THE USE OF MOOSE AND OTHER WILD RESOURCES IN THE TYONEK AND UPPER YENTNA AREAS: A BACKROUND REPORT

by
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ABSTRACT

This report contains background information on the use of moose and other wild renewable resources by the residents of the village of Tyonek (population 239) and the Upper Yentna area (population 145), both of which lie in Game Management 16B. The data derive from two Division of Subsistence research projects which have been investigating resource uses in these areas in order to provide data for area and regional plans, and to the Board of Fisheries and Game for their review of proposals for regulatory change. Several proposals to reestablish a November moose hunting season in GMU 16B will be considered by the Board of Game during its Spring 1983 meeting. This report supplements an earlier Division paper on the use of moose by Tyonek residents (Foster 1982a).

Research methodologies have included interviewing, participant-observation, and mapping. Data were collected from 52 percent of the Tyonek households and 82 percent of the households in the Upper Yentna Area.

An annual round of resource harvests and a map of the geographic areas used for these harvests are provided for both areas. In addition, harvest quantities for 43 resources or groups of resources are reported for the Upper Yentna area. In both areas, residents harvest a wide range of resources. At Tyonek, the three year average subsistence catch of salmon has included 1,900 kings and 250 reds. Fifteen moose were taken by Tyonek hunters in September 1981. In 1982, Upper Yentna households harvested an estimated maximum of 1,630 salmon, 1,800 freshwater fish,

and 30 moose for local use. Travel to hunting and fishing areas in the Tyonek area is primarily by pickup truck along a network of roads built for timber harvesting, by boat along several rivers, and by ATV. In the roadless Upper Yentna area, travel is by boat, snowmachine, ATV, and dogsled along rivers and trails and is highly dependent on weather conditions.

The preservation of most meat and fish in both areas is accomplished by methods not requiring electricity, including smoking, canning, and freezing outdoors.

Over the past three years, an average of 59.6 percent of the households in the Upper Yenta area harvested at least one moose; most unsuccessful households received moose meat from other households. Harvest levels in Tyonek were monitored in 1981 only. While sharing was extensive, the total of fifteen moose harvested was said to be insufficient to meet village needs. Of the Tyonek households interviewed, 73 percent expressed a preference to reopen a November or December moose season.

Residents in both areas have few sources of wage employment and utilize a variety of sources of monetary income, most of which are seasonal, for the purchase of non-locally produced commodities. The use of local harvests of wild, renewable resources has historically played a major role in the economic and sociocultural systems of this region.

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PURPOSE

This report describes the uses of wild resources and socioeconomic characteristics of the residents of portions of Game Management Unit 16B. It provides a background for the Board of Game's consideration of several proposals for regulatory change which would open a November moose season in that GMU.

The data derive from two ongoing Division of Subsistence research projects. The first, the "Tyonek Comprehensive Resource Use Study," commenced in 1980 and will conclude in 1984. The second, the "Susitna Basin Resource Use Study," began in December 1982. One purpose of both of these projects is to gather data on the current patterns of resource uses by local residents of each area which may be incorporated into area and regional land use plans. These data may aid in our understanding of the potential effects of land disposals, timber sales, road construction, and the development of nonrenewable resources such as coal, oil, and gas. To date, the Division has been able to comment on several potential resource development projects (such as Oil and Gas Lease Sales 33 and 40; coal leases; geothermal leases) and, in addition, has provided data on land use patterns for the Department of Natural Resources' Susitna Area Plan.

A second major purpose of these projects is to provide information on local uses of fish and wildlife to advisory committees, regional councils, and the Boards of Fisheries and Game which may inform their consideration of fish and game regulations. Accordingly, as particular regulations have been subjected to review and modification, the Division has period-

ically prepared reports based on ongoing projects (Foster 1981; Stanek, Fall, and Foster 1982). The current paper is an example of such a report. While based in part on preliminary data describing only portions of the unit under consideration, the paper depicts the general patterns of resource use by residents of this area. This description can serve as a context for understanding the use of moose.

Additionally, the paper will also introduce the new Board of Game members to the Division's research program in the Cook Inlet area and, especially, outline the scope of our recently initiated work in the Susitna Basin.

METHODOLOGY

Tyonek Comprehensive Resource Use Study

Research methodologies for the "Tyonek Comprehensive Resource Use Study" have included formal interviewing with the aid of survey instruments (Foster 1982a: Appendix B; 1982b:60-61), informal discussions, mapping, and participant observation. Data specific to the use of moose by Tyonek's 239 residents were gathered in the fall of 1981. Of 48 identified moose hunters, 40 were interviewed. Hunting trips by several Tyonek residents were also observed. Using United States Geological Survey (USGS) 1:63,630 topographic maps, local residents indicated the areas that they had hunted in 1981. From these maps, the researchers prepared a composite map of the village moose hunting area. The complete results of the research on 1981 moose harvests in Tyonek are discussed in Foster 1982a.

During the spring and summer of 1982, data were collected on the current annual round of resource harvests in the Tyonek area. With the aid

of several key respondents, the researcher chose of a sample of 39 households representing 52 percent of the village households for intensive interviewing. This sample included those households most active in resource harvesting. Respondents were asked to indicate the resources which they had regularly harvested within the last five years. The results of this research included an annual round of hunting and fishing activities, an estimate of the percentage of Tyonek households participating in harvest activities, and a series of maps of harvest areas (Foster 1982b). The major findings of this research are summarized below.

Susitna Basin Resource Use Study

Data on resource uses in the Upper Yentna study area (Figure 1) were primarily collected through household interviews with the aid of an interview guide (Appendix A) and in field notes. Prior to conducting household interviews, Division staff discussed the proposed research, including its purpose, objectives, and methods, with area residents at a public meeting in Skwentna.

In a population census survey conducted by Schulling (1982) in the same geographic area as this study, 145 full-time residents were identified. With the aid of local key informants, Division staff mapped the approximate locations of homes of Upper Yentna residents. During a five week period in December 1982 and January and February 1983, the Division researchers attempted to interview as many of the households as possible. At the end of the study period, 38 households, with a total population of 126, had been interviewed. This provided a sample of 87 percent of the census population.

Several factors influenced the choice of households to contact,

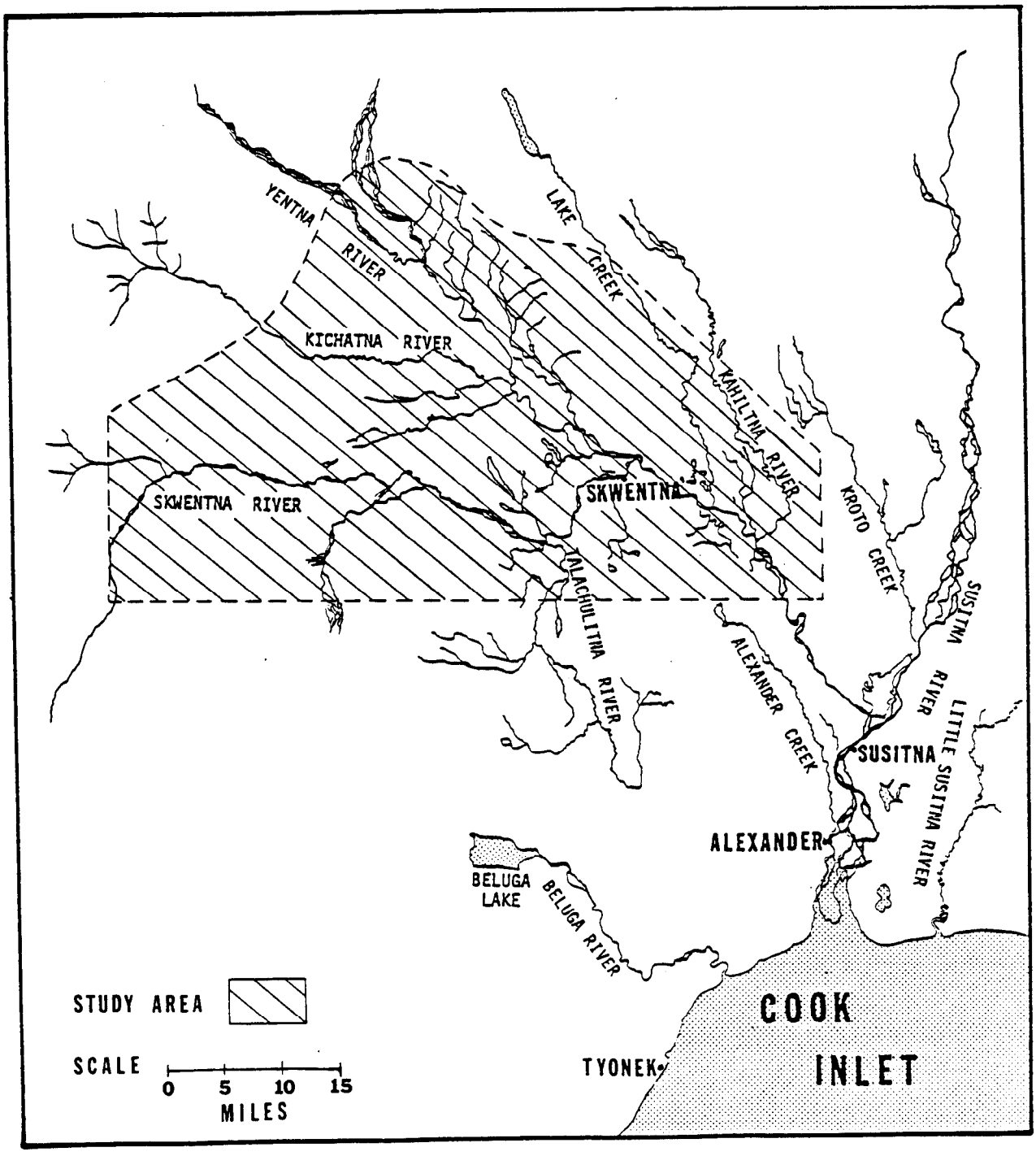


Figure 1. The Upper Yentna area in which households were interviewed.

including the availability of household members for interview, logistical constraints such as availability of transportation, prevailing weather conditions, and time limitations. There was a tendency to select those households which were the most active users of local resources, such as trappers, hunters and fishermen, and guides, although other residents who used resources to lesser degrees were not systematically excluded. An effort was made to include in the sample as many long-term residents as possible.

Questions on the interview guide asked for household information appropriate to 1982 use levels. When discussing harvest levels, many households were unable to recall exact harvest quantities for particular species. This was particularly true for fish. In such cases, a range was estimated. For big game and furbearers, respondents generally were able to recall exact harvest levels.

The researchers attempted to arrange interviews before visiting each home. This allowed residents to decide in advance whether they wanted to participate and to prepare for the discussion. Interviewees were given the option of not answering questions with which they felt uncomfortable. Two researchers were present for each interview. One researcher asked questions from the interview form and recorded data pertinent to each question, and the other researcher recorded additional information from ensuing discussions.

All household members were encouraged to participate in the interviews. Since most interviews were prearranged, the persons most knowledgeable about particular subjects were present to reply to specific questions. In addition, this approach proved beneficial in reaching a consensus on harvest quantities, seasons, or locations. In all inter-

views, open discussion of resource use activities was encouraged in order to elicit any qualifiers to specific interview responses.

Mapping of resource use areas followed each interview. The researchers used the list of resources generated earlier as a guide in mapping use areas, which was done on 1:63,630 USGS topographic maps. Because mapping of use areas for a single year might not realistically represent the area generally used, interviewees were asked to draw a line encompassing the area they currently use to harvest each resource or category of resources. Resource use areas were grouped into fishing, trapping, moose hunting, wood gathering, berry picking, small game hunting, and bear hunting areas.

RESULTS

Patterns of Wild Resource Use in Tyonek

The uses of wild resources by the residents of the village of Tyonek have been described in detail in several Division reports (Stickney 1980; Stanek and Foster 1980; Stanek, Fall, Foster 1982; Foster 1982a, 1982b). In this regard, the reader should refer to Foster (1982a), Foster (1982b: 32-54), and Fall (1982). This section briefly summarizes these earlier findings.

The geographic area utilized by Tyonek residents for the harvest of resources from 1978 to 1982 is depicted in Figure 2. The harvest and utilization of fish and game in the Tyonek area proceed according to an annual round of activities (Figure 3). A new round begins each April as groups of villagers travel south in dories to Redoubt Bay to harvest razor clams and three other species of shellfish. These trips are usually

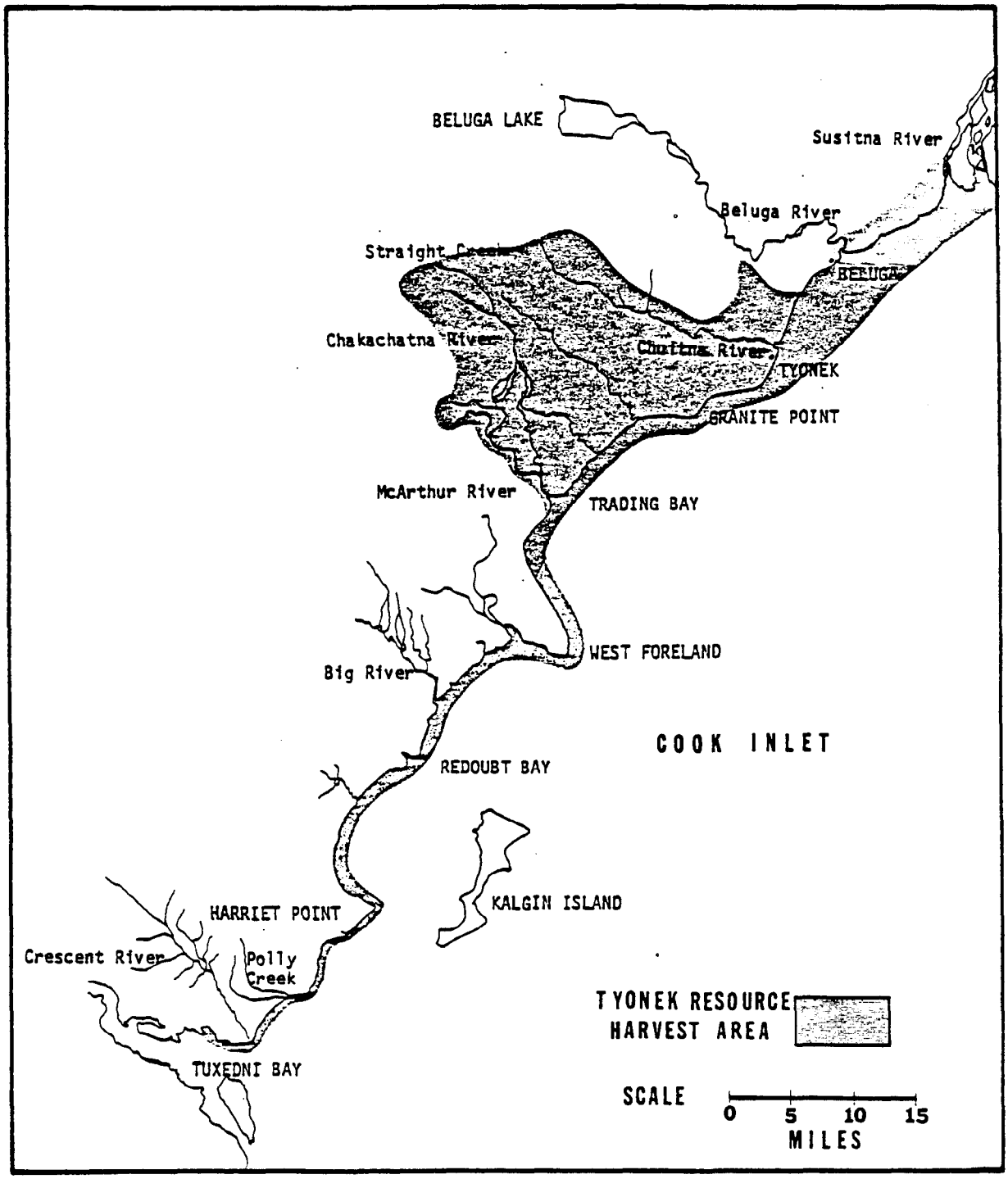
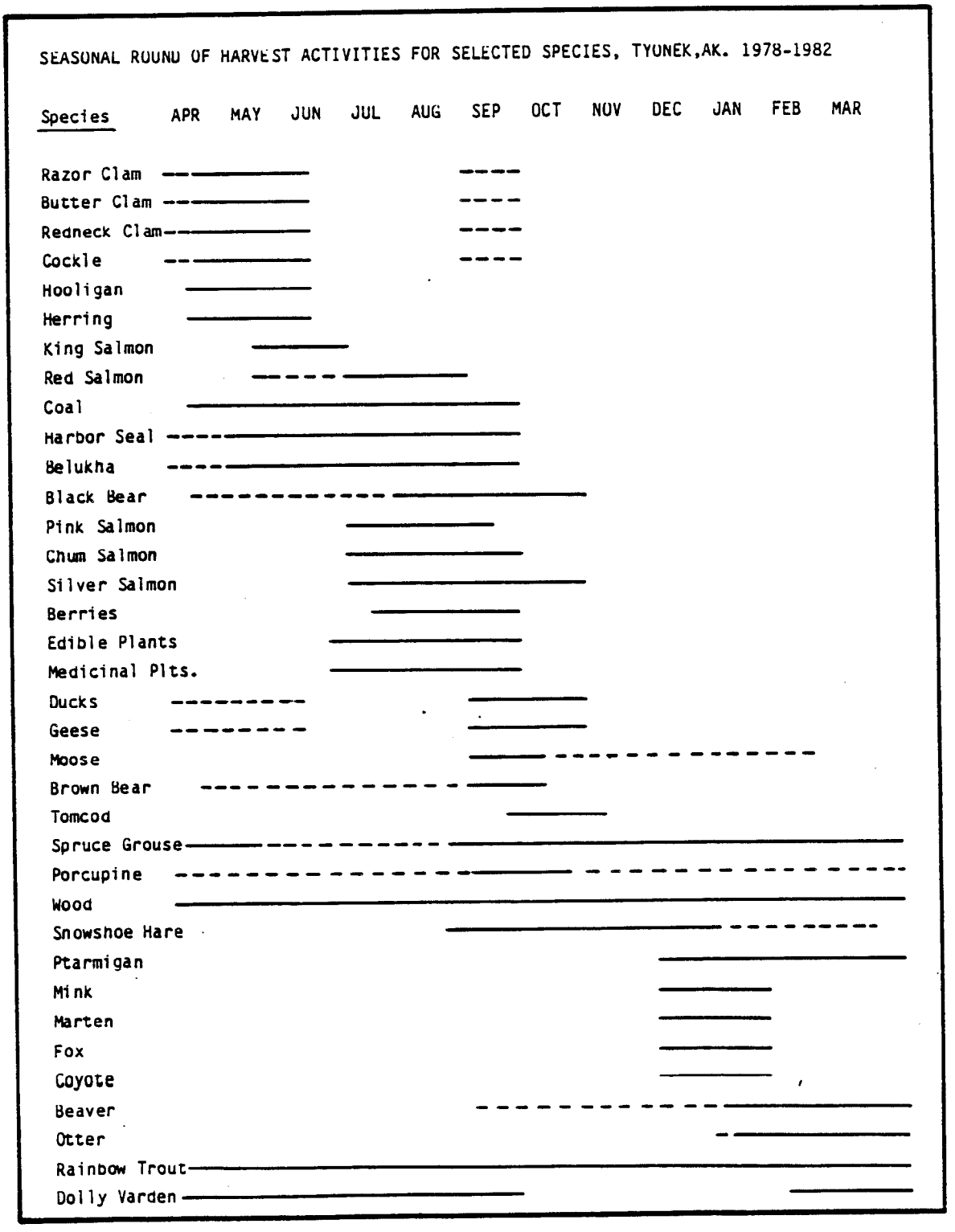


Figure 2. Geographic area of resource harvest used by Tyonek residents 1978 to 1982



Key: _____ Usual period of harvest effort; ------ Occasional period of harvest effort.

Figure 3. Seasonal round of harvest activities by Tyonek residents (Foster 1982b:34)

organized by older, more experienced men with boats and motors. The village harvest of 2,000-3,500 clams is distributed throughout the community.

Preparation for subsistence and commercial salmon fishing takes place in late April and early May. During the summer months, the majority of Tyonek households take salmon for local use with set gill nets from 28 fish camps. Many camps also have smoke houses and other fish processing facilities, although most Tyonek families now cut and smoke their salmon in the village. Over the last three seasons, the subsistence catch at Tyonek has averaged about 1900 kings and 250 reds. Additionally, approximately 25 households fish commercially at the same camps. Harbor seals and belukha are also harvested during the summer months. About 37 percent of Tyonek households regularly participate in the harvest of these marine mammals. As with clams, the products of these hunts are widely distributed in the village. Salmon fishing, especially for silvers, continues into the fall.

Each September, approximately 50 Tyonek residents hunt moose. Figure 4 depicts the general area used by Tyonek moose hunters in 1981. The area hunted in 1982 was similar. Access to hunting areas is along the network of local roads first constructed in the early 1970s for a commercial logging operation, or by dory to several rivers south of the village. About 87 percent of Tyonek households harvested moose regularly over the past five years (Fall 1982). While considerable time and effort were expended by Tyonek hunters in September 1981, the harvest of 15 moose was considered by the villagers to be inadequate to meet their needs. The 1982 fall harvest was of a similar size. Traditionally, moose hunting in the Tyonek area, as well as the Susitna Basin, continued throughout the winter months (Fall 1981:146-49, 188, 197). Tyonek residents have

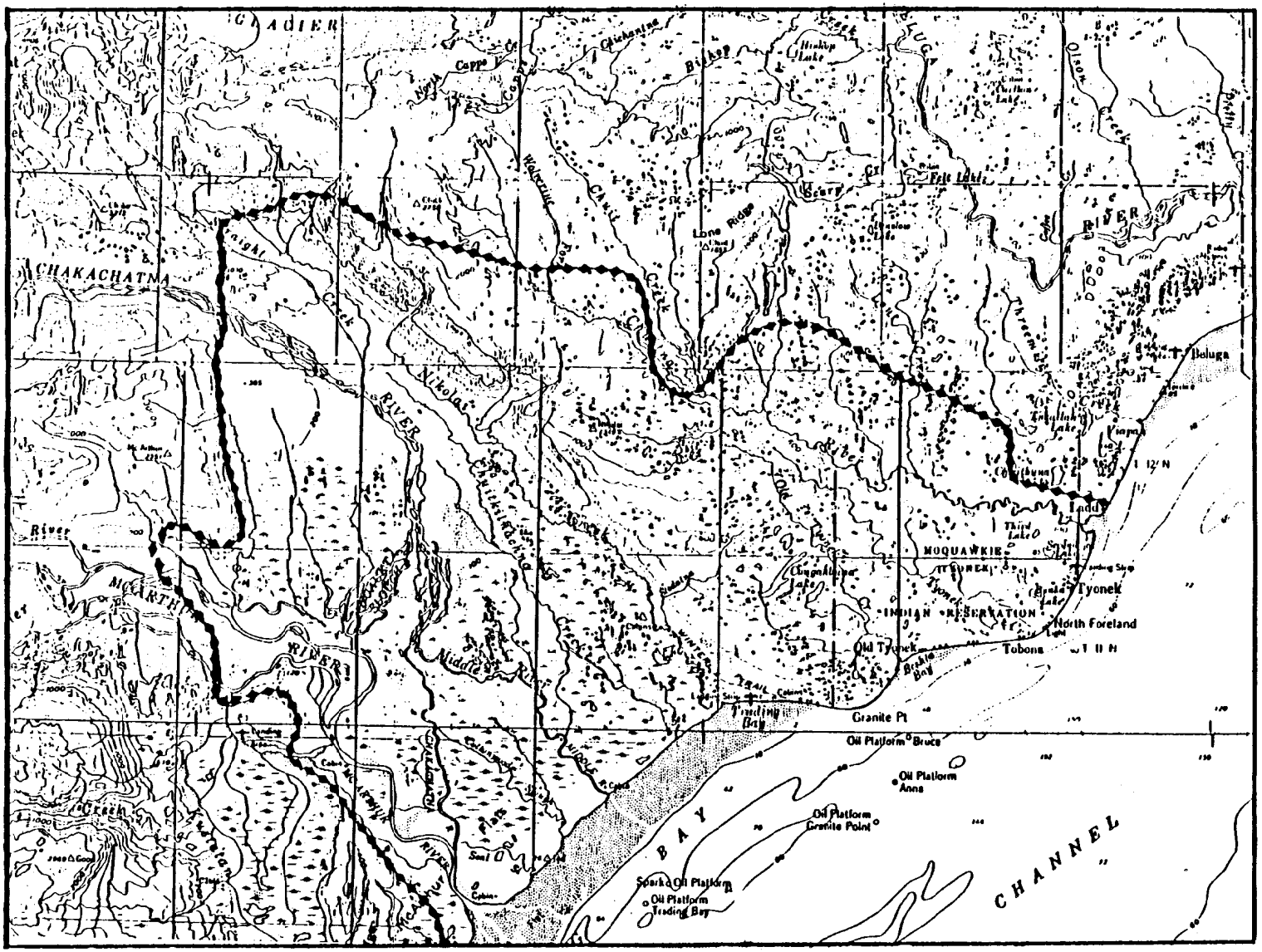


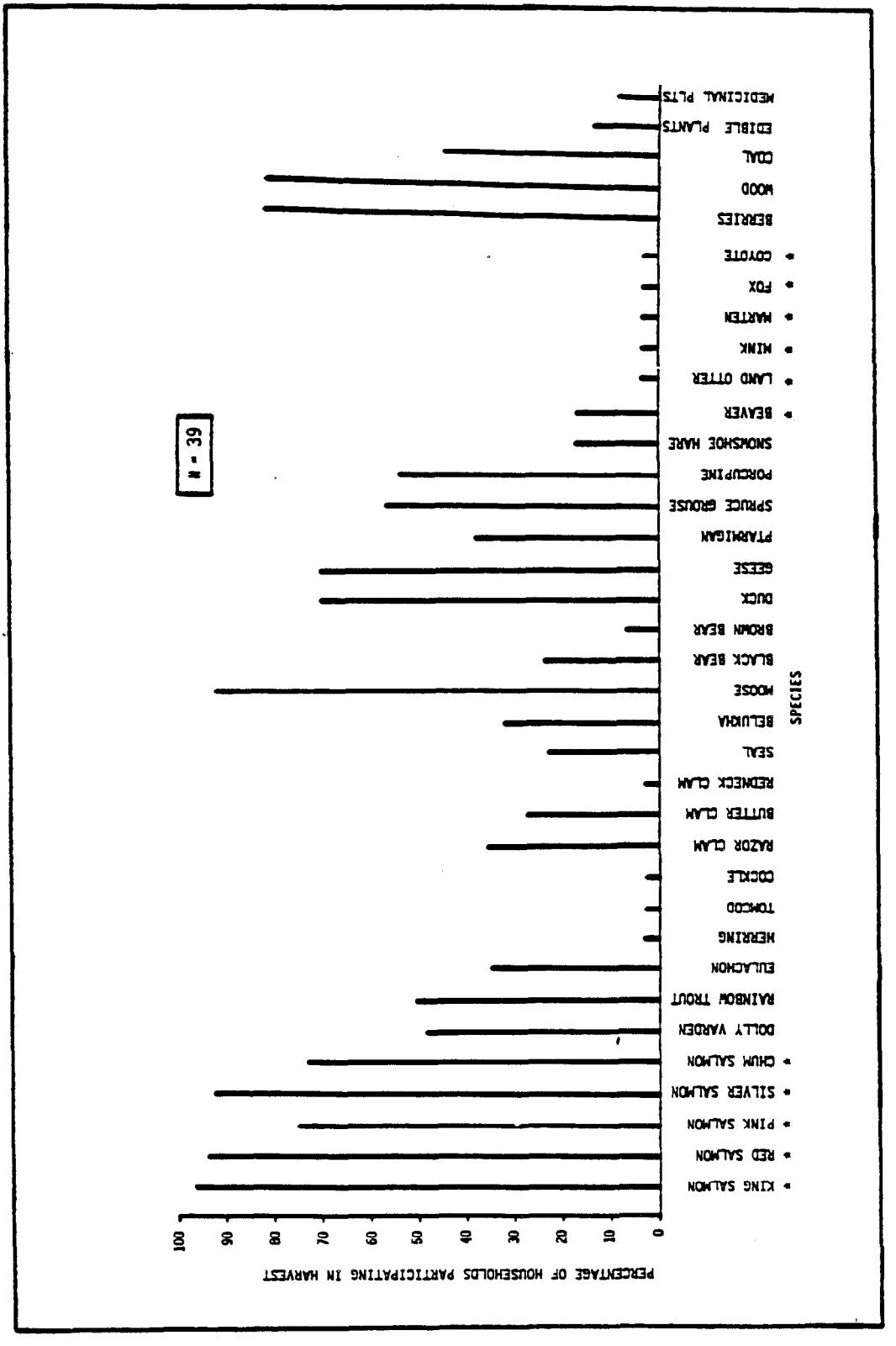
Figure 4. Areas used for moose hunting by Tyonek residents during 1981 moose season, representing a composite of individual hunting areas (N=40) (Foster 1982a:9)

indicated a desire to reopen a November or December season (Foster 1982a:25).

In addition to moose, Tyonek residents take bear, waterfowl, and small game in the fall. Although winter harvest activities are not as intense as those of spring, summer, and fall, a few individuals run trap lines, and others hunt small game and fish through the ice for trout. The percentage of Tyonek households which generally participate in the harvest of various resources is shown in Figure 5.

Social relationships, especially kinship, structure the harvest, processing, and distribution of fish and game in Tyonek. Hunting and clamming parties, as well as fishing groups, are normally composed of relatives. Fish and game harvests are widely distributed throughout the village, and facilities such as fishcamps and smokehouses are extensively shared. For example, while only 15 hunters successfully harvested moose in September 1981, over 90 percent of Tyonek's 75 households received moose meat. Resources which require special skills and equipment for their harvesting, such as marine mammals or clams, are taken by a limited number of individuals in the village, but these products are distributed almost village wide. Village elders and the ill, as well as kin, are included in this resource sharing.

In summary, the use of wild resources provides an important economic base for the majority of Tyonek residents. Wage employment opportunities in the village are relatively few and household incomes are well below Alaska's average (Fall 1982). In addition, harvesting and utilizing fish and game tie the community together and are a basis for group identity and community stability.



* Species harvested for household use and commercial sale.

Figure 5. The percentage of sampled Tyonek households which participated in resource harvest during the period 1978-1982 (Foster 1982b:33)

General Characteristics of the Upper Yentna Area

The Upper Yentna area is located in the Susitna basin along the upper reaches of the Yentna River. The focal point for the area's residents is Skwentna, which is located near the confluence of the Yentna and Skwentna Rivers approximately 55 air miles northwest of Anchorage.

Travel in the area is by boat or airplane during summer months and fall months, and by snowmachine, airplane, dogsled, and ATV during the winter months. Especially, travel in fall and spring is highly dependent upon the weather and the freezing and thawing rivers, lakes, airstrips, and trails.

Settlement Patterns

The aborginal inhabitants of the Yentna River drainage, the Upper Inlet Dena'ina, had greatly declined in population by the early twentieth century, most due to diseases. Subsequently, a few scattered households of trappers and prospectors comprised the permanent population until, within the past 30 years, human settlement again increased as a a result of State and Federal land disposal programs. Consequently, concentrations of households have appeared in areas along rivers or bordering lakes. This is the current pattern around the mouth of Lake Creek, at Skwentna, and in the Whiskey and Hewitt Lake areas.

The means by which local residents acquired their land included purchase from previous owner (36.8 percent), State open-to-entry programs (21.0 percent), State remote parcel programs (18.4 percent), and a variety of other State and Federal programs (Table 1).

Population Characteristics

A summary of interview findings regarding households member charac-

TABLE 1.

UPPER YENTNA HOUSEHOLD LAND ACQUISITION

Purchased From Previous Owner	14
State Open-To-Entry (OTE) Program	8
State Remote Parcel Program	7
Federal Homestead	2
State Homesite Program	2
Borough Housing	1
Federal Cabin Site	1
Rental	1
Purchased from State	1
Other	1

TABLE 2.

CHARACTERISTICS OF UPPER YENTNA HOUSEHOLD MEMBERS

	Mean	Range
Number of Persons/Household	3.3	1-7
Age of Heads of Households	42.9	25-70
*Number of Years in Alaska	16.4	3-41
*Number of Years in Upper Yentna Area	7.9	1-33

*Indicates number of years for the longest residing household member.

teristics appears in Table 2. Household size varied from one to seven members and averaged 3.3 persons.

The results of interview questions asking about length of residency appear in Figures 6 and 7. The range of time that household members had been in Alaska was 3-41 years. The average length of time in Alaska was 16.4 years. Residency in the Yentna area ranged from .5 to 33 years, and averaged 7.9 years. Overall, most residents have resided in the area for less than 10 years.

The age/sex structure of the population, depicted in Figure 8, reflects this immigration of most families into the area. The few individuals over 50 years of age are mostly males. Middle aged couples (ages 31-50) and their children (ages 11-20) comprise most of the population. The age/sex profile also reveals that there are few children under ten years of age and few young women in prime child-bearing years (ages 21-30). This suggests that the population is not yet reproducing itself; individuals must still find mates from outside the area.

Wage Employment and Other Sources of Monetary Income

Full time wage employment opportunities in which the sample of 126 Upper Yentna residents were involved during 1982-83 included positions as school teacher (3), weather reporter (2), equipment operator (1), postmaster (1), and facilities engineer (1). The remaining sources of cash income were seasonal, part time, and/or temporary. Some people worked outside the area on a seasonal or part time basis. Examples of local seasonal jobs include guiding hunters and fishermen (8), trapping (18), freighting (2), consulting (2), assisting at lodges (7), operating

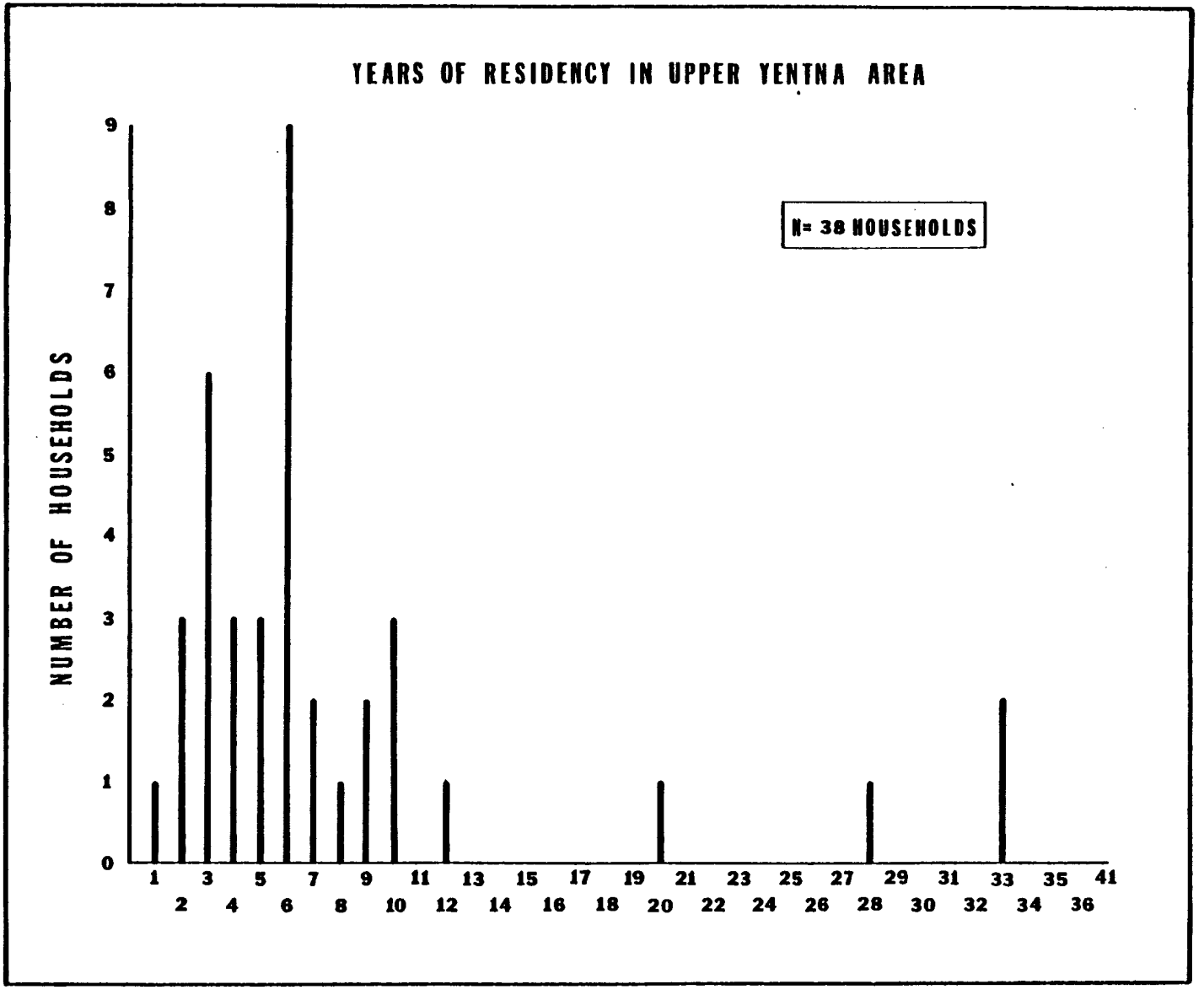


Figure 6. The length of residency in the Upper Yentna area for the longest residing member of each household in 1982

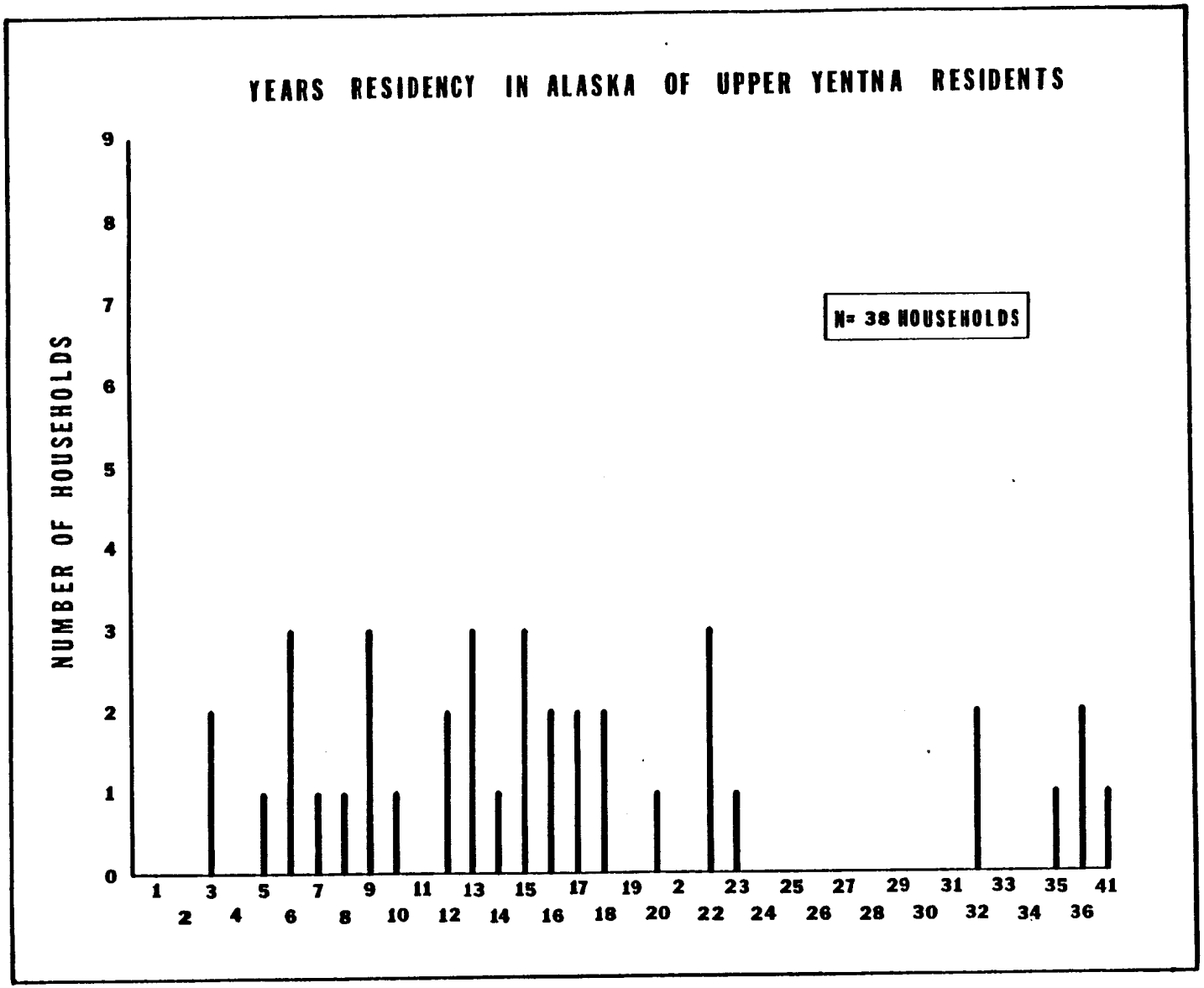


Figure 7. The length of residency in Alaska for the longest residing members in Upper Yentna households in 1982

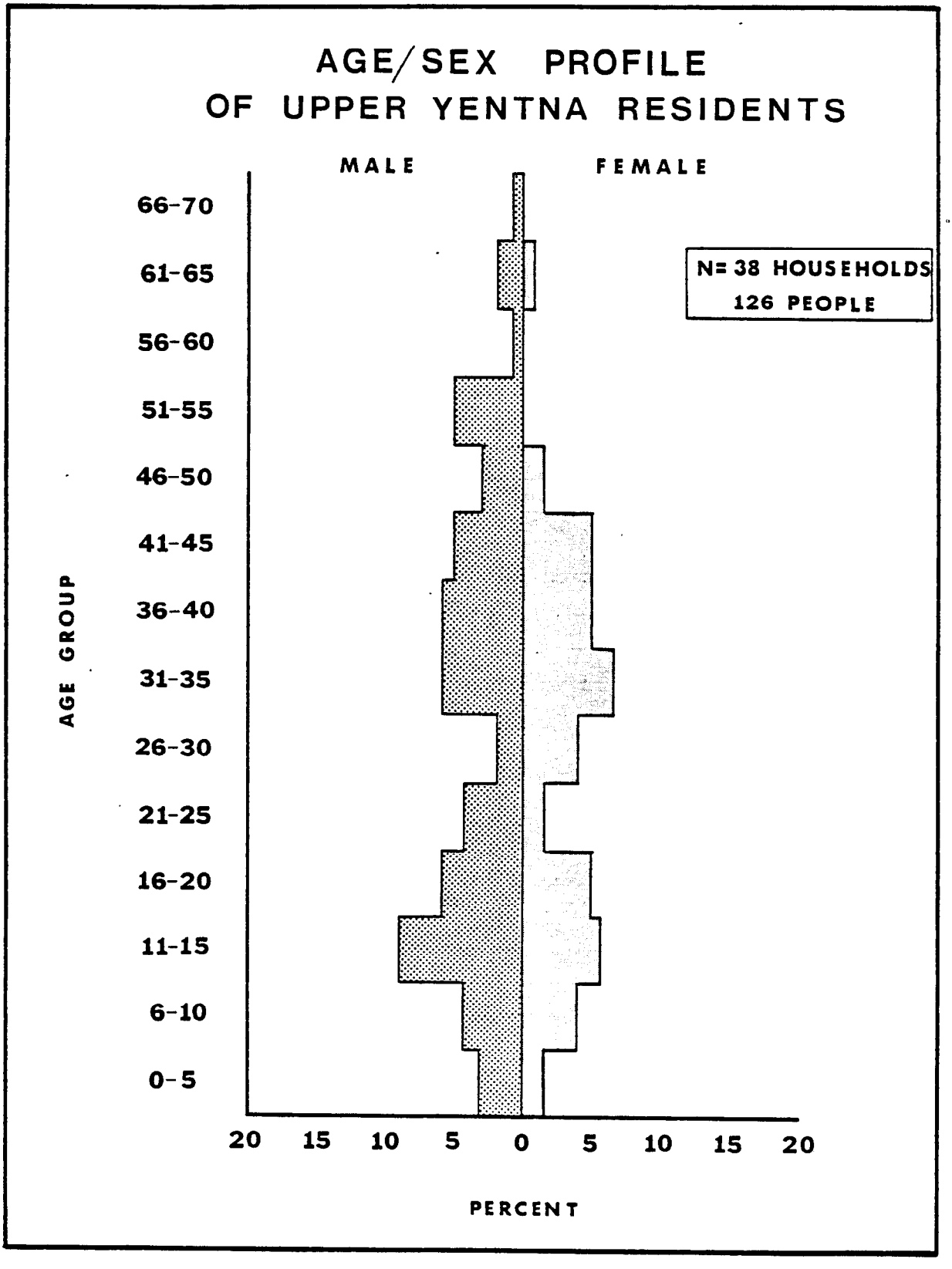


Figure 8. The age/sex structure of Upper Yentna households in 1982

the store (4), running river boats (3), and operating saw mills (2). Examples of nonlocal employment include commercial fishing (2), North Slope oil field work (2), and road and housing construction (2). Some people were retired and received longevity payments and retirement benefits.

Fifty-two percent of the households had three or more sources of cash income during a single year (Figure 9). Forty-eight percent had one to two sources of income. Thirty-one percent had four to seven sources of cash income.

Because of the small numbers of full-time jobs in the area, most households need several seasonal or part time sources of cash income in order to purchase food staples, fuel, equipment and parts, building materials, air transportation, and other commodities not produced locally.

Annual Round of Resource Harvest

The range of wild resources harvested by residents of the Upper Yentna area during 1982 is indicated in Figure 10, along with estimated quantities, timing of harvest, and percentages of households participating in the harvests. The number of resources taken by each household varied considerably, with 91 percent of the households harvesting from 6 to 25 individual or groups of resources (Figure 11). Following is a summary of the annual round of resource uses in the Upper Yentna area as reported by area residents for 1982. Although the harvest of resources occurs continuously throughout the year, the month of April was used as a convenient starting point for this discussion.

When the ice on rivers and lakes started to melt in April, harvesting of rainbow trout, grayling, whitefish, and northern pike began. This

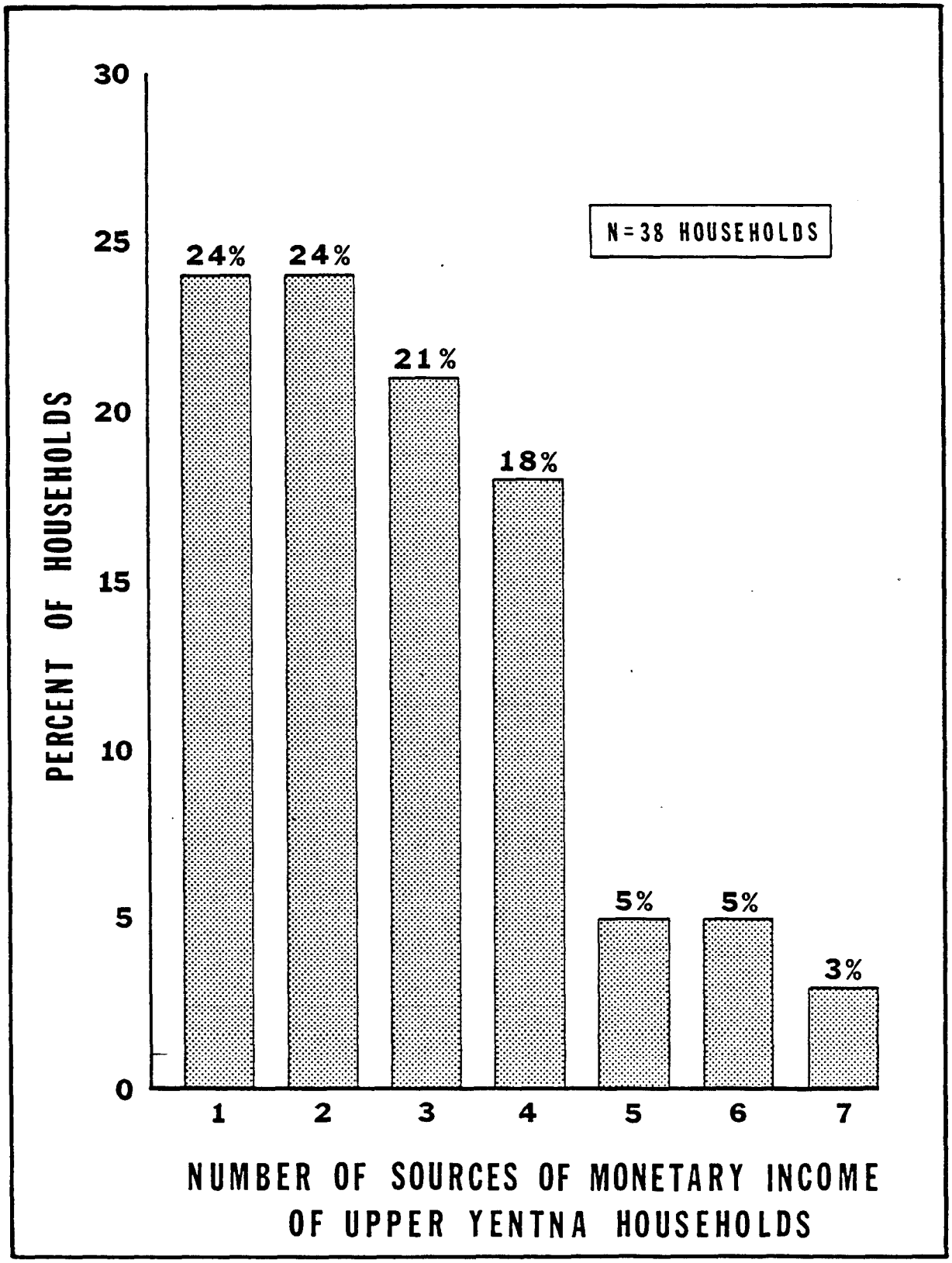
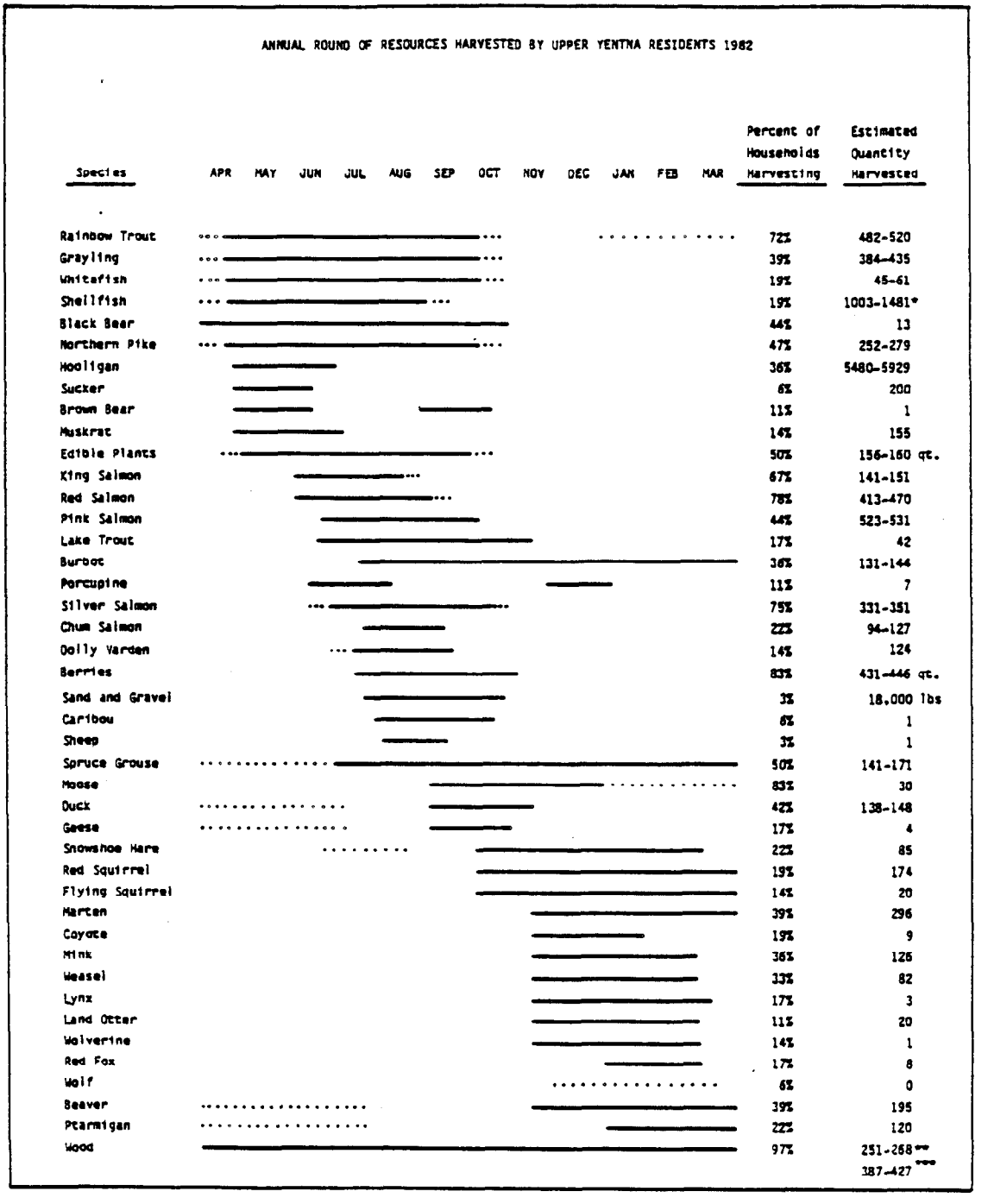


Figure 9. The number of sources of monetary income of Upper Yentna households in 1982



Key: _____ Usual period of harvest effort; ..... Occasional period of harvest effort. *Razor, steamer, fresh water clams. ** Cords of birch, spruce, and cottonwood used as firewood for heating and cooking. *** Number trees of spruce and some birch used in construction of homes, outbuildings and furniture.

Figure 10. The annual round of resources harvested, percentage of households harvesting and estimated quanities harvested by Upper Yentna residents in 1982

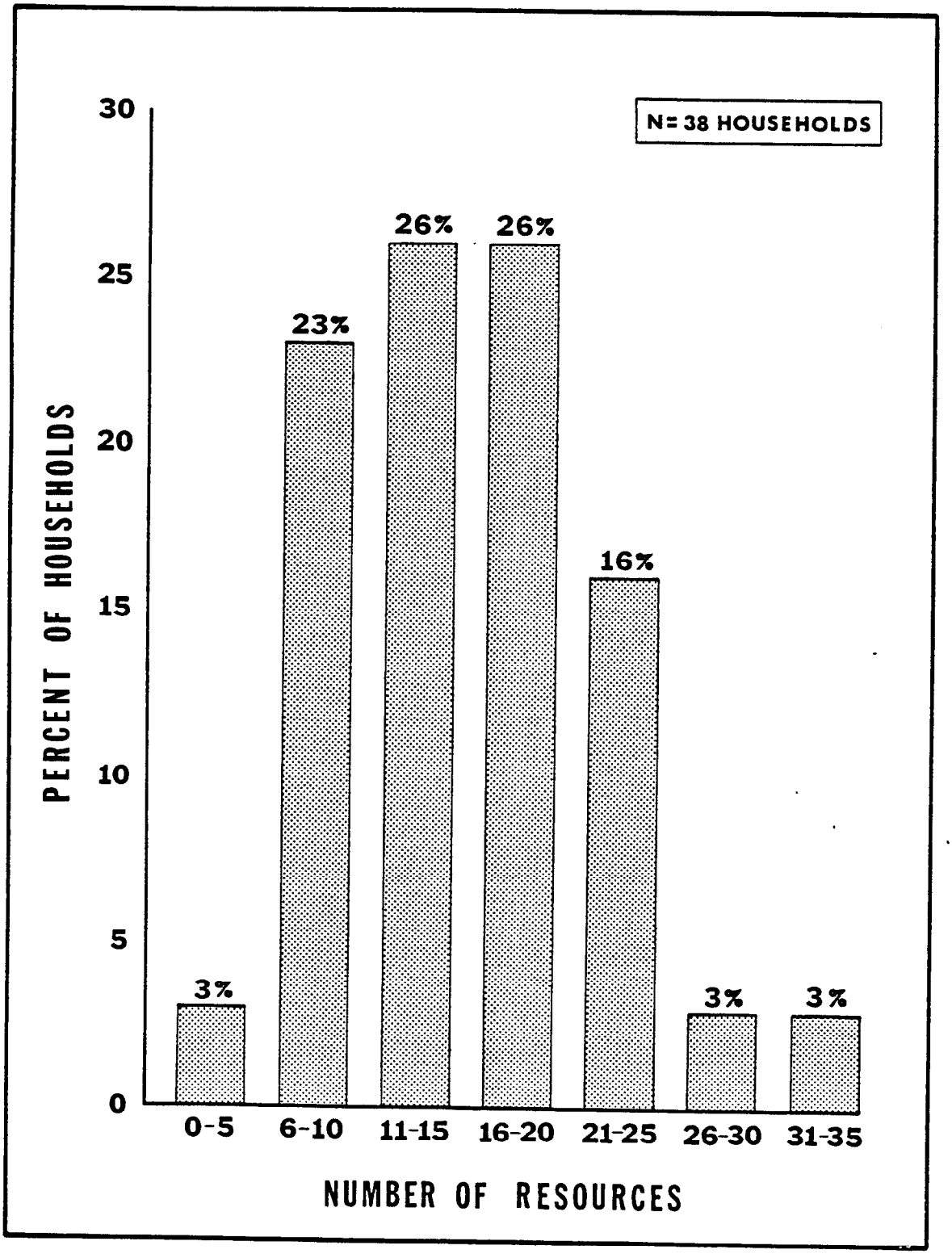


Figure 11. The number of resources harvested per household in the Upper Yentna area in 1982

continued through September. The percentage of households harvesting each species was as follows: rainbow trout--72 percent; northern pike--47 percent; grayling--39 percent; whitefish--19 percent. For a short period in May and June, hooligan and suckers were included in the harvest. Nearing the end of May and continuing through November, five salmon species were harvested: king salmon were harvested by 67 percent of the households, red salmon by 78 percent, and silvers by 75 percent. At this time lake trout were harvested by 17 percent of the households. Burbot was said to be a highly desired species for eating, and was taken by 36 percent of the households.

Plant species including edible mushrooms, berries, fireweed, and fiddlehead fern, were gathered from spring through fall. Wood was taken throughout the year. During February and March, when snow conditions were favorable for travel, wood was stockpiled for the following year. Among the mammals taken in April and May were muskrat and beaver, which were trapped primarily for fur and dogfood by 14 and 39 percent of the households respectively. Brown and black bear were taken by 11 and 44 percent of the households respectively, usually as nuisance animals, although black bear meat and hides were used by many people.

During the fall, moose were harvested by 83 percent of the households, waterfowl by 42 percent, and spruce grouse by 50 percent. When cold weather and freeze-up arrived around November 1, trappers began setting out their traplines. A wide variety of furbearers including marten, mink, weasel, and otter, was taken throughout the winter months by 40 percent of the area households.

The geographic area currently used by Upper Yentna residents for all resource harvest activities is shown in Figure 12. The number of households indicating use of a particular area varies depending upon the

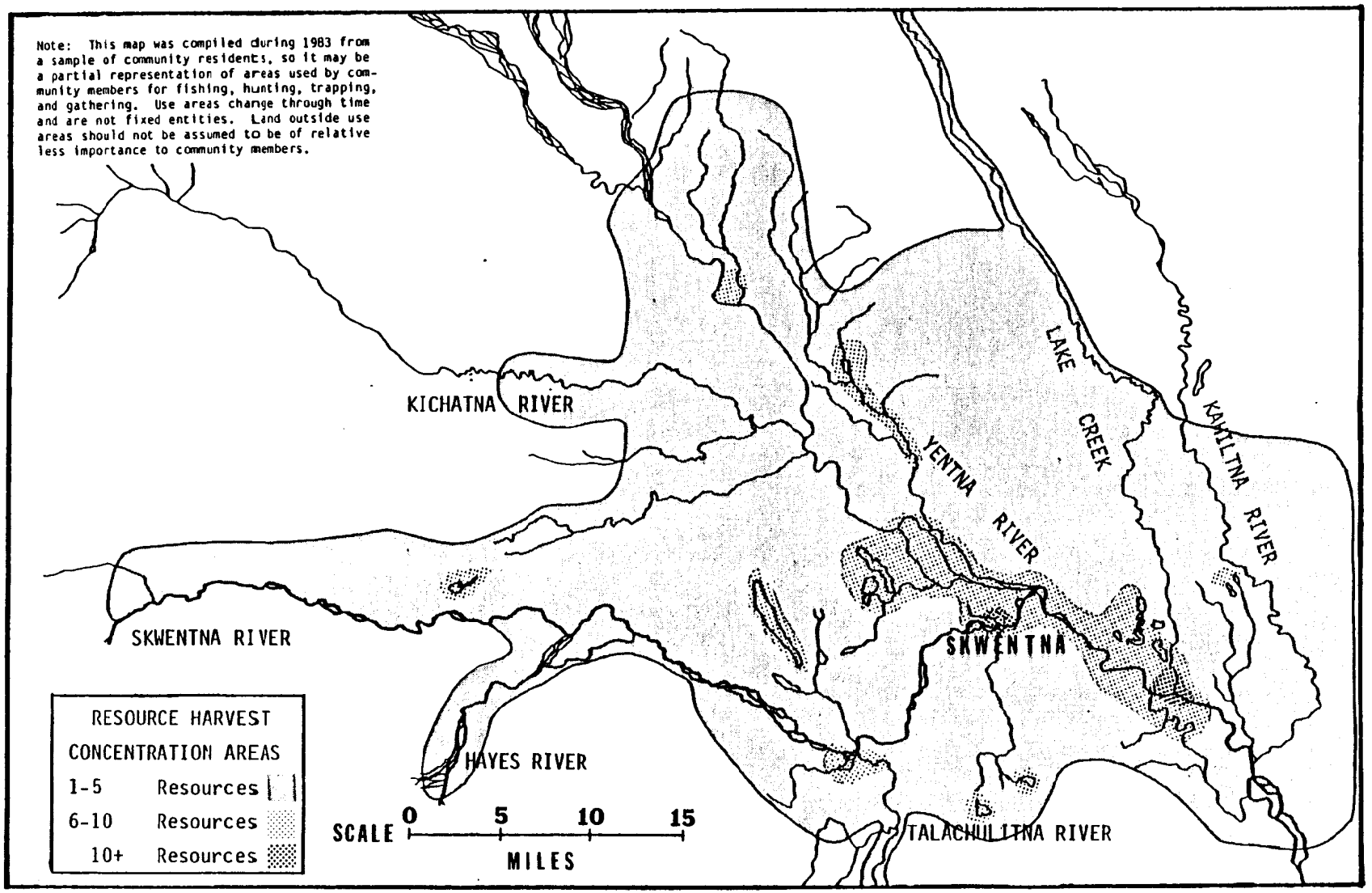


Figure 12. Geographic area currently used for resource harvest by Upper Yentna residents indicating levels of use (N=38)

proximity of the area to local residences, accessibility of the area by rivers, streams, and trails, and the variety of resources present.

Characteristics of Moose Harvest by Upper Yentna Residents

Information about moose harvest was requested for the past three years (Figure 13). In 1980, 63 percent of the households harvested a moose locally, 2.6 percent (one household) harvested a moose nonlocally, 21 percent were unsuccessful in their attempts locally, and 13 percent did not hunt moose. In 1981, the success rate dropped to 52 percent and the portion of unsuccessful households increased to 34 percent; no one travelled out of the area for moose and the percent of those who did not try remained the same. The success rate for 1982 returned to 1980 level, and fewer households (7.9 percent) did not try. It should be noted that in 1980 and 1982 the success rate among local households which hunted moose was 80 percent. In 1982, the number of moose harvested per household ranged from one to three (Figure 14).

A significant aspect of the harvesting of moose is the relationship between the timing of the harvest and how the meat is distributed. The meat of any moose taken during warm weather was distributed by the successful hunter to other households in order to prevent spoilage. No area households had freezers large enough to freeze all the meat from one moose, and there is no continous source of electricity to run freezers throughout the warm weather during the summer and fall. By distributing meat among several households, the smaller portions could be consumed before they spoiled, frozen in small quantities, or processed by canning, drying, pickling, or making sausage.

Hunting moose during colder weather was said to be preferrd over September seasons for several reasons. Preservation of meat by freezing

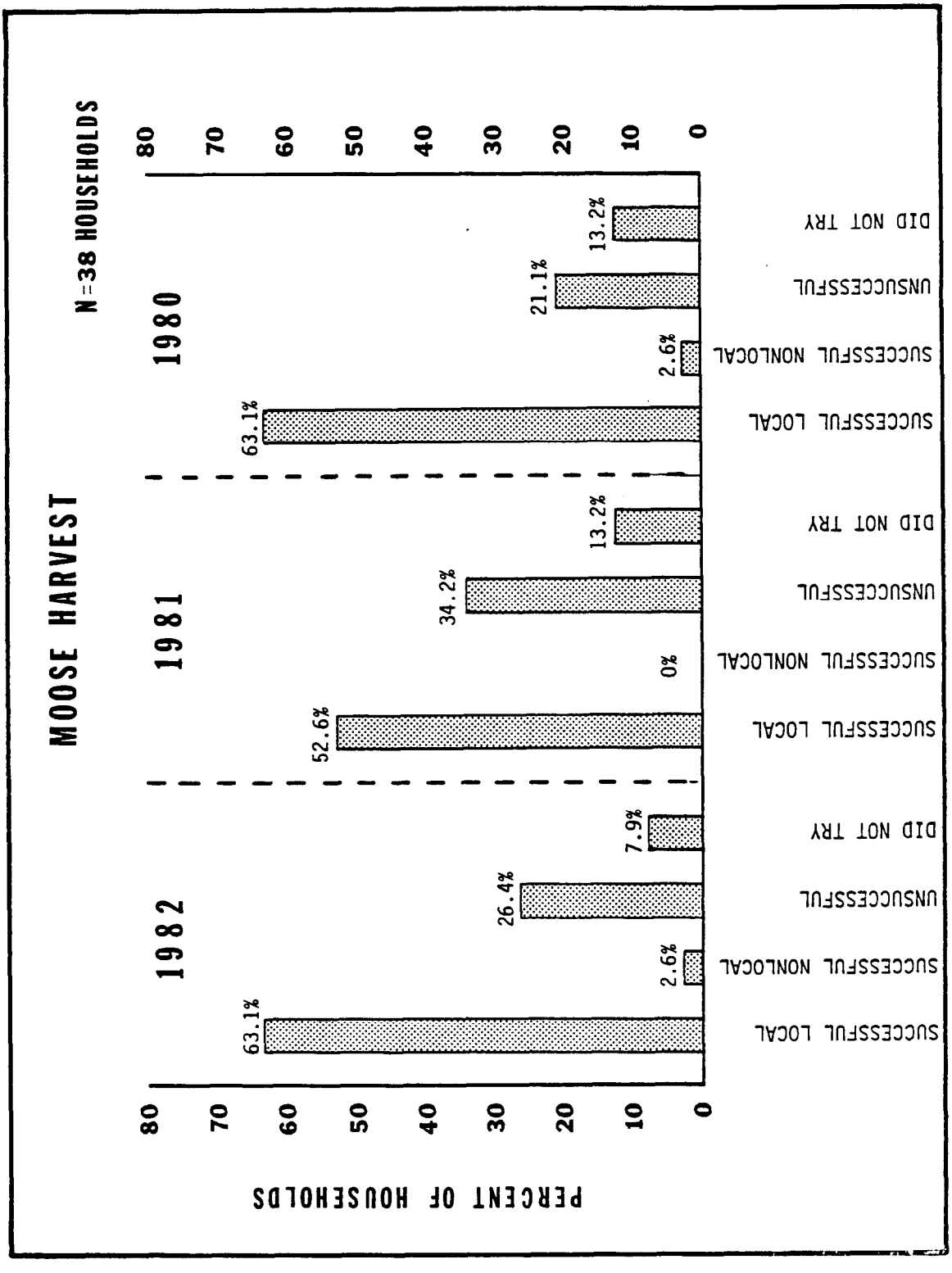


Figure 13. The three year moose harvest characteristics for Upper Yentna households, 1980-1982

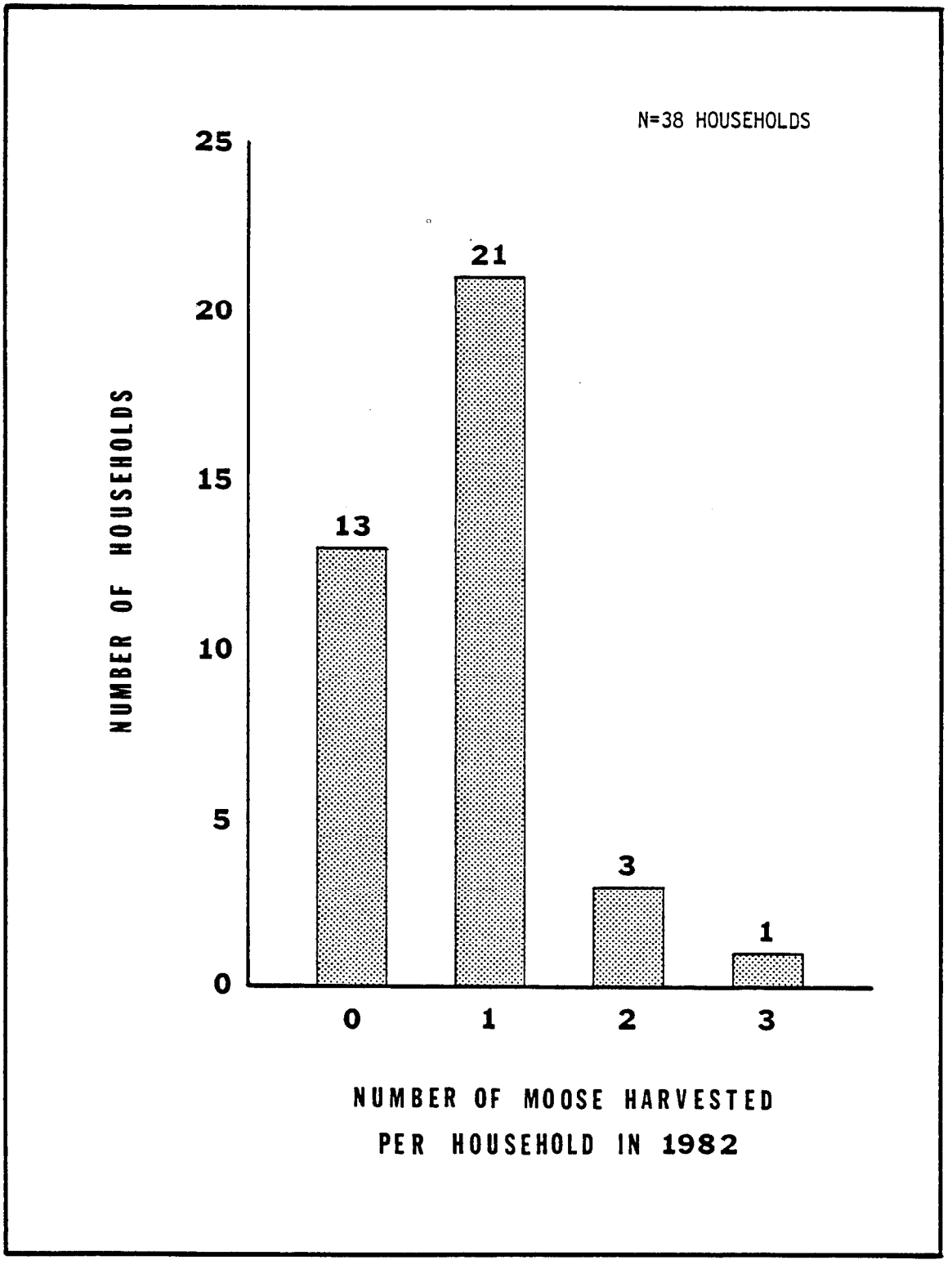


Figure 14. The household moose harvest for Upper Yentna households during 1982

outdoors is possible, and snow and/or ice conditions make hauling of the meat easier and, in most instances, possible. At this time, the lack of foliage makes selecting the desired size of moose easier. As previously mentioned, moose harvested before freeze-up usually are shared with other households and another animal would be needed later in the year to replenish the meat supply. Depending on the year, moose may not move into the local area from higher elevations until December or January. People cannot afford to fly to Anchorage to purchase domestic meat whenever they need it and keeping large quantities is impossible during warm months.

The methods of preserving moose meat used by area residents are indicated in Figures 15 and 16. The largest percentage of meat was preserved by freezing out-of-doors (48 percent). Nearly twice as much meat was preserved by this method than by either canning or freezing in a freezer. The greatest percentage of people used canning as a method of storage than any other method, although only 21 percent of the moose meat was actually preserved this way.

Geographic areas used by Upper Yentna residents for moose hunting are shown in Figure 17. Moose hunting areas most heavily used were those in the vicinity of residences and along waterways.

DISCUSSION

The results of research on the uses of wild resources in two portions of Game Management Unit 16B have demonstrated that harvests of a wide variety of fish and game species play significant roles in the local socioeconomic systems of both areas. Residents of the village of Tyonek and the Upper Yentna area harvest local wildlife resources in substantial

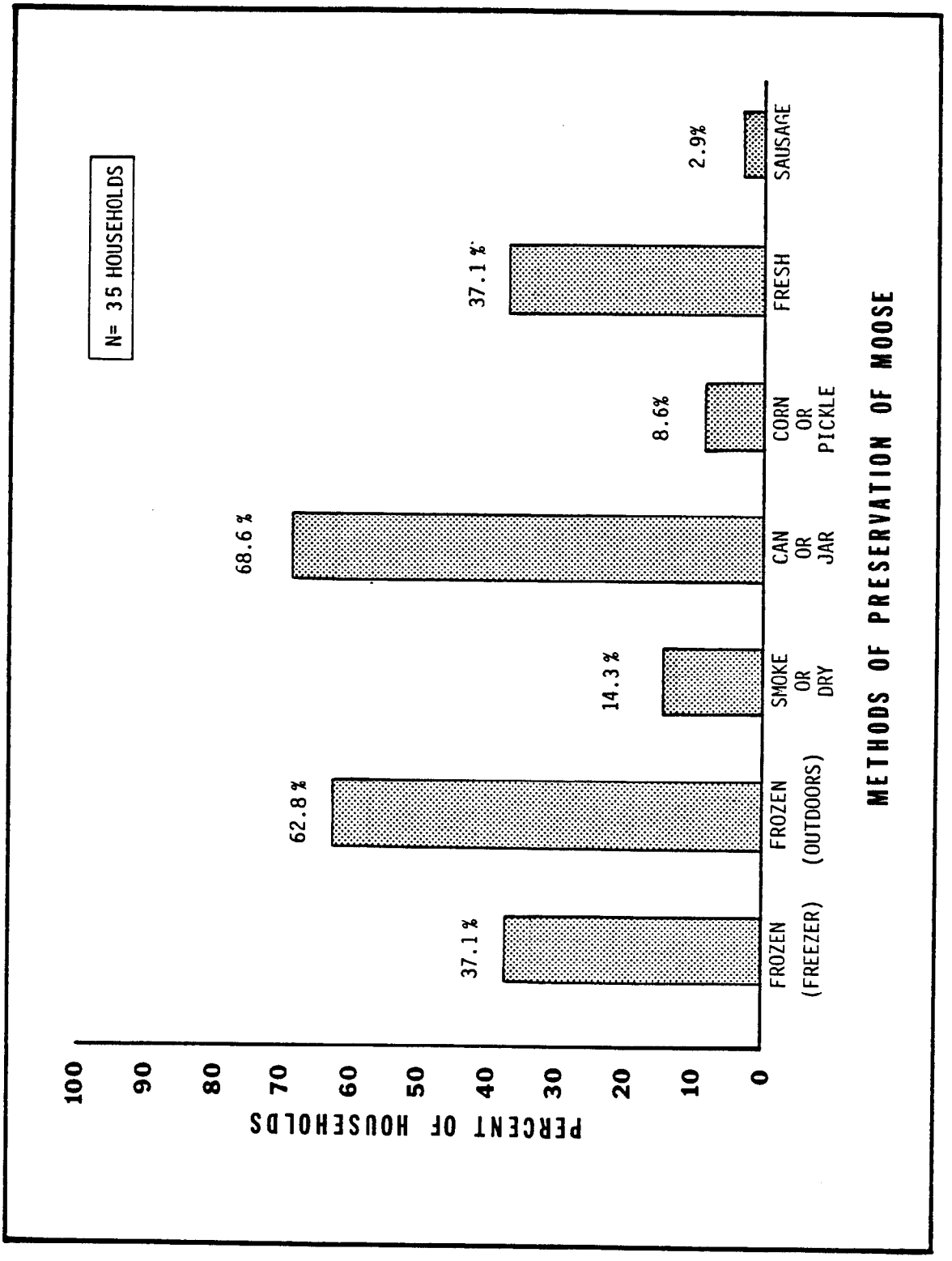


Figure 15. The methods of meat preservation used by Upper Yentna households during 1982

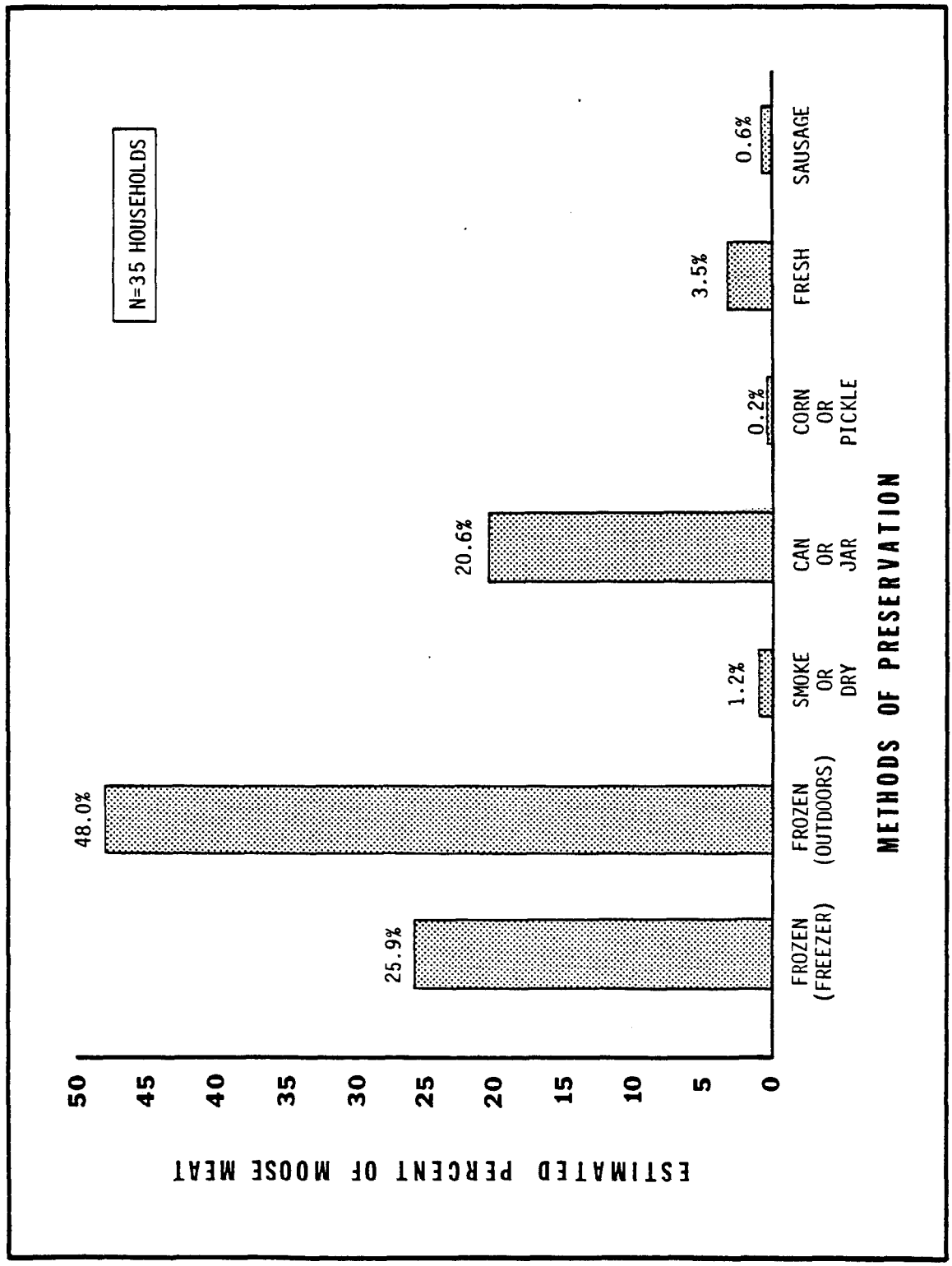


Figure 16. The amounts of moose meat preserved by various methods by Upper Yentna households in 1982

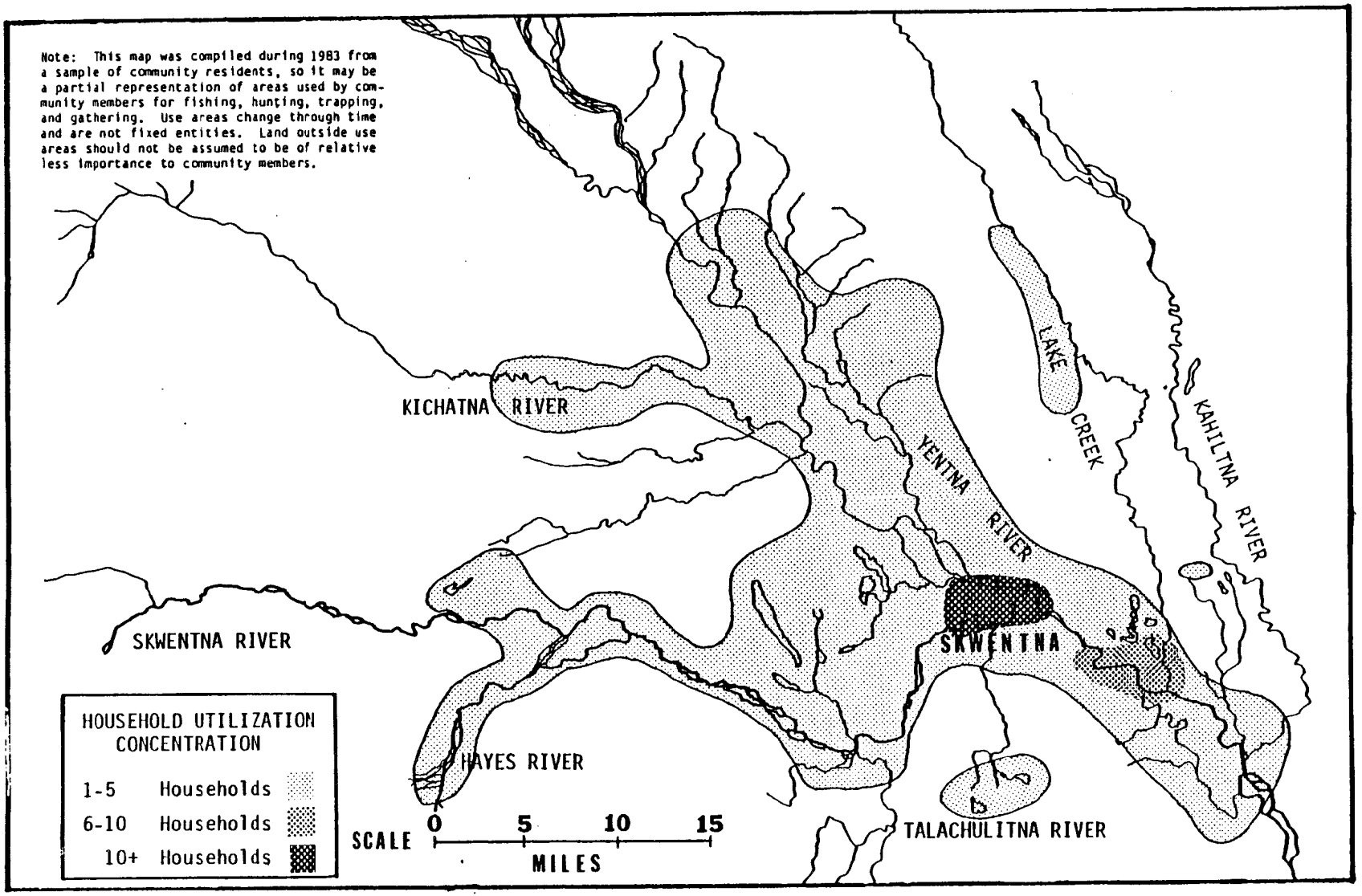


Figure 17. The geographic area currently used by Upper Yentna residents for moose hunting (N=38)

quantities according to an annual round of activities. In Tyonek, five species of salmon, clams, waterfowl, freshwater fish, moose, and several species of small game comprise most of the harvest. Marine mammals and black bear are also taken. Harvest and distribution of these resources are organized on a kinship basis; these uses provide an economic base for village households and bind village residents in networks of sharing and support. In the vast area surrounding the community of Skwentna, households take moose, small game, salmon, freshwater fish, furbearers, and a host of other species. These harvests serve as a focus of family activities, and the sharing of big game, for example, ties households to others of the region.

For both study populations, the uses of fish and wildlife resources generally represent one component of an overall socioeconomic pattern that includes seasonal or part-time wage employment. In both areas, full-time year-round employment opportunities are scarce. Tyonek residents fish commercially, find seasonal construction jobs, or work on temporary village projects supported by state or federal funds in order to obtain cash. In the Upper Yentna area, about 40 percent of the households obtain some income from trapping. Other kinds of seasonal work, often resource related (such as guiding, and logging,) are combined to supply households with adequate cash incomes. In both areas, some residents obtain non-local employment for several months, but most people in each population reside at their homes for most of the year.

Historically, fish and game harvests have been extremely important to residents of the western Susitna Basin and the western Cook Inlet area, the area now encompassed by Game Unit 16B (Fall 1981, Cole 1982). The aboriginal inhabitants of the area, the Upper Inlet Dena'ina, utilized all of this area for fish and game harvests until diseases reduced their

numbers early in this century. While some Dena'ina continued to use portions of the Upper Yentna area seasonally into the 1940s, most former Native residents of the area and their descendents now reside in Tyonek. The area currently used by these and other Tyonek people has been harvested for fish and game by the Dena'ina since before recorded history. During the twentieth century, a small number of prospectors and trappers replaced the Dena'ina in the Upper Yentna area. In the 1900s and 1910s, many newcomers arrived or passed through the area to exploit the Cache Creek or Sunflower Basin mining districts. A few stayed on to hunt and trap. While there has been no subsequent industrial or other development in this region, in the last several decades state and federal land policies have resulted in the introduction of a small, permanent population in the area. As the findings of the first phase of the "Susitna Basin Resource Use Study" have demonstrated, these households have developed a pattern of hunting and fishing which in some ways resembles the historic resource use patterns of the area.

One component of the historic and contemporary resource patterns of the residents of Tyonek and in the Upper Yentna area is the use of moose. In the past, moose have been harvested throughout the fall and winter, generally as needed and as accessible, with a preference for hunting when temperatures permit preservation by freezing outdoors and when travel is convenient.

Findings of this report have demonstrated the widespread use of moose in both areas today. About 87 percent of Tyonek households have harvested moose over the last five years, although only 15 hunters were successful during the September 1981 season. In the Upper Yentna area, about 63 percent of the households reported a successful moose harvest in 1982. Residents cited the possibility of outdoor preservation, ease of travel, and accessibility as reasons for post-freeze up harvests. In

both Tyonek and the Upper Yentna areas, the majority of hunters have expressed their desire to reopen a moose hunting season in November in the vicinity of their homes.

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APPENDIX A

I.D. NUMBER_____ INTERVIEWER_____

DATE _____ LOCATION _____

1. Did you or any member of your household hunt, fish, trap, or gather wild resources in 1982? Yes_____ No_____

2. Did your household use any wild resources harvested by other people in 1982? Yes_____ No_____

3. I'd like to ask you some questions about your uses of wild resources in 1982. I'll review a list of resources. Please let me know if you harvested or used the resource in 1982. If 1982 was not a typical year, please tell me what is typical for your household. I'm also interested to know the methods you use to harvest resources, how much you harvest, and the time of year you harvest resources. I would also like to map your general harvest areas while we discuss these resources. As we conduct the interview one of us will go through the survey and record your responses to the questions. The other person will record any other information you wish to provide. We are interested in any observations and ideas which you may have about resources and their use in this area.

RESOURCE	KING SALMON	RED SALMON	SILVER SALMON	PINK SALMON	CHUM SALMON	RAINBOW TROUT	DOLLY VARDEN	GRAYLING	LAKE TROUT	BURBOT	NORTHERN PIKE	WHITEFISH	FLAT	BROAD	HOOLIGAN	LAMPREY (EEL)
DID YOU TRY TO HARVEST THIS IN 1982																
QUANTITY HARVESTED IN 1982?																
AMOUNT RECEIVED FROM OTHER HOUSEHOLDS																
METHOD OF HARVEST?																
METHOD OF TRANSPORTATION?																
RESOURCE USE? (TRADED, CONSUMED, SOLD, ETC.)																
QUANTITY CONSUMED?																
DISTANCE TRAVELED TO HARVEST RESOURCE?																
JANUARY																
FEBRUARY																
MARCH																
APRIL																
MAY																
JUNE																
JULY																
AUGUST																
SEPTEMBER																
OCTOBER																
NOVEMBER																
DECEMBER																

RESOURCE	FISH EGGS	SHELLFISH	OTHER	SEAL	MOOSE	CARIBOU	SHEEP	BLACK BEAR	BROWN BEAR	OTHER	SPRUCE GROUSE	RUFFED GROUSE	PTARMIGAN	WILLOW	ROCK	WHITE-TAIL
DID YOU TRY TO HARVEST THIS IN 1982																
QUANTITY HARVESTED IN 1982?																
AMOUNT RECEIVED FROM OTHER HOUSEHOLDS																
METHOD OF HARVEST?																
METHOD OF TRANSPORTATION?																
RESOURCE USE? (TRADED, CONSUMED, SOLD, ETC.)																
QUANTITY CONSUMED?																
DISTANCE TRAVELED TO HARVEST RESOURCE?																
JANUARY																
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SEPTEMBER																
OCTOBER																
NOVEMBER																
DECEMBER																

RESOURCE	DUCK	GEESE	CANADA	SNOW	SNOWSHOE HARE	PORCUPINE	RED SQUIRREL	GROUND SQUIRREL	FLYING SQUIRREL	MARMOT	MARTEN	RED FOX	COYOTE	WOLF	MINK	WEASEL
DID YOU TRY TO HARVEST THIS IN 1982																
QUANTITY HARVESTED IN 1982?																
AMOUNT RECEIVED FROM OTHER HOUSEHOLDS																
METHOD OF HARVEST?																
METHOD OF TRANSPORTATION?																
RESOURCE USE? (TRADED, CONSUMED, SOLD, ETC.)																
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AUGUST																
SEPTEMBER																
OCTOBER																
NOVEMBER																
DECEMBER																

I would now like you to think back a couple years about moose. Did you harvest a moose in 1982, 1981, 1980?

4. 1982	5. 1981	6. 1980
Yes, locally_____	Yes, locally_____	Yes, locally_____
Yes, nonlocally_____	Yes, nonlocally_____	Yes, nonlocally_____
No, but tried_____	No, but tried_____	No, but tried_____
No, didn't try_____	No, didn't try_____	No, didn't try_____
Not resident of area____	Not resident of area____	Not resident of area___

7. If the household did not harvest a moose in the last 3 years, when was the last time they harvested one locally?

Year _____

Not a resident_____

Never while a resident_____

8. How do you preserve your moose meat? Estimate the percentage.

Frozen (freezer)_____%

Frozen (outdoors)_____%

Smoke/Dry_____%

Can/Jar_____%

Corn/Pickle_____%

Salt_____%

Fresh_____%

Other_____%

9. In the past year, about how many households have given your household:

Game_____

Fish_____

Furs_____

Berries_____

Food Plants_____

10. In the past year, about how many households has your household given:

Game_____

Fish_____

Furs_____

Berries_____

Food Plants_____

11. Which of the following best describes how you get most of the resources you harvest?

	Individually	with relatives	with friends/partners
salmon fishing			
other fishing			
moose hunting			
sheep hunting			
trapping			
berry picking			

12. Please approximate what percent of your household meat, fish , and fowl in the past year has been from wild resources. _____%

13. Does your household raise a garden? yes_____ no_____

14. (If yes) Please estimate the percentage of your produce which comes from your garden _____% None bought in store? _____

15. Does anyone in your household engage in logging as a business in this area? yes_____ no_____

16. Does anyone in your household participate in mining? yes____ no_____

17. Do you own any of the following?

item	yes/no	approximate value
boat		
snowmachine		
airplane		
ATV		
dogteam		
automobile		
freezer		
smokehouse		
generator		
trapping cabin		

18. Which of the following are sources of household monetary income?

location: town GMU

_____ guiding _____

_____ trapping _____

_____ commercial fishing _____

_____ logging _____

_____ mining _____

_____ construction _____

_____ other _____

_____ other _____

_____ other

19. In terms of income, which of the above is most important? _____

20. What kinds of resources/supplies must you get outside the area?

_____

_____

_____

21. How many people live in this household?

	ages								
males	_____	_____	_____	_____	_____	_____	_____	_____	_____
females	_____	_____	_____	_____	_____	_____	_____	_____	_____
total	_____								

22. Please indicate the longest time any household member has been in

Alaska_____

Skwentna area_____

23. How many months did you stay in the Skwentna area in 1982? _____ months.

Explain prolonged absences._____

_____

_____

24. How did you acquire your property/home (e.g. what program or through sales)

Homestead_____ Other_____

Subdivision_____

Homesite_____

Purchased from previous owner_____

25. What are your ideas on a winter moose season in this Game Management Unit (16B)?

_____

_____

_____

_____