deserts existing in Upper California. This wind, or simoon, during the summer, is held in great dread in this part of the country, for it is of a burning character that is quite overpowering. It generally comes from the southwest. In consequence of this feature of the climate, there is very little vegetation near the fort, not only on account of the heat and dryness, but owing to the vast clouds of drifting sand, which are frequently so great as to darken the sky. In summer it blows here constantly, and at night the wind generally amounts to a gale. Mr. Drayton represents his situation in the northeast bastion of the fort as quite uncomfortable, from the fear of its being blown down.

The Indian mode of taking salmon was witnessed at this place. It consists in the erection of a fish-weir of basket-work, supported by poles. This is placed across the stream, in the form of an acute angle. This barrier dams the water sufficiently to create a little fall. The salmon swim up the river at night, and when they reach the barrier, they jump over the low side, which is down stream, but are unable to leap the higher one. A little before daylight, the Indians spread their nets, carefully avoiding to disturb the fish about the weir, and take all those that have been ensnared. These usually amount to about twenty-five.

Small parties of the Cayuse, Wallawallas, and Nez Percés, were now returning from the Grande Ronde. They occupied about thirty lodges, made of poles, mats, and skins, bought from the Shoshones. The wood-cut of these Indians' lodges will be found at the end of the chapter.

During the week, the Columbia had fallen ten feet. It is here one thousand yards wide, and the altitude of Fort Wallawalla above the sea is twelve hundred and eighty-six feet.

The proximity of these Indians afforded Mr. Drayton an opportunity of observing them, and having an Indian boy with him, who understood both their language and English, he had no difficulty in communicating with them.

The chief of the Wallawallas, who is called Puipui-Marmax (Yellow-Bird) and the Nez Percé chief Touwatui, (or Young Chief,) seemed intelligent and friendly, but the white residents consider them as great rogues. They were going to the Shaste country to trade for blankets, powder and ball, together with trinkets and beads, in exchange for their horses and beaver-skins.

The Company, and the settlers of the Willamette, refuse to trade either powder or ball in this country, and it is but a short time since the Indians have been able to obtain any. The reason assigned by the Company and residents for this restriction is, that the natives

become quarrelsome and turbulent when they are provided with fire-arms. On these trips they are accompanied by about thirty warriors, well armed.

The men are usually clothed in blanket coats; but, notwithstanding this slight approximation to civilized habits, they have the air of the Indian, strongly marked, about them.

MALE COSTUME.

The number of Indians now collected was two hundred. The women were employed in drying salmon and the cammass-root. Some of them are employed in cooking, while others are engaged in dressing skins.

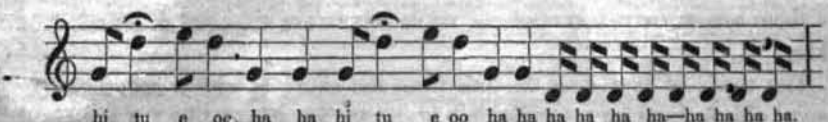
The mode of removing the hair from the skins, is with a round and broad chisel, fixed on a handle, like an adze: the skin, while yet green, is laid on a log or board, and the hair chopped off. The smoking process differs from that already described, at the Cowlitz. A large hole is dug in the ground, in which a fire is made; the skin is sewed on the inside of a bag, which is suspended immediately over the fire, so that little of the smoke can escape, and the process goes on rapidly. This process is necessary, otherwise it would, on becoming wet, and drying afterwards, be hard and stiff.

There were many children among these people. The young Indian women as well as the wives of the Company's servants, who have married half-breeds, invariably use a long board as a cradle, on which the child is strapped, and then hung up on a branch, or to the saddle.

When travelling, a hoop, bent over the head of the child, protects it from injury. The women are usually dressed in skins very much ornamented with beads.

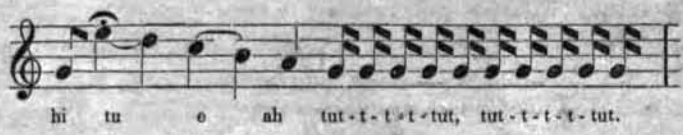
FEMALE COSTUME.

Mr. Drayton, during his stay, was attracted one day by the sound of beating sticks and a kind of unearthly singing, issuing from one of the lodges. On going to the lodge he found a boy, about eighteen years of age, lying on his back very ill, and in the last stage of disease. Over him stood a medicine-woman, an old haggard-looking squaw, under great excitement, singing as follows:



To which shout a dozen men and boys were beating time on the sticks, and singing a kind of bass or tenor accompaniment. The words made use of by the old squaw varied, and were any that would suit the case. She bent over the sick boy, and was constantly in motion, making all kinds of grimaces. She would bare his chest, and pretend by her actions to be scooping out his disease; then she would fall on her knees, and again strive to draw out the bad spirit with both hands, blowing into them, and, as it were, tossing the spirit into the air.

The evening of the same day, Mr. Drayton paid another visit to the same lodge, when he found the medicine-squaw much exhausted. She was blowing with her mouth on his neck downwards, making a quick sputtering noise, thus—



While she was uttering this, a man was holding her up by a rope tied round her waist, while she, bending over the body, began to suck his neck and chest in different parts, in order more effectually to extract the bad spirit. She would every now and then seem to obtain some of the disease, and then faint away. On the next morning she was still found sucking the boy's chest, and would frequently spit into her hand a mouthful of saliva and blood, which she had extracted from her own gums, and spread it with her finger over the palm of her hand, taking great care that all should see it. She would then pronounce the boy better, with apparent satisfaction. So powerful was the influence operated on the boy, that he indeed seemed better, and made endeavours to speak. The last time Mr. Drayton visited the doctress, her patient was found sitting up. She exhibited a stone, about the size of a goose's egg, saying she had taken the disease of the boy out of him as large as it, and that he would now get well. The parents were greatly delighted to hear that their son would recover. The reward she was to receive was a large basket of dried salmon, weighing eighty pounds, a blanket, and some other presents.

One singular custom prevailing here is, that all the convalescent sick are directed to sing for several hours during the day.

It would be a profitable occupation to be a medicine-man or woman, were it not for the forfeiture in case of a want of success; but this applies only where the patient is a person of distinction.

It is seldom that medicine-squaws are met with, as they are by no means numerous.

It was observed that many of the females were living under a little hut at some distance from the lodges; and it was ascertained that women, during the menstrual period, are not allowed to remain in the lodges, and are obliged to stay in huts at a distance, managing the best way they can during its continuance. This custom also prevailed very strictly after childbirth, and in that case continues for forty days. This latter custom, however, is not so rigidly adhered to by this tribe,

at present, as it used to be; but among the northern tribes it is very strictly observed.

By the 20th, Mr. Drayton had finished his drawing and sketching, and obtained the necessary data for the map of the river and the country surrounding this post, to which it was one of the most central, and a commanding one for the protection of the country; and as I deemed that accurate information respecting it would be desirable, I had directed his attention particularly to this business. The manner in which this task was executed was very satisfactory, and merits my warmest acknowledgments.

In company with Mr. M'Kinley, Mr. Drayton rode to the great forks of the Columbia. On reaching that place, they made their way up the south branch, which is a large stream, and navigable for canoes a short distance above the mouth of the Kooskooskee river.

A remarkable phenomenon occurs on the junction of the waters of the Columbia and Snake rivers: the Columbia from the north brings a cold current, while the Snake from the south is warm. This difference is perceived even at Wallawalla; for the water passing along the east shore near the fort is too warm to drink, and when they desire to have cool water for drinking it is brought from the middle of the river by a canoe.

On the day that Mr. Drayton was to leave Wallawalla, four men, who had accompanied Mr. Ogden's brigade as far as Okonagan, returned to Wallawalla on their way back to Vancouver. They brought no letters from Mr. Ogden.

Mr. M'Kinley furnished Mr. Drayton with horses and Indian guides, to return with the horses from the Dalles, and the party was increased by the four voyageurs to the number of eight. By the kindness of Mr. M'Kinley, and by the direction of Mr. Ogden, Mr. Drayton found himself fitted with good horses and every convenience requisite for the journey, besides a quantity of provisions. The first night they encamped near the Windmill Rock, having travelled a distance of thirteen miles.

The voyageurs, however, were found destitute of almost every thing, and spoke of their having been furnished with only a little tobacco, to carry them from Okonagan to Vancouver. Knowing Mr. Ogden's character as I do, I cannot believe that such was the fact. There were some, however, found by Mr. Drayton destitute of every thing, and he provided these with supper from his own stores, after which they lay down on the ground to sleep, without any shelter whatever. The general impression is, that these men are badly found and cared for.

They chose the left or south bank of the Columbia for their descent. Although the road on the north is the shortest, that on the south is better. In passing along, trails are seen, many sometimes joining together; which mark the routes of the Indians in their journeys across the country.

The next night they encamped within fifteen miles of John Day's river. Near their encampment there were several lodges, containing about forty Indians. At sunset, at the lodge of the old chief, a little bell was rung, when they all repaired thither and joined in devotions, the leader praying very loud. On the prayer being finished, they commenced gambling, and kept it up all night; but when the sun rose they again resorted to the lodge of the chief for prayer as before. During the whole night they made a most tremendous noise, singing and beating with sticks on splintered rails, which is the only substitute they have for a musical instrument.

The country had been easily travelled over until John Day's river was approached, when the route became extremely rough and rocky. On the banks of that river is a large village of about sixty Indians, and they were ferried across the stream for a pound of tobacco, while the horses swam over.

These Indians were as great extortioners as the others, and demanded tobacco, powder, and ball. The latter articles they are most desirous of obtaining, as the possession of them enables them to visit their hunting-grounds at the foot of Mount Hood.

The musquitoes were again found here in numbers; but the upper country seems to be entirely free from that annoyance.

The country from this ferry to the Chutes river is a flat prairie, half a mile wide, high enough not to be overflowed, and tolerably well watered, overgrown with small grass. The party passed the Chutes river before sunset, and encamped on its western bank.

On the morning of the 24th, they reached the Dalles. Mr. Drayton found this place entirely altered in its appearance, so much so that he could hardly realize that it was the same. The water had fallen during the twenty days of his absence about thirty feet, and was still subsiding. The Columbia was now confined within high perpendicular rocks; the beach, where he had before stood, and been able to touch the water with his hand as it passed through the confined banks, was now far above it, and the river, instead of rushing through its many canals, was now confined to a single one. It still, however, rushed along with all the fury and violence of a mighty torrent, and had yet as much as twenty-seven feet to fall to low water. In this

state of the river the Company's boats frequently shoot or descend it, but this is at all times an exploit of great danger. Many fearful accidents have taken place with the most experienced boatmen, who with all their skill could not preserve themselves from being carried into the vortices, drawn under, and destroyed.

Such is the peculiar nature of the rush of waters through the Dalles, that for some minutes the whole will appear quite smooth, gliding onwards as though there were no treachery within its flow, when suddenly the waters will begin to move in extended and slow whirls, gradually increasing in velocity until it narrows itself into almost a funnel shape, when, having drawn towards it all within its reach, it suddenly engulfs the whole, and again resumes its tranquil state.

An awful accident was related to me by Mr. Ogden, of which he was an eye-witness, which will more clearly illustrate the nature of the place.

Mr. Ogden was descending the river in one of the Company's boats with ten Canadian voyageurs, all well experienced in their duties. On arriving at the Dalles, they deemed it practicable to run them, in order to save the portage. Mr. Ogden determined, however, that he would pass the portage on foot, believing, however, the river was in such a state that it was quite safe for the boat to pass down. He was accordingly landed, and ascended the rocks, from which he had a full view of the water beneath, and of the boat in its passage. At first she seemed to skim over the waters like the flight of a bird; but he soon perceived her stop, and the struggle of the oarsmen, together with the anxious shout of the bowman, soon told him that they had encountered the whirl. Strongly they plied their oars, and deep anxiety if not fear was expressed in their movements. They began to move, not forwards, but onwards with the whirl: round they swept with increasing velocity, still struggling to avoid the now evident fate that awaited them: a few more turns, each more rapid than the last, until they reached the centre, when, in an instant, the boat with all her crew disappeared. So short had been the struggle, that it was with difficulty Mr. Ogden could realize that all had perished. Only one body out of the ten was afterwards found at the bottom of the Dalles, torn and mangled by the strife it had gone through.

Mr. Drayton found that as many as half of the Indians had left their fishing. He noticed here, in attempting to make a bargain for canoes to take him as far as the Cascades, the same habit of extortion that was before evinced. In all cases, it seems to be a part of the Indian

character to take advantage of distresses and wants. He was finally obliged to give four times as much as it ought to have cost to execute the work; and after the bargain was made, they informed him they must be paid before they launched the canoe; and when that was done, a fathom of tobacco must be given to each of them for launching her. This demand was not complied with, and the goods that had been paid were now seized and taken away again. Mr. Drayton then proceeded to the mission, where Mr. Lee kindly offered his canoe. This was accordingly put on an ox-cart,—for it is necessary to keep it near his house to prevent its being stolen,—and carried to the water. When they reached the river, the two canoes above spoken of were seen near the landing-place, and the owners offered them for a much less price, and without any "potlatch." Their offer was then accepted, when he embarked, and proceeded down the river about twelve miles, where they encamped.

At daylight the next morning there was not an Indian to be found, and two of the best paddles were gone, as well as the men's salmon. On a search being made, the fish were found hidden in the bushes. After leaving the shore, they were called to by the Indian, and on returning to him, the only excuse he offered was, that he had been asleep, and had but just awoke: he, however, ran off into the bush again. After they joined the other canoe, the old Indian in it said that the one who had run away had endeavoured to persuade him to steal Mr. Drayton's things; and when they landed at night the plan was to take the canoe and all off, when he was on shore: this was prevented by their carefully putting all the things into the tent.

When they reached the Cascades, an examination was made of the pine stumps before spoken of.

The same evening a boat reached the salmon-fishery, by which Mr. Drayton returned to Vancouver, where he met with the same kind reception and welcome he had before received.

From this trip, Mr. Drayton brought with him the materials for the construction of a map of the river, above the Cascades as far as Wallawalla, which has been incorporated in our chart of Oregon, and will be found in the small atlas accompanying the Narrative. I take this occasion to say, that I have embraced within this the whole of the territory of Oregon between the parallels of 42° and 54° N. The southern pass of the Rocky Mountains is also included, which was taken from the surveys of Lieutenant Fremont, of the United States Engineer Corps, and which I have designated as Fremont's Pass. This officer is now engaged in an exploration of the country about the

Youta Lake and the middle section of the territory, in a line on the east of the Cascade Range, from John Day's river to the south,—a portion of the country it was my intention to have traversed, if the Peacock had reached the Columbia river at the appointed time.

SKIN LODGE.

CHAPTER XII.

CONTENTS.

BAKERY AT NISQUALLY—PROGRESS OF THE SURVEYS—LOSS OF AN EYE-PIECE—FRUITLESS SEARCH FOR IT—SURVEY OF HOOD'S CANAL—CELEBRATION OF FOURTH OF JULY—VISIT FROM DR. M'LAUGHLIN—MOUNT RAINIER AND OTHER SNOWY MOUNTAINS—EXPEDITION TO THE BUTE PRAIRIES—FARM OF THE COMPANY AT NISQUALLY—SURVEY OF PUGET SOUND—RETURN OF LIEUTENANT JOHNSON'S PARTY—DISADVANTAGES OF THE POST AT NISQUALLY—NISQUALLY INDIANS—LIEUTENANT JOHNSON'S OPERATIONS—EQUIPMENT OF HIS PARTY—HIS GUIDE—HIS FIRST CAMP—HIS SECOND CAMP—PUYALLUP RIVER—DIFFICULT PATHS—LARGE ARBOR VITÆ TREES—SMALOCHO RIVER—LOSS OF CAMP EQUIPAGE—GREAT SIZE OF THE SPRUCE TREES—LA TETE MOUNTAIN—LITTLE PRAIRIE—CAMP AT THE EDGE OF THE SNOW—DISTANT VIEW OF MOUNT RAINIER—SUMMIT OF THE RIDGE—ACCIDENT TO THE CHRONOMETER—INDIANS DISMISSED—SMALOCHO RIVER—FIRE IN THE WOODS—YAKIMA TRIBE—INTERVIEW WITH ITS CHIEF—HE EXCHANGES HORSES—ANOTHER VIEW OF MOUNT RAINIER—SPOKANE INDIANS—YAKIMA RIVER—VERY ELEVATED GROUNDS—DESCENT TOWARDS THE COLUMBIA—COLUMBIA RIVER—PISCHOUS RIVER—INDIAN CULTIVATION—VIEW OF THE COLUMBIA—POINT DE BOIS—OKONAGAN INDIANS—HIGH PRAIRIE—MOUNT ST. PIERRE—FORT OKONAGAN—FORT THOMPSON—ARRIVAL OF MR. MAXWELL—FOOD OF THE INDIANS, AND OF THE COMPANY'S SERVANTS—AMUSEMENT OF THE INDIANS—DEPARTURE FROM FORT OKONAGAN—LIEUTENANT JOHNSON LOSES HIS WAY—GRASSY PRAIRIE—GRANDE COULEE—ARTIFICIAL HORIZON BROKEN—LIEUTENANT JOHNSON LEAVES THE PARTY—THE PARTY ARRIVES AT FORT COLVILLE—LIEUTENANT JOHNSON'S RIDE UP THE SPOKANE—MISSIONARY STATION OF CHIMIKAINE—CORNELIUS, CHIEF OF THE SPOKANE TRIBE—SINGULAR PROPHECY—LIEUTENANT JOHNSON'S ARRIVAL AT FORT COLVILLE.

CHAPTER XII.

PUGET SOUND AND OKONAGAN.

1841.

On my return to Nisqually, my first care had reference to our provision of bread. This I found to be so far expended as to make it necessary to economize it by every means in my power, if I wished to avoid its falling short. I therefore determined to attempt to have fresh bread baked. With this view I had an oven built upon a plan borrowed from the steam-holes of the Indians. The bottom of the oven was formed upon a stage of plank, and the shape of the superstructure was given by bending twigs of hazel. These were covered with a plastic clay, which was found in abundance in the neighbourhood. A dough-trough was hollowed out of the trunk of a large tree. When the oven and trough were ready, another difficulty was to be overcome, for we had no bakers. This was remedied, however, by the assistance of our stewards and cooks; and two sailors instructed by them were appointed to take charge of the bakery. We now began to bake daily, and succeeded so well after a day or two, that the whole ship's company was daily supplied with full rations of soft bread, causing an important saving in our store of sea-biscuit.

I learned, immediately upon my return, that the surveys under Lieutenant-Commandant Ringgold and Lieutenant Case, were making rapid progress. The former, with the force under him, had completed a large portion of Admiralty Inlet; the latter had finished Hood's Canal, and had returned to take up the survey of Puget Sound. A report having been made to me, that one of the eye-pieces of the theodolite had been lost in Hood's Canal, Lieutenant Budd was ordered to relieve Lieutenant Case, and the latter was despatched to search for it. Lieutenant Case proceeded in a boat well armed, and visited all

the stations he had before occupied, and became well satisfied that it had been stolen. While looking for it, a canoe with three Toandos joined him, and on learning what he was looking for, they said it was among the Scocomish tribe, and gave a full account of its having been picked up by a woman who was sitting near when the box was opened. Lieutenant Case took one of the men with him up the canal, to point out the place; on reaching which, they proceeded to the chief's house, who was absent, but soon returned. Lieutenant Case asked him for the missing article; the possession of which being denied, he took the chief's gun, telling him it would be kept until the eye-piece was restored. After several fruitless attempts, it could not be obtained; for the woman, it was said, had taken it down the canal. The chief, however, promised to follow her, which he did the next day. The next morning Lieutenant Case was threatened with an attack by eight canoes, which he avoided by making sail down the canal, when they desisted from following him. During the day he met the chief returning. He had been to the Scocomish village, having heard that a girl there had something resembling it, as he said, but it proved to be a cologne-bottle.

Lieutenant Case, finding that his party was too small to attempt force, restored the chief his gun. He was afterwards informed that the chief's object in visiting the villages on the canal, had been to collect his warriors. After leaving the chief, they were followed by a canoe containing five of the largest and most muscular men he had seen; all of whom were armed, and apparently disposed for some mischief. Although satisfied that the eye-piece was among them, Lieutenant Case deemed it prudent not to risk an encounter with such unequal odds, and returned to the ship. He was desirous of being furnished with a larger force, in order to return and obtain the eye-piece; but believing that a message would be equally effective, Mr. Anderson, at the fort, was obliging enough to despatch a war-messenger, to inform the tribe, that if it were not brought back, I would punish them.

Lieutenant Case's survey of Hood's Canal was very satisfactory. Its banks, as far as Tskutska Point, do not exceed one hundred feet in height, and are formed of stratified clay, with a light gravelly soil above it, thickly covered with different species of pines. This is also the character of the eastern shore, for the whole extent of the canal; but the west and north shores above this point become more bold and rocky, with a deeper and richer soil, formed by the alluvial deposits from the Mount Olympus Range.

On entering the canal, they encamped near some Suquamish Indians,

who had received as visiters a party of fifty Clalams, by appointment, to gamble for blankets: they continued their games throughout the night.

At Tskutska Point, the canal divides in two branches; one taking a northerly direction, while the other pursues its course to the southwest. After leaving the Suquamish, they met the Toandos, a small tribe, inhabiting the mountains; who, from their own account, are able to muster one hundred and fifty warriors.

Lieutenant Case reports them as the best-looking men they had met with. After passing further down the canal, they found the Scocomish tribe, who inhabit its southern end. These resemble in appearance the Toandos, with whom they are in close alliance, and have one hundred and fifty fighting men.

The canal was not found to terminate at the place where the examination of Vancouver ended; but, taking a short turn to the northward and eastward for ten miles, it approaches the waters of Puget Sound within a distance of two and a half miles. The intervening country is rough and hilly. From this point, Lieutenant Case had communication with the ship; and a supply of bread, of which he was in want, was sent him.

At the southern extremity of Hood's Canal, there is a large inlet, called Black Creek, by which the Indians communicate with the Chickeelees and Columbia rivers.

Before reaching the southern end of the canal, the rocky shore of the west side, near Mount Olympus, had gradually sloped into low land, with a thickly-wooded and good soil.

At the extreme end of the canal, there was also a wide creek, which had an extensive mud-flat at its mouth. This is the case with all the creeks that empty into these waters. The water in the centre of the sound is too deep for anchorage; but there are several good harbours, of all which surveys were made. They will be found in the Hydrographical Atlas.

There is plenty of water in the small harbours; and some few of them have water enough running into them to turn mills. There is no very great extent of country for cultivation, and the climate is very similar to that experienced at Nisqually. The survey being completed, the boats returned to the ship on the 3d of July.

During this time we had been steadily employed at the observatory, and by the 4th I had completed the pendulum and astronomical observations.

Wishing to give the crew a holiday on the anniversary of the Declaration of our Independence, and to allow them to have a full day's

frolic and pleasure, they were allowed to barbecue an ox, which the Company's agent had obligingly sold me. They were permitted to make their own arrangements for the celebration, which they conducted in the following manner.

The place chosen for the purpose was a corner of the Mission Prairie, before spoken of. Here they slaughtered their ox, and spitted him on a sapling supported over the fire, which was made in a trench. The carcass could thus be readily turned, and a committee of the crew was appointed to cook him. Others were engaged in arranging the amusements, &c. All was activity and bustle on the morning of the 5th, as the 4th fell upon Sunday. Before nine o'clock all the men were mustered on board in clean white frocks and trousers, and all, including the marines and music, were landed shortly after, to march to the scene of festivity, about a mile distant. The procession was formed at the observatory, whence we all marched off with flags flying and music playing, Vendovi and the master-at-arms bringing up the rear. Vendovi was dressed out after the Feejee fashion. It was truly gratifying to me to see them all in such good health and spirits, not a man sick, and their clothes as white as snow, with happy and contented faces.

Had it not been for the want of news from the Peacock, and the consequent apprehensions in relation to her fate, I should have felt and enjoyed the scene much more than I did. But the continual feeling that the ship might have been lost on some coral reef, and the idea of the sufferings her officers and crew would, in such case, undergo, tended to repress all other thoughts. This anxiety was not only felt by myself, but the officers and crew partook of it in a great degree. It was impossible to conjecture her fate, yet her continued absence and detention beyond the time of her anticipated arrival, naturally excited many fears and surmises, which, as the time passed on, made each one more certain that some disaster had befallen them.

Two brass howitzers were also carried to the prairie to fire the usual salutes. When the procession reached Fort Nisqually, they stopped, gave three cheers, and waited, sailor-like, until it was returned. This was done by only a few voices, a circumstance which did not fail to produce many jokes among the seamen. On reaching the ground, various games occupied the crew, while the officers also amused themselves in like manner. At the usual hour, dinner was piped, when all repaired to partake of the barbecue. By this time, the Indians had gathered from all quarters, and were silently looking on at the novel sight, and wistfully regarding the feast which they saw going on before them. At this time the salute was fired, when one of the men, by the name of Whitehorn, had his arm most dreadfully

lacerated from the sudden explosion of the gun. This accident put a momentary stop to the hilarity of the occasion. Dr. Fox, who was on the ground, thought that amputation of the arm above the elbow would be necessary, but it was deemed better to delay it for a time. The wound was dressed as well as it could be, and a litter was made, on which he was at once sent, under charge of his messmates, to the ship. Men-of-war's men are somewhat familiar with such scenes, and, although this accident threw a temporary gloom over the party, the impression did not last long, and the amusements of the morning were now exchanged for the excitement of horse-racing, steeds having been hired for the purpose from the Indians. This sport is always a favourite with sailors on shore, and in pursuit of it they had not a few tumbles, but fortunately none were seriously hurt. At sunset they all returned on board, in the same good order they had landed.

All the officers, together with Mr. Anderson, Captain M'Niel, and Dr. Richmond, dined with me at the observatory, and we were in hopes of having the company of Dr. M'Laughlin; but, owing to his having lost his way, he did not arrive until the following morning. He was gladly welcomed, and it gave us all great pleasure to acknowledge the attentions that had been heaped upon us by his order, and the kindness of the officers of the fort.

He paid me a visit on board, and felt greatly pleased with the ship, which was the first man-of-war he had ever been on board of. On his leaving the vessel, the yards were manned, and three hearty cheers given him by the crew, who were aware of his kindness in ordering them a supply of fresh provisions. He dined with us, and the next morning returned to the Cowlitz Farm, on his way back to Vancouver.

After the rejoicings were ended, the surveying party was again despatched to complete the survey of Puget Sound.

The height of Mount Rainier was obtained by measuring a base line on the prairies, in which operation I was assisted by Lieutenant Case, and the triangulation gave for its height, twelve thousand three hundred and thirty feet.

While engaged in these duties, I noticed from a point of the prairie, the white cones of both Mount St. Helen's and Mount Hood very distinctly. These mountains all resemble each other closely, and appear in some points of view as perfect cones. They give great interest and grandeur to the scenery. Mount Rainier is at all times a very striking object from the prairies about Nisqually, rising as it does almost imperceptibly from the plain, with a gradual slope, until the snow-line is reached, when the ascent becomes more precipitous.

The ascent of these mountains has never been effected, but it was my intention to attempt it, if my other duties had permitted, as I was very anxious to get a view of their terminal craters. The absence of the Peacock, however, and the great amount of work necessarily devolving on the rest of the squadron, made it impossible for me to undertake this additional labour.

Around Nisqually there are many beautiful rides, and if there were any vehicles, they would be equally favourable as drives; for the country admits of a carriage being driven in almost any direction, within many miles of the fort.

The Company have as yet few fields enclosed, nor is it necessary that they should have, so long as the cattle are watched and penned in at night. The practice of penning is adopted, not only to protect the animals from the wolves, but to save the manure and apply it to a useful purpose. These pens are about half an acre in size, and are enclosed with our Virginia fence, made of pine rails. They are moved once a week, which, in the course of the year, gives a fertilizing effect to a large piece of ground; and all those portions of it that have been poor and barren are thus brought readily, and at little expense or labour, under good cultivation.

On this farm there were about two hundred acres under cultivation, which I was informed would yield fifteen bushels of wheat to the acre, and it is intended to convert it into a grazing farm, for which purpose a stock of cattle was on its way from California, during the year of our visit.

It is estimated that three thousand sheep, fifteen hundred head of cattle, and about four hundred horses, may be maintained at this place. Mr. Anderson, a clerk of the Company, whom I have mentioned as being in charge of the post, receives no more than one hundred pounds for his superintendence.

The observatory duties being completed, I set out, with Lieutenant Budd and Mr. Eld, in three boats, to join the surveying party under Lieutenant Case. Mr. Anderson accompanied us, on a visit to the Shute's River Falls, where we intended to take horses, to ride to the Bute Prairie, with some men, to open several of the mounds, to discover their contents, if they had any.

By the stupidity of the Indian guide, we took the wrong arm of the sound, and did not discover our error until we reached its extreme limit, where, as night overtook us, we were forced to encamp.

The next day, however, we reached the falls, which were insignificant, both in height and volume of water. This arm, which I have called Budd's, is a fine harbour, nine miles in depth, and about half a mile wide.

After forming our encampment near by (which was surrounded by Seringias in full blossom), and giving Lieutenant Budd and Mr. Eld orders, Mr. Anderson and myself, with six men, set off for the Bute Prairie, with shovels and picks. We reached the place about five o'clock, through a rain which had wet the bushes and undergrowth so much, that in passing through the Indian trails, we were completely drenched. These bushes consisted principally of Rubus and Alder. On our route we passed several beautiful and secluded prairies, of excellent soil, and covered with many flowers. The men began their digging early in the morning. These mounds have been formed by scraping the surface earth together in a heap. The soil, therefore, is very rich, and they have a rank growth of vegetation on them. Much of this rich earth or mould must have been brought from a distance. The regularity of their construction and shape, as well as the space over which they are scattered, are surprising. Although I could obtain no direct information respecting them, I was one day told that the medicine-man gathered his herbs from them, to make the decoctions with which he effects his cures.

Although all tradition concerning them may be lost, yet the custom of these medicine-men may have survived, and taking into consideration the influence they have had and still have over the tribes, it is possible that their predecessors might have had something to do with the formation of these monuments. They certainly are not places of burial. They bear the marks of savage labour, and are such an undertaking as would have required the united efforts of a whole tribe.

The hole, which was dug directly in the centre, was about four feet in diameter. At a depth of about six feet was found a kind of pavement of round stones, laid on the subsoil of red gravel. No articles of any description were discovered in the mounds, which seemed to be grouped in fives, as in the figure annexed. Although there is a general resemblance among them, they evidently have been constructed successively, and at intervals of several years. I heard it suggested that they had been formed by water-courses, but this I view as impossible, for they are situated on a level prairie, and are at least a thousand in number.

Observations for latitude and longitude were obtained here, but the weather did not permit me to get angles on Mount Rainier, as I was desirous of doing. The next day I parted with my friend, Mr. Anderson, who desired to return to Nisqually, while we returned to the falls. The ride was more disagreeable than we had before found it, and I felt heartily glad to get back to the surveying parties.

On the 12th, at seven o'clock, we began our surveying operations, and after a hard day's work, joined Lieutenant Case's party, when I took charge of the whole. My force, which now consisted of seven boats and their crews, was sufficiently strong to make rapid progress: the putting up of signals, the triangulation, and soundings, were all carried on at the same time. When we reached our encampment at night, the rough draft of our day's work was completed. We continued thus employed until the 17th, when we reached the ships, having completed the surveys of all the numerous branches of this sound: these all afford safe navigation for large vessels. The land is low, and well covered with various kinds of trees, among which the pine predominates: the other trees, consisting of spruces, oaks, arbutus, alders, and great quantities of seringias in full blossom, reminded me of our gardens at home. The perfume of the flowers scented the air for a long distance around. Some of the seringia-bushes were from twelve to fifteen feet high.

The soil is in some places good, but in others it is quite light and sandy. At the head of all the branches there are extensive mud-flats, and some small patches of salt meadow. We did not meet with many natives: those who inhabit this region were probably employed in taking fish, and they seldom remain in any place beyond the time necessary for this purpose.

On my return to the ship, I found that Lieutenant Johnson had returned, with the party of which he had charge. I shall therefore give in this place an account of their journey, and the country through which they passed, referring the reader to my orders to Lieutenant Johnson, in Appendix XII., for the route intended to be passed over, and the duties to be performed. But before leaving Nisqually, I have a few words to say about its position, and the Indian tribe of that name.

The situation of Nisqually is badly chosen for trade, for the anchorage is of small extent, and only a few vessels can be accommodated within a reasonable distance of the shore. It would also be much exposed to the southwest winds, and the hill is an insuperable objection to its becoming a place of deposit for merchandise, as it would very much increase the labour and expense of transportation. The Nisqually fort or post was chosen, as I have been informed, before the Company had an idea of transporting any articles by water. It has, however, one great recommendation, in the ease with which water may be obtained from the stream that flows in abreast of the anchorage. Much better places than Nisqually could be found in this vicinity, for the location of a town. There is one, in particular, just within Kitron's

Island, about a mile and a half to the north of Nisqually anchorage, where the shore has a considerable indentation. There, although the water is deep, vessels would be protected from the winds which blow most violently, from the southwest, southeast, and northwest, and also from any sea, while Nisqually is not: this place is equally well supplied with water, and the hill is by no means so precipitous.

The spring tides were found to be eighteen feet, those of the neaps twelve feet. High water, at the full and change, at $6^h\ 10^m$, P. M. During the whole of our stay there was found to be a great discrepancy between the day and night tides, the latter not rising as high as the former by two feet.

The country in this vicinity is thought to be remarkably healthy, and on all these salt-water inlets, the winter is represented to be mild, and but of short duration. The mean temperature, six feet under ground, during our stay at the observatory, from the 20th of May till the 14th of July, was found to be 58·5°. I was not fully satisfied that this record gave correct results for the mean temperature of the climate, although frosts do not penetrate the ground; for by the same manner of trying it, and under almost the same circumstances, at Astoria, we obtained only 54°, although that place is a degree to the south of Nisqually.

The geographical position of Nisqually will be found in the tables. The greatest range of temperature was found to be 55°, the lowest 37°; and the mean, during the same period, 63·87°: the barometer standing at 29·970 in.

The Indians around Nisqually are few in number, and the whole tribe does not amount to two hundred, including men, women, and children. They belong to the tribes who flatten their heads, and are represented as vicious and exceedingly lazy, sleeping all day, and sitting up all night to gamble. So strong is the latter propensity among all these tribes, that it is said, that after parting with all their movable property, they will go so far as to stake their wives and children, and lastly even themselves for years of slavery.

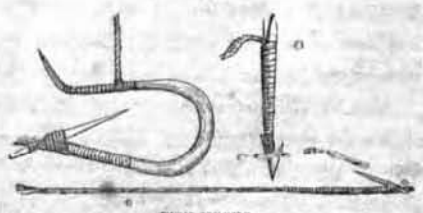
Their clothing seldom consists of more than a blanket, a pair of skin breeches, and moccasins. Little or no distinction of rank seems to exist among them: the authority of the chiefs is no longer recognised, and each individual is left to govern himself.

They are addicted to stealing, and will run some risk to effect their object: thus, several blankets were stolen from the hammocks of our men while asleep in their tents, although a sailor was known to be on guard with loaded arms, only a few paces from the spot. Mr. Anderson informed me that he had employed several of them to till the land,

but he found them disinclined to work, although he admitted they were more apt than he had anticipated. This tribe, so far as respects the ability of committing depredations on the whites, is quite harmless, and is rapidly thinning off through diseases contracted by a change of habits. They are all of a wandering character, and change their residences in search of their food, which consists principally of fish, particularly shell-fish. Clams are seen in great quantities among them, strung on sticks, upon which they have been preserved by drying and smoking. They also store up pounded salmon, and the cammass-root. In the fall and winter they are supplied with an abundance of game and wild-fowl, on which they then live; but they are not upon the whole well fed, as they are little disposed to exert themselves to procure a supply of food, when they are not in actual want. In the winter several families live together in their large board lodges: when the spring comes on they again break up, and resort in small parties to those places where they can obtain their food most easily. This tribe, as is the case with most of those in the territory, speak a peculiar language among themselves, but in communication with others they use the Chinook language.

As the spring is opening, small parties of these Indians may be frequently seen on their way, with their goods and chattels tied on their horse's back, or in small canoes, to the different cammass and fishing grounds.

During the salmon-fishery, vast shoals of young herring are seen, which the Indians take with a kind of rake attached to the paddle. The herring are used for bait for the salmon. Their hooks are made in an ingenious manner of the yew tree, and are strong and capable of catching the large fish. They are chiefly employed in trailing for fish. A species of rock cod is also abundant, some of which exceed fifty pounds in weight. Flounders are also to be had in great quantities.



FISH-HOOKS.

I have before stated that Lieutenant Johnson's party was ready for departure on the 19th May; that it consisted of Lieutenant Johnson, Messrs. Pickering, Waldron, and Brackenridge, a sergeant of marines, and a servant. I must do justice to the exertions of this officer in getting ready for his journey, which he accomplished in less time than I anticipated, as the delays incident to setting out on a novel expedition, and one believed by most persons to be scarcely practicable

in the summer season, are great and tantalizing. In making preparations for such a journey, the Indians were to be bargained with, and, as I have before had occasion to remark, are enough to tire the patience of Job himself. First, the Indian himself is to be sought out; then the horse is to be tried; next the price is to be discussed, then the mode of payment, and finally the potlatch: each and all are matters of grave consideration and delay, during which the Indians make a business of watching every circumstance of which they can take advantage. No one can be sure of closing his bargain, until the terms are duly arranged, the potlatch given, and the horse delivered. After obtaining horses, Lieutenant Johnson had the saddles, alforcas, saddle-cloths, saddle-trees or pack-saddles, &c., with a variety of lashings, to prepare. For many of these we were indebted to the kindness of Captain M'Niel and Mr. Anderson. Others were made on board the ship, after a pattern lent us. One of the most important persons to obtain was a good guide, and hearing of one who resided at the Cowlitz river, by the name of Pierre Charles, he was at once sent for; but I did not think it worth while to detain the party until his arrival, as he could easily overtake it. Lieutenant Johnson, therefore, was directed to hurry his departure, and to set out, which he did on the 19th May, at noon, and proceeded to the prairie about two miles distant, where the party encamped.

There is little danger on these expeditions of having too few articles: the great difficulty is to avoid having too many. It turned out as I had anticipated. The first night passed in their tent fully satisfied them of this, and taught them to dispense with all other bedding save blankets.

Mr. Anderson rode to the encampment before night, bringing the news of the arrival of Pierre Charles at the fort; whereupon Lieutenant Johnson returned to make an agreement with him and his companion. This was done, although, as is to be supposed, their demands were exorbitant, in consequence of the belief that their services were indispensable.

Pierre Charles's companion was a young man, named Peter Bercier, (a connexion of Plumondon,) who spoke English, and all the languages of the country.

On the morning of the 20th, they obtained an accession to their horses, and set out on their route towards the mountains. Although the possibility of crossing them was doubted, yet I felt satisfied if exertion and perseverance could effect the object, the officer who had charge of the party would succeed. This day, they made but five miles; after which they encamped, at the recommendation of Pierre

Charles, in order that the horses might not be over-fatigued, and be able to get good pasture and water. Here a number of natives visited the camp. Pine trees were in large numbers, many of them upwards of one hundred and thirty feet in height. On the banks of a small stream, near their camp, were found the yellow Ranunculus, a species of Trillium, in thickets, with large leaves and small flowers, Lupines, and some specimens of a cruciferous plant.

On the 21st they made an early start, and in the forenoon crossed the Puyallup, a stream about seventy feet wide; along which is a fine meadow of some extent, with clumps of alder and willow: the soil was of a black turfy nature. After leaving the meadow-land, they began to ascend along a path that was scarcely visible from being overgrown with Gaultheria, Hazel, Spiræa, Vaccinium, and Cornus.

During the day, they crossed the Stehna. In the evening, after making sixteen miles, they encamped at the junction of the Puyallup with the Upthascap. Near by was a hut, built of the planks of the Arbor Vitæ (Thuja), which was remarkably well made; and the boards used in its structure, although split, had all the appearance of being sawn: many of them were three feet wide, and about fifteen feet long. The hut was perfectly water-tight. Its only inhabitants were two miserable old Indians and two boys, who were waiting here for the arrival of those employed in the salmon-fishery. The rivers were beginning to swell to an unusual size, owing to the melting of the snows in the mountains; and in order to cross the streams, it became necessary to cut down large trees, over which the packs were carried, while the horses swam over. These were not the only difficulties they had to encounter: the path was to be cut for miles through thickets of brushwood and fallen timber; steep precipices were to be ascended, with slippery sides and entangled with roots of every variety of shape and size, in which the horses' legs would become entangled, and before reaching the top be precipitated, loads and all, to the bottom. The horses would at times become jammed with their packs between trees, and were not to be disengaged without great toil, trouble, and damage to their burdens. In some cases, after succeeding in getting nearly to the top of a hill thirty or forty feet high, they would become exhausted and fall over backwards, making two or three somersets, until they reached the bottom, when their loads were again to be arranged.

On the 22d, their route lay along the banks of the Upthascap, which is a much wider stream than the Puyallup. A short distance up, they came to a fish-weir, constructed as the one heretofore described, on the Chickeeles, though much smaller.

This part of the country abounds with arbor-vitæ trees, some of which were found to be thirty feet in circumference at the height of four feet from the ground, and upwards of one hundred feet high. Notwithstanding the many difficulties encountered, they this day made about twelve miles.

On the morning of the 23d, just as they were about to leave their camp, their men brought in a deer, which was soon skinned and packed away on the horses. This was the first large game they had obtained, having previously got only a few grouse.

They had now reached the Smalocho, which runs to the westward, and is sixty-five feet wide: its depth was found to be four and a half feet, which, as it was also rapid, was too great for the horses to ford and carry their loads. The Indians now became serviceable to them. Lieutenant Johnson had engaged several that were met on their way, and they now amounted to thirteen, who appeared for a time lively and contented. This, however, was but a forerunner of discontent, and a refusal to go any farther; but with coaxing and threatening they were induced to proceed.

The road or way, after passing the river, was over a succession of deep valleys and hills, so steep that it was difficult for a horse to get up and over them with a load, and the fall of a horse became a common occurrence. They were all, however, recovered without injury, although one of them fell upwards of one hundred feet; yet in consequence of his fall having been repeatedly broken by the shrubs and trees, he reached the bottom without injury to himself, but with the loss of his load, consisting of their camp utensils, &c., which were swept off by the rapid current of the river.

The route lay, for several days, through forests of spruce, and some of the trees that had fallen measured two hundred and sixty-five feet in length. One of these, at the height of ten feet from the roots, measured thirty-five feet in circumference; and at the end which had been broken off in its fall, it was found to be eighteen inches in diameter, which would make the tree little short of three hundred feet when it was growing. The stems of all these trees were clear of branches to the height of one hundred and fifty feet from the ground, and perfectly straight. In many cases it was impossible to see over the fallen trees, even when on horseback, and on these, seedlings were growing luxuriantly, forcing their roots through the bark and over the body of the trunk till they reached the ground. Many spruces were seen which had grown in this way; and these, though of considerable size, still retained the form of an arch, showing where the old tree had lain, and under which they occasionally rode. As may be supposed, they could

not advance very rapidly over such ground, and Lieutenant Johnson remarks, that although he was frequently desirous of shortening the road, by taking what seemed a more direct course, he invariably found himself obliged to return to the Indian trail.

Daylight of the 24th brought with it its troubles: it was found that the horses had strayed,—a disaster that the Indians took quite coolly, hoping it would be the cause of their return. After a diligent search, the horses were found in places where they had sought better food, although it was scanty enough even there.

During the day, the route led along the Smalocho, which runs nearly east and west; and they only left its banks when they were obliged to do so by various impassable barriers. This part of the country is composed of conical hills, which are all thickly clothed with pine trees of gigantic dimensions. They made nine miles this day, without accident; but when they encamped, they had no food for the horses except fern. The animals, in consequence, seemed much overcome, as did also the Indians, who had travelled the whole day with heavy loads. Lieutenant Johnson, by way of diverting the fatigue of the latter, got up a shooting-match for a knife, the excitement of which had the desired effect.

The trees hereabout were chiefly the cotton-wood, maple, spruce, pine, and elder, and some undergrowth of raspberry, the young shoots of which the natives eat with great relish.

On the 25th, they set out at an early hour, and found the travelling less rough, so that they reached the foot of La Tête before noon, having accomplished eleven miles. Lieutenant Johnson with the sergeant ascended La Tête, obtained the bearings, from its summit, of all the objects around, and made its height by barometer, two thousand seven hundred and ninety-eight feet: its latitude was fixed at 47° 08′ 54″ N. This mountain was entirely destitute of wood; but, having been burnt over, was found strewn with huge charred trunks, and the whole ground covered with ashes. The inclination of its sides was about fifty degrees.

The country around seemed one continued series of hills, and like La Tête had suffered from the fire. According to the natives, although the wood on the mountains was destroyed many years since, yet it was still observed to be on fire, in some places, about two years ago. Most of the tops of the distant peaks had snow on them. To the east was seen the appearance of two valleys, through which the two branches of the Smalocho flow.

On descending from La Tête, the river was to be crossed: this was found too deep to be forded, and it consequently became necessary to

form a bridge to transport the baggage, by cutting down trees. The current was found to run 6·2 miles per hour. They had been in hopes of reaching the Little Prairie before night, but in consequence of this delay, were forced to encamp before arriving there.

The Indians complained much of the want of food: many of the horses also were exhausted for the same cause, and exhibited their scanty nourishment in their emaciated appearance.

On the 26th, they reached the Little Prairie at an early hour, where, after consultation, it was determined to wait a day to recruit the horses, as this was the only place they could obtain food. It was also desirable to ascertain the practicability of passing the mountain with the horses, and at the same time to carry forward some of the loads, that the horses might have as little as possible to transport. Mr. Waldron and Pierre Charles were therefore sent forward with the Indians, having loads of fifty pounds each, to ascend the mountain, while Lieutenant Johnson remained with the camp to get observations. Dr. Pickering and Mr. Brackenridge accompanied the party of Mr. Waldron to the snow-line. The prairie on which they had encamped was about two and a half acres in extent, and another of the same size was found half a mile farther east.

The 27th was employed by Lieutenant Johnson in determining the positions of this prairie, which proved to be in latitude 47° 05′ 54″ N., and longitude 120° 13′ W. The variation was 19° 39′ easterly. At sunset, messengers arrived from Mr. Waldron, who had reached the summit at noon, and was to proceed down to the snow-line to encamp. The snow was found to be about ten feet deep, and the party crossing sank about ankle-deep, for which reason opinions varied as to the possibility of getting the horses over; but it was determined to make the trial. Lieutenant Johnson, therefore, set out, leaving a supply of food with an old Indian and a horse, both of whom were worn out, and unable to proceed.

By eleven o'clock, they were met by Pierre Charles and the Indians, who gave some slight hopes of accomplishing the task of getting all over. Lieutenant Johnson determined to take only the strongest horses to the edge of the snow. At half-past 5 P. M., they reached the best practicable encampment, being a mile beyond the place where Mr. Waldron had encamped two days before. The snow having melted so rapidly, Lieutenant Johnson, taking all things into consideration, determined, notwithstanding the forebodings of failure held out by the party that had gone before, to make the attempt. It now became necessary to push on with as much haste as possible, on account of the state of their provisions; for what with the loss sustained in

fording the river, and in consumption, they were obliged to adopt an allowance.

On the 29th, they departed, at early dawn, in order to take advantage of the firmness of the snow, occasioned by the last night's frost. They ascended rapidly, and passed over the worst of the way, the horses sinking no deeper than their fetlocks. They first passed over a narrow ridge, and then a succession of small cones, until they reached the summit.

Mount Rainier, from the top, bore south-southwest, apparently not more than ten miles distant. A profile of the mountain indicates that it has a terminal crater, as well as some on its flanks. The barometer stood at 24·950 in.: five thousand and ninety-two feet. There was another, to the north-northeast, covered with snow, and one to the west appeared about two hundred feet higher than the place where the observations were taken. This latter had suffered from fire in the same way as La Tête, and showed only a few patches of snow. To the eastward, a range of inferior height, running north and south, was in view, without snow.

MOUNT RAINIER.

On the western ascent of this mountain, the pines were scrubby; but at the summit, which was a plain, about a mile in length by half a mile wide, they were straight and towering, about eighty feet in height, without any limbs or foliage, except at the top. The distance travelled over the top was about five miles. On descending the east side, the snow was much deeper and softer, but the horses managed to get along well, and without accident.

Lieutenant Johnson, in following the party, missed the trail, and lost his way for three or four hours. On discovering the camp of those who had gone before, on the opposite side of a stream, he attempted to cross it on a log, in doing which his foot slipped, and he was precipitated into the water. Although his first thought was to save the chronometer from accident, it was too late, for the watch had stopped; it was not, however, so far injured as not to be set a-going, and it continued to go during the remainder of the journey: the only use I have been able to make of his subsequent observations, was to obtain the relative meridian distances between the points visited, without the absolute longitude. It is needless to say, that I placed little or no dependence on them, in constructing the map.

Although the horses had, with one or two exceptions, reached the eastern side of the mountain, yet they, together with the Indians, were

very much exhausted. The time had now come when the Indians, according to agreement, were to be paid off, and they had done much more than they agreed to do, having crossed the mountain twice.

Finding the necessity of retaining all the blankets that had been brought with them, in order to buy horses, Lieutenant Johnson proposed to the Indians to receive an order on Nisqually, in lieu of the immediate delivery of the blankets. This they readily assented to, and also willingly gave up those that had already been paid them, on receiving a similar order,—thus showing a spirit of accommodation highly praiseworthy. Only two of them returned to Nisqually, to whom were entrusted the botanical specimens, and the care of the horses left upon the road.

The banks of the small streams on the eastern side of the mountain were bordered with the greatest variety of trees and shrubs, consisting of poplars, buckthorn fifty feet high, dogwood thirty to forty feet high, several species of willow, alder, two species of maple, and occasionally a yew. The undergrowth was composed of Hazel, Vaccinium, Gaultheria, and a prickly species of Aralia. The herbaceous shrubs were Goodyera, Neottia, Viola, Claytonia, Corallorrhiza. The latter, however, were not in flower.

The party on foot, after leaving the Little Prairie about half a mile, crossed the northern branch of the Smalocho, which was found much swollen and very rapid. Two trees were cut down to form a bridge. After this, the walking through the forest became smooth and firm, and they passed on at a rapid pace. The Indians, although loaded with ninety pounds of baggage, kept up with the rest. At nightfall they encamped at the margin of the snow.

On lighting their fires, they accidentally set fire to the moss-covered trees, and in a few moments all around them was a blazing mass of flame, which compelled them to change their quarters farther to windward. They had made eighteen miles. But few plants were found, the season being too early for collecting at so high an elevation. The ground was covered with spruce-twigs, which had apparently been broken off by the weight of the snow. The summit was passed through an open space about twenty acres in extent. This glade was surrounded with a dense forest of spruce trees. There was no danger in walking except near the young trees, which had been bent down by the snow, but on passing these they often broke through, and experienced much difficulty in extricating themselves, particularly the poor Indians, with their heavy burdens. The breadth of snow passed over was about eight miles. At three o'clock they reached the Spipen river, where

they encamped: this camp was found to be two thousand five hundred and forty-one feet above the level of the sea. The vegetation appeared to our botanical gentlemen farther advanced on the east side than on the west, at the same height; the Pulmonarias and several small annuals were more forward. There were only a few pine trees, and those small, seen on the west side of the ridge; and on the east side, there was a species of larch, the hackmatack of the country. While they remained at this camp, they found a Pyrola, and some new ferns.

The country about the Spipen is mountainous and woody, with a narrow strip of meadow-land along its banks. Mr. Waldron had, on arriving at the camp, sent Lachemere, one of the Indians, down the river to an Indian chief, in order to procure horses. Those that remained after providing for the baggage, were consequently assigned each to two or three individuals to ride and tye on their route.

On the 30th, they proceeded down the Spipen, making a journey of eighteen miles, and passed another branch of the river, the junction of which augmented its size very considerably. Its banks, too, became perpendicular and rocky, with a current flowing between them at the rate of six or seven miles an hour. After the junction, the stream was about one hundred feet broad, and its course was east-southeast.

The vegetation on the east side of the mountains was decidedly more advanced than that to the west, and several very interesting species of plants were met with by the botanists, on the banks of the streams: among them were Pæonia brownii, Cypripedium oregonium, Pentstemon, Ipomopsis elegans, and several Compositæ, and a very handsome flowering shrub, Purshia tridentata.

On the 31st, they continued their route over a rough country, in some places almost impassable for a horse from its steepness, and in others so marshy as to require much caution to prevent being mired.

During the morning, they met two Indians, who informed them that the chief of the Yakima tribe was a short distance in advance, waiting to meet them, and that he had several horses. At noon they reached a small prairie on the banks of the river, where old Tidias, the chief, was seen seated in state to receive Lieutenant Johnson; but this ceremony was unavoidably broken in upon by the necessity of getting the meridian observations. The chief, however, advanced towards him with every mark of friendship, giving the party a hearty welcome. In person he was tall, straight, and thin, a little bald, with long black hair hanging down his back, carefully tied with a worsted rag. He was grave, but dignified and graceful. When they had been seated, and after smoking a couple of pipes in silence, he intimated

that he was ready for a talk, which then followed, relative to the rivers and face of the country; but little information was obtained that could be depended upon.

This tribe subsist chiefly upon salmon and the cammass-root: game is very scarce, and the beaver have all disappeared. The cammass-root is pounded and made into a sort of cake, which is not unpleasant, having a sweetish taste, but it is very dry, although some of the party took a fancy to it.

Tidias had with him an old man almost blind, who claimed much respect, and two young men, whose dress of buckskin, profusely ornamented with beads, was much admired by the party. During the talk, the old chief expressed himself delighted to see the white men, and spoke of his own importance, his immense territory, &c., in a style of boasting, to which the Indians are very much addicted. He said that he was desirous of affording all the accommodation he could to the party. But although he had eight or ten fine horses with him, he would not agree to part with them, as they were all his favourites. He was presented with a variety of articles, in return for which he gave the party a few dried salmon.

Towards evening, old Tidias took leave of them, saying that it was not proper for an Indian to encamp in the same place with a white man, and with a promise that he would have horses by ten o'clock the next day; but he had a game to play by procrastinating, in which he thoroughly succeeded.

In the morning they reached the Indian camp below, but no horses had arrived. It was far, they said, to Tidias's house; a man could not go thither and return in the same day; no horses or salmon could be brought; no one could be permitted to go. Lieutenant Johnson was then told that the road he had to follow was a "hungry" road. At last the Indian was induced by high offers to exchange good horses for a great number of bad ones, and finally consented to part with two more. On quitting him they became thoroughly aware that all the difficulties were owing, not to any indisposition to sell, but were created for the purpose of inducing high prices to be given.

The party now branched off at right angles to their former route, Lieutenant Johnson heartily sick and tired of his friend Tidias and his people. Two more of the Indians here left them. The country they entered, after passing a ridge about six hundred feet high, was quite of a different aspect, forming long sloping hills, covered with a scanty growth of pines. Many dry beds of rivulets were passed, and the soil of the hills produced nothing but a long thin grass. There are,

however, some small valleys where the growth of grass is luxuriant, the pines are larger, and the scenery assumed a park-like appearance.

From the summit of one of the hills, a sketch of Mount Rainier, and of the intervening range, was obtained.

MOUNT RAINIER.

On the top of the ridge they fell in with a number of Spipen Indians, who were engaged in digging the cammass and other roots. The latter were those of an umbelliferous plant, oblong, tuberous, and in taste resembling a parsnep. The process used to prepare them for bread, is to bake them in a well-heated oven of stones; when they are taken out they are dried, and then pounded between two stones till the mass becomes as fine as corn meal, when it is kneaded into cakes and dried in the sun. These roots are the principal vegetable food of the Indians throughout Middle Oregon. The women are frequently seen, to the number of twenty or thirty, with baskets suspended from the neck, and a pointed stick in their hand, digging these roots, and so intently engaged in the search for them, as to pay no attention whatever to a passer-by. When these roots are properly dried, they are stored away for the winter's consumption. This day they made only fifteen miles, in a northern direction.

On the 2d of June, they reached the Yakima, after having crossed a small stream. The Yakima was too deep for the horses to ford with their packs, and they now for the first time used their balsas of India-rubber cloth, which were found to answer the purpose of floating the loads across the stream.

This river is one hundred and fifty feet wide, and pursues an east-southeast course, with a velocity of more than four miles an hour. At this place were found twenty migrating Indians, who have their permanent residence on the banks lower down.

The chief, Kamaiyah, was the son-in-law of old Tidias, and one of the most handsome and perfectly-formed Indians they had met with. He was found to be gruff and surly in his manners, which was thought to be owing to his wish to appear dignified. These Indians were living in temporary huts, consisting of mats spread on poles. Among them was seen quite a pretty girl, dressed in a shirt and trousers, with moccasins of skin very much ornamented with fringe

and beads. They had a number of fine horses, but could not be induced to part with any of them.

Lieutenant Johnson had now succeeded in purchasing venison and salmon, and the party again had full allowance.

On the 3d, they continued their route to the northward, over gradually rising ground, and Lieutenant Johnson having succeeded in purchasing three more horses, only three of the party were now without them, so that the riding and tye system was not quite so often resorted to as before. On this plain was seen a number of curlews, some grouse, and a large species of hare. They encamped again near the snow, and found their altitude greater than any yet reached, the barometer standing at 24·750 in.: five thousand two hundred and three feet. They had again reached the spruces and lost the pine, which was only found on the hill-sides and plains.

At 4 A. M. on the morning of the 4th of June, the thermometer stood at 28°. They on that day continued their route up the mountain and across its summit, which was here and there covered with patches of snow. I regret to record another accident to the instruments. The sergeant, to whom the barometer was intrusted by Lieutenant Johnson, in putting up the instrument this morning, carelessly broke it; and thus ended the barometrical experiments in the most interesting portion of the route.

It is difficult to account for the scarcity of snow on a much higher elevation than they had before reached, and under circumstances which would appear to have warranted a contrary expectation. Dr. Pickering was induced to believe that this change in the climate is owing to the open nature of the surrounding country; its being devoid of dense forests, with but a few scattered trees and no under-brush; and the vicinity to elevated plains, and the ridge being of a less broken character.

The early part of the day was cold, with showers of sleet. On the crest of the mountain they passed over swampy ground, with but a few patches of spruces: after passing which, they began to descend very regularly towards the Columbia, which they reached early in the afternoon, about three miles below the Pischous river. The Columbia at this place is a rapid stream, but the scenery differs entirely from that of other rivers: its banks are altogether devoid of any fertile alluvial flats; destitute even of scattered trees; there is no freshness in the little vegetation on its borders; the sterile sands in fact reach to its very brink, and it is scarcely to be believed until its banks are reached that a mighty river is rolling its waters past these arid wastes. The river, in this section of the country, is generally confined within

a ravine of from one thousand to fifteen hundred feet below the general level of the country. It was much swollen when our party reached it; but it is at no time fordable here. Its width, by measurement made a few miles above, was six hundred yards.

A mile before reaching the banks of the Columbia, there were many stupendous castellated rocks, of a yellow colour, which proved to be a soft sandstone. The only shrub was the wormwood.

They passed along the banks of the Columbia to the junction of the Pischous. The course of the latter is to the southeast: it takes its rise in a distant range of snowy mountains, which are seen in a northwest direction. Half a mile above its mouth it is two hundred and fifty yards wide, but the water of the river, in consequence of the state of the Columbia, was backed up; and although it was said by the Indians not to have reached its full height, yet it appeared to have risen to the high-water marks.

They encamped on the southwest side of the river, in a beautiful patch of meadow-land, of about one hundred acres in extent, which the Indians had enclosed in small squares by turf walls; and in them they cultivated the potato in a very systematic manner. On the meadows were found numbers of grouse and curlews, of which they killed many. There were also many wild currants, just ripening. The Pischous was called here, by some of the Indians, the Wainape. I have, however, retained the former name on the map as being that by which it is more commonly known.

From the point of junction, the Columbia can be traced for the distance of thirty-five miles. At the opposite shore of the river, the banks have a more uniform appearance, and would give the idea that on reaching their summit of one thousand five hundred feet, an extensive table-land would be seen; but this is not the case, for mountainous land rises at some distance beyond, but it has no snow upon it, and is destitute of trees. Below, at a distance of ten or twelve miles, is seen a high-peaked isolated rock, which Lieutenant Johnson conjectured to be Buckland Rock; and beyond it, the river seems to take a turn to the southward. Between the forks of the rivers, the hills are very rugged, steep, and rocky.

On the 5th of June, by the timely arrival of an Indian in a canoe, they were enabled to cross the Pischous, and to find out the route they ought to pursue towards Okonagan. With this aid, and without much difficulty, the horses and all the baggage were safely landed on the opposite side, after which their course continued along the Columbia river. The path was a very rough one for the horses to travel, being frequently over jagged rocks, which approach within a few feet

of the water's edge, and in places so near as to leave but a ledge for the horses to pass on, rendering it both laborious and dangerous. These rocks are of granite, with veins of white marble, one of which was several feet in width. Much of the rock resembles slate, capable of being split into thin slabs, and of a dark gray colour. They met with, during this day, many interesting plants, among which were a cupressus tree and a cruciferous plant on the rocks, which an Indian woman was gathering for food. To the taste they were extremely bitter. Large quantities of wild gooseberries were also to be found growing among the rocks, but proved quite insipid.

They encamped on a small sand-flat on the Columbia, having made about eleven miles.

On the 6th, after travelling seven miles, they reached the banks of a small stream, called by the Indians Entiyatecoom, but known by the Canadian voyageurs as Point de Bois. Its course is nearly east and west; it is about one hundred feet wide, and was found at its mouth too deep to ford. They, therefore, continued up the stream for about a mile and a half, in hopes of finding a suitable place. While thus ascending the stream, they were accosted by several Indians, who motioned to them to return to the mouth of the river, whither a canoe was now brought to transport their baggage, and an Indian was despatched to a fishing station, who returned with salmon ready cooked.

The chief of the tribe of Okonagan Indians became much dissatisfied at the mode in which payment was offered him, and which he refused to accept, and went unrewarded for his important services, to the regret of many of the party. They again proceeded on their journey, and came, in the course of a mile, to the camp of the natives from whom the salmon had been sent them. They found them employed in salmon-fishing. Including men, women, and children, they were twenty in number. This is their permanent residence, but they were then living in the usual summer huts, of mats, and near by were the winter habitations, which consisted of two mounds, each of which might contain about ten. Both of these were open towards the river, the door being a round aperture, eighteen inches in diameter. These Indians seem to have little to protect them from the cold of winter, except the grass and their clothing, and do not appear to have any fire in their winter habitation. The mystery about the cooked salmon was now solved, for it appeared that, as soon as the fish are taken, they are at once roasted, and then exposed to the sun to dry on a shed, after which the meat is pounded and made into balls, which are stored

for winter food. They keep a large quantity of it on hand, and it constitutes almost their only food. Their salmon-fishery was on the opposite side of the river. Some of the party bought a number of salmon, the smallest of which weighed nearly forty pounds. These Indians had many good horses, which they had no inclination to sell.

About two miles above the Indian village, they unexpectedly found that they were obliged to cross the Columbia. The balsas were, therefore, put in requisition, and a raft was constructed, on which, with the assistance of a canoe obtained from the Indians, they succeeded in getting all their baggage safely deposited on the other side, whither the horses were also brought.

In lighting their fires they ignited the grass on the prairie, and produced quite a conflagration, which for a time threatened their camp, but they succeeded in extinguishing it. Lieutenant Johnson now engaged an Indian to show them the road to Okonagan, for which they intended to set out at an early hour.

Their course now lay along the Columbia, and, towards the latter part of the day, on the high prairie-land, which was somewhat sandy, and seemed likely to be unprofitable for any purpose, except sheep-pasture. The guides were quite averse to entering on the high prairie, alleging that it was destitute of water.

Lieutenant Johnson, however, determined to pass on, after filling the water-bags. Ascending two thousand feet, they reached the high plain, where all were much delighted with the magnificent and extensive view. The whole sweep of the prairie burst upon them, uninterrupted by any shrub, but covered by a long grass, clothing the gentle inclinations as well as the hollows. The view was desolate, nothing appearing to relieve the eye, but the very distant dark-blue mountains to the northward and eastward, which pointed out the course of the Columbia, or the snow-capped tops of Mount Rainier and the ranges they had left.

Over this prairie they had no track to guide them, but proceeded on a course north-by-east, leaving a remarkable peak, to which the name of Mount St. Pierre was given, to the east of their route. After travelling three miles, they encamped, and were enabled to cook their dinner with a hawk's nest and a few bushes growing out of a rock. The Indians indulged themselves in a feast on the squab hawks: these birds, from the quantities of down on their legs, have a droll appearance.

This plain—for so it must be called—was found tolerably level, and, although it is covered with grass, yet there is but a slight tint of green

over the landscape. This grass is the natural hay before spoken of, which seems to point out this for a grazing country, though there is a large district destitute of water.

On the 8th, at one o'clock, the party reached the banks of the Columbia, opposite to Okonagan, when a canoe was employed to take them over. This post was in charge of a Canadian by the name of Le Pratt; but the whole is now going into rapid decay, as it is only retained as an entrepôt for the deposit of supplies, &c., in connexion with the posts in New Caledonia, as the northern part of this country is called by the Hudson Bay Company. Okonagan lies directly on the route thither, and here they change from land to water transportation. Were it not for the convenience it affords, in this respect, it would not be retained. It is inhabited by two Canadian white men and numerous half-breed women and children, the men having gone down the river with Mr. Ogden. It has, as usual at the posts, an Indian encampment on the outside, but there is no Indian settlement within eight miles, where there is a salmon-fishery. Few skins are obtained here, and the extreme scarcity of game and fur animals is remarkable throughout all this part of Middle Oregon. This is somewhat difficult to account for, as we are well satisfied that there is abundance of food, and that all kinds of cattle would thrive exceedingly in this section, where grass is so abundant.

Okonagan and the old Spokane House, on the river of the same name, (now abandoned,) were the first posts established in this country by the American Company, some twenty-nine years prior to our visit. Falling into the possession of the Northwest Company, they were, on the union of that Company with the Hudson Bay Company, passed over to the latter. Okonagan is situated on a poor, flat, sandy neck, about two miles above the junction of the river of that name with the Columbia. It is a square, picketed in the same manner as those already described, but destitute of bastions, and removed sixty yards from the Columbia. Within the pickets there is a large house for the reception of the Company's officers, consisting of several apartments, and from each end of it two rows of low mud huts run towards the entrance: these serve as offices and dwellings for the trappers and their families. In the centre there is an open space.

French is the language spoken here, as it is at all the other posts of the Company.

Half a mile above the mouth of the Okonagan, it was found to be three hundred feet wide: it is a dull, turbid stream. The Columbia at this place was found to be sixteen hundred feet wide.

Besides the care of the barges for navigating the river, and the

horses for the land journey to the northern posts, they collect here what skins they can. The country affords about eighty beaver-skins during the year, the price for each of which is usually twenty charges of powder and ball. Some bear, marten, and other skins, are also obtained, for which the prices vary; and it appears to be the practice of the Company to buy all the skins that are brought in, in order to encourage the Indians to procure them. At Nisqually, Mr. Anderson informed me that many were bought that were afterwards destroyed, as they were not worth transportation.

At this post they have some goats, and thirty-five head of very fine cattle, which produce abundance of milk and butter. Neither of these are yet permitted to be slaughtered, and the only animal food used, is a species of rat, called "siffleurs," which burrows among the stones on the hill-sides in great numbers. These the Indians catch and sell for a leaden ball: they were found very fat, and considered good food by our party. The soil is too poor for farming operations, and only a few potatoes are grown. There is generally a supply of provisions on hand here for the parties that are passing to and fro.

There is also another post, called Fort Thompson, on the Kamloops Lake, which is in charge of an Indian, and is of less importance than Okonagan.

On the morning of the 9th, Mr. Maxwell, one of the Company's officers, arrived from Colville, with forty horses laden with provisions, for Mr. Ogden's brigade. He was not a little surprised to find strangers in the country, and in possession of his quarters at the post. He was obliging enough to offer any assistance that he could render, and, in conjunction with Le Pratt, endeavoured to supply all the wants of the party.

The Okonagan tribe of Indians are supposed to number about two hundred, and are represented as quiet and peaceably disposed. Their food consists principally of salmon and a small fish which they call carp; but they are not provident enough to lay up a sufficient supply for their winter's stock, and are obliged, for the remainder of the year, to make use of roots, and a bread which is made from the moss that grows on the trees. This moss is collected in large quantities, cleaned, and then placed in a hole made in the ground, along with heated stones, which are all covered up closely with earth. In this hole the moss remains for twenty-four hours. When the pit is opened, it is found to have become soft. After this process, it is washed and moulded into cakes, which are set out to dry. The seed of the Balsamoriza (Oregon sunflower), is also used here, being pounded into a kind of meal, which they call mielito. To this is added the siffleurs; but with all these articles of food, much suffering is experienced towards the spring.

The Company's servants at the northern posts suffer almost as much at times, although they are provided and attended to by the officers: they live mostly upon salmon. The difficulty of getting provisions to the posts in the interior is very great; all that is consumed at the north is carried twenty-four days' journey on pack-horses, and eighteen in barges, before it arrives at its destination; and the amount transported is not more than enough to supply the officers, whose allowance is very limited. The servants of the Company receive an increased pay as some recompense for their privations.

The chief amusement of the Okonagan tribes of Indians in the winter, and during the heat of the day in summer, when they are prevented from taking salmon, is a game called by the voyageurs "jeu de main," equivalent to our odd-and-even.

The latitude, as given by Lieutenant Johnson's observations, place Fort Okonagan in 48° 12′ N.

In the vicinity are found many wild fruits, consisting of gooseberries, June-berries, and currants, which, at this time, 9th of June, were beginning to be ripe.

On the 10th, at noon, they crossed the Columbia to rejoin their horses, where they had been left to graze, during the two days they had remained at the fort.

Lieutenant Johnson rode on some distance before the party, who lost sight of him in rounding a hill. His horse some time afterwards came galloping towards them, without any saddle; but thinking that he had found a good camping-place, they continued on until sunset, when they encamped at a small stream. Supper was prepared and eaten, but Mr. Johnson did not appear. Becoming uneasy, the sergeant and Pierre Charles were sent in search of him, and signal-guns were fired at short intervals till 11 P. M., when they returned without any news of him. Early the next morning, a party again left the camp in search of him, and at nine o'clock he was discovered fast asleep, where he had been since the previous afternoon.

The Columbia, in the neighbourhood of Okonagan is very winding in its course, and is interrupted by dalles about five miles above.

On the 11th, their route lay over the grassy prairie before spoken of, in which they saw a few pools of water. In a salt marsh were found some singular plants, and the crusted salt on the surface had very much the appearance of hoar-frost. In other respects, the route was uninteresting. Mount St. Pierre, before noticed, was seen, with its dome-like summit, and its height was estimated at eighteen hundred feet. The distance made this day was fourteen miles, and they encamped in an open plain, within three miles of the Grande Coulée.

On the 12th, they reached the Grande Coulée. The common supposition relative to this remarkable geological phenomenon is, that it has once been the bed of the Columbia, and this is what would strike every one at its first view; but, on consideration, it is seen that it is much too wide, and that its entrance is nearly choked up by the granite hills, that do not leave sufficient space for the river to flow through. The walls of the Coulée consist of basaltic cliffs, similar to those of the Palisades of the Hudson, seven hundred and ninety-eight feet high; and where it was crossed by the party, it was three miles wide; but, a few miles farther to the south, it narrowed to two miles. Its direction was nearly north and south, for a distance of at least fifteen miles. In places, the cliffs were broken, and appeared as though tributary valleys had been formed, in like manner, with perpendicular walls, though but of short extent. In the northern portion of it were several granite knolls, resembling islands, capped with basalt, and called Isles des Pierres. The bottom of the Coulée is a plain, having some irregularities, but in places, for two miles together, to appearance it was perfectly level. There are in it three lakes: one on the top of the west border, another after descending, and a third between two of the granite islands. The last of these was the largest, being about a mile long, but is not more than three hundred feet broad: these lakes have no visible outlets. Although the soil abounded in the same saline efflorescence that had been remarked on the high prairie, yet the lakes were found to be fresh, and wild ducks were seen in great numbers. In other spots, the earth was damp and overgrown with a rank grass, of the same kind as that growing on the prairie. Next to this, the wormwood predominated.

In the level places the earth was much cracked: incrustations were abundant, which, sparkling brilliantly in the sun, gave the plain somewhat the appearance of being covered with water. Specimens of these were procured, the analysis of which will be found in the Geological Report.

The granite islands, above spoken of, were found to be seven hundred and fourteen feet high. Mr. Johnson named the southern one the Ram's Head. Dr. Pickering, who visited the north part, found no regularity of structure. All were satisfied, after leaving the Coulée, that it had been the seat of a lake, in the northern branch of which, some convulsion had caused a breach, through which it had discharged itself into the Columbia. If the Columbia had ever flowed through this channel, it must have worn the rocks, but they exhibit no signs of any such abrasion; and yet it seems remarkable, that the Coulée had extended from one point of the river to another, and, with the excep-

tion of its breadth, forming very much the same kind of trench as the Columbia would leave, if it forsook its present channel.

From the observations subsequently made at the lower end of the Grande Coulée, there is, however, reason to believe that it was at one period the bed of the Columbia. The fact of there being large boulders of granite at its lower or south end, while there is no rock of similar kind except at its north end, would warrant the conclusion that they had been brought from the upper part of it. There were a great number of stones, having the appearance of being water-worn, lying in its bed, at the south end, as if they had been brought down by the current of a rapid stream.

The Coulée is too much impregnated with saline matter to permit crops of grain to be raised on it; but it would be admirably adapted for the raising of cattle and sheep, there being abundance of water and plenty of good grass here, and for twenty miles on each side of it.

They left the Grande Coulée by passing up the east cliff or bank, at a place where it was accessible for horses, and which was much stained with sulphur. Soon afterwards, they were overtaken by Mr. Maxwell, from Okonagan, which place, although twenty-five miles distant, he had left in the morning. They rode five miles farther, and encamped at a small pool. Mr. Maxwell was kind enough to supply them with two horses, which enabled all the party to mount again.

On the 13th, they started at an early hour, and passed over a gently-rolling prairie country, affording excellent sheep-pasture, but entirely destitute of trees. During this day, Lieutenant Johnson met with another untoward accident: on getting off his horse, he neglected to tie him, and the beast ran off to overtake the rest of the party. The consequence was, that the artificial horizon was broken to pieces, with many other articles contained in his saddle-bags. After travelling fourteen miles, they reached the "Coulée des Pierres," where the prairie terminated. This has features somewhat similar to those of the Grande Coulée, the rocks being basaltic and precipitous. They passed through the Coulée for two miles, when, turning at right angles, two more miles brought them to the Columbia, whose banks were here thickly wooded.*

On the 14th, after pursuing the same general course as the river for four miles, over spurs of hills, they reached the Spokane, which was three hundred feet broad at its mouth, but which, like the Columbia, was at the time much swollen. Opposite to the mouth of the Spokane, there are rocks in the Columbia, beneath the surface of the

* On the banks were found a singular species of Trillium, almost stemless.

water, which cause rapids; but there is no perceptible fall, and the barges shoot them without difficulty. By the assistance of some Indians, with two canoes, they crossed the river, and breakfasted on the opposite side. These Indians had a lodge close by, and were in number twelve, the greater part of whom were women and children. Many of the latter, like others they had met with, were secured upon boards, for which purpose, instead of cord, strips of skin were used. These Indians reported that no salmon had been caught, on which account they were living on a kind of carp. They had with them a number of dogs, which are kept about their lodges: these animals have but little to recommend them, for they are ill-shapen, and of a dingy white colour. Of these dogs but little use is made, for they are seldom employed in hunting, and the Indians never eat them; neither are any of them killed, however large the litter of puppies may be. They, however, cost nothing to keep, for they are not fed, except with the offal of fish and birds, which accounts for the wretchedness of their appearance.

Lieutenant Johnson and Mr. Maxwell now determined to pay a visit to the missionaries who were stationed at Chimikaine, distant only half a day's ride. The rest of the party proceeded along the banks of the Columbia to Fort Colville, a post of the Hudson Bay Company, next in importance to Vancouver. While pursuing this object, they lost their way, and were forced to encamp for the night on the banks of the Columbia.

On the 15th, at 4 P. M., they reached Fort Colville, after having experienced some difficulty in riding their Indian horses up to the gate; for the wagons, poultry, pigs, cabins, and other objects of civilization, excited no little alarm to their animals.

In the mean time, Lieutenant Johnson, in company with Mr. Maxwell, proceeded up the Spokane, which, for the first ten miles, has a course of east-southeast. The route passes through much fine scenery, and on the southern side of the river the hills form terraces, clothed with grass, and having a few pines growing upon them. The pines yield an agreeable shade, and the banks offer numerous beautiful sites for dwellings.

The river itself is pretty: its waters are transparent, and it is joined in its course by many bubbling brooks. To judge from the number of sheds for drying salmon, it must abound with that fish. The average width of the stream was about two hundred feet.

After leaving the Spokane, they rode in a northeast direction, over hills covered with pines, and through valleys rich with fine meadows; and, after a ride of thirty-five miles from the mouth of the Spokane,

reached the missionary station of Chimikaine. Here they learned that neither of the two missionaries, Messrs. Walker and Eels, was at home, being in attendance on a meeting at Wallawalla. Their ladies, however, received the gentlemen with great hospitality, and though living in rough log huts, every thing about them was scrupulously clean; they were without any domestic help, but every thing was attended to that could add to the comfort of their guests. They both, with their families, seemed happy, cheerful, and contented with their situation.

Cornelius, or Bighead, whose native name is Silimxnotylmilakabok, is chief of the Spokane tribe—not by birth, but having gained the station by his shrewdness. With the title, however, he has acquired but little real authority, although he is the most influential of the Flat-head nation; for his commands are often opposed with impunity by the lowest vagabond, and he himself is sometimes personally insulted without fear or danger of punishment. The dignity of rank, therefore, it will be seen, is not looked upon with much respect among these tribes. Cornelius is about sixty years of age, tall and slender, with a dignified carriage; has a thin, wrinkled face, and a far-retreating forehead. He has an expression of intelligence and self-possession, which impresses a visiter very favourably. He is represented as being very pious; and, as far as outward appearances and loud praying go, is certainly entitled to be so considered.

He gives an account of a singular prophecy that was made by one of their medicine-men, some fifty years ago, before they knew any thing of white people, or had heard of them. Cornelius, when about ten years of age, was sleeping in a lodge with a great many people, and was suddenly awakened by his mother, who called out to him that the world was falling to pieces. He then heard a great noise of thunder overhead, and all the people crying out in great terror. Something was falling very thick, which they at first took for snow, but on going out they found it to be dirt: it proved to be ashes, which fell to the depth of six inches, and increased their fears, by causing them to suppose that the end of the world was actually at hand. The medicine-man arose, told them to stop their fear and crying, for the world was not about to fall to pieces. "Soon," said he, "there will come from the rising sun a different kind of men from any you have yet seen, who will bring with them a book, and will teach you every thing, and after that the world will fall to pieces." Although there is not much reliance to be placed in the truth of this story, yet it shows the desire the Indians have to perpetuate the truth; and now that its actual fulfilment, as they say, has come to pass, it has acquired greater

force, and is employed by them as an argument why the tribes should embrace the Christian religion. There is little doubt that the fall of ashes took place, for many traces of such phenomena are to be seen in all parts of the middle section of Oregon;* but they had knowledge of the whites long before the epoch designated. A proof that the white race was then known to them, may be cited in the person of a half-breed Canadian, who is now living at Colville, who had served under Burgoyne, and been fifty years in this country.† Besides the appearance of the Spaniards, and English under Cook, on the coast, the existence of white men must have become known through the intercommunication of the different nations.

Lieutenant Johnson left the mission the next afternoon for Colville, under the guidance of the son of Cornelius, and travelled through an extensive valley to the north, with hills on either side of from six hundred to one thousand feet in height. This valley is crossed by numerous streamlets and brooks, and appears to have a good and extremely fertile soil. The largest stream passed was one near Colville, on which the Hudson Bay Company have their grist-mill: this is about fifty feet wide. Within ten miles of the fort, the house of the Company's storekeeper was passed, and near to it is found a species of white chalk or pigment, which is much used at the fort instead of the common lime whitewash, from which it is scarcely distinguishable. They reached Fort Colville late in the afternoon, and were all soon made to forget the fatigues of the journey by the kind attentions of Messrs. M'Donald and Maxwell, who had charge of the post.

* Within the last year, the craters on the top of Mount Rainier and Mount St. Helen's have been in activity.

† This man is still hale and hearty, though pretty much of a reprobate. His story seemed to be credited by the officers of the Company at Fort Colville.

INDIAN BASKETS OF OREGON.

CHAPTER XIII.

CONTENTS.

CONTINUATION OF LIEUTENANT JOHNSON'S TOUR—FORT COLVILLE—KETTLE FALLS—QUIARLPI INDIANS—HEIGHT OF FORT COLVILLE ABOVE THE SEA—ITS CLIMATE—ITS AGRICULTURE—SPOKANE INDIANS—THEIR MODE OF LIFE—THEIR PHYSICAL CHARACTER—THEIR DRESS—THEIR GOVERNMENT AND DOMESTIC RELATIONS—AUTHORITY OF THEIR CHIEFS—THEIR PUNISHMENTS—THEIR SUPERSTITIONS—THEIR CALENDAR—OPERATIONS OF THE HUDSON BAY COMPANY IN THE NORTH—OUTPOSTS OF COLVILLE—FORT CHILCOTIN—FORT GEORGE—FORT THOMPSON—FORT ST. JAMES—NORTHERN INDIANS—TAKALI AND ATNAHS—THEIR DRESS—THEIR HABITATIONS—THEIR FOOD—THEIR MODE OF FISHING—THEIR FUNERAL RITES—THEIR MEDICINE-MEN—FRASER'S RIVER—LIEUTENANT JOHNSON'S PARTY LEAVES FORT COLVILLE—MISSIONARY STATION AT CHIMIKAINE—CHARACTER OF THE NEIGHBOURING INDIANS—THEIR TREATMENT OF FEMALES—THEIR BURIALS—THEIR MARRIAGES—DEPARTURE FROM THE MISSION—ADVENTURE AT A CAMP OF SPOKANE INDIANS—INDIANS TRAVELLING—KOOSKOOSKEE INDIANS—MISSION AT LAPWAI—MR. SPALDING—HIS EXERTIONS TO CIVILIZE THE INDIANS—FREQUENT VISITS OF THE OREGON INDIANS TO THE UNITED STATES—DEPARTURE FROM LAPWAI—INDIAN FARMS—HALF-BREEDS—MIGRATION OF THE BUFFALO—SNAKE RIVER—SANDY DESERT—CŒUR D'ALENE—NEZ PERCE INDIANS—INDIANS AROUND LAPWAI—SAW-MILL—DECREASE OF WILD ANIMALS—MR. HALE'S TOUR, AND REMARKS—FALLS OF THE PELUSE—LEGEND RELATING TO THEM—WALLAWALLA—LANGUAGES OF INDIANS—YAKIMA RIVER—MISERABLE GROUP OF SQUAWS—SLOW COMMUNICATION OF NEWS IN OREGON—NUMEROUS RATTLESNAKES—SPIPEN RIVER—TIDIAS'S CAMP—PRAIRIES—LITTLE PRAIRIE—SMALOCHO RIVER—RETURN TO NISQUALLY—EASTERN INDIANS OF OREGON—BLACKFEET—SHOSHONES—CROWS—BONACKS—YOUTAS—TRIBES ALLIED TO THE BONACKS—MONKEY INDIANS—APACHES—PRESSURE OF THE TRIBES TOWARDS THE SOUTH—ITS PROBABLE CAUSES.

CHAPTER XIII.

INDIAN TRIBES OF THE INTERIOR OF OREGON.

1841.

Lieutenant Johnson having reached Fort Colville with his party, it was determined that they should spend three days there, not only to refresh their horses, but to repair the damages which their saddles and packs had received. For these purposes Mr. M'Donald afforded every facility in his power, besides supplying all their wants; and received in payment of the articles he furnished, Lieutenant Johnson's orders upon the ship, to be collected through the authorities at Vancouver.

Fort Colville is situated on the east bank of the Columbia river, just above the Kettle Falls. In this place, the river, pent up by the obstructions below, has formed a lateral channel, which nearly encircles a level tract of land, containing about two hundred acres of rich soil. Of this peninsula, about one hundred and thirty acres are in cultivation, and bear crops, composed chiefly of wheat, barley, and potatoes. There are also raised small quantities of oats, Indian corn, and peas, but garden vegetables have never succeeded well. Their failure, however, is to be attributed either to bad seeds or unskilful management; for the soil, which is a rich black loam, mixed with a portion of gravel, seems capable of producing any thing.

The whole peninsula has the appearance of having been deposited by the river, and is believed to be the only spot of that character formed in its whole course.

There are two entrances to the fort, from one of which a road leads to the flour-mill; from the other there is a path extending along the bank of the river.

Fort Colville, like all the other posts of the Hudson Bay Company,

is surrounded by high pickets, with bastions, forming a formidable defensive work against the Indians. Within the pickets all the dwellings and store-houses of the Company are enclosed.

The peculiar character of the soil renders Colville superior, for the purposes of cultivation, to any other spot on the upper waters of the Columbia.

The Kettle Falls are one of the greatest curiosities in this part of the country. They are formed by a tabular bed of quartz that crosses the river, and which, being harder than the rocks either above or below, has of course suffered less by abrasion, and thus formed a basin that renders the name appropriate. The total descent of the water is fifty feet, though the perpendicular fall in no place exceeds fifteen feet, which is, however, more than sufficient to prevent the passage of boats. At the foot of the falls the breadth of the river is two thousand three hundred and thirty feet, and the rate of the current is four miles an hour. This breadth is somewhat narrowed by an island, about midway of which is the first fall, which is almost entirely unbroken. Thence the river forces its way over a rocky bed until it reaches the main fall, where the water is thrown into every variety of shape and form, resembling the boiling of a kettle, from which the falls derive their name.

There is an Indian village on the banks of the great falls, inhabited by a few families, who are called "Quiarlpi," (Basket People,) from the circumstance of their using baskets to catch their fish, (salmon.) The season for the salmon-fishery had not yet arrived, so that our gentlemen did not see the manner of taking the fish; but as described to them, the fishing apparatus consists of a large wicker basket, supported by long poles inserted into it, and fixed in the rocks. The lower part, which is of the basket form, is joined to a broad frame, spreading above, against which the fish, in attempting to jump the falls, strike, and are thrown back into the basket. This basket, during the fishing season, is raised three times in the day, (twenty-four hours,) and at each haul, not unfrequently, contains three hundred fine fish. A division of these takes place at sunset each day, under the direction of one of the chief men of the village, and to each family is allotted the number it may be entitled to: not only the resident Indians, but all who may be there fishing, or by accident, are equally included in the distribution.

At the lower end of the falls are large masses of quartz rock, on which the Indians dry their fish. Few of the salmon, even if able to pass the lower fall, ever get by the upper one, being generally caught between the two falls; consequently, above this place no

salmon are taken. A short distance below the Kettle Falls, are the Thompson Rapids, which begin at the mouth of Mill river, and extend for some distance below that point.

Fort Colville has been found to be two thousand two hundred feet above the sea, according to the officers of the Hudson Bay Company: the barometers of our party having been broken, it was no longer in their power to measure the height. This great rise takes place within the space of five hundred miles, and is unequalled in any other river of so great a size. The cultivation of crops is here the principal object of attention, for the whole of the northern posts depend upon Colville for supplies of provisions.

As to climate, this region has the reputation of being more rainy than the country below, but seasons occur when no rain falls. In the summer the temperature varies very considerably in the course of twenty-four hours, but they have kept no meteorological register, at least none was kept at the time of the visit of our party. The temperature in summer (July) rises to 100°, and falls to 12° in January and February. The winter commences in November, and ends in March. They frequently have flowers in February.

The time of planting the spring wheat is in April; the winter grain is sown in October, and succeeds best, particularly if the autumn should be a wet one. The crops of wheat are reaped in August. Indian corn is not a sure or good crop: it is planted in May and gathered in September. Potatoes, beans, and some oats, with two thousand bushels of wheat, are raised annually at this place.

Of fruits they have those of the country, such as the service-berry, strawberry, wild cherry, and the hawthorn-berry. These ripen from June till September. Imported fruit-trees have not as yet succeeded, and it is thought the spring frosts are too frequent and severe for them.

This post was established in 1825, at which time a bull and two cows were introduced from Vancouver, and from these have sprung one hundred and ninety-six head of fine cattle. They have likewise thirty mares with foal, and sixty grown horses. The horses are little used during the winter, and are usually turned out to shift for themselves. Care is, however, taken to keep them in places which are much exposed to the sun, and in consequence least covered with snow. Though represented as hardy animals, it is deemed prudent to get them into good condition before the winter sets in, to enable them to withstand its rigours.

The number of Indians actually resident about the falls, is one hundred and fifty; but, during the height of the fishing season, there

are often nearly a thousand, consisting of all the Spokane tribe, who are generally included under the name of the Flatheads. They subsist for the most part on roots, fish, berries, and game. At the opening of the spring, in March and April, or as soon as the snow disappears, they begin to search for a root resembling the cammass, which they call pox-pox. This lasts them till the beginning of May, when it gives place to a bitter root, termed spatylon. This is a slender and white root, not unlike vermicelli in appearance, and when boiled it dissolves into a white jelly, like arrow-root. It has a bitter but not disagreeable flavour, and is remarkable for growing in gravelly soils, where nothing else will thrive. In June, the itzwa, or cammass, comes in season, and is found in greater quantities than the others, all over the country, particularly in the meadow-grounds. This root was thought by many of us to have the taste of boiled chestnuts Before this fails, the salmon make their appearance, and during the summer months the Indians enjoy a very plentiful supply of food. While the men are employed fishing, the women are busy digging the cammass, which may be termed the principal occupations of the two sexes. They devote a portion of their time to the collection of berries, a work which is principally the duty of the younger part of the tribes.

In September and October, the salmon still claim their attention: although they are, after having deposited their roes, quite exhausted and about to perish, yet these are dried for their winter consumption; and unless they had recourse to these, much want would ensue, which is always the case if the salmon should be scarce.

In October, they dig an inferior root, somewhat of the shape of a parsnep, that is called by the Indians mesani: it has a peculiar taste, and when baked is of a black colour. After this has disappeared, they depend upon their stores of dried food, and game, including bears, deer, badgers, squirrels, and wild-fowl; which they sometimes take in great quantities. These, however, fail them at times, and it then generally happens that their salmon becomes exhausted also, when they are obliged to have recourse to the moss, the preparation of which has been before spoken of, and which can be scarcely more than sufficient to sustain them until the spring again returns, and brings them the usual round of food. Like all savages, they are improvident, and take no thought whatever for the future. They are as prodigal in all other things as in their domestic economy, and frequently waste articles that might be quite useful if taken care of: their health suffers from the same cause. Notwithstanding, in all their usual concerns they are not devoid of sagacity, and frequent their different fishing-places and root-

grounds regularly in the season, and follow the same mode of changing their residences, as has been heretofore noticed when speaking of the Nisqually tribe. They use in general the simple rush mats on poles for their tents in summer, which, with the few necessaries they have, are readily moved from place to place, on their horses. In this way, they pursue a regular round, and are to be found in the returning season, very near the same spot, if not actually on it. They ought, I think, to be deemed a wandering or nomadic race.

As far as our observations have gone,—and they have been confirmed by some of the intelligent officers of the Hudson Bay Company, —the Flatheads or Spokane tribe, hold an intermediate place, in their physical attributes, between the Indians of the coast and those of the Rocky Mountains. In stature and proportions, they are superior to the Lower Chinooks and Chickeeles tribe; but inferior to the Nez Percés. In bodily strength, they have been found much inferior to the whites.

Their usual dress is a shirt, leggins of deer-skin, and moccasins; all of which are much ornamented with fringes and beads. They wear a cap or handkerchief of some sort on their head: these, with a blanket, form their summer clothing; in winter, a buffalo-robe is added.

This tribe can scarcely be said to be under any general government; at least it is certain that none is regularly organized or acknowledged. They appear now to roam in small bands, as may best suit their temporary convenience; but these join for mutual support against their more powerful enemies, the Pikani or Blackfeet. In bygone days, these small tribes contended against each other with great bitterness; but by the beneficial influence exercised over them by the Hudson Bay Company, they have been induced to live together in peace, and intermarriages among the tribes now frequently take place; in which case, it is said, that the husband almost invariably joins the tribe to which his wife belongs, under the idea that among her own family and friends she will be better able to provide for her husband and children's wants. This also may proceed from the fact of the influence the women possess; for they always assume much authority in their tribe, and are held in high respect. They have charge of the lodge and the stores, and their consent is necessary for the use of them; for after coming into their possession, these articles are considered the women's own. Where such a state of things exists, it may readily be inferred that the domestic ties are not very weak; and they are reputed to have a strong affection for their children and nearest relatives. In this respect they are unlike the Nez Percés and some of the other tribes,

and have always been remarked for their attentions and kindness to the infirm and aged, who are first to be provided for. One of their customs would, however, go to prove that these good qualities cannot exist in the degree in which some represent it. When an Indian of this tribe dies, leaving young children who are not able to defend themselves, his other relatives seize upon his property, and particularly the horses, which he may have left. The only excuse they offer for this kind of robbery and desertion is, that their fathers did so before them.

I have before said, that there is no authority recognised in their chief, at least so far as the power to inflict punishments for crimes or disorders is concerned. There is, however, often a principal man, who, from the circumstance of possessing wealth, intelligence, and character, and sometimes from birth, united, obtains a sort of control or chieftainship, and exercises an authority over others from his personal influence, ruling more by persuasion than by command through sanction of law. The extent of his authority must of course depend upon the individual's own temper: if he were a determined character, he might no doubt exercise very considerable power.

Punishment for crime is generally inflicted by the tribe, and frequently goes so far as to expel the delinquent; but I understand that the circumstances under which the crime was committed, have great influence in their decisions, and that they are for the most part just. Punishment is not by any means certain, an instance of which occurred in the case of Cornelius sending the very man with horses, which had been hired of him, who had the year before, on a similar errand, cheated him out of the stipulated pay. The chief had no redress for this wrong, and moreover, felt obliged again to employ the same person, from fear, as was supposed, of exciting the ill-will of his friends or tribe.

As respects the belief of these Indians in a Supreme Being, they had a very confused idea. Their ceremonies were connected with their superstitions, and one of the most remarkable of these was called "huwash." This results from the belief that the spirit within a person may be separated from the body for a short time, without the person being aware of it, or its causing death, provided it be quickly restored to him. This accident of losing the spirit is supposed to become first known to the medicine-man in a dream, who communicates it to the unhappy individual, and who, in return, immediately employs him to recover it. During a whole night the medicine-man will be engaged in hunting it up, passing from one lodge to another, singing and dancing. Towards morning, they retire into a separate lodge, which is closed up

and made perfectly dark, when a small hole is made in the top, and the spirits descend through it in the shape of small bits of bone: these are received on a mat, a fire is made, and the spirits belonging to a number of their friends already dead, are picked out. The medicine-man then selects the particular spirit of each individual present, makes all sit down, takes the bone representing his spirit, and lays it on the head of the individual, among his hair, with many invocations and grimaces, till it is supposed to descend into the heart of the individual, and resume its former place. When all the spirits are thus restored, the whole party make a contribution of food, and a feast ensues, of which the remainder belongs to the medicine-man. If, perchance, in selecting the spirits of the dead, a living one should be taken up, it is thought that the living person would immediately die.

Tohua is the name of another ceremony, only performed early in the spring, for the purpose of insuring abundance of deer, fish, berries, and roots. This consists in taking up heated stones, and plunging them in water, out of which they draw them with their hands. It is only performed when they have eaten nothing for a day, or are, according to their acceptation of the term, "clean." If they have violated this rule, they believe that the hot stones will burn their fingers. This ceremony is said to last several days, and includes singing and dancing, walking barefoot and nearly naked about the village, and many other such like pranks. The medicine-men also enact the same kind of mummeries over the sick as have been heretofore described.

They have, in common with the other tribes, many traditions connected with the rivers and remarkable features of their country. In these the prairie-wolf bears always a conspicuous part. This wolf was not an object of worship, but was supposed to be endowed with supernatural powers, and to exert them in many ways. On one occasion, it is related that the wolf was desirous of having a wife, and visited the tribe on the Spokane for that purpose, demanding a young woman in marriage. This request being granted, he promised that the salmon should be abundant, and for this purpose he raised the rapids, that they might be caught with facility. After he had been gratified in this first instance, he made the same request of the others, among them, of the Sketsui (Cœur d'Alene) tribe, who were the only ones to refuse; he thereupon formed the great falls of the Spokane, which have ever since prevented the fish from ascending to their territory.

Among the Flatheads they have names for the months, corresponding

to the lunations, which are connected with their habits, and the climate. They are as follows, viz.:

Sustiki,		January.
Squasus,	cold,	February.
Skiniramen,	a kind of herb,	March.
Skaputsi,	snow gone,	April.
Spatylus,	bitter root,	May.
Staqumauos,	going to root-ground,	June.
Itzwa,	cammass-root,	July.
Sa antylku, / Selamp, \	hot; gathering brooms,	August.
Skelues,	exhausted salmon,	September.
Skaai,	dry moon,	October.
Kinui-etylyutiu,	house-making,	November.
Kumakwala,	snow moon,	December.

Of the more northern part of the Oregon Territory, through the kindness of the officers of the Hudson Bay Company and residents, I obtained much interesting information, little of which has, I believe, been yet communicated to the public. I was as desirous as Mr. Hale himself, that he should make a trip to the northern posts of the Company, after our departure from the country, but there were serious obstacles which prevented his doing so. Besides, it would have caused him a detention of several months, or have exposed him to an arduous journey during the depth of winter, which he wisely determined to avoid.

The operations of the Hudson Bay Company over the northern portion of Oregon, which is included in their maps under the name of New Caledonia, are very extensive, and in this section they have nine posts.

At Colville, the number of beaver-skins purchased is but small, and the packs which accrue annually from it and its two outposts, Koutanie and Flathead, with the purchases made by a person who travels through the Flathead country, amount only to forty, including the bear and wolf skins. Muskrats, martens, and foxes, are the kinds most numerous in this neighbourhood. The outposts above-mentioned are in charge of a Canadian trader, who receives his outfit from Colville.

Fort Chillcoaten is a clerk's station, in latitude 52° 10′ N., on the Chillcoaten branch of Fraser's river. The Chillcoatens are a small tribe, numbering about sixty families, and only four packs of peltries are made by them. A pack is equal to fifty-five beaver-skins of large size: a beaver-skin costs one foot and a half of tobacco (rolled kind), or six are bought for a blanket.

At Fort Alexandria, in latitude 52° 30′ N., the point where the navigation of Fraser's river is begun by the northern brigade, on their way north, a chief trader resides. Twenty or thirty packs are made here, seven of which are beaver. A few cattle are kept at Alexandria, about which is the only small open space in the northern country that is cleared, the rest being covered with a dense forest, consisting principally of different species of firs, with some birch, willow, alder, poplar, and maple trees. The Niscotins are a small tribe, and number but twenty families.

Fort George is another station, at the junction of Stuart's and Fraser's rivers. It has a few cattle, and provides during the year a few packs. A clerk of the Company is stationed there.

Fort Thompson, on the Kamloops river, lies in 50° 38′ N., longitude 120° 7′ 10″ W. Fraser's, Babine, and M'Leod's, on the lakes of the same names, together with that of Fort St. James, on Stuart's Lake, the residence of Mr. Ogden, are all places of trade, and yield a profitable return for the expenditure and labour employed in maintaining them. All these, as I have before stated, are under the direction of Mr. Ogden, who is a chief factor, and has charge of the department of New Caledonia. The Company are now extending their posts to the northward, behind the Russian settlements, where an officer of the Company (Mr. Campbell) has been exploring. During the summer, the travelling in this country is performed on horseback or in canoes; but in winter, when the ground is covered to a great depth with snow, and the rivers frozen, the only mode of journeying is on snow-shoes, or in sledges drawn by dogs. These animals draw a weight of two hundred pounds. The snow-shoes require to be six feet long and eighteen inches broad; and notwithstanding the encumbrance they might be supposed to cause, it is not uncommon for individuals in the Company's service to travel for days together a distance of thirty-five miles a day.

This part of the country is inhabited by the two great nations of the north, the Takali, and Atnahs or Shouswaps: the former are also known by the name of the Carriers. The limits occupied by these two nations are shown on the map. The language of the Takali is a dialect of the great Chippewayan family, which, Mr. Ogden informs me, is spoken over the whole continent, as far as Hudson's Bay. They do not extend to the coast, but have frequent contests with the coast tribes about Fort Simpson, although they never have actual war. On the east are the Siconi, who are a nation of hunters, living beyond the Rocky Mountains. They speak a dialect of the same language, but are totally different in their customs and character from the Carriers.

The latter, indeed, differ from all the tribes around them, and the great family to which their language points them out as belonging. They are described as being of a lighter complexion than the more southern tribes. Their features are larger: this is particularly the case with the females. They somewhat resemble the Indians of the Columbia, but are a taller and better-looking race. The Carriers are excessively filthy in their habits, and they have the character of being equally depraved and prone to sexual indulgences. Among the women, chastity is said to be unknown. They are proverbially barren, and almost every individual is infected with that loathsome disease, the venereal. Abortion is constantly practised among them, both before and after marriage.

Formerly they dressed in robes made of marmot-skins, which are taken in great quantities on the Rocky Mountains. They are now clothed in articles of European manufacture, and obtain a plentiful supply of them.

Their houses are built after the fashion of log cabins, of small pine saplings, which are kept in an upright position by posts. The roof, unlike those of the southern tribes, is of bark. Their summer houses are often as much as seventy feet long, and about fifteen feet high. In winter they occupy dwellings of less size, which are often covered with grass and earth. Some of them live in excavations in the ground, which they cover with earth, leaving only an aperture in the roof, which serves both as an entrance for themselves, and as a vent for the smoke.

They live chiefly upon salmon, although there are some other kinds of fish which they take. They obtain, by hunting, a few deer, bears, and some smaller animals, which they eat or sell. Great numbers of wild-fowl, which, at times, almost cover their rivers and lakes, are captured by them.

They all prefer their meat putrid, and frequently keep it until it smells so strong as to be disgusting. Parts of the salmon they bury under ground for two or three months to putrefy, and the more it is decayed the greater delicacy they consider it.

Like the rest of the Indian tribes, they have their own peculiar manner of taking the fish, which is quite ingenious. For this purpose they build a weir across the stream, having an opening only in one place, at which they affix a basket three feet in diameter, with the mouth made somewhat like that of an eel-trap, through which alone the fish can find a passage. On the side of this basket is a hole, to which is attached a smaller basket, into which the fish pass from the large one, and cannot return or escape. This is soon filled, and be-

comes closely packed by their rushing into it, when it is taken up and replaced without disturbing the larger one.

They have some kind of roots or vegetable food, which with the berries, are formed into cakes. They are exceedingly fond of oils, and drink large quantities of them, which they procure from fish, bears, &c. These they also use outwardly, mixed with coloured pigments.

The most remarkable custom of these Indians that was related to me, is the manner in which they conduct their funeral rites. If a man dies leaving a widow, she is subject to undergo an ordeal, perhaps as severe as any of the savage practices that prevail elsewhere on a similar occasion. The corpse is always burned; the funeral pile is built and the body placed upon it, and while the fire is lighting, the widow is compelled by the relations of the deceased to lie on it until the heat becomes intolerable; and if she attempts to break out, they not unfrequently thrust her back, when she is often severely burned. At other times she is obliged to pat the breast of her husband until it is consumed, by which she suffers, and not unfrequently falls into the flames without receiving any assistance from the bystanders. After the body is consumed, she is obliged to collect the ashes and deposit them in a small basket, which she must always carry about with her She afterwards becomes the servant or slave of his relations, who exact of her the severest labour, and treat her with every indignity. This lasts for two or three years, at the end of which time a grand feast is given by the relatives, when the ashes are put into a box, which is placed on a post ten feet high, daubed with representations of animals, men, &c.; there they are allowed to remain until the post decays. The widow is now released from servitude, and is at liberty to marry again.

This tribe, like the others, has priests or medicine-men, who practise incantations. When a body is burned, the priest pretends to receive the spirit of the deceased into his hands, which he closes with many gesticulations. This spirit he is thought to be able to communicate to others living, and when he has selected the person, he throws his hands towards him, and at the same time blows upon him, after which the person takes the name of the deceased, in addition to his own. In case of the death of a chief, or man of higher rank, this belief affords the priest an opportunity of acquiring much influence, and perpetuating his power and consequence.

Fraser's river takes its rise in this region, and flows through it. The country is also well watered by the numerous streams flowing from the mountains. The Company's party never navigate the Fra-

ser's river below Fort Thompson. Sir George Simpson, who passed down it in 1828, stated that he found the navigation so dangerous and difficult that it was almost totally impracticable. If it had offered any facilities for navigation, the distance it would have saved in the transportation of their goods for the northern posts, would have caused the adoption of the route. This will readily be perceived by simply estimating the distances. From Vancouver to Okonagan is three hundred miles by water, with four portages; and from Okonagan to Fort Thompson by land, one hundred and fifty miles; thence to Fort Alexandria, one hundred and twenty, and as much more to Fort St. James, one hundred and twenty miles: total, seven hundred and twenty miles, that occupy nearly sixty days in travelling, two-thirds of which time is employed in going from Fort Okonagan to Fort St. James. This distance, without loads, and with expedition, may be travelled in twenty days.

The climate of this northern section of country is unfavourable to agriculture, in consequence of its being situated between two ranges of mountains, the Rocky Mountains on the east, and the extension of the Cascade Range on the west. Both of these are constantly covered with snow, notwithstanding which, the climate is said not to be remarkably severe. Snow, however, lies on the ground from November till April or May, and on an average six feet deep. From the end of May till the beginning of September, fires can be dispensed with; for the rest of the year they are necessary.

There are many spots of fertile land along the rivers, but the early frosts are a great obstacle to agriculture. Potatoes, turnips, wheat, and barley, are, however, raised at Fort Alexandria and Fort George; but at the more northern, as St. James, Babine, and Fraser's, only the two former vegetables can be cultivated. Cattle are now in considerable numbers at most of the posts.

On the 19th, Lieutenant Johnson was prepared to depart, with his party, having recruited his horses and mended his accoutrements. The kindness of Messrs. M'Donald and Maxwell supplied all their wants, and enabled the party to leave Colville in a better state than they had originally departed from Nisqually.

To these gentlemen my thanks are especially due for their attentions to the officers, who all spoke in high terms of the kindness they received. After their departure, they found that the ladies of the establishment had been equally mindful of their comforts, in not only filling their haversacks, but in supplying them with moccasins.

The latitude was ascertained, by observations at the fort, to be 48° 36′ 16″ N., longitude 118° 04′ 00″ W.

After leaving the fort, they pursued a southerly direction, for the missionary station of Chimikaine. This is called after the name of the plain in which it is situated, which is translated "The Plain of Springs," from the fact that, a few miles above the mission station, in the valley, the streams lose themselves in the earth, and after passing under ground for about five miles, burst out again in springs.

At the time of their visit to the Kettle Falls, the Indians were employed in spearing the salmon, which is almost the only mode used for taking them during the first of the season. In this they are very expert; and to see an Indian thus engaged, is an interesting sight. He stands on the edge of the foaming pool, with his spear poised and pointed, his body in constant and graceful motion, and his eye intent upon his object. When he discovers a fish within reach, he instantly darts the spear with unerring aim, and secures his prize.

They arrived at the station at a convenient hour, and found that the two gentlemen of the mission had returned, and now united with their wives in as warm a reception as the latter had given them on a former occasion.

The ladies of this mission, with some others, had travelled across the Rocky Mountains from the United States. The missionaries had brought cattle with them, and had been now settled here for two years. I understood that their presence had been not only of much advantage to the Indians, who had profited somewhat by their example, but also in a greater degree to the officers of the Hudson Bay Company, by affording them an opportunity of educating their children, and instructing them in the art of the dairy.

According to Mr. Eels, the Indians are glad to have whites settle among them, that they may procure by that means the "fine things" which they so much covet. The conclusion they come to is, the more the whites come the more they must receive. They are particularly partial to the Bostons, and frequently refer back to the time when there was rivalry in the trade.

The missionaries represent the Indians as being very easily actuated by impulses, and impatient of restraint; but that, though quick-tempered, they are not sullen: a revengeful spirit is always discouraged,—indeed it is esteemed a merit to be patient under an injury. Public opinion has a very powerful influence upon them, and few savages are more susceptible of ridicule, to the utterance of which their language is peculiarly adapted. Although there is but little government in families, still they are well behaved; and it is proverbial that they seldom quarrel among themselves. Generosity and wealth are the two qualifications that give most consequence; after these, comes noble blood.

Their adoption of names is arbitrary, and a fortuitous circumstance is frequently seized upon to gratify the passion for a change. The first name they bear is generally taken from some circumstance at the child's birth, and in after life others are added to the first, and there are few individuals but are well supplied with them.

The missionaries have succeeded in inducing many of the Spokane tribe of Indians to reside near them, which affords an opportunity of attending to their temporal wants, as well as of giving them instruction.

On their way, they met a party of Pend' Oreilles Indians, digging the cammass-root. Some of these were purchased that had been cooked with the Oregon sunflower, which imparted to them the taste of molasses.

Shortly after their arrival, they were joined by two Canadian free trappers, whom our party was desirous of procuring as guides; but it was soon found that they were ignorant of the country, and not trustworthy.

The customs of the Indians, in relation to the treatment of females, are singular. On the first appearance of the menses, they are furnished with provisions, and sent into the woods, to remain concealed for two days; for they have a superstition, that if a man should be seen or met with during that time, death will be the consequence. At the end of the second day, the woman is permitted to return to the lodge, when she is placed in a hut just large enough for her to lie in at full length, in which she is compelled to remain for twenty days, cut off from all communication with her friends, and is obliged to hide her face at the appearance of a man. Provisions are supplied her daily. After this, she is required to perform repeated ablutions, before she can resume her place in the family. At every return, the women go into seclusion for two or more days.

When in childbirth, they are still more hardly treated, being required to keep strictly to the hut, whence they are not suffered to be moved, however ill they may be. Death often ensues in consequence.

In case of illness, very few comforts are allowed the sick, in consequence of the custom that all the garments about a death-bed must be buried with the body. They have no medicines, except for sores or wounds.

The conjurors, or medicine-men, are employed to cure diseases, and they have practices similar to those mentioned in speaking of the Nez Percés.

After death, burial takes place within a few hours. The corpse is washed, wrapped in skins, with the legs doubled up, and then put into

a grave three feet deep, which is surrounded and covered with stones and sticks, to prevent the wolves getting at it.

Widows are not allowed to change their dress for a whole year.

The men may take and put away their wives at pleasure, and both parties may marry again. The greatest requisite sought for in a wife is her capability of providing food. Polygamy was and is still practised. Where this is the case, or where many families reside in the same lodge, each family or wife has a separate fire. In marriages, permission is first asked of the chief, then the consent of the parents is sought for, and afterwards that of the intended. If she object, it is conclusive; if acceptance takes place, the groom gives from one to five horses to the bride's parents, they have a pow-wow, and the marriage is concluded. They are often espoused in infancy, but it is not considered as binding on either side. The squaws sometimes make proposals to the men. In other cases, young girls are contracted for, and the price paid down, some years in advance of the marriageable age.

The missionaries had, as I understood, adopted the following rule in relation to these connexions: all who already had wives were required to maintain them, but no new ones were to be taken. In consequence of this regulation, there have been no new instances of polygamy.

The number of Indians that are supposed to speak dialects of the Flathead language, is thought by the missionaries to be about five thousand. Their weapons have been bows and arrows, which they still use for small game: the arrows have iron points, but they use guns in preference for killing the larger animals.

On the 21st of June, at 3 P. M., the party left the mission, being accompanied on their way several miles by Mr. and Mrs. Walker. After riding ten miles in a southerly direction, they reached the Spokane river, and found it but one hundred feet wide, with a current of three and a half miles an hour. They swam their horses across, and passed over themselves and luggage in a canoe, which is always left at this point, to ferry persons over.

The formation of the country was now lava or trap, of which rock the latitude of 48° N. seems to be the limit, after which it gives place to granite. This was found to be the case also in the Straits of Fuca, where the same parallel is the dividing line of the two rocks; and, as far as our opportunities and information went, there seems to be but little doubt that this line extends from the sea-coast to the Rocky Mountains. We may, therefore, confidently state, that the whole portion of the Oregon Territory to the south of the Spokane, is of

igneous formation: it is comparatively level, and offers a fine example of the old-fashioned flinty trap.

The tract of country from the mission to the Spokane is rather sterile, and but thinly wooded, with spruce, larch, and pine, neither of which is of great size. The banks or margin of the river, for some distance on each side, is formed of sand and gravel, with a few alder and willow bushes. The old chief, Bighead, joined the party here.

On the 22d, they travelled thirty miles in an east-northeasterly direction, from the Spokane. The country they passed over would be called hilly, with lakes and open glades intervening: the soil was poor, with sand and stones; a few scattered pines were seen on the hills, and around the lakes were cotton-wood and willow bushes.

On the 23d, after travelling five miles, they reached a camp of Spokane Indians, in number about three hundred, at the entrance of a fine meadow, where they had a number of horses feeding, while they were procuring the cammass-root. The number of lodges was twenty, some of which were conical, and of buffalo-skins. With this party were an Indian and a Canadian Frenchman, both of whom spoke English intelligibly. As the party entered the camp, a stout savage seized one of the horses, which he claimed as having belonged to him, and which he said had been stolen. Evidence was subsequently produced that the fellow had lost the horse by gambling, of which all these Indians are notoriously fond.

The horse had been purchased near Colville, for a musket. The party remonstrated against this violent seizure, through the Canadian, upon which the Indian relinquished the bridle, walked directly up to his lodge, loaded his rifle, and was about to shoot either horse or rider. Two of the gentlemen instantly stepped up to him, with their guns ready, telling him if he pointed his gun at any one, they would blow his brains out. On this he explained that his intention was to shoot the horse, but he was now afraid to do this; and the affair was settled by a few presents. The party at once passed quietly through the camp, and were glad to be rid of such troublesome neighbours.

In the afternoon, they passed through a rich and fertile valley, running in a southwest and northeast direction, in which the horses sank in clover up to their knees; and this day they made twenty-eight miles.

Among the beasts belonging to our party, was a spotted horse, which the Indians were extremely desirous of procuring, as it was a favourite kind with them; but their offers did not prove equivalent to his value. On the other hand, the party succeeded in purchasing a horse from the Indians, which they much required, but which after-

wards turned out to belong to the Hudson Bay Company, having been stolen from them. Horses with the Indians are considered the sign of wealth, and are prized accordingly. One of their great amusements is horse-racing, in which their gambling propensities have full sway. Notwithstanding that horses are the great source of contention and difficulty between the whites and Indians, it is said that little or none occurs between themselves, and that they are not prone to commit depredations on each other. This may be owing to the apprehension that the difficulty would not only involve the individual, but the whole tribe, which is a necessary consequence among uncivilized people.

Several of the Indians at the camp through which they passed, were well dressed in robes obtained by themselves from the buffaloes; for these Indians, as well as others from the Oregon, near the coast, visit the buffalo-grounds annually.

The Indian, who spoke good English, stated that he had been five years at the white man's settlement. On his return he was made chief, and at that time his authority was great in the tribe; but now, owing to his propensity for gambling, he has lost all his influence.

On the 24th, they passed through a fine rolling prairie country, producing very fine pasture, and being well watered, though destitute of wood. The distance made to-day was thirty miles. The plants seen were Convolvulus, Frasera, Habenaria, Calochortus, Baptisia, and Trifolium: this last is a good plant for cattle.

During the day, they met a party of Indians travelling, with abundance of spare horses, and in this case they were carrying even their tent-poles, with which one of their horses was loaded: a proof that underwood of the description used is scarce in the country. Within thirty miles of Lapwai, the mission station on the Kooskooskee, they crossed a small tributary of the Snake river, thirty feet wide and two deep. It was very winding, and its general course was southwest. About twenty miles distant, in a south-southeast direction, they discovered a high snowy peak, which is situated near the Grande Ronde, and is the highest point of what is termed the Blue Ridge. On its summit the snow remains all the year round.

Beyond the Snake or Lewis river, was a long even-topped ridge, wooded on its upper parts, and covered with snow. This is the mountain which Mr. Drayton ascended near the Wallawalla. From the northwest, it has the appearance of an extensive and elevated table-land.

On the 25th, about noon, they reached the Kooskooskee, which is two thousand feet below the plain they had been travelling on. It is here eight hundred feet wide, and a powerful stream. Lewis and Clarke fell upon this river about forty-five miles above this place, and it is not

difficult to imagine how they were induced to suppose that they had reached the great river flowing to the west, so totally different is it from the Ohio and Missouri. The missionaries informed me, in explanation of this, that the Indians have names for all the nooks and points along the rivers, but none for the rivers themselves: they further state, in reference to these travellers, that when they made their appearance, the Indians for some time doubted whether they were really men, so overgrown were they with beards, and of course so different from this beardless race.

Mr. Spalding has built himself a house of two steries, with board floors, as well as a grist and saw mill. For these he procured the timber in the mountains, and rafted it down himself; in doing which he has not neglected to attend to the proper sphere of his duties, for his labours will compare in this respect with those of any of his brethren. His efforts in agriculture are not less exemplary, for he has twenty acres of fine wheat, and a large field in which were potatoes, corn, melons, pumpkins, peas, beans, &c., the whole of which were in fine order.

This part of Oregon is admirably adapted to the raising of sheep: the ewes bear twice a year, and often produce twins. One ewe was pointed out to our gentlemen, that had seven lambs within three hundred and sixty-three days. Horned cattle also thrive, but the stock is at present limited. The Indians have a strong desire to procure them. A party was persuaded to accompany a missionary, and take horses over to St. Louis, to exchange for cattle. When they reached the Sioux country, the chiefs being absent at Washington, they were attacked and all murdered, except the white man.

Mr. Spalding, during his residence of five years, has kept a register of the weather: this he was kind enough to present to the Expedition, and it will be found in Appendix XIII. Mr. Spalding regards the climate as a rainy one, notwithstanding the appearance of aridity on the vegetation. There is no doubt of its being so in winter, and even during summer there is much wet. A good deal of rain had fallen the month before our visit. The nights were always cool. The temperature falls at times to a low point. On the 10th of December, 1836, it fell to —10°; and subsequently was not so low till the 16th of January, 1841, when it fell to —26°; and on the 10th of February, it was as low as —14°.

The greatest heat experienced during his residence was in 1837: on the 23d July, in that year, the thermometer was 108° in the shade. In 1840, it was 107°; and in the sun, it reached 144°. The extreme variations of the thermometer are more remarkable, the greatest

monthly change being 72°; while the greatest daily range was 58°. Mr. Spalding remarks, that, since his residence, no two years have been alike. The grass remains green all the year round. In their cultivation, irrigation is necessary; and the wheat fields, as well as those of vegetables, &c., were treated in this way. Indian corn succeeds well.

Among the other duties of Mr. Spalding, he has taught the Indians the art of cultivation, and many of them now have plantations. The idea of planting seeds had never occurred to the Oregon Indians before the arrival of the missionaries. Mr. Spalding kindly lends them his ploughs and other implements of husbandry: and on a difficulty occurring with some of them, he had only to threaten them with the loss of the plough, to bring the refractory person to reason. One of the Indians had entirely abandoned his former mode of life, had built himself a log cabin, and both himself and wife were neatly dressed in European costume. The women are represented as coming a distance of many miles to learn to spin and knit, and assist Mrs. Spalding in her domestic avocations.

Mr. Spalding gave his assembled flock some account of the Expedition, and a short sketch of the people we had seen, which the Indians listened to with great interest, and appeared to comprehend perfectly, with the aid of a map.

Mr. Spalding stated, that the number of Oregon Indians whom he had ascertained to have visited the United States was surprising. He informed our gentlemen that he had sent letters to Boston in eighty-one days from the Dalles, by means of Indians and the American rendezvous; and, what was remarkable, the slowest part of the route was from St. Louis to Boston. The communication is still carried on by Indians, although it was generally supposed to be by the free trappers. He considers that these tribes, both men and women, are an industrious people.

Our thanks were due to Mr. Spalding for his kindness in exchanging horses, which enabled our party to proceed more comfortably, and to carry forward their collections.

On the 26th, they left the mission at Lapwai, accompanied by the missionaries and their ladies, intending to visit some of the rude farms of the natives. These are situated in a fertile valley, running in a southerly direction from the Kooskooskee. The farms are from five to twelve acres each, all fenced in, and on these the Indians cultivate wheat, corn, potatoes, melons, pumpkins, &c. One of them, in the year 1840, raised four hundred bushels of potatoes and forty-five bushels of wheat. With part of the potatoes he bought enough buffalo-

meat to serve him through the winter. All these lots were kept in good order, and several had good mud houses on them. The great endeavour of Mr. Spalding is to induce the Indians to give up their roving mode of life, and to settle down and cultivate the soil; and in this he is succeeding admirably. He shows admirable tact and skill, together with untiring industry and perseverance in the prosecution of his labours as a missionary; and he appears to be determined to leave nothing undone that one person alone can perform. In the winter, his time and that of his wife is devoted to teaching, at which season their school is much enlarged.

On their way, they fell in with some half-breeds, going to hunt buffalo. Among them there were four brothers, all fine-looking young men, and very much alike. Many of the Indians, as has before been remarked, visit the buffalo-grounds. These have been constantly changing, and, within the memory of many of the hunters, their limits have been very much circumscribed. From the accounts we received, these animals are not now found west of the Portneuf river, and their range has been materially changed since the arrival of the whites. Instead now of migrating to the south during the winter, they are reported as seeking a more northern clime, and are now found as far north as 64°: four degrees farther in that direction than their former range. This abandonment of their feeding-grounds is unknown in any other American animal, and may forebode their extinction at no very distant day.

At 3 P. M., after travelling fifteen miles, they reached the banks of the Snake river, at the forks. On their way down the Kooskooskee, they had met with numerous herds of horses belonging to the Indians; and here they found the owners, consisting of about one hundred and fifty persons. There was but one building, which was of a circular form and a hundred feet in diameter. It was built of rails or rough joists set on end, which supported a roof of the same material, and served the double purpose of sheltering the inhabitants and drying their fish. The different families were arranged around the walls in the interior. These Indians paid no attention to our party while passing, but soon after sent up two canoes, to ferry them and their luggage over the river; which being finished, they went away without demanding any thing for their services, and exhibiting a sort of independence, characteristic of this race when they think themselves well off or rich.

The party crossed the Snake river about a mile above its junction with the Kooskooskee: its breadth here was seven hundred and fifty feet, and its banks were destitute of trees and bushes. The Snake

river abounds in salmon; but few are found in the Kooskooskee, in which the Indians say the water is too clear to spear salmon. A few miles below the junction of the two rivers, the Snake or Lewis river is bounded by a range of high basaltic columns, affording a fine specimen of that structure. Under these the party encamped, some twenty miles from Lapwai. The greater portion of the prairie they had just passed over, is only fit for sheep-pasture.

The Snake river is much inferior to the north branch of the Columbia, notwithstanding its length of course; but after it is joined by the Kooskooskee, it becomes much enlarged. It resembles the north branch in being sunk, as it were, in a deep trench, much below the level of the country; and its banks are even more naked than those of the Columbia.

On the 27th, they travelled forty miles, at first in a westerly course, and then southwest. The country was hilly, with deep valleys, in which there was water and an abundance of good pasturage. A few willow and alder bushes were all that were seen. In one of the valleys, they saw a considerable tract irrigated and under cultivation, and small patches of corn on the hill-sides. From the hills over which they passed, they had a view of a high even-topped ridge, on which there were trees of large size. On the north, beyond the Snake river, was an almost boundless expanse of level plain. The prairie that they passed over during the day, was observed to have lost its flowery character, and become altogether grassy.

On the 28th, they rode fifty-six miles, the first thirty-six of which was through a country of the same character as that they had passed the day before, but the last twenty took them over a sandy desert, on which the vegetation consisted only of wormwood. They reached Wallawalla before dark, and were kindly welcomed by Mr. M'Lean, one of the Company's clerks, who was in charge of that post.

On the 30th, Lieutenant Johnson joined them again. On his leaving the mission at Chimikaine, he had pursued an easterly course, along the Spokane river, until he reached the falls, of which there are four, three of ten feet, and one of forty, besides which there are rapids; and the whole fall of the river, within a distance of one thousand feet, is about one hundred feet. After travelling a distance of ten miles, both the distant mountains and prairies expanded to the view: the former rising ridge beyond ridge, while the latter exhibited a breadth of seven miles. The nearest range of mountains trends east and west. Six miles further on, they came to the Little Falls, and above them about six miles to the lake of Cœur d'Alene. The breadth of this lake is two miles, by five miles long, in an east-southeast and west-north-

west direction. There is a smaller lake to the northward, half a mile in length. The mountains were of granite. A large number of inhabitants were seen, who used canoes of bark. Lieutenant Johnson then returned on his path for a few miles, and afterwards pursued nearly the same direction that the party had done before him. It is therefore unnecessary to repeat what has been before said of this route. He made the latitute of Lapwai 46° 27′ 00″ N.; and measured the width of the river, which was found to be four hundred and sixty feet.

There are a number of singular customs prevailing among the Nez Percés, perhaps a greater number than in any other nation of savages. That of overcoming the "Wawish," or spirit of fatigue, if it may be so translated, is the most remarkable; for this is a ceremony to enable them to endure fatigue, that has long been practised among them, and is still kept up. The operation continues for three, five, and seven days, and is often repeated. It is begun on the first day by taking three or four willow sticks, eighteen inches long, and thrusting them down the throat, in order to cleanse the stomach by bringing up bile, blood, and coagulated matter; a hole is then prepared, of a sufficient depth for a man to sit upright, with his head above the ground. This is usually dug near a running brook.

On the second day they fast, and collect other willow sticks, of one-eighth of an inch in diameter, the distance of the navel from the mouth being their length. These are slightly rounded and made smooth, and are passed down to the bottom of the stomach, which causes a severe irritation and vomiting, and is continued until it produces a burning sensation: this is repeated from time to time until noon, and not unfrequently as often as eighteen or twenty times. The number of sticks is diminished as the throat becomes sore. When noon arrives, they plunge into cold water, and remain there till evening, when they take half a pint of porridge.

The third day, a similar course is gone through.

On the fourth day, after heating a number of stones, they get into the pit, the water in which is heated by throwing in the hot stones, until it is no longer to be endured; they then plunge into cold water, and remain there slapping themselves until they are quite benumbed; they then again resort to the hot bath, and continue to pass from the one to the other throughout the day, during which they are allowed to eat porridge, but to take no drink.

On the fifth, sixth, and seventh days, the same operation is repeated, until 2 P. M., after which hour they eat largely, and satisfy both hunger and thirst. This treatment is said to be gone through several times by

some of them, and after the probation, they deem themselves capable of enduring both heat and cold, of sustaining fatigue, of outrunning horses, pursuing game, and overcoming their enemies. If this is neglected to be performed annually, they believe that the system becomes easily fatigued, and Wawish is again their master.

This treatment generally begins at the age of eighteen, and is only discontinued when they have a large family, or have passed the most active age by reaching that of forty years; some, however, from a feeling of pride, are said to continue it much beyond this period.

The officers at Wallawalla mentioned, that some of the Indians had remarkable powers of undergoing fatigue, and instanced the case of one who performed the journey from Dr. Whitman's mission-house to the forks of the Clearwater, a distance of one hundred miles, between morning and sunset. This man is in the habit of performing this treatment on himself annually.

The Indians around Lapwai subsist for the most part upon fish, roots, and berries: the latter they make into cakes; moss is also eaten by them. Half of these Indians usually make a trip to the buffalo country for three months, by which means they are supplied with the flesh of that animal.

The school at the station has in winter about five hundred scholars, but in the summer not one-tenth of that number attend. Our gentlemen heard some of the pupils read. Only two are converts to Christianity, the principal chief and another; eight or ten, however, are reported as showing signs of piety.

The men are industrious, for Indians. The mission have a saw-mill at this place, capable of sawing three thousand feet per day.

The usual games of the Indians, which have been already described, are played here. The wages for the performance of any task are paid for in clothing, blankets, horses, &c.

Their salmon-fishing is conducted with much industry, and lasts from daylight until ten o'clock at night. Supper is their principal meal.

The scalps of enemies are taken in war, and the war-dance is always performed.

Girls are offered as wives to the young men by the parents: the ties of marriage are very loose, and wives are put away at pleasure. This privilege is also allowed to the women, which places the two sexes much more on a par than among the tribes west of the mountains.

The medicine men and women are much in repute here. Before any sorcery or divination is performed, they retire to the mountains for several days, where they fast, and where they pretend to have an

interview with the waiakin or wolf. When they return, they relate the conversation they have had with him, and proceed to effect cures, &c. They are looked upon as invulnerable, and it is believed that balls fired at them are flattened against their breasts. If affronted or injured, they predict death to the offender, and the doom is considered inevitable. They use the same means of extricating diseases that have been before described.

Wild animals are now comparatively few, when compared with their former numbers. They consist of wolves, large and small, who prowl around the dwellings; lynxes, bears, of the gray, brown, black, and yellow colours, the former of which were the most numerous. Beavers and otters are now both scarce. Rats, both water and musk, are seen in numbers.

Mr. Hale, the philologist of the Expedition, who was left in the Oregon Territory, passed from Waiilaptu, the mission station of Dr. Whitman, to Chimikaine and Fort Colville, by the Peluse river, crossing the country over the middle sections of Oregon, about half way between the route the party under Lieutenant Johnson pursued to Lapwai. Mr. Hale describes the country as an upland plain, covered with herbage, but without trees. There were no running streams, but numerous ponds of fresh water. This is the most direct route to Fort Colville, and is that usually chosen by the servants of the Hudson Bay Company. It passes by the Peluse river, and follows its windings.

The falls upon this river are of some note, and are called Aputaput; and they will hereafter be an object of interest to travellers in this country. The river pours down, in a cataract of foam, through a perpendicular descent of one hundred feet, and is received in a basin, surrounded by basaltic walls, between two and three hundred feet in height. These falls are celebrated in Indian mythology. Among other legends, it is related that a woman of gigantic size lived in that part of the country, with four brothers of equal stature. She became very desirous of obtaining some beaver's fat, but whether for a delicacy or cosmetic is not known. At this time there was only one beaver, and that of enormous dimensions, inhabiting the banks of the Snake river. The brothers hunted him for a long time without success: many places along the river, in which he could harbour, were searched, but without finding his hiding-places. Finally, the animal was surprised at the mouth of the Peluse, which was then a peaceful stream, winding through an even channel. As the beaver retreated up the stream, he was pursued, and overtaken two miles from its mouth. At first they pinned him to the earth with their spears, but

by a violent effort he broke loose and fled. This struggle produced the first rapids of the Peluse. A little farther up they again overtook the beaver, who again made his escape, by producing the second rapids; and lastly, where he was secured, his dying struggles gave rise to the great falls of the Aputaput. After killing him, and taking his skin and fat, they cut up the body, and threw the pieces in various directions, from which has arisen the various tribes in the region; among them the Cayuse, the Nez Percé, Wallawalla, &c. The Cayuse are said to have sprung from the heart, and became, in consequence, a strong and thriving people, which they continue to be to this day.

The party remained but a few days at Wallawalla. Their measurement made the width of the river at this point, two thousand seven hundred and sixty feet, but in it there are many small islets.

At Wallawalla, as before stated, there is no soil, even for a garden; but a spot of about fifty acres, three miles from Wallawalla, on the banks of the river Columbia, and called by the same name as the post, has been for some time past cultivated. On this is grown wheat, corn, peas, potatoes, &c. The garden embraces about two acres, where all the smaller vegetables had been sowed, but it was entirely neglected, and overgrown with weeds. The soil of this garden is a deep rich brown loam.

On the sandy plain about Wallawalla, as was to be expected, there are but few plants to be found. A Salsola, Opuntia, Dalea, Oberonia, and Rubiaceæ, with several Compositæ, were all that were found. Hares were seen on the prairies in numbers: these are larger than the English hare, had larger ears and limbs, and are of a lighter colour. They do not burrow, as has generally been supposed, but form a shallow seat or nest under the wormwood-bushes.

While they stayed at Wallawalla, Dr. Whitman came down to visit them, and kindly offered his services.

The diversity of languages heard during this jaunt, was very remarkable. The dialect seemed to change with almost every party of Indians they met with, and it was frequently necessary for words to pass through three or four different interpreters, before they could be comprehended, and an answer obtained. It was thought, at times, that every family must have a language of its own. It is difficult to account for this state of things. The tribes on the west of the mountains have been, for the most part, at peace with each other, and have had much intercourse, for the purpose of trading their fish and other articles: yet but few can understand their immediate neighbours.

One cause of this discrepancy may arise from the length of the Indian words, which are always abbreviated in talking. According to Dr. Whitman, the Indians of one tribe very soon pick up the language of another. He also stated that the Nez Percé dialect is fast gaining upon that of Wallawalla; and he thinks that the rising generation are inclined to a more general language.

On the 4th of July, they left the fort and crossed the river. The Columbia is here an imposing stream, and its waters flow in a rapid and powerful current. Mr. M'Lean's kindness and attention were similar to that already met with, and he provided them with the necessary horses, provisions, &c.

On the maps of the Oregon Territory, opposite Wallawalla, a volcanic mountain has been exhibited; but none exists here, nor on inquiry could any information be obtained of any such object in the country around.

The party now pursued the route up the river, and in two hours reached the Yakima, up whose valley they passed, encamping after making twenty-five miles. The country was rolling, and might be termed sandy and barren.

Mount St. Helen's, with its snow-capped top, was seen at a great distance to the west.

On the 5th, they continued their route, and at midday were overtaken by an Indian, with a note informing them of the arrival of Mr. Drayton at Wallawalla with the brigade. This was quick travelling for news in Oregon; for so slow is it usually carried, that our party were the first to bring the news of the arrival and operations of the squadron in Oregon. This intelligence had not previously reached Wallawalla, although it is considered to be on the direct post-route to the interior, notwithstanding we had been in the country nearly two months. The news of the murder of Mr. Black, in New Caledonia, was nearly a year in reaching some points on the coast.

This was one of the warmest days they had experienced, and the thermometer under the shade of a canopy stood at 108°. At a short distance from the place where they stopped was a small hut, composed of a few branches and reeds, which was thought to be barely sufficient to contain a sheep; yet under it were four generations of human beings, all females, seated in a posture, which, to whites, would have been impracticable. They had just procured their subsistence for the day, and their meal consisted of the berries of the dogwood. The scene was not calculated to impress one very favourably with savage life. The oldest of these had the cartilage of the nose pierced, but

the others had not; leading to the conclusion that the practice had been discontinued for some years in the nation, who still, however, retain the name.

The country exhibited little appearance of vegetation; the herbage was quite dried up, and from appearances was likely to continue so throughout the season. The prevailing vegetation consisted of bushes of wormwood, stinted in growth, and unyielding.

After making thirty-three miles, they encamped among loose sand, one hundred feet above the water of the river. Many rattlesnakes were found in this vicinity.

Owing to the quantities of musquitoes, combined with the fear of snakes, the party obtained little or no rest, and were all glad to mount their horses and proceed on their way.

In the early part of the day, they arrived at the junction of the Spipen with the Yakima: previous to this they crossed another branch, coming in from the southwest; the waters of the latter were very turbid, of a dark-brown colour, and it was conjectured that it had its source at or near Mount Rainier. Along its banks was seen a range of basaltic columns. The Yakima was crossed during the day in canoes, the river not being yet fordable.

The country, which had for some days exhibited the appearance of the Tillandsia districts of Peru, had now begun to acquire a tinge of green, and some scattered pine trees had become visible. Some small oaks were passed, which appeared of a local character. This night they again had a number of rattlesnakes in their camp.

On the 8th, the valley had narrowed, and the banks becoming more perpendicular, they had a great many difficulties to encounter. They stopped at the camp of old Tidias, whom, it will be recollected, they had encountered after crossing the mountains, and from whom they obtained some horses. They soon afterwards arrived at the path where they had turned off to the north. The river had fallen very much during their absence, and there was a marked difference in the season, the vegetation being much more backward than in the parts they had recently visited. The berries were just beginning to ripen, while in the plains, not twenty miles distant, they were already over. Old Tidias determined to accompany them to Nisqually, taking with him his son, and lending them several horses. The Spipen, up which they passed, was now hemmed in by mountain ridges, occasionally leaving small portions of level ground. They encamped at the place they had occupied on the 30th of May.

The vegetation, since they had passed this place, had so much advanced that they had difficulty in recognising it again. The wet