

upon the efficiency of the army, but upon the military organization of the whole nation.

The question of the value of fortifications as a protection against the new engines of destruction, devised by modern ingenuity, has also had considerable light thrown upon it by the present war. But the Crimean war had already demonstrated the value of improvised defences, as did also the late war between the Northern and Southern States. The sieges withstood by some of the temporarily fortified positions in the South, were quite as prolonged and perhaps quite as earnest as that of Strasburg. Yet Strasburg has fallen, and from having been a protection to France as intended, it has become a serious menace. The few border fortified towns which France has lost one after another have not only proved sources of weakness during the war, but their very existence complicates negotiations for peace. France can scarcely surrender, or even dismantle them without loss of dignity, and Prussia can hardly accept a peace which would leave them untouched. They thus complicate the relations both of peace and war, and we may safely say they add immensely to the horrors of the latter.

This subject is not without interest to Canada, as the Imperial Government, in pursuance of a six years' old agreement, has passed a guarantee bill for a Canadian loan of five millions of dollars to be expended in fortifications at Montreal, Kingston, St. John, N. B., and perhaps a few other points deemed to be of strategic importance. If, however, Canada, by her delegates in 1864-5, had bound herself to the fulfilment of this compact, she is certainly released from her bond by the words of Mr. Gladstone, the Prime Minister of England, who declared that the Imperial guarantee was given solely because of its having been solicited by Canada, and not in fulfilment of Imperial policy. We understand, therefore, that the tendered guarantee may or may not be utilised, according to the judgment of the Canadian Government: and that, in fact, the refusal to expend the money would be no disappointment to the Imperial authorities. If such be the state of the case we are firmly convinced that Canada ought not to raise a dollar of the loan. Our border line is too immense to permit of a complete system of fortification, and isolated works would but chain the fighting part of the population to particular spots, to an extent that would render operations in the open field impossible, except at an immense disadvantage. As we understand the action of the Imperial authorities at Quebec, the fortifications at Levis are simply intended to protect the citadel. The immense range of the modern engines of war in the discharge of projectiles, necessitated this precaution, if Quebec was to be maintained as a strong military position; and hence the Imperial fortifications at Levis do not imply any Provincial obligation. The fact is, simply, that the heretofore impregnable position of Quebec had become exceedingly vulnerable, from the progress made in the invention of powerful siege guns; and therefore its fortifications, like those of Paris, had to be protected by other fortifications in order to preserve their value. Any country can afford to pursue, with advantage, this policy in respect of one or two strong positions: but to attempt to extend the system to every important town would be an act of madness. Fortifications present one of two phases to an enemy—an eligible object of attack, or an object to be circumvented, at a safe distance. But the enemy who attacks Canada from the sea cannot circumvent Quebec: it is, therefore, confessedly the right place for the most complete system of fortification; it guarantees free communication with the seat of empire, and while it is held, renders the conquest of British America impossible. But can the same be said of Montreal or Kingston, or any other point included in the proposed system? No! If the enemy thinks the place too strong he may pass it by, or he may detail a force to mask it while his main body scours the country at leisure. On the other hand, knowing that within the charmed lines all the treasures of the foe will be gathered, he may sit down around the fortified city and either storm or starve it into submission. Once beleaguered, the strongest fortress must yield in time, because its strength is limited, whereas the besieging force, having open lines, is practically unlimited, in that it has the whole strength of its country at its back. It has also been abundantly shewn that extemporised defences generally prove the most valuable, and hence, whatever money is to be expended for Canadian "fortifications," ought to be invested in the most approved arms and munitions for field warfare, and the training of the people to the use of the rifle, the pick, and the spade. The building of the North Shore railway would be a better service for the defence of Montreal than any practicable system of circumvallation that can possibly be devised.

Now and then they cut off the ears of a horse thief in Oregon, and then telegraph east that the crops were never better than they are this season.

THE NORTH-WEST TERRITORY.

No. 13.—BRITISH COLUMBIA.—FISHERIES, &c.

By the Rev. *En. McJ. Dawson, Ottawa.*

The extraordinary abundance in British Columbia of those fish which ascend rivers and penetrate, in great numbers, to the highest habitable land of the interior, cannot be merely accidental. They form the staple food of the Aboriginal Indian. They are as necessary to him as grain and bread to man in a civilized state, or as the plantain and banana to the dwellers in the tropics. Improvident, as savages generally are, we find that they exercise wonderful foresight in treasuring up supplies of salmon. They literally harvest them, as we do our grain crops. And not without good cause. But for their care in trapping, curing and garnering the fish which visit the remotest inland regions, in the summer months, they would certainly die of hunger in the severe winter season. At this period of the year, so terrible in the more elevated parts of the country, the thermometer falling as low as 30° Fahr. below zero, no other resource is available. During six months, at least, there is a depth of snow in the more inland and mountainous regions. The birds migrate to warmer climes, the animals that can be hunted and caught in summer, retire to secluded spots where it is very difficult, and often impossible to trap them. The very bears go into inaccessible winter quarters; so that the poor Indian, in his small lodge made of hides or rushes, must meet a miserable death, starved alike by cold and hunger, if it were not for the salmon which he takes and cures in the summer months. Dried in the sun, it possesses, unimpaired, its heat and flesh-yielding qualities. The Indians that are remote from the sea-board, chew it, uncooked, all day long, and thus retain their embonpoint throughout the cold and dreary winter time. What a providential arrangement! By means of the innumerable waterways, are wafted, free of freight, to the doors of every wigwam, inexhaustible stores of both food and fuel,—fuel, inasmuch as the dried salmon, retaining its oily and nutritious substances, supplies the caloric which is necessary to sustain life, in those wretched abodes, where the Indian families cower and shiver over their smouldering log-fires, that are but ill-calculated even slightly to moderate the cold, biting winter blasts, which penetrate the fragile and sieve-like structure.

As the salmon harvest is of such importance to the Aborigines, it may be worth while to consider by what means it is reaped. In the Bays and harbours they use a net about forty feet long and eight wide, with large meshes. The upper edge is buoyed by pieces of dry cedar wood, and the net is kept tight by means of small pebbles, slung at distances of four feet along the lower margin. This net is stretched across the mouth of a small bay or inlet, and the Indians sit watching it in their canoes at a short distance. Shoals of anchovies and herrings have their abodes and lurking places in such bays as are alluded to. As may be supposed, these small fish often venture beyond the confines of their rocky home. They are no sooner spied and pursued by the greedy salmon, than they seek safety in flight, and, rushing towards their hiding place, easily shoot through the cordy snare,—not so the lordly salmon. The voracious fish runs his head into the net. Down go the floats below the surface. Up rushes Redskin in his light canoe, hauls up the net, clutches his silvery prey, fells it with a blow of his club, and, lets down his net for another draught. Immense numbers of spring and autumn fish are caught in this way, before they ascend the rivers.

In Columbia River, the first salmon that ascend from the sea, are taken at a place called Chinook Point, not very far from the mouth of the river. These are said to be the fattest and most finely flavoured salmon that are found along the coast. They are very large, weighing from 35 lbs. to 75 lbs. They are celebrated in the neighbouring country, and as far even as San Francisco in California. They are known as the "Chinook Salmon."

The Indians display wonderful ingenuity in accommodating their modes of fishing to the nature of the fishing grounds. At the rapids called "The Cascades," they erect scaffoldings among the boulders. These are clumsy enough contrivances, but they are strongly constructed of poles jammed between large stones, and lashed with ropes of bark to other poles, which cross each other to form stages. Indians of several tribes come from great distances to await the arrival of the salmon, and plant their lodges in the most beautiful spots that can be imagined along the whole length of the rapids. Nor do they come unprepared. They are provided with small round nets, such as are used in catching shrimps. These they fasten to handles forty and fifty feet in length. On the river sides of the stages, already alluded to, hollow places are ingeniously enclosed, with low walls of boulders. As soon as the salmon arrive, which is early in June, business commences. The Indian fishermen, without any other garments than a piece of cloth tied round the waist, are seen everywhere plying their nets. As the salmon ascend the rapids, they naturally seek the calmer waters at the edges of the current, or linger behind a rock, or in some convenient hollow such as the basins, constructed with stones by the Indians, close to their stages. Here the way-worn fish will rest and idle for a time; but not without extreme peril. The cunning fisherman drops his net in the water at the head of the pool, and allows it to be swept down by the stream, thus securing salmon after salmon without danger of failure.

Two Indians in the course of an hour, often land as many

as thirty salmon on one of the stages. When fatigue obliges any one of them to rest, another takes his place, and so the net is constantly plied. As soon as a fish is thrown on the stage, a blow on the head puts an end to its struggles to regain the water. Boys are at hand who seize it and carry it ashore, where it is at once split up and cured. Notwithstanding the ingenious contrivances of the crafty Red-skins, immense numbers of fish escape up the rapids, and convey wealth and plenty to the dwellers in the remote interior.

The mode of fishing at the "Kettle Falls" of the Columbia is somewhat different. It is only at the time of the highest flood, about the middle of June, that the salmon can pass this formidable barrier. About three weeks earlier Indians begin to assemble from all quarters. Day after day cavalcades are seen winding their way along the plain. The whole sum of Indian wealth accompanies these cavalcades. The savage leaves nothing behind him for an enemy or a robber to seize upon. Wives, children, dogs, horses, lodges, weapons and skins—all, *en route*, together, present a most novel and extraordinary spectacle. The smaller children are packed with the baggage on the backs of horses. These horses are driven by squaws, themselves on horseback, and riding astride like men. The elder boys and girls ride with their mothers, three or four on a horse. The men and stouter youths drive the bands of horses that run loose in front of the procession. The march is also graced by a pack of prick-eared curs, which are nothing else than tamed prairie wolves.

Lodges of all shapes and sizes are speedily erected on a level piece of ground which overlooks the falls. A zigzag path down a cliff which is almost vertical, leads from the falls to the rocks at their base. The squaws, who for such parties are the "hewers of wood and drawers of water," immediately busy themselves in the work which belongs to camping. The men, meanwhile, who are all under one chief, who is styled the "Salmon Chief," commence the labours which fall to their share. Some repair the drying sheds, which are placed, as well as many of the lodges, at the foot of the zigzag path, others make or mend huge wicker baskets, which are about thirty feet in circumference, and twelve feet in depth; others in groups drag down large trees, which have been already lopped clear of their branches. These branchless trunks they roll and twist and tumble over the rocks, fixing them at last by means of massive boulders, whilst the ends hang over the foaming waters not unlike so many gibbets. The trees having been secured in their right places, it remains to suspend from them the great wicker traps. This last work is very risky and difficult. Numerous willing hands, however, and long experience accomplish the necessary task. The baskets are at length firmly suspended with strong ropes made of twisted bark. The river now begins to rise rapidly, and soon overflows the rocks where the trees are fastened, and rushes also into the basket, which is speedily in the midst of the waterfall, and is so contrived as to be easily accessible from the rocks that are not covered by the flood. Everything is now ready for the reception of the finny visitors.

On such occasions, all feuds are laid aside, or, as the Indians themselves beautifully express it, "the hatchet is buried," and there commences, among these singular people a series of diversions which it would be quite in vain to attempt to describe—horse-racing, gambling, love-making, dancing, &c. Revelling is the order of the day.

The medicine men or conjurers, meanwhile, are more seriously engaged. Some of these, in every tribe, go zealously to work, and ply their charms and incantations in order to insure an abundant run of fish.

Certain members of the tribes are appointed to keep watch, and as soon as they announce the welcome tidings that the salmon are come, the onslaught begins. The first few that arrive are often spared from the rocks. But soon they are in such great numbers that one could not well throw a stone into the water, at the base of the falls, without hitting a fish. More than fifty may now be seen in the air, at once, leaping over the wicker baskets, which experience has taught the Indians to place so cunningly that the adventurous fish, failing to clear the "salmon leap," fall back and are trapped. Two naked Indians are stationed in each basket all day long. This is accomplished by means of frequent relays, as there is always a heavy fall of water. Salmon, three or four at a time, fall in quick succession into the basket. They are no sooner trapped than the skilled fishermen thrust their fingers under the gills, strike the fish on the head with a heavy club, and then fling them on the rocks. Mr. Lord mentions having seen as many as three hundred salmon, varying in weight from twenty to seventy-five pounds, landed from one basket betwixt sunrise and sunset.

With so many traps in successful operation fish speedily accumulate on the rocks, where they are piled in heaps. Numbers of boys and girls are employed in dragging them back from these heaps to the curing houses, around which the Squaws are seated. These lady fish-curers rip the salmon open with sharp knives, twist off the head, and skillfully remove the backbone. The next process is to hang them on poles, which are close under the roofs of sheds open at the sides. In this position they are gradually dried by means of slow fires, which are kept smouldering on the floors. Flies are kept away by the smoke, which, no doubt, aids also in preserving the fish. The whole salmon is cured in this way with the exception of the head, backbone, row and liver.