Trapping in Alaska Communities With Mixed, Subsistence-Cash Economies

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ABSTRACT

This report describes the place of trapping in the mixed, subsistence-cash economies of rural Alaska communities. The fur trade has a long tradition in rural Alaska. Furs have been traded for money and other goods for over two centuries. By catching and selling furs, most households earn relatively modest amounts of money annually, as indicated by case communities. Fur harvests had estimated mean gross values of $1,488 per trapper in Skwentna (1985), $1,477 per trapper in Stevens Village (1984), and $7,549 per trapper in Ft. Yukon (1988). Net returns may be about 50 percent of gross. In addition, trapline activities produce wild foods, raw materials, and fuel consumed locally by households. A substantial number of other non-monetary social values also derive from trapping, especially the socialization of young males regarding traditional knowledge, skills, and beliefs which benefit the community's general welfare.

For most trapping households in rural areas, trapping is generally profitable when attached to a larger complex of traditional fishing, hunting, and gathering activities. Trapping is typically an incremental use of equipment and land used for other subsistence activities. A cost-return accounting of trapping typically shows positive returns to trappers if capital equipment costs are prorated across all subsistence activities. Rural residents generally consider trapping to be a part of an annual cycle of subsistence activities.

State regulations currently recognize "trapping" as a single generic management category. State management does not distinguish between "subsistence trapping", "commercial trapping", "recreational trapping", or combinations of these. "Customary trade" and the sale of handicraft articles of fur are recognized as subsistence uses under the state and federal subsistence statutes. Currently, trapping by rural Alaska residents is allowed on federal park lands as a subsistence activity. State classification of trappers into "commercial" or "recreational" categories might lead to their exclusion from park lands by federal managers.

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INTRODUCTION

This paper describes the place of trapping in the mixed, subsistence-cash economies of rural Alaska communities (Wolfe and Walker 1987). Recent information on trapping from three case communities (Skwentna, Stevens Village, and Fort Yukon) are presented to illustrate how trapping fits into the rural socioeconomic system (cf., Stanek 1987; Sumida 1988; Sumida and Andersen 1990).

The report is written to provide information to the Board of Fisheries as they consider regulatory proposal No. 396 at the fall 1991 board meeting. This proposal prohibits the feeding of subsistence-caught fish to dogs used for commercial activities, including trapping:

> **Board of Fisheries Proposal No. 396**
> **5 AAC 01.XXX.** Fish caught for subsistence purposes cannot be feed to dogs used for commercial activities including but not limited to dog racing, trapping, or commercial kennels.
> **5 AAC 39.975 DEFINITIONS**
> (XX) commercial purposes means... (language will be adopted by the Board of Fisheries.
> (XX) commercial kennels means... (language will be adopted by the Board of Fisheries.

The proposed regulation raises the issue of whether state regulations should define "trapping" as a type of commercial activity. At present, state regulations contain only a single management category called "trapping"; there are no distinctions between types of trapping activities, such as "subsistence trapping", "recreational trapping", or "commercial trapping". Also, "customary trade" and "the selling of handicraft articles out of nonedible by-products of fish and wildlife resources" are recognized as subsistence uses under the state and federal subsistence statutes. If state regulations are created to define certain types of activities to be "commercial", the regulations will need to distinguish them from "subsistence trapping" and "subsistence fur sales". The information on trapping and fur sales of this report may be used to discuss these regulatory issues.

CURRENT TRAPPING REGULATIONS

Currently, Alaska's statutes define "trapping" as a single regulatory category. "Trapping" is defined as "the taking of mammals declared by regulation to be fur bearers" (AS 16.05.940(34)). "Furbearer" means a beaver, coyote, arctic fox, red fox, lynx, marten, mink, least weasel, short-tailed weasel, muskrat, land otter, red squirrel, flying squirrel, ground squirrel, Alaskan marmot, hoary marmot, woodchuck, wolf, or wolverine (5 AAC 92.990). Furbearer is a classification of animals subject to taking with a trapping license.

There are no distinctions made in statute or regulation to distinguish "recreational", "commercial", or "subsistence" trapping as separate types of activities. There is only the single "trapping" category. Consequently, there are no separate recreational, commercial, or subsistence regulations dealing with trapping or the sale of trapped furs.

Under the state and federal subsistence statutes, "customary trade" and the sale of handicraft articles made of furs are recognized as subsistence uses:

> ""subsistence uses" means the noncommercial, customary and traditional uses of wild, renewable resources... for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption, and for the customary trade, barter, or sharing for personal or family consumption..." (AS 16.05.940).

The Boards have never specifically stated in regulation that trapping for sale is an example of a subsistence use, or that the sale of furs is an example of customary trade. The sale of furs is allowed under a general state regulation pertaining to the generic category, "trapping" (5 AAC 92.200).

Current federal subsistence regulations regarding trapping closely parallel state regulations, with one important distinction. Unlike state regulations, federal statute and regulations treat "subsistence trapping" as distinct from "non-subsistence trapping", the latter of which is prohibited on certain public lands.

"Subsistence trapping" is trapping by rural residents for subsistence uses, including sale. "Non-subsistence trapping" is trapping by non-rural residents. "Non-subsistence trapping" also includes trapping activities "as the employee of another person" (13.21(d)). Non-subsistence trapping is prohibited in National Parks, and trapping activities as the employee of another person is prohibited in National Preserves (13.21(d)). Current federal subsistence regulations also define "customary trade" as:

> "types and volumes of trade in existence among rural resident subsistence users prior to the passage of ANILCA. Customary trade does not include significant commercial enterprises established after the passage of ANILCA" (Temporary Subsistence Management Regulations for Federal Public Lands in Alaska, July 1, 1991 - June 30, 1991).

One possible effect of the state Board of Fisheries creating regulations which define "trapping for sale" as a "commercial" activity is that federal park lands might be closed to rural trappers by federal regulation. This would occur if federal management agencies adopted the state's regulations. The likelihood of this occurring is difficult to predict. Such a regulatory restriction would have significant impacts on many rural communities that historically have trapped on federal park lands.

The sale of furs by a trapper or hunter is not considered "fur dealing" in state regulation. "Fur dealing" is defined as "engaging in the business of buying, selling, or trading in animal skins, but does not include the sale of animal skins by a trapper or hunter who has legally taken the animal, or the purchase of animal skins by a person, other than a fur dealer, for the person's own use" (AS 16.05.940(16)). There are special reporting requirements for fur dealers which do not apply to trappers who sell their own furs.

In state regulation, furs which are sold also may be taken by hunting as "fur animals" (coyote, arctic fox, red fox, lynx, or red squirrel) or "big game" (wolf and wolverine) (5 AAC 92.990). "Fur animals" and "big game" are subject to taking

with a hunting license (5 AAC 92.990).

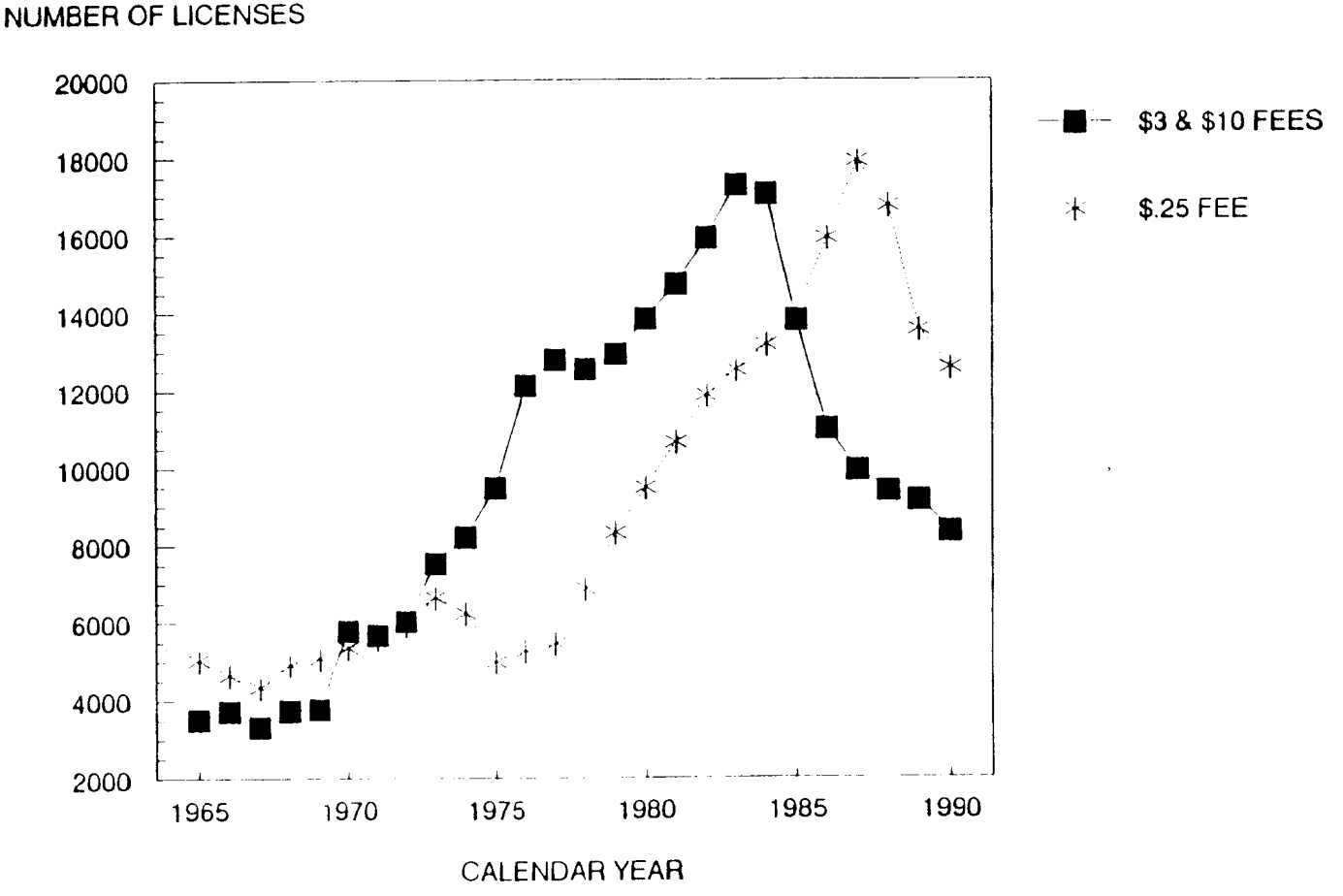
NUMBERS OF RESIDENT TRAPPERS AND TOTAL EXPORTS

In 1990, there were about 21,500 Alaska residents who purchased trapping licences (Fig. 1). About 13,000 purchased the $.25 license for low income households, while about 8,500 purchased the $3 or $10 license. The number of resident trappers is somewhat larger than this, as not all trappers purchase licenses, especially in remote areas. The number of trapping licenses have varied over the past quarter century, from about 8,600 licences in 1965 to a peak of about 30,000 licenses in the early 1980s to the current level. Increases in trapping license sales after 1965 were associated with increases in the number of state residents and improved license availability through the state vendor system. The most recent declines in trapping license sales are probably associated with decreases in fur prices, which make trapping less profitable.

Trends in exported fur volumes are discernable through fur export permit reports required of shippers (see Fig. 2). Over the past 40 years, the number of exported furs substantially declined during the 1950s; since then, reported exported furs have fluctuated between about 45,000 and 125,000 pelts annually (Fig. 2). About 75,000 furs were reported exported in 1990 (Fig. 2). The actual fur harvest is larger than this, as some portion of the annual fur harvest is not sealed, sold, or reported by fur dealers and fur exporters. In particular, furs harvested for local domestic uses in remote villages are commonly missed by the reporting system. Prior to the 1950s, annual fur harvests were larger and comprised a greater portion of the state's exports (Courtright 1968).

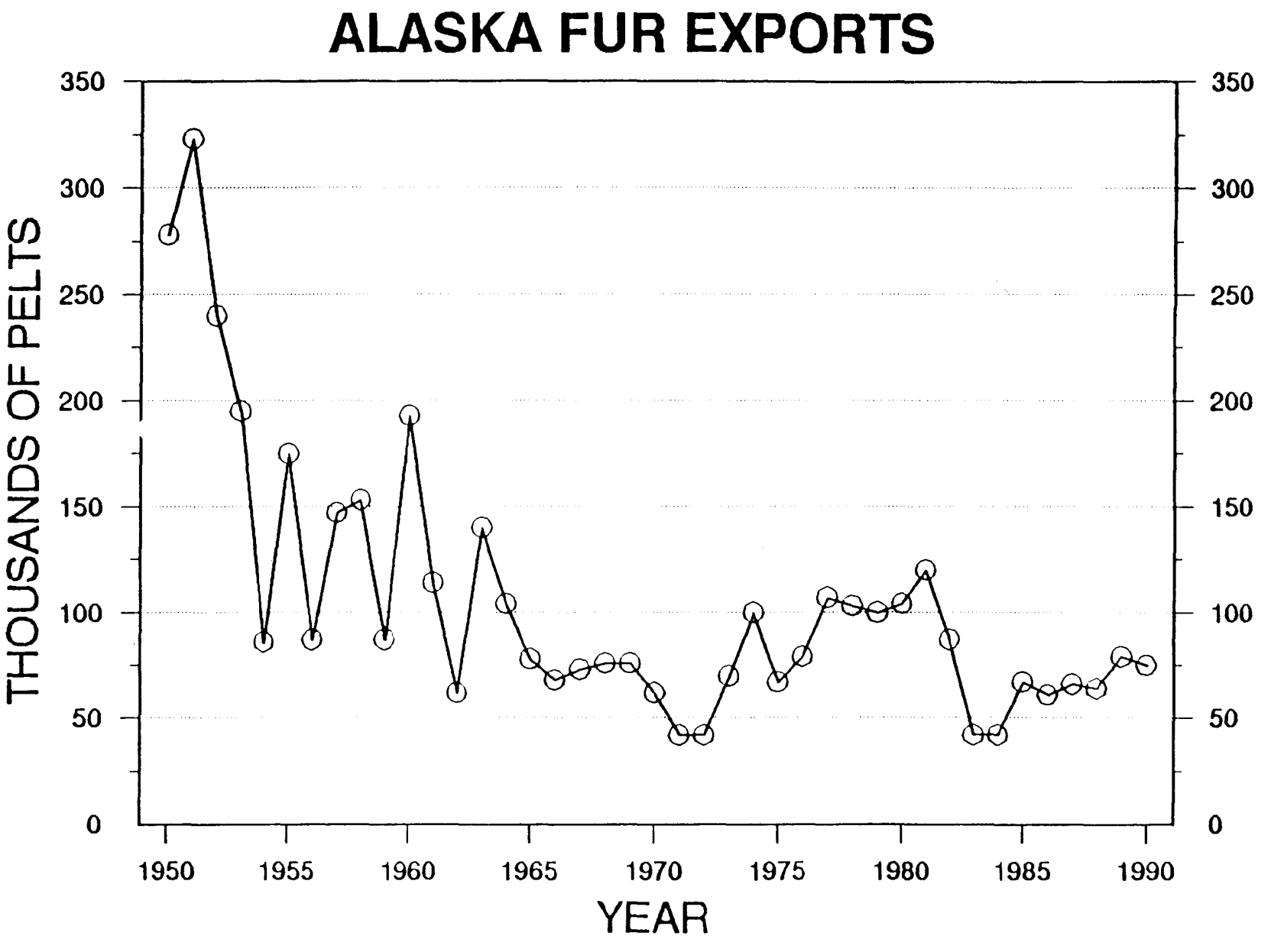
FIGURE 1

RESIDENTS LICENSED TO TRAP
1965 THROUGH 1990



Source: Herbert R. Melchior, Division of Wildlife Conservation, ADF&G

FIGURE 2



Source: Herbert R. Melchior, Division of Wildlife Conservation, ADF&G

THE MONETARY VALUE OF TRAPPING TO INDIVIDUAL TRAPPERS

The value of furs to individual trappers can be illustrated by trapping information from three communities -- Stevens Village, Skwentna, and Fort Yukon (Fig. 3). These communities were selected because there is good recent documentation of household trapping patterns. Trapping patterns at Fort Yukon were documented in 1988 by Sumida and Andersen (1990). The trapping information from Stevens Village was collected in 1984 by Sumida (1988). The trapping analysis at Skwentna was conducted in 1985 by Stanek (1987). While these case materials are several years old, they describe continuing trapping patterns which are similar to practices in many other rural communities.

Figs. 4-6 show the potential gross value of furs harvested by individual trappers in Stevens Village, Skwentna, and Ft. Yukon, respectively, assuming that all harvested furs are sold on export markets at the mean market value. (In fact, a portion of the harvest is retained for local use or trade, as discussed below.) The gross value does not take into account a trapper's monetary expenditures while engage in trapping, processing, and shipping fur products; that is, it assumes the trapper's costs are zero.

As shown by these three case communities, most trappers in rural villages harvest only modest quantities of furs, as measured by their gross values. In Stevens Village, the range of potential gross fur values was $0 to $8,755 per trapper, with a mean of $1,477 and a median of $500. In Skwentna, the range of potential gross fur values was $0 to $4,902 per trapper, with a mean of $1,488 and a median of $1,335. In Ft. Yukon, the range of potential gross fur values was $0 to $29,270 per trapper, with a mean of $7,549 and a median between $7,110 and $7,585. During the 1980s, Fort Yukon was probably among the most productive trapping communities in the state's rural areas, and their top harvesters

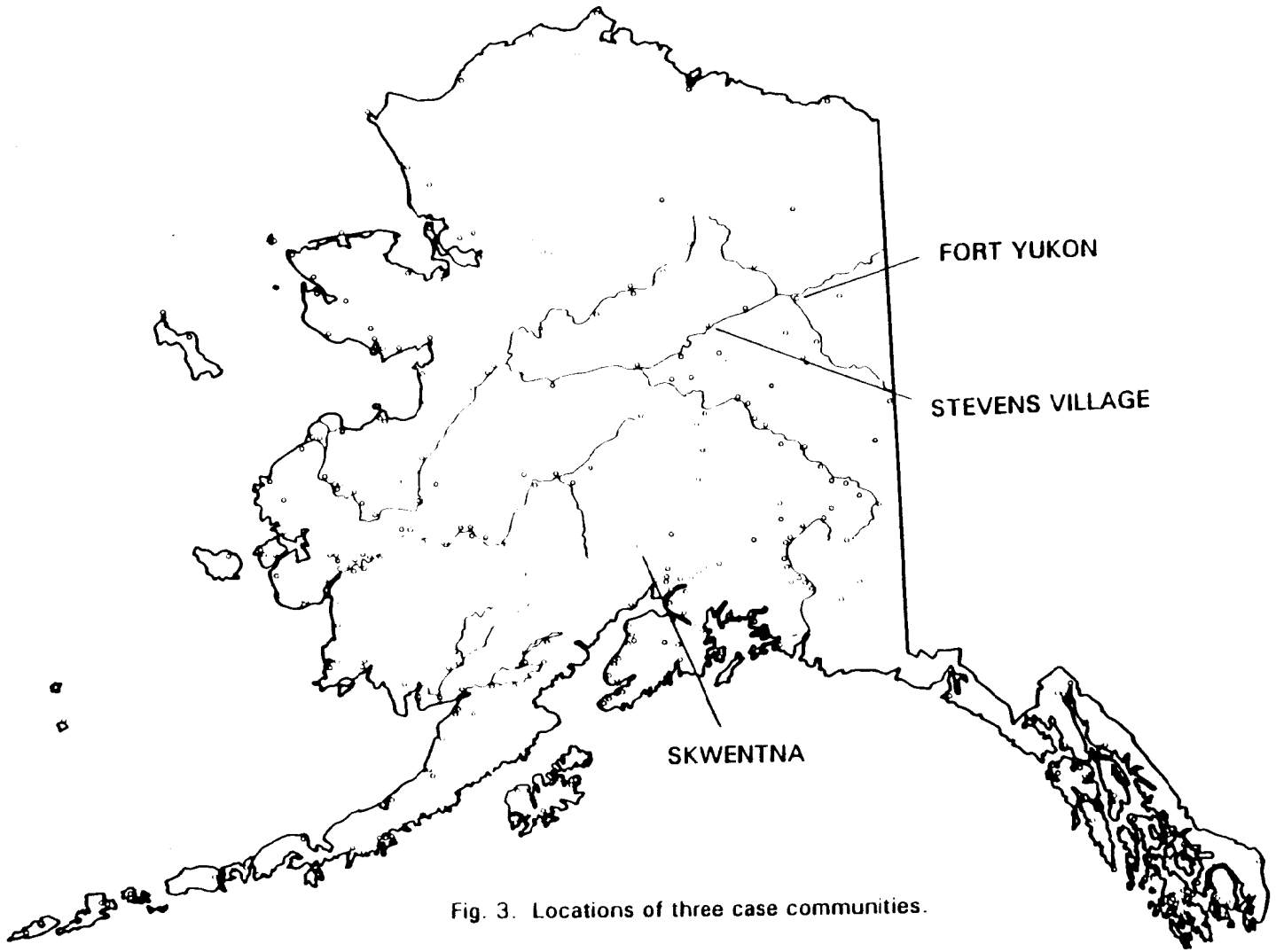


Fig. 3. Locations of three case communities.

FIGURE 4

GROSS VALUE OF FURS HARVESTED, STEVENS VILLAGE TRAPPERS, 1984

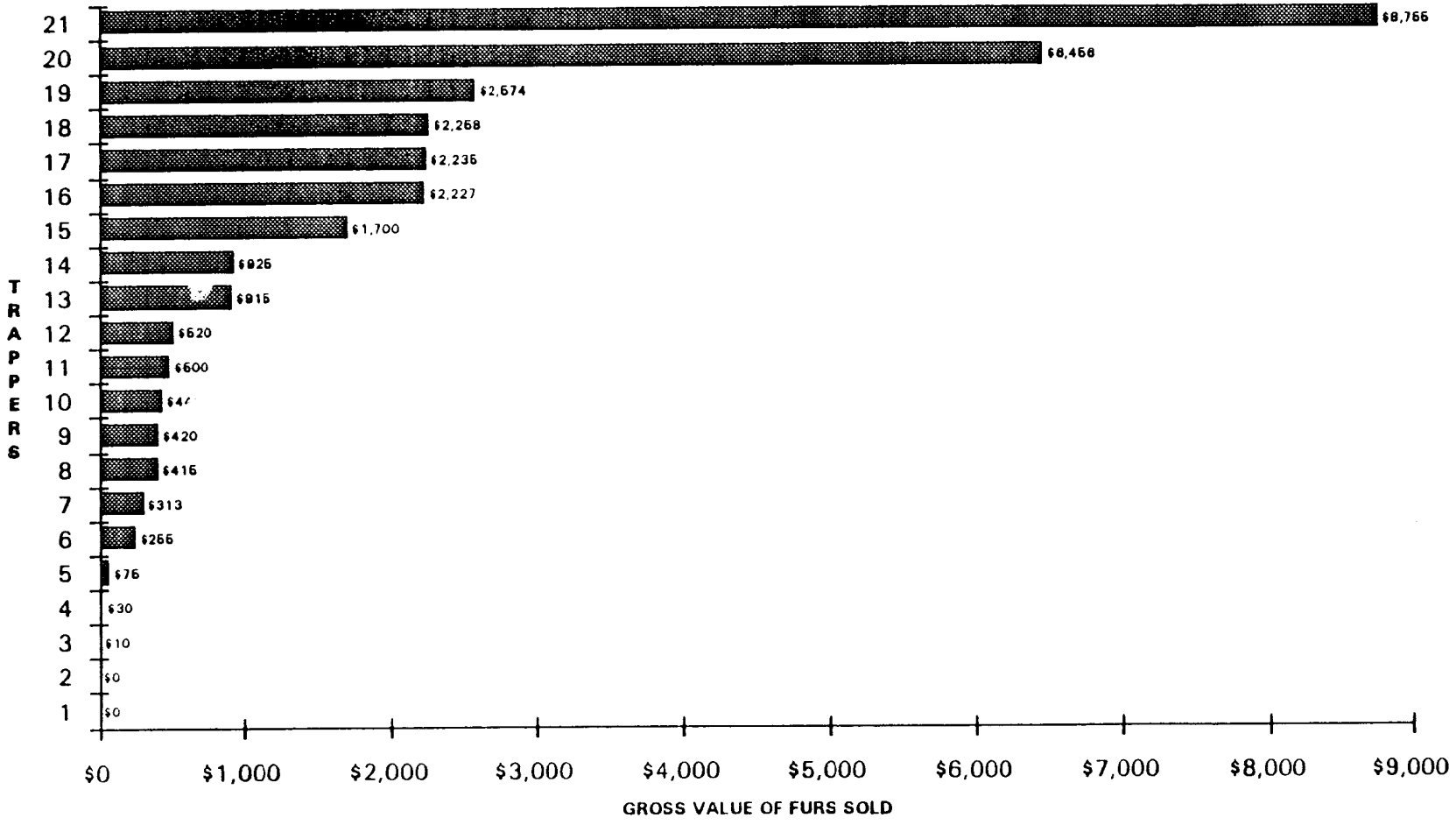


FIGURE 5

GROSS VALUE OF FURS HARVESTED, SKWENTNA TRAPPERS, 1984

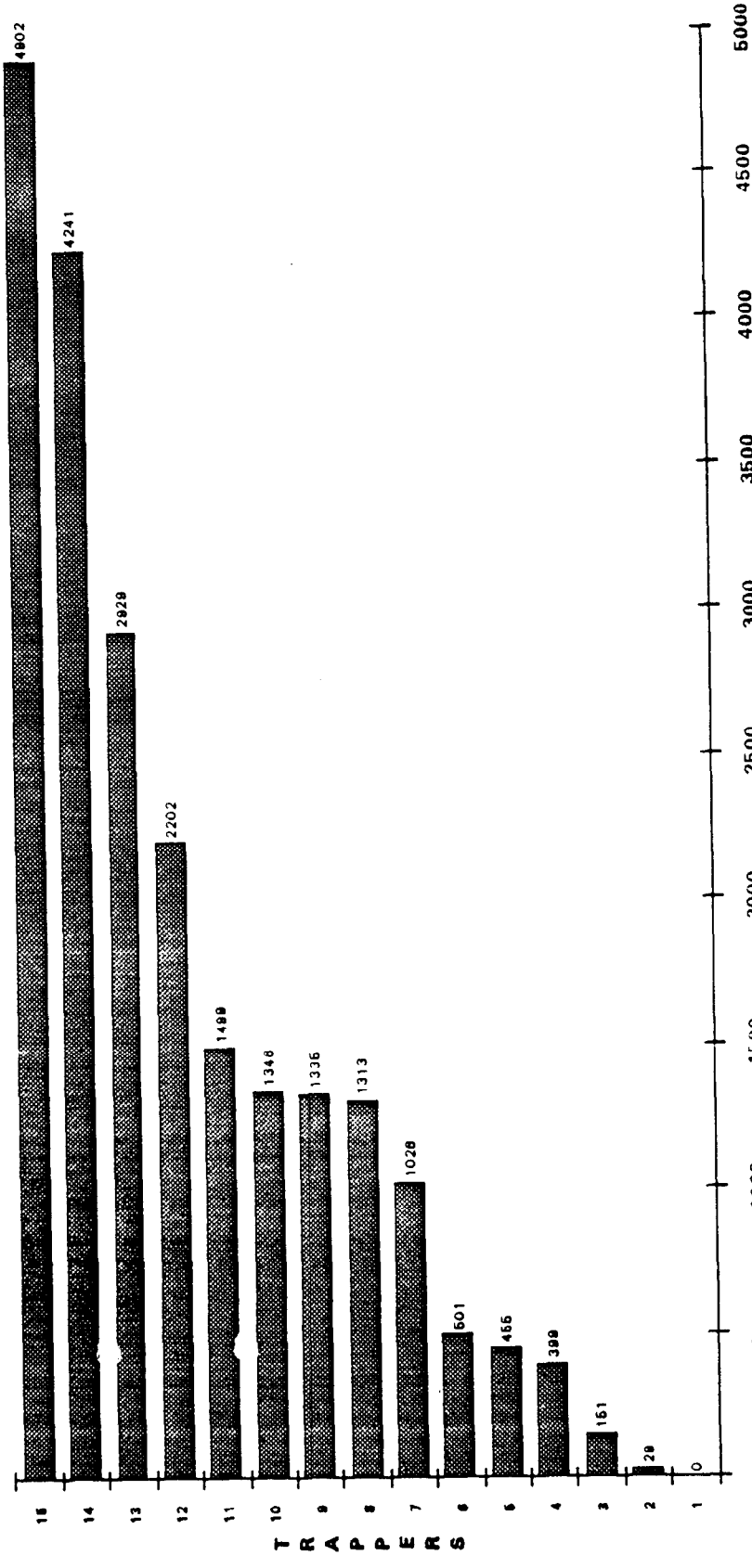
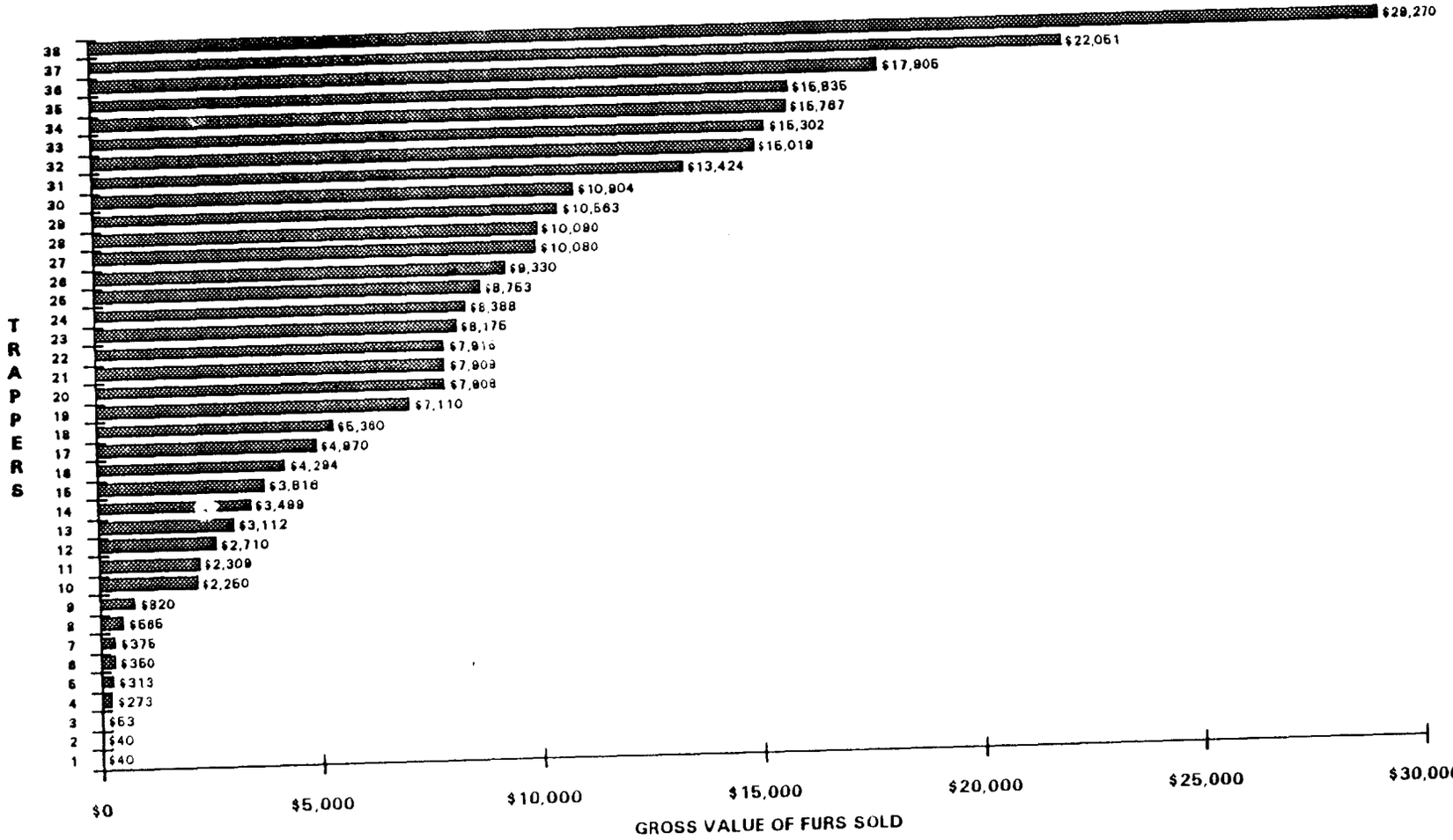


FIGURE 6

GROSS VALUE OF FURS HARVESTED, FT. YUKON TRAPPERS, 1987



probably are among the tops for rural trappers (Fig. 7). Trapping volumes at Stevens Village and Skwentna appear to fall in the middle to lower range of Interior communities that trapped during the 1980s (Fig. 7).

The net monetary value of furs to trappers is substantially less than the gross value, probably at least on the order of 50 percent less, as shown below. The net monetary value represents the monetary earnings to a trapper of furs actually sold, after the subtraction of trapping costs. Trapping costs can be calculated several ways, including prorated monetary expenditures for equipment (such as snowmachines, sleds, traps, and dog teams), fuel, and facilities (such as trapping cabins, tents, and trail lines) (Stanek 1987). Table 1 and Figure 8 show the net monetary value of furs at Skwentna calculated using six different cost accounting methods by Stanek (1987). These pertain to 15 Skwentna trappers for whom detailed cost-return information was collected. In all six cost accounting methods, labor costs are assumed to be zero; that is, no monetary value is attributed to labor in the equation. Also, equipment costs are prorated among all uses of the equipment, as described further below.

As shown in Table 1, the mean net monetary values of furs by Skwentna trappers ranged from -$119 to $833, depending upon the cost accounting method. By comparison, the potential mean gross fur value was $1,488. Thus, the highest estimated net value was about 56 percent of the gross value (that is, trapping costs ate up 44 percent of the fur's gross value). The lowest estimated net value was -8 percent of the gross value; that is, using one cost accounting method, trappers on average trapped at a loss at Skwentna. If Skwentna trapping patterns resemble patterns in other rural communities, it is not unreasonable to figure net fur values to be at least 50 percent less than gross fur values, as a mean across a group of trappers.

As another example of net returns, 43 trapping households in Ft. Yukon

FIGURE 7

MEAN GROSS MONETARY VALUE OF FUR HARVESTS PER TRAPPING HOUSEHOLD BY COMMUNITY, INTERIOR ALASKA

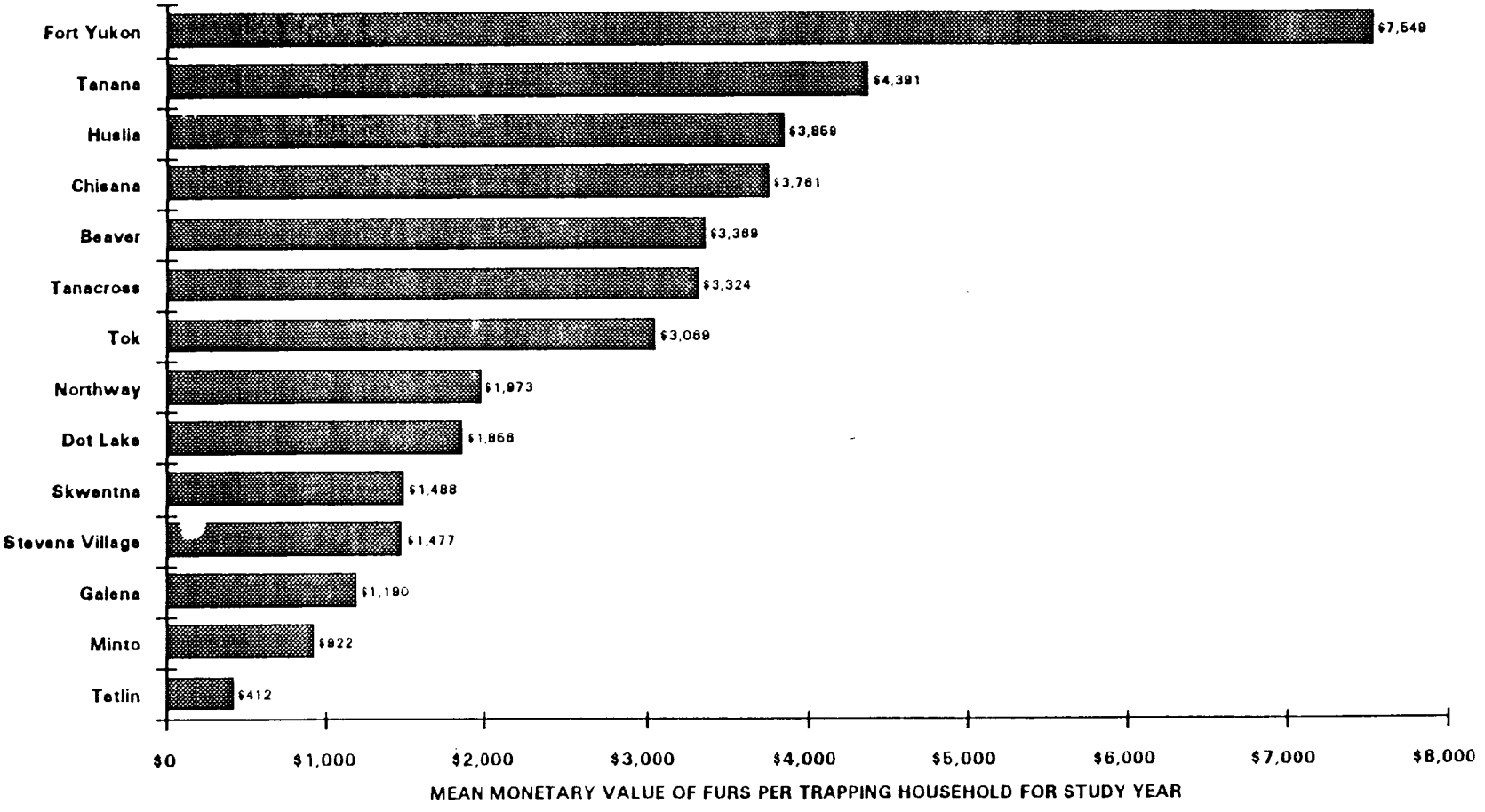


TABLE 1. NET INCOME ESTIMATES FROM TRAPPING, USING SIX CALCULATION METHODS, SKENTNA 1984

TRAPPER	GROSS FUR VALUE	NET INCOME METHOD 1	NET INCOME METHOD 2	NET INCOME METHOD 3	NET INCOME METHOD 4	NET INCOME METHOD 5	NET INCOME METHOD 6
1	$151	($615)	($407)	($115)	($464)	($256)	$36
2	$1,335	($578)	($79)	($178)	($382)	$116	$18
3	$4,902	$3,191	$3,607	$3,492	$3,346	$3,762	$3,647
4	$1,313	($810)	($535)	$190	($601)	($327)	$399
5	$455	($1,237)	($1,099)	($837)	($843)	($704)	($443)
6	$29	($643)	($477)	$7	($614)	($448)	$36
7	$1,026	$467	$591	$667	$624	$749	$824
8	$399	($397)	($120)	($397)	$2	$279	$2
9	$1,346	($585)	($475)	($185)	$761	$872	$1,161
10	$2,202	$409	$794	$1,409	$641	$1,026	$1,641
11	$1,499	$23	$309	$723	$298	$584	$998
12	$2,329	($1,145)	($522)	($485)	$879	$1,503	$1,539
13	$0	($115)	($60)	($115)	($115)	($60)	($115)
14	$501	($317)	($178)	($317)	$52	$191	$52
15	$4,241	$566	$1,452	$666	$2,606	$3,492	$2,706
MEAN	$1,488	($119)	$187	$302	$413	$718	$833

Method 1. Gross value of furs sold minus costs

Method 2. Gross value of furs sold minus costs excluding prorated equipment costs

Method 3. Gross value of furs sold minus costs excluding equipment repairs

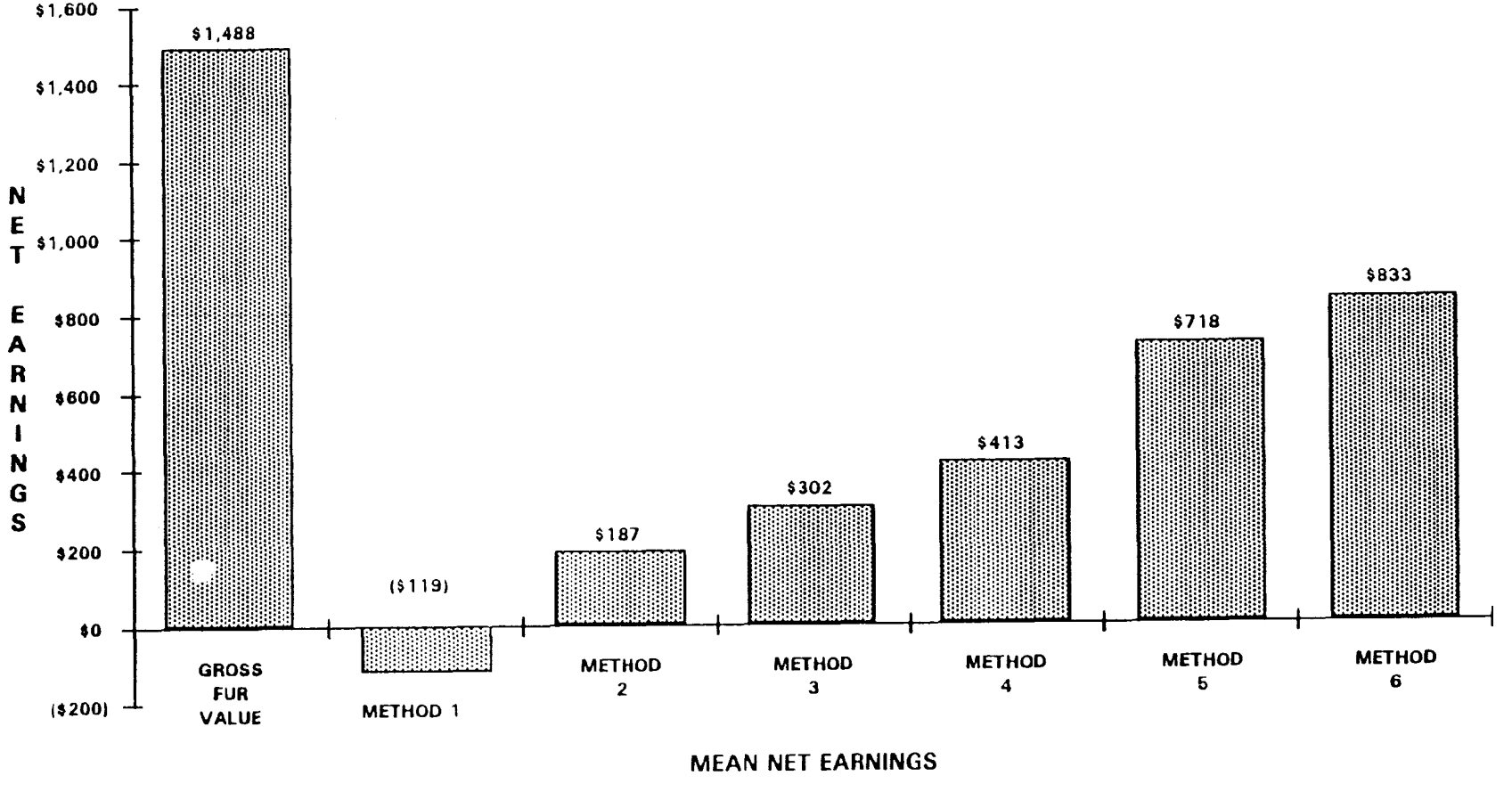
Method 4. Gross value of furs harvested minus costs

Method 5. Gross value of furs harvested minus costs excluding prorated equipment costs

Method 6. Gross value of furs harvested minus costs excluding repairs

FIGURE 8

MEAN NET EARNINGS OF TRAPPERS CALCULATED SIX WAYS, COMPARED WITH GROSS VALUE OF FURS, SKWENTNA, 1984



reported fur harvests with a potential estimated gross value of $7,549 per trapper if all furs were sold. The furs the trappers actually sold had a potential estimated gross value of $7,275 per trapper. The reported income actually earned from trapping was $5,149 per trapping household, which is 68 percent of gross. As reported income probably represents income before expenses for some surveyed households, the mean earned income per trapper may be less.

As shown above, it is somewhat difficult placing a precise value to a trapper's actual net monetary earnings, as there are several different cost-accounting methods. Nevertheless, all cost methods showed that trappers operate at relatively modest monetary scales. On average for the individual trapper, trapping is an activity that does not require much money, does not produce much money, and does not lose much money for the average trapper.

OTHER DOMESTIC VALUES DERIVED FROM TRAPPING

In addition to furs sold to outside fur dealers, trapping produces other domestic products for the trapper. A portion of the furs harvested are used by the trapper's own family or sold locally by the trapper's family, either as tanned pelts or as hand-crafted items. For instance, in Skwentna, of 256 beaver harvested in 1985, only 80 were sold to fur dealers. Of 33 land otter, only 14 were sold. Of 327 land otter, 210 were sold. In the Skwentna case, trappers on average sold $957 of the gross fur harvest which was valued at $1,488 per trapper. This means, figured by their potential dollar values, about 64.3 percent of their furs was sold, while 33.7 percent was retained for home use.

In rural areas, furs are commonly made into hand-crafted specialty items which are of higher value to the trapper than if sold as raw pelts. Cold-weather gear is commonly made from beaver, fox, marten, and land otter. In Skwentna, a

beaver pelt with a raw pelt value of $42 sold locally as a finished beaver hat for about $200. A land otter with a raw pelt value of $45 sold as a finished hat for about $250. In practice, many locally-made hats are not sold, but are used by the family or given away to others in the community. Other common items crafted with furs are mitts, coats, boots, fur ruffs, and slippers. In some rural areas, households use most of the wolverine and wolf pelts harvested locally for ruffs, wind guards, and lining, because imported materials are considered inferior. Almost all the pelts of hares and squirrels are used locally. The making and selling of hand-crafted items are subsistence uses recognized in state statute and regulation. There are no systematic studies of the amounts of furs which go into handicraft articles for home use and sale in Alaska.

Many furs kept for home use are distributed among households by sharing. Furs commonly flow between households along kinship networks. Fig. 9 shows the percent of households that reported giving or receiving furbearers in eleven Interior Alaska communities. For instance, in Fort Yukon, 62 percent of household reported receiving furbearers and 53 percent of households reported giving furbearers during the study year (Fig. 9). This was the highest among the sampled communities.

Some furbearers are used for food for people. Beaver, hare, and lynx are commonly eaten. More occasionally, muskrat, land otter, squirrel, and mink are eaten. The pounds of usable meat per person derived from furbearer harvests can be considerable, as shown in Fig. 10. In the community of Beaver, furbearers provided 57 lbs of meat per person the study year. In Fort Yukon, furbearers provided 33 lbs of meat per person. Furbearer meat is also commonly fed to dogs, and beaver carcasses are sold locally as dog food in many areas. Furbearer meat is also used as trapping bait.

FIGURE 9

PERCENT OF HOUSEHOLDS RECEIVING AND GIVING FURBEARERS BY COMMUNITY, INTERIOR ALASKA

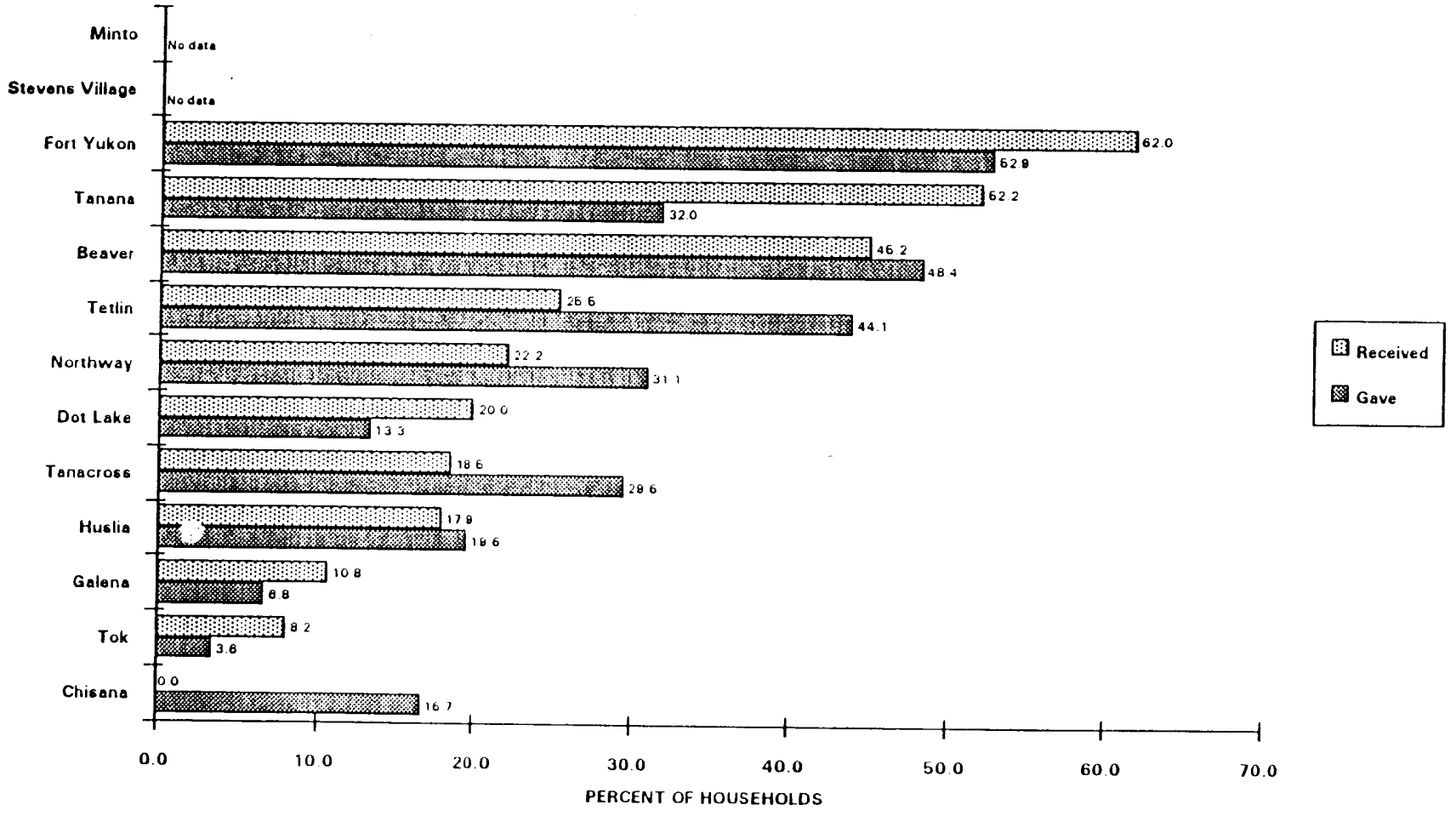
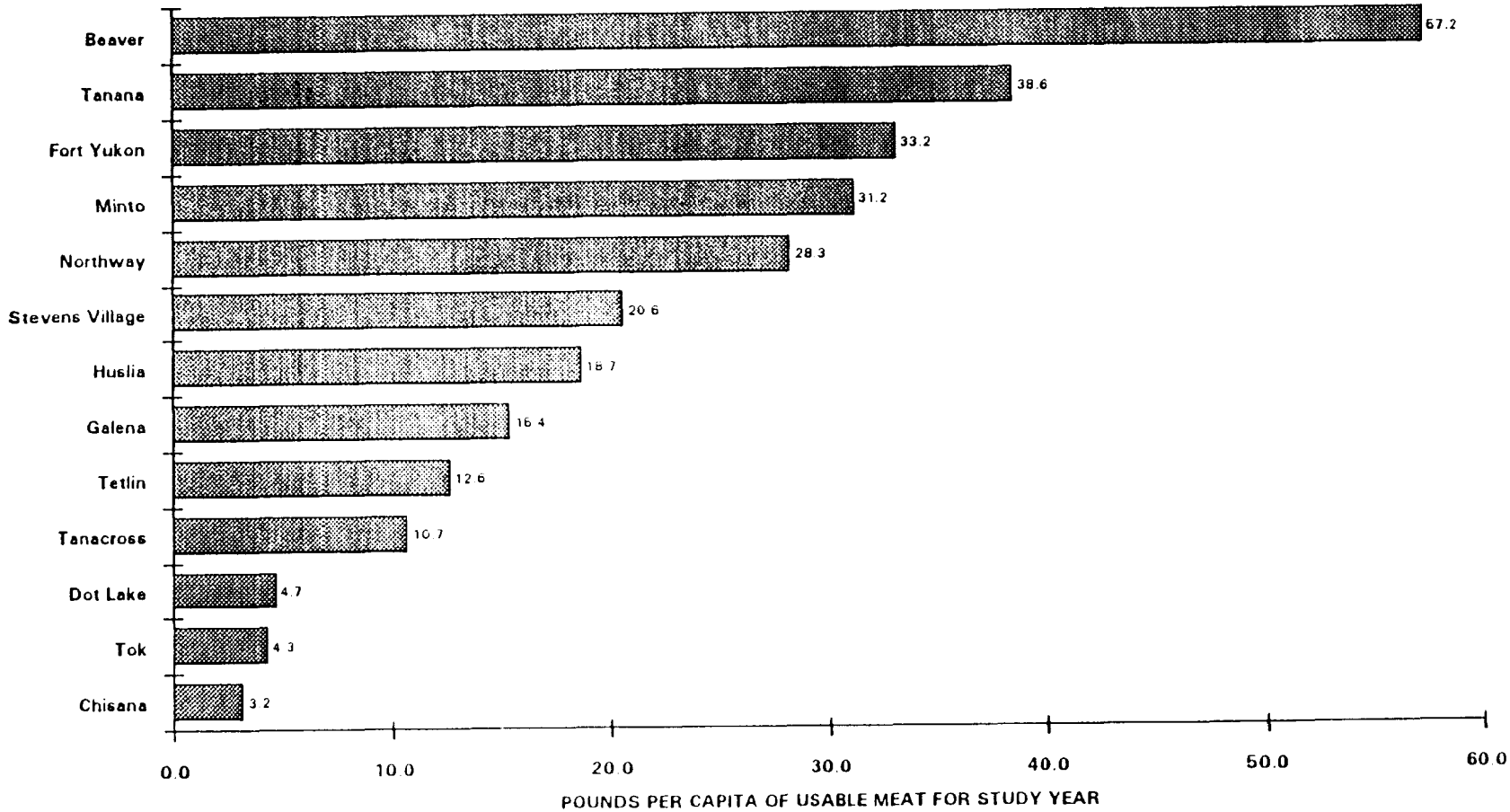


FIGURE 10

SUBSISTENCE FURBEARER HARVESTS (LBS PER CAPITA OF USABLE MEAT) BY COMMUNITY, INTERIOR ALASKA



THE LINKAGE OF TRAPPING WITH OTHER SUBSISTENCE PATTERNS

In most rural communities, running a trapline is a multipurpose activity, and the trail systems used as traplines serve multiple purposes. The trapline trail system serves as a winter transportation network for snowmachines and dog teams traveling between settlements. The trapline trail system represents a "groomed" territory used for hunting, trapping, fishing, and wood gathering during winter. Products commonly produced while engaged in trapping include wood for fuel, wood for construction, and meat from moose, caribou, and game birds, depending upon the community. Trappers commonly hunt while checking their lines. Moose or caribou taken at these times are brought back to the community and distributed, providing fresh food to a seasonal diet of dried fish and meats. To correctly figure the net returns from trapping, these additional products should be included in the cost-accounting equation. However, because of the difficulty of calculating their values in monetary terms, they are excluded from the cost-accounting methods used above.

Most rural communities are supported by mixed, subsistence-cash economies (Wolfe and Walker 1987). Subsistence activities are not "cash-less" activities -- they require cash and occasionally produce cash. During the year, a rural household typically engages in a seasonal cycle of traditional activities that produce subsistence foods and money. The household uses money to purchase equipment used in subsistence food production, such as boats, outboard motors, snowmachines, fishing nets, rifles, and ammunition. The ability to purchase equipment used in subsistence activities is contingent upon earning some money during the year. The monetary incomes earned typically in villages are not sufficiently large to support the family unless a portion is used in subsistence fishing and hunting. Trapping is one customary way of earning money for families who

participate in this traditional, mixed subsistence-cash economy.

Trapping in rural communities generally makes a profit for the average trapper if other subsistence activities are figured into the cost-return calculations. The cost-accounting methods used in the Skwentna analysis took into account the use of trapping equipment for other subsistence activities. That is, the total costs of owning and operating snowmachine, tents, and other equipment were prorated across all the activities which used the equipment, including hunting, fishing, wood cutting, procuring water, and so forth. For instance, on average, a household's snowmachine was used only 45 percent of the time for trapping in Skwentna. Thus, in the cost accounting methods, the costs of this equipment were prorated to reflect this use. If the total costs of equipment were allocated only to trapping, ignoring the other subsistence uses of the equipment, then most trappers appear to be trapping at a monetary loss. That is, it is not economic to trap unless trapping is an adjunct of other subsistence activities.

In practice, trapping typically is viewed by trappers as an additional use of equipment, labor, and land that are already being used for other subsistence activities. Trapping is an incremental use of snowmachines and trapping trails that otherwise would be underutilized during winter. Viewed this way, trapping is part of a larger complex of subsistence activities.

Most trappers recognize that the money netted by trapping is insufficient by itself to meet a family's annual monetary expenses. But the trapping earnings can be important when combined with money from other seasonal, income-producing activities. It is common for families to patch together several income streams during the year, such as commercial fishing, fire fighting, construction work, the permanent fund dividend, local public-sector wage employment, and trapping (see Stanek 1987, Sumida 1988, and Sumida and Anderson 1990). The net earnings from trapping on some years may make the difference between a tight or more

manageable yearly household budget. The money that comes from trapping also is earned during winter, a time of the year when other seasonal jobs are typically scarce. So if a person did not trap, the person might not have any incoming money. On a very good year, with a combination of high fur yields and strong market prices, trapping may produce a "windfall" large enough to allow a trapper to replace or upgrade equipment, such as a snowmachine or an outboard motor.

The incomes of the three case communities illustrate the low income levels typical for rural communities with subsistence economies. The mean taxable income per income tax return in 1985 was $6,685 in Stevens Village, $13,632 in Skwentna, and $13,571 in Ft. Yukon (Division of Subsistence, Community Profile Database). This compares with mean taxable incomes of $25,464 in Fairbanks and $25,855 in Anchorage. In the three case communities, reported trapping income represented 3.7 percent of the community's monetary income in Ft. Yukon, 27.0 percent of the community's income in Stevens Village, and 19.5 percent of the community's income in Skwentna. The contribution of trapping to the community's economy is variable from year to year. Trappers continue to trap, even for modest returns, in part because of the low, insecure monetary base in rural areas. To maximize economic security over time, households maintain involvement in trapping because it is one of the few, sustainable sources of money available to the community.

TRAPPING IN STEVENS VILLAGE: A CASE EXAMPLE

The role of trapping in the traditional economy and sociocultural system of rural Alaska communities can be illustrated with additional materials from Stevens Village (Sumida 1988). Stevens Village is a predominantly Koyukon Athabaskan community on the Yukon River at the western edge of the Yukon Flats. Its

population was 90 people in 30 households during the study year (1984), and 102 people in 1990. Stevens Village represents a community which derives relatively modest monetary returns from trapping, which is typical for most rural Alaska communities during this past decade. Monetary incomes in Stevens Village are among the lowest in Alaska. During the study year, the average household income was $5,374 in Stevens Village. Only two residents had commercial salmon fishing permits.

Trapping is part of a larger complex of hunting, fishing, and gathering activities that traditionally have supported Stevens Village. As shown in Figure 11, most subsistence foods are harvested during the ice-free season, about May through October, primarily salmon (921 lbs per capita), whitefish (53 lbs per capita), and fall moose (54 lbs). This is also the period that most seasonal wage employment is available. During winter, severe low temperatures and snow cover reduce the availability of local wild species to furbearers (hare, beaver, muskrat, marten, otter, fox, wolf, mink, lynx), moose, and game birds (ptarmigan and grouse). The primary productive activities from the land at this time are those conducted along trapline trails.

An extensive, complex network of trapline trails have been established and maintained by Stevens Village residents across the Yukon Flats (Fig. 12). Active trails are brushed out annually by trappers. Cabins and sheltered campsites for canvas wall tents are maintained throughout the system. The subsistence use area surrounding Stevens Village is considered the common property of the local group, open to community members for subsistence uses following local customs. The rights to trap along pieces of the trail network are "owned" by particular trappers according to customary rules. Rights to traplines tend to be inherited, but also can be given, sold, or lost through inactivity.

Prior to the mid-20th century, families dispersed to winter camps for

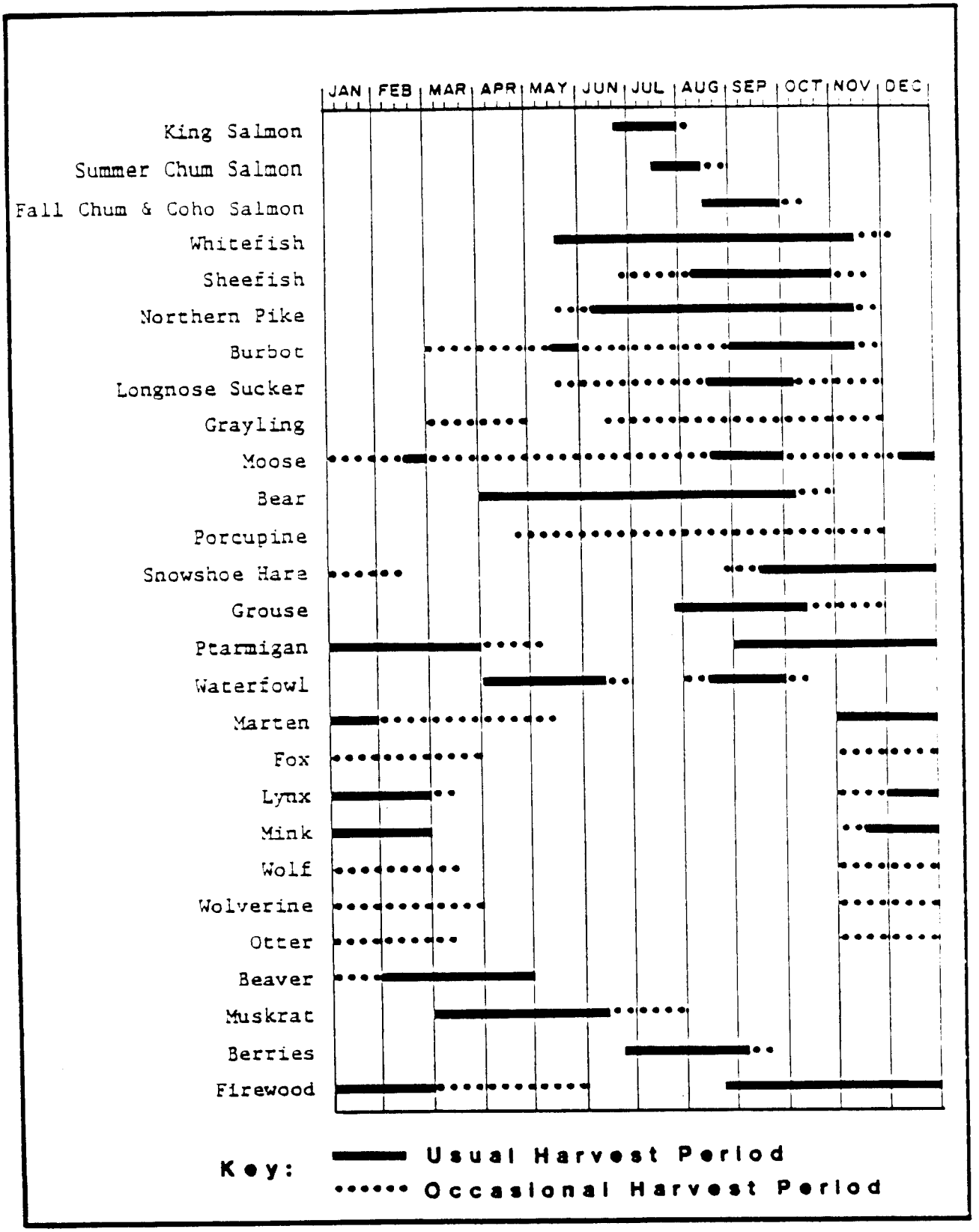


Fig. 11. Seasonal cycle of harvest activities, Stevens Village, circa 1980s (Sumida 1988)

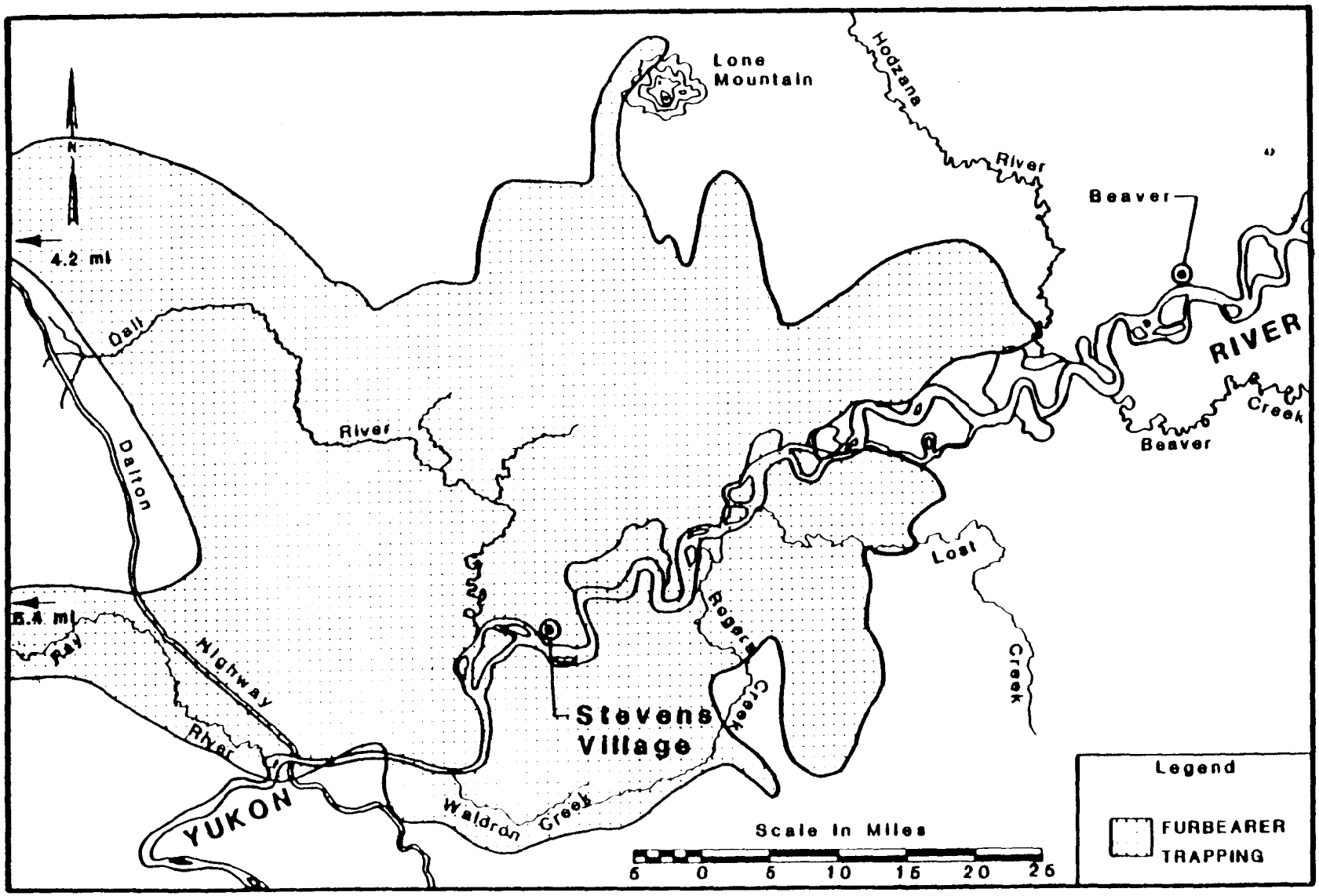


Fig. 12. Areas used by Steven Village residents for furbearer hunting and trapping, 1974-84 (Sumida 1988)

trapping. They gathered for mid-winter celebrations during which visits with Eskimo trading partners were made. The mid-winter gathering was followed by extended trips by families for hunting and trapping. Another move to "rat camps" were made in April to hunt muskrat. After mandatory public school attendance, families remained at Stevens Village during winter. Trappers traveled to traplines from the winter community, primarily with snowmachines. Traplines varied in length from a few marten sets a short distance from the community, to traplines 80 miles long with 200 traps. Sumida (1984:161-162) describes this pattern in 1984:

> "[Y]oung adult males in the community often learned to trap from an older, experienced trapper, usually a close relative such as their father or uncle. In this way younger men learned about the specific areas being trapped along with trapping techniques and animal behavior. This information was especially relevant as the younger man would someday inherit the trapping area.
>
> In certain instances a trapper learned about another individual's trapline when a partnership was formed. When local trappers talked about the areas they had trapped, they were careful to specify ownership of the trapline. Partnerships were sometimes relatively permanent and longstanding while others were temporary in duration. Partners often maintained separate lines in the same general vicinity of one another. They may have helped one another check lines but usually kept their caches separate. During the 1983-84 trapping season, ten Stevens Village trappers reported having a trapping partner, most commonly a related individual.
>
> Trading posts, which were still common in the first part of the century, no longer operate to subsidize trappers on credit in exchange for their fur harvest. Instead, trappers sometimes shared expenses with a partner or were subsidized by another trapper with available cash in

exchange for assistance in trapping activities. To undertake trapping required an initial cash outlay of up to several thousand dollars for the purchase of necessary equipment. Snowmachines were currently the main mode of transportation, and commercial traps and snares were used. Annual expenditures were made for equipment repair, fuel, and other supplies...

Trapping areas extended north to Lone Mountain, west up Dall River towards the pipeline and Dall City, south to Rogers and Lost Creeks, and east towards the mouth of the Hodzana River... [see Fig. 12].

Once traplines were set up, most village trappers checked their lines once a week or every few days. A few trappers waited ten days to two weeks between trips. Depending upon the distance to be traveled and the length of the line, tending the lines took from a single day to one week. Traplines near the village were often reached by walking, whereas snowmachines were used for travel to more distant areas. A common pattern reported by trappers during the winter of 1983-84 entailed spending one or two days each week checking lines. Fifteen trappers reported traveling an average of 40 miles round trip to their trapping areas. Round trip distances from individual trappers ranged from 3 to 80 miles.

Sets were baited with a variety of material, including "green" or slightly decomposed fish with a strong odor, often whitefish or chum salmon. Fish eggs, carcasses of other furbearers, bird wings, beaver castor, and commercial lures were also used as bait.

Beaver, lynx, and muskrat were commonly used for human consumption although these and other furbearer carcasses were sometimes fed to dogs, used as bait, or were discarded. Trappers used both homemade and commercial stretchers for drying furs. After drying, furs were stored until they could be sold to fur buyers. Most households kept some furs

which they home-tanned for use in sewing hats, mitts, mukluks, or parka trim."

The income generated by trapping was relatively modest in terms of absolute size. In 1983-84 in Stevens Village, 21 trapping households harvested 432 marten, 40 fox, 26 lynx, 14 beaver, 8 mink, 4 wolverine, 1 land otter, and 950 muskrat. The estimated gross value of the fur harvest was $31,026, or $1,477 per trapper (range $0 to $8,755), in 1984 dollars. This is the value of the furs before trapping expenses (such as snowmachine, fuel, traps, and labor). As shown in Figure 4, 66.6 percent of trapping households harvested furs with a gross value of less than $1,000. Only 2 of 21 trapping households harvested furs with gross values of greater than $5,000.

While small in absolute size, the monetary earnings were important to Stevens Village households. Because the mean household income was only $5,374, gross fur values represented 27 percent of the total household income for the year. Fur harvests are produced at a time of year when there are few other opportunities to earn money.

In addition to their gross monetary values, trapping produces a number of social and cultural values to the community. Trapping is one important channel for socializing young adults into traditional subsistence patterns. This is especially true for families that use dog teams for travel along the winter trail networks. The daily work of keeping a dog team teaches a variety of responsibilities to young adults, including traditional knowledge, skills, beliefs, and lore. These are socially important later on in the young adult's life. Trapping gets males out on the land, where they learn the survival techniques that have traditionally sustained their social group. Purposeful, productive, and meaningful activity during winter helps create responsible adults who support the family and community.

SUMMARY

The three case communities illustrate several aspects of trapping. Trapping in rural communities like Fort Yukon, Stevens Village and Skwentna is part of a traditional, mixed subsistence-cash economy. Trapping is integrated with a whole complex of traditional fishing, hunting, gathering, and trapping activities. Trapping occurs during winter, from about November through May, targeting several types of animals during the course of the season. In comparison with summer and fall, winter is a relatively less productive economic season in terms of subsistence productivity and monetary employment. Work along traplines represent one of the few types of productive activities during winter.

Trapping produces both money and products used by the domestic household. For direct family use, activities along traplines produce:

1. wild foods for human consumption (beaver, squirrel, muskrat, lynx, hare), including moose and caribou taken during winter in many communities;
2. raw materials for specialty clothing, bedding, and other hand-crafted items, especially cold-weather gear for the head, hands, and feet;
3. dog food and trapping bait; and
4. wood for heating homes, cooking, and bathing.

Trapping also typically produces small amounts of money for families through the sale of several products:

1. raw furs sold to outside buyers;
2. furs sold to neighbors for hand-crafted items;
3. hand-crafted items sold locally; and
4. dog food and trapping bait sold locally.

The values of the raw furs and the products used locally are difficult to directly compare through cost accounting techniques.

Trappers do not make much money from selling furs on good years, nor do they accrue much loss on bad years. If cost accounting methods disregard the other subsistence uses of capital equipment, then trapping appears to be a money loser for most trappers. In practice, for most trappers, trapping only is profitable as an adjunctive activity to other subsistence pursuits. In this type of cost calculation, trapping activities are viewed as a way to earn additional money at the margin on equipment and lands used for other subsistence pursuits, which otherwise would be underutilized during the slack winter season. Thus, for most trappers, trapping becomes profitable when part of a larger, on-going subsistence pattern.

Finally, trapping is important for socializing young adults into a subsistence way of life. This is especially true for families that trap with dog teams. The daily work of keeping a dog team teaches a variety of responsibilities to young adults, including traditional knowledge, skills, beliefs, and lore, which are socially important later on. Trapping gets males out on the land, where they learn the survival techniques that have traditionally sustained their social group.

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