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The 1995 Interpretive Sourcebook

NATIONAL INTERPRETERS WORKSHOP



INTERPRETATION

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EVALUATION OF A PILOT INTERPRETIVE PROGRAM FOR NATIONAL FOREST RECREATION AREAS IN EAST TEXAS

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ABSTRACT: Visitor surveys were conducted at Ratcliff and Double Lake Recreation Areas to evaluate visitor characteristics and effectiveness of interpretive services as a management tool. Two hundred eighty-two campers completed the survey. Data from both recreation areas were analyzed and compared in order to determine significant differences between visitors in recreation area and also between visitors who attended or did not attend interpretive programs.

KEY WORDS: interpretation as a management tool, evaluation, park management, visitor surveys

Introduction

Freeman Tilden (1977) recognized the necessity of understanding park visitor interests and backgrounds before developing interpretive programs. He stated, "The visitor is unlikely to respond unless what you have to tell, or show, touches his personal experience, thoughts, hopes, way of life, social position, or whatever else. If you cannot connect you have lost his interest." In natural resource management, it is important that the general public be informed and understand management procedures and policy (Hendee 1974). If the public lacks interest or has inadequate comprehension of natural resource management policies, poor and unsupportive attitudes may be formed toward those policies (Sharp 1982; Chaffee 1969). An interpretive program which addresses the opportunity to educate well-meaning but uninformed visitors and clearly deals with the care and appreciation of the natural environment should have an immediate and positive impact (Sharpe 1982).

Park interpretation programs have great potential for promoting sound conservation practices, and USDA Forest Service recreation areas provide an ideal situation for educating an important segment of the public about the natural history of East Texas and the role of forest resource management in conserving natural resources. Interpretive programs have been found to be a particularly effective form of environmental education in a variety of regions (Jacobson 1987).

The USDA Forest Service, in cooperation with the College of Forestry at Stephen F. Austin State University, began a pilot interpretive program at Ratcliff Recreation Area near Crockett, Texas in 1990, and decided to expand the pilot interpretive program to include two other National Forests in Texas in 1991. No in-depth studies of interpretive programs in Texas or of the information needs of USDA Forest Service Recreation Area visitors existed. In order to ensure appropriate programs for the general public, consumer wants and needs must be evaluated.

The purpose of this study was to evaluate the effectiveness of interpretive programs in USDA Forest Service Recreation Areas and to determine what types of programs should be developed in the future.

Study Area

The study areas were two USDA Forest Service Recreation areas in East Texas: Ratcliff Recreation Area, located on the Davy Crockett National Forest, and Double Lake Recreation Area, located on the Sam Houston National Forest. Both of these recreation areas were constructed by the Civilian Conservation Corps and contained developed campground facilities, an amphitheater and nature trails for

interpretive purposes. Double Lake Recreation Area is only a one hour drive from Houston and most of its visitors were from the Houston Metroplex area. Ratcliff on the other hand is located in rural east Texas over four hours driving time from both the Houston and Dallas Metroplexes. Most of Ratcliff's visitors were from small towns in east Texas.

Methods Data Collection

A visitor questionnaire was developed to determine three categories of visitor information: recreation participation, interest in natural resource management, and participation. Recreation participation variables included visitation rates, group size, distance traveled, and socio-economic data useful in visitor classification. Resource management included variables measuring visitor knowledge of natural resource management practices, and public opinions regarding current national forest management. Interpretive questions gathered information on program attendance, content, and effectiveness.

Surveys were conducted on Sundays beginning July 14, and ending on September 2, 1991. The survey was pretested to insure reliability on Sunday mornings during the dates of June 16, through July 7, 1991. Consequently, some questions were revised and others added or deleted. The revised survey was administered to 295 visitors in Ratcliff and Double Lake Recreation Areas. Of the 295 surveys administered, 282 were satisfactorily completed. Ninety-three surveys were administered at Ratcliff Recreation Area and 189 surveys were administered at Double Lake Recreation Area. The lower number of surveys completed at Ratcliff recreation area may be attributed to lower at Ratcliff Lake or Ratcliff Lake visitors departing earlier on Sunday morning and missing the survey. Surveys were administered between 8:00 a.m. and 10:00 a.m. on Sunday mornings since Saturday evening was the highest participation time for amphitheater programs.

Sampling Procedure

Interpreters visited campsites on Sunday morning and asked visitors if they would participate in a short questionnaire. If visitors

agreed to participate, they were given a survey form and a brief explanation of how to complete it. The interpreters would then return to the campsite in approximately one hour to give the visitor time to complete the questionnaire.

Survey Questionnaire

The visitor questionnaire consisted of three parts. The first part of the questionnaire was a data sheet which included: date, day of week, campground, weekend program listings, number of people in campground, and visitor campsite number. This was completed by the interpreter conducting the survey. The second part contained demographic background information to be filled out by the head of household at each campsite. The third part determined the interpretive wants and needs of visitors. It was given to visitors age 12 and older in every campsite to evaluate each person's perspectives and attitudes concerning interpretation, conservation, and environmental practices.

Analysis

Correlations between demographic and benefit variables and interpretive program attendance were used to establish the extent to which the pilot interpretive program met the needs of visitors.

Independent variables in the study included:

1. Expectations prior to visit;
2. Aspects of the area most enjoyed;
3. Programs attended;
4. Preferred activities;
5. Preferred programs;
6. Knowledge of the area;
7. Time spent in the area;
8. Socio-demographic variables.

Dependent variables to be delineated include:

1. Educational wants and needs;
2. Recreational wants and needs;
3. Program preferences.

The JMP statistical package, developed by the SAS Institute for the Apple Macintosh computer, was used to determine frequency distributions to discover significant differences in sample groups.

**Results of Survey Questionnaire
Demographics Of Visitors**

Overall the demographic characteristics of the visitors to both recreation areas were similar. Approximately eighty percent of all visitors to both recreation areas were there for a weekend excursion (Table 1). Most visitors were tent or tent trailer campers and arrived Friday evening and departed on Sunday morning. No significant differences were found between the percentage of tent campers at Ratcliff and Double Lake. There were significantly more

travel trailers at Ratcliff than Double Lake Recreation Area as would be expected since Ratcliff had a camping loop with electrical hookups and Double Lake did not. Travel trailer campers at Ratcliff had significantly lower program attendance than tent campers. It was observed on many occasions by interpretive staff that many people in trailers had portable televisions and radios to occupy their time. This possibly may have been the reason trailer visitors did not attend interpretive programs.

Table 1. Comparison of demographic & recreation variables between Double Lake and Ratcliff Recreation Areas, and overall means for participants who attended and did not attend programs.

Variable	Double Lake		Ratcliff		Overall	
	Attended	Not Attended	Attended	Not Attended	Attended	Not Attended
weekend excursion	79 (82%)	76 (82%)	40 (82%)	37 (84%)	119 (81%)	113 (82%)
Tent or Travel Trailer	84 (87%)	86 (92%)	48 (98%)	37 (84%)	132 (91%)	123 (90%)
Average income	53,275	49,932	37,500	53,841	46,995	51,326
Avg. education	12 yrs.	12 yrs.	12 yrs.	12 yrs.	12 yrs.	12 yrs.
Single family	34%	50	52%	34%	40%	45%
Multi-family	27%	24%	35%	48%	30%	31%
Avg. camping experience	6-10 yrs.	6-10 yrs.	10-15 yrs.	15+ yrs.	10-15 yrs.	10-15 yrs.

Employment status of Recreation Area visitors was predominantly full-time. There were no significant differences between Ratcliff and Double Lake visitors regarding employment status. The number of full-time students attending programs at Double Lake Recreation Area was higher than that of full-time students not attending programs. There were no significant differences in full-time students who attended and did not attend programs at Ratcliff Recreation Area. The percentage of retired people visiting both Recreation Areas was very low. Lack of accommodations for large motor homes and the remote locations of both

recreation area may have contributed to the low percentages of retired people.

The average income of visitors to Double Lake Recreation Area was higher than the average income of visitors to Ratcliff Recreation Area. Ratcliff visitors who attended programs averaged 37,500 dollars of family income which was significantly lower than Double Lake program attendees and non-program attendees. The average income for Double Lake visitors and Ratcliff non-program attendees was approximately \$50,000 per year. Ratcliff visitors who did not attend programs stated that their income level was between

\$50,000 and \$75,000, significantly higher than program attendees. This is probably related to the travel trailer data in that trailer campers had higher incomes and lower attendance than tent campers.

There was no significant differences in education levels between the two Recreation Areas. However, Double Lake visitors who did not attend programs had more college education than Double Lake visitors who did attend programs.

Most visitors found out about both Recreation Areas from friends. More Ratcliff visitors lived nearby and had previously known about the Recreation Area than Double Lake visitors. At Double Lake there was a significant difference between program attendees and non-program attendees in that more program attendees lived nearby.

Environmental Awareness

It is interesting to note that significantly fewer individuals who termed themselves environmental activists attended interpretive programs (Table 2, located at end of article). There was a significantly lower number of Ratcliff visitors attending programs over other visitors surveyed who were environmentally concerned but not really involved. However, Ratcliff visitors attending programs were more environmentally active than Ratcliff visitors not attending programs and also more active than Double Lake visitors who attended programs.

About half of the visitors in both Recreation Areas subscribed or contributed to conservation oriented magazines (Table 3, located at end of article). However, at Ratcliff significantly fewer program attendees subscribed to conservation magazines than non-program attendees. One reason for this may be that Ratcliff program attendees had a lower income level than the other recreation area visitors.

There was no significant difference between those who attended interpretive programs and those who had not in contribution of money to an environmental issue (Table 4, located at end of article). Approximately one half of all visitors surveyed had contributed money to an

environmental issue. This is much higher than the average for the general public in Texas.

Most visitors had not actively demonstrated or protested an environmental issue. Double Lake non-program attendees and Ratcliff program attendees were significantly higher than Double Lake program attendees and Ratcliff non-program attendees in demonstrating or protesting environmental issues. Overall, environmental activity and membership in environmental organizations for all visitors in both recreation areas was higher than the general population.

Interpretive Programs

The interpretive programs presented at both Recreation Areas were a key part in determining what visitors knew and did not know about environmental issues and conservation practices. Most visitors who attended interpretive programs found out about the programs when an interpreter came by their campsite (Figure 1, located at end of article). It was observed on many occasions that campers seemed apprehensive toward uniformed personnel approaching their campsites until the interpreter explained that they were there to invite visitors to the interpretive programs. The friendly attitude and good examples set by the interpreters gave visitors a positive image of uniformed personnel which was a great asset to the U. S. Forest Service. The campground walks were perhaps the most effective form of interpretive programming conducted during the study. They were just as economical as amphitheater programs based on the number of contacts per interpreter-hour and were more economical than trail walks and Jr. Ranger programs. It also gave interpreters the opportunity to talk to a wider spectrum of visitors than that attending programs.

Posting program schedules was also an effective way of publicizing the upcoming interpretive programs. A program schedule was posted on bulletin boards in the Recreation Areas and also in local businesses in the nearest town. Some of the people attending interpretive programs were from the surrounding communities and were not staying in the Recreation Areas. Many of the repeat visitors expressed interest in continuation of interpretive programs in the future.

Some people had problems with the time schedule of morning walks. These time schedules were changed many times during the summer to accommodate as many people as possible. Morning walk times ranged from 6:00 a.m. to 11:00 a.m. Even with time flexibility, only 20 to 25 percent of visitors participated in morning walks, which was still enough participation to justify keeping morning walks in the interpretive program (Figure 2, located at end of article). Many people were just too busy in the mornings to take time out for a morning walk.

Junior Ranger programs were difficult to arrange in order to have enough children to participate in some of the activities. When Junior Ranger programs were scheduled during the same time as the morning walks, children many times preferred to accompany their parents on the walk. When the Junior Ranger program was scheduled later in the afternoon, interpreters had a very hard time competing with swimming. After observing many families with children, it was found that many activities were done as a family and parents were not always willing to drop their children off with an interpreter for an hour or two because of the limited time available for family activities.

The evening programs were by far the most popular of all the interpretive programs (Figure 2). They were also the programs with the strongest visual component. Slide programs, night walks and sky interpretations were just a few of the activities available to the public. These programs were popular because visitors had more leisure time in the evenings than during the day, and in addition, evening programs provided an opportunity for families to do something together. Interpretive programs were scheduled near the end of the day when people were trying to relax. At this point in the day, many visitors felt they had time to attend a program. Almost all of the visitors who attended programs enjoyed the presentation and when asked to rate the interpretive performance, most visitors said it was excellent or good (Figure 3, located at end of article).

The number one reason given by those that did not attend programs was that they did not have the time to attend programs. Many also stated that they were not interested in the subject

matter being presented (Figure 4, located at end of article).

Interpretive Program Content

The most popular programs presented were the night walks and sky interpretation. Visitors seemed to be fascinated with the night. These interpretive programs included night sounds, owl prowls, the night sky, and Indian myths and legends of stars and constellations. The second most popular programs were those dealing with wildlife. Some of the wildlife programs talked about birds, reptiles, endangered species, animals indigenous to East Texas, and nocturnal animals (Table 5, located at end of article).

Interpretation of forest management concepts were advantageous in that visitors learned why different management practices were used in different situations and the advantages and disadvantages of various types of forest management activities. One such interpretive program dealt with the use of fire as a natural part of the forest and also as a management tool. Visitors that attended this interpretive program reacted more positively to the use of fire as a forest management tool than non program attendees. This type of positive reaction was also measured in visitors attending other interpretive programs on forest management concepts and practices as well.

Opinions Of National Forest Management Activities

Visitors had a variety of opinions on management of National Forests ranging from no management to strict management of certain resources. Resource management issues addressed in detail by the interpretive programs were limited to fire ecology and management and wildlife management. Program attendees in both Recreation Areas were more likely to agree with the statement that fire is a natural and necessary part of forest lands and that we should use fire as a management tool in national forests than were non-program attendees. The fire ecology interpretive presentation may have influenced the results of program attendees.

All Recreation Area visitors agreed that wildlife management is needed. A smaller portion of the visitors felt that wildlife would flourish without the help of humans. This consensus

indicates that while visitors enjoy wildlife programs that it is not necessary to make an effort to convince them that management is necessary. Wildlife programs probably should be directed toward increasing awareness of the species in the recreation area and enhancing the recreation experience of the visitor. However, the strongly positive attitude of visitors toward wildlife indicates the agency can capitalize on wildlife programs to enhance their image as a multi-resource management agency.

Conclusions

The interpretive programs presented in the Recreation Areas helped visitors better understand forest resources and management of those resources. The campground walks every Friday and Saturday evenings were very important to the success of the interpretive programs. Program attendance was greatly enhanced by personal contact with an interpreter. When campground walks were omitted attendance fell substantially. Economic evaluation indicated campground walks were the most effective form of interpreter contact. However, other types of programming accomplished additional management goals unattainable during the short contacts during the campground walks. The friendliness of interpreters made visitors feel more comfortable talking to people in uniform. It was noted that many visitors were very curious about what types of plants and animals were in the area but were afraid to ask until approached by an interpreter. The campground walks gave visitors time to get to know the interpreter and also to find out more about the interpretive programs being presented.

The most popular interpretive programs were those dealing with night time activities and wildlife. Programs concerning the night sky and nighttime wildlife indicate a strong curiosity about the mysteries of the night. This type of programming also has somewhat less competition from television documentaries. The outdoor interpretive environment lends itself well to programs about what is going on in the dark.

The results also indicate that timing of programs in recreation areas is critical to

success. The campers have relatively busy schedules and spend a significant portion of their time in campsite activities. Programs must be arranged to fit into lulls in normal campsite activity or be announced well in advance to be successful.

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Table 2. Environmental activity of questionnaire respondents

	Double Lake				Ratcliff				Overall			
	Attended		Did Not Attend		Attended		Did Not Attend		Attended		Did Not Attend	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
An environmental activist	5	5	7	8	--	--	--	--	5	4	7	5
Concerned and somewhat involved	25	26	17	18	17	36	12	27	42	31	29	21
Concerned but not really involved	55	57	57	61	19	38	23	52	74	51	80	58
Part of the silent majority	6	7	10	11	8	16	9	21	14	10	19	15
Not concerned	5	5	2	2	5	10	--	--	10	4	2	1
Total	96	100	93	100	49	100	44	100	145	100	137	100

Table 3. Respondents attending and not attending interpretive programs who subscribed or contributed to conservation organizations.

	Double Lake				Ratcliff				Overall			
	Attended		Did Not Attend		Attended		Did Not Attend		Attended		Did Not Attend	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Yes	45	47	38	41	19	38	23	52	64	44	61	45
No	51	53	55	59	30	62	21	48	81	56	76	55
Total	96	100	93	100	49	100	44	100	145	100	137	100

Table 4. Responses to question: "Have you ever contributed money to an environmental issue?"

	Double Lake				Ratcliff				Overall			
	Attended		Did Not Attend		Attended		Did Not Attend		Attended		Did Not Attend	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Yes	35	37	47	51	23	47	17	40	58	41	64	47
No	61	63	46	49	26	53	27	60	87	59	73	53
Total	96	100	93	100	49	100	44	100	145	100	137	100

Table 5. Average program attendance at amphitheater programs by subject area.

Program Type	Average Number Attending
Night walks and star programs	48
Wildlife	37
Plants and Wildflowers	40
History and Fire	35

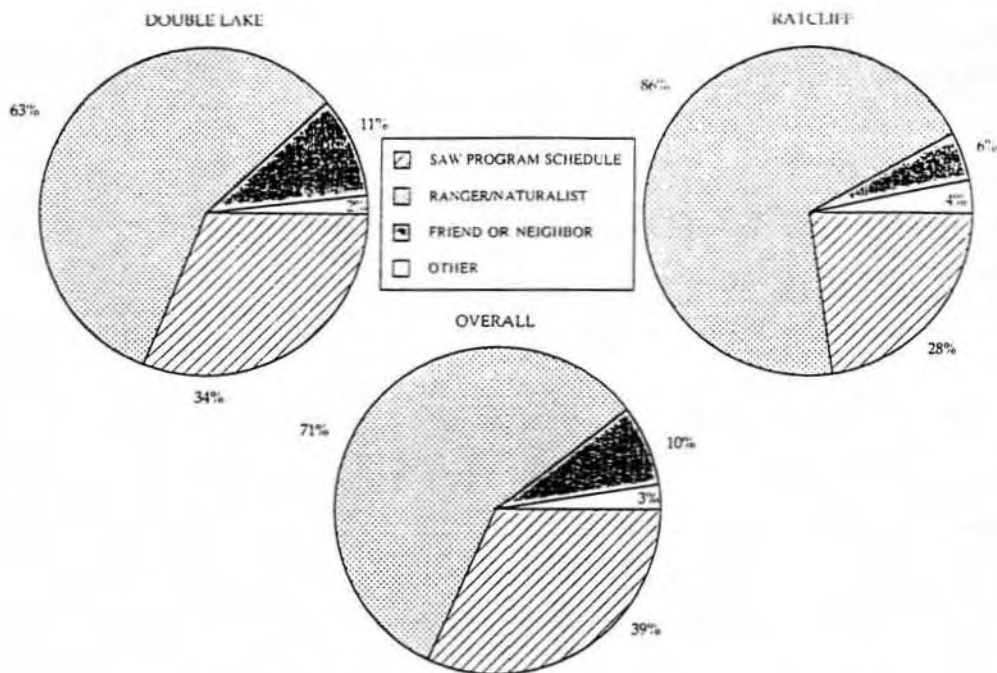


Figure 1. How recreation area visitors found out about interpretive programs.

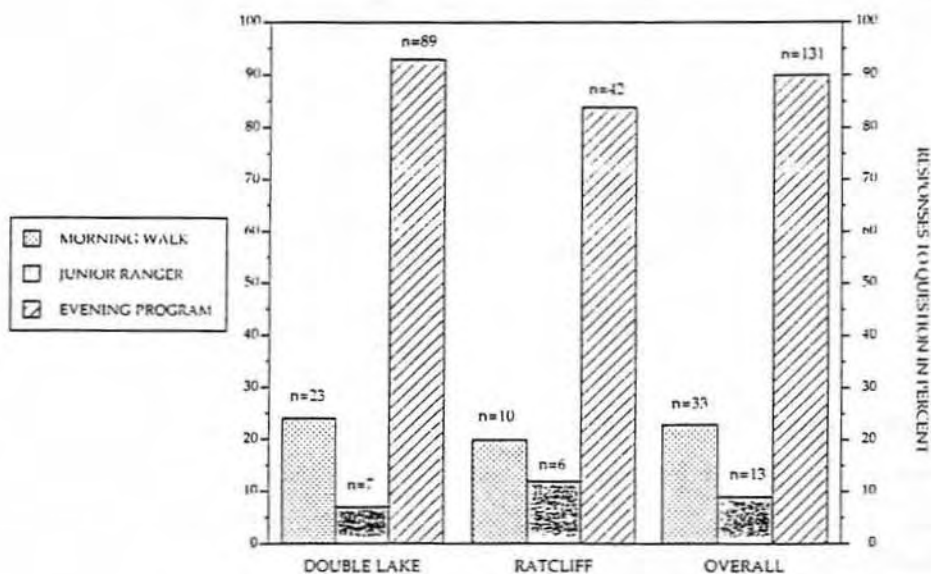


Figure 2. Types of Interpretive programs attended by questionnaire respondents.

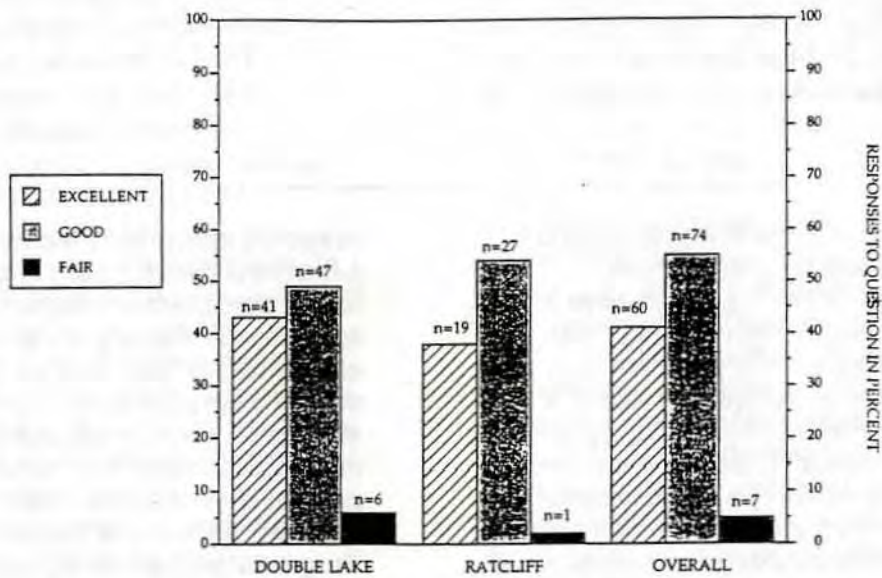


Figure 3. Overall program ratings by visitors who attended interpretive programs.

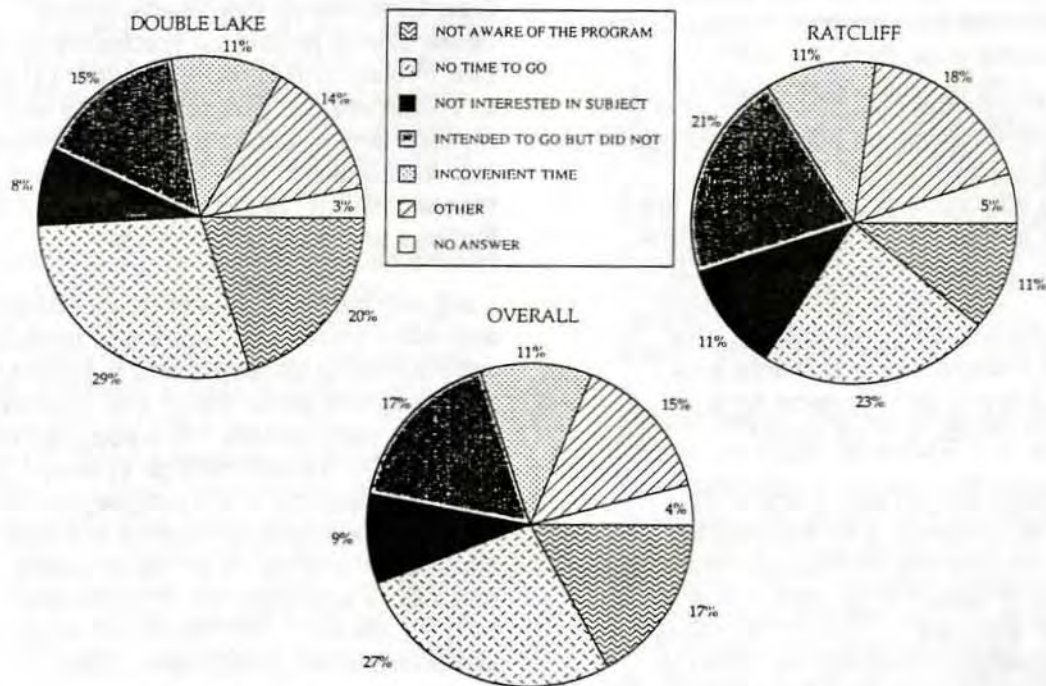


Figure 4. Reasons given by survey respondents for not attending interpretive programs.