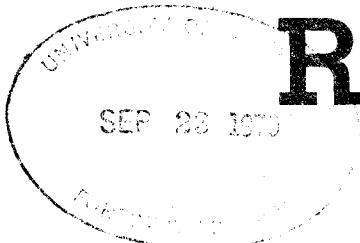




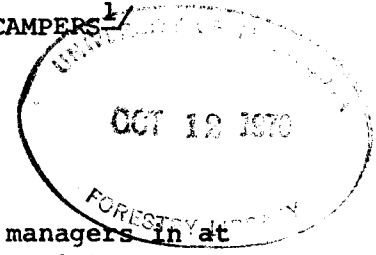
# Minnesota Forestry Research Notes



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TRAVEL METHOD PREFERENCES OF BOUNDARY WATERS CANOE AREA CAMPERS<sup>1/</sup>

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## Introduction

Measuring recreational area visitor preferences can aid managers in at least three ways. First, managers may be able to foresee potential resource degradation because of inappropriate visitor preferences. For example, visitor preferences for mechanized travel in some ecologically sensitive areas could result in serious soil erosion problems. Second, managers of recreation resources can evaluate the congruence of management objectives with visitor preferences. Finally, data on visitor preferences may help the manager to anticipate and thereby reduce possible conflicts among the visitors themselves.

Most studies on visitor preferences have concentrated on some aspect of the recreational environment -- either natural or cultural. Investigations reported in (1) and (2) researched preferences on both aspects of the natural environment (vegetation, topography) and recreational facilities. Klukas and Duncan (3) were interested in vegetational preferences only and Schafer and Burke (7) were primarily concerned about recreation area facilities. Lacking in these studies were data on preferences for type of camping shelter, travel method, and similar variables which may have meaningful implications for the design of facilities and establishment of carrying capacities for wildland recreation resources.

Data was obtained on travel method preferences of visitors camping in the Boundary Waters Canoe Area (BWCA) located on the Superior National Forest in northeastern Minnesota. It was gathered as part of an overall study of camper-canoe outfitter relationships. The information presented here illustrates certain implications for BWCA management and relationships which may be worthy of investigation for other wilderness areas.

<sup>1/</sup>The authors gratefully acknowledge the financial support of the North Central Forest Experiment Station and cooperation of Superior National Forest officials in the conduct of this study.

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### Method

A total of 499 interviews were taken with group spokesmen (16 years of age and older) returning from overnight camping trips into the BWCA. Interviews were conducted during the summers of 1968 and 1969 at twelve access points and one portage within the BWCA according to a sampling procedure explained in (6). All groups returning to the interviewing location within the designated time period were interviewed. Three refusals were recorded. Respondents were asked: "Under ideal conditions what method of travel in the Boundary Waters Canoe Area would you prefer?". Answers were tabulated and related to the variables reported below.

### Results

Most paddling canoeists interviewed preferred to remain paddlers (Table 1). While a majority of the motor canoeists and motor boaters preferred their present travel method, a quarter to a third preferred paddling. Less than 13% of the paddlers preferred motorized travel.

Table 1

Travel method preferences and actual travel method used of BWCA camping respondents, 1968-1969

Travel Preference*	Travel Method			
	Paddle (N=325)	Motor Canoe (N=112)	Motor Boat (N=59)	Other (N=3)
	Percent			
Paddle Canoe	84.6	34.8	23.8	33.3
Motor Canoe	12.0	53.6	16.9	33.3
Motor boat	0.6	4.5	52.5	33.4
Other	2.8	7.1	6.8	0.0
Total	100.0	100.0	100.0	100.0

\*Differences statistically significant at  $\alpha = .05$  level.

Table 1

Sensitivity to litter, awareness of and compliance with littering regulations and type of BWCA camping group, 1968-69

Group Characteristic	Organized (N=77)	Non-Organized (N=422)
	Percent	
Noticed litter	85.8	70.2
Aware of littering regulations	83.1	78.9
Complied with littering regulations	84.4	71.4

Table 2

Sensitivity to litter, awareness of and compliance with littering regulations and travel method of BWCA camping group, 1968-69

Group Characteristic	Paddle Canoe (N=325)	Motor Canoe (N=112)	Motor Boat (N=59)
	Percent		
Noticed litter	76.6	64.2	64.4
Aware of littering regulations	86.2	93.8	98.1
Complied with littering regulations	75.4	67.0	74.6

### Management Implications

In summary, three principal variables - residence, type of group, and occupation - were found to meaningfully affect sensitivity to litter and compliance with littering regulations, even though most groups were about equally likely to be aware of the regulations. It was found that compliance was greatest when the anonymity of the situation in which communication on litter was least. In other words, when individuals perceive their judgments and/or actions to be readily identified, conformance to littering regulations will be most likely. Thus, the establishment of a relationship with a canoe outfitter led to increased rates of compliance over that resulting from communication with the managing agency.

The data indicate which groups now need the most attention in this anti-littering campaign. For these groups, which rarely contact outfitters, managers will need to establish a relatively intimate relationship in order to achieve higher rates of compliance. Similarly, in other national parks and wilderness areas, compliance will be greatest where manager-visitor relationships are least anonymous and when visitors are sensitive to the presence of litter.

### Literature Cited

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3. McCool, S. F. 1970. Dynamics of interpersonal interaction in the forest environment: An exploration of outfitter-camper relationships in the Boundary Waters Canoe Area. Unpub. Ph.D. Dissertation. University of Minnesota. Minneapolis, Minnesota.