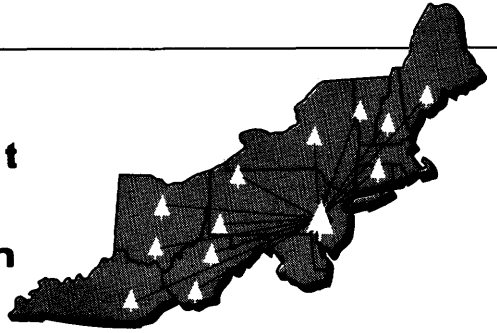


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# Northeastern Forest Experiment Station



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## GEOGRAPHICAL VARIATION IN CAMPER EXPENDITURES

*Abstract.*—Daily expenditures by families camping in New Hampshire State parks in 1967 averaged \$11.81. Considerable variation was found between the northern, central, and southern regions of the State in both the average amount of money spent and the way in which the money was spent. Daily expenditures in the north were higher, but average visit lengths were shorter, resulting in less local spending per family. The ratio of campground visit length to total trip length is shown to vary with several categories of trip expenditure. Campers who spent all or most of their trip at one campground spent substantially less per day in total and spent less on specific items of entertainment and automotive expenses.

Expenditures by campers and other tourists are generally thought to be an important source of income for rural economies (*Church 1969*). However, reliable figures on how much money campers actually spend are scattered and highly variable. Results of a 1967 Forest Service study suggest that we need further information on the nature of camping expenditures if we are to properly assign measures to the economic impact of camping.

In 1959, family groups camping in State parks in Maine were reported to have spent an average of \$19.80 per day (*Maine State Park Commission 1960*). In a 1967 study of campers at just one State park in Maine, the average daily expenditure for camping families was \$13.83 (*Buxton and Delphendahl 1970*). A study of Wisconsin State park visitors (not all were campers) in 1958 revealed an average daily expenditure for car parties of \$16.38 (*Hutchins and Trecker 1961*). A profile of Delaware

campers in 1967, revealed an average daily camper expenditure of \$2.70 or \$12.69 for an average party of 4.7 persons (*Roenigk and Cole 1968*).

Camping groups along the Androscoggin River, in northern New Hampshire, were reported to spend an average of \$11.20 per day in 1967 (*Wallace and Olson 1969*). Visitors (reported to be "typically campers") to two reclamation reservoirs in Colorado during the summer of 1968 were reported to have spent widely different daily average amounts of \$5.22 and \$13.73 (*Milliken 1970*). A study of local spending patterns at one New Hampshire State park revealed the average daily expenditure per family to be \$3.98, \$4.22, \$5.45, and \$4.54, respectively, for the years 1966 through 1969 (*Jansen and others 1970*).

The extreme variation in reported expenditures by campers is probably attributable to two major sources: (1) the methods used in identifying camping-related costs are probably not comparable between studies; and (2) relative opportunity to spend varies with a number of geographic factors such as quality of the attraction and intensity of tourist-economy development, which, in turn, may influence such things as lengths of visit and styles of camping participation.

During the summer of 1967, a sample of campers at New Hampshire State parks supplied information about their daily expenditures for camping fees, gas and oil, food, equipment, entertainment, and miscellaneous trip costs. Campers were randomly selected throughout the summer at all State-operated campgrounds. Sampling methods, campground descriptions, and a partial analysis of the survey have been previously reported (*LaPage 1968*).

Total daily costs, and costs in several of the expenditure categories, varied with park locations, and with whether the park visit was a major, or incidental, part of the camping trip.

## Geography and Costs

Expenditure data were collected from 642 camping families at New Hampshire's six major camping parks (figure 1). The average daily expenditure by these families while on their camping trip was \$11.81. However, the total daily expenditure, as well as the daily cost for gas and oil, entertainment, and equipment varied significantly between parks and increased distinctly from the southern to the northern part of the State. Expenditures for camping fees and for food tended to remain relatively constant throughout the State (table 1).

The average expenditure for a day's camping at three northern parks—Lafayette, Moose Brook, and Coleman—was \$3.23 higher than at the

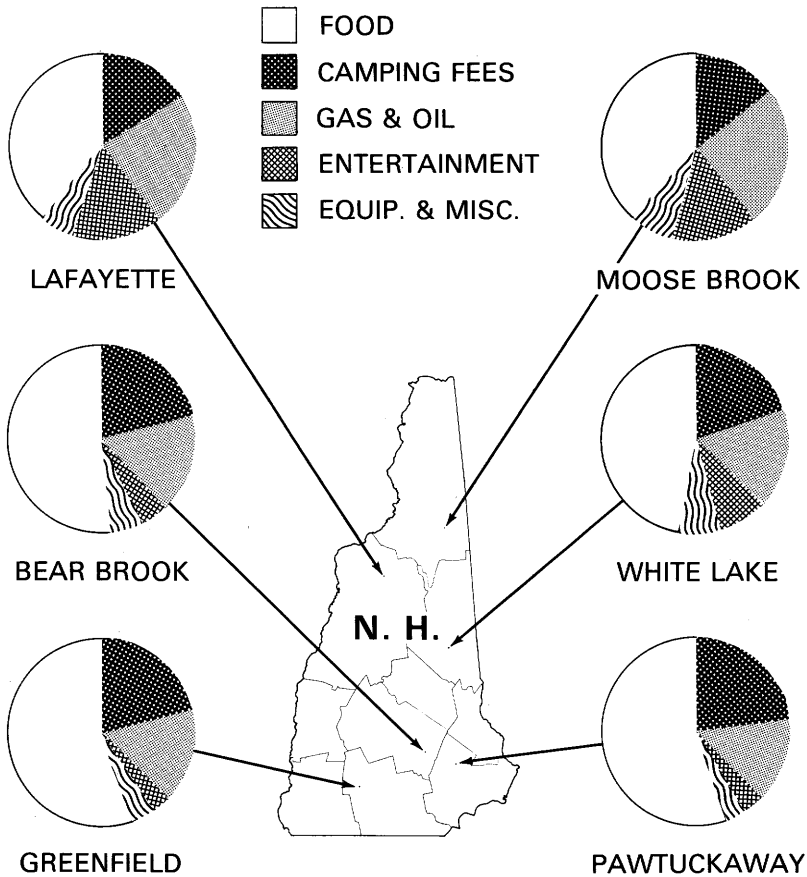


Figure 1.—Where the average daily camping expenditure goes, at six State operated campgrounds in New Hampshire.

five southern parks—Bear Brook, Pawtuckaway, Greenfield, Monadnock, and Pillsbury—(\$14.00 and \$10.77, respectively). The bulk of this difference occurs in two classes of expenditures: gas and oil expenses and entertainment expenses each averaged \$1.55 more in the north. While all campers incurred some expense for gas and oil, relatively few reported expenditures in the entertainment, equipment, and miscellaneous categories (table 2).

Campers at White Lake State park, which is more or less centrally located, reported expenditure patterns almost exactly in the middle of the north and south extremes in total daily costs, gas and oil expenses, and entertainment.

Campers in the northern part of the State not only spent more money each day, they also averaged more days away from home. But, since a

Table 1.—Mean trip expenditures and standard deviations<sup>1</sup> by camping families at six major State parks in New Hampshire, by expenditure classes

Item	Camping location						
	Pawtuckaway	Greenfield	Bear Brook	State-wide average <sup>2</sup>	White Lake	Lafayette	Moose Brook
Cost/day/family (\$)	10.03	10.52	11.71	11.80	12.11	13.87	14.64
Std. dev. <sup>1</sup> (\$)	( 4.69)	( 3.96)	( 4.70)	( 5.32)	( 4.88)	( 6.23)	( 7.60)
Camping fees (\$)	2.30	2.27	2.35	2.29	2.42	2.31	2.23
Std. dev. (\$)	( .49)	( .49)	( .59)	( .54)	( .60)	( .55)	( .55)
Food (\$)	5.53	5.73	6.12	5.70	5.70	5.50	5.59
Std. dev. (\$)	( 2.90)	( 2.84)	( 3.20)	( 2.70)	( 2.30)	( 2.56)	( 2.34)
Gas & Oil (\$)	1.41	1.64	2.01	2.18	2.10	3.18	3.64
Std. dev. (\$)	( 1.24)	( 1.56)	( 1.63)	( 1.75)	( 1.25)	( 1.52)	( 2.45)
Entertainment (\$)	.35	.35	.54	.90	1.00	2.07	2.13
Std. dev. (\$)	( .78)	( .83)	( 1.09)	( 2.34)	( 2.28)	( 4.45)	( 3.47)
Equipment (\$)	.12	.28	.25	.43	.68	.61	.53
Std. dev. (\$)	( 1.07)	( 1.31)	( 1.31)	( 1.68)	( 2.10)	( 2.08)	( 1.67)
Miscellaneous (\$)	.32	.25	.44	.30	.21	.20	.52
Std. dev. (\$)	( 1.06)	( .89)	( 1.20)	( 1.15)	( .67)	( .48)	( 2.56)
Number of families	107	172	91	689	123	83	66

<sup>1</sup>The standard deviation expresses the range around the mean which includes about 2/3 of the campers.

<sup>2</sup>Includes 642 campers interviewed at the six major campgrounds and 47 additional families interviewed at four lesser campgrounds.

**Table 2.—Number of camping families having made expenditures for entertainment, equipment, and miscellaneous camping purchases and mean expenditures and standard deviations**

Item	Camping location						
	Pawtuckaway	Greenfield	Bear Brook	State-wide	White Lake	Lafayette	Moose Brook
<b>Entertainment</b>							
Purchasers (No.)	27	45	25	245	51	49	38
Mean cost (\$)	1.39	1.35	1.97	2.52	2.42	3.51	3.71
Std. dev. (\$)	1.00	1.14	1.24	3.37	3.03	5.36	3.89
<b>Equipment</b>							
Purchasers (No.)	2	11	6	57	16	7	7
Mean cost (\$)	6.44	4.45	3.73	5.16	5.22	7.28	5.03
Std. dev. (\$)	6.28	2.95	3.90	3.11	3.27	1.59	1.95
<b>Miscellaneous</b>							
Purchasers (No.)	14	26	18	110	18	15	8
Mean cost (\$)	2.48	1.64	2.24	1.90	1.42	1.09	4.26
Std. dev. (\$)	1.86	1.74	1.82	2.30	1.16	.57	6.54

**Table 3.—Average lengths of camping trips and visits and average total expenditures by campgrounds**

Item	Camping location						
	Pawtuckaway	Greenfield	Bear Brook	State-wide	White Lake	Lafayette	Moose Brook
Mean trip (days)	8.14	6.31	7.19	8.70	10.14	11.39	11.95
Std. dev. (days)	5.77	4.87	4.89	7.24	5.61	10.45	6.81
Mean cost (\$)	81.64	66.38	84.19	102.75	122.80	157.97	176.50
Mean visit (days)	6.43	4.88	5.30	5.44	8.15	3.88	2.68
Std. dev. (days)	4.05	3.78	4.19	5.18	5.31	3.27	3.08
Mean cost (\$)	64.49	51.34	62.06	64.25	98.70	53.82	39.58
On first visit (%)	44	45	34	49	32	75	88

much smaller portion of their total trip was spent at these campgrounds, their total expenditures while at the campground were lower than were those by campers at either the central or southern parks (table 3).

Those parks having a high incidence of transient visitors (short visits) also have a much higher proportion of campers who are visiting for the first time. The majority of visitors to Moose Brook spent less than one-fourth of their trip at that campground, and 88 percent had never been there before. By contrast, at White Lake, four-fifths of the average trip was spent at the campground, and only 32 percent were visiting the park for the first time.

### Visit/Trip Ratios and Costs

Although the ratio of visit-length to trip-length varies from park to park, 65 percent of all families were spending their entire camping trip at a single campground. When this ratio dropped below 1, or when campers visited more than one campground on a single trip, daily expenditures increased. When the campground visit represented less than one-third of the total trip, mean automobile expense almost doubled, mean entertainment expense increased by 124 percent, and the proportion of campers incurring an expenditure for entertainment nearly tripled.

The transient (visit/trip ratios of less than 1) campers were typically tourists in both their expenditures and their trip characteristics. For

Table 4.—A comparison of selected camping-family expenditures and trip characteristics by visit/trip ratios

Item	Length of visit/length of trip ratio		
	less than 1/3	1/3 to 9/10	1/1
No. of families	115	126	448
Mean total daily expenditure	\$15.26	\$11.68	\$10.94
Mean gas & oil expense	\$ 3.51	\$ 2.32	\$ 1.81
Listing entertainment expense	65%	50%	24%
Mean entertainment expense by those listing	\$ 3.92	\$ 2.15	\$ 1.75
Visiting campground for the first time	84%	63%	37%
Residing in N. H. and neighboring states	28%	48%	85%
Mean trip length (days)	15	11	7
Mean visit length (days)	2	5	7

example, they were much more likely to be on a long trip, to be visiting the campground for the first time, and to have traveled a greater distance in getting there (table 4). While transient campers spend more per family per day, their per-family local spending impact is much lower than that of the campers who stay at a single campground (2 days  $\times$  \$15.26 per day, versus 7 days  $\times$  \$10.94 per day). However, collectively the transient campers' impact could be much higher because their shorter visit permits more transient campers to use the same campsite during the season.

### **Implications for Economic Impact**

Aside from the obvious need for more comparative data on the amount of camper expenditures, this study suggests a need for further research into the nature of camping expenditures if we are to properly assign measures of economic impact to camping activity. For example, there appears to be a paradoxical relationship between the intensity of tourist area development and the average length of a camping visit. Highly-developed tourist areas, such as those which exist around the two northern parks, seem to produce more expenditures but shorter visits. On the other hand, the three southern parks have relatively few spending opportunities nearby and longer visits. Further confounding an attempt to measure the impact of camper spending at the southern parks are their much higher rates of: (1) repeat visitation (better knowledge of what to bring and what to buy locally?), and (2) local visitation (resulting in less new money being introduced into the local economy?). Our existing knowledge of camper expenditure patterns strongly suggests that the single goal of trying to maximize local area impact would provide a poor rationale for locating new public camping facilities.

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