



12-1973

Campground Usage and User Attitudes in the Allegan State Game Area, Allegan County, Michigan

Gregg R. Squire
Western Michigan University

Follow this and additional works at: https://scholarworks.wmich.edu/masters_theses



Part of the Environmental Sciences Commons

Recommended Citation

Squire, Gregg R., "Campground Usage and User Attitudes in the Allegan State Game Area, Allegan County, Michigan" (1973). *Masters Theses*. 2706.

https://scholarworks.wmich.edu/masters_theses/2706

This Masters Thesis-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Masters Theses by an authorized administrator of ScholarWorks at WMU. For more information, please contact wmu-scholarworks@wmich.edu.



CAMPGROUND USAGE AND USER ATTITUDES
IN THE ALLEGAN STATE GAME AREA,
ALLEGAN COUNTY, MICHIGAN

by

Gregg R. Squire

A Project Report
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Specialist in Arts Degree

Western Michigan University
Kalamazoo, Michigan
December 1973

ACKNOWLEDGEMENTS

The writer wishes to thank Dr. Henry A. Raup, Dr. W. Thomas Straw, and Dr. David G. Dickason for their encouragement, suggestions, and constructive criticism during the planning and writing of this project. In addition, I thank Mr. Charles Friley, manager of the Allegan State Game Area for the time and information he so willingly provided, Mr. Ron Alexander for preparing a computer program to analyze the camper registration data used, and my wife Sandy for her aid in preparing the illustrations and typing the original copy. The completion of this program would not have been possible without the aid provided by a federal E.P.D.A. grant in Environmental Science and the able direction of the program by Dr. George G. Mallinson, Dean of the School of Graduate Studies at Western Michigan University.

Gregg R. Squire

INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.
2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.
3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again -- beginning below the first row and continuing on until complete.
4. The majority of users indicate that the textual content is of greatest value, however, a somewhat *higher quality reproduction could be made from "photographs"* if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.
5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Xerox University Microfilms

300 North Zeeb Road
Ann Arbor, Michigan 48106

MASTERS THESIS

M-5245

SQUIRE, Gregg R.

CAMPGROUND USAGE AND USER ATTITUDES IN THE
ALLEGAN STATE GAME AREA, ALLEGAN COUNTY,
MICHIGAN.

Western Michigan University, Sp.A., 1973
Agriculture, forest recreation

University Microfilms, A XEROX Company, Ann Arbor, Michigan

TABLE OF CONTENTS

INTRODUCTION	1
Purpose	1
Area of Study	2
Swan Creek	7
Lakeview	7
Pine Point	8
Ely Lake	8
METHODS TO OBTAIN DATA	9
RESULTS AND DISCUSSION	11
User Characteristics	11
Where campers come from	11
Weekly, seasonal and long term usage patterns	17
Number of persons using a site	24
Age distribution of campers	26
Type of camp	31
Site days and camper days spent in the A.S.G.A.	33
Camper Activities While in the A.S.G.A.	36
Swimming	36
Hiking	38
Fishing	38
Other activities	39

Camper Attitudes	40
Why campers chose the A.S.G.A.	40
Complaints reported by campers	41
Changes campers would like to see made	46
The amount campers would be willing to pay to camp . . .	49
SUMMARY	51
CONCLUSIONS	53
REFERENCES CITED	56
APPENDIX I: Campground Questionnaire	58
APPENDIX II: Forest Campground Registration Tag	60
APPENDIX III: Sites Occupied by State and Country	61
APPENDIX IV: Sites Occupied by Michigan Counties	62

LIST OF FIGURES

FIGURE		PAGE
1	Visitor access to Allegan State Game Area	3
2	Allegan State Game Area showing central campground locations	5
3	Distribution by percent of site occupancy in the A.S.G.A. by county and state during the summer of 1972. Areas contributing less than 0.9 percent are not included	14
4	Graph showing the inverse relationship between percent of a county's population camping at the A.S.G.A. and distance from the campground	16
5	Daily record of sites occupied at Swan Creek campground (1972). Lettered dates indicate Saturdays.	18
6	Daily record of sites occupied at Lakeview campground (1972). Lettered dates indicate Saturdays.	19
7	Daily record of sites occupied at Ely Lake campground (1972). Lettered dates indicate Saturdays.	20
8	Daily record of sites used at Pine Point campground (1972). Lettered dates indicate Saturdays.	21

LIST OF TABLES

TABLE		PAGE
1	Number of sites occupied by the leading three states from April 1, 1972 until September 4, 1972	12
2	Number of sites occupied by the leading eleven counties in Michigan from April 1, 1972 to September 4, 1972	13
3	Number of campers who stayed for more than three days at the same campsite during the 1972 season	23
4	Number of campers who returned to the same campground at least once during the 1972 summer season	24
5	Distribution of campers by numbers per campsite as shown by questionnaire results	25
6	Distribution of campers by type of group as shown by questionnaire results	27
7	Michigan's population and Southwestern Michigan's population (Allegan, Berrien, Calhoun, Cass, Kalamazoo, Kent, Ottawa, St. Joseph, and Van Buren Counties) by age group compared with the age distribution of the campers interviewed at the A.S.G.A., (Population data from U.S. Census, 1971b)	28
8	Type of camp used by campers at the A.S.G.A. during the 1972 summer season according to registration cards	31
9	Type of camp used by campers contacted by personal interviews in the A.S.G.A. during the summer season, 1972	33
10	Total number of camper days spent in the A.S.G.A. during the 1972 summer season	34
11	Total number of site days utilized per campground in the A.S.G.A. during the 1972 summer season and the percent of possible utilization (number of sites x number of days available)	36
12	Where campground fishermen spent their fishing time, as shown by questionnaire results	37
13	Extra equipment brought by campers interviewed by the author	40
14	Reasons why campers chose the Allegan State Game Area to camp in, based on questionnaire results	42
15	The most liked features of the campground areas as reported by campground users	43

16	Complaints reported by campers as shown by the questionnaire	45
17	Changes campers would like to have made in the camping area, if any	47
18	The maximum amount campground users would be willing to pay and still camp as frequently in the A.S.G.A. as they presently do	50

CAMPGROUND USAGE AND USER
ATTITUDES IN THE ALLEGAN STATE GAME AREA,
ALLEGAN COUNTY, MICHIGAN

INTRODUCTION

Purpose

The Allegan State Game Area, (henceforth abbreviated A.S.G.A.) was studied in an effort to better understand where the campground users came from, what the attractions were which brought them, what they did while camping, and what they liked and disliked about the area. By obtaining a better understanding of why campers have come to an area which provides primitive campground facilities, and what they do while camping in these areas, the planners and administrators of these areas may gain more insight into what facilities and characteristics of a campground are most desired by the users of such areas. With a better understanding of camper's wishes and activities, the design of new campgrounds and alterations to old ones can be made which will more fully provide for the desires of the campers, and maximum usage of the facilities which are to be established. Because this property is the only large tract of state owned land in the southern third of Michigan which offers relatively primitive camping facilities, a rather unique situation is generated. Even so, it is the writer's belief that the people

who use this area are typical of many campers who utilize primitive camping areas throughout Michigan and other parts of the Midwest.

An attempt has been made to discover where these campers came from, how long they stayed, what they did while in the area, and their likes and dislikes regarding the campgrounds and the surrounding area. It is hoped that by obtaining a knowledge of these facts, a better camping experience may be provided to those persons who continue to use undeveloped camping areas.

Area of Study

The A.S.G.A. looks a great deal like many other Michigan and Wisconsin areas which were logged during the late 1800's and then later allowed to grow back into second growth forests. This particular area is a 45,000 acre tract located entirely within Allegan County, Michigan. Allegan County lies about sixty miles north of the Indiana border and is bounded on the west by Lake Michigan, although none of the state game area is adjacent to the lake. The area is nearly equidistant from the cities of Grand Rapids, Kalamazoo, and Benton Harbor, all of which are less than fifty miles away (Figure 1).

The majority of the area is located upon an old glacial lake bed, although some portions of it extend unto the gently rolling topography adjacent to the lake bed region. The largest area of the A.S.G.A. is drained by the Kalamazoo River, which flows toward the northwest

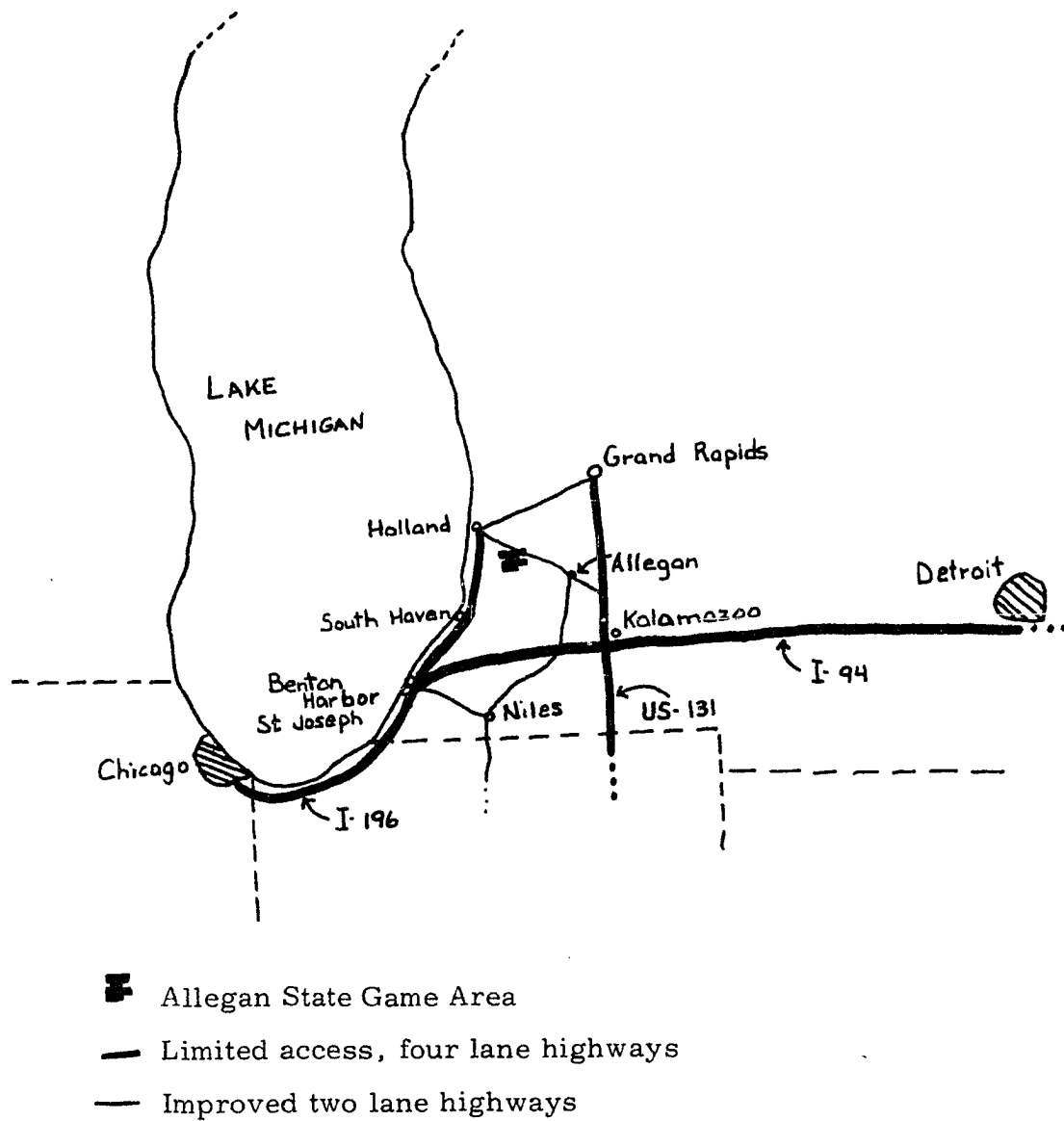


Figure 1. Visitor access to Allegan State Game Area

through the area. Several small lakes and bogs are also present within the A.S.G.A. The most common trees within the A.S.G.A. are oaks. The understory trees are primarily white oaks; black oak predominates in the canopy (Brewer et al., 1973). The oak trees have replaced a forest of white pine which was removed by logging during the late 1800's. Although most of the region is very sandy, some landowners attempted to make a living by farming these logged-over areas until about 1935. At that time, the Federal government, through the Sub-Marginal Land Program and Resettlement Plan, purchased most of the property which ultimately became the A.S.G.A. (Nowell, 1935). By 1938, the area had been developed into a forest and recreation area and a portion of it was designated as a wildlife sanctuary (Sawyer and Moore, 1938). In 1941 the area was leased to the Michigan Department of Conservation and was then referred to as the Allegan State Forest. The state of Michigan actually received ownership by transferring state owned property in the northern sections of the State to the federal government in exchange for ownership of the lands in Allegan County (Schroeder, 1973). Such transfers took place from 1949 to 1951.

All of the campgrounds which are presently being used in the A.S.G.A. were established in 1938 when the Allegan Land Utilization Project was opened to the public. The location of each of these campgrounds is shown on Figure 2. When the A.S.G.A. was opened for camping, no individual campsites were designated for use and campers

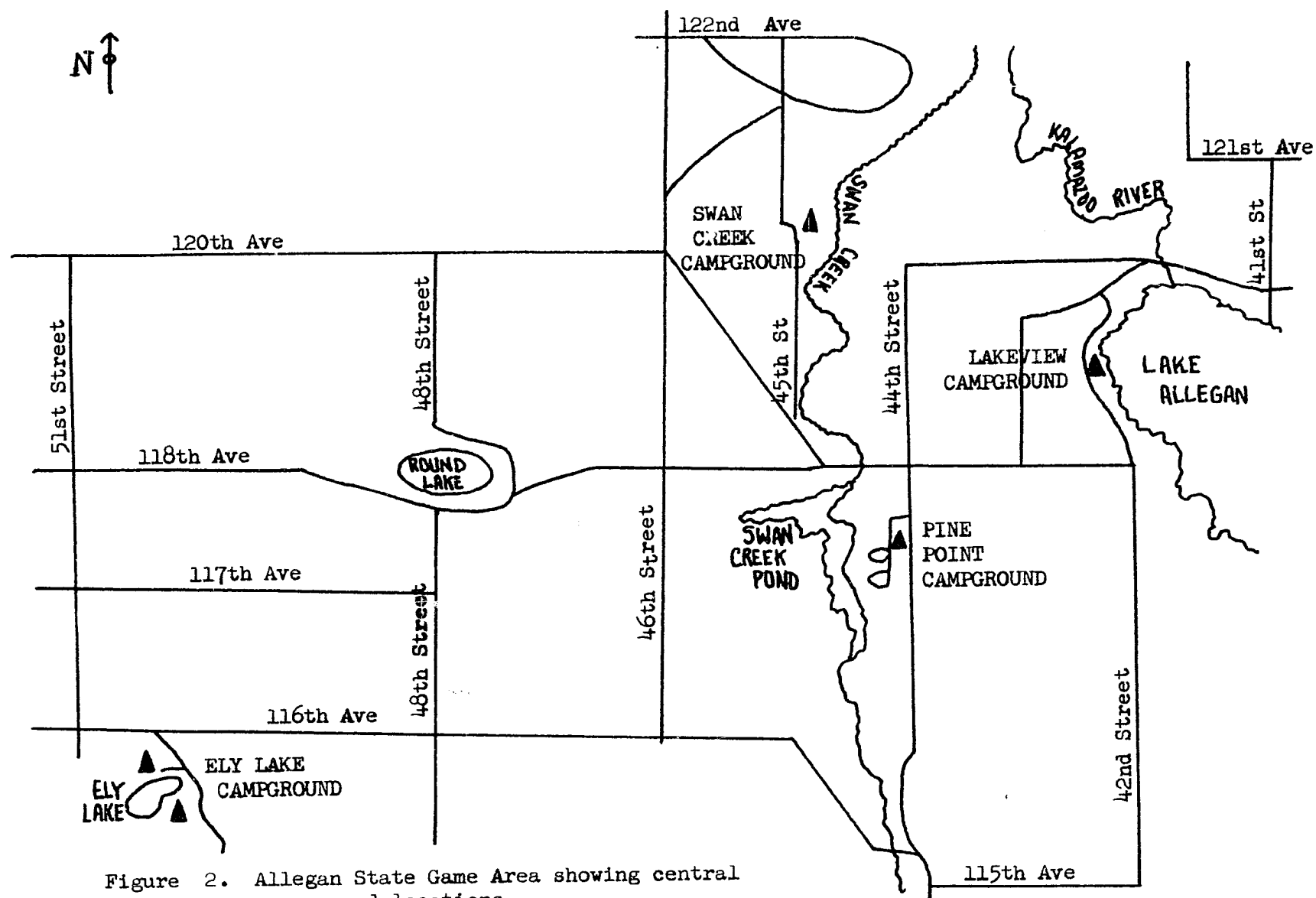


Figure 2. Allegan State Game Area showing central campground locations.

set up their tents anywhere within a campground area, resulting in very crowded conditions at the choicest areas. The first modernization of the grounds occurred in 1963 when a new trail and several loops were built along the north shore of Ely Lake to provide more camping areas for the large numbers of people who gathered each summer around the swimming beach on the eastern shore of the lake.

During 1969, all of the campgrounds were marked with numbered posts which designated specific campsite locations. It was not until this time that any limitation was placed upon the number of campers using any of the campgrounds.

Four campgrounds were open to the public during the summer of 1972 in the A.S.G.A. All of these areas were in a primitive or undeveloped condition. Each campground contained marked campsites, hand pumps for water, and pit-type toilets. Running water, showers and electricity were not provided. All of the campgrounds were located within wooded areas composed mainly of oak trees, and all were near some type of lake or stream. Within the A.S.G.A., and easily accessible from the campgrounds, are two swimming areas, one at Swan Creek Mill Pond and the second at Ely Lake. In addition four streams provide trout fishing and several lakes nearby contain pike, bass and panfish. Hiking trails, canoeing on the Kalamazoo River, mushroom hunting, and birdwatching are other activities which are available in the area.

A description of each campground is given to familiarize the reader with the type of terrain and facilities present in the campgrounds.

Swan Creek

Swan Creek is the most remote of the four campgrounds. It can be reached by driving slightly more than one mile along a "two track" road after leaving a primary, asphalt-covered county road. There are ten campsites located near the end of the trail which stops at the end of the campground. Swan Creek flows near the campsites but is far below in a wide, wooded valley.

Lakeview

Lakeview is named for the scenic vistas of Lake Allegan which can be observed from the campsites. Lake Allegan is an artificial lake created by damming the Kalamazoo River. Although the waters of this lake support large numbers of warm water fish, no swimming is allowed due to upstream pollution of the water from the city of Kalamazoo to the city of Allegan. In recent years this pollution has decreased and the lake may soon be opened to swimming. Lakeview contains ten camping sites which are large and widely spaced. The trees here are large and it is a very quiet and pleasant area.

Pine Point

The original Pine Point campground was located about 1,000 feet north of its present location. In 1971, 47 sites were constructed around two large ovals. Shortly thereafter, the old area was closed to camping but has remained open for day use (Friley, 1973).

Pine Point campground lies close to the backwaters of a small artificial lake created by the damming of Swan Creek. This lake is usually called the Swan Creek Mill Pond. There is a swimming area and beach located on the lake within walking distance of the campsites, but it is often overgrown by algae and pond weeds by late summer.

The sites at Pine Point are not as large as the ones at the other campgrounds, although they are well separated and most sites are screened from view from other sites by intervening vegetation. The area to be used as the tent or trailer location is outlined by logs and many of the sites have had a layer of gravel placed upon them. This type of site construction and camper reactions to it will be discussed later in the paper.

Ely Lake

The oldest campground in the A.S.G.A. is Ely Lake. This campground now contains 80 sites. These sites are roughly broken into two areas: the North Section and the East Section. The East Section was in

part, the original campground and grew without much planning or control. It is located near the swimming beach and dock. People camped around these facilities for many years before formal sites were marked out. As a consequence, most of the smaller trees and undergrowth has been beaten down and trails wind throughout the area. Most of the large trees still remain and this part of the campground is well shaded.

The North Section was opened in 1963. The area was planned in a series of small loops braching off the main access road. Each loop contains four or five sites on the outer side of the loop. There is abundant shrubbery growing inside the drive and between sites. This design retains privacy while still utilizing space in a reasonably efficient manner.

In addition to the swimming beach and dock, there is a baseball diamond and several hiking trails located near the sites at Ely Lake.

METHODS USED TO OBTAIN DATA

Two major sources of information were utilized during this study. The first was a questionnaire written by the author. This questionnaire is included as Appendix I. Each campground was visited several times during the summer. An attempt was made to return at different times during the day and on weekdays and weekends. Eighteen different days from June 7th until September 2nd were spent interviewing campers at the various campgrounds. When a campground had only a few campers present, an attempt was made to contact all of them. During periods of

high occupancy, sites were visited in a logical sequence, such as every second occupied site, until the campground had been covered. At each interview, the author would read the question and record all responses made by any of the campers utilizing the site. An attempt was made to obtain the reactions of any children present as well as the adults. In all, 220 interviews were conducted, representing 993 campers, nearly 7.5% of all the campers who camped in the A.S.G.A. from April 1st until September 2nd, 1972 (the period of time covered by this study).

After the information was gathered, it was number coded and transferred to computer punch cards. The data was then synthesized and analyzed with the aid of a card sorting machine.

The second source of information was the forest campground registration card. This card is a standardized form used by Michigan's Department of Natural Resources (DNR) in their state forest campgrounds. All campers must complete these cards when they arrive at the campgrounds. This card is shown in Appendix II. All of the registration cards which were completed in the A.S.G.A. from April 1st until September 4th, 1972 were used. A total of 3,190 registration cards had been filled out by campers during this time interval. All of the information on these cards, except the camper's name and street address, was transferred to computer punch cards. A computer program was then written to analyze this data. Examples of some of the information which was obtained include the total

number of campers using the campgrounds, where the campers came from, and how many sites were occupied in each campground during each day of the spring and summer.

In an attempt to see if the two methods of collecting data yielded similar results, several comparisons were made. The personal interviews showed that 90.0% of the campsites were occupied by persons from Michigan, while the registration cards showed that 87.3% of the users were from Michigan. Tents were used on 42.4% of the sites surveyed by interviews, while 45.5% of the registration cards reported a tent as the type of camp used. Average camp size was 4.4 persons as reported by the registration cards; 4.5 persons were present in an average site based on the interview data. It is felt that these numbers are similar enough to make valid comparisons between the two survey instruments.

RESULTS AND DISCUSSION

User Characteristics

Where campers come from

According to campground registration data a vast majority of the A.S.G.A. campers come from Michigan (87.3%). Other than Michigan, only two states utilized greater than one percent of the campsites. They

were Indiana, 5.6% and Illinois, 3.9%. These three states provided almost 97 percent of all of the campers (Table 1). A complete listing of states which had campers in the A.S.G.A. during 1972 is included as Appendix III.

Table 1. Number of sites occupied by the leading three states from April 1, 1972 until September 4, 1972.

STATE	NUMBER OF SITES OCCUPIED	%
Michigan	2785	87.3
Indiana	180	5.6
Illinois	123	3.9

This data would seem to indicate that the A.S.G.A. is not heavily used by out-of-state tourists and may not be attractive to persons coming from even relatively long distances. This conclusion is further verified by the data showing campsite usage by county, Table 2, and by Figure 3 which illustrates the distribution of site occupancy by county and state. (See Appendix IV for a complete listing of site use by counties). More than 50% of the sites were occupied by campers coming from Allegan County or counties adjacent to Allegan County. Over 75% of all the sites used were occupied by campers from Michigan counties not more than sixty miles from the A.S.G.A. (Table 2). Another study of A.S.G.A. users, which included picnickers, hikers, and sightseers, as well as campers, also indicated that the majority of the users of the A.S.G.A.

Table 2. Number of sites occupied by the leading eleven counties in Michigan from April 1, 1972 to September 4, 1972.

COUNTY	NUMBER OF SITES OCCUPIED	PERCENT OF MICHIGAN CAMPERs
Berrien	684	24.7
Kalamazoo	513	18.6
Allegan	444	16.1
Van Buren	284	10.3
Kent	197	7.1
Ottawa	192	6.9
Calhoun	77	2.8
Cass	60	2.2
Wayne	43	1.6
St. Joseph	28	1.0
Oakland	28	1.0
All other counties	224	7.7

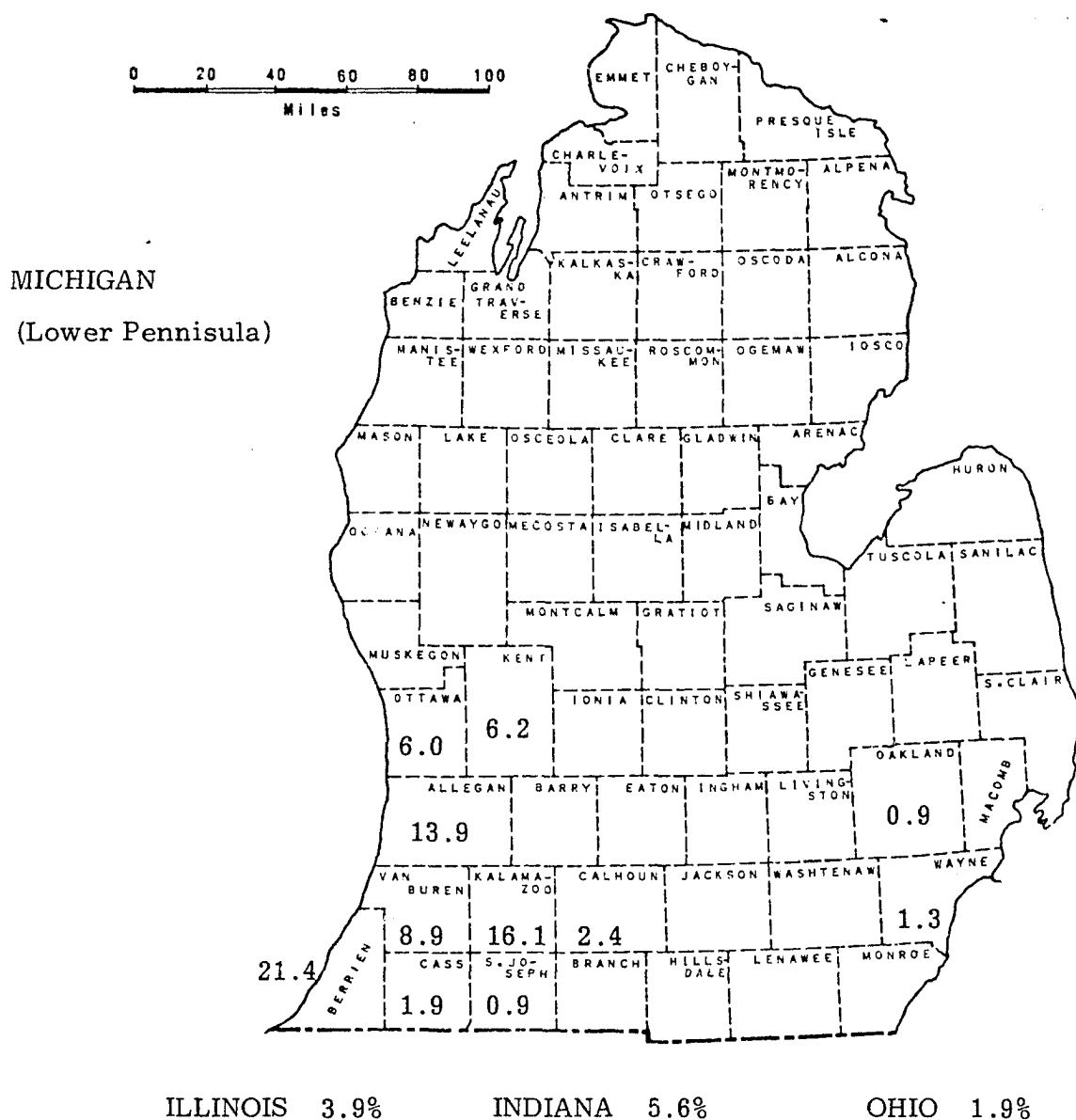


Figure 3. Distribution by percent of site occupancy in the A.S.G.A. by county and state during the summer of 1972. Areas contributing less than 0.9 percent are not included.

came from nearby areas (Stanford, 1972). This study was based on interviews with nearly the same number of persons as the present one was, but did not utilize any information from the camper registration cards. One difference between the two studies was that Stanford's work reported more persons visiting the A.S.G.A. from Kalamazoo County than from any other county, whereas the present study showed that the greatest number of campers came from Berrien County. Although the significance of this difference is not known, one explanation is that there were more day visitors from Kalamazoo County, but more campers from Berrien County.

To further illustrate the influence that distance exerts upon campground use, a graph was prepared comparing the percent of a county's population camping in the A.S.G.A. with the distance of the county from the area. Figure 4 shows that as the distance from the campground increases, the percent of a county's population visiting the campground decreases rapidly. The only county which a large number of campers came from that is not adjacent to Allegan County is Berrien County. There are probably many reasons why so many campers from Berrien County use the area. First of all, Berrien County contains the cities of Benton Harbor and St. Joseph. These are relatively large cities and many of the inhabitants may enjoy leaving town during the weekend. Secondly, as Figure 1 shows, people from these cities have an easy access route to the Allegan area along Interstate 196. Many of these people reported that they could get to a campsite

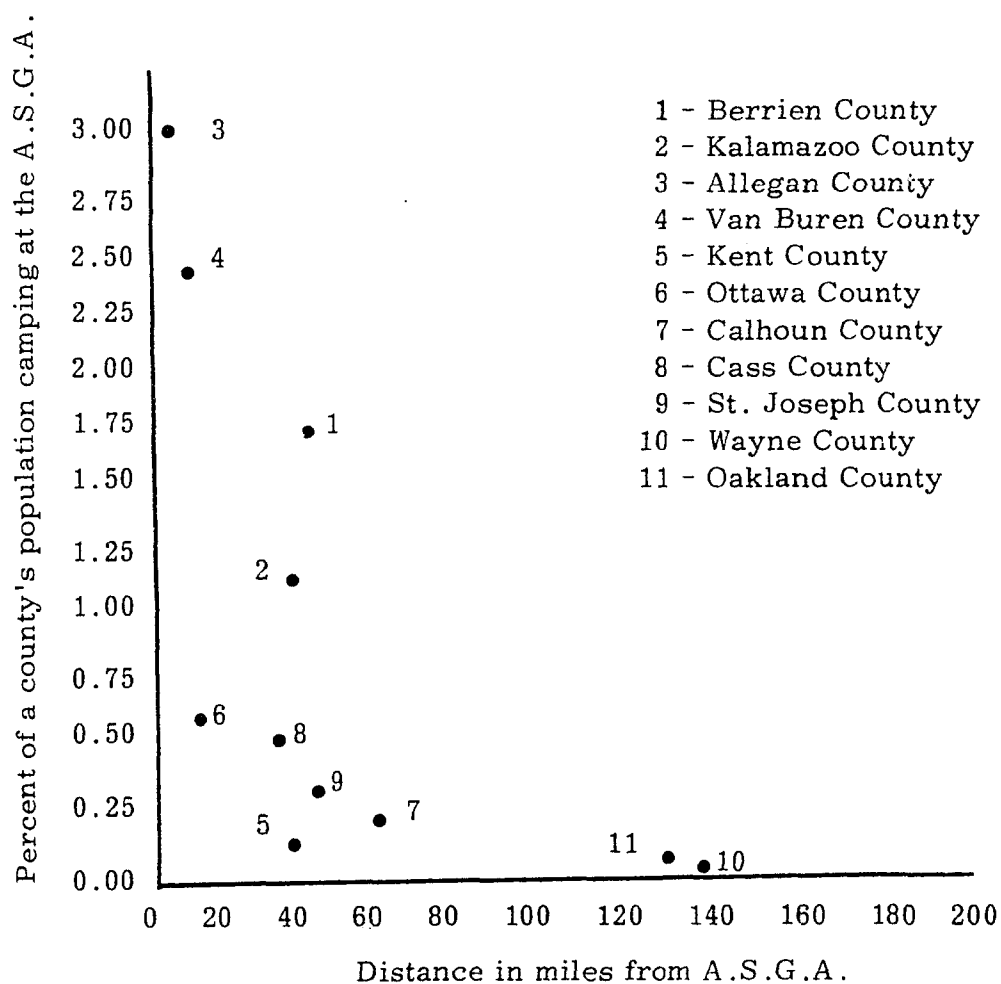


Figure 4. Graph showing the inverse relationship between percent of a county's population camping at the A.S.G.A. and distance from the campground.

in less than an hour and a half. A third reason for so many campers coming from Berrien County is that the A.S.G.A. is the closest large forested area. Although Van Buren and Warren Dunes State Parks are closer and provide camping, they are located upon a sandy beach along Lake Michigan. These campgrounds attract large numbers of youthful bathers and campers, and are rarely quiet or restful. Most of the campers from Berrien County continue on to the A.S.G.A. because they prefer the quiet forest area to the more crowded beaches along Lake Michigan. A final reason, which is purely speculative, is the "go north" instinct of many campers. Of the top eleven counties which use the Allegan area, only Kent and Ottawa lie north of Allegan County. Since Berrien County is nearly straight south of the A.S.G.A., it feels proper to these people to camp there. It is also interesting to note that both of the states other than Michigan which utilize more than one percent of the campsites (Indiana and Illinois) lie directly south of the Michigan border.

Weekly, seasonal and long term usage patterns

Originally the number of sites occupied during each day of the study period were plotted separately by campground. This was done to determine if the difference in number of campsites, the presence or absence of a swimming area, or some other particular feature of an individual campground would alter the pattern of campground usage for that particular campground. What actually became evident was that the

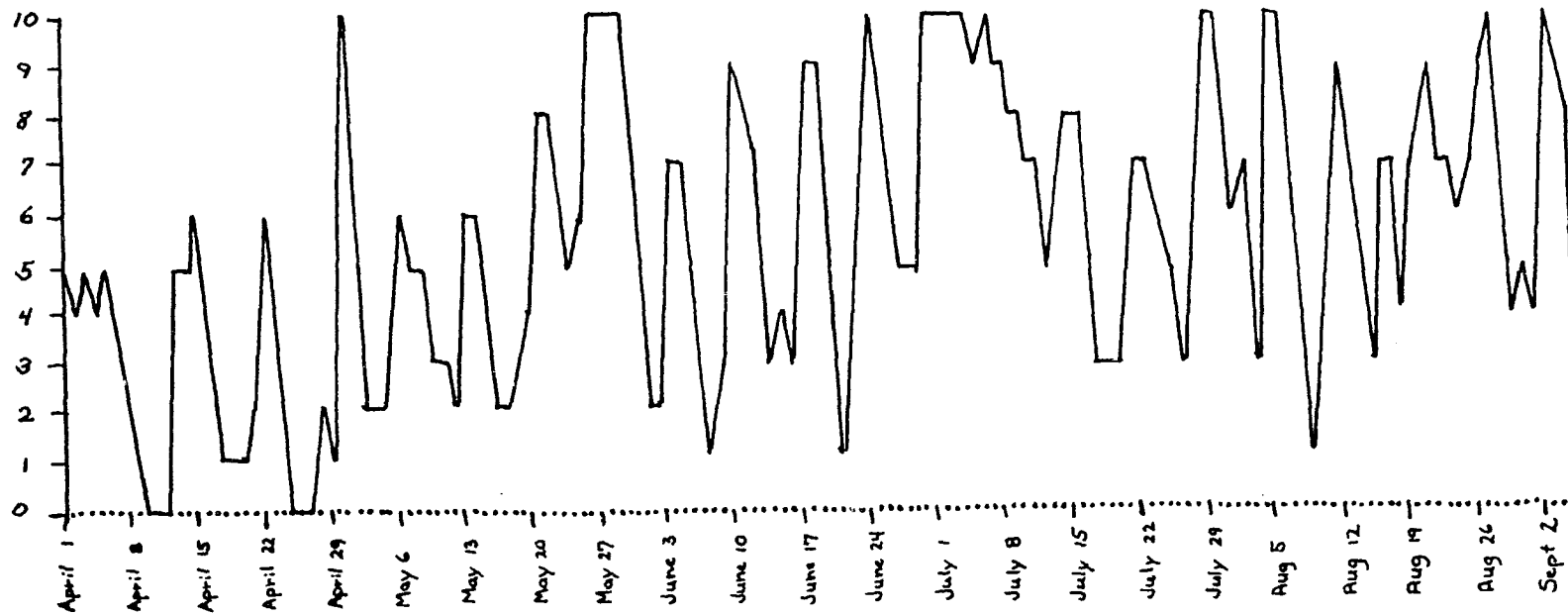


Figure 5. Daily record of sites occupied at Swan Creek campground (1972).
 Lettered dates indicate Saturdays.

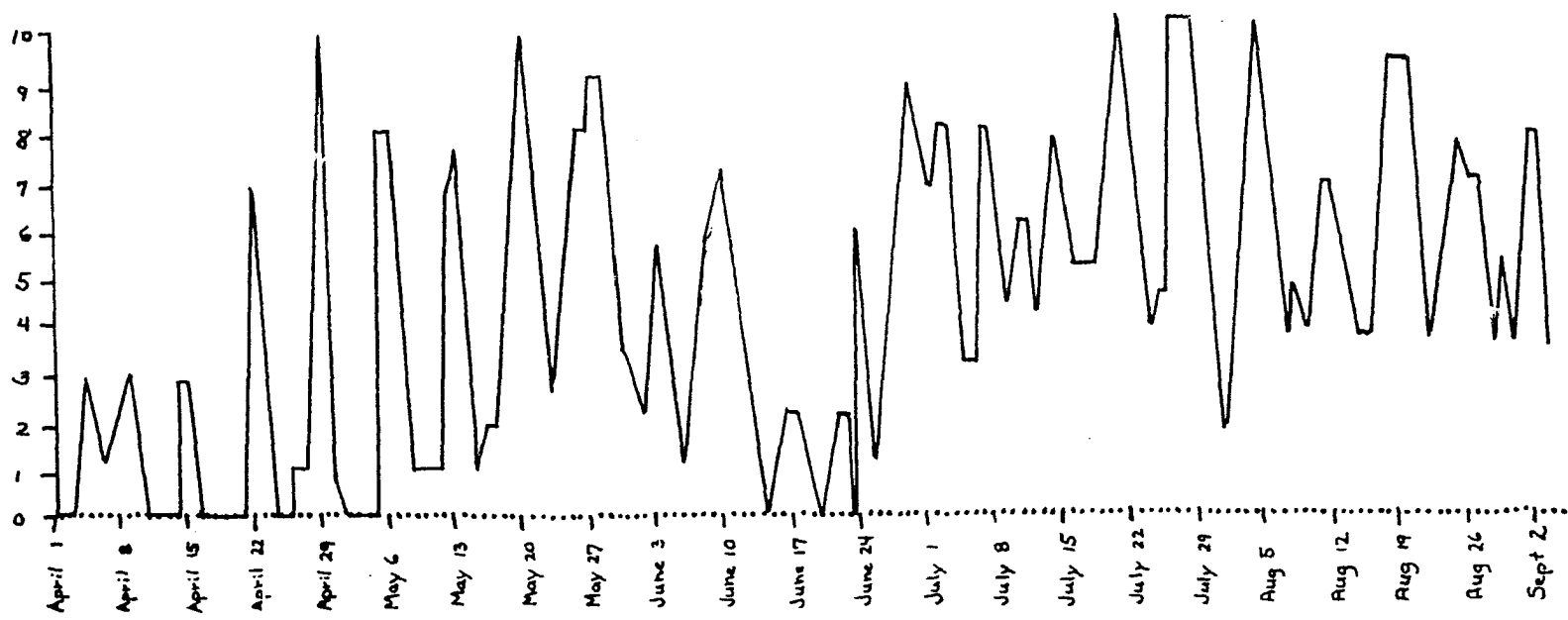


Figure 6. Daily record of sites occupied at Lakeview campground (1972).
Lettered dates indicate Saturdays.

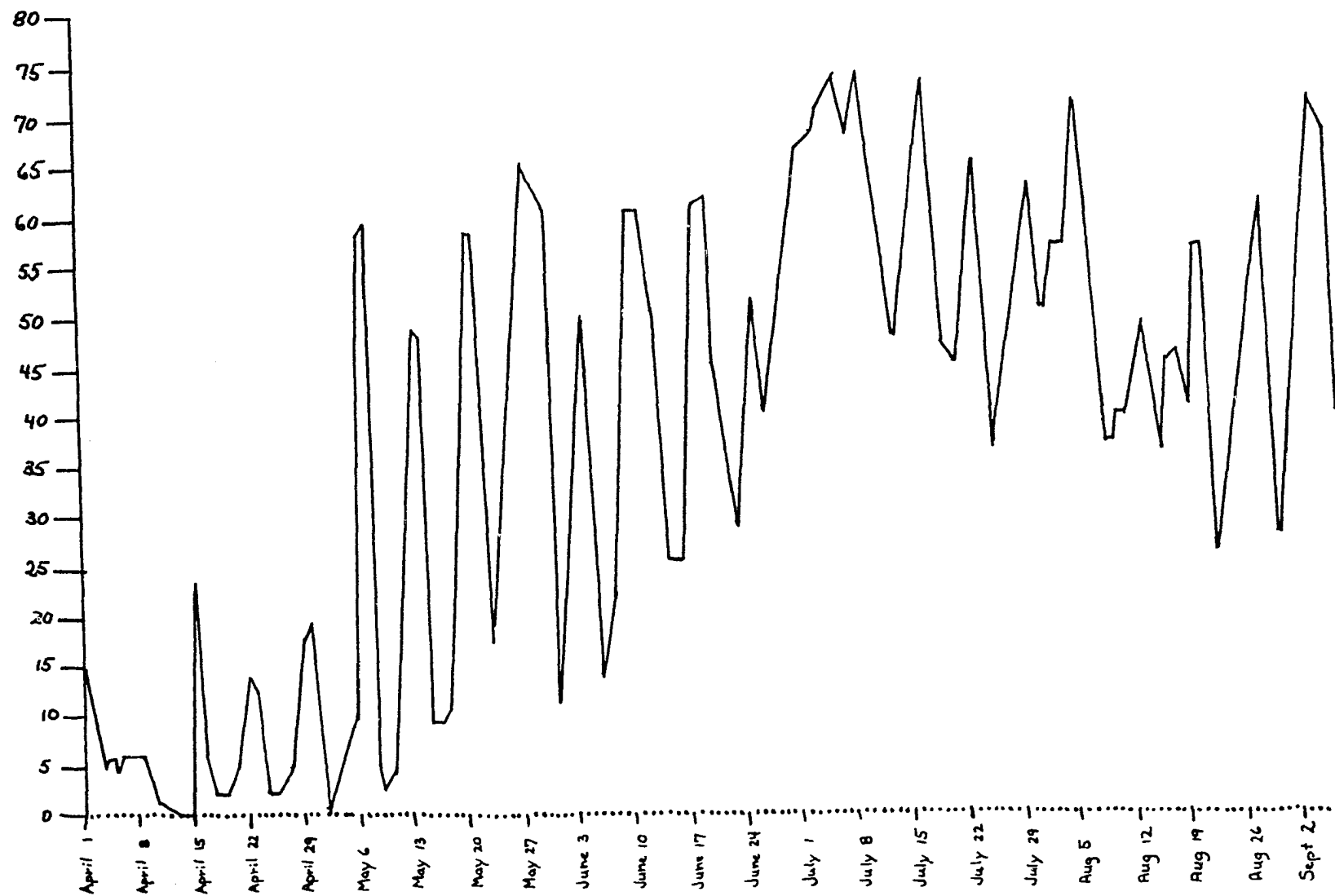


Figure 7. Daily record of sites occupied at Ely Lake campground (1972).
 Lettered dates indicate Saturdays.

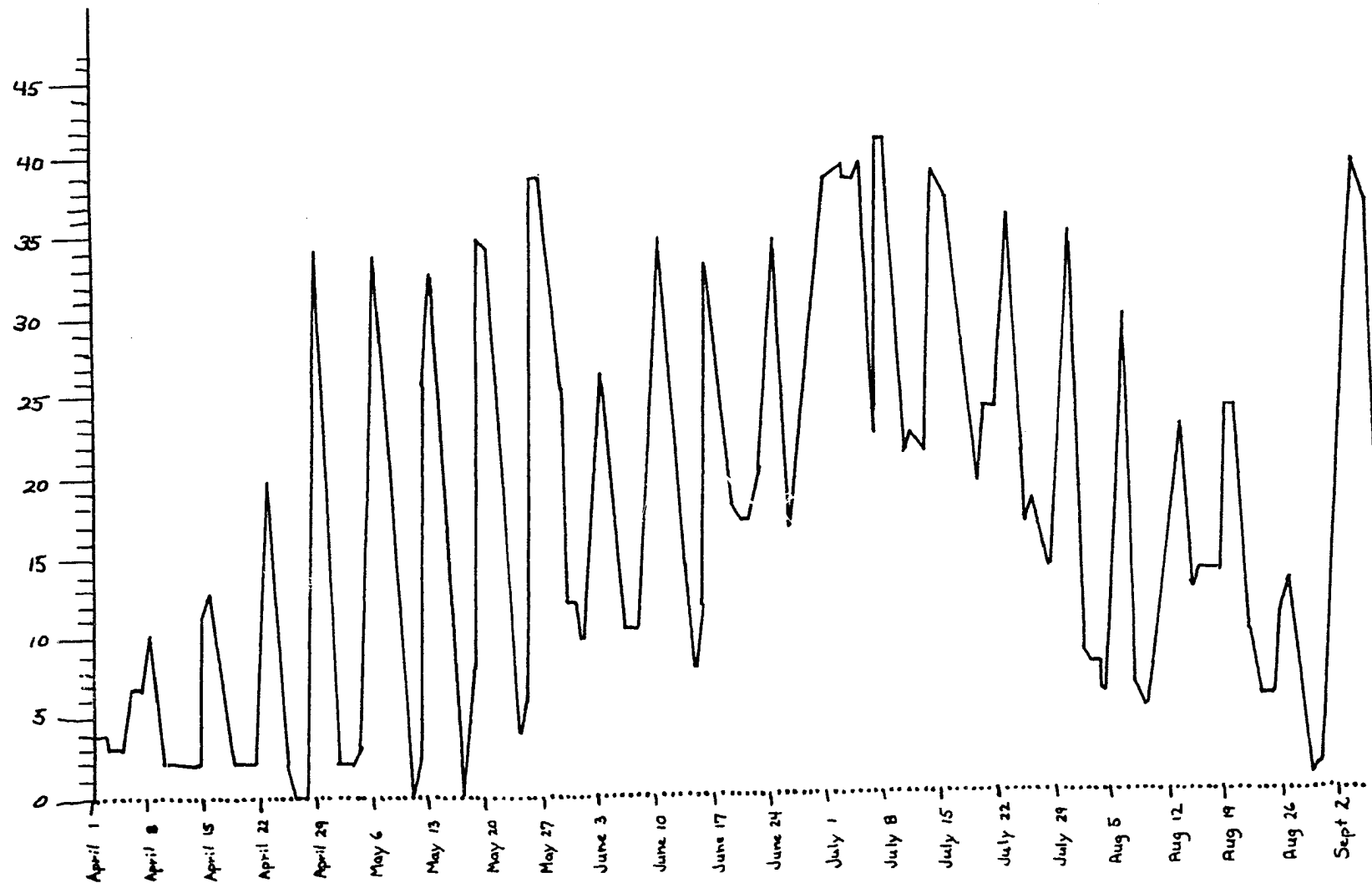


Figure 8. Daily record of sites used at Pine Point campground (1972).
 Lettered dates indicate Saturdays.

major factor which could be correlated with high campground usage was the occurrence of weekends and holidays. By studying Figures 5 through 8 it quickly becomes obvious that campground usage is not consistent either throughout the week or through the summer. Campers tend to arrive either on a Friday evening or Saturday, and leave Sunday evening or Monday morning. From mid-June until the end of August, mid-week occupancy rises, but is never as high as during the weekends. There does not seem to be any difference between the attendance patterns at different campgrounds. These graphs were based on camper registration cards and should be very accurate. It should be noted that at neither of the two large campgrounds, Ely Lake or Pine Point, were the campgrounds ever full. From personal experience, the writer knows that these campgrounds are often filled during weekends. Two reasons may account for these discrepancies. First, many campers may arrive late in the evening and not register until the following day. Secondly, because of the fifteen day limit on the number of days a camper may stay from May 1st until Labor Day, some people may not register for as many days as they actually stay. It appears that an increase of about 10% over the recorded totals would be a reasonable estimate of the true number of sites occupied and campers which actually use the A.S.G.A. This adjustment factor should perhaps be used on all attendance figures given in this paper.

The average stay per camper registration card was 3.5 days, slightly less than the average of 3.8 days computed for all campers using Michigan State Forest campgrounds during 1972 (Anon. 1973). If stays of over three days are considered to be vacation visits, while persons staying three days or less are considered to be camping for the weekend, it appears that nearly 9 out of 10 sites are occupied by weekend campers, as shown below in Table 3.

Table 3. Number of campers who stayed for more than three days at the same campsite during the 1972 season.

CAMPGROUND	NUMBER	PERCENT
Swan Creek	39	14.9
Lakeview	23	8.3
Ely Lake	259	15.8
Pine Point	65	5.8
TOTAL	386	11.7

The campground which had the largest number of campers staying for more than three days was Ely Lake, probably because it offers the best swimming facilities. Swan Creek also had a fairly large vacationing group. The vacationers which were interviewed at Swan Creek said that they chose it because of its seclusion. These two campgrounds not only had more long term users, but the results of the personal interviews showed that they also attracted more repeat visits from previous

campers than Lakeview or Pine Point (Table 4) . These findings indicate that campers, when given a choice, are selective about which campground they use even when the basic facilities and general location are the same.

Table 4. Number of campers who returned to the same campground at least once during the 1972 summer season.

CAMPGROUND	NUMBER	PERCENT
Swan Creek	34	13.3
Lakeview	32	11.5
Ely Lake	242	14.7
Pine Point	104	9.3

Number of persons using a site

The average number of persons per site, as shown by the registration tags, was 4.4 persons. This figure corresponds well with the averages of from four to five given in a summary of two studies done in Maine and Delaware (Cole and Wilkins, 1971) , but is higher than the 3.4 average found in a study done in a state forest campground in northern Michigan (DeVillez, 1972) , and the 3.5 average for the campers using National Forest campgrounds (Isabell, 1973) . Of the 215 sites which were checked, only five had one camper and over half of the sites had either two, four, or five campers (see Table 5) . Ninety percent of the sites were being used by some sort of a family unit, either a couple, a

Table 5. Distribution of campers by numbers per
campsite as shown by questionnaire results.

NUMBER OF PERSONS USING THE SITE	NUMBER OF SITES CONTAINING THIS MANY PERSONS	PERCENT OF SITES CONTAINING THIS NUMBER OF PEOPLE
1	5	2.3
2	41	18.6
3	31	14.1
4	45	20.5
5	38	17.3
6	17	7.8
7	15	6.8
8	14	6.4
9	5	2.3
10	4	1.8
11	3	1.4
14	1	0.5
16	1	0.5

family, or a family and friends. The campsites with family groups contained an average of 2.2 children 12 years of age or under. Only 10% of the campsites were occupied by organized groups, friends camping together, or a single person (Table 6). These figures are remarkably similar to those cited by Cole and Wilkins (1971) in their summary of the studies conducted in the northeastern United States. It would seem that camping, is truly a family activity.

Age distribution of campers

A comparison was made between the age distribution of the campers using the A.S.G.A. and the actual age distribution of the population living in Southwestern Michigan (Table 7). The population data for Southwestern Michigan was used because almost 90 percent of the campers from Michigan came from this area. The results are quite interesting. Children 12 and under were greatly over represented in the campgrounds; there was also an excess of campers from 13 to 44; while persons over 45 were not using the campgrounds as often as might be expected from the census data. An overrepresentation by the younger age groups in wilderness type campgrounds was noted in a study by Burch and Wenger (1967). Their conclusion was that perhaps the young to middle age family groups who prefer wilderness camping may later change to convenience camping as they grow older. A similar explanation could easily be correct in the case of the campers using the A.S.G.A. This preference for primitive type

Table 6. Distribution of campers by type of group
as shown by questionnaire results.

TYPE OF GROUP	NUMBER	PERCENT
Single family	123	55.9
Couple	36	16.4
Family and friends	24	10.9
Two or more families	15	6.8
Organized group	4	1.8
Friends	13	5.9
One person	5	2.3

Table 7. Michigan's population and Southwestern Michigan's population (Allegan, Berrien, Calhoun, Cass, Kalamazoo, Kent, Ottawa, St. Joseph, and Van Buren Counties) by age group compared with the age distribution of the campers interviewed at the A.S.G.A., (Population data from U.S. Census, 1971b) .

AGE GROUP	PERCENT OF MICHIGAN'S POPULATION	PERCENT OF SOUTHWESTERN MICHIGAN'S POPULATION	PERCENT OF CAMPER'S POPULATION
1-12	26.2	25.9	34.5
13-19	14.1	14.5	19.9
20-44	31.4	31.3	36.3
45-64	19.8	19.2	7.5
65 or over	8.5	9.1	1.8

campgrounds may be partially economical. Younger married couples usually do not have as large an income as middle-aged families. The A.S.G.A. provides camping with no fee, and since most of these people who camp there live within an hour's drive, it does not cost much to travel to the campground.

DeVillez (1972) reported that persons from 46 to 65 were over represented at the state forest campground in northern Michigan which he studied. He also stated that over 90% of the campers planned to fish while at the camp. Older couples whose children have left home, or parents with older children are more likely to be able to spend more time fishing. These persons who are free to travel further, because they are not encumbered by young children, may drive further to reach better known fishing areas rather than camping at nearby areas such as the A.S.G.A. thus contributing to the low percentage of persons over 45 who camp there. A final reason for the low number of campers in the higher age groups is simply that older persons camp less frequently. A report by Mueller and Gurin (1962) showed that over 20 percent of the persons surveyed from 18 to 44 years old had camped at least once the previous year, 10 percent of those from 45 to 64 had been camping, and only seven percent of the persons surveyed who were over 65 had been camping during the last year.

There was a larger percentage of teenagers at Swan Creek and Ely Lake (30.0% and 26.0%) than at the two other campgrounds (7.8% and 16.0%). There seems to be two different reasons for this. The teenagers interviewed at Swan Creek were gathered in groups of friends and reported that they were camping there because it was isolated and they did not wish to disturb anyone. On the other hand, the thirteen to nineteen year olds at Ely Lake were camping with their parents, and preferred that campground because of the swimming beach. Conversely, there were more children 12 or under staying at the Pine Point (39.0%) and Lakeview (44.0%) campgrounds than at Swan Creek (26.0%) and Ely Lake (27.5%). Conversations with the parents indicated that these areas were preferred because of the quiet and safe nature of the campgrounds. Ely Lake especially is known for its concentrations of teenagers, and some parents of younger children tend to shun this campground because of this.

Judging from the data collected from this survey, and the above discussion, it would appear that driving time to the campgrounds, cost factors, the available type of recreation, and the age of the children, if any, all have an effect upon the age distribution of campers at a particular campground.

Type of camp

A surprisingly large number of campers used tents for shelter. Table 8 shows that nearly half of the registration cards reported tents as the type of camp. Trailers were second with 39.6% and pick-up campers were reported as 14.9%. A similar study by DeVillez (1972) in a northern Michigan state forest showed that only 21% of the campers used a tent, and in U.S. Forest Service Campgrounds which are accessible by automobiles, less than one-third of the campers use tents (Isabell, 1973).

Table 8. Type of camp used by campers at the A.S.G.A. during the 1972 summer season according to registration cards.

TYPE OF CAMP	NUMBER	PERCENT
Tent	1316	45.5
Trailer	1144	39.6
Pick-up camper	430	14.9

The reason for the larger numbers of tents at the A.S.G.A. might include the fact that most of the campers came for relatively short periods of time (Table 3) and were not traveling for long distances. Because of this the additional conveniences offered by travel trailers were not as important as they otherwise would be. Another reason is that these

campgrounds are not planned for use by large trailers. Most of the sites are not of the "pull-through" type, and there are no sewer, water, or electrical hook ups.

A report by Ferriss (1962) stated that camping and income are directly related, each higher income group doing more camping than the preceding, except for the highest income class (\$15,000 and over). Although family income was not determined, many of the users appeared to be in the lower income ranges. Factory workers, married college students, and migrant farm workers were all met while interviewing the campers. By using tents these people were able to camp without making a large initial investment.

A comparison of the data in Table 8 with that obtained by personal interviews (Table 9) shows that tent percentages were quite similar, but that there were more pick-up campers and trailers reported on the registration cards. The most logical explanation for this is that the registration cards did not provide a place to report motor homes, buses, vans, or tent-trailers. The person registering may easily register motor homes, buses or vans under pick-up camper rather than tent or trailer, whereas the tent trailer user would probably register his camper as a trailer.

Table 9 further supports the idea that the campers may be from the lower income range because the cost of the average trailer is greater than that of an average tent-trailer.

Table 9. Type of camp used by campers contacted by personal interviews in the A.S.G.A. during the summer season, 1972.

	TOTAL	PERCENT
Tent	92	42.4
Tent-trailer	32	14.7
Camper trailer	68	31.3
Motor home, van, or bus	7	3.2
Pick-up camper	18	8.3

Site days and camper days spent in the A.S.G.A.

Table 10 shows the total number of camper days spent in the A.S.G.A. during the 1972 summer season as indicated through the registration cards filled out for that time period. This information shows that over 50,000 camper days were spent in the area. The main purpose in obtaining this information was to give the managers of the area a better idea of just what the total use of the area was. This knowledge is valuable when plans are being made for future site construction, staffing needs, and operational cost estimates.

Table 10. Total number of camper days spent in the A.S.G.A. during the 1972 summer season.

CAMPGROUND	NUMBER OF CAMPER DAYS
Swan Creek	4955
Lakeview	3157
Ely Lake	29,375
Pine Point	12,555
TOTAL	50,042

Mr. Charles Friley, manager of the Allegan State Game Area, informed the author that a rough estimate of user days at each campground is made by counting the number of full trash barrels emptied at each location. Each full barrel is considered to represent 30 visitor days. This method resulted in an estimate of 53,250 user days at Ely Lake, 27,030 at Pine Point, 9,270 at Swan Creek, and 8,310 at Lakeview during the 1972 camping season from April through October. These estimates are almost twice as high as the reported number of campers calculated by the use of the 1972 camper registration cards. The 1972 registration totals (shown in Table 10) indicate that a total of 50,042 camper days were spent in the A.S.G.A. during the study period. The estimates made by trash pickup are based upon a slightly longer time period than the one for which this study was conducted. In addition, some of the garbage is left by day visitors, such as swimmers and picnickers, who are also included in the user day report, hence raising the estimate. The Ely Lake campground and Pine Point campground attract

many people each day who come to picnic and swim. By adding these persons to the camper visitation days at Pine Point and Ely Lake, Mr. Friley's estimates may be quite close. This writer does feel that the estimates of user days based on trash pickup are too high for Swan Creek and Lakeview because the published estimates are much higher than the camper days recorded. Very few day users were observed in these two camping areas. By dividing the number of camper days at Swan Creek and Lakeview (8,112) by the number of barrels of trash picked up (586) an estimate of about 14 camper days per full barrel is obtained. If an adjustment is made for the longer time period that trash pickup records were kept than that for which camping registration data was tabulated, and for some addition of trash by day users, an estimate of 20 camper days per barrel of trash would probably be quite accurate.

Table 11 shows that the sites at Swan Creek are more fully utilized than those at any other campground, probably due to people using this area who prefer isolation and the small number of campsites found here. It was quite surprising to find the other small campground, Lakeview, also had more of its sites filled during the camping period than did Ely Lake. The most logical explanation for this may be that although the sites near the beach at Ely Lake are often full, the writer observed that the ones along the north shore of the lake often are not. Pine Point ranked lowest in the percent of possible utilization, probably since it is neither very secluded nor does it offer a swimming area which is as good as the beach as Ely Lake.

Table 11. Total number of site days utilized per campground in the A.S.G.A. during the 1972 summer season and the percent of possible utilization (number of sites x number of days available) .

CAMPGROUND	NUMBER OF DAYS USED	PERCENT UTILIZATION
Swan Creek	1049	66.4
Lakeview	855	54.1
Ely Lake	6402	50.7
Pine Point	2998	40.4

Table 11 further emphasizes the fact that although campgrounds appear to be fully utilized during busy summer weekends, there are many times when less than 50% of the sites are occupied.

Camper Activities While in the A.S.G.A.

All of the information used in the portion of the paper was obtained from 220 interviews at campsites. A total of 993 persons were camping at these sites at the time that the interviews were conducted. Most of the information was divided into two units: that representing persons 19 or under, and that which pertained to the persons 20 or older.

Swimming

The most popular activity at all the campgrounds except Lakeview was swimming. Over 60% of all the persons under 20 did some swimming

Table 12. Where campground fishermen spent their fishing time, as shown by questionnaire results.

FISHING AREA	SWAN CREEK	LAKEVIEW	ELY LAKE	PINE POINT
Ely Lake	0 %	10.1 %	71.7* %	2.1 %
Little Tom Lake	17.0	0	11.1	0
Swan Creek Mill Pond	21.9*	1.0	9.3	88.3*
Lake Allegan	5.5	70.8*	0	0
Allegan Dam Area	9.1	18.1	3.9	5.3
Other Areas	46.5	0	4.1	4.3

* Indicates the closest fishing area to the respective campground. In all cases these areas are within one mile of the indicated campground.

and 35.9% of the campers over 19 also went swimming. At Ely Lake and Pine Point, where the beaches are located, both groups averaged over two hours per day on the beach or in the water. At Lakeview and Swan Creek, the campers spent about one hour per day swimming.

Hiking

A large percentage of both groups at all the campgrounds did some hiking. Nearly 60% of the younger persons and 39.1% of those over 19 hiked, with a daily average of 1.8 hours for the younger group and 1.7 hours for the older campers. Most of the hikes were relatively short, either within the campground area, along the county roads, or on the shorter hiking trails near the campgrounds. Only one person reported that he had done some hiking off the trails within the woods. This would indicate that a relatively small area is needed to provide hiking trails for most persons.

Fishing

There were almost as many persons over 19 fishing (100) as there were younger persons (32). These figures represent 24.4% of the young group and 22.3% of the older persons at the campgrounds. An average of 2.35 hours per day were spent fishing, with little difference between the two groups. Table 12 shows that most of the fishermen spent almost all of their fishing time at the nearest available fishing area. Fishermen camped

at Ely Lake fished at Ely Lake; those at Pine Point fished almost exclusively in the Swan Creek Mill Pond, which is adjacent to the campground, and those at Lakeview fished in Lake Allegan, which is within 100 yards of all the campsites at Lakeview. The results from the Swan Creek campground were strongly affected by one large group of campers which spent several days fishing in Lake Michigan near South Haven. Without this group's contribution, the largest number of fishing hours would have been at the Swan Creek Mill Pond, which is the closest warm water fishing area near the Swan Creek campgrounds.

Two reasons may explain why most of the fishermen concentrated their activity at the lakes nearest the campground where they were staying. The first would be that they established their camp where they wished to fish. The second reason, which the author believes to be the case more often, is that most of the fishermen did not come to the A.S.G.A. primarily to fish, when they did do some fishing they fished at whichever area was the easiest to reach from their campsite.

Only three campers interviewed did any trout fishing. All of these people fished in Swan Creek.

Other activities

Table 13 shows that 14.5% of all campsite users brought a small boat; many of these were used for boating as well as fishing. In addition, 2.3% of the users brought canoes.

Table 13. Extra equipment brought by campers interviewed by the author.

	TOTAL	PERCENT
Small boats	32	14.5
Bicycles	25	11.4
Canoes	5	2.3
Trail bikes	4	1.8
Motor bikes	4	1.8

Bicycles were present at over 11.0% of the sites, and a few trail and motor bikes were also observed. It should be pointed out that motorized vehicles are not allowed in the forest or on hiking trails; they must have state vehicle licenses and remain on marked county roads.

Four percent of the persons interviewed reported that they did some sightseeing while driving within the A.S.G.A., and one couple spent several hours each day birdwatching. The majority of the adults which were interviewed reported that they spent more time "just relaxing" than in doing anything else.

Camper Attitudes

Why campers chose the A.S.G.A.

More than 60% of all campers interviewed stated that their reason for choosing this area was because it was close to home, quiet, or not

crowded (Table 14) . The only other reasons given more than five percent of the time were "came with or met friends here" and "recommended by friends" . Although a few persons mentioned fishing, swimming and hiking, these did not seem to be important factors in choosing this area to camp in .

The best liked features of the camping area were its quiet and relaxing atmosphere and the wooded and primitive nature (see Table 15) . Privacy and room also seemed to be valued by many campers, but recreational facilities such as swimming, fishing, and hiking were mentioned infrequently . The majority of the campers seemed more interested in relaxing without any disturbances than they were in participating in more active forms of recreation .

Complaints reported by campers

A remarkably large number of the people contacted had no complaints (Table 16) . Rowdyism and vandalism were the most common problems reported by campers, most of these complaints coming from Ely Lake campground . In most of these cases, it was not other campers who were causing trouble, but a few day users who came from nearby to swim, or just pass the time . Many of the campers who had camped at Ely Lake for several years reported that these problems had decreased during the 1972 camping season . They also mentioned that there seemed to be more patrolling of the campground area by law enforcement personnel this year, which seemed to curtail most of the undesirable behavior .

Table 14. Reasons why campers chose the Allegan State Game Area to camp in, based on questionnaire results.

	NUMBER	PERCENT
Close to home	63	27.3
Like it; nice; quiet, primitive	48	20.8
Came with friends	23	10.0
Closest one that we like	17	7.4
Recommended by friends	13	5.6
Can commute to work	10	4.3
Beach; swimming	9	3.9
Lots of room	9	3.9
Free	6	2.6
Privacy	5	2.2
Hoped to find an empty site	4	1.6
Friends/relatives live nearby	4	1.6
Lots to do	3	1.2
Fishing	3	1.2
Try a new place	3	1.2

Table 15. The most liked features of the campground areas as reported by campground users.

	NUMBER	PERCENT
Quiet; relaxing	85	28.6
Secluded; shaded woods	46	15.5
Large campsites; well spaced sites	26	8.7
Swimming	19	6.4
Primitive atmosphere	17	5.7
Clean	17	5.7
Scenic; pretty	14	4.7
Everything just nice	14	4.7
Close to home	6	2.0
Privacy	6	2.0
Lake is close	5	1.7
Patrolled	4	1.3
Trails	4	1.3

Table 15. (continued) The most liked features of the campground areas as reported by campground users.

	NUMBER	PERCENT
Friendly people	4	1.3
Can usually get in	3	1.0
Garbage pickup	3	1.0
Firewood supplied	3	1.0
Good facilities e.g. restrooms, tables	3	1.0
Many kinds of recreation	3	1.0
Large area for recreation	3	1.0
Ball diamond	2	0.7
Small number of sites in camp	2	0.7
Safe for children	2	0.7
Fishing	1	0.3
Like "circle" design of north camping area	1	0.3
Good facilities for children	1	0.3

Table 16. Complaints reported by campers as shown by the questionnaire.

	NUMBER	PERCENT
No complaints	154	63.9
Rowdyism; vandalism	25	10.4
Toilet odor	23	9.5
Insects	15	6.2
Poor swimming area	4	1.7
Rules not well enforced	4	1.7
Small size of sites	4	1.7
Hard to get a campsite	2	0.8
Sites too close together	2	0.8
Loose dogs	2	0.8
Need more firewood	2	0.8
Remove the restrictions	1	0.4
Restrooms too far away	1	0.4
Litter/trash in camp ground and on beach	1	0.4
Trash not picked up for three days	1	0.4

The only other complaints made by more than 2% of the campers were the numbers of insects present and the odor and condition of the restrooms. Very little can be done at the present time to solve either of these problems without large expenditures of funds and a rather substantial alteration in the appearance and nature of the campgrounds. Insect control would involve clearing and spraying, both undesirable measures in a state forest area. The only sure way of eliminating the odor from pit toilets is to replace them with flush toilets. This would involve bringing electricity into each campground, installing septic tanks and drainage fields, and in general, changing the overall primitive nature of these campgrounds.

Changes campers would like to see made

More than 63% of all campers interviewed stated that they did not want any changes made in the camping area (Table 17). Over 12% of the campers wished to have the restroom improved or have flush toilets and/or showers installed. This will probably not be done since it is the policy of the Michigan DNR to keep state forests and game areas in a primitive state. As explained in the preceding section, it would be difficult to install indoor plumbing facilities without altering the nature of the campgrounds.

Some of the other suggestions appear to be worth considering. At the present time, many of the campsites do not have any specific area to build a camp or cooking fire. At least one child was injured last year

Table 17. Changes campers would like to have made
in the camping area, if any.

	NUMBER	PERCENT
No change	148	63.5
Add flush toilets and/or showers	16	6.0
Improve and repair restrooms	13	5.6
Add electricity	8	3.5
Add some type fireplace or grill	6	2.6
Add children's play area	6	2.6
Enlarge part of site used to pitch tent	6	2.6
Add more sites	5	2.1
Remove weeds from swimming area	4	1.7
More patrolling	3	1.3
More restrooms	3	1.3
Enforce camping rules	3	1.3
Move sites further apart	2	0.9
Add water and electricity	2	0.9

Table 17. (continued) Changes campers would like to have made in the camping area, if any.

	NUMBER	PERCENT
Control non-camping traffic: gate, fee or other method	2	0.9
Eliminate formal boundaries	2	0.9
Improve dock at swimming area	1	0.4
Mark trails better	1	0.4
Add running water	1	0.4
Move restrooms closer to camp	1	0.4
Fasten the tables down	1	0.4

when he stepped into the embers of an unmarked fire, and there is the danger of an uncontained campfire escaping and starting a forest fire. Furthermore, with different campers building their fires on different parts of the site, the entire area soon becomes covered with partially burned wood fragments and ashes. A square concrete receptacle, without a bottom, could be sunk a foot or so below ground level at each campsite to provide a simple, relatively inexpensive fireplace.

A play area for children may also be worth building at each of the two large campgrounds. A few swings, slides, and a set of monkeybars would certainly be used by the large number of younger children who are brought to these campgrounds by their parents.

A final change mentioned by almost five percent of the campers at the Pine Point campground is the small size of the "tent pad" area of the campsite, provided for pitching a tent or parking a trailer. This space is also used for parking cars and does seem quite small. Mr. Charles Friley, manager of the A.S.G.A., has recently informed me that these sites are presently being enlarged and by the summer of 1973 most of them will have a larger tenting and parking area.

The amount campers would be willing to pay to camp

Table 18 shows what campers would be willing to pay per night and still camp as often in the A.S.G.A. At the time that this study was made,

there was no fee charged. However, 95% of the campers were willing to pay at least a nominal fee. Even most of those who said that they would not camp as often if any fee was charged based their objection to a fee on the grounds that they were already paying for the right to camp by paying property taxes. Many of the persons who said they would pay from \$1.00 to \$2.00 per night indicated that they would pay more if conveniences such as running water, electricity and showers were installed. There seemed to be conflict of interest here, because many of these same people had earlier stated that they did not want any changes in the camping area and that they came to these campgrounds because of their primitive nature. Many of the users who said they would pay \$3.00 per night seemed to realize that installation of running water and electricity could alter the atmosphere of the campgrounds. These campers stated that it was worth \$3.00 just to keep the campgrounds the way they were.

Table 18. The maximum amount campground users would be willing to pay and still camp as frequently in the A.S.G.A. as they presently do.

PERCENT OF CAMPERS	WILLING TO PAY
5.0	0
4.1	\$0.50
51.1	\$1.00
1.4	\$1.50
28.8	\$2.00
9.6	\$3.00

SUMMARY

The A.S.G.A. contains four primitive campgrounds with a total of 147 campsites. All of these campgrounds are shaded by oak trees, and are near some type of lake or stream.

The majority of the campers come from Michigan; over 50% of all the sites used are occupied by campers from Allegan County or the counties directly adjacent to Allegan County. The distance from the campgrounds seems to be important to the users. Very few people come from more than sixty miles away. The heaviest use of these campgrounds occurs during summer weekends. Before school vacation begins during June, very few persons camp in this area during the week. The average occupants of a campsite were a family with two or three children, which traveled less than sixty miles and most often used a tent for shelter. Their average stay was 3.5 days.

While at the campgrounds, over 60% of the children and 35% of the adults did some swimming. About the same percentages hiked, but for a shorter time each day. Slightly less than 25% of the campers fished, averaging 2.4 hours per day. Other activities included boating, bicycle riding, sightseeing, and birdwatching. The most popular "activity" was just relaxing.

The most common reasons for choosing the A.S.G.A. were the closeness of the area, its peaceful atmosphere, and the fact that it was not crowded.

Although many of the campers did some hiking, swimming, or fishing, these were not the main reasons for choosing the A.S.G.A. to camp in.

The majority of campers had no complaints; the most commonly mentioned one was the rowdy behavior of a few teenage day-users who came to the Ely Lake beach. Very few of the campers wanted any changes made in the campgrounds. Perhaps the most often heard requests were for improved restrooms and showers.

Although there is presently no charge for camping in the A.S.G.A., nearly 90% of the campers said they would be willing to pay \$1.00 or more per night for the use of the campsites.

The A.S.G.A. seems to be used primarily by persons who do not vacation at this area and probably do not have an unusually high annual income. Their main interest was to relax for a few days in a quiet area without having to drive too far to reach it. The A.S.G.A. seemed to meet the requirements for this type of camping very well.

CONCLUSIONS

The average camper using the A.S.G.A. is a member of a family consisting of parents between 21 and 44 years of age and two or three children. This family came for the weekend from less than 60 miles away and slept in a tent. While at the campground they went swimming and hiking, although the majority of the time was spent "just relaxing." This average camper was satisfied with the campground and didn't want any changes made in the area. From this profile it may be concluded that the A.S.G.A. is providing a recreational facility which is utilized primarily by families coming from short distances for weekend camping. Since there were few major complaints about the area, and most campers didn't want any changes made, apparently the area is meeting the needs and desires of the campers using it. The demand for this type of campground is evident by the near-capacity crowds which are present almost every weekend during the summer.

Recent interest in the preservation and enjoyment of our natural environment, as evidenced by news reports, legislation and the offering of environmentally oriented classes in high schools, colleges and community service facilities, would seem to indicate that many persons enjoy natural areas such as the A.S.G.A. One way in which more people could take advantage of such areas would be to establish more primitive style campgrounds within an hour's drive from major population centers. In this way many more persons could take advantage of this type of campground on

weekends, without spending an excessive amount of time on the road or having to take a vacation. It is this writer's opinion that there is a sufficient demand for more campgrounds similar to those presently in use in the A.S.G.A. to justify establishing similar grounds near urban areas. By establishing this type of campground the number of persons who would have an opportunity to camp more than a few times each year would be greatly increased.

Since most of the campers who used the A.S.G.A. were satisfied with it, the information obtained from this report might be useful when constructing new campgrounds which are designed to serve the same function as the A.S.G.A. does. Some of the features which were mentioned as desirable by the campers in the A.S.G.A. are described next. The majority of the campers at the A.S.G.A. indicated a preference for sites which were quiet and secluded. This does not necessarily mean that they must be large, but a screen of vegetation between each site is desirable. Campgrounds should not be located too close to areas which are used for other recreational purposes such as picnicking or swimming. Although each campsite may be kept relatively close to the next this does not imply that the utilization of a campground can be increased by overcrowding. Regulations in the A.S.G.A. require that each site should be limited to one family, and no more campers should be permitted than there are sites available. Many of the campers questioned indicated a willingness to pay for the privilege of camping in a

natural environment with a limited number of facilities. This is an indication of the demand for undeveloped campgrounds which are not overly crowded.

Most of the campers did not indicate a desire for running water, electricity or showers, although many of them, especially the children, did enjoy having a place to swim. This could be provided by utilizing existing waterbodies, or by damming a small stream. Large tracts of wooded land are not needed. Very few of the campers interviewed showed any interest in going far into the woods, seeking total seclusion, or hiking for more than a short distance from the campgrounds.

Although there were some problems reported by the users of the A.S.G.A., this writer did not interview a single person who reported that their camping experience was not worthwhile. The vast majority of the campers indicated that they thought that the operation of this type of campground was well worth the effort it took. Very few persons abused their privileges, and most campsites were left in excellent condition when the occupants left.

Although much is heard of overcrowding, rowdyism, and abuse of our public campgrounds, this study has shown that the majority of the campers were satisfied with the facilities and camping experience. This interviewer's personal experience was that an overwhelmingly large majority of the users were concerned persons who appreciated the availability of the area and treated it with respect.

REFERENCES CITED

- Anon. "State Forest Campground Summary-1972." Mimeo from Forestry Division, Michigan Department of Natural Resources, Lansing, Michigan (1972), Pp. 2.
- Brewer, R., D.A. Boyce, J.R. Hodgson, J.D. Wenger, M.H. Mills and M.M. Cooper, "Composition of Some Oak Forests in Southwestern Michigan." (In press, 1973) Michigan Botanist.
- Burch, W.R., Jr. and W.D. Wenger, The Social Characteristics of Participants in Three Styles of Family Camping, U.S. Department of Agriculture, Forest Service Research Paper PNW-48. Pacific N.W. Forest and Range Experimental Station, Portland, Oregon (1967), Pp. 30.
- Cole, G.L. and B.T. Wilkins, "The Camper." Recreation Symposium Proceedings. N.E. Forest Experimental Station, Forest Service, U.S. Department of Agriculture, Upper Darby, Pennsylvania (1971), Pp. 105-112.
- DeVillez, R.E., User Profile for a State Forest Campground. Forestry Division, Michigan Department of Natural Resources, Lansing, Michigan (1972), Pp. 20.
- Ferriss, A.L., National Recreation Survey. O.R.R.R.C. Study Report 19, Washington, DC (1962), Pp. 254.
- Friley, C., Allegan State Game Area Manager. Allegan, Michigan, Interview, May 8, 1973.
- Isbell, F. Information Specialist, Division of Recreation, U.S. Forest Service, U.S. Department of Agriculture, Washington, DC Telephone Conversation, October 12, 1973.
- Mueller, E. and G. Gurin, Participation in Outdoor Recreation: Factors Affecting Demand Among American Adults. O.R.R.R.C. Study Report 19, Washington, DC (1962), Pp. 94.

Nowell, R. I., "Final Plan Allegan Project--State of Michigan Submarginal Land Program." Land Policy Section, Agricultural Adjustment Administration, Madison, Wisconsin (1935).

Sawyer, L.E. and M.L. Moore, The Allegan Land Utilization Project, Bureau of Agricultural Economics, U.S. Department of Agriculture, Washington, DC.

Stanford, F. Non-Compensatory Users of the Allegan State Game Area. Unpublished Masters Research Paper, Department of Geography, Western Michigan University (1972), Pp. 97.

Schroeder, P. Area Forester, Department of Natural Resources, Plainwell Regional Office, Plainwell, Michigan, Interview, May 8, 1973.

U.S. Bureau of the Census 1971 (a), U.S. Census of Population 1970. Number of Inhabitants. Final Report PC (1)-A 24 Michigan.

U.S. Bureau of the Census 1971 (b), U.S. Census of Population 1970. General Population Characteristics. Final Report PC (1)-B 24 Michigan.

APPENDIX I

CAMPGROUND QUESTIONNAIRE

Campground _____ Date _____

1. Home town _____ 2. County _____ 3. State _____

4. Distance from home a) Less than 50 miles b) 50-100 miles
 c) 100-200 miles d) over 200 miles5. Ages and numbers. a) 0-12 _____ 6. Type of camper
 b) 13-19 _____ a) Tent
 c) 20-44 _____ b) Tent trailer
 d) 45-64 _____ c) Travel trailer
 e) over 64 _____ d) Motor home
 e) Pickup camper
 f) Other

7. Is this your main destination: Yes _____ No _____

8. Number of nights you plan to stay. _____

9. Number of camping trips you made last year. _____

10. How often did you camp here last year? _____

11. How many years have you camped here? _____

12. Are there any other campgrounds you use regularly? _____

13. Which ones? _____

14. Why did you choose the Allegan State Forest to camp in? _____

15. Major activities.

Adults Hours Children Hours Where?

Just relaxing _____

Fishing _____

Hiking _____

Boating _____

Swimming _____

Sight seeing _____

Other activities and _____

Extra equipment _____

APPENDIX I (continued)

QUESTIONNAIRE

16. Rank in order the things you like best about this camping area.

17. Rank in order the things you like least about this campground.

18. Would you use this camping area as often if there was a fee of _____ per day?

\$1 _____ \$1.50 _____ \$2 _____ \$2.50 _____ \$3 _____

19. Would you like to see any changes made in this camping area?

Yes _____ No _____ If so, what would they be?

20. How did you pick this area?

- a. Told by friends
- b. Close to home
- c. Found by chance
- d. Been here before
- e. Other reason _____

21. Kind of group.

- a. Single family
- b. Two or more families
- c. Group of friends
- d. Family and friends
- e. Organized group
- f. One person
- g. Couple

APPENDIX II

STATE OF MICHIGAN
DEPARTMENT
OF
NATURAL RESOURCES

FOREST CAMPGROUND
REGISTRATION TAG

Name		
Number and Street		
City		State
License numbers	Auto Trailer	Campsite no.
Expected length of stay _____ days	<input type="checkbox"/> Check if overnight only	Type of camp <input type="checkbox"/> Trailer <input type="checkbox"/> Tent <input type="checkbox"/> Pickup camper
Date of arrival	No. in party	

APPENDIX III

Total number of sites occupied by each state and country at the A.S.G.A. from April 1, 1972 to September 4, 1972. (Note: the leading four states comprise 97.8% of the total occupancy.)

STATE	TOTAL NO. OF SITES	STATE	TOTAL NO. OF SITES
Michigan	2785	Maine	2
Indiana	180	Virginia	2
Illinois	123	Massachusetts	1
Ohio	32	South Dakota	1
Florida	25	Connecticut	1
Wisconsin	5	Arizona	1
Maryland	4	Rhode Island	1
California	4	Kansas	1
Arkansas	4	Iowa	1
Pennsylvania	3	Tennessee	1
New Jersey	3	Kentucky	1
Ontario, Canada	3	Alaska	1
Minnesota	2	Louisiana	1
New York	2	Switzerland	1
TOTAL NUMBER OF SITES		3,190	

APPENDIX IV

Breakdown of sites occupied by each county in Michigan from April 1, 1972 until September 4, 1972 as determined by camper registration cards.

COUNTY	NUMBER OF SITES	COUNTY	NUMBER OF SITES
Berrien	684	Macomb	7
Kalamazoo	513	Midland	7
Allegan	444	Branch	6
Van Buren	284	Monroe	6
Kent	197	Bay	5
Ottawa	192	Genessee	5
Calhoun	77	Montcalm	3
Cass	60	Newaygo	3
Wayne	43	Gratiot	3
St. Joseph	28	St. Clair	2
Oakland	28	Benzie	2
Barry	26	Clinton	2
Ingham	24	Grand Traverse	2
Jackson	18	Chippewa	2
Muskegon	17	Shiawassee	2
Mecosta	13	Osceola	2
Lenawee	13	Mason	2
Livingston	13	Arenac	1
Washtenaw	10	Oceana	1
Isabella	9	Manistee	1
Eaton	8	Ionia	1
Hillsdale	8		