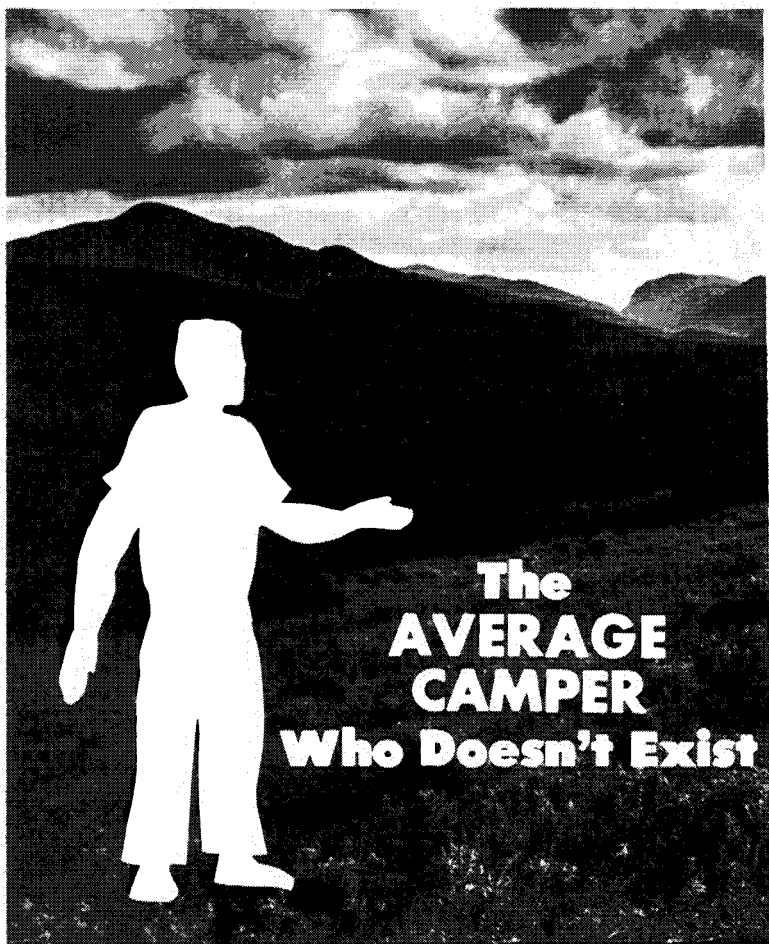




by Elwood L. Shafer, Jr.

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The AVERAGE CAMPER Who Doesn't Exist



INTRODUCTION

IN SURVEY STUDIES of campers, you can no more lump together data for different campgrounds than you can mate widgeons and wombats. Campers differ not only from campground to campground, but also at the same campground from month to month.

This was one major finding in a study made at five New York State campgrounds. In future surveys of this sort the campers sampled should be grouped according to monthly time periods, and the survey locations should be grouped by campgrounds that are similar in certain features.

If you study campers by sampling at random at several campgrounds, you may find that your data describe an "average" camper who simply does not exist. Such information is not good enough for recreation planners who need reliable information for making decisions.

A study was made in 1964 in northeastern New York State to determine if personal-interview data differ significantly among five campgrounds and three summer months. Campgrounds, months, or their interaction significantly affected the results of all 17 questions used in 1,140 interviews.

Results of this study should help strengthen the administrator's and researcher's awareness of the variation in camper characteristics and preferences. Some of the underlying causes of this variation, and its effect on future management and research, will be discussed later.

STUDY DESIGN

The five parks used were Fish Creek, Hearthstone Point, Rogers Rock, Rollins Pond, and Green Lakes. The parks differed considerably in physical site characteristics (table 1).

June, July, and August were used as three sampling periods. Climate, social, economic, and psychological factors were associated with different summer months. For example, water and air temperatures, number of insects, school vacations, and fishing success are associated with different periods of the summer. Total effect of any one factor does not begin and end exactly within each month. Nonetheless, a summer month represents a fairly uniform condition for many of the factors that affect camper behavior.

Table 1.—Physical site-characteristics of parks used for camper survey, 1964

Characteristics ¹	Fish Creek	Hearthstone Point	Rogers Rock	Rollins Pond	Green Lakes
Campsites Number . .	379	246	301	257	202
Average distance between campsites feet . .	58	45	64	84	45
Average slope of campground percent . .	2	13	12	18	4
Average density of vegetative screening between campsites ² percent . .	18	13	39	50	5
Average overstory density of all tree species ³ percent . .	68	88	75	88	35
Average distance between a campsite and lake . . . feet . .	18	578	272	148	2,680
Lake available for motorboats acres . .	5,638	28,200	28,200	422	0
Additional lake available by canoe portage acres . .	2,015	0	0	2,015	0

¹ Average values computed from measurements taken at 10 randomly selected campsites at each park. Other data obtained from the files of the New York State Conservation Department and the Central New York State Park Commission.

² As measured according to procedures described by Nord & Magill (2).

³ As measured according to procedures described by Strickler (7).

Table 2.—Number of questionnaires that were partially or totally completed within each month, park, and replication

Month	Park	Replication	Total sampling frame available	Number of questionnaires obtained
June	Fish Creek	1	50	50
		2	51	51
	Hearthstone	1	37	37
		2	36	36
July	Fish Creek	1	68	66
		2	67	65
	Hearthstone	1	87	84
		2	91	88
	Rogers Rock	1	83	83
		2	84	84
	Rollins Pond	1	38	38
		2	36	36
	Green Lakes	1	78	78
		2	73	72
August . . .	Fish Creek	1	45	45
		2	44	44
	Hearthstone	1	91	89
		2	96	94
Total			1,155	1,140

Personal interviews were conducted during three months at Fish Creek and Hearthstone, and at all five parks during July. The questionnaire that was used is described in another study (4). Approximately every 4th camping party that registered at each park was personally interviewed, for a total of 1,140 interviews.

The other campers were used in a secondary phase of this study that compared personal interview results with results from three other user survey techniques (4).

Throughout the sampling procedures, completed questionnaires within each month-park category were assigned systematically each day to one of two replications. For example, if 24 camping parties were interviewed in 1 day at Fish Creek in June, every other interview was assigned to replication one, and the other 12 were assigned to replication two.

The total number of interviews within each park-month replication varied from 36 to 94 (table 2).

ANALYSIS

Each answer category for a question was analyzed separately. Analysis of variance (model I, fixed effects) was used to detect non-random differences among two parks and three months, and among five parks during July (6). Orthogonal comparisons (8) were used to compare results for June versus the average combined results for July and August; and also July versus August results (table 3). The Scheffé test (3) was used to make all 10 possible two-way comparisons between parks in July (table 4).

It was necessary to transform the data before analysis because the variances were not uniform at different times and places. For certain questions, the number of people in each answer category was expressed as a percent of total response to the question, and then was transformed (6) to arcs $\sin\sqrt{\text{percent} + 1}$ for analysis (table 3).

Answers to other questions involved a camping party's cost (X_j) of the trip or camping equipment. The transformed value analyzed within each park-month replicate, with sample size N_i , was

$$\sum_{j=1}^{N_i} \log (X_j + 1).$$

In these cases the analysis followed the procedure described by Snedecor (6) for a two-factorial experiment with disproportionate subclass numbers.

Irregular camper registration and departure patterns made it impossible to obtain an equal number of observations in all treatment combinations without biasing the results. Furthermore, different length-of-stay patterns among months and parks made it impossible to obtain *proportional* subclass samples. For example, the ratio between sample sizes for Fish Creek and Hearthstone was not equal throughout the three summer months (table 2):

$$101:73 \neq 131:172 \neq 89:183$$

Table 3.—An example of how data were analyzed among two parks and 3 months. Analysis of variance for the question: What was the most important reason you camped at the park? The value analyzed was the $\arcsin \sqrt{\text{percent} + 1}$ of respondents in each category.

Source of variation	D.f. ¹	Campsites near water		Recommended by friends		Swimming and water sports facilities		Campground design and campground spacing		Landscape variability in surrounding areas	
		Mean square	F	Mean square	F	Mean square	F	Mean square	F	Mean square	F
Parks	1	3,989.90	458.08*	100.96	6.83*	5.97	0.33	9.21	0.55	1,442.98	149.84*
Months ²	2	33.37	3.83	32.34	2.18	2.37	.13	2.23	.13	51.95	5.39*
1 vs. 2 + 3	1	11.57	1.32	63.32	4.28	4.71	.26	4.47	.27	78.75	8.17*
2 vs. 3	1	55.17	6.33*	1.38	.09	.02	.00	.00	.00	25.15	2.61
Parks x months	2	37.91	4.35	11.96	.80	19.31	1.07	81.50	4.93	.08	.00
Error	6	8.71	—	14.77	—	17.95	—	16.51	—	9.63	—

Source of variation	D.f.	Close to home		To be with friends camping at park		Tourist attractions near the park		Type and amount of trees and shrubs in park		Other reasons	
		Mean square	F	Mean square	F	Mean square	F	Mean square	F	Mean square	F
Parks	1	832.21	54.68*	0.04	0.01	105.91	33.62*	0.03	0.00	44.01	4.71
Months	2	23.20	1.52	21.17	4.75	64.61	20.47*	2.18	.38	12.28	1.31
1 vs. 2 + 3	1	35.76	2.34	31.71	7.11*	17.17	5.44	1.96	.34	20.97	2.24
2 vs. 3	1	10.64	.69	10.63	2.38	112.05	35.50*	2.40	.42	3.59	.38
Parks x months	2	50.94	3.34	3.67	.82	3.83	1.21	6.17	1.08	47.04	5.04
Error	6	15.22	—	4.45	—	3.15	—	5.67	—	9.33	—

¹Degrees of freedom.

² June, July, and August are represented by 1, 2 and 3.

*Indicates significance at the 95-percent probability level.

Table 4.—An example of how data were analyzed among five parks during July. Analysis of variance for the question: How many years have you camped at this park? The value analyzed was the arcsin $\sqrt{\text{percent} + 1}$ of respondents in each answer category.

Source of variation	D.f. ¹	Never camped at the park before		Camped at the park for the last 2-5 years		Camped at the park for the last 6 or more years	
		Mean square	F	Mean square	F	Mean square	F
Parks ² —	4	171.56	14.92*	106.03	6.61*	81.60	9.88*
1 vs. 2	4	100.3	8.75*	25.7	—	45.0	5.45*
1 vs. 3	4	32.2	—	5.3	—	17.2	—
1 vs. 4	4	2.5	—	17.8	—	25.6	—
1 vs. 5	4	18.5	—	19.3	—	72.2	8.75*
2 vs. 3	4	18.8	—	7.6	—	6.5	—
2 vs. 4	4	134.5	11.66*	86.5	5.41*	2.7	—
2 vs. 5	4	32.6	—	51.1	—	3.2	—
3 vs. 4	4	52.9	—	42.6	—	.8	—
3 vs. 5	4	1.9	—	19.2	—	18.9	—
4 vs. 5	4	34.6	—	4.6	—	11.8	—
Error	5	11.49	—	16.03	—	8.25	—

¹Degree of freedom.

²Fish Creek, Hearthstone, Rogers Rock, Rollins Pond, and Green Lakes are represented respectively by 1, 2, 3, 4, and 5.

*Indicates significance at the 95-percent probability level.

VARIATION IN SOCIAL CHARACTERISTICS

Throughout the discussion of survey results, percentages and dollar values are presented graphically to assist in interpretation of results. Remember, however, that statistical inferences in these same graphs usually apply to some type of transformed data.

In the figures, percentages may not always add up to exactly 100 percent. Furthermore, percentage results from the two-factorial design may differ slightly from comparable data for the five parks in July. These discrepancies exist because the computer rounded values to the nearest whole percent.

Type of Camping Party

Over 90 percent of all parties interviewed at the five campgrounds were single families or groups of families. Approximately two-thirds of these families had children under 12 years of age and roughly one-third to one-half of the families had children between 12 and 18 years old. However, at this point the similarity among campers ends.

Type of Visit

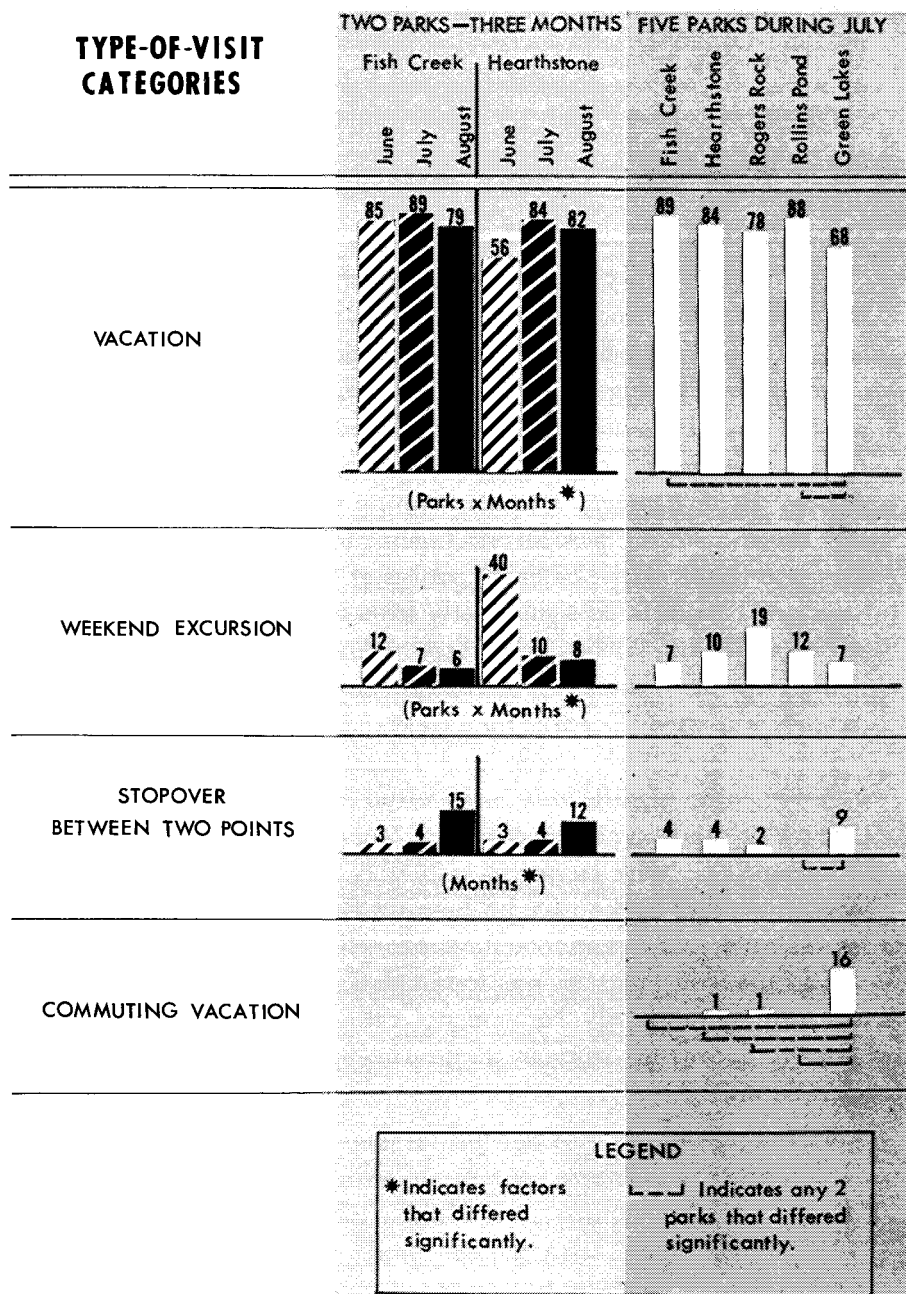
The percent of campers on vacation at Fish Creek and Hearthstone followed different patterns throughout the summer, and thus caused a significant park-month interaction. For example, vacationing campers at Hearthstone increased from 56 percent in June to around 82 to 84 percent in July and August. An opposite trend occurred at Fish Creek where 85 to 89 percent of the campers were on vacation in June and July, but this dropped to 79 percent in August. In July, slightly more than two-thirds of the camping parties at Green Lakes were on vacation. This differed significantly from the 89 and 88 percent at Fish Creek and Rollins Pond respectively (fig. 1).

A significant park-month interaction also occurred with those campers who used the parks for a weekend excursion (fig. 1).

Furthermore, Fish Creek and Hearthstone were used as stopover points significantly more often in August than during the rest of the summer. And almost 10 percent of the campers at Green Lakes were stopovers in July; however, this difference from the other parks may be because Green Lakes is only a 10-minute drive from an interstate throughway.

An interesting pattern was found at Green Lakes, where 16 percent of the family respondents camped while the father commuted daily to work in the nearby Syracuse metropolitan area (fig. 1).

Figure 1.—Type-of-visit patterns. Bars indicate percentage of camping parties in each category.



Length of Stay

Length-of-stay distributions were placed into four categories:

1. The *transient* camper who stayed 1 night.
2. The *short-stay* camper who camped 2 to 4 nights.
3. The *one-week* camper who stayed approximately 1 week—5 to 7 nights.
4. The *two-week* camper who camped 8 to 14 nights.

The proportion of short-stay campers at Fish Creek and Hearthstone differed significantly among months. For each of the other length-of-stay categories there either was a park-month interaction; or parks and/or months differed significantly.

Throughout the summer, Fish Creek had a greater proportion of 2-week campers than Hearthstone, whereas Hearthstone consistently had a greater proportion of 1-week campers (fig. 2).

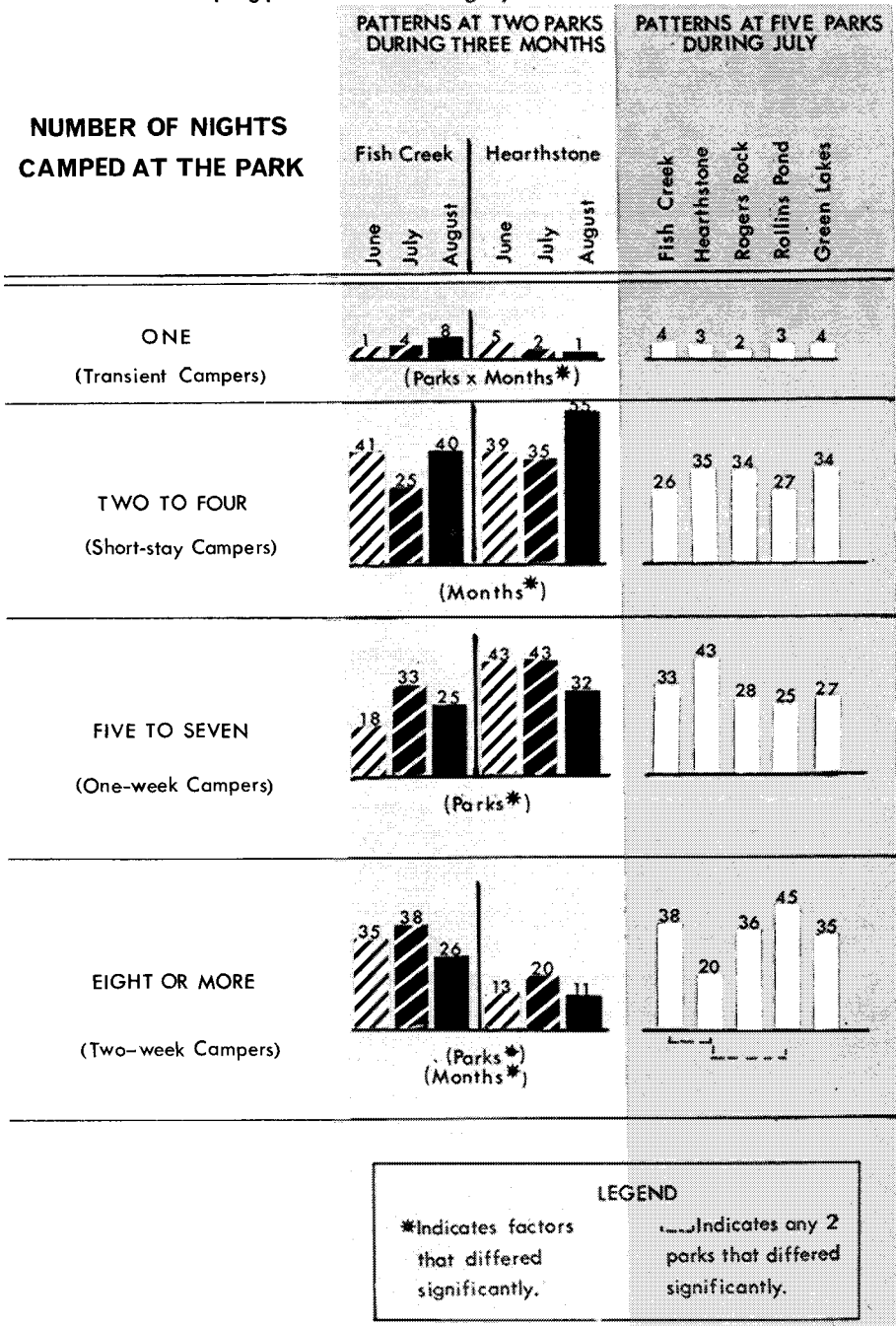
Rollins Pond, the most heavily wooded and most secluded campground of the five, had the greatest proportion of 2-week campers (45 percent). Hearthstone, with the least primitive surroundings of all the campgrounds, had the smallest proportion of 2-week campers (20 percent). At all parks, the 2-week camper accounted for an equal or greater amount of total days of campsite use than the transient or short-stay camper.

The multimodal length-of-stay patterns (fig. 2) at most parks show why it is not meaningful to use average length of stay per camping party, or a count of total number of campers, as an indication of use intensity. Rather, total number of user-days (U) throughout a season is more realistic. Where d_i is the length-of-stay for each of n total camping parties,

$$U = \sum_{i=1}^n d_i$$

For U to reflect the shape of the length-of-stay pattern, it may be necessary to multiply U by the proportion of 2-week campers. Other types of weighting are also possible.

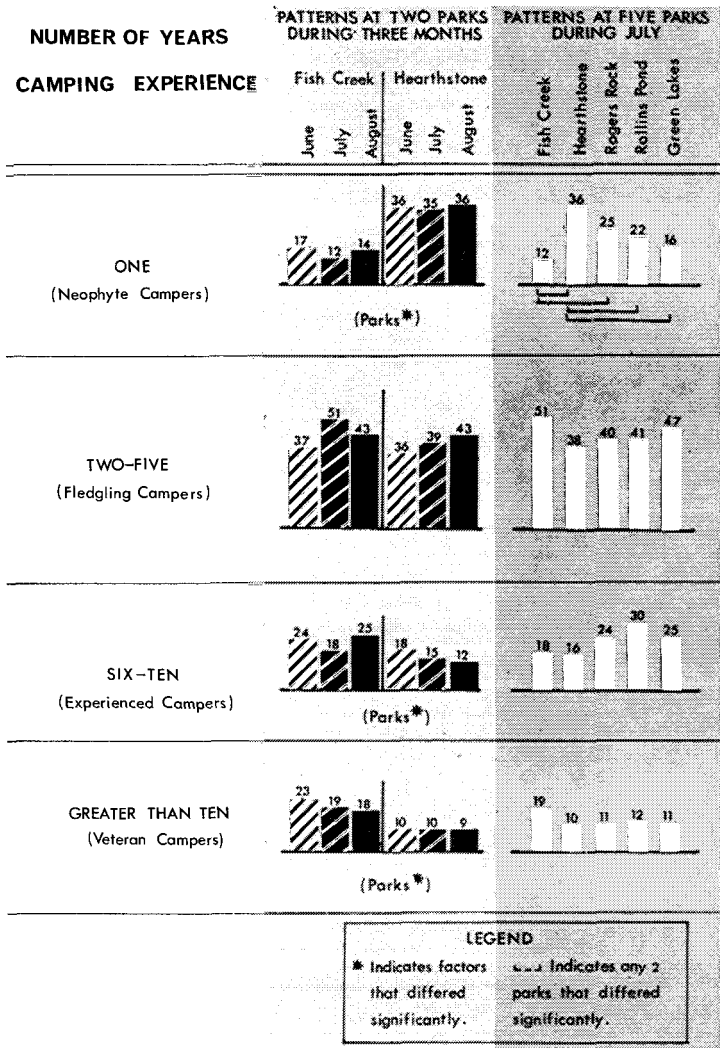
Figure 2.—Length-of-stay patterns. Bars indicate percentage of camping parties in each category.



Camping Experience

The number of years one camps reflects a certain degree of commitment to camping. The classification scheme described here attempts to segment this intensity of camping-commitment into four discrete categories:

Figure 3.—Camping-experience patterns. Bars indicate percentage of camping parties in each category.



1. The *neophyte* camper who was camping for the first time.
2. The *fledgling* camper who was gaining camping experience over a 2- to 5-year period.
3. The *experienced* camper who had camped for 6 to 10 years.
4. The *veteran* camper who had camped for more than 10 years.

Campers at Hearthstone differed from Fish Creek in three of these four categories. In July, Hearthstone had the greatest number of neophyte and the smallest number of veteran campers of all five parks. Fish Creek had just the opposite pattern (fig. 3). Neophyte and fledgling campers seem to like Hearthstone because it is surrounded by suburban conveniences and tourist attractions.

Repeat Visits

Preference for a park is reflected, at least partially, in the number of times one camps there. An effective classification for this type of behavior was:

1. The *initial* visitor who visited the park for the first time.
2. The *repeat* visitor who returned to the campground for 2 to 5 consecutive or intermittent years.
3. The *continuous* visitor who returned for 6 or more consecutive or intermittent years.

Campers at Fish Creek were distributed about evenly across all three of these categories. Significantly unlike this pattern, 66 1/2 to 80 percent of the campers at Hearthstone were initial visitors. Other parks in July also differed significantly within these various categories (fig. 4).

Other Camping Areas Used

The number of different campgrounds that individual camping parties use throughout their camping experience provides some indication of the variety of campgrounds they prefer.

Results of my inquiry about use of other campgrounds depended mainly on where, but not when, the question was asked. Fish Creek and Hearthstone differed significantly in

Figure 4.—Repeat-visitation patterns. Bars indicate percent-
age of camping parties in each category.

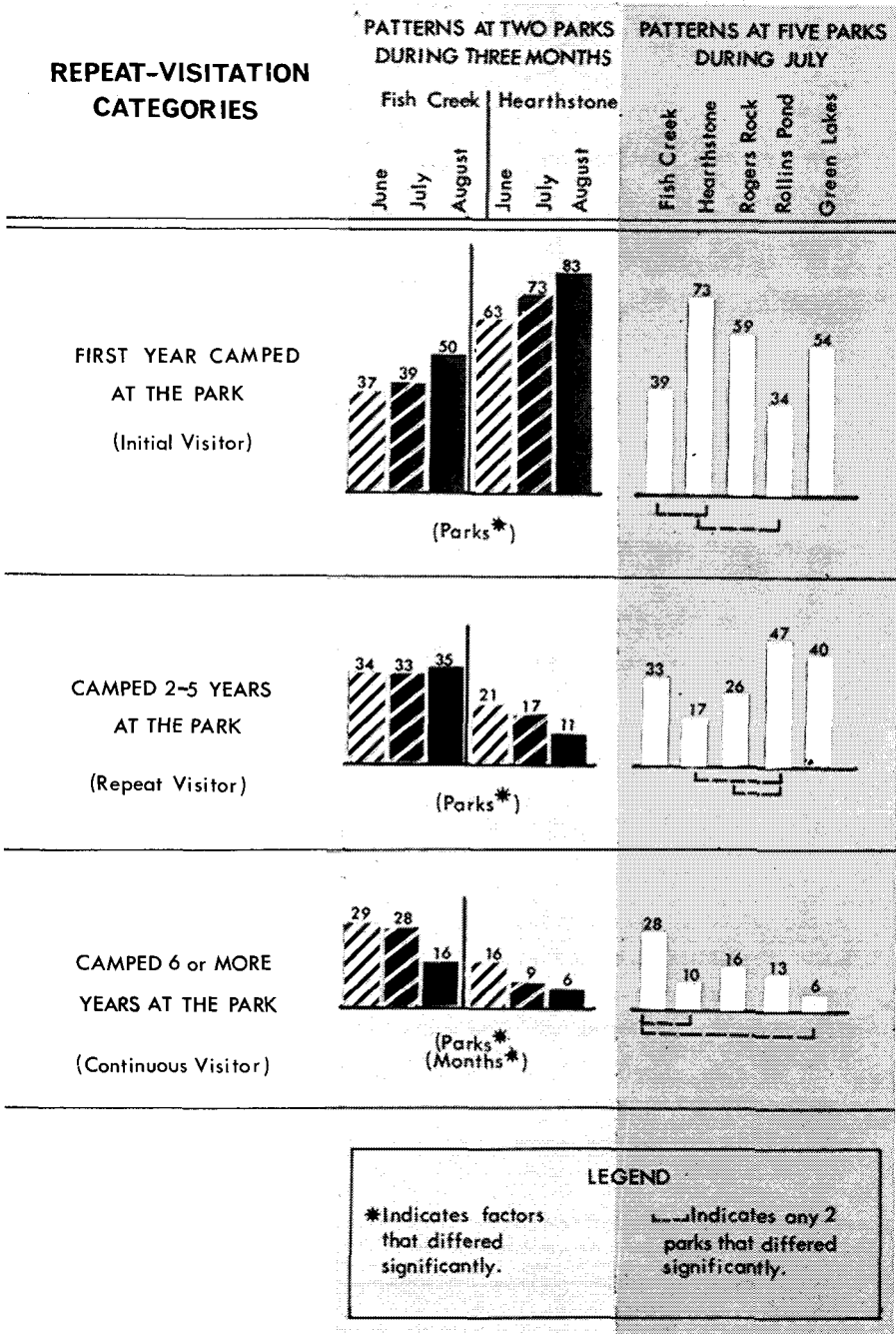
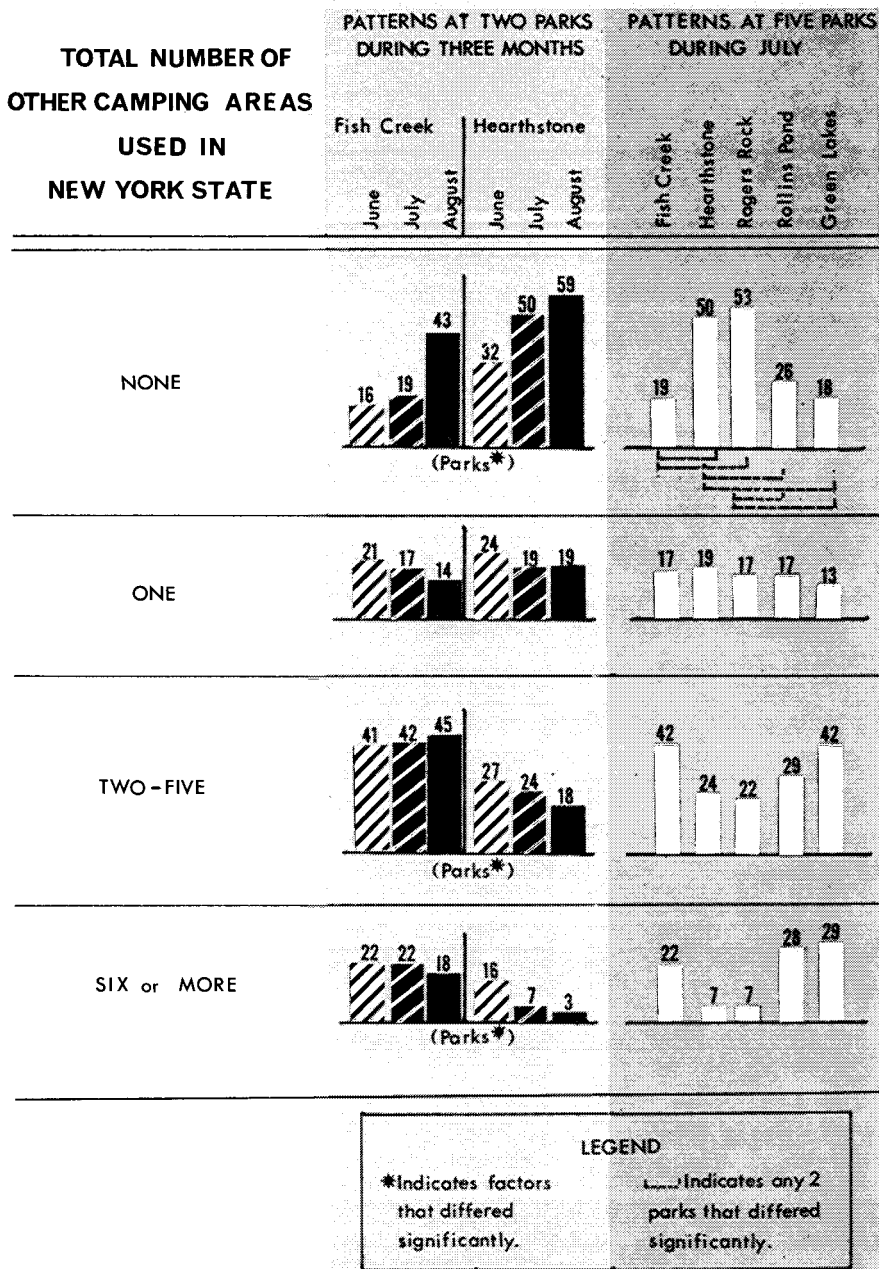


Figure 5.—Total number of camping areas that camping parties have used in New York State, other than the park in which the survey was conducted. Bars indicate percentage of camping parties in each category.



terms of the proportion of camping parties who used six or more, two to five, and no other campgrounds within New York State during their camping career. Many of the five parks differed greatly within the latter category during July (fig. 5).

Factors that Influenced the Visit

Between 92 and 100 percent of the respondents gave at least one reason for visiting the campground where they were interviewed. Reasons mentioned as most important were grouped into 10 categories (table 3). The seven reasons mentioned by 5 percent or more of the camping parties at a park during any one month were: campsite nearness to water, swimming and water-sport facilities, landscape variation surrounding the park, nearness to home, tourist attractions near the park, campground design, and recommendations by friends (fig. 6).

The primary reason usually differed significantly between parks and/or months (table 3). Usually, the predominant physical feature at each park was the major item that influenced a significant proportion of visits.

For example, at Fish Creek most campsites are located near a lake (table 1). So it is not surprising to find (depending on the month) that 46 to 59 percent of the respondents at this park, as compared with 1 to 16 percent at other parks, said nearness to water was the most important reason they camped there. This reason, together with recommendations by friends, influenced the *initial* visit to Fish Creek. Thereafter, campers returned annually because the campsites are near the lake.

At Green Lakes, on the outskirts of Syracuse, 37 percent of the respondents said they camped there because it was close to home. The proportion of campers who gave this reason at Green Lakes increased directly with the number of years they had camped there. At the other parks this reason was mentioned only by 1 to 14 percent of the campers interviewed, except during June at Hearthstone, where 28 percent gave this response.

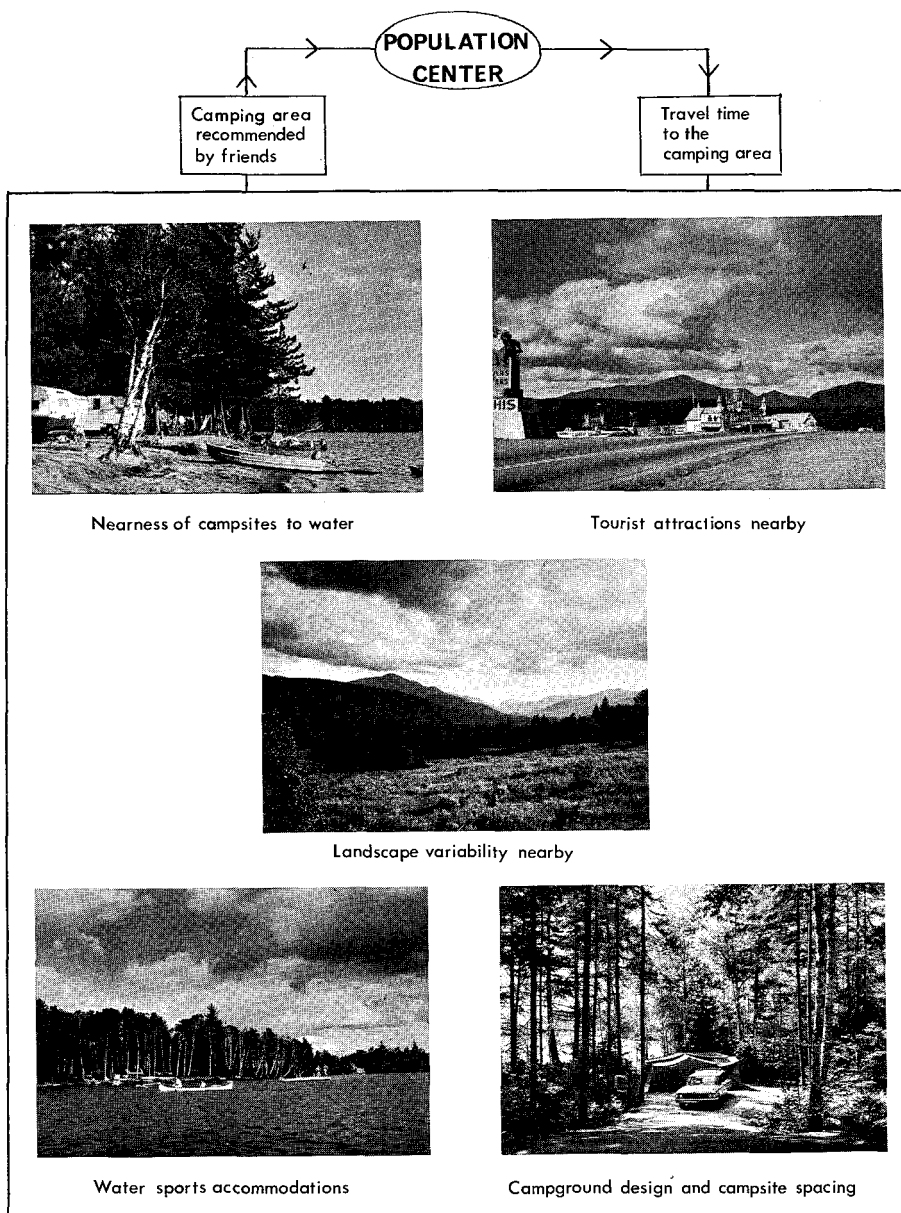


Figure 6.—Flow chart of the seven major factors that influenced use at five public camping areas in New York State. The relative importance of each factor differed significantly among the five campgrounds considered.

Rollins Pond campground is composed of a heavily wooded and secluded environment, unlike the other parks investigated (table 1). At this park, 32 percent of the respondents camped there because they liked the campground design and campsite layout. In comparison, only 1 to 12 percent of the campers at the other four parks gave this reason. Campground design influenced attendance at Rollins Pond, regardless of the number of years respondents had camped there.

Depending on the month, landscape variability accounted for a significant 21 to 32 percent of the response at Hearthstone. This park is surrounded by mountainous terrain and is located along the irregular shoreline of island-studded Lake George.

A substantial 22 percent of July campers visited the parks because they were recommended by friends. Thus we find a rub-off effect operating once campers return to their residences and describe their experiences to others. Clawson (1) inferred a trend of this type when he described a recollection phase of an outdoor recreation experience. The influence of friends ceases to be important after the initial visit.

Swimming and other water-sports facilities influenced 8 percent of the respondents to visit each park. However, swimming facilities are an important part of campground *design* at Fish Creek and Rollins Pond, where campers can swim and launch their boats a few feet from their campsites. The overall swimming facilities, other than the developed beaches at these two campgrounds, probably were included in the two major reasons for camping there—nearness to water and campground design.

In another study of *observed* use-intensities at Adirondack campgrounds, we found that measurements of the lake, swimming beach, and campground design can be used to mathematically describe use-intensity at a campground (5). These complementary results indicate that respondents in our study provided reliable and valid reasons for choosing a particular park.

Only a few camping parties mentioned that the type and amount of trees and shrubs in the park were important to the

visit. However, respondents may have considered vegetation as part of the dominant physical features of the landscape.

In summary, there are several factors that influence a person to camp at a specific park. How close it is to home is most important in some instances. Next, aesthetic features and nearness to water at the campground seem to be the prime factors. Finally, the decision to camp at a place for the first time can be most influenced by the comments of others who previously visited the area (fig. 6).

VARIATION IN ECONOMIC CHARACTERISTICS

Equipment Used

The proportion of campers who used tents, collapsible trailers, and house trailers was the same at Fish Creek and Hearthstone throughout the summer (fig. 7).

Figure 7.—Equipment used by campers. Bars indicate the percentage of camping parties having each type of equipment.

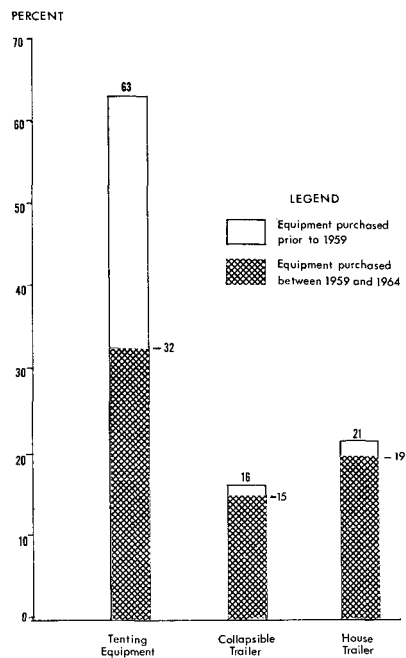
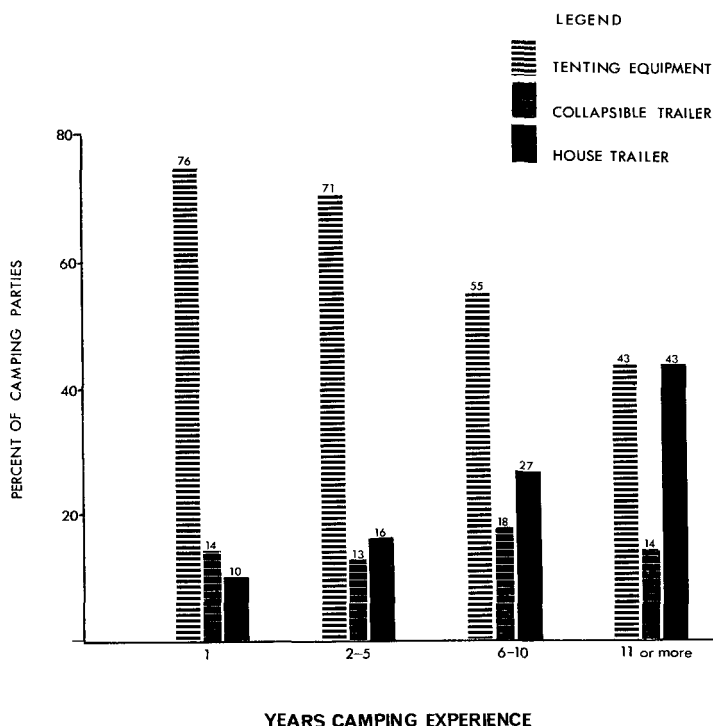


Figure 8.—Relation between camping experience and equipment-ownership patterns. Bars indicate percentage of camping parties in each category.



Tents were used by 63 percent of all the campers interviewed; 50 percent of these campers had bought their tents within the previous 5 years. Twenty-one percent of the respondents had house trailers and 16 percent had collapsible trailers. Most house and collapsible trailers were purchased within the previous 5 years, and this reflects a trend toward more comfortable and more convenient camping equipment (fig. 7).

Use of higher-priced camping equipment was significantly related to an individual's camping experience. Only 10 percent of the neophyte-campers (first-year campers), but more than 40 percent of the veteran-camper group (11 or more years camping experience) had house trailers (fig. 8).

Cost of Equipment

A significant park-month interaction, in terms of average *total* cost of equipment per camping party, occurred at Fish Creek and Hearthstone and four of the two-way comparisons among five parks differed significantly during July.

At the beginning of the camping season in June, the average total cost of equipment used at Fish Creek and Hearthstone was almost \$1,000. During the high-intensity-use months of July and August, total equipment costs at Fish Creek remained close to \$1,000, but equipment costs were 30 to 50 percent lower at Hearthstone (table 5).

The average cost of any one item covered a wide range of values, depending on where and when the data were obtained (table 5).

Park-month interactions were significant for five of the six items analyzed. Average cost of different equipment items also fluctuated significantly among the five parks in July.

The average cost of house trailers at Fish Creek ranged from \$1,600 to around \$1,900. This was 10 to 40 percent higher than the average cost of trailers used at Hearthstone (table 5). One explanation for these differences is that most campers at Fish Creek had more camping experience (fig. 3) and probably were more strongly committed to camping than campers at Hearthstone. Therefore, we would expect most campers at Fish Creek to have more expensive equipment.

Depending on the sampling location and period, average tenting-equipment costs ranged from \$97 to \$142, collapsible trailer costs varied from \$483 to \$727, and miscellaneous equipment costs ranged between \$78 and \$148 (table 5).

The average cost of boats used at Hearthstone varied between \$637 and \$837. This was 30 to 60 percent higher than boats used at Fish Creek. However, we might expect to find more expensive boats at Hearthstone because there is five times more lake area than at Fish Creek (table 1).

Table 5.—Average number of dollars invested during 1959-64 by the purchasers of camping and boating equipment.

Park	Month	House trailer	Collapsible trailer	Tenting equipment	Boat	Outboard motor	Other equipment	Average total investment per party
Fish Creek	June	\$1,848	\$630	\$98	\$338	\$251	\$123	\$967
	July	1,948	598	108	496	223	122	987
	August	1,639	635	110	451	303	106	887
Hearthstone Point	June	2,010	727	142	762	137	78	1,051
	July	1,496	601	112	637	301	142	578
	August	1,320	615	97	837	453	148	551
Rogers Rock	July	1,494	615	98	1,040	356	141	733
Rollins Pond	July	1,352	502	99	249	188	117	623
Green Lakes	July	2,359	483	103	1,025	100	111	824

Cost of Camping Trip

During their visit, campers spent an average of \$49 to \$70 per party (table 6). Summer months significantly influenced the average total on-site expenditure per camping party at Fish Creek and Hearthstone. Between June and July, total average on-site costs rose 26 percent at Hearthstone, and 15 percent at Fish Creek (table 6). Also, for this same data, there were significant differences among the five parks in July.

Expenditure patterns were extremely variable between parks when the average total on-site cost was segmented into its five major components: food, entertainment, camping fees, gas and oil, and other miscellaneous expenses. Average money spent for lodging outside the campground was negligible (table 6).

Throughout the summer season, average camping-fee expenditures per camping party ranged between \$7 and \$13. As might be expected, average cost for camping fees and food followed approximately the same trend; from a low in June to a high in July, followed by a drop in August (table 6). These trends are related directly to the fluctuations in length-of-stay patterns at the parks (fig. 2). At Fish Creek, average food costs were the major on-site expenditure, ranging from \$29 to \$38 while those at Hearthstone averaged between \$22 and \$30 (table 6).

At both parks, money spent for entertainment rose from June through July, and this was the only thing that campers at Hearthstone spent more for—as much as 150 to 300 percent—than those at Fish Creek. Entertainment costs at Hearthstone undoubtedly were associated with the many tourist attractions in the Lake George area.

Significant differences between many of the parks during July, in terms of average on-site costs, provided further indications of the wide range of values that can be encountered, depending on where the data are gathered.

Income

Income distributions fluctuated significantly among months but were the same between parks. Ranges in income levels reported during the summer were as follows:

Table 6.—Average number of dollars spent per camping party while camping, 1964.

Park	Month	Entertainment	Camping fees	Food	Gas and oil	Other	Average total amount spent per party
Fish Creek	June	\$ 5	\$11	\$29	\$8	\$3	\$56
	July	7	12	38	8	3	68
	August	9	10	32	9	7	67
Hearthstone Point	June	12	8	22	7	—	49
	July	22	10	30	6	—	66
	August	22	7	24	6	—	57
Rogers Rock	July	16	11	37	6	1	70
Rollins Pond	July	5	12	36	8	2	64
Green Lakes	July	4	13	36	6	4	63

<i>Income class (dollars)</i>	<i>Percent of camping parties</i>
0 to 3,999	1 to 3
4,000 to 6,999	19 to 27
7,000 to 9,999	37 to 46
10,000 or more	27 to 34

About two-thirds to three-quarters of the respondents reported incomes of \$7,000 or more.

VARIATION IN PREFERENCE FOR CAMPGROUND DESIGN

Number and Spacing of Campsites

Campground size did not seem to concern the respondents. The majority of campers at all parks sampled either were satisfied with the present campground size; or its size was not important to them. Thus expansion of present facilities may be satisfactory to most users.

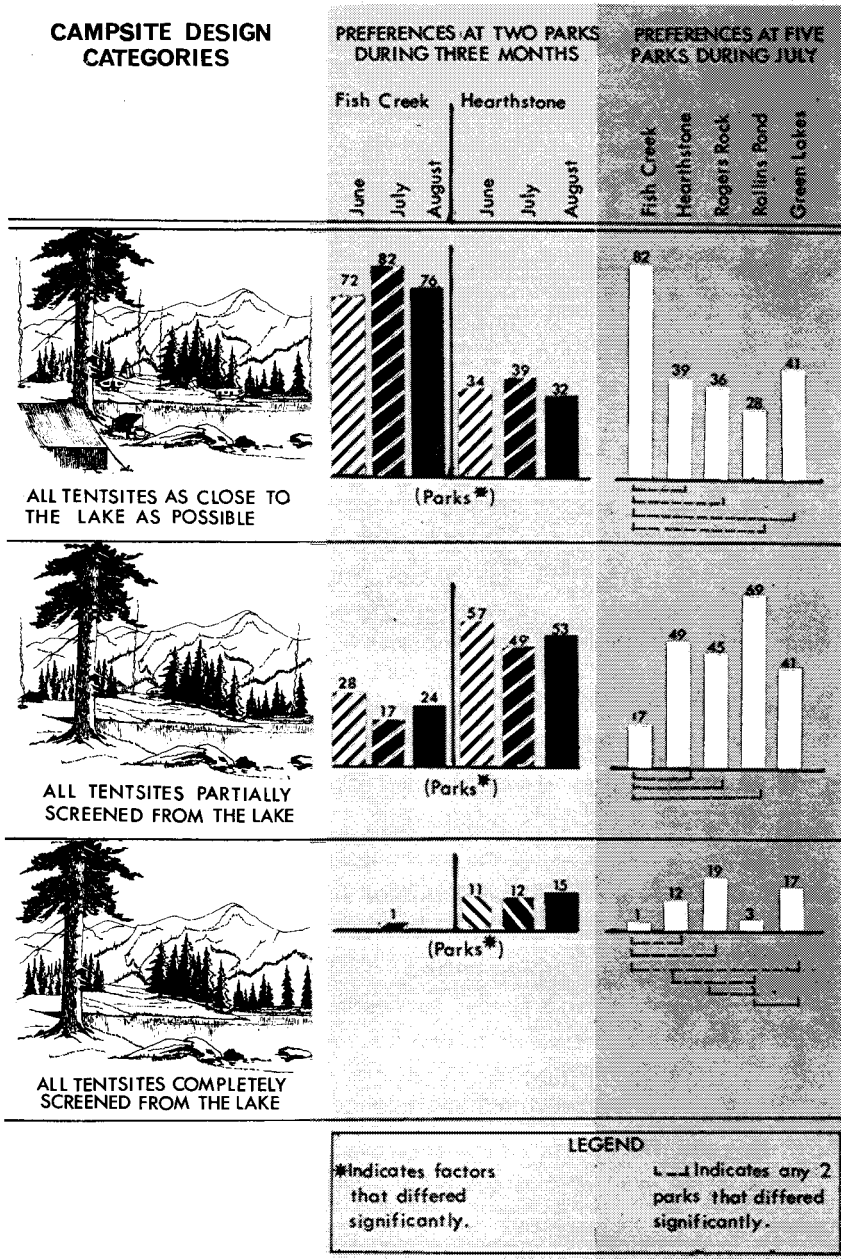
Depending on the individual park, average distance between campsites was 45 to 84 feet (table 1). Most campers (66 to 85 percent) felt that present campsite spacing was satisfactory, but another 14 to 28 percent preferred campsites twice as far apart as they are now.

Vegetative Screening

On-site conditions at individual parks seemed to influence preferences for vegetative-screening. At Fish Creek, where there was an 18-percent screening density (table 1), 43 percent of the campers in July desired sparse screening between campsites. In July at Rollins Pond, where there was a 50-percent screening density, none of the respondents chose the sparse-vegetation category.

Most people (85 percent) preferred either partial or very sparse screening between campsites. At most of the parks, understory vegetation density was sparse (table 1). Campers—

Figure 9.—Preference for campground design. Bars indicate percentage of camping parties in each category.



except those at Rollins Pond, the most primitive area—were not too concerned with the amount of understory vegetation available. In fact, the lack of screening in many cases presented the opportunity for campers to display camping and boating equipment. This in turn, may have afforded some degree of social prestige.

Nearness to Lake

On the average, 77 percent of the respondents at Fish Creek wanted to camp as close to the lake as possible, but only an average of 35 percent of the campers at Hearthstone wanted this (fig. 9). But again, on-site conditions seemed to influence questionnaire response. At Fish Creek, the average distance from a campsite to the lake was 18 feet, while at Hearthstone it was 578 feet (table 1). At the other extreme, Rollins Pond, where most campsites were almost completely screened from the lake by natural vegetation, and were located an average distance of 148 feet from the lake, 72 percent of the respondents wanted lakeshore vegetation either partially or completely undisturbed by campsites (fig. 9).

DISCUSSION

The months and parks studied do not represent random selections from a larger population. Therefore our results are restricted to the conditions investigated. However, in future surveys that deal with other summer seasons and campgrounds we can expect to find similar variation in the characteristics and preferences of the camping public.

In one phase of this study, survey data differed significantly 35 percent of the time between two parks, 24 percent of the time among three months, and 12 percent of the time in park-month interactions. In another phase, survey data differed significantly 38 percent of the time among five parks in July.

Therefore, if you plan to survey campers, you should stratify your sample beforehand by monthly intervals and similar campgrounds. Specifically, campgrounds within a strata should be approximately the same in terms of: number of campsites,

campground design, lake acreage available for boating, surrounding landscape, number of tourist attractions near the campground, and distance from population centers.

Otherwise, if you survey several campgrounds at random throughout a summer, your results will describe a nonexistent *average* camper who eventually can cause more management problems than your study intends to solve.

At present, one should relate management decisions and use-predictions to the physical and social environments that surround *individual* parks.

The same type of variation found among campers in this study probably exists also among fishermen, hunters, skiers, and other types of recreationists who use a wide variety of environments for their sport.

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