

A NARRATION OF AN AERIAL TRIP OVER KEEWATIN, N.W.T.

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Between the 5th July and 9th September nine points were occupied in the barren lands of the District of Keewatin.

The object of the work was the determination of latitude and longitude by star observation.

Observations were made at the following points which were occupied in the order named:-

Kasan River	Lat.	61° 28'	Long.	100° 42' W.
Yathkyed Lake	"	62 42	"	98 18 W.
Baker Lake H.B. Post	"	64 19	"	96 02 W.
Lake Franklin	"	66 46	"	95 51 W.
Pelly Lake	"	65 55	"	101 52 W.
Wager Bay H.B. Post	"	65 56	"	90 49 W.
Douglas Harbour	"	65 44	"	88 51 W.
Repulse Bay H.B. Post	"	66 31	"	86 15 W.
Committee Bay	"	67 21	"	86 35 W.

The total air mileage incidental to the completion of the programme was 4000 miles.

All of the above points lie north of tree growth.

The panorama presented to one covering the territory by air is one of limitless expanse of lakes of varying sizes and shapes and is a nightmare to the bush pilot, who has been trained to fly by topographical features and intuition, rather than by the plane's instrument board. The flat landscape, bearing the imprint of the titanic Keewatin glacier moving southward in a past age, is devoid of marked topography and, to make matters more confusing, the magnetic compass is too unstable to be relied upon with impunity.

Such was the experience in attempting a flight by compass line from Churchill to the Kasan River some 300 miles distant. After 2½ hours on the way our position was so uncertain that no alternative was left but to make for the open Hudson Bay and thence along its coast line back to the starting point.

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This ended any further attempt to fly by bush-pilot methods, so successfully done elsewhere, by men who display uncanny ability of getting around in the air.

The answer to our difficulty here was the use of the gyro compass, with which the planes were fortunately equipped. It was most revealing to witness the accurate performance of this compass where drift was not too great.

On the 5th July the lakes en route from Churchill to Kazan River were mostly frozen over. Some were free from ice, the different condition attributable, it is believed, to varying depth of water.

During the 10-day stop, 6th-16th July, on Motherwell Lake, an expansion of the Kazan River, we were visited by Eskimos, three families of which were encamped in the neighbourhood. They are known as the Kazan Eskimo and are said to be inferior type of native.

The first contact with the barren land inhabitant was interesting but as the novelty wore away, one wished that they would not come visiting so often. This attitude is the result of the lack of any means of conversation.

The only word of common sound in English and Eskimo is "tea" and it is perhaps not surprising that it was overworked. We parted as much as possible from our allotted double ration but our contribution was sorely inadequate to their need.

The reaction of the first meeting with the male Eskimo is the startling resemblance to the Jap in both stature and facial traits. They are indistinguishable in fact, in some cases.

Quite a few tracks of the migrating caribou were in evidence here but none was seen.

The local bank of the river ran about 15 to 25 feet in height and the current was scarcely perceptible. The land

surface is somewhat rolling and consists mostly of spongy wet moss. Not very much rock outcrop is noticeable but glacial boulders are plentiful on the higher locations. The barometric altitude of Motherwell Lake is 985 feet.

The next step in the itinerary was Yathkyed Lake, which is both fed and drained by the Kasan River. Arriving here on 17th July the westerly end of the lake was free from ice and an island was selected for the 8-day sojourn, 18th - 24th July. It was apparent from the air that ice was plentiful on the easterly portion of the lake, which is about $1\frac{1}{2}$ times that of Lake Simcoe. Within three days a shift in the wind drove the ice field southwesterly and the island was well surrounded with ice floes. A solitary caribou was seen several times near the camp. It was thin and seemed greatly harassed by the ever present swarms of mosquitoes, from which it would frequently seek relief by immersion in the lake water.

The aneroid barometers indicate an altitude of 478 feet for Yathkyed Lake.

The flight to Baker Lake H.B. Post, 175 miles, was made on 24th July and followed the general direction of Kasan River to its mouth, thence around the westerly end of the lake to the Post.

Shortly after taking off from our island location we were over unbroken ice surface extending for some 20 miles.

Quite near the mouth of the river a waterfall of considerable height was observed from the distance.

Kasan River, forms a delta as it emerges into Baker Lake resulting in miles of low sand bars and peninsulas of loose sand and gravel deposit. The topography in the area of the mouth would be subject to change from year to year through alluvial action of tide and spring run off. The low lying flat

topography of the south shore of Baker Lake is in marked contrast to the rugged rock-bound nature of the north shore.

Leaving the Kazan River mouth the planes ran into a blanket of Arctic mist which necessitated low flying in order to follow the shore line of the lake and insure spotting the Hudson's Bay Post buildings. Having arrived at the Post it was necessary to circle over it for 45 minutes at near roof-top level before a landing was skillfully accomplished on the lake surface plentifully strewn with ice floes.

Baker Lake Post is situated at the northwest end of the lake from which it takes its name and some three miles east of the mouth of the Thelon River. The present site was formerly occupied by the now defunct Revillon Freres, when the H.B. Co. post was on the other side of the bay, some two miles away. The present factor, Sandy Lunan, was the resident manager of the liquidated competitor and the Hudson's Bay Co. at the time, some 15 years ago, decided to close their own premises and occupy the newly acquired property whose location possessed better advantages. It is interesting to record an epic feat performed by a team of 90 dogs. It was desired to move the H.B. deserted frame store building to the new site and Sandy Lunan conceived the plan of doing it with dog power. The building measured 50 by 25 feet, and was of stout wooden construction with an upper floor. Sandy first cut it into halves and then devised an ingenious system of straining ropes whereby the individual pull of the 16 five-dog teams could be centralized by means of pulleys and so directed onto the main task. When the big day arrived to do the job, the building was moved with the greatest ease across the two miles of frozen lake surface without a single halt on either trip.

Sandy was still confronted, however, with the task of moving the two 25 x 25 ft. units of the building up a sloping surface to the ultimate site on the lake shore some 150 feet back from the bank.

He decided to induce the 90 huskies to put forth a maximum effort by tempting them with caribou meat in the hands of Eskimo women spaced at the site of the goal. When the crucial test came for the up-slope drag, in Sandy's own words, the dogs "ran away with it".

Baker Lake Post has a trading population of some 350 Eskimos who come to the Post once a year with the fur catch which consists principally of fox, some barren-land grizzly and caribou skins. It is interesting to note that the latter is destined entirely for Eskimo use and not for the commercial trade of the outside world as in the case of other furs. There are areas in the Arctic where the caribou migration does not take place and the skins for personal wear of the native must be brought in from other areas.

There is about five inches of tide in Baker Lake at the site of the post and at times the water is brackish and unfit for household use, such condition being due to sustained wind from a certain quarter.

The R.C.M.P. maintain a permanent post here. It is one of their responsibilities to distribute staple foods to the natives when the need arises due to periods of scarcity of caribou or lean fur seasons. Cases arise, however, where destitution is attributable to that tired feeling known among white people as "laziness" but the officer soon gets to know how to discern between the worthy appeals and those arising from indolence.

Anglican and Roman Catholic Missions are located

here, and worthy and zealous gentlemen of the cloth not infrequently fall victim to the hazards and privations of their calling. They spend months at a time with the nomadic tribes sharing their hardships and dangers as well as facing the threats of the Medicine Man whose antagonism has been known to take the form of threat upon their lives. Two mercy flights in winter have been made during the past three years to remove missionaries who had fallen victim to the hazards of their calling, which they pursue fearlessly and with praises unsung, just as they are unsought.

Baker Lake Post made headline news in the summer of 1932 for it was an overnight stop of Col. Charles Lindbergh and his wife on their historic flight across the high latitudes of Canada to Japan. They flew directly from here to Aklavik.

It was also the scene of intense activity sometime later, when it was the plane-base of the sensational search for the lost McAlpin party of mining men, which fortunately resulted in a happy ending.

The seal and walrus do not penetrate Chesterfield Inlet as far as Baker Lake. There is said to be a fresh-water seal inferior to the salt water prototype. The lake, teems with fish, especially salmon trout of the most succulent variety.

Open water occurs in Baker Lake about the 15th July, although ice floes were still plentiful last summer on the 25th July. Freeze-up occurs about the 15th October. Three months of open water is the general rule.

The caribou migration to the south occurred this year on Sunday, 1st August. The advance guard appeared early in the morning and this had an adverse effect on attendance at the Mission Church, as the men folk were intent primarily, on this day, on food for the body.

This trek or migration which was witnessed for the first time by the undersigned reached impressive proportions but far short of the legendary 50,000 sometimes claimed by certain writers and narrators. The herds were observed from a point of vantage and it is estimated that 2500 to 3000 passed within two miles of the Post between early morning and late evening. They travel in herds varying in number and move along rather leisurely stopping to browse as they proceed. When frightened the herd will dash away for a few hundred yards and then stop and stand stationary facing the direction of supposed danger, thus becoming easy prey to the gun of the native; fortunately so, as the Eskimos are said to be notoriously poor marksmen, which is reflected in the abundant quantity of ammunition supplied in trade.

On the 4th August the flight was made from Baker Lake to Pelly Lake on the Mackenzie - Keewatin Boundary. The course, in part, was over the route of Thelon River, in which basin a federal game preserve for the musk-ox has been established.

Pelly Lake (barometric elevation 365 feet) is an expansion of the Back River. Fed by the Consul as well as the Back, its westerly end contains many sand bars. Suitable shore line for plane anchorage could not be found closer than 12 miles down the lake.

During the two weeks spent at this location neither native nor wild life was observed. Most disappointing weather conditions prevailed. What might have been a two-night stand, had we been favoured with clear night skies, was perforce extended to 13 nights. Results of observations made here indicate the existing maps to be in error one degree in longitude, and too far west.

On Friday, 13th August, a 175-mile flight was made

Lake Franklin coming down at a point near the mouth of Back River. The course of flight did not follow the river but a gyro course to the north of it. The same changeless ground pattern of numberless water surfaces continued as it had since our departure from Churchill. There appeared slightly more relief, however, nearing Lake Franklin, a few rock ridges and mounds of rock outcrop becoming discernible. These might run to 100 feet in height. We were now within the Polar regions, being 14 miles north of the Arctic Circle.

Back River empties into Lake Franklin through a stretch of swift water about a half mile in length.

Three Eskimo families encamped on the other shore during our stay here. They were trekking up the Back River using some 20 dogs to pack their belongings. The party, 8 adults and 6 children, were truly living off the country. On a visit to their camp we were impressed at the sight of the all-day sucker in the hands of the children which consisted of the fleshy end of a raw fish tail. The adults ate the fresh caribou meat in the raw without benefit of salt. The diet would appear to supply ample vitamins of the right type, as the children were impressively healthy in appearance.

The area about Lake Franklin is distinctly more rugged in topography and this condition becomes more accentuated as the Arctic coast is approached.

The next stop was at the Hudson's Bay Post at the west end of Wager Bay. This post is no longer managed by a white trader but by an Eskimo known as Wager Dick. Only a few families trade at this post. The area is almost entirely of massive rock formation, the ridges rising to some 200 or 300 feet in height.

Wager Dick makes an annual trip to Repulse Bay Post

by schooner delivering the fur catch and returning with coal and trading supplies. No game was seen while at Wager Bay but salmon and lake trout are always plentiful. Coal is used for fuel at all H.B. Posts. As the landing cost runs from \$80 to \$100 per ton, it must be used sparingly. Imported fuel is a luxury enjoyed only by the white population, traders, police and missionaries. Many Eskimos now use gasoline vapour lamps (Coleman) to supply added heat in their igloos. It is a modern practice increasing among them.

After a 3-day stop at Douglas Harbour on Wager Inlet the planes arrived at Repulse Bay H.B. Post on 26th August. The Post is situated just two miles south of the Arctic Circle. The local belief is that the site is just north of the circle.

During our sojourn there until September 5th the bay was completely ice bound, all whaling, seal and walrus hunting activities having to be suspended. However on the 7th of the month a westerly wind started the ice floes moving out again, and within two days, the Bay was cleared.

Some 400 or more Eskimos trade into the Post and the white fox fur catch in a season runs as high as 6000 pelts. Many of the Eskimos have good credits with the Company and some own schooners running to \$15,000 in value. Wealth, however, brings few added comforts in a part of the world where wood is unobtainable for fuel or building and so the comparatively prosperous Eskimo must still live the Arctic winter in his traditional fireless igloo.

Of course it should be remembered that this form of life is a hardship only in the eyes of the white man and the native does not miss that which is unobtainable and which he has never enjoyed and does not long for comforts which he has never known.

The most northerly point touched was at Committee Bay an indenture on the Arctic coast line, where a one-night stand was made on the 6th September. The coastal waters were entirely free of ice floes, although a very thin sheet of ice was formed during the night indicating the early termination of the short open water season.

The ice forming rendered further float plane transportation too hazardous to be continued in these parts and accordingly the season was considered closed and the 700-mile journey out to Churchill was begun. With a brief layover at Chesterfield the party reached Churchill on the 9th September.

Supplementary General Observations

Weather

The temperature during the day for July and August ran from 48°F. to 62°F. with one recording of 70°F. on the 15th August. Night temperatures were generally around 40°F.

During the two-month period only nine clear relatively cloudless nights were experienced. It is the considered opinion that the great preponderance of overcast night sky is the rule rather than the exception, and this condition will have to be considered in future planning of work of the same nature.

In view of the superabundance of surface water throughout the district it is natural to expect cloud formation to accompany the lowering night temperature.

The humidity of the atmosphere is very high at all times. Articles of woollen apparel will not dry after washing, although hung in the sun and wind during an entire day.

Time and again preparations were made with perfectly clear sky showing an hour before sunset. Within the space of five minutes or less the clear blue would undergo a seemingly magical transformation into opaque gray and so remain for the night.

As regards wind, we were agreeably surprised at the lack of strong winds. These had been anticipated.

Agriculture

This phase of economic life can be disposed of with the brief statement that no seed nor vegetable growth is possible. Germination cannot take place in soil underlain with perpetual surface frost. Dwarf lettuce and radishes are nursed along under raised glassed-in miniature gardens and at Baker Lake turnips of the size of one's fist have been brought to maturity in this way. It is probably true to say that farming conditions have not appreciably improved since Lake Agassiz drained away in the remote past leaving a vast rocky terrain pitted with lakes without number.

Mosquitoes, etc.

The misery spread by this pest which is inseparable from life in the frontier spaces of all countries in all continents reaches a climax here. Should anyone feel that he has experienced the worst in this field of torture, let him sojourn for the summer months on the barren lands of Keewatin. Suffice it to say that the hardihood of the mosquito here enables it to swarm and flourish at 40°F. and no quarter is given day or night.

However, in mitigation of the severity of the foregoing statement, it may be comforting to add that snakes as well as ants are entirely non-existent in the westerly hinterlands of the second largest season earth.

Culture

The Eskimo is not without an accomplishment in the field of art; that of ivory sculpture or carving. The raw material is plentiful, each walrus yielding two tusks from 10 to 15 inches in length and weighing to $3\frac{1}{2}$ pounds per tusk.

The art has reached a high state of development at Iglulik, a rather inaccessible island settlement at the eastern entrance of Fury and Hecla Straits. The highly polished ivory carvings depict the wild and native life in its various forms and some admirable specimens of the craft are to be found in the Vatican Museum, where they rank highly among exhibits of aboriginal handicrafts of the world.

Customs and Morals

Seal hides are the main source of supply for footwear, more particularly for wet conditions of the summer months. The skins are extremely stiff as they come from the tanning operation and must be rendered pliable before the skilled hand of the Eskimo woman can shape and sew them into foot wear. The softening process is performed by the teeth and saliva in the mouths of women old and young. It is a novel experience to see a half dozen youthful Eskimo maids each with a handful of seal hide stuffed into their mouth and carrying on a seemingly endless chewing operation. It is a traditional custom combining, as it does, the utilitarian and physiological characteristics of the operation, thus yielding not only excellent material for foot covering but equally excellent sets of healthy, strong teeth.

It must be added, however, that those native women, who continue the practice in their declining years, exhibit pronounced erosion or wearing down of the teeth.

The Eskimo man is referred to as a "husky" in the vernacular of the North, but it is interesting to note that there exists no equivalent abbreviated expression for the Eskimo woman, as for example "squaw" in reference to the Indian woman.

Burial of the dead follows a form dictated by necessity in a land of rock and eternal frost. The deceased is

placed in a shallow depression and a more or less crude covering made that arches over the body and permits the cool atmosphere to circulate through the enclosure. As far as is known, there is no desecration of the remains from animal marauders.

The Medicine Man or Sorcerer still practices his black art among some of the tribes. An authenticated account of the Back River area relates how a considerable section of a certain river valley is carefully shunned by Eskimo followers of the witchcraft priest who insists that the Evil Spirit awaits any intruder into the domain; in consequence of which white fox now abound here and no federal sanctuary could afford more successful wild life protection.

The native barbaric customs, such as desertion of old people, polygamy, swapping of wives and cruelty to children, have been largely eliminated through the influence of the missionaries and the police and no useful purpose would be served in dwelling on the immoral side of native life. Such customs are rooted in antiquity that may go back to the remote period following the recession of the North American ice cap. A discussion on customs born out of environment, totally foreign to present times, is an undertaking for a philosopher rather than a surveyor.

Motherwell Lake (Ka-an River)

Yathkyed Lake

Baker Lake

Pelly Lake

Back River and Lake Franklin

Wager Bay H.B. Co. Post, beside

Wager Inlet

Lake Alda

Douglas Harbour, Lake Alda in background

Repulse Bay H.B. Co. Post

Repulse Bay, H.B. Co. Post at

Chesterfield Settlement