

whole endorsement, with interest and expenses added. If, then, the policy of a money bonus cannot be frankly adopted on certain general conditions, there should be an effort made to utilise our wild lands, by appropriating a portion of them at the rate of so many acres per mile for every new mile of railway built; and as the whole country has had to pay for the aid heretofore accorded to railways, though the benefit has been in great part local, it will be seen at a glance that no injustice is being done to the old settled portions through which the roads already pass, by helping the newer parts of the country to secure the like accommodation.

It is whispered abroad that Ontario, which has already done so much in the way of material progress, is again about to set the example by supporting a vigorous railroad policy and by giving either of the public lands or the public money to assist in their construction. We should be glad indeed to believe that this were true; but the system, suggested in some quarters, of loaning money to new railway schemes, is radically wrong. Let the Local Government collect the seven or eight millions due on the Municipal Loan Fund, and the six or seven millions in arrears for Crown Lands, before going into the lending business; or rather let Ministers make an equitable settlement as between the hopelessly indebted Municipalities and those which drew nothing from the fund; and let them adjust their claims against the settlers so as to bring their holdings within the range of their purchasing power. The two questions referred to no doubt present difficulties; in the enforcement of the claims unjustifiable hardships, and in their remission seeming partiality. But it is for Ministers to find out the mean between these two extremes, and with the balance in their hands to do justice between the different sections of the Province and encourage progress in all. Certainly the example of Ontario would be followed in other Provinces, only that already Quebec has gone ahead of its Western sister in the forwarding of local railway enterprise, so that, in this particular, so far as the Government is concerned, Ontario must be content to follow.

The plan adopted by the local Government of Quebec is, in many respects, an excellent one. By guaranteeing a very small rate of interest—3 per cent.—on a certain moderate outlay per mile, it places the investors in the road beyond the risk of absolute loss or utter depreciation of their stock, and at the same time involves the country in but a comparatively small annual charge, for which the daily running of the railway is at least fair compensation. Several countries in Europe have adopted a similar system, guaranteeing rates of interest as high as six per cent. for a stipulated number of years, and they have profited largely by their liberality in the general prosperity which the construction of railways has brought. In Canada, if the local Governments cannot be prevailed upon to give land grants—and in this country there is a terror of land monopolies—the next best thing is to guarantee a small annual percentage on the capital for a certain number of years to every railway company whose line is located to the satisfaction of the Public Works Department of each Province. It would thus become the interest, as it is now the duty of the Government and Legislature to guard against the creation of too many competing lines; and the spirit of local enterprise would be strong enough, when backed by the guarantee, to speedily supply the country with such a network of railways as is essential to the full development of its immense and varied resources.

THE NORTH-WEST TERRITORY.

No. 14.—BRITISH COLUMBIA.—FISHERIES, &c.

By the Rev. A. M. Dawson, Ottawa.

(Continued.)

A no less useful, although not quite so beautiful a fish of the tribe of Salmonidæ, is the OREGON BROOK TROUT, *Fario Stellatus*. It is about the same size as the *Salmo spectabilis*, and varies in weight from eight ounces to three pounds. Its whole length is four and a-half times that of the head. The back is of a bright olive green colour. The sides are yellow, tinged with pink, the belly white, and speckled all over with small black spots. There is no river or lake of British Columbia where this trout is not found. It abounds in the waters of Vancouver's Island. It is met with in the rivers which flow westwards from the Cascade Mountains, as well as in the waters of their eastern declivities. It is a denizen of all the rivers descending from the Rocky Mountains to the Pacific Ocean, delighting even in waters that are no less than seven thousand feet above the level of the sea. It is very voracious, and so affords excellent sport. Butterflies, dragon flies, and mock flies and insects of the least artistic description, prove a sufficiently tempting lure to this greedy little fish. Mr. Lord relates an incident of his angling experience which is abundantly illustrative of this statement. When enjoying the pleasures of woodland life, one day, sitting on the bank of a stream that rippled gaily on its rocky course, down the western slope of the Rocky Mountains, he was suddenly seized with

the determination to become possessed of one of these fine speckled trout. And, indeed, the creature, by its proceedings in the water near him, awakened his cupidity. First of all, by a sudden splash, it disturbed the solemn stillness of the scene and broke his reverie. With no less celerity it devoured a large grey fly upon which it had pounced, under the very banks on which the learned naturalist sat, as the insect, unconscious of danger, had touched the water with its gauzy wings. "Very well, master trout, you may, perhaps, be as easily duped as your more cautious confrères; so setting to work I overhauled my 'possible sack,' found a few coarse hooks, a bit of gut and some thread.

Among other materials wherewith to make a fly, feathers were indispensable. Shouldering my gun, I strode off to look for a 'white fletcher,' alias ruffed grouse; soon stirred one up, bagged him, hauled out his glossy bottle-green frill; selected some feathers which I thought would turn a decent hackle, picked out a couple of brighter ones for wings, some red wool from my blanket for cribbing, and with these materials I tied a fly. Not the slightest resemblance, fancied or real, did it bear to anything ever created, but still it was a fly, and, as I flattered myself, a great achievement. A line was made from some ends of cord; then, cutting a young larch, I made my tackle fast to the end, and thus equipped sallied to the stream.

My first attempt in the swift scow was a lamentable failure. Warily I threw my newly-created monster well across the stream, and, according to the most approved method, let it slowly wash towards me, conveying to the rod and line a delicate and tempting tremble. Not a rise, not a nibble; my hopes wavered, and I began to think these trout wiser than I had given them credit for. I tried the pool as a last chance. So, leaning over the rock, I let my tempter drop into the water. It made a splash like throwing in a stone. But imagine my delight, ye lovers of the gentle art, when a tremendous jerk told me I had one hooked and struggling to get free! Depending on the strength of my tackle, I flung him out on the bank; and, admitting all that may be said against me as being barbarous and cruel, I confess to standing over the dying fish and admiring his brilliant colour, handsome shape, fair proportion—and last, though not least, contemplated eating him! I pitied him not as, flapping and struggling on the grass, his life ebbed away, but thought only of the skill I had displayed in duping him, and the feat in store for me on returning to camp. "Our naturalist turned the secret he had discovered to good account. That very day he played havoc among the trout, returning to quarters with as many as he could carry, strung on branches cut with a crook at the end. These trout are by no means fastidious. They can be tempted and taken with almost every conceivable kind of bait. Grasshoppers, fragments of grasshoppers, pieces of white meat from the tail of the river crayfish, they seize quite ravenously.

There is a still more wonderful kind of salmon trout in the waters of British Columbia—one which affords to the uncivilised native light as well as food. It can be eaten as a dinner or used as a candle, and hence its name, CANDLEFISH. It is also called EULACHON, *Salmo (mallotus) Pacificus* and *Thaleichthys Pacificus*. This little fish, which supplies so many wants, is not larger than a smelt. But it is as pretty, perhaps, as any of the salmonidæ. The mouth is rather large for so small a fish, the head is cone-shaped, the eye small, with a dark spot nearly black over each orbit. Its colour generally is white, tinged with a dingy yellow; the back is something approaching to olive green. The chief peculiarity of this little fish is its extraordinary fatness. Blubber-bearing whales and seals and porpoises are not the only fish which contain the fat of the seas. All along the shores of British Columbia, Vancouver's Island, Alaska, and the adjacent islands, the diminutive Eulachon furnishes an inconceivably great supply of fatty matter for maintaining the warmth of the body as well as for lighting the homes of the Aboriginal tribes. At certain seasons it is the chief business of these tribes to trap, and cure and store up for winter use, a fish that supplies so many wants. They commence operations by erecting lodges near the bays and inlets where it abounds. This once accomplished, they carry on their labours by the light of the moon. In fine weather, just as the moon begins to cast her rays down the mountain slopes on the bright, green waters, the Indians launch their light canoes, and glide along noiselessly towards the immense shoals of Eulachon that are seen glittering over the sea like pearly nacre. Pity that, in catching them, they should use such a horrid instrument,—a monster comb or rake armed with huge teeth, four inches long, and an inch apart. These teeth are, for the most part, made of bone, although the Indians prefer iron when it can be had, and beat it into sharp-pointed nails. The comb itself consists of a piece of pinewood from six to eight feet in length, which is rounded at one end for a handle, the rest being shaped flat, thick at the back and thinner towards the edge in which the teeth are inserted. In the stern of each canoe sits an Indian, paddle in hand, for the purpose of impelling the tiny craft and keeping it in convenient proximity to a shoal of Candlefish. Another holds the rounded part of the rake firmly in both hands, with its teeth pointing sternwards, whilst he himself looks towards the bow. As soon as he is near enough, he sweeps his terrible weapon through the glittering mass of fish, and, with a powerful effort, brings it to the surface,

teeth upwards. There is almost always, at least one, but often three or four fish impaled on each tooth. The rake is now brought into the canoe. A rap on the back knocks off the fish, and the process of raking recommences. A canoe is very quickly filled by this rude way of fishing. What a spectacle must not a whole fleet of such vessels present, whilst the dusky forms of the savages are seen in the moonlight, bending over the water, and, with their brawny arms, sweeping their toothed sickles through the silvery shoals. Stroke rapidly follows stroke, till the canoes are completely loaded. They are then paddled to land, drawn upon the shelving beach, and overturned, (this being the quickest mode of discharging) and at once re-launched for the purpose of raking up another cargo. This work is continued until the moon sets behind the mountain peaks, when the fish disappear. It appears to be the peculiar habit of this fish to come to the surface only in the night. The squaws now commence their labours. Their business is to cure, dry the fish, and make oil. They do not clean the fish or remove the entrails, but at once pass through their eyes long, smooth twigs or sticks, skewering on each stick as many as it will hold. Next comes the process of drying. This is soon accomplished by suspending the skewered fish in the thick smoke at the top of the sheds. In drying, they acquire a flavour of wood smoke, which also aids in preserving them. They are then packed in bales for winter use. No salt is used in curing these fish any more than in any of the other Indian systems of fish curing. These fat little members of the tribe of Salmonidæ, thus preserved, constitute the best of Arctic winter food. They are also used in lighting the lodges of the natives. A piece of rush pith, or strip from the inner bark of the cypress tree (*Fujia gigantea*) is drawn through the fish when dried, by means of a long, round needle made of the hardest wood. When lighted, it burns, like the most artistically manufactured candle, till consumed. One can read comfortably by its light, with no other candlestick than a piece of wood split at one end, and thus simply adapted to receive and hold the light-giving fish. By the application of a little heat and pressure this admirable taper may be changed to a liquid state. The Indian then drinks it, and so, throughout the long, cold and dreary winter of the more elevated regions, feeds abundantly the flame of life, which, but for this wonderful resource which Nature supplies in such bounteous profusion, would be utterly extinguished. All the fish that are not required for winter food and light, the Indians convert into oil immediately after they are taken. They who wish to learn the process by which this oil is made, have only to consult the writings of learned naturalists. Let it suffice to observe that Nature has supplied the place of art, in providing a ready-made bottle in which this valuable oil is preserved. The hollow stalk of the sea-wrack, which, on the coast of the North Pacific, grows to an immense size, forming submarine forests, expands at the root end, so as to constitute a complete flask. These hollow stalks are cut about three feet from the root, and, with the bulb at the end, are preserved in a moist state, until required for use. Each of these vessels contains about three pints, and the oil, as soon as it is manufactured, is stored in them.

THE EXPLOSION OF THE POWDER MAGAZINE AT LAON.

The town of Laon, although not fortified, was a point the possession of which became of the utmost importance to the Prussians on their march to Paris. As the centre of no less than four railways, and the starting-point of numerous roads leading to the capital, it was to be expected that the Prussians would not neglect to possess themselves of the place, the more so as they expected little or no resistance from the small garrison occupying the citadel at the north end of town. This garrison was composed of 2,000 Gardes Mobiles, and about a regiment of infantry, who had escaped with Gen. Vinoy from Sedan previous to the capitulation of that place. The whole were under the orders of General Ternin de Hame, the commandant.

On the 8th September a company of Uhlans belonging to the 15th regiment made their appearance before the city, and finding the gates closed—for Laon possesses old ramparts that are hardly worth the title of fortifications, having been partially destroyed by the Prussians in 1814—summoned the place to surrender. The commandant begged for time to consider and was granted until 4 o'clock that afternoon. Subsequent events tend to show that the delay was asked solely with a view to communicating with the Government as to the advisability of surrendering. However, the Uhlans commander immediately communicated with the General of the division, Duke William of Mecklenburg, who sent an attaché, Col. Alvensleben, with a ready drawn-up agreement for the surrender. The Colonel was admitted to the citadel, his eyes having been previously bandaged, and was conducted into the presence of Gen. Ternin, and the Prefect of the arrondissement, M. Ferrand. The former, having received the message of the Prussian commander, raised new objections, evidently with the purpose of delaying the arrangements until he should hear from Paris. However, Col. Alvensleben succeeded better in another quarter, and concluded arrangements with Mayor Vinchon for the capitulation. During the night the commandant received a despatch from head-quarters desiring him to surrender the town, as it could be of no value as a fortified place, and would be unable to sustain bombardment. In consequence of these orders Gen. Ternin despatched two Mobile officers into the Prussian camp, who concluded arrangements for the capitulation of the town and the citadel, together with the garrison and all materials of war. The capitulation was to take place the next day, the 9th September, at half-past eleven in the morning.

At the hour appointed the German troops, consisting of two batteries of artillery, two brigades of cavalry and a battalion of Jagers, entered the town, and occupied the principal posi-