

HISTORICAL POPULATIONS IN WESTERN ALASKA AND MIGRATION THEORY

by

WENDELL H. OSWALT

Introduction. The purpose of this paper is to discuss the historical ethnic groups along the Kuskokwim River system of western Alaska and to view the population shifts in terms of migration theory. The empirical data and its interpretations should be considered as a reconstruction of shifting ethnic boundaries and as a step toward assembling a comprehensive ethnography of the Kuskokwim River peoples. It might be initially mentioned that there are several unique characteristics of Kuskokwim ethnic boundaries that are significant in the total analysis of Eskimo culture. For example, the upriver migration of the Eskimos is still taking place, and the Kuskowagmiut have penetrated farther inland than any other contemporary Alaskan Eskimos. These Eskimos also have had, in the recent past, more contact with diverse Athapaskan tribes than any other segment of the Yupik population. Furthermore, and in striking contrast with other areas of Eskimo-Indian contacts, the relationships between the two groups have been surprisingly amicable.

The Kuskokwim River system, draining some 50,000 square miles of western Alaska, was not penetrated by the Russians until 1830, and only three settlements of a permanent nature were occupied by the early Russian traders and missionaries. Following the purchase of Alaska by the United States in 1867 and until the early 1940's few outsiders occupied the region. Virtually the only persons of western European ancestry along the river were Bureau of Education (later Bureau of Indian Affairs) educators, hospital personnel or administrators; missionaries; and fur traders or trappers. The historically isolated position of the Kuskokwim River system has been due largely to the relative local scarcity of fur animals and precious metals, which have been the two most sought after products in this sector of Alaska.

The primary ethnographic account of the indigenous population was written by L. A. Zagoskin based upon his travels during the Russian period. Other ethnographic information may be found scattered through the writings of Glazunov, Elliott, Nelson, Gordon, Hrdlicka and Osgood, as well as in the published and unpublished accounts of missionaries. Additionally, I have spent a total of 17 months in the region since 1952 making anthropological studies.

Ethnic boundaries at the time of historic contact. The year A.D. 1830 has been selected as a date representative of aboriginal occupancy, for it

was during this year that the Vasilief party penetrated the main course of the Kuskokwim River. The Vasilief journals have never been published, but we do have the benefit of the published Glazunov account with observations from 1833 and 1834 (Van Stone, 1959). The slightly later ethnographic observations by Zagoskin from 1842 to 1844 describe essentially aboriginal conditions. In reconstructing the ethnic boundaries pertinent information from Glazunov and Zagoskin has been relied upon most heavily and then supplemented by later firsthand published observations or by informants' statements. It is assumed that present day informants interested in ethnic groupings are a reliable source of boundary information.

Identification of the Kuskokwim River ethnic groups will be based largely upon linguistic affinities. Linguistic rather than cultural criteria must be first considered for establishing these boundaries due to the heterogeneous nature of the socio-cultural milieu along much of the river. The four ethnic groups along the Kuskokwim River drainage represented Eskimoan and Nadene linguistic phyla. The Kuskowagmiut were Eskimoan speakers of the Yupik family, while the Nadene, Northern Athapaskan division, was represented by the Ingalik, Tanana and Tanaina. Considering the ethnic distributions at the time of contact we find that Indians, Eskimos and most white observers agree rather closely concerning the extent of the inland penetration of the Kuskowagmiut. These Eskimos clearly occupied the Kuskokwim River as far upstream as the vicinity of Kolmakoff Redoubt (Nelson, 1899, Plate II; Zagoskin, 1847; Petroff, 1884, p. 13; Elliott, 1886, p. 407; Explorations in Alaska, 1898, pp. 31-2; Spurr, ms, p. 71). The area of continuous occupancy was then broken along the Kuskokwim River proper, but Eskimos also occupied the Holitna River drainage. Likewise they probably had settled along the Hoholitna River although this river may have been jointly occupied by Eskimos and Tanaina.

Athapaskan distributions at the time of historic contact are generally more difficult to reconstruct. However, it is certain that Tanaina, originally from the Lake Clark region, lived along the Stony River and were the exclusive occupants of this drainage. It is also possible that the Tanaina ascended the main stream of the Kuskokwim above the Stony River junction, but since there is some uncertainty concerning who the occupants of the area were, it has been designated as Ingalik territory (Map 1). According to E. Hosely, who recently (1960) worked among the McGrath area Indians, the inhabitants of the upper Kuskokwim River from above the junction of the Stony River to slightly beyond the North Fork junction were related in traditions, language and material culture to Athapaskans of the Yukon River. These people may be most closely identified with the Ingalik from the vicinity of Holy Cross. Following Osgood (1936, p. 13) we will provisionally consider them as a distinct Ingalik sub-group, the McGrath Ingalik. The Athapaskans occupying the

extreme upper reaches of the Kuskokwim River, above the junction of the North Fork, were rather clearly Tanana (Hosley, 1961, p. 99).

A complex area of occupancy was along the central Kuskokwim River drainage, but two facts emerge from the partially conflicting reports. First, the area was jointly settled by Eskimos and Athapaskans, and secondly the Athapaskans were more closely akin to their Yukon River counterparts than to the Tanana or Tanaina. The Indians in this sector, from Kolmakoff Redoubt to Sleetmiut, are known to the surrounding Eskimos as Yohwalingoot or Yugelenut as recorded in the literature by Zagoskin (1847). The Kuskokwim segment of this population occupied mainly the George River system and adjacent areas of the Kuskokwim River and will be termed Georgetown or Yugelenut Ingalik. Their Kuskokwim settlements were scattered among those of Eskimos. The presence of mixed Eskimo and Indian settlements in this area was clearly noted by Zagoskin (1847) and has been confirmed by numerous white observers or informants for later periods (e.g., Report on Population and Resources of Alaska, 1893, p. 106).

The foregoing interpretations of the aboriginal boundaries are at variance with some previous analyses of the problem. Thus, it may be helpful to comment briefly upon the existing classifications. Zagoskin's general groupings seem highly accurate although it is sometimes difficult to identify particular sub-groups that he discusses. Dall (1870, p. 405; 1877, pp. 18-9) considered that the Eskimos extended only a short distance up the Kuskokwim River from the sea, while the Indians of the Kuskokwim, termed Kaiyuhkhotana, are lumped with those of the Yukon and much of the interior. Dall belabors Zagoskin for his proliferation of Indian groups, but I can only agree with Osgood (1940, p. 480) that these criticisms are not justified. I would thus set aside Dall's classification as being unduly simple. The ethnic divisions of Nelson (1899, Plate II) take only the Eskimo into account and agree with the findings of the present study.

The most recent systematic attempt to define the boundaries of the Kuskokwim peoples was made by Osgood (1936, 1940) and only with specific reference to the Athapaskan occupants. Osgood incorrectly excludes the Tanaina from the Stony River drainage while at the same time acknowledging Zagoskin's recognition of this as Tanaina country. Osgood (1936, p. 13) would hesitantly include the McGrath area Athapaskans as a distinct Ingalik sub-group; my own field work and that of Hosley would support this identification. The Georgetown Ingalik or Yugelenut are lumped with the Holy Cross Ingalik group by Osgood (1936, p. 13; 1940, p. 31). The only Yugelenut speaker of whom I know maintained that her language differed significantly from the Yukon drainage Ingalik. In a crude effort to test her assertion I asked the Yugelenut words for 69 items in the Anvik-Shageluk vocabulary assembled by Osgood (1940, pp. 459-76) and found that 38 words were the same and 31 differed

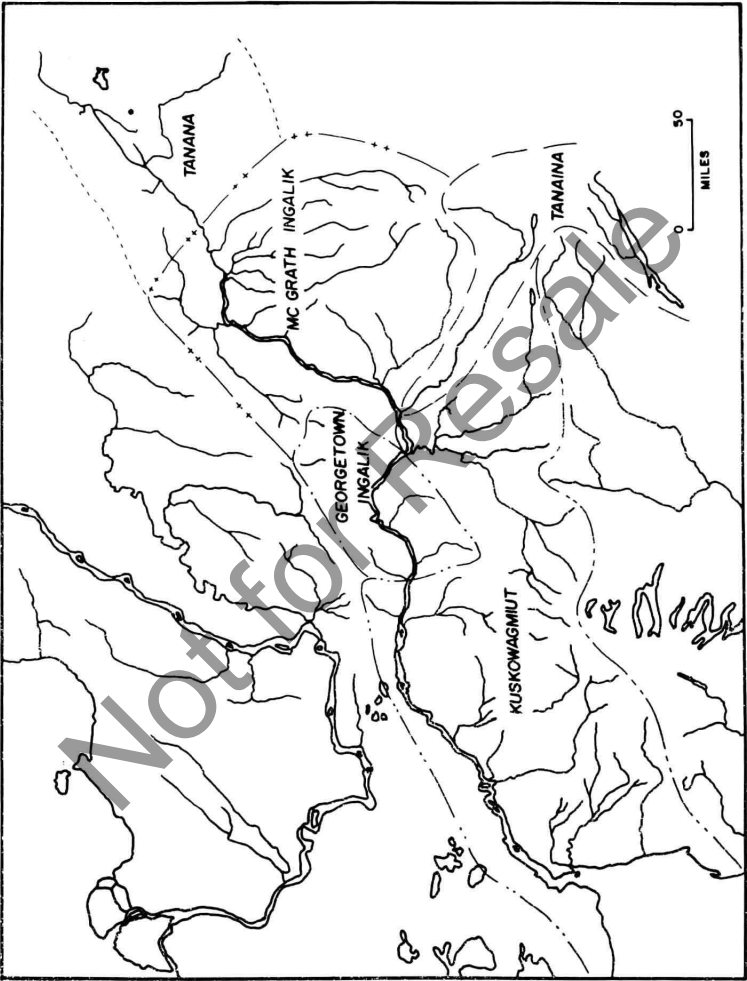
significantly from those on the list. Considering that all the competent informants along the central Kuskokwim consider the Yugelenut as a distinct people I would suggest that they be separated from the Holy Cross-Georgetown sub-group of Ingalik created by Osgood and be henceforth considered as a separate Ingalik group. The North and East Fork people are classed as Ingalik by Osgood, but they were more likely Tanana speakers according to Hosley. In essence the classification of Kuskokwim drainage Athapaskans by Osgood lacks precision, but final judgement must necessarily await further study of the problem.

Ethnic boundaries from 1830 to 1960. Summarily the major changes in ethnic distributions since historic contact are as follows: 1) the Kuskokwagmiut have continued to move inland, 2) the Georgetown Ingalik have become culturally extinct, 3) the McGrath Ingalik and Tanana have come to occupy more restricted areas, and 4) permanent alien settlers now include persons of Russian origins and Anglo-Americans.

The deep Eskimo penetration of the central Kuskokwim River valley has been frequently noted in diverse published accounts, and it is universally acknowledged by local informants. Gordon (1917, pp. 109-12) clearly records that Eskimos had penetrated the interior as far as Sleetmiut (Sikmiut) by 1907 and occupied this village with local Athapaskans. From his description it would appear that a new cultural tradition was emerging at this community. Today the Eskimos extend in a continuous line to just above the Stony River junction, but farther up the Kuskokwim there are numerous Eskimos at the town of McGrath and one at the village of Medfra.

The Georgetown Ingalik have ceased to exist as a distinct ethnic group. The culture survives in the memories of a few individuals, but aside from linguistic purposes it does not exist. The people have not become genetically extinct since they have married into the Eskimo population. The Tanana on the other hand have retained possession of the Stony River system and their distinctive identity even though they too have upon occasion married Eskimos. The McGrath Ingalik range from the vicinity of the Stony River junction to the village of Nicholai; however, there are probably not six families below the town of McGrath. They exist at the latter community but are more abundantly represented at Medfra and Nicholai. The Tanana are represented solely by a few individuals at Lake Telida.

Individuals who include among their ancestors persons of mixed Russian and Eskimo or Indian blood are presently found along the Kuskokwim. Most of these people are socially and culturally identified as Eskimos or, less often, as Indians. The Anglo-American population is largely transient in nature. Individuals temporarily residing along the Kuskokwim River are most often attached to some American institution such as the Bureau of Indian Affairs, U.S. Public Health Service, a trading



company or state agency. Additionally, missionaries of various denominations are present, but some of these may be long-term or even life-long Kuskokwim residents. There are finally second and third generation Anglo-Eskimo families that are permanent Kuskokwim occupants. These individuals are usually the descendents of traders from the early American period.

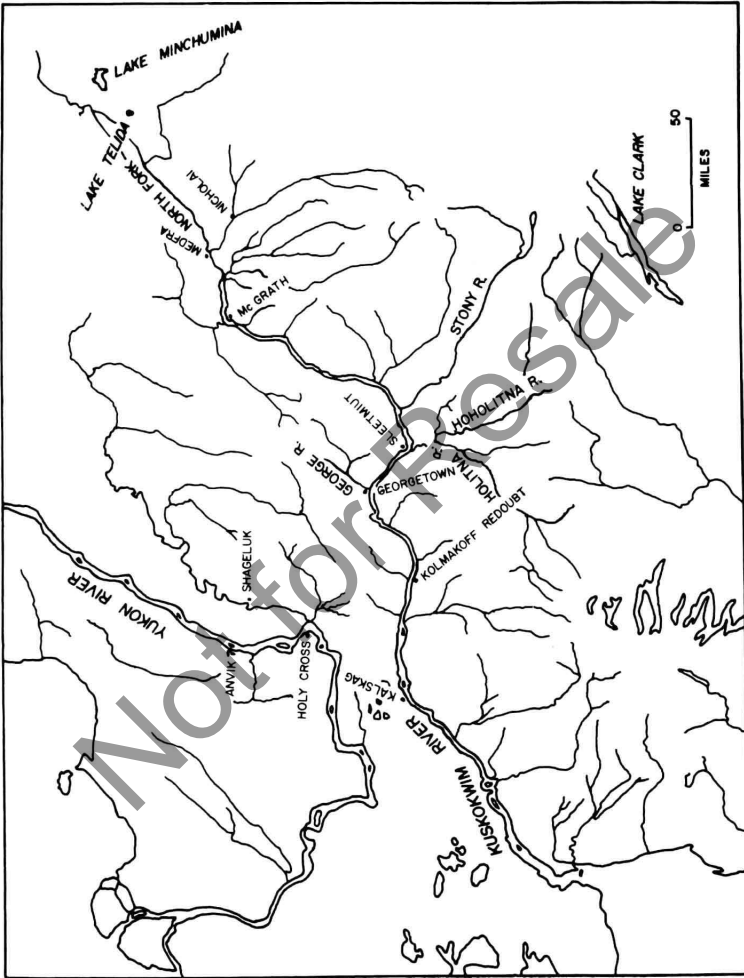
Interpretations. Initially it may be asked whether or not any of the Kuskokwim people are migrant in a technical sense of the word. The anthropological definition of a migration proposed by Rouse (1958, p. 64) is accepted in its essence since it is clearly the best general statement upon the subject. Rouse suggests that a migration exists when one can:

"... 1) Identify the migrating people as an intrusive unit in the region it has penetrated; 2) trace this unit back to its homeland; 3) determine that all occurrences of the unit are contemporaneous; 4) establish the existence of favorable conditions for migration; and 5) demonstrate that some other hypothesis, such as independent invention or diffusion of traits, does not better fit the facts of the situation."

Applying these criteria for a migration to the Kuskokwim scene we find that the first two requirements can be met for all of the peoples involved. The Eskimos can clearly be identified as intrusive from the Bering Sea Coast; the Tanaina from the Lake Clark region; the Georgetown Ingalik from the Yukon River; the McGrath Ingalik from the Yukon drainage; and the Tanana from the Lake Minchumina area. Each of these ethnic groups or sub-groups is clearly identified as an off-shoot of another population in an adjacent river drainage. The requirements of intrusion and homeland seem clearly established.

The third requirement, that all occurrences of the units be contemporary, seems readily demonstrable. We assume, for example, that some Eskimo units of the Kuskowagmiut remained along the Bering Sea coast while other sub-cultural units of this group spread to the Kuskokwim River. The same assumption is made for segments of the Indian population. It might be argued that such a population spread is not a true migration since all representative units do not move; however, this would be to ignore an essential feature of population movements. It is not suggested that the movements of all known Kuskokwim groups were contemporaneous, but that at present they can best be analyzed within an historical framework. All of these people should be considered as essentially contemporary in their Kuskokwim basin intrusion until systematic archaeological excavations or ethnographic reconstructions lead to alternate interpretations.

The fourth point of Rouse, to establish the existence of conditions favorable for migration, poses a different kind of question than those that preceded it. I find it helpful to consider certain specific factors in determining whether or not conditions are favorable for a migration. These are



regional geography and ecology; the subsistence orientation of the socio-cultural units; the rigidity of the boundary maintaining mechanisms; and possible historical influences. Each of these factors will be discussed next to show its general bearing upon migration problems and the Kuskokwim situation in particular.

Geographically the Kuskokwim River system consists of two dominant provinces. From the sea to just below Kalskag the mainstream flows through a low alluvial plain with lakes, sloughs and sluggish streams abundant. Along the river estuary there is a tundra vegetation, but as one goes upstream alder and willow thickets are more and more luxuriant until scattered stands of spruce are encountered (see Williamson, 1957, for a general statement upon lower Kuskokwim River plant ecology). Above Kalskag the river is increasingly confined by hills and low mountains of the Kuskokwim Range. The up-river province is dominated by stands of spruce, and at elevations above 1000 feet there is an open lichen and moss tundra cover.

Along the main course of the river there are no natural barriers to travel; the river flow is gentle and without obstructions or fast water until the upper reaches of the tributaries are approached. In terms of accessibility for man into the river system there are three obvious entryways. The first is from the Bering Sea coast to the river proper. Physical movement to the river would be without difficulties for a riverine or coastal dwelling people. The river system is equally accessible to an inland population along the central course of the river which is nearest the Yukon River. Here on the northwestern and then the southeastern flanks of the Kuskokwim Mountains, from Kalskag to the vicinity of Telida, there are numerous low passes into the Yukon River drainage system. This entire sector of the Kuskokwim River could be penetrated by a people already adapted to conditions in the interior of Alaska. The passes leading to the Nushagak and Lake Clark drainages are rugged and more difficult but may be negotiated at favorable seasons. However, passage to the Susitna River drainage would be extremely difficult and was probably rarely utilized. The foregoing analysis of accessible routes to the Kuskokwim River assumes that the geographical configuration of the area has not changed in the last few hundred years. It further assumes that what is currently regarded by the Eskimos, Indians and whites as an easy or difficult route could be applied equally as well to the conditions confronting migrants in early historical or proto-historic times.

The animals upon which the Kuskokwim peoples depend for food are usually limited in distribution to one or the other of the two geographical provinces mentioned above. In the wooded interior were found moose, bear, marten, land otter and beaver, to mention the most important species for man. These were increasingly rare upon approaching the coastal tundra until, when the open tundra was reached, they occurred only as strays except

for the land otter. In early historical times caribou were common in the interior highlands as well as upon the open tundra and the country in between. Subsequent to historic contact there have been two major changes in the large game distributions. First of all, and of vast significance, is the complete disappearance of the caribou from the tundra country and their scarcity in the interior highlands. This depopulation occurred just before the turn of the present century. A second change in game distributions has been for the moose to extend its range into the tundra region, particularly within the past ten years.

In terms of human survival fish are of the utmost importance to the Kuskokwim peoples, occasionally to the virtual exclusion of land animals. During the summer various species of salmon may be taken along the main course of the river and in many of its tributaries. Likewise whitefish are an important subsistence item, both in the main river and streams or lakes depending upon the time of the year. Other fishes may be locally important such as pike and trout, but these are never the primary dietary items of any contemporary group.

The two geographical provinces, each with its distinctive biota, are meaningful cultural divisions for these hunters and fisherman. Summarily the river-wide subsistence activities were organized as follows: the people of the upper river, above Sleetmiut, were mainly hunters who further relied heavily upon catching whitefish; the lower people, from Kalskag to the estuary, fished for whitefish and salmon while supplementing their fare with caribou whenever possible; along the central course of the river, from Kalskag to Sleetmiut, there was a blending of the two economies. It is significant that the varying subsistence pursuits were not confined to particular groups but rather to broad ecological zones.

A combined view of the geography, ecology and known subsistence orientations at the time of historic contact make more meaningful the already recorded population shifts along with the how and why of their occurrence. On the basis of the reconstructions to this point we may suggest the following interpretations. The McGrath Ingalik, Tanaina and Tanana, at the time of their entry into the Kuskokwim River system, were oriented toward a life adapted to the sub-arctic coniferous forests and the highland tundras. Caribou and moose hunting were vital to their way of life. During their initial penetration of the stream heads leading to the Kuskokwim River they followed their traditional manner of living and spread down the main stream to the Kuskokwim, except for the Tanaina who probably remained confined to the Stony River and perhaps to the adjacent Hoholitna River.

Judging from proto-historical remains along the central sector of the Bering Sea coast (Oswalt, 1952) the coastal Eskimos were oriented toward both sea mammal and caribou hunting as well as toward fishing for

salmon. As they ranged toward the river mouths, both the Yukon and Kuskokwim, the former economic base became less diverse. The increased specialization is explainable by the fact that the low coasts adjacent to the Kuskokwim River mouth are not favorable environments for most sea mammals. Walrus are never found here and neither are the larger whales. Seals occur seasonally as do beluga, but they are not a wholly predictable source of food. Just how important caribou were to these people is impossible to say at this time, but it would seem likely that they were a significant item in the economy. The point I wish to make is that the unreliable nature of sea mammal hunting at the river estuary was crucial in redirecting the economic lives of these people. They were obliged to seek other foods in order to perpetuate the type of stable community life known to them in the more advantageously situated coastal villages. A basic assumption in this interpretation is that people will normally become more sedentary in residence with an increasingly reliable food supply (see Beardsley, *et. al.*, 1956). Along the estuary salmon came to supplement sea mammals, and the latter did not exist when the people moved up the river. The importance of salmon to the Eskimos living along the shallow portions of the central Bering Sea coast can not be underestimated. The salmon was a reliable source of food, the migrations were predictable within limits, and the runs rarely if ever failed. Salmon fishing would require technological skills already known to Eskimos that were sea mammal hunters. The nets, harpoon darts, arrow darts, etc. as well as the techniques for preserving salmon would be within the range of their existing skills. Salmon concentrate most heavily at the mouths of the rivers they ascend to spawn, and undoubtedly the Eskimos soon penetrated the river drainage proper. This generalization would most likely apply to the Yukon River as well as to the Kuskokwim. Salmon fishing is a safer and surer way of life than sea mammal hunting, and these advantages would certainly not go unrecognized by the Eskimos involved.

The Eskimo penetration of the Kuskokwim River system was unimpeded as far inland as the vicinity of Kalskag. Here the Eskimos encountered scattered settlements of Georgetown Ingalik who came from the Yukon River system. Contacts between the Eskimos and Indians were peaceful and even quite friendly. A possible explanation of the congenial atmosphere may be sought in the background of the Yugelenut. Along with some other segments of the Ingalik they had intensive contact with the lower Yukon River Eskimos before their spread southward. The Ingalik ethnography, of the Anvik area, by Osgood (1940, 1958, 1960) strikingly demonstrates how many of the lifeways of these people were more typically Eskimo than interior Athapaskan. With a background of amicable Eskimo-Indian borrowings on the Yukon River the same attitudes were carried to the Kuskokwim. By the time of historic contact we find Eskimo and Yugelenut settlements scattered along the central Kuskokwim River, and in at least one village there were clearly mixed populations.

This does not, however, explain why the Tanaina were also friendly with the Eskimos.

The unprecedented Eskimo-Indian harmony leads to another significant point in understanding the intrusion of a new people into an already settled area. The effectiveness with which ethnic barriers are developed and maintained is a key socio-cultural factor inhibiting population movements. Boundary maintaining mechanisms (Broom, *et. al.*, 1954) along the central sector of the Kuskokwim River are notably lax. Here, as we have seen, there were no distinct geographical or ecological provinces of exclusive occupancy, and the socio-cultural scene is marked with numerous instances of genuine friendly relationships. For example, there are few tales of warfare, raiding or long-term feuding between the Yugelenut and Eskimos. Hosely's inquiries among the McGrath Ingalik concerning their indirect Eskimo relationships support this generalization. Furthermore, there are numerous traditions of ceremonial gift exchanges and feasting between the Georgetown Ingalik and Eskimos. A few years ago many individuals spoke both Eskimo and some Athapaskan dialect, and instances of mixed marriages occur down to the present. These latter observations have been recorded only for the post-contact period, but there is geneological evidence that they existed earlier as well. It is highly significant that ethnographic reconstructions to date show rather clearly that the population spread in historic times was in terms of individuals. It seems that most often an individual Eskimo man married an Indian woman, and they lived in the vicinity of the wife's home.

Felt needs of an economic nature further bound these peoples together. Seal oil and seal skins were highly desired by the interior residents, and for these were exchanged beaver, martin and wolverine skins, spruce gum, caribou sinew and birchbark canoes. Still another indicator of the lack of ethnic exclusiveness was the failure to develop rigid rules against trespassers. Conversely, we find that individuals traveled widely, which would have been impossible in a hostile atmosphere.

The final ascendancy of the Eskimos over the Georgetown Ingalik to the cultural extinction of the latter people is most readily explainable on ecological and cultural grounds. With the virtual disappearance of caribou along the Kuskokwim River drainage the former lifeway of the Yugelenut had to be drastically redirected. Survival lay in more intensive salmon fishing, which in turn fostered more intimate Eskimo contacts since the Eskimos were already local salmon fishers. The Georgetown Ingalik married into Eskimo families with increasing frequency, and this marked their eventual cultural demise.

One critical interpretive problem in understanding the Kuskokwim and other migrations is the influence of indirect and direct historical contact upon the spread of previously aboriginal peoples. Precisely how

disruptive European influences are is difficult but obviously necessary to establish. References of indirect contact on the Kuskokwim are scanty but seemingly important in paving the way for future direct European intervention. Trade goods filtered into the Kuskokwim River system before the Russians. I would infer that the goods were desired by the people, which would in turn make them receptive to alien contacts. From the nature of the direct contact situation on the Kuskokwim River I am led to conclude that initial disruptions had serious repercussions. The Russian American Company pushed into the Kuskokwim drainage to extend their fur trading activities. Initially in the 1830's there were only itinerant missionaries and traders at the temporary trading stations. Their influences upon the lives of the people were probably not overly disruptive. However, the smallpox epidemic that swept into the Bering Sea area in 1838-39 may be indirectly attributable to the Russians. The disease apparently wiped out communities and seriously disrupted normal life in others (Zagoskin, 1847-48). This would be a very important influence upon the peoples. One would, judging from records of later epidemics in the area, expect that some villages would be abandoned temporarily or perhaps permanently. It is doubtful, however, that an epidemic would have had an immediate effect upon the changing ethnic boundaries since all groups would, in theory, be similarly afflicted. During the 1840's the Russians became more active and expanded their trading facilities to include a redoubt and two artels. By 1866 we find that the area was neglected by traders and missionaries alike. Throughout the Russian era direct sustained influence upon the people and their lives did not occur; trade goods, the Russian steambath, and the essence of the Greek Catholic Russian Orthodox faith were the major innovations. Contacts were of the direct type and materially oriented. The same would further apply to the first eighteen years of American occupancy. The arrival on the lower river of resident Moravian missionaries in 1885 and the generally renewed efforts of the Russian Orthodox missionaries shortly thereafter produced direct culture changes of increased intensity. These and later efforts by the federal government and other mission groups have culminated with the establishment of schools and churches in every village and in the systematic dissemination of American socio-cultural concepts.

Rouse's fourth point, to demonstrate that conditions favoring a migration do exist, seems clearly established in the earlier discussion and needs no further comment. The final criterion of a migration in this classification requires demonstration that some other hypothesis such as independent invention or diffusion does not better fit the particular situation. There is no question but that we are dealing with integrated ethnic groups which cannot be thought of simply in terms of independent invention and diffusion.

The evidence supporting migrations both for the Indians and Eskimos

into the Kuskokwim River drainage seem positive. Precisely what this means in the over-all procession of western Alaskan peoples is presently obscure. Nonetheless certain important interpretations are suggested. Initially it is impressive that in terms of geography there are well defined avenues of possible entry into the area; each was utilized by recent migrants. An analysis of the regional ecologies proved helpful in making the migration potential of each people understandable in terms of subsistence activities. It is particularly impressive in this regard to consider the way in which the presence or absence of one animal, the caribou, radically changed the ethnic distributions and seemingly foreshadowed the extinction of one people. Finally the ethnic diversity at the time of historic contact is a striking characteristic of the Kuskokwim River peoples, for each represented group was a satellite population from a more firmly established center in an adjacent area.

Bibliography

Beardsley, Richard, *et. al.*

1956. Functional and Evolutionary Implications of Community Patterning in Seminars in Archaeology: 1955, pp. 131-157. *Memoir No. 11 of the Society for American Archaeology*. Salt Lake City.

Broom, Leonard, *et. al.*

1954. Results of the SSRC Seminar on Acculturation. *American Anthropologist*, Vol. 56, No. 6, pp. 973-1000. Menasha.

Dall, William H.

1870. Alaska and its Resources. Boston.
1877. On the Distribution and Nomenclature of the Native Tribes of Alaska and Adjacent Territory. *Contributions to North American Ethnology*. Vol. 1, pp. 7-40. Washington.

Elliott, Henry W.

1886. Our Arctic Province. New York.

Explorations in Alaska

1898. House Document 5, 56th Congress, 1st Session. Washington.

Gordon, George B.

1917. In the Alaskan Wilderness. Philadelphia.

Hosley, Edward

1961. The McGrath Ingalik, *Anthropological Papers of the University of Alaska*, Vol. 9, No. 2, pp. 93-113.

Hrdlicka, Alex

1930. Anthropological Survey in Alaska. *Bureau of American Ethnology, 46th Annual Report*. Washington.
1933. The Eskimo of the Kuskokwim. *American Journal of Physical Anthropology*, Vol. 18, No. 1, pp. 93-146. Philadelphia.

Nelson, Edward W.

1899. The Eskimo about Bering Strait. *Bureau of American Ethnology, 18th Annual Report*, Pt. 1. Washington.

Osgood, Cornelius

- 1936. The Distribution of the Northern Athapaskan Indians. *Yale University Publications in Anthropology*, No. 7, pp. 1-23. New Haven.
- 1940. Ingalik Material Culture. *Yale University Publications in Anthropology*, No. 22. New Haven.
- 1958. Ingalik Social Culture. *Yale University Publications in Anthropology*, No. 53. New Haven.
- 1959. Ingalik Mental Culture. *Yale University Publications in Anthropology*, No. 56. New Haven.

Oswalt, Wendell

- 1952. The Archaeology of Hooper Bay Village, Alaska. *Anthropological Papers of the University of Alaska*, Vol. 1, No. 1, pp. 47-91. College.

Petroff, Ivan

- 1884. Report on the Population, Industries, and Resources of Alaska. Department of the Interior, Census Office. Washington.
- 1893. Report on Population and Resources of Alaska in the Eleventh Census. Washington.

Rouse, Irving

- 1958. The Inference of Migrations from Anthropological Evidence. Migrations in New World Culture History. *University of Arizona Social Science Bulletin* No. 27, pp. 63-68. Tucson.

Spurr, J. E.

- ms Log of the Kuskokwim [copy in the Arctic Health Research Center, Anchorage, Alaska].

Van Stone, James

- 1959. Russian Exploration in Interior Alaska. *Pacific Northwest Quarterly*, Vol. 50, No. 2, pp. 37-47. Seattle.

Williamson, Francis S. L.

- 1957. Ecological Distribution of Birds in the Napaskiak Area of the Kuskokwim River Delta, Alaska. *The Condor*, Vol. 59, pp. 317-38. Berkeley.

Zagoskin, L. A.

- 1847. Pedestrian Journeys in the Russian Possession of America in 1842, 1843 and 1844. St. Petersburg. [1938 Hotovitsky unpublished translation].

Department of Anthropology and Sociology
University of California, Los Angeles