TYONEK MOOSE UTILIZATION
1981

by
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ABSTRACT

This report documents the utilization of moose by the village of Tyonek during 1981 as part of a comprehensive resource use study. Methodologies included household interviewing of 40 moose hunters with a standardized interview guide, and participant observation of moose hunting activities.

Results indicate that 40 Tyonek hunters expended a total of 437 man-days to harvest 15 moose during the 1981 season. The mapping of hunting areas of individual hunters produced a composite map of the village hunting zone. Examination of the distribution of moose in the village showed that 13 of the 15 harvested moose were shared among members of more than one household. The sharing of moose meat expresses social relationships within the village. Through observation, the researcher estimates that 90 to 100 percent of the households in Tyonek received some moose meat during the fall of 1981. Though extensive distribution occurred, the 15 moose procured during season were not sufficient to meet the village needs.

Tyonek hunters have faced increasing competition for moose with employees of Kodiak Lumber Mills and outside hunters in recent years. Of a greater magnitude will be the impacts of future development, specifically the production of coal within the immediate area.

Hunters have indicated a preference for an open season in November or December. Hunters perceive a reduction in competition, more efficient

means of harvesting moose, and the preservation of quality meat without loss due to warm weather and flies as reasons for wanting a shift in current seasons.

As an initial description and analysis of moose hunting by the people of Tyonek, this report may serve as a tool for managers, developers, and the village itself as they make decisions which will profoundly affect the future of Tyonek and the way of life of its people.

ACKNOWLEDGEMENTS

Acknowledgement of appreciation is given to all the residents of Tyonek for their help and understanding during the collection of moose harvest data for 1981.

Special gratitude is extended to George Constantine for allowing me to stay at his home and accompany him during the hunting season.

TYONEK MOOSE UTILIZATION

1981

TABLE OF CONTENTS

Abstract ii
Acknowledgements iii
Table of Contents iv
List of Figures and Tables v
Introduction 1
Purpose 4
Methodology 5
Results 7
    Characteristics of Hunters and Hunting Parties . . 7
    Hunting Locations 8
    Hunting Methods 10
    Harvest Effort 11
    Associated Activities 14
    Distribution 14
    Preservation 23
    Hunting Seasons 24
Discussion 24
Bibliography 29
Appendices 30

LIST OF FIGURES AND TABLES

Figure 1. Map of Northern Cook Inlet 2

Figure 2. Map of use area during 1981 moose season . 9

Figure 3. Map of specific use areas showing levels of effort and productivity 12

Figure 4. Distribution chart for Case #1 16

Figure 5. Distribution chart for Case #2 18

Figure 6. Distribution chart for Case #3 19

Figure 7. Distribution chart for Case #4 21

Figure 8. Distribution chart for Case #5 22

Table 1. Hunting efforts and returns for four hunting areas of 40 Tyonek hunters, 1981 . . 13

Table 2. Hunters preference of desired open moose season 25

INTRODUCTION

This report documents the utilization and harvest areas of moose by the people of Tyonek in 1981. Tyonek is an Athabascan Indian community located on the northwest shore of Cook Inlet. This non-road connected village is approximately 43 air miles southwest of Anchorage (Figure 1). The village contained 239 residents according to 1980 United States Census figures. Village officials estimate that 95 percent of the residents are Alaska Natives (Darbyshire and Associates 1981a).

Since the spring of 1980 the Subsistence Division of the Department of Fish and Game has been engaged in a comprehensive resource use study of Tyonek. Preliminary results of this research indicate that important resources used by the residents of the village include king salmon and moose (Stanek and Foster 1980; Webster 1981). This report is one component of this comprehensive study.

Resource use information is essential because of impending developments and land disposals in Game Management Unit (GMU) 16b. For example, the Tyonek/Beluga area has a high potential for coal development. Large coal deposits are located within 25 miles of potential sites for deep water ports. Two coal developers, Diamond-Chuitna and Placer Amex Inc., have each developed scenarios for the production of coal from these fields.

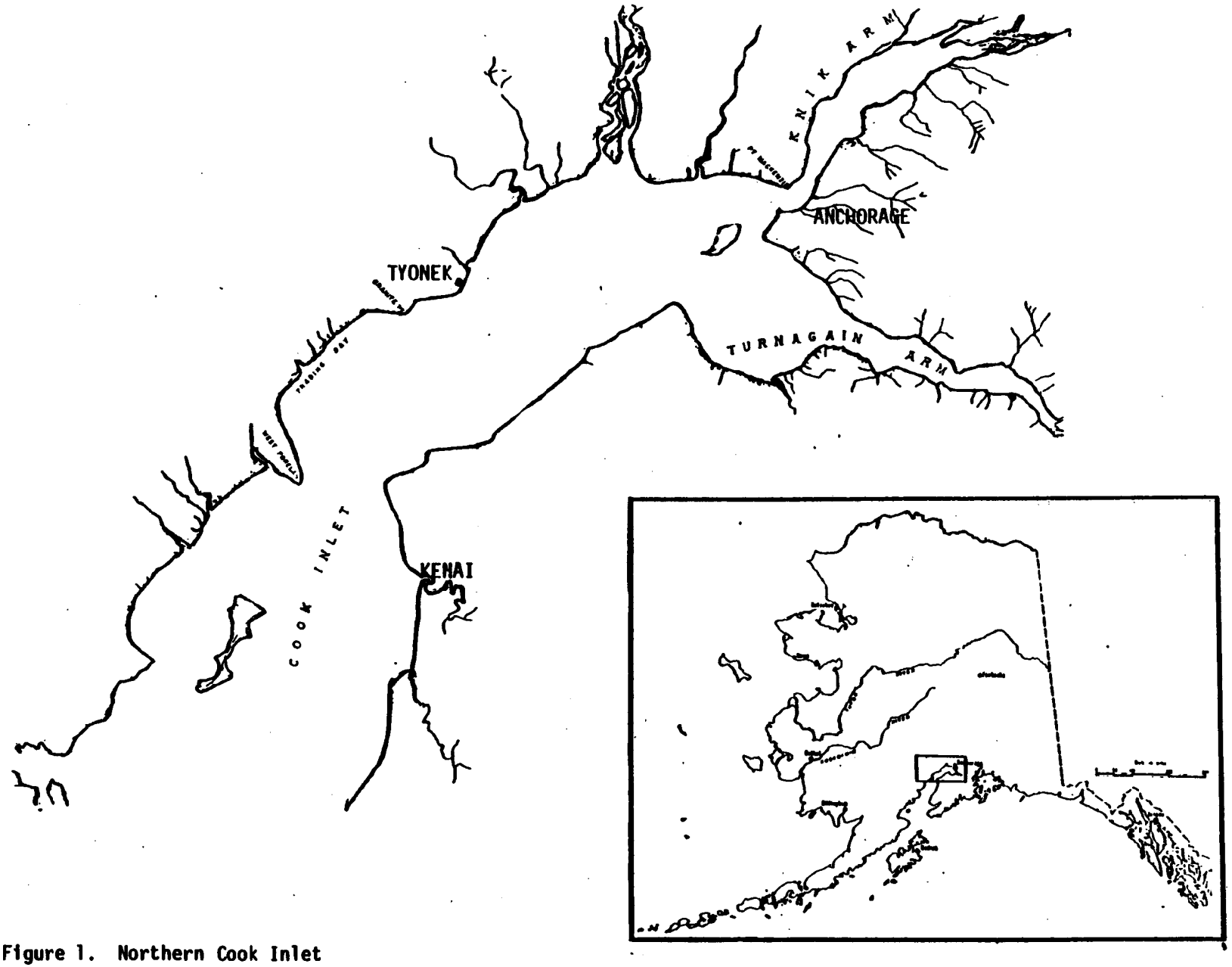


Figure 1. Northern Cook Inlet

Placer Amex Inc., is also developing plans for a coal-to-methanol conversion plant at Trading Bay. If the development of these coal fields occurs, there is the possibility of as many as 4,000 people working on the construction of the facilities, with a reduction to 2,500 people to handle operations during production.

Another area of concern is the Chakachamna Lake and McArthur River drainage, being considered for hydropower production. A feasibility study is now underway. Information as to potential impacts on the Tyonek area is not yet available (Darbyshire & Associates 1981b:24).

These potential developments, and others such as land disposals and conveyances, may have major effects on the local moose population and the people who utilize this resource. An example from the recent past is the Kodiak Lumber Mill's (KLM) logging of beetle infested timber in this area. Logging activities within the immediate area, while of a smaller magnitude than those anticipated for coal production, have impacted Tyonek residents' resource use patterns. Among these impacts have been increasing access into new hunting areas with the expansion of the road system and increasing competition for resources with KLM's 50 to 75 seasonal employees and their families (Braund and Behnke 1980; Darbyshire and Associates 1981b; Tyonek Residents, Personal Communication 1980, 1981). The residents of Tyonek perceive an over-harvest of moose as a result of increased hunting pressure by KLM employees (see letter, Appendix A).

The data included in this report pertain to the 1981 moose season within Game Management Unit 16b. During 1981, open season occurred from September 1 to 30. Antlerless moose could be taken only from September 10 to 16. The bag limit for this GMU is one moose per calendar year. Information on the utilization of moose in previous years will be presented at a later date also as part of the comprehensive resource use study report. Previous harvest trends provide a historical perspective for understanding the current use of moose and its relationship to other resource uses in the region.

PURPOSE

The primary purpose of the study was to describe the complex of activities which surrounded the use of moose by the community of Tyonek in 1981.

The objectives to be accomplished during this study included the following:

1. Documentation of the social characteristics of hunters as these relate to moose hunting.
2. Maps of locations of moose hunting activities conducted by Tyonek residents.
3. Descriptions of methods of moose hunting and caring for the harvest.
4. Estimations of the levels of effort expended in moose harvest activities.

5. Identification of activities associated with moose hunting.
6. Descriptions of the distribution of moose harvests among community members with genealogical charts.
7. Identification of general concerns of hunters regarding moose hunting

METHODOLOGY

Research was conducted in three phases. During the first phase preliminary contacts were made with people who expected to hunt moose during the 1981 season. On-site observations of certain hunters were made during the hunting season and enabled the researcher to develop a familiarity with hunters and their hunting activities. During the second phase, an initial list of known successful moose hunters in Tyonek during the 1981 moose season was compiled by talking with village officials. Interviews with these individuals were then conducted. Additional names of both successful and unsuccessful hunters were produced during these interviews through the question, "Who do you know who hunted or killed a moose this year?" (see question Appendix B). During the final phase, the remaining successful hunters and the unseccessful hunters were interviewed. The interview data provided a means to cross check some of the information gathered through participant observation, and initial discussions with key informants.

Through the use of an interview guide (Appendices B and C) and United States Geological Survey (USGS) topographic maps, personal conversations, and field observations, the researcher obtained information on the following variables:

1) Important resource use areas, and specific locations of hunting activities. These were recorded on 1:63,360 USGS topographic maps. Hunters were asked to personally outline the areas which they hunted during 1981 and include harvest locations. All maps included in this report are composites of individual maps so that confidentiality of individual hunting areas is retained.

2) Forms of transportation used to get to and from the hunting areas.

3) Social roles involved in the utilization of moose through field observation and harvest distribution data.

4) Kinds of equipment and specific techniques used in hunting.

5) Methods of preservation of the harvest.

6) Levels of effort expended during moose harvest activities.

This information was obtained by asking each hunter to estimate the amount of time spent hunting in each area he utilized.

7) Other production activities such as hunting other game, fishing, and picking berries that are conducted concurrent with moose hunting.

8) Factors influencing decisions about the distribution of the moose harvest, such as the relationship of the hunters to the people with whom the moose was shared. A distribution chart (Appendix B, Form A) was used to record this information.

9) Hunters' concerns regarding moose hunting.

RESULTS

Characteristics of Hunters and Hunting Parties

Of the 48 participants identified in the 1981 moose season from Tyonek, forty (83.3%) were interviewed. The 8 remaining hunters were unavailable for interviewing. Hunter's ages ranged from 16 to 62 years. Hunters had participated in moose hunting an average of 17.5 years.

Hunting is usually done in family units or small hunting parties consisting of 2 to 5 members. Younger hunters tended to accompany experienced older family members, thus learning hunting skills. Both men and women participate in the procurement of moose. Usually men do the actual hunting, while men and women participate in such activities as arranging the camp, preparation of food, and care of meat. One woman was successful in harvesting a moose during this season.

Hunting Locations

As previously described, in the discussions about moose hunting, hunters were asked to indicate on USGS topographical maps (1:63,360) areas in which they hunted for moose during the 1981 season. A composite map of these individual maps depicts the areas used by Tyonek moose hunters during 1981 (Figure 2). There are few notable differences between areas used by successful and unsuccessful hunters except that unsuccessful hunters use the Middle River drainage. Retrospective and prospective mapping of hunting areas may reveal as yet unidentified differences in land use patterns overtime for Tyonek hunters.

The areas covered by the Tyonek hunters during the 1981 season were the McArthur River drainage (Nadudiltnu; Chickalusion and Chickalusion 1979:8), the Middle River drainage, (Cha'Kajatnu; Kari n.d.) and the road system from lower Chuitna River drainage (Ch'u'itnu; Kari n.d.) west to Mt. McArthur. This road system was created to support transportation needs stemming from

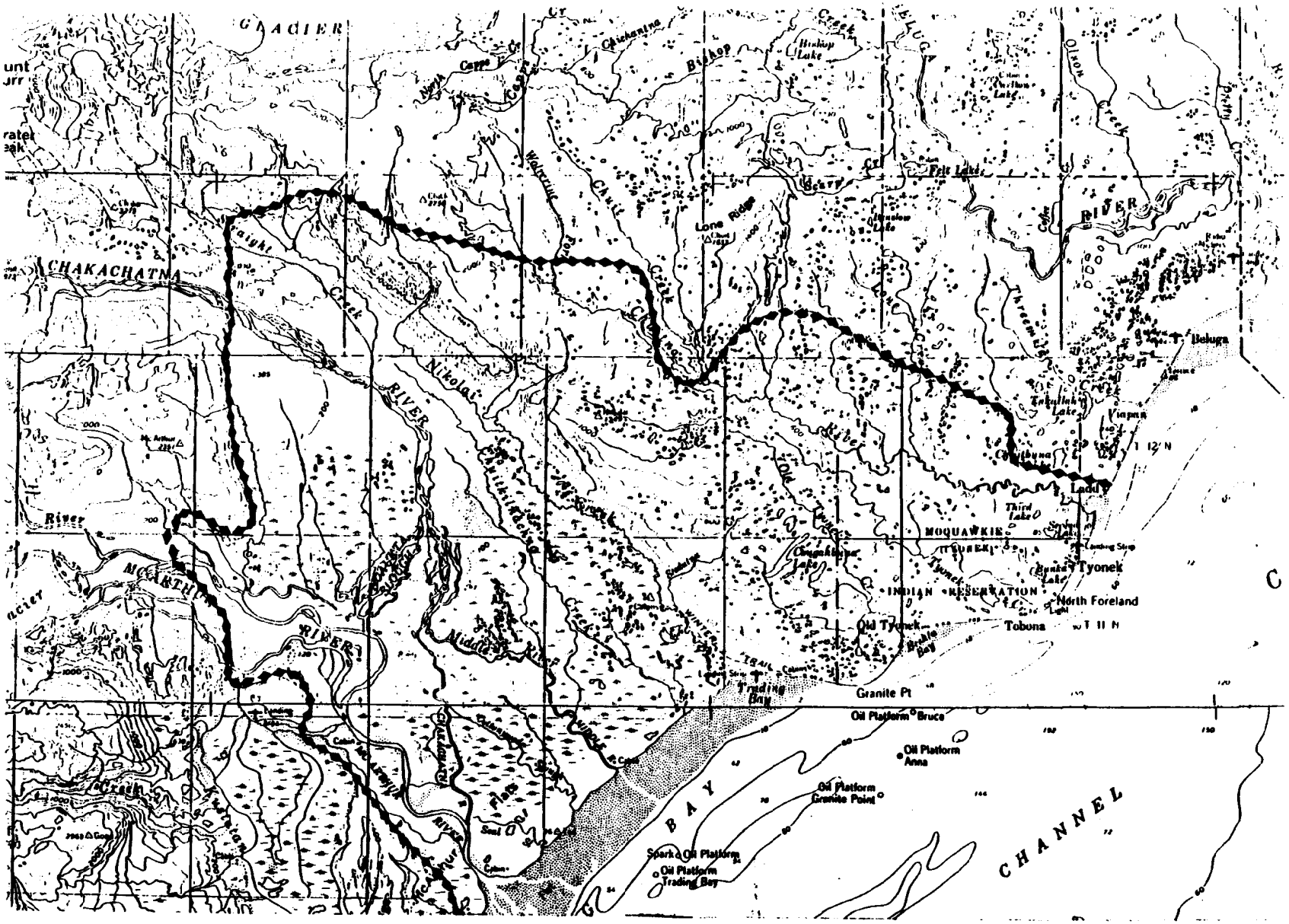


Figure 2. Areas used for moose hunting by Tyonek residents during 1981 moose season, representing a composite of individual hunting areas. (n=40)

oil and gas exploration, construction of the Beluga Electric Power Plant, and the harvest of timber by Kodiak Lumber Mills (KLM).

Hunting Methods

The means of transportation to and from hunting areas was either by pickup truck or dory powered by an outboard motor. Twenty-four hunters used only pickup trucks, while 15 hunters used both a truck and a dory at separate times during season. One hunter used only a dory.

The most commonly used methods of locating moose are spotting them from the roadways, spotting them from a vantage point, and walking through the woods looking for moose signs. Hunters who scanned the roadsides and river-banks for moose while enroute to hunting areas created a corridor hunting zone between more intensively hunted areas. The roadside method proved to be successful for four hunters who harvested moose prior to reaching their planned destination. Upon reaching a hunting area, parties of hunters would fan out in the area and hunt individually. In addition, moose calls developed by vocalization or scraping an antler on a tree were used to attract moose. High powered rifles were used by all hunters.

Sometimes, hunting parties return to the village after spending a day hunting along the roads. At other times, they camp overnight in a hunting area and continue hunting the next day. Groups which use dories to ascend rivers to hunt always establish overnight camps along the banks of the river. The

researcher did not accompany any hunting parties who used a dory, but future research will include such participation.

Harvest Effort

The level of effort was determined by the total number of days each hunter spent hunting moose in specific areas. The general hunting area (Figure 2) has been divided into four subunits (Figure 3) to show areas with different levels of effort and productivity. They are listed in order of greatest hunting pressure (Table 1). The areas are:

Area A: the KLM road system from Mt. McArthur northeast to the western boundary of the Tyonek Reservation. This area received 150.5 man-days of effort with eleven moose being harvested, an average of 13.7 man-days per harvested moose.

Area B: the Tyonek Reservation northeast to the lower Chuitna River drainage. This area received 136.5 man-days of effort with two moose being harvested, an average of 68.3 man-days per harvested moose. Hunting effort in this area was mainly along a road corridor zone while enroute to Area A.

Area C: the lower portions of the McArthur River drainage. This area received 94 man-days of effort with two moose being harvested, an average of 47 man-days per harvested moose. Access to this area was by dory and was used during the first ten days of moose season only September 1 to 10. Hunting was discontinued in this area due to a low success rate.

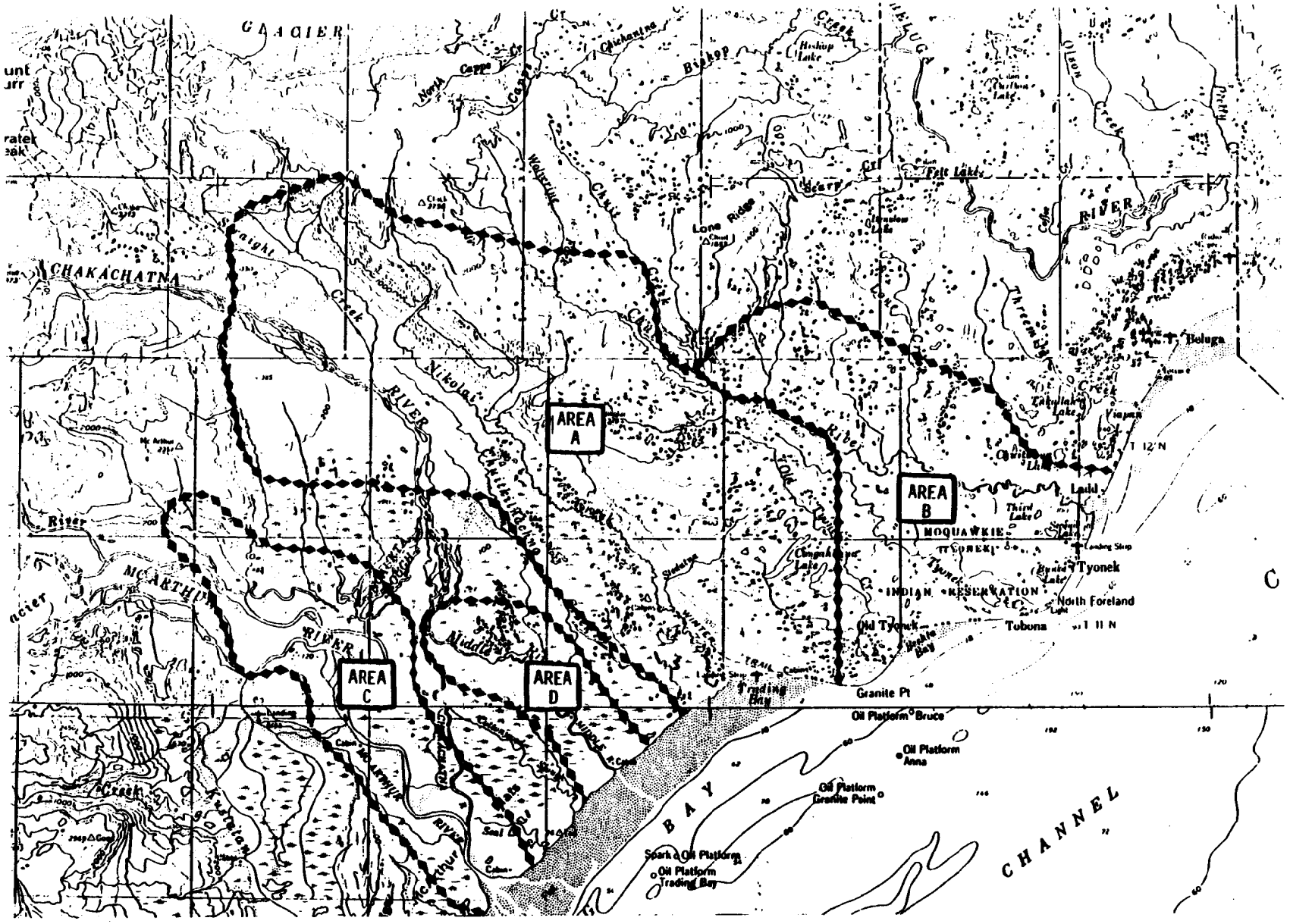


Figure 3. Subunits of the general hunting area showing various levels of effort and productivity. Area A: 150.5 man-days of effort, 11 moose harvested. Area B: 136.5 man-days of effort, 2 moose harvested. Area C: 94 man-days of effort, 2 moose harvested. Area D: 56 man-days of effort, no moose harvested.

Table 1

HUNTING EFFORTS AND RETURNS
FOR FOUR HUNTING AREAS
OF 40 TYONEK HUNTERS,
1981

Area	Hunting Man-Days	Number Moose Harvested	Man-Days Per Moose
A	150.5	11	13.7
B	136.5	2	68.3
C	94.0	2	47.0
D	56.0	0	-
Totals	437.0	15	29.1

Area D: The Middle River drainage. This area received 56 man-days of effort with no moose being harvested. One family unit of four people (a father and three sons) hunted this area.

The total harvest effort by the 40 interviewed Tyonek hunters was 437 man-days with a resulting harvest of 15 moose. This equals an average of 29.1 man-days per harvested moose during the regular season.

Associated Activities

Other food production activities such as hunting small game, fishing, and picking berries were generally not conducted concurrently with moose hunting during 1981. An occasional porcupine or grouse was taken if incidentally encountered while hunting. Effort was focused on the harvest of moose during the limited open season, while other harvesting activities occurred during times outside the moose season.

Distribution

The sharing of wild food resources expresses social relationships within the community of Tyonek. Successful moose hunters generally share a significant portion of their moose with relatives, close friends, and elderly people within the village. Thirteen of the fifteen moose taken (86.7 percent) were shared by more than one household. A single moose was shared among an average of 3 households, with a range of one to nine households per moose. In 12 of the cases where moose were harvested within a hunting

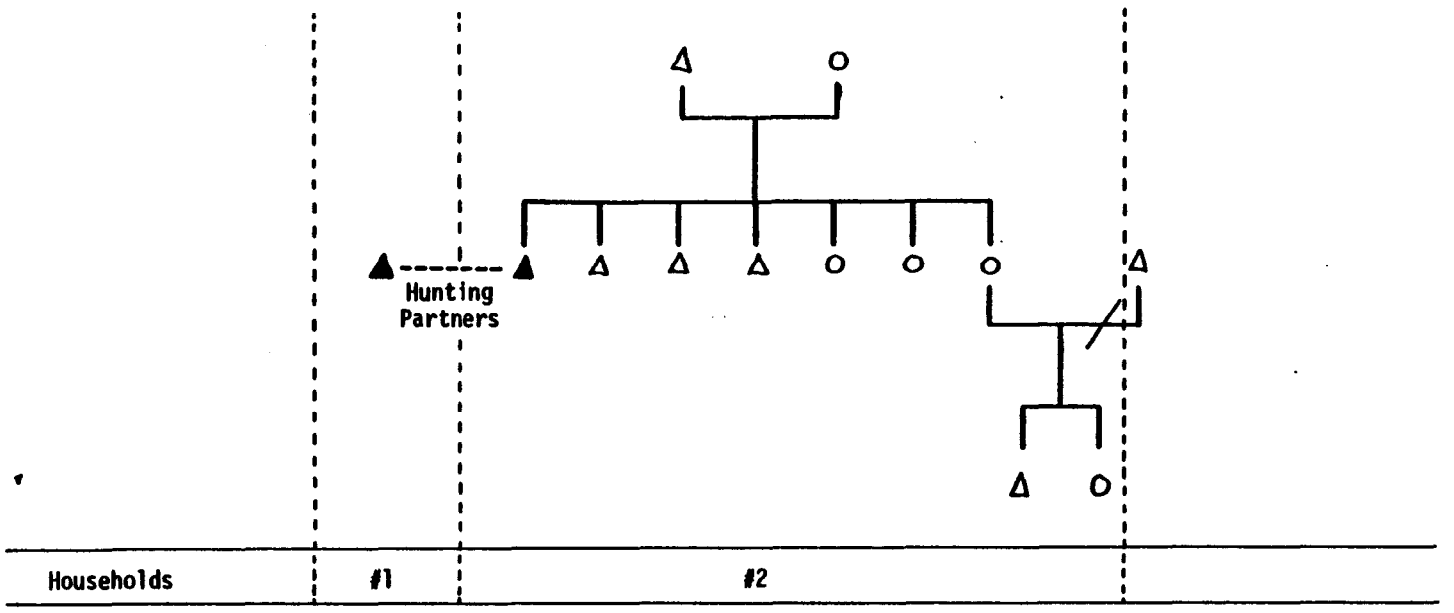
party, the meat was initially divided among the hunters.

One-hundred percent of the unsuccessful hunters received moose meat directly or indirectly from the successful hunters. Through observation and conversations with village residents, it was estimated that from 90 to 100 percent of the households in Tyonek received some moose meat during the fall of 1981.

Tyonek hunters commonly used three criteria to determine with whom they shared moose and the quantities and parts that were distributed. These criteria were: kinship relationship to the hunter; number of dependents in the recipient's immediate household; and perceived need of the individual or family. The following cases have been selected as representative of how moose is distributed in Tyonek.

Case 1 (Figure 4)

Two young men from different households were hunting together and harvested a moose. One of the hunters lives alone, while the other is a member of a large household with 11 members. The meat was divided accordingly with one hind quarter and a side of ribs going to the single hunter. The other hunter received the remaining three quarters, ribs, and internal organs. Distribution of this particular moose did not extend beyond the immediate households of the two hunters.



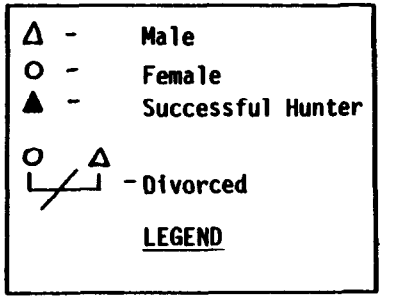


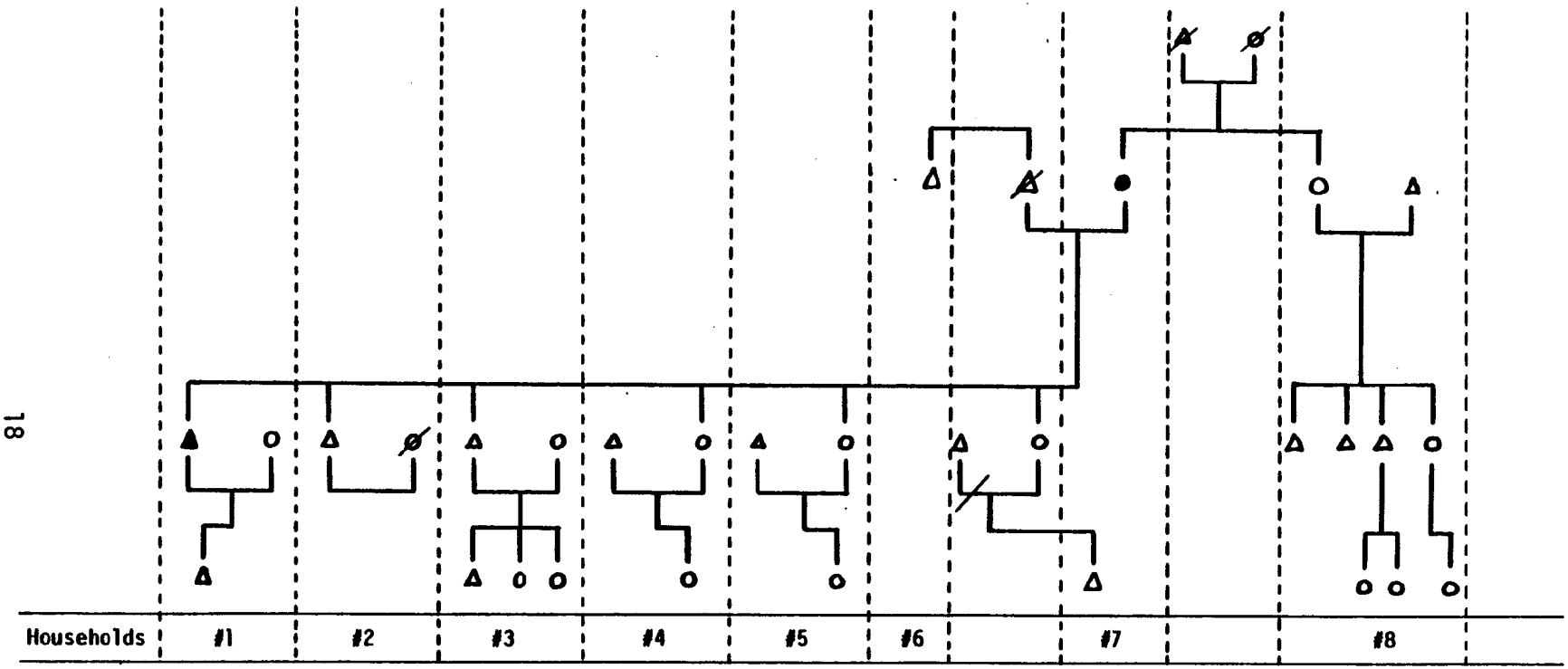
Figure 4. The distribution chart of moose meat in Case #1. Distribution to 2 households consisting of 12 dependents, only those households numbered received meat.

Case 2 (Figure 5)

A young man hunting alone procured a moose. He transported the entire animal to his mother's house, where distribution of the moose took place to an extended family of 8 households and 27 people. The hunter was related through kinship to members of each household which received portions of the meat. The quantity of meat received by each household was small due to the extensive sharing.

Case 3 (Figure 6)

The hunting party consisting of four brothers traveled by dory to the McArthur River to hunt moose. After 7 days, one brother killed a moose. The group decided to return immediately home to prevent spoilage of the meat due to warm weather and flies. Distribution of the meat took place at the successful hunter's home. The meat was divided between the four brothers according to the size of each hunter's family. Each brother received either a front shoulder or hind quarter of the moose while the remaining meat was divided into thirds and shared between the three brothers with families. The internal organs (heart, liver, and kidneys) were cooked fresh; the four families, comprising seventeen people shared this meal together.



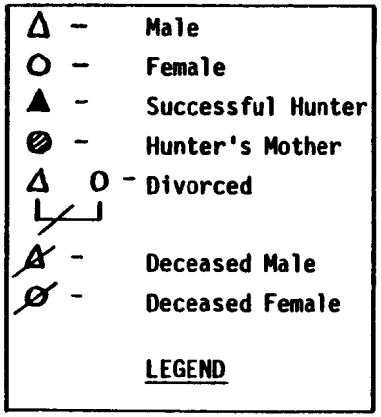


Figure 5. The distribution chart of moose meat in Case #2. Distribution to 8 households consisting of 27 dependents, only those households numbered received meat.

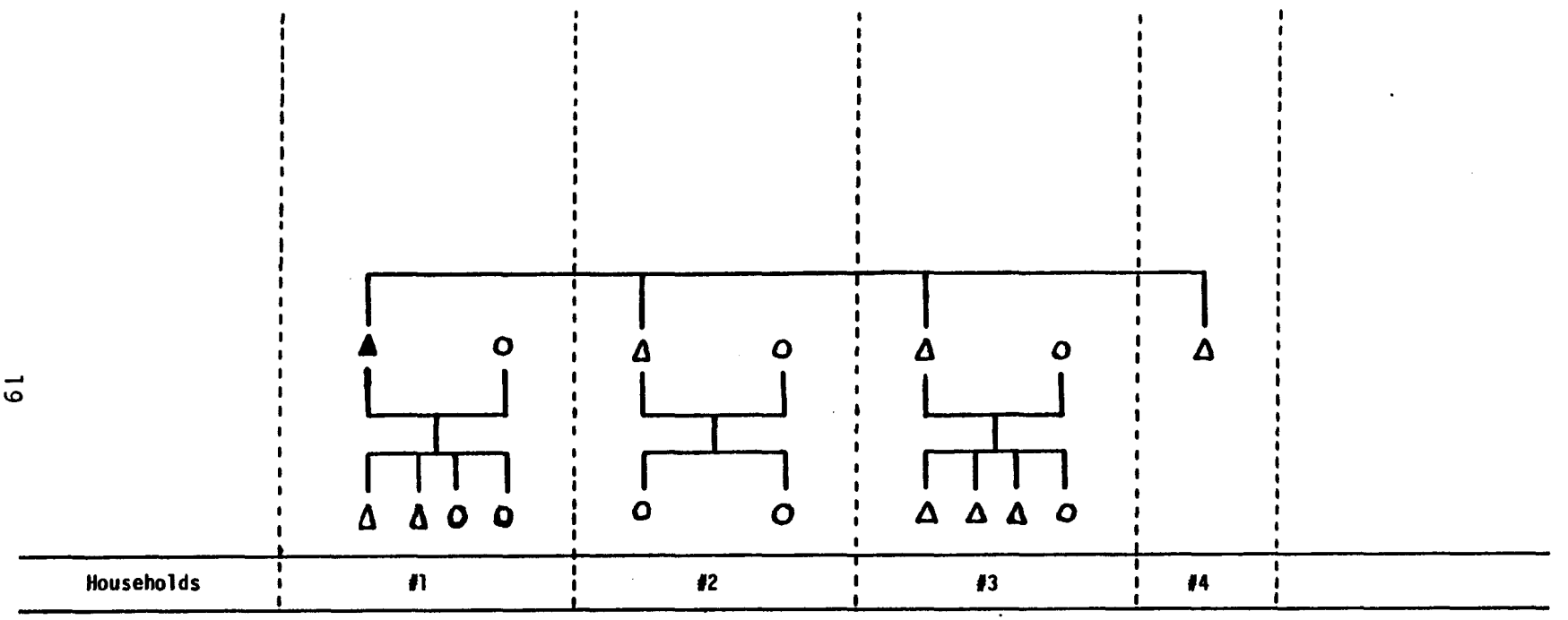


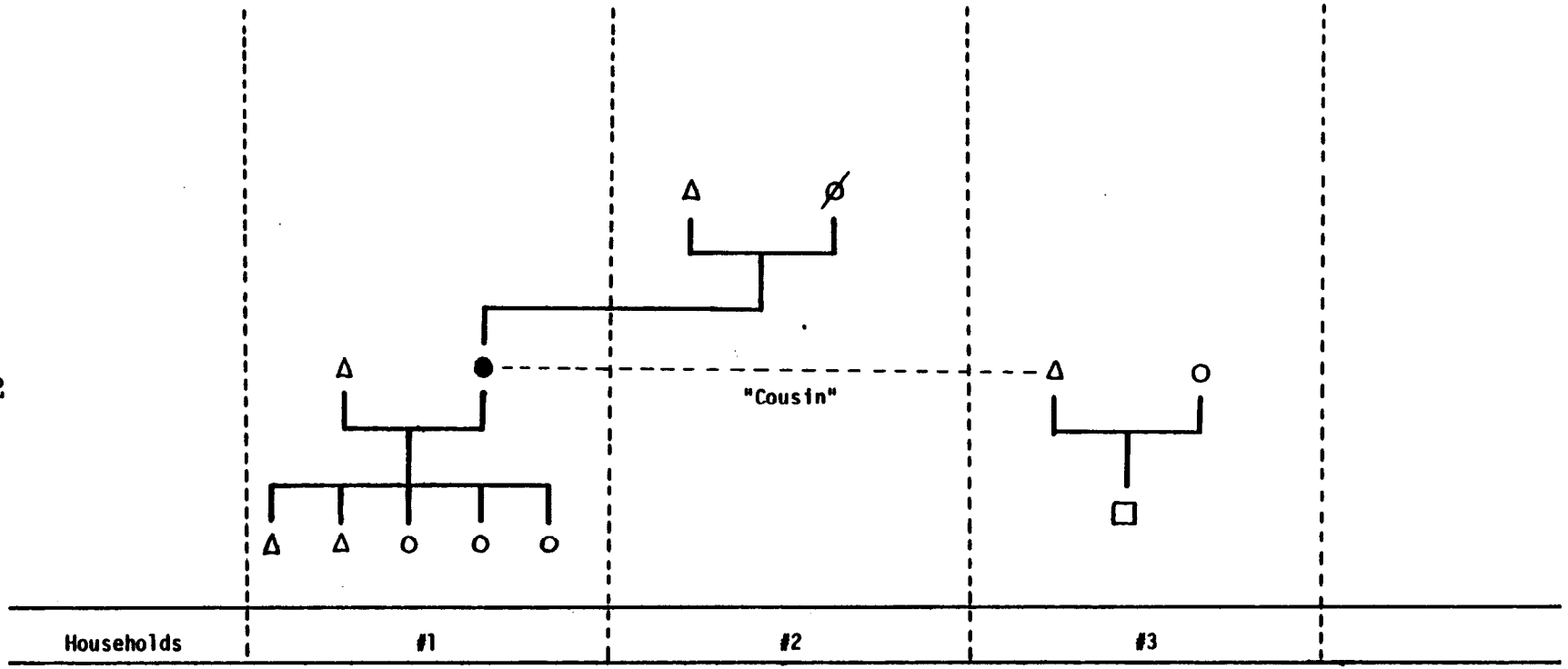
Figure 6. The distribution of moose meat in Case #3. Distribution to 4 households consisting of 17 dependents.

Case 4 (Figure 7)

A husband and wife hunting team were traveling the road system when a moose was sighted and killed by the wife. While in the process of field dressing and quartering the moose, a "cousin" of the wife stopped to help. He received one front shoulder of the moose at the kill site for the assistance he had given. The moose meat was transported to the residence of the hunter by pickup truck. One hind quarter was given to the hunter's (that is, the wife's) father. The remainder of the moose was kept for the hunter's family. The hunter also stated that their meat would be shared with needy village residents during the winter.

Case 5 (Figure 8)

After 12 consecutive days of hunting the road system from Tyonek to Mt. McArthur, a young man and his father's brother harvested a moose. They divided the kill equally between themselves. Each hunter kept some of his half for his own household while distributing a significant amount to other village residents. The uncle shared his half of the moose with his other brother and family. The nephew gave meat to his father, brother, and two village elders who live together. One of these elders is considered by many Tyonek people as "grandfather" (Chada). It is because of this fictive kinship relationship that this man



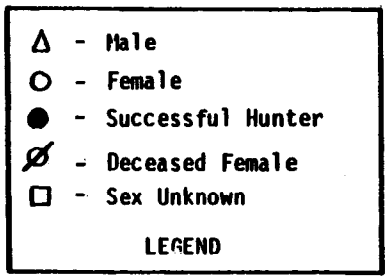


Figure 7. The distribution of moose meat in Case #4. Distribution to three households consisting of 11 dependents.

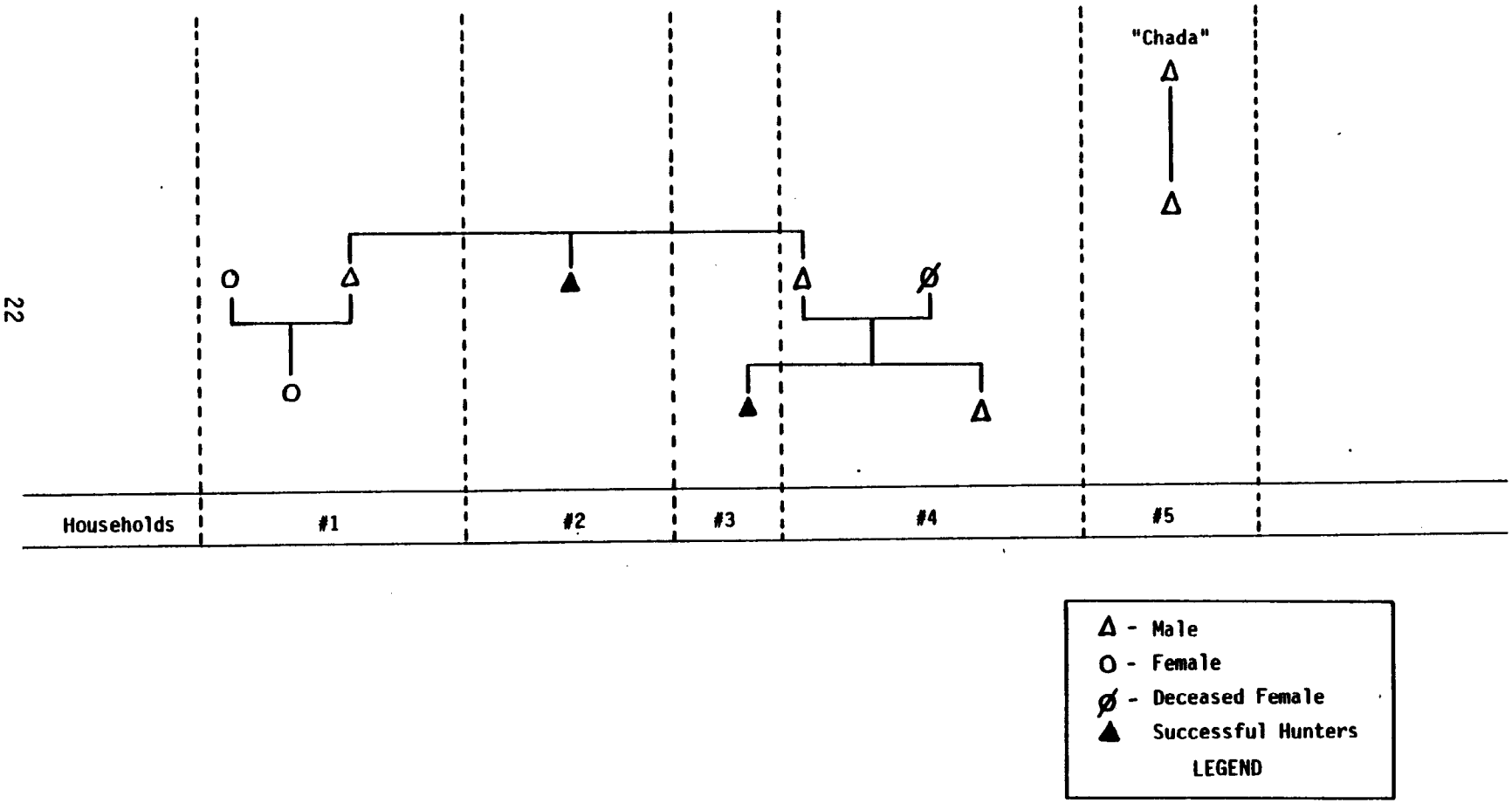


Figure 8. The distribution chart of moose meat in Case #5. Distribution to 5 households consisting of 9 dependents.

receives resources from village hunters. This moose was shared among 5 different households totalling 9 people.

Not all members of a distribution system necessarily receive equal portions of meat or adequate amounts for their annual needs. Therefore, distribution and redistribution occur beyond the time immediately following the harvest. Traditionally, out of season harvests have helped to supply needs unfulfilled by harvests during season.

Distribution of moose meat also occurs during social events such as potlatches, weddings and funerals. One such event, a potlatch, took place on February 28, 1982. Information on these types of exchanges has not yet been obtained. Affiliation with the Russian Orthodox Church disallows the consumption of red meat and animal fat during the 6 weeks of Lent. During this period much of the previous summers' salmon and clam harvest is consumed, thus the significance of moose meat during the previous 6 months.

Preservation

Freezing, canning, smoking and drying were the primary means of preserving meat in Tyonek in 1981. Of the hunters surveyed, 100 percent stated that they ate some meat fresh and froze most of the remainder. Forty-eight percent of the hunters interviewed indicated that some portion of their meat was canned for later use. Smoking and drying of meat was used as a method of preservation by 22 percent of the hunters.

Hunting Seasons

Hunters had varied opinions concerning the preferred times of the year for hunting moose (Table 2). Desired times of the year ranged from the current open season (September 1 - 30) to year-round hunting. Fifty-five percent of the hunters indicated a preference for a November moose season while 17.5 percent preferred December. Thirteen percent of the hunters desired no change in the current hunting season. The remaining 14.5 percent was divided between the months of August, October, January, February, and No Closed Season. Reasons for wanting a change in current season included more efficient means of harvesting and preserving moose, and reduced competition among hunters (Table 2).

DISCUSSION

This report is a component of a comprehensive resource use study of Tyonek. It is the first step towards understanding economic, social, and cultural factors influencing the uses of specific fish and game resources in this village. The report also may help to identify problems and potential problems in resource use for the Board of Game. Such problems may be subsumed within two general questions: do current regulations meet the subsistence priority in regards to the people of Tyonek and will future development disrupt the Tyonek people's way of life which depends upon hunting, fishing, and seasonal monetary employment?

Table 2

HUNTERS PREFERENCE OF DESIRED OPEN MOOSE SEASON

Preferred Month	Number of Hunters Preference		Reasons for preferred change in current season.
	1st	2nd	
January	2	-	Bulls would be back into good shape. Less competition from outside hunters. Moose are within the immediate area.
February	1	1	Bulls would be back into good shape.
March	-	-	
April	-	-	
May	-	-	
June	-	-	
July	-	-	
August	1	-	When all the moose are in the best shape.
September	5	-	Bulls are in good shape before the rut. Before the moose start to lose weight during the winter.
October	1	-	Moose would be starting to move down from the hills closer to the village.
November	22	3	Moose meat is needed during that time of the year by the village. Able to keep meat cleaner in the snow and no flies to spoil meat. Bulls are out of the rut. Meat can be stored without the use of a freezer. Cows are good shape but the bulls are still thin from the rut. Use of snowmachines and snowshoes to track moose. Less competition from outside hunters.
December	7	8	The snow drives moose down from the hills. Moose are easier to hunt and locate. Meat can be stored without use of a freezer. Less competition from outside hunters.
No Closed Season	1	-	Village needs meat year-round.

During the 1981 moose season, Tyonek residents successfully harvested 15 moose. These 15 moose were divided among approximately 239 residents. Several methods of hunting and transportation were used according to the specific area and terrain being hunted. Trucks were extensively used on the road system to reach desired hunting areas (Chakachatna River, Nikolai Creek). Dories with outboard motors were used in Cook Inlet to travel to and up river systems such as the McArthur River and Middle River. Calling moose and locating moose with binoculars from vantage points were two methods of hunting used.

The 40 hunters interviewed comprising 15 successful and 25 unsuccessful hunters, expended a total of 437 man-days of effort during the September 1 - 30 hunting season. Moose hunting involved an average of 11 man-days per hunter and 29.1 man-days per harvested moose during this season.

Despite this high level of effort, the 15 moose procured during the open season were not sufficient to meet village needs. Traditionally, additional hunting has occurred after the close of season in an attempt to meet these needs. The magnitude of this effort is presently undetermined. This suggests a topic for future research.

A possible explanation for this failure to harvest adequate supplies of moose in season is that during season competition for moose occurs between the Tyonek hunters and the transient population of the KLM plant who reside in a permanent camp near the North Foreland. Tyonek hunters have noted an

increase in this competition for moose in recent years. The 50 to 75 company employees, their immediate families, and other relatives and friends who flew in, harvested over twice as many moose during the regular hunting season in 1981 as did the Tyonek people. KLM employees have particular advantages over Tyonek hunters in locating and harvesting moose, in that they hunt during working hours while engaged in harvesting timber with company equipment. Other non-local hunters may also contribute to the competition for moose in the Tyonek area. There is also a perceived decrease of the moose population within the immediate area attributed to the increase in hunting pressure.

Distribution of meat obtained from the harvested moose was an important means to establish and reaffirm social relationships between the hunters and other village residents. Elders, individuals unable to hunt, and unsuccessful households were all provided with portions of the 15 harvested moose. Distribution within the entire village occurs regardless of the size of the moose harvest.

By and large, hunters indicated a preference to return to an open moose season in November or December (73.0 percent indicated this preference). More efficient means of harvesting moose and the preservation of quality meat without loss due to warm weather and flies were the major reasons for wanting a shift in current seasons.

Proposed land developments in the Tyonek area might lead to changes in land

use patterns. Possible expansion or reduction of resource use areas may result from an expansion of existing road systems into previously inaccessable areas. Hunting patterns may change due to shifts from areas of old growth timber to areas of new growth which had previously been clear-cut of timber. Alterations of habitat by the production of coal through strip mining may influence resource use areas. Moose kills are expected to increase due to moose/train collisions associated with railroads hauling coal (Darbyshire and Associates 1981: 14).

Tyonek hunters have expressed concerns over the proposed future development of a coal industry near their homes. They are not only concerned about their continuing opportunity to harvest moose, but with the status of the entire moose population within the area as well.

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APPENDIX A

NATIVE VILLAGE OF TYONEK, ALASKA

INCORPORATED
TYONEK, ALASKA 99682

MANAGEMENT OFFICE
1675 "C" STREET — ROOM 246
ANCHORAGE, ALASKA 99501

November 24, 1980

Mr. Ron Stanek
ADF & G
333 Raspberry Rd.
Anchorage, Alaska 99502

Re: Moose Hunting

Dear Mr. Stanek:
I'm writing this letter in regards, to Moose Hunting. Kodiak Lumber Mills moved in here 1973-74, for the purpose of Logging Beetle infected logs, on State Land. There were no studies done at the time, and as one of the more major results, were over harvesting of the moose.

The Native People of Tyonek, had used the Moose to eat, and now with all the people, of Kodiak Lumber Mills hunting them, the moose are very scarse. and my people have a hard time getting any moose to eat, and whats even worse, is the development of the Beluga Coal Mine, what will happen to our moose then.?.

I would appreciate any help you can give me, to protect our moose from being slaughtered, by the great Impact that comes with development, also to make sure that the Native People of Tyonek, will still be able to hunt, without competing for our moose, as a lot of us Natives, don't have Pick-Ups, Dune Buggies, Airplanes, Etc. We don't hunt for Antlers either, we hunt the moose for food.

Sincerely,

Donald Standifer, President
of The Native Village of Tyonek.

cc: File

Appendix B

Number _____

TYONEK MOOSE SURVEY
1981

I. WHO HUNTED

a. Who in your household killed a moose?_____

b. When was the moose killed? (Date)_____

II. HUNTING LOCATION

a. What areas did you hunt? (Plot on Map)_____

_____

b. Where did you kill the moose? (Plot on Map)_____

_____

c. How much time was spent hunting moose in each area?_____

_____

III. HUNTING METHODS

a. What form of transportation did you use to get to the hunting area? (Boat, Tryck, Airplane, ATV, Horse, Foot)_____

b. What form of transportation did you use while actually hunting?

_____

c. What equipment do you use in hunting? (Gun, Bow and Arrow, Moose Call, Moose Antler, Binoculars, Tree Stand, Skidder, Chain Saw, A Camp, etc.)

_____

d. Who do you hunt with?_____

IV. ASSOCIATED ACTIVITIES

a. What other activities do you participate in while hunting moose? (Hunting, Fishing, Gathering, Other)_____

_____

Number_____

V. DISTRIBUTION (See Form A)

a. Who was involved in the distribution of the moose?

b. Who are the household members?

c. Who are the primary recipients of the moose?

d. What is their relationship to the hunter?

e. What portions of the moose do the recipients receive?

VI. PRESERVATION

a. How do you field dress your moose?_____

_____

b. How do you store your moose meat?_____

_____

VII. GENERAL QUESTIONS

a. Who do you know who hunted and killed a moose this year?_____

_____

b. Who do know who hunted but did not kill a moose this year?_____

_____

_____

c. When other than the September season would be a good time to hunt moose?

_____

d. Why would this be a good time of the year?_____

_____

_____

_____

e. Have you hunted moose in years past?_____

f. Would you be willing to provide information on these years of hunting at a latter date?_____

Number_____

VIII. COMMENTS

_____

_____

_____

_____

_____

_____

_____

_____

Appendix B Continued

Form A.

DISTRIBUTION

Number _____

HUNTER					
DISTRIBUTOR					
HOUSEHOLD MEMBERS					
RELATIONSHIP TO HUNTER					
PRIMARY RECIPIENTS					
RELATIONSHIP TO HUNTER					
NO. OF HOUSEHOLD MEMBERS					
PORTION OF MOOSE RECIEVED					

Appendix C

Number _____

TYONEK MOOSE SURVEY NUMBER 2
UNSUCCESSFUL HUNTERS
1981

I. WHO HUNTED

a. Who in your household hunted a moose?_____

_____

II. HUNTING LOCATION

a. What areas did you hunt? (Plot on Map)_____

_____

_____

_____

b. How much time was spent hunting moose in each area?_____

_____

III. HUNTING METHODS

a. What form of transportation did you use to get to the hunting area? (Boat, Truck, Airplane, ATV, Horse, Foot)_____

b. What form of transportation did you use while actually hunting?

_____

c. What equipment do you use in hunting? (Gun, Bow and Arrow, Moose Call, Moose Antler, Binoculars, Tree Stand, Skidder, Chain Saw, A Camp, etc.)

_____

d. Who do you hunt with?_____

IV. ASSOCIATED ACTIVITIES

a. What other activities do you participate in while hunting moose? (Hunting, Fishing, Gathering, Other)_____

_____

Number_____

V. DISTRIBUTION (See Form A)

a. Who was involved in the distribution of the moose?

b. Who are the household members?

c. Who are the secondary recipients of the moose?

d. What is their relationship to the Primary Recipient?

e. What portions of the moose do the recipients receive?

f. From whom did you receive moose meat?

VI. PRESERVATION

a. How do you store your moose meat?_____

_____

VII. GENERAL QUESTIONS

a. Who do you know who hunted and killed a moose this year?_____

_____

_____

b. When other than the September season would be a good time to hunt moose?

_____

c. Why would this be a good time of the year?_____

_____

_____

_____

e. Have you hunted moose in years past?_____

f. Would you be willing to provide information on these years of hunting at a latter date?_____

Number_____

VIII. COMMENTS

_____

_____

_____

_____

_____

_____

_____

_____

Number _____

Form A.

DISTRIBUTION

HUNTER/GIVER					
PRIMARY RECIPIENT					
DISTRIBUTION					
HOUSEHOLD MEMBERS					
RELATIONSHIP TO HUNTER/GIVER					
SECONDARY RECIPIENT					
RELATIONSHIP TO PRIMARY RECIPIENT					
NO. OF HOUSEHOLD MEMBERS					
PORTION OF MOOSE RECIEVED					

Appendix C Continued