

**Cooperative National Park
Resources Studies Unit**

ARIZONA

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COOPERATIVE NATIONAL PARK RESOURCES STUDIES UNIT

University of Arizona/Tucson - National Park Service

The Cooperative National Park Resources Studies Unit/University of Arizona (CPSU/UA) was established August 16, 1973. The unit is funded by the National Park Service and reports to the Western Regional Office, San Francisco; it is located on the campus of the University of Arizona and reports also to the Office of the Vice-President for Research. Administrative assistance is provided by the Western Archeological and Conservation Center, the School of Renewable Natural Resources, and the Department of Ecology and Evolutionary Biology. The unit's professional personnel hold adjunct faculty and/or research associate appointments with the University. The Materials and Ecological Testing Laboratory is maintained at the Western Archeological and Conservation Center, 1415 N. 6th Ave., Tucson, Arizona 85705.

The CPSU/UA provides a multidisciplinary approach to studies in the natural and cultural sciences. Funded projects identified by park management are investigated by National Park Service and university researchers under the coordination of the Unit Leader. Unit members also cooperate with researchers involved in projects funded by non-National Park Service sources in order to obtain scientific information on Park Service lands.

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TECHNICAL REPORT NO. 12

INTERNATIONAL VISITORS TO GRAND CANYON NATIONAL PARK

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SUMMARY

- This study was conducted between Memorial Day (May 30) and Labor Day (September 6) 1982.
- Total number of foreign visitors to Grand Canyon National Park during this period was 305,000 \pm 9,000.
- Visitors came from 112 different countries around the world.
- Germans, French, English, and Japanese contributed 48.7 percent to total foreign visitation at Grand Canyon National Park.
- Foreign one-day to foreign overnight visitor ratio was approximately 1:1. Approximate ratios for the south, north, and east gates were 1:1, 2:1, and 1:2 respectively.
- Different nationalities displayed different day to overnight ratios.
- Approximately 33 percent of all visitors to Grand Canyon were foreign visitors.
- 1846 questionnaires were returned by overnight foreign visitors.
- Many differences were found between foreign day tour visitors (surveyed by Machlis-Wenderoth 1981) and foreign overnight visitors when questionnaires from each group were compared.
- Questionnaire data revealed little difference between nationalities.
- Little is known about foreign visitor activities while at Grand Canyon National Park.

Introduction

For years tourism was an American phenomenon; the stereotype of the "Ugly American" abroad was, rightly or wrongly, widely recognized. Since World War II, however, this pattern has been changing. Large numbers of Americans still visit all corners of the globe; their numbers, like those of visitors to the United States, fluctuate somewhat with international monetary exchange rates, but now, visitors to the United States equal or exceed those traveling in the other direction (USNWR 1982).

To a large degree, this international travel has been the result of increased prosperity and increased consumptive capacity by the developed nations (Burkart and Medlick 1981). The numbers of visitors from third world countries have also been on the rise. In the mid to late 1970's the United States experienced a sharp rise in foreign tourists as the value of the dollar declined coupled with lower air fares and expanded United States marketing efforts. The 1980's began to bring a stronger dollar, higher air fares, and a drop in the real value of some foreign currencies; this is causing a slow down in United States visitations from some countries as, for example, Mexico (OECD Publications 1981). Figure 1 presents world-wide international tourist arrivals.

In 1978, the last year for which total visitation figures to the United States are available, the U.S. Department of Commerce (USDC) recorded a total of 19,842,182 foreign visitors. This figure was broken down for the 15 countries with the most visitors (a total of 17,678,394) and all other countries (2,163,788; see Table 1). Figures for Mexico are tabulations of SW434 forms required for all trips made by Mexicans other than border crosses; the rest are totals of Immigration I94 forms required of all other foreign tourists. The source of Canadian totals is uncertain because the United States has an open border with Canada.

Table 2, also from USDC, gives the regional distribution of foreign visitors to the United States in 1976 for 11 countries (excluding Canada) with the highest totals. Grand Canyon is located in the Frontier West Region.

National Park Service officials estimated that foreign visitors made over 22 million of the estimated 220 million visits to National Park System units in 1981 (Dateline NRPA 1981). While these figures are rather imprecise estimates, National Park Service officials do know that the Statue of Liberty, Grand Canyon, and Yellowstone, all units of the National Park System, rate along with Niagara Falls, New York City, and American Indians as the most often mentioned attractions that brought tourists to the United States. Obviously, in these days of significant United States trade deficits, the money spent by foreign tourists is important. The role of the unique American National Park System in attracting these visitors is also important.

In 1981, Machlis and Wenderoth (Machlis-Wenderoth 1982) conducted a study of foreign visitors to Grand Canyon National Park. They observed the behavior of foreign visitors who flew into Grand Canyon airport and were taken on a 3-hour tour of Grand Canyon National Park and vicinity (including lunch in Tusayan) and ending back at the airport. They also collected from these visitors

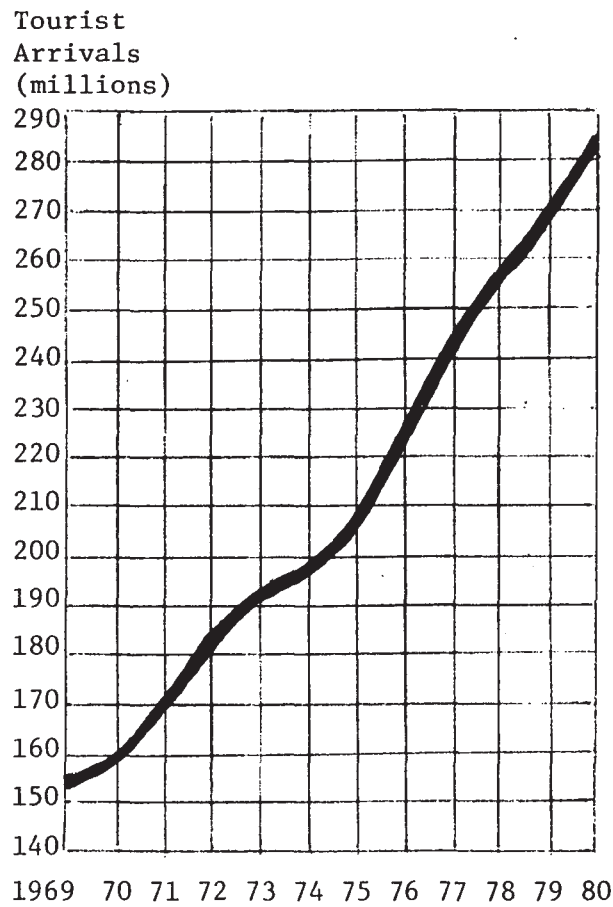


Figure 1. World-wide international tourist arrivals. After Waters 1981.

approximately 900 completed questionnaires. These questionnaires were in five languages (English, German, French, Spanish, and Japanese). Also as a part of this study, non-quantitative observations of foreign visitor actions were collected at various points within the park. Their results have been published in the report cited above.

The current study is to some extent a follow-up on the Machlis-Wenderoth study. However, there are major differences both in objectives and procedures. Researchers on this study sought a reasonably accurate estimate of total foreign visitation to Grand Canyon National Park between Memorial Day (30 May) and Labor Day (6 September) 1982, broken down by country. It was also decided

to use the Machlis, five language questionnaires to compare overnight foreign visitors to the park with the 3-hour tour visitors surveyed in the 1981 study.

Table 1. Arrivals to the United States, 1978.

Country	Number	% Change
Canada	11,938,839	- 1
Mexico	2,142,420	+ 6
Japan	886,447	+18
United Kingdom	757,127	+42
Germany	485,784	+32
France	259,818	+21
Venezuela	303,948	+46
Australia	179,496	+16
Italy	153,002	+25
Netherlands	141,021	+36
Switzerland	122,178	+37
Sweden	98,518	+30
New Zealand	83,479	+27
Spain	67,825	+15
Belgium	61,492	+36
Subtotal (15 countries)	17,678,394	+ 5
GRAND TOTAL (All countries)	19,842,182	+ 7

Source: USDC 1980

Estimation of Total Foreign Visitation to Grand Canyon
National Park Between Memorial Day and Labor Day
(May 30 to September 6) 1982

One of the objectives of this study was to obtain an accurate count of all foreign visitors by country to Grand Canyon National Park during the Memorial Day to Labor Day study period. To do this, the ratio of foreign day visitors to foreign overnight visitors was determined, and an effort was made to count all foreign overnight visitors who stayed in or adjacent to the park. Thus, data collection focused on the day-to-overnight foreign visitor ratio and on total overnight foreign visitation.

All overnight facilities within the park and in the Tusayan vicinity were surveyed. Different methods of counting visitors were applied at the various sites. Registration cards were filled out by all visitors at Trailer Village, the hostel, Moqui, North Rim, and Red Feather lodges, Camper Village, and Squire Inn. Research assistants counted the foreign visitors from the registration

TABLE 2. Regional Distribution of Foreign Visitors to the United States—1976

	Far West	Eastern Gateway	The South	Frontier West	George Washington Country	The Islands	Great Lakes Country	Mountain West	New England	1976 Foreign Visitor Arrivals
Mexico	818,000 (43%)	190,000 (10%)	227,000 (12%)	714,000 (37%)	61,000 (3%)	113,000 (6%)	123,000 (6%)	46,000 (2%)	48,000 (3%)	1,920,509
Japan	277,000 (36%)	112,000 (15%)	36,000 (5%)	48,000 (6%)	41,000 (5%)	553,000 (72%)	42,000 (5%)	18,000 (2%)	20,000 (3%)	772,386
United Kingdom	183,000 (34%)	268,000 (50%)	96,000 (18%)	68,000 (13%)	144,000 (27%)	10,000 (2%)	105,000 (20%)	30,000 (6%)	107,000 (20%)	538,486
West Germany	146,000 (40%)	193,000 (53%)	82,000 (22%)	78,000 (21%)	68,000 (19%)	19,000 (5%)	65,000 (18%)	45,000 (12%)	41,000 (11%)	365,553
France	82,000 (38%)	140,000 (65%)	63,000 (29%)	47,000 (22%)	53,000 (24%)	7,000 (3%)	36,000 (17%)	16,000 (7%)	38,000 (18%)	217,284
Australia	139,000 (83%)	61,000 (36%)	37,000 (22%)	53,000 (31%)	48,000 (28%)	79,000 (47%)	36,000 (22%)	27,000 (16%)	21,000 (13%)	168,470
Venezuela	16,000 (11%)	51,000 (34%)	79,000 (52%)	9,000 (6%)	12,000 (8%)	35,000 (23%)	8,000 (5%)	2,000 (2%)	8,000 (5%)	152,003
Italy	49,000 (37%)	105,000 (80%)	25,000 (19%)	26,000 (20%)	45,000 (34%)	2,000 (2%)	24,000 (18%)	19,000 (15%)	23,000 (18%)	131,375
Netherlands	43,000 (45%)	39,000 (41%)	17,000 (18%)	18,000 (19%)	19,000 (20%)	3,000 (3%)	28,000 (30%)	15,000 (15%)	10,000 (11%)	94,936
Sweden	33,000 (44%)	44,000 (58%)	24,000 (32%)	15,000 (19%)	16,000 (21%)	5,000 (6%)	26,000 (34%)	8,000 (11%)	14,000 (19%)	75,270
Belgium	20,000 (45%)	27,000 (60%)	12,000 (27%)	10,000 (23%)	12,000 (28%)	1,000 (3%)	12,000 (28%)	6,000 (13%)	6,000 (13%)	44,753

Source: U.S. Travel Service 1979.

Table 3. Overnight Foreign Visitors.

Site	Sample Days	June (30 days)	July (31 days)	August (31 days)	September (6 days)	Total
Mather Campground	14	3807.60	4314.89	6264.17	(1 Sample)	16018.66
		4635.00	5587.75	7373.66		19228.41
		5462.40	6860.61	8383.15		22428.16
		± 827.40	± 1272.86	± 1109.49		± 3209.75
Ten-X Campground	7	885.30	(1 Sample)	913.16		3255.46
		1140.00		1655.75		4252.75
		1394.70	1457	2398.34		5250.04
		± 254.70				± 997.29
North Rim Campground	3	(1 Sample)	(1 Sample)	(1 Sample)		1474.00
		420	279	775		
Desert View Campground	7	(1 Sample)	(1 Sample)	1283.71	(1 Sample)	3584.71
				1542.25		3843.25
		900	1209	1800.79		4104.79
						± 258.54
*Combined Commercial Lodges and Campgrounds	-	bus 13568	bus 14406	bus 18234		bus 46208
		on own 18967	on own 21653	on own 30443		on own 71063
		<u>32535</u>	<u>36059</u>	<u>48677</u>		<u>117271</u>
Hostel	-	Not Open	Open July 15 122	279	61	462
Total		39,360	44,714	62,188		146,532

*Sites Included: Red Feather Lodge, Squire Inn, Camper Village, Moqui Lodge, The North Rim Lodge, Trailer Village, and all Fred Harvey lodges within the park boundaries.

Table 4. Overnight Foreign Visitors to GCNP by Country.

Country		Mather Campground	Ten-X Campground	North Rim Campground	Desert View Campground	Combined Lodges and Campgrounds	Hostel	Total
England	tour	326	98	-	54	4930	-	5408
	on own	1846	124	198	59	11978	97	14302
	total	2172	222	198	113	16908	97	19710
Germany	tour	427	37	-	-	4546	-	5010
	on own	4534	1317	517	1005	16783	86	24242
	total	4961	1354	517	1005	21329	86	29252
France	tour	648	9	-	8	6449	-	7114
	on own	1366	425	-	464	9034	64	11353
	total	2014	434	-	472	15483	64	18467
Switzerland	tour	232	54	-	-	3915	-	4201
	on own	1170	203	60	271	4457	24	6185
	total	1402	257	60	271	8372	24	10386
Japan	tour	39	356	-	-	4739	-	5134
	on own	262	-	-	85	2947	23	3317
	total	301	356	-	85	7686	23	8451
Australia	tour	416	69	-	16	4779	-	5280
	on own	632	45	122	31	4438	28	5296
	total	1048	114	122	47	9217	28	10576
Sweden	tour	77	-	-	-	398	-	575
	on own	112	-	-	31	2087	25	2255
	total	189	-	-	31	2485	25	2830
Canada	tour	154	-	-	-	685	-	839
	on own	1160	312	476	383	5424	-	7805
	total	1314	312	476	383	6109	-	8644
Italy	tour	95	-	-	23	1870	-	2229
	on own	310	28	-	31	2961	18	3348
	total	405	28	-	54	4831	18	5577
Mexico	tour	-	-	-	-	310	-	810
	on own	238	56	-	92	826	-	1212
	total	238	56	-	92	1636	-	2022
Holland	tour	484	65	-	8	4198	-	2092
	on own	828	67	101	324	2852	25	3434
	total	1312	132	101	332	7050	25	5526
Austria	tour	13	-	-	-	697	-	710
	on own	119	65	-	163	836	16	1199
	total	132	65	-	163	1533	16	1909
Israel	tour	16	-	-	-	800	-	816
	on own	80	24	-	166	1102	9	1381
	total	96	24	-	166	1902	9	2197
Belgium	tour	196	9	-	-	1384	-	487
	on own	159	46	-	286	1347	2	1500
	total	355	55	-	286	2731	2	1987

Table 4. Overnight Foreign Visitors (cont).

Country		Mather Campground	Ten-X Campground	North Rim Campground	Desert View Campground	Combined Lodges and Campgrounds	Hostel	Total
Denmark	tour	135	9	-	8	636	-	788
	on own	222	37	-	-	620	2	881
	total	357	46	-	8	1256	2	1669
Other Europe	tour	191	-	-	-	540	-	731
	on own	87	-	-	62	669	8	826
	total	278	-	-	62	1209	8	1557
South America	tour	96	-	-	-	697	-	793
	on own	281	230	-	8	696	1	1216
	total	377	230	-	8	1393	1	2009
Central America	tour	-	150	-	-	90	-	240
	on own	37	-	-	4	97	-	138
	total	37	150	-	4	187	-	378
Africa	tour	347	-	-	-	604	-	951
	on own	178	-	-	10	741	1	930
	total	525	-	-	10	1345	1	1881
Middle East	tour	-	-	-	-	388	-	388
	on own	186	195	-	5	469	1	856
	total	186	195	-	5	857	1	1244
Soviet Block	tour	68	-	-	-	221	-	289
	on own	142	29	-	82	207	4	465
	total	210	29	-	82	428	4	754
Southeast Asia	tour	245	15	-	-	649	-	909
	on own	309	-	-	3	873	13	1198
	total	554	15	-	3	1522	13	2107
All Others	tour	77	39	-	-	1683	-	1799
	on own	688	140	-	161	1919	15	2932
	total	765	179	-	161	3602	15	4731
Total:		19,228	4,253	1,474	3,843	117,271	462	146,532

information. The Fred Harvey Sales Office surveys 30 percent of the rooms sold each night in all of their lodges within the park boundaries (excluding Moqui Lodge). The foreign visitor information from their survey was expanded to 100 percent and then multiplied by 2.25 (a figure given by the Harvey office as the average number of people per room). Mather, Ten-X, and Desert View campgrounds were surveyed on sample days and counts were expanded to obtain totals for each site. Sample days were chosen randomly and were stratified by day of the week. The North Rim Campground was surveyed three nights on three randomly selected trips to the North Rim.

Table 3 presents total overnight foreign visitation to the park during the study period. The three Park Service campgrounds, the Forest Service campground, and the hostel are listed individually. Since the actual number of foreign visitors at each establishment is considered sensitive information by some operators, the remaining commercial lodges and campgrounds are combined. Confidence limits were determined where possible. No sample days were selected in September for Ten-X or the North Rim campgrounds; therefore, August totals are expanded to include the 6 days of September. August and September totals are also combined for the commercial lodges and campgrounds. Overall, 146,532 overnight foreign visitors were counted during the study period. The Fred Harvey lodges contributed most to overnight foreign visitor data. Mather Campground was the next highest contributor with 19,228 foreign visitors. Total overnight foreign visitation increased as the summer progressed, showing a peak in August.

Table 4 presents approximate overnight foreign visitation by country for the various establishments. Tour and non-tour foreign visitors are shown separately and then combined for each country or country group. Of the overnight foreign visitors, Germans were by far the most common nationality, followed by English and French.

Day-to-overnight ratios were taken at three entrance gates on 28 randomly selected sample days (15, 6, and 7 at the south, north and east gates respectively). Sample days were stratified by day of the week for the east and south entrance gates. The north gate was surveyed twice on each of the three randomly selected trips to the North Rim. In determining the ratio, 15,011 foreign visitors were surveyed: 12,894 at the south gate, 684 at the north, and 1,433 at the east gate. A 4-hour period was set aside on each sample day for actual surveying. Research assistants were positioned in front of the entrance stations and stopped each vehicle before it entered the park. Each passenger was asked his/her home country and if he/she planned to stay the night at the park or in the Tusayan area. Once commercial bus operators learned about the survey, their drivers usually knew the needed information about their passengers. If the driver did not know, the research assistant entered the bus and asked the passengers directly. Private vehicle and bus ratios were calculated separately and then combined (see Table 5). Other factors included in ratio calculations were percentage of cars and buses entering the park, differing numbers of people entering at each gate, and unequal number of sampling days at each gate. After all these factors were weighed and applied to the total foreign visitor count, the ratio of day to overnight visitors was determined to be 1:1. That is to say, for every foreign day visitor to the park there is one overnight visitor. The south gate, which is by far the most heavily used entrance, had approximately a 1:1 ratio; the north and east gate ratios were approximately 2:1 and 1:2 respectively.

Table 5. Ratio of day to overnight foreign visitors to Grand Canyon National Park.

Gate	Bus Ratio	Car Ratio day/overnight	% of Visitors through gate	Combined ratio
South	2.5812	.5905	70	1.0453
North	4.2500	2.1928	11	2.1940
East	.3320	.4666	19	.4655
Combined ratios	2.4118	.7876	-	1.0839

Table 6 presents the day-to-overnight ratio by nationality. In general, countries with high day percentages had a greater number of their nationals traveling on tours that were in the park only part of a day, for example, the Japanese and Southeast Asians. It is interesting to note that the Dutch, Germans, French, and Swiss tended to be visiting the park for more than one day, while the English were evenly split between overnight and day visitors.

Table 6. Day to overnight foreign visitors to Grand Canyon National Park.

Country	Ratio Day OV	Total Overnight	Total Visitors	Percent of Total
England	51:49	19,710	40,224	13.2
Germany	36:64	28,452	44,456	14.6
France	38:62	18,467	29,785	9.8
Switzerland	37:63	10,386	16,486	5.4
Japan	75:25	8,451	33,804	11.1
Australia	58:42	10,576	25,181	8.2
Sweden	56:44	2,830	6,432	2.1
Canada	41:59	8,644	14,651	4.8
Italy	57:43	5,577	12,970	4.2
Holland	34:66	5,526	8,373	2.7
Belgium	36:64	2,731	4,267	1.4
Latin America	52:47	4,409	9,381	3.1
Other Europe	37:63	5,135	8,151	2.7
S.E. Asia	75:25	2,107	8,428	2.8
Africa	59:41	1,881	4,588	1.5
Other	69:31	11,650	38,181	12.4
Totals		146,532	303,358	100.0

OV = Overnight

Using the overall ratio of 1.0839 day to one overnight foreign visitor and the figure of 146,532 total overnight foreign visitors, 305,358 foreign visitors were estimated to have visited Grand Canyon National Park during the study period. Table 6 also shows the estimated breakdown of total foreign visitors by nationality. Overall, visitors came from 112 different countries ranging from England and Germany to Sri-Lanka and Nepal.

While the study was in progress, the Park Superintendent asked the survey team to estimate the ratio of foreign to United States visitors to the park. Counts from entrance gates on the remaining sample days (6, 5, and 2 at the south, east, and north entrance gates respectively) were used to determine this ratio. Research assistants interviewed approximately 20,600 visitors on all buses and cars entering the park during the 4-hour sample period. Of the 20,600 visitors, 6800 or approximately 33 percent were foreign. Thus, for every two domestic visitors there was one foreign visitor.

Questionnaire Data

Another objective of this study was to use the 1981 study questionnaires to collect information about overnight foreign visitors, and to compare overnight foreign visitors to day-tour visitors surveyed in 1981. To complete this objective approximately 6000 questionnaires were distributed to overnight foreign visitors during the study period and 1846 completed questionnaires were collected. The questionnaires (in German, French, Spanish, Japanese, and English; see Appendix A for samples) were distributed from 12 sites: the North Rim campground and lodge, Desert View, Mather, and Ten-X campgrounds, Trailer Village, Camper Village, the hostel, Squire Inn, Red Feather Lodge, and Yavapai and Bright Angel transportation desks. Two types of distribution methods were used: a) personal contact with the visitor by research assistants and/or campground hosts, and b) a display of questionnaires with a sign encouraging foreign visitors to fill one out. Personal contact was used at all campgrounds and at the Bright Angel transportation desk. Visitors were given a questionnaire and asked to return it, when completed, to campground attendants or the transportation desk. Desert View campground has no regular campground attendants; therefore, visitors were asked to return their questionnaires at park entrance gates upon their departure. The display method was used at remaining sites. Questionnaires were picked up and delivered weekly at Squire Inn, Red Feather Lodge, and Camper Village, and as needed at the less busy sites such as the hostel and Yavapai transportation desk. Remaining sites were checked in accordance with the schedule (see Appendix B).

Table 7 illustrates questionnaires returned to the 12 distribution sites. The relatively large number returned to Mather Campground was due to accessibility of visitors, more sample days, and very helpful Park Service personnel.

Most foreign visitors surveyed were from nine countries, with Germany, France, and England as the major contributors. Foreign visitors from other countries are represented in the following three country groups: Other Europe, Latin America (including Mexico and South and Central America) and All Others (see Table 8).

Table 7. Questionnaire returns from 12 distribution sites.

Site	Number
North Rim Campground	15
North Rim Lodge	304
Desert View Campground	83
Mather Campground	812
Ten-X Campground	166
Trailer Village	3
Camper Village	189
Hostel	10
Squire Inn	101
Red Feather	18
Fred Harvey lodges (Yavapai & Bright Angel transportation desks)	122
*No location	24
Total	1846

*Origin of these questionnaires is unknown. Visitors returned them to points other than distribution sites.

Table 8. Questionnaire returns by nationality.

Country	Number
England	149
Germany	525
France	246
Switzerland	141
Australia	86
Japan	106
Canada	98
Holland	86
Belgium	43
Other Europe	93
Latin America	40
All Others	135
*Country Unknown	68
Total	1846

*Home country is unknown. Visitor neglected to answer this question.

Question 1 on the questionnaires concerns the reasons for visitation to the United States (see Table 9). Since respondents could select more than one answer, the Friedman Statistical Test was used. The Friedman Test uses ranking of components within a question to test for significant differences between classes, or in this case, nationality groups. It revealed no significant differences; however, percentage differences did occur. Most visitors come for vacation (84.8 percent), but only 47.2 percent of the Japanese were in this category. It is possible that this response has something to do with Japanese tax laws or the amount of money which may be taken out of the country for vacation travel. Japan also had the highest percentage of people visiting the United States for reasons other than those listed on the questionnaire. Visitors from Latin America and All Others were most likely to come for business.

Visitors were asked their sources of information about the Grand Canyon (see Table 10). "Books, magazines, and newspapers" was most often cited. "Friends and relatives" was the category mentioned second, and "Airline Companies" was mentioned least. No significant differences were found between nationality groups.

Almost 87 percent of the foreign visitors surveyed indicated that this visit was their first trip to Grand Canyon (see Table 11). There is a high percentage of first-time visitors to the park among both foreigners and Americans. Other Europe, Switzerland, and England had the highest percentage of returning visitors, while All Others and Latin America had the highest percentage of first-time visitors. No significant differences were found between first-time visitors in the various nationality groups.

Visitors were asked who came with them to Grand Canyon (see Table 12). Again, no significant differences were found between country groups. Most respondents said they came with friends or family; the Germans, Swiss, Japanese, and Dutch listed friends first and the remaining nationalities listed family first. Few visitors traveled alone or with fellow workers, but the English were more likely to answer affirmatively to these two categories. Only about 6 percent said they traveled with someone other than friends, family, or fellow workers.

When asked what other American national parks they had visited, only 14.9 percent said they had visited no other parks; 85.1 percent said they had visited one or more parks other than the Grand Canyon (see Table 13). The average respondent visited approximately three other parks in the United States. The most common response was the "other" category, indicating visitors had seen parks other than those listed on the questionnaire. One possible reason for the high percentage of "other" responses may be the exclusion of Yellowstone National Park from the list. Table 14 presents write-in responses. Notice that Yellowstone was mentioned 139 times, ranking this park much higher than the Hawaiian parks. No significant differences were found between country groups, but percentages did differ. Japanese were by far the most likely to have visited no other parks. The Japanese, French, Australians, and Dutch mentioned Yosemite the most, and Belgians mentioned Bryce Canyon the most. Hawaiian national parks were visited by relatively few people, but Canadians and Australians were most likely to have done so.

Table 9. Reason for Visiting United States.

Country	Vacation			Visit Relatives			Visit Friends			Business			School			Other			Total: Responses People
	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	
England	159	89.3	(1)	34	19.1	(3)	51	28.7	(2)	20	11.2	(4)	6	3.4	(6)	14	7.9	(5)	284 178
Germany	147	91.6	(1)	75	14.3	(3)	102	19.5	(2)	14	2.7	(6)	29	5.5	(5)	31	5.9	(4)	730 523
France	215	87.8	(1)	19	7.8	(3)	38	15.5	(2)	17	6.9	(5)	19	7.8	(3)	15	6.1	(6)	323 245
Switzerland	123	87.9	(1)	27	19.3	(3)	35	25.0	(2)	6	4.3	(5)	22	15.7	(4)	5	3.6	(6)	218 140
Japan	50	47.2	(1)	11	10.4	(4)	11	10.4	(4)	9	8.5	(6)	15	14.2	(3)	21	19.8	(2)	117 106
Australia	69	80.2	(1)	14	16.3	(3)	17	19.8	(2)	12	14.0	(4)	9	10.5	(5)	5	5.8	(6)	126 86
Canada	95	97.0	(1)	9	9.2	(3)	11	11.2	(2)	1	1.0	(5)	0	0	(6)	8	8.2	(4)	124 98
Holland	80	93.0	(1)	15	17.4	(2)	15	17.4	(2)	4	4.7	(5)	7	8.1	(4)	1	1.2	(6)	122 86
Belgium	37	86.0	(1)	6	13.9	(2)	2	4.7	(4)	0	0	(5)	5	11.6	(3)	0	0	(5)	50 43
Other Europe	84	90.3	(1)	13	14.0	(2)	12	12.9	(3)	6	6.5	(5)	9	9.7	(4)	2	2.2	(6)	126 93
Latin America	26	65.0	(1)	4	10.0	(4)	1	2.5	(5)	1	2.5	(5)	8	20.0	(2)	5	12.5	(3)	45 40
All Others	93	69.4	(1)	16	11.9	(4)	19	14.2	(3)	4	3.0	(6)	29	21.6	(2)	11	8.2	(5)	172 134
Unknown Country	51	75.0	(1)	13	19.1	(2)	3	4.4	(6)	6	8.8	(5)	7	10.3	(4)	9	13.2	(3)	89 68
Totals	1561	84.8	(1)	256	13.9	(3)	317	17.2	(2)	100	5.4	(6)	165	8.9	(4)	127	6.9	(5)	2526 1840

13

1840 Visitors answered this question; 6 did not.
 2526 Responses
 Friedman's test: Chi-Square = -96.34 p < .05.

N = number giving this reason
 % = % of people giving this reason
 R = rank of this reason

Table 10. Sources of Information About Grand Canyon.

Country		Friends/ Relatives	Travel Agency	Airline Companies	Employment	Government Offices	Books/ Magazines/ Newspapers	Other	Totals	
									People	Responses
England	N	90	26	3	2	8	106	39	177	274
	%	50.8	14.7	1.7	1.1	4.5	59.9	22.0		
	R	(2)	(4)	(6)	(7)	(5)	(1)	(3)		
Germany	N	332	69	2	11	14	361	58	518	847
	%	64.1	13.3	-	2.1	2.7	69.7	11.2		
	R	(2)	(3)	(7)	(6)	(5)	(1)	(4)		
France	N	132	40	3	5	11	160	18	245	369
	%	53.9	16.3	1.2	2.0	4.5	65.3	7.3		
	R	(2)	(3)	(7)	(6)	(5)	(1)	(4)		
Switzerland	N	93	16	1	2	2	90	11	139	215
	%	66.9	11.5	-	1.4	1.4	64.7	7.9		
	R	(1)	(3)	(7)	(5)	(5)	(2)	(4)		
Japan	N	40	16	1	3	4	56	10	105	130
	%	38.1	15.2	.9	2.9	3.8	53.3	9.5		
	R	(2)	(3)	(7)	(6)	(5)	(1)	(4)		
Australia	N	36	16	3	3	4	46	17	85	125
	%	42.4	18.8	3.5	3.5	4.7	54.1	20.0		
	R	(2)	(4)	(6)	(6)	(5)	(1)	(3)		
Canada	N	43	8	1	3	10	62	24	96	151
	%	44.8	8.3	1.0	3.1	10.4	64.6	25.0		
	R	(2)	(5)	(7)	(6)	(4)	(1)	(3)		
Holland	N	55	9	2	2	2	61	13	86	144
	%	64.0	10.5	2.3	2.3	2.3	70.9	15.1		
	R	(2)	(4)	(6)	(6)	(6)	(1)	(3)		
Belgium	N	30	13	2	2	5	23	4	43	79
	%	69.8	30.2	4.7	4.7	11.6	53.5	9.3		
	R	(1)	(3)	(6)	(6)	(4)	(2)	(5)		
Other Europe	N	54	9	0	3	2	68	13	93	149
	%	58.1	9.7	-	3.2	2.1	73.1	14.0		
	R	(2)	(4)	(7)	(5)	(6)	(1)	(3)		
Latin America	N	27	1	0	2	1	21	2	40	54
	%	67.5	2.5	-	5.0	2.5	52.5	5.0		
	R	(1)	(5)	(7)	(3)	(5)	(2)	(3)		
All Others	N	85	18	3	2	5	83	19	133	215
	%	63.9	13.5	2.3	1.5	3.8	62.4	14.3		
	R	(1)	(4)	(6)	(7)	(5)	(2)	(3)		
Unknown Country	N	37	10	1	0	4	35	8	66	95
	%	54.5	15.1	1.5	-	6.1	53.0	12.1		
	R	(1)	(3)	(6)	(7)	(5)	(2)	(4)		
Total	N	1054	251	22	40	72	1172	236	1826	2847
	%	57.7	13.7	1.2	2.2	3.9	64.2	12.9		
	R	(2)	(3)	(7)	(6)	(5)	(1)	(4)		

1826 Visitors answered this question; 20 did not.
 2847 Responses
 Friedman's test: Chi-Square = -77.62 p < .05.

N = number giving this answer
 % = % of people giving this answer
 R = rank of this answer

Table 11. First Visit to Grand Canyon.

Country	First Visit to Grand Canyon		Been to Grand Canyon Before		Total
	N	%	N	%	
England	150	84.3	28	15.7	178
Germany	455	86.7	70	13.3	525
France	216	88.2	29	11.8	245
Switzerland	115	82.7	24	17.3	139
Japan	92	88.8	14	13.2	106
Australia	75	87.2	11	12.8	86
Canada	82	84.5	15	15.5	97
Holland	75	87.2	11	12.8	86
Belgium	38	88.4	5	11.6	43
Other Europe	76	81.7	17	18.3	93
Latin America	35	89.7	4	10.3	39
All Others	123	91.8	11	8.2	134
Unknown Country	58	90.6	6	9.4	64
Totals:	1590	86.6	245	13.4	1835

1835 Visitors answered this question; 11 did not.
 Chi-Square not significant at $p < .05$.

Table 12. Traveling Companions.

Country	Came Alone			With Family			With Friends			Family/ Friends			Fellow Workers			Other			Total: People Responses
	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	
England	16	9.0	(3)	100	56.2	(1)	50	28.1	(2)	5	2.8	(6)	10	5.6	(4)	10	5.6	(4)	178 191
Germany	14	2.7	(5)	205	39.2	(2)	235	44.9	(1)	69	13.2	(3)	1	-	(6)	15	2.9	(4)	523 539
France	18	7.3	(5)	105	42.9	(1)	76	31.0	(2)	24	9.8	(3)	6	2.4	(6)	20	8.2	(4)	245 249
Switzerland	7	5.0	(4)	42	30.0	(2)	70	50.0	(1)	15	10.7	(3)	1	-	(6)	7	5.0	(4)	140 142
Japan	8	7.6	(5)	28	26.4	(2)	52	49.1	(1)	9	8.5	(4)	1	-	(6)	11	10.4	(3)	106 109
Australia	8	9.3	(4)	48	55.8	(1)	21	24.4	(2)	4	4.7	(5)	1	1.2	(6)	9	10.5	(3)	86 91
Canada	2	2.0	(5)	51	52.0	(1)	33	33.7	(2)	4	4.1	(4)	1	1.0	(6)	7	7.1	(3)	98 98
Holland	2	2.3	(5)	33	38.4	(2)	34	39.5	(1)	12	14.0	(3)	1	1.2	(6)	7	8.1	(4)	86 89
Belgium	3	7.0	(5)	13	30.2	(1)	9	20.9	(2)	9	20.9	(2)	1	2.3	(6)	8	18.6	(4)	43 43
Other Europe	4	4.3	(5)	38	40.9	(1)	35	37.6	(2)	15	16.1	(3)	3	3.2	(6)	5	5.4	(4)	93 100
Latin America	1	2.5	(4)	33	82.5	(1)	1	2.5	(4)	3	7.5	(2)	1	2.5	(4)	1	2.5	(4)	40 40
All Others	5	3.9	(5)	67	51.5	(1)	35	26.9	(2)	19	14.6	(3)	2	1.5	(6)	9	6.9	(4)	130 137
Unknown Country	3	4.5	(4)	34	51.5	(1)	22	33.3	(2)	3	4.5	(4)	3	4.5	(4)	3	4.5	(4)	66 68
Totals	91	5.0	(5)	797	43.5	(1)	673	36.7	(2)	191	10.4	(3)	32	1.7	(6)	112	6.1	(4)	1834 1896

1834 Visitors answered this question; 12 did not.
1896 Responses
Friedman's test: Chi-Square = -90.53 $p < .05$.

N = number in this category
% = % in this category
R = rank of this category

Table 13. American National Parks Visited by Respondents.

Country	Volcanoes			Haleakala			Yosemite			Petrified Forest			Sequoia/Kings Canyon		
	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R
England	7	4.0	(9)	1	-	(10)	83	47.7	(2)	31	17.8	(6)	26	14.9	(7)
Germany	6	1.2	(9)	2	-	(10)	325	63.1	(2)	106	20.6	(7)	159	30.9	(6)
France	2	-	(9)	0	-	(10)	103	43.5	(1)	49	20.7	(6)	40	16.9	(8)
Switzerland	4	3.0	(9)	2	1.4	(10)	65	47.1	(4)	27	19.6	(7)	35	25.4	(6)
Japan	4	4.0	(8)	1	1.0	(10)	41	41.0	(1)	4	4.0	(8)	5	5.0	(7)
Australia	8	9.3	(8)	4	4.7	(9)	40	46.5	(1)	3	3.5	(10)	13	15.1	(6)
Canada	8	8.2	(10)	13	13.3	(8)	27	27.6	(4)	13	13.3	(8)	21	21.4	(5)
Holland	1	1.2	(9)	0	-	(10)	49	57.0	(1)	19	22.1	(6)	25	29.1	(5)
Belgium	0	-	(9)	0	-	(9)	22	53.7	(3)	7	17.1	(6)	10	24.4	(5)
Other Europe	2	2.2	(10)	3	3.4	(9)	40	44.9	(2)	18	20.2	(7)	20	22.5	(6)
Latin America	2	5.1	(8)	1	2.6	(10)	16	41.0	(2)	4	10.3	(7)	13	33.3	(3)
All Others	9	6.9	(9)	4	3.1	(10)	41	31.3	(2)	9	6.9	(8)	16	12.2	(7)
Unknown Country	2	3.2	(9)	1	1.6	(10)	25	39.7	(2)	13	20.6	(6)	10	15.9	(7)
Total	55	3.1	(9)	32	1.2	(10)	877	48.6	(2)	303	16.8	(7)	393	21.8	(6)

1803 Visitors answered this question; 43 did not.
 4737 Responses
 Friedman's test: Chi-Square = -6.83 $p < .05$.

N = number of visitors
 % = % of visitors
 R = rank among parks

Table 13. American National Parks Visited by Respondents (cont).

Country	Bryce Canyon			Mesa Verde			Zion			Other			None			Total People Responses
	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	
England	48	27.6	(4)	35	20.1	(5)	51	29.3	(3)	88	50.6	(1)	26	14.9	(7)	174 396
Germany	280	54.5	(3)	177	34.4	(5)	274	53.2	(4)	363	70.5	(1)	29	5.6	(8)	515 1721
France	85	35.9	(2)	47	19.8	(7)	78	32.9	(3)	75	31.6	(4)	62	26.2	(5)	237 541
Switzerland	72	52.2	(3)	43	31.2	(5)	78	56.5	(2)	91	65.9	(1)	5	3.6	(8)	138 422
Japan	21	21.0	(4)	9	9.0	(5)	20	20.0	(5)	30	30.3	(3)	35	35.0	(2)	100 170
Australia	15	17.4	(5)	13	15.1	(6)	18	20.9	(4)	38	44.2	(2)	20	23.3	(3)	86 172
Canada	31	31.6	(2)	17	17.3	(6)	28	28.6	(3)	64	65.3	(1)	14	14.3	(7)	98 236
Holland	32	37.2	(4)	19	22.1	(6)	33	38.4	(3)	48	55.8	(2)	7	8.1	(8)	86 233
Belgium	25	61.0	(1)	6	14.6	(8)	24	58.5	(2)	15	36.6	(4)	7	17.1	(6)	41 116
Other Europe	37	41.6	(4)	27	30.0	(5)	39	43.8	(3)	49	55.1	(1)	13	14.6	(8)	89 248
Latin America	9	23.1	(4)	2	5.1	(8)	7	17.9	(5)	24	61.5	(1)	6	15.4	(6)	39 84
All Others	25	19.1	(5)	20	15.3	(6)	27	20.6	(4)	66	50.4	(1)	35	26.7	(3)	131 252
Unknown Country	19	30.2	(3)	17	27.0	(5)	18	28.6	(4)	34	54.0	(1)	7	11.1	(8)	63 146
Total	699	38.8	(3)	432	24.0	(5)	695	38.5	(4)	985	54.6	(1)	266	14.8	(8)	1803 4737

Table 14. American National Parks Visited by Respondents. These are write-in responses for "other".

Country	Eastern Parks	Death Valley	Yellowstone	Glacier	Grand Teton	Crater Lake
England	1	0	10	5	2	0
Germany	4	12	39	1	15	1
France	5	1	22	2	7	5
Switzerland	6	1	10	2	4	1
Japan	0	0	5	1	2	0
6 Australia	4	0	5	3	2	1
Canada	3	0	11	5	1	1
Holland	2	1	5	0	4	0
Belgium	0	0	7	0	0	4
Other Europe	0	1	7	0	4	1
Latin America	2	0	2	0	2	0
All Others	2	2	12	2	9	2
Unknown Country	2	1	4	0	1	0
Total	31	19	139	21	53	16

Table 14. American National Parks Visited by Respondents (cont).

Country	Mt Ranier	Other Utah Parks	Rocky Mountain	Other Western Parks	Alaska Parks	Total Responses
England	0	2	1	10	0	31
Germany	1	24	9	33	0	139
France	0	12	4	18	1	77
Switzerland	0	1	5	4	1	35
Japan	1	1	0	2	0	12
20 Australia	0	0	2	5	0	22
Canada	1	3	0	10	0	35
Holland	0	2	2	4	0	20
Belgium	2	5	1	5	0	24
Other Europe	0	0	2	5	0	20
Latin America	0	3	0	0	0	9
All Others	1	1	3	8	0	42
Unknown Country	0	0	1	2	0	11
Total	6	54	30	106	2	477

Two questions were included in the questionnaire in an effort to detect visitors' comprehension of the English language (questions 7 and 8). The questions were written in English in all instances with instructions to write down the answer in the space provided. Answers were divided into three categories: no answer, inappropriate answer, and appropriate answer (see Table 15). No answer or an inappropriate answer was taken to indicate the respondent did not comprehend English. No statistical tests were done for this question because results may not be reliable. Some foreign visitors may have asked an English speaking friend to write an answer for them, thereby skewing the results of the question. Notice, however, a high percentage of foreign visitors did comprehend English well. The Dutch and Swiss had the highest comprehension level of visitors from non-English speaking countries. The Japanese and Latin Americans had the lowest.

Most visitors participated in some of the 10 activities listed in question 6--only 4.1 percent said they did not participate in any of the activities listed (see Table 16). Visiting places of scenic and historic interest was mentioned most, overall. Japanese indicated driving for pleasure and Germans, Swiss, and Belgians indicated hiking and walking as the most common activities. Japanese also participated more in mountaineering and less in camping than other country groups, and Germans were more likely to participate in nature study. The Japanese mentioned photography less than most other nationalities, dispelling the stereotype of the Japanese tourist always carrying a camera. The Friedman Test did reveal significant differences between country groups, but the low lambda indicated overall differences were fairly small.

Approximately two-thirds of the visitors surveyed considered themselves to be either professionals or students (see Table 17). Japan was the only country from which there were more students than professionals. The clerical workers category was third, with Germany and Switzerland having the highest percentages. Few people were farmers, laborers, or unemployed. Significant differences were found between country groups, but the low lambda indicates differences are small. It should be noted that different societies classify employment or occupations differently. We suspect these classifications are not accurate by United States standards.

Approximately 85 percent of the visitors were 45 years of age or younger, with the largest age-group being the 26-45 (see Table 18). Japan was the only country from which group composition was more in the 18-25 year bracket. The under 18 age bracket was not included in the questionnaire; therefore, responses shown in this age bracket were written in by respondents. The under-18 age group most likely consists of children with their families. While age-bracket of visitors may seem relatively unimportant to park managers, the correlation between age and type of activities pursued at the park is important. Significant differences in visitor age groupings were found between nationalities, but overall differences were small.

A majority of foreign visitors surveyed were male (54.9 percent, see Table 19). Significant differences were found between nationalities, but again differences were small. Japanese were approximately 60 percent female, while Germans were approximately 60 percent male visitors. English visitors were virtually equally represented and Belgians were the only group other than the Japanese to have more female than male visitors.

Table 15. English Comprehension.

Country	No Answer		Inappropriate Answer		Appropriate Answer		Total
	N	%	N	%	N	%	
England	0	-	0	-	178	100.0	178
Germany	56	10.6	31	5.9	439	83.5	526
France	33	13.5	15	6.1	197	80.4	245
Switzerland	15	10.7	3	2.1	122	87.1	140
Japan	29	27.4	10	9.4	67	63.2	106
Australia	0	-	0	-	86	100.0	86
Canada	3	3.1	4	4.1	91	92.9	98
Holland	0	-	1	1.1	86	98.9	87
Belgium	6	14.0	4	9.3	33	76.7	43
Other Europe	7	7.4	6	6.4	81	86.2	94
Latin America	10	26.3	3	7.9	25	65.8	38
All Others	2	1.5	1	.7	131	97.8	134
Unknown Country	6	54.5	1	9.1	4	36.4	11
Total:	167	13.0	179	4.8	1538	82.2	1786

1786 Visitors answered this question; 60 did not.

Table 16. Hobbies of Respondents.

Country	Photography			Hike/Walk			Camping			Hunt/Fish			Nature Study			Mountaineering		
	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R
England	100	56.2	(3)	111	62.4	(2)	83	46.6	(4)	14	7.9	(10)	41	23.0	(6)	24	13.5	(8)
Germany	286	54.4	(4)	350	66.5	(1)	149	28.3	(5)	23	4.4	(10)	291	55.3	(3)	81	15.4	(7)
France	140	57.6	(3)	153	63.0	(2)	121	4.9	(5)	18	7.4	(9)	27	11.1	(6)	27	11.1	(6)
Switzerland	83	59.3	(2)	92	65.7	(1)	53	37.9	(4)	12	8.6	(10)	49	35.0	(5)	23	16.4	(7)
Japan	20	19.2	(4)	28	26.9	(3)	15	14.4	(7)	6	5.8	(8)	16	15.4	(6)	17	16.3	(5)
Australia	44	51.2	(4)	48	55.8	(2)	47	54.7	(3)	19	22.1	(6)	14	16.3	(7)	6	7.0	(10)
Canada	50	51.0	(5)	76	77.6	(3)	78	79.6	(2)	28	28.6	(6)	24	24.5	(8)	4	4.1	(10)
Holland	48	49.0	(3)	57	65.5	(2)	48	55.2	(3)	4	4.6	(9)	15	17.2	(6)	10	11.5	(7)
Belgium	14	32.6	(4)	27	62.8	(1)	11	25.6	(5)	3	7.0	(8)	5	11.6	(6)	2	4.7	(10)
Other Europe	43	46.7	(3)	50	54.3	(2)	33	35.9	(4)	8	8.7	(9)	33	35.9	(4)	22	23.9	(7)
Latin America	13	35.1	(4)	16	43.2	(2)	14	37.8	(3)	7	18.9	(5)	7	18.9	(5)	1	2.7	(11)
All Others	61	45.5	(4)	76	56.7	(2)	69	51.5	(3)	28	20.9	(6)	22	16.4	(7)	16	11.9	(9)
Unknown Country	9	69.2	(1)	9	69.2	(1)	5	38.5	(4)	0	-	(10)	2	15.4	(7)	2	15.4	(7)
Total	911	51.2	(3)	1093	61.4	(2)	726	40.7	(4)	170	9.8	(8)	546	30.7	(6)	235	13.2	(7)

1781 Visitors answered this question; 65 did not.
 5914 Responses
 Friedman's test: Chi-Square = 32.81 p .05.

N = number participating in this activity
 % = % participating in this activity
 R = rank of activity

Table 16. Hobbies of Respondents (cont).

Country	Horse-back Riding			Canoeing			Driving for Pleasure			Scenic Sites			None			Total People Responses
	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	
England	25	14.0	(7)	16	9.0	(9)	78	43.8	(5)	135	75.8	(1)	6	3.4	(11)	178 633
Germany	45	8.6	(8)	39	7.4	(9)	99	18.8	(6)	337	64.1	(2)	18	3.4	(11)	526 1718
France	21	8.6	(4)	15	6.2	(10)	122	50.2	(4)	171	70.3	(1)	5	2.1	(11)	243 820
Switzerland	18	12.9	(8)	15	10.7	(9)	39	27.9	(6)	83	59.3	(2)	6	4.3	(11)	140 473
Japan	2	1.9	(10)	1	-	(11)	62	59.6	(1)	40	38.5	(2)	6	5.8	(8)	104 213
Australia	13	15.1	(8)	8	9.3	(9)	43	5.0	(5)	67	77.9	(1)	3	3.5	(11)	86 312
Canada	5	5.1	(9)	28	28.6	(6)	57	58.2	(4)	83	84.7	(1)	2	2.0	(11)	98 435
Holland	3	3.5	(11)	5	5.7	(8)	24	27.6	(5)	64	73.6	(1)	4	4.6	(10)	87 282
Belgium	2	4.7	(10)	5	11.6	(6)	20	46.5	(3)	26	60.5	(2)	3	7.0	(8)	43 118
Other Europe	7	7.6	(10)	9	9.8	(8)	26	28.3	(6)	67	72.8	(1)	4	4.3	(11)	92 302
Latin America	3	8.1	(9)	4	10.8	(8)	6	16.2	(7)	25	67.6	(1)	3	8.1	(9)	37 99
All Others	17	12.7	(8)	16	11.9	(9)	59	44.0	(5)	94	70.1	(1)	13	9.7	(11)	134 471
Unknown Country	2	15.4	(7)	0	-	(10)	3	23.1	(5)	6	46.2	(3)	0	-	(10)	13 38
Total	163	9.2	(9)	161	9.0	(10)	638	35.8	(5)	1198	67.3	(1)	73	4.1	(11)	1781 5914

Table 17. Occupation of Respondent.

Country	Professional			Clerical			Craftsman			Farmer			Laborer			Student		
	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	N	%	R
England	91	51.4	(1)	16	9.0	(3)	4	2.3	(7)	1	-	(8)	0	-	(9)	41	23.2	(2)
Germany	175	33.2	(1)	105	19.9	(3)	17	3.2	(6)	1	-	(10)	9	1.7	(8)	149	28.0	(2)
France	85	34.8	(1)	2	0.1	(8)	4	1.6	(6)	0	-	(10)	6	2.5	(5)	69	28.3	(2)
Switzerland	48	34.3	(1)	32	22.9	(2)	7	5.0	(6)	0	-	(9)	4	2.9	(7)	23	16.4	(3)
Japan	17	15.9	(2)	7	6.5	(5)	8	7.5	(4)	0	-	(9)	0	-	(9)	54	50.5	(1)
Australia	38	43.2	(1)	6	6.8	(5)	5	5.7	(7)	8	9.1	(4)	1	1.1	(10)	6	6.8	(5)
Canada	53	53.5	(1)	8	8.1	(3)	5	5.1	(6)	0	-	(10)	2	2.0	(8)	13	13.1	(2)
Holland	36	41.4	(1)	4	4.6	(4)	3	3.4	(5)	0	-	(8)	0	-	(8)	23	26.4	(2)
Belgium	22	53.7	(1)	2	4.9	(4)	0	-	(7)	0	-	(7)	0	-	(7)	5	12.2	(3)
Other Europe	42	44.7	(1)	6	14.6	(3)	2	2.1	(5)	1	1.1	(7)	0	-	(9)	32	34.0	(2)
Latin America	14	36.8	(1)	3	7.9	(5)	0	-	(8)	0	-	(8)	1	2.6	(7)	8	21.1	(2)
All Others	59	44.0	(1)	6	4.5	(6)	8	6.0	(5)	5	3.7	(7)	0	-	(10)	30	22.2	(2)
Unknown Country	7	50.0	(1)	3	21.4	(2)	0	-	(6)	0	-	(6)	0	-	(6)	2	14.3	(3)
Total	687	38.6	(1)	200	11.2	(3)	63	3.5	(6)	16	0.9	(10)	23	1.3	(8)	455	25.6	(2)

1778 Visitors answered this question; 68 did not.
 Friedman's Test: Chi-Square = 481.06 p < .05
 Lambda = .001

N = number of people in this occupation
 % = % of people in this occupation
 R = rank of this occupation

Table 17. Occupation of Respondent (cont).

Country	Retired			Unemployed			Homemaker			Other			Total
	N	%	R	N	%	R	N	%	R	N	%	R	
England	7	4.0	(5)	0	-	(9)	10	5.6	(4)	7	4.0	(5)	177
Germany	9	1.7	(7)	4	-	(9)	24	4.6	(5)	34	6.5	(4)	526
France	2	-	(8)	4	1.6	(6)	12	4.9	(4)	60	24.6	(3)	243
Switzerland	0	-	(9)	3	2.1	(8)	8	5.7	(5)	15	10.7	(4)	140
Japan	2	1.9	(7)	4	3.7	(6)	13	12.1	(3)	2	1.9	(7)	105
Australia	4	4.5	(8)	2	2.3	(9)	7	8.0	(3)	11	12.5	(2)	87
Canada	8	8.1	(3)	1	1.0	(8)	6	6.1	(5)	3	3.0	(7)	99
Holland	0	-	(8)	2	2.3	(6)	1	1.1	(7)	18	20.7	(3)	87
Belgium	2	4.9	(4)	0	-	(7)	2	4.9	(4)	8	19.5	(2)	41
Other Europe	0	-	(9)	1	1.1	(7)	3	3.2	(5)	7	7.5	(3)	92
Latin America	2	5.3	(6)	0	-	(8)	7	18.4	(3)	3	7.9	(4)	37
All Others	4	3.0	(8)	1	0.8	(9)	10	7.5	(4)	11	8.2	(3)	134
Unknown Country	0	-	(6)	1	7.1	(4)	0	-	(6)	1	7.1	(4)	13
Total	40	2.2	(7)	23	1.3	(8)	103	5.8	(5)	180	10.1	(4)	1781

Table 18. Age of Respondent.

Country		18-25	25-45	46-65	Over 65	Under 18	Total
England	N	51	79	35	5	8	178
	%	28.7	44.4	19.7	2.8	4.5	
	R	(2)	(1)	(3)	(5)	(4)	
Germany	N	191	251	58	12	12	524
	%	36.6	47.9	11.1	2.3	2.3	
	R	(2)	(1)	(3)	(4)	(4)	
France	N	92	132	19	0	2	245
	%	37.6	53.9	7.8	-	.8	
	R	(2)	(1)	(3)	(5)	(4)	
Switzerland	N	56	61	20	1	2	140
	%	40.0	43.6	14.3	.7	1.4	
	R	(2)	(1)	(3)	(5)	(4)	
Japan	N	43	37	9	1	16	106
	%	40.6	34.9	8.5	.9	15.1	
	R	(1)	(2)	(4)	(5)	(3)	
Australia	N	19	37	26	3	1	86
	%	22.1	43.0	30.2	3.5	1.2	
	R	(3)	(1)	(2)	(4)	(5)	
Canada	N	14	63	12	5	4	98
	%	14.3	64.3	12.2	5.1	4.1	
	R	(2)	(1)	(3)	(4)	(5)	
Holland	N	30	44	13	0	0	87
	%	34.5	50.6	14.9	-	-	
	R	(2)	(1)	(3)	(4)	(4)	
Belgium	N	10	21	10	1	0	42
	%	23.8	50.0	23.8	2.4	0	
	R	(2)	(1)	(2)	(4)	(5)	
Other Europe	N	37	45	6	0	6	94
	%	39.4	47.9	6.4	-	6.4	
	R	(2)	(1)	(3)	(5)	(3)	
Latin America	N	8	20	8	0	1	37
	%	21.6	54.1	21.6	-	2.7	
	R	(2)	(1)	(2)	(5)	(4)	
All Others	N	43	66	21	2	2	134
	%	32.1	49.3	15.7	1.5	1.5	
	R	(2)	(1)	(3)	(4)	(4)	
Unknown Country	N	3	6	2	1	0	12
	%	25.0	50.0	16.7	8.3	-	
	R	(2)	(1)	(3)	(4)	(5)	
Total	N	597	862	239	31	54	1783
	%	33.5	48.3	13.4	1.7	3.0	
	R	(2)	(1)	(3)	(5)	(4)	

1783 Visitors answered this question; 63 did not.
 Chi-Square = 43.77 p < .05.
 Lambda = .007

N = number in this age-group
 % = % in this age-group
 R = rank of this age-group

Table 19. Gender of Respondent.

Country	Male		Female		Total
	N	%	N	%	
England	88	49.4	90	50.6	178
Germany	313	59.5	211	40.1	526
France	129	52.7	116	47.3	245
Switzerland	79	56.4	61	43.6	140
Japan	42	39.6	64	60.4	106
Australia	53	61.6	33	38.4	86
Canada	54	55.1	44	44.9	98
Holland	49	57.0	37	43.0	86
Belgium	20	46.5	23	53.5	43
Other Europe	49	52.1	45	47.9	94
Latin America	21	55.3	17	44.7	38
All Others	71	53.0	63	47.0	134
Unknown Country	11	91.7	1	8.3	12
Totals	979	54.9	805	45.1	1784

1784 Visitors answered this question; 62 did not.

Chi-Square = 26.91 $p < .05$.

Lambda = .034

Campers and Lodgers

Campgrounds and lodges are the two types of overnight accommodations available to the visitor; however, the recently opened hostel does provide an alternative. The vast majority of people staying at the hostel are young foreign visitors traveling around the United States. Since few questionnaires were collected from the hostel, and, since the hostel does not fit either a lodge or campground description, it will not be considered further at this time. Although there were no drastic differences in camper and lodger characteristics, some general tendencies could be found. Campers had a tendency to be slightly younger or retired, and were more likely to be students, clerical workers, or laborers. Lodgers tended to be more middle-aged and in a professional occupation. This is probably more influenced by income than any other factor, but income was not included in the survey. Campers were more likely to see parks in the vicinity of Grand Canyon, such as Bryce Canyon, Zion, and Mesa Verde, while lodgers were more likely to see Yosemite and Sequoia and Kings Canyon. Both campers and lodgers enjoyed visiting places of scenic and historic interest, walking and hiking, and photography. Campers, however, listed the more active hobbies such as camping, hunting and fishing, mountaineering, and canoeing more than lodgers who preferred nature study, horseback-riding, and driving for pleasure.

North Rim and South Rim Visitors

The North and South rims can provide different types of recreational opportunities, the North Rim being less developed and less crowded. Because of the differences between rims, different types of people may be more attracted to one than the other. We suspect, however, that the choice of rim by foreign visitors was not influenced by activities or terrain, but by where they were traveling in the United States or the tour company they selected. When questionnaires from the North Rim Lodge were compared to those from the South Rim lodges, few differences were found. (Campgrounds were not included in this comparison because only 14 questionnaires were received from the North Rim Campground.) South Rim visitors were more likely to be in the United States for business. Although both rims had a high percentage of first-time visitors, the South Rim had the highest percentage (88.6 and 77.8 percent for South and North rims respectively). North Rim visitors were more likely to visit Bryce, Zion and Petrified Forest national parks, probably because of their close proximity. Lastly, North Rim visitors were more likely to have seen parks other than the Grand Canyon.

We should point out here that there is a bias in questionnaire returns. Twenty-nine thousand campers returned 1086 questionnaires while 117,000 lodgers returned only 737 (of these, 192 were from Trailer Village and Camper Village). However, we believe both samples are large enough for statistical validity.

Comparison of 1981 and 1982 Studies

As mentioned earlier, the 1981 foreign visitor survey focused on day-tour visitors and the 1982 study focused on overnight visitors. The 1981 study examined questionnaires returned by Japanese, French, mixed, other, and total visitors. Comparing nationality groups common to both studies (French, Japanese, and total visitors) revealed many differences between day-tour and overnight visitors.

In Question 1 (reason for visit), both day-tour and overnight visitors were in the United States primarily for vacation. Day visitors were more likely to be in the United States for business while overnight visitors were here more often to visit friends and relatives.

Tour visitors most commonly received their information about the Grand Canyon from travel agencies while overnight visitors received their information from books, magazines, and newspapers.

Approximately 20 percent of day-tour visitors came to Grand Canyon with fellow workers as compared to only 1.7 percent of the overnight visitors. The French day-tour visitors were the most likely to travel with fellow workers (35.2 percent). However, family or friends were still the most common categories for accompaniment for both groups.

Many differences between the two visitor types were found regarding visitation to American national parks. Overall, day-tour people visited less parks than the overnight people, 1.2 and 2.9 parks per visitor respectively. The most common answer for day-tour visitors was that they had seen no other American national parks (45.7 percent), while only 14.5 percent of the overnight visitors had seen no other national park. Day-tour Japanese, as well as total day visitors, had seen the Hawaiian parks, especially Volcanoes National Park, more than the corresponding overnight visitors. Conversely, parks located nearer to Grand Canyon (Bryce Canyon, Zion, Petrified Forest, and Mesa Verde) were visited more by overnight visitors.

Both visitor types enjoyed many hobbies, especially visiting places of scenic and historic interest. The overnight visitors tended to participate in more activities than tour people (3.3 and 1.9 activities per visitor respectively). Overnight visitors were more likely to participate in camping for pleasure, while day visitors were more likely to drive for pleasure.

When questioned about their occupations, professional people were most common in both visitor populations. A higher percentage of clerical workers was found among day-tour people while students were more common among overnight visitors. Few farmers, laborers, and unemployed were found in either visitor type. Again, we point out that foreign visitor perceptions of these categories vary greatly.

Day-tour visitors were more likely to be women (53.1 percent) while overnight visitors were more likely to be men (54.9 percent). Also, day visitors tended to be first-time visitors more than overnight visitors (96.1 percent and 86.7 percent respectively).

Lastly, in both visitor types the 26-45 age-bracket was the largest group, but overnight visitors tended to be younger. Overnight visitors had the highest percentages in both the 18-25 and 26-45 groups, while day visitors had higher percentages in the 46-65 and over 65 age-bracket.

General Observations

With approximately one of every three visitors to Grand Canyon National Park coming from other countries, the reaction of American tourists to foreign visitors is important. Overall, most Americans expressed interest in, and enjoyed talking with, the foreigners, particularly in the open, informal atmosphere of campgrounds. Most Americans were surprised at the great number of international visitors, but felt that foreigners were equally welcome at the American parks. Similarly, most foreigners enjoyed interacting with Americans and experiencing American culture.

The language barrier at Grand Canyon is very evident and can even become serious when foreign visitors venture down the canyon without being prepared. Most international tourists do know at least some English, but at times communication is very difficult and often conversations between park or Fred Harvey personnel and foreign visitors ended in confusion, and even anger.

While standing at the Bright Angel transportation desk many foreign visitors expressed anger at not being able to ride the rafts or mules. Some overseas tour and travel companies promise mule and raft rides to potential customers. Whether these promises are made to sell a trip or out of ignorance is unknown. When the tourists visit Grand Canyon, they find raft and mule rides booked up for months in advance. Many foreign tourists stated that the only reason they had come to Grand Canyon National Park was to ride the rafts or mules.

While surveying the campgrounds, research assistants noticed two or more families, particularly French and German families, camping in one motor home. The families claim that touring the United States is becoming too expensive; therefore, they must all travel together. One other common sight was of two or more unacquainted groups camping in the same campsite. Many foreign campers do not know or do not acknowledge the American idea of one camper per campsite. Because many Americans enjoy talking with the foreigners, the Americans, who very often were at the campsite first, allow the foreigners to camp with them. The foreign tourists, often do not know the necessity of arriving at the campgrounds very early in the morning; they arrive late at night expecting to find a place to camp. Campground attendants often hear the plea, "I have little tent and need only little space." Lastly, many young foreign visitors from a variety of countries travel on bus-camping tours. The tour companies travel between New York and Los Angeles, picking up a fresh tour at each end point.

In addition to general foreign visitor characteristics, each nationality group displayed specific characteristics. Since England, Germany, France, and Japan were the major countries contributing to questionnaire data, these four nationality characteristics were examined.

The English represented the average foreign visitor, rarely differing from the total visitors surveyed. However, the English did tend to prefer lodging accommodations over camping more than did people from other countries.

Germans tended to participate in more active and outdoor hobbies. This group camped much more than they stayed in lodges, and hiking and walking was their most common activity. Germans also enjoyed nature study more than other nationality groups. People from Germany were more likely to be with friends than family and more Germans were male than female--approximately 60 percent.

Visitors from France tended to speak less English than most other country groups except Japanese. The French travel with family more often than with friends, and are more likely to be in the United States for education and business. They are also more likely to visit Yosemite, Bryce Canyon, and Zion national parks.

Japanese had the most distinctive characteristics of all nationality groups. Japanese were the least likely group to speak English, were the youngest, had the highest percentage of female visitors, and the highest percentage of students relative to other nationality groups. The Japanese tended to be in the United States for school rather than to visit friends and relatives, which was popular with other nationality groups. Parks near Grand Canyon (Petrified Forest, Mesa Verde, Bryce Canyon, and Zion) were least likely to be seen and Yosemite and Sequoia were more likely to be seen by the Japanese. However, of all nationality groups, the Japanese were the least likely to see parks other than Grand Canyon. Japanese, like the English, preferred lodges to campgrounds. Lastly, driving for pleasure was the activity enjoyed most commonly by the Japanese and far less by other country groups. Overall, the Japanese interviewed in this study seem to be a different population than the Japanese interviewed in other surveys (Machlis-Wenderoth 1981, and USDC 1980). Other studies specifically portray Japanese tourists as professional people who always have a camera and who visit the Hawaiian parks more than any other nationality.

Recommendations

Visitors from foreign nations make up a significant portion of Grand Canyon National Park visitation. During the summer of 1982, foreign visitors numbered approximately 305,000 and contributed 33 percent to total visits. This study developed a method for estimating foreign visitation by country. We do not recommend that this technique be used every year, but it might prove valuable to re-check at intervals--say 3 to 5 years to determine if there are any significant changes in foreign visitation.

Since this study used the same questionnaire as was used by Machlis and Wenderoth in 1981 for 3-hour tour visitors, it is possible to compare these tour visitors' responses with those of overnight foreign visitors. There appear to be some significant differences between the two groups that should be helpful to concessionaires and tour operators, but there is not too much that park managers can use to evaluate how well visitors, especially foreign visitors, enjoy their park experience.

The current study did not attempt to measure foreign visitor impressions or attitudes. However, some observations may be valuable. Foreigners often do not know American park rules or customs. They do not understand campground or road rules. Signs or brochures in French, German, Spanish, and Japanese would be helpful.

Saving a percentage of backpacking permits and/or mule rides for foreign visitors might be a good idea.

Information on river float trips would also be helpful. Many foreign visitors would like to take these and do not realize that they are concession-controlled and are launched 150 miles from Park Headquarters.

The Social Science Research Panel that developed a program of social science research for Grand Canyon National Park (Special Report #3: Grand Canyon National Park Social Science Research Program, Shaw et al., National Park Service/University of Arizona, Oct. 1982) strongly recommended a survey of park visitors to determine what they came to Grand Canyon to see or do, what they did while there, and how satisfied they were with their experience; if dissatisfied, why, and what could make their visit more enjoyable, meaningful, educational, etc. This is needed for all visitors and certainly for foreigners with their different cultural backgrounds.

An encouraging development along these lines is the simple park visitation census form currently being developed by the Recreation Resources Assistance Division of the National Park Service in Washington, and being cleared through the Office of Management and Budget. This form will answer many of the above questions for Americans and foreign visitors alike.

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Appendix A

Questionnaire sample, English and French (German, Spanish
and Japanese were also used)

Grand Canyon Visitor Study

Hello! I hope you've enjoyed your visit to the Grand Canyon. I am conducting a study on Grand Canyon visitors and would greatly appreciate your thoughts. This study is being conducted by the University of Arizona. The results of this study will be used to help improve the services available to Grand Canyon's visitors.

Q-1. *What is the reason for your visit to the United States? (please circle as many as apply)*

- | | |
|--------------------|---------------------------|
| 1. VACATION | 4. BUSINESS |
| 2. VISIT RELATIVES | 5. STUDY/FORMAL SCHOOLING |
| 3. VISIT FRIENDS | 6. OTHER |

Q-2. *From what sources did you receive information of this Grand Canyon tour? (please circle as many as apply)*

- | | |
|----------------------------|-------------------------------|
| 1. FRIENDS/RELATIVES | 4. PLACE OF EMPLOYMENT |
| 2. TRAVEL AGENCY | 5. GOVERNMENT OFFICES |
| 3. AIRLINE COMPANY OFFICES | 6. BOOKS/MAGAZINES/NEWSPAPERS |
| | 7. OTHER |

Q-3. *Whom did you come with on your Grand Canyon tour? (please circle as many as apply)*

- | | |
|-----------------|----------------------------|
| 1. CAME ALONE | 4. WITH FAMILY AND FRIENDS |
| 2. WITH FAMILY | 5. WITH FELLOW WORKERS |
| 3. WITH FRIENDS | 6. OTHER |

Q-4. *Was this your first visit to the Grand Canyon? (please circle one response).*

- | | |
|--------|-------|
| 1. YES | 2. NO |
|--------|-------|

Q-5. *Which of the following American national parks have you visited? (please circle as many as apply)*

- | | |
|---|--------------------------------|
| 1. HAWAII VOLCANOES NATIONAL PARK | 6. BRYCE CANYON NATIONAL PARK |
| 2. HALEAKALA NATIONAL PARK | 7. MESA VERDE NATIONAL PARK |
| 3. YOSEMITE NATIONAL PARK | 8. ZION NATIONAL PARK |
| 4. PETRIFIED FOREST NATIONAL PARK | 9. OTHER NATIONAL PARKS |
| 5. SEQUOIA NATIONAL PARK AND KINGS CANYON NATIONAL PARK | 10. NO AMERICAN NATIONAL PARKS |

Grand Canyon Visitor Study

Q-6. Which of the following recreational activities do you participate in at your home? (please circle as many as apply)

- | | |
|------------------------|---|
| 1. PHOTOGRAPHY | 6. MOUNTAINEERING |
| 2. HIKING/WALKING | 7. HORSE-BACK RIDING |
| 3. CAMPING | 8. CANOEING AND RAFTING |
| 4. HUNTING AND FISHING | 9. DRIVING FOR PLEASURE |
| 5. NATURE STUDY | 10. VISITING PLACES OF SCENIC AND HISTORIC INTEREST |
| | 11. NONE OF THESE ACTIVITIES |

Q-7. Do you enjoy hiking/walking? (please write your answer)

If so, where do you like to hike (walk)? (please write your answer)

Q-8. What country are you from? (please write in the name of your country)

Q-9. What is your occupation? (please circle the occupation that best describes what you do)

- | | |
|-----------------|---------------|
| 1. PROFESSIONAL | 6. STUDENT |
| 2. CLERICAL | 7. RETIRED |
| 3. CRAFTSMAN | 8. UNEMPLOYED |
| 4. FARMER | 9. HOMEMAKER |
| 5. LABORER | 10. OTHER |

Q-10. What was your age on your last birthday? (please circle one age category)

- | | |
|----------|------------|
| 1. 18-25 | 3. 46-65 |
| 2. 26-45 | 4. OVER 65 |

Q-11. Are you male or female? (please circle one response)

- | | |
|---------|-----------|
| 1. MALE | 2. FEMALE |
|---------|-----------|

Thank you very much for your help in this study.

Études sur les visiteurs du Grand Canyon

Bonjour! J'espère que vous avez aimé votre visite au Grand Canyon. Je dirige une étude sur les visiteurs du Grand Canyon et apprécierais grandement vos idées à ce sujet. Cette étude est sanctionnée par l'Université d'Arizona. Les résultats de cette étude seront utilisés dans le but d'améliorer les services disponibles aux visiteurs du Grand Canyon.

Q-1. *Quelle est la raison de votre visite aux Etats-Unis? (Veuillez encercler toute réponse applicable)*

- | | |
|------------------------|----------------------|
| 1. VOYAGE d'AGRÉMENT | 4. VOYAGE d'AFFAIRES |
| 2. VISITE À LA PARENTÉ | 5. ÉTUDES |
| 3. VISITE À DES AMIS | 6. AUTRE |

Q-2. *D'où avez-vous obtenu des renseignements sur cette visite au Grand Canyon? (Veuillez encercler toute réponse applicable)*

- | | |
|----------------------|-----------------------------|
| 1. AMIS/PARENTÉ | 4. LIEU d'EMPLOI |
| 2. AGENCE DE VOYAGES | 5. AGENCES GOUVERNEMENTALES |
| 3. LIGNE AÉRIENNE | 6. LIVRES/REVUES/JOURNAUX |
| | 7. AUTRE |

Q-3. *Avec qui êtes-vous venu au Grand Canyon? (Veuillez encercler toute réponse applicable)*

- | | |
|--------------------|--------------------------------|
| 1. SEUL | 4. AVEC LA FAMILLE ET DES AMIS |
| 2. AVEC LA FAMILLE | 5. AVEC DES COLLÈGUES |
| 3. AVEC DES AMIS | 6. AUTRE |

Q-4. *Était-ce votre première visite au Grand Canyon? (Veuillez n'encercler qu'une seule réponse)*

- | | |
|--------|--------|
| 1. OUI | 2. NON |
|--------|--------|

Q-5. *Le(s)quel(s) des parcs nationaux suivants avez-vous déjà visités? (Veuillez encercler toute réponse applicable)*

- | | |
|--|-----------------------------------|
| 1. PARC NATIONAL HAWAII VOLCANOES | 6. PARC NATIONAL BRYCE CANYON |
| 2. PARC NATIONAL MALEAKALA | 7. PARC NATIONAL MESA VERDE |
| 3. PARC NATIONAL YOSEMITE | 8. PARC NATIONAL ZION |
| 4. PARC NATIONAL PETRIFIED FOREST | 9. TOUT AUTRE PARC NATIONAL |
| 5. PARC NATIONAL SEQUOIA ET PARC NATIONAL KINGS CANYON | 10. AUCUN PARC NATIONAL AMÉRICAIN |

Grand Canyon Visitor Study

Q-6. A laquelle/lesquelles des activités suivantes prenez-vous part a la maison? (Veuillez encercler toute réponse applicable)

- | | |
|------------------------|---|
| 1. PHOTOGRAPHIE | 6. ALPINISME |
| 2. EXCURSION/MARCHE | 7. EQUITATION |
| 3. "CAMPING" | 8. CANOE/RADEAU |
| 4. CHASSE ET PÊCHE | 9. PROMENADE EN VOITURE |
| 5. SCIENCES NATURELLES | 10. VISITE DE SITES d'INTÉRÊT HISTORIQUE ET PANORAMIQUE |
| | 11. AUCUNE DE CES ACTIVITÉS |

Q-7. Do you enjoy hiking/walking? (Please write your answer)

If so, where do you like to hike (walk)? (please write your answer)

Q-8. Quel est votre pays d'origine? (Veuillez indiquer le nom de ce pays)

Q-9. Quelle est votre profession? (Veuillez encercler la profession qui décrit le mieux votre situation)

- | | |
|------------------|------------------------|
| 1. PROFESSIONNEL | 6. ÉTUDIANT |
| 2. COMMIS | 7. RETRAITÉ |
| 3. ARTISAN | 8. SANS EMPLOI |
| 4. AGRICULTEUR | 9. MAÎTRESSE DE MAISON |
| 5. OUVRIER | 10. AUTRE |

Q-10. Quel âge avez-vous? (Veuillez n'encercler qu'une seule catégorie)

- | | |
|----------|---------------|
| 1. 18-25 | 3. 46-65 |
| 2. 26-45 | 4. 66 ET PLUS |

Q-11. Êtes-vous mâle ou femelle? (Veuillez n'encercler qu'une seule réponse)

- | | |
|---------|------------|
| 1. MÂLE | 2. FEMELLE |
|---------|------------|

Merci pour votre participation à cette étude.

Appendix B

Statistical Explanation

Several statistical techniques were used on the questionnaire data: chi-square, Friedman Test, asymmetric lambda, and binomial proportion test. The first three techniques were used for the 1982 data while the binomial proportion test was used to compare 1981 questionnaire results to corresponding 1982 results. The chi-square, Friedman Test, and asymmetric lambda were chosen for the purpose of continuity, as these techniques were used in the 1981 study. The chi-square and Friedman tests were used to test for significant differences between nationalities. The chi-square was used when only one response per question was appropriate (Question 4, 7, 9, 10, and 11), and the Friedman Test was used for multiple response questions (Question 1, 2, 3, 5, and 6). The Friedman test ranks observations within each question and, using ranks only, tests for significant differences between nationalities. If significant differences occurred within a question, the asymmetric lambda was used to measure the strength of the differences.