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Down the Yukon.

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DOWN THE YUKON.

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between the 15th and 25th of May; whereas experience showed that a month later would be nearer the truth; in point of fact, we did not get through the ice on Lake Le Barge until the 20th of June. Reports about the amount of game and facilities for getting it were also vague and untrustworthy. Fish, again, were represented to be wonderfully plen-

Overland Monthly, 1891, June.
v. v. 17, No. 102. Second Series.

Down the Yukon.

William A. Redmond.

OK

No. 6745.

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country was looked on as a sort of last chance for placer mines, for those of Caribou, Granite Creek, Stickeen, and Cassiar, were almost if not quite worked out; and it is doubtful, on account of climatic severity, whether, should other mines be discovered further north, they could be worked.

In my account of this journey, which I shall give somewhat in the manner of a diary, some of the hardships of travel in a rough, cold country may seem exaggerated; but I do not wish to make light of what is really a severe journey, for it is a serious matter to lead anyone into undertaking it that has not both sufficient means and much physical strength and endurance. Once in the country, one has to depend on himself alone; and the getting in, as I shall show, is a far simpler matter than the getting out.

Again, as to the mode and best time for making a start, it was difficult to get trustworthy information. I was assured that the ice would be out of the lakes

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In the summer of 1887 much had been written about the Yukon country; white men had been in there trading for many years, and gold mining carried on for five or six; and a good map had been published in 1884. Yet I found it hard to get any exact information before starting for that far-off land; as most people would say, "a tough country,"—"bad Indians,"—and shake their heads.

There were also the vaguest ideas regarding the gold finds on the Lewis, Stewart, and Forty-Mile Creek. A good deal of excitement was caused last winter by the report that Williams, who unfortunately died from the hardships he met on the journey from Stewart River to Chilcoot, was the bearer of some very startling news from the gold fields. Before his death, which occurred at Chilcoot a couple of days after he was packed in from the divide, he said that he had some intelligence of importance to give to Mr. McQuesten. As far as I have been able to find out, what he wished could only have been to tell him that coarse gold had been struck on Forty-Mile Creek, and to advise him as to the amount of provisions it would be really necessary to fetch into the country. Of course, as Stewart River diggings had been already almost played out, and nothing else had turned up, it would not have been worth while for any trader to risk getting a large stock of food into the country, had not gold been struck on Forty-Mile. Most of the miners would have left, for the country is not one to go pleasuring in, and the expenses of living are necessarily high.

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between the 15th and 25th of May; whereas experience showed that a month later would be nearer the truth; in point of fact, we did not get through the ice on Lake Le Barge until the 20th of June. Reports about the amount of game and facilities for getting it were also vague and untrustworthy. Fish, again, were represented to be wonderfully plenty,—indeed, one had only to throw in a small net just before meal time, and then choose the best of the catch for cooking.

All this loose kind of information is not only misleading, but may be dangerous. I am therefore tempted to publish an account, although I fear a somewhat disjointed and imperfect one, of a journey I made in the summer of 1887, getting into the country by way of Chilcoot and leaving by the mouth of the river. This country was looked on as a sort of last chance for placer mines, for those of Caribou, Granite Creek, Stickeen, and Cassiar, were almost if not quite worked out; and it is doubtful, on account of climatic severity, whether, should other mines be discovered further north, they could be worked.

In my account of this journey, which I shall give somewhat in the manner of a diary, some of the hardships of travel in a rough, cold country may seem exaggerated; but I do not wish to make light of what is really a severe journey, for it is a serious matter to lead anyone into undertaking it that has not both sufficient means and much physical strength and endurance. Once in the country, one has to depend on himself alone; and the getting in, as I shall show, is a far simpler matter than the getting out.

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easiest two are by the Chilcoot route, and by the mouth of the river.

The second, though easy, is slow and somewhat expensive. You leave San Francisco by the Alaska Fur Company's boat, *St. Paul*, in May; arrive at *St. Michaels* the next month, then go up river by one of the small steamers, and arrive at *Forty-Mile Creek*, about the 20th of July. You will then have to lay in your store of provisions, either build or buy a suitable river boat, and pole and track up the creek; prospect, or buy a claim; get in two months' work; then prepare for the winter. Of course, going out the same year is not advisable; you would have gone to great expense in getting in for nothing, perhaps, having had so little time to work. Moreover, as yet there is no regular means of getting out by the mouth in the fall of the year. *St. Michaels* is not a place of call for sealers and whalers. A United States revenue cutter usually calls at *St. Michaels* in the fall on her way south, and has taken off men who had no other means of getting away, on the representation of the agent there that there was no accommodation or sufficient food for them during the winter; but this is a kind of off-chance,—the cutter is, I believe, supposed only to relieve distressed and shipwrecked whalers,—and it is possible for the too trusting miner to be left to cool his heels and stomach for nine months, or until the next steamer from San Francisco arrives. And if you go up stream from *Forty-Mile Creek*, you have before you a tough journey of some seven hundred miles, against a current running four or five miles an hour; and ought to leave not later than the middle of August, so as to get over the divide before bad weather sets in. I hear of men making the journey in twenty-eight days; but I am disposed to think that, for other than very expert travelers, thirty-five days' good work would be nearer the mark. I would therefore advise a miner, in order to give

the country a fair chance, to come in prepared to stay for a couple of seasons, and to have means, say \$300 or \$400, to keep him over the first winter, in case he should not make his grub stake to commence with.

The Chilcoot route is perhaps the best, although rough; yet it is the cheapest, and a man can get down to the diggings in good time. He can cross the divide in February or March, and travel down the lakes and river on the ice as far as he thinks fit, packing his stuff by sleigh; and then he may build his boat and finish the journey. Or, if not in a hurry, he may cross the divide about the last of April, and get over *Lindeman* on ice, build his boat on *Payen's Portage* at his leisure, and go down with the ice. While traveling over the ice he must look out for air holes. The ice may be four or five feet thick, and everything apparently safe, when suddenly the sleigh and contents go plump through, destroying the cargo and risking life.

He must not delay crossing the divide after the last of April, as the ice in the cañon leading from the summit to *Lake Lindeman* begins to break up soon after that, when the travel is of the roughest kind imaginable; should it be inconvenient to cross at this time, it would then be much better to wait until the snow is off, and travel by the summer trail. There are, however, objections all round; in the winter time men have had to lie at *Sheep Camp*, a short distance this side of *Summit*, for a long time, waiting for an opportunity to cross the divide, the passage of which at times, owing to wind, mist, and generally blizzardy weather, is not possible; in the summer the trail is not so direct, and the stuff has to be packed on the back a long distance, over a pretty rough road. Taking one thing with another, perhaps the end of March would be about as good as any time to cross, and then proceed along the lakes by sleigh to a suitable place for building boats.

We built ours on Payen Portage (between Lindeman and Bennet), but could not make a start from there until the 14th of June. Even then we were delayed by ice at several points.

Timber is somewhat scarce on the Portage. A good deal close by has been cut down, and much destroyed by fire. Still, enough can be got to build boats, without going very far. The kind of craft that are useful for going down stream are of no value for coming up. For that reason many prefer rough rafts with a platform, which it is little trouble to put together. A raft is, however, unmanageable, and hard to get off if firmly grounded on a bar. I think that good rough boats are the best means of conveyance, made with plenty of beam for light draft and to carry cargo well. A sail can be improvised out of a tent or fly. Time would be saved—and some of the mosquitoes, at least, avoided—if some arrangement could be made to do a little of the cooking on board the boat, which drifts swiftly down the stream all the time. This, however, can only be done on a raft or large boat, and with a small party.

In the spring and summer time the wind is almost always blowing from the southeast,—that is, down the lakes,—strong and sometimes a little squally. There is frequently a very strong wind, with a sea on, at Windy Arm, a point immediately after the narrows that lead from Lake Bennet into Takko. Here one ought to be careful with a heavily loaded boat.

It may perhaps be as well here to refer to the size of the party most convenient for this country. I think from three to five about the thing; probably three is the best number. In a larger party there are many drawbacks. For example, it is one man's work and hard work, too, to cook for a large party. Should a few fish be caught or a few birds shot, they go nowhere among a big crowd. Then there are always too

many different opinions: large parties always split up, and then there is always some trouble about the tools and mining appliances, which cannot always be divided. For those reasons a small, well assorted party, particularly, if possible, men who have been previously acquainted, is more likely to make a success than a big crowd. I am also of opinion, from experience, that a careful method of proceeding—no overwork, no rushing one time and idling the next, but a steady application to the business in hand—is an important element of success to either the explorer or miner; with good food and clothing, plenty of rest and shelter, no rashness or foolhardiness, and above all no making the work harder than it really is. Many young men seem to delight in disdaining precautions. They like to run chances and do the tough. How many cases of snow blindness, scurvy, or black-leg, and loss of cargo or life, may be attributable to these causes! Every inch of this country requires to be traversed with care.

I also think that in the eagerness to get on, many places have not been prospected that would pay to work,—a thing certainly likely enough, when your boat goes rushing down stream at the rate of one hundred and twenty miles a day. It is almost a trouble to stop, and many a likely spot is passed in a moment before a resolution is reached whether to stop and prospect or not. Our party, nine in number, left Victoria on the 21st of April, eighteen hundred and eighty-seven, on the Olympian, and arrived at Juneau on the 24th. There was nothing remarkable about our sea voyage, which was however a rapid one, and nothing particular may be said about Juneau, except that we had one fine day during our stay of ten days there.

There were several parties there outfitting for the Yukon, and there seemed to be a want of information regarding the advisability of taking sleighs along. I remember looking at a picture sign

over a store, representing a miner traversing what seemed to me the direct route to the North Pole, his rifle slung, and he seemed to be dragging an enormous load on his sleigh. I felt thankful at the time in my blissful ignorance that our journey was to be made in the summer, and that there would be none of that amusement for us, — no frozen regions to traverse. A few days, however, taught us otherwise; for very shortly after we were harnessed up ourselves, and toiling over the ice and snow like the veriest Arctic dogs.

At this time there seemed to be quite a stir in Juneau, — the outfitting stores busy, and some buildings going up. There were several parties who intended to prospect for ledges in the immediate vicinity during the summer. These were making their preparations for a start.

Douglass Island and the Treadwell mines are so well known as not to require much comment. Their total product was about \$67,000 per month; the mine was worked night and day. I was told that it was bought at one time for \$500. If so, it was rather a good investment.

Our next move after laying in our stock of provisions, (to which subject, an important one, I shall refer later on,) was to reach Chilcoot, distant about one hundred miles. There were a couple of odd-looking steam launches plying at uncertain intervals between Juneau and Chilcoot, for the transport of miners and their stores. The fare charged was ten dollars. As our party was a large one, and the accommodation in these "steamships" seemed to be somewhat limited, we hired a large open boat, with two men, for sixty-four dollars.

We stowed away our grub, etc., and made a start on the morning of the 4th of May. The weather, wonderful to relate, was fine, dry and sunny. As there was little wind on this trip, we rowed most of the way, and camped in the evenings on the beach.

During the passage through the Lynn Canal the weather was calm and dry, sunny and clear, and at midday warm, with cold, frosty nights. The scenery was grand, — fantastic snow-capped mountains on either side, bright blue sky above, and smooth sea. A few miles make a most wonderful change of climate here, from the continual rain of Juneau to what I have described.

We passed Chilcoot Mission on the afternoon of the 6th, saw the United States gunboat Pinto anchored there, — and soon entered the river. The channel is very tortuous, and you keep to the right, — following, that is, the left bank of the river. We got up to within about a mile and a half of the rancheria, unloaded, and packed our stuff up to the village, where we camped close to Healy's store. Farther up the village is another store, — Dickinson's.

Chilcoot is on a nice dry site, — a large sandy flat, covered with grass and small trees, running back from the edge of the river to the hilly country at the back. There are quite a number of Indians here during the summer months. They winter at the Mission. They do all the packing into the Yukon country, and jealously keep out the Stick Indians, whose country is on the other side of the divide.

At this time of the year the Indians would only pack to the Summit, for which the price was ten dollars per one hundred pounds. The chief, who was not a favorite with either white men or Indians, tried to bounce new-comers into paying him double price for his own pack, twenty-five pounds. In some cases he was successful.

The weather here was delightful, — clear, dry, and sunny; and it seemed almost impossible to conceive that a day's walk farther on would carry you into a country where there was nothing but ice and snow.

Having arranged about the packing, and given the Indians pieces of paper

with the amount marked on, we broke up camp on the morning of the 9th of May, amidst a scene of clatter and confusion, the Indians scrambling for the packs and suiting them to their individual capacities. Seven of us went on ahead, leaving the other two to see the Indians well under way. We carried with us our tents, blankets, and cooking outfit, with present-use provisions.

The trail led along the right bank of the river, and was pretty good for a short distance; then along the river bottom. Sometimes the route crossed stretches of pathless sand, then there would be a little beaten trail, and then a bit over rough boulders. The stream was crossed about five times. About four in the afternoon we reached the mouth of the cañon, where we found another party camped. Although the weather was dry and hot, yet we found here ice on the edges of the stream and snow in patches.

Next day, May 10th, we proceeded through the cañon, seven of the party carrying packs of about fifty pounds, which contained our blankets, provisions, cooking utensils, etc. At first starting there is a steep climb of about a mile or so over a ridge, and then the trail leads over rocks, stumps, swamps, mud-holes, then snow, ice, and boulders, until the end of the cañon, where the timber ends, and where we camped on a rocky point on the side of the stream.

Next day, at five in the morning, we went on. The Indians, with their packs, had overtaken us at this point. The way led over a sharp ascent of snow. The crust was firm, but the walking was slow and difficult. After about three miles the ascent became steeper, and the sides of the pass narrowed together. About a half mile from the summit the ascent became very steep, progress painful, and frequent rests necessary. We had to dig our toes and staves into the crust, and indeed, sometimes to crawl on all-fours, to prevent returning in Chilcoot direction with considerable celerity. Several of the party were glad

to transfer their loads to the Indians,—paying them well, and glad to do so. The Indians showed wonderful endurance. One man, Skookum Jim, toiled along with over one hundred pounds on his back, and his squaw, a slight looking woman, had about fifty pounds.

At length the summit was reached,—a dreary waste of snow, swept by a cold, piercing wind and mist. After the somewhat rapid change from the warmer regions below, and heated as we were from the climb, we were rapidly chilled through. Moisture was condensed and frozen on our beards, and those who had mits were glad to use them. Fortunately there was a big hole in the snow-bank, which we scooped out a bit and made into a kind of snow-house, into which we were glad to crawl for protection against the cold and bitter wind. We needed it to warm our fingers enough to get out money to pay the Indians, who now began to straggle in and present their checks. We paid them their well earned money, and they lost no time in getting away homewards from that inhospitable spot.

Here lay the frozen remains of the last dog that was left with Williams when he reached this mountain pass in a starved, frozen, and dying condition. His dog remained at the spot, faithful to the last, and was frozen to death at his post, guarding the mail bag. Williams was packed into Chilcoot, with great risk and exertion, by the Indian who accompanied him, and another Indian whom they met. There he lived two days.

On looking over our stores, we found that some four hundred pounds of flour had been, by some error, left at the mouth of the cañon,—a grave loss.

We now found that, without sleighs, farther progress would have been impossible. Fortunately we found two sleighs on the summit, and took the liberty of borrowing them. It was a serious liberty to take, but we were sure to be able to return them in a couple of days. In

deed, we saw no other course open. We loaded up the sleighs, therefore, and proceeded down the descent for about five hundred yards, when we came to a point where there was a sudden very steep drop, down which it was impossible even to lower the sleighs. So we placed them on the brink, and giving them as good a direction as possible, let them go and take their chance. Away they went, and the momentum carried them about a half-mile into the plain below. We then descended, unloaded the sleighs, dragged them up again to the summit, loaded up, and repeated the process, until we got all our cargo down.

We then loaded the sleighs with the tents, cooking outfit, etc., and some provisions. Cacheing the remainder and covering them up with the fly, we went on slowly with our load over a most dreary waste of frozen plain, surrounded in the distance with snowy mountains. We had before us now some eight or ten miles, before reaching timber to camp in.

For a couple of miles the travel was not bad, although the snow was very deep and the crust soft, and the sleighs consequently sank a good deal at times. At last we reached the descending cañon, where the snowdrifts became heavier. Here the traveling became very bad. There were deep snow-banks, and the ice on the water (for our way led over a small lake and along the course of a stream flowing down cañon) was rotten, so that the sleigh frequently broke through or overturned, and we sank ourselves, sometimes to the middle, in slushy ice and snow.

We wearily struggled along until nightfall, and then, having reached timber, we camped in the snow at a point about two miles from the first lake, Lindeman. Our camp consisted of brush thrown on the crust of snow, which was about ten feet deep in places, so building a fire, getting water, and cooking were done with considerable difficulty.

Next day, at four in the morning, six of the party started back with the sleighs to Summit, to fetch more of the stuff from our cache. The other three were employed moving camp a mile farther on, and mending the trail, which was now becoming very bad. The same trouble in travel was repeated,—continually breaking through the crust, building up the trail, and at one time two of us tumbled right into a deep pool of ice-water, to vary the monotony a bit. Thus work continued until nightfall, when we camped as before, on the snow.

Next day three men started back to Summit after the stuff still left there, and the others mended the trail. All were suffering badly from the effects of labor and hardship, and the midday glare of sun on the snow. Two of the party were snow-blind. On this day two white men passed our camp, going out. One of them was named Leslie. They came over the ice on foot from Stewart River, and reported serious trouble with the Indians there, and starvation times. Their account was that two or three white men and five Indians had been shot at Harper's Post, Stewart River, by Indians who were in a starving condition, and had been refused provisions by white men. This story, which we afterwards found to be without foundation, deterred several parties from coming into the country. Some even turned back after they had started. On May 14, the next day, two men started back to look after the missing four hundred pounds of flour, and two went down to the lake with small boats. Three of us were now snow-blind. The two men returned with three hundred pounds of the flour.

It had turned soft weather in the meantime, and the trail had become very bad. The rain continued on the 15th, with high wind, and it was heavy work moving our stuff, tents, etc., to a point about a half-mile down the lake, where we camped on a rocky bluff. The trail

was very bad, and the men sinking through the crust at almost every step up to the hips; and it took our greatest efforts to move the sleighs along the trail, which was all the time becoming worse.

The 16th we spent in camp resting. There was a strong southeast wind, thawing the ice on lake, which was three or four feet thick, with air holes at some places. This Lake Lindeman, is about six miles long and one and one-half miles wide. It is hemmed in by high, rocky mountains, bare above, with a little balsam and spruce below and along the edges.

The night was cold, windy, with a hard frost, and the 17th proved fine and bright. The surrounding snowy mountains were dazzling in the midday sun. The 18th also was a bright, sunny day. In the evening of that day, when there had been sufficient frost to put a crust on the ice, we moved our stuff to the end of the lake. This took up from about eleven at night to six in the morning and was a heavy drag. Our loads were large, and the sleighs, being of rough make, ran very hard. At the end of our journey across, our clothes were quite saturated with perspiration. It began to freeze stiff on us. It was necessary to chop wood, make a fire, undress, and get on dry clothes. We camped here on the edge of the lake.

A stream runs out of this lake into the next, Lake Bennett, and later in the season boats can enter and run down to a point a few hundred yards down, where the cargo should be taken out, and the boats dropped down by line along the right hand bank. At this time of the year the stream was frozen up, so we portaged our cargo across for about three fourths of a mile, and camped on the edge of a small slough close to the head of Lake Bennett. The portage here is called Payen Portage.

On the 20th of May we began cutting timber for boat building. The best of

the timber had been weeded out, and forest fires had destroyed much. The weather was cloudy and rainy, with strong southeasterly wind, and the ice and snow were disappearing very slowly. The ice on the lake was thick and strong generally, but dangerous to travel over on account of occasional air holes. A short time before this a party were traveling at a great rate down the lake on a sleigh helped by a sail they rigged out, when suddenly they went into an air hole. They lost most of their cargo and saved their lives with difficulty.

From this date to the end of the month we were employed in sawing lumber and building boats. The weather was generally fine during day, cold and frosty at night. An occasional shower fell and the wind was generally southerly. No game except a few ptarmigan were seen, with which and a few divers and sawbills we supplemented our diet. On June 2nd a party of six Indians, Sticks, carrying packs of skins, came up the lakes. They were bound for Chilcoot to trade. These Indians have to smuggle their peltries into Chilcoot, as the Chilcoot Indians monopolize the trade at their side of the mountain, and do not allow the interior Indians to fetch in their furs except by paying a heavy duty.

We were unable to get away from this place until the 14th of June, when the ice having cleared away, we left the portage in our boats, six in one boat and three in the other. We made about seven miles down the lake, sometimes getting patches of open water, and again having to force our way through floating ice. We camped in the evening; went on again next morning; and by towing, poling, and forcing our way through the broken ice, with great labor, reached a point about three miles from the Narrows, where we camped.

On the way we saw a large black bear descending a cañon. Some of the party fired at him, but did not hit him.

On the 16th we went on through the

Narrows, which are tortuous and very shallow in places, sandy bottom and rapid current. We got aground several times, and all hands had to get out in order to get our boats afloat. We saw a moose and then a bear crossing the stream, but not near enough to shoot at.

The Narrows open out into the second part of the lake, or Lake Takko, at the head of which and to the right is the gorge or cañon I have spoken of, called so appropriately Windy Arm from the strong breeze here which is here generally foul for downward-bounders. We had a heavy and long pull to get into the lake, where we found it blowing pretty stiffly and quite a sea on, which made considerable care necessary in the management of our boats. At times we had to shorten our sail.

Close to Windy Arm is a small, rocky islet called Bird Island. This rock is frequented by gulls, and at times eggs are collected in abundance.

We made a rapid run across Lake Takko, and then came to the passage leading into Mud Lake, or Marsh. Immediately before these narrows the lake becomes shallow, and large white rocks crop up here and there. Some of them are just awash, and care is necessary to prevent injury to boats. We had a strong southeast wind, which swept us rapidly through these narrows, where there is also a very rapid current. We then came to a rancheria on the left bank, where there were a few Indians. To the right is a large lagoon, where there were a good many ducks. You are now at the entrance of Lake Marsh, or Mud Lake. Its shores are sandy, with a growth of poplar and balsam, and a background of high, barren, rocky mountains, with snow patches here and there.

We had a very strong southeast wind, which took us rapidly across about twenty or twenty-five miles of lake, and towards evening we entered the river at the other end. This is the Lewis River,

down which we went about ten miles, and camped for the night. The banks of the river here are high and bluff, with occasional sandy beaches and bars, and back from the river banks are many open spaces. We caught a few lake trout here with our spoon bait, and found them excellent eating.

On Friday, the 17th of June, we went on down river, which is very tortuous, with occasional high, sandy banks, and level patches of table land on the top, and groves of poplar. As we descended, the banks of the river became higher, and at points presented peculiar bare promontories of a Gothic arch shape. The current was very rapid, perhaps about five miles an hour, even more at some places.

We were looking out closely now for the entrance to Miles Cañon, but on account of the peculiar winding of the river we found ourselves, notwithstanding our care, suddenly and somewhat unexpectedly at the entrance to this important place for the Yukon traveler. One might very easily be drawn into the cañon unawares, and consequently have to run through and take chances.

This rocky cañon presents a somewhat somber appearance at its entrance, which is about seventy yards wide, with high, rocky portals on the left side. The water is broken with rocks, but there is a deep channel to the right, through which the water rushes with an ugly swirl. It is about three quarters of a mile long, bounded by perpendicular masses of black rock two or three hundred feet high. There is a kind of basin in the center, which narrows again to a second gorge.

You take the right hand bank about two hundred yards from the entrance of the cañon, and make your preparations, which consist in lightening your boat if necessary, covering your cargo well, especially in the bows, and placing your men so as to exercise the best control over the boat in order to keep her

straight. You now enter the cañon to the right, and are swept swiftly onwards for about three hundred yards; then about the center of the channel there is broken water, with three or four great waves with ugly looking crests. To the left of this, close to the base of the cliff, is a smoother channel. You then reach the central basin, which is smooth, and gives you a rest for a short time before entering the second part of the cañon, through which you sweep rapidly, and at the end pass through some rough, broken water. You are then quite through, and pull into the bank on the right, where there is a kind of eddy and muddy beach.

In passing through this cañon it is difficult to avoid the broken water in the first part, into which you seem to be drawn with great force. The usual clumsy boat does not yield rapidly to the stroke of the paddle, and the passage is so swift that you are in the breakers almost immediately. With a light boat it is possible, by exercising considerable judgment and muscle, to get into the smooth channel to the left. In our case, although we had a light boat and not very heavy cargo, and tried our best, we were swept right into the bad water, and shipped a good deal. You have just time to realize the possibly awkward position in which you are placed, when you find yourself well washed down two or three times, and then safe in the central basin. The broken water at the other end is not of any consequence. In a raft, of course, you fasten everything on securely, and go right through.

I would advise everyone to look at the place well before going through, and to lighten the boat as necessary, having the bows well out of water, and covered with waterproof or substitute, to fend off the water and protect the cargo. Broadside oars are awkward to use. I have not heard of any serious accident here, but a boat might easily get swamped through overloading or carelessness, and in that

case the occupants would probably be drowned. There is a good portage on the right, where those not going in the boats, and part of the cargo, pass over. The time occupied in running this cañon is about one minute.

For some three miles below the cañon a good many bars, small rapids, and spaces of broken water, are encountered, necessitating some care. You then come to the White Horse Rapids. It is necessary to watch for these rapids carefully, as just before coming to them there is a bend in the river, and one might get into the broken water unexpectedly. When the rapids are reached, you take the left bank and unload your boat. These rapids are about a half mile long, and at the end there is a kind of fall or bad water. Just to the left of and above this fall is an eddy. Unloaded boats can be easily run down the left side of the rapids, close to the bank, and guided into the eddy, from which there is a small portage of about twenty yards over rocks or snow, as the case may be, leading into the river again. Parties, after unloading their boats above the rapids, ought to look at the place before running down their boats. If one is doubtful about this method, they can be easily dropped down by line. You portage your cargo along the left bank when going up the river. The other side offers better facilities for towing.

For the next mile or so the river is bad, and bars and rocks are frequently met with. We saw many rafts firmly stranded on them. The current is very rapid. The channel, generally speaking, is to the left. About here almost anywhere you can get a few small colors,—three to six to the pan of dirt. The river then widens out considerably, and the water becomes smooth.

The evening of the 17th there was a smart frost. The 18th was a fine, warm, sunny day. We prospected occasionally as we floated down stream, always finding a few colors of fine float gold. On

the 19th the river became very tortuous, and spread out into sheets like small lakes, before we reached Lake Le Barge. At the entrance to this lake are numerous shoals and bars, and a large island to the left.

We entered it about ten o'clock in the morning, and proceeded down it about ten miles, when we met with ice stretching across it. We camped on the right hand shore and hauled up our boats, and shortly after which the ice closed in on us. Some peals of thunder and the capture of three lake trout completed the history of the day. There was frost at night.

Next day the ice was moving down the lake, and the next we reached the end of it and entered the river again. At the point where the lake and river join, we caught several large lake trout (each weighing perhaps fourteen pounds or more), with a spoon bait, at which they bit freely. This was the only point on the river where fish bit well, and I should advise travelers to camp here and catch a few fish, and perhaps salt down some. They will not have such a good chance anywhere else; these fish are delicious eating.

At our camp there was rain, and the mosquitoes were troublesome; and we went on next day in cloudy and cold weather. We now passed sandy bars in the river, and occasional high banks. About four in the afternoon we reached the Hoodalinkie (marked Iyon on the United States Coast and Geological Survey map of 1884). We found several mining parties camped there. There was heavy rain all that night, and the morning was cloudy, cold and rainy.

The men debated about proceeding up this river to prospect. The water was very high, and the stream rapid. This river, the Hoodalinkie, seems to be quite as large as the main stream. We decided at length to proceed down stream, and prospected at intervals, always finding colors, but nothing to warrant be-

ginning to work. We found several parties mining, mostly on the right bank, not doing very much, and thinking of leaving. Mosquitoes were very troublesome, and a fox and a few ducks the only game seen.

Next day, the 24th, we saw several old claims and spoke a few men. Some of them were doing a little work, but most had had to cease on account of the high water. A good deal of work had been done on what are called the Cassiar Bars, about four miles above the Big Salmon River. These bars were now almost flooded, and a couple of men who remained were about to leave. The bars are almost worked out. Mosquitoes were today again very troublesome.

The river banks that we passed on the 25th present an odd, bench-like appearance in places, like railroad works or cuttings. There are high hills at the back, covered with coarse bunch grass, and occasional groves of poplar. We passed several small islands. The stream is here very rapid, perhaps averaging four miles an hour.

We had fine, bright weather on the 26th. About midway we made the Five Fingers or Rink Rapids, which are marked by a few irregular rocky cliffs or pillars in mid-stream, through which are several channels. We took the right hand one, which I think is about the best. There is a good deal of swift, broken water in it, and a few waves, but nothing of importance. Ordinary care only is necessary, and boats need not be unloaded.

About three miles below these rapids are some awkward rocky bars, the passage through which must be watched, keeping to the right. The river about here and for some distance down is studded with islands covered with a dense growth of willow brush, and is about two hundred or two hundred and fifty yards wide. An occasional wild goose was seen here.

On the 27th the river was winding

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and studded with islands, whose shores presented long, odd-looking benches. An occasional Indian's grave was seen. There is a good deal of high, grass-covered land, and many deep ravines. One very remarkable cliff rises on the right bank. There are occasional patches of low land, with poplar and willow growth. We shot two geese today. We also fell in with an Indian ranch, the first since Mud Lake, and got some dried moose meat, which tasted good to us. We passed the Little Salmon, but did not notice it. Next day we saw a cow moose and calf crossing the river, and fired a few shots at the cow, but the rapid movement of the boat, and mistaken range on account of the clearness of the atmosphere, caused a miss each time. The weather was still very fine. About four in the afternoon we reached the site of McQuesten's store, near the mouth of Stewart River.

We expected here to find some notice or information regarding the whereabouts of Forty-Mile Creek, but could get nothing from the few Indians there. The post seemed almost abandoned. There was one notice which stated that "Still left here for St. Michaels, May 4th, '87," and another as follows: "All gone to Hell." There was not much to be got out of this. We looked carefully for bullet marks, remembering the report made to us by the man Leslie we met up the river, but found no sign of any firing.

After a deal of trouble, we managed to get out of the Indians that "plenty white men farther down stream, and all find a little gold." A squaw drew a kind of rough map on a piece of wood for our direction, and it proved to be correct and of use to us. We then went on our way down stream.

The weather was exquisite, and the scenery of this part of the river, which is about a mile wide, the finest we had yet seen. The surrounding hills were bright green, and the water was dotted

with numerous islands. The current was, as usual, rapid, four or five miles an hour. We camped at night on a small island, and the next day continued our voyage down the stream, which presented the same general appearances as before,—sand bars, numerous islands, high timbered land on either side.

We fell in with a big outfit of Indians traveling down stream on rafts and canoes. Their rafts were pretty well loaded with skins and dried moose meat, sleighs, dogs, and various impedimenta. They had a kind of platform built on them, and thole pins for using oars, at which the women toiled. Meanwhile, the bucks fitted round in light, birch-bark, one-man canoes. These little vessels are extremely light, weighing perhaps not more than ten or twelve pounds, and beautifully made of birch bark, the bow part covered in. They use a small, light, single-bladed paddle. These people are small, with well shaped hands and feet. The whole outfit, rapidly drifting down the stream, with the canoes fitting about in a wonderfully swift way, presented a very picturesque appearance. We traded a little tobacco with them for moose meat.

Shortly after we struck a large rancheria on the right bank of the river. On account of the story we had heard regarding the hostility of the Indians, we approached with care, but we found them very friendly. They all insisted on shaking hands, and saying "How de do-do," with great earnestness. We did a little more trading here for moose meat. The Indians were preparing for the salmon run.

We continued then down stream, and towards evening arrived at Fort Reliance. This old trading post is abandoned, and in a state of dilapidation. The weather became cloudy during the evening, and some rain fell. Next day, the 30th, we went on down stream, passing the usual islands and sand-bars. We saw the woods on fire at several points.

We kept a sharp lookout for the creek for if we had passed it we should have had great trouble in making any headway up stream again. In the afternoon we made what turned out to be the creek we were looking for,—Forty-Mile, or Franklin. It is on the left bank of the main river, with very high land around. Close to the mouth of the creek is a bluffy point, which seems to be an old camping ground. We here found a cache and a notice board, with some directions regarding points up the stream, and a few letters stuck to a tree directed to parties outside. The creek water is of a light reddish tinge, probably from swamps further up.

There is an island near the left bank at the mouth, with sandy and gravelly beach, where we camped, to escape the mosquitoes, which were very bad near the brush. Two other parties reached the creek at the same time. After supper two moose calves came down to a little cove about three hundred yards from us. There was a rush for rifles, and fire was opened. After some ridiculous feats of shooting had been exhibited by some of our supposed-to-be-good hunters, the range was got, coolness established, and the calves were at last bagged, much to our delight, after a large expenditure of ammunition.

On prospecting round here a few colors could be got almost anywhere. Prospects get better on going farther up.

On July 1 we continued our journey up creek, towing the boats, wading ourselves at times, poling, and sometimes having some difficulty at the riffles. We camped on the left bank, about six and a half miles up, and two miles from the cañon.

On the 2d three of our party went ahead to find out what was going on up the creek, taking the small boat. Another party went along about the same time, and at the cañon they helped each other to tow. During the towing one of the boats was upset, the cargo lost, and

one man, named Lamont, was drowned. Another boat was also capsized, losing our remaining bacon. Last month two men were drowned at this cañon, by the capsizing of their boats. One of these came into the country with Lamont. They separated, one going to Sixty-Mile Creek, and crossing over into Fort. They were both drowned at the same place, within a few days of each other. This cañon does not look dangerous, and men neglect to take precautions. Cargo ought to be here portaged over bad places, and great care taken.

On Saturday, the 9th of July, one of our scouts returned, and reported fair diggings up the creek, so the party decided to go up at once. I elected to remain at the mouth of the creek, as I intended going down the river to the mouth, and returning to Victoria, if possible.

Now a few words about the mining experiences met with during the trip,—although I fear that not being an expert I cannot do justice to the subject, and what I say will be expressed in a disjointed manner. Yet the information is such as many people may be glad to get, particularly should they think of visiting the country.

We began to get colors almost anywhere below the White Horse rapids, but not enough to encourage men to work. The water at this time of year, the end of June, was high, and still rising, so that the prospecting done was unsatisfactory. Moreover the party were in a hurry to get on, and the stream was so rapid that we occasionally passed spots that looked promising before deciding to stop and examine. The gold found was very fine and superficial.

Below Lake Le Barge we experienced about the same result,—colors everywhere, two to six to the pan. When we got to the Hoodalinkie, we found the river very high, and the time being short we again went on.

The bars above the Salmon River

were nearly covered with water, and men about leaving them. Some of these men said they had been doing fairly well during low water, but were now moving down to Forty-Mile. The Cassiar bars, about four miles above the Salmon, had yielded fairly the year before, but were about worked out. I heard later that fair prospects had been got immediately below Five Fingers, or Rink Rapids, and I would advise miners not to pass that point without giving it some attention.

After this part of the river, there are few signs of gold until the Stewart is struck. That year there were very few men in the Stewart, perhaps not a half dozen. Two years before some \$30,000 were taken out of that river; in fact the cream was skimmed off, the gold being superficial. That season on Stewart as much as \$3.50 to the pan was found.

At Forty-Mile Creek there were three parties working between the mouth and the cañon; one of these, about two miles up on left bank, was taking out about \$10 or \$12 a day. A man three miles above that was doing \$6 to \$8 a day; and two men above them and two miles below the cañon were doing about the same. The gold was very fine, and was found in the light, sandy soil about a foot from the surface, and in patches. There was nothing deeper done. I interviewed a man named Raymur, who had just come down the creek from a point about forty miles up, where he had been working. He had just sold his claim for about \$300, I believe. He showed us some of his gold. It was much coarser than any I had seen yet; one piece was about the size of a bean, and was considerably discolored and dirty. He said that most of the claims up stream were "spotty."

No deep mining had been done up the creek: getting down to bed rock in the frozen ground was a very hard and slow process, and where the season was so short, men preferred to stick to a small

certainty, rather than to break through, with much labor, an uncertain depth of frozen ground to get to bed rock. The mining season is practically over by the 15th of September, when the weather becomes too cold for work.

A few men were hired up the creek (at wages \$8 a day and find themselves) by a company, Messrs. Franklin & Lambert, who had built a wingdam and were sluicing.

This creek runs up a long way, and divides into three forks. The gulch from which great things were expected is about one hundred and thirty miles from the mouth. To us it is evident that there is a large extent of country up here to be prospected.

Some coarse gold was also found on Sixty-Mile Creek, from the headwaters of which several men crossed over to those of Forty-Mile. The headwaters of the Tananah, which opens into the Yukon at Nucluckahyet, can be reached also by a short portage from the upper waters of Forty-Mile. Diggings may be struck on this river.

As I mentioned before, the diggings up creek are spotted. I referred before to a claim that was sold; no doubt the vender was under the impression that there was not much more in it. However, his successor took out twenty-six and one half ounces of gold in two hours, according to his own statement. I saw a portion of the gold. It was coarse, the largest nugget being about \$7.50. By the way, I hear of much discolored gold being met with, and no doubt a certain quantity has been thrown away or lost. A magnet would be of use in these cases in determining the presence of ferruginous material. I was also told of a man named Hughes who took out \$250 in a day. This was probably on Lewis River. One Steele had also done fairly well: he had in his possession two nuggets, one weighing \$15.30; the other, which was mixed with quartz, seemed to contain about \$30 of gold. There has been

as much as \$38.75 taken out of a pan of dirt (from a crevice) up the creek. Mr. Le Doux, who had just come down the creek, reported another man as taking out \$50 a day, rocking. To speak again of Stewart River,—during 1885 \$15,000 was supposed to have been taken off one bar.

A word here about these spotted claims. Poplin's claim had been prospected several times before being taken up, and passed over.

About this time, July 19, many men were abandoning claims on the creek that paid some \$10 to \$15 a day, and going up to a gulch near the middle fork, one hundred and thirty miles up, where some very coarse gold had been found, and where the great bonanza was supposed to be. Later on, with considerable toil, bed rock was struck in the gulch, about twelve feet down, and the prospect only realized about thirty cents to the pan. I understand that about this time the men agreed to abandon work in the gulch until next year, and to return to their claims down the creek, in order to get out what they could before the season closed. A grub stake means a good deal, as I shall presently show, taking into consideration the length of the winter and the necessarily high price of provisions.

On the Franklin Bar, thirty-six miles up, they were sluicing, and probably making about \$30 a day. I heard of another man who made for a short time \$40 a day, rocking. There are large gravelbeds up this creek, they say, thirty feet deep, where there is gold which could be hydraulicked "if they were not frozen."

Now the gist of all this is, that over a large area of country there is gold scattered in small quantities; the most easily reached parts have been worked, and the cream skimmed off. The gold increases in coarseness as you go up Forty-Mile Creek. I should say there were some two hundred and fifty men,

or perhaps more, on the creek in 1887, and the takings were from \$5 a day to \$424 (the 26½ ounce supposed to have been taken out by Poplin). Wages were \$8 per diem. The miners were very hopeful that something good and lasting would ultimately be struck, but they had to contend with shortness of season and a frozen-up country.

The general method of mining was by the rocker, gold being caught on blanketing. I have not heard of copper plating being used much, perhaps in a half dozen claims.

It is possible that some men have made a few thousand dollars in this country, but most likely, as it usually is, the great majority find themselves as they were.

I saw some good specimens of gold quartz and galena found about this region. There has also been some soft coal found on a creek nearly opposite, and a little farther down than Forty-Mile. This may be of use, should anything permanent be struck about here, either in the placer or ledge way. The price paid for this gold in the country is \$16 per ounce.

Now as to the question of supplies. Men coming into the country by way of Chilcoot generally get their supplies at Juneau, calculated to last for a variable time, according to their means or ideas, — four to six months, as the case may be. They depend for the rest on provisions fetched up the river from St. Michaels by Messrs. Harper, McQuesten and Mayo, a firm of traders who have been in this part of the country for some years. Up to the last two or three years before my trip there was no difficulty in supplying the few miners who came into the country, but in the winter of 1886 there was considerable scarcity of food, and a small steamer, the *New Rocket*, went down the river somewhat earlier in 1887 in order to get supplies and return immediately. A few people coming in from Chilcoot with supplies helped to tide over matters. The *New Rocket* was

expected on the 15th of July, but did not arrive until the 27th, by which time many men were quite out of provisions.

Three days before, on the 24th, a miners' meeting was held, and after deliberation it was resolved to open a cache of provisions left near the mouth of the creek by some parties at present up country. This was accordingly done, and a quantity of flour, bacon, coffee sugar, and other things, were removed by those in urgent need, and receipts made out and deposited.

Provisions come up the river by three river boats,—the Yukon, New Racket, and Explorer. Their carrying capacity is almost nothing. The provisions are loaded in barges and towed. The quantity is about as follows: Yukon, 48 tons; New Rocket, 8 to 10 tons; Explorer, 12 tons. Now, supposing that each boat made two trips, which is the utmost that can be done, that would mean about 136 tons of cargo,—say enough provisions for one hundred and fifty men for a year. Of course, this may be supplemented by fish and game, but these are not to be depended on in this country. When I left, at the close of the season of 1887, no more supplies from below could be looked for till the end of July, 1888; and as there were then between two hundred and fifty and three hundred men in the country, a good many must have had to get out some way, or to make their way down the river, to say Nuklukahyet, where some provisions are always kept by the traders there, Messrs. Walker and Frederickson. It was hoped that if there were good reports that fall, the Alaska Fur Company might put a two hundred-ton boat on the river in 1888; in that case there would be no further anxiety on the subject of provisions. Men wintering in the country ought to keep clearly before their minds that they ought to have a year's supply of provisions always in advance. When the July or August boat unloads, there will be no more until the following year.

I would advise no one to go mining in the country unless he were prepared to stay two years at the least. The seasons are so short that little may be done except to prospect the first year. Then the long journey out and in again is very trying. A man had better winter and be on the spot, ready for work in the spring. It would also be better for a man to have say \$300 in hand also, in case he does not make his grub stake, to see him over the winter,—although the traders up the river are extremely kind and obliging in these matters. In concluding what I have to say about mining, I may add that the gold seems to have been pretty well followed up, and whether rich placer diggings exist will soon be made apparent. There must be somewhere in this region very rich deposits in the quartz to give rise, by its slow disintegration, to such extensive and wide-spread deposits of auriferous matter.

Now, as regards the climate of the country traversed, a few words only are necessary. That on the coast of Alaska and Juneau in particular, is a very humid one, very heavy rainfall; as you go inland through the Lynn Canal, the climate becomes drier, and at Chilcoot the summer is pleasant enough. As you proceed up the creek towards the summit, say in the month of May, a few hours' walking takes you from warm, sunny weather to what seems midwinter. On the summit, and for hundreds of miles beyond, nothing but enormous masses of ice and snow were to be seen. The middays about this time (May) are warm and sunny, nights cold and frosty. About the end of May and beginning of June a little rain frequently occurs. July and August on the Yukon are generally fine, sunshiny months, with a few showers, and an occasional thunder storm. Night frosts commonly occur. September, I was told, is fine and frosty; in October the weather becomes cold; in November it goes down to an occa-

sional— 30° ; and during the remainder of the winter extreme cold reigns,— 60° to— 80° . I have been assured, at all events that— 80° has been registered. I should say, however, that— 70° would be nearer the mark, cold enough to suit any one that wants a bracing climate.

I do not see how any mining work can be done before the end of May. Perhaps, with difficulty, three and a half or four months' work can be got in during the year. I am disposed to think that the ice is not out of the lakes before the 16th of June. This year it was the 20th; but one's visit to a new country, by some curious coincidence, is invariably made when the seasons are at their worst. Towards the end of August even at times the weather becomes tempestuous, and rain and some sleet falls; and even at that early time of the year the passage of the summit is sometimes not unattended with difficulty. The Chilcoot or Dayai River is also swollen and rapid. I understood that some persons, having in view the trouble people experience in getting into the country by Chilcoot and the mountain pass, were looking for a route entering some few miles below Juneau, through the Tarkon inlet, and striking the second portion of Lake Bennett, or Lake Takko, at Windy Arm,—or, as it is marked on the map, Falls of Notalinga River. There was also some talk of placing a couple of small steamers on the lakes, in the event of the success of the mines justifying the venture. There are, however, many serious obstacles to steamboating on the upper Yukon. No doubt, should mining prove a success, either a new route will be found, or the present one across the pass may be improved in some way. A few men ascended the Hoodalinkie (Iyon) river in 1887, and I understand struck fair prospects. There is a short cut to the upper waters of the Hoodalinkie by a portage of about thirty miles, striking in near the head of Mud or Marsh Lake.

A few words as to game and fish:—The miner or traveler must not depend on either; he may perhaps supplement his ordinary diet by them, but nothing more. Along the lakes we saw only a few grouse, a couple of bears, and at the narrows at the end of Lake Bennett, a moose. Three moose were seen going down stream, and a few bears,—the latter seem to be pretty plentiful. The country is very thickly wooded, and it is difficult to travel without making a good deal of noise, and the moose is a shy animal. During the month of July the cow moose is traveling round with a calf, and consequently does not move very rapidly, especially in crossing the water, which they frequently do; later on, when the bulls are running, you may by chance fall across one; still later hunting is difficult on account of the cold.

In some places, up Forty-Mile Creek, for instance, I have been told by good authority that caribou are plentiful in the winter; it is necessary, however, to ascend the mountains to the limit of timber line, and then hunt on the bald hills. The caribou travel in large bands. Deer also are reported plentiful up the Porcupine River, where they are frequently killed by spearing while crossing the river. Geese are fairly abundant on some portions of the river, for instance, below the Rink Rapids, and again near the mouth of the river; ducks not so numerous as I expected to find them,—they are, however, pretty thick in the lagoon close to the Indian village at the entrance to Mud Lake.

Whitefish and lake trout are the principal fish on the Upper Yukon. They are of the finest kind and good flavor. The whitefish is caught only by the net, and a spoon is the best for the trout. They are not, however, so plentiful as I expected, except at one point, the exit of Lake Le Barge, and a short distance down the Lewis from the lake. There they bit freely, and were certainly the

finest fish I ever saw or tasted. Those I caught averaged from fourteen to twenty pounds in weight. From Stewart River, down, king salmon are very fine, and become more plentiful and in better condition as you descend. I would therefore impress on the traveler the advisability of taking along a spoon or artificial bait, and a gill net. I believe a few fish have been taken up the small creeks with a fly.

Now with regard to arms:—To begin at the bottom of the list, I should say don't trouble about taking a pistol,—it is so much weight, and you will have no use for it. Neither is a shotgun of much use; should one, however, be taken, it ought to be a heavy 10-bore, well choked. A good rifle is, however, indispensable, and it ought to be a good, serviceable gun, of caliber not less than 45, and chambered for a long cartridge of not less than seventy grains of powder. Your game is bear, moose, and deer, and as you may not have a chance every day you want a powerful weapon. The Winchester is good, and the Springfield (needle gun) as used in the United States service is a good weapon, strong shooting and not liable to be injured by rough usage. An important matter about rifles is to have them carefully sighted and tried, so that you can depend on the performance, and then have a guard over the foresight, to protect during rough travel and boating.

It is as well to know that there are such things as mosquitoes in the Yukon country. They begin to get troublesome below the lakes, and increase in numbers and ferocity as you descend. On the lower Yukon they are a perfect terror, so take along plenty of mosquito netting. A carefully closed tent will, of course, also be an efficient protection.

The Indians met with in this country are, as a rule, friendly and harmless, with the exception of the Tananah tribe, who are on account of their isolated position not often brought into contact with

white men. They are therefore pretty savage, and I believe at times dangerous. The Chilcoots are good packers. After crossing the divide you meet very few Indians, or perhaps none, until Mud Lake is reached, where there is a small rancheria of Sticks. They are then scarce until you get near Stewart River, and as you descend the Yukon they become more numerous.

Now as regards the amount of provisions to be taken into the country. This important matter rests entirely with the ideas of the party, and of course must be regulated according to their means. It cost \$10 a hundred in 1887 to get stuff packed from Chilcoot to the summit, and say \$13 to \$15 to the lake. After that it is a matter of personal time and labor to complete the transportation. Some hardy men have done their own packing. The usual provisions taken by travelers are flour, bacon, beans, rice, a little fruit, and some condiments. Should they depend on the supply coming in by the mouth, and reaching Forty-Mile about the end of July or beginning of August, and enter the country in the early spring, the quantity can be easily calculated. I would, however, advise men not to cut down too fine such articles as tea, coffee, sugar, tobacco, and either baking powder or a supply of soda and acid for the same purpose. These articles are never a drug in the market. A few tins of fruit or jam are also useful as antiscorbutics.

The Juneau prices are about as follows: sugar, 10 cents a pound; bacon, 21 cents; beans, 4 cents; flour, \$3 for 100 pounds; rice, 9 cents; baking powder, 60 cents one-half pound; coffee, 5 pounds for \$1.25; black tea, 75 cents; tobacco, 70 cents a pound. The prices at Forty-Mile Creek are about as follows: flour, \$18 for 100 pounds; bacon, 40 cents; beans, about 35 cents; rice, 30 cents; tea, \$1.50; sugar, 30 cents; milk, 75 cents a tin; butter, 75 cents a pound;

baking powder, 75 cents a quarter-pound tin.

This was on arrival of Messrs. Mayo and McQuesten's boat, *New Racket*, on the 27th of July. Before that, on account of the scarcity of food, large prices were offered, such as \$30 or more sometimes for 100 pounds of flour. Any money was offered for tobacco, which had quite run out. Last winter many men were tightly pressed for food. I have heard of moss being dried, pulverized, and mixed with flour to make it spin out.

As regards sleighs, they are of course necessary up to the end of May, and must be taken along. They can be purchased at Juneau, or can be made by the parties themselves. I have heard the Juneau sleighs well spoken of, although they are high-priced.

Now as to the effect of the climate and travel on health. The country, generally speaking, is a healthy one. Snow-blindness is a complaint frequently met with among parties traveling in early spring, and occurs commonly among men coming into the country over the summit. It is characterized by an inflamed condition of the conjunctiva, or external lining membrane of the eyeball, some pain, and intolerance of light. A bad attack renders the person quite incapable of using his eyes for some days. It is caused by the bright glare of the sun reflected from the snow. The deeper structures of the eye are occasionally affected, the retina more particularly. Precaution is better than cure. Eyes should be shaded when the person feels the glare inconvenient. For

that purpose, one can use tinted glasses, pieces of leather or gum boot, with a small central opening, so as to limit the entrance of light; or, perhaps, as good as anything is a piece of green mosquito netting, rolled round the hat, and used as a screen. The best treatment seems to be rest for a few days in a darkened tent, hot fomentations, tea-leaf poultices, and later on a mild eye wash, made by dissolving five grains of zinc sulphate in a cup of water.

Scurvy in the form of black-leg is occasionally met with, especially after wintering. The causes are confinement to the house, and diet not sufficiently varied,—deficient in vegetable matter, and perhaps consisting too much of bread and bacon,—and so a general lowering of health. People so affected generally recover rapidly in the spring, when they begin to move round a bit, and perhaps get some lamb's quarter and wild onion, both of which may be found. A favorite remedy is an infusion of cottonwood bark and spruce tops. Fresh meat, fruit, and lime juice, and canned vegetables would of course be proper.

This closes what I have to say regarding the trip to the placer mines on Forty-Mile Creek. I have endeavored to place before the reader, as accurately as possible, the state of matters existing at the time there; and have described the journey, so as to give information fully, and on as many points as possible, to those interested in the country, or to any who may contemplate paying it a visit. I left the Yukon by the mouth of the river.

Wm. A. Redmond.

[The following notes have been kindly furnished us by Mr. Ivan Petroff, U. S. Census Agent for Alaska, to bring the information contained in this article down to date.—ED.]

Page 614.—The Chilcoot Indians never winter at the Mission, which was built in a romantic spot in the hope of getting the Indians to move, but the latter preferred salmon to scenery.

Page 616.—This man Leslie has since been driven out of the country, being suspected of having committed four or five murders himself.

Page 625.—A powerful boat carrying 250 tons now makes two or three trips during the season between St. Michael and the mining region on the Upper Yukon.

Page 626.—Considerable work is now done during the winter by miners remaining in the country. They haul logs upon the gravel bars, and by setting fire to them they thaw the ground sufficiently to throw a quantity of gravel upon the banks for washing in the spring.

The rush of miners to the Yukon diggings has almost ceased. Less than fifteen men are on the road now,—against hundreds a few years ago.