CHAPTER VII.

THE FIFTH OR KUSKOKWIM DISTRICT

The Fifth or Kuskokwim district ranks second in Indian population and last in the number of whites enumerated. It embraces within its limits the whole country drained by the Kuskokwim river and its tributaries, and in addition the tundra and lake region lying east of the Kuskokwim river and south of a line drawn from the "divide" on the Ikogmint portage to Cape Rumlantsof and the island of Nunivak. This district has been affected less than any other in Alaska by contact with white men or by their enterprise. Whole villages of people can be found living here in their aboriginal state, and thousands of individuals beheld in the census enumerator the first white man they ever saw.

Beginning our review at Cape Newenham, its southernmost point, we find the first settlement at Kingagnagmint, on the north side of a narrow isthmus connecting the cape with the Togiak chain of mountains. The people living here are Kuskogmint Eskimos, numbering 76. Their dwellings are underground huts, with frames of drift logs, covered with sods. Entrance to the living rooms is made through a long, low tunnel and a majority of the houses are provided with covered entries and small sheds for cooking. The neighborhood of Cape Newenham, with its many surrounding shallows and reefs, is one of the few places to which walrus still resort at certain seasons. Most of these large animals are found to the south and east of the cape, and a number of dwellings have been constructed on that side by the Kingagnagmints for temporary occupation. Though the walrus is highly prized by these people for its ivory as an article of trade and as material for the manufacture of tools and implements, the people by no means depend upon the meat for food. They hunt the hair seal and the beagla successfully for their meat, blubber, and oil. Sea birds, which roost in myriads around the cliffs and rocky islands, furnish them with meat, eggs, and garments made up out of their feathered skins. The streams and lakes teem with trout, and herds of reindeer feed upon the mossy tundra.

The Kingagnagmints obtain tobacco, powder, and lead, and a few other manufactured articles, through native traders from the Kuskokwim, who visit Good News bay and the cape during the winter season with dog teams. Once during every summer these people migrate to the hills in search of ground squirrel skins for undergarments, and also to indulge in their custom of animal physicking by means of a diet of green weeds boiled in oil.

Good News bay, which was thus named by Captain Cook, is a large sheet of water surrounded by hills, but too shallow to make a good harbor. Light-draft vessels can enter, but can not proceed much beyond its mouth. At low water nearly one-half of the bay presents a surface of soft, blue clay.

The village of Muntrahamint, on the eastern shore, contains a population of 162 Kuskogmints, who, though making this their permanent home, roam over a vast extent of country, the lake district forming the divide between the Kuskokwim and Togiak basins. They seem to be equally at home in trotting for days after a shy band of "trumpets" or reindeer, or paddling their kayak over the rough waters of the ocean chasing beagla or seal. The sod huts of Muntrahamint have been constructed upon a narrow strip of dry soil between the beach and a brackish lagoon. Spring tides frequently flood these wretched dwellings, and the only water supply of the people is derived from the lagoon, which is also the depository of all offal, fish skins and bones, etc. For squalor and apparent misery of circumstances and surroundings the Muntrahamint people stand pre-eminent even in this most primitive of Alaskan districts; but this seems not at all to interfere with their happiness and general health. They are cheerful and have increased in numbers during the last decade.

The rolling hills of the surrounding country, covered with a thick carpet of moss, produce abundant crops of several species of wild berries, but there is no timber of any kind, the only fuel obtainable being driftwood.

According to tradition, unsupported by any record, one of the earliest Russian missionaries, Father Juvenal, penetrated westward from Cook inlet as far as Good News bay. We know that Juvenal was killed by natives in the vicinity of Iliamna lake at the end of the eighteenth century, but if he actually reached this neighborhood he
left no trace or record, and the natives profess no knowledge of such a visit. The earliest mention of the Knuskokwim in Russian records occurs in a report made in 1818 recommending the abandonment of the station on Bristol bay (Fort Alexander) and its removal to Hagemeister island, which is described as situated "not far from the great river Knust-Kohan", without any mention of the intervening cape and bay.

About 15 miles north of Good News bay, on the swampy shore of a lagoon, there is another wretched settlement, Kl-changamint, inhabited by 49 Eskimo. The dwellings here are also exposed to overflow, and the only drinking water consists of a dark brown, strongly flavored liquid dried up from swamp holes. The desolation of this spot is indescribable, making us wonder what could induce human beings to settle here. The coast is so low that the southwesterly gales drive the salt spray far inland, and for weeks at a time the people live in an atmosphere of salt mist and particles of sand. Walking over the vast plain intervening between the hills and the sea is made impossible by the swampy nature of the ground, and only in the depth of winter can these people move about more freely with their dog teams. The moisture of the summer climate prevents a thorough drying of fish, which becomes maggoty and putrefies rapidly. Here the principal articles of food are fresh fish and seal meat, generally eaten raw.

The sand dunes which separate the large lagoon of Kl-changamint from the sea, some 20 miles in length, have evidently for many generations been the resort of beluga hunters from the Knuskokwim river. They have erected crude shelters of driftwood in many places, all but the most recent among their structures being almost buried under the drifting sand. In one place only a hole, about 5 feet in depth, has been dug in the sand for the collection of brackish drinking water. Ample proof, however, is extant of the large number of beluga (or white grampus) killed here, in the shape of long rows of beluga skulls laid one by one beside each other; with the pointed jaws to the south and the rounded back part of the skulls to the north. These rows, of which there are between 30 and 40 within a few miles, were begun at the beach, where the skulls are half decayed and moss grown, and continued inland, where the newest specimens are found. I have counted nearly 200 in a single row. The rounded back portion of the beluga skull presents three apertures, resembling in shape and relative position the eye and nose apertures in the human skull, and the effect of these long rows upon the unprepared stranger is at first rather startling.

The reason why this locality has been so much resorted to by beluga hunters is easily understood by noting its topographical features. There is one deep but narrow entrance to the vast lagoon, the waters of which are shallow. With high tides schools of these animals often turn into the opening when on their way to their feeding grounds in the wide estuary of the Knuskokwim. On such occassions a number of natives, forming a line with their canoes across the entrance, can by dint of splashing and shouting prevent the greater part of the school from making their exit with the receding tide, which finally leaves the bewildered cetaceans floundering upon the muddy bottom at the mercy of their enemies.

Such fortunate incidents are, of course, not of frequent occurrence, and much patient watching and waiting is required on the part of the hunter; but the capacity of the Eskimo for patient watching without much exertion is almost unlimited. The Kl-changamint people assert that each row of beluga skulls on that long strip of beach represents the number of animals killed by successive generations of hunters from some village farther up the river, who are always careful to add only to the trophies of their own people.

Between Kl-changamint and Quinhaghamit, for a distance of about 40 miles, the coast maintains the same desolate aspect. The land is low and flat, bounded on the east, some 20 miles away, by low, blue hills, and to the north, west, and south by an apparently unlimited expanse of water. The flood tide, running with great velocity, carries the traveler along in his canoe, but if he be wise he will land when the current turns, no matter how uninviting the place, or he will shortly find himself far from the friendly ridge of marsh grass, with miles of impassable mud, bared by the ebbing tide, separating him from the nearest spot upon which he could pitch his tent. At various points the ruins of abandoned villages or isolated hunting stations can be observed, visible from a great distance, though rising but a few feet above the surrounding flatness. I have seen the hemispheric mounds of an Eskimo village, our next camping place, on starting in the morning, apparently rising immediately from the glassy surface of the water, and it required a long Alaskan summer day of constant paddling to reach them. In one instance I found a group of sod huts between 4 and 5 feet in height had been apparently visible for a distance of 25 miles. Throughout that day they presented no perceptible increase in size until we were almost up with them in the evening.

At Quinhaghamit the first stream of any magnitude is found flowing into the sea from the distant hills in the east. The village, containing 109 Eskimo, is situated upon a narrow peninsula between the river and sea. My visits to the place were made during the driest summer weather, but even then we could not pass from one dwelling to the other without wading. Water was standing in many parts of the houses, and a careful search for a camping place failed to reveal any spot large enough to pitch my tent upon from which water did not ooze freely under pressure of the foot. As a last resort, I spread my blanket upon one of the stagings used for drying fish, only to be driven away again by the discovery of an invading army of maggots, bred in stagnant pools filled with fish and animal refuse, making their way rapidly up the posts of my last refuge. How human beings can thrive in such surroundings would puzzle the disciples and teachers of sanitary science.
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Quinhagak river is a very crooked, sluggish stream, the outlet of a lake, upon the banks of which these people have another village, temporarily occupied at certain seasons. Their principal food is the flesh and blubber of seal and beluga, but there is also a short run of charicachi or king salmon in the river during the month of June. Owing to the moisture of the atmosphere, but few of the fish are dried.

The houses of this settlement consist of 6 large sod huts, each containing several families, and a large "kashga" or council house, also used as a bath and dance house. Visitors and travelers are always allowed to seek shelter in these kashgas, but as they are nightly crowded by all the unmarried men and boys of the village, who stretch themselves promiscuously upon the narrow platforms, entirely naked, the more fastidious travelers rarely avail themselves of the opportunity.

Every male individual in these communities, from half grown boys upward, possesses his own canoe, and many of the females, especially widows, are also thus equipped. This custom is an absolute necessity in a country which is practically inaccessible on foot and subject to sudden tidal overflows. As it is, it requires but a few minutes for the whole population of a village to be afloat and ready to paddle away to some place of safety.

But a few miles to the northward of Quinhagamint is the present limit of navigation for seagoing craft, at the mouth of the Kuskokwim, and even that point is reached with difficulty and at considerable risk, owing to shoals of unknown extent and shifting channels, and as at this point the anchorage is entirely exposed to prevailing winds and sea, the Kuskokwim river can scarcely be considered open to commerce. At present but one vessel each year runs in when the indications are favorable to discharge a cargo of goods sent up for the Kuskokwim trade by the Alaska Commercial Company, and to carry away the furs collected during the preceding winter. For this purpose a small warehouse has been erected at a small village of 2 houses, Shinyagamint, containing but 7 people. In the month of June the traders and missionaries from the upper river descend to the place in boats and lighters to await the coming of the steamer, and for a brief period a little town of white tents arises upon the greensward along the water's edge. Canoes from neighboring villages are constantly coming and going, and a brisk exchange of fish, geese, ducks, and "wild eggs" for powder, lead, and tobacco is carried on. As darkness is unknown at that time of the year, a lookout is constantly kept on the roof of the warehouse, but often the people are kept in suspense for a month or 6 weeks before the trailing black smoke along the southern horizon assures them that the news of the world's doings during the past 12 months will soon be in their possession. As soon as the cargo is discharged, and before there has been time to answer any but the most urgent letters, the steamer fades away from view, and all hands apply themselves to the task of carrying stores and supplies upstream against a lively current in boats and skin "bidarkas" propelled by oars and sail.

At Shinyagamint the opposite shore is still invisible, though the water is fresh at low tide. Passing along the eastern bank, we note the gradual approach of hills to the river and the narrowing of the swampy plain. Islands with winding sloughs and channels between them begin to line the shore, and, with a scarcely perceptible rise in the surface of the land, population increases. The villages of Kuskoklagamint, Chiminganyamint, and Ahpokagamint are all situated upon the banks of sloughs, at some distance from the open channel, and easily overlooked by the passing traveler. Kuskoklagamint has 115 inhabitants, living in 7 dwellings and a large kashga. This settlement, as well as others on the river, is connected by many waterways with lakes in the interior, upon the banks of which the people have other dwellings for temporary occupancy.

Chiminganyamint, a few miles to the northward and hidden among willow thickets, has only 40 inhabitants, living in 2 large dwellings. Ahpokagamint is the first large settlement on the east side of the Kuskokwim, being composed of 11 dwellings and a very large council house, which measures 25 feet square in the interior. The number of people here exceeds 200, and the muddy beach is crowded with kayaks, some at the water's edge ready for launching, but most of them resting on forked uprights beyond the reach of hungry canines. The dogs average in numbers from 4 to 7 to each household, and are looked upon as quite an important part of the community. They are of use only during the winter, as dogs are never trained to hunt, but they are not fed in idleness as long as there is any possibility of their picking up a living without endangering their master's property. During the summer migrations of the people to the various hunting and fishing grounds the dogs, generally preserving their organization as teams, either follow the movements of their masters along the shore, swimming rivers and sloughs and making long detours around bays and bends of the river, or remain at home, taking charge of their master's home or of the whole village, as the case may be. A team of dogs which have labored together during a winter always follow the movements of their leader. They can be seen far away from the settlements, scouting over the tundra and shore in search of game, never refusing any carcasses or offal cast upon the beach, but with the approach of winter they are sure to make their reappearance at home, ready to labor and be fed.

The history of a day as observed at Ahpokagamint, while waiting for my native paddlers to "set their house in order" previous to departure, may serve as a typical presentation of the summer life of all the inhabitants of this part of the Kuskokwim tundra.

Life and movement do not altogether cease even during the night, as such dogs as are not afield are moving about on a still hunt for any scraps of food carelessly dropped by children or left exposed among the grass and weeds, which grow thickly, not only around the dwellings and caches but all over the sod roofs and walls. An occasional fight will occur when prowlers meet, but the noise quickly subsides. With the first break of dawn the grown dogs trot off, each team following their leader, while the pups are still comfortably snoozing within the
shelter of the houses or cooksheds. Among human beings the women are generally the first to stir. They seem to walk about aimlessly, gazing at the sky and water, exchanging a few words of gossip as they meet. Next a few old men make their appearance, crawling on hands and knees from the low entrance tunnels. Once emerged, they stretch their cramped limbs and slowly ascend to the top of some house, generally the kashga, that being the highest. Here they squat down upon their haunches, drawing their fur or feather garments closely about them, and observe the aspect of the sky and water. Having devoted some time to this study, they slowly return to their families and communicate their opinion as to the weather prospects of the day. Not until this has been done does the day's work begin. Now the women go to the caches to take out provisions for the morning meal, and boys and girls can be seen scurrying around from house to house to “borrow fire” from somebody who has preserved a few live coals through the night. Others gather chips and pieces of driftwood, and before long the thin, blue smoke can be seen curling from many of the grass-grown mounds. When the meal is prepared, be it cooked or raw, the food is divided by the female head of the family, serving the men first, then the boys, the women and girls coming in for the remainder. Wooden dishes with food are sent to the kashga for the unmarried men and youths, and for such strangers as have “affinities” or relatives in the village. But little time is wasted over the morning meal, and it is still quite early when some of the old women start out in search of berries or fuel, while others set to work cleaning fish left over from the previous day. The young men, emerging from the kashga, saunter down to the beach and examine their hunting and fishing gear previous to launching their canoes. A few provide themselves with a dried fish or a piece of seal blubber, intending to prolong their journey, but the majority take nothing but their gear and a wooden dipper. The fishermen proceed directly to their traps, while others, alone or in groups of 3 or 4, cruise about along the shore or to seaward, following up any sign of seal, beluga, or fish. Among the groups thus paddling along conversation never flags and much rough joking is indulged in.

In the meantime the older men and heads of families have been advised by their “tungak” or medicine man that the time is propitious for a bath in the kashga. The boys are set to work at once collecting fuel, which is piled up in the central fireplace and ignited, and rocks smooth and black from long usage are placed among the heat. When the large pile of fuel has been consumed, the men disperse to their homes and leave their clothing. As they return in a state of nature, each throws a dipper or basin of water on the red-hot rocks, filling the gloomy compartment with steam. A few stone lamps are lighted and the smoke hole in the roof is firmly closed. Singing and shouting, the men jump about to assist perspiration as much as possible, and rub themselves with alkaline liquid, which, combining with the oily exudations from their bodies, creates a thick malodorous fester, falling off in flakes as they move about. The atmosphere soon becomes stifling and the stench very offensive, the feeble flame of the moss wick grows dim, and at last the door and smoke-hole shutter are opened and the bathers rush out; some throw themselves into the river or sea to rinse off, others run to their homes, naked as they are, to don again their filthy garments, with their bodies no cleaner than they were before.

A reflection of some kind generally follows the bath, and after the kashga has been aired a little the men return to gossip and labor, making weapons or utensils, repairing fish traps or canoes, etc. The women in the meantime attend to household duties, cleaning or drying fish, scraping skins for tanning, weaving grass mats, or making garments and looking after the pups. The latter receive as much attention as the babies, and certainly more useful training. When the pups are but a few weeks old the women of the house fit them with small harness, tie them to a stake set in the ground and let them tug away. The pups complain vociferously but never stop pulling, until at last the woman releases them, holds them to her breast with many expressions of endearment, and feeds them from her mouth with partially masticated blubber. By this means the women, while really torturing them, obtain a hold upon the affection of the young dogs which lasts through life. The men manage their dog teams only through fear and starvation; the women can make them do anything with kind words only.

The children devote the whole of the long summer day to play. They attend to regular meals, but run to their mother whenever they are hungry, and their wants are always supplied without stint. The girls have dolls carved of wood or ivory and dressed in tiny fur garments; they also play certain games, accompanied by singing and dancing, and, like the children of civilization, they take much pleasure in “playing house.” The boys, from the time they are able to stand alone, are provided with toy bows and arrows and spears, practicing chiefly upon the unfortunate dogs or young gulls and ducks and other household pets. The older, experienced dogs sink quietly away whenever they see a boy arm himself with his toy weapons.

As the day progresses canoes begin to return with fish or game, each arrival being previously announced by some old man keeping a lookout, perched on the apex of his sod hut, and by the time the landing is made the members of the household to which that canoe belongs are waiting on the beach to carry away its cargo. If the weather be fine, the returning hunters or fishermen lounge about the beach or stretch themselves in the grass, where they are served with food by the women of the household, but generally they refresh themselves at the fireside, relating between mouthfuls every trifling incident of their morning’s cruise to the assembled members of the family.

If at any time during the day the dogs of the village gather on the beach and howl in chorus, the people know that strangers are approaching, and the idle and the curious (there are but few others) crowd to the shore to receive them. The distance at which these dogs can distinguish the canoes of strangers from those of friends is astonishing; they never make mistakes. Visitors are always entertained by relatives or by their “kin by choice” or elective
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affinities, a rather peculiar institution of Eskimo society. Being a roving people, much given to assemble in the
winter time for ceremonial and semi-religious festivals, masked performances, etc., they have hit upon a plan which
facilitates travel, in so far as it does away with the necessity of carrying provisions for the whole time they are
absent from home. During such gatherings individuals from various settlements form friendships, according to
their fancy, agreeing to treat each other as brothers at their respective homes, and thereafter they use a special
term in addressing each other; generally this term is derived from some character assumed by both during the
masked performances at their festivals. Each party of such an alliance is treated at the other's home as a member
of the family. In the case of single men (and the agreement is generally entered into in youth) the guest is cared
for in the kashiga by his host, who places all his weapons, gear, and trinkets at his disposal. With married men
the custom leads to a community of wives if the latter do not accompany their husbands on such journeys. The
claims based upon such elective relationship seem to be considered stronger than those of ordinary kinship.

Among these primitive people, who have not yet acquired the accomplishment of making or consuming strong
liquors, quarrels among men are scarcely ever heard of. Their general disposition is amiable and cheerful, and
though some young fellow may feel aggrieved over some joke of more than usual breadth, he will only sulk, not
quarrel. Among the women only wordy disputes occur, sometimes provoked by jealousy, though their easy code
of morals leaves but little room for that, but more often the cause is some derogatory remark made by one woman
on the child of another.

With the approach of evening the children gradually "hunt their holes," curling themselves up in any nook
or corner that may take their fancy. The women do much gadding about from house to house to gossip and ascertain
the success of the hunters or fishermen of each family, and chiefly to "sniff" in company. The snuff is drawn into
the nose through a tube of bone, in powdered form, from boxes carried, by all from early youth. Only the most
affluent of these people can afford to smoke tobacco, as that process makes an immediate end of the precious
substance. The usual mode of indulging in the weed is to chew it, the strength and bulk of each quid being
increased by a liberal admixture of wood ashes. In this shape the little package of tobacco affords enjoyment for
a prolonged period, not only to the original owner but to his friends as well, being freely passed from one to the
other. At intervals between mastication the quid is placed behind the owner's ear, probably affording him by
more contact the pleasures of anticipation. This process, however, by no means ends the career of the precious
morsel; it is finally turned over to the women, who, by drying, maceration, and admixture of ashes, convert it
into snuff. The use of tobacco has taken a thorough hold upon these people; much time is devoted to its
preparation for consumption, and they freely exchange the proceeds of weeks of labor and hardship for a few
leaves of the plant. I have seen a man laboring for hours, carefully taking to pieces all the pipes of the household
and scraping the inside of the tubes, only to consume in three or four whiffs the result, a fine dust of wood
impregnated with nicotine.

While the women visit and gossip the men are assembled in the kashiga, gossiping also, or chanting
monotonous, meaningless songs, at the same time repairing arms and implements, until at last the fathers of the
families pick their way home over the winding paths strewn with garbage and rubbish, and the bachelors strip
off their garments and, placing them under their heads, stretch themselves on the platform lining the walls. The
old men, who are light sleepers, attend to the fire at intervals during the night. Outside, the prowling dogs are
again in possession, while their owners sleep in peace.

Proceeding northward from Alpokaganint along the east bank of the Kuskokwim, we find a number of
populous villages, resembling in characteristic features those already described. The most important among
these are Shovenagamin and Hghuligamint, the latter containing 106 people in 6 dwellings. The surrounding
country is higher and less subject to overflow, enabling the people to select more comfortable locations for their
settlements. Some spruce timber can be seen in the distance, and its vicinity is also indicated by the better
construction of dwellings, the log frames being raised a little above the surface instead of being altogether
underground, as in the tundra country.

From Hghuligamint to Lomavigamint the banks of the river are somewhat higher, but the back country is
still a level swamp, crossed here and there by slightly elevated ridges. This region is the summer home and
breeding ground of innumerable flocks of geese and ducks. The natives gather their eggs in such localities as are
accessible to them with their canoes, but the birds are not actively hunted, because their weapons for shooting
them, consisting of 3-pronged arrows, are very imperfect, and they are too saving of their small supply of
powder and lead to expend it on small game that yields them food alone. For the same reasons the large flocks
of ptarmigan remain almost unmolested. Not many years ago large droves of reindeer grazed over the lowlands
and hills on both sides of the river and their meat and skins made an important item in the domestic economy of
the Kuskwogiments, but in this case they did not hesitate to expend their ammunition as fast as it could be
obtained, the result being an almost total extermination of the animal.

At Lomavigamint we meet with the first birch-bark canoes, partially decked over with bark, in imitation of
the kayak. These canoes are either purchased from natives living in the timber country or built with material
obtained by barter, and they are used chiefly for attending to fish traps or by women and children in search of
berries and fuel. For extended journeys, or for hunting seals or beluga, the skin canoe only is used.
Up to Lomavigamiut the direction of the river is north and south, but above this point its general course is from northeast to southwest. A few miles above this bend we find the villages of Napuskeagamuit and Napalhayagamuit, on opposite sides of the river but occupied by the same people at various times of the year. The inhabitants, numbering between 100 and 150, do not depend upon the water exclusively for their subsistence. They trap foxes and land otters and make long inland journeys in quest of reindeer and ground squirrels. Their dwellings are well lined with timber and erected on dry soil. The kashga is found in each village, sometimes of quite imposing dimensions, and the burial places are full of carved memorial posts of grotesque designs, hung with articles of clothing and ornament. Many of the graves are quite covered with a collection of masks and fancy trappings, worn by the deceased during some masked dance or festival.

A few miles to the northward of Napalhagamuit, on the western bank of the river, we find the Moravian missionary station of Bethel and the trading post and native village of Mumtrekhangamuit within half a mile of each other. Bethel was founded in the year 1886, the site having been selected by Rev. A. Wehnmann after an examination of the country from Bristol bay to the Kuskokwim. The mission consists of several buildings, erected by the missionaries chiefly with spruce logs which had to be rafted with great difficulty from the forest region on the upper river. They have 2 dwelling houses for the 2 married couples engaged in the work, a large school building, a storehouse, and bath house, all overlooking the river from a bluff. In order to pursue their vocation and to keep themselves and their charges supplied with such food as the country affords, the missionaries have found it necessary to provide themselves with both skin and bark canoes, dog sledges and teams, and a large sailing sloop. The latter vessel is used for communicating with the annual supply steamer at the mouth of the Kuskokwim, and for bringing up to the mission the stores of all kinds forwarded in abundance by the managers of the society from Bethlehem, Pennsylvania.

Mr. John H. Killbuck, the missionary, and Mr. Charles Weber, his assistant, who were also engaged in the enumeration of this district, have performed the most arduous journeys in order to reach the people, either with sledges or canoes. Both modes of traveling are exceedingly laborious. The canoe must be propelled either with paddles or poles, and an Alaskan sledge journey but seldom affords the passenger an opportunity to ride. As a rule he must trot along and keep up with the dogs, which have all they can pull in the shape of tent, bedding, and food for man and dog.

The work of christianizing and civilizing the natives of this district is exceedingly arduous and beset with difficulties, and even a partial success in teaching the people to lead better lives in a moral as well as a physical sense still leaves us to be confronted with the question, “What can these people do to support themselves in a more decent and comfortable mode of life?” The country, as far as it is inhabited by Eskimo tribes, is very poor in furs, or, in fact, in anything that civilized man would care to buy. Even the fish with which its rivers teem periodically is not of a quality to command a market now. The brief run of king salmon supplies only a quantity sufficient for fresh consumption by the natives, and the various species of whitefish (Coregonus), though very palatable, have not yet found a market; and though the quantity is ample to supply the people with food, these fish do not appear at any time in large schools or “runs”, such as would be required for making a paying industry of their capture. The same can be said of the hair seal and beluga, hunted by these people; the number of these animals is sufficient only for home consumption as food, not enough for making their skins or oil articles of trade.

The trading station of Mumtrekhangamuit has been in existence for many years as a tributary depot of the large trading post at Kollmakovsky, on the upper river. The place was established and maintained for the purpose of collecting the few mink and land otter skins of the lower Kuskokwim and the tundra region to the westward, as well as the oil of seal and beluga in small quantities, to be used in payment for furs among the inhabitants living beyond the reach of tide water. A limited quantity of walrus ivory is also collected here from the people living on the coast of Etonin straits, opposite Nunivak Island.

The traders' journeys are performed in large, open skin boats or bidarkas, with oars and sails during the summer months, and with dog teams in the winter.

The station consists of 3 substantial log buildings and a small wharf, surrounded by a few native huts containing 28 Kuskwogmiuts.

To the northward of Bethel the banks of the Kuskokwim rapidly increase in height, and a number of low, willow-grown islands divide the stream into sloughs and narrow channels. As the winding course throws the rapid current from one side of the river to the other, it undermines the sandy soil with its substratum of soft clay, causing large fragments of surface soil, composed of decayed vegetation and the tangled and intertwining roots of trees, to fall into the current. The precipitated earth forms shifting bars, and the trunks and branches of trees incumber the channels and further impede, in the shape of snags, an already sufficiently difficult navigation. Here and there, set up against the steep river banks and partially dug into them, we find small settlements, generally of a temporary character and used only during the fishing season. The permanent villages for the next 60 miles are Kiklikhangamuit, with 119, Akingamuit, with 97, and Tuluksagmiut, with 62 inhabitants. Situated on high bluffs in the timbered border of the river, and beyond the reach of inundations, these villages bear evidence of long occupation. The buildings are substantial and much larger than those of the tundra people, consisting generally of two parts, one under ground and the other above. The latter, which is generally used in summer and
connected with the other by a tunneled passage, is constructed of logs and roofed with sods; it also contains a central fireplace for cooking, which is utilized throughout the year. The winter habitation differs in no way from the common subterranean dwelling already described.

The skin kayak now disappears altogether and is superseded by the birch-bark canoe, which can be seen skimming over the waters for miles on either side of a settlement. The people do much trapping for foxes and land otters in the winter, and secure large numbers of salmon and whitefish by means of ingenious wickerwork traps, upon which they expend much time and labor. The hurdles serving as "leaders" to these traps can often be seen to extend from one-half to three-fourths of a mile over shallow reaches of the river, so as to turn the schools of fish ascending the current in the eddies into which the traps are moored. The traps are composed of a series of cylindrical and conical baskets, fitting into each other and terminating with a tube with removable bottom, through which the captive fish are extracted. The several parts of this complicated contrivance are prepared within the kashga, generally by skilled old men, but are put together on the spot selected for trapping. Some of these baskets are from 20 to 30 feet in length, and they are secured with stakes driven into the river bottom. Previous to the appearance of ice in the river, in September or October, these salmon traps are all removed and laid away for the winter upon a rude staging of branches in the shelter of the nearest woods. When everything has been arranged to the satisfaction of the owner, the locality is marked by lopping off all but the uppermost branches of some tall spruce tree near by. A set of much smaller traps, entirely submerged, for whitefish and grayling is then placed in the river, to be tended through holes in the ice throughout the winter.

The village of Kikikhtagamiut is situated upon the banks of a slough several miles from the river, and has been rarely visited by white men. Evidently the relic hunter has never been there, as the burial place, immediately adjoining the dwellings, contains a great number of the most interesting carved monuments or memorial posts. Upon the graves masks, charms, drums, belts, pieces of garments, and pieces of dried fish and tobacco are deposited, but the natives are unable or unwilling to explain whether these offerings are made to please the deceased or to keep evil spirits away from their resting place.

The 11 dwellings of this village are all of the composite type recently described, bearing evidence in their construction of an abundance of building material and of the permanent character of the settlement. Both reindeer and moose are hunted occasionally by these people. The graceful, half decked birch-bark canoe is in general use, though to obtain the bark it is necessary to ascend to the upper reaches of the river, where birch forests of considerable extent exist.

Aliagauniut, on the western bank of the river, and Tuluksgamiut and Quieechohlogamiut, on the eastern side, are similar in general features, but, being less removed from the main route of travel, their primitive characteristics are less apparent to the casual observer. Though these villages are separated by distances of some 20 or 30 miles, their fish traps form a continuous line on either side of the river, advantage having been taken of every eddy or gravelly flat favoring the erection of the frail structures beyond the reach of the main channel's rapid current. The number of these traps is very large, and the partially stripped spruce trees, indicating their sites, become a regular feature of the landscape, creating the impression that the population of these settlements must be larger than the enumeration seemed to show. Such, however, is not the case. It is the custom of many Eskimo communities inhabiting the vast tundra and lake country drained by the Kviuchuk river to repair annually to this section of the banks of the Kuskokwim to prepare their supply of dried fish for the winter. This movement begins toward the end of June, and for a time the shores are lined with camps and kayaks of the tundra people, mingling with the bark canoes of the permanent residents. The time of this annual visit is regulated by the run of salmon, and its length depends upon the abundance of fish; but it is anticipated and enjoyed by the people as a period of recuperation from the rigor and want of the winter season and for the exchange of social amenities in accordance with their customs. At the same time the lakes and swamps are fairly alive with wild fowl, ducks, geese, and swans, affording both eggs and meat to the hunter, while the ground is covered with berries of various kinds. The tundra people's greatest comfort is probably derived from the abundance of fuel and unrestricted enjoyment of fires, in strong contrast to their winter homes, where they pass the greater part of the season without fire in their dwellings.

Each of the permanent villages on this part of the river has one or two large kashgas, built with logs of great size, for the accommodation of visitors and the performance of masked dances during their winter festivals.

A few miles south of the great bend of the Kuskokwim we find the village of Ugavigamiut, consisting now of 7 dwellings and 57 people. In former times this village was quite an important native trading center for the exchange of oil and fur, and for some years the white trader at Kolmakovskoy maintained a depot here, the location being convenient for communication with the tundra people as well as with those from the central part of the river. At present there is but 1 Eskimo trader, who lives in a comfortable log house, provided with chairs, table, and "a real glass window" of 3 panes of various sizes. The remains of 3 large kashgas speak of the former importance of the place. The burial place, which occupies more space than the present village, is crowded with specimens of rough carving and trinkets of native manufacture.

To the northward from Ugavigamiut the channel of the Kuskokwim becomes much obstructed by the precipitation of whole groups of trees into the current which undermines the banks. These form dams and weirs,
extending far into the stream, confining the current and thereby increasing its velocity to such a degree that boats and canoes can stem it only with the greatest difficulty. At the same time the banks of the river rise rapidly in height, and during high water one has to travel long distances before a landing place can be found.

A few miles west of the village of Kaltakamuit a small stream enters the main river from the north, its dark, muddy water showing distinctly for miles along the shore against the clear fluid of the Kuskokwim. Entering this tributary with his canoe, the traveler meets with no perceptible current, but glides easily over an apparently oily surface, with large patches of metallic luster. The channel winds through a stunted grove of spruce and poplar trees, with trunks and lower branches discolored by the same red pigment which tints the water, an evidence of flood, caused by “backwater” from the Kuskokwim. About 2 miles up this stream is the terminus of one of the most important routes of intertribal traffic in all this region. A portage trail of less than half a mile over swampy ground, which evidently has been used for ages, leads to channels connecting with the Kvichak river, an exceedingly crooked stream, which takes its origin from the swampy plains between the Yukon and Kuskokwim, and separated from the latter by a single narrow, wooded ridge. Its general course is at first from east to west, but after tapping and draining a number of large lakes in the tundra region it doubles upon itself and finally enters the Kuskokwim south of Bethel, having covered, with all its sinuosities, a course of several hundred miles. The same portage also serves travelers bound for the Yukon, with its vast tributary river systems. In order to make this journey we leave the Kvichak and drag the canoes through swampy swales and channels into several connecting lakes, and finally carry them over a wooded knoll 50 feet in height, and involving a portage of half a mile, and deposit them in a wide, sluggish stream of dark brown water, which affords uninterrupted navigation to the great river of the north.

The village of Kaltakamuit, once populous, is now reduced to 3 dwellings and a small kasluga, containing 20 people. They are Eskimo, with a slight intermixture of Athapascan Ingalik, but their habitations are altogether of the former type. The burial place of this village also affords a great display of carved monuments, among them some female figures with four arms and provided with natural hair. Its situation upon a high bluff overlooking the river makes Kaltakamuit a landmark and favorite resting place for winter travelers, and formerly the inhabitants could always be relied upon for a supply of dog feed (dried fish, the poorest quality of salmon, carelessly prepared). Though the Eskimo element still predominates here, the mode of life approaches that of the Athapascan, the people depending to a considerable extent upon the forests and hills for a living. The women spend much time in collecting berries, bark, and spruce gum, the latter article being an absolute necessity for travel in birch-bark canoes. Wherever a camp of these people is seen on the river bank the women will be found squatting around the upturned canoes, mending the cracks and leaks with a lump of pitch or gum, which they pass slowly over the seams while blowing upon a live coal held closely against it.

The villages on both sides of the river between Kaltakamuit and Kolmakovsky are small and widely scattered. Some of them are inhabited by Ingalik only, others by Eskimo, while a few contain both elements of population. The Oh-kagamuit and Tukakamuit people are Kuskovgmiut Eskimo, while 5 or 6 other small villages are occupied by Ingalik, with but a few Eskimo, generally females, the wives of Ingalik men. These natives, living on the border land between two of the principal tribes of Alaska, exhibit the characteristics of both, but their dwellings and garments are superior to those of the coast people. The common dress for both men and women is a parka, or shirt, made of the skins of the ground squirrel (Spermophilus) or of the whistling mammt, each little pelt remaining doubled, the backs, with pendant tails, forming the outside of the garment and the bellies the inside. The parkas of men and women reach from the neck to the feet; they are drawn over the head, and have armholes with small detachable sleeves. For walking, the men raise up the parka by means of a girdle worn somewhat lower than the waist. In cold winter weather a hood of heavier fur is worn. They also have mittens of various kinds, the warmest being lined with sward’s-down. Their footwear is used chiefly during the winter, and consists of top-boots of seal throat or moose skin, which are frequently lined with some light, soft fur. The dwellings still resemble the Eskimo huts in general plan, but are more durable, as considerably more timber enters into their structure. Here and there one finds a dwelling with a small underground compartment added, in which the owner can enjoy a steam bath in privacy. These bath rooms are lined and floored with timber, and are sometimes offered to white travelers as sleeping places.

The animal life of this central section of the Kuskokwim valley is quite abundant. Both black and brown bears are found, and foxes and land otters are trapped successfully during the winter. A few marten skins are obtained from the more distant wooded hills, which, on the south side of the river, rise to a height of 2,000 feet. The open tundra is still swollen by reindeer, and moose frequent the poplar and willow thickets of the valleys. Veins of cannibal crops out at various points along the river, but though they are known to contain a large percentage of mercury, their remoteness from shipping has thus far prevented their thorough examination or development.

The number of salmon ascending to these upper reaches of the river is not great, and consequently we no longer meet with the large wicker traps, a more compact appliance intended for whitefish being in general use. The river banks of this region are high and firm, and do not crumble and fall into the stream, as in the lowlands. However, navigation is still beset with difficulties. Gravel bars and shallow reaches extend for miles, compelling travelers to abandon the paddle and propel themselves by means of short, light poles against the rapid current.
THE FIFTH DISTRICT.

The old station of Kolmakovsky, commanding the trade of the whole river system, is situated on a commanding bluff on the south bank of the Kuskokwim, fully 250 miles above the head of ocean navigation at Shinyaguniut. It was founded in 1833 by Luke Kolmakov, a Russian creole in the employ of the Russian American Company, who selected the site after a prolonged exploration of the country to the northward from Bristol bay, where the Russians had occupied a fortified station, New Alexandrova, since the year 1818. When this Muscovite pioneer and his companions reached the upper Kuskokwim its mouth and lower banks were still unknown beyond the indefinite outlines of "shoalness" described by Vancouver on his chart of Bering sea, and the Yukon, under the Eskimo name of Kwikkipak, had been described vaguely by native travelers. Kolmakov obtained the good will of the people with whom his countrymen had not previously come in contact, and after building a fortified station of the class known as "redoubts" in the Russian possession he lost no time in exploring the country. In the winter of the same year he first gazed upon the ice-covered Kwikkipak and traded with the Eskimo natives on its banks.

Kolmakov's discoveries were speedily reported to the company's manager at Sitka, who less than 2 years later sent Lieutenant Michael Tekenof by water to establish a fortified post on Norton sound, to serve as a depot for the Kwikkipak or Yukon valley. Communication between the new post and the Kuskokwim was at once established by means of portage routes across the tundras. At that time the fur-bearing animals throughout all that vast region were still very numerous. Black bear, black fox, marten, beaver, and land otter were the furs most common, and large quantities of these pelts, pressed into compact bales, were transported on rivers and over portages to Alexandrova, on Bristol bay, and owing to the exaggerated reports of Russian skippers of the dangers of navigation in Bering sea, much of this valuable freight was carried farther across the peninsula by way of Illama or Bocharof lakes.

Of the redoubt as it existed during the flourishing times of Kolmakof but little remains to-day. One octagonal 2-storied blockhouse, which probably formed an angle of the stockaded square, still stands, and also a tumble-down log warehouse, with porches for musictry, probably of a later date. The stockade has long since disappeared and the space of the former inclosure is filled with weed, substantial log houses and a small chapel of the Russian church, finished with dressed lumber and shingle roofs, erected by the present trader, a native of Finland, who has earned for himself a moderate fortune in the course of 15 or 16 years, being favored above all other Alaskan traders by exemption from competition. Until the last few years he led a life of complete isolation, meeting other white men but once a year and living almost entirely upon the products of the country, but one meets the irrepressible prospector in the farthest recesses even of this the least known Alaskan district, and the voice and influence of the hardy missionary are heard and felt throughout the region which was but a field for conjecture a few years ago.

The trade of Kolmakovsky is still very important, the place being one of the few remaining from which a considerable quantity of skins of the marten, beaver, and black bear is still obtained. The region to the eastward, along the main river and its tributaries, which is rich in peltries, is inhabited by industrious and energetic hunters of the Kutchina tribe, who in disposing of their furs purchase freely oil and dried fish, bartered at very low rates, from the Eskimo of the lower river, as well as the more costly necessaries and luxuries of civilized life laid before them by the enterprising trader.

The region of alternate mountains and high plateaus drained by the upper Kuskokwim and its tributaries must still be considered as essentially unexplored, though much information as to its physical features and native inhabitants has been laid before us through the efforts of the census taker. Mr. John H. Killbuck names 8 tributaries to the Kuskokwim above the trading post of Kolmakovsky, as follows: the Kwikkipak, the Tal-Kohta, the Shalatuk, the Nmaitchak, the Tahliewikshakh, the Tsavonech-tahlie, the Tahkalkoh, and the Holitnuk. The latter stream has heretofore been known as the Halitno, but was changed to Olitna in the latest edition of the coast survey map, No. 900. The only permanent agglomeration of settlements in all this region is Vinishal, the winter station of a creole trader.

The people of this section belong to the Athapascan family of the North American Indians. They are easily distinguishable from their Eskimo neighbors, not only linguistically, but in their habits, customs, and whole manner of life. Depending chiefly upon the game and birds of the forest and tundra for their subsistence, they live in scattered, often but temporary, small settlements, and as this mode of existence involves constant activity and vigilance, these qualities have impressed themselves upon their character, offering a very agreeable contrast to the sluggish sloddity of the fish and blubber eating Eskimo, who lazily wait for the fish and marine mammals to make their appearance at their very door in each successive season.

The observant visitor among the Kutchina is struck at once with the unusual traits of industry and intelligent adoption of the comforts of civilization to the utmost limits of their means and natural facilities. A marked change in this respect has taken place in their condition since the greater enterprise of traders from the states, instigated by active and untrammeled competition, has placed within their reach manufactured articles of necessity, and even of luxury, and enabled them to see with their own eyes the many conveniences in housebuilding and furnishing invented by civilized man. We now find them generally (at least in their winter settlements) in comfortable log dwellings, with one or more outhouses, the dwelling furnished with a small cookstove or heater, and even crude tables and chairs. By the conditions of their habitat, monopolizing the trade in the skins of the most valuable
fur-bearing animals found along the course of the Kuskokwim river and its tributaries, the Knikchana, who are able to dispose of the pelts of the black bear, black fox, marten, and beaver, have become comparatively wealthy, and occupy the enviable position of an aristocracy among the native tribes. Thus far their trade has been carried on with only 2 or 3 white men and Russian cccles, who were honest, intelligent men, honorable in their dealings with the natives, who have thus escaped the evil consequences of promiscuous intercourse with men of all kinds or of no character, who have left their mark with the most deplorable effects upon whole tribes in various sections of Alaska.

For several generations past these people have been members of the Russian orthodox church, but the visits from such missionaries as Russia sends to or maintains in its former possessions are exceedingly rare. The census enumerator who visited them in 1890, himself a missionary of the Moravian church, expressed the opinion that these people "lead conscientious, Christian lives, in accordance with such light as they have received". Among them was found one man who, with such tools as he made himself, could repair any part of breech-loading arms of various patterns, replace parts lost, and even rifle a smooth-bore gun barrel. With their early Muscovite semi-civilization the Knikchana have imbued a strong predilection for tea as a beverage, a luxury in which their relative financial prosperity enables them to indulge. Tobacco is used as much by the Knikchana as by other Alaskan natives, but is always smoked or powdered and taken as snuff. In former times these natives practiced the arts of making the crudest kind of pottery and of weaving straps and bands from the wool of the mountain goat, as the Chaghaluk and Anvik people do now; but the influx of better articles to serve the same purposes has caused them to abandon their primitive methods.

When we look upon these natives, exhibiting the most praiseworthy traits of character and eagerly adopting themselves to the habits of civilized life, it seems a pity that there is no apparent hope of their increase or even preservation. Removed as they are from all medical assistance, every cold, to which they are more exposed now by reason of their "improved" mode of life, is apt to result in pulmonary disease; almost any accident may result fatally for the want of intelligent care, and without being exposed to the contaminating and fast-killing vices of the white man, they seem to be drifting away, with the doom of ultimate extermination already in sight, while their Eskimo neighbors, who still lead primitive lives, devoid of every comfort, and by their poverty denuded from making the slightest improvement in their habitation or garments, seem to thrive in the most squalid and cheerless surroundings, subsisting upon food which the dogs of civilization would certainly refuse.

The territory occupied by the Knikchana is so large that the fur-bearing animals are in no danger of extermination, and consequently the members of this tribe will probably not lack the means of continuing to live in comparative comfort during their limited period of existence.

The small, scattered settlements on the Holitnik are inhabited by Ingalik, a few of whom have Eskimo wives sailing from the Table Knuk or Nushagak river. Their dwellings are ill-constructed and mostly underground, as timber can only be obtained from a great distance. The annual overflow of the river causes these people to migrate and to live much in temporary camps in the vicinity of the resort of beavers and land otters.

The villages of Napalnut and Kwischippingammuit, though situated considerably above Kolmakovsky, contain about 50 per cent Eskimo population, owing, probably, to the vicinity of several portage routes connecting the Kuskokwim with the Eskimo villages on the Yukon river. These routes are now, however, only traveled with dog sleds in the winter.

The parts of the Fifth district thus far discussed comprise three-fourths of its superficial area and all that is present known to be of any commercial importance, but considerably more than one half of its population is contained in the comparatively small section still to be described, the tundra region, lying between the Kuskokwim and Bering sea and the island of Nunivak.

This whole region, triangular in shape, measures about 160 miles along the base on the north and nearly the same along the perpendicular to the apex on the south, indicating a superficial area of about 12,800 square miles. As the population of this section is in the aggregate 3,400, we may consider this the region of greatest density of population in Alaska, at the rate of between one-third and one-fourth of a person to the square mile.

In appearance this deltoid formation, created evidently by the alluvial deposits of two great rivers, presents a perfectly level expanse of swamp but a few feet above high-water mark, from which rise, like islands, a few hills from 50 to 100 feet in height in the southeast near the headwaters of the Elk-kwir river, the Nunivak hills in the north and the heights of Cape Vancouver attaining an altitude of about 1,800 feet in the west.

Proceeding from Bethel southward along the western shore of the Kuskokwim, over the route followed with his dog team by Mr. Weber, who undertook the enumeration of the tundra people, we pass by Nupaluyagannuit, previously described, to find the first important settlement at Kenaghamnut, at the mouth of a tidal slough nearly opposite the village of Ahpokagamuit, on the eastern bank, but beyond the reach of vision, owing to the lowness of the land. This village is typical of the better class of settlements in the tundra, consisting of 10 large dwellings and 2 Kashgas, inhabited by 267 Kuskwogamuit Eskimo. The people are comparatively prosperous, as they still annually obtain a certain quantity of walrus ivory from the sand bars and dunes frequented by the walruses for "hunting up" at certain seasons. The makhak and other hair seals, as well as the beluga, are very plentiful in the waters of the adjoining sea, the shallowness of which prevents whaling or sealing vessels from approaching the coast.
The spring tides and southwesterly gales drive the waters of Bering sea far inland, leaving each dwelling an island for the time being, and as the inhabitants depend upon swamp holes for their drinking water the quality of the latter is very bad.

The only furs obtained by these people are mink and muskrat skins, the former of a poor quality. Their garments are made of the skins of birds (divers, cormorants, and gulls) and hair seals. The more prosperous among them only are able to purchase ground squirrel and reindeer parikas from their neighbors on the opposite bank of the Kuskokwim river.

The vicinity of this village, as well as the whole densely settled tundra region of the delta between the Kuskokwim and Yukon rivers, with its great network of tide channels, sloughs, rivers, and lakes, offers to its inhabitants an additional food fish of great importance, a small blackfish named the Dalilca pectoralis. Dr. Tarleton H. Bean's report on Alaska fishes does not mention this species, which, though but 5 or 6 inches in length, plays a prominent part in the domestic economy of the inhabitants of the tundra. It is found in all the shallower channels and lakes throughout the country in such quantities as to furnish subsistence for whole settlements in the most desolate regions, where nothing else could be found to sustain life at certain seasons of the year. The blackfish, as it is called by the natives, is exceedingly fat, and a good quality of oil is obtained from it by compression. Its presence is of the greatest advantage to the civilized traveler who may happen to traverse this almost unknown region, as it represents the only palatable article of food found there during the winter, and without it he would be obliged to subsist upon badly cured dried fish, seal blubber, and oil in various stages of decomposition. The fish are found in such abundance that old women and children only engage in their capture with scoop nets and other primitive appliances. Good bundles can be found in the food caches in the winter, the frost preserving them in a palatable condition.

Proceeding westward from Kenbachmanam through the tundra, we pass at the head of a tidal river a small settlement of 2 wretched dwellings inhabited by 12 Kwakwagnits. The sod huts are in a state of partial collapse, the effect of frequent inundations, but the kugat, or food caches, are full to overflowing. A semicircle of shallow excavations incloses the dwellings on the land side. These are the "head holes," receptacles for salmon heads, which are deposited here and submerged in muddy and brackish water until they have acquired a flavor "high" enough to suit the Eskimo idea of delicate food. Some of these holes are covered with sods or clay, while others are left open. The latter always exhibit a thick, green scum on the surface of the water. These pitfalls are only dangerous to the traveler at night, but there are others not so easily avoided. It is customary with the dwellers upon this bleak shore to deposit such blubber and intestines of walrus, seal, or beluga as they are unable to consume at once in pits from 3 to 4 feet deep. When the pit is filled nearly even with the ground a thin layer of grass is sprinkled over the blubber and a little earth on top of that. There is nothing to warn the unwary visitor of his peril until he sets foot upon the shaking, slippery mass, and he sinks into a disgusting mass of putrefying fat before he can jump aside. The dogs apparently do not venture to dig into these caches.

A long day's travel over the tundra and across wide streams and channels brings us to Kenachmanagharnamit, one of the few villages of the tundra region built upon the seashore. The tides and gales which drive the waters far inland over the flat surface and deposit floating ice fields miles from the seashore have compelled the people to build upon the slightly elevated banks of streams in the interior. This settlement, consisting of 8 dwellings and 1 kashka, inhabited by 181 people, is located upon a sandy ridge thrown up by the sea and surrounded by it during spring tides and southwesterly gales. The inhabitants are Kwakwagnits, who add walrus hunting to their other pursuits. The western limit of this tribe on the coast is reached at the next village of Quelechakamit, situated about 15 miles inland, on the banks of a small river. They number 112, living in 6 dwellings and 1 kashka. During a part of the summer these people occupy camps upon the seashore for the purpose of hunting walrus and beluga.

A few miles to the northward, on the banks of the same stream, is the small settlement of Anovokhamit, consisting of a single house inhabited by 2 families of Magamits. By this name, which signifies mink people, the greater part of the inhabitants of the tundra region are known, probably because mink skins are almost their only article of trade. The difference between them and the Kuskwamits is chiefly dialectic.

There does not seem to be the slightest trace of tribal organization among the Eskimo in this part of Alaska. The only persons of influence in a community are the trader or middleman and the shaman or medicine man. The trader is only found in the more important settlements, chiefly those on the coast, where intercourse with whale or white traders takes place. The efforts of the "tungiaqkhuk", as he is called, are directed altogether to traffic, which he takes good care to cause to pass only through his hands. In domestic or social affairs he seems to have no more voice than any other man. The medicine man uses no medicine and relies wholly upon noise, contortions, and incantations. Sickness and other ills are, in the Eskimo's opinion, the work of evil spirits, and can be cured or remedied only by driving the evil spirit away. To this end the operator gets himself up in the most hideous disguise he can devise, at the same time endeavoring to produce the most uncanny noises with voice, drum, and rattles. He is also consulted in the manufacture of carved designs over the resting places of the dead or in memory of those lost at sea.

When an Eskimo is attacked by disease his recovery depends very much upon the state of his mind as to whether, in his own opinion, he has lived long enough. He is not at all afraid of death, unless it appears in the shape of violence at another's hand, and this is of exceedingly rare occurrence. If he has made up his mind that
his time has come no ordinary treatment will avail, no matter how slight the ailment. Hunger, hardships, and exposure he can bear for extended periods, displaying great fortitude and powers of endurance. On the other hand, nostalgia or fretting under some real or imaginary wrong will quickly wear him out, extinguishing all desire to live and destroying the power to resist any ailment that may overtake him.

The people living in the interior of the tundra region seem physically stronger than their kinsmen on the seacoast. I think this can safely be attributed to the ample supply of blackfish, alluded to elsewhere. These fish are caught at all times, even in the transition period, much desired by the Eskimo, between winter and spring, which is known as a period of want and suffering among those who must depend wholly upon stores prepared in summer for the winter; and thus it happens that these “mink people”, poor as they are from a commercial standpoint, are physically in a better condition at the advent of spring than any of their more affluent neighbors.

The most populous settlement of the Magniuts is situated on a slight rising ground a few miles to the eastward of the mouth of the Osuskuk river, consisting of 17 dwellings, the largest kashga in the tundra country, and a small trading store conducted by a native as agent of the Kuskokwim trader. The permanent inhabitants of this place number 358, but at certain seasons of the year numbers of people come here from various sections of the interior and the coast for the purpose of fishing in the river or hunting the walrus and beagins. In the winter season the westerly gales often drive in large fields of ice from Bering sea well covered with hair seal, affording the Magniuts an opportunity to gather a rich harvest of blubber and hides. On these expeditions they provide themselves with canoes and small hand sleds, carrying one upon the other alternately as their course leads them over ice or water. Occasionally a hairless seal hunter is carried away to his death by a drifting floe during snowstorms, which cause him to lose his bearings.

Quite a large quantity of driftwood from the Yukon and Kuskokwim rivers is carried into the mouth of the Osuskuk river by currents and tides, enabling the people of Chalitmunit and a few neighboring villages to construct better houses than their neighbors. Though they have no means of transporting heavy logs overland, they take advantage of the highest spring tides to accomplish their purpose. The huge logs used in erecting their kashgas were collected during quite a long period of years.

Within a radius of less than 20 miles from Chalitmunit we find 3 other villages of considerable importance, on the west and 1 on the east bank of the river. Queaknaghunimnit contains 4 houses and 1 small kashga, with 75 inhabitants; Chechinudnit has 7 dwellings, a kashga, and a trading store, conducted by 84 inhabitants, and Tefaknahgahunimnit, beyond the river, with 135 people living in 10 houses and a large kashga, has been provided with a small chapel, in which the Jesuit missionaries of Dunlunuk hold services during their periodical visits to this populous center. The casual observer may fail to discover the means of subsistence offered by nature to this aggregation of more than 700 wasteful consumers, but the supply must be ample if overflowing “kungats”, or caches, and a decidedly “comfortable” appearance of the people are to be considered as reliable indications. A closer inspection, however, reveals a very important item in the domestic economy of these people; the ribs and bones of whales seem to have entered largely into the construction of houses, and we are told that the same friendly current which provides them with timber also carries to their shores many a carcass of whales struck by the harpooners of the whaling fleet in Bering sea and allowed to drift away, after being stripped of the precious baleen. Thus the people of this group of settlements may be said to live upon bread cast upon the waters by other people, and their general embodiment is duly accounted for.

Proceeding from Tefaknahgahunimnit northward we find the village of Ighiaknahgahunimnit, with 81 inhabitants, within a few miles of the broad tidal channel which connects Baird inlet with Bering sea. On Nelson island, beyond this channel, often impassable during the winter on account of the breaking and shifting ice carried to and fro by changing tides, there is another small village of about 50 inhabitants, and further on, on the southern slope of the mountains of Cape Vancouver, we find 2 other settlements, with an aggregate population of 80 or 90 Magniuts. These mountains, which rise to a height of about 3,000 feet, were formerly a resort of reindeer, and the people of the vicinity were known as the Kialigamit (people of the Kialit mountains). The differentiation was, however, noticeable only in their habits, based upon the presence of the deer and ground squirrel. Linguistically they can be safely classed with the Magniuts.

Two sparkling streams descending from the heights afford the traveler a pleasant break in the distantly uniform landscape of dead level and stagnant water. The first of these, the Daksuk, winds through the southern part of Nelson island, while the other, the Dununuk, runs eastward through a valley and discharges its waters into Btolin straits just south of the cape, at the site of a village of the same name. Here a trading post has been in existence for many years, maintained by a native but supplied from St. Michael. Dununuk is also the only point of communication with Nunivak, to which island the trader voyages once each year in his “angevok”, or large skin boat, to collect the meager spoils of the Nunivak hunters, leaving them a small quantity of powder, lead, percussion caps, and tobacco in exchange. The native population of this settlement consists of but 48 people, living in 5 rather well-constructed houses and one kashga. Close by, on the hillside, a Catholic mission and chapel have been erected by the Jesuit fathers, who have their headquarters at Holy Cross mission, on the Yukon river. Supplies are brought to this mission in the summer by means of large sailboats, which come down from the Yukon through its Kaslunuk arm and thence along the coast.

From Cape Vancouver northward, after passing the Ninghalik tide channel, the northern entrance to Baird
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inlet, the coast is very low again for a distance of 100 miles. Then Cape Rumiantzof looms up like an island, with rugged hills over 1,000 feet in height. The intervening coast, however, though flat and uninviting and cut up with shallow bays, sloughs, and inlets with muddy bottom and bars, is by no means uninhabited. We find on Nelson island, on the banks of a small stream, the Utkuk, the village of Ugokhamint, of 6 dwellings, 1 kashga, and 65 inhabitants. Beyond the Ninglacik channel we find a small settlement of a single dwelling and a kashga at Glkahamint, on the Mokhowruk (wood) river, and advancing northward over alternate mossy swamps and mud flats we reach Kashmunamint, a settlement of 20 houses and 2 large kashgas, constructed upon a peninsula between the branches of the Kashmunuk river, one of the many outlets of the great Yukon. This is quite an important and prosperous settlement. A large number of beluga is secured here annually. These animals, on their way to the mouth of the Yukon, enter the shallow bays and channels, and being cut off by a chain of canoes from deeper water are left stranded by the receding tide. Many varieties of the hair seal are also numerous, and there is quite a run of king salmon to the Yukon through the Kashmunuk mouth. In addition, these people have, like all other dwellers in the tundra, an ample supply of blackfish throughout the winter. The abundance of food and of driftwood from the Yukon serves to attract a large number of Maginuits to this vicinity, not only as permanent residents but as temporary dwellers, chiefly in the winter, the season of masked performances and social gatherings throughout this region. The 2 kashgas are very large, and are fitted with all the latest Eskimo appliances for stage effects and for the make-up of the performers.

20 miles north of Kashmunuk, on the opposite shore of Hooper bay, we find the village of Askhaghamint, nestled against the foot of Askhaghamint or Cape Rumiantzof mountains. The inhabitants are Maginuits, 138 in number, who live in 14 dwellings and 2 kashgas. The natural advantages of this location are fully equal to those of Kashmunuk. Food is plentiful and is obtained with but little exertion, leaving the people much time to devote to their social gatherings and superstitious rites. Their domestic economy and intercourse are ruled by the edicts of the tungiak (medicine man), who alone claims to know the ways of the evil spirits and how to circumvent them. Occasionally periods of hardship and scarcity of food have been brought about by the tungiaks' order to the people to abstain from labor for any kind for from 10 to 20 days in the height of the hunting or fishing season. The suffering resulting is, of course, laid to the action of evil spirits, and is borne without a murmur by these patient beings. However, the rule of the tungiak is approaching its end. The missionaries are firmly established at Cape Vancouver, and they are rapidly gaining the love and confidence of the tundra people, who willingly give them their children to be trained at the sisters' schools on the Yukon. Taught by long experience among native tribes, the Jesuit fathers do not attempt to break up the gatherings in the kashgas; they simply endeavor to eliminate from them the rites of superstition, substituting amusing exhibitions of another kind, and at the same time they carefully avoid, in their attempts to better the physical condition of their charges, the creation of new wants, but simply teach them to make the most of means at hand.

In the vast lake region lying between Hazen bay and Baird inlet on the west and the Kvichak river on the east we find 8 settlements of Maginuits scattered along the water courses and among Lakes Nangavolanhame, Kagahihkak, Takhalaq, and Dab-lakak. Several of these villages consist of 1 or 2 dwellings each; the larger ones are Kwikgamint, of 7 dwellings and 1 kashga, with 157 people; Nnahkochamish, on the headwaters of a stream running through several lakes into Baird inlet, of 6 houses and a kashga, with 135 inhabitants; Nushuvonak-chigamint, among the lakes, of 5 houses, with 107 people, and Tschanghamint, of 4 houses, with 60 inhabitants, on the banks of the Kvichak river, within a few miles of Bethul, on the Nushokokwin.

To conclude the review of the Fifth district we must turn our attention to its only detached portion, the island of Nunivak, separated from Cape Vancouver and the adjoining coast by Etolin straits.

Nunivak island is one of the few sections of Alaska in which no white man has as yet established himself permanently. Its northermost point was years ago determined and surveyed by a coast survey party under Mr. William H. Dall, but the remainder of its coast is still uncharted and carefully avoided by navigators. Twice within the last 20 years the crews of shipwrecked vessels have spent a few weeks of weary waiting on the island, but even these visitors were seen only by a few of the people and under circumstances that could not impress them with the white man's superiority. It remained for the enumerator of the Eleventh Census to obtain the first view of the whole circumference of the island, its villages and people.

At the southern extremity of Nunivak a large lagoon makes in from the eastward, cutting almost through the island and separated at its head from the sea by an isthmus only 200 yards in width. Here the visitor approaching the island from the south meets with the first inhabitants, and here the census agent was landed from the United States steamer Thomas Corwin to make his way over and around the island. Upon the shores of the lagoon, which still remains unnamed, and of which our maps give not the slightest indication, several settlements are situated. The largest of them is Kwikgamint, which must have been more populous in the past, as the people now occupy three separate sites at various seasons of the year, each containing far more house room than the number of inhabitants would seem to warrant.

The Nunivagamits occupy large subterranean communal dwellings, consisting of a number of square or circular cavities opening upon a common hall or corridor with but a single entrance from the surface of the ground. Each family compartment has its separate smoke hole, but these are rarely used, as the object of this crowding together is warmth through exclusion of all outside air, and nearly all cooking is done in the entrance or in sheds erected for
the purpose. Fires are kindled in these inner rooms only for the purpose of indulging in a steam bath, for, strange to say, these Eskimo have not adopted the custom of the kasgah, so universal on the mainland. The only explanation of this absence seems to lie in the fact that visitors never reach these shores except in summer, when their own upturned boats afford sufficient shelter. That the Nunivak people are not without their masked dances or performances is evidenced by heaps of finely carved masks and other paraphernalia which can be found deposited at the outskirts of the village. The dances probably take place in the larger apartments of the communal houses, which are found only in the winter villages.

At the time of the enumeration the Kwigamint people were at their fishing place, at the mouth of a small river on the northern shore of the lagoon. The houses, 6 in number, consist of single dwellings, semisubterranean, and generally provided with a protected entry and outside cooking sheds. A little above the village a low dam has been erected across the stream with 3 cylindrical traps, clumsily constructed from short pieces of drift lumber, lashed together with willow wishes. These traps have no depth, and to secure the fish, a very small species of salmon, the men stand on the dam and spear them as they enter or emerge from the cylinders. The rocky banks of the stream are utilized for spreading the split fish upon them for preliminary curing. Later, when they have become somewhat hardened, the fish are set upright on the mossy surface, tails upward, in pyramidal groups of from 4 to 6. The wind passing through these piles slowly dries the fish, but at the same time the insects of both air and earth have every opportunity to deposit their eggs, and consequently, when the dried fish are ready to be laid away in the caches they are fairly alive with maggots. The absence of any material for drying frames is the only reason for the adoption by these natives of such primitive and unsatisfactory methods of curing their fish.

From the village sites well-beaten trails can be seen leading into the interior over the gently rolling surface. A cursory examination of these tracks convinces the explorer that they are traveled only in winter, as they do not follow the sinuous depressions between mossy hummocks, but lead over all moderate obstacles which in winter are covered with snow. At intervals, but generally within sight of each other, we notice monuments of stone piled up loosely to a height of from 3 to 10 feet. These serve as guideposts for travelers from one village to another when the uniform covering of snow has obliterated all the other landmarks.

In the vicinity of Kwigamint, about 3 miles to the northeast, there is one slight elevation, a saddle-shaped hill less than 100 feet in height. It is used by the people as a lookout seaward at times, and one of the stone piles has been erected on it, not at its highest point, but in the central depression, probably on account of the bearings of certain objective points in the landscape.

The body of Nunivak Island is a dark basaltic rock, much worn and broken wherever it is exposed to atmosphere or water, but all elevations present a very light volcanic tufa, very porous and bright red in color where covered with its thin coating of moss or soil. Exposure to air changes the tints of the tufa to a darker hue, verging upon brown.

Having completed the enumeration of the settlement on the Kwigamint lagoon and desiring to proceed on his journey, the census agent found himself confronted with an unexpected difficulty. In all other parts of Alaska natives can always be hired to assist travelers, but these isolated savages were as yet ignorant of the principle of one man laboring for another for a compensation. If they had understood the object of the agent’s journey, or if they had any desire to travel in the same direction, they would probably have offered assistance, but the case evidently presented itself to their minds in some such manner as this: here was a man, unknown to them, who had been left among them by a ship which had gone away. They saw in his possession certain articles which they very much desired, and yet very little that looked like food in their eyes. They reasoned that in course of time the man must need food and give in exchange the coveted articles in his possession; consequently they refused to help their visitor onward to other settlements, there to dispose of his valuables to other people. With such views of the situation they even refused to sell a kayak to the agent, and it was the mere accident of a woman coveting a small pair of scissors in a dressing case that induced her to sell her own rather dilapidated kayak. And thus, depending upon his own muscular powers and upon his untired skill in managing so frail a craft along an unknown coast over a stormy sea, the agent was compelled to proceed upon his enumerating journey.

On the map the island of Nunivak presents a slightly undulating outline, without bays or salient points of any kind except Cape Estlin, the only point thus far surveyed. In reality the coast represents a constant succession of bays, shallow, but reaching far inland, and intersected by low, rocky headlands, with small islets and rocky reefs extending miles to seaward.

To the master of a vessel tossed by the choppy waves of Bering sea these large bays may look inviting, as affording shelter and anchorage, but to approach them even he must risk his craft. He will find rocky banks extending far out into the sea, and there is not a single bay where the bottom is not visible from cape to cape at the entrance, though the distance between them may be 10 or 12 miles. The shallow waters break into a tremendous swell with the least wind, causing the natives in their kayaks to keep close under the land and to follow all windings of the coast line in their journey from place to place.

Passing from Cape Mendedhall, at the south end of the island, to Cape Corwin, its eastern extremity, we pass a number of villages set upon low headlands, guarded only by roving dogs. To find the inhabitants in the summer time it is necessary to enter the lagoons, and by following the rock-incumbered winding channels we come upon scattered groups of dwellings, occupied as summer residences only.
The settlements between Capes Mendenhall and Corwin number 5, with an aggregate population of 186, occupying probably not more than 20 houses at any one time, though the number of dwellings, both temporary and permanent, they have at their disposal is much larger. The character of the dwellings is the same in all, communal houses in the winter village and single ones for summer and fishing habitations. As each male individual from 10 years upward has his own kayak, and many of the females (widows and single women) also, much time must be devoted to tanning and otherwise preparing skins of the large maklak seal, with which their canoes are covered. Days and weeks are spent by the men in patrolling the beaches in search of driftwood of size and quality suitable for the purpose of being worked up into canoe frames, and the greatest ingenuity in matching, mortising, and splicing is frequently displayed in putting these frames together. Such drift logs as are water-logged and unfit for either boat or house building are carefully selected to serve as posts for stretching the sealskin lines which form an important item in their trade with their neighbors on the mainland. A single skin, carefully cut, will furnish a quarter-inch line of from 300 to 400 feet and thicker ones of proportionate length. The skins intended for canoe covering undergo various processes, and can often be seen forming white patches upon the green grass or moss upon which they have been stretched to bleach. These natives, as well as those of the mainland tundra, like to have their kayaks as nearly white as possible, to assist them in approaching the beluga or white grampus. Each canoe has some device drawn upon its side or upper surface with pigments obtained by barter from Cape Vancouver. The figures thus far observed are the fox, the whale, and the walrus; boys sometimes have an irrecognizable bird, long drawn out from stem to stern, and others content themselves with concentric rings or ovals. Though representations of the extinct reindeer can be observed upon many implements and ornaments, they are not found upon canoes. These devices, however, do not seem to have any totemic significance, being adopted according to the fancy of the owner or maker of the canoe.

The appearance of the low, rocky coast of this section is extremely desolate and forbidding. One may skirt it for 20 or 30 miles without being able to make a landing through the ever-rolling and ever-breaking surf, even at the head of bays and inlets, and at long intervals only the sight of a cushion of matted seaweed cast over the cruel rocks by the waves, upon which he may draw his canoe, will gladden the heart of the weary paddler. Beyond the rocks of the seashore a narrow belt of low sand dunes is sometimes found, for the presence of which it is rather difficult to find an explanation, unless the sand was carried there upon its floes from the crumbling banks of the Yukon delta. The interior presents to the distant observer a perfectly level moor, but a nearer view reveals a surface full of inequalities, with numerous ponds and water holes and patches of dwarf willow less than knee high, forming a combination of serious obstacles to the progress of pedestrians through the country.

The formation of hummocks throughout the level moors of this southeastern half of the island of Nunivak reveals some novel and thus far unexplained features in geology. The plain, from a few hundred yards beyond the shore line to the first gently rising swells of the western hills, is intersected with many lakes, between which the surface is a moss-covered marsh, from which innumerable hummocks rise of every imaginable shape, varying from 4 to 7 feet in height. The mounds are covered with a matted carpet of moss and small plants, the roots of which form a tenacious sod. Under this covering, however, the mound consists of a very soft, black mold, permeated with water until its consistency has been reduced to that of thick muck, perceptibly quaking under the weight of a man. The most peculiar feature, however, is that each mound is accompanied by what looks like an excavation, a water hole, generally circular in shape, from 1 to 3 feet in depth, nestling close to the mound on one side or the other. In nearly every instance the bulk of the mound would just about fill the corresponding cavity, creating at the first glance the impression that one must have been dug up out of the other. Around and between the water holes, which vary from 10 to 20 feet in diameter, a luxuriant growth of grasses has sprung up through the moss. The soil of the general level resembles that of the mounds, but exhibits a greater degree of consistency; by digging down one comes upon rock or frozen peat within 2 or 3 feet of the surface. As no explanation or theory as to the origin of this formation, apparently not elsewhere observed, has been offered thus far, I can only state the facts and present an illustration of the peculiar appearance of the interior tundra belt of Nunivak island.

To the northward of the peculiar hummock formation just described rises the only eminence on the eastern coast of Nunivak island. When first observed from the south, it looms up like a high, saddle-shaped mountain, but the most practiced eye will find itself at fault in estimating altitudes in those flat northern countries. The mountain does not seem to gain in height as we approach it, and when we finally reach it we find what looks like an extinct crater, the northern wall of which has disappeared, while in the south there remains a narrow rim, about 200 feet above sea level at its central lowest part. The eastern and western sides rise to an altitude of 800 and 600 feet respectively. Near the center of the southern rim, within 20 yards of each other, we find a hot spring, flowing northward through the crater in the direction of the village of Igermut. and a cold spring, the source of a small stream flowing southward and emptying into the sea about 10 miles southwest of Cape Corwin. From the summit of the crater's rim a fine view can be obtained of the serrated coast and level surface of the island, the straits of Etolin in the east, and beyond, a little to the northward, the dark blue slopes of Cape Vancouver. Turning to the westward, one sees a vast plain, dotted with innumerable lakes, with gray, rocky, vein-like ledges rising here and there a few feet above the surface of green. Far away, on the western horizon, a long chain of blue, undulating hills incloses a scene of monotonous desolation, and shuts out from view the waters of Bering sea, that love the west coast of Nunivak. From this height the vast plain seems lifeless, although the scrub willow thickets are fairly alive with ptarmigan,
and their chattering cry, sounding for all the world like the croaking of frogs, can be heard rising through the still, clear air of these high latitudes; wild geese and ducks are probably feeding on the lakes, but they are hidden from view, and the caribou, which once in thousands found here a paradise of plenty, have disappeared before the reckless slaughter of savages intoxicated with their first experience of the range and power of firearms. A few antlers crumbling to pieces on the hillsides is all that remains of thousands upon thousands cast east every season before the war of extermination was inaugurated.

Rounding Cape Corwin and changing our course to the northwest, we enter another deep bay, and at its head find the village of Ingeramut (Mountain village), consisting of 3 communal houses inhabited by 35 people. The waters of the warm spring flowing from the crater spread out into a series of ponds, which form a favorite resort for all kinds of wild fowl. The birds are said to remain here throughout the year, as the ponds do not freeze over, and this circumstance accounts for the establishment of a village amid surroundings otherwise very uniniting. The inhabitants also claim that berries ripen here much earlier than in other parts of the island. Concerning the hot spring they have the following tradition: "Its water was formerly cold, but one day, a long time ago, 2 hunters killed a reindeer near its head, and kindling a fire began to cook the meat. A strange old man appeared and asked for a piece, but was told to wait, and when the hunters had finished their meal there was not a single scrap left and the old man went away very angry. When the 2 men attempted to put out the fire to prevent it from spreading through the dry moss, they could not do it, though they carried water in the fresh deerskin all day long, pouring it on the flames. They became frightened, and taking all their people they paddled away to another village, but they could see the fire for many days. At last they saw no more fire and smoke, and went back to find the flames extinguished, but the water in the stream was hot and has remained so ever since."

On the deeply indented coast between Cape Corwin and Cape Etolin we find but 2 settlements, each with a winter village on the coast and summer camps at the heads of various bays.

Sites and ruins of abandoned villages are also numerous, and graves, single and in groups, can be seen on every slight eminence or projecting point along the seashore. As the bodies are only laid upon the ground and but partially covered with stones and driftwood, the skeletons soon fall to pieces and become scattered; the skulls, however, are gathered and piled up in small pyramids, which form a regular though not a cheerful feature of the dreary landscape.

Chuligunt and Upper Ohuligunt, the latter quite an important fishing station, contain 62 inhabitants. A wide but shallow river debouches at Upper Chuligunt, from which the largest and best salmon on the island are obtained. Quantities of the fish are dried here and packed closely in grass baskets made by the women for trading with people of other parts of the island where salmon is comparatively scarce. Driftwood is quite abundant.

Within 15 miles of this place we reach the northern extremity of Nunivak, Cape Etolin, a low, rocky point, curving somewhat to the east and thus forming a partially sheltered anchorage. The settlement at this point, the most populous on the island, is named Koot. In addition to the winter houses on the cape there is a large summer village with 8 communal houses near the mouth of a large lagoon south of the cape, which has an outlet to the westward, impassable for any craft but canoes. Into the southeastern angle of the lagoon flows Koot river, upon the banks of which there is a continuous row of single dwellings, inhabited only during the fishing season. With the rising tide canoes can ascend Koot river between 10 and 12 miles.

Koot is the point of communication with the mainland and the commercial center of the island. Its trade, with its ramifications over the island, is in the hands of a single man, who buys up all the ivory, maklak skins and lines, and oil secured by the people in excess of their immediate wants, giving in return the cargo of a single skin boat brought over once a year by the Eskimo trader from Dumnuk. The ceremonial of this annual visit and the manner of transacting business on this isolated spot are interesting enough to be described.

One cold, drizzling afternoon in August the cry of "angoyok" (big boat) aroused the donzens of Koot from their stetsa and caused old and young to crawl from their underground dwellings and hasten to the lookout, a "nuggut", or elevated food cache, erected on the highest point in the village. Beyond the low eastern shore of the lagoon a tiny sail could be seen at times when the curtain of mist was temporarily parted by the fierce gusts of an easterly wind. It was surely the long expected angoyok. Public excitement at once rose to white heat, and every household became speedily engaged in the bustle of preparation for the reception of visitors. The strangers' boat in the meantime had made a landing on the outer shore, and presently dark specks could be seen moving over the portage trail across the narrow neck of land between the lagoon and the sea. The crew were carrying the cargo, and presently the upturned boat was taken over the trail on the shoulders of men with their heads inside, resembling from a distance a many-legged beetle crawling over the tundra. At last the boat was launched upon the still waters of the lagoon and, the cargo having been replaced, was propelled toward the village with oars. The men of Koot ranged themselves in a line on the beach and began to discharge their guns, the salute being replied to from the boat. This waste of precious ammunition was kept up until the newcomers stopped ashore. Then the young men and boys rushed to the assistance of their guests, and in a few minutes both cargo and boat were deposited upon the rank grass that springs up around the edges of native settlements.

The cargo consisted of 10 bales of leaf tobacco of 50 pounds each, 8 sacks of flour of 50 pounds each, 3 pieces of
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faded calico print (of about 48 yards each), 100 half-pound cans of powder, 200 pounds of bar lead, 1 tin of matches, and 1 small box containing a few cheap knives, needles, thread, thimbles, and fine-toothed combs. This was the sum total of the products of civilization required by the 700 inhabitants of Nunivak.

The goods deposited, no further attention was paid to them that day, the remainder of the day being entirely devoted to the entertainment of the guests. In the largest compartment of the trader's house a fire was built and a steam bath prepared, which the strangers enjoyed at their leisure, coming out occasionally to chat with their entertainers without any covering on their bodies except their own parboiled epidermis. After the bath the feasting began, and boys and girls came scurrying from the various households, bearing offerings of food in wooden bowls and trays and grass baskets. There was oil, blubber, bird meat, fish (dried and fresh), seal meat, and the stalks and leaves of various weeds soaked in oil. From the trader's kitchen came the only foreign luxury, a heaped tray of flapjacks fried in whale oil.

The following day was devoted to trade, which was conducted at the "warehouse", a small, square structure of drift logs, with a door 3 feet square, fortified with all the padlocks, bolts, and bars collected from 2 wrecked ships, until there was considerably more lock than door. The 2 traders sat inside of the box-like building, which now contained not only the Koot trader's purchases during the year preceding, but also the cargo of the boat. Customers were allowed to approach one by one and insert their heads through the narrow entrance to the abode of wealth; and thus, in semiobscurity, they conduct their business, either disposing of some trifling article they had brought with them, a bladder of oil, a walrus tusk, or a roll of maklak line, or receiving payment for similar articles deposited many months ago with the "tungak", who never takes any risk of having self-won goods on his hands, and is generally short on every class of goods by midwinter.

The prices paid to the Nunivak people for their commodities would to us seem pitifully small. A young man from the south end of the island, who had left a pair of magnificent walrus tusks with the trader in March, received in August 2 squares of matches (100 each), 1 pound of leaf tobacco (value 30 cents), and 2 needles. This was the result of his struggle with the huge animal, a winter journey to Koot with the tusks, and another by canoe to receive his so-called equivalent. However, all parties seem to be satisfied. It is all among themselves, and certainly is not a case of oppression of ignorant natives by the white man.

When the angayok was launched again for the return journey to Cape Vancouver it contained 260 tanned maklak hides, a dozen fox and land-otter skins, 39 pair of walrus tusks (from 5 to 7 pounds to each tusk), about 100 gallons of oil in bladders, and several thousand fathoms of seal and walrus line.

At social gatherings, on special occasions such as the trading visit just described, and around the camp fires of hunters and fishermen among all the Eskimo tribes, much time is devoted to singing and chanting, mostly by 1 or 2 individuals at a time, with a general chorus breaking in occasionally. The words of a majority of these songs are extemporized a sentence at a time with many repetitions, and they generally express the experience, wishes, or hopes of the singer. But few of them seem to contain traditions. The song indulged in on the occasion of the trader's visit to Nunivak in August, 1891, afforded an interesting bit of information as to the rapid spread of folklore or "news" among these people. In June, 1890, the special agent of the Census Office, while ascending the Kuskokwim river, was obliged to subsist chiefly upon the eggs of wild fowls, which he purchased from the natives for needles, carrying a supply of this circulating medium in his vest pocket. On one occasion, traveling through a swamp in his canoe, he passed the nest of a mallard duck. The native paddlers confiscated the eggs, and, as a joke, the agent dropped a few needles on the despoiled nest. The paddlers, much struck with this proceeding on the part of their passenger, related and enlarged upon the occurrence at every village and camp, and transmitted it to their successors, giving the agent much undesired fame. At Nunivak, a year later, the natives of this isolated spot were already singing of "the man who was so eager to trade that he paid the ducks for their eggs", ignorant of the fact that the individual was then among them.

From Cape Etoin and Koot village to the western extremity of Nunivak island, which has been named Cape Mohican, in honor of the United States sloop of war of that name, which cruised in Bering sea in the summer of 1801, the coast is more elevated, sloping down gently from the range of hills running nearly parallel with the seashore.

The villages of this section of the island number 4. Kahmiut, consisting of 3 dwellings with 40 people, 15 or 20 miles south of Koot, is located upon the shore of a lagoon and on a point of land resembling Cape Etoin to such a degree as to lead navigators into dangerous mistakes in thick weather.

Kiiagmik, near Cape Mohican, has 76 inhabitants, living in 6 houses, and the 2 settlements of Tunagmiuit and Kanagmiuit, between Cape Mohican and Cape Mendenhall, have an aggregate population of 112, living in 8 permanent winter dwellings.

An important salmon stream debouches into Bering sea at Tunagmiuit, and the people of the other villages gather here in the summer to prepare dry fish and to participate in walrus hunting expeditions to the southern end of the island.

In the appearance and general mode of life these people in no wise differ from the other Nunivagmiuit, but the spoils from the wreck of a whaling bark have lately invested them with wealth in the shape of metal, hardwood, and other material precious in their estimation, and caused them to be envied by their less fortunate neighbors.
CHAPTER VIII.

THE SIXTH OR YUKON DISTRICT.

THE SIXTH DISTRICT.

BY WILLIAM C. GREENFIELD.

The mighty stream known as the Yukon does not appear by that name on the map until the confluence of the Pelly and Lewis rivers is reached, about longitude 137° 30' west, in British Northwest Territory. Both of the latter are large rivers. The Lewis river is the best known, having been used for the past 6 years as the highway from southeastern Alaska to the gold diggings on the Yukon, near the eastern boundary of Alaska. Its length from Lake Linderman, one of its chief sources, to the junction with the Pelly is about 375 miles, and lies entirely in British territory, with the exception of a few miles of the lakes at its head.

The Pelly river takes its rise about Dease lake, near the headwaters of the Stikine river, with a length of some 500 miles before joining the Lewis to form the Yukon river. The union of these two streams forms a river varying from three quarters of a mile to a mile in width. For many miles on the northern bank is a solid wall of lava, compelling the swift current to follow a westerly course in search of an outlet to the north. The southern bank is comparatively low, formed of sandy, alluvial soil. A few miles above the White river the stream takes a northerly course through a rugged, mountainous country, receiving the addition of the waters of the White river on the south, so called from the milky color of its water, and a few miles farther on the waters of the Stewart on the north. The current is exceedingly swift here, especially at a high stage of water, as I saw it, being at least 6 or 7 miles an hour. From Stewart river to Fort Reliance both banks are closed in by high mountains, formed chiefly of basalt rock and slaty shale. Many of the bluffs are cut and worn into most picturesque shapes by glacial action. At Fort Reliance, an abandoned trading post, the general course of the stream changes to northwest, continuing thus for a distance of about 500 miles, or as far as the confluence with the Porcupine river, which flows from the north.

Some 40 miles from Fort Reliance the mouth of Forty Mile creek is passed, where is located the miners' trading post. On that creek or river we find the chief gold diggings known at the present time. Some 38 miles from there the river crosses the eastern boundary of Alaska. Here was located for the last two seasons the camp of one party of the Alaska boundary survey, having been previously the camp of the Canadian government party. For 100 miles after crossing the boundary the river runs in one broad stream, confined on either side by high banks and a mountainous country, known as the "upper ramparts." It then widens out, and for a distance of 150 miles is a network of channels and small islands. At old Fort Yukon, an abandoned Hudson Bay post, it attains its highest northern latitude, being just within the Arctic circle. From main bank to bank the distance has been found to be 7 miles at a point just above the site of Fort Yukon. This place is probably the only serious obstacle to navigation that is met with from its mouth to Fort Selkirk, a distance of over 1,600 miles, the channel here shifting from year to year, and at certain stages of water it is difficult to find. From Fort Yukon to the mouth the river has been frequently traveled and well described, rendering further description unnecessary. Without actually taking measurements, it is exceedingly difficult while traveling on the river to determine the immense volume and magnitude of the stream.

AGRICULTURE AND STOCK RAISING.

The long and severe winter season and the frozen, moss-covered ground are the chief obstacles to be overcome in the raising of crops and stock. The former can never be changed, but the latter, by gradually destroying the mossy covering by burning and opening the soil to the influence of the sun and air in summer time, can be brought under cultivation in very limited areas. Many large stretches of burnt country have undergone a complete change of vegetation after two burnings within the recollection of white men now in the country. There can always be a good crop of vegetables of the hardier sorts raised, and there is considerable land that would be suitable for
cultivation. The cereals have hardly been experimented with, though there is a tradition that the Hudson bay people at Fort Yukon had a small quantity of barley come to maturity. I saw barley this season at Forty Mile creek that promised well, but it was not far enough advanced to judge much about its maturing. Potatoes have done well at all points on the river, but the seed has been difficult to obtain. Distance from market and rigorous climate will always preclude the pursuit of agriculture as a business further than the actual needs of those living there. Stock can be kept by using care in providing abundant winter feed by ensilage or curing natural grass hay and by housing them in the winter. In summer time an abundance of the finest grass is to be found almost everywhere in the neighborhood of the rivers or streams throughout the country.

INHABITANTS OF THE YUKON RIVER COUNTRY.

The inhabitants on the Upper Yukon, from the Rampart house to the boundary, form part of a nation known to the English missionaries of the Hudson bay side as the Tukudli (Takuth) Indians, tribes of which extend over the country inclosed by the Porcupine river, the Peel river to the Mackenzie, the Upper Yukon to the neighborhood of the Stickeen Indians in the south, and to the southeast in the McMillan river country. They speak of themselves, however, as Yukon Indians. Their language has been put into print by the venerable Robert McDonald, archdeacon, bibles and hymn books being universally read by all from Nulukayet up. They are of average size, lithe and active, many of them being quite graceful in their carriage. In appearance they approach the typical North American Indian: sharp features, aquiline nose, and high cheek bones, with very small feet and hands. They are nomadic in their ways of life, living in temporary camps both winter and summer, either in the mountains or on the river banks, according to the habits of the game they are hunting.

Some few in the neighborhood of the mining camps are perceptibly changing their mode of life. Around the trading posts at Forty Mile creek there are a number of log cabins built and inhabited by them the year round, and they fully appreciate the advantages of stoves and clothing from the states. The younger men are more-fastidious in their dress than the average white man. They are industrious and fairly enterprising, many of them working successfully at mining for wages paid by the whites, and some are mining on their own account. They make excellent boatmen, poling a boat with skill, boats built of sawed lumber being preferred for river navigation to their own birch canoes. Docile and peaceable, both among themselves and with the miners, they are strongly imbued with the teachings of the English missionaries with whom they had more or less intercourse for many years previous to occupation of the country by the United States. Formerly their chief subsistence was caribou and moose meat, and fish they only used during the summer and fall, but since the arrival of the miners they depend each year more and more on white men's provisions. Obtaining pay for work, they also avoid the necessity of hunting for furs to buy provisions with, as used to be the case in former years; hence the falling off of the supply of furs from that section.

The population is very sparse. At certain times during the year a traveler might pass down the Yukon from Forty Mile creek to Nulukayet and hardly see a score of natives in a distance of 800 miles. The different villages or communities seem to be under the guidance of chiefs and subchiefs, though there does not appear to be much authority exerted by them, and I could never ascertain that this chieftainship was hereditary.

Their mode of transportation in summer time is by rafts, boats, and birch canoes, and is entirely confined to the streams and water courses; in the winter time sleds are used, drawn by dogs, men, or women. Their language is known to the missionaries as a dialect of Tukudli (Takuth), but they converse with the traders in a jargon called "Shavey", a mixture of Canadian French and hybrid words of English, something in the nature of the "Chinook" of southeastern Alaska.

At Nulukayet and down to the vicinity of Nulato changes are to be observed in the natives; though very similar in general appearance, they seem to be a mixture of tribes from the Koyukuk and Tanana rivers and of Ingalik from lower down the Yukon.

Their language is different, though many can converse in a dialect that is understood by the Upper Yukon people. They are not so nomadic in their way of life, living in villages, building log cabins and huts of earth and logs. They depend more largely on the supply of fish and not so much on game. They are mostly addicted to paganism, being more superstitious and depending on instructions from the shaman, or medicine man. They also are becoming yearly more dependent on provisions from the states, but have to procure them by trapping fur-bearing animals to a far larger extent than those of the upper river. They are shrewd traders, taking advantage of every point. They do not so readily adapt themselves to the ways of the white man. They are more pugnacious, quick tempered, resenting a fancied injury or insult very quickly with force. Many years ago some of them killed a white woman, the wife of a trader at a post a few miles up the Tanana river, at the instigation of a shaman. 4 years ago, at Nulukayet, on account of a disagreement with a trader, they broke open the store, scattering the goods about recklessly, and would have shed blood had they not met with adequate resistance. Religious teaching does not seem to have the same effect upon them as on the natives on the upper river. They have had visits from Russian priests and resident English missionaries in past years, without much noticeable effect upon their lives or morals. Their villages are only found on the main river, hunting parties only going into the back country.
temporarily, at which time all the members of the families take part in the expedition. The population found on this part of the river is much larger than that on the Upper Yukon. There is no time of the year when more or less people are not to be found in the villages, and we find among them a larger proportion of females than on the Upper Yukon. Some time ago the lack of females was most noticeable among the Indians of the upper river, attributable to hard usage and the work they were compelled to do, as well as to the lack of care of female children. Of late, however, female children have been better taken care of, and probably in course of time there will be more marriageable women among them. Most of the married women to be seen there at present come from the Koyukuk or the Lower Yukon river. The Nalukayet and Nolukaket people claim to have their origin from the tribes on the Koyukuk river in the north. The Tanana river and Upper Yukon Indians speak an entirely different language, though there is a dialect by which they can communicate with the various tribes.

After passing the Melozikakat river, going down the Yukon, a different type of native is met with, from an intermixture of the Ingaliks from Ulukuk and the Koyukuk river people. These natives are an undutiful and shiftless race, querulous and hard to please.

Nulato was one of the oldest established posts of the Russian company, consequently all the older inhabitants speak fair Russian and belong to the Russian church; but for many years they have been without a resident priest and have received no attention from that church.

Many years ago there was a large number of natives speaking the Ingalik language living on the headwaters of a stream called Ulukuk river, which flows into Norton sound 60 miles north of St. Michael, but owing to constant raids on them by the coast natives, or Mallehmat, their numbers were diminished, and nearly all of them changed their place of abode, moving over to the Yukon, forming a village or tribe at Nulato and intermixing in time with the Takasuki and Koyukuk people, who were already established there. Consequently, the different dialects of these various tribes are to be met with in the vicinity of that place. They subsist chiefly on salmon, large quantities of the small red and silver salmon being dried by them every summer and stored away for winter use. In some seasons there are numbers of reindeer to be found on the neighboring mountains, but not enough to be a regular source of food supply. For some years that district used to be a good fur country, but latterly the number of furs has diminished each year, whether from the extermination of the animals or from the increased amount of provisions which the natives receive in payment for work, doing away with the necessity of trapping, it is impossible to determine; probably both circumstances tend to produce the change. They are, like all these natives, keen traders, considerable trade being carried on among themselves and the coast natives, beaver, land otter, marten, and fox skins being exchanged for oil, Siberian deerskins, breech-loading arms, and ammunition.

All the people mentioned so far, though apparently physically strong and well made, seemingly lack vital force and resistance to sickness. They are subject to pulmonary complaints; ulcers and sores of great severity are constantly met with; they soon show the effect of age, so that from their appearance their age is most liable to be overestimated. They have no idea of taking care of themselves, sleeping in damp and exposed places, and wearing in that severe climate clothing that would be no protection to a white man. I have repeatedly seen in the depth of winter parties traveling, and their only bedding would be a grass mat, a small bag for a pillow, and perhaps a ragged old skin garment or rabbit blanket large enough to cover the feet; they seldom seem to suffer from cold, but it tells on their constitution in course of time. The population has undoubtedly diminished of late years on all the upper parts of the Yukon.

From 40 miles below Nulato the population is very sparse until the neighborhood of Anvik is reached, when a type of natives of purely Ingalik origin is met with, the first large village being at Anvik, some 130 miles from Nulato.

On the Chageluk slough, a branch of the Yukon, several villages of the same tribe are to be found. They extend on the Yukon down to Kozereevsky, 60 miles from Anvik. These natives are in many ways similar to Nulato people; the language varies slightly, but their habits and manners are much the same. They profess the Greek religion, but are strongly under the influence of the shaman, or medicine man, and are so steeped in superstition as to affect almost every action of their daily life. They subsist chiefly on dried fish and trap considerable numbers of fur-bearing animals, the furs being traded for goods. Some of these natives are the sole makers of certain kinds of utensils, such as wooden "kantags" or oval-shaped deep bowls, of various sizes, made from the native spruce timber; others again manufacture a certain kind of clay pot, which in the spring and autumn is brought down in quantities to the coast to exchange for seal and beluga (white whale) oil, which forms part of their food supply, constituting one of the distinctive features between them and the upper river Indians, who abhor oil in any shape as an article of food.

The village of Kozereevsky seems to be the dividing line between the upper and lower river, as far as inhabitants are concerned; below that to the mouth of the river a different race is encountered, being allied to the coast Eskimo, speaking a language totally different. They are a round, flat-faced people, averaging under size, docile and peaceable, subsisting entirely on fish and oil. They live the year round in villages on the river banks, their habitations being constructed somewhat on the plan of a beaver house, which the natives say was their
model. Each village, according to its size, has one or more kashga, used for public shelter, for dance house in proper season, and for the accommodation of all travelers and the single men of the village. Though professing almost universally the Greek church faith, they are intensely superstitious, regulating their fishing, hunting for beluga or seals, and almost every action of their daily life by some superstitious tradition. In the commencement of the winter season they devote a great deal of time to dances or “igrushkas” (Russian for “games”) in memory of deceased relatives or to celebrate some event, when neighboring villagers are invited en masse to partake of their hospitality, and this is usually kept up until the food supply is exhausted. The guests are privileged to name what they desire as a present from their hosts, and it is a point of honor to obtain what is demanded, a return being made by the guests at some future time when their position are reversed. The white traders used to make a point of attending these gatherings, often obtaining considerable fur in exchange for goods that were required to supply the demands of the guests.

Down to about midway between Ikogmint and Andreeffsky the birch-back canoe is used, but from there to the mouth of the Yukon the kayak and angaycik, made of sealskin, are the only forms of boats used. Many villages situated on the low-lying swamps of the Yukon delta away from the main river are utterly devoid of wood for fuel, and the food is consequently devoured raw and in a frozen state. In winter a species of mudfish called blackfish, found in the lakes, is a great food source, being caught in quantities in traps during the fall and winter, allowed to freeze and then eaten raw. Large quantities of waterfowl eggs are obtained in season, also the birds themselves, it being the summer home of many varieties of ducks, geese, swans, and other aquatic fowl. In winter the only means of traveling is in sleds drawn by dogs.

THE FUR TRADE.

The fur trade has undergone considerable change of late years, the catch of furs being considerably less than formerly, partly owing to the decrease of fur-bearing animals, and also to there being more white men in the country, independent of the fur traders, causing the circulation of more money among the natives, with which they buy instead of trading furs. The average catch of land furs for the whole year ranges from 16,000 to 20,000 pelts, usually with a large proportion of mink skins, the lowest-priced fur on the market.

There are 6 trading posts at points on the river in Alaska. The traders, to reach the back country, usually fit out trusty natives with small stocks of goods to travel among the distant tribes. Since the discontinuance of opposition the white traders do not travel in the winter. The prices paid are regulated by the standard price of red fox or marten, called 1 skin, about $1.25. A prime beaver would be 2 skins; black bear, 4 skins; lynx 1 skin; land otter, 2 or 3 skins, and so on. 5 yards of drilling, or 1 pound of tea, or 1 pound of powder, or half a pound of powder, with 1 box of caps and 1 pound of shot, are given for 1 skin; 50 pounds of flour for 4 skins; 5 pounds of sugar for 1 skin. These are samples of the prices obtained by the natives, with but little variation, until the mining district is reached, where the prices are higher, to conform with the prices charged to miners.

MINING.

Mining can not be called a success on the Yukon up to the present time. Since the first excitement in 1886 there have been few instances of individuals taking out of the country more than $2,000 for 2 or even 3 seasons of privation and hardship. There are a few isolated cases of more than that amount being taken out. The majority of the miners are working on prospects, with a heavy account at the store against them. The hardships of traveling to prospect, the short working season, and the frozen ground are obstacles difficult to overcome. The prices of supplies at the store are high considering the small means at the disposal of the miners, but they are not much more than barely remunerative to the trader, owing to the expense and risk of transportation.

The merchandise is carried on the river by means of stern-wheel steamers, the 2 principal ones belonging to the Alaska Commercial Company, 1 of 200 tons, the other of 30 tons capacity, carrying freight and passengers. On the larger boat there is a white man for captain and another for engineer, but both captain and engineer are unlicensed and without papers; the rest of the crew are Indians. There are 3 other small steamers, 2 belonging to the Russian and Catholic missionaries, respectively, and 1 to the trader at Fort Selkirk. All supplies are received at St. Michael, on Norton sound, 80 miles north of the mouth of the Yukon, the furs and gold obtained being turned over to the Alaska Commercial Company's agent there and shipped to San Francisco. Once a year, in June, missionaries and traders assemble at St. Michael and for a few days that place is doing a rushing business. It has become a regular fair for the natives, who gather in numbers from various points on the coast and river, getting a few days' work from the company and having the satisfaction of seeing the new stock of merchandise.

Although the miners have made an entrance to the country, unless some rich developments should yet be made the mining interest will never assume very large proportions on the Yukon. Large areas of the country have been run over by the miners, and gold in small quantities has been found on many of the tributaries of the Yukon, but so far only in placer and bar diggings, no gold-bearing quartz ledges having been discovered.
THE SIXTH DISTRICT.

The influx of miners to the country has produced marked changes among the natives, and not to their benefit morally. The illicit manufacture and use of liquor, both by the traders of the company and miners, is certainly demoralizing the natives to a great extent. It is openly carried on both on the upper and lower river. At Andreafsky, on the lower river, it is a common sight to see intoxicated natives, more especially in the winter, and the natives have now learned the process of making liquor themselves, more particularly on the coast and the Lower Yukon.

MISSIONARY WORK.

Of late years missionaries of various denominations have entered the country, but the progress made so far does not appear much on the surface, though according to the reports of the individual missionaries they seem to be satisfied with the advance made.

The Jesuit fathers, under Father Tosi and the sisters of St. Ann, have at Kozerevsky a very promising school, with some 60 boys and girls boarding in their establishment. They have made wonderful progress in teaching half-breed and native children, as was shown by the closing exercises of the summer term, which I witnessed at Kozerevsky last June. Some of the scholars, who 10 months previously I had known as wild Indian children, then spoke good English in conversation and went through a creditable examination before the visitors. They were all healthy looking and well clothed, appearing contented and happy. Though I visited all the other mission stations in the course of my travels, I was unfortunately there at the time when the scholars were not to be seen, being presumably away on vacation.

CLIMATE.

On the coast the temperature varies from 70° Fahrenheit in summer to 40° and 45° below zero in winter. The late summer and fall is usually stormy and wet, the snowfall in winter being from 3 to 5 feet on a level. Navigation is closed to the outside for 7 months in the year by heavy ice on the sea. The Yukon river is closed by ice from November to the end of May. In the interior the climate is drier and warmer in summer, but many degrees colder in winter, the thermometer going as low as 60° below zero. The snowfall is excessive, but less wind prevails here in winter than on the coast.

For many miles on the lower river the banks are devoid of timber other than a stunted growth of willow brush, alder, and cottonwood. The first spruce timber is seen some 50 miles below the Russian mission, at Ilugmint, and from there up to its head the river is more or less belted with timber, spruce, fir, hemlock, birch, alder, and cottonwood being the varieties most predominant. On the low islands and flats the spruce attains a considerable size, but as lumber it is not adapted for any purpose beyond the needs of miners and others in the country, being checked by frost and full of knots. The growth of timber seems to be entirely confined to the margins of the streams and rivers, in many instances being merely a fringe on the banks.

There is a great variety of berries to be found all through the country: high and low bush cranberries, blueberries, salmon berries, red currents, and raspberries. The salmon or dew berries abound on the swampy lands of the Lower Yukon, and are gathered by the natives in quantities, who preserve them by burying them in the ground, using them as a delicacy in the winter, mixed with seal oil or deer fat and snow.

Abundance of grass suitable for making hay is to be found from the coast up into the interior on the banks of streams, but away from the water courses the whole country is covered with a thick layer of moss of various species, to the exclusion of flowers and small vegetation.

In the course of several extended journeys in that country, both winter and summer, my experience, as well as that of others, is that game is very scarce considering the immense stretches of uninhabited country. Numerous signs are to be seen on the banks of the main river, but so far few white men have proved successful hunters, owing to the difficulties of travel. An Indian traveling with no impediments can scour over the country, and being acquainted with every game sign, can obtain some reward for his exertions where a white man would starve.
ADDITIONAL TO SIXTH DISTRICT.

To write of life on the Yukon, to describe the salient features of animate and inanimate nature on the banks of the great river of the north and its tributaries, one should not wait until he has returned to the distracting surroundings of busy everyday life. Facts and incidents which really were of prime importance are apt to seem trite and insignificant when reviewed from a distance, in comparison with the more vivid and ever changing impressions of civilized existence.

In speaking of the physical features of the great Yukon valley and of its native inhabitants, I prefer to begin with the coast region and doldrums of the river, following up and giving my impressions just as they struck me during my gradual, frequently interrupted advance from the low seaboard to the rocky gorges of the upper river.

The observant traveler, standing upon the deck of one of the small stern-wheel boats laboriously pushing its way against the powerful current of turgid rolling waters, will be struck with the immense area of alluvial soil which has been carried bodily for centuries and ages from the far interior to the verge of Bering sea. The land here is being made and unmade under our very eyes. The ice-laden freshets of each returning spring never leave uncharted the contour of the shores which but imperfectly confine the rushing waters. A solid cake of ice, caught in an eddy and set into swirling motion, grinds against the loosely constructed bank and undermines it until a mass of sand or clay falls down upon it. The impetus given by the precipitated earth drives the ice cake out of the eddy and sends it adrift upon the current, to be carried on and on until stranded again upon the low beaches of the delta or some distant island of the sea, when its cargo of soil will be deposited as a gift from the great Yukon. On the other hand, land making is going on just as constantly. The accidentallodgment of one of the gnarled giants of the inland forests on its way seaward may cause the formation of a muddy bar or island within the space of a few years. Thickets sprung up from twigs of willow deposited by the passing flood or from seed carried by the wind and strengthened the new ground, binding together its component parts with their roots until it can resist the ordinary pressure of rushing flood and grinding ice. Even then a sudden rise of a few feet in the water or an unusually heavy formation of ice on the upper river may undo in a few moments what nature has been years in creating. The little island will then dissolve like snow before the sun and its component parts be torn away and carried suspended in the raging flood until the neutralizing action of opposing tide causes them to settle and scatter broadcast over the shallow bottom of Bering sea contiguous to the great river’s mouth.

Under more congenial skies this vast accumulation of the richest soil would doubtless attract a teeming population; and who knows whether this mighty water power may not be now building for the future, when some slight deviation in the axis of our whirling globe may unlock the icy fetters that now bind the land, compelling man to rely upon the products of the sea alone for his subsistence, and teaching him to look for but scanty favors from mother earth. Should that time come in some far distant period, there will be here a field for agricultural wealth and greatness surpassing in range and possibilities that of the ancient Nile. The very sea is aiding in building up and enriching this possible granary of future geologic ages by sending its flimsy denizens by countless millions up into every vein and artery of the vast surging and throbbing water system, impregnating both soil and water with minute deposits of highly fertilizing qualities.

To return from soaring dreams of brilliant possibilities to the dead level of stern reality, it must be confessed that such inhabitants as now eke out an almost purely animal and quasi-amphibious existence on the sodden tundras of the Lower Yukon banks and delta would seem to give but little promise of becoming factors in their country’s growth and development. At present their mental horizon is as limited as that of vision on the dead level of the land they live in.

The few settlements scattered over the large, flat islands of the Yukon delta are perched upon the rare points of vantage to be found in this land of desolation and periodic submersion. An elevation of from 10 to 15 feet above the ordinary flood line is considered sufficient for a village site, especially when further protected by adjacent sloughs, through which the waters of freshets may escape from the main channel and spread at will over the teatless tundras. The first selection of a site is probably guided also by the presence of a protecting cheyau-de-frise of drift logs, affording partial security from the attacks of ice floes; but the shiftless inhabitants can not withstand the temptation to use up their safeguard, and in the course of a few years their homes are unprotected and they scour the river banks for miles to gather fuel for their fires.

Though careless and short-sighted, these people are made industrious by necessity. Any relaxation of their daily efforts in pursuit of seals, beluga, mink, and muskrats, as well as any failure to secure their quota of salmon and other fishes, simply means starvation, and such periods of distress as do occur can always be traced to corresponding ones of idleness indulged in by these superstitions pagans at the behest of their crafty shamans, or medicine men. Living as they do in the direct path of ice gorges and floods, it is not surprising to find traditions among them of the disappearance of whole villages within a night, carried away by evil spirits, according to their belief.
BANKS OF THE LOWER YUKON.
Along the Ap-bun or northernmost mouth of the Yukon, through which light-draft steamers from St. Michael enter the river, the banks are somewhat higher and the small settlements more permanent in character. At Kotlik and Pastolik trading stations have been in operation for many years. At the former place, which is situated at the head of a blind slough, the improvements consist of substantial log buildings surrounded by a strong stockade, including a neat chapel erected by the Russian trader for the convenience of his family.

To the traveler by boat or canoe in summer or with dog teams in winter Kotlik has ever been a welcome place of shelter and refuge, and many would have perished but for the ready hospitality of this oasis in the desert.

The season of rejoicing and prosperity with the dwellers in the delta lands begins with the disappearance of the ice, which is simultaneous with the advent of the salmon. The sun of the long arctic summer day stands bright in the heavens, and under its genial glare the harvest of fish goes on without interruption, and as everybody can once more revel in richest food the pangs of hunger of the winter just past are forgotten. Children roll and tumble over the mossy hummocks of the tundra searching for eggs, for nature, having once thrown off the austere garb of winter, fairly showers her blessings on the wards upon whom she generously bestows her scantiest gifts for 8 months of the year. Busy as they are, both man and beast, gathering and consuming food, they do not miss the first faint whistle of the steamboat, still far away, battling with the shifting shoals that beset the entrance to the river. Through the stillness of the summer air the clanging and puffing of the boat can be heard far away, and as it finally rounds the last bend the joyous shouts of women and children are joined by the piercing but dolorous yell of the dogs, who resent all arrivals and departures. The steamers to these people mean tobacco, powder, lead, and caps in exchange for mink and muskrat skins. It also means flour and some calico for the women, with the few enterprising individuals who have piled up a few cords of wood on the river bank to sell to the captain at $8 a cord. The captain would gladly buy a great deal more at that price, but the supply is limited by the amount of energy and ambition latent among the men of these scattered communities. The furnaces are arranged for wood, and wood he must have; therefore he finds himself compelled to carry a number of axmen, some on small wages and some working their passage, but all to be fed. With a crew numbering from 20 to 30 it takes from 10 to 15 hours to wood up, and each cord of fuel is made to cost much more than $3. With one-half the energy possessed by the Thlingit tribes the men living on the lower reaches of the river, where driftwood is piled up in huge winrows, could earn money enough each season to better their condition in many ways and place them beyond the reach of want and starvation. As we ascend the river, winding slowly through the innumerable bends, dry land still appears insignificant in area when compared with the boundless watery surface until the first hills confront us not many miles below Andreafsky station. From the bluff, quite insignificant in height, above the small village of Kahmt we can view at a single glance the many broad outlets of the Yukon diverging from this point.

Andreafsky, formerly a fortified trading post of the Russians of considerable importance and once the scene of summary vengeance inflicted upon a band of Ingalik for depredations committed on the upper river, is now but a shadow of its former self. The strong stockade has been laid low and has probably fed the fires of the Scandinavian trader who for many years collected the furs of the river and adjoining tundra, claiming as his field of operations the vast triangle between the Iliamna mission, the northern mouth of the Yukon, and Cape Vancouver. His large "bidars," laden with goods or skins, could then be seen on river, slough, and lake throughout the summer, and in the winter his dog teams were known in every village. Now what there is left of the trade passes through native channels to St. Michael, the headquarters of the Alaska Commercial Company in the Yukon district, and the former trader, now a full-fledged steamboat captain, with gold band around his cap, passes his winters in retirement at the scene of his former activity. The summer traveler who camps at Andreafsky beholds a picture of neglect and desolation, relieved by 2 or 3 log cabins kept in repair, with windows and doors shuttered and barred. The surrounding buildings are wrecks, with falling roofs and gaping walls. A warehouse built by the Russians, of huge logs that still resist decay, bereft of its doors, contains a heterogeneous mass of rusty ironware, old casks, coal-oil cans, and broken traps. One corner of the ancient structure bears evidence of having been but lately used as a shrine of Baccus; the place of the wonted statue of the rosy god, however, is taken by a home-made still, showing that the libations made here must have been somewhat stronger than the watered wine of Greece.

From Andreafsky upward the habitations of the natives exhibit an entire change in character and construction. They are nearly all above ground, with walls of upright logs and planks and slanting roofs covered with grass and sods. The only entrance is a round or square aperture in the center of the front wall 18 inches or 2 feet from the ground. Low platforms line 3 sides of the houses, which are from 15 to 20 feet square. A fireplace and corresponding smoke hole occupy the center, and all the available space overhead is filled with sticks and rods, from which dried fish are suspended, making it impossible to move about in an erect position under the malodorous festoons, from which pellucid drops of oil fall gently upon the inmates. Many of these attractive homes are also provided with excavated additions for places of refuge during extremely cold weather.

The "kuggats", or storehouses, in all these villages are large and strongly built, a sure sign that food is plentiful. Occupying a prominent position midway between the dwellings and the beach, these caches are all that the passing traveler sees of a village, and as they are thickly hung with drying salmon throughout the summer they appear from a distance like bright crimson spots upon the green banks of the river.
The inhabitants of this region could easily gain their subsistence by devoting their time to the catching and curing of salmon during the season, but they have many other sources of supply. Both seals and beluga ascend the deep, wide channels of the river. The marshes on both sides of the river are fairly alive with wild fowl, ducks, geese, swans, and cranes; minks, muskrats, land otters, and arctic foxes yield marketable furs, and bands of reindeer still pay occasional visits to their old feeding grounds.

Many populous settlements are located in this vicinity, the largest being the village of Kinngait (the Bazeinofitskaya, Robber's village, of the Russians). As we approach the neighborhood of Ikogmint, the Russian mission, long, wooded ridges come in sight on the northern bank of the river, the villages become more frequent, and no eddy or other point of vantage along the shores is without its fish traps, for which the willow thicket of the sand islands furnish ample and most excellent material. Birch-bark canoes here begin to make their appearance, and are used in preference to kayaks for fishing or for gathering wood or berries.

The Russian mission buildings nestle among the hills on the right bank of the river, looking down upon the half dozen large native houses and a store and warehouse on the sandy shore. The church now in use is an old and somewhat dilapidated building, but the foundation for a new sacred edifice has been laid. The quarters for the clergy, erected by the present priest at his own expense, consist of substantial and comfortably furnished log buildings. A small stern-wheel steamer, the Explorer, a relic of Lieutenant George M. Stoney's investigations in these northern regions, is now the property of the missionary Zachary Belkof and his brother. The little craft is run with a native engineer and fireman, and is of the greatest service for bringing supplies from St. Michael and for the summer journeys of the priest in visiting his converts or opening up new fields for his labors. In winter the steamer is hauled ashore and the dog teams resume their places as locomotive power. Upon his register and record of baptisms the priest at Ikogmint claims 5,000 members of his church, but probably this includes past and present members, and not less than one half of that number have long since shuffled off the mortal coil.

From Ikogmint upward the scenery along the main banks of the river becomes quite attractive, alternating between wooded hills and towering cliffs of sandstone worn into fantastic shapes by flood and weather. The middle of the river is dotted with low islands, divided by muddy sloughs and covered with dense thickets of poplar, willow, and stunted spruce.

From the confluence of the Yukon with the Chagelsh slough and Innoko river to the mouth of its largest tributary, the Tanana, its banks are settled by a branch of the Athapascan family known as the Ingalik. Unlike their kin on the upper river and in the interior, these people depend more upon fish for their subsistence than upon game. The close vicinity of the Eskimo, with whom they have intermarried (in former times by forcible abduction), has affected their mode of life and to a certain extent modified their tribal characteristics, although up to a very recent time there was but very little friendly intercourse with their neighbors. They have adopted the oil of the seal and beluga (which the upper tribes abhor) as an article of food, and in many of their villages we find public structures corresponding to the Eskimo kashga.

In intelligence, mechanical skill, and ingenuity the Ingalik excel the Eskimo. They manufacture clay dishes and vessels and weave straps for dog harness and small mats from the wool of the mountain goat or from any textile material at their command. When furnished with models, they carve in wood with the most primitive tools very creditable imitations of artistic ornaments or even statuary. With proper teaching the Ingalik children of both sexes acquire the English language in a very short time, and, unlike the Eskimo, they are not ashamed to use it when once mastered.

HISTORY OF CATHOLIC MISSIONS IN THE YUKON COUNTRY.

On the 18th of July, 1886, Archbishop Charles J. Seghers, bishop of Vancouver island, accompanied by Fathers Tosi and Robaut, S. J., left Victoria, British Columbia, on board the steamer Aneon, for Alaska, by way of Juneau. Having with great difficulty reached the trading post at the junction of the Stewart with the Yukon river on the 12th of September, the bishop left the 2 fathers there, and with a single servant, who subsequently became his murderer, proceeded down the river with the intention of reaching Nulato, if possible. At this place he had spent a winter 7 years before in company with Father Moncaur. But he was not again to see the people so dear to his heart, to whom he had so generously devoted the best part of his life. The circumstances of his murder when within a day's travel of his destination are well known.

In the following year, 1887, the murdered bishop's companions left the upper river, where missionaries of the Church of England were at work, and established themselves at Nulato and Kozerovsky. Father Tosi inaugurated the Nulato mission by erecting a small temporary dwelling and a chapel, and Father Robaut founded a second mission at Kozerovsky, where, during the summer of 1888, having been re-enforced by 3 sisters of St. Ann, he put up hurriedly 2 good log houses, 1 for the fathers and the other for the sisters. During the first winter work was inaugurated with a day school only, as it had been impossible to improvise the necessary accommodations for a boarding school. In the following summer Father Robaut built a schoolhouse, and a boarding school was started with 20 children of both sexes. The success of this first undertaking was something wonderful. Under the care and tuition of the sisters of St. Ann these children were transformed within a year from savage to well-beloved,
happy youngsters, speaking English habitually among themselves, studying cheerfully, and enjoying the games of civilized childhood. The examination witnessed by the census agent in 1890 would have done credit to any primary school of the United States, and at its conclusion the scholars united in a dramatic representation which probably could not be equalled by any body of school children in the country of less than 2 years standing, without regard to the fact that in this case the children were acting in a strange language but just acquired and representing scenes entirely foreign to their own experience and surroundings. The piece had been arranged by one of the fathers upon the basis of the old tale of a servant’s complaint of the loss of a paradise of idleness through Eve’s curiosity and his own fall when tried with a box which he is forbidden to open. The part of the servant was taken by a boy 10 years old, who seemed to enter understandingly into the humor of the situation. The other characters were a mother of a family and a nursemaid (taken by 2 of the larger girls) and a number of children.

That such results could be obtained from such unpromising material in so brief a time speaks volumes for the untiring labors of these self-sacrificing dwellers in the wilderness and for the intelligence and practical sense they bring to bear upon their praiseworthy undertaking.

In 1891 the boarding school at Holy Cross mission contained 60 children, all the dormitories will hold. Most of them are able to write good letters without prompting from the teachers, the mistakes being chiefly in the line of spelling, not of construction or expression of ideas.

The boys are taught to labor in the well-stocked vegetable garden, at fishing, wood cutting, building, and general chores. The girls are thoroughly instructed in household duties: bread making, preserving the native berries, curing fish and venison, sewing, and knitting. A beginning has also been made in training some of the smaller girls as lace makers, one of the sisters being an expert in this art from Belgium. The larger girls and the sisters also make undergarments and deerskin boots to sell to passing hunters, traders, miners, and travelers.

At Nulato the location of the mission is less pleasant than at Kozerevsky, but as a central point between the various Athapaskan tribes, it will be an educational center of great importance as soon as the boarding school shall have been fairly established with the assistance of the sisters of St. Ann.

The third Catholic mission, in the vicinity of Cape Vancouver, is flourishing in quite an unexpected manner, considering the unpromising material drawn from the semiambushable dwellers in the tundras. A branch chapel has already been established at Chaltmunt, to the southward.

Under date of July 20, 1892, Father J. M. Treca, S. J., wrote as follows of the missionary and educational work in the tundra country:

Up to the present time I have been very busy among the people from Chaldmint (near the Kuokokwim river) to the mouth of the Yukon, a country presenting a vast field for a new mission. I found the people well disposed everywhere, but absolutely ignorant of the meaning of religion. Our experiment with a school at Dunnuck proved unsuccessful, and must prove thus on any part of the coast between the Yukon and the Kuokokwim by reason of the scarcity of food and fuel, as well as of the great difficulty of bringing supplies from St. Michael, the sea being extremely shallow, and therefore very dangerous all along the coast. All that section of the country between the Kashunuk river and the Kuokokwim is very badly off for fish. In the winter time the lakes and streams contain only small specimens of blackfish (Dallia pectoralis), tomcod (walkhita), and sticklebacks, and in the summer there is no salmon. For this reason Father Test thought it best to make Dunnuck only a missionary station and to establish a big school for all the coast region on the mouth of the Yukon. For this purpose I am now building a house on the Kusiluk (or Kusilik) mouth of the river, where 1 or 2 fathers will reside during the coming winter, engaged in preliminary work. Another school is to be built on the Kuokokwim river somewhere near Kusilakevsky.

THE KOYUKUK RIVER.

Not far from Nulato the Koyukuk river enters the Yukon from the north. Its headwaters are far beyond the Arctic circle and in the longitude of Fort Yukon, making its course nearly parallel with that of the main river. Near its middle course the Koyukuk is but a few miles distant from the Melozikakat and Nowvikakat, also tributaries of the Yukon from the north, and it is chiefly by this route, by means of brief portages, that the inhabitants of the Koyukuk valley communicate with their neighbors in the south, though their own long, winding river is said to have a moderate current and to be quite free from falls and rapids. The northernmost settlement on the river, according to Lieutenant Allen, is in latitude 60° 44’ north and longitude 150° 47’ west, while the most southern one is within a short distance from its junction with the Yukon, fully 500 miles below, as the river runs.

The number of these people in their own country is but little over 300, but quite a number of them are found settled among kindred Athapaskan tribes of the Yukon river, making a total of over 500 for the tribe. All readily converse with their neighbors of Nulato and Nuklukayet by means of a trading dialect or jargon similar to that used among the various Kutchin tribes. They do not differ in outward appearance from the Ingalik, except where in the extreme north they have mingled with the Eskimo tribes of the Arctic district. All the Koyukuk people on the river are extremely poor and physically stunted, and they would probably have ere this migrated southwest in a body had it not been for the advent of miners and prospectors among them, from whose scant stores a portion dribbles into the hands of the needy natives in various ways. Formerly these natives had the reputation of being warlike and fierce, and it is probably true that the Nulato massacre, during which
Lieutenant Barnard was killed, was due chiefly to the instigation of a Koyukuk shaman and the assistance of his tribe, but epidemics and want have played such havoc with them that they appear no longer formidable. Whatever energies they possess in this inhospitable region, must naturally be devoted wholly to the daily struggle for existence. Game is very scarce in the hills of the Koyukuk, and the people are forced to depend upon fish as their principal diet. Fortunately the run of salmon, chiefly dog salmon, is quite large, though the fish reaches the upper waters and tributaries in a rather dilapidated and to us disgusting condition after his long journey from the sea, the back and sides being covered with bruises and sores, the effect of contact with rocks and snags and of the debilitating effects of a prolonged sojourn in fresh water. The native's appetite, however, is not in the least affected by the outward appearance of his food. In addition to salmon they have a fair supply of whitefish and grayling, which they trap under the ice throughout the winter.

In their endeavors to better their condition, and driven by want, the Koyukuk people perform remarkable journeys, not only to the comparatively richer regions of the south, but far to the north and northwest, where they mingle with the few nomadic Eskimo who rove along the headwaters of various rivers, some debouching into Kotzebue sound and others into the Arctic ocean beyond Point Barrow. Their furs finally fall into the hands of the trading whalers, while they receive in return a few articles of Arctic Alaskan and even Siberian trade, tobacco and ammunition being the greatest desiderata. The almost infinitesimal ratio of compensation received by them for their furs may be imagined when we consider the number of hands, greedy for profit, through which each pitiful transaction must pass before its final consummation; the wholesale dealer in far Siberia, the wandering trader among the Chukchee, the native dealers of the Siberian coast and of the Alaskan littoral, and, finally, the middleman, forming the link between the seacoast and the desolate regions of the Arctic watershed, all have to be satisfied before the poor Koyukuk man gets his share.

The few miners who have penetrated to the Koyukuk have succeeded in almost superhuman exertion and by battling with untold hardships and difficulties in extracting a few thousand dollars from the gravel bars and frozen subsoil on the river. One of their earliest pioneers, John Brenner, who was a companion of Lieutenant Allen in his explorations, was wantonly killed by a young native who wanted to be taken to see the white man's country and was willing to go as a prisoner rather than not see it at all. To his great disappointment he received quick retribution at the end of a rope at the hands of the miners and traders.

**THE TANANA RIVER.**

The people inhabiting the banks of the Tanana river, the largest southern tributary of the Yukon, which enters the main river a few miles to the eastward of the trading post and mission of Nuklukayet, have been variously named the Tanmai Khotanas, Tanamata, and the Tanma Kutchin, the latter being probably the best known and most significant. They live in small bands, with settlements generally away from the main river, in sheltered portions, and are distinguished only by the name of the chief of each band. The Tanma Kutchin enumerated on the river and at Nuklukayet numbered a little over 300, but a few more were reported who could not be reached by the special agent, among them Hilltah's band, consisting of 73 persons (15 male and 18 female adults and 40 children, composing 16 families), who were residing temporarily across the divide on Franklin gulch in the Forty Mile diggings. Another detached band was reported as hunting on the banks of a big lake to the westward of White river, consisting of 11 male and 11 female adults and 25 children. A third band was reported on Birch lake (Kichukin) numbering only 16 persons in all.

According to Lieutenant Allen the inhabitants of the Upper Tanana river call that stream the Nabesna. In general appearance and manner they do not vary much from other Kutchin tribes. Formerly they clothed themselves almost exclusively in tanned moose skins, profusely ornamented with beads, but the scarcity of game and contact with white miners have wrought a change. They spend the greater part of the year in temporary camps, which can be seen all along the river, creating a delusive appearance of population.

The Tanma Kutchin on the Upper Tanana seldom descend the river to its mouth for trading purposes, since the rapid current would prevent them from returning until winter bridged the turbulent flood with ice. There is, however, no urgent necessity for such journeys, as they have several portage routes by which they can reach the trading post at the mouth of Forty Mile creek in from 6 to 10 days.

The Yukon salmon, for some reason not yet explained, does not ascend beyond a certain point near the middle course of the Tanana, but both graylings and whitefish, as well as a few uncatalogued species, are found in the upper river and form an important item in the domestic economy of the natives.

For land transportation sleds are used in winter, and the dogs are also used as pack animals in summer, the original breed having been much improved by the introduction of larger animals from the Hudson Bay Company's dominions.

The larger game, moose and deer, are still captured by means of long fences of brush and logs, with narrow openings through which the animals are driven, to be either snared or speared by men in ambush.

The houses of the Tanma Kutchin, even where they have been erected for permanent occupancy, are wretched structures, entirely inadequate as protection against the extreme cold of winter, such as is commonly experienced in this region.
ESKIMO ON LOWER YUKON.
THE SIXTH DISTRICT.

The Tanana river region has been prospected by miners for many years, and a few gravel bars have been worked desultorily with comparatively insignificant results. The country is described as being exceedingly difficult of access and unsafe for white men to rely upon for subsistence. The mountains defining the immediate valley of the Tanana are not very high, but in a southwesterly direction from the headwaters very high peaks have been reported, though not definitely determined. The portage routes to the Copper and Yukon rivers do not present any difficulties greater than those usually encountered in Alaskan travel; they are, however, but little traveled.