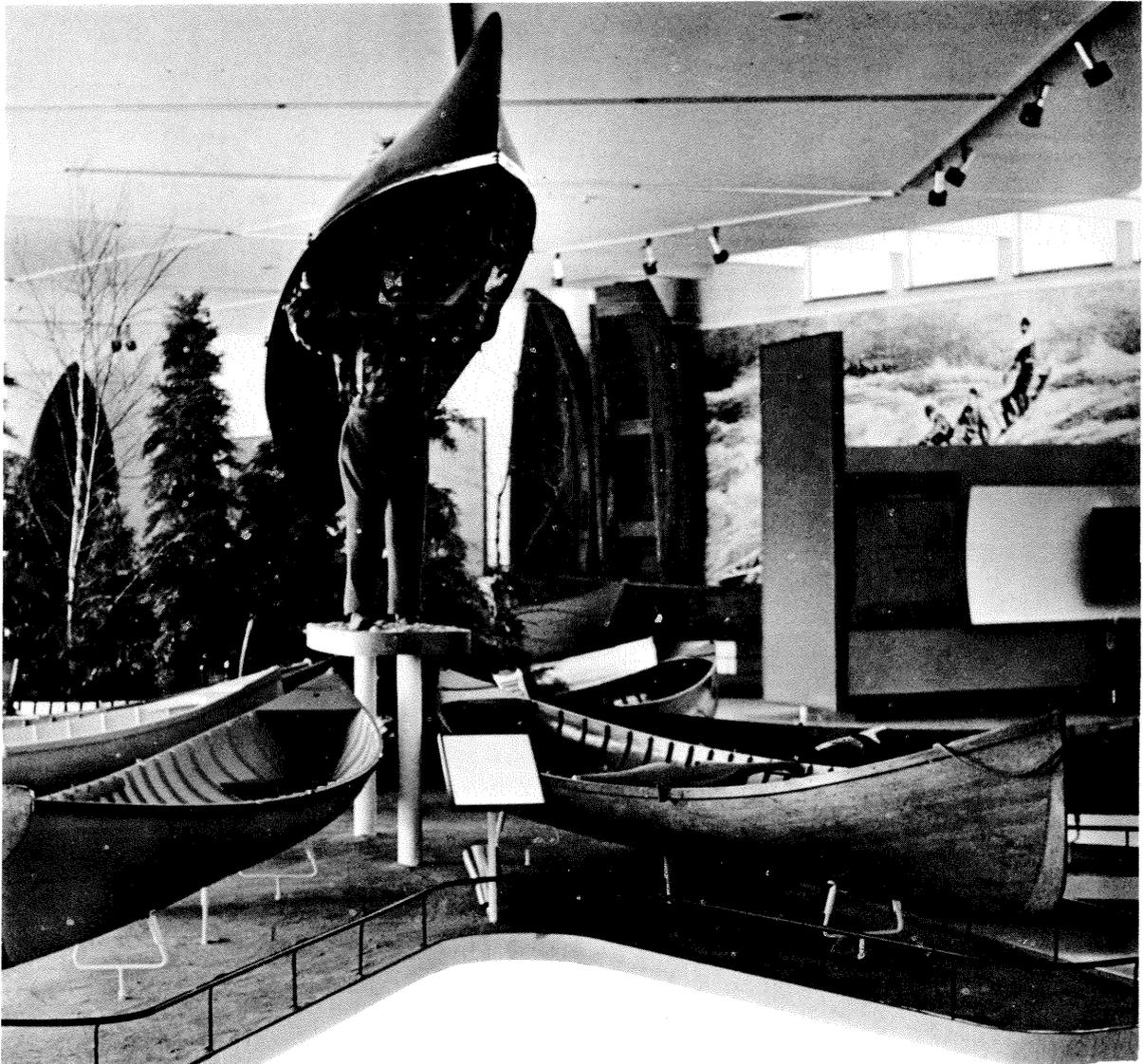


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HOW LONG DO PEOPLE Look at and Listen to FOREST-ORIENTED EXHIBITS?



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ABSTRACT

To gain a better understanding of public reaction to I & E displays, average visitor-viewing time was measured for a variety of exhibits at the Adirondack Museum, Blue Mountain Lake, N.Y. Visitors viewed displays 15 to 64 percent of the time required to read or listen to the total message presented. The longer the message per exhibit, the less time was spent observing it. This paper includes a picture of each exhibit, the number of minutes normally required to read each exhibit's entire message, and the average number of minutes visitors actually took to view each display. Study results are intended to assist professionals in the design and presentation of I & E exhibits about people's relation to their forest resources.

INTRODUCTION

INFORMATION AND EDUCATION (I & E) exhibits can serve to help us understand our use of the forest—not only as a unique renewable resource but also as an outdoor playground. However, do people really read, hear, and understand the messages presented at I & E displays about people's relationship to their forest environment?

The purpose of our study was to describe differences between required reading or listening times for a variety of I & E exhibits and the time people actually spent reading and listening to the exhibits. Study results may help forest recreation managers and I & E personnel:

- To better understand public reaction to museum displays.

- To improve descriptions of future displays, and thus increase the likelihood that the entire message will be read or heard.
- To better inform the public of their affect upon and interrelationship with the physical and cultural aspects of their forest environment.

THE STUDY

Our study was made in 1968 at the Adirondack Museum, Blue Mountain Lake, New York. The museum, one of the finest of its kind in the nation, is located near the geographic center of the Adirondack Region in northeastern New York. Open to the public throughout the summer and early-fall tourist season, the museum contained, at the time of this study, 41 separate indoor and outdoor exhibits.

On three randomly selected days in August and October, we recorded the viewing times, sex, and approximate age categories of randomly selected visitors at each of 14 selected exhibits. The total number of visitors per day during the three sampling days in August ranged from 810 to 1,193; and in October from 100 to 558. On the average, during both months, visitors stayed in the museum a total of 1½ hours.

Before observing viewer behavior, we measured the total time required to read or listen to all the printed or recorded commentary at each of the 14 exhibits used in the study. For a standard of required reading time, we had 10 adults read the entire message at each exhibit, recorded the time they took, and computed an average reading time for each exhibit. Required listening time was measured from the recorded message.

A "t" test was used to determine if average viewing time for the 30 viewers per exhibit in August differed significantly from the average viewing time in October.

Each of the 14 exhibits is described briefly. Signs throughout the museum-campus suggested the most convenient route for visitors to take. The 14 exhibits included in the study are discussed in that sequence.

THE EXHIBITS

Relief Map

Just inside the museum's main building is a 5 x 5 foot topographic relief map of the Adirondack Region. Along one edge of the display's raised platform is a control panel, on which visitors may press various buttons to light up and locate prominent features in the Adirondacks (fig. 1).

Geologic History

Also in the foyer of the main building, and directly between the two entrance doors, six small paintings depict the geologic history of the Adirondack Mountains (fig. 2).

Paintings of Wildlife and Vegetation

A large painting of wildlife species and vegetation in the Adirondacks adorns one wall of the main building foyer (fig. 3). On

the opposite wall a painting characterizes water-oriented Adirondack wildlife and vegetation (fig. 4).

Dioramas

In one wing of the main building, a series of dioramas illustrates historical aspects of logging operations in the Adirondacks. At each diorama, earphones enable viewers to hear a recorded message that describes the events presented (fig. 5).

Viewing times were averaged for five dioramas: interior of a logging camp's living quarters, peeling and cutting hemlock trees for bark, skidding and rolling logs on a skidway, removing bark from logs on a lake, and sprinkler wagon and sled of logs.

View of Adirondack Landscape

A diorama-shaped exhibit at one end of the diorama room is actually a window through which visitors may gaze at Blue Mountain Lake — a picturesque island-studded lake that played an important role in the early history of man's adaptation to the Adirondack wilderness (fig. 6).

Cross Section of Log

In the center of the diorama room, the cross section of a 230-year-old white pine tree is exhibited, and a sign relates the age of the tree to historical events that occurred between 1728 and 1956 (fig. 7).

Paintings

In a second wing of the main building, 42 Currier and Ives prints depict man's early life in the Adirondacks. Interpretive signs are interspersed among the prints (fig. 8).

Hermit's Cabin

Next on the museum tour, an Adirondack hermit's 4-foot high cabin, firewood tepee, and utensils are displayed. This outdoor exhibit is supplemented by a sign that describes the hermit's wilderness activities (fig. 9).

Firearms

Near the hermit's cabin, hunting rifles and guns are displayed in an unheated building.

The gun exhibit progresses from antique firearms to modern repeater rifles. A diorama that describes illegal killing, or "jacking," of deer also is included in this exhibit (fig. 10).

Antique Vehicles

Next on the tour, an unheated building contains 11 vehicles used in the Adirondacks before and near the turn of the century. An 1890 hearse, a fire-hose cart with hand pumper, a 1907 Maxwell automobile, and several antique wagons and surreys are included in this exhibit (fig. 11).

Antique Logging Equipment

Vehicles used for logging and road maintenance in the Adirondacks during man's early logging operations were examined next (fig. 12).

Historic Photographs

A variety of black and white photographs depicting life in the Adirondacks during the late 1800s and early 1900s followed. Visitors viewed a belt-mechanism, protected by a glass-enclosed rectangular shaped table, that displayed a variety of scenes showing man's relationship to Adirondack environments (fig. 13).

Canoes and Guideboats

The final exhibit was a collection and display of various types of canoes and guide-

boats that were used by early settlers and sportsmen in the Adirondacks (fig. 14).

RESULTS

Observations of respondent viewing time indicated that visitors looked at displays only 15 to 64 percent of the total time required to read or listen to the total message presented. Usually, the longer the printed or recorded message a display contained, the shorter the viewing time. Furthermore, August visitors, who were mostly family groups, stayed at exhibits significantly longer or shorter lengths of time (depending on the exhibit) than October visitors, who were primarily older adults.

The exhibits that the viewers saw are shown in the pictures that follow. Below each picture, the following statistics are presented:

- The actual average number of minutes required to read or listen to the entire printed or recorded message.
- The average number and range of minutes that visitors viewed each display.
- The percentage of average required viewing or listening time that visitors used.

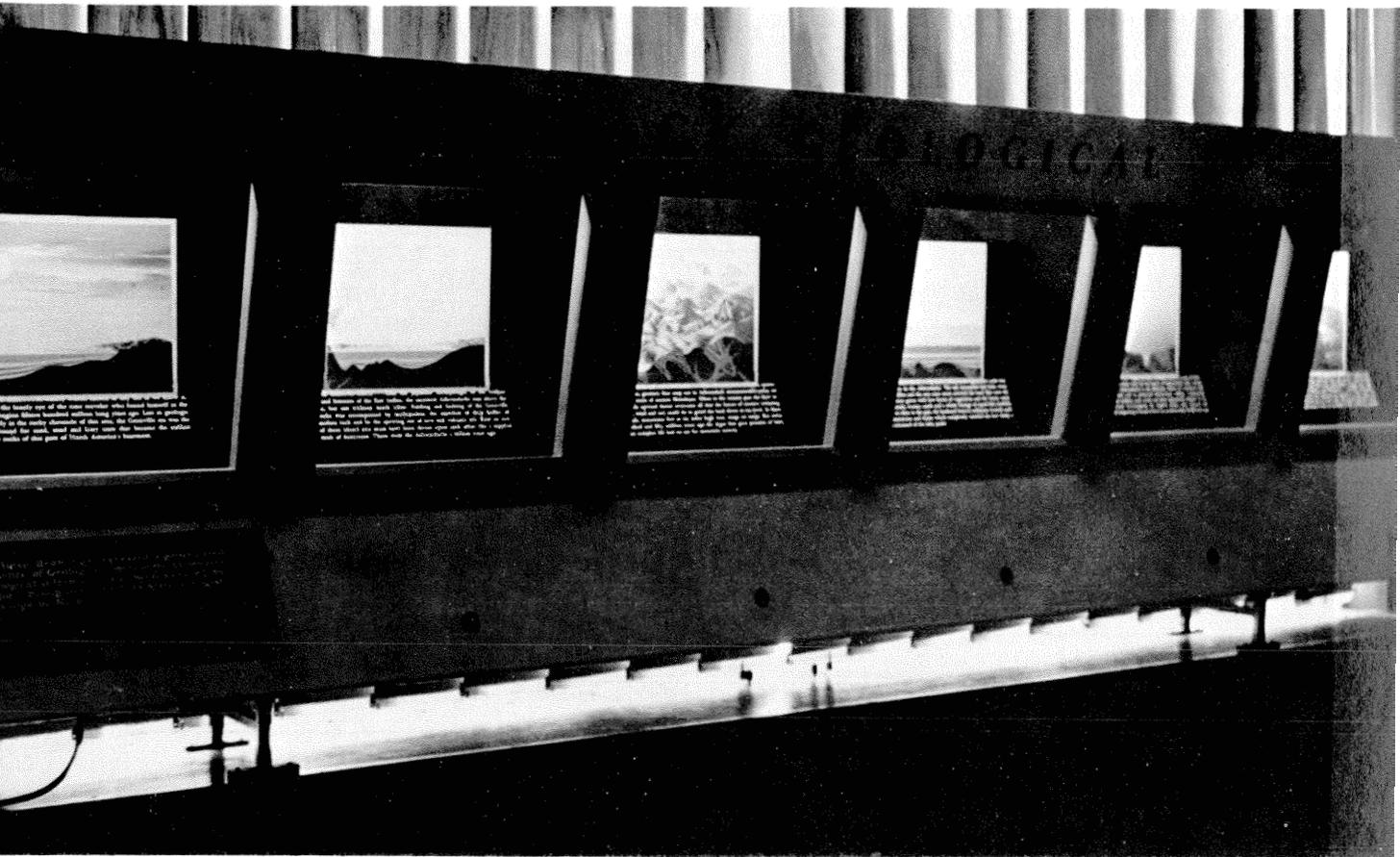
Average viewing time per exhibit is reported for the 2 months only when there was a statistically significant difference between them.

Figure 1.—Relief map of the Adirondack Region.



Average time required to read or listen to the entire message	Average time visitors took to view the exhibit		Average percentage of required reading and listening time that visitors used	
	August	October	August	October
<i>Minutes</i> 5.3	<i>Minutes</i> 1.6	<i>Minutes</i> 2.3	<i>Percent</i> 30	<i>Percent</i> 43
	Range of viewing times, in minutes			
	<i>August</i> 0.4 to 4.5	<i>October</i> 0.2 to 5.4		

Figure 2.—Geologic history of the Adirondacks.



Average time required to read the entire message	Average time visitors took to view the exhibit	Average percentage of required reading time that visitors used
<i>Minutes</i> 3.1	<i>Minutes</i> 2.0	<i>Percent</i> 62
Range of viewing time, in minutes 0.1 to 4.4		

Figure 3.—Woodland painting.



Average time required to read the entire message

Minutes
4.5

Average time visitors took to view the exhibit

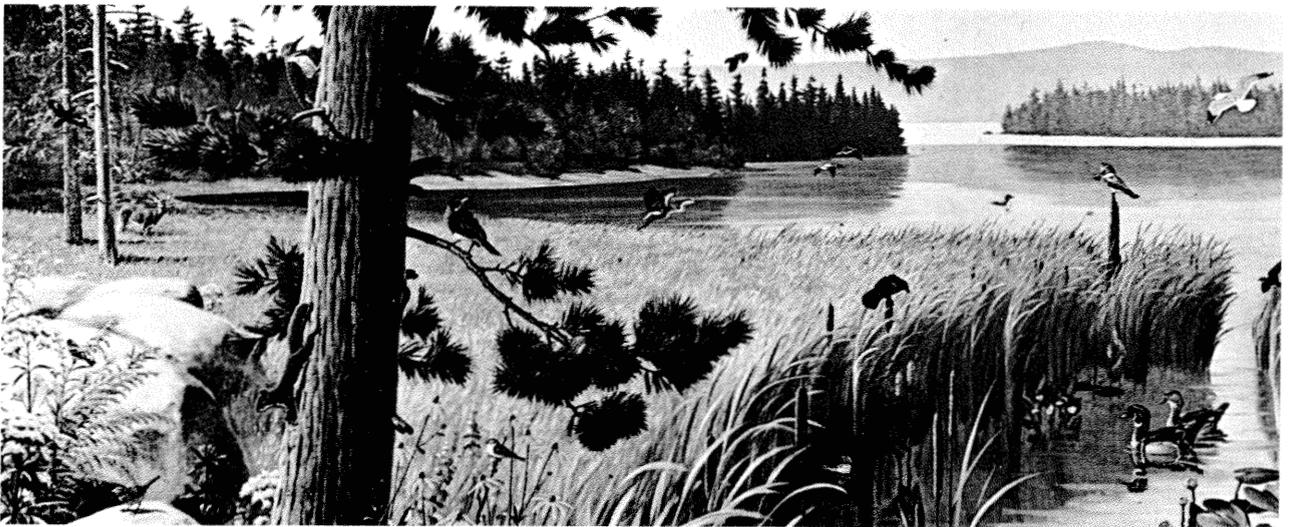
Minutes
1.1

Average percentage of required reading time that visitors used

Percent
25

Range of viewing time, in minutes
0.1 to 5.2

Figure 4.—Lake painting.



Average time required to read the entire message

Minutes
2.7

Average time visitors took to view the exhibit

Minutes
1.0

Average percentage of required reading time that visitors used

Percent
37

Range of viewing time, in minutes
0.1 to 5.4

Figure 5.—Part of diorama room. Note the three earphones at the bottom of each diorama, which can be used to listen to a recorded message about the scene.



Average time required to listen to the entire message presented at five dioramas	Average time that visitors listened to the messages at five dioramas	Average percentage of required listening time that visitors used at the five dioramas
<i>Minutes</i> 11.2	<i>Minutes</i> 4.1	<i>Percent</i> 37
Range of viewing time, in minutes 1.0 to 16.1		

Figure 6.—Diorama window overlooking Blue Mountain Lake.



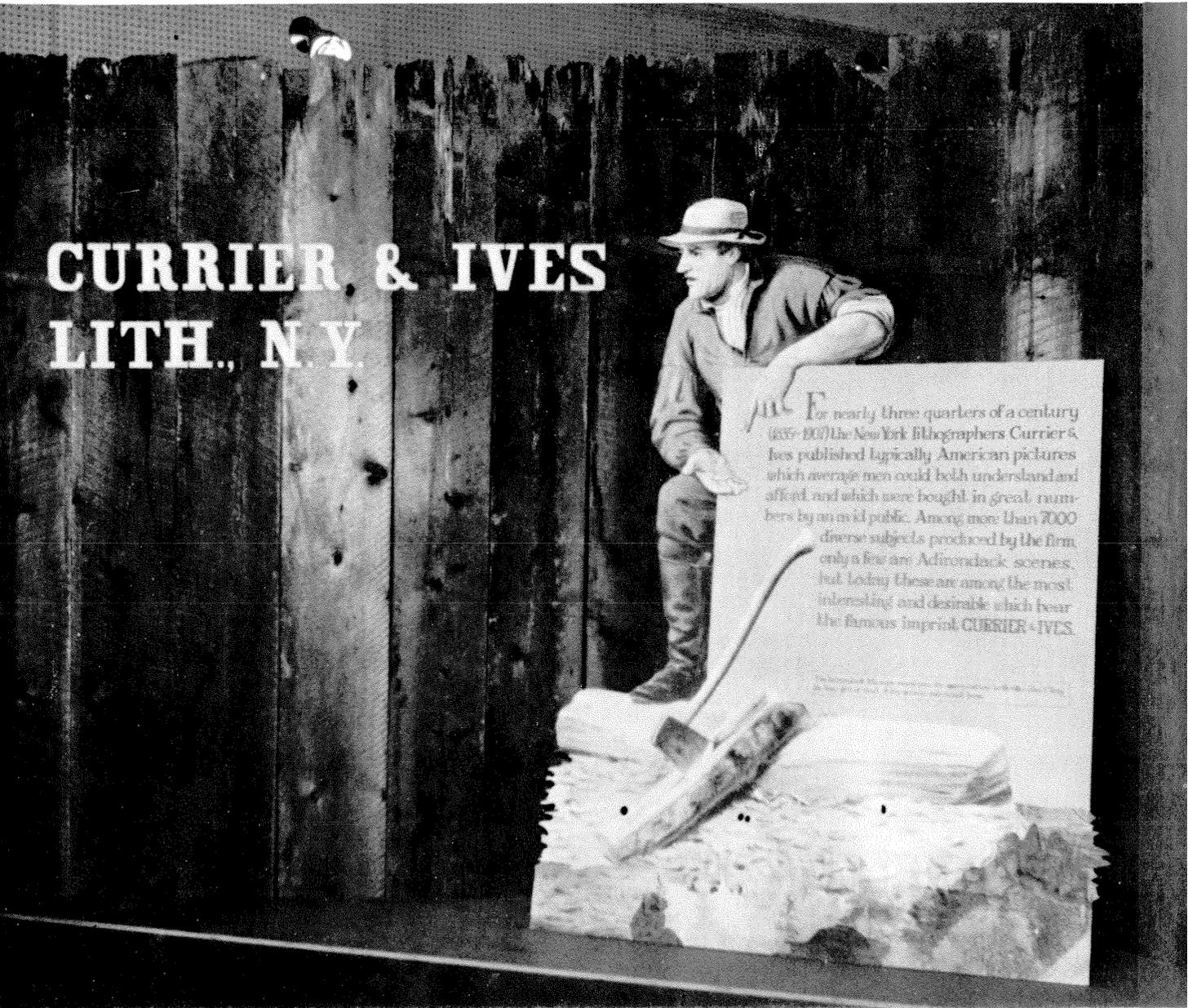
Average time required to listen to the entire message	Average time visitors took to view the exhibits	Average percentage of required listening time that visitors used
<i>Minutes</i> 2.1	<i>Minutes</i> 1.3	<i>Percent</i> 64
Range of viewing time, in minutes 0.1 to 4.5		

Figure 7.—White pine log section.



Average time required to read the entire message	Average time visitors took to view the exhibit		Average percentage of required reading time that visitors used	
	August	October	August	October
<i>Minutes</i> 2.3	<i>Minutes</i> 1.0	<i>Minutes</i> 0.8	<i>Percent</i> 43	<i>Percent</i> 35
Range of viewing times, in minutes				
<i>August</i> 0.2 to 3.3		<i>October</i> 0.1 to 1.3		

Figure 8.—Introduction to 42 Currier and Ives prints.



Average time required to read the entire message presented at all paintings	Average time visitors took to view all paintings	Average percentage of required reading time that visitors used
<i>Minutes</i> 6.3	<i>Minutes</i> 2.1	<i>Percent</i> 33
Range of viewing time, in minutes 0.3 to 5.6		

Figure 9.—Adirondack hermit's cabin and firewood-tepee.



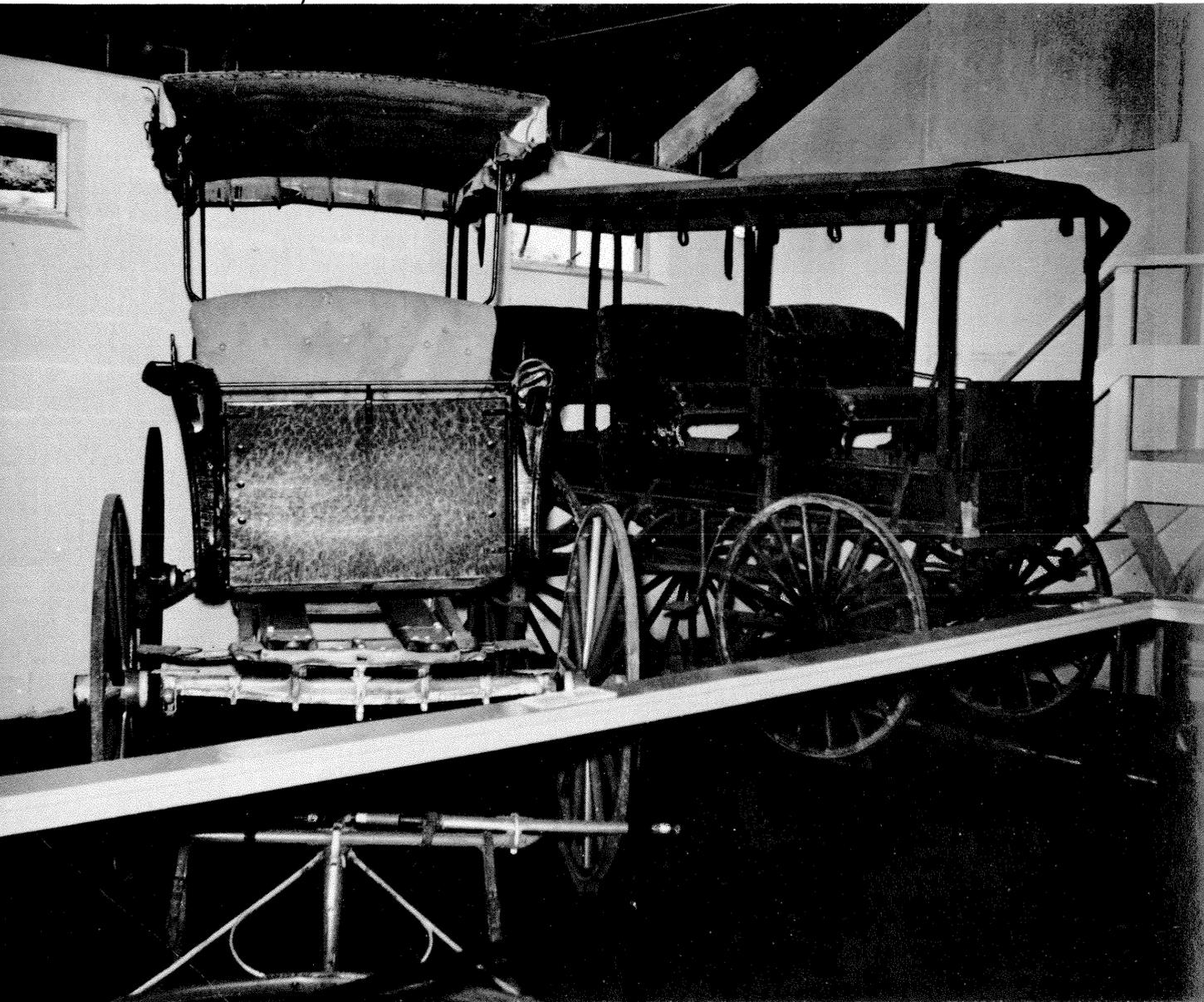
Average time required to read the entire message	Average time visitors took to view the exhibit		Average percentage of required reading time that visitors used	
	August	October	August	October
<i>Minutes</i> 3.3	<i>Minutes</i> 1.9	<i>Minutes</i> 1.3	<i>Percent</i> 58	<i>Percent</i> 39
	Range of viewing times, in minutes			
	<i>August</i> 0.5 to 4.1	<i>October</i> 0.3 to 2.1		

Figure 10.—A typical part of the gun exhibit showing hunting rifles used in the Adirondacks.



Average time required to read the entire message	Average time visitors took to view the exhibit	Average percentage of required viewing time that visitors used
<i>Minutes</i> 15.5	<i>Minutes</i> 2.5	<i>Percent</i> 16
Range of viewing time, in minutes 0.2 to 7.3		

Figure 11.—Part of the exhibit showing vehicles used during the early history of the Adirondacks.



Average time required to read the entire message	Average time visitors took to view the exhibit		Average percentage of required viewing time that visitors used	
	August	October	August	October
<i>Minutes</i> 6.1	<i>Minutes</i> 3.9	<i>Minutes</i> 2.2	<i>Percent</i> 64	<i>Percent</i> 36
	Range of viewing times, in minutes			
	<i>August</i> 0.3 to 6.0	<i>October</i> 0.2 to 7.1		

Figure 12.—Part of the logging and road-maintenance vehicle exhibit.



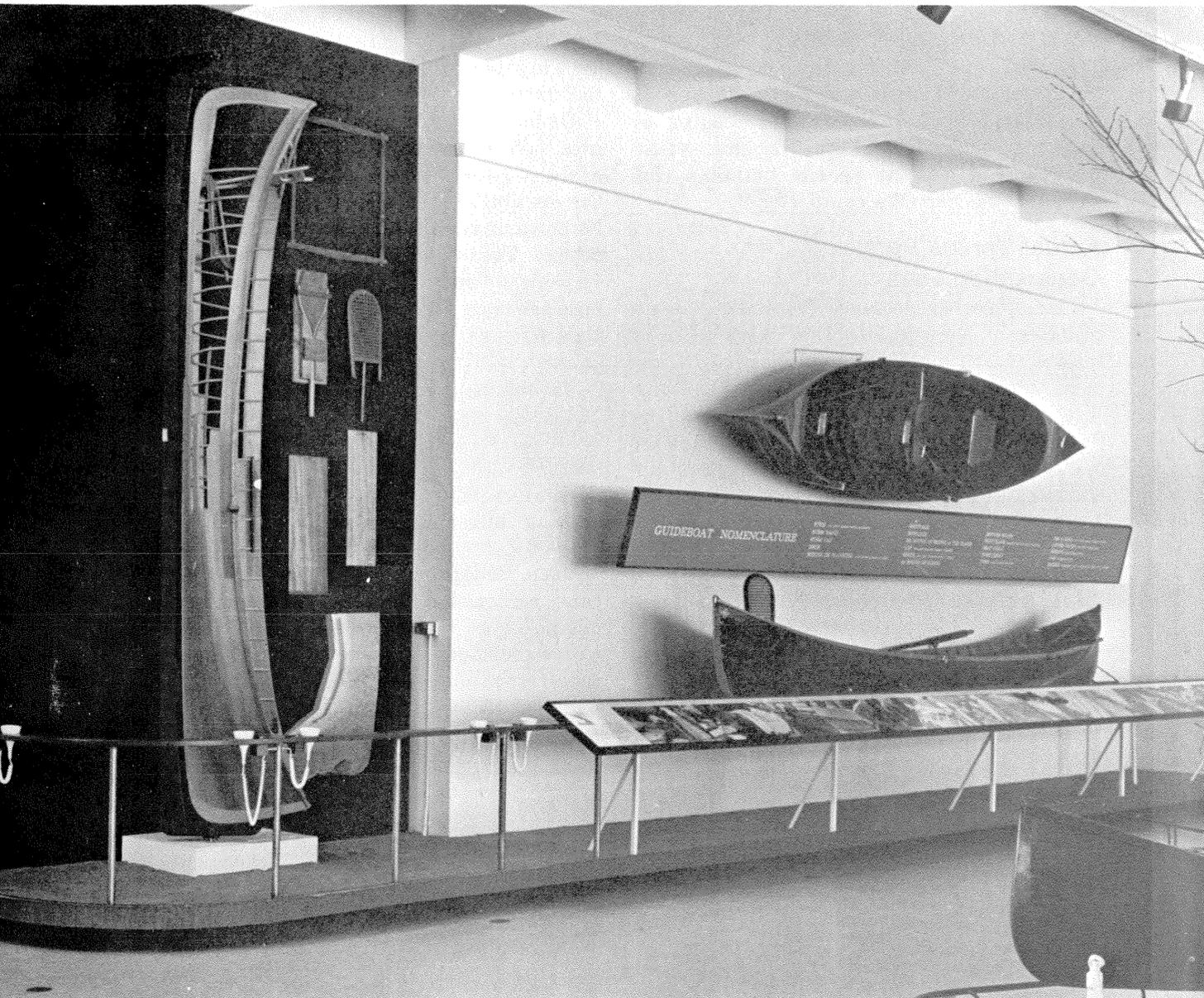
Average time required to read the entire message	Average time visitors took to view the exhibit	Average percentage of required viewing time that visitors used
<i>Minutes</i> 7.0	<i>Minutes</i> 2.7	<i>Percent</i> 39
Range of viewing time, in minutes 0.4 to 5.4		

Figure 13.—An example of the many black and white photographs used in the photo belt to describe man's relationship to the Adirondacks.



Average time required to read the entire message	Average time visitors took to view the exhibit	Average percentage of required viewing time that visitors used
<i>Minutes</i> 28.0	<i>Minutes</i> 10.1	<i>Percent</i> 36
Range of viewing time, in minutes 0.1 to 25.0		

Figure 14.—Part of the boat exhibit.



Average time required to read and listen to the entire message	Average time visitors took to view the exhibit		Average percentage of required viewing time that visitors used	
	August	October	August	October
<i>Minutes</i> 28.5	<i>Minutes</i> 6.8	<i>Minutes</i> 9.7	<i>Percent</i> 23	<i>Percent</i> 34
	Range of viewing times, in minutes			
	<i>August</i> 0.5 to 7.4	<i>October</i> 1.5 to 13.0		

DISCUSSION

Variation Among Exhibits

Realism in an exhibit seems to affect visitor interest. Three exhibits that elicited 58 to 64 percent of total required reading or listening time were: the diorama vista-window (fig. 6), the vehicle building (fig. 11), and the hermit's camp (fig. 9).

Actual Versus Required Observation Time

Exhibits with messages requiring 2 to 4.9 minutes of viewer attention were actually viewed 1.3 minutes—or 45 percent of the total time required to read or hear the entire message. Exhibits with messages requiring 5 to 28 minutes of viewer attention were viewed for shorter times in relation to a message's total required reading or listening time. For example, only 27 percent of the total required reading or listening time was taken by visitors at exhibits that required 15 or more minutes (table 1).

However, differences between the required viewing time and average observed viewing time at an exhibit are not necessarily a realistic index of that exhibit's drawing power. Rather than its printed message, an exhibit's

variability, contrast, and uniqueness in comparison to other exhibits in a museum may be a more effective measure of that exhibit's drawing power and of its lasting effect on the viewer.

Undoubtedly, the average number of minutes that visitors spent at an exhibit were not devoted entirely to reading or listening to the exhibit's message. And some viewers listen to or read a message much faster than others. Therefore, the average time spent by visitors to comprehend an exhibit's entire message may have been even less than the reported average of 16 to 64 percent of required observation time reported here.

Results of this study showed variations in visitor viewing behavior at different types of exhibits. In this respect, the results may be useful to I & E planners.

However, the question whether the length of most messages should be reduced or increased cannot be inferred from our results—even though average observed viewing time per exhibit was always less than the average time required to read or listen to the entire message. The answer to that question requires a more detailed study that would find out how much information visitors retained.

Table 1.—Summary of behavior patterns at the 14 exhibits

Average time required to read or listen to the entire message	Exhibits in this category ¹	Average observed viewing time	Percentage of required reading or listening time actually used by visitors
<i>Minutes</i>	<i>No.</i>	<i>Minutes</i>	<i>Percent</i>
2.0 to 4.9	8	1.3	45
5.0 to 9.9	6	2.5	42
10.0 to 14.9	1	4.1	37
15.0 to 28.0	4	7.3	27

¹ Viewing times at any one exhibit during August and October were considered separately when the two months differed significantly.