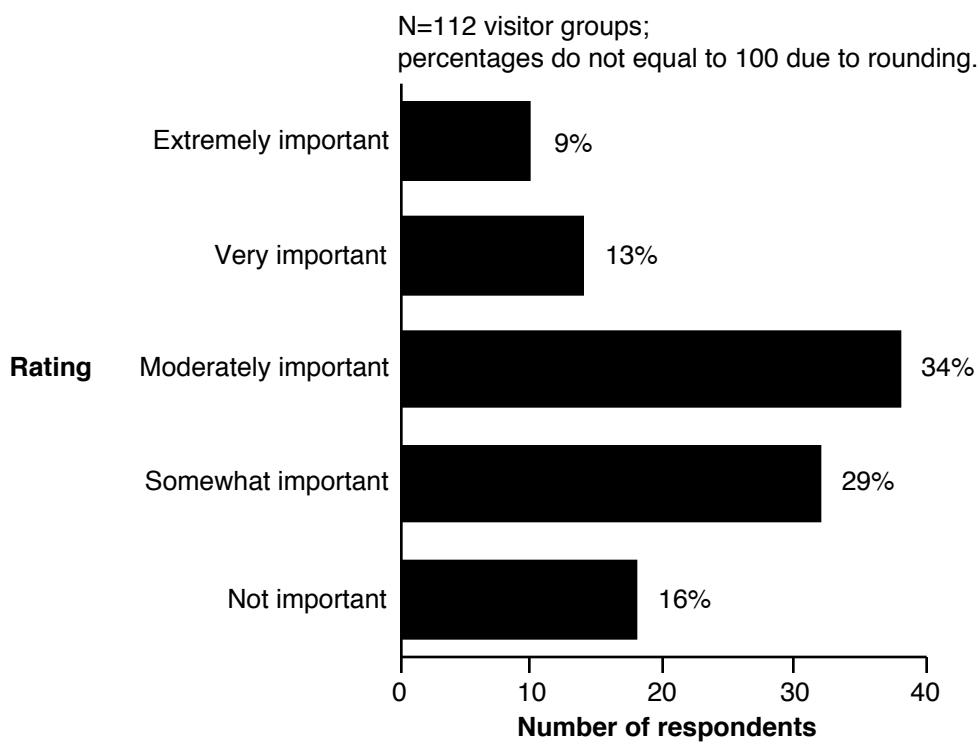


Figure 29: Importance of activity: Shopping in bookstore

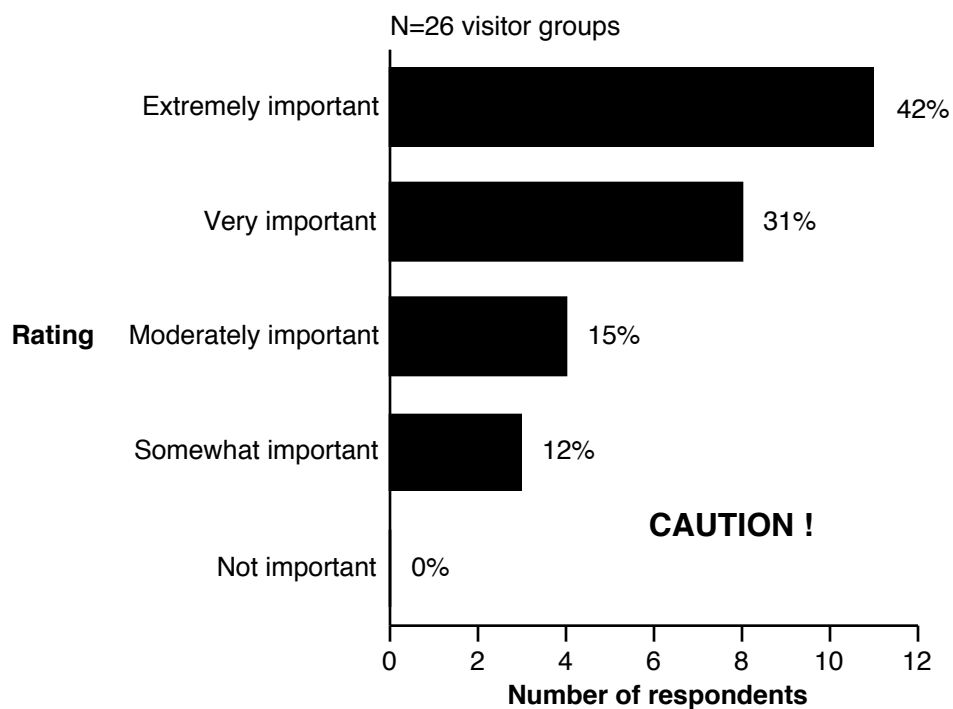


Figure 30: Importance of other activities

Sources of information

Visitor groups were asked to indicate the sources from which they had received information about Dry Tortugas NP prior to their visit. Five percent of visitor groups received no information prior to their visits. Of those visitor groups who received information, the most common sources were travel guide/tour book (41%), friends, relatives or word of mouth (39%), and internet—other websites (32%), as shown in Figure 31. The least used source of information were dive shops (1%). “Other” sources of information used by visitor groups included hotels/motels/guest houses, books, history studies, brochures, and birdwatching guides.

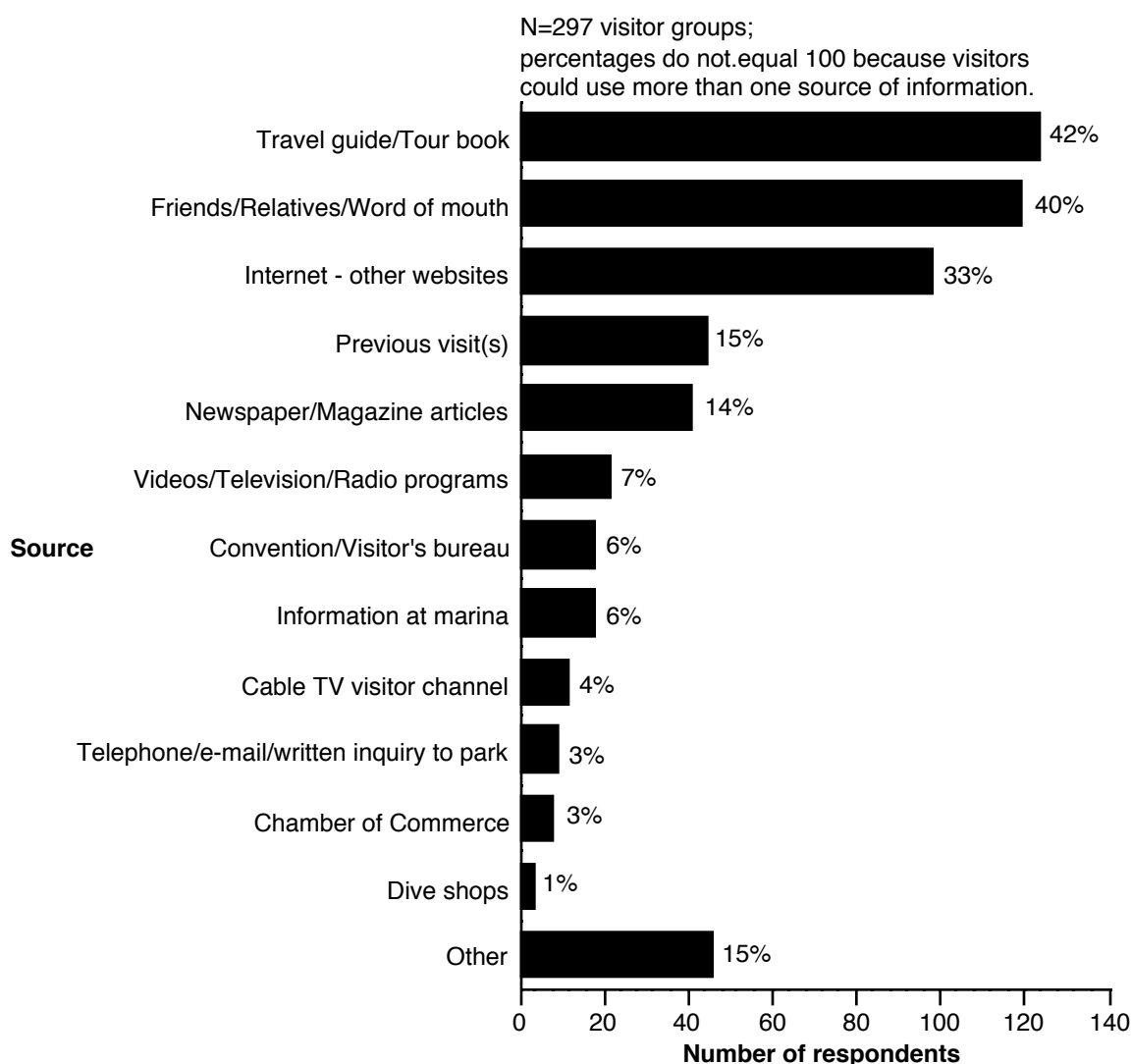


Figure 31: Sources of information used by visitors prior to visit

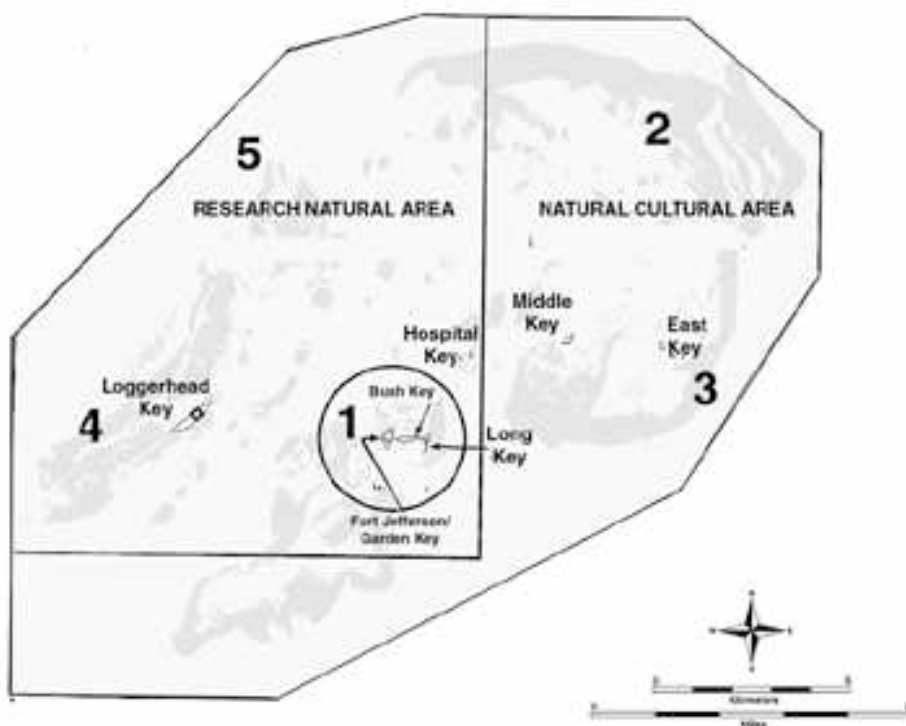
Visitor groups were asked to indicate the locations they had visited at Dry Tortugas NP from the list that follows:

Locations visited

LOCATION 1: GARDEN KEY AND FORT, BUSH KEY, LONG KEY
 LOCATION 2: NATURAL/CULTURAL ZONE AREA OPEN WATER
 LOCATION 3: EAST KEY
 LOCATION 4: LOGGERHEAD KEY
 LOCATION 5: RESEARCH NATURAL AREA OPEN WATER

Visitors were provided a park map as shown below (Map 2) and were asked to circle the location(s) they visited. As shown in Figure 32, the most commonly visited location was Location 1—Garden Key and fort (98%), followed by Location 4—Loggerhead Key (7%) and Location 2—Natural/cultural zone area/open water (6%). The least visited location was Location 3—East Key (2%).

Visitors who participated in fishing were also asked for the locations where they fished, using the same map. Caution should be used in considering this data since only 21 groups responded to this question. The most common fishing location was Location 1—Garden Key and fort (95%), as shown in Figure 33. The least used fishing location was Location 5—Research natural area/open water (5%).



Map 2: Dry Tortugas NP fishing locations

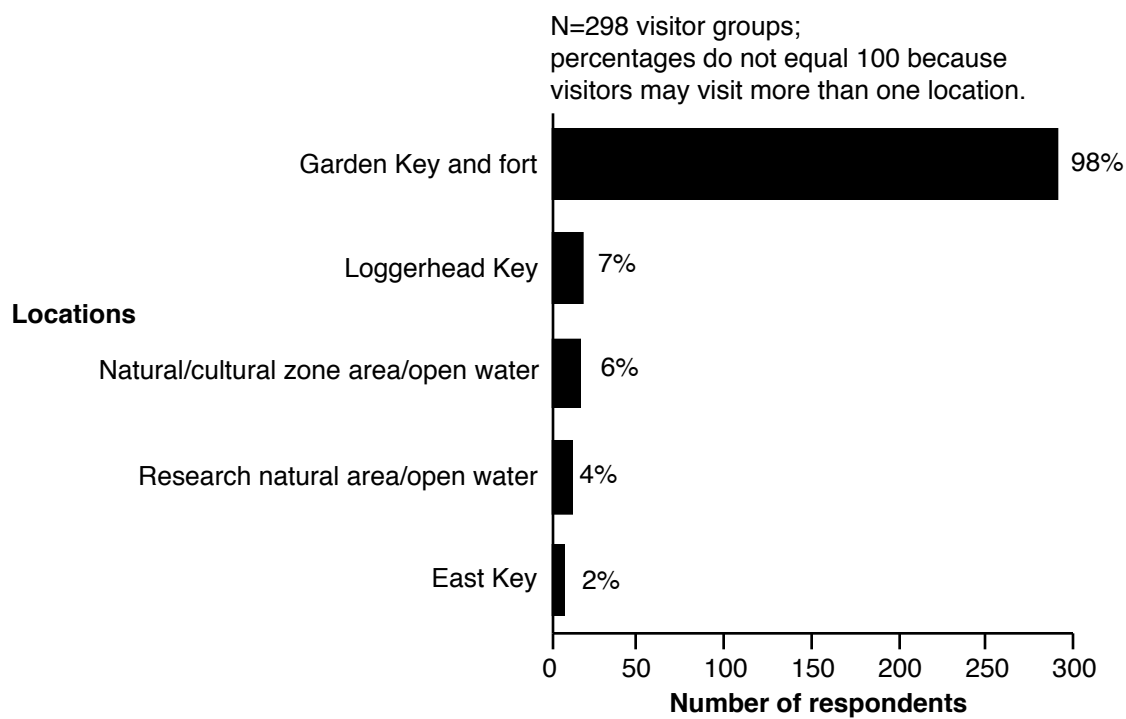


Figure 32: Location visited

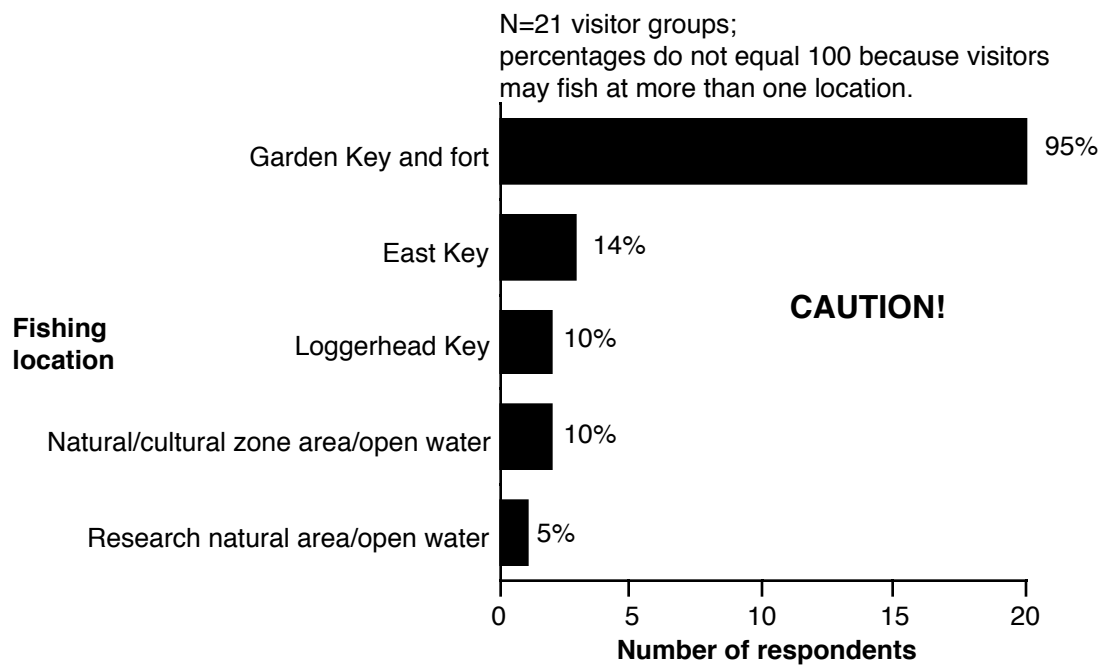


Figure 33: Fishing locations

Visitors were asked about their reasons for visiting Dry Tortugas NP. Most visitors (78%) visited to learn about history, while 77% went to snorkel and/or dive, 36% to visit a unit of the National Park system, and another 31% to experience the solitude of the park (see Figure 34). Other reasons included seeing a unique site, photography, taking a ferry ride, flying in a seaplane, showing friends, seeing the lighthouse and spending time with family.

Visitors were also asked about their primary reason for visiting South Florida. As shown in Figure 35, the most common reasons were visiting the Florida Keys (56%), visiting Dry Tortugas NP (16%), and visiting friends/ relatives in the area (10%).

Reasons for visiting

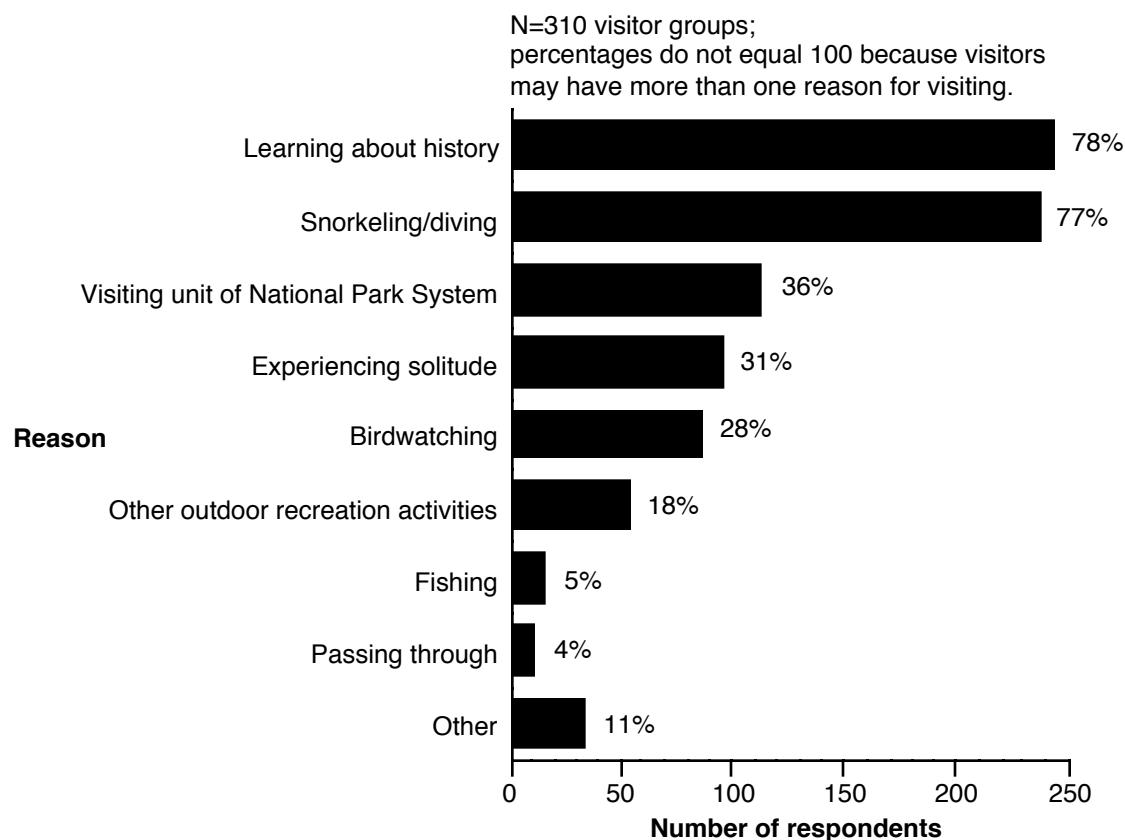


Figure 34: Reasons for visiting the park

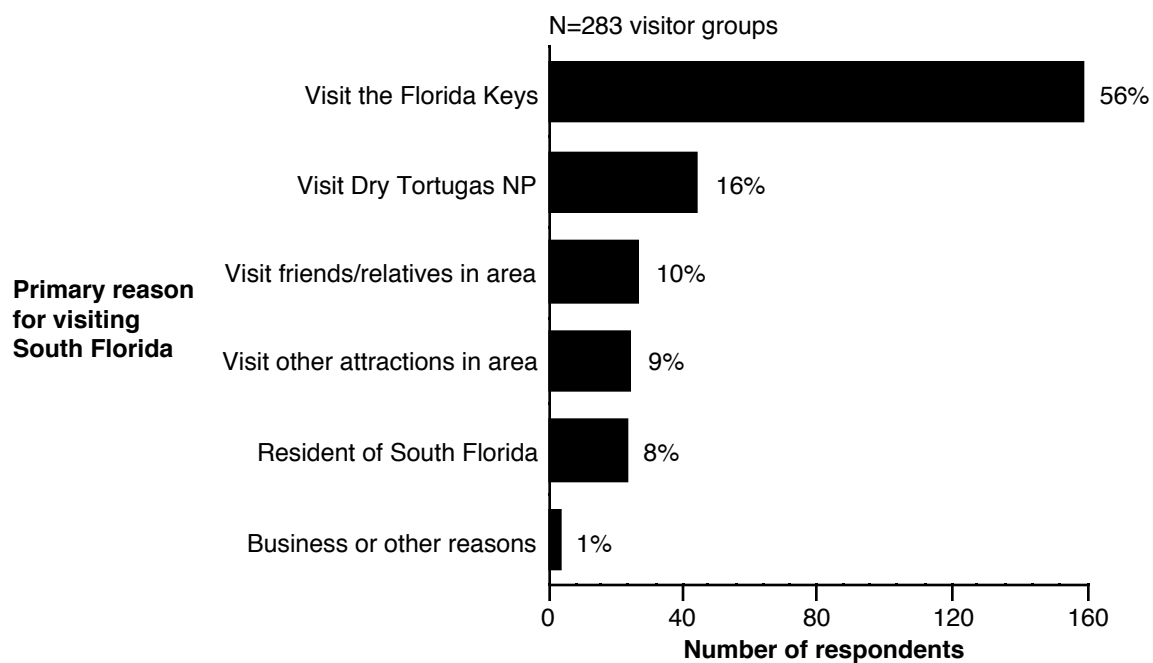


Figure 35: Primary reason for visiting South Florida

Visitors were asked to indicate the forms of transportation that they had used to travel inside Dry Tortugas NP. As shown in Figure 36, the most commonly used forms of transportation were ferry (69%), seaplane (11%), and commercial charter (other than ferry) (10%). "Other" forms of transportation that visitors listed included the fast catamaran [actually a ferry], kayaks, dinghies and foot.

Transportation used at Dry Tortugas NP

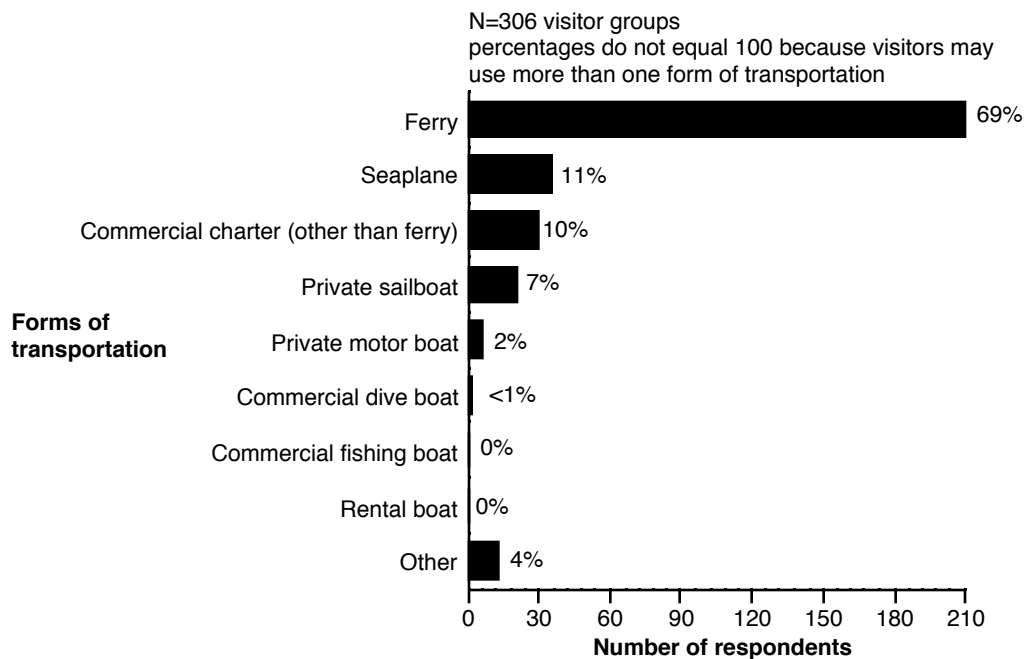


Figure 36: Forms of transportation used to travel inside Dry Tortugas NP

Importance of protecting park's natural, scenic and cultural resources

Visitors were asked: "It is the National Park Service's responsibility to protect Dry Tortugas National Park's natural, scenic and cultural resources while at the same time providing for public enjoyment. How important is protecting of the following resources/qualities to you?" A list of selected natural, scenic and cultural resources in the park was provided. The following 6 choices were used in the questionnaire:

1= Not important
2= Somewhat important
3= Moderately important
4=Very important
5= Extremely important
0= Don't know

Table 4 compares the importance ratings for protecting selected resources/qualities. Figures 37 to 45 show the rating for each resource/quality. The resources/qualities that received the highest proportion of "extremely important" and "very important" ratings were coral reefs (97%), water quality and flow (96%), and endangered species (93%). Those resources/qualities receiving the highest proportion of "not important" ratings included recreational opportunities (4%), wilderness experience (4%), and solitude (3%).

Table 4: Importance rating of protecting Dry Tortugas NP resources and qualities

N= number of visitors group who answered each choice;
percentages do not equal 100 due to rounding

Resources/qualities	Extremely important		Very important		Moderately important		Somewhat important		Not important		Don't know	
	N	%	N	%	N	%	N	%	N	%	N	%
Healthy fish population	217	70	71	23	17	6	1	<1	1	<1	2	1
Endangered species	235	76	53	17	9	3	6	2	3	1	2	1
Coral reefs	254	82	46	15	8	3	0	0	2	1	1	<1
Water quality and flow	226	73	70	23	8	3	2	1	1	<1	3	1
Natural quiet	161	52	95	31	43	14	11	4	1	<1	0	0
Solitude	132	43	93	30	53	17	22	7	9	3	1	0
Recreational opportunities	74	24	90	29	88	28	44	14	12	4	1	<1
Educational opportunities	123	40	120	39	48	16	9	3	7	2	2	1
Wilderness experience	142	47	91	30	46	15	13	4	12	4	1	<1

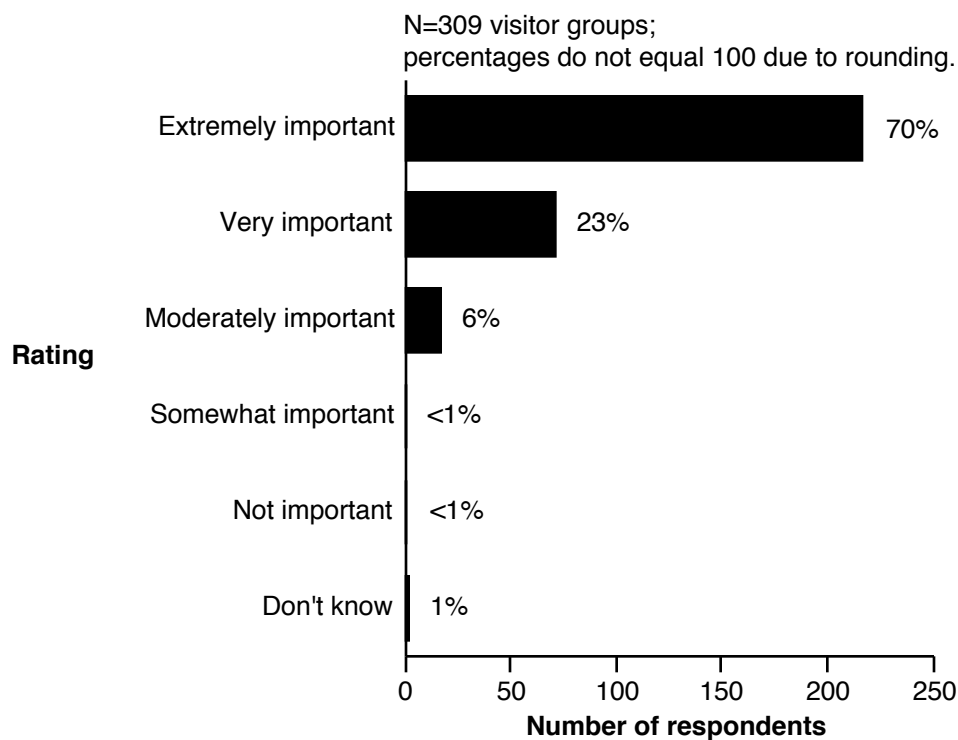


Figure 37: Importance of protection: Healthy fish population

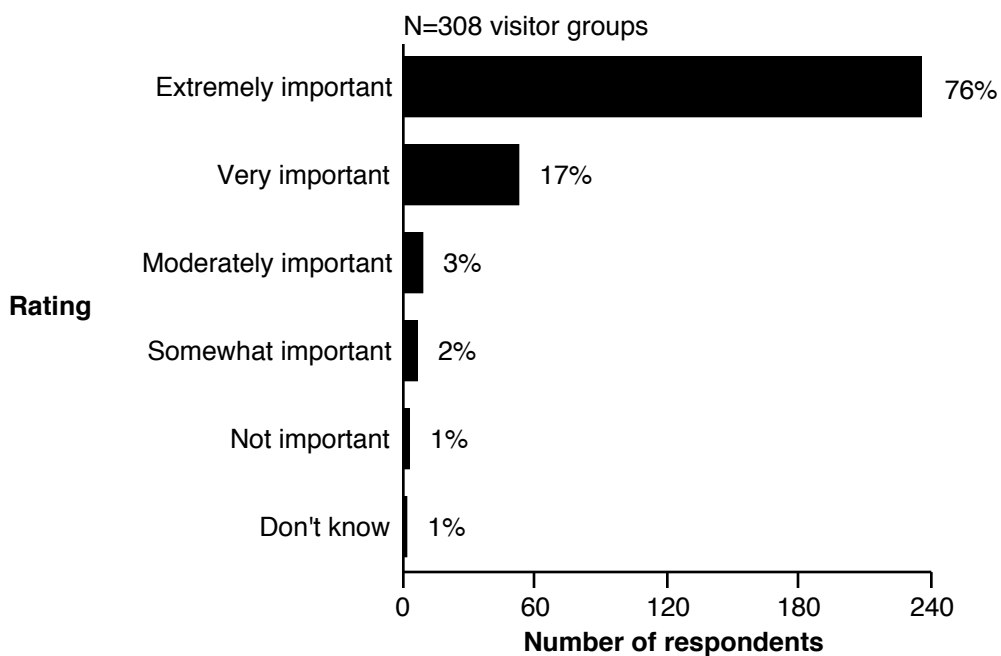


Figure 38: Importance of protection: Endangered species

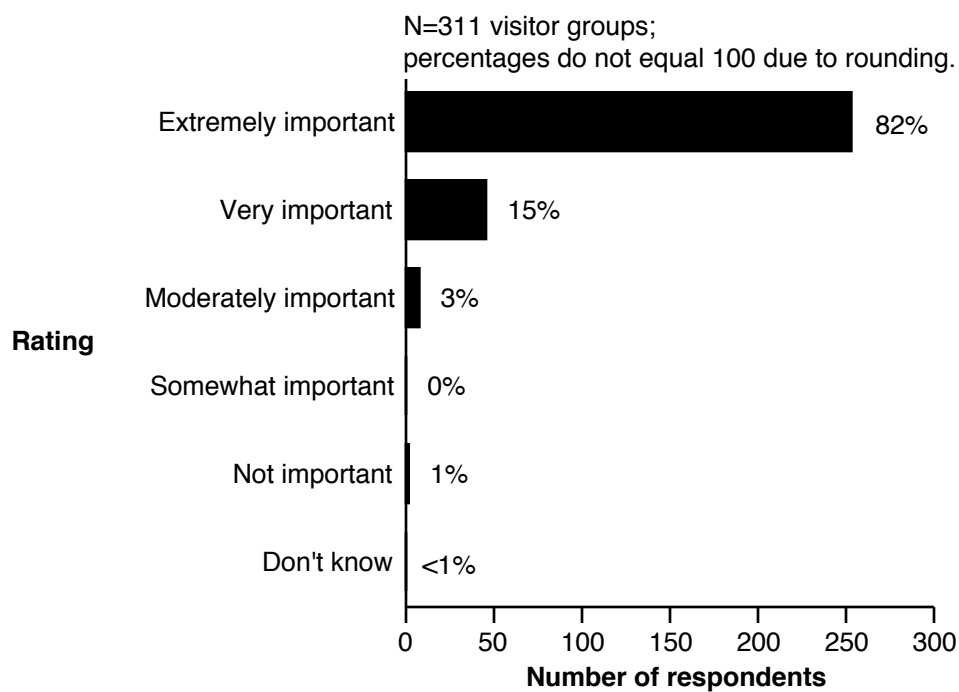


Figure 39: Importance of protection: Coral reefs

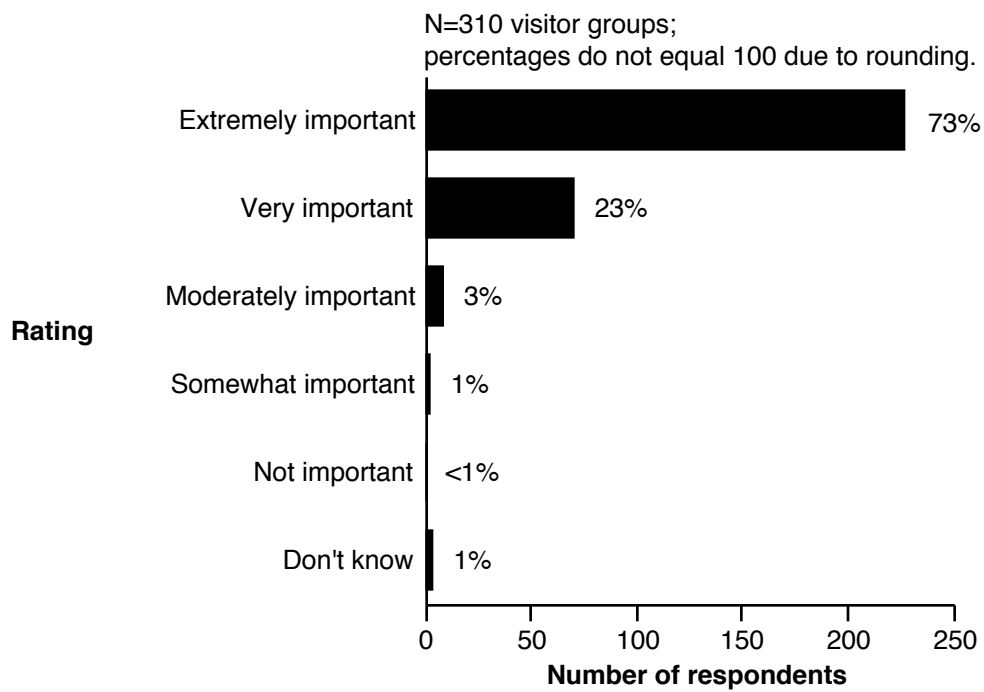


Figure 40: Importance of protection: Water quality and flow

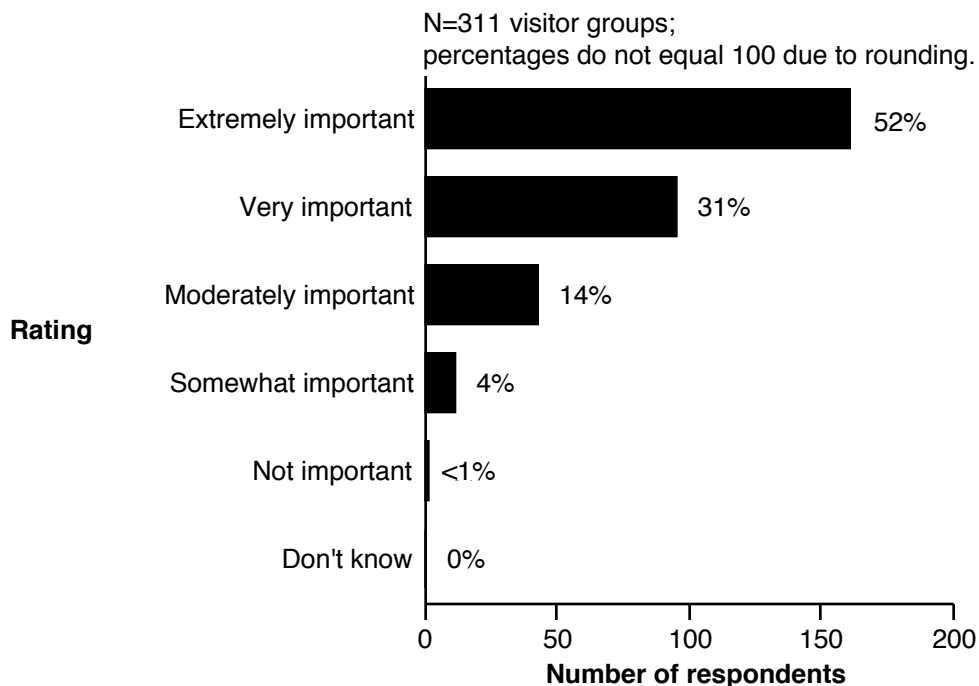


Figure 41: Importance of protection: Natural quiet

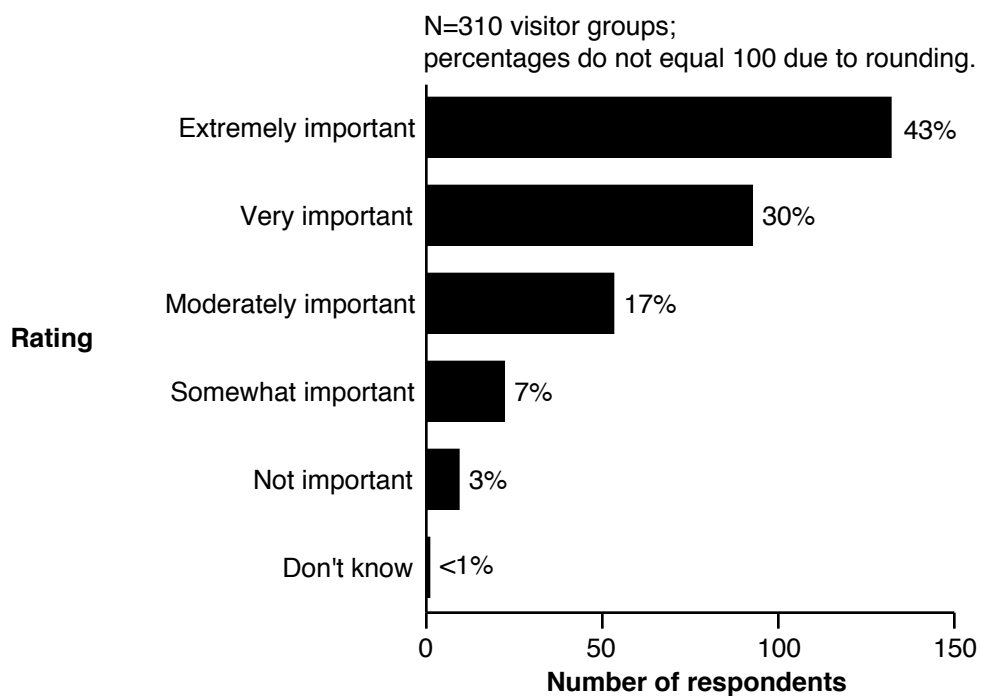


Figure 42: Importance of protection: Solitude

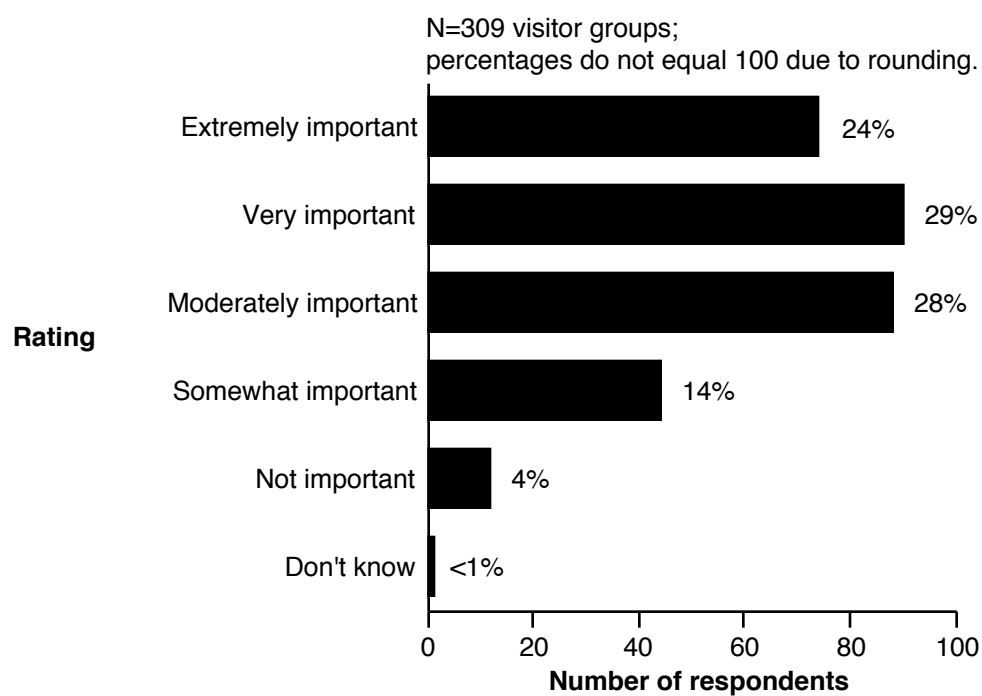


Figure 43: Importance of protection: Recreational opportunities

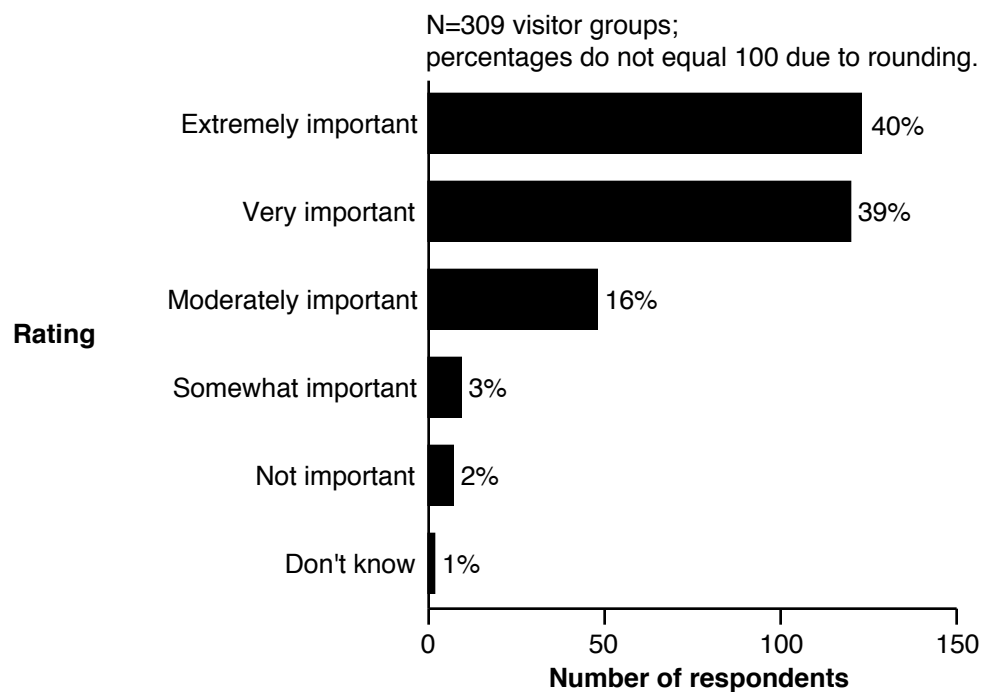


Figure 44: Importance of protection: Educational opportunities

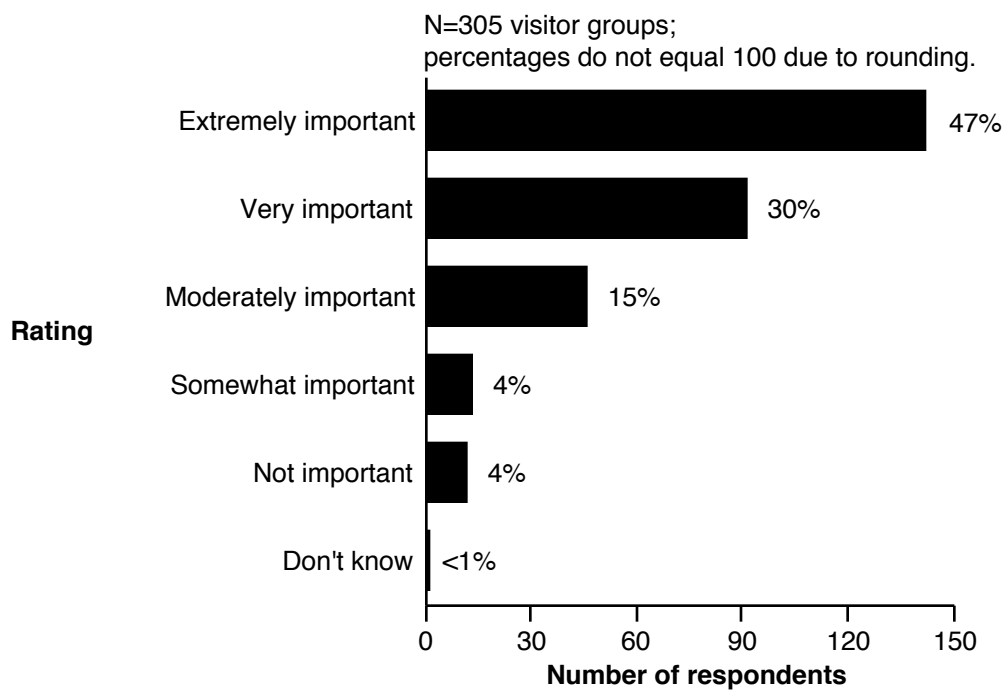


Figure 45: Importance of protection: Wilderness experience

Visitor services and facilities: use, importance and quality

Visitor groups were asked to note the park services and facilities they used during this visit to Dry Tortugas NP. As shown in Figure 46, the services and facilities that were most commonly used by visitor groups were restrooms (89%), beach/swim areas (83%), and picnic area (70%). The least used services or facilities were the anchorage (8%), park newspaper (8%) and visitor protection/law enforcement (6%).

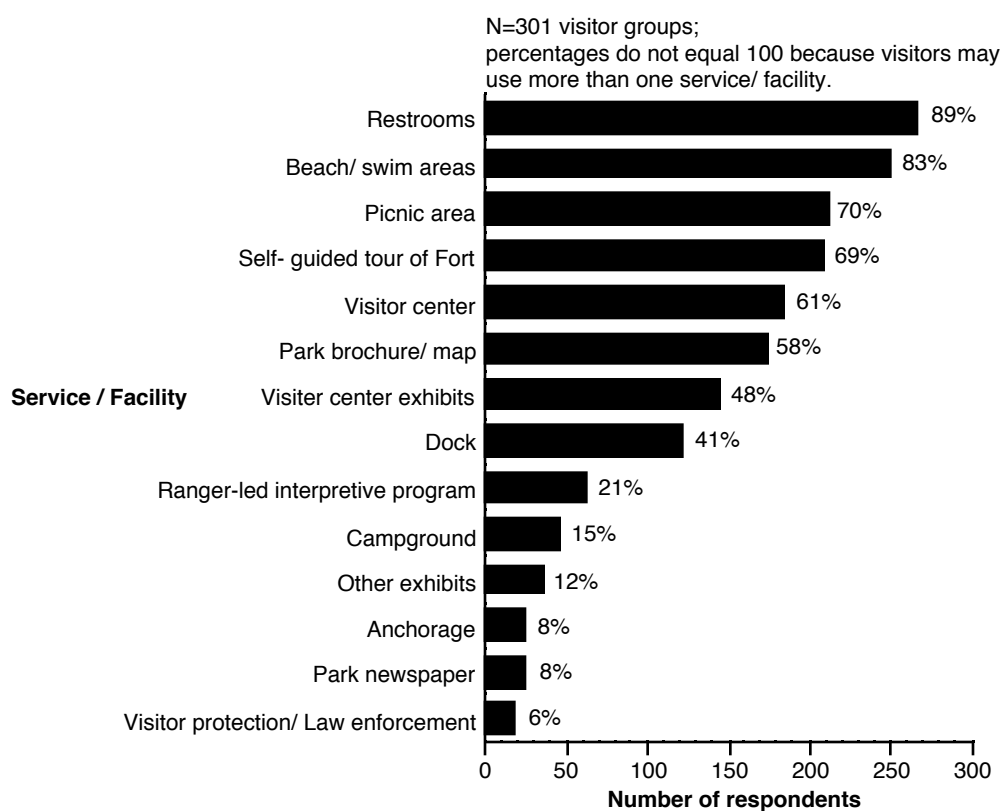


Figure 46: Services and facilities used

Visitor groups rate the importance and quality of each of the services and facilities that they used. The following scales were used in the questionnaire:

IMPORTANCE

5= extremely important
4= very important
3= moderately important
2= somewhat important
1= not important

QUALITY

5= very good
4= good
3= average
2= poor
1= very poor

Figure 47 shows the average importance and quality ratings for visitor services and facilities. An average score was determined for each service based on ratings provided by visitors who used that service. This was done for both importance and quality, and the results are plotted on the grid shown in Figure 48. NOTE: The park newspaper, visitor protection/law enforcement and anchorage were not rated by enough visitors to provide reliable information. All other services were rated as above average for both importance and quality.

Figures 49 to 62 show the importance ratings that were provided by visitor groups for each of the individual facilities and services. Those services/facilities receiving the highest proportion of “extremely important” or “very important” ratings included campground (95%), restrooms (89%), and beach/swim area (85%). The highest proportions of “not important” ratings were the dock and other exhibits (each 3%).

Figures 63 to 76 show the quality ratings that were provided by visitor groups for each of the individual facilities and services. Those facilities/services receiving the highest proportion of “very good” or “good” ratings included ranger-guided interpretive programs (93%), beach/swim area (86%), and park brochure/map (85%). The highest proportions of “very poor” were for other exhibits (6%) and restrooms (4%).

Figure 77 combines the “very good” and “good” quality ratings and compares those ratings for all of the services/facilities.

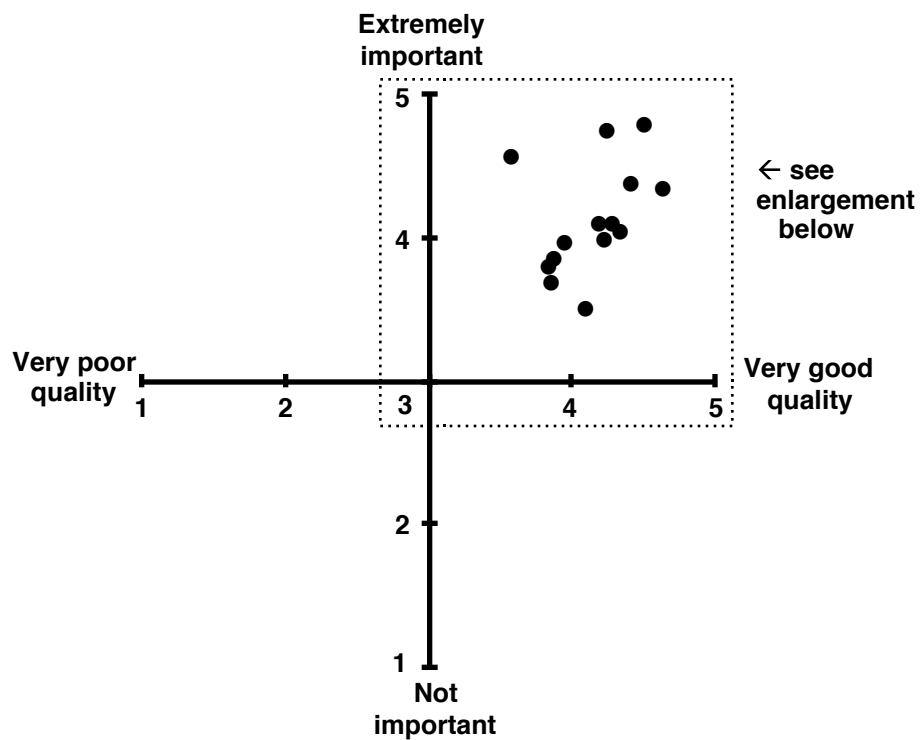


Figure 47: Average ratings of service importance and quality

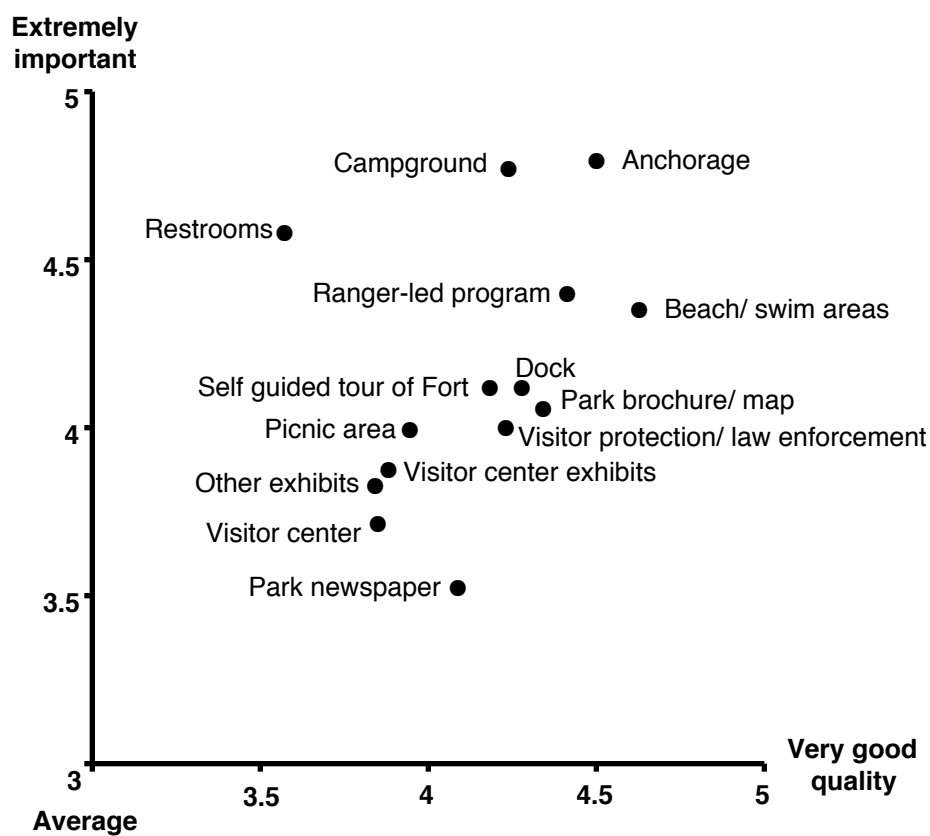


Figure 48: Detail

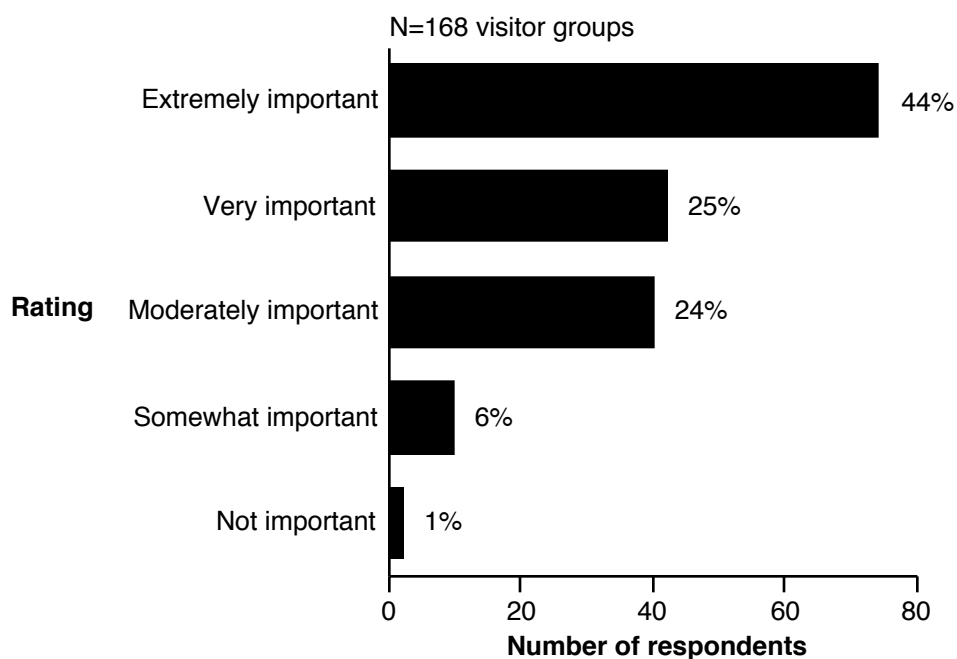


Figure 49: Importance of park brochure/map

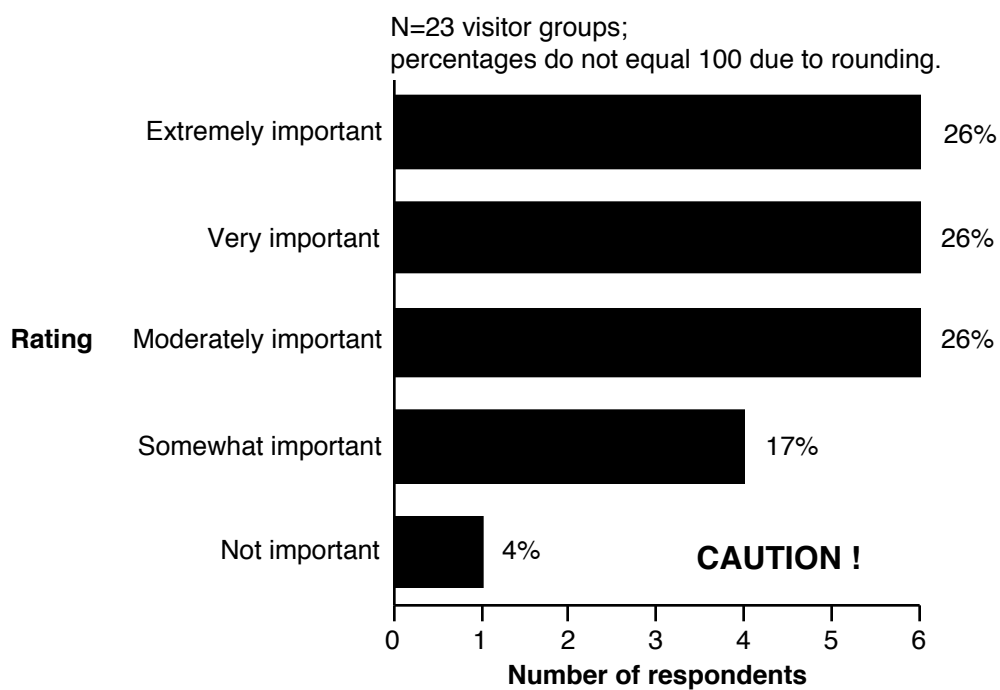


Figure 50: Importance of park newspaper

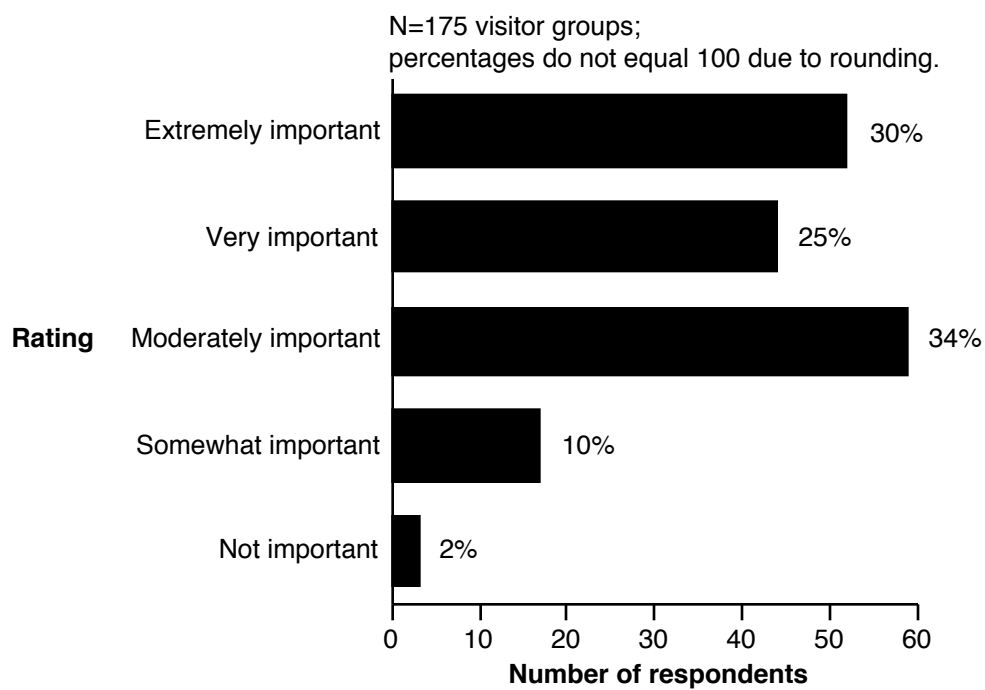


Figure 51: Importance of visitor center

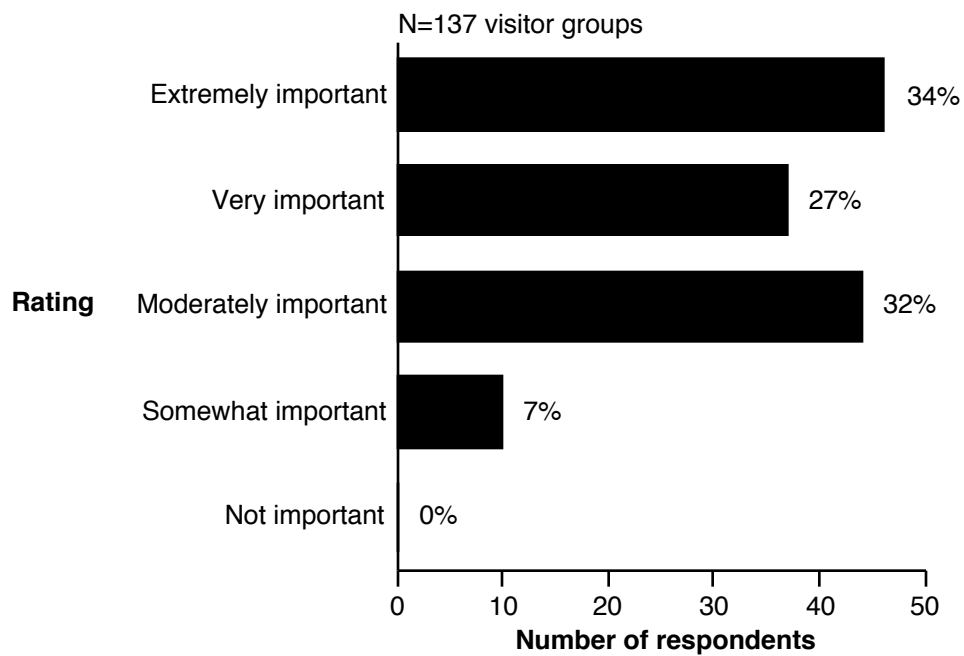


Figure 52: Importance of visitor center exhibits

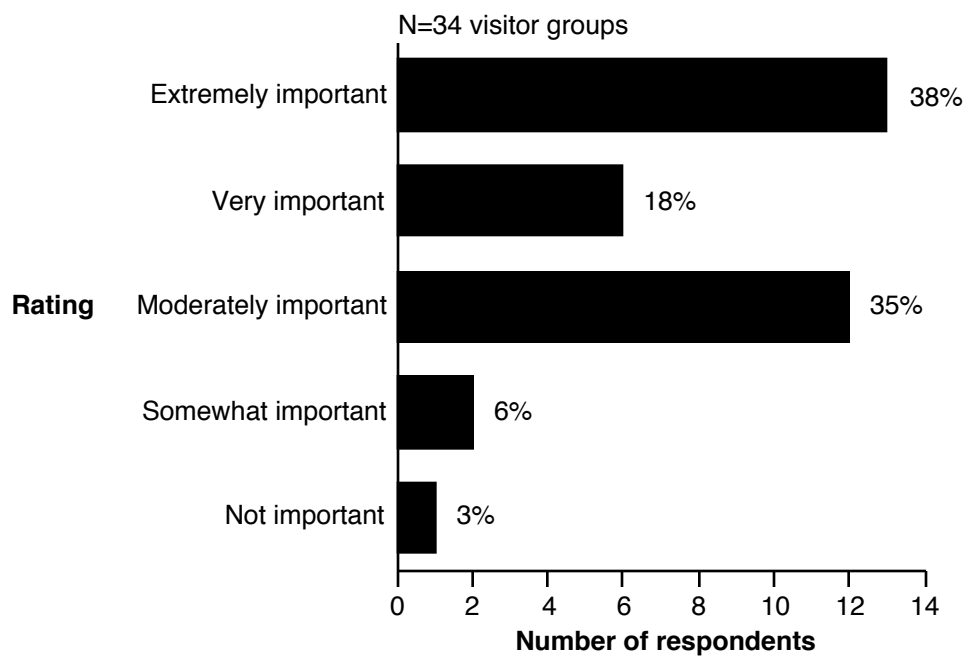


Figure 53: Importance other exhibits

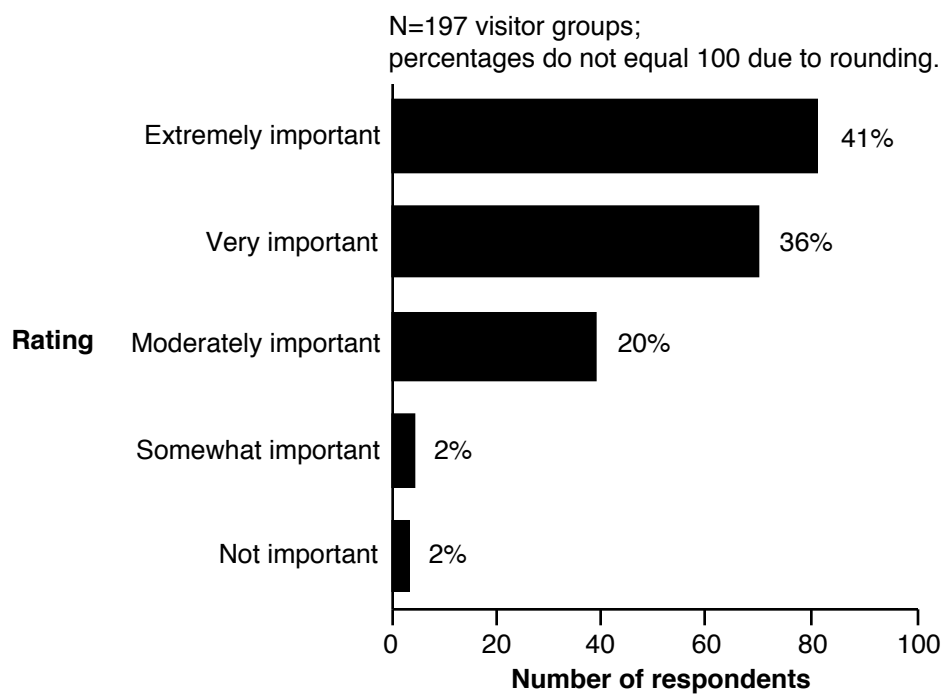


Figure 54: Importance of self-guided tour of fort

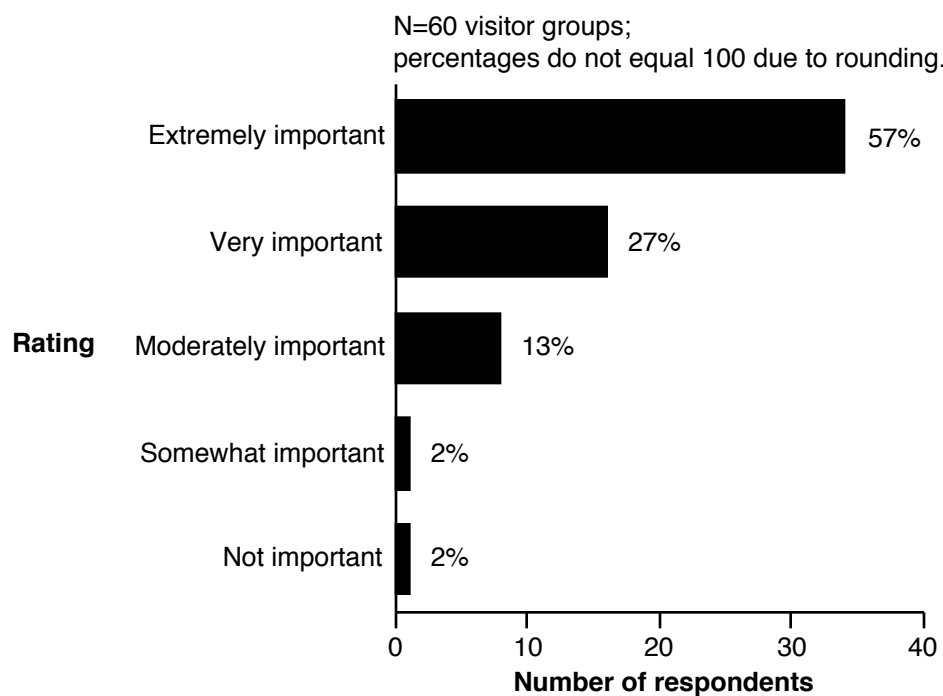


Figure 55: Importance of ranger-guided interpretive programs

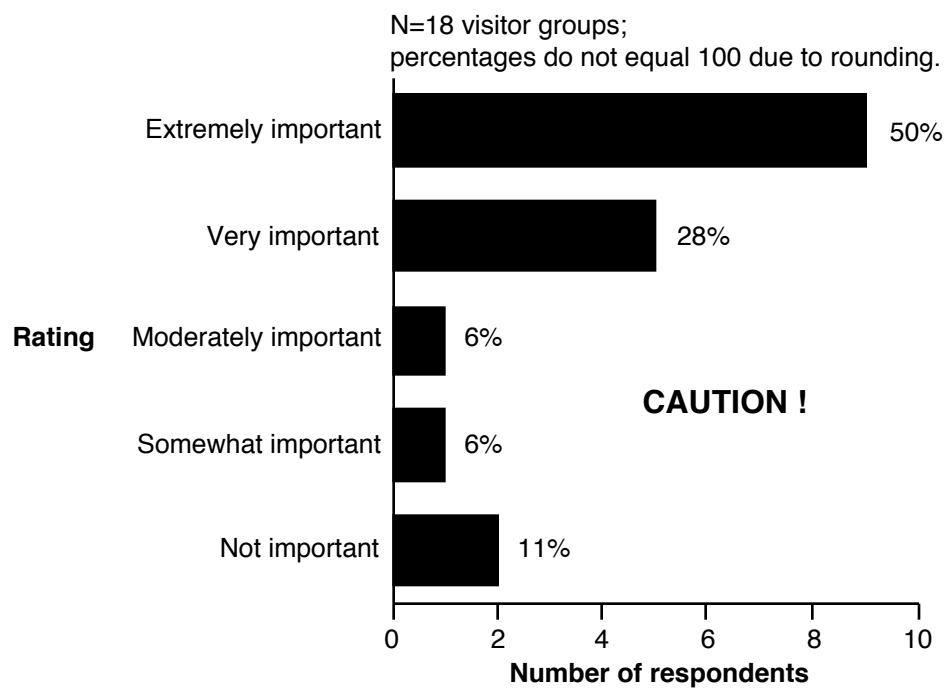


Figure 56: Importance of visitor protection/law enforcement

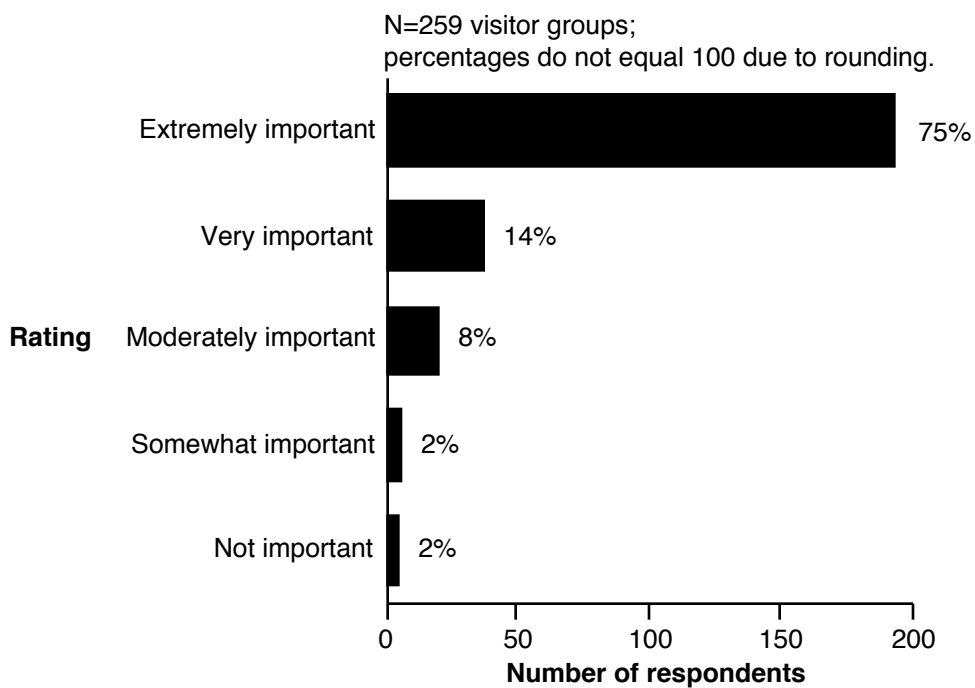


Figure 57: Importance of restrooms

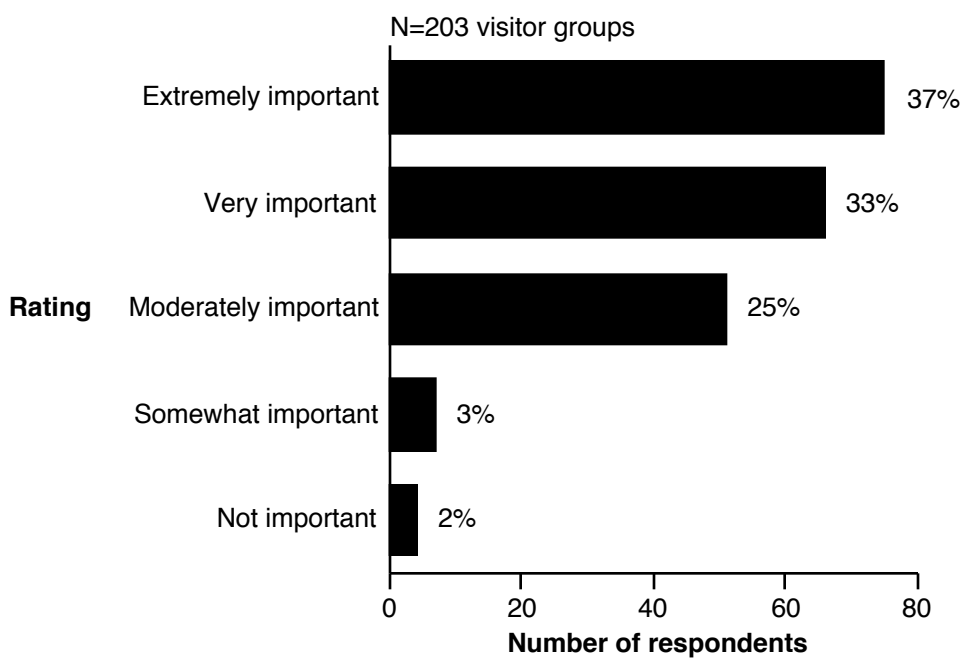


Figure 58: Importance of picnic area

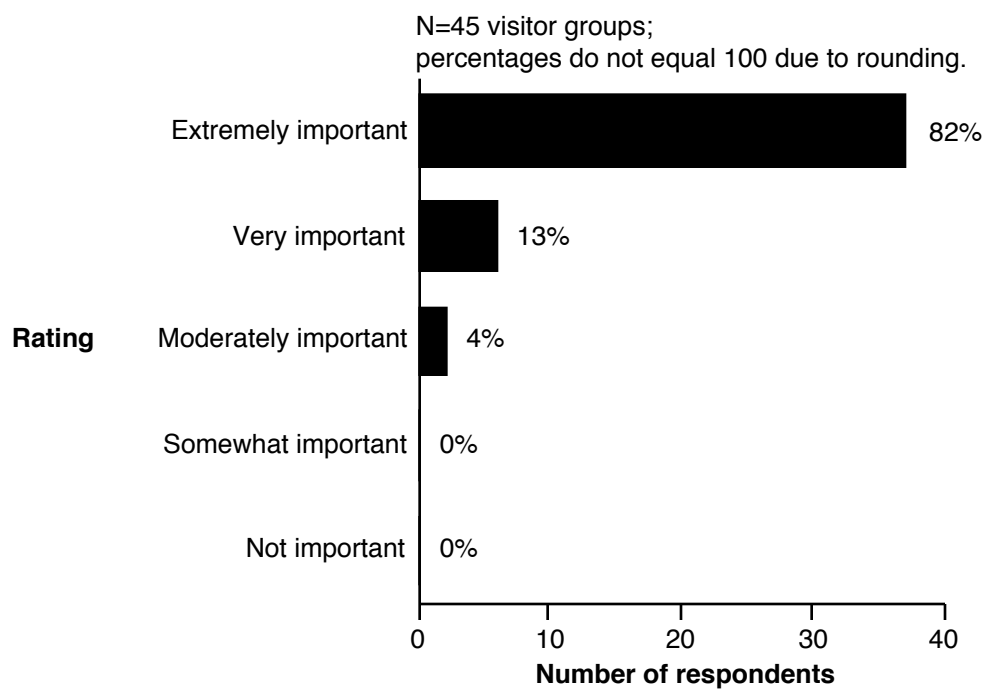


Figure 59: Importance of campground

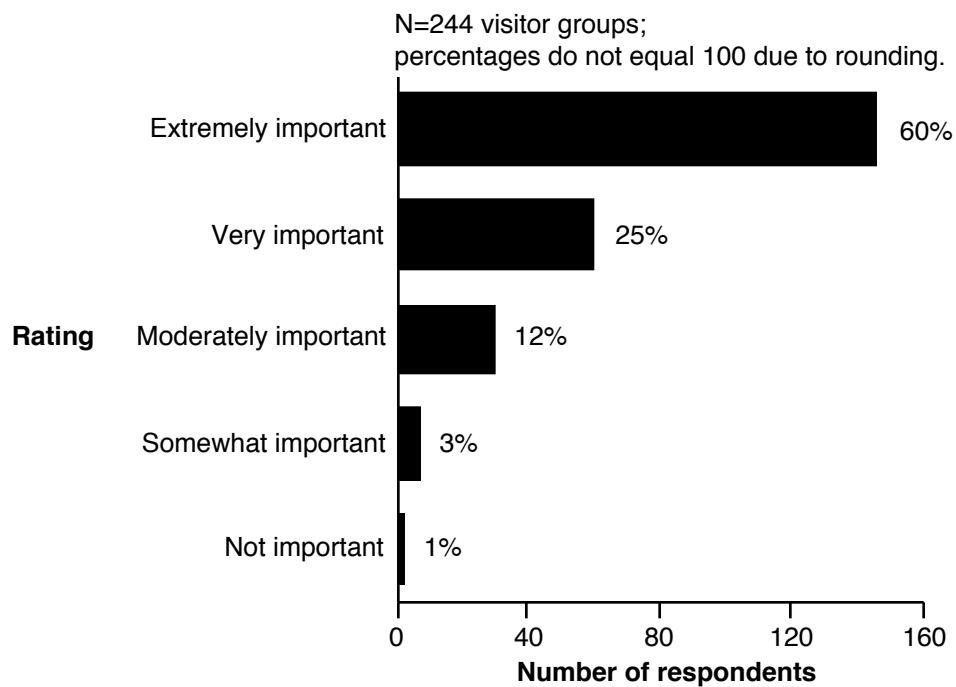


Figure 60: Importance of services/facilities: Beach/swim area

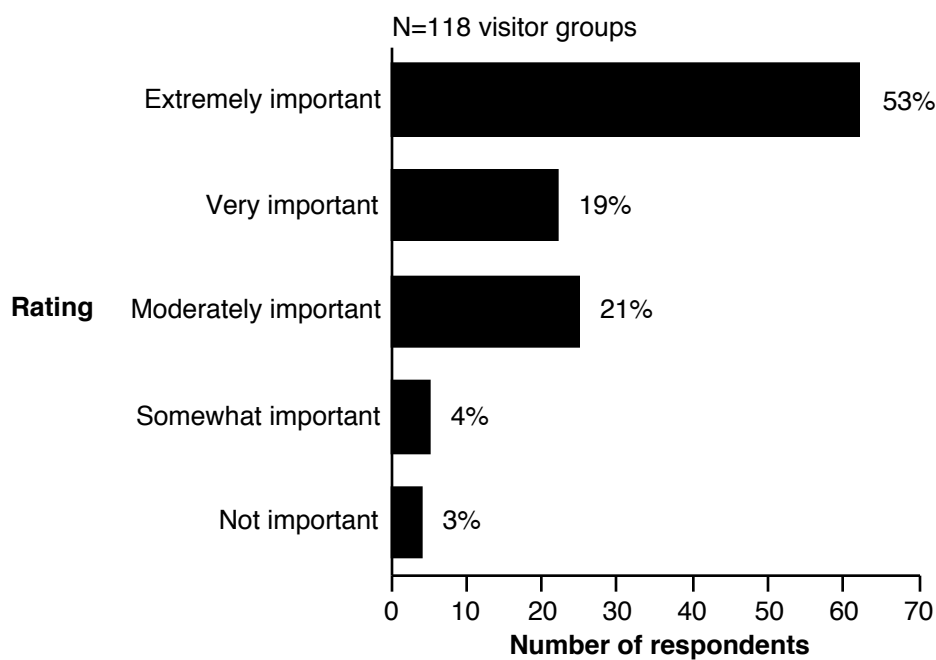


Figure 61: Importance of dock

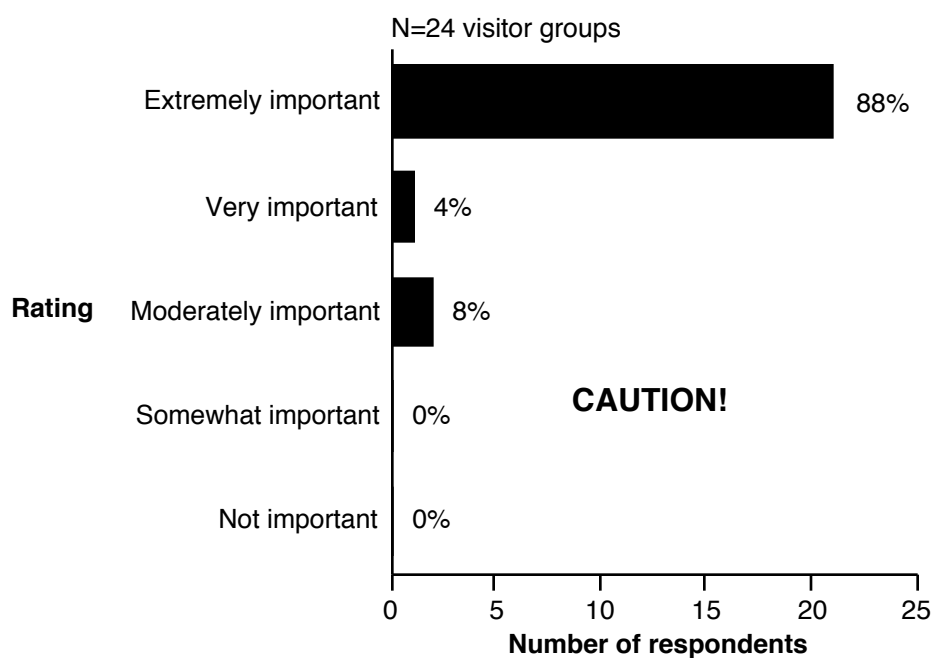
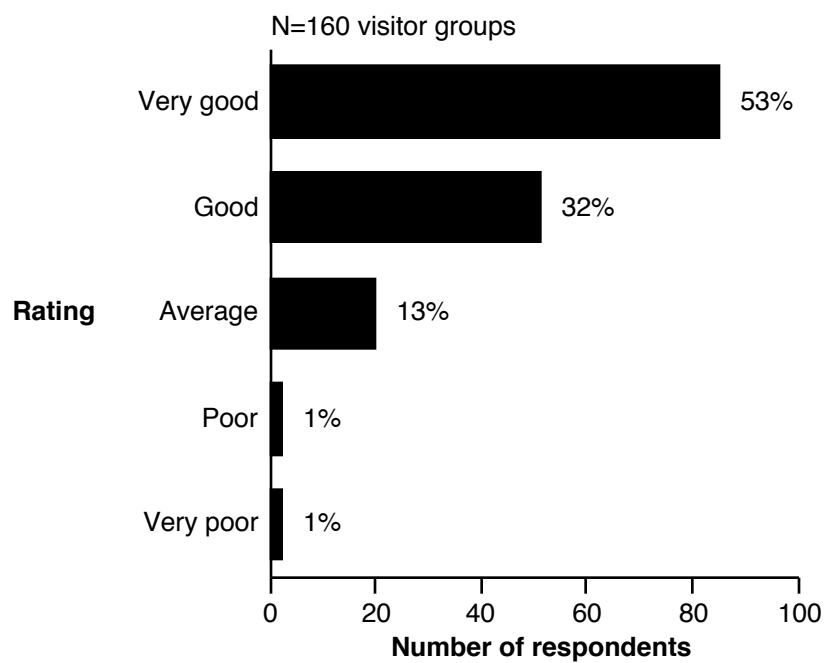
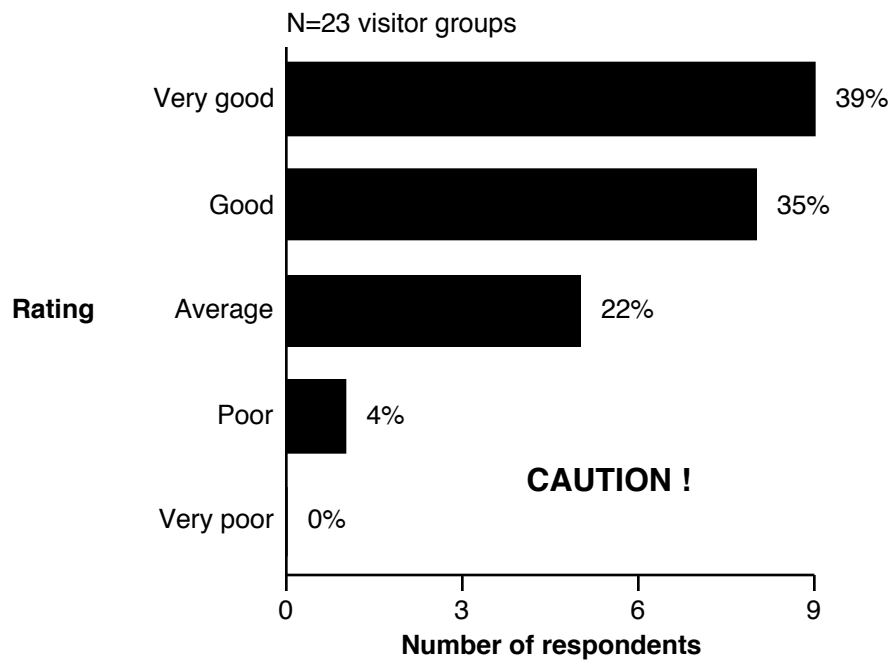


Figure 62: Importance of anchorage

**Figure 63: Quality of park brochure/map****Figure 64: Quality of park newspaper**

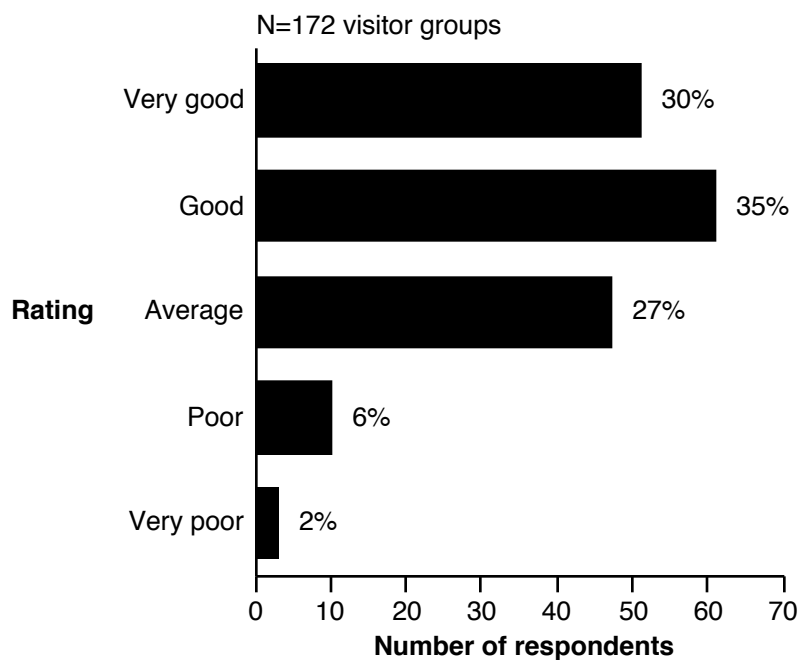


Figure 65: Quality of visitor center

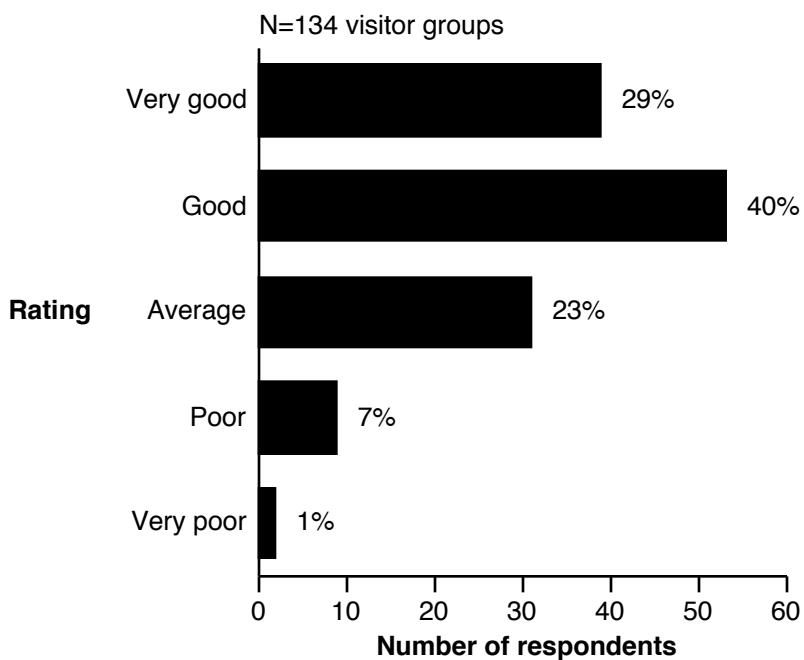
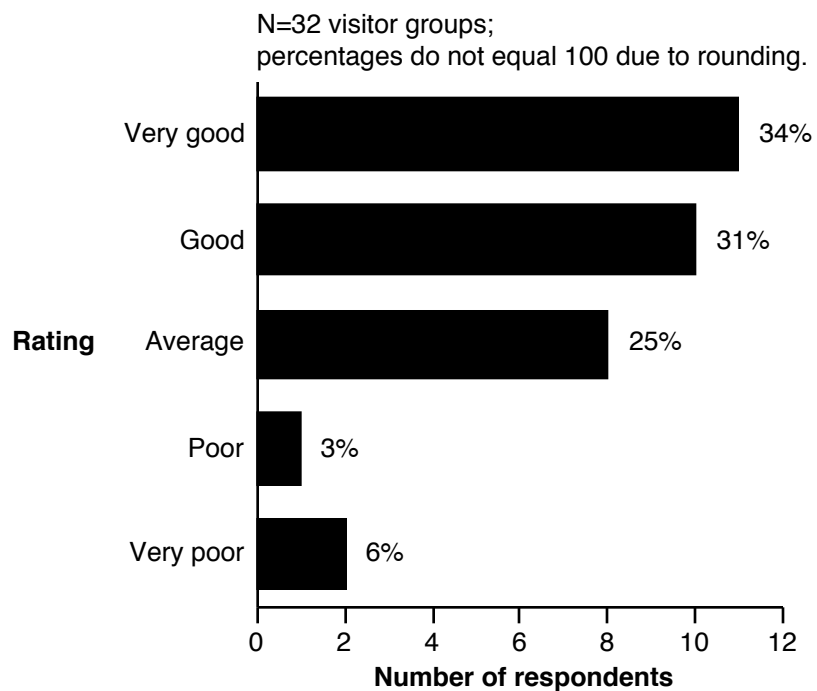
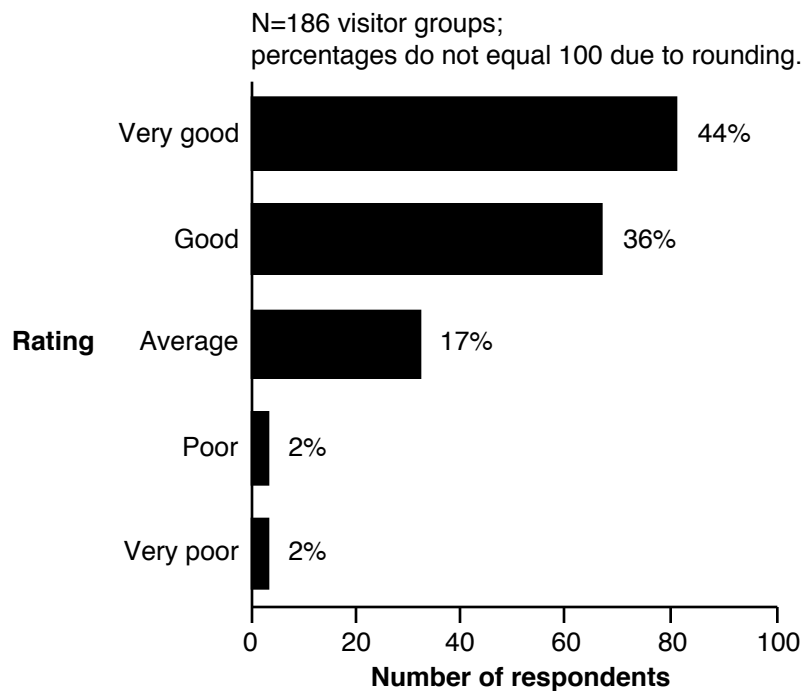


Figure 66: Quality of visitor center exhibits

**Figure 67: Quality of other exhibits****Figure 68: Quality of self-guided tour of fort**

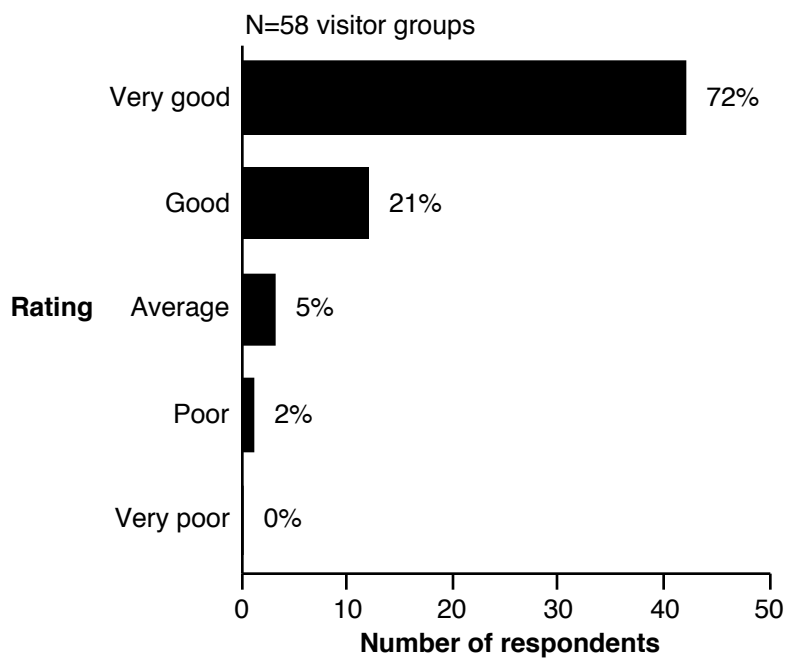


Figure 69: Quality of ranger-guided interpretive programs

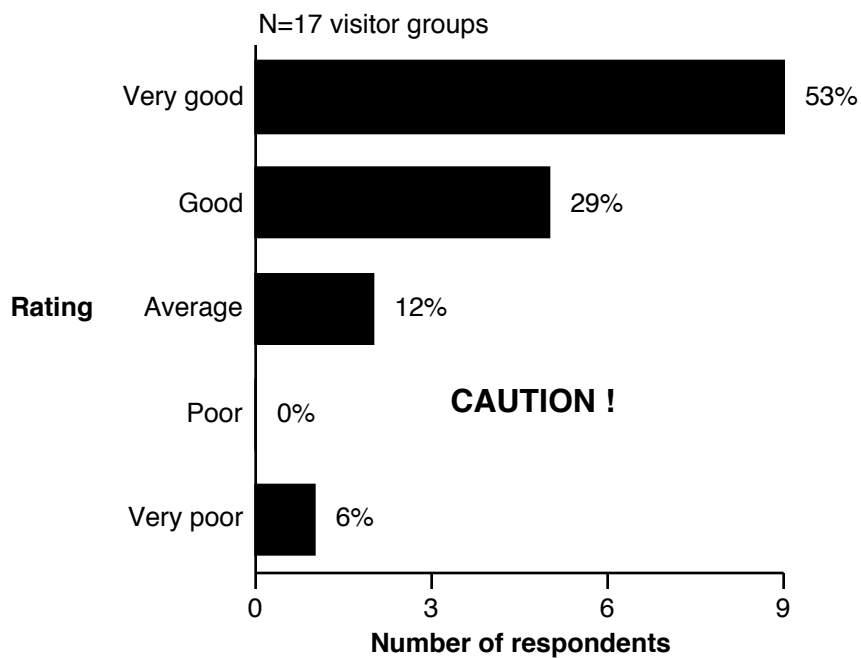
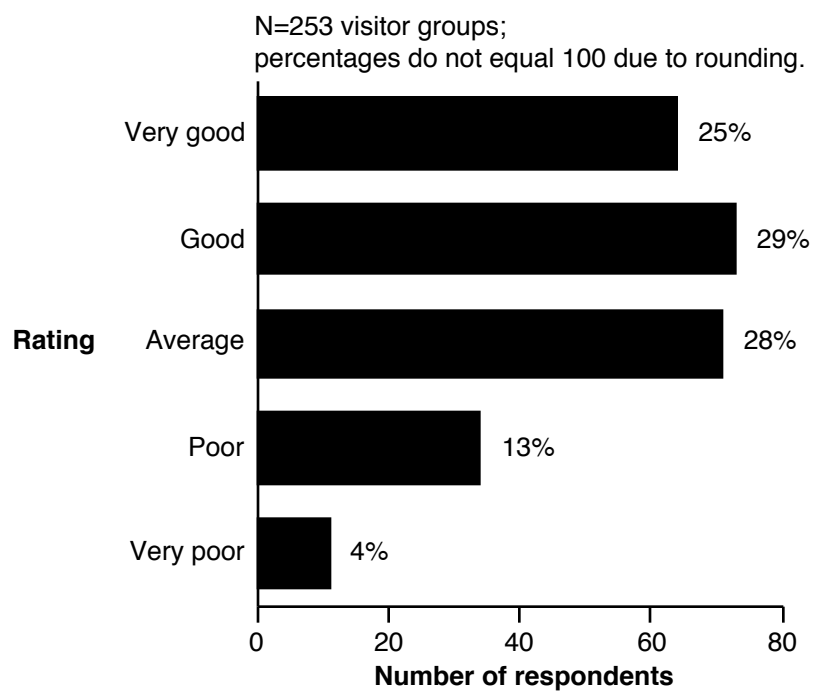
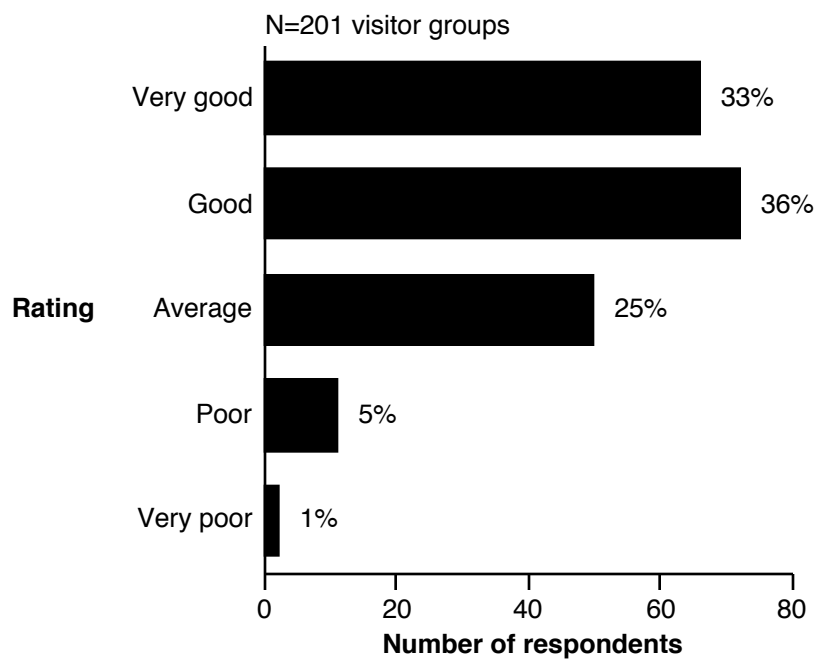


Figure 70: Quality of visitor protection/law enforcement

**Figure 71: Quality of restrooms****Figure 72: Quality of picnic area**

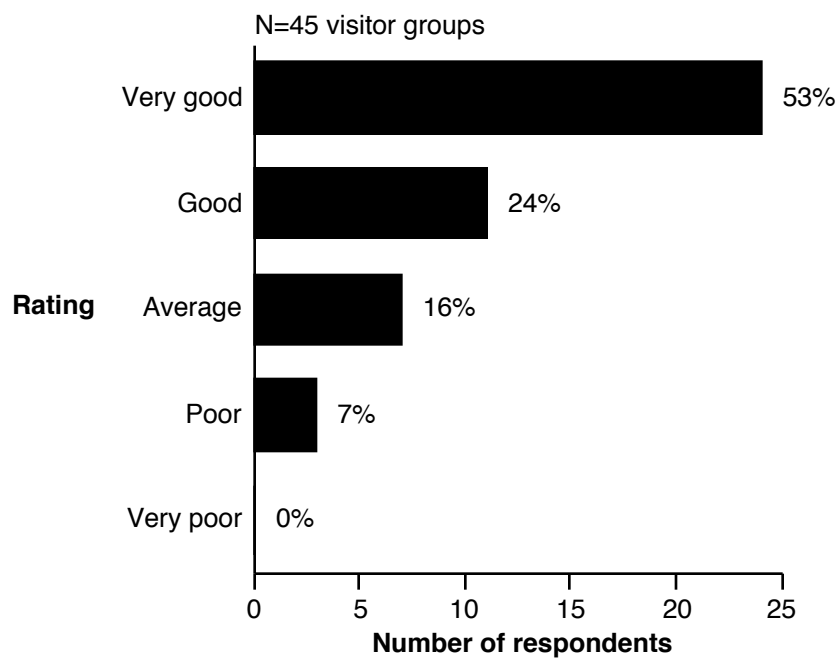


Figure 73: Quality of campground

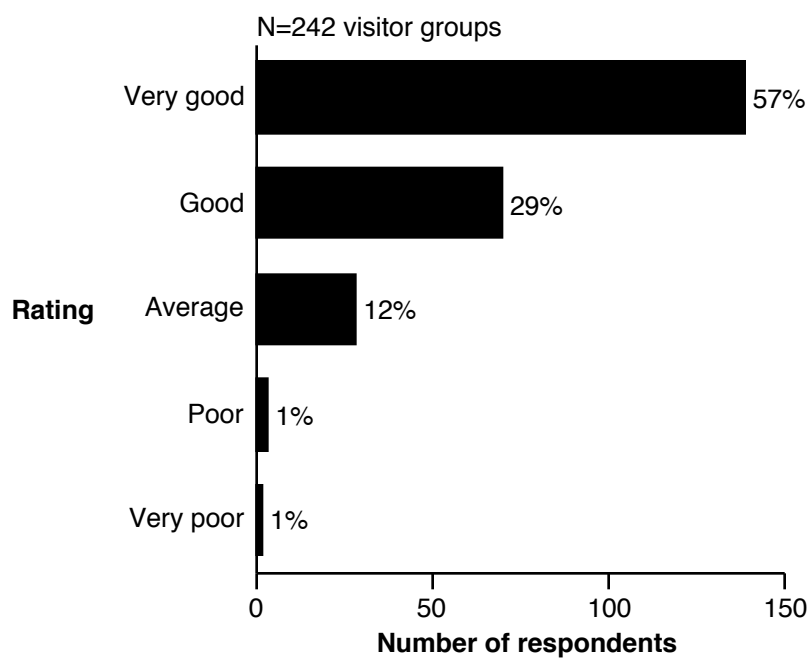
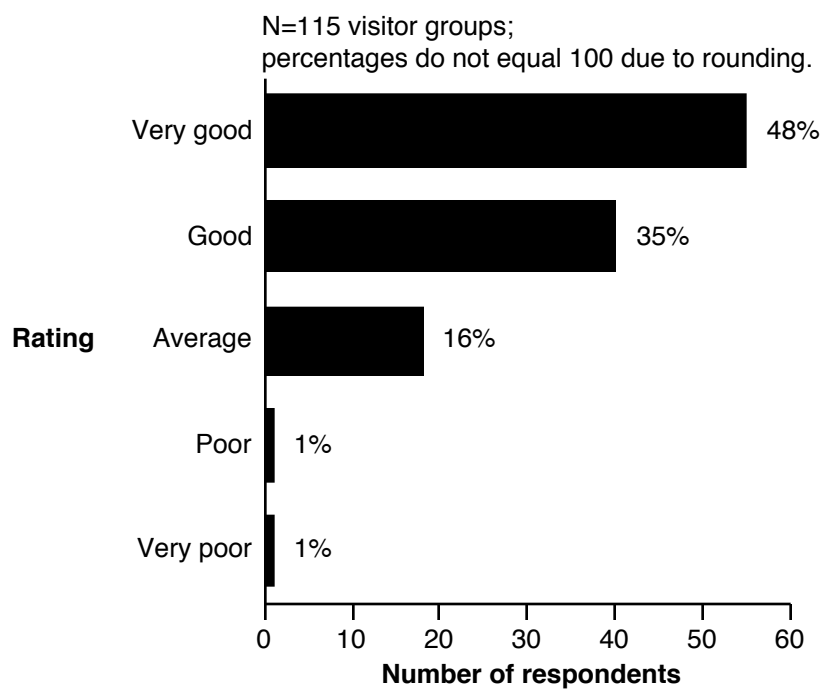
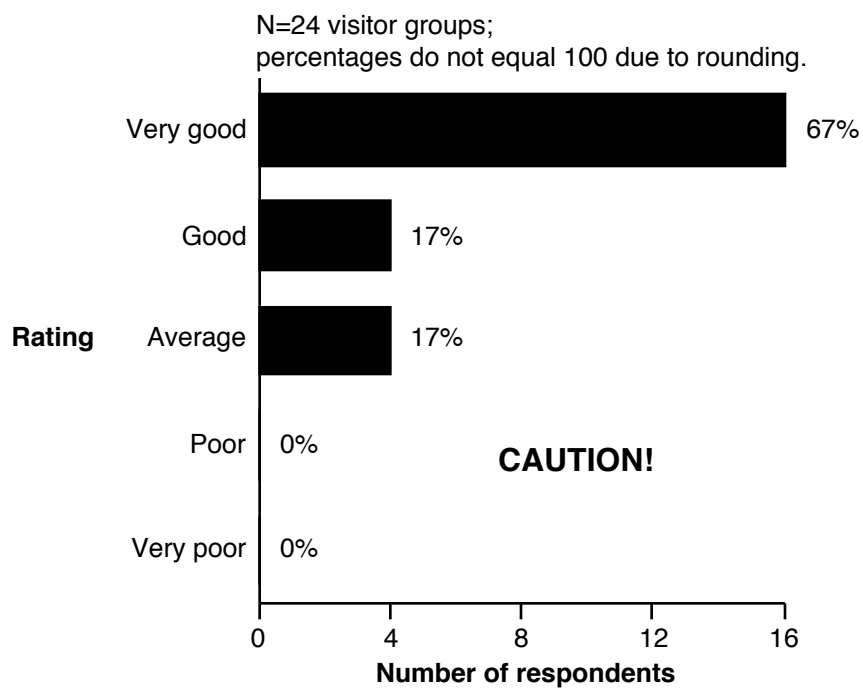


Figure 74: Quality of beach/swim areas

**Figure 75: Quality of dock****Figure 76: Quality of anchorage**

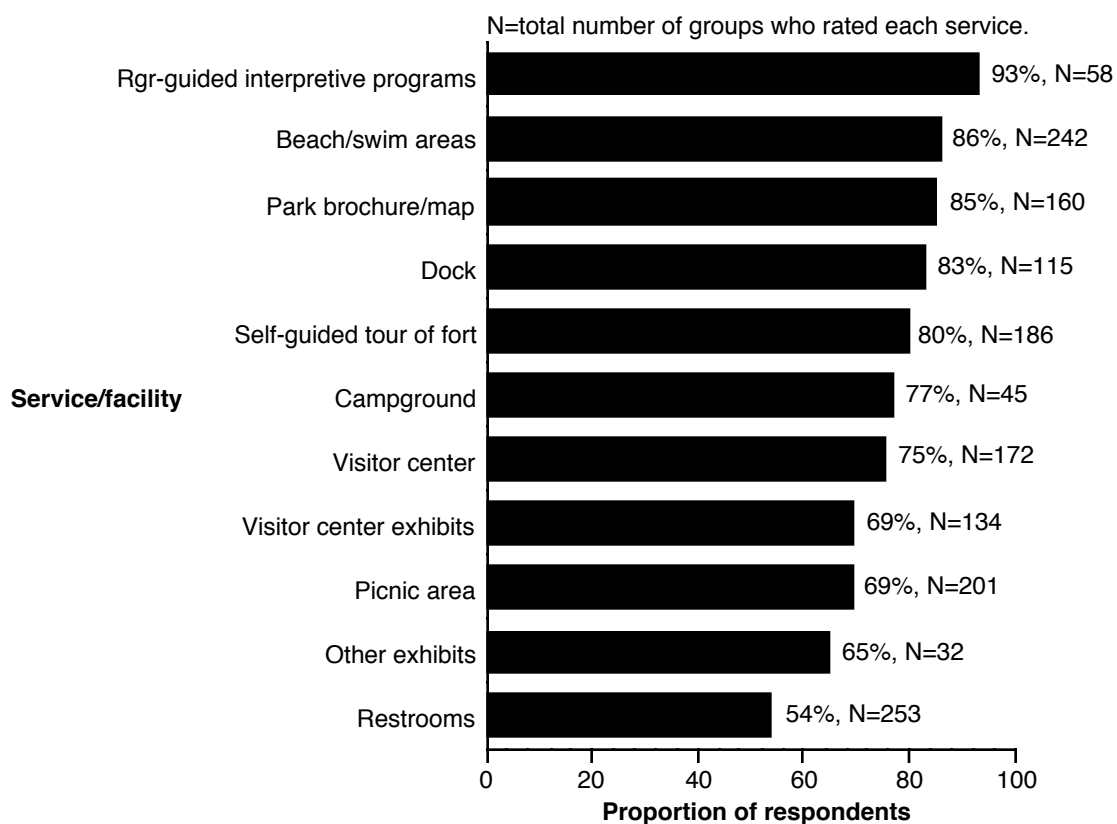


Figure 77: Combined proportions of "very good" or "good" quality ratings for park services and facilities

Commercial services and facilities: use, importance and quality

Visitor groups were asked to note the commercial services and facilities they used during this visit to Dry Tortugas NP. As shown in Figure 78, the services/facilities that were most commonly used were ferry (71%) and diving/snorkeling trip (42%). The least used commercial service or facility was birding trips (3%).

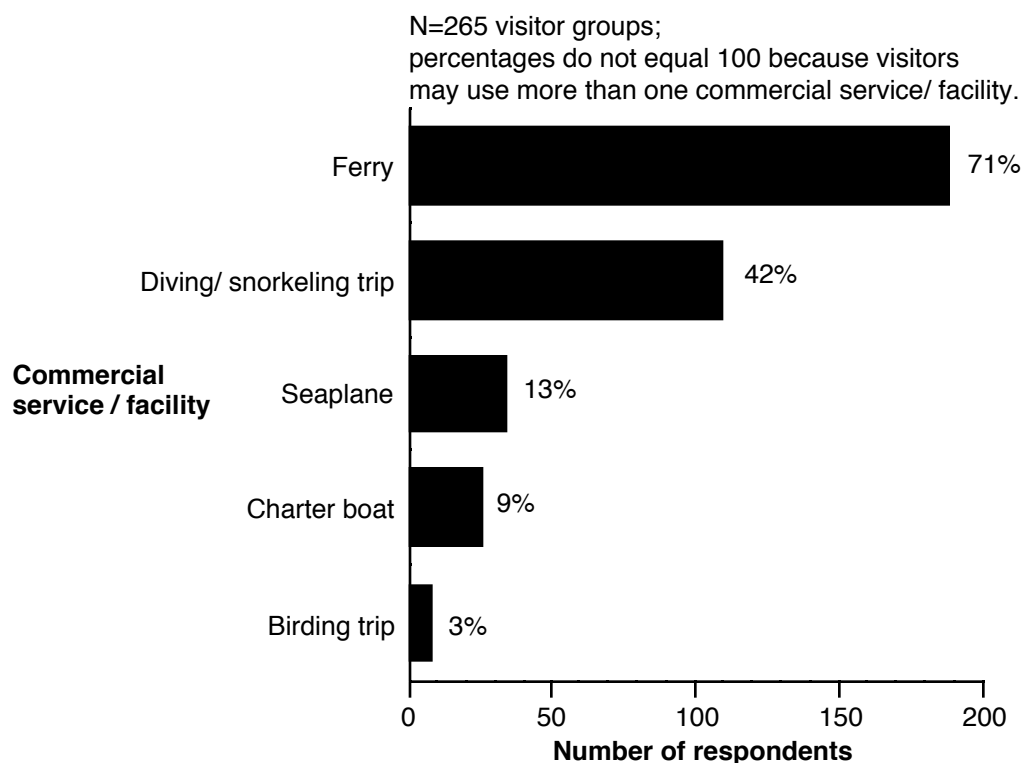


Figure 78: Commercial services and facilities used

Visitor groups rate the importance and quality of each of the commercial services and facilities that they used. The following scales were used in the questionnaire:

IMPORTANCE 5= extremely important 4= very important 3= moderately important 2= somewhat important 1= not important	QUALITY 5= very good 4= good 3= average 2= poor 1= very poor
---	---

Figure 79 shows the average importance and quality ratings for commercial services and facilities. An average score was determined for each service based on ratings provided by visitors who used that service. This was done for both importance and quality, and the results are plotted on the grid shown in Figure 80. NOTE: The birding trip and charter boat were not rated by enough visitors to provide reliable information. All other commercial services/facilities were rated as above average both importance and quality.

Figures 81 to 85 show the importance ratings that were provided by visitor groups for each of the individual commercial services and facilities. Those services/facilities receiving the highest proportion of “extremely important” or “very important” ratings included the ferry (94%) and seaplane (90%). The highest proportion of “not important” ratings was for the seaplane (7%).

Figures 86 to 90 show the quality ratings that were provided by visitor groups for each of the individual services and facilities. Those services/facilities receiving the highest proportions of “very good” or “good” ratings included the ferry (91%) and seaplane (90%). The highest proportion of “very poor” was for the seaplane (6%).

Figure 91 combines the “very good” and “good” quality ratings and compares those ratings for all of the services/facilities.

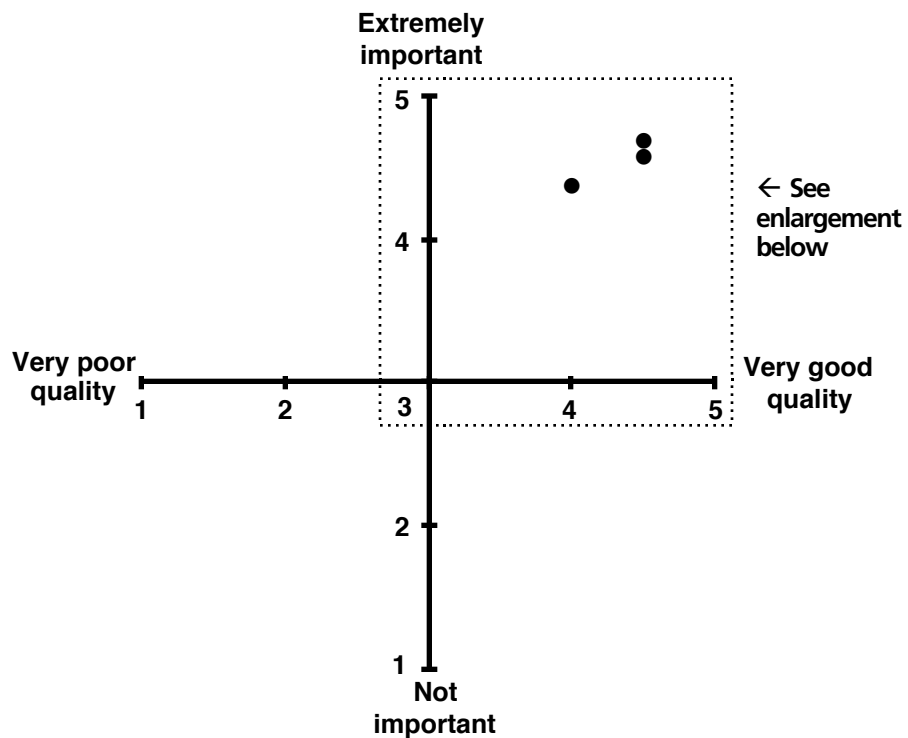


Figure 79: Average ratings of commercial service/facility importance and quality

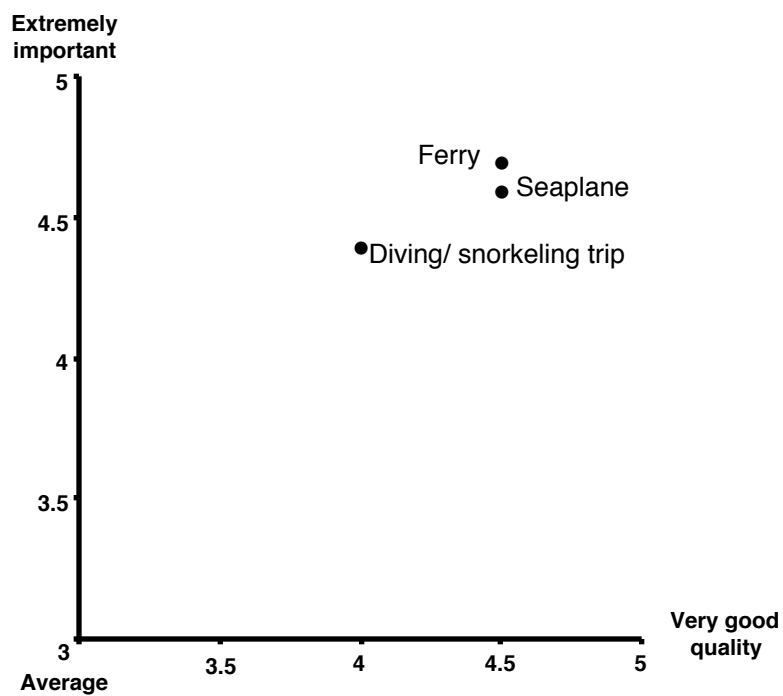


Figure 80: Detail

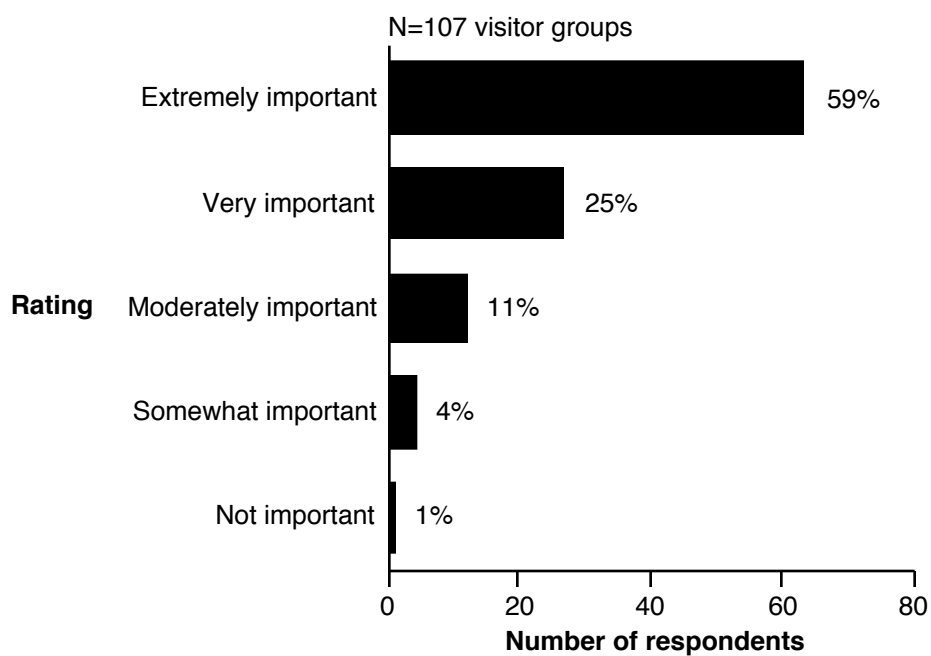


Figure 81: Importance of diving/snorkeling trip

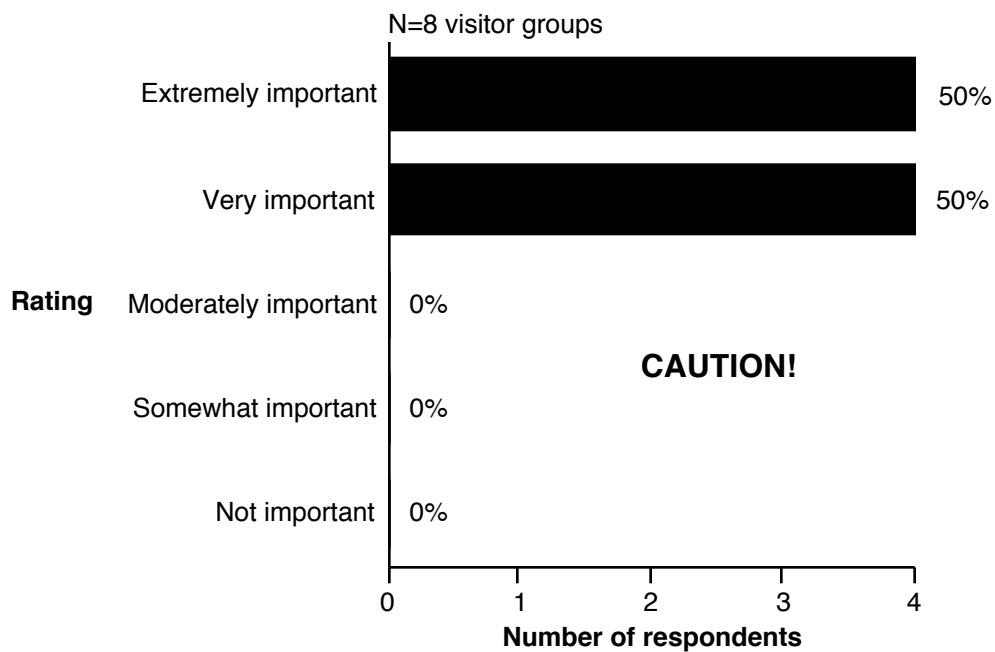
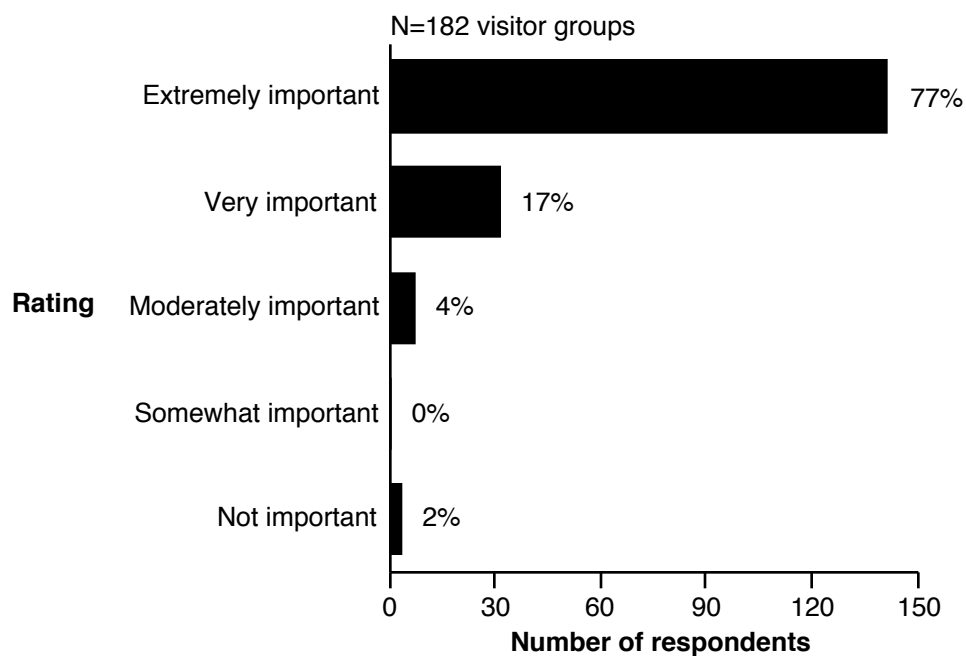
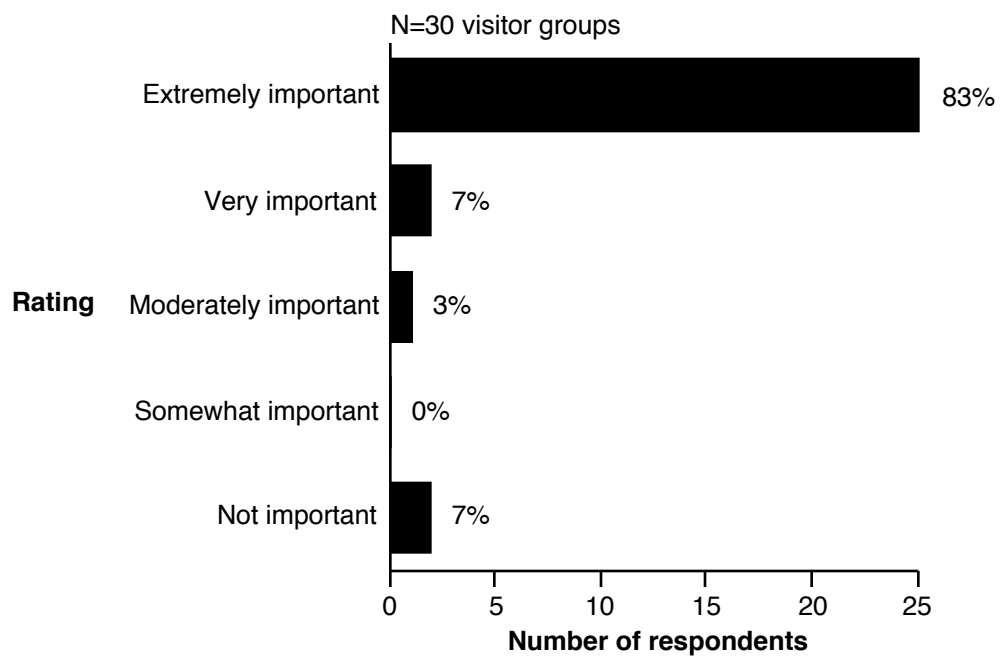


Figure 82: Importance of birding trip

**Figure 83: Importance of ferry****Figure 84: Importance of seaplane**

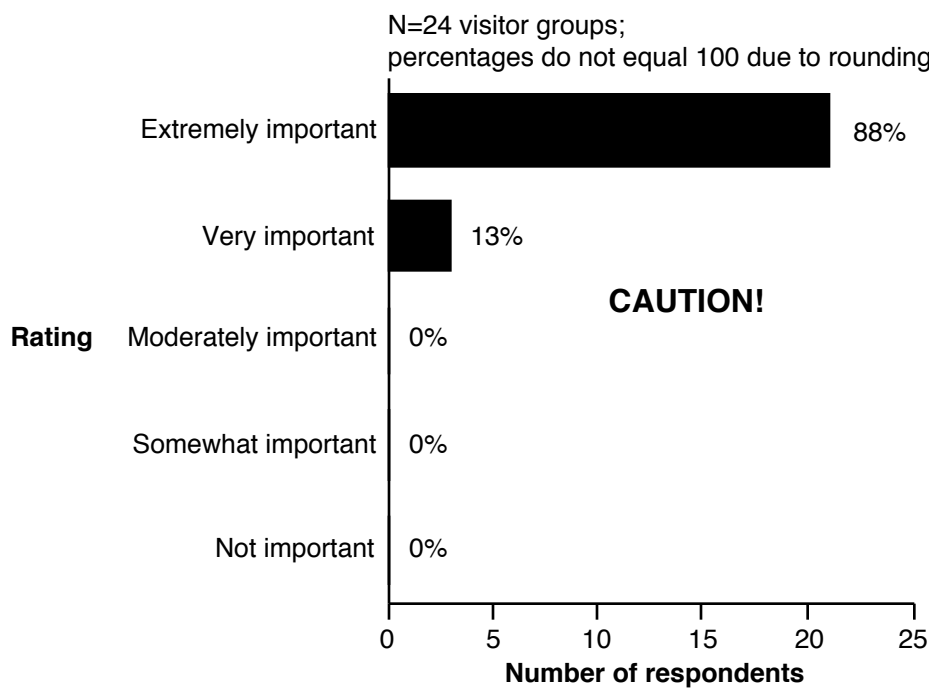


Figure 85: Importance of charter boat

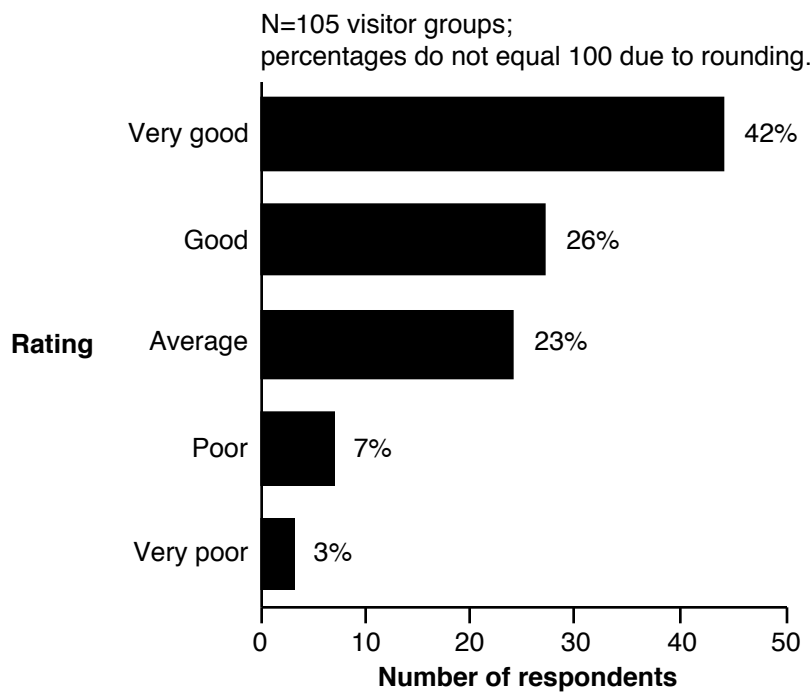
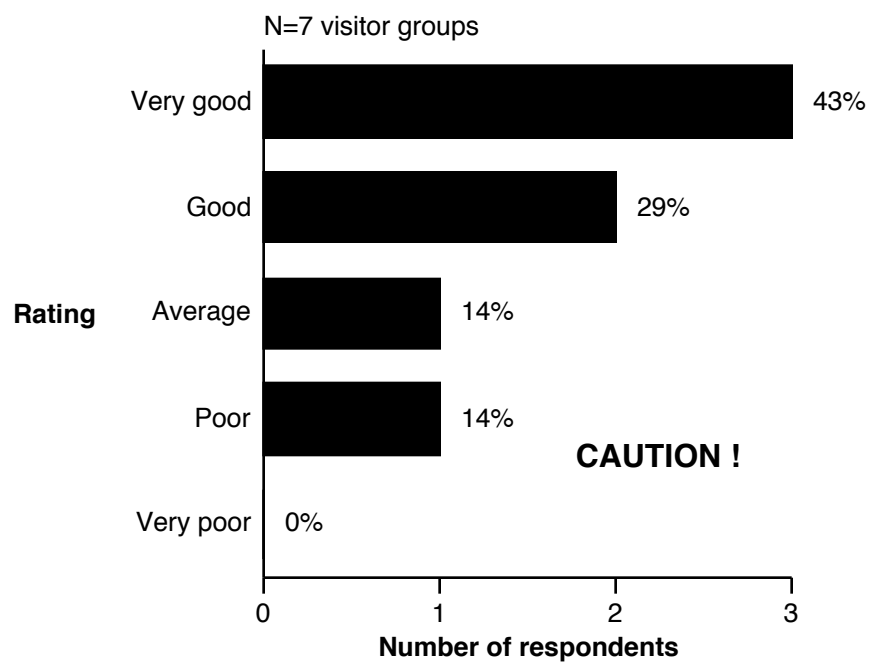
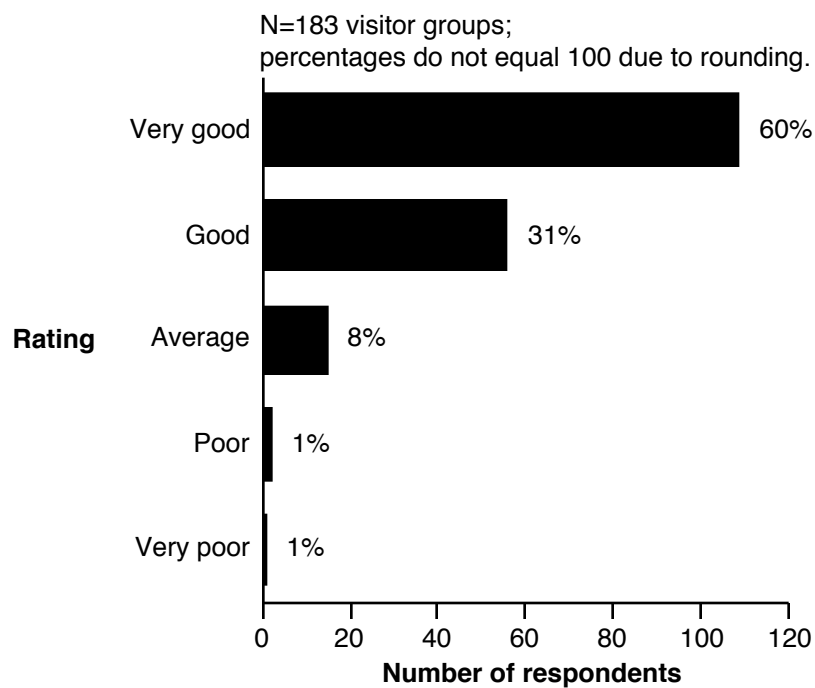
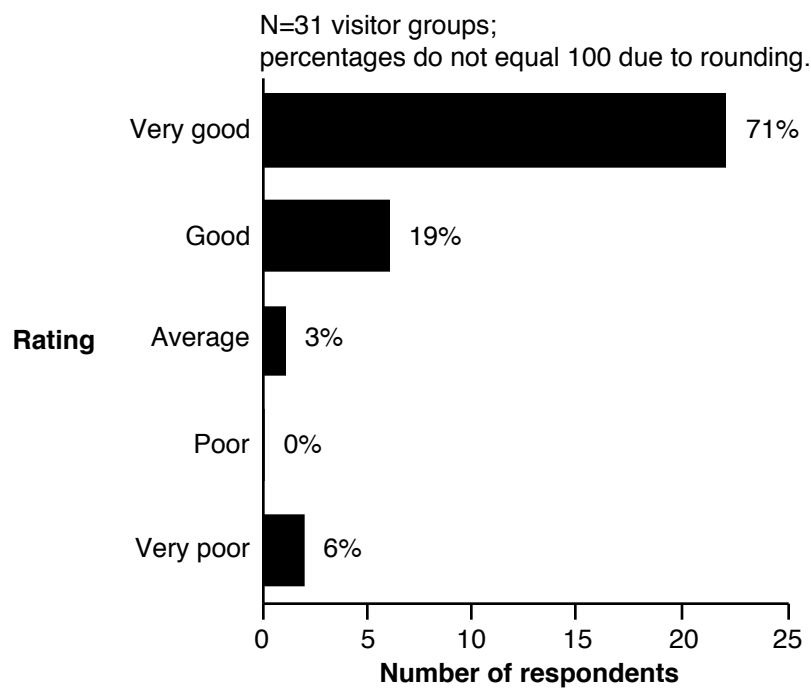
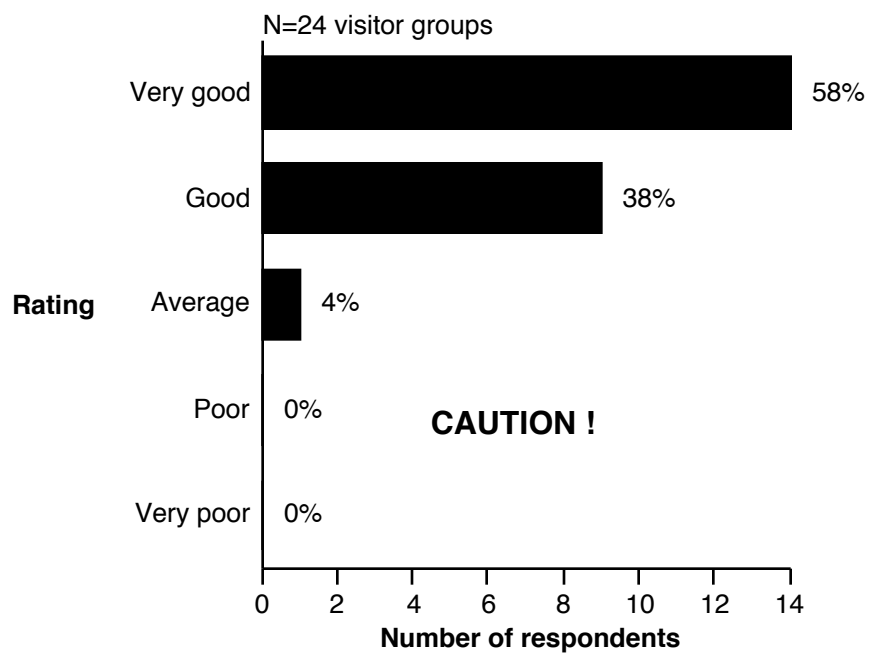


Figure 86: Quality of diving/snorkeling trip

**Figure 87: Quality of birding trip****Figure 88: Quality of ferry**

**Figure 89: Quality of seaplane****Figure 90: Quality of charter boat**

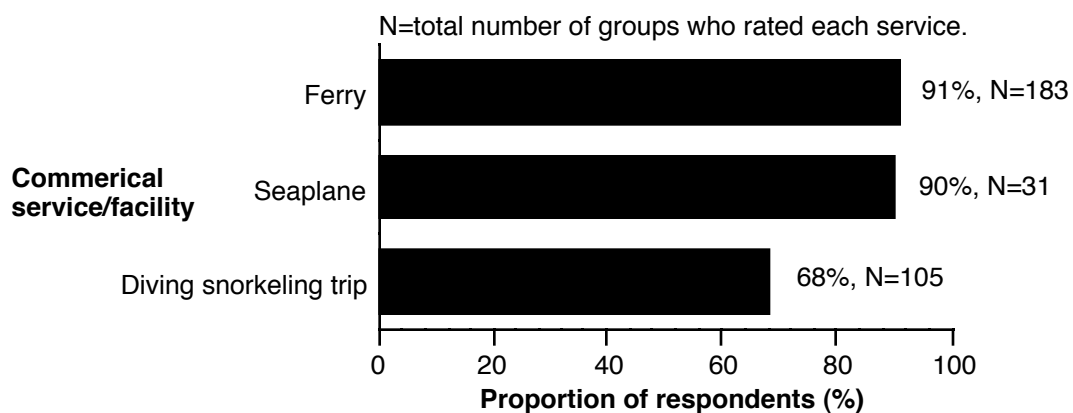


Figure 91: Combined proportions of "very good" or "good" quality ratings for commercial services and facilities

Visitors were asked to report the weather and sea conditions on their visit in their own words. Table 5 shows their responses.

Weather and sea conditions

Table 5: Weather and sea conditions

Comment	Number of times mentioned
Sunny, beautiful, calm	176
Sunny, warm, light chop	55
Rough seas	46
Fair, warm, moderate chop	39
Multiple conditions on same trip	25
Sunny, warm	24
Rainy, overcast, choppy	15
Windy	12
Rain, wind	7
Overcast, warm	4
Warm, windy	4
Poor sea clarity	3
Choppy	2
Other	1

Visitor expectations

Visitors were asked if there was anything specific that they expected to see or do on this visit to Dry Tortugas NP, but were unable to see or do. Figure 92 shows that 29% of visitors had something that they were unable to see or do on this trip to Dry Tortugas NP.

Those visitors were then asked what they were unable to see or do. Their responses are listed in Table 6.

Finally, visitors were asked what kept them from being able to see or do what they had expected. Their responses are listed in Table 7.

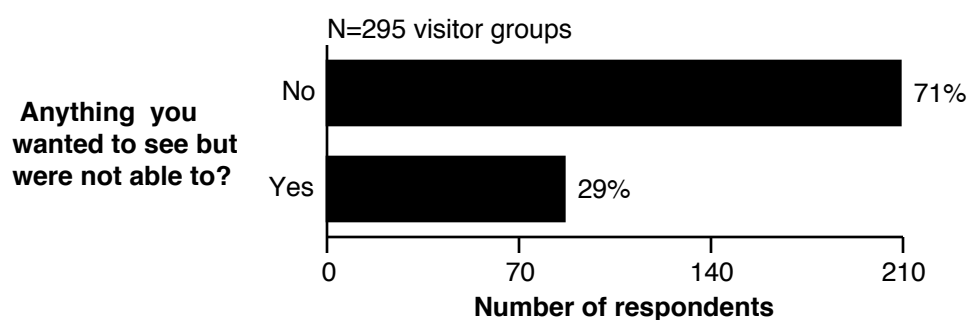


Figure 92: Anything visitors were unable to see or do?

Table 6: What visitors were unable to see or do

N=94 comments

Comment	Number of times mentioned
Snorkel	24
See turtles	11
Visit Loggerhead Key	8
See more of the fort	8
Visit birds/bird nesting locations	7
Fish	5
Take ranger-led tour	5
Coral reef	4
Visit Windjammer wreck	4
See more wildlife	3
Swim	2
Bush Key	2
Learn more historical information about the fort	2
Picnic	2
Other	7

Table 7: Reasons visitors had unfulfilled expectations

N=74 comments

Comment	Number of times mentioned
Bad weather	15
Not enough time	11
Rough/water not clear	7
Wildlife not seen at the time of visit	7
Not a good spot for snorkeling	7
Did not have transportation means	5
Areas were closed/restricted	5
Not right season for bird nesting	4
Lacked good snorkeling equipment	3
Ranger-led tour not offered at the time	3
Bad luck	3
Other visitors' interference	2
Other	3

**Total
expenditures**

Visitor groups were asked to list the amount of money they had spent both inside Dry Tortugas NP and the surrounding area (Florida Keys, Miami area or Naples area) on this visit. Groups were asked to indicate the amounts they spent for lodging; camping fees; guide fees and charges; restaurants and bars; groceries and take-out food, gas and oil; other transportation expenses; admissions, recreation, entertainment fees; and all other purchases.

Total expenditures in and out of park: Three percent of visitor groups did not spend any money and 21% spent between \$1 and \$400 in total expenditures in Dry Tortugas NP and the surrounding area (see Figure 93). Of the total expenditures by groups, 34% was for lodging, 20% was for other transportation expenses, 19% was for restaurants and bars, 8% was for all other purchases, and 6% was for groceries and take out food (see Figure 94).

The average visitor group expenditure during this visit was \$1,496. The median visitor group expenditure (50% of groups spent more and 50% of groups spent less) was \$1,010. The average per capita expenditure was \$402.

In addition, visitors were asked to indicate how many adults (18 years and older) and children (under 18 years) were covered by their expenditures. Figure 95 shows that 66% of the visitor groups had two adults. Figure 96 show that 69% of the visitor groups had no children under 18 years of age.

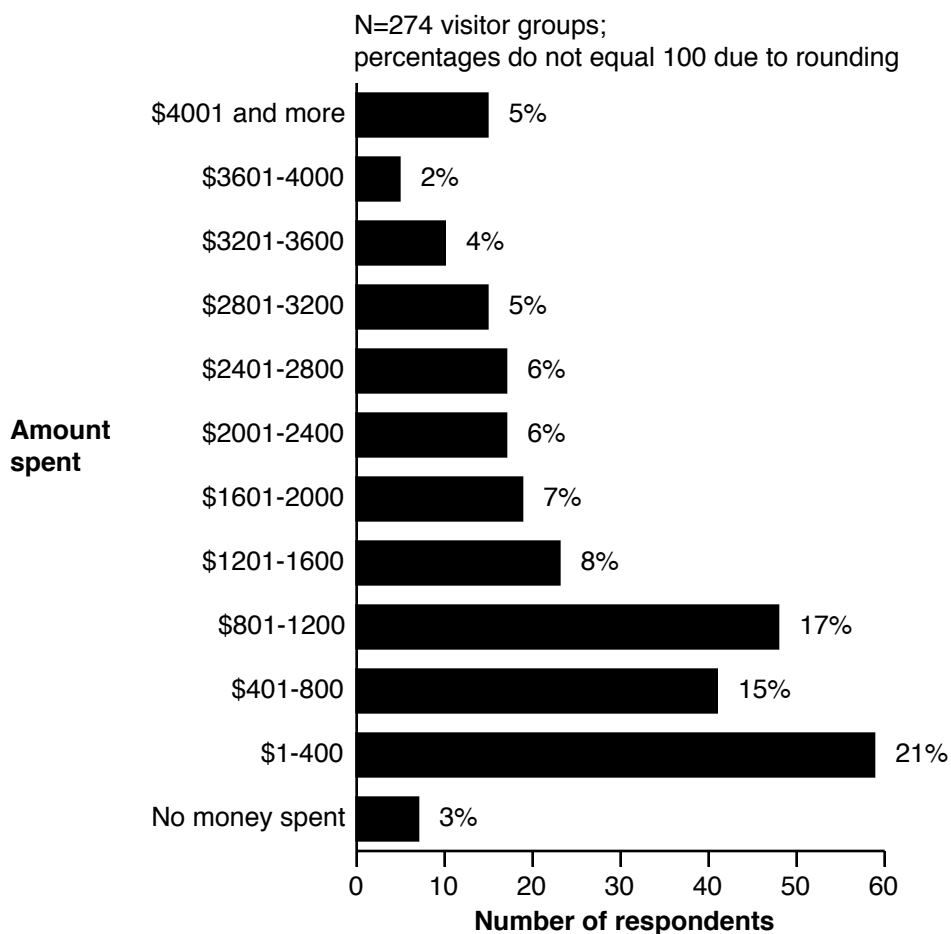


Figure 93: Total expenses in and out of Dry Tortugas NP

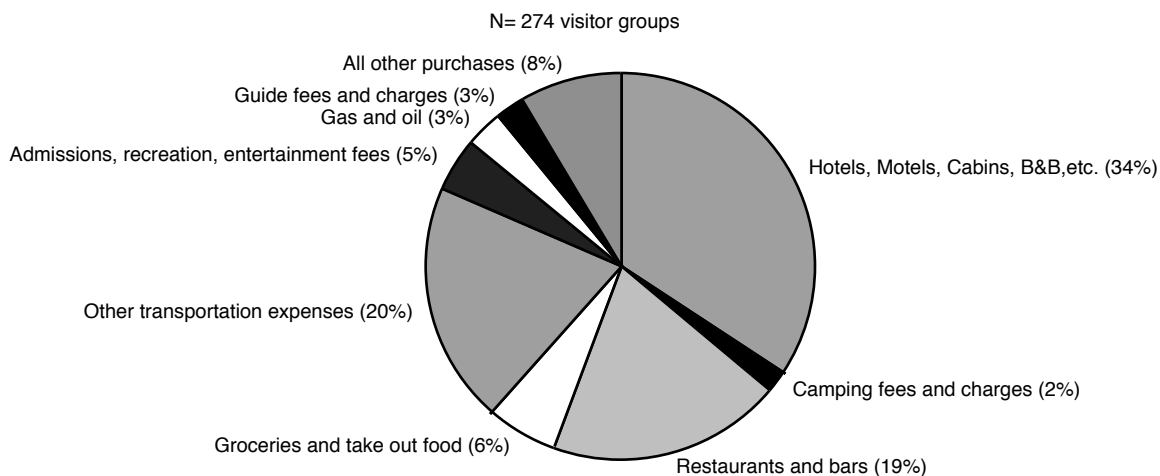


Figure 94: Proportions of expenses in and out of Dry Tortugas NP

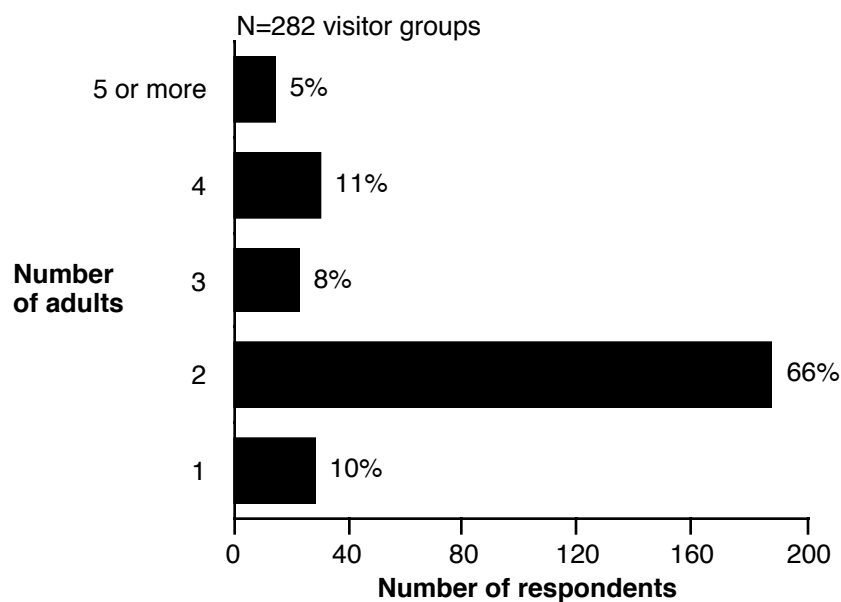


Figure 95: Number of adults covered by expenses

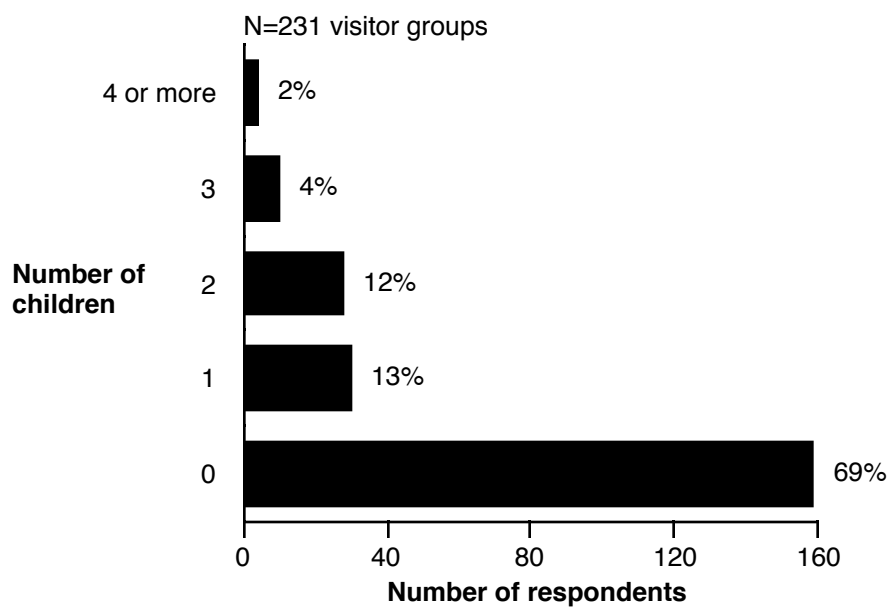


Figure 96: Number of children covered by expenses

Total expenditures in the park : Twenty-seven percent of visitor groups did not spend any money in Dry Tortugas NP and another 26% spent between \$1 and \$100 in total expenditures in the park on this visit (see Figure 97).

Expenditures inside park

Other transportation expenses accounted for 88% of total expenditures in the park, followed by all other purchases (9%), as shown in Figure 98.

The average visitor group expenditure in the park during this visit was \$170. The median visitor group expenditure (50% of groups spent more and 50% of groups spent less) was \$72. The average per capita expenditure was \$76.

Camping fees and charges in the park: Seventy-six percent of visitor groups did not spend any money on camping fees and charges in Dry Tortugas NP; 21% spent from \$1 to \$50 (see Figure 98).

Other transportation expenses in the park: Thirty-four percent of visitor groups did not spend any money on other transportation expenses (including rental cars, auto repairs, ferries, but not including airfare) in Dry Tortugas NP; 43% spent between \$1 and \$200 (see Figure 100).

All other purchases : Forty-three percent of visitor did not spend any money on other purchases in Dry Tortugas NP; 45% spent between \$1 and \$50 (see Figure 101).

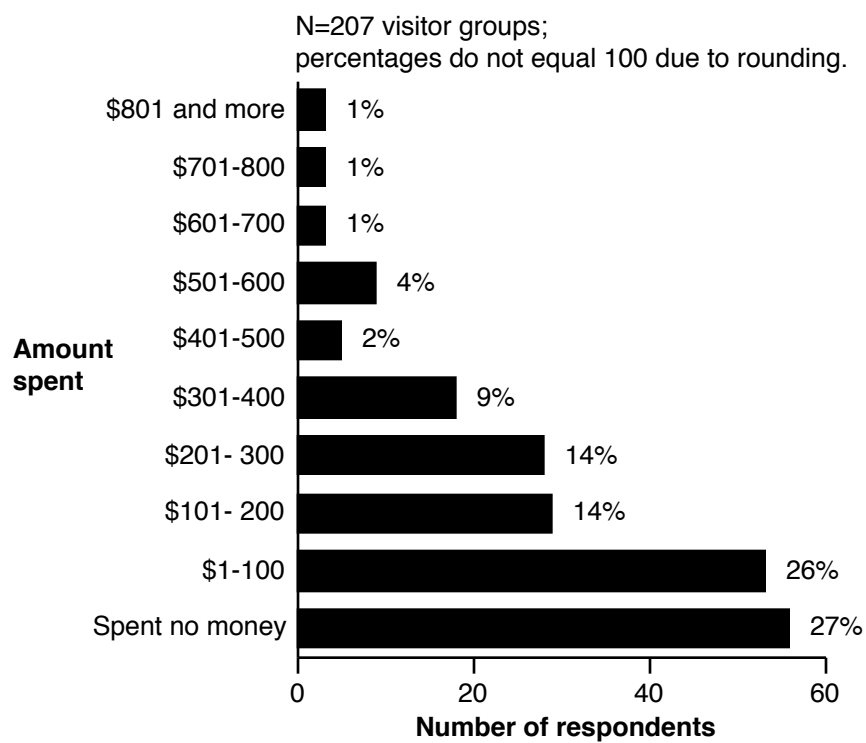


Figure 97: Total expenditures in park

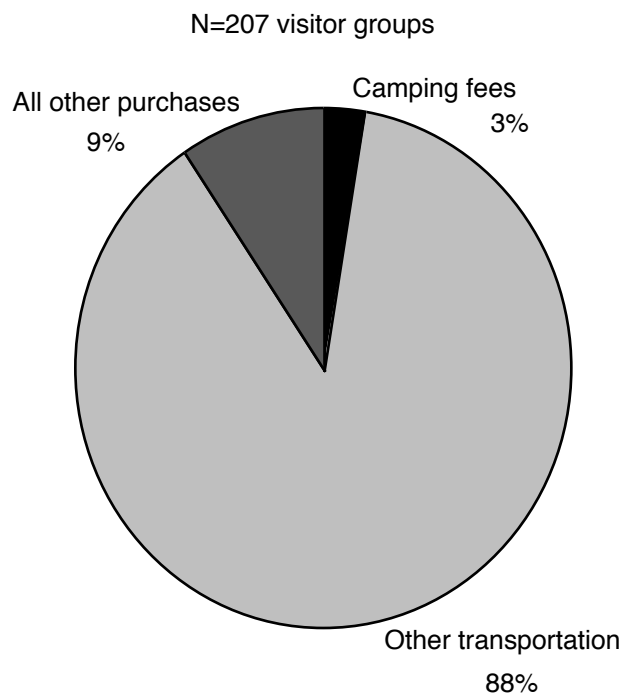


Figure 98: Proportion of expenditures in park

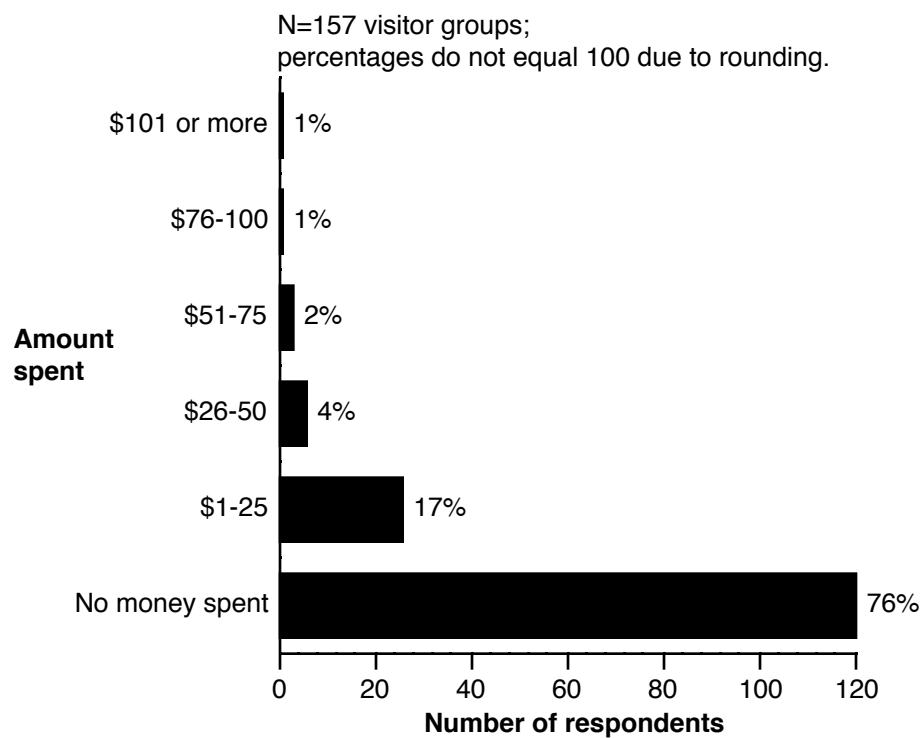


Figure 99: Expenditures for camping fees and charges in park

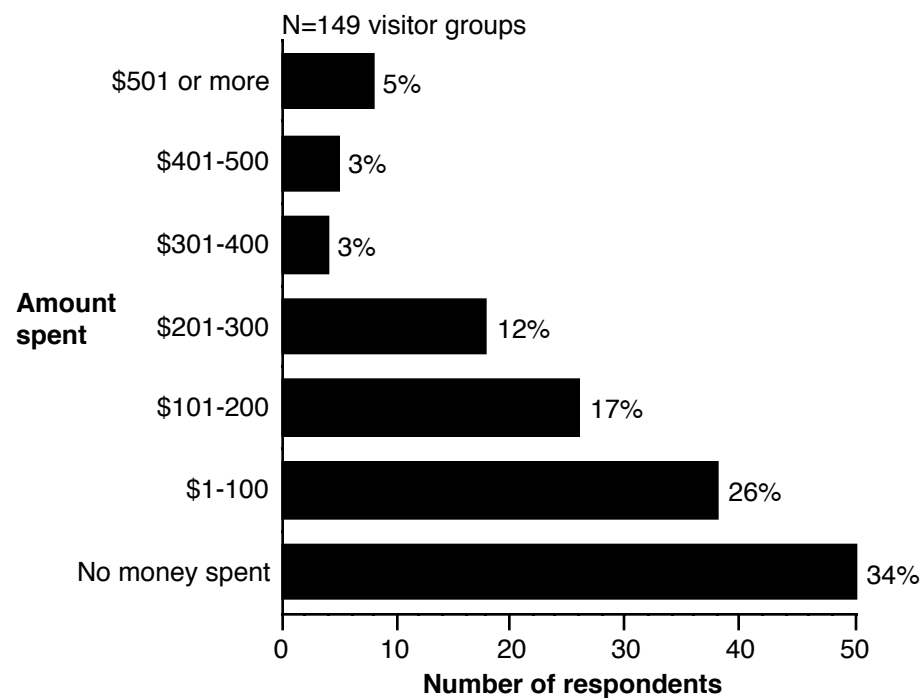


Figure 100: Expenditures for other transportation expenses in park

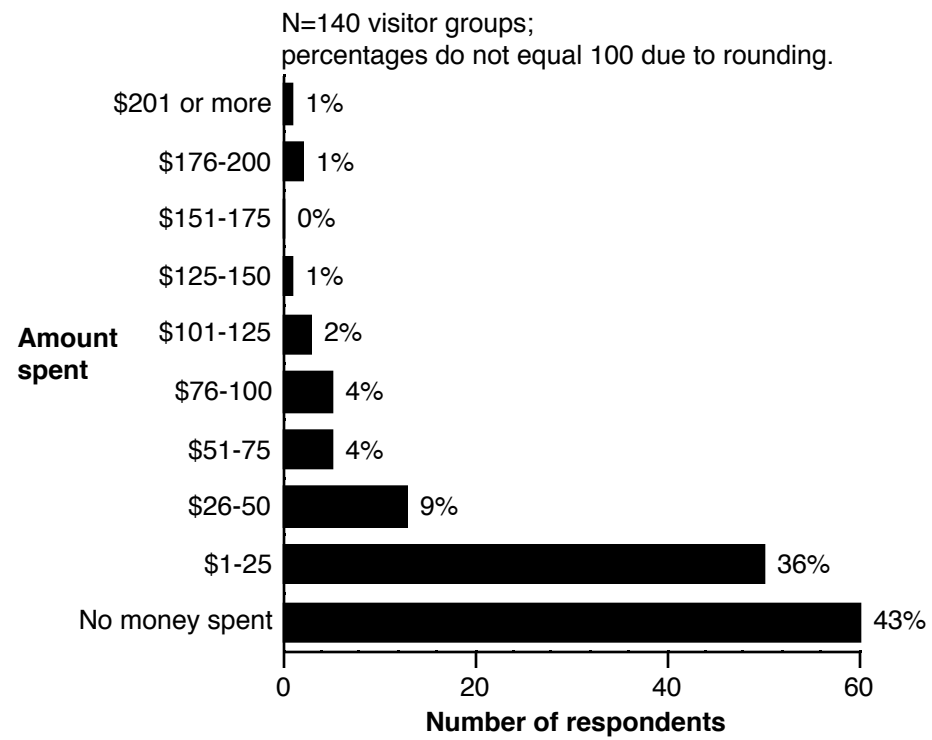


Figure 101: Expenditures for all other purchases in park

Expenditures outside park

Visitors listed their expenditures outside the park, defined as the Florida Keys, Miami area or Naples area. Three percent of visitor groups did not spend any money, 16% percent of visitor groups spent between \$1 and \$300 in total expenditures out of the park during this trip (see Figure 102).

Lodging accounted for 37% of total expenditures out of the park, followed by 21% for restaurants and bars, as shown in Figure 103.

The average visitor group expenditure in the park during this visit was \$1458. The median visitor group expenditure (50% of groups spent more and 50% of groups spent less) was \$990. The average per capita expenditure was \$562.

Hotels, motels, cabins, etc. out of the park: Twenty-five percent of visitor groups did not spend any money on lodging out of the park, another 22% spent from \$1 to \$300 (see Figure 104).

Camping fees and charges out of the park: Most visitor groups (81%) did not spend any money on camping fees and charges out of the park (see Figure 105).

Restaurants and bars out of the park: Eleven percent of visitor groups did not spend any money on restaurants and bars out of the park, while 45% spent between \$1 and \$200 (see Figure 106).

Groceries and take-out food out of the park: Twenty-one percent of visitor groups did not spend any money on groceries and take-out food out of the park (see Figure 107).

Gas and oil out of the park: Twenty-five percent of visitor groups did not spend any money on gas and oil out of the park, while 44% spent between \$1 and \$50 (see Figure 108).

Other transportation expenses out of the park: Twenty percent of visitor groups did not spend any money on other transportation expenses out of the park (see Figure 109).

Admissions, recreation, and entertainment fees out of park: Thirty-seven percent of visitor groups did not spend any money on admissions, recreation, and entertainment fees out of the park, while 22% spent between \$1 and \$50 (see Figure 110).

Guide fees and charge: Over two-thirds of visitor groups (68%) did not spend any money on guide fees and charges out of the park (see Figure 111).

Other purchases out of park: Sixteen percent of visitor groups (68%) did not spend any money on other purchases out of the park (see Figure 112).

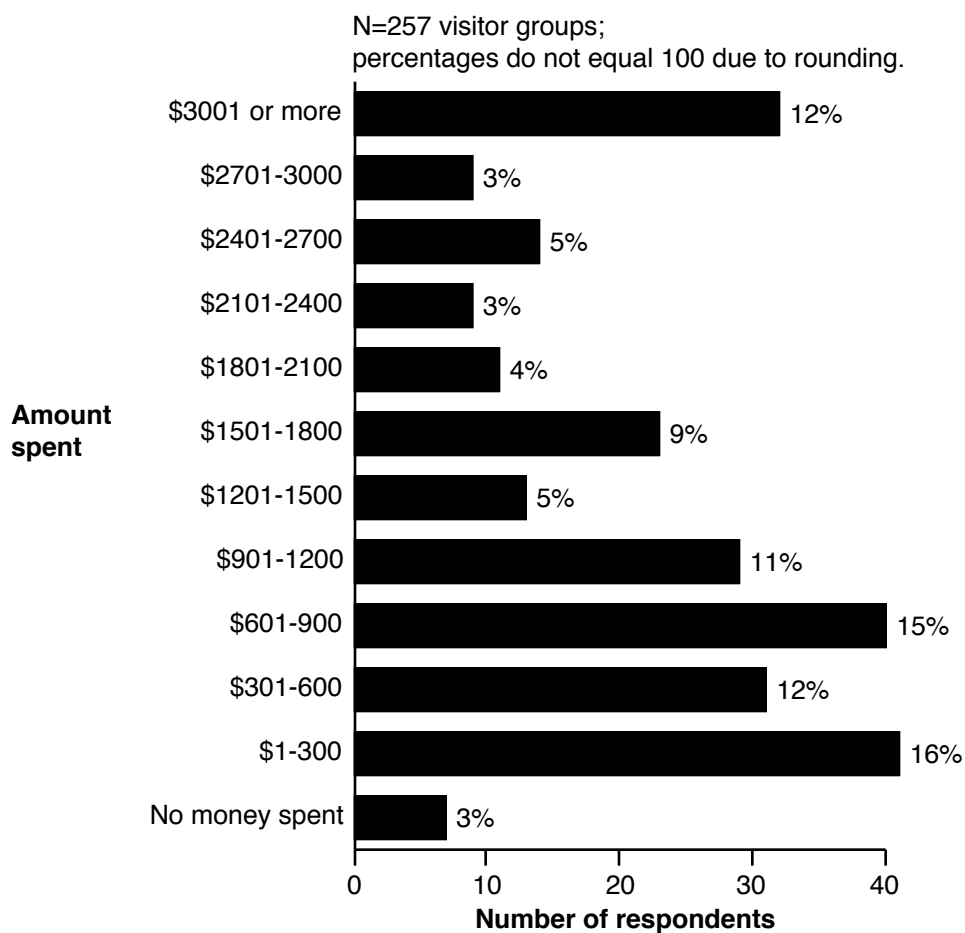


Figure 102: Total expenditures out of park

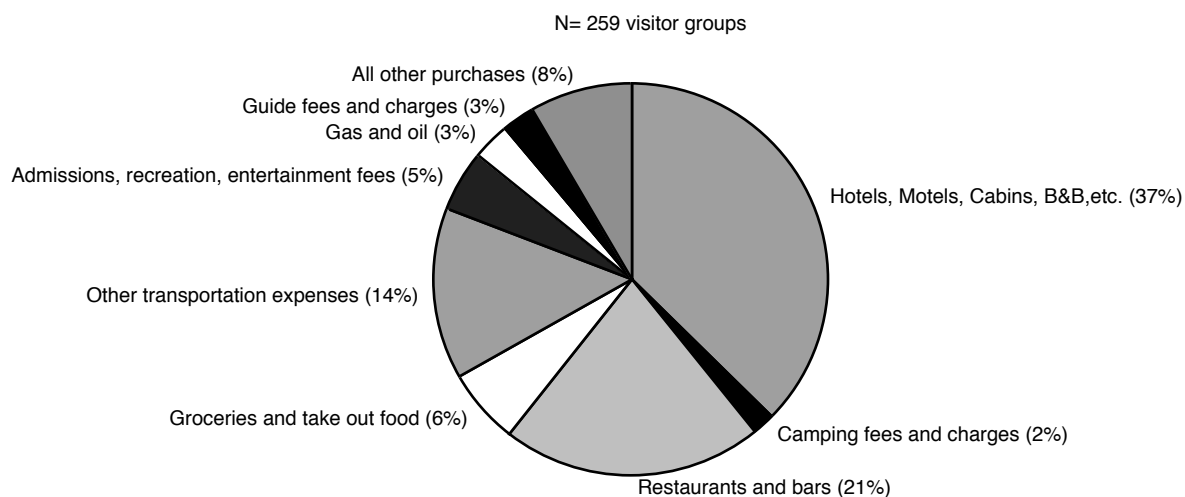


Figure 103: Proportion of expenditures out of park

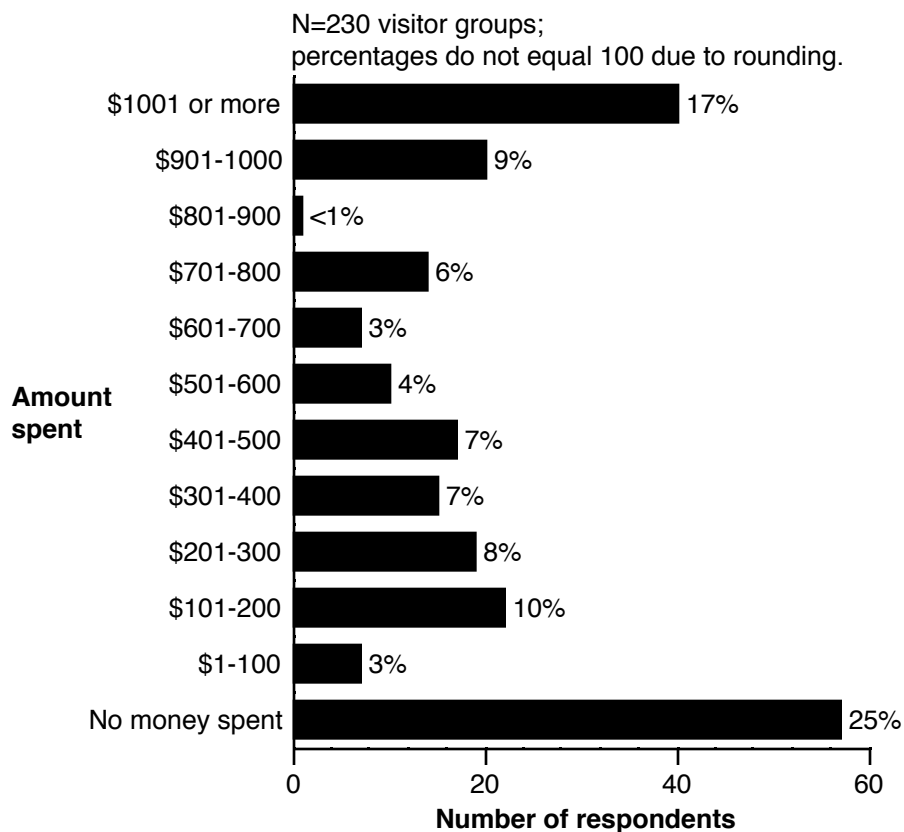


Figure 104: Expenditures for hotels, motels, cabin, B&B, etc. out of park

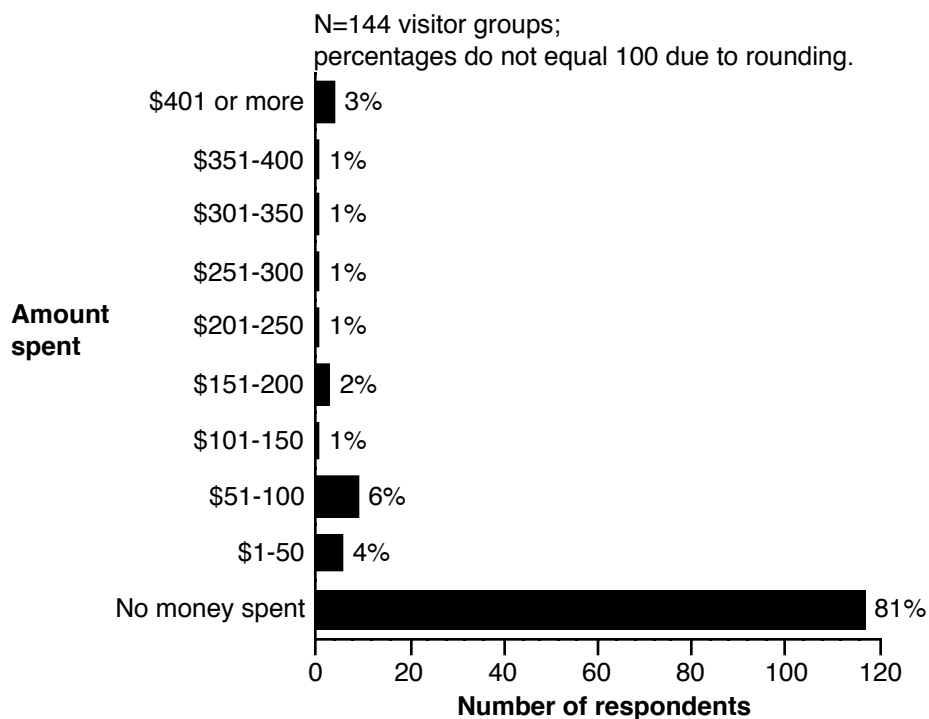


Figure 105: Expenditures for camping fees and charges out of park

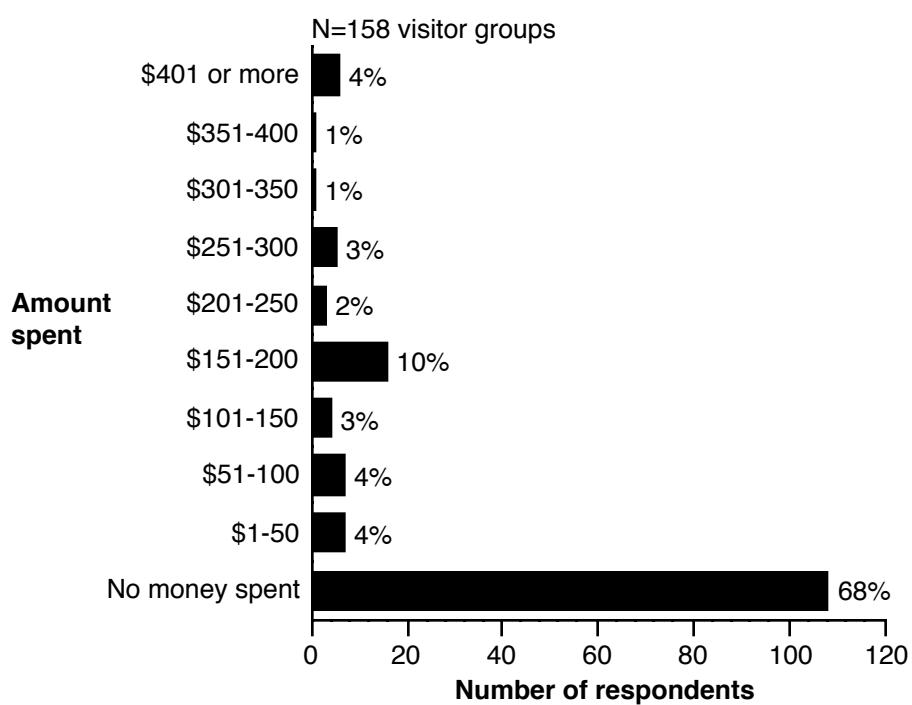


Figure 106: Expenditures for guide fees and charges out of park

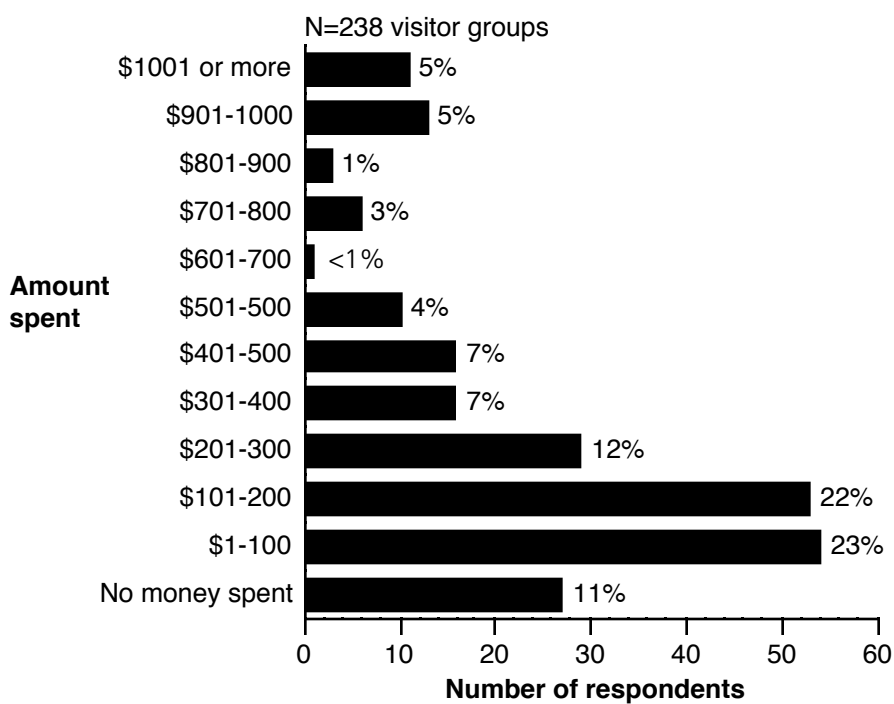


Figure 107: Expenditures for restaurants and bars out of park

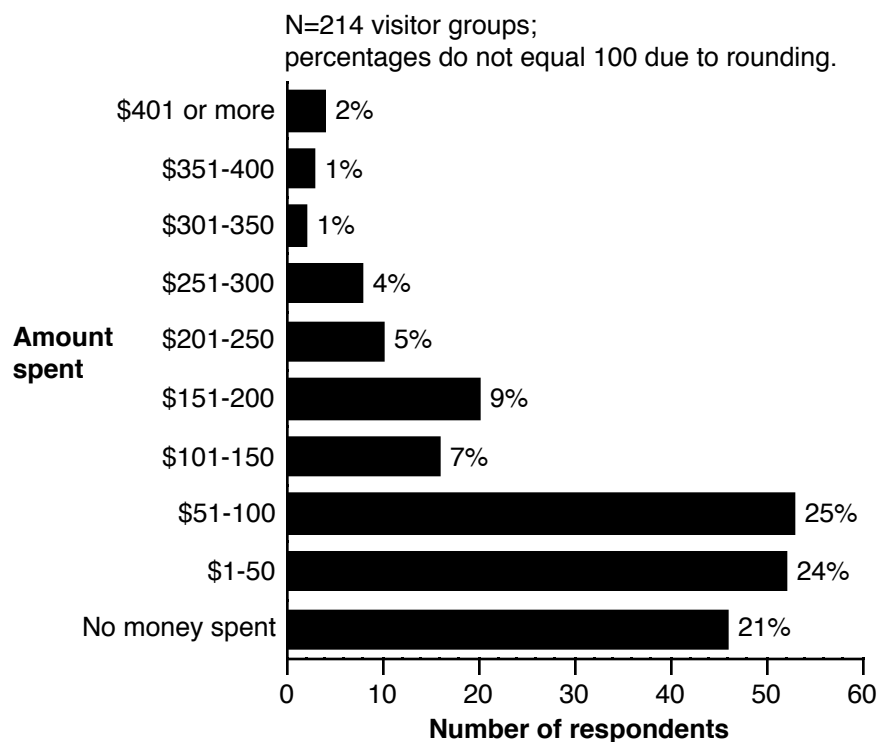


Figure 108: Expenditures for groceries and take-out food out of park

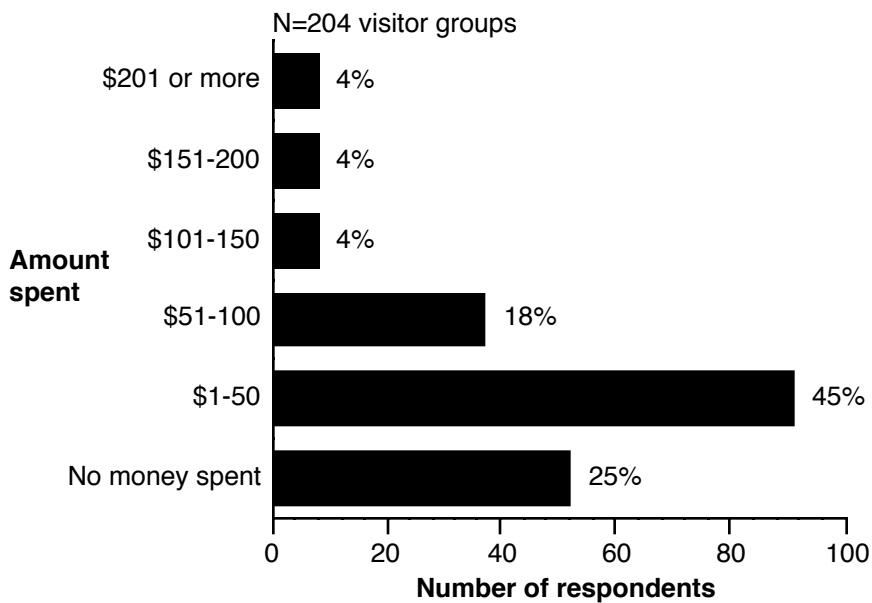


Figure 109: Expenditures for gas and oil out of park

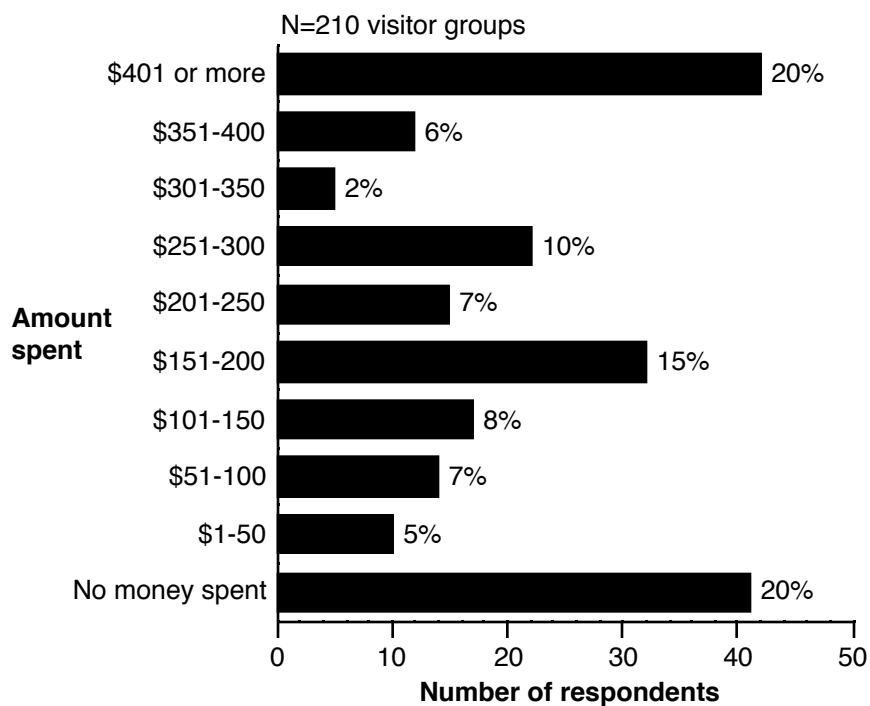


Figure 110: Expenditures for other transportation expenses out of park

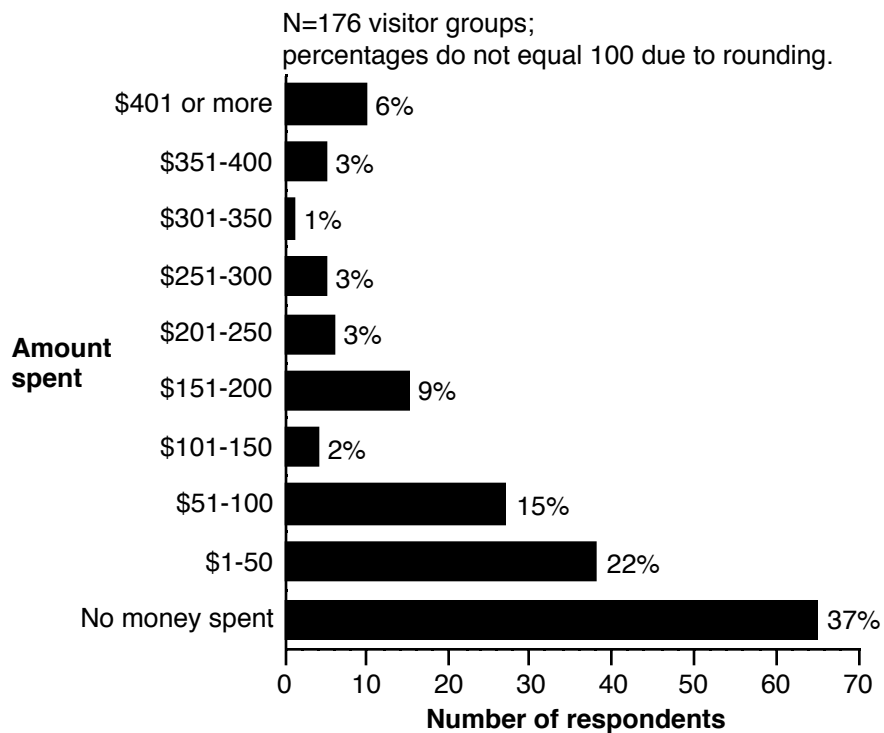


Figure 111: Expenditures for admissions, recreation, and entertainment fees out of park

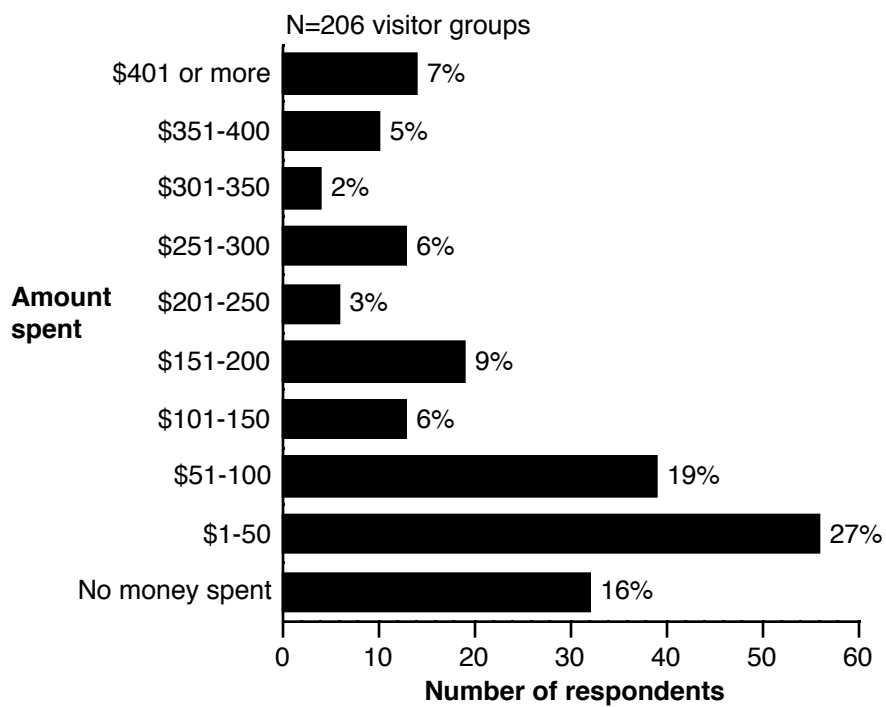


Figure 112: Expenditures for all other purchases out of park

Opinions about park's national significance

Visitor groups were given the following information and question to answer: "Dry Tortugas National Park was established because of its significance to the nation. In your opinion, what is the national significance of the park?" Visitor responses are listed in Table 8.

Table 8: Opinions about park's national significance

N=382 comments

Comment	Number of times mentioned
Historical value	159
An important ecosystem	37
Wildlife sanctuary	35
The fort structure/architecture	29
Importance to national security	23
Natural beauty	20
Coral reefs	11
Nesting area for birds	11
Dr. Mudd's imprisonment	10
Show our men power/nation's strength	9
Uniqueness	8
Good place for educational activities	7
Good place for recreational activities	6
As important as other national parks	4
Show failures of government before it was a park	4
Solitude	4
Don't know	3
Importance to public enjoyment	2

Visitor groups were asked: "For any of the following elements that you and your group experienced in Dry Tortugas National Park, indicate how they affected your park experience." Table 9 lists the elements and shows how each element affected visitors' park experience. Among those elements, interaction with park staff/concessionaire (70%), condition of vegetation (49%), and availability of shade (44%) received the highest ratings of adding to visitors' experience. Noise from generators/construction work (48%), noise from aircraft engines (26%), and availability of shade (22%) were the most common sources that detracted from visitors' experience.

**Opinions about
how selected
elements
affected park
experience**

Table 9: Elements' effect on visitor experience percentages do not equal 100 due to rounding.						
Elements affect on visitor experience	Added to		No effect		Detracted from	
	N	percent	N	percent	N	percent
Noise from:						
▪ Boat motors, N=273	2	1%	216	79%	55	20%
▪ Other visitors, N=272	16	6%	204	75%	52	19%
▪ Aircraft engines, N=278	8	3%	199	72%	71	26%
▪ Generators/construction work, N=272	3	1%	138	51%	131	48%
Availability of shade, N=281	125	44%	94	33%	62	22%
Condition of vegetation, N=276	135	49%	127	46%	14	5%
Interaction with park staff/ concessionaire, N=277	193	70%	80	29%	4	1%
Other visitors in water (on trails), N=280	49	18%	202	72%	29	10%
Other visitors around fort (on trails), N=279	51	18%	204	73%	24	9%

Opinions about reducing the number of visitors

Visitor groups were asked: "In order to provide a high quality visitor experience and protect park resources at Dry Tortugas National Park in the future, would you and your group support modestly reducing the number of visitors to the park each day, even if this could affect your plans to visit the park?" Fifty percent of visitor groups supported reducing number of visitors, 33% did not support the reduction, and another 17% were "not sure," (see Figure 113). The reasons for visitors' answers are shown in Table 10.

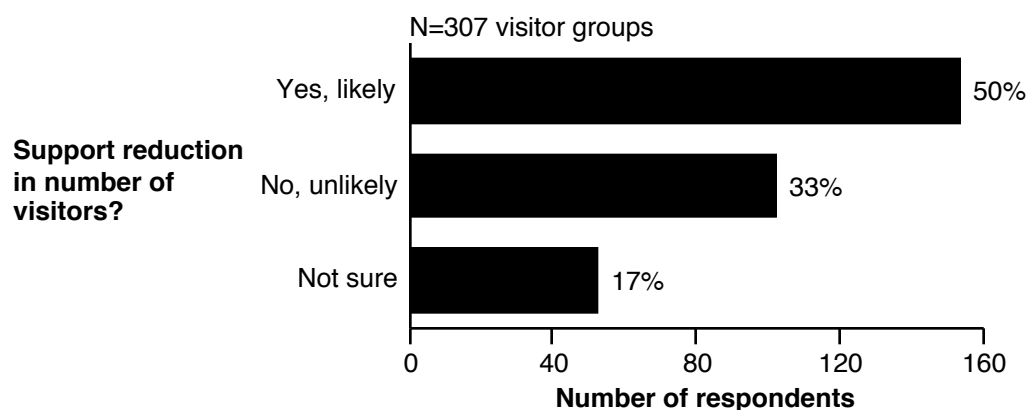


Figure 113: Opinions about reducing number of visitors in future

Table 10: Reasons for answers concerning reduction in number of visitors

N=269 comments

Comment	Number of times mentioned
"YES" answers	
To protect resources from visitor impact	65
Fewer visitors=better visit	38
Too crowded now	17
To keep it in its present condition	4
Snorkeling crowded	3
Keep reservations to limit use	3
Did not experience high visitation, but keep it limited	2
Modest reduction in visitors only	2
Do not commercialize	2
Picnic areas/beaches already crowded	2
Other comments	7

Table 10: (continued)

Comment	Number of times mentioned
"NO" answers	
Not crowded	57
Do not eliminate visitors from park	7
Keep flexible--too remote to restrict visitors	4
Others should be able to experience	4
Want to be able to come anytime	3
Allow no more visitors than currently	3
Other comments	11
"NOT SURE" answers	
Not sure of current number of visitors--visit was fine	10
Too long a trip to prohibit visit (private need anchorage)	5
Should be able to visit anytime	4
Current number of visitors okay	4
Visited without ferry there--experience different when ferry there	3
Other comments	9

**Interest in
proposed boat
tour**

Park managers are considering adding a new boat tour of the park. This tour in a small boat may include camping overnight at Dry Tortugas NP. Visitor groups were asked: "On a future visit, would you and your group be interested in such a trip?" Fifty-six percent of visitor groups indicated they would be interested in taking a new boat tour, 33% indicated they would not be interested, and 11% were unsure (see Figure 114).

If the answer was yes, visitor groups were also asked what types of activities they would be interested in doing and the locations they would like to participate in such activities. As shown in Figure 115, the activity in which visitors were most interested was snorkeling (91%). "Other" activities included birdwatching, fishing, camping, swimming, kayaking, photography, relaxing, and learning history.

The locations to visit on the new boat tour that received the highest proportions of responses were Loggerhead Key (64%) and Windjammer Wreck (49%) (see Figure 116). "Other" locations included any locations in the park, Bush Key, Garden Key, Long Key and the best locations for viewing turtles, birds and coral reefs.

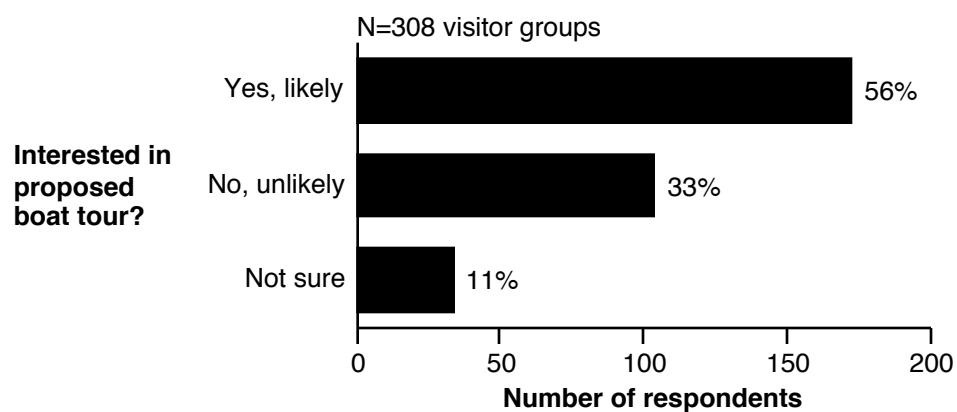


Figure 114: Interested in taking proposed boat tour

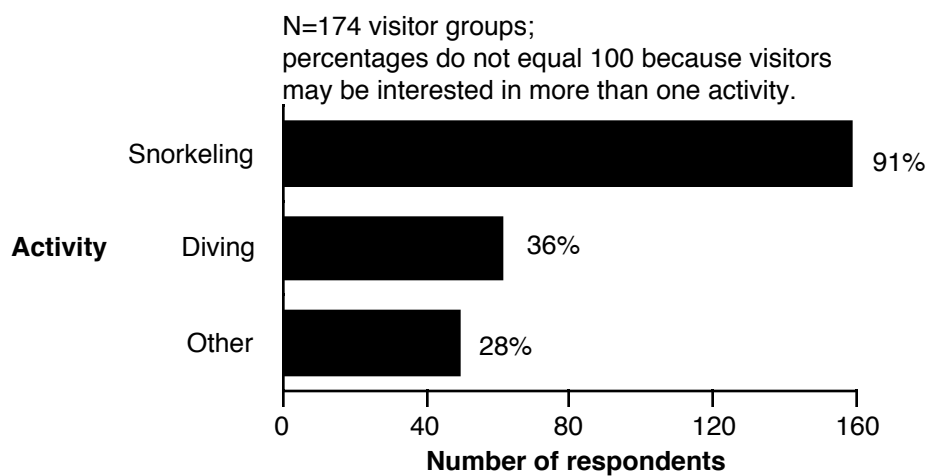


Figure 115: Type of activities for proposed boat tour

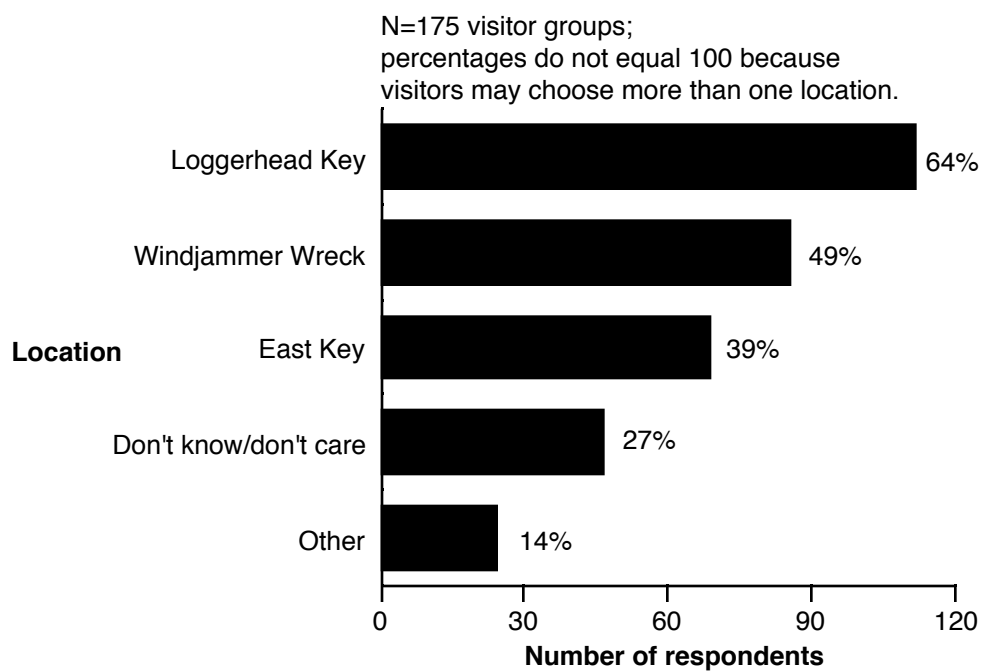


Figure 116: Preferred locations for proposed boat tour

**Interest in
bookstore sale
items**

Visitor groups were asked what types of items they would like to be available for purchase in the bookstore sales areas. Fifty-three percent of the groups who responded to this question were not interested in sales items. As shown in Figure 117, over one-half of visitor groups were interested in gifts/souvenir items (55%), and publications (53%). "Other" interested items included T-shirts, postcards, bottled water, wildlife posters, educational materials and books.

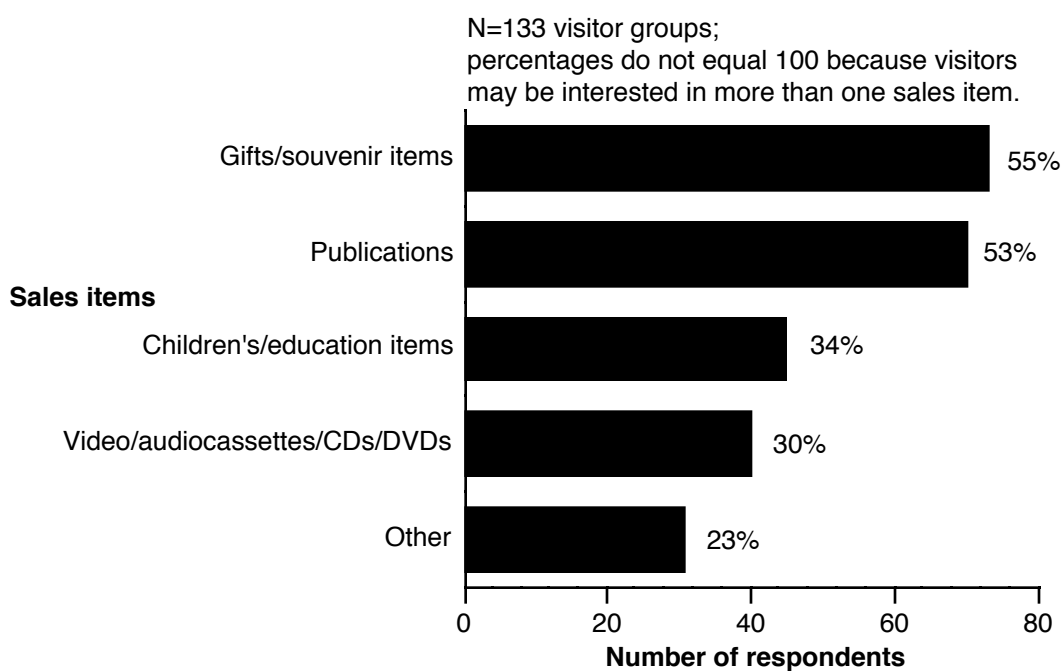


Figure 117: Bookstore sales items

The following information and question were posed to visitors:
 "A visitor center in Key West is being planned, which would provide information about Dry Tortugas NP. What kinds of information and services would you like to have available?" Visitors' responses are listed in Table 11.

**Preferred
information and
services at
proposed Key
West Visitor
Center**

**Table 11: Information and services preferred at
proposed Key West visitor center**

N=347 comments

Comment	Number of times mentioned
History of fort	67
Information about wildlife in the area	28
Information about camping opportunities	23
Video tour of fort	18
Alternative ways to get there	16
Information about recreational opportunities	16
Maps with highlights	15
Information about best sites for snorkeling	13
Books/educational publications	11
Facts of fort	11
Information on birds	11
Available rangers/staff to talk to	10
Prices of services	10
Brochures	8
Had enough information; don't need anything else	8
Ecology	7
Update about sea and weather condition	7
Visitors' education	7
Availability of facilities	6
Boat/ferry schedule	6
What to take on trip	6
Preservation efforts	5
Souvenir/gift items	5
Historic photos	4
History of park	4
Information about availability of tours	4
Natural history	4
Exhibition of artifacts	3
Information about fish	3
Scientific information about coral reefs	3
Don't advertise the park	2
Geography of area	2
Other	4

**Overall quality of
visitor services**

Visitor groups were asked to rate the overall quality of the visitor services provided at Dry Tortugas NP during this visit. Most visitor groups (93%) rated services as "very good" or "good" (see Figure 118). No visitor groups rated the overall quality of services provided at Dry Tortugas NP as "very poor."

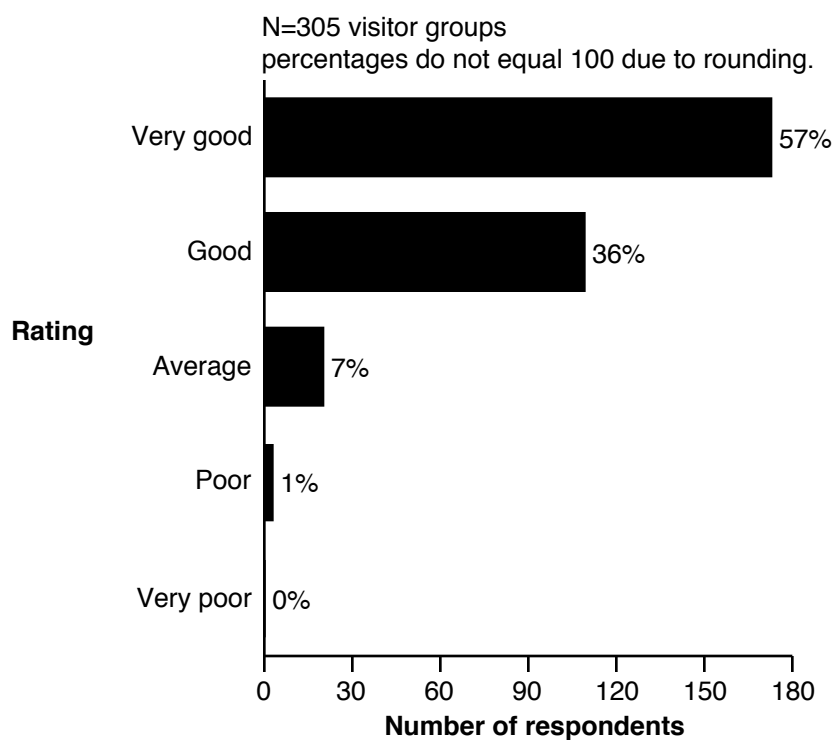


Figure 118: Overall quality of visitor services

Visitor groups were asked what they liked most about their visit to Dry Tortugas NP. Ninety-four percent of visitor groups (293 groups) responded to this question. A summary of their responses is listed below in Table 12 and complete copies of visitor responses are contained in the appendix.

What visitors liked most

Table 12: What visitors liked most

N=465 comments;
some visitors made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Excellent staff	8
INTERPRETIVE SERVICES	
Learning history of fort	34
Guided tour of fort	21
RESOURCE MANAGEMENT	
Seeing wildlife	23
Birding	22
Beach	20
Fort structure	13
Pristine water	11
Ocean	8
Coral reef	4
Lack of commercialization	3
Seeing a dolphin	2
GENERAL IMPRESSIONS	
Snorkeling	72
Self-tour of fort	71
Natural beauty	48
Solitude	39
Uniqueness of experience	14
Walking around	12
Swimming	10
Boat trip	6
Seaplane ride	6
Camping	6
Perfect weather	3
Fishing	3
Sunbathing	2
Being outside	2
Other comments	2

What visitors liked least

Visitors were also asked what they liked least about this visit to Dry Tortugas NP. Eighty percent of visitor groups (249 groups) responded. Their comments are summarized below (see Table 13).

Table 13: What visitors liked least

N=258 comments;
some visitors made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Comment	1
INTERPRETIVE SERVICES	
Rangers did not give tour	7
Lack of adequate information	3
FACILITIES & MAINTENANCE	
Lack of shade	17
Noise from construction	16
Not enough restrooms	15
No fresh water	14
Poor quality restrooms	14
Lack of changing area	8
Lack of picnic tables	5
Other comments	2
POLICY	
Park used by commercial fishermen	4
Lack of law enforcement for visitors who disturb nature	4
RESOURCE MANAGEMENT	
Too many people	38
Obvious endangerment of ecosystem	4
Closures/restrictions to parts of park	3
GENERAL IMPRESSIONS	
Not enough time	18
Long ride	18
Bad weather	14
Disappointing snorkeling	13
Heat	7
Inappropriate behavior of other visitors	7
Seaplane noise distracting	7
Nothing to complain about	7
Lack of food/concession stand	6
Choppy boat ride	3
Transportation expensive	3

Visitor groups were asked: "If you were a manager planning for the future of Dry Tortugas NP, what would you propose?" Seventy-five percent of visitor groups (234 groups) responded to this question. A summary of their responses is listed below in Table 14 and complete copies of visitor responses are contained in the appendix.

Planning for the future

Table 14: Planning for the future

N=399 comments;
some visitors made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Need more staff available to answer questions	5
INTERPRETIVE SERVICES	
Focus on visitor education	35
All tours should be led by rangers	19
Provide more information on wildlife	7
Provide information about best snorkeling site	6
Provide more signs with historical information	6
Provide re-enactment or model	6
Need more information prior to visit	4
Provide waterproof charts for bird/wildlife identification	4
Improve video	4
Provide binoculars for rent	2
Enlarge visitor center	2
Provide spotting scopes for wildlife viewing	2
FACILITIES/MAINTENANCE	
Restore more of fort	28
Provide more shade	17
Provide changing area with fresh water	14
Provide more restrooms	13
Improve restrooms	13
Need more picnic tables	9
Eliminate noise problem	5
Charge park entrance fee	5
Clean up unused bricks	3
Provide better access for handicapped	2
Provide more trash cans	2
Provide more campsites	2

Table 14: (continued)

Comment	Number of times mentioned
POLICIES	
Limit number of visitors	70
Enforce regulations to protect natural resources	12
Provide concession stand/snack bar	10
Limit access to camping	8
Provide more public access	7
Limit number of boats	7
Provide boat tour to other locations in park	6
Limit seaplane access	5
Offer more recreational activities	5
Limit access to coral reef	4
Prohibit commercial fishing boats in harbor except for bad weather	3
Charge mooring fees for boats	3
RESOURCE MANAGEMENT	
Priority is to protect wildlife/natural resources	25
GENERAL IMPRESSIONS	
Do not change anything	10
Provide small B&B/bungalow/cabin	3
Provide kayak rentals	2
Other comments	4

Fifty-two percent of visitor groups (161 groups) wrote additional comments, which are included in the separate appendix of this report. Their comments about Dry Tortugas NP are summarized below (see Table 15. Some comments offer specific suggestions on how to improve the park; others describe what visitors enjoyed or did not enjoy about their visit.

Comment summary

Table 15: Additional comments

N=216 comments;
some visitors made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Rangers knowledgeable/helpful	12
Staff friendly/helpful	12
Need more rangers	2
INTERPRETIVE SERVICES	
Informative/educational	8
Educate visitors about protecting environment	4
FACILITIES & MAINTENANCE	
Very clean	2
Other comment	1
POLICY	
Allow less visitors for better experience	6
Glad park management wants visitor opinions	2
Congress needs to spend more to restore park	2
Other comments	2
RESOURCE MANAGEMENT	
Preserve it	8
GENERAL IMPRESSIONS	
Enjoyed visit	82
Beautiful	14
Would like to camp next time	10
Appreciate job done by NPS	8
Good food	6
Would like to return	6
Trip well organized	5
Trip fulfilled dream	4
Trip too short	4
Trip too expensive	4
Trip was highlight of trip to Florida Keys	3
Do not change anything	3
Enjoyed snorkeling	2
Enjoyed ferry ride with narration	2
Enjoyed remoteness	2

Dry Tortugas National Park Visitor Study Additional Analysis VSP Report 132

The Visitor Services Project (VSP) staff offers the opportunity to learn more from VSP visitor study data.

Additional Analysis

Additional analysis can be done using the park's VSP visitor study data that was collected and entered into the computer. Two-way and three-way cross tabulations can be made of any of the characteristics listed below. Be as specific as possible-you may select a single program/service/facility instead of all that were listed in the questionnaire. Also send your name, address and phone number.

- | | | |
|--|---|---|
| • Source of information | • With school/educational group? | • Camping fee expenditures in park |
| • Length of stay | • Group size | • Other transportation expenditures in park |
| • Forms of transportation used | • Primary reason for South Florida visit | • All other purchases in park |
| • Reasons for visiting | • Gender | • Lodging expenditure out of park |
| • Activities | • Age | • Camping fee expenditures out of park |
| • Importance of activities | • State/country of residence | • Guide fees expenditures out of park |
| • Locations visited | • Number of visits in past 12 months (including this visit) | • Restaurant/bar expenditures out of park |
| • Locations fished | • Number of visits 2 to 5 years ago | • Groceries/take-out food expenditures out of park |
| • Visitor services/facilities used | • Visitors with disabilities/ impairments? | • Gas/oil expenditures out of park |
| • Importance of visitor services/ facilities | • Type of disability/impairment | • Other transportation expenditures out of park |
| • Quality of visitor services/ facilities | • Encounter access/service problems in park? | • Admissions/recreation/ entertainment expenditures out of park |
| • Commercial services/facilities used | • Importance of natural, scenic, cultural resources | • All other purchases out of park |
| • Importance of commercial services/facilities | • Selected elements' effect on visitor experience | • Number of adults covered by expenses |
| • Quality of commercial services/facilities | • Support reduction in visitors? | • Number of children covered by expenses |
| • Group size | • Interest in proposed new boat tour | • Unfulfilled visitor expectations? |
| • Group type | • Activities on proposed boat tour | • Preferred bookstore sales items |
| • With guided tour group? | • Locations for proposed boat tour | • Overall quality of services |

Phone/send requests to:

Visitor Services Project, PSU
College of Natural Resources
Resource Recreation & Tourism Department
P.O. Box 441139
University of Idaho
Moscow, Idaho 83844-1139

Phone: 208-885-7863
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QUESTIONNAIRE

Visitor Services Project Publications

Reports 1-6 (pilot studies) are available from the University of Idaho Park Studies Unit. All other VSP reports listed are available from the parks where the studies were conducted or from the UI CPSU. All studies were conducted in summer unless otherwise noted.

1982

1. Mapping interpretive services: A pilot study at Grand Teton National Park.

1983

2. Mapping interpretive services: Identifying barriers to adoption and diffusion of the method.
3. Mapping interpretive services: A follow-up study at Yellowstone National Park and Mt Rushmore National Memorial.
4. Mapping visitor populations: A pilot study at Yellowstone National Park.

1985

5. North Cascades National Park Service Complex
6. Crater Lake National Park

1986

7. Gettysburg National Military Park
8. Independence National Historical Park
9. Valley Forge National Historical Park

1987

10. Colonial National Historical Park (summer & fall)
11. Grand Teton National Park
12. Harpers Ferry National Historical Park
13. Mesa Verde National Park
14. Shenandoah National Park
15. Yellowstone National Park
16. Independence National Historical Park: Four Seasons Study

1988

17. Glen Canyon National Recreational Area
18. Denali National Park and Preserve
19. Bryce Canyon National Park
20. Craters of the Moon National Monument

1989

21. Everglades National Park (winter)
22. Statue of Liberty National Monument
23. The White House Tours, President's Park (summer)
24. Lincoln Home National Historical Site
25. Yellowstone National Park
26. Delaware Water Gap National Recreation Area
27. Muir Woods National Monument

1990

28. Canyonlands National Park (spring)
29. White Sands National Monument
30. National Monuments, Washington, D.C.
31. Kenai Fjords National Park
32. Gateway National Recreation Area
33. Petersburg National Battlefield
34. Death Valley National Monument
35. Glacier National Park
36. Scott's Bluff National Monument
37. John Day Fossil Beds National Monument

1991

38. Jean Lafitte National Historical Park (spring)
39. Joshua Tree National Monument (spring)
40. The White House Tours, President's Park (spring)
41. Natchez Trace Parkway (spring)
42. Stehekin-North Cascades NP/Lake Chelan National Recreation Area
43. City of Rocks National Reserve
44. The White House Tours, President's Park (fall)

1992

45. Big Bend National Park (spring)
46. Frederick Douglass National Historic Site (spring)
47. Glen Echo Park (spring)
48. Bent's Old Fort National Historic Site
49. Jefferson National Expansion Memorial
50. Zion National Park
51. New River Gorge National River
52. Klondike Gold Rush National Historical Park (AK)
53. Arlington House-The Robert E. Lee Memorial

1993

54. Belle Haven Park/Dyke Marsh Wildlife Preserve (spring)
55. Santa Monica Mountains National Recreation Area (spring)
56. Whitman Mission National Historic Site
57. Sitka National Historical Park
58. Indiana Dunes National Lakeshore (summer)
59. Redwood National Park
60. Channel Islands National Park
61. Pecos National Historical Park
62. Canyon de Chelly National Monument
63. Bryce Canyon National Park (fall)

Visitor Services Project Publications (continued)
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1994

- 64. Death Valley National Monument Backcountry (winter)
- 65. San Antonio Missions National Historical Park (spring)
- 66. Anchorage Alaska Public Lands Information Center
- 67. Wolf Trap Farm Park for the Performing Arts
- 68. Nez Perce National Historical Park
- 69. Edison National Historic Site
- 70. San Juan Island National Historical Park
- 71. Canaveral National Seashore
- 72. Indiana Dunes National Lakeshore (fall)
- 73. Gettysburg National Military Park (fall)

1995

- 74. Grand Teton National Park (winter)
- 75. Yellowstone National Park (winter)
- 76. Bandelier National Monument
- 77. Wrangell-St. Elias National Park & Preserve
- 78. Adams National Historic Site
- 79. Devils Tower National Monument
- 80. Manassas National Battlefield Park
- 81. Booker T. Washington National Monument
- 82. San Francisco Maritime National Historical Park
- 83. Dry Tortugas National Park

1996

- 84. Dry Tortugas National Park (spring)
- 85. Chiricahua National Monument (spring)
- 86. Fort Bowie National Historic Site (spring)
- 87. Great Falls Park, Virginia (spring)
- 88. Great Smoky Mountains National Park
- 89. Chamizal National Memorial
- 90. Death Valley National Park (fall)
- 91. Prince William Forest Park (fall)

1997

- 92. Great Smoky Mountains National Park (summer & fall)
- 93. Virgin Islands National Park (winter)
- 94. Mojave National Preserve (spring)
- 95. Martin Luther King, Jr., National Historic Site (spring)
- 96. Lincoln Boyhood Home National Memorial
- 97. Grand Teton National Park
- 98. Bryce Canyon National Park
- 99. Voyageurs National Park

1998

- 101. Jean Lafitte National Historical Park & Preserve (spring)
- 102. Chattahoochee River National Recreation Area (spring)
- 103. Cumberland Island National Seashore (spring)
- 104. Iwo Jima/Netherlands Carillon Memorials
- 105. National Monuments & Memorials, Washington, D.C.
- 106. Klondike Gold Rush National Historical Park (AK)
- 107. Whiskeytown National Recreation Area
- 108. Acadia National Park

1999

- 109. Big Cypress National Preserve (winter)
- 110. San Juan National Historic Site (Puerto Rico)
- 111. Saint Croix National Scenic Riverway
- 112. Rock Creek Park
- 113. New Bedford Whaling National Historical Park
- 114. Glacier Bay National Park & Preserve
- 115. Kenai Fjords National Park & Preserve
- 116. Lassen Volcanic National Park
- 117. Cumberland Gap National Historic Park (fall)

2000

- 118. Haleakala National Park (spring)
- 119. White House Tour and White House Visitor Center (spring)
- 120. USS Arizona Memorial
- 121. Olympic National Park
- 122. Eisenhower National Historic Site
- 123. Badlands National Park
- 124. Mount Rainier National Park

2001

- 125. Biscayne National Park (spring)
- 126. Colonial National Historical Park (Jamestown)
- 127. Shenandoah National Park
- 128. Pictured Rocks National Lakeshore
- 129. Crater Lake National Park
- 130. Valley Forge National Historical Park

2002

- 131. Everglades National Park
- 132. Dry Tortugas National Park

For more information about the Visitor Services Project, please contact the University of Idaho Park Studies Unit; phone (208) 885-7863.

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Visitor Services Project

Dry Tortugas National Park

Visitor Study Spring 2002

Appendix

Yen Le

Margaret Littlejohn

Report 132

January 2003

This volume contains a summary of visitors' comments for Questions 24, 25, 26, 27, 28 and 29. The summary is followed by visitors' unedited comments.

Yen Le is Research Assistant and Margaret Littlejohn is National Park Service VSP Coordinator, based at the Park Studies Unit, Resource Recreation and Tourism Department, University of Idaho. We thank Todd Simmons, Uwe Doeringer, and the staff of Dry Tortugas National Park for their assistance with this study. The VSP acknowledges the Public Opinion Lab of the Social and Economic Sciences Research Center, Washington State University, for its technical assistance.

What visitors liked most

N=465 comments;
some visitors made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Excellent staff	8
INTERPRETIVE SERVICES	
Learning history of fort	34
Guided tour of fort	21
RESOURCE MANAGEMENT	
Seeing wildlife	23
Birding	22
Beach	20
Fort structure	13
Pristine water	11
Ocean	8
Coral reef	4
Lack of commercialization	3
Seeing a dolphin	2
GENERAL IMPRESSIONS	
Snorkeling	72
Self-tour of fort	71
Natural beauty	48
Solitude	39
Uniqueness of experience	14
Walking around	12
Swimming	10
Boat trip	6
Seaplane ride	6
Camping	6
Perfect weather	3
Fishing	3
Sunbathing	2
Being outside	2
Other comments	2

What visitors liked least

N=258 comments;
some visitors made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Comment	1
INTERPRETIVE SERVICES	
Rangers did not give tour	7
Lack of adequate information	3
FACILITIES & MAINTENANCE	
Lack of shade	17
Noise from construction	16
Not enough restrooms	15
No fresh water	14
Poor quality restrooms	14
Lack of changing area	8
Lack of picnic tables	5
Other comments	2
POLICY	
Park used by commercial fishermen	4
Lack of law enforcement for visitors who disturb nature	4
RESOURCE MANAGEMENT	
Too many people	38
Obvious endangerment of ecosystem	4
Closures/restrictions to parts of park	3
GENERAL IMPRESSIONS	
Not enough time	18
Long ride	18
Bad weather	14
Disappointing snorkeling	13
Heat	7
Inappropriate behavior of other visitors	7
Seaplane noise distracting	7
Nothing to complain about	7
Lack of food/concession stand	6
Choppy boat ride	3
Transportation expensive	3

Planning for the future

N=399 comments;
some visitors made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Need more staff available to answer questions	5
INTERPRETIVE SERVICES	
Focus on visitor education	35
All tours should be led by rangers	19
Provide more information on wildlife	7
Provide information about best snorkeling site	6
Provide more signs with historical information	6
Provide re-enactment or model	6
Need more information prior to visit	4
Provide waterproof charts for bird/wildlife identification	4
Improve video	4
Provide binoculars for rent	2
Enlarge visitor center	2
Provide spotting scopes for wildlife viewing	2
FACILITIES/MAINTENANCE	
Restore more of fort	28
Provide more shade	17
Provide changing area with fresh water	14
Provide more restrooms	13
Improve restrooms	13
Need more picnic tables	9
Eliminate noise problem	5
Charge park entrance fee	5
Clean up unused bricks	3
Provide better access for handicapped	2
Provide more trash cans	2
Provide more campsites	2
POLICIES	
Limit number of visitors	70
Enforce regulations to protect natural resources	12
Provide concession stand/snack bar	10
Limit access to camping	8
Provide more public access	7
Limit number of boats	7
Provide boat tour to other locations in park	6
Limit seaplane access	5
Offer more recreational activities	5

Planning for the future (continued)

Comment	Number of times mentioned
POLICY (continued)	
Limit access to coral reef	4
Prohibit commercial fishing boats in harbor except for bad weather	3
Charge mooring fees for boats	3
RESOURCE MANAGEMENT	
Priority is to protect wildlife/natural resources	25
GENERAL IMPRESSIONS	
Do not change anything	10
Provide small B&B/bungalow/cabin	3
Provide kayak rentals	2
Other comments	4

Additional comments

N=216 comments;
some visitors made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Rangers knowledgeable/helpful	12
Staff friendly/helpful	12
Need more rangers	2
INTERPRETIVE SERVICES	
Informative/educational	8
Educate visitors about protecting environment	4
FACILITIES & MAINTENANCE	
Very clean	2
Other comment	1
POLICY	
Allow less visitors for better experience	6
Glad park management wants visitor opinions	2
Congress needs to spend more to restore park	2
Other comments	2
RESOURCE MANAGEMENT	
Preserve it	8
GENERAL IMPRESSIONS	
Enjoyed visit	82
Beautiful	14
Would like to camp next time	10
Appreciate job done by NPS	8
Good food	6
Would like to return	6
Trip well organized	5
Trip fulfilled dream	4
Trip too short	4
Trip too expensive	4
Trip was highlight of trip to Florida Keys	3
Do not change anything	3
Enjoyed snorkeling	2
Enjoyed ferry ride with narration	2
Enjoyed remoteness	2
