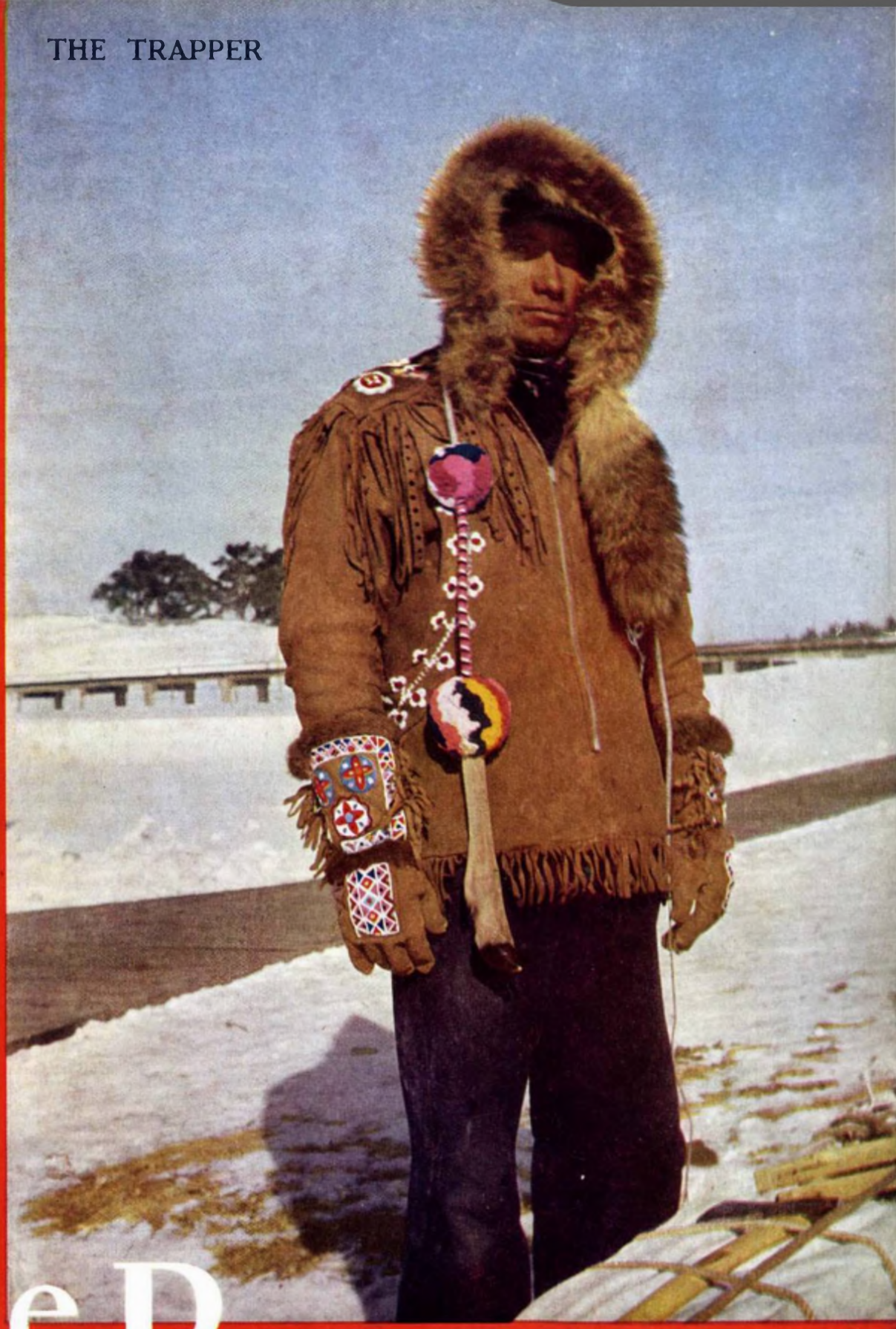
THE TRAPPER



The Beaver

A MAGAZINE OF THE NORTH

PUBLISHED QUARTERLY BY Hudson's Bay Company. INCORPORATED 2ND MAY 1670 OUTFIT 274 DEC. 1943

Governor's Christmas Message

THOUGH we are still living in a world at war, with many of our loved ones scattered and some lost to us in this life, we thankfully face a happier Christmas than we have known since 1939—happier than many thought would be possible in 1943.

Like Christian we have climbed, wearily but determinedly (and always by the Grace of God), out of the valley of the shadow of death through which our great community of British peoples has journeyed.

Now we have reached a height from which we can see afar that vision of final victory, the certain belief in which has sustained us. Let us have no illusions, however: victory is still distant and it will need all our resourcefulness, tenacity and courage to attain it in any reasonable period of time—indeed, these qualities must be ever present if we are to achieve it at all.

We look forward to the day when the sight of an aeroplane winging its way through the air will awaken terror in the heart of no man: when the sailor may proceed on his lawful occasions without scanning the waves for the lurking menace of an enemy submarine: when the soldier will know that he stands for the promise of law and order in the world, and that his watch is over a country at peace.

Let us remember that we are encompassed by the host of those who have laid down their lives that we should eventually accomplish the task. It is for us to re-dedicate ourselves at this festival of the family to the work still in hand: to vow to those who will know no more Christmas reunions that we shall not rest or slacken until the earth is cleansed from the evil that walks abroad in it.

In the words of that great Englishman, Sir Francis Drake, who saw his country pass through as dire a peril as we have faced, we say:

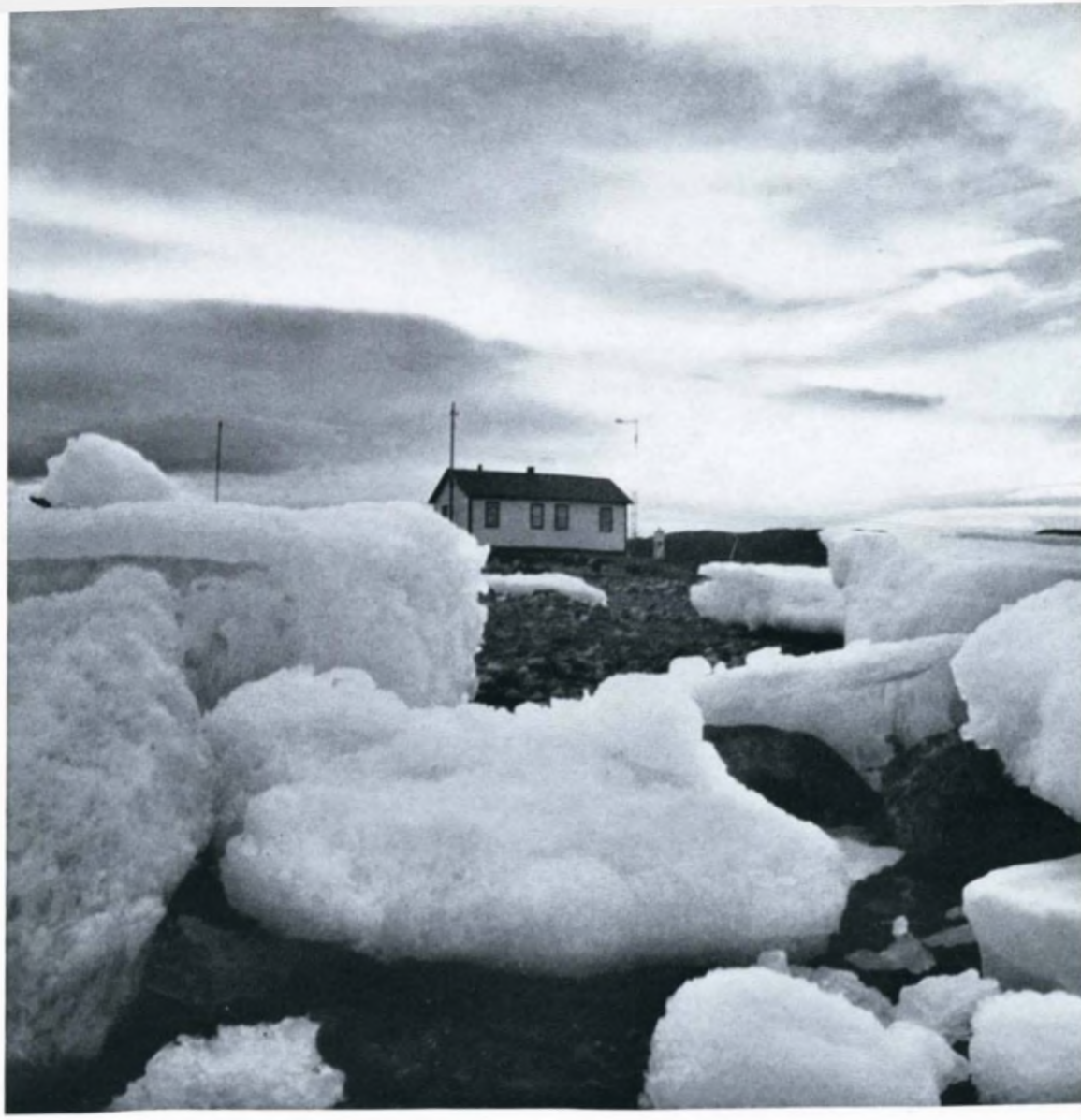
There must be a beginning of every matter but
the continuing unto the end yields the true glory.

May God make us worthy of victory.

J. A. Cooper.
Governor.

FORT ROSS

This picture of the dwelling at Fort Ross is rather symbolic. For two years now, the post has been besieged by ice, so that the *Nascopie* has been unable to approach it. The occupants were rescued last month and brought to Winnipeg by an American Army plane.—
L. A. Learmonth.



The Beaver

A MAGAZINE OF THE NORTH

OUTFIT 274 DECEMBER 1943

CONTENTS

Cover Picture—*J. F. Dalman*	1	The La Loche Brigade—*J. P. Turner*	32
House of Ghosts—*Corday MacKay*	4	Montagnais Crossbows—*J. A. Burgesse*	37
The Douglas House	9	Inventions Unlimited—*D. B. Marsh*	40
Warm Clothes for Airmen—*P. W. Webb*	11	Founding Fort Nelson—*Mary Weekes*	42
Nascopie, 1943—*J. W. Anderson*	15	On the Alaska Highway—*J. Milne*	44
The Trapper—*J. F. Dalman*	18	Winter Packet	46
Aklavik of the Arctic—*Mary C. Peters*	28	Book Reviews	49

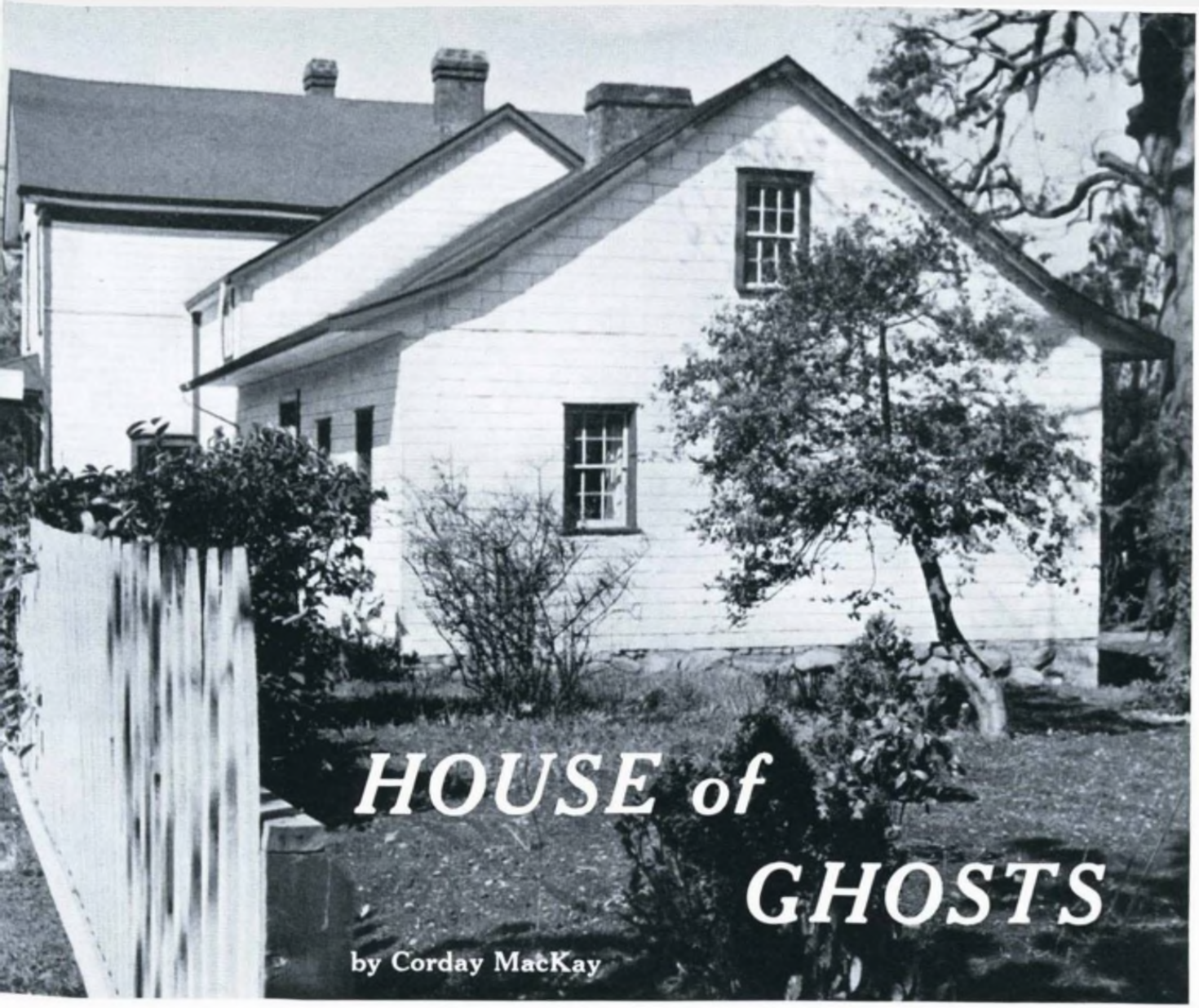
ONE DOLLAR A YEAR

PUBLISHED QUARTERLY BY

HUDSON'S BAY HOUSE — Hudson's Bay Company. — WINNIPEG, CANADA

INCORPORATED 2ND MAY 1670.

THE BEAVER is published quarterly by the Governor and Company of Adventurers of England trading into Hudson's Bay, commonly known as the Hudson's Bay Company. It is edited at Hudson's Bay House, Winnipeg, at the office of the Canadian Committee. Yearly subscription, one dollar; single copies, twenty-five cents. THE BEAVER is entered at the second class postal rate. Its editorial interests include the whole field of travel, exploration and trade in the Canadian North as well as the current activities and historical background of the Hudson's Bay Company, in all its departments throughout Canada. THE BEAVER assumes no liability for unsolicited manuscripts or photographs. Contributions are however solicited, and the utmost care will be taken of all material received. Correspondence on points of historic interest is encouraged. The entire content of THE BEAVER is protected by copyright, but reproduction rights will be given freely upon application. Address: THE BEAVER, Hudson's Bay House, Winnipeg.



HOUSE of GHOSTS

by Corday MacKay

Helmcken House, Victoria, as it looks to-day. The original dwelling, built in 1852, is the section nearest the camera. Under the little holly tree, the doctor's first-born was buried. ***C.P.W.***

IN his *Letters from America* written in 1913, Rupert Brooke has said of Canada, "It is an empty land . . . there are no ghosts here." To one fresh from the storied streets and haunted lanes of the old land that is a natural feeling. The almost limitless regions of plain and mountain of this country seem empty and lonely, lacking entirely in historical associations. But to anyone familiar with the history of the early fur-trade days there are ghosts in Western Canada. They walk the portages of the fur brigades; they linger in the quiet bays where canoe and sailing vessel came to rest. But, above all, they loiter and dream where the stockades of the old forts once stood to guard the earliest trading centres.

Of no place is that more true than it is of Victoria. Perhaps because the change from fort to village, from village to town and city, was so rapid. This was due, of course, to the gold rush of the fifties and sixties—so short a time after the founding of the fort. In that brief period the traces of the past were swiftly obliterated by the encroaching tides of commerce. Little of the old escaped the eager hand of the improver. In 1860, as a result of a campaign of ridicule and agitation, the remaining bastion at the corner of View and Government streets was torn down. Little by little other buildings followed until practically nothing of the old fort days remained.

One house, however, escaped the changes of the years. And here the ghosts may still linger undisturbed. Its capacious chimney rises under the oak trees and marks the passing of time undismayed by its changes. It is not, perhaps, the oldest house in British Columbia, but it is the oldest residence to survive unchanged from its original state. It was built in 1852 by Dr. John Helmcken and, though two additions were later made, the original house of three rooms still remains, unaltered. Under the old hand-hewn beams in the attic lay until recently many relics of those long-ago days.

Helmcken House is more than a residence. It is the history, in a sense, of a doctor, politically active in the old colony and in post-confederation days, pursuing his medical practice by canoe and saddle. It is the history, too, in part, of one of the most colourful families in the Northwest—the Douglases, for Mrs. Helmcken was Cecilia, daughter of Sir James. But it is also the history of the passing of an age—a chapter in the records of empire building. Its very simplicity and sturdiness is an emblem of that adventurous spirit which sent out young men willing to make homes in a wilderness and by their efforts add that wilderness to the spreading limits of the Queen's realms.

Dr. John Sebastian Helmcken, the owner and builder of Helmcken House, died as recently as 1920. His

daughter, Mrs. E. L. Higgins, who continued to live in the family home, died in April 1939. The house was acquired by the Provincial Government in July of that year and turned over to the Provincial Archives for use as an historical house museum. On August 26, 1941, the house was formally opened. In March of this year (1943) the centenary of the founding of Victoria was celebrated. One of the attendant ceremonies was a motor cavalcade sponsored by the British Columbia Historical Association. It passed through the streets of the city, visiting historic spots and unveiling tablets. One of these was at the old house on Elliot Street, where a plaque was unveiled by Mrs. Josephine Crease, daughter of Sir H. P. P. Crease, first attorney-general of British Columbia.

Thus Helmcken House was finally made secure against the hand of time and preserved intact as a model of pioneer homes.

The story of its builder, who lived in it for over seventy years, is an interesting one, well worthy to rank among the great biographies of the West. He himself has left us a record of it in his *Reminiscences*, the original of which, written in 1892, is preserved in the Provincial Archives. It is full of anecdotes of his medical and political career, also of his life as a boy apprentice to a Dr. Graves in London at the beginning of the "Maiden" Queen's reign. Through the whole of his story, the doctor's love of wit and humour, a faculty he retained throughout his long life, is plainly evident.

John Sebastian Helmcken was born in London, June 5, 1825, of German parentage. Before the expiration of his four-years apprenticeship as a doctor's boy, he became a student at Guy's Hospital. At the end of four years there he obtained the diploma from the Royal College of Surgeons. As a reward for merit, for he had won several prizes during his years at Guy's, he was given an appointment to the Hudson's Bay Company's ship *Prince Rupert*. Thus he first became acquainted with this continent by way of Hudson's Bay and York Factory. This was an experience he apparently never wished to repeat, for a year or so later, when he was offered a place with the Company at their new colony on Vancouver's Island, he asked: "Where on earth is Vancouver's Island? If it be in Hudson's Bay, depend on it, I do not go!"

"Oh," he was told, "it is in the Pacific—here it is on the map, and my nephew wrote me it has a climate like that of England."

Thus the young doctor decided to come to this "demi-semi-paradise" of the Pacific. He was appointed as clerk and colonial surgeon in the Company's services.

"For this purpose," said Mr. Barclay, the Company's agent, "tell me what instruments and medicines you want for the voyage, for the company will provide them . . . . and, in conclusion, I dabble in philology and I shall be pleased if you send me anything you may learn about the Indian Languages. Good day. You will be off soon; so get ready, the ship sails next week!"

The doctor's *Reminiscences* continue: "This ship was the *Norman Morison* and I had to board her at Gravesend. Arriving there about October 1849, I found emigration commissioners and so forth inspecting everything. A good deal of fuss was made about this first voyage to a new colony and some grandees were on board, drinking wine and speaking good wishes etc., etc."

The tale of the voyage to the new colony is too long to tell here. To the young surgeon apparently the five-months trip was a wearisome one, and he tried to



Below: The smaller bedroom (seen through the doorway in the picture to the left) with its mahogany linen press.



Above: Dr. Helmcken's medicine chest with its labelled bottles, which he brought over from England in 1850. On the mantel is the first clock used in the Legislative Council room. The chair is one of those from the Hudson's Bay store. ***All photos from B.C. Archives.***

amuse himself, as he records, "making bird cages of strips of bamboo and other trifles . . . . Books we got tired of—the daily routine had to be gone through. All the most of us had to do was to speculate how long it wanted to the bell for breakfast, lunch, dinner and supper."

His first glimpse of the new land was not reassuring. Nor was his first impression of Fort Victoria any better. Already he must have regretted the decision to come to such a wilderness. For, besides the bastions, which, he thought, at a distance looked like dovecotes, there was nothing to be seen but "land, water, canoes, and Indians." He was too active a man, however, to repine long. A few weeks after his arrival he was sent to Fort Rupert as medical officer and magistrate to settle some trouble with the natives. In this way he commenced his dual career of surgeon and public officer. From it he never escaped. Indeed, in spite of his first unfavourable impression of the new land, he threw himself vigorously into its life; so much so that he never again returned to the old land of his birth.

Shortly after his return from Fort Rupert (about Christmas 1850) he seems to have begun plans for a home of his own. His eye had been caught by one of the Douglas girls—the eldest, Cecilia. He had seen her on the very first day of his arrival. Of that night he says:

"At the windows stood a number of young ladies, hidden behind the curtains, looking at the late important arrivals, for visitors were scarce here, but we were not introduced. Anyhow, before going away, the room of Mr. Douglas, partly an office, partly domestic, stood open, and there I saw his eldest daughter, Cecilia. I was more or less captivated. Afterwards I heard her singing in the church and she had a beautiful voice though uneducated."

And he goes on with one of those touches of realism that make the old diary so entertaining. "Pianos were at this time unknown in Victoria, probably no musical instrument existed in Victoria save the howl and barking of dogs, and the discordant music of Indians from the tomtoms."

Some building at this time had been attempted outside the fort palisades. Mr. Douglas had bought his James Bay property and had begun a home there. A four-roomed building had also been put up for Governor Blanshard at the corner of Yates and "faced with plained shingles." It was "comfortable but not commodious in the present sense of the term." The young doctor began courting in earnest. "The courtship was a very simple affair," he continues, "generally in the evening, when we had chocolate and singing and what not; early hours were kept." Sometimes there were outings and horses were driven into the fort for the clerks and ladies. Mr. Douglas often accompanied them in these rides to the country round about.

Dr. Helmcken soon began making plans for a home. Mr. Douglas gave him a piece of land, an acre, thinking it would be nice for Cecilia to live near her mother. To build was no easy matter, for there were no contractors and very little lumber to be had. The timber had to be taken from the forest, squared there by hand and brought down by water, then hauled up the hill to the site by oxen. French Canadians supplied the labour, squared the logs and split the cedar shingles. These men took their pay in blankets and provisions and the balance in coin. Flooring, eight or ten inches wide, was obtained from Fort Rupert. After endless time and trouble he got lime from Langfords and McKenzie's and the Indians split cedar laths, "a work pretty new to them, so the laths were too thin and

Dr. Helmcken at the time of his marriage, and his wife Cecilia, daughter of Sir James Douglas. Their wedding day was advanced because Douglas was going in search of an Indian murderer, and wished to leave his family in safe hands.







Right: The sitting room, containing the doctor's medical library, and his chair. The fireplace is the original one purchased from the Hudson's Bay Company.



Left: The larger bedroom, with original furnishings. On the right is a sea chest. Note the simple structure of the bed.

springy." Unfortunately our narrator is silent on the subject of the huge chimney which served the two fireplaces. One would like to know the story of their building and of the original iron fittings, which came, probably, from the fort blacksmith's. These are the same to-day as they were when they were installed, as are the panes of hand-blown glass in the windows.

On December 27 Dr. Helmcken and Cecilia Douglas were married in the mess hall of the fort. At that time there was no church and services were conducted by the Reverend Mr. Staines in the hall, he, at times, violently objecting to the smell of tobacco smoke, which often pervaded the room. Dr. Helmcken has left an amusing account of the wedding in an article written by him for the *Victoria Daily Colonist* of January 1, 1889. He calls it "A Wedding in High Life," and the whole account is tinged with the good spirits and slightly sardonic humour that colours all of his *Reminiscences*. By this time Mr. Douglas and his family were living on his estate in James Bay. (See page 9.)

"We remained at Gov't house a few months, and then had to remove to my residence, still standing. It was habitable, roughly finished, plastered etc. but inner doors were wanting; so to supply these, grey cotton curtains were hung across—the furniture did not amount to much, but we were soon better supplied, as I received some from England—the horsehair chair remains—the windsor chairs came from the H.B.Co."

Here then the doctor worked and lived, travelling by canoe and horse-back to visit patients, trudging in all weather to an office he had established in Yates House near the fort. In the small back bedroom there is a door which he used at night in order not to disturb his family when he was called out at unseemly hours. Here his family were born. The first-born, a boy, Claude Douglas, died when only a few months old and was buried under the holly tree just outside their bedroom window.

Dr. Helmcken's medical career had begun with attending the sick of the Company, but this soon spread to patients from "the other side." He had also to supply the Hudson's Bay posts throughout the country with the medicines they required. Fresh supplies had to be ordered from England, allowing a year for these to arrive by sailing ship around the Horn. To the distant posts he had to send "dozens of bottles of Turlington (?) Balsam and Essence of Peppermint—grosses of 'Purges' of jalap and Calomel—dozens of emetics of Ipecacuanha and Tartar Emetic and other samples."

The years rolled on. Fort Victoria grew and spread, but the old home remained, little changed, for Dr. Helmcken was not by nature inclined to adopt new ways. From this home he went out to his first electioneering, to his first official position in the legislature. Here his wife, the graceful Cecilia of earlier days, died



Above: The doctor's children. The little girl is Edith, who as Mrs. E. L. Higgins lived in the old house until her death four years ago. Below: Dr. Helmcken, photographed at the back of his house shortly before his death in 1920. Beyond the fence is the cherry tree seen opposite.

suddenly in 1864 and left him with a young family to care for. But still he had time to enter actively into all the affairs of a growing community.

In 1856 the first election was held in the colony and on July 22 Dr. Helmcken was chosen as one of the representatives of Esquimalt. At the opening of the first house assembly, or parliament, of Vancouver Island he was elected speaker. These first meetings were held in the Bachelor's Hall of the fort and, as there was no clerk, Dr. Helmcken, as speaker, had much of the work to do.

He was one of the three delegates sent to Ottawa in 1871 to arrange the terms on which British Columbia would join the Dominion of Canada. He later refused a senatorship and, retiring from politics, he lived quietly in the old home until 1920, when he died at the age of 95. He was loved by all, and his *Reminiscences* are a long record of the gay and grave, but mostly gay, happenings of the old colonial days. His life spanned the nineteenth century and is the story in its last fifty years of the growth and development of a province.

It is therefore most fitting that his home should be a museum of those days. The furnishings are, almost all of them, original. Some of them came with him on that long-ago voyage of the *Norman Morison* in 1849-50. Others were added later, but all are of great historical interest. The great mahogany linen press, the bed in which he slept for many years, his boot-jack and his canes, all remain as they were when he lived. Every thing has been done with an eye to creating the past. Here then the old house lingers on, almost under the towering walls of the Empress Hotel. In Pioneer Square on Church Hill its owner rests, undisturbed by the great cathedral bell as it rings out on Sabbath mornings over the city which he helped to build.



The Douglas House

B.C. Archives

THE house seen above, built for Sir James Douglas in 1851, stood not far from the Parliament Buildings in Victoria. In this year, it would have been the centre of interest in the capital's centenary celebrations—had it been allowed to stand. But in 1906, in order to make a roadway (the present Elliott street) through the Douglas estate, it was sold for twenty-five dollars, on condition that it be removed within three weeks. "Time, like the affectionate trees around it," wrote the *Victoria Colonist* in a protest against its destruction, "has been gentle with its old timbers, but the human destroyer has marked it for his own."

To-day, all that remains to mark its site is a stone monument, and one of the "affectionate trees"—a cherry tree, seen in blossom below. Beyond is the central dome of the Parliament Buildings.





Warm clothes for airmen were tested high up on Mount McKinley by the author and others. The summit (20,300 feet) is at the left. ***Bradford Washburn.***

WARM CLOTHES FOR AIRMEN

by P. W. Webb **Photos by R.C.A.F. and Bradford Washburn**

THE problem of keeping warm in winter has always engaged the ingenuity of northerners. Ever since the *Nonsuch* wintered at the mouth of Rupert's River, the men of the Hudson's Bay Company have had to contend with the intense cold of the sub-Arctic and Arctic regions. And, down the centuries, they have learned a good deal about combating it. They have discovered, for instance, the wisdom of avoiding excessive perspiration, which chills when exertion ceases. And they have also found that the warmest clothes are made of the skin of the caribou, with the hair left on, or perhaps of eider duck feathers.

In their search for clothing for aircrew, which will combine warmth with serviceability, the R.C.A.F. have learnt a lot from experienced northerners. But as conditions of high altitude flying are so different from those encountered in winter on the ground, they have had to conduct further researches into this extremely important problem.

It is of the utmost importance that the men in a service aircraft should be kept warm, for the sensation of cold may produce poor judgment, lethargy, and distraction from the main task; and it may induce sleepiness, bad temper, and carelessness. An R.C.A.F. officer, while testing cold weather clothing recently, put the situation in a nutshell when he said: "The outstanding impression of severe cold is the almost overwhelming desire to avoid it at any price, even that of duty." It follows, then, that the first armour of an airman is his clothing, and a mistake in clothing design may mean the loss, not of one life, but of many.

The conditions faced by an airman on a long flight at high altitudes differ chiefly from those experienced by a winter traveller on the ground in two main respects:

1. In variability of temperature: 40,000 feet above the equator the temperature may be 50° below zero. While, on the ground, the degree of cold is more or less constant; an airman may leave a ground temperature of 70° F. or more, and only five minutes later be called upon to face a temperature of 20° F. below zero *in the same clothes.*

2. In physical activity: On the ground a traveller keeps moving, and his circulation responds to the exercise. But an airman is exposed to extreme cold for several hours at a time, with comparatively little bodily movement.

The question of altitude also enters into the problem. The sensation of cold at 20,000 feet without proper oxygen supply is probably equivalent to a temperature ten degrees lower, when compared to reactions to that temperature at ground level. The body and limbs increase in dimension at high altitude; allowance must be made, therefore, in such form fitting clothing as helmets and gloves, because the tighter the clothing, the less protection it affords. The shortage of oxygen in the air requires an auxiliary supply of oxygen, which means special helmets, goggles, flying suits, etc., to accommodate the attachments for this equipment.

Much has been learned from the characteristics of northern clothing and the way it is worn; but to adopt it piecemeal for aircrew is not good enough. Before the war, bush pilots dressed very similarly to those working on the ground, but the demands on clothing protection were less severe, the flights of shorter duration, and there was usually a warm engine to sit behind, and shelter at both ends of a short trip. Let us take a northerner's articles of clothing seriatim, and examine them for suitability for aircrew:

PARKI HOOD—Aircrew must have freedom for "rubbernecking," and a minimum of loose pieces of clothing which can catch.

FUR HAT—Any protective hat or helmet must support two earphones, goggles, oxygen mask and microphone, communication cords and switch. Exposed fur is dangerous, as gasoline fumes permeate and remain in the furs, thus increasing the fire risk.

ANTIGLARE GOGGLES—Ordinary sun-goggles will not do. Tint lenses must be interchangeable for protection from snow glare, water glare and for adaptation to seeing in the dark.

UNDERWEAR AND SOCKS—Heavy woollen underwear and socks are rarely suitable, because of the waiting indoors before take-off. Underwear which protects at forty above cannot be worn with safety at forty below. Flying clothing must be of a type which can be taken off or put on quickly and without undue exertion.

SHIRTS AND COATS—International laws demand that combatants be dressed in formal uniforms. Aircrew who have to bail out behind enemy lines may be shot as spies unless dressed in proper uniform and displaying badges by which their rank, nationality and service may be identified. Clothing must be readily removed in fire or water. Absolute freedom of movement for legs and arms, minimum bulkiness at the crotch and a complete absence of loose material which may snag and catch are essential in the restricted space in an aircraft.

SKIN BOOTS—Form fitting boots to provide utmost sensitivity on foot controls are necessary. Waterproof protection for the feet is also desirable, because damp may be encountered on the aerodrome, or in the tender proceeding to the aircraft before taking off, with serious results later. Furthermore, all clothing must be such that it permits aircrew to "walk out" after bailing out and coming down in entirely unpredictable terrain and climate.

Even the air over the African desert is cold, as the dress of these Spitfire pilots testifies.





The parki hood of the R.C.A.F. "Type E" suit, tested on Mount McKinley, folds away into the collar.

MITTS—Ordinary mitts will not do in an aircraft. The intricate duties of the hands on radio panels and instruments frequently demand the utmost dexterity of the fingers.

WINDBREAK MATERIALS—Outer shell materials of flying clothing must have wear and tear properties equal to a tent duck, but at only a fraction of the weight and stiffness. Protection from shrapnel, fire and water must be considered equally with protection from cold.

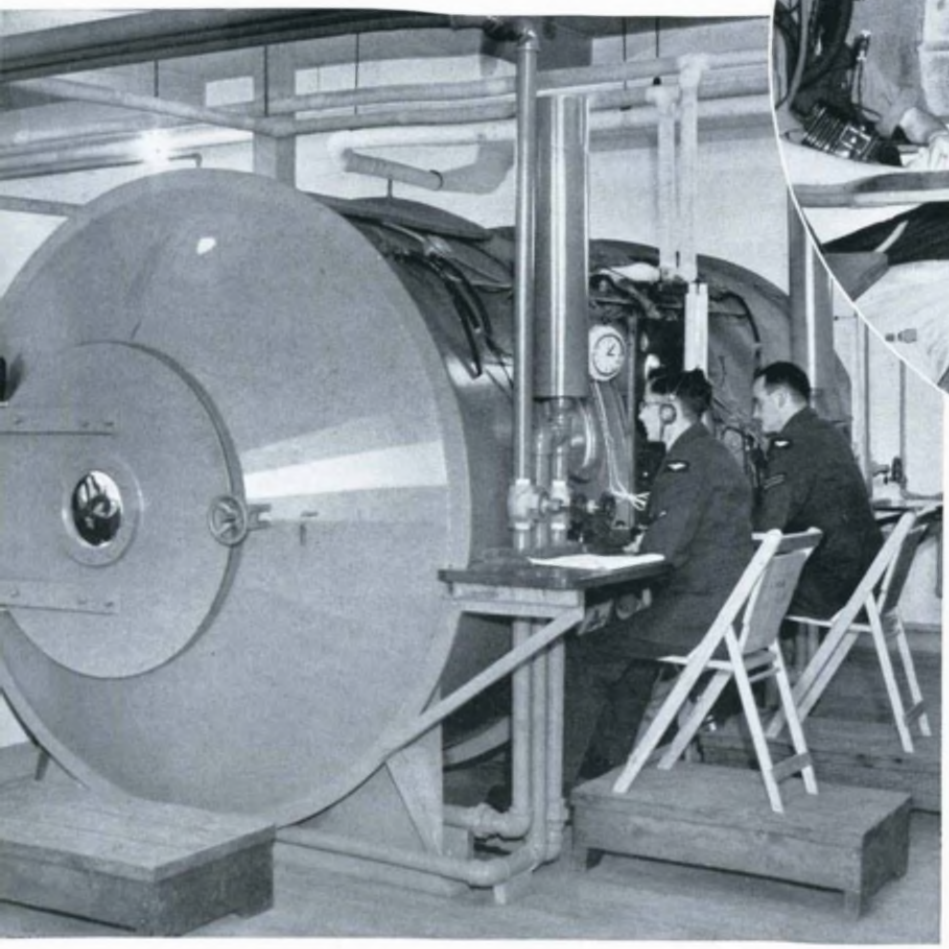
LINING MATERIALS—The thicker a material is, the warmer it is, and for tours of duty which may call for sitting almost motionless at forty below for four hours or more, a lining material half an inch thick is necessary. Conventional lining materials are unsuitable, because they compress under the weight and pressure of outer clothing, the parachute harness and the body. If a lining compresses to half its original thickness, it is just half as warm.

One final feature about conventional clothing which prohibits its use is non-availability. When the R.C.A.F. wants moosehide boots, it wants 50,000 pairs; when it wants homespun, home-knit socks, it wants 150,000 pairs at a time. Indian and other resources are today more usefully and beneficially occupied, so that, no matter how suitable the native clothing, it cannot be obtained.

As a solution to non-availability, therefore, it is necessary first to try to measure up the properties that make caribou skin, for example, a warm material for clothing; and secondly, to try to duplicate it in Canada's textile mills and tanneries.

In their search for the most efficient aircrew clothing, the R.C.A.F. has set up a requirements committee dealing specifically with the subject. This committee meets regularly to determine—not to test—the

The exterior and interior of a low-pressure chamber, with airmen undergoing a test. A similar chamber is used for clothing tests.





qualities flying clothing must have. It may consist of an operational pilot, an engineer, a medical officer, and an equipment supply officer, each of whom puts forward the requirements to which a particular article of clothing must measure up, from his point of view.

This list of combined requirements is then submitted to a research committee, which carries out exhaustive tests both in the laboratory and in the field. It is made up of action workers; that is to say, each member undertakes the actual research and development personally, and is concerned more with deeds than with words or directives. Both civilian and service personnel sit on the committee, and each has thorough access to the other's facilities for performing research and for field investigations. Research workers may, if necessary, examine the conditions on the spot, in an aircraft and in flight.

Each research worker (or a group) goes to work on one particular project. When he has reached his findings, they are presented to the research committee, which accepts or amends them. R.C.A.F. test facilities include cold chambers and decompression chambers in which subjects may sit fully dressed in flying clothing and oxygen equipment. These massive steel chambers may be set to give inside conditions of 60° F. below zero, or a pressure equivalent to that encountered in an aircraft operating at 40,000 feet. Equipped with telephones and glass windows, the precise reactions of the test subject may be recorded by the observer sitting outside.

This research committee which deals exclusively with protective clothing is probably unique amongst all the Allied services. There are lots of committees dealing with such items as radio instruments, sanitation in buildings and other problems; but for some unknown reason, not only in wartime but also in peace time, the proper protection of the human body by means of clothing has heretofore been ignored.

Wherever possible, the aim of the research committee is to produce an article answering so well to laboratory tests that field or "service" trials become a mere formality. Sometimes the article developed by the laboratory is so acutely tested by accelerated methods that no service trials are necessary. On other occasions, especially in such items as socks, underwear and boots, it is not possible to predict just what happens when they are worn.

Many unusual things happen to the body under conditions of excitement, nervousness and extreme exertion. Service trials are, therefore, occasionally necessary; but they must be just as carefully controlled as the laboratory test. For instance, as food is the source of heat units, different opinions are bound to result if one of those taking part in the test is hungry and the other has just completed a big meal full of calories.

In the same manner, the circulation will vary in different subjects; one may be well acclimatized and the other very sensitive to cold. Without control, one person may be wearing an entirely different combination of footwear to another, when, for example, it is only desired to test one particular item, such as an insole. One subject may be performing different duties to another, generating more heat by exertion, losing body heat quicker by perspiration.

Above: Two members of the clothing research party, 20,000 feet up on Mount McKinley. In the background is the North Peak, and down below, on the extreme right, is Magonigal Pass, where the base camp was pitched at 5,000 feet. Below: The summit camp at 18,000 feet, under the lee of the North Peak. Note the variety of tents being tested, some of which weigh only seven pounds, complete with poles. *Bradford Washburn.*





Above: The author at 18,000 feet in the first Type E flying suit ever built. Below: Three members of the R.C.A.F. in Type E suits. The boots have rubber feet and leather uppers, with heavy wool lining.



With all these variables, it can be readily seen that such trials are to be avoided wherever possible; but if they are essential, the only reliable method is to have the subject test two similar articles of clothing, but of different specification, at one and the same time. That is the way in which R.C.A.F. service trials are being undertaken. The subject is literally cut in half.

For example, test underwear is produced with one leg manufactured from coarse wool and one leg from fine wool. Test shirts are produced with the right sleeve of a cotton-wool mixture and the left sleeve of an all-wool material. Parkis are tested in which the right half of the garment is manufactured of a woven alpaca material and the left half is a natural caribou skin. The subject will wear identical socks, insoles and mukluks on both feet, but in the left mukluk he will be wearing a Hudson's Bay duffel and the right mukluk a felted duffel. On one hand he will wear a mitt with a cuff which fits outside the parki sleeve, and on the other a mitt with a narrow cuff to fit under the sleeve.

Hundreds of subjects will perform these comparative tests, and not less than six will wear the same combination of clothing on the same day whilst performing the same duties. At the end of the test period, results will be recorded merely by preference.

They may show that five of the six wearing the Hudson's Bay duffel did not feel cold until after four hours, whereas the other foot with the felted duffel became uncomfortably cold to two subjects after fifty minutes, and to three more after two hours. Results will be charted and the test then repeated on other subjects under the same conditions. The same item of clothing will then be tested in a similar manner under entirely different environment and conditions. Subjects will record details of which article "wet out" more readily with perspiration, which dried out quickest, and from which frost could be shaken out most completely. Each subject will then reverse the order of garments worn under previous tests; for, unfortunately, symmetry does not rule in the human body: the left arm may naturally, irrespective of clothing worn, be a warmer arm than the right.

R.C.A.F. tests were recently carried out along with U.S. Army personnel at altitudes up to 20,000 feet on a mountain. While it was necessary to go to such an altitude in order to test at low temperatures during the summer months, it concurrently was an excellent opportunity to observe the result and to puzzle out the effects of the shortage of oxygen which occurs at high altitude.

A large variety of special clothing, food and equipment was tested during this trip, and with the ardours involved in climbing such a high mountain, and owing to the duration of the test, the actual conditions under which clothing is worn were in part duplicated.

Canada can be proud that it has taken the lead in working out solutions to these important needs. In a way, it is only proper that Canada should take this lead; its natural resources and the special clothing which its textile mills, tanneries and tailoring houses have had to supply in the past to northerners give it a head start in producing the ideal articles for those who suffer cold in the performance of service duties. Moreover, invaluable experience of organized groups which function in the north, such as the Hudson's Bay Company, the R.C.M.P., mining companies, etc., may be called upon to guide the R.C.A.F. in solving many of its problems concerning protective clothing.



NASCOPIE 1943

by J. W. Anderson

J. W. A.

THE 1943 voyage of the *Nascopie* was a voyage of disappointment—disappointment because ice conditions would not permit a visit to Fort Ross. We sailed into Prince Regent Inlet with high hopes. Southward we sailed and were not stopped by the ice until within striking distance of the post. Then we were caught for seven days in the polar pack, and during all this time we moved only a short distance under our own power, though we drifted a considerable distance with the pack. On the fourth day the ice was solid around the ship, and the captain allowed the passengers off the ship to exercise on the ice. Some even had the unusual experience of a ball game on the polar pack. On the fifth day three polar bears came to inspect the ship. They appeared in the evening, after dusk, had a leisurely look around, and then departed. On the seventh day the ship was actually frozen to the pack. It was with the greatest difficulty that the captain freed her, and, the season now being late, he was obliged to take the fateful decision to steam north without visiting Fort Ross.

This cast a gloom over the ship's company; but there was relief too, for we were in danger of being trapped in the ice for the winter. But the disappointment was keen nevertheless, because for three days we were within sight of the entrance to Bellot Strait, on which Fort Ross is situated, though we could not see the fort.

Our failure to reach Fort Ross meant also that the trial of Angootacoyomayo's wife, suspected of murdering her husband, could not be carried out. W. L. Cory, of Ottawa, had gone north with us to act as counsel for the defense; and the Royal Canadian Mounted Police, under the direction of Inspector C. N. K. Kirk, had made all in readiness for conducting a proper trial in accordance with the traditions of British justice. But now the whole affair had to be postponed for another year.

Apart from the heavy ice encountered in Prince Regent Inlet, conditions were not unduly severe on the 1943 voyage. We had ice in the vicinity of Cape Chidley at the northernmost top of Labrador and in Ungava Bay. Both in entering and coming out of Lake Harbour we had to steam through heavy ice. And more was encountered off Churchill. Icebergs were numerous in Davis Strait, and a few scattered ones were encountered in Lancaster Sound. The voyage was a comparatively smooth one, in great contrast to the stormy weather encountered on the Greenland run in 1942. In Hudson Strait and Hudson Bay the weather was warmer than usual, though much fog was encountered, which caused considerable delay.

With a heavy program of work in hand our stay at the various posts was governed strictly by the time taken to unload cargo. Sugluk holds the record, at which post we anchored at 7.15 one morning and sailed the same evening at eight. This was indeed a quick clearance, but it did not provide much of a "shiptime" for Post Manager and Mrs. H. B. Figgures.

The tragic news of the accidental death by drowning of Post Manager R. H. Kilgour, of Lake Harbour, came to us after we left Churchill. The first news did

An iceberg sculptured by the sea. *S. A. Sigvaldason.*

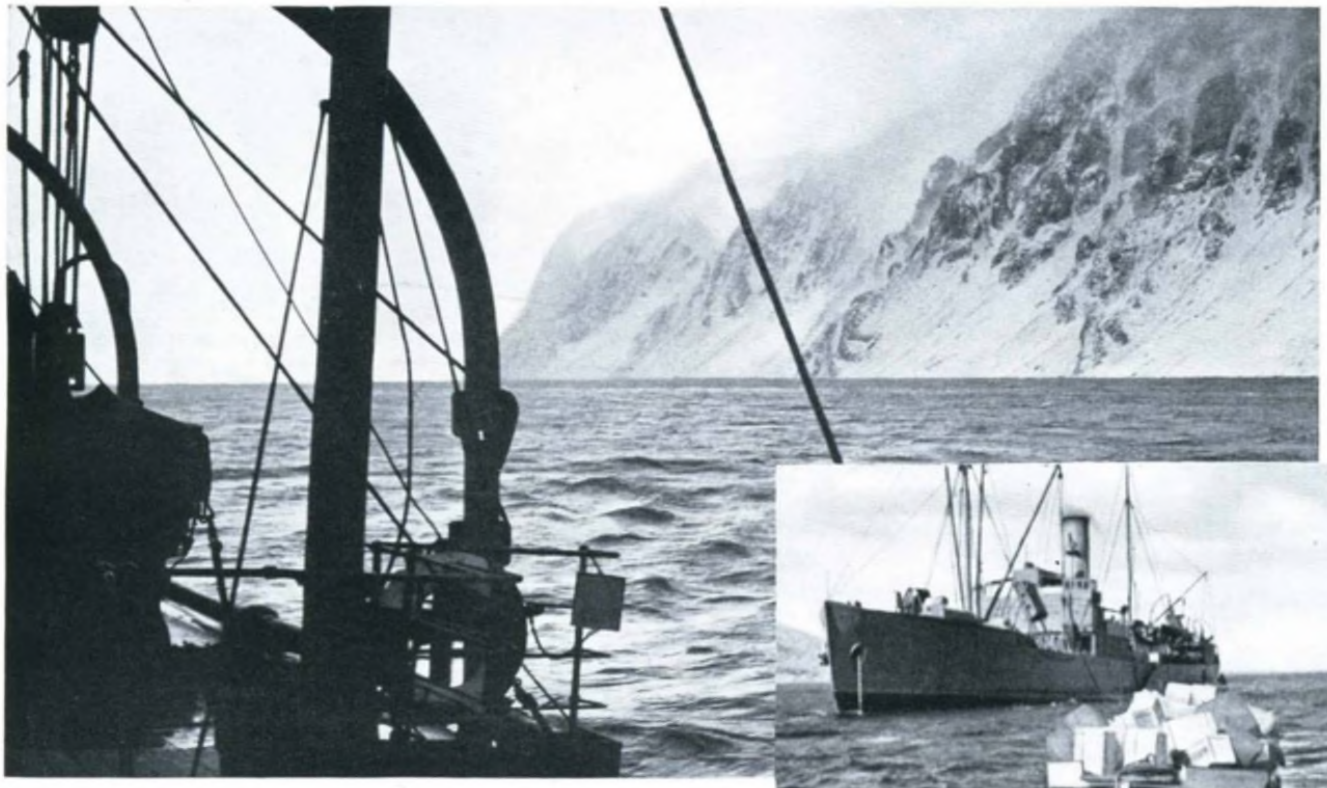




Jock and Mary Kilgour at Lake Harbour. *S.A. Sigvaldason.*



The famous R.C.M.P. Northwest Passage ship, *St. Roch.* *J.W.A.*





Above: The storm sweeps over the rocky hills guarding Albert Harbour.

Right: Passengers go ashore. L. to R. in front: Mr. Cory, Dr. Collins, Post Manager Melton, Major McKeand. ***J.W.A.***

not give details, but subsequently, at Lake Harbour, we learned that "Jock," as he was known to all, lost his life in a boating accident along with a faithful Eskimo lad named Jimmy. Mrs. Kilgour and the second Eskimo, Tommy, had a narrow escape, but were able to reach shore on the overturned boat and thus, after a long harrowing journey, reach the post, where Mrs. Kilgour was most kindly cared for by the Reverend and Mrs. H. C. Quartermain, of the Anglican Mission. This tragedy cast a gloom over the entire Eastern Arctic, and many expressions of sympathy came to Mrs. Kilgour from far and near.



Winter had already come to some of the more northerly posts. *J.W.A.*

This summer we had the unusual experience of anchoring in Albert Harbour at the entrance to Pond Inlet. A heavy gale was blowing, which made it impractical to anchor off Pond Inlet post, so we enjoyed the shelter of Albert Harbour with its impressive surroundings of snow-clad, towering cliffs. Snow was a common occurrence with us towards the end of the voyage, and on one occasion, after a particularly wild and stormy night, the decks were covered to such an extent that the captain ordered the crew out in the morning with snow-shovels!

Our veteran Arctic navigator, Capt. T. F. Smellie, is now an officer of the Order of the British Empire. This well deserved award was conferred on him in the King's Birthday Honours of last June, and is an eminently fitting recognition of his services in the command of the good ship *Nascopie* during many years of eventful Arctic voyages. Not the least of these was the 1934 voyage, when the Governor of the Hudson's Bay Company, accompanied by Mrs. Cooper, made the historic voyage "Trading into Hudson's Bay." Another historic voyage was that of 1937, when Capt. Smellie led the expedition into the Bellot Strait for the founding of Fort Ross. On this occasion the *Nascopie* was the first steel ship in these waters and the first ship of any kind in seventy-eight years.

Major D. L. McKeand, another Arctic veteran, was again superintendent of the Eastern Arctic patrol, with Dr. A. H. Collins as medical officer. We again enjoyed the efficient service of F. R. E. Sparks as post office representative for the Eastern Arctic patrol. Dr. J. R. Grandy, of Galt, Ontario, was the Company dentist for the voyage and was able to do much good work throughout the Arctic, often under considerable limitations as to time in port.

Those of us who "enjoyed" the stormy experiences of 1942 were very pleased that Greenland was not on the 1943 itinerary. To conclude the voyage we enjoyed a remarkably quick run from Pangnirtung to Montreal—only nine days, including a day in Cartwright.

Sub-Arctic sunset. *J.W.A.*




The Trapper



Norway House, once the great distributing centre for the North, where most of the accompanying photographs were taken. From left to right: The store, built about 1830; the main depot, 1845; the old gaol (now an oil house), 1855; the provision warehouse or "pork shed," 1830; and the Archway warehouse, 1830. The new dwelling is out of the picture on the left.

THE story told in these pictures is a very old one. It has been enacted many thousands of times in the northern wilderness, and at the posts of the Hudson's Bay Company. For over four centuries the Indians of Canada have been trapping the fur bearing animals of the forest and trading their pelts to the white man; and for two and three-quarter centuries the Hudson's Bay Company has been bartering goods for those pelts and shipping them to the fur marts of the world. These photographs unfold the modern version of the story, in which the old and the new are picturesquely combined.

The advancement of "debt" to the Indian is a northern custom started long ago to offset his natural improvidence. The native, setting out for his trapping grounds, has seldom had the wherewithal to buy supplies for the journey. The trader lends them to him, in the hope that the furs he brings back will wipe off the debt. The supplies the trapper chooses today include such old standbys as tobacco, an axe, and some tea, and such modern products as condensed milk, a tin of sardines, and canned tomatoes. His toboggan is of the Indian pattern, but factory made. In place of the native birch-bark wigwam, he takes along a light canvas tent.

In the office of the H B C store are seen such modern appliances as a portable typewriter, and an adding machine. But the store itself has been there for over a century, and a sense of the past still lingers within its squared-log walls. For it was at Norway House that the giants of the old fur trade met to decide the affairs of half a continent, and the vanished voyageurs of the York boat brigades gathered once a year, spending their nights in dancing and fighting and carousing.

The house where Simpson and his stalwarts held council has now disappeared, and with it Bachelors' Hall, where generations of young fur traders had their bed and board. The great days of the fur trade empire are gone forever. But still the Indian trapper gets his debt at Norway House, sets out for his trap lines, and returns at leisure with his furs; and still they are baled and shipped out marked with the familiar HB. Yet, though the Indian can afford to take his time, the white man must conduct his end of the business in modern tempo. By radio he keeps in touch with Hudson's Bay House, and when his furs are shipped to Winnipeg, they go winging far above the old fur trade highway where the dog trains laboured on the long trail to Fort Garry.

A Story in Pictures

Photographed by J. F. Dalman

ADVANCES





Above: In the office of the post manager, A. B. Fraser, the trapper, Isaiah Clark, a full-blooded Cree, points out his trapping grounds on the map.

Right: The post manager hands him an advance, with which (below) he gets his supplies at the store from Joe Keeper, ex-Olympic runner.



Above: With his supplies packed on his toboggan, and his dogs harnessed, the trapper is ready to leave the old fort through the Archway warehouse.

Below: On the trail to the trap line. Note the dog saddles and pompoms (or standing irons) of coloured wool and ribbons.

THE START





Above: Isaiah finds a place for his camp on the lake shore, and unloads his toboggan.

Left: Having put up his tent, started a fire, and fed his dogs, he gets his own meal of bacon and tea (below).





MAKING CAMP





SETTING TRAPS

Above: For marten, the trapper builds a small enclosure of stakes at the base of two trees, sets his trap inside, places some scented bait (left) beyond it, covers the trap with grass, and lays some brush over the "cubby" (right).

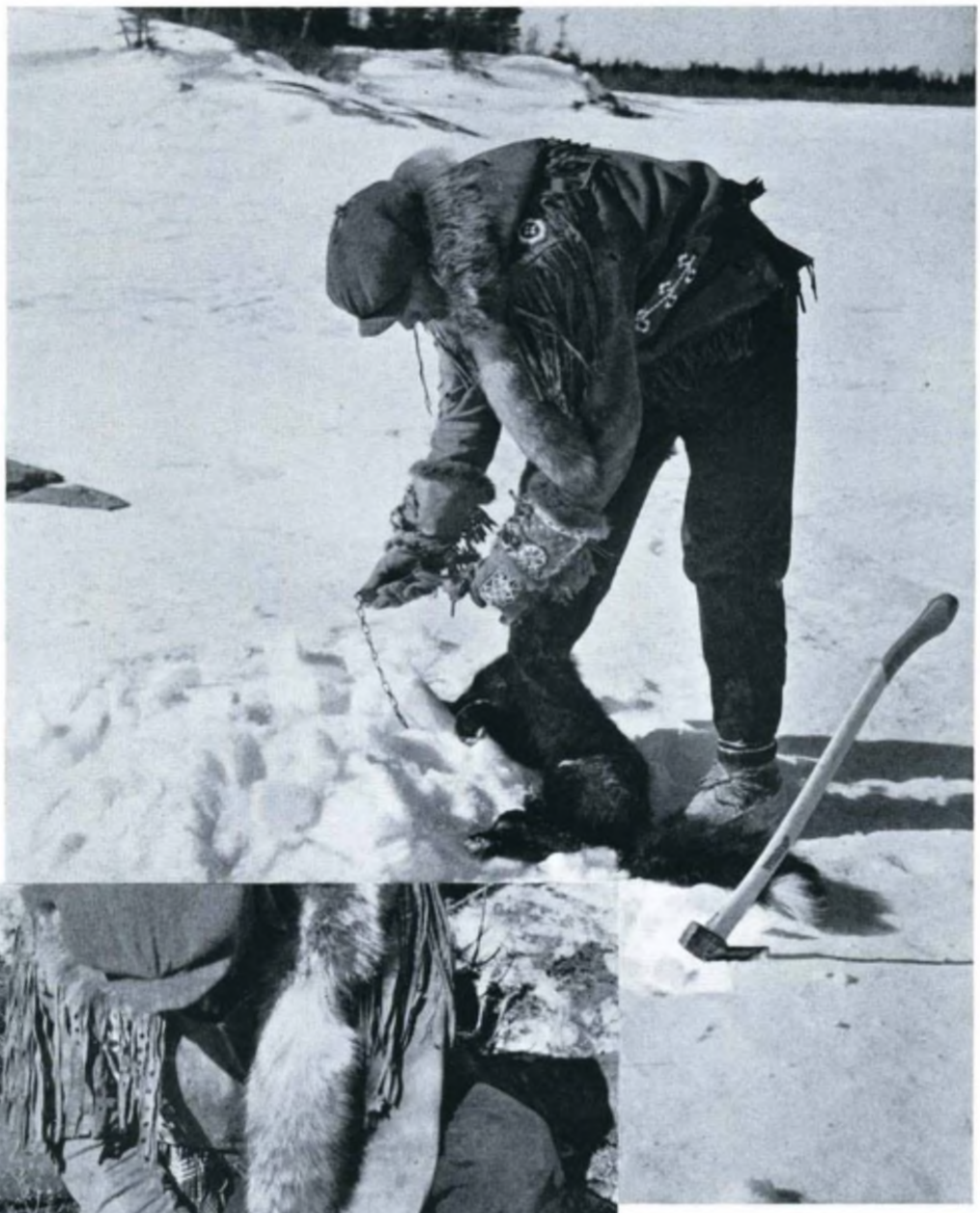
Below, left: For mink, he scoops out a hole on the shore, puts a fish head for bait inside, lays the trap in front of it, and covers the trap with snow.

Below, right: For fox, he hides the trap in the snow a little way out from shore. In every case, he chains the trap to a light pole.





Right: A few days later, the trapper finds a silver fox caught in the trap shown in the previous picture. He removes the dead animal, sets the trap again, and continues on his rounds with his trophy. At his camp, he sets about skinning the animals he has caught.



Below: He starts to skin the fox; in a few minutes the furry little beast is transformed into the skinny object shown at the lower right.



A FOX IS CAUGHT and SKINNED





THE RETURN

A couple of weeks later, the trapper returns to the post with his catch.

Above: He is welcomed by the post manager, who has seen him afar off coming down the river.

Left: Back in the office, he smilingly displays part of his catch.

Below: Post Manager Fraser values the silver fox.









BALING and SHIPPING

Above, left to right: (1) Isaiah's furs go up to the warehouse, where they are hung by the post clerk, D. C. Allen, until he is ready to bale them. (2) Baling red fox. The skins are carefully piled inside the fur press, burlap is placed below and above them, and (3) the screw is turned. Below, left to right: (1) The bale is sewn up, (2) marked with the outfit number, post letter and number, and bale number, and (3) finally loaded aboard the plane for Winnipeg, consigned to the Hudson's Bay Company in Montreal. In due course, the furs that Isaiah has caught may find their way to some of the leading fur salons of the world.

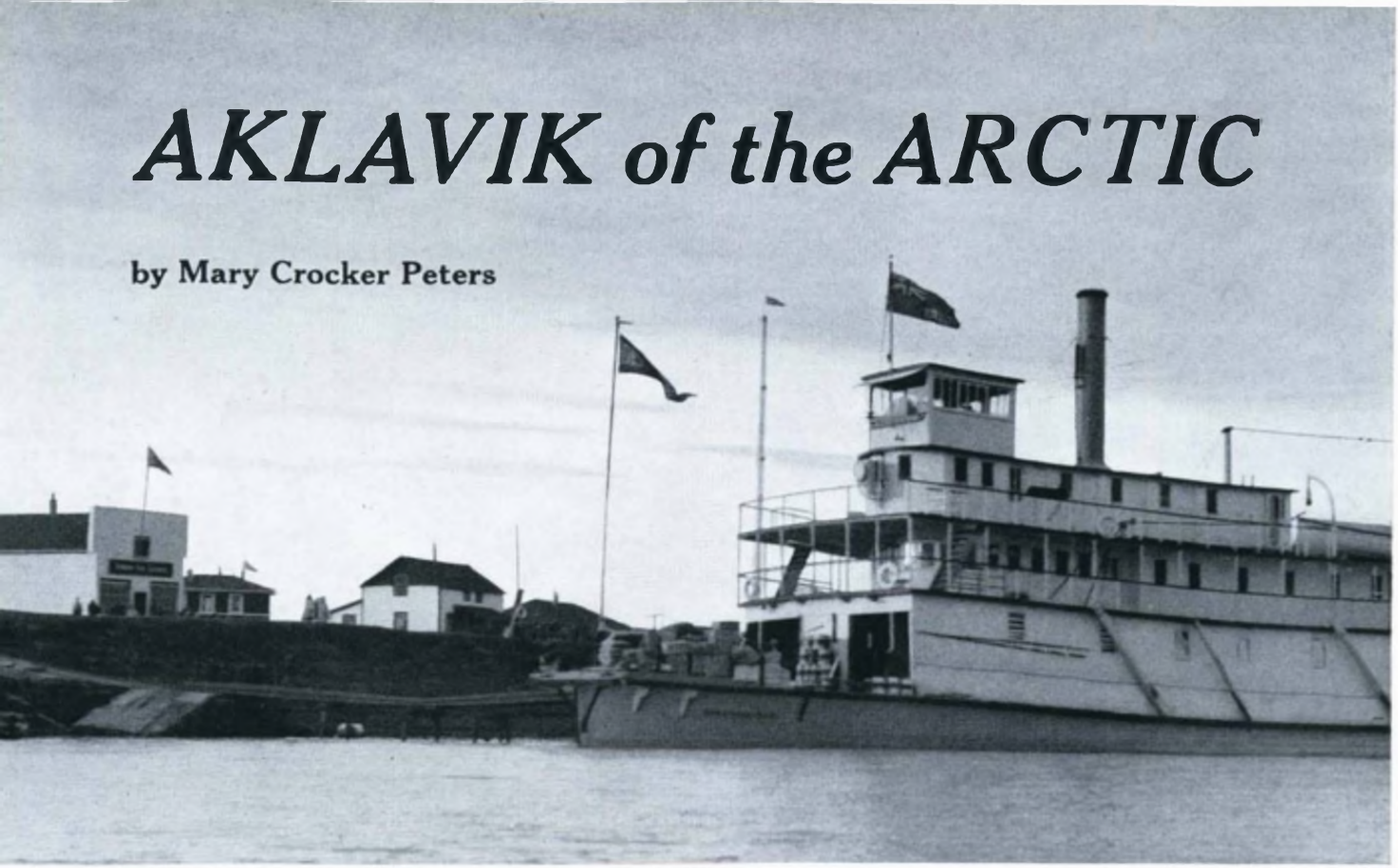





FORT GARRY
BAKING POWDER

AKLAVIK of the ARCTIC

by Mary Crocker Peters



The *Distributor* at Aklavik. On the left is the Hudson's Bay trading post. *R. N. Hourde*

IF you have known and liked the North, it stays with you. I have found, after two years "Outside," that in spite of the urgent interests of the present I am linking today with "the time we picked the berries on Red Mountain"; or a plane droning overhead will unconsciously revive some of the old mail-day thrill.

My first glimpse of Aklavik was in early September. On our journey down the Mackenzie folks had told me, "You'll like Aklavik, it's the friendliest little fort on the river"; and I was not disappointed. One distinguished visitor had written: "It is a place like Broome or Thursday Island: you cannot believe it exists until you get there, and then it seems as natural as day." Learning to know the one hundred Indian and Eskimo children at our residential school was my chief concern, and an absorbing one! Meeting their parents was likewise a refreshing experience: smiling, happy-go-lucky, hand-shaking people. These left the settlement by schooner, bound for the coast with winter supplies, soon after the arrival of the *Distributor*. Someone would call, "There goes the *Flying Cloud*," or "the *Beluga* is leaving," and the children would run to the beach to wave good-bye.

No one had prepared me for a northern autumn. In my mind's eye all country inside the Arctic Circle must be bleak, barren and desolate. Surprised I was then to find the delta studded with spruce-fringed lakes, and to see birch and willow and alder, with which the frost plays magic. I think the northern colouring becomes intensified in the clear autumn light. It is as though Nature is trying to make a vivid impression before her winter's nap. There was a warmth of yellow scattered among the dark green, and along the banks the berry bushes made a scarlet carpet.

One week we were canoeing up the creeks, and the next skating on the lakes with northern lights putting on a special showing for our benefit. Unless I had seen them I would not have believed they were green, yellow, mauve and even red. It gave one an eerie feeling of seeing a garden in the sky. When they swooped in and out among the stars you fancied you could hear them—but never did, of course.

Freeze-up time was the signal for caribou hunting. One fall, early hunters returned with fabulous stories of a herd fourteen miles long in the hills, and the village emptied of its male population over night. Unfortunately, however, a chinook came along while the men were away, and the ice rotted in the river. One young Indian returning to camp lost his dogs and sled and was floating about on a piece of ice when rescued by his father in a canoe. Others, however, had better luck, and there was an abundance of meat and deer skin for clothing in the settlement that winter.

Meanwhile, the womenfolk were not idle. "Jigging" for fish through a hole in the ice was their lot when they were not out searching for firewood. Cold days, and colder ones, saw them squatted on their caribou mats jigging tirelessly hour after hour. Occasionally they would pause to stretch their limbs and clap their mitted hands, but you wondered often what miracle kept them from becoming part of the river ice itself. At the end of an afternoon's labours one triumphant fisherwoman might return with forty fish, another with only two or three. The children, at the same time, were busy roaming the myriads of frozen lakes marking muskrat "push-ups" against the ratting season next spring. By driving a stick into the ice near the muskrat's winter camp, they would be able to identify the spot later, despite the concealing snow.

At school the coming of November is a warning that Christmas is not far off, and feverish preparations are begun for the festive season, which hosts of native people come to share with us. Weeks are spent rehearsing the children for the "concert," which will be the highlight. There are costumes to be made for every one of the hundred: a green satin evening dress converted

into a suit for Little Lord Fauntleroy; an ingenious arrangement of footless black stockings for Mickey Mouse, and a borrowed umbrella (the only one in the settlement) for Black Sambo's stock-in-trade. Days grow shorter, and toward the end of the month the sun disappears entirely.

One day the children are helping you gather evergreen boughs, and one shouts, "Dog teams coming." The cry passes along the ranks, "Dog teams coming." It is a Moment, and far down the river you see small black specks which presently grow to two, six, ten, twenty dog teams with their laden carrioles, and the village has turned into a metropolis. There is much hand-shaking and talking, and a great deal of laughter; the trading stores are crowded, and smoke curls up from the tents in the willows. Excitement mounts minute on minute as the Great Day approaches. And there are the dogs. At night their howls follow the pattern of the lights overhead; for a while the quiet darkness, then a lone wail, and gradually a crescendo as one joins the others, until the din is beyond hearing.

Christmas Eve was memorable for more than one reason: there was the concert, with its attending crowd of spectators; there were personal radio messages from home, when I heard my own mother's voice, five thousand miles away, as though she were in the very room; and there were the midnight candlelight services in the churches, when Indian, Eskimo and whites, trappers, traders, government employees and mission workers gathered to offer their praises.

The concert was always a huge success. What matter if small Black Sambo (aged four) lost his place in the drill and wandered about the stage pressing the large umbrella close to his nose? Nothing mattered excepting that each fond parent should have a good view of his Rachel, or Abraham. One distinctly remembers that first large gathering, and the overpowering



Old Mary, belle of the ball, and her husband.

muskiness. Caribou clothing, regardless of exposure to the elements, carries an essence of wild life that is not at its best in a crowded room. Strangely though, one becomes accustomed to it.

Holiday activities usually terminated with an Eskimo dance at Peffer's Hotel, to which everyone was

The author with some of her boys from the Anglican Residential School.





Across the Delta lies the Richardson Range.

invited. You sat where you could, atop packing boxes or beside them, the large storage room having been cleared for the occasion. Along the walls the Husky, Loucheux and Slavey people sat cross-legged, and the atmosphere was one of friendliness, and smoke. The "music" came from three native drums and a choir of chanting Eskimo women led by old Mary, resplendent in her dancing parka of red-and-white stroud and caribou skin. Mary is white haired and wrinkled, but acknowledged belle of the ball, and her grace and agility are seventh wonders. Sometimes she would dance alone, sometimes joined by other women, and again by the men, as the spirit moved them . . . and always there was the beat-beat and *ah-yah-yi-yah* of the drummers.

It was interesting to note that the women never failed to pull up their parka hoods before performing, and the men invariably donned gloves or mitts. They scarcely moved their feet off the floor, but swayed their bodies and waved their arms to the rhythm of the music.

Mary would don a head-dress of black feathers and give her interpretation of a crow making fun of a ptarmigan (as our Eskimo interpreter informed us). It was decidedly clever, and the crowd howled with glee. When the Eskimos paused to rest, the Loucheux people took up the drums and danced as the Indians of the Yukon do. On one occasion the few Slavey men present danced a "tea dance," and before the night was out all joined the white men in square dancing.

With the return of our visitors to their winter quarters excitement languishes. But not for long. The mail plane is coming today! Over three months since we've had a written line, or a newspaper. The children, playing football on the crusty snow, give first warning. "Airplane coming . . . airplane coming . . . airplane coming." It is useless then trying to accomplish anything. Until that precious bag of mail is dumped without ceremony on the kitchen table you are powerless to concentrate on anything else. All concerned lend a hand with the sorting. Someone mumbles disappointedly, "My book isn't here!" Someone else breathes a relieved "Oh, it came!" and there follow hours of happy reunions with old friends and associations. . . .



Boys from the school play near the Company warehouse.

If the truth be told, most northerners are sun-worshippers, after a fashion. The return of sunlight in January, at Aklavik, was like food to a starving man, and even the native children (to whom it must have been an ordinary occurrence) expressed their delight. There was a day when the first rays, striking the frost-covered bushes, kindled millions of lights in their branches, and the children came panting indoors to tell us there were "stars in the willows." There is an enchantment about an Arctic sunset that one fails to recapture Outside. It is as though it were a different sun, and certainly the colours seem more brilliant. Long after it had set in a vivid flourish there were echoes of it all around the horizon. To us who were colour hungry it was perfection.

Those were the days when every spare minute would be spent roaming the dog trails, up creeks, across lakes, through country that could be explored only in winter-time. Most years the old adage held true, "As the sun lengthens the cold strengthens," and there might be weeks on end when the thermometer would not rise above forty below.

Spring came at length. There were numerous heralds. When needles and pins began disappearing from the sewing supplies one knew it was time for *Nabajuk*, a game the children played, like Jackknife. When a strange odour permeated the far corners of our dwelling, we traced the offending source to muskrat carcasses roasting on top of the furnace! Ratting time! most important season in the Delta, for it is then most trappers make their grubstakes for the coming year.

At first the catches were comparatively light; but later, when water appeared along the edges of lakes and rivers, the men went hunting in canoes with their guns, and some were known to get one hundred rats in a single night. Night was day now, only a few hours of semi-darkness around twelve. If you chanced to sleep



Eskimo Schooners at Aklavik.

in the open you saw there were stars no more. Instead, clouds of birds winged toward the coast: ducks, red-winged blackbirds, and robins; beautiful white swans, and two large owls that lived close by. And there were whiskey-jacks, the impudent beggars; and golden plovers with a song not unlike the robin's, Arctic terns that swooped down close to frighten you off; and hoarse old ravens who bothered with no one. That was the ideal camping time, before the snow had quite gone and mosquitoes came to life.

Break-up time could be a treacherous or an unruffled one, depending on the ice-jams. One spring, water rose over the mud flats until buildings at one end of the settlement were surrounded and communication depended entirely upon canoes. Another year the ice-flow was hastened by an earthquake. It happened at supper time while the children were eating their meal. The buildings rocked, lights swayed overhead, and for a moment it seemed that panic would reign. The moment was saved when an Eskimo girl cried, "It must be the Germans in our cellar!" The children forgot their fear and laughed heartily.

That night the river ice moved on without further fanfare, and we woke next morning to the realization that all barriers were down: we were part of one world again. Boats, we knew, would come, there would be tourists; planes would fly in and out all summer, bringing unexpected mail packets; our term of isolation had ended for a season.

Break-up meant wood-gathering time, and on the heels of the ice-flow small gas boats chugged back and forth, towing barges of cordwood which had been cut and piled along the river banks during the winter. All who could lent a hand. It was occasion for a picnic (there were indeed few occasions that could not be made excuse for a picnic). And when the wood had been loaded, unloaded and piled on the beach, waiting until snow came so that dog teams might transfer it to the buildings, it was Boat Time.

The coming of the boat meant many things: new supplies to replenish our waning stores; renewing of old friendships with those who came year after year; learning first hand of what was developing Outside; and the thrill of opening parcels from home. The native schooners began arriving, loaded to the gunwales with dogs, children and rat carcasses. Village trails were busy with traffic once more. Stacks of freight appeared at intervals along the banks—barrels, boxes, crates and sacks; trading stores were crowded again, and the wretched canines took up their dismal chorus. Aklavik field day was the feature of this visit, and chief excitement was the tug-of-war between the Indian and Eskimo women. There were races and contests to suit everybody; a hot-dog and ice-cream stand; and in the evening a soft-ball match between mixed teams. The proceeds, a great percentage of which was voluntary, totalling generally in the vicinity of five hundred dollars, was donated to the Red Cross.

Later in the summer the Bankslanders arrived, a band of Eskimos who live nine tenths of the year entirely to themselves. Their one visit to the mainland is for supplies. They came in the *North Star*, the *Nanook* and the *Omingmuk*, tidy schooners, kept scrupulously clean with shining engines, and in one a red-and-white colour scheme carried out in the galley!

When berries were ripe, and before frost came we took a trip to the mountains, eighteen boat-miles away. Red Mountain was nearest, but Black Mountain held a lure. Climbing to the top was an adventure. With the delta unfolding below, one's imagination ran wild. These foot-hills are the ranching country of the west; from up here on a plateau you are looking on the lush fields of a southern plantation. And after easing ourselves over the last rocky inclines we saw the true delta, seventy miles of it, stretching to the Reindeer Station hills. Actually it is a maze of lakes and creeks edged with every shade of green, the Mackenzie running like a broad highway in the midst of it. But to us it was the earth unspoiled, a thousand nameless lyrical things that cannot be expressed.

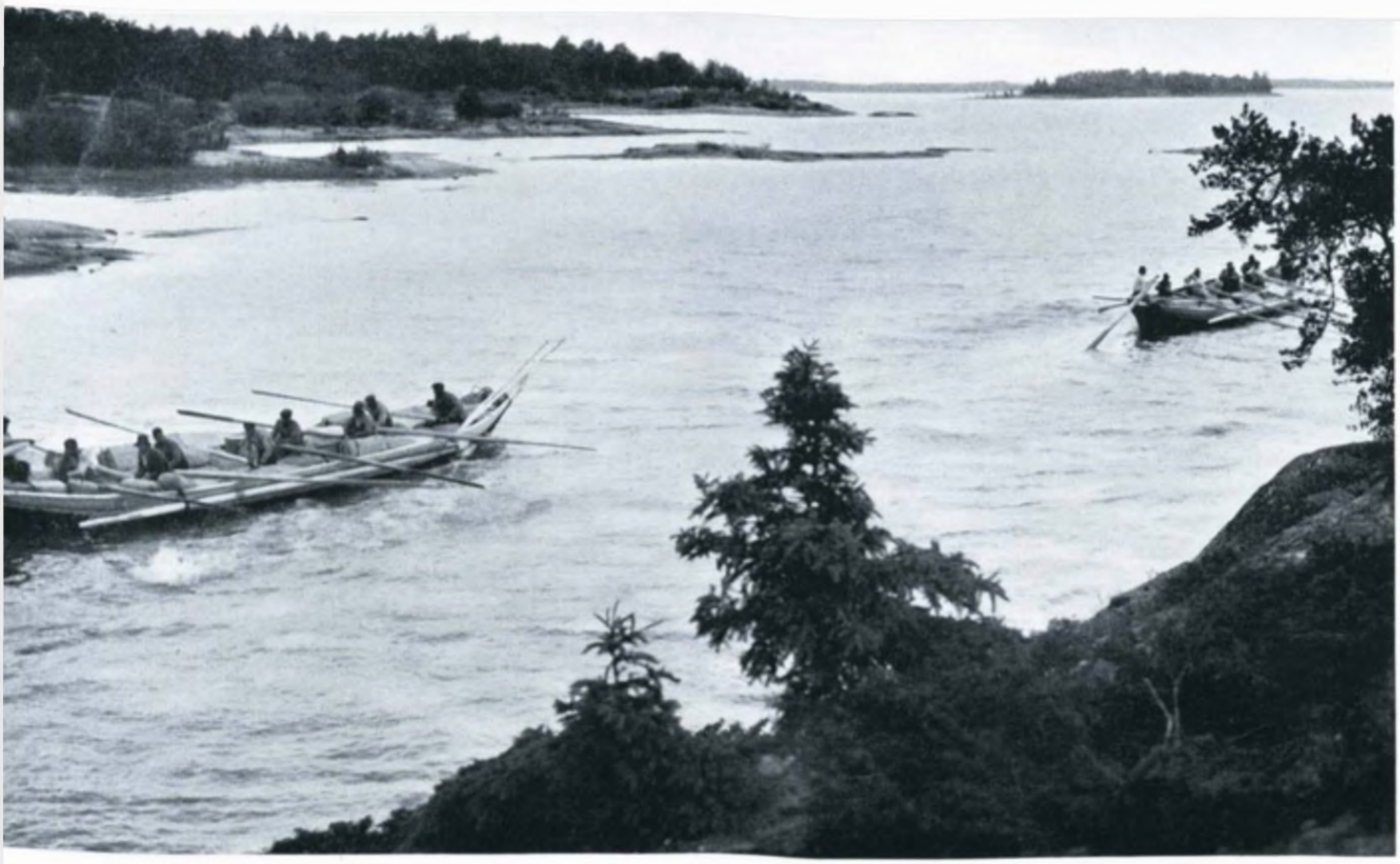
Freeze-up time is nearing, and the entire settlement is concerned about the last boat, long overdue. It is carrying our winter's vegetables, the doctor's cow, and furniture, and several trapper's outfits. All summer the river water has been dropping, dropping, and now rumours have reached us that the boat is caught in the shallows of the Ramparts. Will it come? Will we be without vegetables this winter? And what of the doctor's cow? Frantic messages hum through the airwaves. "Where is the last boat?" The doctor inquires anxiously of every small craft coming in. "Did you see her anywhere?" No, they had not seen her. One cold, windy morning when ice is forming and hopes have ebbed, she limps down the river. The cow is here, Jim's outfit arrives, the vegetables are safe—let winter come!

Back home, folks ask me, "What did you ever do to pass the time away? Didn't it drag, and get monotonous?"

Monotonous . . . ?

From the Richardson Range there is a far reaching view of the Delta. ***A. Figgures***





York boats near Norway House. The stern sweep was used when the men were rowing.

THE LA LOCHE BRIGADE

Chief among the York boat brigades organized at the Red River Settlement was that plying between Fort Garry, Portage la Loche and York Factory.

by John Peter Turner

MORE than a hundred years ago Fort Garry and the Red River Settlement occupied a highly important place in the ramifications of the fur trade. Here was the main gateway to the vastness of the West, and not the least among the activities of the big trading establishment at the fork of the Red and Assiniboine Rivers was the gathering of buffalo products, chiefly pemmican and skins, for general distribution. In addition, the pioneer settlers on the river farms were looked to, to supply the only marketable agricultural produce to be had in a land as large as Europe.

Primitive Red River carts and rugged shallow-draft York boats made possible the interchange of commodities and articles of trade between this strategic centre and many of the Company's scattered outposts. In varying degrees, proportioned to the established modes of travel, transportation rested upon the well directed brawn of man and beast.

Annals of other days tell us that the long water highway from Fort Garry to Methye Lake, and back to salt water on Hudson Bay, was regarded as foremost among the Company's regularly travelled trade routes; that it held an intangible allure; that the brave and the daring heard its call; and, most of all, that apprentice voyageurs eagerly sought opportunity to test their portage straps, or tump-lines—and themselves—on the twelve-mile footpath beyond the Methye Lake. For the Portage la Loche, situated in the very midriff of the northern wilderness, presented a more irresistible challenge than any other carrying place in all the land of fur.

We must peer far back to find even a cursory glimpse of this highly important lake and river highway of the long ago.

At sun-up on a June morning, say in the "thirties" of the last century, a group of noisy voyageurs might have been seen below the stone-walled trading post at the mouth of the Assiniboine.* The flood waters of the Red had swept the last vestiges of winter far out upon Lake Winnipeg, and the northern boat brigade was about to move. There had been weeks of careful sorting and packing in preparation for the annual shipment. Storerooms, bulging from the buffalo expeditions of the previous year, had all but been depleted to fill up-country needs. Produce from the near-by farmsteads had been securely baled, and a large assortment of furs awaited transport to the sea.

Seven sturdy York boats, of pointed prow and stern and generous hull, occupied the immediate river front. Seams had been caulked and pitched; patches fitted; broken parts replaced. Enrolment of the crews had been completed, and final inspection was in order by one whose name had long borne high repute throughout the realm of Rupert's Land.

*Fort Garry, then known as Fort Gibraltar, was standing at the union of the Hudson's Bay Co. and the North West Co. (1821). Lower Fort Garry, known as the "Stone Fort," was begun in 1831. The upper fort was exposed to spring floods and was inconvenient for navigation, being above the rapids on the Red River. In the words of the minutes of a meeting at York Factory, in 1830, it was not "sufficiently centrical." The lower fort was purposely built below St. Andrew's Rapids, and was first intended to be the headquarters, but this plan was later abandoned.

In the light of breaking day, Alexis L'Esperance, an agile, dexterous man of good Quebec lineage and huge stature, moved among the boats, directing and instructing—a master of lake and river navigation, who, following an honoured place in the great canoe of Governor George Simpson, had succeeded, in 1834, to the premier command on the waters of the north.*

The ponderous craft were soon put ready. Fore and aft and amidships the cargoes lay stowed—approximately four tons to every boat. Mail packets had been distributed lest accidents should happen. A deluge of handshakes and bonhomies, a hubbub of wild imprecations, perhaps a hurried invocation or two and sign of the cross to ensure a safe return, and the crews sprang lightly to their places. Slowly, the laden boats were eased out to the stream. In each, four pairs of rowers, or middlemen, awaited expectantly, oars at the ready. Captain-steersmen completed the crews, and, erect over all, towered the stalwart L'Esperance.

"*Avant mes enfants!*" The oars dipped together; the boats lunged forward.

The way held down the wide reaches of the Red, past the humble homesteads on either side, the short rapids of St. Andrew's, the Lower Fort Garry or "Stone Fort"—then in course of construction—the Indian village of St. Peter's and the broad marshes at the river's mouth.

The huge expanse of Lake Winnipeg lay northward for three hundred miles. Masts were erected; large square sails bellied in the breeze. Or, head winds prevailing, the boats worked slowly with the oars, plunging across long traverses from point to point, following the eastern shores. Occasional stops were made and the kettles set to steaming. A frugal, though sustaining meal of pemmican stew; a draw at the ubiquitous pipe, and away again. Mile on mile, the brigade pounded through the white-topped waves, till dusk crept out upon the lonely waters.

Storms swept down to find the crews facing as uncomplainingly a rain-drenched bivouac beneath their waterproof *prelarts* as when, rolled in their single blankets, they turned to relaxation beneath the stars. The flickering fires against the darkening forest, the indistinct sweep of sullen waters, the primal stillness, broken only by some night bird or creature of the wilds—all contributed to an impressive aloofness from the world. But there was jovial camaraderie, and the chill night air brought ready sleep and comfort. Undisturbed, the hours moved round, till, with the first pale light, the resonant call of guide or captain roused the inert figures to another day of toil.

"*'Leve, 'Leve! Il faut partir!*"

Instantly, the camp was all astir. Utensils and blankets found places in the boats. Oars were set in motion the "chunk-chunk" of bulky tholepins sounded in the dawn. Someone would strike up an old French chanson, perhaps *La Belle Rose* or *La Petite Jeanneton*, voicing in weird refrain the very spirit of the wilds. As the sun rode forth, the cheerful breakfast fires blazed on some jutting headland.

So, through wind and wave, blistering sun and driving rain, the boats reached the stockaded fort of Norway House, on an island in Little Playgreen Lake, the northernmost arm of Lake Winnipeg. Here came the fur harvests on their long journey to the Old World markets, and, more often here than at Fort Garry, the Council of the Northern Department assembled.

Supplies from Red River were discharged; articles of trade from London, previously received through York Factory, were loaded; and, having indulged freely in festivities and controversies attendant upon contact with long-separated comrades and rivals of other brigades, the Red River crews bid Norway House farewell and turned southwesterly towards the Saskatchewan.

Where the combined waters from the farthest plains thunder down the Grand Rapids to Lake Winnipeg, the first full test of ability had arrived. Straining in single file upon the stout tow-lines till the uppermost eddies were reached, the men assailed the "Grand Portage" with proud show and rivalry. Reputations were at stake. Competitive merits of crews and individuals hung in the balance. Old trippers called lustily for their loads; green hands, fearful of proving unequal, strove to emulate their peers. Emptied of cargo, the boats were further tracked, hauled across the portage, and re-loaded. More than two hundred miles of upstream navigation lay ahead, on the broad highway of the Saskatchewan.

Short portages were made at the Roche Rouge and Cross Lake Rapids, and the brigade passed up the Demi-charge, where the boats were tracked with half-loads. The wind being favourable, the river widenings of Cross Lake and the lovely Cedar or Bourbon Lake were traversed under sail. Thence the river wandered through low country, past the straggling Indian village and the surrounding marshes of Chimahawin, above which the crews worked untiringly to gain the Kettle Island, a time-honoured resting place amid a sea of swamp. Many miles of unobstructed water stretched westward to the mission and traders' rendezvous of Le Pas, and on past the Big Bend to Pine Island Lake and Cumberland House—the pioneer inland post of the Company established in 1774 by Samuel Hearne.

*As Lower Fort Garry came into use, the La Loche Brigade started from there, and up to the year 1848 consisted of only seven boats. From that year to 1866, it consisted of fifteen boats, divided into two brigades, the second starting a week after the first. From 1866, it comprised seventeen boats, in three brigades. Baptiste Bruce became the guide of the second brigade. He boasted Highland, French and Indian blood; was chosen, in 1843, to accompany the first Arctic exploration to Point Barrow, and later reached well-merited appointment under L'Esperance.

Alexis L'Esperance, who commanded the Portage la Loche brigade.



Sending forward a boat with mail and merchandise, and to procure supplies for his men, L'Esperance turned northward from the Saskatchewan, through Namew and Amisk Lakes and the Sturgeon Weir River, the men, often waist deep in water, tugging, heaving and pulling past shallows and currents towards the watershed between the Saskatchewan and the Churchill. The Pelican Narrows between Mirond and Pelican Lakes were coursed, and the slow-moving transport crept on and on till, worn and weary from constant effort, the unflinching voyageurs reached the Portage du Fort de Traite—the *Athiquisipichigan Ouinigan* or "Portage of the Stretched Frog-skin"—where Joseph Frobisher and Alexander Henry, of Montreal, had built, in 1776, their farthest fur post in seeking the beaver of the Churchill.

Studded with lakes, turbulent with countless falls and rapids, bordered by continuous forests, embracing on its flanks the habitat of moose and caribou, and teeming with the fur-bearers of the northern zone, the Churchill stood pre-eminent among the arteries of the fur trade. Up the long grind of tossing water, halting at widely separated sub-posts of the Company, surmounting many portages, tracking mile after mile, blistered, bruised, lacerated, but scoffing at all mishaps, the crews pressed on.

At last, the lonely Lac Ile à la Crosse was reached, and the hospitable Fort Ile à la Crosse, five hundred miles above Cumberland, held out its welcome. Here a rest of several days preceded the final hundred mile stage to the height of land, and in due course, with stout hearts and echoing refrains, the crews made a lusty pull across the Methye Lake and gained the famous portage of La Loche.

The top of the voyageur's world had been reached. On one side the waters flowed eastward down the Churchill; on the other, by the Clearwater and Athabaska Rivers and Great Slave Lake, they sought the Mackenzie, to flow northward to the dismal Beaufort Sea. Across the separating twelve miles, the portage trail rose to a height of eight hundred feet.

Two months had passed since L'Esperance had set out from Fort Garry, a thousand miles away on the margin of the prairies. For as long, the boats of the Mackenzie brigade, with winter catches from the solitudes of the Athabaska and the Yukon, had toiled up stream to exchange their precious loads for much needed supplies and articles of trade brought inland.

And now, for three burdensome weeks under the summer sun, the crews laboured on the exacting footpath of La Loche.

Going half way with trade articles and provisions, the Red River carriers returned with furs; the northern crews reversed the order. To stand with braced shoulders on the high prow of the beached York boat, to receive the regularly constituted load of two "pieces" —each approximately one hundred pounds—to hop lightly to the ground and trot away, was not a feat for weaklings. Rivalry became rampant. Often, the impossible was attempted. From dawn to dark, through sweltering, fly-infested days, the unconquerable portagers bent to their tasks, while the leather sank into swollen foreheads and stiffened throbbing shoulders.

With the stowing of the last bulky packs for further transport, farewells sounded across the Methye Lake. August had come; broods of ducks and geese were on the wing; mossberries were reddening in the cooling nights. The Portage la Loche had been enlivened for another season, but, as the last shouts echoed down the forest aisles, the silence of the wilderness returned.

The backbone of the long journey had been broken; two thirds of the distance yet remained. Now running free, the reloaded flotilla swept eastward by swift currents till the Churchill and Saskatchewan were left

"The men, often waist deep in water, tugging, heaving and pulling past shallows and currents . . ." In the foreground are the long sweeps. ***C. H. M. Gordon.***



behind. Again the dipping prows clove the waters of Lake Winnipeg to Norway House, where all semblance of discipline was temporarily forgotten in mixtures of rivalry, friendship and carousal. But another four hundred miles of lake and river awaited ere the Company's barque would be sighted riding at anchor in "York Roads," trimming her topgallants for the voyage to England.

Again on the way, the boats headed northward by Little Playgreen Lake and the easterly channel of the Nelson River. A few miles down stream, where the Sea River Falls was portaged, the course turned easterly by the narrow Blackwater Creek to Bullrush Lake, near the divide between the headwaters of the Nelson and Hayes Rivers. A diminutive beaver stream was traversed, where rude dams were maintained by all who passed, to hold the waters in reserve as they seeped to the western branch of the Echiomameesh—"Water-flowing-both-ways." A short lift over the ridge of the Painted Stone brought the boats to the marshy channel of the eastern branch, thence to Franklin's River. Increasing water led the way to the White Fall or Robinson Portage, a spot at which the inherent spirit of competition again found scope—a favoured arena for combats and feats of skill and strength whenever rival brigades should meet. Here the mile-long trail was only second in importance to the Portage la Loche, and the novice who could undergo the run of "The Robinson" without stop, until he had conveyed 1200 pounds from end to end, rose to the status of a first class tripping man.

An entire day was needed to pass the heavy craft around the White Fall, the combined man-power being required in moving each boat in turn. The Upper and Lower Hell Portages followed, and Hell's Gate, a deep chasm too narrow for oars. Farther on, Oxford Lake was reached; and, aided by sails, the brigade cruised forward to Oxford House on its eminence above the eastern shore. Here a brief halt was made to participate in the proverbial hospitality of this half-way hostel of the wilderness.

Following a night of feasting, merrymaking and dancing, the crews forged on, assisted by increasing currents below the pleasant lake. In all the impromptu finery of gaudy shirts and scarlet sashes, donned on the occasion of the previous night, each crew took the Trout Falls at top speed under the masterly guidance of its steersman, plunging down the sixteen-foot cascade amid clouds of spray and loud acclaims.

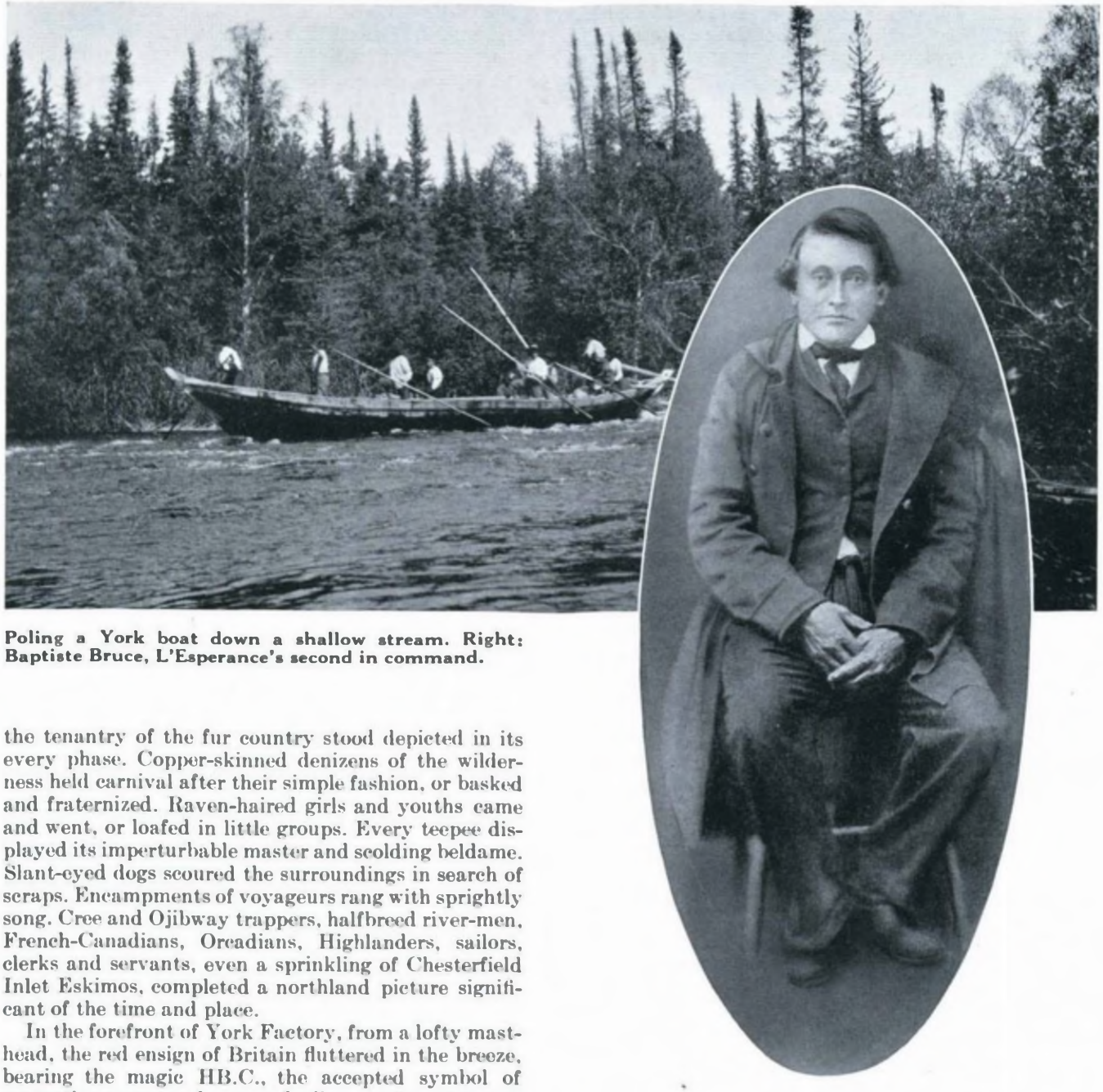
After sailing across the island-studded Knee Lake to the main intake of the Hayes River, the boats held down the final reaches to the coast. Swift currents bore them past innumerable rapids, between rocky shores and wooded isles rich with autumn tints. Morgan's Portage and Rock Portage were passed, and Rock House, an old depot for the first incoming Red River settlers in 1811. Below its junction with the Shamattawa, the Hayes spreads from three hundred yards in width to more than half a mile, and, almost shoulder to shoulder, mingles its contribution with the Nelson as the two streams join the sea.

Five miles in the rear of Beacon Point, on a spit of lowland between the two estuaries, stands York Factory, approximately on the site of the first fort to carry the banner of the "Adventurers of England" to the western wilds.

The commercial capital of Rupert's Land was at its zenith as L'Esperance arrived. Far out, at her anchorage in "Five Fathom Hole," the *Prince Rupert* rode the sparkling blue in graceful outline, dwarfing the smaller craft that plied shoreward and back with the exchanging commerce of the fur trade. Above the tidal line, where York boats, dories, birch canoes and smoke-wreathed camps lay strung in careless non-permanency,

When the wind was fair, a square sail was hoisted, sweeps were shipped, and the "captain" steered with the rudder instead of with the long sweep, shown protruding from the stern. ***R. A. Talbot.***





Poling a York boat down a shallow stream. Right: Baptiste Bruce, L'Esperance's second in command.

the tenantry of the fur country stood depicted in its every phase. Copper-skinned denizens of the wilderness held carnival after their simple fashion, or basked and fraternized. Raven-haired girls and youths came and went, or loafed in little groups. Every teepee displayed its imperturbable master and scolding beldame. Slant-eyed dogs scoured the surroundings in search of scraps. Encampments of voyageurs rang with sprightly song. Cree and Ojibway trappers, halfbreed river-men, French-Canadians, Orcadians, Highlanders, sailors, clerks and servants, even a sprinkling of Chesterfield Inlet Eskimos, completed a northland picture significant of the time and place.

In the forefront of York Factory, from a lofty masthead, the red ensign of Britain fluttered in the breeze, bearing the magic HB.C., the accepted symbol of protective power and square dealing. At the climax of the year's affairs, the northern gateway pulsed with absorbing business and enjoyment, while officers from land and sea pushed the transfer of import and export to completion.

At last an auspicious hour arrived. Thunder of cannon rolled across the forests as the laden barque, now decked in white, swung to her helm and stood to sea. Fort guns echoed the farewell. Canoes began to drift away to distant trapping fields, and merchandise, loaded for Fort Garry and the distributing warehouses of Norway House, awaited the muster of the river crews.

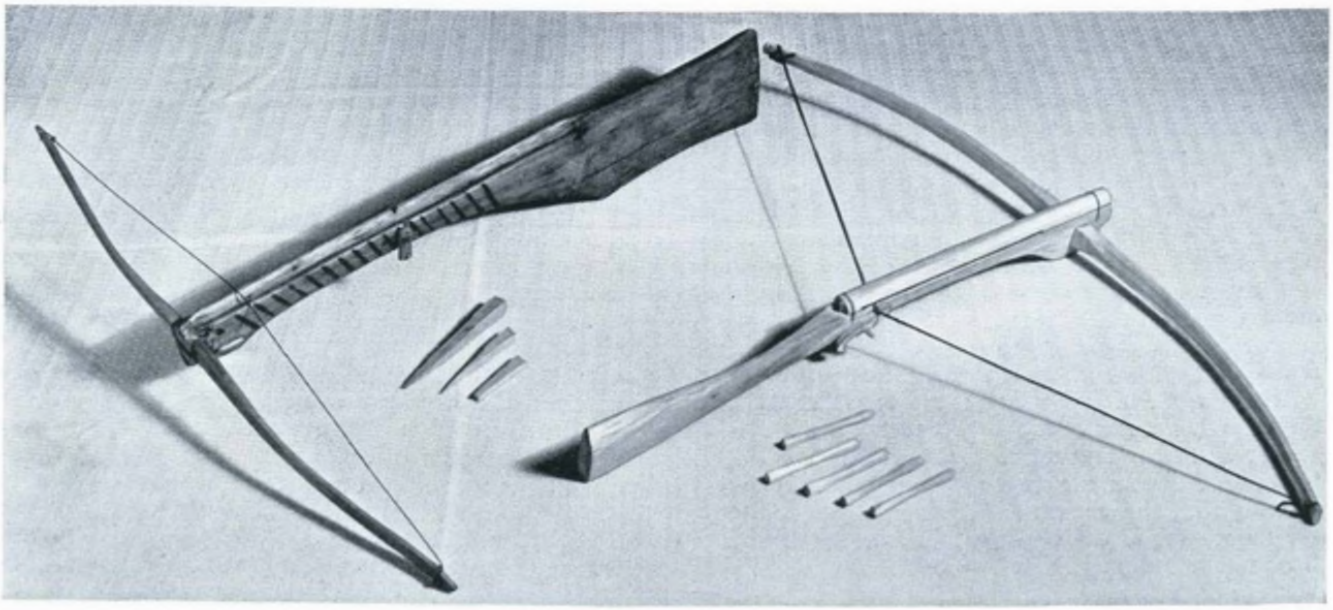
In high spirits, the opposing currents were assailed. September was on the wane. Once more, Lake Winnipeg was reached; and, aided by every following wind, the weather-beaten argonauts steered leisurely for home.

A crisp October morning. Seven scarred York boats swept up the muddy current to the "Forks." Voyageur ears thrilled to greetings from the shores, and, as the crews relaxed their rowing, hearty cheers broke forth below Fort Garry. Three thousand miles by inland water route had been achieved!

Upon the efforts of the stalwart L'Esperance and his command hung in large measure the fortunes of scattered tribes and fragments of tribes, the buffalo hunters of the plains, officers and servants of the fur trade, Red River settlers and wanderers throughout the whole Northwest.

The glory of La Loche is gone. The old trail lies grass-grown, all but forgotten. But perhaps ghosts linger along its twelve-mile course. Perhaps spirits of hardy travellers, treading softly beneath their phantom loads, yearn to live again the high adventures and triumphs of the past.

The material for this article was gleaned many years ago from L'Esperance's son, Bruce's daughter, Roderick MacFarlane, Jim McDougall, William Clark, Isaac Cowie, Archibald McDonald, and Sheriff Colin Inkster. Hargrave's "Red River" (1871) is also a valuable source of information.



A grooved Mohegan cross-bow (left) and a Montagnais cross-bow, with a barrel, from Pointe Bleue. Mr. Burgesse obtained both for the Company's museum.

MONTAGNAIS CROSS-BOWS

by J. A. Burgesse

THE woodlands camp of a primitive Montagnais is scarcely the place in which one would expect to find a cross-bow. The mere sound of the word conjures up visions of Senlac Field, of the Crusades, or of Crécy. Somehow or other, the redskin does not strike us as being quite up to the romantic level of a William Tell, or of a mediaeval Genoese arbalester. Yet, strange as it may seem, some of the few localities in which this ancient weapon may still be encountered are not the snowy vales of the Swiss Alps, nor yet along the sunny slopes of Old Liguria, but in the deep spruce forests of North America and by the shores of Lake St. John, Quebec, where the child of the Montagnais red man uses it at play.

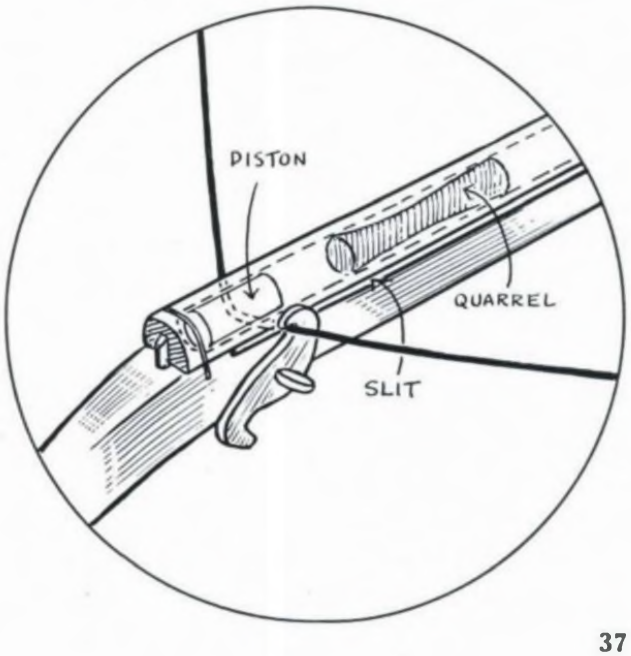
The Montagnais cross-bow differs greatly from the very complicated and highly efficient arm of the Middle Ages, for the ratchet mechanism by which the European bow was "wound up" is lacking. However, it is a true cross-bow inasmuch as it is provided with a stock and butt which permit of its being sighted and discharged from the shoulder. The missiles, which are ejected from a groove or barrel, are short stubby quarrels, devoid of point or fletching, and quite unlike the war-bolts of the archers of the *corps d'élite*.

Two types of cross-bow are to be found in the Lake St. John region, but it is obvious that one of these is of very recent development, and its use has been noted in but one family. The supposedly more ancient arm is of simple construction, and consists of a straight stock, about three feet long, which terminates in a butt similar in shape to that of a rifle or shot gun. A longitudinal groove in the upper surface of the stock carries the quarrel when the cross-bow is in use. The trigger, which is merely a short piece of wood with a notch in its end, is pivoted to the stock at its juncture with the butt. A transverse hole pierces the butt at the front end and serves to take the bow-stave, which is held in place with a thin wedge, thus completing the weapon. The quarrels, which are not more than six inches in length, are narrower in the middle than at the ends and have a short tongue at one extremity by which they are engaged by the bow-string when the cross-bow is in action.

To shoot the bow, the string is brought back over the stock and hooked under the trigger notch. This "cocks" the arm. Next a quarrel is placed in the groove so that the small tongue lies over the bow-string, and the cross-bow is loaded. A touch on the trigger releases the string, which then speeds the missile towards its objective.



A quarrel for a grooved cross-bow, and a sketch showing the mechanism of the Montagnais bow above.



The second type of Montagnais cross-bow is, basically, of the same design as the one just described, but has an added improvement in the form of a "barrel." In this model the groove in which the quarrel rides is entirely enclosed by building up the stock with a length of wood, grooved along its underside, so that, instead of a channel, a completely enclosed chamber, or barrel, is provided. Slits are left open at the points where the two sides of the "barrel" meet, and in these the bow-string travels. No tongues are cut in the ends of the quarrels used in this type of cross-bow. Instead, a piston, or plunger, slides to and fro in the barrel, actuated by the bow-string, which passes through a hole in its middle. The action is similar to that of a child's pop-gun, except for the fact that the bow-string, and not compressed air, provides the motive force, and the missile receives its impetus by direct contact with the piston. (See sketch.)

In both types the bow itself is exactly similar in form to the ordinary stave-bow of the Montagnais. It varies in length from thirty-six to forty-eight inches and is about one inch wide at the "grip," tapering to about three quarters of an inch at the tips. The cross-section is either V or U shaped. The wood which is preferred for the fabrication of a bow is white cedar on account of its lightness and straight grain, but sometimes birch and other woods are used. The string is made from two strands of fine caribou babiche, twisted together and well stretched. It is attached to the bow by a peculiar knot which resembles both a clove hitch and a bowline-on-a-bight.

One of the strangest things about the Montagnais cross-bow is the fact that it is a mere toy with which the children amuse themselves, and is never used as a serious hunting arm. This is in marked contrast to the stave-bow, which, though fast becoming obsolescent, is not disdained by the grown hunter as an adjunct to rifle or shot gun. In times of stress, when ammunition is scarce and has to be conserved, the Montagnais brave often uses his bow against partridges, rabbits, and other small game, but he would never dream of using a cross-bow for the same purpose. Children often enough shoot at small game with the cross-bow, but it is quite apparent from their attitude that its use as a weapon is secondary and that its chief purpose is amusement. No traditions have been discovered which would lead one to believe that in former times it had enjoyed a more favourable status. It is nothing more than a tricky little gadget with which to amuse the youngsters.

An Algonkin boy of Maniwaki, P.Q., aims a spruce bow.
Taken by F. G. Speck, 1943.



The cross-bow does not even have a distinctive name in the Montagnais dialect and is known merely as *passigan-atshapi* (word derived from *passigan*, a gun, and *atshapi*, a bow). The word used to convey the idea of discharging a cross-bow is exactly the same as that for firing a gun or rifle, and does not resemble the one which means shooting a stave-bow. This, in itself, would seem to indicate that the cross-bow was introduced only after the Montagnais had become familiar with fire-arms, and, in fact, the whole design of this toy is similar to that of a gun. It is quite possible, of course, that a more ancient, though little used, name has been lost and replaced by one with more familiar associations. This is unlikely, for the Montagnais does not replace old words with new ones. Rather, he uses his older words in describing newly introduced articles.

There is some doubt, therefore, regarding the origin of the Indian cross-bow and the problem is not easy of solution. The most obvious answer is that it was introduced to North America by the first white settlers and is a mere simplification of some French or Spanish model. Though the cross-bow became obsolete as a weapon of war in the early fifteenth century, towards the close of the Hundred Years' War, it is known that it lingered for many years in the hands of local forces, and in country districts. Columbus brought a few with him to Espagnola, on his first voyage of discovery, and the cross-bow was met with in rural France as late as the middle of the seventeenth century. Indeed it would appear that the weapon may have lingered on even longer than this, for, in Asia at least, it was used as a battle weapon almost down to our own times. At the taking of Taku in 1860 the defeated Chinese forces had opposed the Anglo-French troops with cross-bows. It seems not unlikely, therefore, that the early French settlers, and probably the Spaniards further south, brought this arm along with them. The Indian could be expected to copy it and hand it over to his children as a toy, but would not use it himself, since a much better weapon was to hand in the musket and fowling piece.

Nevertheless, it is hard to believe that the casual introduction of a few cross-bows would explain the wide distribution which it is known to have throughout the Indian country of North America. It is found, not only in Quebec, but throughout Eastern Canada and as far west as the Slavey country. In the United States it has been noted throughout the Atlantic seaboard as far south as the Carolinas, and extends at some points into the Mid-Western States. Nor is its existence confined entirely to the Indians, for examples of it have been found at such points as Repulse Bay and Cape Smith on the western and eastern shores of Hudson Bay, and inland at Baker Lake.

Surely such a broad distribution indicates a much more remote date of origin than the late fifteenth, or



A Nanticoke Indian of Delaware holds a bow with "latch-string" release. *F. G. Speck, 1942.*

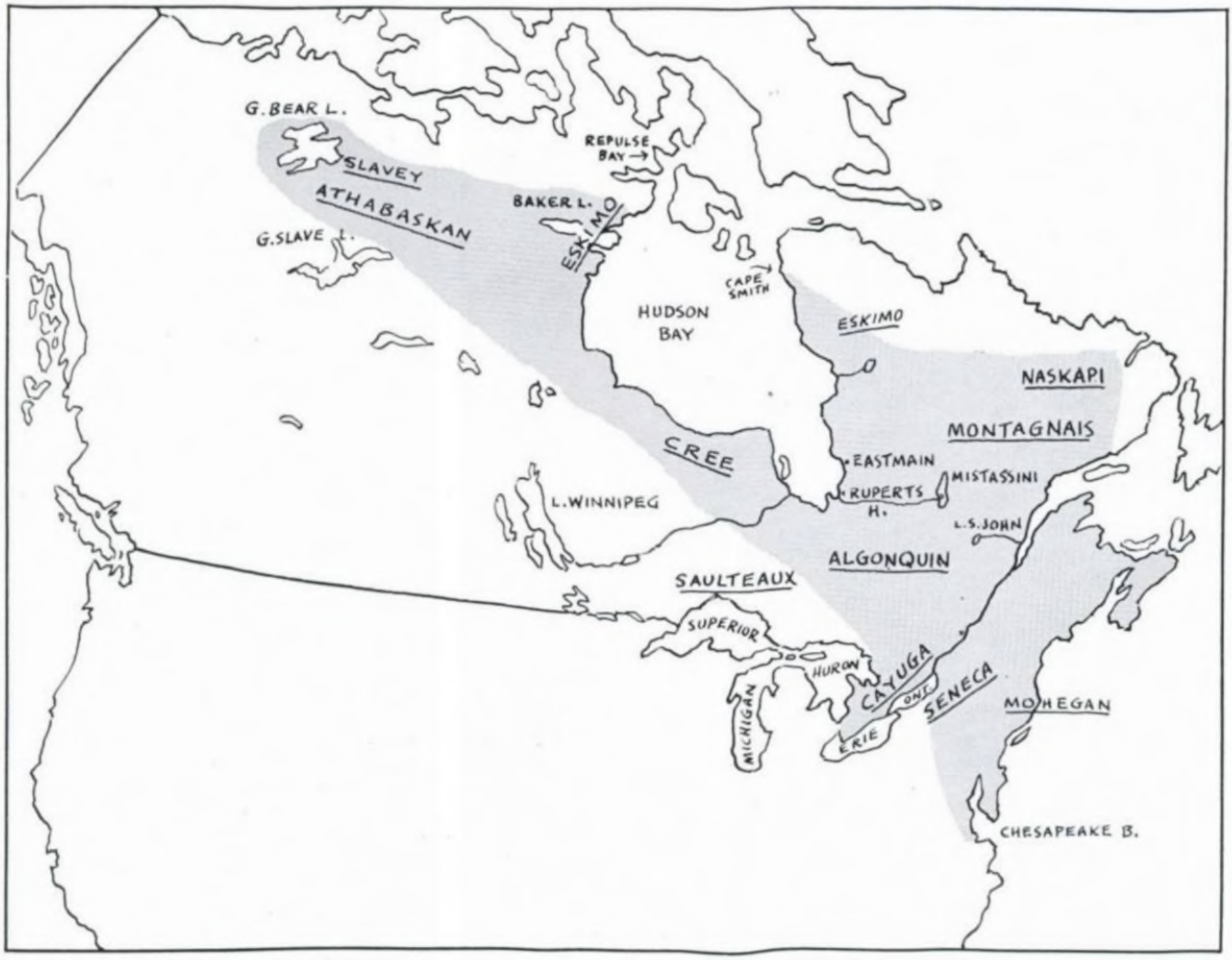
early sixteenth, century. Some modern ethnologists are of the opinion that the cross-bow is pre-Columbian and circum-polar in distribution, pointing to Asia, and not Europe, as the source of its American introduction. There is, indeed, some evidence to support this theory. There is the known lateral distribution in America, which will extend further afield as new locations are discovered, and specimens have been found in Arctic Europe and Asia which have a marked resemblance to American models. The distribution throughout northern Asia is fairly wide and the natives of this region also use ingenious traps which operate on the cross-bow principle.

There is also a possibility that both Asia and Europe were responsible, for there are marked differences between the cross-bows of the East Coast of the United States, south of Maine, and those of Canada. The Canadian cross-bows seem to be practically identical, one with the other, but those from the United States are said to vary greatly in construction, release mechanism and missile.

However, not enough is yet known about the whole question to permit of a definite answer to it. Only further research and enquiry will allow the ethnologist to make a more accurate pronouncement.

The author wishes to thank the following ethnologists for aid in the preparation of the foregoing article: Fr. J. M. Cooper, Catholic University of Washington, D.C.; Dr. F. G. Speck, University of Pennsylvania; and Dr. T. F. McIlwraith, Royal Ontario Museum of Archaeology.

The shaded area (which should include Repulse Bay) shows the approximate distribution of the Indian cross-bow, as determined to date. Northern readers may know of its penetration still farther into the Arctic, and their comments will be welcomed.





By "telephone" she calls him and . . .

INVENTIONS

Story and Pictures

TWO blocks of wood, two chunks of a steel barrel, some twine, a little work, and you have a pair of skates, if you are an Eskimo! I was idly looking out the window one fall day watching one of the white men on the post skating on the thin ice of the lake. There was, I knew, only one pair of skates in the settlement. Suddenly, from the lake edge, falteringly wobbled another figure on skates—an Eskimo. Gradually he seemed to gain control of his feet, until in a short while he skated as though he had been doing so for years. What puzzled me was where had he obtained his skates; and so I walked down to see.

He saw me coming and came over to me; and on his feet were the most primitive pair of skates you could imagine. Tied to each foot was an eight or nine inch length of 2x4, and from the bottom of each projected a piece of steel barrel. No one could call them artistic, but they worked!

That was several years ago, but I have often thought about this trait, found in every Eskimo tribe across the Arctic, which seems to excite more admiration for them than almost any other of their fine qualities.

That this trait should be so pronounced is not to be wondered at; for, after all, if you can't buy what you want, you must either make something else do or go without. The Eskimos have long since learnt and appreciated this fact. Only too often has it been necessary for them to invent substitutes, the possession of which meant life itself. Their weapons, tools, and utensils all eloquently speak of that. Yet even so, as with the skates, it is surprising what a large number of things are invented by them, purely for the love of making things—or maybe just to prove they can.

Perhaps it was this same spirit that I found at a camp north of Eskimo Point. Inside the igloo I noticed a tobacco tin inset into the wall. From the centre of the inside of the tin projected the knotted end of a cord as if it were tied in place. Packed around the can were strips of haired caribou skin. Curiosity prompted me to ask what it was, and I was much amused when the Eskimo said, "Just call loudly and Ootoonik will answer you." Then I laughed as I remembered that Ootoonik's igloo was over one hundred feet away. (I measured the distance later and it was 125 feet.) However, I shouted into the can and called, "Ootoonik," and in a moment I heard a voice, distorted it is true, but nevertheless distinguishable, say (in Eskimo), "What?" Still sceptical, I called out, "Come here." And within a minute Ootoonik came bursting through the doorway enquiring why he was wanted. The expression on his face when I said we didn't really want him for anything, convinced me that this really did work, and that I was not after all the victim of a hoax.

So here I had found a telephone in the Arctic. Buried wire but no batteries nor any bell to worry one. Conversation was of course limited as words were very indistinct, but all the same it was a telephone. The most amazing thing of all was that no one in that camp had ever seen a telephone, though doubtless they had heard of them from their friends who from time to time visit Churchill.

One of the most curious things about this inventiveness is their adaptation of articles to suit their own ideas, regardless of the fact that the original article or one they can purchase would do just as well.

A good example of this is the match box and tobacco tin. Waterproof match boxes are regarded by the Eskimos as useless, and while they use a pouch for tobacco during the summer, it is discarded when winter comes and a tin is used instead. Not just any old tin that they might find; the tall flat tins used for the ten and fifteen-cent purchases of tobacco are considered the real things for match boxes. They are of course too long, and so the Eskimo sets to work with a knife or scissor blade and opens up the reaming around the base of the can. This is done most patiently and carefully so that the shape is retained. When the bottom is removed, the side is cut down with a pair of scissors to the depth required, the bottom is fitted on, tapped in place to ream over the edges, and a match box an inch to one inch and a half high is completed. Tobacco tins follow the same system. A half-pound tobacco tin reduced to two inches in height is greatly favoured, for in it can be stored, besides tobacco and penknife, any odd letters, and in fact anything which needs special care.

Tobacco means much to an Eskimo, and I have heard some queer tales about what they do when the tobacco gives out, or when they lose their pipe.

Left: A cigarette tin cut down to hold primus stove needles. Right: A cut-down tobacco tin. The sled runner is six inches high.



UNLIMITED

by D. B. Marsh

One night as I sat watching an Eskimo mend a hole in his pants (we were both in our sleeping bags inside an igloo), he pricked his finger. Ruefully he shewed me the hole, and also a smooth-edged circular hole in his thimble. (All Eskimos carry a thimble, sinew, and needles so that they can make any vital repairs to their clothes overnight.) I asked him what it was there for, and he explained that in the fall he had been on the trail and had lost his pipe. He was miles from home and badly wanted a smoke. That night in his igloo he bored the hole in his thimble, starting at one of the little indentations and working his knife blade patiently round and round until it pierced the thimble, and he then increased the hole till it was almost half an inch in diameter. The perfect shape of the hole testified to his patience, and emphasized his remark that it was very, very late before he had finished. Since he had no wood to make a stem, he removed the bullet from a cartridge, also the powder and cap, and then fitted the cartridge case into the thimble; and so his pipe was complete. As he laughingly remarked, the stem was a little large for the bowl, but the affectionate look he bestowed on that thimble spoke volumes.

Tobacco shortages often occur and result in curious things taking its place. Tea, the fluff (plus odd grains of tobacco) from the pockets, even the pockets themselves, and once the dottle from two old pipes with the charred wood made a pipeful of "tobacco" for a third. As one naively remarked, "It made us cough a bit."

Naturally chewing gum enters into many schemes of repairs, but not one use could ever be more ingenious than the mending of a broken mica covering on the sound box of a gramophone with a small wad of chewing gum. Strange to say, to all intents and purposes it worked perfectly. Of course the filing of needles when they are very worn and blunt doesn't make for very perfect reproduction of a record; but still sound issues forth, and that means a lot.

The mending of records is quite simple. If it is merely cracked, a small hole is drilled on each side of the crack around the edge of the record; a piece of sinew threaded and tied through these makes the record *almost* as good as new. If a chunk has been completely broken out of the record, what is simpler than to bore holes at both ends of the break and tightly bind the broken portion in place? The *chk-chk, chk-chk* sound that the record makes as it plays gives that much more time to the music.

A broken gramophone spring can only be mended just so many times before it is useless, but even then you can play the records by merely putting the forefinger on the record and pushing the latter round and round. I have seen Eskimos play for three or four hours, endlessly pushing round record after record, and I could not but admire their tenacity of purpose or love of music, whichever was the greater factor.



. . . he listens in an igloo forty yards away.

A broken sled is a useless thing, and at times such an article cannot be mended. A man however can always find a substitute, such as a bearskin or even a caribou skin. To this he attaches his dogs, seats himself thereon, and off he bumps. An uncomfortable ride, but he gets there all the same. One man had a better idea. Having no sled, he took a walrus skin, wet it, shaped it like a sled, and then let it freeze. Thus he was able to drive in to the trading post, where he could purchase materials for a new one.

To be without heat on the trail can be serious in the Arctic, and the use of primus lamps is almost universal. These lamps have a special pricker, which is a bit of wire set in a handle. This summer I was besieged by Eskimos asking me for a tiny square of mosquito screening, and it appears that this wire had been discovered to be the exact thickness. This was a recent discovery, and many an Eskimo has sat shivering in an igloo while he improvised some kind of "pricker" to clean the nipple on his lamp. A splinter of wood most carefully peeled down till it was the right size demanded patience, but the cream of all was surely the man who cut a sliver of metal from a tin, and then filed and filed at it until it was small enough to do the job.

It might be said that the Eskimos were the first to use oil burning stoves in Canada, for their blubber lamps are famous. However, I saw a home-made oil burner stove the other day which might have come from a store. The stove itself was a steel drum, and the bottom was covered with bones and bone ashes. I asked why the bones were there, and the Eskimo explained that he could not get the blubber and oil to burn by itself. If he used wood the ash soon burnt to nothing, but by using bones he had but to pour the oil over them (either seal oil, walrus oil or whale oil), start a fire going with a small bit of wood, and in a moment the whole barrel was full of flame, and threw a grand heat too.

Telephones, oil burners, skates! What will be next?

This hunter has shot a bear and is riding home on the skin. *J. G. Cormack*



FOUNDING FORT NELSON

by W. Cornwallis King as told to Mary Weekes

EDITOR'S NOTE—*Fort Nelson was originally established by men of the North West Company in the early 1800's, and named after the hero of Trafalgar. In the winter of 1812-13, it was attacked and the occupants murdered by the Indians. Several writers have stated that the celebrated Alexander Henry the younger was among the killed. Actually, he was drowned in 1814 at the mouth of the Columbia River. After the massacre, the fort lay deserted until re-established by W. Cornwallis King in 1865. Today it is one of the main depots along the Alaska Highway.*

IN the year 1864-65, I was at Fort Rae when word came from Fort Garry that free traders were on their way to the Mackenzie River district. Upon investigation, we discovered that these free traders were entering the district by way of the Peace River, coming from Fort St. John to Fort Liard on the Liard River. I was the only available clerk, so Mr. Hardisty ordered me to go at once to the Nelson River and establish a post. It would be my business to keep these traders from getting furs. Hardisty took me to Fort Simpson himself. Here he gave me reliable men—experienced fur men, boatmen, hunters—and good boats. I got to Nelson River about the end of September with my crew and outfit.

Among the men travelling with me were Baptiste Fortier and Francois Boileau. No ordinary boatmen, they were perhaps the finest in the service of the Company. And that is saying much, for the Hudson's Bay Company had in its employ boatmen without peers. Also, I had two young metis; Michael (I forget his last name) and Baptiste Comptois; a fellow named Mackay, whose nickname was "la toupe"; Baptiste Fortier's son-in-law, a metis, whom we called "simple Jack"; and a Sikanni Indian. In addition to these men, I had to engage one or two others to complete my party to build Fort Nelson.

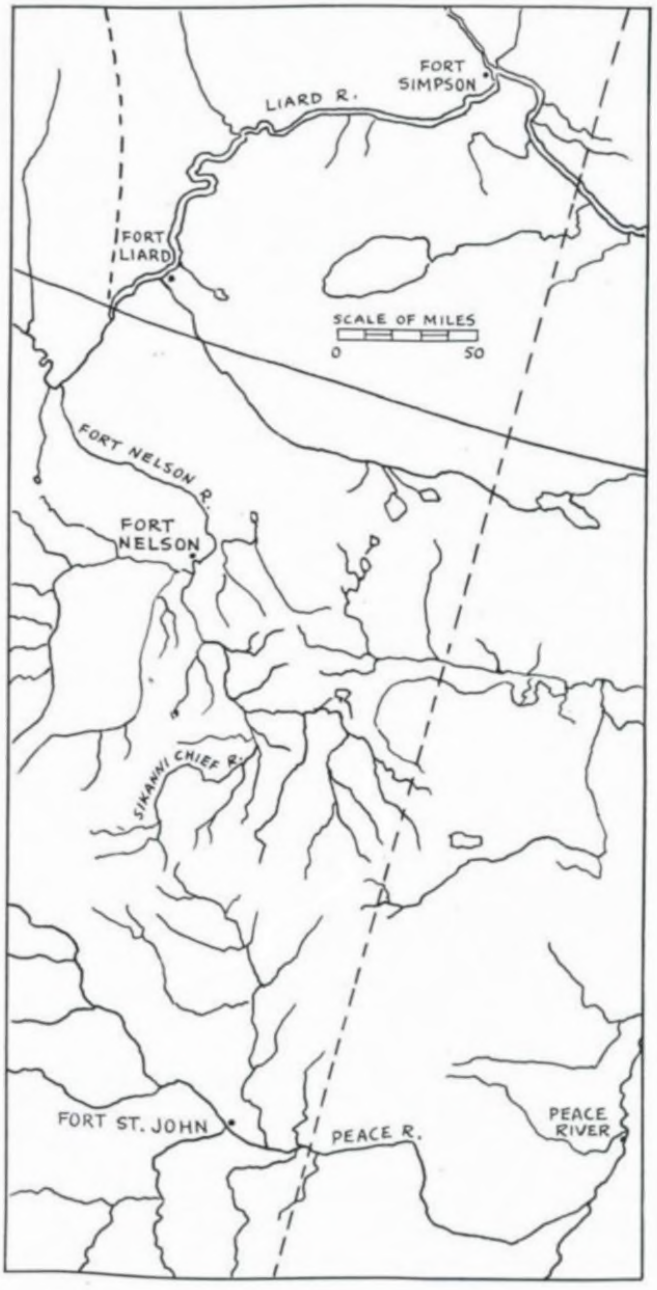
The choice of the site for the fort was left entirely to my discretion. I decided to place it at a point where I could meet, and watch, the free traders who came into my territory. I travelled a hundred miles up Fort Nelson River to the point where, the Indians informed me, the traders coming from Peace River would strike it. The place looked suitable for a fort, so we set to work to build.

Like all our trading posts, our little establishment was modest. First we built a one-storey trading store, thirty by twenty feet, and a little house for myself and my cook, Fortier, his fifteen-year-old stepson, and his little girl. Fortier's wife had died on the trip and we had buried her in a river bank. Then we built a house for Francois Boileau, who had his wife and several children with him. The two single men had quarters with them. All houses were built of rough hewn logs.

To maintain prestige, an officer of the Company always had his own house and his own servants. Like other officers, I was thrown in with perhaps the hardest and roughest men in the territory of Canada, and always we respected each other.

The loyalty and obedience of the men to duty and to the commands of the Company were a tradition. I can think back over a span of more than seventy-five years to my days amongst them. I can forget much of their roughness and remember most of them kindlily for their loyalty to me and to the Company. The prestige which we demanded may have had something to do with it.

Early in November, when the Indians heard that I had come to establish a post, they came in from their hunting grounds, bringing their furs and great quantities of provisions. They had the furs of their previous





P. H. Godsell of the Hudson's Bay Company blazed the trail between Fort St. John and Fort Nelson in 1925. Here is his pack train at the Fort Nelson store.

winter hunt, and also those of their spring hunt. They had all the meats of the region—moose, mountain goat, and sheep. We had sent word out by runners of our intention to establish a post, and the tribes had been collecting their furs in anticipation of our arrival. I had a great trade.

I had a list of the debts owed by the Indians at Fort Liard. After collecting them and paying the hunters for their provisions and furs, I gave them advances for the winter. One or two of the Indians, whom I engaged as fort hunters, stayed in the vicinity of the fort all winter. The rest of them, about twenty-five able and experienced hunters and their families, and young men, went off to their hunting grounds for the winter.

I didn't expect to hear anything from these hunters until Christmas or after, when it was customary for them to come back to the fort with their early catch of furs. Christmas arrived and not a word from them. I grew anxious. No hunters, no furs. Then one day a woman arrived in a half-starved condition to report that the whole band was down with sickness. Only she had escaped the disease. She said all were starving.

This was the year of the great scarlet fever epidemic, and it was the first I had heard of it. The disease had been carried into the Mackenzie River and to other parts of the country from Fort Garry in goods. Indeed the epidemic swept through the whole Mackenzie River district. I lost half my Indians—the hunters with whom I had expected to trade.

I sent a party of men with provisions and instructions to bring the party to the fort. We had to do what we could to save their lives. They found more than half the party dead. We had only three sleds. On these they brought as many as they could of the sickest. All who could walk at all followed on foot. As soon as the sleds reached the fort, we unloaded the sick and sent the dog teams back to the Indian camp, which was fifty miles from the fort. The weather was terribly cold. I had to send men back to bury those that had died on the trail. Out of the whole band, not more than fifteen of my good hunters were saved.

Presently, when the packet arrived from Fort Simpson via Fort Liard, I learned that the epidemic was bad—that the Indians were dying like rats.

Although Fort Nelson was built for the purpose of intercepting the free traders, it was never actually used for this purpose. When they heard that the epidemic had wiped out the hunters, they stayed away. The few Indians that were left were too feeble to hunt. I had to feed them and give them additional advances and take a chance on getting paid.

With things in this state, a band of Indians came from Devil's Lake on the south side of the mountains to hunt in the Beaver Indian country. They got quantities of furs, and my trade with these western Indians more than counterbalanced my loss. I was able to make excellent returns. The other districts hadn't such luck. I turned in a fine lot of business. The epidemic had successfully opposed the free traders.

Suddenly, Fort Nelson became an important post. Orders came from Fort Garry to place the most experienced clerk in the district in charge of it.

In the spring of 1865, I got word from Mr. Hardisty that Julian S. Camsell [father of Dr. Charles Camsell], a senior clerk, would be sent to relieve me. By first open water in the spring, Camsell arrived. I handed the fort over to him and we left for Fort Simpson. We travelled in a couple of makeshift canoes as far as Fort Liard, where I got proper canoes to take me to Fort Simpson.

Fort Nelson still stands. The original building of course has been enlarged. It became in after years a great trading post. It remained undisturbed by free traders until the Klondike gold rush, when traders, miners and prospectors came by way of Fort St. John across to Fort Nelson, then up the Liard to the Yukon.

On the ALASKA HIGHWAY

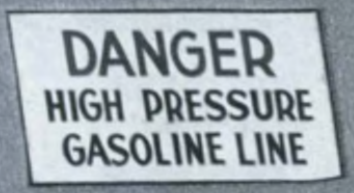
Snaps taken during a motor trip last summer from Edmonton to Whitehorse

by J. Mil













Top left: Bridge across the Peace River.

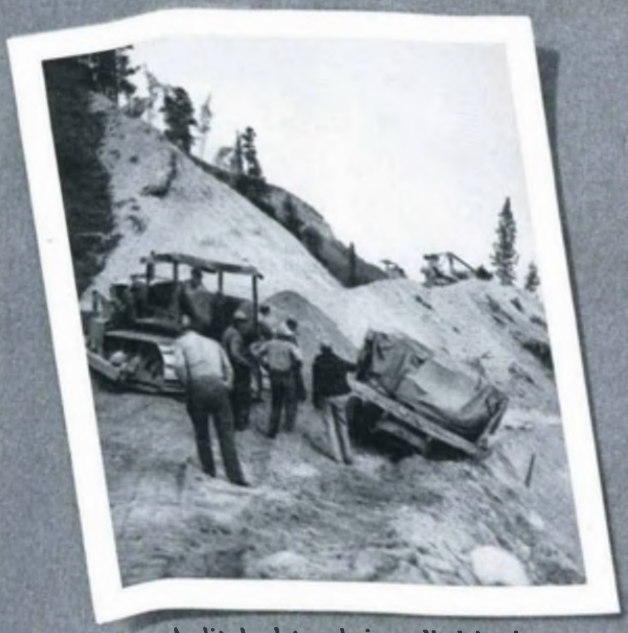
Top right: The road comes down into the valley of the Sikanni Chief River, between Fort St. John and Fort Nelson.

Right: A rock slide across the highway near the bridge over the Sikanni Chief.

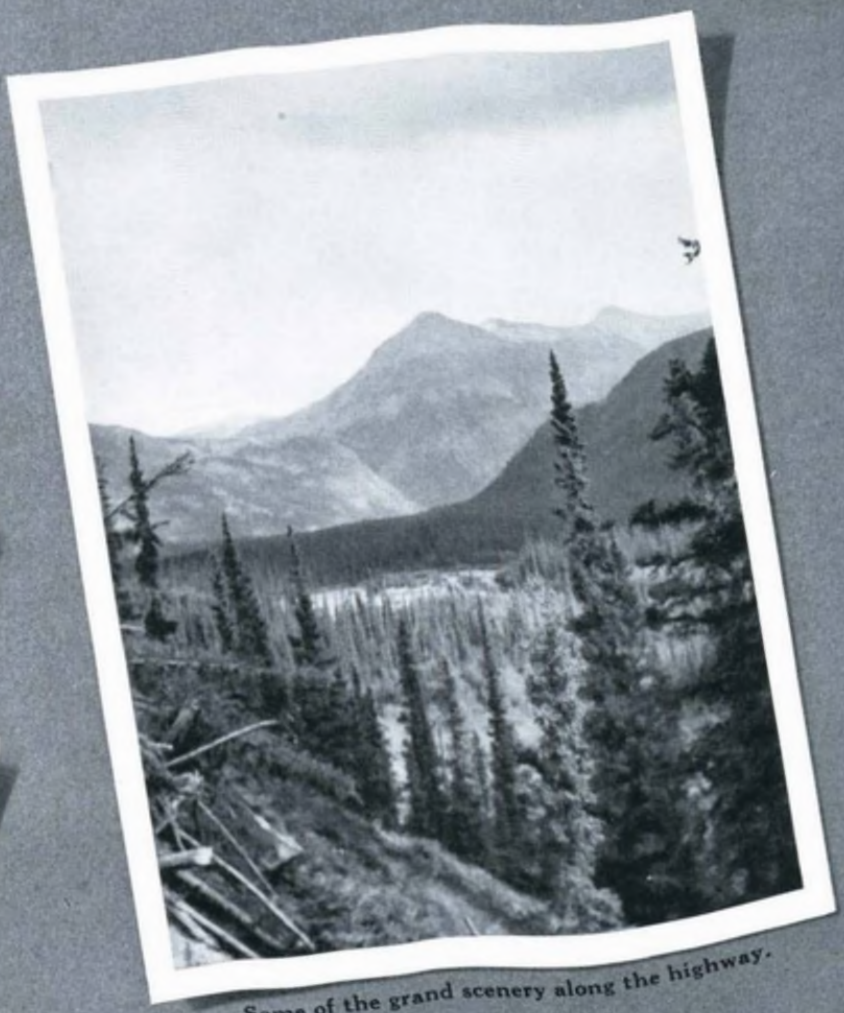
Bottom right: Muncho Lake, half way between Fort Nelson and Lower Post.







A ditched truck is pulled back on the road by a tractor.



Some of the grand scenery along the highway.



A bear saunters along a side road close to the highway.



Cars and trucks make good time on the well-surfaced road.

This hill is steeper than it looks.



The highway crosses Teslin Lake in the Yukon.



WINTER PACKET

Contributors

Of the contributors to this issue who are not so well known to *Beaver* readers, J. F. DALMAN is staff photographer for Bulman Brothers Limited, the lithographers of our 1943 and 1944 calendars. . . . MISS CORDAY MACKAY is librarian of the Lord Byng High School, Vancouver, B.C. . . . J. MILNE is manager of the B.C. District in the Fur Trade Department. . . . MRS. G. W. PETERS of Newcastle, N.B., was boys' supervisor of the Anglican Residential School, Aklavik, from 1937 to 1941. . . . J. P. TURNER does historical research for the R.C.M.P. . . . WING-COMMANDER P. W. WEBB does clothing research for the R.C.A.F.

Portage la Loche

John Peter Turner's fine story of the Portage la Loche brigade calls to mind some caustic criticism levelled at the men who comprised it by Chief Factor John Lee Lewes, of the Mackenzie district. Writing from Fort Simpson to his friend, Chief Trader James Hargrave, in 1840, about some "table furniture" he had requisitioned from York Factory, he says:

"I beg that the greatest care and attention be paid to their packing, for they will be in hands none of the most carefull or tender, the portage La Loche Boys are a sett of rough & terrible fellows caring little for the contents of packages. All their aim is to get through the voyage as quick as possible their cry is *the D—l take the hindermost* helter, skelter, bing, bang, the pieces here & there on the portage, pieces containing the most brittle ware are as tenderly dashed on the rocks as two or three pieces of bar iron fasted together."

Fort Ross

By the time this issue appears, most *Beaver* readers will have heard of the dramatic relief expedition to Fort Ross post, in latitude 72°, made by the U.S.A.A.F. For those who have not, we offer the following brief summary:

When the *Nascopie* was unable to get into Fort Ross for the second year (see page 15), Post Manager Heslop, his wife, and the clerk, D. W. Munroe, as well as the Eskimos dependent upon the post, found themselves with only a few weeks' supply of food.

Relief could only be given by air, and as a large transport plane was required, the Canadian Government, in conjunction with the R.C.A.F., asked for the assistance of the U.S. Army Air Forces, which was promptly and generously given.

Three flights were made from a northern base to Fort Ross; supplies were dropped by parachute; Captain Stanwell-Fletcher made his first parachute jump—and incidentally the first ever made in the Canadian Arctic—on to the ice; and on the third flight Captain Corwin landed the huge aircraft on a lake about ten miles from the post.

In bare outline it sounds simple, but actually it was far from that. Fort Ross is nearly four hundred miles above the Arctic Circle, just opposite the northernmost tip of the continent, and the expedition will undoubtedly go down as an outstanding event in the long story of arctic adventure. Certainly the men who brought it to such a successful conclusion deserve the highest praise.

It was also a striking example of the spirit of cooperation among the United Nations, in that men of the U.S.A.A.F. should willingly risk their lives to rescue three Canadian civilians, and to provide supplies urgently needed by Canadian Eskimos.

A debt of gratitude is especially owing to Colonel J. P. Fraim, Commanding Officer, U.S. Army Forces, Central Canada, who personally organized and directed the expedition throughout.

The rescue occurred too late to include a full-dress article in this issue, but one will appear in the next number, illustrated by photos taken on the trip.

On Active Service

Just before the last issue of *The Beaver* appeared, three fur trade men lost their lives. On August 22, Eric Dibnah, who took the pictures at Camp Canol shown in that issue, and who had meanwhile joined the R.C.A.F., suddenly died of pneumonia. Four or five days later, W. B. Gourlay, post manager at Temagami, was drowned in Lake Temagami. Three days after that, R. H. ("Jock") Kilgour, post manager at Lake Harbour, Baffin Island, was drowned with an Eskimo boy when his motor boat capsized in a tide rip, Mrs. Kilgour and another Eskimo barely escaping alive.

Then, in September, when the Canadian destroyer *St. Croix* was lost in a convoy battle, two former fur trade men were missing after the action—Lieut.-Commander A. H. Dobson, D.S.C., her captain, who before the war was chief officer on the *Nascopie;* and Lieut. George Wright, on leave of absence from the Raw Fur Department, Winnipeg.

More recently, we heard that F.O. D. G. Sturrock, previously of the Western Arctic district, is missing after operations over Burma, and is presumed dead.

Arrowsmith

In this year's Summer Packet we mentioned rather casually that the Monty Demments, of Cape Dorset, had fought an epidemic of meningitis which took twenty lives last winter. The casualness, we admit, was due largely to lack of detailed information. But now the full story has come in, via *Nascopie*. Briefly, here it is:

The outbreak was first reported on January 26 last from a camp twenty miles away from Cape Dorset post. Mr. Demment and his faithful Eskimo post servant, Ottochie, at once drove over there, and found nine cases, of which one died while they were there. Back at camp, he made radio contact with Pangnirtung, where the Canadian Government M.O., Dr. McKee, diagnosed the disease from his descriptions as cerebro-spinal fever, and ordered isolation.

The whole of the native population lying between the post and Amadjuak, totalling 250, was endangered. The Demments had a few tablets of sulfathiazole provided by the Company, but not nearly enough to deal with an epidemic of such proportions. Acting on Dr. McKee's instructions, Monty gave tablets to the newer cases only, but soon the supply was exhausted.

His only hope now, until more medicines arrived, was to keep on enforcing isolation at the various camps between his post and Amadjuak, ten days' sled journey distant along the coast. Before entering a camp, he would enquire by shouting from a distance whether any sickness was present. If not, no contacts were made, but the theory of isolation was explained to the camp boss, who at once put it into effect.

Each time, on his return to Cape Dorset, he would report the situation to Dr. McKee. Ottawa had been informed of the epidemic towards the end of January, but, due to a couple of failures, it was not until February 24 that a plane was able to get through with the medicines. By that time all cases were already beyond the need of drugs. Those who had not died were in the convalescent stage; but they were in great need of regular nourishment, so dextrose, powdered milk, and lighter foods were distributed among them.

Between January 27 and March 4, Monty travelled often by night, over a thousand miles and spent from twelve to sixteen hours a day helping the sick, enforcing isolation, and making up radio reports. Isolation was difficult to enforce among a simple, superstitious people who had never heard of such a thing, but offenders were told firmly and candidly that they were responsible for any sickness or death resulting from their carelessness. At the post, two snowhouses were maintained for visiting natives, one being disinfected by freezing while the other was in use. The usual mug-up supplied to visitors was only made possible by boiling the mugs for three hours after using. Each time that the two men returned from a trip among the infected camps they would have to sterilize their outer clothing by leaving it to freeze in an outside shed.

Altogether, Monty and his driver travelled sixteen hundred miles with one dog team, Ottochie having to neglect his traplines entirely to do so. Eighteen thousand words were sent and received over the radio by Pangnirtung, dealing with the epidemic. Norman Ross, Pangnirtung post manager, assisted by Mrs. Ross, handled these "medicals," while the Dorset end of the radio work was looked after by the clerk, C. M. Dean, who assisted in every other way possible. Mrs. Demment received the reports of the neighbouring camp bosses while her husband was on the trail, and carried on energetically and usefully at home. Constable McLauchlan of the R.C.M.P. at Lake Harbour did yeoman service bringing medicines from his post, and was of particular assistance in enforcing quarantine.

This is only a bald summary. One day, we hope the story will be told in all its details, so that the Demments and all who worked with them may be given the credit they so richly deserve.

LONDON LETTER

July 12 to October 6

The following members of the Canadian staff serving with the Canadian Forces on this side have been welcomed recently at Beaver House: AC. 2 M. E. Dashney, R.C.A.F., from Flin Flon store; L. Corp. T. M. Hays, C.S.R.U., from Edmonton store; Sgt. Pilot J. R. Coffey, R.C.A.F., from Port Simpson; Sub-Lieut. J. G. W. Briggs, R.C.N.V.R., from Calgary store; Lieut. J. R. Rannie, R.C.O.C., from Fort Simpson; Corp. R. Davidson, R.C.A.F., from Vancouver store; Lieut. J. J. Laudrum, C.A.T.C., from Vancouver store; Pilot Officer L. R. Pattee, R.C.A.F., St. Lawrence District; Radio Mechanic Ross Coleman, R.C.A.F., Winnipeg store.

The following have visited our Archives Department: Pilot Officer Wilmot, the son of Mr. J. H. A. Wilmot of the Fur Trade Department; J. P. Birk, sent by the Beaver Club, who was enquiring about his great grandfather, John Palmer Birk.

Pilot Officer Elwyn Ingrams has now made a complete recovery from his recent illness.

Acting Colonel M. R. Lubbock, M.B.E., recently called at Beaver House on his way from active service in the Middle East to take up a new appointment on the British Army staff in Washington, D.C.

The Governor has recently inaugurated at Beaver House a scheme under which all members of the present London staff will have the opportunity of undergoing a medical examination and overhaul, with a view to steps being taken to improve the health of the staff under the existing war conditions. The Company bears the cost of the scheme.

Another case of clothing, assembled and despatched by the Hudson's Bay Company "Help Britain" Club of Edmonton, has arrived safely at Beaver House. This is the third generous shipment, and it is another token of the tide of sympathy and good will which continues to flow to us across the Atlantic.

Great credit is due to the organizer, Mrs. Chubb, and her helpers, and to the donors of the garments, for the great care and attention which has been given to the selecting and packing, and no words can adequately express the gratitude of the many recipients in the bombed areas. Mrs. Ashley Cooper has kindly organized the whole of the distribution in England, and we very much appreciate her help. Parcels have been despatched by her to the East End of London, to Swansea, Cardiff and Plymouth where, in the extensive devastated areas, rows and rows of unoffending little houses have been reduced to heaps of rubble.

The depth of the tragedy of the war, and the torture of mind, body and nerve of the homeless victims, is hard to realize unless encountered personally. When one woman, who had had two children killed and her husband severely injured in a raid, opened the parcel containing clothes for her baby, warm coats and underclothes for herself and her husband, a beautiful leather bag filled with hairpins, safety pins, powder, handkerchiefs—all the accessories which mean so much to a woman—she said, in amazement, "From friends in Canada! They are so far away but they seem to understand." Surely there can be no greater tribute and no message of thanks more acceptable to the members of the "Help Britain" Club of Edmonton than those eloquent words: "They understand."

Here and There



Below: Reuben Ploughman, of Southampton Island post, with a sunbathing friend.





Left (top): The V-flag won by Hudson's Bay House as an award for topping their objective of $31,000 in the Fifth Victory Loan is displayed by girls of the sales force in their "Miss Canada" uniforms. The men are (left to right): W. E. Brown, who collected $33,550 from the fur trade posts; N. Leach, of the National War Finance Committee, who made the presentation; Arthur Brock, O.C. the H.B. House campaign; and H. E. Cooper, captain of the commando sales force who blitzed the staff in one day.

Above: The present H. B. post at Portage la Loche is a far cry from the days of the old brigade described in this issue.





Above: John Bartleman, Mackenzie River District manager, at Camp Canol. *Eric Dibnah*

Left: Bechtel-Price-Callahan men laying the oil pipeline between Norman Wells and Whitehorse. *Caterpillar Tractor Co.*

BOOK REVIEWS

ARCTIC TRADER: The Account of Twenty Years with the Hudson's Bay Company, by Philip H. Godsell, F.R.G.S.; illustrated. Macmillans, Toronto, 1943. 322 pages.

THESE reminiscences of twenty years' service with the Company depict a phase of northern life which is now past and gone. Though the author is still in his early fifties, few now living are conversant with the conditions prevailing in the "old" fur trade during the first part of the period of which he writes, from 1906 to 1914. The first Great War brought violent changes in the trade, far more so than the present conflict, and we are indebted to him for recording these in such a readable and entertaining book.

The author is one of the few to bring out clearly the detrimental effects of the introduction of the white trapper into the Indian domains. Your white man, when he takes up trapping as a trade, plans to do it efficiently and aggressively, in the same manner as he pursues his other activities. And, just as the prairie farmers "mined" for wheat, so does the white trapper quickly exhaust the fur resources and pass on to pastures new. This was very well illustrated in the construction of the transcontinental railway from Quebec City to Winnipeg. It passed through a teeming fur country which, being relatively inaccessible from James Bay, the nearest source of supply, was very little disturbed, and then only by the more progressive and aggressive Indians who could be trusted with the large "grub-stakes" necessary for wintering in what was then a remote interior. With the railroad construction gangs came many adventurous spirits who dropped off here and there along the way and took to trapping for a livelihood. It was indeed a trapper's paradise, but in the short space of fifteen or twenty years the country was trapped out to an extent that made it quite unattractive to the white trapper. And so what was left of it from settlement and mining activities was returned to the Indian.

The chapter "'Contraband' of the Forests" depicts a phase in the growing pains of the Fur Trade which can be little understood by the present generation. In the old days of the monopoly, the H B C had their own game laws, and, though primitive, they were quite effective and peculiarly well adapted to the needs of the country. Take, for instance, the prohibition against shooting wild fowl after sundown. This regulation was enforced long before the enactment of provincial game laws or the Migratory Birds Convention Act. Its method of enforcement was very simple, for the Hudson's Bay Factor simply refused to sell ammunition to any offending Indian. And, as the overwhelming majority of the Indians were in favour of the regulation, there was no lack of informers.

The story of the Weetigo of Pepekwatooce will no doubt sound incredible to the modern reader. But in the old days nearly every encampment had its "Weetigo" and great would be the fear and trembling on his approach. It is all very well for the city reader to laugh at such "foolish" ideas, but when a white man is alone with a tribe of Indians it is truly impressive to witness the extent of their fear and belief in the Weetigo. And to have him pointed out to you in the midst of a camp of excited Indians is, to say the least, eerie.

Arctic Trader was first published in 1934, in England. This is the sixth and revised edition, and contains many new illustrations relating more directly to the North of the present day.—*J.W.A.*

THE PORTS OF BRITISH COLUMBIA: A story of Canada's Great Pacific Seaport Cities. By Agnes Rothery. Doubleday Doran, New York, 1943. Illustrated, 267 pages.

TOURIST bureaux will soon become unnecessary if we are to be treated to many more books like Bruce Hutchison's *The Unknown Country* and Agnes Rothery's *The Ports of British Columbia*. The debt Canadians owe Bruce Hutchison is now almost equalled by the debt the inhabitants of Vancouver and Victoria owe Agnes Rothery for her vivid and soul-stirring description of the beauties of our two western ports—Vancouver, with its incomparable situation, its pulsing energy and unlimited future, and Victoria with its flowers, its old-world atmosphere of peace and charm, and its fascinating antique shops. Celebrating its centenary this year, Victoria retains much that is English in custom and in spirit. It is a veritable Mecca for the retired army officer, civil servant and dweller on the prairies. Life there moves more slowly than in other American cities, and opportunities for material gain are comparatively lacking, but where else can one find a climate averaging 61° in summer and 42° in winter, golf all the year round, flowers hanging from the lamp-posts, distant views of snow-capped mountains, the sea at one's doorstep, drives like that over the Malahat—with scenes so reminiscent of the west coast of Scotland—opportunities of all kinds for fishing and shooting, and a thousand other delights?

Younger, lustier, and more modern in every way, Vancouver presents a different picture—situated more beautifully than almost any other city in the world, the terminus of a vast transcontinental railway system, the port through which must flow to the Seven Seas, the vast wealth of a huge province plentifully endowed by nature. Vancouver is and must continue to be our greatest western port.

In this tale of two cities, the author brings to us much of the romance of history—Capt. Vancouver's voyages of exploration (the first white man to sail into Burrard Inlet), the influence of the Hudson's Bay Company on the development of the Province, and the tremendous changes brought by the opening of the C.P.R. The vast natural resources of British Columbia in mine, sea and forest are vividly portrayed, together with man's effort in extracting this wealth, and its influence on the fortunes and future of Vancouver. The author makes a strong plea for conservation of natural resources—a plea made necessary by

the almost ruthless exploitation of British Columbia's huge forests of centuries-old timber.

A distinctly disappointing feature of the book is the illustrations: they are few in number and scarcely worthy of the subjects they portray. With this one exception, this book will prove a sheer delight to many a reader who knows British Columbia, and an inspiration to many others seeking new places to visit and new sights to see.—*J. D. Gemmill.*



FIFTY YEARS BELOW ZERO, by Charles D. Brower, in collaboration with Philip J. Farrelly and Lyman Anson. Illustrated. Dodd, Mead & Co. N.Y., 1942. 310 pages.

THIS is the autobiography of Charles D. Brower, resident of Barrow, most northerly settlement of Alaska—and therefore of Uncle Sam's entire domain—for close to sixty years.

The name of Charlie Brower is well known to me from Western Arctic days as it is to all Arctic coastal dwellers—or the white men, in any case—from Siberia to King William Land. A man of his personality, living as long as he has at a place with the personality of Point Barrow, could hardly escape being well known in those latitudes.

I met Mr. Brower when we were ice bound at Barrow with the *Baychimo* in 1931 and remember him as a bluff, hearty mountain of a man who looked the part of the "King of the Arctic," as he is called in Alaska. No one would think of passing that most desolate spot in the world without calling on Charlie Brower, whether he had met him before or not.

Mr. Brower first went north in 1883 with the old whaling fleet which for so long braved and bucked each summer the ice floes from Cape Prince of Wales, opposite Siberia, to Banksland in the Beaufort Sea. It was a dangerous but romantic trade. From the time he first hit the Arctic and saw the Eskimos, a spell was cast over him, and he has remained ever since.

The book tells of life with the tough whaling masters and crews, going on to fur trading in later days. It deals chiefly with the Eskimos, their culture and characteristics, methods of whaling, hunting, travelling and plain unadorned living. It encompasses the period of their transition almost from the stone age to their so-called "civilization" of to-day. There are exciting stories of "devil-driving," long nights of dancing to the weird and rhythmic beating of the skin drums. It tells of death, disaster, murder, famine, and likewise of success, happiness, wealth and the motley of life which is the Arctic. It recounts visits paid to Barrow by many a famous Arctic explorer coming by ship, dog team and plane. Charlie Brower was host and friend to them all—Amundsen, Stefansson, Rasmussen, Wilkins. There was the search for the lost Russian fliers and the tragedy of Will Rogers and Wiley Post.

The village of Barrow is the most desolate, the bleakest, the coldest and dampest looking place I have ever seen, or could possibly conceive. Situated on a low plateau of frozen mud, the highest part only a few feet above sea-level, it is flanked on three sides by literally nothing but hundreds of miles of vast ice floes which grind in and out, in and out, twelve months of the year. Fog and cold and snow are almost unceasing. I doubt if the sun has ever shone there. But *Fifty Years Below Zero* proves that human beings can exist and even live happily in such a climate.—*R. H. G. B.*



SLEEPING ISLAND, by P. G. Downes. Illustrated. Longmans, Green, Toronto, and Coward, McCann, New York, 1943. 296 pages.

PROFESSOR Downes gives in this book a very realistic and detailed description of a canoe trip in Northern Canada. Starting on the water route at Pelican Narrows in northeastern Saskatchewan, he journeys north to Nueltin Lake post, in the Northwest Territories.

One must admire his pluck in attempting, and successfully completing, such a hazardous journey, without aid of anything but the roughest of maps—if any at all. His good luck held throughout the trip, especially in the matter of shooting unknown rapids without disaster, and again when his forced landing on the return journey by plane put him down on a named lake—South Knife Lake—and at an Indian cabin, probably the only one between Nueltin Lake and Churchill.

The canoe route from Pelican to Brochet, although the easiest part of the journey, is very well described, and extremely accurate, and the detail he gives of Nueltin Lake and its barrenness makes one wonder why he would make that place his ultimate destination, unless it was the urge simply to find his "Sleeping Island" and, by chance, see the caribou migration.

Although not in diary form, the book gives each day's happenings, and were it not for the rather interesting bits of native folk-lore inserted here and there would become somewhat dull reading except for those extremely interested in northern canoe travel.

The author says that "from a plane the traveller sees the North below him as he can never see it from his canoe or from the portage trail. He sees an incredible immensity of forest and lakes. And yet a man can fly a thousand times over the North and see nothing of the living North. . . ." This is very true, and that is no doubt why he has so thoroughly recorded his daily travels and his meetings with other travellers, as well as with the residents of the isolated settlements in the North.

The map of the route travelled from Brochet to Nueltin Lake is probably the best that has been made of that part of Northern Canada, and shows to what pains the author went to give those who might have to use the route the benefit of his observations.

Without doubt, Professor Downes is an experienced northern traveller, and his book is a good description of a rather unusual journey.

Incidentally, we take issue with the writer of the jacket blurb, who refers to the country through which the author travelled as an "*uncharted* wilderness." This particular wilderness was chartered some time ago—on 2nd May, 1670, to be exact.—*R. A. Talbot.*

The Beaver is printed for the Hudson's Bay Company by Saults & Pollard Limited, Winnipeg, Canada, and the engravings are made by Brigdens of Winnipeg Limited.

Perhaps You Agree . . .

with the opinions given here about "The Beaver"

(Maybe yours is among them . . ?)

The vice-president of a famous advertising agency in New York City says: "The Beaver" gives me a vicarious thrill during these times when it is impossible for me to get into the Canadian backwoods that I love so well.

* * * * * *

Interesting, authentic and entirely worth while. A magazine I am proud to show my guests.—Mrs. C. W., North Battleford, Sask.

* * * * * *

This warm and friendly little publication is the one and only non-war filled paper I subscribe to. Sometimes I buy a quart of "Best Procurable" in appreciation!—F. E. B., Rochester, N.Y.

* * * * * *

"The Beaver" should be in every school library in Canada.—A. J. B., Montmartre, Sask.

* * * * * *

One of the most delightful magazines on the market.—A. S., New York City.

* * * * * *

A doctor in Toronto says: It is the most used of the magazines in my waiting room—and the others are both good and up-to-date.

* * * * * *

It is the only magazine that I feel speaks directly to me.—Mrs. L. W. S., Springfield, Oregon.

* * * * * *

"The Beaver" answers my desire for a "He-Man" magazine.—J. R. T., Toronto, Ont.

* * * * * *

We have several Canadian friends in London and I hand it around to them; then it goes to my son who is stationed in Brazil. He finally sends it to the British Club, where there are also some American readers.—F. D. M., London, England.

* * * * * *

Literally a mine of information on our far north.—Miss G. W., Brantford, Ont.

Congratulations on publishing such an excellent magazine, which I consider a public service to the people of Canada.—G. D. E., Trail, B.C.

* * * * * *

Best magazine, bar none. I can't and won't read anything else, except, perhaps, "Time." It's very meaty.—E. C. H., Syracuse, N.Y.

* * * * * *

A professor of history, in Toronto, says: Your magazine is making a fine contribution to Canadian history.

* * * * * *

A trustee of a famous American university says: I have never seen any photographs or read any stories that seemed as fine as those that have been appearing in your wonderful little magazine. I cannot begin to tell you what a grand job you have done. There is nothing in America like it.

* * * * * *

The best magazine dealing with the north country. Most of the magazines of this type go on pure hearsay.—R. C., Lachine, Que.

* * * * * *

This friendly magazine is one of the very finest on the continent.—H. W. R., New Canaan, Conn.

* * * * * *

My copies eventually find a permanent place in the Art Association, where the librarian finds it interests many visitors and tourists.—Miss M. M., Montreal.

* * * * * *

The publisher of a Michigan newspaper says: "The Beaver" has the qualities that appeal to me: early American history, travel, knowledge of a land long unrevealed, splendid pictures, the tinge of adventure, the realistic knowledge of how people live under unusual conditions, the romantic flavour that goes with the words "Hudson's Bay Company," excellent reading and sound facts indicating careful research.

The Beaver *helps Canadians to know their country.*
The Beaver *helps Americans to know their neighbours.*

A GRAND GIFT ON BOTH SIDES OF THE BORDER

One Dollar a Year



Gift for a Man

Wartime restrictions have brought about changes in the containers, but Imperial Mixture is a wonderful smoke, as always.

In two strengths—"Regular" and "Mild"

Canada's Most Famous Tobacco