

WASON  
DS  
895  
H7  
B63+

ASIA

Wason  
DS 895+  
H7R63+

CORNELL  
UNIVERSITY  
LIBRARY



THE WASON  
CHINESE COLLECTION

THIS BOOK IS THE GIFT OF

The Hitchcock Estate

CORNELL UNIVERSITY LIBRARY



3 1924 064 362 084



# Cornell University Library

The original of this book is in  
the Cornell University Library.

There are no known copyright restrictions in  
the United States on the use of the text.

# JAPAN IN YEZO.

---

A SERIES OF PAPERS DESCRIPTIVE OF JOURNEYS UNDERTAKEN IN THE ISLAND OF YEZO,  
AT INTERVALS BETWEEN 1862 AND 1882:

By T. W. B.

—WITH—

ITINERARIES OF DISTANCES ON TRAVELLED ROUTES, AND A SKETCH  
MAP OF YEZO.

---

Originally published in the "JAPAN GAZETTE" February to October 1883, and reprinted  
in this form by request.

---

YOKOHAMA:

PRINTED AND PUBLISHED AT THE "JAPAN GAZETTE" OFFICE, No. 70, MAIN STREET.

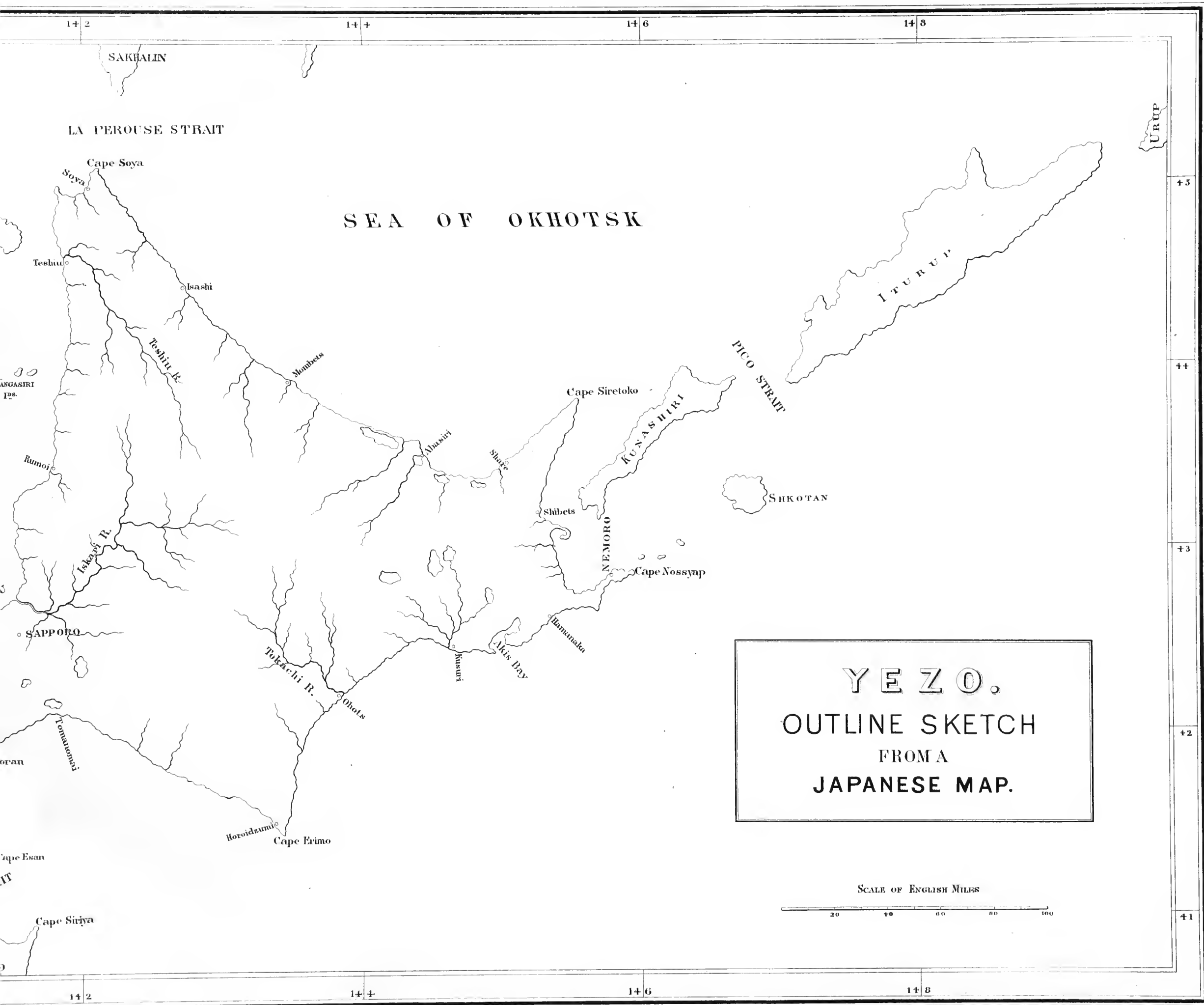
---

1883.









142

144

146

148

SAKHALIN

LA PEROUSE STRAIT

Cape Soya

Soya

Teshu

Isashi

Teshu R.

Mombets

Rumoi

Iskari R.

SAPORO

Cape Siretoko

KUNASHIRI

PICO STRAIT

IURUP

Shibets

NEMORO

Cape Nossyap

SHIKOTAN

Hananaka

AKIS BAY

Kusumi

Tokachi R.

Ohots

Horoidzumi

Cape Erimo

oran

Cape Esan

IT

Cape Siviya

142

144

146

148

45

44

43

42

41

YEZO.  
OUTLINE SKETCH  
FROM A  
JAPANESE MAP.

SCALE OF ENGLISH MILES





Animals names of 70  
Agriculture 101

Bear feast. 100, 99.  
Bears 44  
Boats 51, 89, 90

Cloth, 26, f. n. 100.  
Clay used for food 83  
Ceremonies 99

Deer 45, 72.

Earth, edible 83

Fishing 23, 24.  
Fish salting & canning 36, 37 105, 114.  
" Species of 24, 65  
Food, vegetable 45, 46.  
" Earth 83  
Fire, producing 99

Greeting 81  
Graves 100

Hunting 92, 100.

of

of

Kaitakushi 40

0,

L

Pottery 25. Stamp.

Plants 71

Pits. 25. 26. 35. 37

Musical Insts 100

L

R

U

Spears for fishing 55, 87  
Snowshoes 100

V. W.  
Volcanos 96

Tattooing 100, 101.  
Temple oldest. Drose 95-7  
Trous 71



# CONTENTS.

	PAGE.
CHAPTER I.	
Retrospect of Hakodate: Modern facilities for travel: Shanghai to Japan: Japanese sailing craft: Strait of Tsugaru: Bay of Hakodate ... ..	1
CHAPTER II.	
Impressions on landing in Yezo: Peninsula of Hakodate: Active Volcanos: Appearance of the town: Principal occupation of the inhabitants: Foreign residents... ..	3
CHAPTER III.	
A trip to Awomori: Japanese-English: Custom House: Hakodate and its changes ... ..	5
CHAPTER IV.	
Excursions to the Volcano and Lakes ... ..	8
CHAPTER V.	
Volcano of Komagatake: Volcano Lake: Variations in the route: Government farm at Nanai: Togeno- shita: View from the pass: Jinsai Lake: Ascent of Volcano... ..	8
CHAPTER VI.	
Second visit to volcano of Komagatake: A Yezo forest: Bears... ..	12
CHAPTER VII.	
Cape Esan and Volcano Bay: Autumn in Yezo: Some points in the character of the people of Yezo: State of foreign society ... ..	14
CHAPTER VIII.	
A happy recollection: Sulphur springs: Cape Blunt: Mountain travelling: Iron sand: Nidanai: Volcano of Nidanai: On the surface of Volcano Bay: Pack horses and saddles: Stormy weather <i>en route</i> : The Ainu race: Holidays in Hakodate: Processions ... ..	15
CHAPTER IX.	
A visit to Eturup: Cape Erimo: Currents: Headlands, islands and reefs: Eturup: Salmon: Bettobu: Inaccuracy in charts: Trout fishing: Pit dwellers: Hunting salmon-trout with rifles and sticks: Moyoro or Bear Bay: Shibetoro: A strong gale: Rubets: Return... ..	22
CHAPTER X.	
The south-east coast: Cape Erimo: Horoidzumi: The track: Sararu: Another route: Okos: Between Okos and Shoya: Changes in the last few years: Biru or Tokachi Quaisho: Erimo mountain range: Subdued nature of Ainu: Ohots: Supposed region of gold: Ohots to Kusuri: Kusuri valley: Kusuri: Kombumoi: Jempoze: Jempoze to Akis Quaisho... ..	27
CHAPTER XI.	
The eastern part of the island: Bay of Akis: Timber: Fishery: Hamanaka Bay: Hamanaka to Nemoro: Travelling and accommodation: Fishery: Nemoro ... ..	32
CHAPTER XII.	
Tsugaru Strait: Matsumai: Kindness of Japanese: Villages in the vicinity of Matsumai: Development of Yezo: Settlers brought from the south: An agricultural college established: Subsequent conduct of affairs: Colonel Crawford and the Sapporo-Otaru railway: Dissimilarity of fauna in Yezo and the Mainland of Japan... ..	38
CHAPTER XIII.	
Matsumai to Esashi: The route: Bears on the mountains: An adventure with bears: Deer: Ishisaki: Plants used as edible vegetables: Kaminokuni; Fisheries there: Esashi ... ..	43
CHAPTER XIV.	
Esashi along the west coast: A rough trip: Asabu valley: Ainuma and Tomarikawa: Kuwaishi to Kudo: Usibets river: Cape Ota: Futoro: Setanai: Impractical character of the colonization scheme: Setanai to Cape Mota: Shimamake: Cape Benke: Sitze ... ..	47

## CHAPTER XV.

- Otaru *viâ* Iwanai: Various routes: Fish manure: Otsupe: Roads and ferries: Yamakusnai: First Ainu settlement met with: Yurap and Yurap river: Oshamambe: Oshiro: Isoya: Pass of the Raiden mountain: Iwanai: Kaiyanuma coal mines: Shakotan promontory: Yoichi: Otaru... 53

## CHAPTER XVI.

- The Mororan route to Sapporo: Nanai and experimental farm: History of the farm: Ono valley: Mori: Mori to Mororan: Horobets: Aijiro: Shirai: Tomakomai: Chitose: Route on to Sapporo... .. 61

## CHAPTER XVII.

- West of Cape Erimo: Tomakomai: Yubuts: Mukawa river: Trigonometrical survey of Yezo: Valley of the Saru river: Ainu villages: Piratoru: The Ainu Chieftain: Sarubuto to Saru-Mombets: Shibichari: Horse breeding station: Sitsinai: Sitsinai to Mizuis: Urukawa: Porobets river: Shamani: Poromambets: Horoidzumi: Okos: Shoya: Snowfall... .. 66

## CHAPTER XVIII.

- The North-east coast: Nemoro district: Notski: Shibets: Pack-saddles: Sleeping houses for travellers: Share valley: Share: Abasiri: Hot baths: Tokoro: Yubets: Mombets: Poronai: Civility of Ainu: Isashi: Cape False: Any shelter in a storm: Sarubuts: Soya: Material saved from the wreck of H. M. S. *Rattler* ... .. 73

## CHAPTER XIX.

- Cape Soya to the Iskari: Natural panorama: Bakai: Teshiu: Wimbets river: Tomamai: Shakotan: Rurumopi: Maski: Yuwawi: Hama-maski: Gokibiru: Oshirokotsz: Mouth of the Iskari: Ainu canoe: Fishing stations: Salmon fishery: Satsporo Buto: Tszî-Iskari: Izaributo: Yubute ... .. 84

## CHAPTER XX.

- The north shore of Volcano Bay: Kiu-mororan: Osarubets river: Usu-mombets: Miss Bird's *Unbeaten Tracks in Japan*: Some recent literature on Japan: Foreigners in Yezo: Shiribets mountain: Usu: Abuta: A road "not good": Ribunge: The Ainu race: Mr. Lyman's journey: Rapids of Kamoikotan: Major Bridgford's description of the Iskari: And of the salmon fishery: Alleged productiveness of the soil: The reality... .. 92

## CHAPTER XXI.

- The Iskari valley: Tributaries of the Iskari: Poronai coal region: Mr. Lyman: Mr. Boehmer: Ancient form of the Iskari valley: Ainu traditions ... .. 108

## CHAPTER XXII.

- Sapporo and its vicinity: Works of colonization commission: Sapporo climate: The neighbourhood: Rail to Otaru: Otaru-Sapporo railroad: Poronai coal fields: Flies and mosquitoes: Sudden changes of temperature: Seasons: Excursions: Conclusions... .. 111

## APPENDIX.

Distances on travelled routes in Yezo.

# JAPAN IN YEZO.

(REPRINTED FROM THE "JAPAN GAZETTE" OF FEBRUARY 3RD, 1883.)

## I.

### RETROSPECT OF HAKODATE.

WHEN I first approached the shores of Yezo, over twenty years ago, it was by way of the sea of Japan. Communication in those days with Hakodate (one of the three ports opened to foreign commerce under the treaties of 1854-55 and 1858), and the outer world was confined to sailing vessels carrying on a small trade in seaweed and dried fish with Shanghai, and the occasional visit of a vessel-of-war, merchant steamers being then almost unknown in Japan waters. A revolution in such things has—as well as in others—occurred within later years; so much so indeed, that, supplementing the actual foreign sea-borne commerce of the country maintained by mail and other steamers sailing under various national flags, there is hardly a port in Japan which is not constantly visited by steamers and sailing vessels owned by native associations or private individuals, manned and often officered entirely by Japanese. Such constant and, compared with the former junk trade, rapid means of communication offering facilities for the transport of merchandise and produce, has developed an amount of coast-trade formerly impossible besides affording a mode of travelling for passengers, quick and reasonably safe, which the Japanese have not been slow to avail themselves of, and by which they escape the tedious and slow land journeys of former times, and can now arrive at their destinations within as many hours as it formerly occupied them days to accomplish.

The facility for travel is also of much advantage to foreign tourists who pay flying visits to Japan, and has essentially with respect to the north, brought visitors to Yezo, who otherwise would not have included that comparatively wild and unsettled portion of the Midado's dominions in their excursions. It is now only a matter of getting on board a steamer at Yokohama, and in fifty or sixty hours being landed at Hakodate; or of taking an overland run through the main island, reaching the same destination by doing the sixty miles of sea from Awomori by steam. Thence there are steamers running to Otaru on the north-west coast which take less than twenty-four hours for the passage in moderate weather, whence twenty-two miles of rail are in existence connecting the port with the town

of Sapporo, the capital of the newly established 'ken' or prefecture of the same name, beyond which the iron road has lately been extended about thirty-five miles to the coal district of Poronai well in the interior of Yezo. Or if the traveller is desirous of visiting the eastern parts of the island, he can find steamers frequently leaving Hakodate for Horoidzumi, Akis, and other places along the south-east coast as far as Nemoro; and may occasionally also find a good and well found steamer going as far as Eturup, the largest of the Kuril Islands, and sometimes circumnavigating Yezo. It is even possible to reach northern Japan from Shanghai direct by steam, but more frequently this voyage is made by steamers in the trade *via* Nagasaki, thence to Vladivostok the principal naval and military station of the Russians on the Manchurian coast, and then directly across the sea of Japan to Hakodate, or touching at some part of Sakhalin. There are also steamers of the Mitsu Bishi Company which sail once a month from Nagasaki to the two Japanese trading ports on the west coast of Korea, Fusan and Gensan, (Chosan harbour and Port Lazareff of foreign charts) and on to Vladivostok, which route affords a passing glance of the coast and of these harbours, though foreigners are not permitted to land.

I will now go back some years and give my own experience as written at the time, when Japan and everything Japanese was a novelty.

Two or three nights in succession rendered sleepless from the partiality of China mosquitoes for white blood, and the intense heat of a Shanghai July, caused me to decide on migrating to cooler regions. With European residents in the Celestial Empire, Japan has a peculiar charm. A voyage of a few days in some well-found steamer on a trading voyage, places the merchant—wearied by constant attention to business relieved by little relaxation save boating on the Canton river, listening to the military band at Hongkong, or a promenade on the bund at Shanghai—in a new world. His ears are relieved from the constant clashing of brass gongs and explosions of mammoth crackers; he gets clear of the hum and buzz of garlic-odoured Chinese crowds, in Chinese or semi-Europeanized cities; he hears no longer the peculiar jargon known and understood as Canton-English, and he finds himself among a quiet, unassuming, and industrious race, one discarding the tawdry tinsel work

and gaudy show of the Chinese, and the people of which show a taste for neatness and cleanliness to which he has for years been a stranger. He is in a beautiful and diversified country, where the garden-like minuteness of the cultivation even exceeds that of some parts of China, but where, at the same time, some parts are left in the wildest state of nature. Then the dwellings, public buildings, roads, and even the people themselves, are so different, that his former associations are dispelled, and he devotes himself to seeing and enjoying to the fullest extent the little-known country, and people. Transport could then be had to the ports of Nagasaki and Yokohama but my object was to get cool. As luck would have it, there was a vessel on the point of leaving for Hakodate, the third and little-frequented port opened to foreign trade by our treaty with Japan, and situated on the northernmost island, Yezo. The barque *Eva* was to sail on the following morning, and so I had but just time to procure a few things, including a tolerable supply of powder and shot, and get myself, bag and baggage, on board.

With the afternoon tide we dropped down the Shanghai river, passed the village of Woosung, and anchored in the outer roads for the night of the 13th of July. Next morning, weighing anchor at an early hour, we tacked down the broad estuary, passing the light ship at 11 a.m., and by evening were standing steadily on a north-east course with a leading wind in blue water, having left the muddy current of the great Yangtze-Kiang far behind. Continuing to be favoured by the steady breeze of the summer monsoon from W. S. W., just sufficiently strong to stir up the white horses, we made good progress for several days; sighting the high land of Quelpart Island on the evening of the 15th, Tsusima on the following evening, and were past the smaller Colnet Island and through the Strait of Korea by the 17th. Beyond this (the reader will find it of advantage to refer to a map) the monsoon was feeble, but a branch of the North Pacific Gulf-stream, called by the Japanese "Kuro-siwo," which invariably sets through this strait and up the Sea of Japan, helped us along in the right direction. The temperature of the air ranged from 76° to 85°, the water maintaining a pretty even average of about 80°. The colour of the sea was a deep blue, and a good deal of yellow weed floated at the surface. The set of the current is sometimes as much as thirty-six miles in the twenty-four hours. A few sea birds of the gull tribe were seen, and one morning a dove flew on board, but our efforts to capture her for the purpose of adding a specimen to an ornithological collection were unavailing; and our voyage in events perhaps was much the same as any other, our view being bounded always by that true but monotonous line, the visible horizon. In the way of weather we were favoured by a clear bright sky and dewy nights till the 21st, when, after a calm, in lat. 38° north, we got the wind from north and north-east baffling and unsteady, with clouds and rain, the temperature of the air falling considerably, and for a few days we made but indifferent progress in the required direction.

Having kept the mountainous coast of the north-western part of Nipon on our left hand for a day or two, on the 25th we sighted Ko-sima (*sima* means island, *yama*, mountain,

and *kawa*, river), a rocky island off the entrance of the Strait of Tsugaru, and beating up against a stiff breeze we got in under the high land of Yezo by night time. Hitherto the amount of native craft which we had seen on the voyage—we had not sighted a single foreign vessel in the little-frequented sea—had been limited to a few trading junks on what might be called distant voyages to and from the southern parts of the empire; but as we approached the strait we fell in with plenty of coasters and fishing-boats, and some of them were a considerable distance from land in a pretty heavy sea. The ordinary junks in Japan are all on one model, until the last few years regulated by law, it is said, with open sterns, so as to preclude the possibility of their performing distant voyages and visiting other countries. They are clumsy-looking, saucer-shaped vessels, each with but one stout mast planted amidships, supported by a fore stay, but devoid of all rigging, and supplied with tackle only sufficient for hoisting one large square sail made of strips of cotton cloth loosely threaded together. This sail, when filled by the wind, is allowed to belly out to a considerable extent, even when sailing, as it is called in nautical language, "on a wind," so that it is not astonishing to find that when they meet with a foul wind, the sailors of Japan invariably make for some one of the snug harbours with which their coast abounds, and lie quietly at anchor with that stoical patience and disregard of the value of time which so eminently characterizes the distant nations of the East. The junks themselves are unpainted, but are slightly decorated with copper. As they have a large slanting roof built over amidship, they carry considerable cargoes, but must be awkward in a sea-way. However, using hempen or grass cables of good length, they manage to ride out severe gales at anchor; having on such occasions seldom less than four or five anchors down, and an equal number more of those grapple looking affairs lying at the bows ready for use. One can well realise the shipwreck of St. Paul, and the passage "they cast four anchors out of the stern, and wished for the day," if we imagine his "ship" to have been equipped similarly to a Japanese junk; in fact, my first view of one of these primitive looking craft, brought immediately to my recollection the form and appearance which I had always pictured in my own mind of the style in use in the days of the Apostles. The vessel which was wrecked at Melita must have been liberally supplied, for having already four down, "they would have cast anchors out of the foreship," which, by the lowest assessment, would make six in all, and I have frequently seen ten in a junk. A second but very low mast is at times erected in the fore part of a large junk, and carries a small sail, as an assistance for the helm when the wind is a-beam. These junks do not make bad way running free, and although not coming up to our western ideas of either the beautiful or as most adapted for rapid and sure transit, still the native craft of Japan seem to answer tolerably well the requirements of the people of a country where no very high estimate is placed on the value of time. The Japanese have, however, of late years, since the residence of Europeans at the open ports, built some vessels partly copying foreign models, and have made queer-looking specimens of naval architecture of them, also, a few



schooners after western designs; beside the government, adopting an enlightened policy, have purchased several English and American vessels, including steamers, which they work by native crews, and will doubtless copy and perhaps improve upon.\*

The land on either side of the Strait of Tsugaru is mountainous, and to the southward, that is on the Nipon (the largest island of the Japan group) side, a fine-pyramidal-shaped volcanic peak rises above everything else, and may be seen for a very long distance. As we got into the western entrance on the morning of the 26th of July, the strength of the current which sets through the strait towards the Pacific was made evident to us by the streaks of tide-ripple through which we sailed, and the eddying waters around the headlands as we neared them on our successive tacks. The breeze was fresh, just allowing our vessel to carry her top-gallant sails, and though dead against us, the set of the current caused us to make good way. We passed Matsumai, formerly the chief town and residence of the governor of Yezo, early in the forenoon. It is now supplanted by Hakodate selected by the Americans as a treaty-port on account of its having been long frequented by whaling ships, and as affording a safe and commodious harbour, which the former wants, the roadstead of Matsumai being open and exposed. In my eyes, the appearance of Northern Japan was very pleasing: the capes and rocky promontories were mostly precipitous, and the greater part of the coast on either side of the straits is high, backed by the mountains of the interior. As we neared the shores in our successive tackings, we could observe the mountains clothed to their summits with thick forests; not the uniform dark green artificial-looking foliage of the tropics, but a pleasing variety of hues and forms more in accordance with our northern tastes. Occasional patches of green fern-covered slopes showed between the wooded hill-sides, and a chance clay-coloured landslip or grey cliff served to dispel any approach to monotony in the scenery. A little before sunset we had beaten up to Tsiuka Point, from whence we could see Hakodate Head and the Pacific, and by 9 p.m. we were at the entrance of the Bay of Hakodate when it fell calm.

The bay is formed by the projection of the peninsula of Hakodate from the mainland of Yezo on the northern coast of the Strait of Tsugaru, which is connected with that land by a low sandy isthmus. The "head" is a mountain mass forming the peninsula, and rising a little over 1,100 feet above the sea; it is nearest to the Pacific end of the strait, the whole length of which from the outer capes being fifty-five miles; Hakodate is thirty-seven from the Sea of Japan: the least distance across the strait is ten sea miles. The town stands at the foot of the northern slope of the mountain; thence the bay sweeps round, forming three parts of a circle, the opening toward the Strait being between the head and Mussel Point, four miles across, having over thirty fathoms of water deepest on its eastern side. The harbour is a portion of the bay, which rounds to the eastward behind the head, and possesses the advantage of being commodious and

well land-locked, with good holding ground. Protected from the surges of the broad Pacific, which break against the rocky shores of the peninsula, and roll up on the sandy isthmus, vessels may lie in safety off the town of Hakodate in all weather; and the simplest possible rules only being required to enter the harbour, the greatest advantages are offered as a port of refuge or call. Add to these the presence of coal on the island, and the great natural strength of the peninsula in a military point of view, the present little-frequented port of Yezo may at a future time become of national importance. Most visitors to Hakodate are struck with its resemblance, on a small scale, to Gibraltar; and such is the similarity in most respects, that should some European power take it into its safe keeping, which, by the way, is quite possible, and not at all improbable, it may play no small part in the future of Eastern Asia. At any rate, Hakodate would be the most convenient coaling station for a line of steamers between Shanghai and San Francisco; for the great circle (shortest line on the globe) between these places passes exactly through the Strait of Tsugaru; and any vessel making the voyage by way of the sea of Japan, must pass within four or five miles of Hakodate; so that to put in there, where she would find good native coal, would lengthen her voyage no more than the actual time required for coaling.

As we lay quietly on the still waters of the bay, with the sails flapping lazily against the masts of our good ship, we could just distinguish the white cliffs in the neighbourhood of Mussel Point, and the village of Mohitze showing in the dim light of the evening, while the moon was yet below the horizon; at the same time on the other hand, the mountain mass of Hakodate Head loomed black and giant-like above us. The night was damp, feeling to us even chilly, and I was glad to slip on a peajacket over my flannel shirt and white trousers, which had been the extent of my dress hitherto. During the night we got but little wind, and we stood on and off in the bay until it became daylight, when we rounded a reef which runs out in a N.N.E. direction from the northern point of the peninsula, on which a fort was in course of construction, and keeping just clear of a number of junks at anchor off the town, the barque *Eva* cast anchor at Hakodate at 4 a.m. on the 27th of July.

## II.

First impressions are often erroneous, but those which struck me on landing in Yezo,—to wit, of the smell of dried fish and seaweed; of the practice the natives have of placing the stones which should be used for macadamizing the roads on the tops of their houses; of the universal use of wood and paper in the manufacture of everything, from a house down to a toothpick or pocket-handkerchief; of the abundance of dogs and armed officials;—these impressions remained on my mind as fresh at the end of three months, when I took my departure, as when they were first felt, and convinced me that if erroneous, they were at any rate my own; and as such only, without the slightest wish to force them upon my readers, I will endeavour to portray them.

The highest part of the mountain mass of which the head or peninsula of Hakodate is composed is a blunt conical peak, somewhat

\* These remarks refer to the year 1861.

overtopping the rest. The summit of this is reckoned at 1,136 feet above the sea, which is the measurement assigned it by the American surveyors of Commodore Perry's expedition, which visited this port in 1854. The mountain is composed mostly of trachyte, and the rock evincing the appearance of having undergone great heat appears, like most of the mountains in the neighbourhood, of volcanic origin. Three parts of the shores of the peninsula are precipitous, while on the north-eastern face there is a considerable wood of cryptomeria close to which was the residence of the governor and some other officials; and the Russian Consulate, a fine two-storied white structure, had a prominent position. Below, and stretching to the battery at the point of the harbour, and in the other direction curving round as far as the low shore of the isthmus, is the town. Seen from the water on the opposite shore of the bay, the situation of Hakodate is picturesque; the mass of dull-coloured houses clustered along the shore and reaching some little distance up the hillside, being broken by the fine tiled roofs of several well-kept temples, and the mountain rising immediately at the back with its forest-clad side seems to overhang and shelter the harbour. The country in the neighbourhood is hilly and even mountainous. At a distance are active volcanoes, of which I shall have to speak hereafter, one of which, known as "Komagnatake," is seen raising its sharp peak over 3,000 feet above the sea to the northward, while, nearer, the wooded hills slope down towards a plain of considerable extent, which reaches to the bay, a few sand hills alone breaking the sterile waste of the isthmus. To the eastward—that is, toward the Pacific—the rounded headland of Cape Blunt shuts out the view of a bold rocky coastline, which stretches thence to Cape Esan, the extreme point on the southern side of the great "Volcano Bay," which cuts so far into Yezo from the Pacific as to cause the southern portion to be almost an island. Looking across the straits, the land of Nipon appears to partake of the same general character as its northern neighbour Yezo, but the line of coast is broken by a deep indentation called Awomori Bay.

To any one coming direct from China, the unpaved streets of Hakodate strike him as of great width, but they are not in reality nearly so wide as those of foreign towns; however, they are sufficient for a country where wheeled carriages are not in general use. The houses are low, none being more than one story above the ground floor, and are of wood, paper taking the place of glass for the windows and light partitions. The roofs have only a slight pitch, and are tiled, if I may so express it, with shingles (wooden slates), as in America, which are kept down by strips of wood laid transversely with a quantity of stones piled on the top. A large tub with a mop generally stands on the gable end; the former being kept filled with water for use in case of fire, and the mop is for poling out the liquid on the inflammable roof when sparks are flying about from an adjacent conflagration. In the internal arrangements of their houses the Japanese are very neat and tolerably clean. The floor of a room is covered with very finely made thick straw mats, which fit against one another precisely, and are kept constantly clean-swept; persons on entering a room being

obliged to take off their sandals or clogs, and leave them in the passage which runs through each house on the ground level, the floors of the rooms being raised about eighteen inches. In the centre of the apartments a square space is left, generally filled with sand or shingle, where an open wood or charcoal fire is kept, and the pots and kettles are hung from the rafters overhead, whence the smoke escapes after assisting in curing sun-dry split fish, through a hole in the roof. The teapot is always on the hearth, and often by its side a small stone jug of sake (spirit) is undergoing the process of warming,—for the Japanese are not a nation of teetotallers. In cold weather, closing all the sliding partitions and windows, the inmates huddle round the fire in the middle of the room, keeping off the draught by screens set up behind their backs; in fact, a Japanese house may be compared to an Indian wigwam on an enlarged and more civilized scale.

In the streets you see numbers of clean effeminate-looking people; every man with his forehead and part of his crown shaven, his hair fastened at the top of his head and finished off by being glued in the form of a spike pointing forward, but devoid of the queue of the Chinese; while the females, combing the hair off the forehead, make it into a roll at the back, which they ornament with coloured crape and lacquered wooden combs. The common material for wearing-apparel is cotton, generally dyed dark-blue, black, brown, or grey; even comparatively well-to-do people seldom indulging in silks, except on high days and holidays. In fine weather it is not usual to cover the head except by an umbrella, but, when necessary, countrymen and common people tie a piece of cotton cloth round the head, and officials wear mushroom-shaped hats of waterproof material. Rain-coats, perfectly waterproof but made of paper, are used in bad weather; but in the summer time the common coolies, who work about the town and amongst the junks, seem to have an utter disregard for superfluous apparel, appearing in the natural "buff," with the exception of a scanty loin-cloth.\* Among the crowd, you cannot fail to meet with certain persons armed with two heavy swords, a long and a short one, pushed through their sashes and sticking out awkwardly behind; these are officials, "yakuin"—officers, civil or military; any one, in fact, in government employ. They are the two-sworded men, the bugbears of Japan. As they pass you they may scowl, or, seeing a good stick in your hand, or revolver in your belt, put on a forced look of indifference, and pass by keeping well clear of you. The common people make way for them, and if they have anything on their heads they uncover, or when riding dismount from the horse until the official has passed; and unlucky is it if the poor countryman, toiling in under a heavy burden, forgets to untie the strip of cotton from around his head; he will not unlikely feel the weight of the heavy two-handed sword, which is never drawn but it must carry out the design for which it is unsheathed—not, however, as is erroneously supposed by many, until it has killed, for the intention is not always to kill. The fear of the sword is the beginning of wisdom in Japan.

\* It must be borne in mind that this refers to over twenty years ago.

Gaining the outskirts of the town, you meet strings of ponies, fastened head and tail, filing along, loaded with fish, seaweed, vegetables, charcoal, wood, and other products of the interior, on pack saddles; and if you take a ride out towards the country, in the afternoon, you will pass these same ponies, and sometimes oxen, being driven homewards by drunken countrymen, singing and joking as they jog along. Perchance you meet two or three stout thickset men, with long beards—which the Japanese do not cultivate—and manly countenances, dressed in the coarsest hempen garments. They are Aino, the aborigines of Yezo, many of whom still inhabit the island, living by fishing and the chase. They are quite subject to the government. Any number of wolfish dogs are to be seen in the streets, and they have a great antipathy to foreigners; but when I arrived at Hakodate, the bark of many a one was feeble, for a terrible distemper had been raging, and carried them off by hundreds, and they lay about the streets dead and dying in all directions. One peculiar feature in the disease was the entire loss of strength in their loins and hind-legs and an abundant discharge from the nose and eyes, and many were revolting-looking objects. The Japanese, who knew that the European and American residents hated these dogs, supposed that they or their Chinese servants had poisoned them. Although this was not the case, still, from the annoyance which the foreigners sustained from the unconscionable number of these animals infesting the town, they did not feel much regret at this wholesale diminution of their numbers. It was estimated that about ninety per cent. died from the ravages of that distemper.

On my arrival at Hakodate, I was at once made aware of the principal occupation of the inhabitants, and the consequent trade of the place, by the all-pervading stench of dried fish and seaweed; in the streets, in the houses, on the mountain side, everywhere the same scent haunted me of fish, shell-fish, and seaweed, fresh, drying, and dried. Even like the eternal cocoa-nut oil in Ceylon, the food, the water, and everything one touched, seemed to be scented in the same manner. At every fishing village on the coast, the shingle is strewed with fish in different stages of decomposition, and kelp is hung out on poles; while oil is extracted from a certain small fish and put up in tubs for market, so that it is easy to detect the existence of a Japan Yarmouth at a long distance, entirely by the nose. This dried fish, shell-fish, and oil, besides what is carried to other ports in Japan by junks, is bought up by foreign merchants, and exported to China, where the consumption of such food is large. The principal fish which are dried or salted are cod, herring and salmon; cuttle-fish is largely cured, and the shell-fish are awabe and irico; the refuse of herring and iwashi (sardine) after extraction of the oil is dried into the form of guano, and is exported in large quantities south. Beyond these products, the island of Yezo is rich in timber, coal, and sulphur; but the principal export besides fish, oil, and seaweed, should be timber, there being sufficient of both pine and hard woods to supply a large demand, and of the latter several very fine qualities. Timber is as yet

slipped in only small quantity to China, but this trade will probably increase.

Horses, or rather ponies, are abundant at Hakodate and there are a few cattle, but no sheep or pigs, except those kept by Europeans. As the places of interest which should be seen by a visitor to the port are not within easy walking distance, I made during my stay there pretty constant use of animals placed at my disposal by friends, so that I can bear testimony to the hardy nature and good "bottom" of the ponies. The number of foreigners (*foreigner* being the name by which all Europeans and Americans are known in the Far East) at the port of Hakodate when I visited it, inclusive of merchants, consuls, a Roman Catholic missionary, and some other residents, did not number over twenty, of which but four were women, two of whom were Russians. There was generally a Russian vessel of war lying in the harbour, which added its officers to the society of the place, and its drunken sailors to the streets of the town. Naturally, in so small a community, all nationality was dropped, and the residents were more like the members of one family, such etiquette as formal invitations and calls being discarded, for the more open and cordial hospitality induced by a common feeling of being strangers amongst a treacherous and deceitful race; and all seemed to look to one another for mutual protection. During my sojourn I was most hospitably entertained and treated in the kindest manner; and I enjoyed my stay excessively. I accompanied several parties organized for excursions to the volcanos, the lead mines, and other objects of interest, within or sometimes a little beyond the regulated "ten ri" (about twenty-five miles), fixed by treaty as the limit to which foreigners can penetrate the country from the treaty ports; besides which I devoted much of my time to collecting birds, which led me on rambles about the mountains and swamps, and afforded scenes of much pleasure and information. I shall endeavour later to give the reader some of my experiences in that way, one, however, I will not now omit.

### III.

One of my friends resident at Hakodate, had somewhat improved on a Japanese junk by cutting off the useless portion of the stern, fixing to it a European-shaped rudder, and rigging her in lateen style; and being rather proud of the supposed superior sailing-qualities of his hermaphrodite craft, and having long had an idea of visiting the far side of the Strait of Tsugaru, for the purpose of exploring the deep inlet known as Awomori Bay, he decided on starting on a cruise. Under invitation, I embarked on board the "yacht" in company with Captain P—, on the first of October, a day long to be remembered by me, as one in which I entrusted my life to the unsafe keeping of an unseaworthy craft, manned by Japanese landlubbers, who so far forgot their trust as to come near delivering up my body for the benefit of the fishes of the Western Pacific. At nine a.m. we pushed off from the "new ground" an intended second "Desima," which the government had built, with the expectation that all foreigners would live on it. On rounding the new fort at the point of the harbour we squared away to an E.N.E. breeze; but, getting within the influence of

the mountain, we lost the wind for a time. Soon after, however, we got a fresh breeze from the south-east, and stood on a direct course for Tsiuka Point in company with some junks. On approaching the Cape, we found the set of the current very strong against us, and crossed the junction of two streams, one of a light pea-green colour coursing along in-shore towards Mussel Point, while the other was a deep sea-blue. Some of the junks, the skippers of which I suppose understood the navigation, made good way and rounded the point, while others seemed to be as awkward as ourselves, and managed only just to keep pace with the land, if I may so express it; that is, the stream in one direction had as much effect on our junk as the wind on her sail, and so we were stationary. Thus we remained for some considerable time, several other junks passing us by, and one, having got into a wrong current, even came sailing back towards us, then wore round (they never stay), and taking a current nearer the shore, shot ahead. At last we managed to get past the cape, and steered towards Matsumai, intending to make a harbour for the night, for by this time there was a nasty chopping sea on; however, as the weather was clear and showed no symptoms of being anything but fine during the night, Captain P—— determined to cross the strait, so as to be able to get into the South Bay the following morning, and with this intention he headed the junk accordingly, and we stood off from the land.

It was now evening, but the motion of the junk had had its effect on me some time previously, and I now lay down in the hold, only occasionally coming up on deck for the purpose of casting up accounts. Captain P—— was also rather squeamish, which was the more extraordinary as he was by profession a man of the sea. We had on board three or four Japanese and a Chinaman; this latter had been taken as cook, but we had neither of us felt at all inclined to eat, and he was now as incapable as myself. Towards the middle of the night, when I presumed we were about halfway across the strait, the sky clouded up and it commenced to blow hard from the eastward. Captain P——thereupon had a reef taken in the sail; and soon after, it beginning to rain, he came below and lay down, leaving one of the Japanese to steer. We had not been long asleep, when I was awakened by the junk being thrown from a steady list to starboard suddenly on her beam-ends on the other side, while boxes, guns, kettles, and other traps, came flying on the top of us, and the junk seemed to lie like a log. My first thought was that we had struck on a rock, and I did not imagine for a moment but that we should go bodily down. We scrambled as well as we could towards the small hatch, and crawled out on deck, or rather the roof. Here we found that the fellow at the helm, having been inattentive, had allowed the sail to be taken aback, and the old junk now lay over on her beam-ends with the sail against the mast, and the sea breaking clear over her. We were certainly in a very awkward, if not dangerous predicament; and as our sailors were both awkward and timid, it was with the greatest difficulty that my companion could induce them to work at lowering the sail, which was no easy matter in the present state of affairs. All this time, we pitched and tossed about in the trough

of the sea, and each wave struck the junk almost heavily enough to smash her sides in, and then broke over us. We, however, managed to hold-on on deck, and by example and threats my friend managed to get the boatmen to help him, and at last lowered the sail altogether. Then he reefed it as close as possible by lashing it round the pointed end of the yard; and hoisting it again, the junk came up into the wind, and was once more under command. The gale continued with unabated fury, and as it was against the set of the current it stirred up a very heavy sea, which our craft was not a bit more than a match for.

In the darkness it was impossible to tell where we were, but by aid of a light and a compass I managed to discover that we were heading back again towards the Yezo side of the Strait. With the first streak of morn, my companion discerned the shore much too near to be agreeable; so he put the junk on the other tack until it became light, when we found that we were some distance to the westward of Tsiuka Point; no doubt during the night we had been nearly across to the Nippon side and back again. Having gained some experience of the sailing qualities of the "yacht," and not feeling assured of either a safe or rapid passage across the Strait of Tsugaru, we decided on deferring our visit to Awomori Bay to some more convenient season, and headed for Hakodate. The breeze allowed of our standing into the bay; but when we got there, the wind was dead against us so we tried to beat the junk up against it. In this, however, we signally failed, for every time we attempted to go about, the "yacht" missed stays, so that we had to wear her, thereby losing so much ground, that each successive tack found us nearer and nearer a lee shore, until at last we were compelled to anchor, to prevent driving on the beach. In the evening the breeze fell, and then the sailors, getting out a couple of large sculls, worked away till they got to the junk's anchorage, and we were thankful to find ourselves back at Hakodate by half-past nine at night. The trip quite satisfied me, if before I could have entertained any doubt, concerning the pleasures of junk-sailing in the Strait of Tsugaru and has, I am afraid, somewhat shaken my faith in the pleasantness of "yachting."

Since the treaty made by the Americans in 1854, the Japanese government had caused a number of young men to be instructed in the English language; and the proficiency which many of these interpreters had attained, reflected the greatest credit on the pupils, and certainly shows the native ability. I often conversed with those attached to the custom house at Hakodate, and must admit that, excepting some few peculiarities, a slight admixture of Yankee expressions, and a few words of Canton-English, they spoke better than many who call themselves educated persons in England. In the way of writing they also managed tolerably well, and some were advanced in the study of navigation and nautical astronomy. I give below a couple of specimen letters. The first was by an official to the United States commercial agent, written in pencil: it ran thus:—

"To W. R. Pitts, Esq.,

"Acting Consular Agent of U. S. A.

"Owing to enqnar something to Kods-jro,

boy employed by Mr. Fletcher your resident merchant, I beg you to tell him that the said boy come; when the inquarement is done he (boy) will be returned.

"KATSUDA-EGONO-KAME.

"1st year of Bunque,  
"13th of 9th month.  
"October 16th, 1861."

The second is from one of the custom house interpreters to an English merchant. From the tenor of it one might suppose the Maine liquor law to have been in force in Japan:—

"To Alex. P. P.—, Esquire.

"Sir,—I request you to ask some bottle of gine, as I want to use every morning for my stomach, or if you have got it for sale, tell me can you sell me some?

"With respect;

"KISI."

"29th of 9th month."

Speaking of the custom house, at that time, I should mention that all business with foreigners was transacted by that department; and a great deal of annoyance and inconvenience was often caused merchants by the petty matters which were brought up by the Japanese officials as grounds of complaint, which had ultimately to be settled with the consul, or, as was the case with almost everything, referred to the central government at Yedo. During my stay at Hakodate I saw a good deal of these difficulties; and I found that our consuls, feeling that they might not be backed in straightforward and firm conduct by the minister at the capital, were forced to have recourse to diplomacy, at which the Japanese invariably beat them; or when there was any doubt,—which there often may be with respect to the trade regulations of a patchwork treaty,—they sided with the Japanese. Such is, of course, very disagreeable to mercantile men, and great and frequent were the complaints against the mode in which British interests were looked after in Japan. The Americans often managed better; for the hands of the consuls not being so tied down by strings of regulations and cautions, they frequently took a very effective mode of settling a difference, namely, by causing harbour-dues and duties payable by an American into the custom-house, to be paid into the consulate, and these were retained until matters could be brought to a satisfactory conclusion.

At that period the duties on exports and imports were generally five per cent. *ad valorem*, with the exception of wines and spirits, on which it was 35 per cent.; while the import of arms and munitions of war was prohibited, as well as the export of grain, copper, and a few other articles. On account of the low value of copper in Japan, a good deal of the native copper cash was smuggled to China, where, being very similar to the Chinese cash, it passed current. The duties on spirituous liquors were also seldom paid, resident merchants being allowed to land as stores what they required for their own consumption, and, owing to the prohibitory tariff, the rest was smuggled. Immediately that a vessel arrived in port she was visited by custom house officers, who examined the manifest of cargo, and made such inquiries as they considered necessary, leaving two

men, who immediately set to work and put together a small portable house on the upper deck, in which they took up their quarters. These men acted as tide-waiters, keeping account of everything which was discharged or brought on board; they each relieved the other every twenty-four hours. Some of these fellows were very conscientious in the execution of their duty, while others being just the reverse, a small bribe had often the effect of closing their eyes to the shipment of contraband articles.

Among other objects of interest at Hakodate is a natural cave in the rock, at the southern side of the head. It is large enough to admit a boat, and before I left I paid it a visit. We went in the ship's boat of the *Eva*, having four strong hands to pull us round from the harbour. We chose a calm day, otherwise the visit would have been useless, as we could not have entered the cave. The opening was rather narrow; but when we lit the torches which we had brought, we found a spacious tunnel-shaped chamber, about forty feet in height. I fancy we went about sixty yards in by water, and then landed and walked about thirty or forty yards further on dry ground, our exploration being only limited by the length of the torches. There was some dripping from the roof, but there were no stalactites. Neither did we find any birds inside; but outside the whole face of the cliff was whitened with the dung of cormorants, perched on the ledges of the rock in large numbers. When we disturbed them they flew over our heads, and I brought down a couple for specimens. I also fired off my fowling-piece inside the cave, the reverberations from which were very grand. The rock out of which this natural cave is hollowed is a sort of decomposed syenite or something of that nature, and the effect of the inside when the wet walls and roof were lit up by the flaming of our torches was exceedingly beautiful.

Since the time when the above was written Hakodate has much altered. The population increased to about thirty-seven thousand, has had to find accommodation by filling up many open spaces that then existed, besides erecting dwellings higher up the slope of the mountain side; moreover, the town has extended around the shore of the harbour till on the main road the houses are nearly continuous as far as the village of Kamida, a *ri* (2½ miles nearly) from the post office, and likewise almost across the isthmus to the Pacific shore, where the fishing village of Sesabe may be considered now a part of the town. A cutting has also lately been made which connects the vale of Yachigashira, the excavated earth from which has been used to fill up the swamp which formerly existed there. Around the edge of this are now many nicely laid out tea gardens much resorted to in summer, and immediately overlooking the same is the public garden and museum.

Not only in extent but in the character of its buildings has the town much improved. The few thatched roofs which were in existence till within a few years, serving to recall to the older inhabitants the days when, occupying quite a secondary position to the Daimio's capital of Matsumai on Fukuyama, Hakodate was but a fishing village, have disappeared. Several great fires in succession—the last and most extensive of which

## IV.

## EXCURSIONS TO THE VOLCANO AND LAKES.

occurred in November or December 1879, which included in its destruction the large temples which stood in about the middle of the town,—have admitted the straightening and widening of the principal streets; so that, with the erection of better and more permanent style of stores, houses, telegraph and post offices, banks, schools, and merchants' business places, the town cannot but impress the traveller very favourably in its modern and semi-foreignized aspect. It must be understood, however, that it is not the small portion of foreign element mixed as it is there among the native population, that has brought about this change; for this is so infinitesimally small—there being only about twenty odd Europeans and about an equal number of Chinese—that the effect, if we omit the somewhat ostentatious appearance of churches and residences of the missionaries who usually multiply in inverse ratio to the amount of foreign business,—is hardly perceptible. Indeed it is less now than in the earlier days of foreign residence in Japan; so that the growth and modernization of Hakodate can only be attributed to the advantages it possesses as a mercantile base for Yezo, and the enterprise and intelligence of its citizens stimulated by the infusion of the ideas of new Japan. Certain it is that the increase of Hakodate has been a spontaneous growth. It owes nothing to the fostering care of a paternal government, so lavishly dispensed under the so called colonization commission\* lately abolished, on other parts of Yezo, farther than that owing to its geographical position, and its local natural advantages, it could not but reap indirectly many fruits of the immense expenditure of government money on schemes, visionary and ill-advised as many were, which had for their objects rather the raising of rivals than its own advancement. Indeed while ignoring almost the existence of Hakodate, and endeavouring to divert trade and settlement from it, the government was blind to the fact that of every dollar they expended, and every immigrant they induced to settle in Yezo, half of that dollar, and half of that settler, or half of the result of his labour, found its way to Hakodate.

The commission has terminated its labours; the department has been broken up, its chief has been promoted to a higher if not so independent a position, and a general distribution among other departments, and the sale of unproductive property and manufactories have been or are being carried out. The island of Yezo is henceforth divided into three prefectures, the seats of government of which are located at Hakodate, Sapporo, and Nemoro, from which towns the 'ken' take their names. The home department at Tokio controls these separate governments, and Yezo is in future not to be considered as an outlying province or colony, but to become in all ways an integral part of the Island Empire, the land of the Rising Sun, or whatever poetical appellation it may please the next writer on Japan to adopt, as a catching title to draw the reading public.

\* The 'Kaitakushi' was a special department instituted in 1871 for the purpose of developing the resources of Yezo. Under the direction of General Kuroda, a minister of state, many millions were spent. It was abolished by Daij-kwan notification dated 8th February 1882.

A gentleman I met at Shanghai had given me the best possible advice. "If you are going to Hakodate" said he, "take a saddle and a good pair of long boots." I followed his recommendation then, and twenty years has not discounted the value of that counsel which I would pass on neither extended nor abridged as a legacy for future travellers. For although, since the age of jinrikisha, steamer, and rail, an ordinary summer excursionist may reach Sapporo without getting his socks muddy, even if wearing low shoes, and without ever sitting astride a pig-skin, still, if he should protract his stay well into the autumn months, or "knock about the country" at all, he will, before he again reaches civilized life, often regret the omission should he not have followed this advice. Neither would I add to the short sentence my friend expressed himself in, for I am no believer in a person requiring a coat of a particular cut with so many pockets for one country, and one of a different style for another; nor it being necessary to carry half a druggist's shop, etc., etc., (see guide books). The experienced traveller knows well what are necessaries, and what is superfluous "gear," and should have discrimination enough to leave all the latter behind in going to Yezo, as to any other country where he will have to depend on the ordinary means of transport, sometimes reduced to pack saddle, canoe, or even men's backs. And a visitor to Yezo will usually have made at any rate one or more excursions in some other part of Japan, and so be aware of the kind of sleeping accommodation and food the country affords, which he may feel assured will not be worse, and seldom half so bad as in many parts of the main island. "A light heart and a thin pair of breeches \* \* \*" it has been said, but I would prefer the latter to be rather thick—for riding. But let us get away.

## V.

A hurricane passing over Hakodate on the 28th of August, prevented our starting on an excursion to the volcano of "Komagatake,"\* as intended; but on the following morning, everything being arranged in the way of pack-ponies and well filled baskets of provisions, we got off at an early hour. A couple of miles along the level ground of the isthmus brought us to Kamida, a small village at the mouth of a stream falling into the bay, where we waited to allow of our Japanese attendants coming up. It was a delightful morning, and as we rode along the smooth sandy beach continuing our course round the shore of the bay, numbers of gulls sailed about in graceful curves overhead, dipping down occasionally to pick up stray pieces of

\* This mountain, which is visible from Hakodate, is also known as 'Sawara-dake' taking that name probably from the village of Sawara, situated on the shore of the bay at the foot of its northern slope 'Komaga-take,'—Stallion mountain—is the more poetical name, being said to be derived from a legend which recounts that after the defeat of a certain chief by the soldiers of the Prince of Matsumai, he plunged into the lake on his white charger and was drowned—or at any rate never more heard of. The white stallion is said still to roam about the forest at the foot of the mountain. It is also contended that whenever any Matsumai retainers pass near the lake a storm agitates its waters.

fish-offal washed in by the tide; while a pair of eagles soared at greater height, seeming in their dignity to disdain such low fare. A little breeze was blowing in from seaward, serving to keep us tolerably cool, and before it a crowd of junks could be seen coming in from the strait, with their white sheets of canvas stretched to catch every breath. The forms of the foreign vessels lying off the town became gradually less distinct, and soon little more than the general futures of Hakodate were distinguishable. Passing a fishing hamlet, we continued along a well-beaten track over a plain covered with scrub oak and fern; then crossing a river by a substantial wooden bridge, we found ourselves among the gardens and fields of a cultivated district. The houses of the peasantry were neat, well-built wooden structures, thatched with straw; alongside were fields of rice and buckwheat, well advanced towards maturity, and gardens containing turnips, potatoes, and other vegetables, cultivated with neatness and regularity. Some of the houses were surrounded by good orchards, the pear-trees being well loaded with fruit. The people were all at work, the men and boys in the fields, and the women mostly around the houses, attending to those duties for which they seem more especially fitted; they all looked contented and happy, and we were frequently greeted with the salutation, "Konichi-wa" (good morning.)

After leaving the shore of the bay, the road led us more to the northward, and we jogged along at a smart pace so as to get over the first stage of our journey before the middle of the day. We reached Ono, a good-sized village, distant about eleven miles, where we dismounted and unsaddled our horses, gave them water and grass, and rested ourselves for an hour or so. The woman of the little inn where we put up served us with tea, sweet cakes, and boiled heads of Indian corn, and on these latter I made a good lunch. Soon after leaving Ono the land begins to ascend, and after riding some three or four miles we reached the foot of a high wooded ridge, up which the road led in zigzag fashion. A quarter of an hour's steep climb brought us to the summit of the pass, from which we beheld magnificent views on both sides. Looking back to the southward over the plain we had traversed, the bay and peninsula of Hakodate were spread out in panorama, while the silvery sea of the strait and broad Pacific was visible beyond, our view being limited by the distant mountains on the mainland. On either hand were forest-clad hills and wooded ravines, with a rich profusion of varied foliage. Turning to the north, the great volcano of "Komagatake" was in full view, its pumice and cinder-covered sides running down into the beautiful woodland country of its lower slopes; while below at our feet lay a lovely clear lake stretching away to the very foot of the volcano, so broken by wooded islands and long points, as to give uncertainty to any estimate of its extent, and allow range for the imagination which always adds charm in the contemplation of a landscape. How long I stood gazing on the scene before me I do not remember, but it was sufficient to make an impression which cannot easily be effaced, and leaves in my recollection one of the many lovely views of the scenery of Northern

Japan which I shall ever remember. Descending by a path equally steep with the one by which we had gained the summit, we arrived at the lake. Here we left the main road, which keeps more to the westward, and striking into the woods on our right hand, we followed a narrow path, sometimes close to the margin of the lake and at others more removed. The woods were in their primitive state, and our ride was enlivened by watching the motions of numbers of woodpeckers, which flitted from tree to tree in search of their insect prey. A few ducks, too, occupied the placid waters of the lake; but they were not yet in great numbers, for the season for the migration of water-fowl from their nesting-places in the far north had not yet arrived.

As the baggage-animals did not travel very fast, two of us rode on ahead to try fishing in a small stream which lay on the way. We were rewarded by taking a few small trout, but having no regular rods or fine tackle, we were obliged to angle in a very primitive manner. We were now on the edge of a large extent of grass-covered swamp contiguous to the lake, across which we had to get in order to arrive at the place where we intended to put up for the night. We followed a trail through the high grass, but every now and then came to places where our horses sank in deeply, and some regular mud-holes where much caution was necessary. There was a good deal of wood along the margin of the lake, and some parts of the swamp were likewise wooded. We had been told that bears were numerous in this region, and therefore kept a sharp look-out, but saw none. It was certainly a very favourable retreat for these animals, where they might roam with little chance of being disturbed. Under the guidance of a Japanese we turned off from the trail at a certain spot, and after about half an hour's more ride, we found ourselves at a deserted house situated at the mouth of the outlet of the lake, whence a stream communicates with the sea. We left our Japanese servants to picket out the horses, cut grass for them, and attend to the culinary operations, while we cut sticks for rods, and enjoyed a little fishing and bathing combined in the clear water of the creek. We were fortunate—one of my companions the most so—in obtaining enough small trout, and another kind of fish of a similar nature, to make a respectable fry, which we discussed at our dinner served before dark.

During the evening my two companions and myself amused ourselves in listening to the stories of an old Japanese cattle-farmer whom we had invited to be of the party, as his station was not far from the lake. He was terribly deaf, but this affliction made him the more amusing, for we communicated mostly by signs, at which he was a great adept; so that, although almost totally unacquainted with the language, I could understand a good deal of what he meant. He was quite an original, and we laughed to our hearts' content at his quaint manner and droll way of telling stories. A French deserter was living at the old fellow's farm, and this man attached himself to us, and made himself very useful as cook for the camp.

We were up at an early hour next morning, and having got a hot cup of tea, two of us and a Japanese started with the first streaks

of daylight for the ascent of the volcano. The third one of the party had made the ascent before, and not being of a very active disposition, he preferred to remain at the house and amuse himself by fishing. Forging the creek on horseback, we first followed a path through a thick piece of wood, and then emerged on the cinder-covered slope of the volcano. We continued on horseback until we reached nearly halfway up the mountain, when we dismounted and gave our horses over to the Japanese who accompanied us. On the way we passed an extinct crater, and thence we found the proper road up by noticing small piles of stones set up to mark the track; but it was a weary sort of trudge, as there was not a blade of grass or any green thing to be seen, and the light pink and white cinder, like pumice stone, was very awkward to walk upon. In the space of two hours we arrived at the summit of Komagatake the last part of the climb being very steep. The top is of basin-like form, depressed from the crest or rim inwards towards the centre, where is the crater. In various parts of this basin jets of steam issue from crevices in its surface, and you may thrust a stick in and make a jet for your own amusement. The mountain still rose higher than where we were; in fact, on one side it runs up into a steep rocky peak, 3200 feet above the sea; but it came on to blow very fresh, which drifted the dust and cinders to such an extent that we were forced to cover our faces with our handkerchiefs to prevent being blinded. Had it not been for this, we should have explored more fully the summit of the mountain, which is of considerable extent, and perhaps might have reached the highest peak; but with such a hail of pumice stones flying about us it was impossible.

Having picked up some pieces of cinder as relics of the volcano, we turned to descend. Below us lay the volcano lake, surrounded on all sides, save where the sterile slope of the mountain reached down to it, with a thickly-wooded country in its primitive wildness, while the view was bounded by hills equally covered with thick forest. We found our horses where we had left them, in the safe keeping of the Japanese; and following the indistinct track by which we had ascended, we reached the house at the lake by eight o'clock, when we were ready, after a bath in the cool water of the creek, for a good breakfast. The day was rather warm, and consequently we found it agreeable enough to fish for small trout, and wade about in search of ducks; but the sport in the latter way was but meagre. Bears were reported to be numerous in the adjoining woods, and the old deaf Japanese assured us that several cattle had been killed at his station, situated about a mile distant from the lake, by these ravenous brutes. The Japanese are very much afraid of bears, and from all reports the species inhabiting Yeze must be of a rather savage nature. The old farmer told us that he could not induce his men to attack them, but that they contented themselves by firing off guns at night to scare them away from the stock-yard where the cattle were housed. He said that but a few nights ago a bullock had been killed and carried off, and held out the inducement of certain sport if I would watch for them one night. Having brought a rifle as well as my fowling-piece on the chance of something of the kind, I

accepted the old gentlemen's proposal to tie up one of his cows as a bait, and watch for the bears that very night. The Frenchman, who owned an old rusty musket, agreed to lead her to the place and make all necessary arrangements, and the deaf man lent me his short sword (he wore two, in virtue of being of the samurai class) for use, should bruin and myself come to close quarters. Taking our horses, the Frenchman and myself left the house where we had lodged, and passing through swamps and mud-holes we arrived in about an hour and a half at the deaf man's cattle-station. It was situated on a hill-side which had been cleared of timber and fenced in, while a little stream ran down a narrow ravine towards the swamp below.

Before dark we looked to our arms, and by carefully priming ensured their going off when required. Some four or five men inhabited a hut near the cattle-sheds, and we waited there until it was dark. A cow having been selected which had once been mauled by a bear, as being more likely to give us timely notice of the approach of the enemy, we formed single file—the Frenchman, the cow, and myself—and in that order marched off to the selected spot. Gaining a part of the fence where the bears had been in the habit of getting over, and near which the last scene of murder had been enacted, we tied the cow to the rails, and then getting over, ensconced ourselves on the other side. Our arms were a breech-loading rifle, a double shot-gun, and an old musket with fixed bayonet, with which, I think, we ought to have been a match for a Japanese bear. As it was a cloudy night and no moon during the fore part, it was quite dark, and seeing no chance of being able to aim at bruin if he did pay us a visit, I made myself as comfortable as I could under the circumstances with a blanket which I had brought with me, and dozed away. I was roused by the Frenchman, as he thought he heard the approach of something, but after listening attentively for some minutes, sleep again overcame me. I am ashamed to say that the greater part of the night was spent in this way; whether my companion slept or not I cannot say, but I should much doubt if any bear came near us or the struggles of our live bait would have awakened us. As the moon rose in the latter part of the night, and caused it to be too light for our purpose, we shouldered our guns and led the cow back to the cattle-station, where I lay down in the hut and slept as well as could be expected, considering that the place was infested with fleas, and the other inmates snored most terribly.

My companions from the deserted house arrived at an early hour, and after taking breakfast, we started on our return to Hakodate, which we reached the same evening.

At the present day it is unnecessary to pass through the village of Ono when visiting the lakes although it is an agreeable variation in the route to do so either in going or returning. The main road made by the government some years ago, leaves the shore of the bay at the village of Kamida just outside the town, and striking across some swampy ground, gains the lower slopes of the mountains to the north-east, and thence runs nearly in a direct line for Nanai, where is prettily situated a government farm, ten miles from Hakodate. This is worth a



visit if the traveller is not going to extend his journey to Sapporo; as the crops raised under foreign mode of agriculture can be inspected, and there is a fair show of foreign and half-bred cattle and horses. It is especially interesting as showing how some hundreds of acres can be farmed for a government, give scarcely any returns, and support almost as many officials as labourers, on an expenditure of not over thirty thousand dollars a year.

The road is good all the way, in fact was constructed as a wagon road, and, since it has been metalled, is fairly passable at most seasons. Indeed a pleasant way to get to the lakes is to hire a "trap" at Hakodate or take the public conveyance which leaves daily. The straightness of the road is, however, rather tedious, and the interminable telegraph poles add to the monotony. After passing Nanai the scenery is very pretty, there being some beautiful slopes dotted with chestnut and oak, which have quite a park-like appearance.

Togenoshita is at the foot of the hills which shut in the northern end of the valley, or plain it may be called, stretching from the bay. This point is thirteen and a half miles from Hakodate, and here the road *via* Ono joins the main one. Formerly the only route over the hills to the lakes zigzagged up to the crest of a ridge and then down in a similar manner immediately to the south end of the larger lake, and this road still exists but along the lake side has fallen much out of repair, so that at most seasons there are some very wet places to be passed through. I think, however, it is the prettiest road of the two, as the scenery along the side of the lake is very beautiful. It can be easily passed on horseback, so that mounted travellers should not fail to take it one way or the other. It meets the main road again at the little lake, known to the Japanese as 'Jinsainuma,' so named from the prevalence of a small water-plant valued by them for edible purposes.

If, however, the highway should be taken, it will be found to enter the hills a short distance beyond Togenoshita, following up a narrow thickly wooded valley, alongside a clear mountain stream, and by an easy grade reaching the ridge of a spur of the hills. Then taking the side of another hill winds along its slope overlooking a deep ravine, where it was engineered by Major Warfield to reach the summit of the pass by a moderate slope. Looking back from certain points on this part of the road the distant view of Hakodate, which appears like an island, and the intervening bay and plain, through the opening in the wooded hills is extremely pretty. The trees are nearly all deciduous, a general feature in the forest nature of South Yezo, the few firs being confined to the highest part of the mountains, and hardly distinguishable when the other trees are in full leaf. Among the latter in this part may be seen the beech, which is found in few other parts of the island, and seems to be wanting altogether in the valley of the Iskari and the region around Sapporo, although there is another tree—not unlike the beech in foliage—which has been sometimes mistaken for it. Indeed there is a great variety of trees and shrubs in this region including, oak, elm, chestnut, horse-chestnut, lime (linden), ash, alder, elder (with scarlet berries), magnolia, willow,

azalea, wild pear, yew, mountain-ash, aspen, and others represented in Europe, besides some genera peculiar to Japan which have no recognized foreign names; while a great deal of mistletoe exists generally flourishing on trees in low situations or on the borders of swamps.

The summit of the pass (about 850 feet above the sea) is reached a little before arriving at the seventh *ri* post, seventeen miles from Hakodate. Here you obtain glimpses of the larger lake, and the adjoining volcano of Komagatake, which taken together from a favourable point afford one of the finest views in Yezo. The larger lake Ko-numa has a length of about four miles in a north-easterly direction, but being narrowed at places by projecting points, its width varies from a few hundred yards to a couple of miles. There are many wooded islands on it which add to its appearance, which is picturesque from any point of view. Its outlet is at the north-east end, whence it discharges by a rapid stream of about five or six miles in length—though the direct distance is but four—into Volcano Bay between the villages of Pombetsu and Skabe. In its course this outlet passes through a deep cut which it has worn for itself in a bed of volcanic cinder and concretioned ash, and at one point, some three miles above its mouth, rushes over a rock barrier by a considerable fall. This is a formidable obstacle to the passage of the salmon-trout, which it is a very interesting sight to watch making their repeated jumps at the cascade. The people from the neighbouring villages during the season—June—often set a coarse net on a frame-work of rough poles immediately below and just within the spray in front of the fall, into which many fish fall back if unsuccessful in jumping far enough to clear the roughest water. In the pool below the natives catch many trout and 'yungui' (a kind of soft mouthed fish) with bait, and there are usually a number of salmon-trout sculling about and leaping in it, but they will not take the fly. Lower down the stream however, even as far as its mouth, good sport may be had with the artificial fly during the right season, and almost at any time small brook-trout and 'yungui' may be taken in the same manner. The disadvantage of this as a fly fisher's river, is the great amount of timber and bushes along its banks; but it has one essential advantage in never flooding to any extent, owing to the lake acting as a reservoir.

On the north side of the pass (I return to the highway) the road winds down along the hill sides, heading wooded ravines where the forest vegetation is thick and luxuriant, having a tolerable grade for wheeled carriages. It is not in the best of repair, however, after much rainy weather, or when the snow is going off in spring, but is always passable on foot or horseback. The trees are much covered with a wild grape-vine which flourishes in this somewhat rigorous climate, and bears quantities of small purple grapes in thick clusters, palatable enough when quite ripe. There are also other kinds of creepers, but especially a species of climbing hydrangea envelopes the stems of many of the large trees. It is very beautiful when in flower, and has been introduced of late years into Europe and America by Mr. L. Boehmer, formerly horticulturist of the Kaitakushi Department.

At a turn in the road you come suddenly upon Jinsai lake beneath you, with its thickly wooded shore and steep partially surrounding hill side. There are here a couple of way-side inns, where fair accommodation can be found; and it is an agreeable place to halt at or remain for a few days, within an easy half-day's ride (19 miles) from Hakodate. This lake is connected with the larger one 'Ko-numa,' by a stream passing out of its North-western end and through a densely wooded tract, which stream is crossed near an inn known as Sikonope on the main road towards Mori.

The lakes, or at any rate the larger one, appear to be of recent origin, or their level has been considerably raised; evidence of which may be seen in the number of tree-stumps existing under water, their tops having—as they naturally would—rotted off a few inches below the present surface. It seems likely to suppose that the cause has been an eruption of Komagatake volcano throwing a barrier or dam across a valley which had formerly existed where the large lake now is, and extended probably to the sea at Skabe; for between the lake and that point, wherever the nature of the ground can be examined, it appears to be entirely volcanic cinder or burned rock. Besides, all through the region between the lakes and the sea-shore at Mori on the western side of Komagatake, the evidence of volcano eruption, and showers of ashes at distant periods, are patent; the cuttings on the road giving excellent sections showing layers of ash, with intervening strata of vegetable mould. These are so marked indeed that by measurement one might arrive at a history of the successive eruptions, calculating the duration of the epochs of rest by the thickness of vegetable mould. The traces shewn by volcanic ash of Komagatake eruptions may be seen as far south as the Hakodate side of the hill which the road passes over towards the lake, even to the village of Togenoshita. In this connection I may also mention that in the region of this volcano are a number of mounds, generally of blunt, conical form, composed of volcanic ash but frequently with large irregular blocks of broken rock in them. On account of the thick growth of forest they are not so noticeable near the main road between the lakes and Mori; although if the traveller looks for them he cannot help recognizing them, as in one or two places they have been partially cut into in making the road, though it has usually been curved so as to avoid them. They are from a few feet to, say, fifty in height. Some may be seen near Mori, but in the open country between Ikusa-kawa and Skabe they are a striking feature. They may perhaps be accounted for by the ejection of huge masses of rock by the volcano during eruption, natural decay through the effect of the weather having disintegrated the outside and softer portions, causing the mass to assume a mound form. Geologists, however, may have a different explanation.

The volcano is easy of ascent, in fact it is possible to ride up to the lip of the crater. Depending on the extent and position of its cinder slopes, which reach farthest down on its southern and eastern sides, the easiest way is perhaps from the village of Pombets on Volcano Bay; but as the ordinary traveller is not likely to pass on that side of the

mountain, the best route to adopt is to turn off for the main road between Jinsai-numa and Mori just before reaching the ninth ri post. Or if you are staying at the lakes and can obtain a boat, the ascent is good from the lower end of the large lake. This point may also be reached by viâ Ikusa-kawa, crossing the outlet of the lake by a bridge existing on a road made some years ago running over the cinder slope towards Sawara. When I first ascended it in 1861, I reached the cinder slope at the lower end of the lake by going along an inferior track through a bad swamp, and crossing the outlet just where it leaves the lake, as there then existed a house at that point—from which we walked up. Now however I should recommend the ascent by horse, from the ninth ri post already mentioned; taking your horses through the woods and as far up the mountain as you choose to ride and leaving them to await your return. A guide can be obtained for the track through the wood from any of the roadside inns.

My first experience of this route or rather the attempt to follow it when it was little if at all used, was rather different to what might be likely to occur now. I give it below as written at the time.

## VI.

The departure of a loaded vessel for China was usually the pretext at Hakodate for getting up an excursion. We had paid visits to most of the places of interest, including the lead mines, sulphur springs, and Cape Esan; but as there were two or three who had not ascended the volcano of Komagatake a second trip to that mountain was decided upon, with the intention of trying a new route to it. On the morning of the 17th of October a party of six in number started. The first portion of the road was the same as that followed on a former occasion; and as before, we lunched at the village of Ono. Passing over the first mountain range to the lake at the foot of it, we there deviated from our former route by following the main northern road by the west side of Volcano Lake, instead of branching off to the right, as we had done on the previous visit. The road followed the lake-shore, or occasionally left it for the purpose of crossing a projecting tongue, when we passed through magnificent forests of oak, maple, beech, birch, chestnut, and other valuable hard woods—fine trees standing in their primitive grandeur, untouched by the hand of man. The mountainous nature of a large proportion of this country precludes the advantageous settlement of it, still near Hakodate there is a great deal of land that might be profitably devoted to agriculture, where at present the wild animals of the forest roam in undisturbed security. One may walk for miles through magnificent forests without the chance of meeting a single soul, and in a day's ramble the only sign of industry or improvement will be the log-hut and rough furnace of some lone charcoal-burner, so that you may well imagine yourself in the forest wildernesses of Northern America.

We passed one or two small wayside inns, used as houses of call by the natives, who drive in strings of pack-ponies and oxen laden with fish, seaweed, or charcoal from distant villages, to the town of Hakodate. An

establishment of this sort, if it be a respectable one, had one end set apart for the reception of government officials, into which the common people were not admitted, notwithstanding that those travelling under the authority of the government did not pay more than one-half the charge made for ordinary travellers; but Japan was then a strongly-governed country. Each time that we emerged from the woods on the shore of the lake a fresh view of the fine volcano of Komagatake opened to us, and a new foreground presented itself at every turn; while the still water of the lake reflected the image of the sharp peak and the cinder-covered sides of the mountain with a distinctness which I never remember to have seen equalled. I did not fail to make a sketch of one of these views. Then the weather was most enjoyable,—a fine, clear, and bright sky, giving to every object its most vivid colouring, while the dry freshness of the autumn air braced the nerves for muscular exertion, and kept the mind alive to the beauties of nature. The woods wore their finest "fall" tints, the bright red of the maples and oaks being mingled with the vivid yellow of the poplars and birches, and intermixed with browns and greens of the under foliage; and I think I never enjoyed a ride more than this one along the shores of Volcano Lake.

We managed to bag a few ducks, which were now plentiful, and saw some geese; but these latter kept too far out in the lake to be reached by our fowling-pieces. Early in the afternoon we came to the river where we intended to put up for the night, and while dinner was preparing I took a stroll with another one of the party in the woods in search of rarities in the feathered way. I succeeded in procuring a species of woodpecker, and a titmouse, which had hitherto escaped me in my ornithological rambles nearer Hakodate and observed a number of thrushes, with the voice and habits of the misselthrush of Europe. The evening was occupied in chatting with the people collected at the inn, who were ready to afford us such information as we required, and were anxious to hear what we chose to tell them of ourselves or our respective countries, for we numbered among our party natives of very different climes. We also arranged a plan of route for the morrow. There was a sharp frost at night, which caused us to roll ourselves well up in our blankets, as the side of the house was only of thin sliding paper windows.

Immediately after breakfast on the following morning, five of the party started under the pilotage of a native, who professed to know the way through the woods to the volcano. After proceeding about a mile along the main road to the north, we turned off and followed a path through the forest. This led us to a charcoal-burner's where we rested for a few moments and ate some chestnuts, which are common in the woods. Thence the old Japanese started off ahead of the party, and led us through thick forest, swamps, and rough places, until he lost all sign of a trail and seemed to be quite bewildered. Add to this, he was in great dread that we might come upon snares set with poisoned arrows by Ainu hunters for bears, which we had been told were very common in this locality, so we had to use some threats to get him to go on. Presently there was a shout of "bear" from the

leading ones of the party, and a great brown fellow went scampering off through the woods until he was hidden by the underbrush. I was the only one who carried a gun, but being at that time in the tail of the party, I did not get the chance of a shot; or, what with revolvers and bowie-knives carried by the others, we might have had the honour of being the first foreigners to have killed a Yezo bear. After this little incident we continued on through the woods, until about noon when we reached the shore of the lake.

We now discovered what we had long suspected, that the old guide knew nothing of the way, or if he did, that he had purposely led us in quite a different direction to that of the volcano; so we halted to hold a consultation, and enjoyed our pipes and a bathe in the lake. Some were for giving up the attempt and returning; but having gone so far, it was at length decided that we should push on in the direction we considered best for getting to the open cinder slope of the mountain. Some hours more were spent in toiling through thick woods, during which we met with a covey of wood-grouse, of which I managed to bag a couple of brace; and then we came to almost an impassable thicket, where, from the later eruptions of the volcano, fallen trees were scattered about in every imaginable way, over and around which vines had entwined themselves so as to form almost insurmountable obstacles to our progress. The party now divided into two or three, each following their own inclinations, but shouting to one another, so as not to separate too far. Some were nearly exhausted with fatigue, all, I think, acknowledged the severe exertion of getting through a Yezo forest, and each bore some trace on his face, hands, or clothes, of the tenacity of the thorns and brambles. Late in the afternoon we caught sight of the clear ground, between the trees, and at last, about sunset, emerged on the cinder slope of Komagatake.

We were now, however, only at the foot of the mountain, and all were very tired and excessively parched with thirst, while there was no water near. Notwithstanding this, three of the party who had never ascended the volcano started with that intention; but one turned back after a few yards, and the other two, after manfully struggling about half-way up the mountain side, were forced to relinquish the attempt. As it was growing dark, we who remained below made a large bonfire of the dead trees and logs at the edge of the woods, and our companions were thus guided back. Now, what was to be done? It would be impossible to get back through the woods to the house we had left in the morning while dark, for we had had as much as we could do during the daylight; so, after some deliberation, we decided to make for the edge of the lake, and there refresh ourselves with a good draught of water, and then proceed round the shore to a creek which has its outlet towards Volcano Bay, where there was a deserted house, which, it may be remembered, was the one we slept in on a former visit to Komagatake. This we accordingly did; and when we waded across the stream, carrying large bundles of hay, which we found already cut in a neighbouring swamp, imagine our joy to find that there were some persons in the house!

The inmates turned out to be a Japanese

officer with two attendants, who had been on a pilgrimage to the volcano, and, as luck would have it, they had a plentiful supply of rice. We therefore set the pot boiling, plucked our four grouse—which I had wished to have preserved as specimens—put them in, and cooked up a good mess of thick porridge, which we were none of us sorry to help to devour. It would have done many a dyspeptic individual good to have seen us squatting Indian fashion round the kettle and using the readiest and rudest means of reaching our mouths by the very shortest ways; at any rate, we managed to fill our stomachs, and that was the first step towards comfort for the night. The next thing was how we were to keep ourselves warm, for we had no blankets and only some of us wore coats; so we laid out the hay, kept a good fire on, and lay down close to one another. One of the party—rather an original in his ideas—took one of the wooden-framed and paper-covered doors off its slide and covered himself with that, trying to persuade himself that he was warm. It was the first time I ever heard of a door being used as a counterpane. But it was no use, our best endeavours to keep ourselves warm were of little avail, so we put more wood on the fire, and sat round talking. It was freezing sharply out of doors.

As I have before said, bears were reported numerous in this region, so by way of a joke one of the party started the idea that it would be necessary to keep watch during the night to prevent their attacking the house; and as this seemed to take with the one who had covered himself with the door, the others kept up the joke by different suggestions, while one tied a bowie knife to the end of a pole, and the fowling-piece was looked to. It was arranged that the night should be divided into five watches, and a white-man and a Japanese be on each watch, the former to carry the gun and the latter the pike. Then we came to cast lots for the different watches, and pretended to make a great deal of trouble on this head, which all went to make the affair look serious. The gentleman of the door went out and made arrangements where those on watch were to station themselves, and took the whole thing as a very weighty matter. Unfortunately we could not carry the joke far enough that any one was willing to take the first watch outside the house, or I feel sure our friend would have walked up and down the rest of the night, for it was arranged that the one who followed him was to feel unwell when roused for duty. However, the joke was carried on sufficiently to expend a considerable part of the night, and left us so much the less to shiver till morning, when we turned out early, ate some cold rice that was left, and then started to return to the house by the eastern side of the lake, where there was a path.

We had a good many miles to walk before we got round the lake, and after that had all the distance along the road before we reached the inn about the middle of the day. The same afternoon some of us rode about ten miles beyond the inn to Volcano Bay, where we visited some fishing villages, inhabited partly by Ainu. Some of the villagers had never seen Europeans before, and therefore took great interest in inspecting us, which we allowed them to do to their hearts' content. They were very well behaved, and

offered us tea, sweet cakes and pears. As we rode back by moonlight through the forest we saw several owls and foxes, and shot at one of the latter with a revolver. One of the party met with a capsize in the stumbling of his horse; but, with this exception, we had no mishap on the road, and reached the inn with a war-whoop that made the woods ring again.

We slept soundly at night; and next morning, after defraying our expenses in ichibu, we rode in to Hakodate. That night an earthquake occurred, which threw a vase off the mantelpiece in the house, and was felt by most people. It was said to last three minutes, but I felt nothing of it.

A few weeks subsequent to this I was again on board the good barque *Woa*. As we sailed out between the iron-bound shores of Hakodate Head and the white cliffs in the neighbourhood of Mohitze, boneto played in shoals around our vessel, chasing the smaller fry of the sea, while gulls hovered over the stern with graceful motions. There was a gentle breeze, and the sharp peak of the volcano grew dimmer and dimmer, while the outline of the coast became less defined; then places, which had become familiar to me in my rambles about the country, faded away and I bid adieu to Hakodate. The reader who may have followed me through these columns may, perhaps, be weary of Northern Japan; it may not have attractions for him, for he may love more southern climes; but for my part, I must say, *Au revoir!*

## VII.

### CAPE ESAN AND VOLCANO BAY.

There are some very nice rides in the immediate vicinity of Hakodate, while those who prefer to walk will not find it difficult at any time to spend a few hours pleasantly in rambles by following the goat-like paths on the mountain from many points on the top of which excellent panoramic views are obtained of the town and harbour, the isthmus and open country beyond, and of the shore curving round toward the steep bluffs on the western side of the entrance to the bay; to which may be added a fine view, if the weather be clear, of the greater part of the strait of Tsugaru, with the mountains of the main island on the south side. In June the azaleas, which cover a great part of the mountain, are in bloom, and have a very brilliant appearance, seeming to thrive excellently in that climate; while three weeks or a month earlier the terraces of the lower slopes of the hills beyond the isthmus are literally covered with lilies-of-the-valley, which grow so thick and profusely that it is possible to walk for miles and step on them all the way.

In autumn again the neighbourhood of Hakodate looks very beautiful. Then the ferns have withered which together with some of the brighter tints of other plants and shrubs, give the lower slopes of the mountains seen across the bay a rich red-brown tint, while the higher parts still retain the green of the scrub-bamboo, overtopped, perhaps, by a sprinkling of snow on the highest peaks and ridges. Moreover at such season the colours of the woods are in constant change as various kinds of trees assume their seasonable tints, which, after the first sharp frost, are of the most brilliant descriptions.

The face of the country, however, looks otherwise in winter. The great snow-mantle has covered up the dwarf vegetation, while the leaves having fallen from the deciduous trees, the mountains look comparatively bare. At such season Hakodate Head, although on its southern aspect sometimes almost bare of snow, looks bleak and desolate on the harbour side, only relieved by the dark forest of cryptomeria immediately above the town. Snow lies perhaps a couple of feet in depth on the lower ground, while in the mountain gullies the fierce north-westerly winds accumulate it in immense drifts. Still on a fine, clear, calm, winter day, the general view is pleasing if not enticing. Then the forms of the mountains, and distribution of land and sea, being very dissimilar to most scenery in southern Japan, there are few observant persons who have visited Hakodate at any season, but are struck with the picturesqueness of the neighbourhood.

It is almost needless to refer to the municipal institutions of Hakodate as a town, its schools, prisons, baths, &c.; there is so much similarity in such between one Japanese place and another; though it is worthy of remark that of late years a good deal of public spirit has been displayed by the inhabitants, who seem to have embraced the idea that they should not look to government inspiration in all matters, and who have on several occasions displayed a spirit of independence quite commendable. This is doubtless owing in a great extent to the *laissez-faire* policy pursued in regard to Hakodate itself by the department which had control of Yezo for the ten years preceding 1882; but also perhaps to the more self-reliant nature of a people induced by living in a thinly populated and comparatively wild and inhospitable country. This spirit of independence is generally remarked upon by persons visiting Yezo for the first time, often, however, in a disparaging manner, and especially by those who have become accustomed to the obsequious politeness and timid manners common to many southern Japanese.

I might not be going too far perhaps if I should introduce some remarks on the social state of the people of Yezo, but I consider it is a subject on which travellers may be left to form their own unbiassed opinions. For whatever may be written on such a subject is always open to the objection that it is more or less necessarily one-sided. No two persons can have gone through identical experience; none make their observations from the same stand-point; and few, if any, deduce from such experience and observation, conclusions in accordance with the preconceived notions of any reader, and therefore fail to produce an exact impression. Speaking generally, however, I think I may say that the majority of foreign residents in Japan, will speak less enthusiastically on the subject of the Japanese people than visitors; while the opinions of those of the longest term of residence will be still less favourable. There are many points in the Japanese character that we cannot but respect, if not admire; but there are others which—although perhaps unknowingly—are used to conceal, as by a screen, an innate rascality often practised in the most painstaking and clever manner; and the more business, official or mercantile, that one has with them, the sooner does the screen cease to serve its purpose.

The experience of many lead them to say that gratitude does not exist in Japan. This is nearer a truth than the contrary. A Japanese is always anxious, when it can serve his end, that you should form a favourable opinion of him. This is true, however, generally all the world over. A Japanese gives you a present, as a peace offering, before he knows you or your intentions; but how many presents does he bring *after* you have befriended him and he has ceased to require your assistance? Individual instances occur; but were exact records kept, as in any scientific investigation, I do not doubt the result.

Passing from this general question, it may be remarked that the state of foreign society at Hakodate is peculiar. A limited number of residents, with little or no business to occupy them, induces a state to which all small communities are liable. A most healthy climate permits of no disease in the body, but the mind broods over its own cares, and it must be added—the cares of others. The latter begets scandal, the first insobriety. People who should live as one family—two dozen foreigners in the midst of thirty-seven thousand natives—exist as cats and dogs, some cats together and some dogs together. Some wear brass collars, such as consuls, some wear black coats, such as missionaries; some would be industrious dogs if they had enough to do, some would be sleepy, quiet cats, if their tails were not trodden upon. Let us hope that the missionary element now so greatly preponderating, may induce in the future a more sociable state of society, such as existed twenty years ago when there were no missionaries and but two consuls, and of which time I have very happy recollections, among which is one which I shall endeavour to describe, as nearly as possible, in the words in which it was then written.

#### VIII. *Stairway?*

An early breakfast enabled us to leave Hakodate at a quarter before eight o'clock on a fine morning at the commencement of September. Our party was composed of three mercantile gentlemen of the place, the resident Russian doctor, and Mr. M—, a naturalist, in the employ of the Russian Government. Our attendants were Japanese "boys" (every servant is called a boy east of the Red Sea); our baggage and provisions being packed on country ponies, while we ourselves travelled on horseback. A ride of some five miles, mostly over the soft sand of the isthmus, brought us to a small village known as the Sulphur Springs, where a natural warm bath impregnated with brimstone, is resorted to by all the scabbed and itching people of the neighbourhood. Here we were obliged to wait some time to allow our pack-animals and servants to come up, and we occupied the interval by smoking our cigars and watching the doings of the people in the bath. In the volcanic region in which Hakodate is situated there are many mineral springs, but of any peculiar properties which they may possess beyond their mere cleansing quality, I am ignorant.

From the sulphur springs we followed the line of beach towards Cape Blunt, a headland seen to the eastward from Hakodate. Our ride was most enjoyable, with a bright clear sky overhead, and the heat of a September sun modified by a gentle breeze off the broad Pacific. Having my gun with me I rode on

ahead of the party, and was successful in stalking a cormorant; but the strong current which sets through the Strait of Tsugaru, and runs sometimes like a sluice along the coast, kept my prize from drifting ashore, so that I was obliged to strip and swim after the bird. He was worth the trouble, being a fine specimen of a large species frequenting these seas; and I only regretted that I was going out on, rather than returning from, an excursion, or I might have added it to my collection. We reached Cape Blunt soon after noon, and putting up at a small fishing village, we fed the horses, then fed ourselves, enjoyed our manillas, and waited for the heat of the day to pass over before we again started. Beyond the Cape the coast trends away north of east, the shore becomes rocky and precipitous, while the country inland is altogether mountainous. There is no road except a mere mountain path, and this in some places is lost on the hard rock at the sea-side, so that we had consequently a good deal of climbing and scrambling both on horseback and on foot; sometimes clambering round projecting rocks on the sea-shore, sometimes in the water, and at others enveloped in the dense forests of the mountains, or threading along precipices hundreds of feet above the sea. Before six in the evening most of us reached a small fishing village, where it was decided we should stay the night. The head man of the place accommodated us with a house, and our servants soon made themselves at home in that half which served as the kitchen, while we took up our quarters beyond a paper partition in a very respectable room, matted over in the ordinary fashion. A couple of sliding-doors were soon taken down, and these, propped up on buckets, served as a table; while we sat on our haunches around it, and did good duty towards a dinner. After the fatigue of the day, we were not long before we spread our blankets on the floor and dozed off to sleep. A more than ordinarily persecuting flea caused me to wake in the night. I stepped outside the house to see if the horses were all right, and found most of them following the examples of their masters. The sky was beautifully clear, and the stars were reflected in the smooth surface of the water of the little bay, itself darkened by the shade of the high cliffs which shut it in, while the universal stillness was only broken by the rippling of a small stream, and the regular break of the waves on the sea-beach.

Starting by seven o'clock the second day, the mountain travelling of the previous afternoon was repeated. We passed several villages, and crossed the mouths of one or two small rivers. At one part of the beach the sand is black, containing a large proportion of iron; and in the valley, a little way distant from the sea, are some works erected at the expense of the Japanese government, where the sand used to be washed and the metal smelted. The furnace when we visited it, was not in work; but we obtained the key, and made an inspection of the factory. None of us being metallurgists, we could not pronounce on the perfection of the works; but water-power was laid on, and it was evident that a good deal of money must have been expended on the place. Wood was used altogether in the smelting process, and large quantities lay still piled in stacks near at hand, cut from the neighbouring forests. I selected some specimens of the iron as well

as the sand, and these have been examined in England and pronounced to be of very pure quality.\* The doctor and the botanist employed themselves along the route collecting plants, and on this excursion they were lucky enough to procure some species which they had not hitherto obtained: I always think that botanists work with more zest than other naturalists. By half an hour before midday we reached the fishing village of Nidanni, situated on the open coast near Cape Esan, and within sight of the volcano of the same name, where we halted to refresh ourselves and our animals.

After lunch we set off, some to collect plants, one to go on with the packs to the village where we intended to stay the night, and the rest, among whom I was included, for the ascent of the volcano. An hour's ride from the sea over the hills brought us to a sulphur-refining establishment at its foot. Here the sulphur, which is collected at the mouths of the small craters in a very pure state, is melted down and run into the shape of cheeses for the market, and I nearly choked myself by too close an inspection of the operation. We tied our horses; and the botanist having lingered behind, we indulged in a hot alum-bath cut out in the ground and fed by green-coloured water from the springs on the side of the mountain. We afterwards tried the temperature of one of the springs where the alum-water issued from the earth, and found it to be 123° Fahrenheit; but as it trickles for some little distance to the bath, it becomes of a bearable temperature. The workmen who are engaged at the sulphur-works use these baths very much, and they attribute the quality of curing skin-diseases to the alum equally with the sulphur-baths already mentioned. The effects of fleas and mosquitoes were all we had to complain of, but we found the bath refreshing at any rate.

We had but a short distance to get up to the active part of the volcano, for, unlike Komagatake and one's general idea of a volcano, there was no hollow on the summit; but the crater, or rather craters, for it is made up of many, were on the side of the mountain about halfway down its western face. Those which we inspected were formed like enormous hollow ant-hills, boiling up inside with molten lava or mud and ejecting sulphurous vapour, which condensed and congealed on the mouth in a solid and pure state. A constant rumbling noise was kept up, and the bubbling was like that of the boiling of a gigantic cauldron. We tried to stop up one of the escape-valves so that we might witness an explosion, and in endeavouring to do so one of the party burnt his hand rather severely. The height of this mountain, measured by naval surveyors, is put down at a little under two thousand feet. Having satisfied ourselves with a minute inspection of one of the wonders of Nature, we descended and took to our horses again. A ride along a mountain-path brought us to the descent into a fine wooded valley with a stream coursing through it, and we reached our intended halting-place at dark, where I enjoyed a good bathe in the sea, and washed the

\* For particulars regarding this Kobui iron-sand, and that found also near Yamukusnai on Volcano Bay, see *Preliminary Report on the first season's work of the Geological Survey of Yezo*, by Benjamin Smith Lyman (Kaitakushi official letters and reports. Tokio, 1875.)

salt off by jumping into the fresh-water of a creek, and was not sorry to fall to on a good supper as soon as it was ready.

In the evening we discussed our plans for the morrow. We had reached a part of the coast where, from the absence of any path, it was impossible to proceed further with horses, and it was said to be extremely difficult on foot—in fact, that it was hardly ever travelled; any persons whose business or pleasure forced them to go that way, passing from village to village by sea. Now, two of us had a very strong notion of going back to Hakodate by a different route from that by which we had come along the coast; and so, as we were a large party, and our detaching ourselves could not make much difference, except in diminishing the number of mouths—an arrangement by no means disagreeable in the reduced state of the commissariat,—we hired a boat, to be ready at daylight.

The sun had not risen when, between two rolls of the surf, my companion and myself jumped into a canoe-like fishing-boat, and three sturdy Japanese launched her on the waves, and then sat down to their oars. The distant land on the far side of Volcano Bay was just visible against the reddened eastern sky. The boatmen set fairly to work with their light sculls, which they pull with one arm and the other alternately, and we skimmed along towards a rocky bluff which bounded our view ahead. In order to keep out of the strength of the tide, the boatmen kept much closer to the rocks than seemed prudent, and we passed close in under the steep cliffs, where the crows were just awakening from their night's repose, and gulls were beginning to collect in search of food. Looking back, we had Cape Esan and its volcano in full view, and the steaming mountain side looked grand, in full relief against the deep blue of the sky and the darkly shaded wooded mountains alongside. Under the cliffs at its foot lay a little fishing-village, of which the inhabitants lived in unconsciousness that at any moment the internal forces might burst forth and overwhelm them; but successive winters come and go, spring and summer succeed one another year after year without variation, and they fish, they eat, they exist. "Where ignorance is bliss, 'tis," &c. As we pulled along the rugged shore I made a sketch in my pocket-book, and we had the satisfaction of seeing the first bear that any European, although some had resided at Hakodate over four years, had seen. He was a fine fellow, but as I was getting a bullet from my pouch to drop into my gun he plunged into the woods and we saw no more of him.

We passed one fishing-village, and after being a couple of hours in the boat reached a second one, where we went ashore. Finding, however, the road spoken of as a very indifferent one, we hired another boat, and embarking again we continued coasting till we reached Osaspi. A couple of miles' walk took us thence to Kakumi where, meeting with a Japanese doctor who wanted to get to Hakodate and who informed us that we could hire horses, we halted, ordered the horses, and made an apology for a breakfast off some potatoes, a piece of cheese we had brought with us, and Japanese tea. We had not expected to be able to get through to Hakodate in one day, and were therefore much

astonished when the man who brought the horses, told us he would be able to get there before evening. Notwithstanding the morning had been so fine, it now commenced to rain, and in a manner that gave us the idea it was in earnest, and that mountain travelling would not be particularly pleasant; but as neither our friend the itinerant doctor nor the owner of the horse seemed to wish to avoid going in the face of the storm, it would not do for us to back out, so we jumped upon the pack-saddles and started off. A pack-saddle of any sort is not a comfortable seat, and those of Japan are of a most unaccommodating pattern; our experience, before we got halfway up the first mountain, went to prove that excruciating agony, combined with cramp in the lower extremities, was the inevitable consequence after half an hour's ride. How we endured these pack-saddles as long as we did I hardly know: certainly nothing short of a rocky and difficult road with twenty miles to Hakodate staring us in the face, a soaking rain, and no provisions, could induce any one to undergo the penance; the treadmill, I am sure, can be nothing to it, picking oakum a pastime, and peas in the shoes a pleasure.

Soon after starting, we passed a few houses at some sulphur springs, and a little further on a place where we were told there had been silver and gold mined, but which we did not believe. It took us from half-past ten till a quarter past noon to ascend the first mountain. On getting to the top, we passed along a ridge for some distance, and then following the path, we descended, and fell upon a mountain-stream. The whole country was one thick forest, in which we observed some very fine hard-wood timber. We passed a government manufactory of stone inkstands, in a secluded place; to reach which they were constructing a new road from Hakodate or rather improving some parts of the old one, but, as it was yet very soft, we did not gain much by resorting to it. The rain continued without any intermission, and very heavy, so we were not sorry to reach a small house of call at about two o'clock, where we got a cup of hot *sake* and some boiled rice. We also endeavoured to dry ourselves a little, but could not do much in that way, for, being lightly clad, we had been wet through ever since we first started. At half-past two we left again, and it took us two hours before we emerged from the mountains. During the latter part of the way we had ridden but very little, for besides our ponies not being very well up to the mark, we had found walking easier than undergoing the tortures of the pack-saddles. At five o'clock, we arrived at a village which we knew from having been to it on former rides from Hakodate, and it being only about six miles' farther, we paid off the owner of the pack animals, bid good-bye to our friend the doctor, and started on foot to complete the journey. The storm continued, and we had a heavy trudge across the open plain before we reached the town. That evening, although we had eaten little or nothing all day, we were so fatigued that we could not take any dinner, but having got out of our wet clothes, we turned in between the blankets, and slept soundly. Owing to the bad weather, it was two days after this before the rest of the party returned to Hakodate.

The route here sketched may be recognised

by reference to the itineraries published in the *Japan Gazette* of 16 September 1882, entitled 'Distances on travelled routes in Yezo.' It will be there seen that from Kakumi we took the direct road to Hakodate. In place of doing this, however, or after reaching the shore of Volcano Bay by the last mentioned road, or by another *viâ* the Obune hot spring, a very pleasant excursion may be made by continuing along the bay-shore to Shkabe, thence returning to Hakodate *viâ* Nanai; or even going on and passing round the north side of Komagatake volcano by Sawara and Oshiranai, either right on to Mori where the new highway strikes the bay, or branching off from Oshiranai through the woods and cutting into the same road about a ri on the Hakodate side of Mori. Whichever of these routes be taken will be found interesting, owing to the variable nature of the country, and the ever changing view of the volcano and lake, the scenery being hardly excelled in any part of Yezo. It is missed by the bulk of travellers who push on across Volcano Bay for Sapporo or the south-east coast, and who are anxious to make the best use of their passport, and perhaps the limited time at their disposal; whereas, a week or ten days divided up by two or three excursions within the ten-ri radius from Hakodate, can be very pleasantly spent, and with the exception perhaps of not meeting with any Ainu, the excursionist will be as well satisfied with the knowledge gained of the way the Japanese live in Yezo, as by a much more extended and tedious journey.

The settlements and fishing villages scattered along the coasts of the southern part of Yezo, are of course older than those farther removed from the main island whence immigration on Yezo has come, but the style of life is much the same. The Japanese have in many ways adopted Ainu fashion. Even in Hakodate harbour the small fishing-boats, and many of those used at the present day in landing passengers from steamers, in the harbour are the Ainu pattern of 'chip'—called by the Japanese 'chippu,'—altered only in the planks being fastened with iron spikes instead of bark; the oars, pulled on single thole-pins passing through them, hand after hand alternately, Turkish fashion, are essentially the same; while within treaty-limits of Hakodate, at some of the out-of-the-way villages, the Ainu word 'shamo' is still used to designate a Japanese.

Having drifted into the subject of the Ainu affords me an opportunity which I readily embrace, of drawing attention to the researches amongst this interesting race by Mr. J. Batchelor of the 'Church Missionary Society.' This gentleman lived for months at one of the largest settlements of these people, where he studied their language, habits and customs, and their traditions. The outcome has been two papers in Vol. X., pt. II. of the 'Transactions of the Asiatic Society of Japan,' 'Notes on the Ainu,'—and 'An Ainu Vocabulary.' The first, I am sorry to observe, has evidently undergone some mutilation in passing through the press, Mr. Batchelor having left for England before his papers were published; this is the more objectionable because being in a very condensed form, the slightest deviation from the original must have a magnified effect. The pity is that Mr. Batchelor did not give us more "notes,"—not vocabulary, for that is

very full, and must have occupied an immense deal of time laboriously expended. He certainly—and we should have placed great weight on his observations—might have entered much more fully into the habits and peculiar customs of these people; but he has modestly said:—"Miss Bird's remarks upon the Ainu are perhaps the best that have been written in English." This is in a way satisfactory as affording confirmation of a portion of that author's writings, which otherwise on Yezo require much discounting. (See *Japan Gazette* 5 August 1882, 'Some recent literature on Japan'). Mr. Batchelor has, however, gone far enough to correct some popular errors. Thus *menoko*, woman; is really Japanese 'me-no-ko,' probably Nambu dialect where dog is 'inu-ko,' and ox 'beko-ko.' The "Biratori"—principal Ainu settlement on the south-east coast—of former writers, is 'Piratoru,' and is not in the district of "Saru" of the Japanese, but at 'Sara'; while in the vocabulary will be noticed many words adopted from Japanese, but which unfortunately the revisor for the press has not distinguished by asterisks or italics as should have been done.

Mr. Batchelor contends that Ainu should be spelled Ainu. He is probably right. Still this is a point which depends—in the absence of a written language—on how the final sound strikes the ear of the listener, and may possibly be as correct one way as the other; or it may be just between the two. I notice in some other cases where the 'u' has been used, that Mr. Batchelor adopts 'o.' Thus 'Kamoi' is as often, if not more often spelt 'Kamui.\*' As to 'Aino' we may be right in using it as singular, for 'an Aino,' but in the plural it would be better possibly to say 'Ainu' than 'Ainos.'

Regarding the origin of the race, Mr. Batchelor says the Ainu "know nothing for certain." They have a foolish tradition about a certain Okikurumi having descended from heaven. Another makes this Okikurumi a sort of Jesus Christ; but we should remember that the Rev. Mr. Dening had visited the same village some years before Mr. Batchelor, and we all know the old story of the North American Indians and the musk-rat which does duty for Noah's dove. The Kuril Islands seems the only line of migration which those Ainu whom Mr. Batchelor conversed with, pointed to. In an article in *Nature* (28 Sept. 1882) signed 'A. H. Keane,' the "national traditions" of the Ainu are said to "point to north-east Asia as the region whence they migrated to their present homes." It would be interesting to know where Mr. Keane found these "national traditions." I shall probably refer to this question elsewhere, so for the present will only say that so far as indications can be traced, it is possible that the Ainu were once inhabitants of Japan proper,—meaning thereby the main and southern islands. On this subject the inquirer will find a good deal of information and much speculation in various papers scattered among the record of societies both in Japan and elsewhere, but one of the latest and most interesting is that read by Professor John Milne and printed in the same volume and part of the 'Transactions of

\* This although a word very much used by Ainu, is however, probably a corruption of the Japanese 'Kami.'



the Asiatic Society of Japan' as Mr. Batchelor's, entitled 'Notes on the Koro-pok-guru or Pit-dwellers of Yezo and the Kurile Islands'. In this paper Professor Milne shows, I think conclusively, that a race of small people inhabited Yezo antecedent to the Ainu, whose "spoor" remains in the form of partially filled up holes, broken pottery, arrow beads, stone adzes &c., in and about these pits. I can myself bear testimony to the existence of these traces in many parts of Yezo; and Mr. Batchelor gained from the Ainu their belief in "dwarfs who dwelt in cave-like huts built over round depressions dug into the earth;" while he was the first who obtained the actual Ainu name—as distinct from its Japanese corruption into "Ko-shito" or "Ko-bito"—of 'Koro-pok-guru,' "men having depressions," or more freely, according to Professor Milne, "pit-dwellers."

Professor Milne believes "that the Ainos once covered Japan, and that they left behind them as indication of their presence the various kitchen-middens which have been described by" himself, "Professor Morse, H. von Siebold, and others." He considers that as the Japanese drove the Ainu out of the main island, so the Ainu drove out the Koro-pok-guru from Yezo, and that the latter "disappeared in the direction of Kamschatka." Mr. Batchelor says:—"The Ainu are said to have exterminated this race in warfare,"—and—"The Ainu know nothing of making pottery, and have never heard that their forefathers did;" while of the pit-dwellers:—"This nation are said to have known the art of making pottery, and used flint heads to their arrows."

So far so good, but Professor Milne thinks that a few people which now live upon the most north-easterly of the Kurils, nearest to Kamschatka, are descendants of the Koro-pok-guru. There are not above one hundred of them altogether. They live in holes, roofed over, as we may imagine the ancient pit-dwellers did. But both Mr. H. J. Snow and Captain Hardy—who lived close to a village of Ainu on Sakhalin for some years—contend that these people are proper Ainu; in corroboration of which one of the chief men informed Mr. Snow that he had himself come from Sakhalin. The doubt, however, as to the race to which these few people belong, does not detract at all from the conclusions arrived at; only it does not assist us as to what has become of the ancient pit-dwellers. Not that we should gain much by knowing; but it would be interesting to trace a connection with some existing people. The Aleuts apparently had the same style of dwellings, and there is no reason why they should not have formerly occupied Yezo; or indeed why not Eskimo.

It seems far from probable that the Ainu should have so far modified their habits as to change from a pit-dwelling race into one constructing edifices wholly above ground without, as far as we can see, any reason for so doing. Besides had the Ainu changed in this particular, why should they not likewise have changed in others when they came in close contact with the Japanese; while if they changed at all, would it not be most probable that they should imitate the Japanese, especially in the form of edifice. But on the contrary, it is matter of common

remark, that considering how long the Ainu have been within Japanese influence, they have adopted so very little from the dominant race. There is not the slightest resemblance between an Ainu wigwam and any description of Japanese building. Indeed there is a peculiar character about Ainu construction, and the only similarity that I have observed anywhere is between the large store-houses used by the Japanese on Hachijo (an island situated about one hundred and twenty miles due south of the mouth of the gulf of Yedo), and the diminutive structures on posts which the Ainu use for similar purposes. In this particular the same cause may have operated in each case to require such style of building; or that on Hachijo may be a relic of Ainu. Besides, although according to Mr. Batchelor, some of the Ainu told him that their ancestors formerly did use huts over pits; still, as he pertinently remarks, if such were true "it is hard to see why they should distinguish themselves from this nation by designating them "Koro-pok-guru, men having depressions." There is consequently in my opinion, no reason why we should attempt to mix up these two races, or hesitate to adopt the view that the people who used the pits found in Yezo were pre-Ainu.

Professor Milne has quoted at length a translation by Mr. Satow from an old Japanese work on Karafto (Sakhalin), where it is recorded that "some of the barbarians of the island, when winter comes on, take to living in pits;" but I notice that it is distinctly mentioned that, "for a distance of 50 or 60 ri in the south of the island, the construction of the dwelling is in no way different from that which is found in the island of Yezo." Now this amounts to two degrees of latitude and carries us up as far as Kussunai, beyond which, at the present day there are none, or hardly any Ainu to be met with. I think therefore, that in place of this observation serving to exhibit Ainu as pit-dwellers, its tendency is to lead to a contrary conclusion. The fact of a few families of doubtful origin now found on the extreme north-eastern Kurils, as previously noted, if they should be pure Ainu, having adopted a style of underground dwelling, I think may be attributed to their being, as we know, a wandering band, and having found pits already dug, they roofed them over and adopted a style of dwelling most suitable to the rigorous climate, in situations where timber is scarce and where in passing from island to island their small canoes would not afford means of transport for the complete materials for overground structures.

There is still one other point which might be taken as indicating a connection between the Ainu and the pit-dwellers, namely the existence of a similar description of rough earthenware in the shell-heaps found on the main island, and about the pits—and also where there are no traces of pits now discernable—on Yezo. But that would hold good only if we could with certainty ascribe the former to the Ainu, which I can see no sufficient reason for doing, notwithstanding these kitchen-middens exist, and we know from historical records that the Ainu were at one time on the main island. Nevertheless it may be fairly urged, that, if the latest evidence of a pre-Japanese people is exhibited in these shell-mounds or kitchen-middens,

and the Ainu were the inhabitants of much of the main island immediately preceding the Japanese, these ought to be ascribed to the Ainu. The question then arises, are these shell-mounds the latest pre-Japanese traces? And further, how is it we find the Ainu of the present day, not only without any earthenware utensils, but according to Mr. Bachelor being ignorant of the art of its manufacture, and without any tradition respecting its use by their ancestors? It is not so very improbable that these people may have lost the art; but in their fondness for treasuring up heir-looms I think it strange that no articles of pottery are found among them, if such were ever in use. It is true that earthenware is of such fragile nature that it is not likely to be preserved in its original and useful form for a great length of time; while the necessity for it has long ceased owing to the introduction by the Japanese of metal and wooden cooking and feeding utensils. Still I cannot help thinking that we ought to find some traces. It seems to me therefore somewhat unreasonable to ascribe the rough earthenware of the main island, and that of Yezo which—I take the word of Professor Milne—is exactly similar, to different people.

I admit the question to be very puzzling, because, as I have before remarked, the kitchen-middens and shell-heaps of the main island appear to be the latest pre-Japanese remains. Much further research is necessary before a decided conclusion can be arrived at. In the meantime we may feel pretty certain that on Yezo there existed a race of people before Ainu immigration; the Koro-pok-guru of Mr. Bachelor. Where these people disappeared to is quite uncertain. Whether the Ainu, who were within historic times on the main island, occupied the region where the explored shell-heaps and kitchen-middens exist is likewise somewhat uncertain; but that they ever were potters is unlikely.

It appears to have been generally conceded without necessity of proof, that the Ainu were the aborigines of Japan proper and were the savages with whom the Japanese fought in the central part of the main island; but as I see no special reason for this assumption, I have only said at the commencement of these remarks that such is possible. It seems equally probable that they may have entered by way of Sakhalin, from the north. They may have driven out the Koro-pok-guru from Yezo on to the main island, and even followed them there. The Koro-pok-guru when they reached a much warmer climate than they had been accustomed to, may have given up leaving their dwellings underground, or to a certain extent done so, and this would account for the absence of pits in central Japan,—together of course with the likelihood of such traces being obliterated in a thickly populated region. The Koro-pok-guru may have been driven southward by the Ainu until they came in collision with an advancing tide of Japanese, and between the two have been annihilated. This theory may appear perhaps rather far fetched, but the facts so far as observed, fit in well with it, while the most serious objection which might be raised against it would not probably be of greater force than those which meet us in any other, considered in regard to the present state of our positive

knowledge which allows such scanty groundwork to build upon.

It appears moreover in Japanese records (see Milne *Prehistoric Remains*. 'Trans. As. Soc. Japan' 1879-80) that mention is made of more than one tribe of 'eastern barbarians' existing on the Main Island about the beginning of the Christian era. Also of "dwellers underground" called 'Tsuchi-gumo,' who were dwarfs. We must make a good deal of allowance of course for the poetical imagination of ancient writers, still the coincidence with Ainu description of the Koro-pok-guru is striking, and if we could depend on both accounts we should not hesitate to consider the Tsuchi-gumo and Koro-pok-guru as identical; while the fact of the former being described as pit-dwellers is probably the strongest item of evidence against their being Ainu: because had the Ainu built dwellings partly underground, it is impossible to imagine that, as forced northward into a colder climate, they would have abandoned the habit.

As I have before remarked, I think it has been admitted on too little evidence that most of the pre-historic remains in Japan proper are Ainu. The similarity of stone implements and pottery on the main island and Yezo, do not seem to assist us much in the investigation; because, if according to a Japanese work upon the Ainu written about the year 1800, mentioned by Professor Milne (*Prehistoric Remains* p. 82) these people did manufacture pottery, yet, as we find all the fragments of about the same style and generally distributed,—in the shell heaps of the main island,—in the refuse mounds on Yezo,—and about the pits in Yezo and Eturup,—we should be almost forced to associate the Ainu with the pit dwellers; and have to account in some way for a great change of habit. It is of course possible that two nations may have manufactured and used earthenware; or that the Koro-pok-guru may have learned the art from the Ainu, or have obtained the articles found about the pits from them. Indeed it has been urged that the quantity of pottery so far discovered in and about the pits hardly justifies us in concluding that the pit-dwellers were potters, and there is certainly a gap left still to be filled in our investigation in this particular, as in few if any instances have the pits been sufficiently explored by digging through and around them. If, when such is done, there shall be found sufficient pottery to establish the Koro-pok-guru as having habitually used it, then I think we may fairly conclude that they were the potters, Japanese written evidence regarding the Ainu notwithstanding.

After so much pre-historic speculation let me return to life in Japan as seen but little over twenty years ago. I transcribe it without alteration:—

The Japanese do not seem behind their neighbours, the Chinese, in keeping holidays. During my stay at Hakodate several occurred; and on one occasion the festival extended over three or four days, one being set apart for the officials and aristocracy, another for the merchants, a third for the coolies (labourers); and even the prostitutes were not forgotten, but were allowed one day in which they might enjoy themselves at liberty, otherwise they are restricted to a certain quarter of the town, which is closed by gates, and is under the strict surveillance of the police. The greatest festival I witnessed

was on the 18th and 19th of September, being the 14th and 15th of the eighth moon, Japanese and Chinese reckoning. Occurring only every other year, all work is suspended on those days, and the people go to considerable expense. The festival, I think, is connected with some tradition concerning their origin or their doings in Korea; but I was unable to collect any precise information concerning it, and therefore, without any vain speculations, I shall proceed to relate what I saw.

At an early hour people began to collect from all parts in holiday attire, and triumphal cars were taken out of the sheds where they had been kept, and decorated in their gay trappings. These cars had been got up by the people of certain districts of the town clubbing together, or by those of the same trade, or sect of religion, and their manufacture must, in several cases, have cost the owners much money. The procession was formed and commenced to move along the main street of the town at about ten o'clock. It was divided into different sections, each of which was headed by two men in ordinary light-blue and grey holiday attire, and armed, as was every one else except the common coolies, with two swords, or wooden imitations of such. The leading body consisted of forty men in various-coloured dresses, carrying gaudy banners. A single man followed these, with a false head of large size and grim visage. Then twenty men dressed in green tunics, with brown underclothes, having their legs bare, except below the knee, where they wore brown gaiters, in imitation of buckskin, with stockings and sandals. Each of these bore a gun wrapped in a scarlet cover, and they stepped at a very measured space, lifting one leg very high, while they balanced themselves on the other, all chanting in time. They held one arm horizontally out from the body, and the performance must have been most tedious to them. These were followed by a body of twenty bowmen, dressed in the same style, only the colours were reversed—the tunics being brown and the underclothes green, but with the gaiters as before; they moved slowly along in the same manner as those in front, keeping their long bows high above their shoulders, to each being attached a quiver containing ten arrows. Then came twenty spearmen, headed, like the other bands, by two men in common holiday costume, dressed in tunics of brown, with blue underclothes, and the heads of their spears decorated with festoons of black horsehair. Following these was a boy with a monkey's face, and a horse covered with a white sheet, led by two men dressed in white; two other men following behind with a bucket and eatables for the horse. Then came several citizens in ordinary full dress. A man wearing a black bullock's head came next, and then several little girls and boys richly dressed, some of them being attended by their parents or friends. The next person was intended to represent a young prince, who was followed by his retinue, baggage, and a band of fifes, drums, and clappers. After this two citizens headed forty-five soldiers, each with two swords. Again were two more citizens, and following them in regular order came two men carrying a large scarlet-covered box, two spearmen, two bowmen, and two fusilliers, all dressed in dark-blue and brown. Then a man with a

battle axe, and two with long poles, with their tops enveloped in black velvet, followed by another band of drums and fifes. After this was a shaven-headed priest in long yellow garments, waited on by four attendants, one of whom carried an umbrella, and another a battle-axe. Then a long string of citizens walking two and two, as indeed was the order of the whole procession, numbering in all thirty-four. A portable tabernacle was carried along, one portion of which was devoted to receiving any spare cash the spectators might choose to give.

The latter part of the procession consisted of wheeled carriages; but as there was a very steep hill in front of the residence of the Governor past which the procession moved, which it took a long time to get up, the line was a broken one. I went, however, to see them where they were, and found six larger affairs and several smaller ones. The first was a fine new platform on wheels, on which was built a sort of triumphal structure, in which were a number of boys and girls playing musical instruments, the whole being highly decorated and surmounted by a pole carrying a fine banner. Large gilded fish were prominent in its decoration, and on the top was the figure of a man with an enormous fish hooked to a very slender line and small rod. I believe this was emblematical of the rise of the nation by industry and perseverance from a race of humble fishermen, as the Japanese say they originally were. The second and third cars carried junks, rather large ones, built of fine wood, and varnished. They had masts, and the sails were of red and white silk in stripes. A fourth car, devoted to certain trades, and with devices and decorations in keeping, followed the junks; then an imitation whale, life-size; and lastly, a car entirely devoted to fishing, and which probably represented the portion of the community which live by that pursuit. The cars were very heavy, it requiring the use of long ropes with a great many men to each, to move them; and all these men were dressed in certain uniforms, according to the car to which they belonged. They made a tremendous noise when hauling, keeping up a constant shouting and singing the whole time. The wheels of the cars were low, and formed of solid blocks; but I observed, what gives a high idea of the imitative ingenuity of the people, that the axles of one were made on the principle of the patent blocks now in use among shipping, having a number of small rollers for reducing the friction.

How long the procession took to get through the town I do not know, for I went out for a ride; but in the evening all the cars were collected at one place and illuminated. The second day the same rejoicings were carried on in quarters which had not been visited the first day, and no work was done. In the afternoon, however, a row took place between two parties, which ended in one man being almost killed on the spot, three others wounded and the paper whale mashed up, when the government authorities interfered, and put an end to the rejoicings; but I heard plenty of noise and music in the town again in the evening, and I have not the least doubt that a very large amount of native whisky was consumed.

## IX.

## A VISIT TO ETURUP.

Having embarked on board our steamer late the night before, she steamed out of Hakodate harbour on the morning of September 2nd. On getting east of Shiokubi-saki (Cape Blunt of the charts) we encountered so heavy a swell setting in the mouth of the strait from the Pacific, that the captain considered it advisable to run in under shelter of the Whale-Back, which, ending in Cape Siriya, is that promontory on the south side of the eastern entrance of the Strait of Tsugaru terminating the main island, where we anchored in seven fathoms with the light-house bearing N.N.E.

Next morning the east wind having calmed down we were under weigh by 6 a.m. There was still however a tolerably heavy and confused swell, though the weather was fine with only a light northerly breeze. By 2 p.m. we were off Cape Erimo,\* 120 sea miles from Hakodate, where we passed through a little light-tinted water probably discoloured by the discharge of a river on one or other side of the cape, and then immediately struck dark olive-coloured sea having a temperature of only 61° Far. This we took to be the Oya-shiwo, a current supposed to come out of the sea of Okhotsk. The contrast was very striking, because up to within only about fifteen miles west of the cape we had been still in the dark blue of the Kuro-shiwo or Japan current that we had carried with us out of the Strait of Tsugaru with an uniform temperature of 74°, showing a difference therefore of thirteen degrees.

Regarding these currents there is much difference of opinion, but the fact is we have very little to go upon in the way of correct observations. We know for instance that a branch of the Kuro-shiwo parting off from the main stream near the south-west extremity of Japan, passes through the strait of Korea and is felt all the way up the Sea of Japan to the northern part of the main island, the principal part of it then running with considerable velocity, (I speak of the average as it is sometimes after strong easterly winds quite slack in this strait) through the Strait of Tsugaru; while the remainder of it passes up the west coast of Yezo and through the strait of La Perouse between that island and Saghalin; but we do not know what becomes of either after entering the Pacific Ocean. Neither are we acquainted with the currents, if any, between where the main Japan-stream leaves the coast near Inaboye-saki, and Tsugaru Strait. Then at the east extremity of Yezo, we only know that there has generally been observed to be a current setting to the southward through the crooked channel between it and Kuna-shiri; but with the tides running in and out of the sea of Okhotsk through the several straits between the Kuril islands† it has

\* Or 'Erimu' which in the Ainu language signifies rat.

† So named by the Russians "because they saw "from the coast of Kamschatka, the smoking "volcanoes which are on those islands, and called "them Kuriles from the Russian word 'Kuril,' "to smoke." (Golownin's Narrative 1811-14, English translation, Vol. 3, p. 240). It is hardly necessary to note, that the Japanese name 'Chishima' means literally the thousand islands, a poetical mode of expressing a great number.

been difficult to judge with any degree of certainty. However it is the experience of Mr. H. J. Snow and the captains of otter-hunting schooners that the preponderance is out of the Okhotsk. Moreover, that a vessel lying becalmed on the inner or north-west side of any of the large islands, where she is out of the draught through the straits between them, is usually set north-easterly; while on the Pacific side she will on the contrary be drifted to the southward. It has been observed also that there is a south-westerly current, but only a slight one, setting along the south-east coast of Yezo, as far down as Cape Erimo. But this is about the extent of our information, and it is useless therefore to endeavour to build any theory upon it. As to taking the evidence adduced at Naval Courts of Inquiry on the losses of vessels as of any value, such would be as absurd as accepting the testimony of a thief on his own trial; the "uncertain nature of the currents" almost always comes in for the major part of the blame. Take for instance the case of the *Mary Tatham* run ashore in the spring of last year near the extremity of Cape Erimo. According to the reckoning kept on board after 'taking a departure' in the Strait of Tsugaru, that vessel must have been set over twenty miles due north on a course and distance of ninety miles East, which occupied her only thirteen hours, being at the rate of over one and a half miles an hour; which would be the same thing as over two miles an hour North-east, and nearly four E.N.E. That this could not have been the case we have every reason to suppose; but as I said before our actual knowledge is so deficient that we are hardly warranted in speculating on its probability or improbability.\*

During the night, having run our distance to off Akis, or Good-Hope Bay, it came on thick fog, so the engines were slowed down and the vessel's head turned off the land. But in the morning we steamed in again, and the fog lifting for awhile, we found ourselves about eight miles south of Jempeze the western head at the mouth of the bay, 217 miles from Hakodate. Here the sea

\* In illustration of how utterly 'at sea' we are regarding the set of the currents off the North-east part of Japan, I give two instances on record which appear diametrically opposed to each other, though they will probably admit of explanation when we become properly acquainted with the currents. The first, mentioned by Lieut. Day, U.S.N., who was in charge of the survey of Yezo under the Kaitakushi, is that of a junk which sailing from Kagoshima bound for the Liu-kiu islands in May, was dismantled. She appeared off Biru, twenty miles N.N.E. of Cape Erimo in August, and was towed in to an anchorage. The second was the case of a box of specimens and books belonging to Mr. Maries, a botanical collector, lost through the wreck of a small junk at Shamani the same distance on the North-west side of the cape, in autumn—I have not the date at hand—which was washed ashore on the coast of Sendai somewhere north of Kinka-san light-house. With our present limited knowledge it is difficult to account for either of these cases. In the first one, it is possible, that after having been carried far out in the Pacific, the junk had been driven by wind across a weak part of the Kuro-siwo, and thus set in on the Yezo coast; but how a water-logged box, which must have been only just able to sustain itself by flotation, and consequently could have been little under the influence of wind, should have crossed the Tsugaru Strait branch of the Kuro-siwo, and drifted to the southward seems unaccountable.

water had a temperature of 58°, and there was no bottom at 90 fathoms. The fog closed in again about noon, and we were forced to anchor in forty fathoms off Cape Usu for three hours. We passed through the strait between Cape Noshap the eastern point of Yezo 260 miles from Hakodate, and the low islands and reefs which lie off it just at sunset, obtaining a fine view of the mountains of Kunashiri,\* including the high one near the north-east extremity of the island called Saint Antony's Peak on the charts, but known to the Ainu as 'Chacha-nobori,' or old people mountain.†

Among the low islands and reefs off Cape Noshap as well as along most of the coast about there, the Japanese collect a great deal of kelp, for drying into the marketable form of 'seaweed,' for export to China. These islands all come within the Nemoro district, which is about the most productive in that article on Yezo. Skotan island has hardly so far been utilized for any purpose. It lies about forty miles N. E. by E. from the cape; is nearly circular and about fourteen miles in diameter. It contains several small harbours, two of which are favourite resorts for otter-hunting schooners when pressed by bad weather among the Kurils. It is moderately high and well wooded.

Having steamed quite slowly during the night, and part of the time headed back so as not to arrive too soon, we were by morning at the entrance of Pico or Catherine channel; and luckily just getting a glimpse of the north-east point of Kunashiri as the fog lifted for a little, our captain was able to steam slowly through between that and Eturnup. At 8 a.m. a cast of the lead gave 80 fathoms 'coral and sand,' and the surface sea temperature was 52°. The south-west end of Eturnup is 340 sea miles from Hakodate. Thus the water was getting gradually colder, namely three degrees in 90 miles between Erimo and Akis, and six more in

130; being an average of a degree for twenty-five miles.

Eturnup is a narrow island lying about north-east and south-west, about one hundred geographical or sea miles in length, seldom more than ten miles wide, and in places not over half that from sea to sea. The strait separating it from Kunashiri at the one end is about twelve miles across, while Vries Strait which intervenes between it and the next of the Kurils, Urup, is about twenty. It is much broken up by mountains, of which several are fine bold and brightly coloured peaks, indicating their volcanic origin.

We passed through some strong tide-rips in the strait, where the sea was thrown about in heavy overfalls; so strong indeed that an open boat would have stood every chance of being swamped. The fog cleared off just as we got through, so that we had a good view of the bold shore on our right as we headed for a fine volcanic cone about four thousand feet above the sea called Atzosa. We passed a remarkable bay which appears to be an extinct crater, for it has high vertical cliffs forming about two thirds of a circle, and a peculiar islet of rock in the form of a crouching lion—known to the sea-otter hunters as 'Lion Rock'—which according to Professor Milne is probably a portion left of the outer rim of the crater. Thence crossing Naibo Bay in which there is a fishing station and some Ainu huts, we passed close under Mount Atzosa with its steep violet-chocolate coloured cinder sides almost bare of vegetation, and thence along a rugged coast, reaching Furbets, the head station on the island, about 4 p.m. This place is open to westerly winds, but a large rock above water and a sunken reef protect to a certain extent an inner anchorage available for small craft. We anchored over a mile out in fourteen-and-a-half fathoms. It is rather a desolate looking place with stunted and dead trees only on the hills, which are in regular terraces. The shore is of stones and boulders. We got away again about 7 p.m. and steamed round a headland into the next bay to the north-eastward, and anchored at about 9 p.m. off a fishing station called Rubets; in which same bay are Raus, two or three miles W. S. W., and Shana about ten miles E. N. E.

On the 6th, though it was blowing from the southward with squalls of rain, the Japanese who came off from the station with large fishing boats, managed to discharge a good deal of salt and load some of the salted salmon-trout which was to form the steamer's cargo. Large numbers of this fish are taken annually on Eturnup during July and August. The true salmon—the 'shake' or 'akouji' of the Japanese—are not caught until autumn, usually striking in on this coast about the middle of September. The stations on the island are maintained exclusively for these fisheries, which during good seasons afford excellent returns to those engaged in them; but, of course, the occurrence of occasional unfavourable years, the expense entailed by having to transport labourers and supplies so long a distance, and the excessive freights charged by vessels taking the risk of a rather dangerous coast, tend much to reduce the profits of what otherwise would be a very lucrative business. The seasons vary so much that it is not easy to arrive at a correct estimate of this fishery, so I am only able to give the roughest statement that the catch of

\* Regarding the spelling of this and other of the Kuril islands, as well as some around the coast of Yezo, the terminations *shir*, *shiri* and *siri* have been used indiscriminately, as well as the full word *moshir*. According to Mr. Batchelor (see 'An Ainu Vocabulary' *Trans. As. Soc. Japan* Vol. X pt. 2), *moshir* is "a country; island;" and *shiri*, "the earth; world;" as also the "sign of superlative degree; very." The Japanese, of course, unable to use a consonant by itself in *kana*, have been obliged to terminate with *ri*, and thus probably such endings have become established. I do not purpose to go the length of attempting to correct the orthography of Yezo generally, and so leave them as I find them. When, however, as in some instances elsewhere mentioned, I have found the English spelling faulty, not only as to the Ainu sounds, but through a too rigid adherence to the *kana* syllables the pronunciation even of the Japanese is not obtained, I have in such cases made alterations which I venture to think will not be objected to. Thus for instance with words like 'Shibets' and 'Akis,' or 'Akish,' how absurd it looks in English to add 'u' or 'i,' and unnecessary also, for such endings only add to those names sounds which are but half uttered even by Japanese. We may take it also as a good rule to follow, when we can, to employ the least possible number of letters in spelling a native word for which no mode has become recognised through continual usage.

† The top of this mountain has a peculiar form, being like a cone out of which a horizontal slice had been taken, and the apex put on again. The Ainu say there is a ring-shaped lake between the inner cone and the lip of the original crater, but I do not place much reliance on the story.

salmon-trout on Eturup is from ten to twenty thousand koku, and of salmon about half that amount; or say approximately, two thousand and one thousand tons respectively.

The weather became threatening towards evening with falling barometer. There was a lull, and then a strong breeze came in from north-west, and as there is no shelter at Rubets from W. S. W. to the westward and northward, we had to get up the anchor and steam away by 8.30 p.m. Our captain, who was well acquainted with the coast and with the uncertain kind of weather that is met with on it, stood well out, then rounded the next headland to the eastward, and by morning we were anchored off another fishing station called Bettobu, where there is fair shelter from winds south of north-west. From this anchorage there is a high volcanic mountain to the north-west, under which a rough rocky shore extends as far as a bearing of N. 15° W. To the southward and eastward is low land fringed by a sand-beach, again beyond which the extreme bears N. E. by E. From this place the north-eastern portion of Eturup is very incorrectly placed on the chart of the Hydrographical Department of the Japanese Admiralty. The position of Shibetero has been laid down—probably through some error in figures, or possibly an indifferent observation—about fifteen miles too far north. The traverse lines along the coast—which doubtless were run because soundings are shown right along—must have been altered in the plotting in order to make them fit in with this error of latitude, as the bearings are entirely out of truth. It is a disgrace that such errors are possible in a department where accuracy is the first essential, and should never be made subordinate to quantity or show. It not only reflects on the departmental staff in a particular instance, but tends to create a doubt as to other surveys which may really be of perfectly accurate character. There is no reason why Japanese naval surveyors should not do the best kind of work. Great aptitude in learning the use of instruments and the most approved methods of surveying is displayed by many who have been employed in such way on shore; while in neat and accurate drawing the Japanese are not to be excelled. But it should be borne in mind by those in authority, that when lives and property often rest on the accuracy of coast delineation, no slipshod kind of work can be permitted; and they should impress upon their subordinates not only the necessity of careful verification, but discountenance all tendency towards quantity rather than quality, and be particular in their publications to exhibit to the world a pains-taking accuracy that cannot be questioned. When it seems desirable to publish charts of imperfectly surveyed districts—which are often of great use—let them be distinctly marked as 'sketches' and the relative value of their different parts be clearly shewn by difference in the engraving. Let us trust that the chart which has led to these remarks, namely that embracing the extreme east of Yezo, Kunashiri, and Eturup, be at once, if it has not been already, withdrawn from sale, and if materials do not exist to permit of the construction of an accurate one to take its place, let it be so far corrected as can be done by reference to commanders of vessels, native and foreign, who have navigated those waters,

and then marked 'approximate' with the probable value of the material used in its construction clearly stated upon it.

The sea having moderated we managed to get ashore in the afternoon, and taking trout-rods with us, we had some fishing in a small stony brook half a mile or so east of the station. The trout were numerous but very small. There were three kinds, namely the ordinary barred brook-trout or 'Yamabe' of the Japanese; the white spotted sea-trout or 'Ami-Mas' of Yezo; and a dark species with yellowish tinge barred something like the 'Yamabe' but with small vermilion spots on its sides, which was new to me. A Japanese said it is called 'Oshoro-Koma,' which is probably Ainu; and that it attained much larger size than the 'Yamabe' which is always small. We subsequently at another place found a fourth species, called 'Iwana.' This is found on Yezo. It is very similar to the 'Ami-Mas,' but the white spots are confined to the back and are smaller; the spots on the side of the belly are pink, the intensity of which seems to depend on age, the larger fish having these spots very light, the smaller fish brighter, and in the smallest very bright specs surrounded by white; seeming as if with age the specs disseminate and mix with the white. Although I have used the name 'Iwana,' it must be understood that I do not therefore consider this trout as identical with the 'Iwana' of Japan proper, which from drawings made by Mr. P. L. Jony of specimens collected by him at Chinsenji Lake appears to be an entirely different fish. Indeed the names of many natural objects on Yezo have been sadly confused by the Japanese owing to the universal habit of the first settlers in a new country naming things after others somewhat similar to what they have been accustomed. 'Ami-Mas' and 'Iwana' so called, run in and out of the river mouths all summer, but the breeding fish are supposed to ascend in the early part of that season. Of these two very similar fish, the 'Iwana' has much the redder flesh and is preferable for the table. While trout fishing you are always sure to catch some 'Yungui,' a soft-mouthed, bony fish almost useless for the table but which affords tolerable sport with the fly. In order to make sure about these trout, I bottled specimens of each, which I subsequently handed to Mr. C. O. Whitman, formerly of the Tokio University, who was going to Europe, but I am yet without hearing from him regarding their identification.

There were a number of salmon-trout also in this stream, but they were all discoloured fish which had already spawned, or had played about so long in the brackish waters at the mouths of the rivers, or been actually in the rivers, that they had become dark and slimy, many with great patches of white on them, more or less hook-jawed and hump-backed, and often mutilated in their fins and tails. The Japanese say there are three distinct kinds of salmon-trout (I use this term advisedly in order to distinguish these fish from the large autumn salmon; on the Pacific coast of the United States and British Columbia they would be called 'spring-salmon,') which they call 'Mas' or 'Hon-Mas,' 'Sakura-Mas,' and 'Beni-Mas,' distinguishing the two latter by the colour of the flesh, that of the last being most intensely red, and consequently compared to the rouge used on the lips by Japanese women; and

considering the first as the 'true' or ordinary Mas of Yezo, Saghalin, and the Main Island. As to this, however, I am somewhat inclined to doubt their identification, for I observed the markings especially on the tail to be different to the ordinary salmon-trout which ascends the Iskari and its tributaries. However this is again more or less an uncertain test, because, even on that river, there are several recognized varieties, if not species. Indeed most of the *Salmonidae*, and many other fresh-water fishes of Japan, await investigation by some competent zoologist, until which the sportsman must be content with native names however unreliable. On Eturnp, according to report, neither the 'Sakura' nor 'Beni-mas' are so numerous as the ordinary species; but on Urup—the next Kuril island—the 'Beni-mas' is the prevailing kind, and is called by the Ainu 'Urup;' but whether the island takes its name from the fish, or the fish from the island, does not appear clear. Neither the Japanese nor Ainu ever confuse the 'Mas' with the true salmon or 'Shake' (also known in Yezo as 'Akeaji'). They consider it an entirely distinct fish, and no matter how large a 'Mas' may be—and I have seen rare examples attaining a length of three and a half feet and weighing over thirty pounds—a 'Mas' is always a 'Mas,' and never 'Shake.' They look upon the latter as by far the more valuable fish in a mercantile way, although there can be no doubt that on Yezo the salmon is never in such perfection of condition as the salmon-trout, a fact—and as tastes differ one of difficult proof otherwise—borne out by the experience of the foreign fish-curers who were employed by the government to establish canneries in Yezo some years ago, and subsequent results obtained by Japanese who have continued to 'run' those establishments since,—who found it impossible to maintain the colour in the salmon canned in autumn, while the 'Mas' labelled as "Spring-salmon"—retained it perfectly, and were in all respects a decided success. The Japanese seem, however, as a rule, notwithstanding they are such great consumers, remarkably careless as to the state in which they eat fish, and thus great numbers of salmon are salted in Yezo in an unseasonable state, many being actually spent fish such as would not be permitted to be exposed for sale in Europe or America. Still as 'Shio-biki,' these find ready market in the populated districts of the south, and without so much depreciation in price as should attach to so inferior, if not unwholesome, an article of food.

It is next to impossible to get any distance inland from Betobu, or indeed any of the fishing stations on Eturnp, the country being covered with a dense mass of the scrub-bamboo familiar to travellers in Yezo. But there are a few partly overgrown trails between certain of the stations, and even across the island in two or three places; it is more than a labour of love, however, even to get along these. We confined our perigrinations therefore generally to a narrow strip of low-lying country near the shore to the eastward where the sand-ridges are mostly covered with low heather like plants, cranberry bushes and such like, and during our stay on this and a later occasion, picked up a few curlew, a duck or two, some snipe, and sand-pipers, besides a few birds as ornithological

specimens. About two miles away in this direction a small river falls into the sea, and besides getting some fishing near its mouth, we found some distance up on one of its branches which flows for a distance not far from the shore, the remains of a number of ancient pit-dwellings, round about which one of our party specially interested in such matters, dug up a fair collection of rough pottery, thereby clearly tracing a connection between the dwellers in these pits and these rough specimens of ceramic art.

That there can be any question as to the identity of these remains found on Eturnp and those of Yezo is improbable. The forms of the pits, and the situations in which they are found are similar. They are always rectangular in form—that is as near so as any hole in the ground can be distinguished to be after ages of exposure to the elements. They are situated on the higher ground along water courses, near lakes and lagoons, or the sea-shore, and often on small islands close to the main. These positions are invariably such as are favourable for obtaining fish, notably salmon, or oysters, and would therefore naturally be occupied by a people sustaining themselves by these kinds of food. That any of these people—the Koru-pok-guru of the Ainu—were hunters in the true acceptation of the term as distinguished from fishers, there is yet no evidence to shew. Not only this, but it is open to question whether at the time they lived, there was more to hunt on Yezo than there is at the present day on Eturnp.

The question of who these pit-dwellers were, whence they came, and whither they have gone is an interesting one. I have endeavoured in the preceding chapter to lay out the facts; and possible deductions therefrom, with a view of eliciting the opinions of others, and inducing farther research into the subject. The Ainu accounts concerning them seem to be of the most uncertain and untrustworthy nature. In confirmation, however, of what Mr. Batchelor has told us (see 'notes on the Ainu,' *Trans. As. Soc. Japan*. Vol. X pt. 2)—and Mr. Batchelor has the credit of being the only foreigner who elicited anything tangible from the Ainu on the subject—I may mention, that Mr. N. Fukusi, chief of the Survey Department at Sapporo, who has lately returned from a journey up the Iskari, learned from the Ainu inhabiting the region above Kamoikotan Rapids who have had little intercourse even with the Japanese, that the "people of the holes" were of a timid and retiring nature. That they never, if they could avoid doing so, shewed their faces. That the men usually remained in their underground dwellings, sending the women out to forage for them. The women used to visit the Ainu camps, and push their hands through the straw of the hut sides—as they would not come to the doors—and the Ainu gave them scraps of refuse food. That on one occasion the hand of a woman was seized and her arm pulled far enough in to exhibit the tattooing on it; seeing and admiring which, the Ainu adopted the fashion for their own women.

This story may be taken for what it is worth. It is probably only a legend invented by the Ainu to account for a practice among themselves, the origin of which they are unacquainted with. It is probably deserving of no more credit than the stories

which may be elicited from Miss Bird's "magnificent savage," the drunken old chief of the Saru Ainu, by any visitor who will carry with him a liberal supply of sake on a visit to Piratoru. It perhaps may be true in the main fact of some of the Koropok-guru having co-existed with the Ainu on Yezo. But it would be incautious to place much reliance on this, because many Ainu seem entirely ignorant of the legend. I remember well the first Ainu whom I questioned regarding the pits—he was my guide—as I was travelling for the first time, over thirteen years ago, between Hamanaka and Achi-shibets in the eastern part of the island, where these holes are very numerous. He said they were 'Kamisama;' meaning thereby to express something unknown, or to be venerated owing to its inexplicable nature; and I think most investigators will find this the usual answer unless they resort to 'leading' questions.

I have given as I have already remarked, the pros and cons on this subject and its connection with the question of the aborigines of Japan elsewhere (see chap. 3). It is a fertile field for speculation owing to the paucity of facts, the unreliable nature of tradition, and even of such written records as are said to exist. I leave it therefore trusting to future research to reveal something more tangible in the way of evidence in support of, or as contradicting existing suppositions,—they hardly deserve to be called theories.

We also visited a little bay about a mile north-west of the station at Bettobu. This is right in under the high land, and there being some reefs which narrow its mouth and tend to break the sea, is the usual anchorage for smaller vessels and junks. Here we found one schooner which had been capsized at sea the year before, and was now lying on the rocks in a rather doubtful state as to the probability of being again rendered seaworthy. A small stream comes down a narrow valley, in which we observed numbers of discoloured salmon-trout, which we amused ourselves in shooting with rifle bullets and shot; while the ships' sailors who had come ashore with us, hunted them with sticks, obtaining in that manner quite a number which they carried on board with them. The valley was pretty thickly wooded but there were no trees of large size. Indeed it is only in the more protected situations in the interior that timber suitable for building purposes is found. There are several features in the vegetation of Eturup in which it differs from that of Yezo, notably in the occurrence of larch which is to be seen more or less of stunted and weather-beaten form scattered about along the north-western coast. I also observed what I took to be mountain ash in bush form, but which appeared different to that on Yezo. The Ainu informed us that there was none of that species of elm of which they employ the bark for the manufacture of their 'Atzis' cloth.\* I remarked also the entire absence of the large

dock-like polygonum so common on Yezo, though its absence was fully made up for by a rich growth of other weeds and coarse grasses, among which is to be seen the bright blue flower of that species of monkshood or aconite from which the Ainu manufacture their arrow-poison. There are many kinds of berries, one of which seems to be a true cranberry. A kind of heath which has a dark purple berry,—not a true heather but according to Mr. Boehmer probably a kind of *Vaccinium*—covers many of the sand ridges near the shore with a thick carpety surface very pleasant to lie or sit upon. Ground juniper also occurs in similar situations. We did not find the mosquitoes nearly so troublesome as the Yezo savages, nor were the dogs or ourselves bothered with ticks.

An increasing swell on the 8th forced us to weigh anchor that evening and put to sea again. Steaming round the north-east extremity of the island we anchored in the morning in Moyoro, or Bear Bay, in fourteen fathoms of water—a safe place during northerly and westerly winds. Our captain took the boat and sounded all about this bay, finding pretty deep water well inshore, and no indication of rocky bottom. The land rises directly from the sea in wall like form backed by masses of high mountains. There is only one valley opening inland; and as far as we could see only a single unoccupied hut at the south-west corner. The southern part of Urup—the next Kuril island—bears about E.N.E. When driven off the north-west side of Eturup, vessels have frequently run right round to Shigashi-ura ('Jap. Bay' of the otter-hunters) on the south-east side, where is the small station of Onebets on its west shore, and Toshimoi on the north; but there seems no necessity for so doing, as Moyoro affords all the shelter required from winds which would be dangerous on the northern and western coast. There is an absence of larch at Moyoro, while deciduous trees appear healthier and stronger than on the other side of the island.

The following morning, the weather having moderated, we steamed back the fifty-five miles to Bettobu; passing one or two fine waterfalls cascading down the steep mountain sides at the north-east corner of the island. Work was at once proceeded with in loading cargo, so that by the second day all the salt fish from this station was on board, and we proceeded thirty miles to the eastward to another station called Shibetoro. This anchorage is quite open to west, north, and north-east. The station, with about a dozen Ainu huts, is on the west side of the mouth of a river which comes down a narrow valley from the south. On either hand are steep rocky heights with detached rocks in the sea, but beyond these the country becomes lower, and other valleys open out. There is

---

been unable to discover, but I think it requires verification. It is the *Ohiyo* of the Ainu-Japanese language of Yezo.—I may mention, however, that the Ainu do not confine themselves exclusively to this species, but likewise occasionally use the bark of the common elm of Yezo—a much larger tree given as *Ulmus campestris*—for the same purpose. This is the 'Akadamo' of the Japanese. A paper on the subject was written by Professor Penhallow and embodied in one of the reports of the Sapporo Agricultural College, which I have not now at hand to refer to.

---

\* According to Mr. Batchelor *Attushi*. I may be wrong in my pronunciation. The inner bark is that which is employed. The tree has been considered to be *Ulmus montana*, and is so given by I think all writers who have mentioned it; but they have copied doubtless one from the other. Who originally ascribed it to this species I have



one advantage at this place, namely, that unless there is much sea on, the river can be entered by boats, which is very convenient because the fish are then passed directly out of the storehouses into them.

We explored the river some distance up by boat, as it is almost impossible to follow its banks on shore owing to the dense growth of bamboo and other scrub. It is a very pretty fishing river, and at the season we were there trout were very numerous. We commenced by fly fishing, but this was soon abandoned for the more killing but less scientific method of using a common bamboo rod and salmon-roe bait, in which we were joined by sailors and firemen from the steamer. All one had to do was to keep pulling out and baiting afresh, there was no art or skill required. In one afternoon two rods got over a hundred fish each, weighing fifty-five pounds; and next day over three hundred in all, averaging six ounces, many of very fair size, one reaching even three pounds. How many the Japanese boys from the ship got I don't know, but they had several tubs full. These fish were nearly all of the white-spotted kinds of sea-trout before mentioned as 'Iwana' and 'Ami-mas,' but there were among them a few 'Yamabe,' and some of another kind of sea-trout called by the Japanese 'Ito,' a rather flat-headed fish without any very decided markings on it, which is found likewise in the Yezo rivers.

Our stay at Shibetoro was limited to a couple of days, and then starting at midnight we made for Rubets, the station where we had first been obliged to run away from on account of the weather. On the way, however, we fell in with a strong gale which forced us to dodge off-and-on about Cape Chirip. The wind was from E. S. E. and S. E.; the squalls being very fierce, whipping the water up into spray and lashing the surface into one mass of foam. The barometer fell very rapidly from 8 a.m. at the rate of one tenth of an inch per hour. This same storm, which was of cyclonic nature, was felt throughout the south and east of Japan, taking a north-east course from Van-Dieman's Straits, passing east of Osaka, but west of Tokio, reaching the ocean again in the neighbourhood of Sendai, and thence keeping south of Yezo and along the line of the Kurils. Mr. Knipping—now of the weather-signal office—carefully traced it, and found that its centre travelled at the rate of about twenty-five miles per hour. Most of these storms pass a good deal east of Hakodate, and are consequently not usually felt much there, that place being oftener visited by those travelling up the west coast from the strait of Korea, and generally passing west of it.

We had again to visit Bettobu in order to allow the effect of this storm to pass away, it being the safest anchorage of any on the north-west coast; after which we made for Rubets, at which place we remained for the 17th and 18th. There is here an old station with its dependent buildings belonging to the original lessee, another establishment planted by a newer firm, and a temporary fishing station half a mile or so up the river worked by some Kaga people. The country around is more or less terrace like, partially wooded with small trees including larch. There must be some fair timber inland, because we saw a number of logs and poles of the 'todo' spruce lying on the river bank, some of which

were being sawn up into boards for boat building; but I was informed that the best region for timber on the island is about Naibo. A fine range of mountains is seen inland, about south-easterly from here, which includes an active volcano or solfara. The rock in the immediate vicinity, according to Professor Milne, is mostly conglomerate underlain by sandstone. The river near its mouth is tolerably deep and sluggish, about fifty yards wide. A mile and a half or so inland is a lake of about half a mile in diameter and nearly circular. We had some snipe and duck shooting here, but like everywhere on Eturup the country is almost impassable owing to the thick bamboo scrub.

It came on to blow on the night of the 18th, and quite a sea got up before the last of the cargo was on board, which was not completed until after midnight. Indeed it was so bad that the steamer's freight-clerk, who had been ashore attending to the ship's business, was unable to get off till morning, when we weighed and steamed away "homeward bound."

After passing Cape Notoro the weather gradually cleared and settled. We passed Lion Rock and Crater Bay at noon, and steaming through Pico or Catherine Channel where were similar heavy tide-rips and overfalls to what we had observed before; we had a fine view of Cha-Cha Nobori (St. Antony's Peak near the north-east end of Kunashiri reckoned at over seven thousand feet high;) and the irregular profile of the other portion of the island with its lower pyramids and mound-shaped hills, as well as a distinct outline of Skotan. Looking back we saw Atzosa mountain west of Furubets when we were seventy miles past it. We anchored outside of Nemoro harbour at 10 p.m., where I landed the following morning, the steamer proceeding thence to Tokio direct.

If objection is taken to my having failed to mention my fellow passenger on this occasion, to my not having given the name of the steamer, its hospitable captain and his sociable officers, I may say that I have refrained from doing so not through a feeling of ingratitude, but in deference to what I imagine would be a general wish on their part; at the same time I cannot help thinking that a little selfishness has also perhaps influenced me, as did I reveal their names, I might find when next bound to the Kurils, that all the berths of the steamer had been engaged, and I should be unable to repeat one of the pleasantest trips I ever made, of which I fear I have failed to give the reader a just impression.

## X.

### THE SOUTH-EAST COAST.

Cape Erimo may be said to be the great turning point on the south-east coast of Yezo. It is equally distant from Matsumai at the south-west corner and western entrance of the Strait of Tsugaru, and Cape Noshap the most easterly point of the island; being in a direct line ninety sea-miles a little north of east from the Pacific entrance of the same strait. Horoidzumi which is situated about seven and a half miles from it on its western side and is the principal settlement in the vicinity, may be reached from Hakodate direct by sea, the passage being only 115 nautical miles with tolerably frequent communication by steamer or sailing craft. By

the land route via Mororan the distance is eighty ri or nearly two hundred statute miles, this distance being equally divided—forty ri on either side—at the station of Tomakomai where the main road between Hakodate and Sapporo—elsewhere described—leaves the south coast. From Sapporo fifty-three ri is reckoned by the cut-off from Bibi to Yubuts, after which the road\* is identical with that taken by the traveller from Hakodate and Tomakomai. Moreover Horoidzumi is almost exactly half way on the land route between Hakodate and Nemoro.†

Taking this as a point of departure for the eastward, the traveller will find that without going along the coast as far as the cape, a mountain path strikes across the promontory to Saruru on the east shore. The distance is seven ri. This is the ordinary summer road.

After following the sand-beach for a short distance, a trail turns suddenly inland to the E.N.E., and passing over some sparely wooded terrace land, strikes up the valley of a small stream, and gains the higher terraces, whence a fine view of the country as far as the cape is commanded. Thence it trends more northerly along the side of a bare mountain, crossing the heads of several ravines, and dipping into the bottoms of one or two deep glens. The track in this part is stony and rough, but the little sure-footed Horoidzumi ponies make light of it, and after passing the 'great gully,' trudge along the narrow pathway on the steep side of a high peak till you reach a sharp ridge four and a half ri from Horoidzumi, which is known as Saruru-toge. At this point, where it is well worth while to make a halt for a few minutes, one looks down immediately upon a small lake filling a basin-like depression, and beyond to the northward is an extensive view of a mountainous country completely covered with forest. To the southward are the sloping table lands mostly bare of trees, but cut by deep wooded ravines, which extend away towards Cape Erimo.

From the pass the path runs down a ridge from which it zig-zags into the valley of a small stream the descent being pretty steep. Further on this is joined by a larger stream from the westward, down which valley the road continues through thick woods, a break at one part only exposing some open glades. The boulders in this stream are fine light coloured granitic rock and the water remarkably transparent. The lower part of the valley trends eastward, the track following the steep left bank until it emerges from the woods, where there are three or four small houses, a little temple, and a stopping house in rather a dilapidated condition called Saruru.

Instead of taking this route, however, the traveller may continue along the coast-line from Horoidzumi quite to Cape Erimo, or he may follow it only as far as the little rocky bay of Aburakoma, where the steamer *Mary Tatham* full of Chinese labourers ran ashore on her way towards Oregon, early in 1882, and which has a melancholy record from the lives lost during the unsuccessful

attempt in the following summer to float the wreck to a place of safety. Thence are several paths over the treeless terrace land, by which the actual cape can be cut off. A visit to the extreme point is, however, sometimes interesting, as on a reef running off it, sea-lions are frequently to be seen. In a geological point of view also it has claims on the observer owing to its being the terminating point of the great backbone of the main portion of the island of Yezo, which though somewhat irregular in form about its middle portion, may be considered to extend the whole way between Capes Soya and Erimo in a N.N.W. and S.S.E. direction.

The fishing village of Okos is a short distance round the point to the northward and eastward. The sea is comparatively shallow off that place, and there are numerous low-lying reefs which afford abundance of kelp, on the manufacture of which into the 'seaweed' of the China trade, the inhabitants principally subsist. Some of the reefs lie in such positions that medium sized junks and small schooners moor between them and the shore, for facilitating which, stout posts are let into the rocks in an upright position to make the hawsers fast to. Such arrangement may be seen in many places about the coast of Yezo, and is usually effective unless during exceptional gales accompanied by very high sea. At this particular spot, however, the reef protection is very incomplete, which combined with the enormous sea which sometimes sets in on this coast, open as it is to the full expanse of the Pacific, causes the loss of some vessels almost every season.

Between Okos and Shoya the great part of the distance is a straight flat sand-beach known as Hiyaku-nin-bama; having gained that name from the loss many years ago of a hundred lives by the wreck of a junk in which retainers of the Prince of Nambu were passengers from or towards Kunashiri island. A small stone monument may be seen on a grass covered sand-ridge near the shore in memory of this unfortunate event; so that together with the wreck of the *Mary Tatham*, the region of Cape Erimo has quite a melancholy register. It is very desirable that a light be placed on this point. The situation for the necessary structure is remarkably good. No unusual outlay would be required; and there can be no two opinions as to the want of the light for facilitating the navigation between the south and east of Yezo.

From Shoya a roughish trail leads over a bit of a hill, and then up a narrow valley obstructed by a dense growth of scrub-bamboo, towards the open terrace country joining the Horoidzumi—Saruru track, about a mile and a half short of Saruru-toge.

It is now some years ago since I first travelled along the south-east coast by land, and as I find the account I then wrote—which has never been published—to be about as fair a one as I could now manufacture if I went again through my note-books, I purpose to leave it almost exactly as then written, and let the future traveller be guided by my experience on that occasion; while I apologise for breaking off into a personal narrative, which was not my intention when I undertook to collect my scattered notes on Yezo.

Since the time at which I wrote, a considerable change has taken place in the

\* Detailed in Chapter headed 'West of Cape Erimo.'

† For general itinerary, see 'Distances on Travelled Routes in Yezo.' *Japan Gazette* 16 Sept. 1882.

personnel of this coast. Settlements have been formed where none previously existed; while the old 'quaisho,' as formerly kept up by the lessees of large fishing districts, have ceased to exist as such, their buildings having been parcelled out and devoted to government offices or hotels. The whole system of coast leases has also been changed, and in many districts abolished, in favor of a class of smaller fishermen, who may be likened to the "free-selectors" in Anstralia as distinguished from the "squatters" or lessees of extensive runs. The tourist in Yezo therefore at the present day who may elect to carry their notes with him as a guide, must make due allowance for many differences that he will doubtless observe, brought about by these changes. Not only that, but there must always, even with the most careful observation, be many things which strike different people in dissimilar ways; so much so, that a description of a place or route written by one, is hardly recognizable by another. Then besides, the kind of weather one experiences when travelling has so much to do with the impressions left upon the memory of the various scenes, and influences so greatly the enjoyment or otherwise of a trip, that no description however carefully drawn up by one, can fit in perfectly with the experiences of another. I must therefore, as I said, ask the reader's indulgence in this portion of these reminiscences of Yezo, as I would also crave for other parts which are not in the form of personal narrative. I may say, however, that I have studied throughout to be impartial; to describe things and people as I found them, and as they presented themselves or behaved to me. When I have found it necessary to do so, I have drawn on information supplied by, or on the published accounts of others who have had better opportunities or been more capable than myself; but I trust it will be found that in all cases I have given such observers due credit—not always done by writers even concerning Yezo—, and usually made special mention of the sources, even of supplemental information. On the other hand if I have been at all 'hard upon' any author who has taken the public by storm, permitting imagination to run wild upon a supposed virgin soil in Yezo, or thrown a halo around information gained at second hand which otherwise would have sunk into oblivion, I have been so simply in the interest of truth and justice—where such statements would have stood otherwise uncorrected. I need hardly add perhaps that I have considered it unnecessary to notice more obscure but not less pretentious writers, their productions not carrying within them even sufficient leaven to raise them to the level of ordinary serial literature, so that there was no fear of any after effects. To such gentlemen an apology is due for the sin of omission only.

On a day near the close of September having come across from Horoidzumi in the forenoon, I took dinner at Sarnru, and then continued on the road for Biru. Coming out at once at the beach, where there are a few seaweed-gatherers' shanties, we turned to the westward and travelled a mile or so on soft coarse sand under precipitous cliffs of a hard blue rock till arriving at a valley just short of a bold granitic bluff where two posts mark the boundary between the coast

districts of Horoidzumi and Tokachi, and likewise an imaginary line of division between Shtaha and Tokachi, two of the eleven sections into which Yezo and the Kuril Islands were considered to be divided during the Kaitakushi regime.

An inferior rocky and stony path through high bamboo brush ascends a branch of this valley to a pass, from which it descends into another valley shut out from the sea by high hills. Thence it ascends to another pass, from which is a good view of the rocks standing off Biru and the coast beyond, after which it touches the coast where there are some fishing huts scattered under the steep cliffs. But it is again forced inland across other wooded hills and valleys and stony river beds, and does not emerge finally on the sea-shore, till, mounting a steep path from the second branch of a river, you find yourself on a plateau-like bank some 100 feet above the sea, where stands the large quaisho, its storehouses and temple, now called Biru, but better known to the inhabitants of the coast as Tokachi Quaisho. This is the head-quarters of the district which extends above sixty miles along this coast, one being the 'hasho' let by the government to a single firm, the principal productions of which are seaweed, salmon, and deer skins; for which the lessee pays the sum of \$2,300 per annum, besides having to keep up the roads, bridges, ferries &c., so that this is clear gain to the government.

In this district are about 1,500 Ainu, a good many of whose wigwams stand at the back of the quaisho. Those I saw struck me as being the ugliest specimens of the aborigines I have met with anywhere in Yezo. The quaisho, which is an unusually large building, faces S. by W. on a very commanding position. On the beach below the steep bank, are more storehouses, huts, and fish boiling cauldrons, where the boats and nets are hauled out. A small bay is formed by a nest of rocks jutting out E. N. E., one of which is high and narrow and another a large one not so high but broader, from whence the shore turns in north-west for about five or six hundred yards. Huts also line the shore under and to the S. E. of the terrace. In former times junks were in the habit of anchoring to the N. side under shelter of the rocks in 15 fathoms water, but they now lie usually a couple of miles off to the eastward, quite in the open sea. The great mass of the Erimo range of mountains lies to the westward of Biru, the dividing ridge being about 10 miles distance. One very noticeable peak from it, being one of the highest and its top a very perfect cone, I selected for bearings. In honour of the gentlemen now engaged on the trigonometrical survey I named it "Surveyor Peak." Its bearings (true) are from Biru W.  $\frac{1}{4}$  S. Birupunai S. W. by W., Sarurn Toge N. W. by N., Shamani N.E.

Few things probably strike a traveller in Yezo more than the subdued nature of the Ainu; careless and good natured as they are, they appear to have lost all idea of independence, and to have assigned themselves almost as slaves to the more civilized Japanese. Throughout the leased fishing basho they are used as menials about the stations. They act as fishermen only under the direction of masters, and are employed almost exclusively as tenders of horses and guides

for travellers, in which latter capacity they are superior to Japanese. That they will ever regain a status of equality seems very unlikely, although they have been recognized of late years by the government as having equal rights. Some of both sexes were placed at school and on the Kaitakushi experimental farm in Tokio, but although they are said to be apt at learning, a civilized state of existence does not seem to be congenial to their nature, and the experiment proved a failure. The inordinate love of ardent spirits, militates greatly against their social elevation; and unfortunately this propensity is by no means discouraged by the Japanese, who thereby profit in their transactions with them. It has often struck me, and I once proposed it when the government was in some straits, that these people would make excellent soldiers. That organized on the system of "irregulars" or "rangers," they would be a valuable auxiliary to the military force of the empire, particularly for the defence of a mountainous and wild country like Yezo, where regular tactical warfare being impossible, that force most quickly moved and which could subsist more or less on the resources of the country, would have the advantage on its side. With ponies for the transport of provisions, baggage, and materiel, or to be used when required for rapid movements of mounted riflemen, I believe a very effective and an inexpensive force might be thus organized. The Japanese, however, would possibly be averse to teach the Ainu to know their own strength.

On the 30th of September we made a start in tolerably good time on three pack-horses, with an Aino guide on a fourth. We soon cleared the woods about the quai-sho, which were now fast getting their autumn colours, and struck along the coast—not on the sea beach however, which is soft sand and shingle—for a good riding path skirts the edge of a terrace from 30 to 40 feet above the sea, the margin of which is generally clear of woods, being covered with grass and fern, or short scrub-bamboo. Inland the country is of partially oak-wooded plains stretching away in successive terraces toward the mountains, cut by the valleys of rapid rivers, frequently affording fine level sweeps of prairie land and much park-like scenery. The general run of the coast, which is entirely free from rocks, is N. N. E. trending to N. E. Birufune, called by the Aino 'Birupunai,' is the first station, 5 ri from Biru, where there is a river with a wide bed, impassable when in flood. A single house and some Aino huts stand in the valley on the left bank. On my return I obtained some pretty fair deer shooting at this place, as the deer were then—the latter part of October—migrating from Kusuri and the north-eastern section of the island southwards.

Beyond this the travelling continues good, and the country alters little, save in the terraces becoming higher and more broken, and the existence of several lagoons, some of large size. The outlets to the sea are in some cases fordable and in others have to be crossed by ferry-scows attended by Aino. Save the huts of these Aino, there is not an inhabited house all the way to the station of Ohots or Ohotsnai, which stands at the southern mouth of the Tokachi. This is a river of large volume and considerable length, being probably the second in Yezo. It enters the

sea by two mouths about a couple of miles apart, from a low alluvial valley.\* It is noted for the large size of its salmon. Mr. B. S. Lyman, chief geologist to the Kaitakushi, and his party, who ascended one of the branches of the Iskari, crossed overland to this river which they descended in canoes furnished in readiness for them from Ohots. Owing to the size of the party the state of the commissariat was at its lowest when they fortunately reached the boats and a fresh supply of provisions. I ought also to mention that it was in this region, that gold was supposed to have been discovered by Admiral Enomoto, and which was described in the British consular trade report for Hakodate for 1873, under the impression that it was obtained in buckets-full on the sea beach. Mr. H. S. Munroe, the assistant geologist, visited this place. I noted his survey marks in the river valleys north of Birupunai, but according to his own account he was unsuccessful in finding more than the slightest trace of the precious metal, although he carefully washed out many tons of earth and gravel. The discrepancy has not as far as I can learn, been explained. The idea that the ground had been "salted" was combated by a writer in the *Japan Gazette* with, I think, every reason.

From Ohots in a north-east and easterly direction to Kusuri, a distance of fifty miles, the country and route requires little description. The beach is generally flat and sandy, and the track mostly follows along it under high clay banks, or is slightly removed when taking advantage of the better travelling on grass covered old beach ridges. Several rivers fall into the sea, some only of which are fordable. Inland the country is generally of moderate elevation and wooded with deciduous trees, but no mountains approach anywhere near this coast. In fact, after leaving Erimo range nothing more than very ordinary high land is met all the way to the eastern point of Yezo, a very striking dissimilarity to the more southern and western portion of the island; and were it not for the almost total want of harbours, this feature would render this part available for the support of a large population. Two stations exist between Ohots and Kusuri, namely Shakobets and Shirannka, otherwise there is not a house. The first is kept up solely as a post station; and the latter had in former times an importance from the existence of lignite which was worked by the Tokugawa government; hundreds of tons of which inferior description of coal may be seen still lying on the beach.

---

\* Quite a considerable settlement—of spontaneous growth, unassisted by government funds—has lately sprung up here. The settlers take large number of deer, and the catch of salmon has been greatly increased. It is in contemplation I understand to construct a road to connect this district with Sapporo. It would probably branch from about Bibi, 23½ miles on the highway south-east of Sapporo, taking a general east course, striking into the valley of the Tokachi where most practicable. The length of construction, allowing for windings, would probably be about 130 miles. A railroad on such line would open doubtless a vast amount of country available for settlement; besides admitting of the easy transport of merchandise and produce, which an exposed anchorage off the mouth of the Tokachi affords little facility for by the sea route. Much money has been expended on schemes more visionary than this.

To the west of Knsuri a great valley opens into the interior, the principal river\* in which skirts its eastern side and enters the sea where a rocky coast commences; a reef running off from the point of which forms an inferior harbour in front of the quaisho. Here commences another seaweed district, which including Akis and Hamanaka extends eastward to Cape Noshap at the extremity of Nemoro promontory. The whole coast is of a rocky nature, mostly sand-stone, conglomerate, and slaty shales; which rocks being easily acted on by the sea account for the existence of numerous reefs, islets, and some islands, and a very irregular shoreline. It is easy to imagine that the form of this coast must have altered considerably even in recent times. Having previously remarked upon this [R.G.S. Journal 1872 p. 82], I need not here refer to Akis Bay as an example, farther than to say, that of the two Daikoku islands in it, the smaller one will in a few years cease to exist; while the whole northwest shore of the bay is yearly washing away with unerring certainty. Such changes as those occurring under one's own eyes, enables us to imagine those geological formations carried through immeasurable time, the results of which we see in the present physical condition of the globe. Yet do we find those who would have us believe that sudden convulsions have been necessary to bring the surface of the earth into the form it now has, and are not content with the great changes which climate has doubtless brought about. See the effects only of a little extra rain for instance, the destruction and changes which it works, and imagine the rainfall doubled in one season, and an arctic winter following; why we should fail to recognize a country we had lived in all our lives. Mountain sides split off by frost, great ravines scored down their sides, and wide valleys opened, rivers washing away plains, and even hills, and forming islands and shoals; besides a host of changes and devastations which might occur even from the effect of one season alone: and this carried on for a cycle. Surely it is enough to change the face of the earth.

Kusuri is composed of a quaisho, with a number of store houses about it, a temple on a high bank, and a few houses inhabited by Japanese, situated on a slight elevation just above the reef-harbour, a quarter of a mile south of the river mouth. The situation is much exposed to westerly winds. There are many Ainu dwellings along the river banks and on the higher ground. The road towards Akis crosses over the blunt point to the south-east to a small bay, at the farther end of which the outlet of a lagoon is spanned by a bridge. This lagoon runs inland about three-quarters of a mile and is called Haratori; coal has been lately found near the head of it. I visited an opening into a three feet seam, but from what little I saw of it, I

\* Up to the valley of the Kusuri river, which has a general direction of about north, sulphur has been of late years worked out of one or other of the volcanic mountains in that region, of which the two principal peaks called O-akan and Me-akan (meaning 'male' and 'female' something) are visible from the coast, in clear weather even from Nemoro, and a distance out at sea. This river is navigable for boats a considerable distance, and it is said not to be difficult to get right across country to Share or Abasiri on the north-east coast.

should not consider it worth prosecuting. About two ri farther along the coast some more coal was dug out quite close to the shore for the Kobusho department two or three years since, but the works were abandoned.

Partly on the terrace uplands and partly on the beach the track goes eastward  $4\frac{1}{2}$  ri to Kombumoi, where there are a good many fishermen's houses. However, these exist more or less along the shore wherever there is space to be got to build them on out of reach of the waves, and indeed they are frequently built in very dangerous situations for the sake of securing shore right, so much so that many were washed away during a severe gale during last year. Beyond Kombumoi the coast becomes higher, and in most places precipitous. Sometimes the path is along the beach, and at others there is stiff climbing over the heights. At one part a considerable length of road has been cut through the woods, in order to avoid an impassable part of the coast. This was done by Hizen (otherwise known as "Nabeshima") officials at the commencement of the Kaitakushi colonisation scheme in 1869 or 1870, when this portion of the coast was in charge of that daimio. It can hardly, however, be called a road, little more having been done than cutting down the timber.

After passing round a point where a large and a small pinnacle rock stand in the sea, at about eight and a half ri from Kusuri, the path leaves the coast and strikes in on the high land which lies between the S. W. portion of Akis Bay and is terminated by Jempeze-Saki. The course is north-east and northerly on the same kind of road as mentioned before, cut through heavy spruce forest, mixed in which is a good proportion of yew trees; in fact more than I have noticed in any other part of the country. After about five miles of the monotonous kind of travelling you come suddenly to a descent which leads down to Jempeze on the shore of Akis Bay, when there is a house kept up by the lessee of Kusuri district for the accommodation of travellers, but no post station, consequently, the same horses have to go through the whole 45 miles between Kusuri and Akis. The Kusuri horses are, however, usually good and manage to make the distance easily. Indeed my experience of the Yezo ponies favours the Japanese saying that the best animals are found in the Kusuri and Tokachi districts. They are mostly short punchy brutes, and when you get them at stations where they are little worked, such as Shiranuka and Shakobets, you may be sure of making good time. The Ainu guides too, delight in racing them along where the track is good, often much to the discomfort of the riders perched up on the high pack saddles. My Japanese banto and the boy whom I took with me for bird skinning, got several ludicrous spills in this way.

The remaining four ri between Jempeze and Akis Quaisho, which has of late years grown into quite a small town, is round the northern sweep of the bay, though the track for the most part is through the thick woods some distance back from the shore; in following which one gets a good idea of the kind of forest composed mostly of Todo and Yezo Matsu (the two commonest spruces in Yezo), with perhaps a few Shiuko Matsu, which,

unless upon the mountain ranges, is otherwise confined to the extreme east or northern part of the island. A saw-mill has been lately removed from Hakodate to this locality, on account of the abundance of these kinds of timber, more valuable for general purposes to the Japanese than the fine oak, beech, elm, ash, katsura, chestnut and other hardwoods with which the more southern country otherwise abounds. The presence of an extensive lagoon, and the tributary streams falling into it, affords every facility for procuring the logs for sawing.

The outlet of this lagoon has to be ferried before you reach the settlement of Akis, which is situated unfortunately with a northern aspect; common in this particular, however, with most of the principal seaside towns in Yezo., and without an exception in any case when a harbour exists.

## XI.

### THE EASTERN PART OF THE ISLAND.

The Bay of Akis, or as it was designated on the older charts 'Good Hope Bay,' is the most capacious in Yezo. Situated only 50 nautical miles short of the eastern extremity of the island, and 95 north-east of Cape Erimo, it is 217 by ship's course from Hakodate. With its mouth to the southward, it extends 7 nautical miles in a northerly direction, and is farther prolonged inland to the north eastward by a lagoon with a diameter of three or four miles. Its widest part is above 6 miles across east and west. Conspicuous headlands form either side of its opening toward the ocean, the eastern one being Daikoku-sima 370 feet high, which is connected by a line of reefs to what remains of Ko-Daikoku island; the whole of which has doubtless been at one time part of the main land. On the western side is Jempeze-saki, the immediate point of which is about 300 feet, but it rises considerably higher half a mile farther back. The distance between these two points is nearly  $3\frac{1}{2}$  miles, but a reef (partly awash) extends 2 miles due east off the latter, which narrows the actual passage to 13 cables. This opening, however, is perfectly clear with a depth of 16 and 17 fathoms. An admiralty chart, published 10 Sept. 1872, from the survey of H.M.S. *Sylvia* under command of Capt. H. C. St. John in 1871, will enable any navigator to enter this bay with confidence. Keeping Daikoku island well aboard in making the entrance so as to clear Jempeze reef, a straight course N. by W. for a conspicuous bluff called Bara-san, the water shoals gradually up to 6 fathoms. Immediately beyond this bluff, which should not be approached nearer than 3 cables, an anchorage can be picked up according to the size of the vessel, bringing its northern end to bear about east; a small vessel being able to get even farther in, till a temple or the new hospital, which is a conspicuous building, bears S.E., in which position the protection is everything that can be required. A detached shoal partly composed of rock lies 2 miles due west from Bara-san south bluff, between which and the north-west shore the water is mostly shoal.

The country round about the bay is plateau-like seldom more than 250 feet above the sea. Intervening between these plateaux are usually small valleys having a rank vegetation of swamp grass, while the higher grounds are

mostly thickly wooded. At the opening of one of these valleys and just northward of Bara-san bluff, is the present village of Akis. It consists of a street of small traders' houses, and some detached buildings, with an Ainu settlement between it and the lagoon; the quaisho and official quarter being at the opposite end, immediately above, while prettily situated on a small terrace or sub-plateau is the new hospital in semi-European style, which had been just completed when I was last there. The entrance to the lagoon is a mile from the quaisho. Necks of sand form either side, leaving a passage of a quarter of a mile or so which is tolerably deep and the tide flows in and out through it with some velocity. It is a favourite resort for hairseals (Jap. "atarashi,") which animals pursue the salmon even to the mouths of the rivers when they are "running" for their spawning places. The lagoon contains many shoals and low islands, where there are large beds of oysters, which in former times afforded abundant food for the Ainu, who were said to be very numerous in this district. Thick beds of discarded shells are found in many places which were the sites of their dwellings, even to the tops of some of the lower hills adjacent to the bay.

Timber is abundant at Akis, there being besides the usual deciduous trees common to most parts of Yezo, "todo" and "yezo" spruce in quantity, and in such situations that it can be cut and transported on the lagoon or across the bay with ease. Indeed the facilities afforded for this business are such that it seems a wonder a trade in timber should not ere this have developed itself.\* The "todo" spruce is a clean white wood suitable for house-building, but the other kind is preferred for boats as it is said to stand well under water; it can also be got in sizes large enough for junk masts.

Herring are taken in considerable quantity on the west side of the bay at and about Jempeze station, from which both oil and fish gnao are exported. Smelt are plentiful in October, and salmon run in one or more rivers which empty into the lagoon, where they are taken both by the Japanese and Ainu. This fishing would probably be more successfully followed by using "set" nets Japanese 'tate-ami' off the mouth of the bay, to intercept the fish as they travel along the coast, but the villagers are unable to engage in this kind of fishing owing to want of capital, and the lessees only pursue it to a small extent. The seaweed season is the great harvest for the fishermen, every one of whom engage in it; the numerous reefs about the entrance of the bay, and along the coast to the eastward producing this article in abundance, which when dried is remarkable for its thinness and light green colour, being preferred for "cutting" in which state a good deal goes to China.

In the last chapter I brought the reader to Jempeze. From thence to Akis the distance is ten miles round the bay, a mile or so less perhaps if you follow the actual beach, the way I took on my return; but this is only practicable at low states of the tide, there being a rocky point to get round against which the sea washes, besides the high semi-consolidated mud banks are constantly slipping away and forming obstructions which

\* Since this was written an oyster cannery and saw-mill have been established.

it is not always possible to pass on horse-back. The regular road lies a little inland through thick woods, swampy valleys, and roughish hill sides and ridges. Like other inland parts of the road from Kusuri, the trees were simply cut away and some rough bridges made some years ago, since which it has been left entirely in the hands of providence. At about a ri short of Akis it emerges on the sea shore, and from thence there is a fair track on the grass, just clear of the beach, to the mouth of the lagoon, which has to be crossed by ferry boat.

Having visited Akis in 1869, I only slept there on the night of my arrival this time, and started for Hamanaka by land next morning. On returning, however, I took it more leisurely, staying a day and a half here, and making stoppages at many other places on the route, which gave time for preparing specimens of birds, of which I managed to get together a fair collection. The road to Hamanaka, reckoned at nine and a half ri, which was opened by the prince of Hizen's people,—the former route having been very circuitous via the lagoon and part of the way up a river by canoe—strikes up the valley at the back of the village in a south easterly direction, and following the left hand side as you go up, rises on the hills at the head of the valley where it nearly connects with the sea south of Bara-san bluff. Thence it goes over some rather rough wooded country, but affords some peeps of the bay on one hand and the lagoon on the other. After a distance, the track gets on tolerably open ground, from whence a view of the Daikoku Islands is obtained, and thence along heights near the sea. A single house called Rironai is situated in a little valley about ten miles from Akis which is the first one meets on the road. Beyond this the coast trends E.N.E., and the road is usually along the bare, or only scrub-covered heights.

The mouths of two lagoons\* are crossed, the first is bridged, but the easternmost which is called Chirip has to be ferried. There are some dwellings and many seaweed gatherers' temporary straw huts at these places, which afford secure boat harbours. These sheets of water run back into the country for a mile or more. They are great resorts for swans and cranes in the latter part of autumn, and numerous ducks earlier in the season. In crossing the ferry on my return, the horses when in the boat took a stampede, which resulted in one of the packed ones going overboard bag and baggage, we being obliged to tow him to the bank. As may be supposed the contents of the packages were hardly improved by the ducking, and unfortunately one contained some of my ammunition. Such mishaps as these must be borne with composure in the present state of travelling facilities in Yezo.

The coast is excessively rugged and precipitous being composed of sand-stone and conglomerate rock taking all sorts of fantastic forms. At one place there are two peculiar

islets situated side by side in a nest of reefs, each of which has a distinct hole through it. Trending more to the northward the road along the coast approaches the islands of Kenibuk, Kosima, and Kiritap, which shut in and form the eastern and western bays at Hamanaka. They are high, for the most part precipitous, and table like, corresponding so much with the main land that one cannot but suppose that they are only portions which the ravages of the sea has cut off. The view from the heights before the track descends to the shore at the western bay is very extensive, looking down upon the whole swampy flat of Hamanaka, with the numerous straw huts dotted with great regularity along the shore of the two bays, and the larger fishing stations on the eastern one. Where the road descends to the shore is the mouth of a sluggish river which emerges from the swamp. It is crossed by a bridge where there are two or three permanent dwellings. Thence the riding is excellent along the hard sand beach to where the two bays connect by a narrow strait which cuts off Kiritap Island from the main, the quaisho being about a mile and a half north.

On the occasion of my first visit to Hamanaka in the barque *Akindo* in 1869, [See *R.G.S. Journal* 1872]. I made a rough sketch of this bay, which on this occasion I was able somewhat to improve upon; but I imagine it must have been more or less accurately laid down by H.M.S. *Sylvia* in 1871, although I have not heard of any harbour plan having been yet published; nor can I find any description of it in Capt. St. John's, *Notes on the East, North-east, and West coasts of Yezo* published in the same volume of the *R.G. Society's Journal*. I may therefore remark that Hamanaka is a bay open to the east, with a capacity of about eight square miles, its southern side being formed by the island of Kiritap, itself about 2 miles long in east and west direction. Some rocks lie off the east point of the island, and an outlying reef commences about a mile farther east-north-east, and extends in the same direction, having a high rock at its western end called *Kuroiwa* and a higher islet known as *Hokaki-sima* near its eastern extremity. This reef shuts out a good deal of sea. Another reef juts off the mainland on the north side of the bay; but there is plenty of room between them; and likewise a good, but narrow passage between the first and Kiritap island. There is 6 to 7 fathoms in the middle of the bay, shoaling into  $3\frac{1}{2}$  a mile off shore. The best anchorage is as near as the depth of water will allow to the island shore. The back, or western bay formed by Kiritap, Kosima, and Kenibuk, is more shut in but its openings are to the southward, while the water inshore is very shallow, and the bottom bad for anchoring, although there is said to be 5 to 7 fathoms in the middle. This was what I was told, as I did not go afloat in it, but only measured its shores roughly.

The produce of Hamanaka—which belongs to the Akis district—is very considerable in herring-guano, oil, and sea-weed;† but

\* These lagoons, or lakes with openings to the sea, are called in this part of Yezo 'to'; this word according to Mr. Batchelor, confirmed by Mr. Fukusi, meaning lake in Ainu. On the north-east coast, the termination is usually 'ma,' probably a shortening of the Japanese 'numa' having the same signification; though in Hepburn's dictionary it is given as *masch* or *swamp*. I have not found it used in such sense in Yezo, where the term generally employed is 'yachi.'

† In an ordinary season herring-guano 10,000, seaweed 30,000 koku; but in a very favourable one as much as 40,000 koku of the latter, equal to 100,000 piculs.

the catch of salmon is confined to two or three "set" nets, in which fish passing along the coast are entrapped. Besides many junks, the Japanese employ foreign built sailing-vessels and steamers in transporting the produce to Hakodate.

One days travel, if you make use of your time, will take you from Hamanaka to Nemoro. There are two routes. One passes along the coast, and is at the present day that most used, the distance being about fifteen ri. I have, however, in my visits to this district never had occasion to use it, except at its farther end where it crosses the peninsula from Hanasaki; nor have I met with any good description of it. I understand, however, that it is now a fairly good track as such things go in Yezo, and that there are some occupied stations along it, which was not formerly the case. The tourist therefore need not be deterred from adopting it. The other about seventeen ri, which was formerly almost exclusively used, is *viâ* Achi-shibets.\* I travelled over the first portion of it in 1869, on a trip round the northern part of the island, a mutilated account of which appeared in the *Journal of the Royal Geographical Society* for 1872 under the title of 'A Journey in Yezo,' out of which I shall here give a corrected extract, and from which I have largely drawn in other portions of these papers, rather than entirely re-write my experiences, or adopt a guide-book style of description. I have elsewhere apologized for thus drifting into personal narrative, but after all I don't think I could have done better had I entirely avoided it; while as these papers are but a sort of heterogeneous collection of notes made at various times, the reader will I feel sure excuse a want of completeness evidently too apparent, and make allowance for their disjointed condition. I will not ask more. I shall not crave the reader's indulgence for any

\* For distances on all the ordinary routes in Yezo, see itineraries published in the *Japan Gazette* September 16th, 1882.

I much doubt if I am correct in thus spelling the name of this place. There is a stream near Sapporo called by the Japanese 'Ashibets,' which according to Mr. N. Fukusi, chief of the survey, is a corruption of the Ainu 'Atzis-bets' meaning river where the 'Atzis' bark for weaving is obtained. It may be therefore that this place in the Nemoro district should be written the same. The way I 'got the hang' of the word was as spelled in the first instance in my paper published in the *Journal of the Royal Geographical Society* for 1872, quoted from farther on, 'Atchi-Shibets'; which I subsequently shortened up to 'Achi-Shibets,' as being in accordance with ordinary Japanese pronunciation;—in the same way as I have abbreviated the probably more correct 'Atkis' or 'Atkish' into 'Akis,' without attempting to follow the Japanese *kana*. If we were to take Mr. Batchelor's name for the Ainu fibrous bark, we should have to write 'Attushi-bets'; but, as I have elsewhere remarked, I don't think that Mr. Batchelor in all cases has managed exactly to represent Ainu sounds according to Italian vowels and English consonants, at least to my ear. In this connection I think it only fair to mention that Professor Dixon has informed me that he did not have the opportunity of correcting Mr. Batchelor's papers, as they passed through the press for the Society's 'Transactions;' hence the "mutilation" which struck me (see 'Cape Esan and Volcano Bay' *Japan Gazette*, 17th February 1883) must not be read as reflecting on the professor's proficiency in the Ainu tongue, on which of course it would ill become me to pass an opinion.

errors as to facts. If there are such, I am ready to bear the blame for inadvertence. But as to opinions, when expressed, on men and matters, of course such are always open to question, and I do not expect to carry all my readers along with me; still I believe that I shall find nearest in accord with my own, those held by persons most intimately acquainted with the Japanese, particularly in Yezo. Without further digression, let me show how I started on the first land journey of any extent in the island, by copying what I wrote a year or so afterwards:—

On the morning of the 6th October I landed through the surf in a small boat, pulled by a couple of Ainu, one of whom carried me ashore dry-shod on his back. The *Akindo* made sail and passed out of the bay by the east side of the reef we had run past on entering. I was thus left alone at the eastern end of Yezo with a fowling-piece, powder, shot, and bullets, a couple of pairs of blankets, a change of clothes, a good pair of boots, a pocket compass and note books, and a Japanese map of the island, to pursue a journey hitherto unattempted by any foreigner. What I saw, the mode of travelling, and how I was treated by the natives, compiled from the daily notes made as I travelled along, I shall describe. It must be borne in mind, however, that the state of the country at that time was as it had been for many years previous to the colonization—"kaitago"—scheme, inaugurated by the government in the latter part of 1869, so that future travellers must expect to find some important changes, it is to be hoped for the better.

After a fair night's rest I rose from the matted floor of the small room in which I had slept, and went out on the beach to get a refreshing draught of the bracing air, as well as to show the inmates of the quaiho that I was anxious to start on my journey.

A few minutes sufficed to put my little baggage in travelling shape, and by the time I had got through a light breakfast, a couple of ponies were brought, on one of which my two leather bags were lashed to either side of a pack-saddle, on the top of which a Japanese, who was to act as my escort and guide, mounted; and, with a blanket over a native riding-saddle lent me by the master of the establishment, I bestrode the other one, taking my gun, prairie fashion, in the hollow of my arm, and started.

Passing by the huts along the shore of the bay, we ascended the plateau-like land, and followed a narrow horse-track taking a northerly direction. On this course we travelled over a usually level but sometimes undulating country, tolerably thickly wooded with oak and birch trees of moderate size, the ground being free from underwood, but covered with short mountain-bamboo scrub, fern, and long grass. But few leaves had yet assumed their autumn colours. The upper soil was of a dark vegetable mould, with a clay, and in some places gravelly, subsoil. I saw no rock *in situ* all day. Having made about 7 miles, we came to a shallow valley running East, in which we struck the track between Akis Bay and Nemoro, which has to be followed to reach the former place from Hamanaka; the distance by this circuitous route, passing round the north side of the lagoon to the quaiho,



is called  $9\frac{1}{4}$  ri.\* We took the opposite direction, turning to the eastward, and followed along the southern bank of a small but deep stream running with a tortuous course along the bottom of the valley, where I saw evidence of Ainu having been spearing salmon, which were then just commencing to run up to their spawning-places. This valley, though retaining much the same character as the adjoining country, has considerable spaces clear of woods, or only sparsely dotted with trees, and appeared to be well adapted for agriculture; but there are no signs of its having been attempted anywhere. There are some swamps in it, and a few small tributary streams fall in on either side, which, when the banks are steep, are spanned by small rough bridges, otherwise the track passes through them.

The worst parts of the swamps have split timber laid transversely, forming narrow "corduroy" roads, or broader rough planks are laid lengthwise. Sometimes turf, gravel, or sand is put on the top for ballast, but usually such is dispensed with, and being in miserable repair, these kinds of causeways are not the very best for horse travelling. They are, however, the only attempt in any part of the island, and are never resorted to unless the natural state of the country is such that travelling would otherwise be almost impossible. Elsewhere the sea beach, or the rough mountain side, with the trees cut away sufficiently to allow of the passage of pack-horses in single file, are the "roads" of Yezo. It is to be hoped that as the attention of the government is now directed to the colonization of the country, one of their first measures may be the establishment of lines of communication, so essentially necessary to the development of its resources.†

On the route we passed two or three small rest-houses, usually mere sheds, kept up for the accommodation of travellers. At one of these we halted for half an hour in the middle of the day to rest our horses, and eat some cold rice and fish we carried with us for our midday meal, called by the Japanese "bento."

In this valley, usually on slight elevations near the river bank, there may be seen many shallow pits. I was at first puzzled to know what these were, but from observation in other localities, I have noted them near Achi-shibets station, on the island which

forms Nemoro Harbour, and at Kusuri, I came to the conclusion that the Ainu in ancient times built their dwellings (straw and brush wigwams) over these pits, which are more or less about a suitable size. Some Japanese also concurred in the opinion, and I think told me the Ainu said they had been devoted to such use; but one Ainu whom I asked told us a cock-and-bull story about their having something to do with their deities. The Ainu are said formerly to have been very numerous at and about Achi-shibets lagoon, and in this region generally.\*

As the day drew on we approached an extensive lagoon, into which the streams of the district empty themselves, where we saw numbers of wild geese. Passing over rather more fully wooded land, and a little to the northward, we descended a hill and came suddenly on the fishing-station known as Atchi Shibets, distant  $8\frac{1}{2}$  ri, or 21 English miles, from Hamanaka. This station stands on the south shore of the lagoon, which is said to extend thence into the interior about  $2\frac{1}{2}$  miles W.N.W., in its narrow form; but to the south-eastward widens out into a considerable expanse, and communicates with the sea about 3 ri from the station.

The production of my government travelling-order caused a fresh horse to be forthcoming, and after a delay of a few minutes at the station, which is composed of one large dwelling-house, some store-houses, and a small temple, all quite new, I embarked with my baggage and horse in a flat-bottomed scow on the lagoon, which some of the boys, assisted by an Ainu or two about the place, pulled across to the opposite shore, a distance of about a third of a mile. Landing on swampy low land, my baggage was lashed on the pack saddle, and I mounted with some difficulty on the top of it. A Japanese, who acted as guide, led the way for a couple of miles or so through thick willow brush, till we emerged on the seashore, where he obtained a horse for himself, and we went along on the brier-covered sand-ridges parallel with the sea, at a brisk pace. Along the shore there are a number of fishing-stations, as far as the River Nisibets, where there is a collection of buildings, it being a very important salmon river; those on the southern side belonging to the Nemoro district, and called Nisibets proper, while the rival establishment on the northern side, belonging to the district of Shibets, is known as Bitszkai. Leaving our horses we crossed the river in a boat, and my baggage was deposited at the chief house of the

\* This is the old route already referred to, which was partly by water. It must have been longer than the distance here given. In former times the roads were not very exactly measured.

† These remarks although made previous to the Kaitakushi 'epoch,' are still applicable to the major part of the island. A very large amount of money expended upon Sapporo and its communications under the commission, was marked by an almost total neglect of other districts, where but little assistance would have materially stimulated natural growth in settlement. Unfortunately the idea of a 'capital' for Yezo seemed to absorb all the energy of the Department. It might be expected now, however, under the arrangement of three "ken," or prefectures, that the expenditure will in future be more distributed; but it is hopeless to forecast events in this country, where, as the saying is, things go so 'contrariwise'; and where the cupidity of individuals becomes an element in the calculation, and the ins and outs of the dark corridors of official intrigue are so little understood by outsiders. What is good for the country is one thing, but what suits the pocket of officials is, quite another.

\* The reader who has followed the run of these papers so far, will not fail to observe that this is a reference to the pits of the Koro-pok-guru of Mr. Batchelor and Professor Milne (*Trans. As. Soc. Japan*, vol. x, pt. 2) to which I have elsewhere called special attention. I may add that these pits are generally rectangular, of various dimensions; a good sized one being about twenty feet by fifteen. Tourists who may not go farther north than Sapporo, will find many in that locality; generally, as noted above, along the banks of the smaller streams. Of course there is a sufficient reason for their being preserved in such positions, rather than near larger rivers; for in the latter case the continual washing away of the banks, may have either swept them away entirely, or the overflow of detritus obliterated them. It would be a most interesting discovery if any of these could be found on the main-island of Japan though the chances in a settled country are of course unfavourable.

station, where I dismissed my guide with a small present. This place is but 2 ri from Achi Shibets, making the distance travelled during the day  $10\frac{1}{2}$  ri.

I spent the time before dark in strolling about, and looking at the fishing arrangements. Off the mouth of the river a number of Ainu superintended by one or two Japanese, were hauling in a large seine literally filled with fine salmon. These were transferred to a couple of large boats, which carried them into the river, where, thrown out on a platform or stage on the bank opposite a storehouse, a number of Ainu women, boys, and men, set to work with knives gilling, gutting, and cleaning the fish, while others carried them so prepared in baskets on their backs into the store, where they were salted and stacked in rectangular piles, made up of layers head and tail, alternately crossing one another to ensure stability. The place was surrounded by innumerable crows, keeping up a constant cawing, and ready to dart upon the offal thrown away. Although of considerable length this river is of small size, and is further narrowed at its mouth to 30 yards or less. Being the boundary of two districts it is fished from either side on alternate days. A coarse net is set on stakes completely across, some hundred yards or so above its mouth, which prevents the salmon ascending the river. In rainy weather, however, when the river floods and brings down sticks and refuse, this has to be lifted or it would be washed away, and then the fish get a respite, otherwise they would stand a fair chance of being exterminated. Many of the Ainu employed at this river are brought from Share and Mombets, on the north-east coast, just for the fishing season, returning again before winter. The annual catch of salmon is enormous for so small a river. In 1869 it amounted to not less than 6300 koku, at 60 fish to the koku, being 378,000 fish, equal to over seven hundred tons. They are all exported to Tokio and the east coast of Japan, as well as to Hakodate for the west coast ports.

The line of the shore at Nisibets River runs N. N. W. and S. E. by S. The farthest part of the Nemoro peninsula visible, bears E. by S., and some high land on Kunashiri Island, N. N. E. Nemoro quaiho lies across the bay, distant about 13 sea miles to the E. S. E. I should have visited this place, but having a long journey before me, and being unable to calculate how long it was likely to take me, I felt it more prudent to push on and get the better part of the journey over before setting in of cold weather. As it was, I did not reach Hakodate too soon, for but a day or two after my arrival at the close of November, a winter such as had not been known for many years set in with unusual severity, and continued, it may be said, steadily for the next four months.

So far at present. The reader must now bear with me if I break off the above narrative under promise to resume it in a chapter devoted to the 'North-East Coast,' and we will return to Achi-shibets across the lagoon and travel together to Nemoro.

The road is through a wild country, at first rolling and sparsely oak-wooded for about 3 ri, passing clear of the southern part of the lagoon. Then a densely spruce wooded region is entered, where the trees stand so close together that it would be difficult to

make way through them without chopping. At four ri, a deep river running into the lagoon is crossed by a bridge, where there is a single house called Beto-kawa. The course then goes more north of east, still through these thick woods, which have been cut down for a width of about fifty feet. At 6 ri the outlet of a circular lagoon is reached, called One-to. A causeway has been attempted but it has been partly washed away, and you have to wade into the mud on foot or horseback, and cross the deeper water in flat bottomed ferry boats. Here you leave the spruce forest, and ride mostly along the sloping heights bordering the sea, where several bays in which are herring-fishing stations indent the shore, till you reach Nemoro itself, which is a fair collection of houses standing on a moderate terrace overlooking a little harbour formed by an island and some reefs lying off it, and which may be said to afford tolerable shelter for small vessels, but its capacity is not great. The harbour, was carefully surveyed by H. M. S. *Sylvia*, and is published on an admiralty sheet, together with Notske anchorage by Commander Yanagi of H. I. J. M. S. *Kasuga Kan*.

Under its first governor Mr. Matsumoto—afterwards of Sapporo—the settlement at Nemoro made rapid progress, and has now the appearance of a thriving place, but it is to be feared that this is only in appearance; a good deal of money having been sunk in opening of new fishing "rooms," not likely ever to be recovered. For, notwithstanding the distance from a market, the government collects a duty of twenty per cent. on seaweed, and fifteen per cent. on salmon and herring, both reckoned at the Hakodadi value, amounting for this small district to over twenty thousand yen annually.\* A small staff-light has been erected on the island, and one of similar description on Cape Noshap ten miles to the eastward, which is the extreme point of Yezo.

A number of low islands and reefs lie off this Cape causing the navigation to be rather dangerous, and there are others scattered along the south side of the promontory, or peninsula—for it is difficult to know which to call it—on which Nemoro is situated. The land is plateau-like but only of moderate elevation. The trees are often somewhat stunted; and the soil which is rather wet and cold, is everywhere covered with a thick growth of scrub-bamboo. The climate is not particularly inviting, as the late cold spring, almost constant fog during the summer months, and the cold winter, leaves the autumn as the only enjoyable portion of the year. For hydrographical information concerning this district I refer to Captain St. John's paper in the R.G.S. Journal before alluded to.

The view from Nemoro is, I think, very fine. Looking across the Yezo Strait you see part of Kunashiri to the northward, with the fine Share range ending in Cape Shiretoko overtopping it, and extending towards the westward, where the peaks of O-akan

\* This refers to the earlier part of the Kaitakushi 'epoch.' The production has, in face of the heavy dues still levied though modified as to the method of collection, considerably increased. I may later on give some statistics as to the coast-produce of Yezo. At present they are but scattered notes and in such unconnected form that I hesitate to make use of them.

and Me-akan of the Kusuri district, are prominent features above the low coast line about Nishibets river.

These remarks although written some years ago refer tolerably to Nemoro of the present day, though its has increased in size until it may be reckoned now as quite a town,\* while the late change in the administration of Yezo has given it additional importance as the seat of government of a 'ken' embracing the eastern part of the island and the Kurils. There now exist good roads crossing the peninsula, which is very narrow, to the anchorages—they can hardly be termed harbours—of Tomosiri and Hanasaki situated on the southern side in the middle of the seaweed district. Indeed a visitor now by sea to Nemoro, is as likely to be landed, or to have to embark from one or other of these places, as at the harbour of Nemoro itself; the customs arrangements admitting of a vessel getting her clearance or making her entry by means of an officer sent overland; an accommodation not always afforded by custom-houses in Japan, and therefore the more remarkable in so strongly governed a country.

The walk or ride across is a very pleasant one, in the case of Tomosiri hardly over a ri, and to Hanasaki about four miles. In either case you ascend the plateau behind the town by an easy slope, and after traversing the uplands through more or less woods of scrub-oak, birch, alder, &c., you descend to the flat land near the sea-beach, which in the case of the former is of considerable extent and somewhat diversified by the existence of several small lakes and patches of swamp where fair sport with wildfowl may sometimes be had. Seaweed-gatherers huts, and the smaller stations of coast lessees, are scattered all along the shore where, during the season, a busy scene may be observed. The whole of this shore-line is very favourable to the production of kelp, numerous reefs, detached groups of rocks, and some islands, affording good ground and suitable bottom for its growth. The anchorage at Tomosiri-usu, as it is called by the Japanese, ('Ush' is the proper Ainu word for 'bay' according to Mr. Batchelor) is protected from east and south-east by the Tomosiri islands, and some reefs between them and the mainland, but is exposed to the westward of south.

Hanasaki Bay is also somewhat sheltered. On its eastern side there is a high bluff with rocks jutting off it. Iruri islands lie some distance off, the opening between them bearing about S. by E., while the land in the direction of Cape Otzus is about two points westerly. Chogush is a small station to the south-westward, where the coast becomes more high and rocky, and along which the road (now used) runs towards Hamanaka.

---

\* In 1881, Nemoro consisted of about seven-hundred houses, about one half occupied by fishermen and labourers, the other being the residences and business places of merchants, shop-keepers, and others—not omitting females of uncertain fame who invariably swarm at such a place, especially during the fishing season, and towards the support of the pretentious establishments kept up for their accommodation, so large a proportion of the fisherman's hard-earned money finds its way.

Under the Kaitakushi a stock farm was formed at, as usual, a large outlay. There were 150 horned cattle, and about 500 horses, when I last visited the place.

I ought not to omit to mention, although elsewhere referred to, that Nemoro is a favourable place for examining the remains of ancient pit-dwellings. There are a number of these holes upon the island which shut in the little harbour. The only place where I have observed red-currants growing wild on Yezo is Nemoro; there are likewise many strawberries there also in the proper season.

Besides the great number of herring taken at and about Nemoro in spring and summer, and exported from thence in the form of fish-guano, principally to Tokio and the southern markets of Japan; and the large amount of seaweed collected on the south coast of the peninsula for the Hakodate-Shanghai trade; this district, which now includes the whole western side of Yezo Strait, abounds with autumn-salmon. Large seines and set-nets are used in every favourable position along the coast and at the mouths of the rivers, notably in the vicinity of the Nishibets which I have already alluded to. A great deal of money is invested in this fishery, and many hands employed. The fish—wet-salted in ordinary Japanese fashion—find ready market at Tokio, whence they get distributed to the inland districts of the main island. The late Kaitakushi Department, looking upon it as a favourable situation, put up a canning establishment at Bitskai,† under the direction of two American fish-curers, which I understand still exists, but not as a success financially. In fact, as I have remarked elsewhere, the canning of the true salmon has given no satisfactory result anywhere in Yezo, owing to some inherent peculiarity it is believed in the fish which interferes with the retention of the proper colour when preserved in this manner; while on the other hand the salmon-trout, spring-salmon, or whatever it should be correctly called, retains its colour and apparent freshness undiminished, in tins, and in such form is considered excellent for the table.

The set-nets used in this autumn salmon fishery are very large, stretching at right angles off shore from 250 to 350 fathoms. The inshore portion is made of any kind of rough net, frequently of straw rope, 50 meshes deep of seven inches each; the middle is of 75 meshes of six inches, and the outer part 100 meshes in depth of the same size. At the end of this a trap is formed, either single or double-headed according as the fish are known to run in only one, or in both directions along the coast—having a floating cross-spar at its inner end, and a boat securely anchored, also crosswise, to sustain its outer part. The trap is made up of three sections of net; that next the boat 13 fathoms long with a width of five breadths of 75 meshes each, the meshes being  $3\frac{1}{2}$  Japanese inches; the adjoining section is of  $19\frac{1}{2}$  fathoms length, and three breadths of 100 meshes each of half foot meshes; the remaining section being similar. When set, the trap has a length of about forty fathoms, and a width of the length of the boat, about five fathoms. Close to the boat the net is stronger and of smaller mesh, in order to bear the weight of the fish when being got out of water. There are also wing pieces

---

† This is possibly 'Bets-kai,' or 'carrying' over place of the river; 'kai' being, according to Mr. Batchelor, 'to carry.'

set at an oblique angle to lead the fish into the trap. The middle of the trap is sunk to near the bottom, with lines coming up and fastened to the cross-spar. When the net is to be lifted, the captain, who remains on board the large boat moored at the end and watches for fish entering the trap, directs the men in a smaller boat, who, getting hold of the lines made fast to the spar, raise the inner end of the trap thereby closing the opening, and then work out towards the large boat, gradually narrowing up till all the fish are jammed alongside the large boat into which they are lifted. The operation is of course repeated whenever enough salmon enter the trap to make it worth while to clear it. Subsidiary boats take the fish to the beach, where they are carried in baskets on the backs of the men or Ainu women to the spitting and gilling place just above high water mark. After this operation they are transported in like manner to the store-house or temporary shed; salted, by a large handful being shovelled into the belly, and a small one into the place where the gills have been taken out, and then stacked regularly in a pile side by side in cross layers, salt being scattered over each layer as completed. The amount of salt used is on an average of one bag per thirty fish; but as the bags of salt—originally 100 pounds each—leak considerably in the handling during transport, it amounts probably to about 75 pounds to 30 fish, or half a koku,—60 salmon being reckoned to the koku. The roe is salted in piles in a separate place, usually on stages covered with coarse reed mats, to permit of drainage. It is amusing to watch the operation when a big haul of fish comes in, the Ainu women keeping up a lively chatter, or passing jokes and singing as they carry on their work.

The seines\* vary a good deal in size according to the situations where they are hauled, either inside or outside the river mouths. They have regular purses or bags. One of 12 fathoms length of seven breadth of 75 meshes of three inches each, will hold about two hundred 'soku' (score—the ordinary way of counting salmon among the fishermen, not to be confounded with 'koku' to which sixty are reckoned) or say four thousand fish. The side pieces are made up of sections of twenty-five fathoms long corresponding in each wing namely:—First section, 3 inch meshes, three breadths of 75 each deep. Second:—the same but only two-and-a-half breadths. Third:—four inch mesh, one breadth of 100 meshes. Fourth:—similar; while the fifth is but fifty meshes deep; any extra length required is spliced on at the shore end. The ordinary seines require from 35 to 40 men each, and the outfit, boat and gear complete used to cost about 1800 yen, before the great depreciation in currency, but some of the large ones used off the mouth of the rivers employ 50 or 60 people; while the set-nets take twenty men to each, and cost about 1,200 yen. The latter are often stretched at very close intervals, each fishing-master only having so many fathoms of shore-line, which is strictly defined by boundary posts. I have seen as

many as eight of these trap set-nets extending out to sea within less than a mile of beach. The hauling in of a large seine with four or five hundred salmon in it, is a lively spectacle. Japanese, and Ainu men and women hauling, and all singing in time. When the purse comes ashore, it is opened at its end, or detached from the seine wings and the fish generally thrown into a 'sampa' (large boats used in the Yezo fisheries generally, about 48 by 12 feet, about 5 feet deep, with a central cargo or net space of 15 by 12, oars for a dozen rowers, and large steering sweep at the stern) which transports them into a river when there is one, where they can be landed directly on the splitting platforms; the still live fish jumping and flopping about in the boat, and not a few of them getting overboard. All which time there is a tremendous din of shouting and singing, to which the cawing of innumerable crows which always infest the fishing stations, adds a hoarse chorus, while numbers of wolfish looking dogs sit round awaiting the gutting operation, the offal from which they share with the crows, kites and gulls.

## XII.

### TSUGARU STRAIT.

My first visit to Matsumai, generally called Fukuyama,\* was in winter. A barque bound from Shanghai to Hakodate had run into the mouth of Tsugaru Strait during a thick snow storm, and "piled up" on the rocks about a mile east of the town. Fortunately no lives were lost, and when we reached there we found the captain, officers and crew well housed and cared for by the prince's officials, who had also rendered every possible assistance in saving what could be got from the wreck. We were all accommodated—a posse of consuls and merchants—in good quarters, and the prince invited us to an excellent entertainment. This was only one of the many instances where the Japanese have behaved in the most kind and hospitable manner to shipwrecked mariners, and I believe it is only in one case of late that there has occurred an exception to the general rule.

The time of which I speak, was some years before the war of the Restoration, when the Tokugawa rebel band which occupied the southern part of Yezo for a few months

\* Objection has been taken to the name of Matsumai, see 'Travelling in Yezo' contributed to the *Chrysanthemum*; it being contended that the name is only applicable to the former daimiate. Mr. Batcheler, however, who lived among the Ainu for some time, and studied their language, learned that it was an ancient name (as 'Mado-mai') used by these people for the southern portion of Yezo; and who say that Fukuyama was the person who first settled the site of the present town. The Japanese corrupted this into 'Matsumai,' and adopted it, the daimiate taking its name from the country. Hence, although properly applicable to the southern portion only, it was generally applied to Yezo—called also O-shima—before the name of Hokkaido (embracing also the Kurils) came into general use of late years, and frequently used specially to designate the town. It is therefore as appropriate I think as Fukuyama; and there is certainly no parallel—as Professor Dixon has put it—between this and the often mis-applied name of Satsuma to the southern province of Kiushiu. Owing to the Prince of Matsumai having been in former times their feudal lord, the people of Hakodate have only of late ceased to use the appellation of 'joka' (the castle town) for Matsumai.

\* Called by the Japanese 'Hiki-ami,' in distinction from set-net, 'Tate-ami,' and gill-net, 'Sashi-ami.'

looted the prince's property. The castle was then intact, and the town at its highest state of prosperity. It was still the chief business centre for Yezo, and nearly all the principal firms engaged in the extensive fishing trade had their head establishments there. It was also a much more substantial place, with better houses, and more fire-proof godowns than Hakodate. But of late years it has much fallen off in importance, and has never fully recovered the partial destruction during the fighting between the southern army and the Tokugawa rebels ('dasso') in 1869. Without a harbour the anchorage is exposed to the full force of the storms which travel up the sea of Japan, and there being only a few niches between reefs jutting out nearly at right angles to the shore, where junks make fast to wooden posts and iron ring-bolts let into the rock, numbers of these craft are annually destroyed. The superior advantages held out by Hakodate, with its capacious and safe harbour, easy of access at all seasons, and centrally situated, have caused the mercantile houses to transfer their larger establishments, and in many cases abandon Fukuyama altogether. Besides which the town of Esashi about thirty miles to the northward, which has a small harbour inside of Rodger's Island as it is called on the foreign charts, is much more favourably situated as a depôt for the herring-fishery of the west coast proper; while the port of Otaru, with its constant steam communication with the south and railway connection with Sapporo, monopolizes the trade of the north-west coast.

The town of Matsumai, or Fukuyama, has a very pretty appearance from the sea; with one advantage over all important places in Yezo, in its southern aspect; being situated on the lowest of the terraces which rise step by step towards a mass of mountains at its back, besides occupying two or three small valleys cutting these terraces, on the edge of one of which stand the remains of the castle. Cultivated fields stretch up the lower slopes of the mountains, and there is sufficient timber in patches to make a very agreeable picture. It may be reached from Hakodate by sea, or land. By the first the distance is thirty-seven nautical miles; and it is a pleasant trip of a few hours in fine summer weather, the steamer taking you close underneath the fine bold cape of Yagoshi (Cape Tsuka of the charts), then past the pretty village of Fukushima with its dark groves of cryptomeria, where the first submarine telegraph cable left the Yezo shore to connect with the main island; then on past Yoshioka, and round another steep headland called Cape Sagami, when you open the western entrance of Tsugaru strait with the rocky island of Kosima in the distance, and anchor immediately off the town. By land the distance is reckoned at twenty-five ri (61 English miles), and can be accomplished easily in a day and a half on horseback. Except for the first few miles round the bay of Hakodate the road is not practicable for jinrikisha. After passing through the village of Arikawa, eight miles out of the town, you soon reach the steep bluffs of the western side of the bay, under which you can pass, except when the tide is high, on the shingle beach; but the pleasantest ride is to ascend the terrace lands which commence at Tomigawa, as the view of the plain extending from Hakodate Bay towards

Ono and Nanai which has been already mentioned, and the curve of the sea-beach looking back from the top of the terrace is very fine. Besides as you ride along on the fern-covered terrace Hakodate head is seen to advantage, and you get a good view across the strait. Two descents are made from the terraces, at Yaginai point, and at Mohitzi; in the latter case into a fair specimen of a Yezo river valley, more or less cultivated, containing a good trout stream. At Tobitza, a village sixteen miles from Hakodate, the bluffs end in what is known as Mussel Point, which is fringed by a reef exposed at low tide, but with deep water right alongside. Thence the road follows the beach, crossing several rivulets, and passing through some fairly well-to-do villages, where the people follow the occupations of farming or fishing according to the season of the year. Deserting their homes for the entire spring and summer—you many observe many houses closed at that season—many of these find employment in the herring fishery on the north-west coast where they have duplicate houses; returning only in autumn to assist in securing the crops, or not until the approach of winter, when they go into the woods as lumbermen or charcoal burners. Hakodate is to a great extent supplied with firewood from these villages, and generally near the mouth of the rivers large stacks are to be seen ready for transport by small sized junks and sailing boats. Charcoal is also carried in the same way, but more frequently by pack-horses; they being able to load it direct from the kilns which are usually high up among the mountains. Drove of these pack-ponies, fastened head and tail—often as many as nine in a string attended only by one man—may be seen in the streets of Hakodate every day. An immense amount of charcoal is of course consumed in this cold climate. It is made of two kinds, a hard and soft; but none compares with the fine clean quality made from small wood with which the braziers are supplied at Tokio and in the south.

Off a low point just before reaching the village of Idzumisawa\* a reef extends some three quarters of a mile, on or near which two or three foreign vessels have been wrecked. The village of Kikonai is ten-and-a-half ri from Hakodate, where there is a fair sized river, and the hills receding farther from the sea-coast, leave a considerable interval of low land suitable for cultivation, but which is only availed of by the villagers in small garden-like, insignificant patches. This is a general failing in Yezo, to be accounted for by the scantiness of the population permitting the few residents and a great many non-residents being able to support themselves entirely by fishing, a kind of intermittent industry exactly suitable to Japanese character. I have always been struck moreover with the general tendency of the people to congregate in villages, and cultivate their gardens at a distance, instead of living in detached houses on the land they farm. So much is this the case that many take their mid-day food with them, and do not return to their houses before they cease labour for the day. A feeling of insecurity in a wild region may have

\* There are some insignificant oil springs here, particulars of which, together with those in other places in Yezo, will be found in an extract from Mr. Lyman's *General Report on the Geology of Yesso* which I append to a later chapter.

induced this arrangement, but it is probably more likely traceable to the customs of their fore-fathers in the south, where it being the rule to cultivate rice lands, which require irrigation on a mutual system, over the area suitable for which it would be inconvenient to have dwellings scattered. It is a very bad system to pursue in Yezo, but it will probably work itself out as competition increases with the augmentation of population.

This brings us to the question of the development of Yezo, and why it is that the millions spent by a paternal government during the last decade, and before, has exhibited such inappreciable results. Much has been said as well as written on the subject, and the late Kaitakushi department has been thoroughly well abused for its non-success. But it does not take half an eye to see, and it was predicted at the outset, that the whole scheme was based on an error in principle. The main object was to people Yezo, and so build up a barrier against Russian encroachment, the government being willing to expend any amount of money to attain this object. After some more or less spasmodic attempts at colonization as it was called, and the commencement of a government town at Sapporo on what was considered to be the most favourable site for a capital for the island, and centre of agricultural enterprise, the government accepted a scheme proposed by General Kuroda, a man without special knowledge or experience in such matters, and of peculiar disposition. A commission of scientific and technical gentlemen headed by General Capron—formerly of the Bureau of Agriculture at Washington—were engaged in the United States by the Japanese government, and reached Japan in 1871. General Capron took up quarters allotted to him in Tokio. He was made much of by the Japanese officials of course in the first instance. His suggestions and opinions were solicited and listened to with marked attention,—to be acted upon or not as suited the officials themselves. He was delighted with the urbanity, and apparent acquiescence in his views, displayed by all whom he came in contact with;—and who newly from a foreign country is not? He dispatched two of his staff during the first autumn to make tours in Yezo, and report upon its capabilities. The report of one of these gentlemen, a surveyor, was published when the volume entitled *Reports and Official Letters to the Kaitakushi by Horace Capron, Commissioner and Adviser*, appeared in 1875. The other, made by Dr. Antisell, a man of high scientific attainments, never appeared in print. General Capron objected to the term “sub-frigid” used by Dr. Antisell in speaking of the climate of Yezo; and some other differences arising between the two, the doctor was never subsequently employed in any practical exploration, and was later removed to another department. In the meantime, gardens were established for the propagation of foreign fruit trees and plants, and the “acclimatization” of stock imported from America was commenced in Tokio. Two steamers were built to the order of the Japanese government in the United States, and saw-mills and other machinery was brought from the same country. Additions to the staff were engaged as farmers, stock breeder, horticulturist, tanner, engineer; and another geologist was got

out in place of Dr. Antisell. Thousands of labourers were dispatched from Tokio to build a trunk road to connect Sapporo with Hakodate, dig canals, build government offices &c., and complete the laying out of the town of Sapporo, erect sawing and other machinery there, and no expense was spared to push things forward. Then a minute topographical survey of Yezo was decided on, necessitating the triangulation of the entire island with the most approved instruments, and a gentleman put in charge, who in experience was so far wanting, that a capable officer of the United States Navy had to be sent for to “assist” him.

Settlers were brought up in numbers from the south, people little suited to bear the rigorous climate of Yezo; and as an inducement for immigrants they were given so much money if they erected houses in Sapporo, or furnished with house and food if settling outside the town under certain condition. Under this latter arrangement hundreds of military settlers belonging to the samurai (official or military class under the old régime) were allotted land, residences, implements and stock, around Sapporo and in the Iskari valley. Schools were erected for the instruction of their children, and mulberry farms and silk-reeling establishments for the employment of the elder ones. Large contracts were let for supplying timber and stone to be employed in government buildings, bridges, &c., in and about Sapporo. A bridge was thrown over the river at Sapporo, wharf accommodation was made at Otaru, and a road cut to connect that port with the so-called capital. Indeed much was done, and very much money expended in doing it. Explorations were also carried on, mostly by the two geologists, a second having been added, of the coal and gold bearing districts of Yezo, and also in search for other minerals, full reports of which—and many of them both interesting and instructive—will be found in the volume of “Reports &c.” previously referred to.

Then it was decided to establish an agricultural college at Sapporo, and a special staff of professors was engaged in the United States for the purpose. Farms vineyards, orchards, and hop gardens, were laid out; and the stock from Tokio removed to Yezo, supplemented by additional cattle, horses, and sheep from America and China. Some changes occurred in the *personnel* of the foreign *employés*, but General Capron continued to reside at Tokio, paying one visit or so to Yezo, until the termination of his five years' engagement when he sailed for America. The difference between the views held by him just before his departure, and when he first arrived in Japan, is well shewn in part of the correspondence published in the volume already twice referred to. After perusal of these letters, however, it is difficult to judge whether General Capron ever recommended half the abortive schemes commenced by the department, or whether the department ever entered upon half the schemes the general recommended. One thing is certain that he missed a good chance, which might have been employed beneficially for the country, in refusing the control of the finance of the department which was offered him, and thereby neglecting the opportunity of directly influencing the conduct of its affairs.

On this subject the *Japan Gazette* remarked at the time:—

“ We will conclude therefore by noticing the last letter in the collection—enumerated in the index ‘ Commissioner Capron to ‘ Governor Kuroda. April 30th, 1875.’ This is a sort of *résumé* of the recommendations made at various times, and was penned just after the General’s reception by the Mikado. He there speaks very properly of the necessity in future ‘ of a more ‘ rigid scrutiny of the plans and schemes ‘ submitted for Your Excellency’s consideration,’ and reminds the Department ‘ of its shortcomings by saying:— ‘ My suggestions contemplated a systematic plan of operations, which had it been strictly carried out, would I feel convinced, have given more general satisfaction than the course adopted.’ In going through the ‘ Reports and Official Letters,’ now published, however, we have been unable to find any trace of ‘ a systematic plan of operations’; and therefore we cannot see how General Capron can blame the officials of the Kaitakushi for not having acted upon it. Indeed we think the great mistake the Commissioner made was in not submitting such a plan—which he had every opportunity afforded him to do the first season—and insisting on its being carried out to the letter, or resigning a post where he had no authority and but little influence. It is the general opinion that he could have carried his point, and we believe it. But, even had he been forced to resign, he would have shown a spirit of independence which must have been admired; and have set an example to other foreigners in quasi responsible positions in the government service of Japan; at the same time serving to shew the government itself, that men, who have character and reputation to lose, cannot always be retained by the inducement of high salaries alone.”

The conduct of the affairs of Yezo, by the Kaitakushi department subsequent to the departure of General Capron, is not without interest. A successor was never appointed, but several changes were made by the discharge and engagement of foreign specialists; and a new spurt was given to the life of the department when it undertook to supply the iron smelting furnaces at Kamaishi on the north-east coast of the main island with fuel. The scheme was cleverly concocted in order to obtain an additional grant of money from the central government, the department having expended in about six years nearly the whole ten years appropriation. And it was successful,—that is in getting the farther grant.

The idea was that the coal field of the Horomoi branch of the Iskari River should be worked, the coal transported to the sea the first fifteen miles or so by rail or tramway, thence down the main river and out of it through an improved mouth, and then by sea to its required destination. Three chief engineers and several subordinates were employed—one to mine the coal, one to lay the rails, and one to improve the river. The first resigned after some experience of official ways, and his not being permitted to control the work. The third gave what he considered a true estimate of the river works necessary, which were rejected in

favour of a rival scheme of rail communication for the entire distance to the port of Otaru got up by the second gentleman. Colonel Crawford was ‘ smart,’ there is no doubt. He agreed to build a line of railway, twenty-two miles between Otaru and Sapporo, for the amount of money the officials offered to devote to that purpose; and to do it in one season. He went to the United States, got the plant and rolling stock, and he had a train running over the line in November 1880. He had an audience with the Mikado, who conferred on him a decoration, and he went home.

After Colonel Crawford’s departure the Kaitakushi retained the services of a civil engineer for a time, and a skilled mechanic and engine driver. In November 1881, additional plant was received for thirty-five miles more rail to extend the line from Sapporo to the coal mines, and work was commenced upon it when the department was abolished by imperial decree dated 8 February 1882. From that date affairs in Yezo take a new departure, of which I shall afterwards speak. I must now continue the route to Matsumai and the west coast.

I left the reader at the ten ri limit for foreign travellers from Hakodate. Furnished with the necessary government passport, he will have no difficulty now a days in finding his way by following the telegraph poles. Striking inland to the village of Shirinchi where he crosses a river of the same name, the road then follows up a very fine valley, in the upper part of which are some good examples of terraces. These terraces have been all carefully surveyed and prospected for gold, but the result has been that at the present rate of wages the working would not pay.\* In ancient times there had been considerable

\* For detailed account of the survey of this locality called the ‘ Musa Gold Field,’ and similar exploratory operations in other parts of Yezo, see *The Gold Fields of Yesso, a Report by Henry S. Munroe* published by the Kaitakushi, Tokio 1875; and for other technical information of a mineralogical character, *Preliminary Report of the geological survey of Yesso by Benjamin Smith Lyman*, 1873;—*Report upon Yesso coals*, (Munroe) 1874;—*Report of a Geological Trip through Yesso*, (Lyman) 1875;—*Report on the Yamakushinai oil lands* (Lyman) 1875;—*Report on the Washinoki oil lands* (Lyman) 1875;—*Geological Notes* (Munroe) 1876;—*Report on the second years progress of the survey of the oil lands of Japan* (Lyman) 1878;—and *General Report on the Geology of Yesso* (Lyman) 1876; all the earlier of which are to be found in the volume of ‘ Reports and official letters to the Kaitakushi,’ Tokio 1875. Besides these there are the plans and specimens, and numerous original notes concerning which Mr. Lyman, at the conclusion of his last and general report above mentioned, says:—

“ It appears, then, that the total area of our maps is over 190 square feet, the greatest part of which is as closely filled up as clearness would permit with minutely measured, complicated work, which required, however, in addition to what has been copied into the final maps, a very large amount of mapping, section drawing and careful measurements upon the rough sheets. The lettering has been done in both Japanese and English and is very full, so as to make the work easily understood; yet, it is hoped, not so heavily written as materially to obscure the topographical and geological facts. Of the reports there has been a total of about 770 pages of print.

“ There are over 180 two hundred page-note books of the survey and probably some 250 sheets of rough plottings besides a large quantity of manuscripts of other kinds; nearly the whole of which still belong to the Kaitakushi. As they are, however, wholly useless in all probability to the Department, I would strongly urge that they be returned by a very trifling effort of liberality to the

gold washing done in this valley, and some of the water-ways then in use can be seen if one knows where to look for them, but hardly otherwise, as trees of considerable growth now exist both in and about the channels where the water was formerly led. There are also some strong hot springs in a side-valley just off the regular road, but which are not now kept in decent repair.

Ichi-no-watari is a fair roadside inn in a nice situation, beyond which the path ascends to the crest of the hills, and then descends another valley to Fukushima on the shore of the Strait of Tsugaru. Thence you travel along the sea shore which is pretty thickly strewed with the dwellings of fishermen, and then following a path over the hills in order to pass at the back of Cape Sagami, descend towards the sea shore with Ko-shima island in front of you, and follow the road into Matsumai.

To go beyond Matsumai and along the west coast is not a usual route for tourists to take, it being a rough road and the accommodation at the fishing villages not always of the best description. Nevertheless when the traveller has reached Matsumai, unless he have a chance to return to Hakodate by steamer, he may as well proceed as far as Esashi, a couple of days travelling, and then take the direct road from that town towards Hakodate, on which, if bound farther north, he need only go as far as Ono, twelve miles short of Hakodate, and there strike the road to the Volcano Lakes previously described. By the map this will appear a considerable detour, but "the longest way round is often the shortest way home," and it is very certain that in this case the old saying holds good; as fishermen and other native travellers from the neighbourhood of Esashi, and even from places to the north of that, generally adopt this route. The reason is, that between Esashi and where the northern road strikes the west coast at Sitze Bay, there occur two high capes called Ota and Mota, over which the land road has to climb, and

present geological assistants, either collectively or individually, who are the only Japanese capable of making any proper use of them and who would feel more interest than anybody else in their careful preservation and in holding them ready for any possible reference to them that the government might need in the future. The note books are all indexed; and the notes are arranged on such a plan that reference can instantly be made to the original place where any surveying station or mineral locality is mentioned, no matter in what book or by what assistant the note was written. For the name of the station is simply the assistant's initial with the number of the volume and folio of his books and a small letter to distinguish the notes of any one folio.

"Besides the work on the maps and reports, in the field and in the chemical laboratory, we have collected and arranged something like 8,000 specimens of Hokkaido minerals (including about 2,000 previously in the possession of the Kaitakushi.) They are chiefly rock specimens but partly fossils and minerals proper; and have been arranged according to the geological groups. Each piece has had a small label securely gummed upon it to ensure against any future mistake in regard to its locality; and larger separate labels have also been prepared to some extent. But we have not found leisure to complete the arrangement, the separate labelling and the trimming of the specimens: so that the collection still is more a useful than an ornamental one, and less useful to the public and less convenient than when the separate labels shall be all properly finished, so that they can be read from the outside of the glass cases without handling the minerals."

the latter of which is not passable for horses.\* There exist, however, two places where it is possible to get across from the west coast to Volcano Bay, but as the tracks have not been kept open for years they are overgrown by bamboo scrub, and there being no accommodation houses, are seldom resorted to, and never without a guide. The first leaves the west coast at Tomari-kawa, nineteen miles beyond Esashi, passes the abandoned lead mines near the head waters of a southern branch of the Yurap river, and emerges on Volcano Bay at the village of Yurap, fifty miles from Hakodate. The distance is reckoned at ten-and-a-half ri approximately. The other is up the valley of the Tohibets river, which enters the sea of Japan at Setanai between Capes Ota and Mota, crossing a comparatively low watershed near the ancient gold washing region, and reaches Volcano Bay, at a point about half way between Kuroiwa and Oshamambe, about fourteen miles farther up the bay than Yurap. The distance from sea to sea by this route is called twelve ri. Both of these routes in their present state may be considered impassable for ordinary travellers. The opening of bridle paths by them would be a great convenience to the people of the villages on the west coast, but farther than having had the bamboo scrub cut away on one or two occasions to permit of prospecting parties reaching the mineral districts, the government has hitherto done nothing.

Owing to the heading I have placed to this chapter, for want of a better one, this is the most appropriate place to draw attention to a fact which has lately become apparent to those who have studied the natural history of Japan, namely that the Strait of Tsugaru which separates the main island from Yezo, is a very decided line of demarcation between two dissimilar fauna. I mean to say, that while researches in this branch of science have always shewn the Japan islands to be to a great extent essentially distinct from the adjoining continent in forms of animal life, it is only of late that Yezo has been recognized in a zoological sense, as separable from the rest. It can now, however, I think be clearly shewn that such is the case, and that while on the one hand Japan proper—that is, the main and southern islands—exhibits a mixed fauna, partly peculiar, and partly allied to that of China and regions more to the southward, Yezo is inhabited by animals generally identical with those of north-eastern Asia, and must be considered in that connection a part of Siberia.

I am not aware that this fact was ever alluded to before a study of the ornithology of Japan forced the conclusion upon myself. In the introduction to a paper read before the 'Asiatic Society of Japan' on January 13th, 1880, entitled *Catalogue of the Birds of Japan*, compiled by Mr. H. Pryer and myself, we drew attention to it, under the heading 'Zoological line of Demarcation,' noting a number of species which inhabit Yezo, but are not found upon the main island, and conversely, those essentially Japan birds which do not reach Yezo; incidentally referring also to a similar division in mammalia. These views were supported by Professor Milne on geological grounds, whose paper

\* For general itinerary see, 'Distances on Travelled Routes in Yezo' *Japan Gazette*, 16 Sept. 1882.



'Evidences of the Glacial Period in Japan' ('Trans. As. Soc. Japan' 1880) went to shew that in all probability the straits separating severally Yezo from the main island, and Sakhalin from Yezo, as well as the channel at the mouth of the Amoor cutting off Sakhalin from the main, were possibly not in existence during the warm period antecedent to the glacial epoch. In making a revision therefore of our 'Birds of Japan' last year, I again referred to the same question, and I pointed out ('Trans. As. Soc. Japan' Vol. X pp. 134-144) more particularly the evidence with regard to birds. Since then at the instance of Dr. Divers principal of the Imperial College of Engineering, I undertook to prepare a paper for the 'Asiatic Society of Japan,' which I called 'Zoological Indications of Ancient Connection of the Japan Islands with the Continent,' and which, through the courtesy of the proprietor, has lately been printed in the *Japan Mail*. In it I endeavoured to show that the very mixed fauna of Japan might be accounted for without the assumption of a continuous land connection with the Eurasian continent. Others are able to judge how far I succeeded, but without being sanguine enough to believe that I could convince every one who thought on the subject, I at any rate during the inquiry found proof sufficient, in my own mind, to lead me to believe in the existence of the strait of Tsugaru in very ancient times, and to entirely attribute its formation to a period far beyond the time when the two more northern straits were opened; and by its assistance I found I could fairly account for, not only the paucity, but the peculiarities in the land mammalia as well as the non-migratory birds, of Japan proper, and their very decided distinction from those on Yezo. I adopted, therefore, this line of division and classed the latter island as part of Siberia.

It is needless here to adduce the instances which are found to agree with this theory; they have been fairly laid out in the paper referred to, which is accessible to any reader. I have here mentioned the subject only, in order to shew that while politically Japan embraces Yezo, and the Strait of Tsugaru is no longer considered as separating a little known and barbarous country, still it must remain so far as the kindred sciences of physical geography and zoology are concerned, a line of demarcation sufficiently important to authorise me to select it as a heading for a chapter on 'Japan in Yezo,' which I almost fear the readers of the *Japan Gazette* must be nearly tired of already. Nevertheless I trust there may be a few who will follow me through to the end of what I commenced. Of such I will ask, for the remaining chapters, a little additional indulgence in case of such blunders as are certain to occur, as in all probability I may not be able to correct all of them when passing through the press. Not only that, but in order to get through those which would be most difficult for the printer first, the order of sequence may be even more disturbed than with those chapters that have already appeared. They will be probably under the following headings:—Matsumai to Esashi:—Esashi along the West coast:—To Otaru via Iwanai:—The Mororan Route to Sapporo:—West of Cape Erimo:—The North-East Coast:—From Cape Soya to the Iskari:—The North shore of Volcano Bay:—The Iskari Valley:—and, Sapporo and its Vicinity.

## XIII.

## MATSUMAI TO ESASHI.

As is usual at a town, the horses had not put in an appearance by the time I was ready, so I started on foot out of Matsumai, some Japanese friends accompanying me to the outskirts of the town. There was a strong westerly gale right in my teeth as I passed over the bare terrace land of the blunt point known on the foreign chart by no special name, but marked by what is called Flat Rock, near which the brig 'Otto' was lost some years ago and where a foreign rigged Japanese vessel has since been wrecked.\* For a mile or so outside the town there has been an attempt at an avenue of pine trees, in imitation of the approaches to daimios' residences on the main and southern islands, but these exotics have not flourished in this exposed situation.

Striking the shore, the road follows it running north-west and N.N.W. The actual beach is generally sandy, but there are numerous reefs in the sea, and the edges of the unwooded table land is scarped off in low rocky bluffs. The mountains rise at some distance back from the shore, and are broken by some valleys with small streams. The country is generally devoid of timber, and the few small villages are of the poorest description.

At Eramachi, five ri from Matsumai, we changed our horses. The shore-line then becomes steep and impassable, and the road runs over terrace land two ri to Haraguchi. North of this the mountain sides approach

\* It is, I understand, the intention of the government to light the western entrance of the Tsugaru Strait, which considering the number of vessels which now visit Otaru and other ports on the west coast of Yezo, and those trading on the Sea of Japan shore of the main island, to say nothing of the direct traffic between Hakodate and Shanghai, is most desirable. The light-house will be either on the southern point called Tatsupi-saki, or on Cape Sagami just east of Matsumai. A light, I believe, is also in contemplation near Hakodate as a guide for vessels making that port. It has been proposed to put this upon Mussel Point at the entrance of the bay, but this in my opinion would be an error. Light projectors now-a-days take sailing vessels too little into consideration. They consider if they light up a coast sufficiently for steamers which can steer straight courses, that they do all that is necessary; but I think on the contrary the first consideration should be sailing vessels whose courses depend upon the wind, and that the main object should be to place 'leading' lights. A light on the back or southern part of Hakodate Head—and it is not difficult to select a site there for it—would be essentially a leading light in every direction; while if on Mussel Point, a vessel beating up from the eastward keeping well in with the Yezo shore to avoid the strength of the current, would have this light shut in by the projection of Hakodate peninsula; and not only this, but it would be visible five miles less distance to the eastward. At the same time from the south-westward it would not act as a leading light at all, but would require to be kept on the port bow, and at different angles according to the distance, an uncertain calculation at any time and especially liable to false estimation during thick weather; so that vessels coming from that direction would be liable to be drawn into dangerous proximity to the long submerged reef which makes off the low point near Idzumisawa, which I have mentioned in the last chapter. I trust these views, which I know are shared in by nautical men acquainted with the locality, will receive best consideration by the department, hitherto so well managed, which attends to the establishment and maintenance of lights upon the coast.

the sea, and the road becomes a mere path along the slopes, crossing many ravines with steep sides by zig-zags. At one place it touches the shore at a small village, where the fishermen have not even level ground enough to haul their boats out upon, but are obliged to up-end them against the steep bank and secure them with strong lashings to guard against their being washed or blown away. The path often reaches a considerable elevation in avoiding the steeper parts or rounding the heads of some of the 'kloofs,' and it is very rough and tiresome for horses.

Where the higher mountains near the coast, as they do at Ishisaki, there is some timber to be seen on their crests, but the greater part is only covered with scrub or coarse grass. All three islands, Kosima with its adjoining islet and two attendant rocks, and which becomes more V. shaped as you leave it to the southward,—Osima, and Okosiri, as also the high land of Cape Ota, are in sight at once.

Being ahead of the pack animals and unacquainted with the road, I did well to fall in with a couple of young men on horse-back going to Ishisaki who kept me company. They mentioned they had been to look at the carcass of a horse lately killed by a bear. They said that bears were very numerous on the Ishisaki mountains, and that deer also inhabited that piece of high land. Bears are tolerably numerous in most parts of Yezo, are often very destructive among horses, and occasionally attack people. They are formidable brutes attaining large size, are usually black or very dark brown. The Yezo bear is considered a variety of the brown bear of northern Europe, *Ursus arctos*. It is a very different animal to the small bear marked with white on its breast inhabiting the main island, which is a peculiar insular form confined to Japan and known to naturalists as *Ursus japonicus*. This difference between the bears is one of the striking instances of dissimilarity in the fauna of Yezo from Japan generally, to which attention has been drawn by Wallace (see 'Island Life,' and 'Trans. As. Soc. Japan,' Vol. 8, pt. 2); and which is interesting as marking the present continental character of the northern island, as contrasted with the relics of a bygone age existing on the main and southern islands, and which has been brought forward as testimony regarding a glacial age, (see 'Evidences of the Glacial Period in Japan,' 'Trans. As. Soc. Japan,' 1880.) by Professor John Milne.

On the island of Eturnp the bears are I believe invariably of light colour, indeed with a good deal of creamy white mixed with the otherwise chocolate brown hair; and it has been remarked of some which have been kept in confinement in Tokio, that the form of the head is different. However, whether these are permanent characters which would admit of more than separation as a local variety is undetermined. The bears on Kunashiri and Urnp, on either side of Eturnp—and there are said to be none on the farther Kuril islands—are considered to be the same.

Notwithstanding bears are so numerous in Yezo, the denseness of the under-brush and bamboo scrub is such that they are seldom seen, though their presence is not unfrequently made known by a rustling among the bushes, or the starting of horses as the less frequented trails are followed. Japanese

travellers usually keep up a song in such places in order to scare the beasts away, for it is very awkward to come suddenly upon them, as they might in such cases prove dangerous. I remember on one occasion, now some years ago, as I was passing over the then very bad track between Yoichi and Iwanai in November, I put up at a single house in the mountains. A considerable quantity of snow fell during the night, and the morning looked anything but inviting for a journey. Added to this, my guide reported the horse in a bad state. When it was brought to the door of the house for packing, and I saw the poor brute shaking with cold, I decided not to attempt to ride, but, giving the guide instructions in the event of the horse giving in, to hire, if possible, man or beast to carry my baggage to Iwanai, I started ahead on foot. Expecting to have to walk all day, and being encumbered with my wrapper as a protection against the snow, I gave my fowling-piece, which was in a strong seal-skin cover, to be fastened on the pack with the baggage, having previously removed the caps and covered the nipples under the hammer. Hitherto I had invariably carried my gun myself, on the chance of meeting with game, and always loaded ready for action. It was unfortunate, as it happened, that I neglected to do so this day.

The first couple of miles was an up-hill pull to the top of the pass; thence the track leads down a valley, crossing and re-crossing a mountain torrent. The mountains are clothed with thick forests of fir and a mixture of hardwoods. The stream and valley have a steep fall till it becomes wider, when there is a house or two. Continuing downwards, the track leaves the stream on the left hand and follows a valley with much soft ground and deep mud-holes. I stayed for a short time at a house, expecting my guide and horse to come up with me, but, as they did not appear, I went on again in the thick snow. Soon after this I struck the main stream of the Horogap River, which falls into the sea some 3 miles north of Iwanai. The path keeps on its right bank till it crosses it at a ford, where there is a small skiff used for a flying bridge. About here are some houses, and clearings under cultivation.

It was in this part of the road that I met with somewhat of an adventure. I was trudging along in the track where there was high bamboo brush on either side, when, as I turned a bend, I came suddenly in view of three bears, an old one and two cubs, in the path, about 20 yards distant. They did not seem at all scared, so I shouted and waved my arms and flaps of my wrapper, which caused the old one to mount on her hind legs and take a better look at me. How at that moment I wished for my gun, with a brace of bullets! I could not advance, and to retreat would have been ridiculous, as my horse and gun might be miles behind, not having seen them since morning. So I waited till the three bears left the road open, which they did, after a few minutes, quite leisurely, by entering the thick brush. Just as they did so, however, attracted, I presume, by my shouting, another big bear, which I took to be the male, came rustling through the bamboo scrub on my left-hand, and halted within 10 paces, where he stood looking at me. I attempted the same method of trying

to frighten him off as I had done with the others, but he seemed quite indifferent to the sound of the human voice or my gestures. Not relishing his presence in quite so close proximity, I looked for a stone, but there was not one on the path; so I took up a handful of half-dried mud and threw it at the brute. This seemed to convince him that I was in earnest, or perhaps having sufficiently satisfied his curiosity, he deliberately walked off.

But Yezo bears are not always inclined to be so good-natured as these, as one often hears of Japanese being mauled by them and occasionally of having been killed. During the first winter, I think it was, of the settlement of Sapporo, a large bear, which had probably been disturbed from its winter lair by the falling of a tree, a snow slide, or some unusual occurrence, entered the town, broke into a house and devoured one or two children. Its skin is now exhibited in the Sapporo museum, together with the contents of its stomach preserved in alcohol.

Before getting into this subject of bears so deeply, for which I trust the reader will excuse me, I said that my two fellow travellers had stated that there were deer to be found in the mountains at the back of Ishisaki. This was no doubt true, but speaking generally there are few if any deer in the western part of Yezo. In the interior and the east and south-east they have always been very numerous, and notwithstanding the immense numbers slaughtered by the Japanese and Ainu every winter of late years for the sake of their skins and antlers, they are still found in large numbers. In the summer they are mostly in the mountains breeding, after which, as the autumn advances, they travel across country very long distances, so as to reach certain favoured districts where there is little snow and abundant food, by the time the winter sets in. One of their favourite lines of migration is along the south-east coast towards Cape Erimo, and across the dividing range which runs from that point in a N.N.W. direction, on the lee side—if I may so call it—and in the valleys and slopes having a southern aspect, they find situations suitable to their habits. It is in this region, and of late years also in the valley of the Tokachi, where the great slaughter is carried on in winter. Every description of gun and rifle, from the Japanese matchlock to the Spencer repeater, is to be found in the hands of the natives, supplemented by the bow, and cross-bow and poisoned arrows of the Ainu; while all kinds of mongrel curs, from the small Ainu dog to the foreign "come—here" or 'kami,' are collected to assist the hunters on their snow-shoes in driving—often into the sea—or running down the deer. It may be considered incredible, but it is no less true, that during winters of unusually deep snow, the number of skins taken has reached as high, I believe, as one hundred thousand.

Certain parts of the valley of the Iskari and its tributaries used to be favourite resorts of the deer, and even for the first few years after the settlement of Sapporo there was good sport to be had in that immediate neighbourhood; but, whether from the appearance of houses, or whether the animals have been killed off, deer are seldom seen in that region now. I remember when late in 1869 I passed across country, after having

canoeed from the Iskari up the Ebets to Chitose, where the hamlet of Bibi and the government venison-cannery now stands, finding the deer all through there as thick as sheep, and nearly as tame. Instead of which, for the last few seasons, the cannery has not been in use. Every winter a certain number are killed near Hakodate, the most frequented district there, being between the valley of the Mina river, Nodap and Cape Blunt (Shiokubi saki); where it has sometimes occurred that the deer have been so hard pressed that they have taken to the sea and actually crossed over to the main island. The distance across the Strait of Tsugaru is, at the least between the points, ten sea miles, so that the probability is that the animals have had to swim not less than fifteen English miles. The people on the southern side had noticed the occurrence of deer there—there being normally hardly any in that part of Nambu—and were at first unable to account for their sudden appearance.

It was formerly, generally understood that there was but one deer in Japan, *Cervus sika*, a distinct species confined to these islands. It has lately been determined, however, by Père Heude of the Jesuit Mission of Shanghai, to whom I forwarded a head, that the ordinary deer of Yezo is quite distinct (Père Heude considers it to be *C. manchuricus-minor* or an undescribed species); and that there probably exists on that island a second species. Those on Yezo are generally large and finely antlered compared with southern individuals. Both skins and antlers are articles of export, the latter mostly to China, while for the former there is usually sufficient demand in the Tokio market for home consumption, in the manufacture of light kinds of leather. Exportation abroad has been attempted, but without good results, owing principally to the fact—though it is not what one would naturally suppose—that owing to the coldness of the climate, winter skins, while carrying a heavy crop of hair, are not to be compared in thickness or toughness, with skins from warmer regions, and consequently do not work up into such good leather. The export of antlers—and these are all taken from the killed stags, dropped horns being comparatively worthless—from Hakodate to Shanghai alone, amounts to something like three thousand piculs annually, which, taking them at a fair average weight, would account for a very large proportion, of what above might seem otherwise an exaggerated statement.

We reached Ishisaki about sunset. It is only a moderate sized village, but better than the general run of those along this coast. It is situated on the north side of a river, easily fordable when not in flood, in a deep narrow valley having steep partially wooded mountain sides. From Ishisaki the coast bending in to the north-east is of the same bold and rocky nature, necessitating the road passing along the scrub-covered sides of the mountains cut by ravines. I noticed many people—it was October—digging the long roots of a plant which grows wild in many parts of Yezo. The Japanese call these 'nagai-imo,' using them for food. They have also the 'yama-gobo' which if not identical, is very like the 'gobo,' a plant something between a dock and a thistle speaking unbotanically, which has burs, that is cultivated as an edible

root. The Japanese in Yezo use a good many wild plants as vegetables, either in the fresh state or pickled, notably the 'fuki' (*Nardosmia japonica* according to Hepburn's Dictionary) a quick growing large leaved rhubarb-looking plant with hollow leaf-stem, which flourishes especially in the deep black soil of the valleys, where it often attains very large dimensions; even sometimes, as I was informed by the master of a house on Volcano Bay who had collected some for one of the exhibitions, as much as six feet in diameter of leaf. It is the leaf-stem which is used for food. Then the ordinary 'braken' or branching fern, called 'warabi' is used in two forms; namely, the young shoots in spring are boiled as a vegetable; and the roots being dug up in autumn are pounded and washed in wooden troughs, the white liquid resulting from such operation being evaporated, leaves a sediment which, when crushed, is tolerably pure arrow-root. During the rice famine some years ago this was largely used by the rural population near Hakodate, where the lower mountain slopes and terrace lands are for the major portion fern covered.

To these may be added some fruits, such as the chestnut and walnut, the latter confined principally to the valley of the Iskari; the grapes of the wild vine which grows in profusion especially on the alluvial banks of rivers; the tasteful fruit of the 'kokwa,'\* a strong climbing plant, the rope like trailers of which are one of the features of Yezo forest scenery, and which ripens or rather becomes sweet after being touched by the autumn frosts. Besides which, two or more species of a half black-berry half raspberry, a true raspberry, red currant—this particularly about Nemoro,—and other berries. I should not omit to mention at the same time that wild asparagus grows in Yezo, though I am not aware of its being used as food; also a wild celery on the sands near the sea; small leeks; some lilies with edible roots; and a delicate water-plant called 'junsai'—from the occurrence of which the smaller of the two volcano lakes near Hakodate takes its name—, and the water-cress. Add to these, the various kinds of mushrooms and tree fungi, most of which are eaten, and we might say that, even omitting the seaweeds and other marine products, that Yezo is not scantily supplied with vegetables and fruits suitable for human use; while in the way of food for horses, cattle, swine, and deer, the universality of the bamboo-scrub, many coarse but nutritious plants that we call weeds, and the abundance of acorns, beech-maste, chestnuts, and roots, afford an abundant natural supply. In the finer kinds of grasses such as would be suitable for sheep, however, the island is unfortunately deficient, if they are not entirely wanting; and it is on this account that the experiments hitherto tried in wool growing have never developed into anything of consequence, because the government has not been alive to the necessity of introducing exotic grasses on a large scale, contenting themselves with a few hundreds of acres, which the increase of the sheep has rendered inadequate to the demand for proper pasture. That foreign grasses take naturally to the

soil and climate of Yezo, is exemplified on the farms at Sapporo and Nanai, and it seems a false economy not to extend their range to many other suitable localities, so that they might gradually become distributed over large areas, with a view to stock farming in the future.

Owing to the distribution of the government post stations we were forced to change our horses at only one and a half ri from Ishisaki, and indeed should have had to do so again within the next two and a half ri before reaching Kaminokuni, had I not ridden mine on a head so that the packs did not catch me up. This latter portion of country is lower and the road follows mostly the sand-beach about N. by E. to a point westward of Kaminokuni. Looking back from this, Ishisaki and Kosima are seen in line S. S. W., while the same line prolonged N. N. E., about cuts the island at Esashi. The path crosses over this point on terrace land ending in a bold shore-line, and passing a small village, and a peculiar rock with a hole though it, reaches Kaminokuni, situated at the mouth of a river coming down a fine open valley from the south-eastward; indeed there are two rivers which join near the sea, and the smaller of which appears to come out of a distant valley more to the northward. The main river is not fordable near its mouth, where a ferry is kept up. Kaminokuni is a rather well-to-do place, its importance being manifested by the existence of several temples. I spent half a day here, in order to inspect the river with a view to salmon-trout fishing another season, as Mr. Fukusi had been very successful on one occasion, his fish averaging very fair size. I followed up the valley as far as a few farmers' houses, called Tomap. The river winds about through it with only low banks, and there are many old river beds where I found some ducks. The soil seems to be all alluvial and good, the hills on either side not being precipitous, and in few places at all steep. The roads are necessarily muddy and bad. There are other hamlets scattered about beyond Tomap, which all seem to be tolerably old settlements. It is possible to follow up this valley, and passing over the mountains to come on to the shore of the strait of Tsugaru, just clear of the bay at Hakodate, but the trail is said to be indifferent and seldom used.\*

It is in the mountains of this region that the 'hinoki,' a species of *conifer* of the genus *retinospora* generally considered to be restricted to the south side of the Strait of Tsugaru, is found. It is one of the best timber trees in Japan, and much used. Hakodate is generally supplied from the region round about Awomori gulf, where it is abundant. This species is, I believe, distinct from that found about Owari gulf and other districts in the south, and the timber differs in appearance and texture. I have not heard of its being found in any other part of Yezo.

On the Kaminokuni river I found the people preparing salmon weirs, which they build of stakes, brush, and mats, funnel shaped near the bank, in such a way that most of the fish must pass through them. At night they squat alongside, having a gaff fitted to a pole, limber at its end. This they

\* According to Boehmer a species of *Actinidia*: ('Reports and official letters to the Kaitakushi' pp. 304, 322.)

\* Erratum. In Chap. 1. ('Retrospect of Hakodate' *Japan Gazette* 3rd Feb. 1883), for "Having kept the mountainous coast of the north-western part of Nippon on our left hand," read *right* hand.

keep on the bottom, or allow to drift along the bottom, inside the weir, and when they feel a fish rubbing over the stick suddenly jirk it towards them and so gaff the salmon. It is a destructive poaching device, and pricks and scares a number of fish which are not landed, doubtless doing great harm to a salmon river. It should—as well as netting in narrow rivers, and spearing in the upper spawning waters—be abolished by law. There have been it is true, some regulations intended to restrict fishing in inland waters in Yezo, but whatever they are, they are not enforced as they should be. There may arrive a time before long when it will become necessary to re-stock the rivers of the island at a far greater expence than would now be entailed by the employment of a few overseers, entrusted with the supervision of the fisheries. It may not be out of place here to remark that while in the present state of Yezo the fisheries are the only developed wealth, they are at the same time almost the only source of revenue accruing to the government. During the past year there was collected as a tax, nearly a million and a half yen, which reduced to a metallic value would be about one million dollars, about four and a half dollars per head of the population. It is not only the severity of this tax, which is on an average of fifteen per cent., or nearly one sixth of the gross produce of the capital and labour employed in the fisheries, pressing so hard upon the people, but it is the wasteful way which the executive goes about its collection and realization that is so shameful. In the first instance a host of officials employed in gathering it in kind, take the cream off it, after which, it is skimmed down farther and farther by excessive freights, bad bargains, and various squeezes, till the return made—and there can be no mistake about it as it figures in the Finance Minister's annual statement—to the central government is just one half. That this kind of thing should be allowed to go on in the face of the declared intention of the government to encourage immigration into Yezo, seems utterly absurd; and I imagine can be only accounted for by some principle of political economy as yet undiscovered in the western world.

During the afternoon of the day last mentioned I rode two ri alongside the rose and scrub covered sand ridges adjoining the beach to Esashi, and found worse quarters in that town—which seems to be a general rule—than I might have occupied at any obscure fishing village. This place, which contains somewhere about ten thousand inhabitants, is a collection of houses drawn out to considerable length, mostly on the slope of a steep bank of soft rock, partly on the beach at its foot, and partly on the terrace about 150 feet above, facing the sea of Japan with a general W.N.W. aspect. The streets are narrow and the houses poor looking, but there are several large temples. Right off the town there is an island, between which, and the town, the water is shoal with rocky bottom, only allowing a narrow passage available for small craft on the town side to the southward. The northern and island side of the harbour is occupied as a junk anchorage, which in southerly and westerly winds is safe enough, but as a winter roadstead it is very inferior.

The importance of Esashi is derived from its position as an entrepôt for the great herring fishing district along the coast to the

northward as far as Cape Mota and Okosiri island, and it may be said to divide with Sitze, and Iwanai, the fishing produce of the west coast proper. It comes within the 'ken,' of which Hakodate is the capital, and can be reached from that place by an inferior mountain road *viâ* Ono in two days travelling, except sometimes in winter when the passes are blocked with snow.

## XIV.

## ESASHI ALONG THE WEST COAST.

If I wanted to pick out a rough trip for an excursionist in the southern part of Yezo, I think I should advise him to sleep at Ono about a dozen miles out of Hakodate, as far as which he can ride or drive as he thinks fit, for it is a dead flat the whole way, and next day start on the road over the mountains to Esashi. After passing Nakayama and Udzura he could branch off at Gamushi about nine miles short of Esashi and strike the coast at Odope or Ogorope; then following the shore to the northward pass over Capes Ota and Mota, and round Cape Beneke into Sitze Bay. Then turning south-easterly cross over from the west coast to Volcano Bay, returning to Hakodate by the regular southern road. It would take him perhaps ten days or so, but I think he would be repaid by having passed along some of the roughest coast, and over two of the worst mountain paths on any of the travelled routes in Yezo.\*

Without following my ideal traveller round on the whole excursion, I will now simply describe a journey I once made along the west coast to the north coast of Esashi.

The first day, the 15th of October, I reached Kumaishi, a distance of nearly ten ri northerly and north-westerly. The riding was various, partly on the beach and partly on moderate uplands along the sides of high hills, in and out of ravines, and crossing rocky points, depending on the nature of the coast which is mostly rocky with reefs, ledges, and detached rocks in the sea. There are villages all the way along, mostly well-to-do looking, and contrasting with the poorer places between Esashi and Matsumai, and one notices great numbers of large boats used in the herring fishery, the great resource of this coast. In places there is little space available for hauling out the boats, owing to the steep nature of the banks, so that slips have had to be cut out of the hill sides for the purpose, sometimes out of solid rock; and you find houses built in all sorts of queer situations. The rock formations seem very much mixed, from the soft clay rock near Esashi which appears in fine horizontally stratified white bluffs on the north side of the river mouth at Odope, with intervening sandstone and conglomerate, to the hard trachytic rock which takes basaltic form, and of which there is a particularly fine exposure just south of Ainuma.†

\* For itineraries, see *Japan Gazette*, 16th Sept., 1882.

† Making no pretence towards geological knowledge myself, I have been careful to check my notes by referring in most cases to Professor John Milne, of the Imperial College of Engineering. Regarding the geology of Yezo generally—though he was never I believe on that part of the coast now under consideration.—Mr. B. S. Lyman says:—

In the valley of Asabu a few miles north of Esashi, there is an open flat of large extent, in which there are some farming settlements; but whether the soil is too swampy, or from what other reason, the amount of

"The rocks of Yezo seem to belong to seven different groups, as follows:—

<i>New Alluvium</i> perhaps up to	100 ft. in thickness.
<i>Old Alluvium</i> " " "	100 " "
<i>New Volcanic Rocks</i> " " "	200 " "
<i>Toshibets Group</i> probably	
about.....	3,000 " "
<i>Old Volcanic Rocks</i> perhaps...	3,000 " "
<i>Horumui (or Coal Bearing)</i>	
<i>Group</i> , probably about...	6,500 " "
<i>Kamoikotan (Metamorphic)</i> ,	
perhaps.....	3,000 " "

"The thickness, except those of the Toshibets and Horumui Groups, are mere guesses that are not based on any measurements.

"That Yezo has at no very remote period (perhaps within alluvial times) been sinking would seem to be shown by the shape of the sea bottom off the harbours of Catusnai and Shibui, half a dozen miles north of Iwamai, as shown by a hydrographic survey we had occasion to make there. The valley of a little neighboring stream seems very clearly to be continued under the sea to a depth of more than sixty feet at least. The shape of the bottom could hardly have arisen except by ordinary river action at a time when the land was at least so much higher above the sea than it is now.

"The accumulated layers of the New Alluvium in the river bottoms are in general quite flat, just as they were dropped one upon another by the flooded, muddy river. They are of course made up of more or less fine particles of the rocks up stream; the quartz grains persist as sand, the feldspar, so finely divided, decomposes and becomes clay. The formation is too recent to have become hardened into stone by pressure and the cementing action of percolating water solutions, as older groups of rocks have been; still less, to have become disturbed from its horizontal position like them, through the long continued contraction and sidewise pressure of the earth's crust.

"Among the particles in the alluvium are many grains of magnetic iron sand that existed as crystals sprinkled through the volcanic rocks. As such grains are heavier than the much more numerous grains of quartz and feldspar, they tend to lag behind while the rest are washed forward by the water; and so, after much washing and rewashing, gradually to gather together in layers by themselves in some favorable places. Such accumulations of the black sand are to be seen on many river shores and many sea beaches in Yezo. Most of the deposits are of insignificant extent, but some are very large and even of some economical value, especially those of Okotsunai on the south-west shore of Volcano Bay (containing apparently also titanium) and of the south-eastern end of the Island near Esan. Not only are there some of them so very recent as to lie upon the surface; but there are others, a little older, that are now buried a few inches or feet beneath other sand.

"Some such deposits of magnetic sand seem to have occurred in swampy land in the Ishcari valley, near its mouth and near Sapporo; and, as happens in such wet places, to have gradually been turned to bog iron ore (brown hematite or limonite), like iron rust caked together in hard honey-combed masses. As the original magnetic sand deposits are seldom large, so the resulting bog ore is probably seldom of great extent. In such bog deposits it almost invariably happens that a very injurious amount of phosphorus becomes mingled with the iron.

"Gold is another substance that like the iron sand tends by its great weight to gather together in certain favorable places, and in several valleys in Yezo, especially on the Toshibets and Musa River in the great southern peninsula, fine grains of gold derived from older rocks are found in the New Alluvium (as well as in the Old). But the gold is in very far smaller quantity than the iron sand, and, owing to the much greater fineness of the particles, in a very much less concentrated condition." (*General Report on the Geology of Yezo*. Kaitakushi Department, Tokio, 1877.)

cultivated land is but little. The Asabu river which flows down this valley has to be ferried near the sea; it was the only river where such was necessary during this day's travelling. There are two tracks, one on either side of this river, which join the Esashi and Hakodate road. On the northern side of this valley the mountains are thickly wooded, in contradistinction to the hills in the vicinity of Esashi, and as you proceed you find the woods approaching nearer and nearer the coast.

Ainuma and Tomarikawa are adjoining villages without any distinct separation. There is a valley on either side, the southern one containing the larger river, but the northern, which is narrow, is, I understood, that which the track passes up leading over the mountains past the abandoned lead mines and down the valley of the Yurap river to Volcano Bay. It is a very indifferent trail, being seldom used, and almost impassable owing to the heavy growth of brushwood. The distance is reckoned at ten and a half ri approximately.

North of Ainuma a great mountain mass approaches the coast, which I believe is that at the head waters of the Yurap river. Kumaishi is marked by a peculiar white cliff. Boulders and beach pebbles of granite are seen along the shore there, which have apparently been washed from the higher mountains down the river valley next south of this place, which is said, with what truth, however, I am unable to tell, to be the oldest settlement on the coast, prior even to Matsumai (otherwise called Fukuyama). There is a shrine or 'kamisama' put down as having existed for six hundred years. It is the best district on the coast for herring, which strike along here to the northward, and are of larger size than about Esashi. The produce of herring alone is about 20,000 koku, or as much as that of all the villages combined between there and Esashi. The bulk of the population along this coast are originally Noto people, with some from Tsugaru (now Awomori ken), and Akita, and a few from Echigo. They are, in comparison with the general fishing population of Yezo, thrifty and industrious. Okosiri is in sight from Kumaishi, the south point of it bearing W. by S.

As no horses were forthcoming on the following morning, I started on foot for Kudo, distant six ri. Following the shore, but sometimes on the uplands, I reached a point about west of Kumaishi. Along this part are a number of reefs jutting out which must afford tolerable shelter for junks, except from the southward. Houses exist all along, and they may be considered an extension of Kumaishi, but I presume are divided into villages under other names. Rounding the point you come into a sort of bay, and thence the greater part of the distance to Kudo is along a rough rocky coast running about N.N.W., backed by high hills more or less wooded. The road is in many places up and down the sides of steep ravines, but otherwise on the lower slopes of the hills, only touching the beach—which is mostly stony—at the small villages which are scattered all along. The rock exposed to the sea, is mostly conglomerate, and consequently out up into all kinds of shapes.

Half the distance between Kumaishi and Kudo is reckoned as "bad mountain road,"

and therefore—as is usual throughout the country—fifty per cent. extra is charged on horse and coolie hire. Usibets river\*—only a small stream—is in a bight where the coast turns from N.N.W. to west. The valley of the stream is narrow and wooded. I was told at Kumaishi that up this valley there was formerly a 'shiro,' or residence of a small daimio, but I could see no trace of it, nor any position likely to have been occupied for such purpose. I have no reason to place any particular confidence in my informant, nor have I on the other hand any reason to disbelieve him, so that if there is any truth in either this or the statement regarding Kumaishi settlement, or the shrine there, a person well versed in the language might possibly gain a good deal of information regarding the early history of Yezo, by a visit to this part of the coast.

There is some level travelling on a narrow flat below the hills near Usibets river, but some more climbing on the remaining two or three miles to Kudo, where I arrived, though early in the day, pretty well wet through, and had to put up there for the night.

The following morning horses, although promised, did not turn up, so there was a good deal of hard swearing expended on the village 'kncho' or mayor. I then walked on ahead to the next village just over the point and waited there for two hours I should think, till one horse came saddled for me, the man saying that the others with the baggage were just behind,—which was a lie. So I started on again by myself into the mountains which here abut upon the sea rendering the shore impassable, and forming the southern head of Cape Ota, which appears to be of granite or syenite. After crossing a deep ravine, at the mouth of which there are two or three poor huts, the path strikes right up the steep wooded mountain, passing on the inland side of the crest, then along a ridge, and from that up again and at the back of a higher mountain. The path is very steep, and on descending zig-zags down to the sea to a small temple or 'kamisama' built on a point of rock. There is here an old broken iron cage, used formerly for a beacon light, and the place is said to be over one hundred and fifty years old. Formerly junks were expected to partly lower their sails when passing as a salute, and the custom is more or less still observed. I waited here over an hour before the party caught me up, when I found three coolies had been substituted for horses. We then proceeded half a mile or so along partly pebbly and partly rocky beach under the high cliff to where there are a few fishermen's houses, known as Ota. The distance from Kudo is only called three ri, but it is a pretty stiff piece either for walking or riding. Here I found it too late to attempt the four-and-a-half ri on to Futoro, and so put up at one of the fishermen's houses for the night.

From Ota the north extremity of Okosiri bears due west. It may be known by a rock standing out in the sea, having the appearance of a small junk under sail, and a

hummock like a tumulus a little inland. This island lies about seven or eight sea miles off the coast, is about thirteen miles in length by about half that in width. It is resorted to by fishermen during the summer season, and there are some permanent settlements on its eastern side. It has hitherto been but imperfectly laid down on foreign charts, but since the stranding of H. M. S. *Iron Duke* on a reef, off the south end in 1880, has been surveyed. It affords the only good shelter for vessels passing along this coast during the winter season. Osima which lies about thirty miles nearly due south is only a small high island. It is one of the marks for navigators in making the Strait of Tsugaru. When on a south-west bearing its top has a V shaped form, as well as Kosima—a smaller island about twenty miles E.S.E. of it—but may be known from the latter by being broader in comparison with its height.

Cape Ota is the most westerly point of Yezo, being in Longitude 139° 45'. It is divided into two headlands, the northern one being slightly the more westerly. The hamlet where I lodged and where the temple is, is between the two, immediately north of which is a bold precipitous bluff which bars any passage along the shore. The rock appears to be volcanic.

Notwithstanding it had blown a strong gale during the night, and continued in the morning with heavy rain accompanied by squalls of hail and sleet, and the reported bad mountain road ahead, still, I determined to make up for time lost the day previous; so we got away with our two horses, one with my saddle, and the other carrying nearly all the baggage, the three men being very lightly loaded, and immediately commenced a steep ascent up the mountain by a zig-zag path directly from the beach. After ascending a considerable height we got into the wooded part of the mountain, but continued still mounting, sometimes by zig-zags, and sometimes by long inclines on the sides of steep slopes, for two or three miles till reaching the highest point. After this the path follows mostly along the ridges of the mountains without much variation of level for three or four miles. The travelling is nowhere bad, being in most places on tolerably hard ground, but of course, as in all mountain roads in Yezo, it is a mere single track for foot passengers and pack horses. There is, however, no part of it cut into deep mud holes and filled with brush in the usual makeshift way, or corduroyed, and there are very few, in fact almost no bridges necessary. This is to be accounted for by the fact that this trail does not follow the valleys, as is very usual with tracks laid out by Japanese, and in which cases you have to get through muddy bottoms, and have many streams and side gullies to cross. I should imagine this track to be an original Ainu one. These mountains are thickly wooded with a dense underbrush of scrub bamboo, up to seven or eight feet high in places. The trees are principally beech and birch, with some 'todo' fir, and mountain ash, maple, oak &c. in lesser quantity.

Having made six or seven miles, we descended rapidly towards the shore at Zaruisze, which is backed by grass and scrub covered high slopes. The coast is still rocky, and there is little space between the cliffs and

\* This valley has two streams in it, the other being called Moshibets. It is known in the Kaitakushi reports as the 'Kudo gold field.' The result of Mr. Munroe's washing only gave from five-hundredths to three-tenths of a cent per cubic yard of gravel.

the sea. A few scattered houses make up the place. A short ri along the shore and over some low rocky points brought us to the 'honjin'—which the head stations hence to the northward are called—of Futuro, where there is little besides a collection of Ainu huts accomodating about seventy souls. The first Ainu that I had seen on the whole route from Matsmai was a woman at Kudo, and this was the first settlement. These aborigines have been pretty well cleared out on the west coast, by the numbers of Japanese settled along this great herring fishing shore from old times, so that you only find very few of them, and these are confined to such places as the Futuro and Setanai district between Capes Ota and Mota, with which the land communication is difficult. Indeed in the extreme south-west of Yezo they are nowhere numerous, and are only seen in any numbers on Volcano Bay, in situations like Yurap and Usu, which are but indifferent fishing districts.

We took dinner at Futuro and there engaged five coolies—two Japanese, one Ainu, and two Ainu women—to transport the baggage to Setanai distant two and a half ri. We started with another heavy rain and hail squall, and after going over a terrace at the back of the 'honjin,' descended into a narrow valley where we crossed a sluggish river by boat. Thence there is a sandy shore line running N.N.E. about three miles or so to the mouth of the Toshibets river, along which the track runs, or on the scrub covered sand ridges backing it. There are a few moderate hills, oak covered, between the two rivers; but near the Toshibets a considerable extent of low ground. The ferry is about half a mile above the mouth of this river, where it is sluggish, about ten feet deep, and sixty or seventy yards wide. I was told that it becomes somewhat shallow and rapid about five miles up where the Ainu go salmon spearing, but that it can be ascended by canoes eight or ten miles. The valley appears to have a general direction of east, of course looking up it. It seems to be generally heavily wooded. There are no high mountains in that direction, a comparative depression existing here between the west coast and Volcano Bay. The direct distance from sea to sea is twenty-five miles; the travelling distance is reckoned at twelve ri, but I should think this estimate to be too low. The Ainu say that when the snow is on the ground it takes two days to Kun-nui on Volcano Bay, between Kuroiwa and Oshamambe. It is on the upper waters of this river—about three ri from Volcano Bay—that in former times gold was washed. Mr. Munroe, one of the geologists employed by the late Kaitakushi Department visited and reported upon these alluvial terrace formations containing the auriferous gravels, which, however, so far from affording encouragement for reopening such industry with the rate of wages in Japan at the present time, was nearly as discouraging as the results from experimental washing made in other parts of Yezo, and showed that the highest yield which could be looked for in the best deposit would not reach over six cents per cubic yard.\*

\* See 'Report and Official letters to the Kaitakushi Tokio, 1875. The reviewer to the *Chrysanthemum* for February 1882, has taken objection to a statement in Keane's 'Asia' as to gold exist-

Either by following the sand beach from the mouth of the Toshibets, or the track in behind the sand ridges, you reach Setanai in about half an hour. The head station or 'honjin'—an old and rather delapidated building—stands close to the shore, with a great rocky bluff rising right behind it, and a pretty trout stream alongside. Near it are about fourteen Ainu huts, and, at the time I speak of, there was a settlement of thirteen Aidzu families in the vicinity, who were located there by the government after the war of the restoration, with the same idea as in several other parts of Yezo with other former daimios' samurai, of farming. I imagine that a visitor to Setanai now would find few, if any, of these people remaining, as most of these attempts at so called colonization have proved failures. Indeed it could hardly be expected that southern people, most of them previously unused to farm labour, would make good agricultural settlers in a wild and rough country with a rigorous climate such as Yezo, especially where so many other employments were open to them more congenial to their tastes, and more lucrative. Thus it has occurred that many of the villages at these forced settlements—planted at much expense to the government—are at the present day more or less abandoned. As long as a paternal government found them in rice for the first three years or so, these people were agreeable, if not contented, to remain; but when that allowance ceased, those that were able mostly migrated to the coast. The older men,—and having been born and bred as samurai they had a fair amount of education,—often dropped into positions, such as village postmasters, and schoolmasters, or obtained employment in the government service, and thus became absorbed in the permanent population of Yezo; but the younger and unmarried frequently let themselves out as hands to the fishing masters, and many of them are at the present time leading that itinerant kind of life round about the coast; while of course not a few have returned to their original provinces. Unhappily the whole scheme of "colonization" as it was called, undertaken by the late department, was based on wrong principles, or no principle at all: it was utopian and impracticable. Surely it might have been foreseen that a system of agricultural settlement in the interior—at Sapporo for example, ten miles from the sea, and double that from a port—could not naturally thrive while the coast was to a great extent unpeopled and the fisheries only half developed. It would appear absurd that anyone acquainted with Japanese character could believe that the general run of immigrants would take to a settled employment like farming, when an unsteady, lottery-like, adventitious kind of life was open to them by engaging in the fisheries. It must remain an open question, therefore, whether those who advocated the experiment were sincere or not. The result is now seen in the collapse which has taken place. Still it cannot be said that there has not been some good done within the past twelve years

ing on Volcano Bay. Had he correct knowledge of this part of Yezo, or had he gone a little deeper into the geography of Messrs. Lyman and Munroe's papers—which he has *evidently* consulted—he need not have cast a slur on the author of 'Asia' who was nearer right than himself.



through the expenditure of millions. A good deal of that money has remained in the country; the importation of foreign stock and plants; the establishment of certain factories, even as exhibitions alone; the example of modes of grain and other culture suited to a northern climate; the cutting of a road or two; the building of a railway; and indeed many things undertaken by government, although proving unremunerative as business speculations, have afforded examples, which in modified forms, or on lesser scales, may be adopted or imitated in some cases, and the facilities for travel and transport utilized to the advantage of the country. We cannot therefore say that all the money has been thrown away, though it is lamentable that it was not expended more judiciously.

There are several high pinnacle rocks standing on pedestals of reefs just awash off Setanai. I was told that junks up to the burden of 250 koku could anchor under the lee of one of these, but that otherwise inside of any of them the water was too shoal for larger vessels. Some of the lower hills behind Setanai are but sparsely wooded. There is a collection of high mountains to the north-east and N.N.E. inland of Cape Mota, which from the 'honjin' bear N. $\frac{1}{2}$  W. The Yurap mountain mass is visible about twenty miles S.S.E. The highest part of the mountains which form Cape Ota bear S. by W.; and Okosiri island lies S.W.

I was forced to stay a day at Setanai because although the weather had cleared up, I was unable to obtain a boat by which I intended to round Cape Mota. Boatmen, however, turned up in the evening, and the following morning we made a start in one of the ordinary small fishing boats peculiar to Yezo, called 'chip,' which are only copies, somewhat improved upon in construction, only in which iron is used for fastenings in place of bark or hide thongs, of the Ainu sea-going canoe.\* There were three boatmen, two pulling each a pair of the narrow oars pivoted on the single thole pins generally used for these boats, and one in the stern with a Japanese long bladed flexible scull. The distance ahead to Cape Mota I consider about ten miles, but it is reckoned on land at six ri, the road running for the first ri and a half along the beach, often over great boulders, when it is forced into the mountains by the precipitous nature of the coast, after which there are no more houses till Seki is reached, where there are but two. This is at the opening of a narrow valley just south of Cape Mota.

There was little wind and no sea and our boatmen being three muscular young fellows, and working well, we got rapidly along near the shore, which is rocky all the way, there being only a few patches of shingle or sand beach. There are a good many reefs and ledges, which seem to be composed of a sort of pudding rock or coarse volcanic conglomerate, and distorted columnar trachyte looking like basalt.† We passed Seki and round-

\* The Ainu river-canoe is of different form and construction (see a subsequent chapter), being entirely hollowed out of a single log, and not built upon at all as these are.

† I have elsewhere mentioned having no pretension to geological knowledge, so that these and other remarks must be taken for what they are worth. The existence of actual basalt anywhere in Yezo, notwithstanding references made to it by Captain Bridgford—Miss Bird following of course—is very doubtful.

ed the solid precipitous rock bluff forming the southern head of the cape, which is really composed of three bluffs of the same rocky nature. It is a picturesque and wild looking place. On rounding it the course changes to about N.N.E., towards another high point, but which instead of being bare, like Mota, is thickly wooded above the cliffs. We did not reach this, because finding an increasing swell, and observing crested waves at a distance, and two boats running back under reefed sails, our people were afraid to go farther, so we turned back round the cape and made for Seki where there was no wind and but little sea, and we got in between the reefs and landed without much difficulty. Here we put up in rather rough quarters at one of the two houses, which turned out to be kept up by the lessee of Shimakomake—now called Shimamake—a district on the northern side of Mota, the boundary between that and Setanai being little south of Seki, which, however, does not seem a natural arrangement.

By the time we landed it was too late in the day to think of attempting the mountain road which is reckoned at ten ri, and was described as being very bad and requiring a whole day. The two boats which we had seen running back put in also at Seki, and reported having met a very heavy breeze. They were smart looking craft, weather boarded, and using sculls, with a single mast for sail, but being without centre or lee board, could only sail with a leading wind, so that when they got one they made the most they could of it. It was for this reason that they refused to take me as passenger as I had requested them the day previous, because I wanted to be landed at Shimamake or Sitze, and they said if they got a fair wind they would run right on as far as possible on a straight course without going into the bays; which seemed rather adventurous work at that season and on that coast. They were bound from Esashi to Takashima near Otaru for salmon fishing, and intended returning before winter.

Having been fortunate enough to engage three men over night, so as to reinforce our boatmen and distribute the baggage in light packs for going over Mota mountain, and as all had made up their minds for the work which lay before them, we were enabled to get away in the morning soon after daylight. Leaving Seki, we struck immediately into a little valley at the back of the house, crossed a stream rather over knee deep, and at once commenced the ascent of the mountain, the first slope of which is grass covered, by a zig-zag path. This led to a more gradual slope trending more inland, covered with a thick growth of bamboo scrub and small trees. The scrub was not even cut away from the path, but had to be brushed aside as we went along. Thence we got higher on to thickly wooded ground, the road although winding a good deal, having a general north and north-east direction. Our cavalcade presented quite an imposing appearance, for besides the six porters, we were accompanied by two women and a man also travelling towards Shimamake.

Within about three miles we had got over one mountain and into a valley, from which we again ascended and must have reached a considerable height. After this we descended by a steep zig-zag and came down on

the shore at a short stretch of pebble beach, where a small stream comes rushing down from the mountains. This place, where there was no sign of habitation, is called Okutsunai. Here we had a rest, it being called three ri from where we had started, and our people eat most of their lunch. Resuming the journey we ascended another steep mountain by zig-zag, and passed along at a considerable height over the sea to which we ultimately descended to where a mountain river runs out called Kodanisze, two ri from our former descent on the beach, or five ri in all, at about noon. This river is full of large boulders, and is not easily crossed. After rain in the mountains they say it is quite impassable. An old bridge partly broken down, so that on one span only a single unsafe looking beam remained, served the purpose only of shewing the kind of care bestowed by a paternal government on the highways of Yezo. Here we had another rest which our men much required, for even without any load at all more than my gun and ammunition, I had found this mountain work pretty fatiguing. One fellow could not keep up at all being always considerably in the rear, but on the whole they did remarkably well. Of course with their straw sandals they had the advantage of me, my boots causing me to slip about very much, particularly when going down hill.

This mountain mass which form Capes Mota is all pretty thickly wooded. The timber is a mixture of deciduous trees and conifers, the latter predominating on the highest parts. These is more or less scrub-hamboo everywhere, and this is the thing which causes travelling off the beaten tracks almost anywhere in Yezo to be so difficult. The path by which we had come might have been, at some remote date, passable for horses, but it cannot be said to be so now. It requires re-making along most of the steep slopes, and everywhere wants the brush cut away. But even were this road rendered passable for pack horses, it would be useless unless a trail were continued along the uplands between Kodanisze and Barauta and thence on to Shimamake; while the south end would require connection with Setanai.

After leaving Kodanisze, the travelled route—for road it cannot be called—is along under the highlands on a beach made up of rounded boulder stones and broken rocks, from the size of some tons down to pebbles. There is no sign of a track whatever. It is most fatiguing and hard on the feet, stepping from stone to stone with irregular length of pace, and even jumping between the large ones. I think working a tread-mill would be easier. We continued this sort of thing for a ri and a half or so, until we luckily found a fisherman with his boat collecting firewood who we engaged. He took us as far as the commencement of a long straggling village called Barauta, where, having discharged the firewood and some fish he had in the boat, he rowed us the remaining five or six miles to the 'honjin' at Shimamake, which we reached a little after sunset and put up in the most comfortable quarters we had found on the whole journey, which were the more acceptable after our long and tiring day's work.

Shimakomake, or as it is now called according to government nomenclature Shimamake, was, when I visited it, one of the old style of

fishing stations now fast disappearing from the coast. The owner was an old Matsumai man, formerly a prince's official, who had been many years there, and told me the place had been always in his family, and he seemed to take a pride in keeping it up in the old fashion. The house had evidently been originally built in first-rate style. It is said to be ninety years old. I found the rooms still very good, and the people extremely civil. There is a small temple and several store-houses. The little bay is somewhat sheltered from northerly winds by a reef which runs out off its north point. There is a very nice looking river for fly fishing flowing into the sea about a quarter of a mile south-west of the 'honjin,' up which I learned that both salmon and salmon-trout run during their seasons; the latter according to account in July and August, which is later than in most rivers on the coast. This river comes from the back of the Mota mountain mass, a good view of which is obtained as you pass along this coast by water. The highest part, which is somewhat inland, appears to have been a volcano. Between Barauta and Shimamake are a couple of villages one of which is called Eturup. The uplands approach close to the shore all along here, but leave beaches in many places between reefs which shew just above high water, forming boat harbours, and one or two places, as at Shimamake, where junks in the summer season, tie up to posts let in the rocks. There are now only about five and-twenty Ainu at Shimamake, but it is said there were formerly some three hundred. The duty collected in 1875 was at the rate of sixteen per cent on herring, and on awabe and iriko 3,500 and 5,000 momme per man, according as the place where he fished was reckoned as good or indifferent. This has been altered during the last few years. According to the description of produce and locality it runs from ten to twenty-five per cent of the fisherman's gross catch, and may be taken on an average at fifteen. This tax, the bugbear of Yezo settlement, is still collected in a clumsy manner in kind, either directly by the government, or farmed out to favoured merchants, who purchase at a price not always very favourable to the national finances.

The following morning we hired a boat with a couple of oarsmen to take us round Cape Benke to Sitze, reckoned by the land road near the shore at about seven ri, but I was informed that it would be possible by cutting a road across the hills to shorten this distance very considerably. The coast along towards the cape runs generally north-east. It is lined with rocky bluffs and cliffs of most picturesque and fantastic forms, and there are many reefs nearly level with the water, the rock composing which seems to be the same kind of volcanic pudding, or conglomerate, previously mentioned. It appears characteristic of these reefs, that they leave many narrow channels like canals, through which boats can pass. The back country is all hilly, but generally bare of trees near the coast, and is cut by the narrow valleys of two or three small rivers.

Cape Benke is a low point with a reef stretching some distance off it. Rounding it you pursue a course about south-east to Sitze which lies in a bay of the same name. The shore is all rocky with many reefs, which,

off the north-west part of the town extend a long distance out under water, forming much foul ground, but serving to break the sea, and affording some shelter to an indifferent anchorage. A rough small light house stands on a point, to the southward and eastward of which is the junk anchorage. It seems a very favourable site for a town, and has increased considerably of late years. During summer, steamers frequent the place, by which a good deal of produce is shipped away, besides that carried in junks, of which there are always a number at anchor during that season. The steamers, moreover, find a good many passengers at this point, because the fishermen from the main island and others, by taking steam, are able to save a tramp of about a hundred miles to Hakodate. At the back of the town there is only a gradual slope towards the hills, which are devoid of trees in the immediate vicinity.

We had reached Sitze at one o'clock, so after taking dinner, being unable to procure a boat to cross the bay, we were furnished at the 'ikeba' or post-house with three miserable ponies, with which we started along the shore. At a poor looking village we crossed by ferry the Kuromatzunai river, whence the straight sand beach at the bottom of the bay stretches right to Oshiro, reckoned at two ri from Sitze, on the main northern road from Hakodate towards Iwanai, which crossing over from Volcano Bay here strikes the west coast. Oshiro\* adjoins Otasitze of which it is the southern extremity, while there is no apparent division between the latter place and Isoya to the northward; in fact there is one string of houses all the way along from the bottom of Sitze Bay to the Shiribets river at the foot of Raiden mountain. I have passed along this route several times, and I don't think I have found the post-house twice in the same place, sometimes it being at Oshiro and otherwise in Otasitze proper, so that it is impossible to give its actual position. It will be sufficient, however, for travellers to know that if bound to Sitze from Volcano Bay, they fork off from the main northern road—which will be described in the following chapter—where they strike the first houses on the west coast.

## XV.

### TO OTARU VIA IWANAI.

Besides the sea route to Otaru two others are open for the traveller from Hakodate to Sapporo. In either case you proceed in the first instance by the road past the lakes and Komagatake volcano to the village of Mori situated on Volcano Bay. There the opportunity is afforded of a steamer running across to Mororan distant about twenty-three sea miles, from which port the road cut by the former government of 83 miles runs to Sapporo; and this is by far the shortest route, the entire distance from Hakodate to Sapporo including the sea portion being under one hundred and forty English miles. The traveller, however, who intends to visit

the south-east coast after having been to Sapporo, or who may intend going around the whole northern part of the island, and may prefer not to travel over any portion twice, may in going or returning take the route I shall now follow.

Between Mori and the next village Washinoki a small river is crossed, the sides of the valley of which are wooded with chestnut, a tree which in Yezo is seldom found in thick masses, but being more or less open in its distribution, has the effect of giving a park-like appearance to the scenery, even more so than the oak or elm. Then the road takes the beach, running beneath high bluffs which terminate the mountain slopes or terraces. Sometimes you ride on a fine hard sand, sometimes on that of a soft loose nature, or your horse has to pick his way between large pebbles, or over beds of dead seaweed washed up along the shore. The sides of the bluffs are generally wooded, and grown over with masses of *polygonum*, a kind of giant dock which flourishes especially near the sea, lakes, or river shores, and attains sometimes eight or ten feet in height in a season. It has stiff hollow stems of such thickness that they are used for filling in fences and sheds between the posts. The dried stalks are also sometimes used as fuel, but they consume very rapidly. The roots are bamboo like, and difficult to eradicate from newly turned up land.

At one of the points which divide the small bays one from another, there is a warm spring, which by the gas bubbles rising to the surface may be traced in a straight line some distance out in the sea. Several villages of minor importance and many detached fishing stations are passed, where, during the herring season of early summer, or during the 'iwashi' fishing of midsummer, the people are to be seen engaged in running and hauling long seines, boiling the fish in large iron cauldrons built in with clay and stones, and at such seasons there is not the most agreeable odour from acres of boiled fish scattered on straw mats, drying in the sun before being packed in bales for export, to be used in southern Japan as manure. This kind of fish manure, which is exported in very large quantities from Yezo is called "kasu."

Several small valleys open on the bay. They are all pretty, and one gets peeps up them occasionally of the wooded hills and mountain ranges more inland. At ten miles from Mori the village of Otospe is reached. It is situated on the south-eastern side of a deep river-valley cut far back into the mountains, and overhung by the sides of high plateaux. The river is quite a typical one of a Yezo mountain stream. Running over a shingle bottom it passes into the sea by a mouth, more or less blocked by sand heaped up by the sea waves; while its upper course is varied by reefs and ledges of solid rock causing cascades and rapids, between which are deep basins and moderate running pools, such as delights the soul of the fly fisher. The valley bottom is filled by patches of alluvial flats generally covered with a thick growth of willows, with low points of shingle, which cover when the river floods, as it quickly does after heavy rains, or during the spring melting of the snow on the mountains. Indeed, with most of the rivers in Yezo, you easily ford on horseback or on foot one day,

\* The name of this place, I understand, has lately been changed by 'government order' to 'Ushoro' in order to distinguish it from Oshoro between Otaru and Yoichi.

*Erratum.* In the foot note to Chap. XIII, *Japan Gazette*, 25th April 1883, the word *best* in the fourth line from the bottom, should have been in the line above after *nautical men*.

while on the following one you may find your return impeded by a turbid rushing torrent, the strength of which neither man nor beast could withstand. On such occasions you have to take the best accommodation that any house may afford in the vicinity, and abide the time of the subsidence of the water. Otherwise, if the sea be not too rough you may chance to be able to get a boat to carry you beyond the obstacle by sea, though if you have a horse of your own, you will have to leave it behind. It is consequently unadvisable to use your own horse when travelling in Yezo, except for short trips; and not for this reason alone, but, in a country which affords abundance of pack-pouies, to be without your own animal saves you a wonderful amount of care; nor can you, on a long journey, attempt to make anything like the distance for several days together, that you do by resorting to the means of transport afforded along the route. True, you may be often subjected to a good deal of annoyance by getting worn out ill-fed brutes that cannot travel, or, especially when getting to a station or village in the afternoon, by being informed that all the horses have been turned out and cannot be got in before the following morning; and you will probably be often obliged to use much bad Japanese towards the post-masters; but on the whole, these occasional inconveniences do not outweigh the advantage of the system generally.

After fording the river at Otopse the beach can, except when the tide is high and the sea rough, be taken under steep high clay cliffs, on to the next valley; but by far the pleasantest way is to ascend the high bank by a zig-zag path on to the plateau, which as you approach the Nodaoi river descends gradually. This stream is crossed either by fording, or by the ordinary style of flying bridge composed of a stout rope stretched across with sliding iron or vine rings on it, to which a small boat or flat skow is attached. Such temporary makeshift arrangements are, however, in most rivers, only available when the water is not over moderately high; the heavy freshets, which come down occasionally, generally sweeping supports and stretchers away bodily, thereby interrupting communication, sometimes for days in succession. There seems to be no system of ferries under government supervision as in the more settled parts of Japan. Indeed, such matters do not seem to trouble the heads of the officials, and much inconvenience is suffered by travellers in consequence. Not that I would have it understood that government interference is a blessing, still in the matter of the highways a little of it, elsewhere expended to the disadvantage of the country, might be beneficially utilized. Of course one difficulty under which the government of Japan labours in such things, is the almost impossibility of obtaining incorruptible supervisors; or when roads, bridges or other public works, are being constructed or repaired, the getting of such done in any way commensurate with the expenditure. Witness for instance the road from Hakodate viâ Mororan built by the Kaitakushi. It has been estimated that this road cost more than would have sufficed to build a railroad, and yet most of the bridges have had to be renewed twice since they were first built, and the road remained for years

little more than a soft pumice or mud or clay way according to the kind of soil it passed over. A rule which would be of advantage to the travelling public would be, that each governor should be obliged to travel, so many times a year in the wet seasons over every road in his district. The inconvenience which he would suffer ought to tend to cause a better state of things to be brought about.

From Nodaoi point, which the river wash has evidently formed, the shore sweeps back again to Yamukusnai.\* There are some low bluffs with patches of swamp intervening between them and the sea shore. The track passes either immediately on, or near the beach, and in between the houses of the village. Here may be seen some petroleum basins,—holes in the swampy ground filled with an inferior quality of mineral oil of a pitchy nature, which has not been found sufficiently valuable or abundant to repay the cost of refining.†

Just beyond the village there may also be observed much iron-sand mixed with the other sand of the beach, and a smelting establishment on a small scale once existed half a mile or so back in one of the valleys, where this iron-sand, as well as other brought from the shore of Tsungaru strait between Cape's Shiwokube and Esan, was smelted. In fact very tolerable iron was made, which converted with facility into a kind of steel sufficiently good for ordinary knives and choppers. The place has, however, been abandoned for years. I once or twice visited it for the purpose of seeing the operation,

\* The name of this place is another of these instances of Japanese translation, or partial translation of an Ainu word expressing "way to the chestnut place." Yam or Yamu (with a short half sound of "u")—chestnut, kus—road or way, and nai—place or valley. In Japanese it is written Yamakushinai, or "hill-crossing," the nai only remaining as in the original tongue.

† On this subject Mr. Lyman says:—"There are three places, Washinoki, Yamukushinai and Izumisawa, where rock oil has been found in Yezo besides extremely small traces near Atsuta.

"The Washinoki oil had in 1873 been found at five points on the Washinoki brook about half a mile above its mouth; and in 1874, a mercantile company dug six or seven pits near by to depths of about 50 feet, 30 feet, 25 feet, 20 feet and less. At the five old places the whole yield was in October, 1873, about two gallons (5 sho) a day. The 50 foot well appears to have yielded in 1874 about 16 gallons (4 to) a day; and the 30 foot well to have had traces of oil; the rest, none at all. The whole amount gathered in 1874 was probably about 200 gallons (50 to); and the works were then abandoned as too unprofitable, quite as the survey had led us to expect beforehand, although the map was not then ready to serve as a guide in digging.

"At Yamukushinai the amount of oil seems to be still less. It is exposed in traces at a dozen different points, mostly within a hundred yards of each other and of the sea shore. The daily yield of them all is probably less than half a gallon (1½ sho), and seven-eighths of that was measured at one well in 1873. There is also something like a ton and a half of asphalt or dried oil.

"The Idzumisawa oil is still more insignificant in amount.

"It is found at three points within ten yards; but almost wholly at one; and the whole yield was in October, 1873, less than five pints a day (1½ sho).

"The oil at all the places is of much the same character, black and very thick, like tar; and (at 60° F.) marks by Beaumé's scale 15° at Washinoki, and 11° at Yamukushinai and Idzumisawa.

"Washinoki is decidedly the most promising place of the three for trying to work the oil, but even there the encouragement is extremely small."

which, however, appeared to me to be in the most primitive style. The locality has the Aiu name of Okotsunai.\*

\* The following is extracted from Mr. Lyman's 'General Report on the Geology of Yezo,' published in 1877:—

"Iron.—Of magnetic iron sand the only workable deposits on the Island seem to be those of the beaches on the south-west shore of Volcano Bay and on the south-eastern end of the great peninsula. The Volcano Bay deposit stretches from Yurap past Okotsunai and Yamukushinai to Otoshibe, some ten miles (4 ri) in length; and is, on the average, say, twenty yards (ten ken) wide, and perhaps half a foot thick. It would contain therefore less than 60,000 cubic yards (7,500 cubic ken); and if it should average eighty per cent. of pure ore (being much mixed with other sand in spite of looking very rich in many parts) there would be about 120,000 tons of it, which would contain 87,000 tons of iron. There is in addition a very large amount of poorer sand either in underlying layers or in neighboring places, and perhaps with cheap labor more ore could be washed. For washing there is plenty of water in the small streams that cross the beach at every little distance. Wood for charcoal is abundant inland, and especially the Yurap valley would yield a large amount. Charcoal at present costs about a quarter of a cent. a pound. The ore is rather infusible and hard to work alone, probably because it contains titanium; but according to recent English and American experience broken bricks would prove satisfactory flux for it. Iron sand, to be sure, is not well adapted for smelting in the blast furnace; yet it can be worked in a bloomery forge. Some iron works of that kind with two forge fires were set up near Okotsunai a dozen years ago, and were worked intermittently on a very small scale for half a dozen years, but were then abandoned and are now in ruins.

"The iron sand on the south-east end of the great peninsula is much more fusible and probably comparatively free from titanium; but is much less in quantity. It is chiefly in three deposits: at Kobui (near Esan), at Shirikishinai (about a league to the south), and half way between. The middle place is the largest and has in its richest part perhaps 700 cubic yards of the mixed sand with perhaps 500 cubic yards or 1,000 tons of pure ore, containing 725 tons of iron; but there is enough rather poorer sand adjoining to make up perhaps 5,000 tons of ore in all, containing 3,650 tons of iron. The deposit at Kobui has perhaps 250 cubic yards of sand holding 200 cubic yards or say 400 tons of pure ore, which would contain 290 tons of iron. The Shirikishinai sand looks rather poor and seems to be only about 100 cubic yards in amount holding perhaps 140 tons of iron. It was worked about twenty years ago for three years for a furnace near by, built of clay in the Nambu form, seven feet long by four wide and five high. The iron is said to have been soft and pretty good though not the best; and the working was abandoned from lack of, more ore.

"No vein of solid ore has been found anywhere but in a gully on the eastern side of Komangadake at 1,150 feet above the sea and a league from it, a layer of magnetic iron sand a foot thick was found regularly bedded with the other volcanic rocks and about seven feet and a half from the surface of the hill. The covering is loose pumice. No exploration of the extent of the bed has been made.

"The whole amount, then, of pure ore in the principal workable deposits of magnetic iron sand is perhaps 125,500 tons containing 91,000 tons of iron. Only 5,500 tons of the ore (containing 4,000 tons of iron) are of the easily workable kind.

"There are several deposits of hard, coarsely honey-combed bog ore (limonite), which have perhaps been formed from what were originally alluvial deposits of magnetic iron sand. They are at Oyahuru (on the north bank of the Ishcari a league above its mouth), at Utsunai (on the opposite shore, a league up stream), at Bannaguro (another league up stream, on the south bank) and at two places near Hiragishimura, three or four miles south of Sapporo.

"The whole amount of iron then in the workable deposits of ore yet discovered, both magnetic sand and bog ore, would appear to be hardly more than a hundred thousand tons."

Beyond Yamukusnai is the open valley of the Yurap river with a long stretch of sand-beach backed by a strip of level bare ground of fine turf, and a few sand dunes more or less covered with the rose-bush scrub which flourishes near the sea-shore in so many parts of Yezo, behind which again is a considerable extent of flat land, partially swampy, and some oak wooded lower terraces suitable for cultivation—and where within the last few years an agricultural settlement of thirty-four houses containing about 180 people has been established by the Prince of Owari. The old fishing station and two or three other houses stand close to the mouth of the river which is seldom fordable, and where a ferry is kept up. The first Aiu settlement of any size is here met with, and notwithstanding the proximity to the more settled part of the island, these interesting people may be here seen in quite as primitive a state as in any part of Yezo. They live principally by hiring themselves out as fishermen, but cultivate some patches of ground as gardens, never in the immediate vicinity of their dwellings, and often at some considerable distance back on the richer spots of the river alluvium. This habit of the Aiu—and it is followed a good deal by the Japanese on Yezo—I cannot attribute invariably to the unsuitableness of the soil near the villages, because in many places such is not the case; but they seem to prefer getting away back in the bush, and when they do any gardening stay away from their houses usually the whole day. And it seems to me unaccountable also why the Japanese should have copied them in this particular; but there are many other things in which the Japanese on Yezo have assimilated themselves to the aboriginies, such as the form of their small fishing boats and mode of propelling them, their snow-shoes, &c. I presume these are only instances of the natural tendency of civilized man when the absence of severe competition admits of his relaxing in the struggle for existence, to revert to the savage state.

The Aiu at Yurap use canoes on the river both for fishing and bringing down firewood. They are "dug-outs," but small and low compared with those used on the Iekari and other large rivers, and their lightness permits of their passing where there is little water, and being easily hauled over rapids and shoals. Besides roots and berries which they collect in the mountains, a few vegetables from their gardens, and rice and sake which they obtain by barter from the Japanese in exchange for bark-cloth, embroidered gaiters and such things as their women make, or in payment for their labour, these Aiu have to depend principally for sustenance on the salmon and salmon-trout which ascend this river at the breeding season in considerable numbers. They take them both by nets and with the spear, the latter, essentially Aiu, being of very ingenious form. It is not easy to describe, but may be said to be both spear and gaff in one, attached to a light pole by a strip of flexible hide. When thrown or "jabbed" the iron fits in a slot with its point directed forwards, but on striking and penetrating the fish releases itself and then hangs by the strip of hide, thereby reversing itself and forming a loose gaff, from which by no kind of struggling can the fish release itself. They are very expert in the use of this spear, often striking

a fish in motion as much as three feet under water at some yards distance, but generally the fish is "jabbed" without the pole leaving the hand. They have wonderful sight for fish under water. Their dexterity is induced by their using the spear almost from infancy. You cannot go on the river any day during the salmon-trout season, provided the water is clear enough, without meeting brown urchins of all sizes prowling along under the steep banks in small canoes, or crouching on fallen tree trunks peering down through the interstices of masses of driftwood, with their spears ready for a dart at the fish. It is very pretty to see the men chasing the fish in their canoes in which they stand upright and guide back and forth by using the blind end of the spear-pole, at times making sudden rushes with cries of excitement to head off a fish; at others allowing the canoe to float down with the current while they scan every inch of the water to detect a passing or stationery fish, with their spears poised at arms length above the head ready for a strike, standing often on the gunwale of the canoe in order to get as downward a view into the water as possible. Their positions often in such cases are grand, while their features worked up to the highest expression of expectancy, makes a most animated picture of savage life. The Aino seems then really in his element, even more so than when mounted bare back on a horse with only a rope halter he is seen flying over a plain, swinging a lasso round his head driving a herd of half wild ponies towards a corral.

You can ascend the river at Yurap some distance by canoe, though there are many places where the strength of the rapids force you to land and take to the canoe again above the obstruction. It is very convenient when fishing to have an Aino with a canoe along with you, because, not only are you saved carrying your provisions on your back, but if you are fortunate enough to land a few fine salmon-trout—and there is no reason, if fishing this river at the right season and being favoured with good weather and the right water, you should not—you can keep your fish nice and cool covered by willow boughs in the bottom of the canoe; besides having the advantage when tired of fishing any longer, or as the shades of evening set in on you, you can get in and lie out at full length or sit up and watch the skilful way your Aino will run the canoe down the rapids and through the swirling pools, and deposit you at the very door of the house at the mouth of the river, where no mosquitoes—and this is one of the few places in Yezo where there are none—will keep you from enjoying a good nights sleep under the influence of the lullaby sound of the sea waves breaking on the beach,—a fisherman's perfect rest.

Yurap is fifty miles from Hakodate and about twenty beyond the telegraph station at Mori, beyond which the nature of the road does not permit of wheeled vehicles. It is not a regular government horse station but is in the middle of the stage between Yamukusuai and Kuroiwa. Years ago some indifferent lodes of lead containing a little silver were worked up the valley of one of the branches of the river, and while communication was kept up with this mine travellers frequently used a track passing thence over to the west coast at Tomari-kawa on

the way to Esashi. The trail is now, however, almost obliterated, and few if any persons attempt this route. It was re-opened partially by the government in 1871, that is, the scrub-bamboo and brushwood was cleared away, sufficiently to allow of Dr. Antisell—then geologist to the Kaitakushi—getting through,\* after which it was traversed by two or three other foreigners. The only way now to get to the old mine is to take canoes as far as practicable, and then follow up the bed of the stream. This is pretty hard work, as the stones are round and slippery; and though the actual distance is not over six or seven ri, still it is good work if you get as far as the abandoned mine in one day, and reach the coast on the following. Such is one of the routes which an inactive government—active enough, however, in some matters which would better be left to adjust themselves—leaves to the care of an allwise providence; but which if maintained—and the expense would be trifling—would be of much benefit to the people along the west coast south of Cape Ota; who now if they want to travel by land—and many have not the means of travelling otherwise—must cross from Esashi nearly to Hakodate and then follow the main northern road, a distance of about sixty miles more than would be necessary, if this route were opened. The government indeed has always appeared callous in such matters affecting the interests of the settled population of Yezo, while it has lavished millions upon schemes in other directions as unpractical as they were unnecessary.

On the north side of Yurap river is a sand-flat with much drift-wood brought down by the river, which owing to the high ranges bounding its watershed is subject—as are most streams in Yezo—to heavy freshets. Beyond this there is good riding on or between the grass and rose-bush covered ridges about seven miles to where a projecting bluff nears the sea, and a peculiar mass of rock in which are nodules and streaks of calcedony, the same as found in places up the Yurap valley, stands in the sea, and from which a small collection of houses takes the name of Kuroiwa. Here, if you are travelling government post, a change of horses is made, and the rest, twelve miles is along the hard sands almost in a direct line nearly north to Oshamambe. It is seldom one has a chance to praise the roads in Yezo, but no matter at what season you pass this one is always good. It is one of the Almighty's roads, a dead level hard sand flat the whole way. It is rather a dreary ride, however, as there is no variation. The moderate hills thickly wooded which rise some little distance back are of very uniform appearance, and there are hardly any fishing stations, while the small hamlet of Kunnui is only noticeable because it is where a trail

---

\* Messrs. Blake and Pumpelly visited these mines on a tour of inspection in 1862, and there first introduced blasting with gunpowder. The Japanese then said that the mines had been worked 150 to 200 years before. They also went to the Toshibets gold region—which I have elsewhere referred to—by way of Kunnui, during the same season; where they endeavoured to induce the miners to use American shaped sluice boxes. They noted observing trees 150 years old, which must have grown since the ancient washings, which were said to have been two or three centuries previous; although they could get no information as to by whom these workings had been carried on.

enters the interior and strikes the head waters of the Toshibets, where formerly gold was washed for, and by descending the valley of which river the west coast is reached at Setanai. The auriferous region of the upper Toshibets has been fully explored and prospected under the direction of Mr. Lyman, who succeeded Dr. Antisell as geologist, but no washings gave anything like a payable result in gold, and the field proved almost equally discouraging with those explored in other parts of the island.\*

Oshamambe is quite in the north-west corner of Volcano Bay. The village, which

---

\* I will here append an extract from the report of Mr. Henry S. Munroe, which I omitted in its proper place (Chap. XII) referring to the first discovery of gold in Yezo, though of course the amount obtained from the Japanese must be taken only for what it is worth. It refers to what is called the 'Musa Gold Field' in the valley of the Shiruichi river on the road between Hakodate and Matsumai. Mr. Munroe says:—"The history of this gold-field is exceedingly interesting. Mr. Nakano, my interpreter, while on the spot took the pains to collect the following traditions from the people of the valley.

"It seems that in the second year of Genkiu, about six hundred and seventy years ago; a small boat, from the province of Chikuzen, was blown to sea, carrying off two sailors and their cook. This boat finally landed on the shore of Yesso, near Shiruichi, where they waited for fair winds to return home. The cook, looking for water, found a bright lustrous stone at the foot of a waterfall, which excited his curiosity, and which he concealed from his companions, and took with him to his home in Chikuzen. At a convenient opportunity he gave this stone, which appears to have been a grain, or small nugget, of gold, to his master, a small daimio named Araki Daikaku. The daimio sent the nugget to the Shōgun, Yoriya (the next in line to Yoritomo) who was then living at Kamakura.

"This discovery of gold proved to be of sufficient interest, to induce the Shōgun to order Araki Daikaku to proceed to Yesso, taking with him the cook as a guide, to determine whether gold existed there in valuable quantity. "The Shōgun also rewarded the discoverer with a present of a thousand koku of rice, to which the daimio added a hundred and fifty koku from his own income, at the same time allowing him to assume the name of Araki Geki.

"Araki Daikaku now engaged a force of eight hundred laborers, coolies and gold-washers; with a sufficient body of military men for their defence, and a "Shugenja," or priest, to attend to their spiritual wants. The total number of men who sailed for Yesso was over a thousand.

"The party left their native province on the twentieth day of the sixth month of the same year, (the chronology is very exact!) and landed at Yukoshi (near Shiruichi?) on the twenty-third day of the month following.

"On landing, they built a castle on Kenashidake, and began to wash for gold.

"They stayed thirteen years, washing first on a small stream near Shiruichi, and afterward on the Musa river and its branches, obtaining a large amount of gold. They also built another castle for the quondam cook, Araki Geki, in a favorable spot at the foot of Kenashidake. The site of this castle is called Geki-no-yama to this day.

"At this time the Ainos were a very savage and warlike race, and gave the gold-washers no little trouble. Finally the ill-feeling culminated; and after a desperate battle, the Ainos became masters of the field; killing the whole party of Japanese; with the exception of the priest, who, with his family, was concealed by a friendly Aino. This solitary survivor died a short time after, but at the good old age of one hundred and five years.

"The Ainos, emboldened by the victory, crossed the straits in large force, and made vigorous war on the Japanese. They were, however, finally defeated and destroyed by the Shōgun's troops."

stands back from the sea shore, owes its importance principally to the passage of travellers bound to Sitze, Iwanai, and other places on the west coast north of Cape Mota, and being also on the line of the road which passes round the head of the bay via Ribunge. It was here that until the last few years the traveller had to make up his mind for a day, or sometimes two days depending on the season of the year, on one of the worst pieces of road in Yezo. It was not the distance, for that was reckoned at but six ri to Kuromatznai, and three more on to Oshiro or Sitze bay; nor the height of land for there, is quite a depression across this narrow neck not over four hundred feet above the sea anywhere; but it was the terrible state of the track, which during the latter part of autumn, and no doubt also in spring, was one deep slough all the way through. Not only could the pack ponies with difficulty raise their legs sufficiently to step over the crests between the ruts and drag their bellies on these, but from the slippery nature of the soil, in places clay and in others black mud, they could get no foothold, so that they frequently fell. So bad indeed was it that seldom a rider got through without one or more soundings in the liquid mud, and the horses or ponies might be seen emerging at either end of this route, literally covered to their ears with slush, which gave you as you met them some idea of what you might expect. To avoid some of the worst mud holes your guide on the leading horse would diverge off into the thick bamboo scrub, but here you encountered fallen logs and deep gutters which the ponies could not see, or if they did would make sudden jumps for which you would be unprepared, and consequently be sometimes left behind on the ground, or the baggage would share a similar fate. It was indeed a most damnable trail to follow, and yet one that hundreds or thousands of people were forced to use at all seasons, for it was the only route to get directly across from the eastern to the western coast at this part of the island. And this state of things existed under a paternal government until the last few years, since which I have not traversed the route, but am informed that a road has been constructed which should be passable for wagons, except that a portion in the middle has been left as a narrow corduroy path only available for foot passengers and pack animals, a wise provision doubtless if the better portions are intended for show rather than legitimate use.

As I have said there is no actual mountain to be passed over on this route, the ascent being only moderate. A good deal of flat ground is gone over after leaving Oshamambe, and the valley of the river which flows into Volcano Bay is followed up for some miles. After passing a few houses you cross the watershed (according to Bridgford 360 feet above the sea, according to Lyman about 400), and then strike a branch of the Shibuto river, which flows into Sitsze Bay, on the bank of which is the prettily situated inn known as Kuromatznai. The wooded valley of this river—having all the appearance of the prettiest kind of fishing stream—is followed as far as Kwanon-tai, where are a couple of rather ostentatious looking inns situated on a spur projecting from the mountains to the eastward of the route, and where is a row of stone monuments, the history connected with

which I don't know. Thence you cross a flat, where are some modern settlers' houses, and little timber till you strike the bay shore at Oshiro,\* where the road forks off for Sitsze. Otasitze adjoins Oshiro, and one string of houses thence extends right along a rocky coast to Isoya, except where there is actually no room for such intervening between the steep high bluff and the rocks at the water's edge, over which you require in places to scramble as best you can.

To get forward from Isoya the easiest way in fine weather is to take a boat to Iwanai, and thus escape the climb over Raiden mountain; otherwise you pass over a bare hill in order to avoid a rocky point and reach the mouth of the Shiribets, a deep sluggish river winding down a long open valley which falls into the sea just at the foot of Raiden, the source of which is far away to the eastward beyond the mountain from which it takes its name. I should be going out of the way if I attempted here to describe this river, and besides should be departing from the intention with which I commenced to throw together these notes for the benefit of travellers in Yezo, founded on my actual experience but in as impersonal a manner as was possible, because I have never been up the valley myself; and although it has been carefully traced and surveyed with an accuracy for which those who did so deserve the greatest credit, still I know how deceiving descriptions often become by passing through second hands. Having therefore carefully avoided such so far—and I think the reader will have observed that in cases where it had appeared actually necessary that I should notice some locality that it has not been my fortune to be personally acquainted with, that I have invariably given the authority in the words of the author—I shall pass on and leave the valley of the Shiribets to be described by some more capable traveller from his actual experience.

From the mouth of the Shiribets the distance over Raiden mountain is reckoned at four and a half ri, with another ri farther to Iwanai. Its passage is a bugbear to Japanese travellers, but I think there is more in the name than in reality. At certain seasons, however, and especially during snow-storms it is not altogether unattended with danger; but if there were no worse roads in Yezo than the Raiden pass, there would not be so very much to complain of. After a mile or so along the flat land north of the Shiribets, a bare slope is ascended and then a steep ascent reaches the plateau like top of the southern section where the track passes through high bamboo. Then you zig-zag down into a ravine the mouth of which opens on the sea, but which you are considerably above, where the presence of hot springs give it the name of Yunosawa.† There is a travellers rest

\* Now called Ushoro, see Chap. 14. 'Esash' along the west coast,' *Japan Gazette* 7th April 1883.

† Otherwise known, by its semi-Ainu name of Yunai. In Mr. Lyman's remarks on limestone in Yezo, extracted from his 'General Report' already frequently referred to he says:—

"It is to be seen, then, that, although limestone is on the whole rather sparingly distributed through Yesso, it is yet far from being altogether wanting, and that near Hakodate it is even very abundant, and no doubt practically inexhaustible in amount. It is especially fortunate that it should be so conveniently situated for shipment southward for it may even help to supply the needs of Nippon,

house here which formerly belonged to the government, and the master of which was allowed thirty dollars a year for its maintenance. The road then ascends the side of the ravine on to the top of the northern section of the mountain, where the path is rocky and stony.‡ There are some birch, and two kinds of spruce trees known as 'todo' and 'Yezo-matsu.' After this the descent commences, but is broken by a considerable level patch alongside a deep valley on the right, but again descends on the bare northern slope where you have a fine view looking down on Iwanai, the Horogap valley, with the bold coast beyond Kaiyanuma coal mines, and Furo to the north and N.N.W. and the mountain mass of Shakotan.

Iwanai is one of the most important fish-towns on the west coast. Its anchorage is somewhat protected by a spit which makes out, but exposed as the place is to north-west winds, it must be bleak in the extreme during winter.

Bearing due north, 5 sea miles from Iwanai, the little village of Kaiyanuma stands at the opening of a narrow valley running into the mountains to the eastward. Here are situated the government coal-mines, first discovered, I believe, in 1863, by Mr. O-sima, a Nambu officer then in the service of the Tycoon, who had been under instruction by two American mining engineers, Messrs.

where, as I understand, it is very rare and is commonly imported from China. An abundance of lime would have no doubt a very important influence on the architecture of Japan, and perhaps on its agriculture too.

"The only deposit of gypsum known in Yezo is that of Yunai, among the old volcanic rocks of Raiden mountain, three leagues and a half southerly from Iwanai. The gypsum forms a bed sixteen feet thick and is mostly bluish gray, soft and shaly and seems to be on the average very impure with clay; but there are thin white crystalline often fibrous seams of pure gypsum, up to 0.2 feet or thereabouts in thickness, and innumerable minute crystals of white iron pyrites. The deposit is exposed through a length of about fifty feet in the side of a narrow ravine, and is overlain by some forty feet of loam containing blocks of greenish gray trachytic (or rhyolitic) porphyry with what seem to be sanidin crystals. Supposing the bed to extend with the same average thickness every way in the hillsides to a distance of 100 feet from where it is seen, there would be about 40,000 tons of impure gypsum; supposing it to reach in like manner 1,000 feet there would be 1,600,000 tons; perhaps it may be safe enough to count on a million tons.

"Even if the gypsum be too impure to become white when calcined so as to be used as ornamental plaster, it might still be valuable to put on the farming lands of Yesso and Nippon, which are apparently very deficient in lime; but the difficulty of shipment is a great obstacle in the way. The deposit is accessible only by a very narrow steep valley in which there is at present only a very imperfect foot path, which descending about 2,000 feet leads to the village of Abushita on the sea shore about a league distant. At Abushita there is no good harbor; but vessels might lie off it with some safety during the summer. A small tram road could be laid in the valley, and if a steamer could be sent from Iwanai to carry away the gypsum or to tow away vessels loaded with it, perhaps the deposit might be worked. But even then, the looseness of the earth and stones that lie above the bed through a thickness of forty feet at least would make it very difficult to gather any large quantity of the gypsum. It must therefore be considered for the present at least as quite unworkable on any large scale."

‡ According to the Survey Department records, this northern pass is 2,200, and the southern one 1,900 feet above sea-level; the highest part of the mountain being 3,250.



Blake and Pumpelly, who were employed for a period in Yezo, in 1862. H.M.S. *Rattler* first determined the position of Kaiyanuma as latitude  $43^{\circ} 5' N.$ , and longitude  $141^{\circ} 30' E.$  The bearings from the village are:—coast line N. by W. and S. by E.; rocky point beyond Tomari N.W. by N.; Iwanai S.; Cape Raiden S.W. by S.; Sitsze Bay S.W.; Cape Benki S.W.  $\frac{1}{2}$  W.; Cape Mota S.W. by W.

Mr. E. H. M. Gower, with his brother—then H.M. Consul at Hakodate—visited the place in 1866, and recommended the re-opening of the mines. Mr. Gower was subsequently appointed superintending engineer, and under his direction was commenced a tramroad from the mines to the sea. This work was interfered with by the civil war, but in the autumn of 1869 Mr. James Scott was sent up by the government to complete the works, which he had just accomplished when I first visited this place, and I had the gratification of seeing the first coal run down the tramway; in fact, I may say, the opening of the first rail-road in Japan.

Kaiyanuma valley has an average width of from 300 to 500 yards, with grass-covered slopes on either side. It runs about three-quarters of a mile east, when it bends north-east, and the hillsides become higher and wooded with a mixture of firs and hardwoods. Some smaller valleys and ravines branch off the main one, and the coal now being worked lies in a patch of mountain between one of these running east and the north-east part of the main valley, about a mile and three-quarters from the sea. The Japanese originally worked on the north-west side of the mountain from the main valley, but in order to save another bridge which would have had to be made across the small river which runs down the valley, the mine opened under the direction of Mr. E. H. M. Gower was near the top of the mountain on its south-west side, and the tramway ran up the branch valley, or ravine, as it may be called. The main gallery followed a seam of coal  $7\frac{1}{2}$  feet in thickness, running N.N.E., and dipping not less than  $45^{\circ}$  W.N.W. The gallery was 8 feet wide by 10 feet high, and had, when I was there, penetrated between 50 and 60 yards. A smaller gallery had been run off it to strike a  $3\frac{1}{2}$  feet seam. It was intended from the main one, into which trucks can be run, to work laterally both upwards and downwards, but this had not yet been done to any extent. At the mouth of the mine was a level terrace, which had been formed by cutting out and filling up, on which a shed had been erected, where coal which could not be at once run down—as in the winter when the snow is deep—was deposited.

The staff on the place, when I was there, was three yakonins—who however did little or nothing—and 43 men, including carpenters, smiths, foremen, coolies, and 19 miners. Mr. Scott controlled the works, and everything seemed to be going on smoothly under his direction. An absence of trees renders the place bleak, and exposed to the full force of westerly winds which blow up the valley. Carpenters' shed, smithy, and engineers' shop, stood alongside the line near its lower end. Some of the workmen likewise lived there, but the miners were located in dwellings near the head of the main tramway, conveniently situated for work on the mine.

The tramway ran right to the seaside at

the village, where the coal was being deposited in a heap; but it was intended to erect sheds there. The bay at Kaiyanuma is but a diminutive one, having a shingle beach, and ledges of rock on either side. In westerly winds there is no shelter whatever, so that the only kind of boats which can be used for shipping coal are such as can be readily hauled out in case of bad weather. For this the ordinary large fishing sampa, previously described, are very suitable. It would necessitate great expense to construct a wharf to withstand the force of the sea, while a break-water would be a work of considerable magnitude. Coal might be shipped in sailing vessels from April to September, while steamers might take their chance of fine weather at any time, but this is very uncertain after October.

The above account of the Kaiyanuma coal mines is from my 'Journey in Yezo' published in the *Journal of the Royal Geographical Society* in 1872. Under the Kaitakushi various methods were attempted to develop these mines, but owing to the want of a harbour, the disinclination of the Japanese to allow their foreign experts to control the works, the rascality of the officials employed, and above all the inferior nature of the coal, the out-turn has never paid the government a tithe on the expenditure. On one occasion, indeed, when the foreign director visited the place he found the tramroad disused, and coal being transported on the backs of horses; an inquiry into the reason for which brought to light the fact that the officer in charge was the owner of the pack animals. Of course now that the railroad has been completed to the Poronai mine, and the coal there has turned out to be so much superior, there remains no reason for keeping open the works at Kaiyanuma, so that the probability is they will be abandoned. Mr. Lyman carefully surveyed this region, together with the little coves of Chats and Shibui which it was considered might be made available for shipping places for the coal. Full details and plans will be found in Mr. Lyman's elaborate reports in the Kaitakushi volume of 1875, and two later ones on the geological survey of Yezo, published by the same department in 1877. If not from an economical point of view, these reports must be of much value to the specialist in a geological way.

When the tourist has "done" the coal-mines at Kaiyanuma he can, if he wants to see some very fine coast scenery, and the weather should be favourable, take boat round Shakotan promontory, by doing which he will pass the peculiar steeple like rock standing on a reef off the western part of that cape known as O-kamoi,\* probably the Ainn-Japanese word for a god with a Japanese prefix, generally designated on foreign charts as 'sail rock'; and rounding the north part of the cape pass the bays of

\* Usually pronounced by Japanese Oka-moi. I cannot pretend to say which is correct. The next headland to the north-eastward, between Shakotan and Furubira is called Shima-moi. 'Moi' or 'Mui' has some meaning in Ainu, as it is a common termination, as in 'Kombu-moi,' kelp gathering place; 'Tokari-moi' (Mororan), place where the seals haul out, and such like. Mr. Fuknsi considers 'O' in Ainu used as a prefix means 'is,' and that 'O-Kamoi' would be simply the place of existence of the Kamoi or deity.

Shakotan\* and Furubira, reaching Yoichi where the land road which cuts across the promontory from Iwanai again gains the coast. The distances are approximately:—Tomari (Furu)  $4\frac{1}{2}$  ri, Shakotan 8, Bikuni 4, Furubira  $1\frac{1}{2}$ , Yoichi  $5\frac{1}{4}$ . Otherwise he engages pack ponies at Iwanai for Yoichi, a distance of twelve ri, which, if it be late autumn or after heavy rains, he will find quite enough for a day's travelling. Indeed although the highest part of the mountain passed over is not more than about eleven hundred feet above the sea, and the road is one on which there is a good deal of traffic, it is one of the worst in Yezo.

Leaving Iwanai you strike at once inland to the eastward, at first over some open grass land, then into the valley of the Horogap river which falls into the sea some three miles north of Iwanai. Here you ford the river which is sometimes pretty deep, pass a few settlers houses, and floundering about in deep mud-holes along a trail which bifurcates continually in order to avoid places which have been badly cut up with the frequent horse traffic, enters a narrow valley where the height of the bamboo scrub is I think greater than I have seen it almost anywhere else in Yezo, and equally dense and impenetrable. As you get into the mountains the track, although of course steeper, is really better, because it is rocky and hard. The actual pass is about half way between Iwanai and Yoichi.† The last time I travelled this route I found a house had been built just on the summit and presume it still exists. On the northern side you descend pretty rapidly, but the trail passes for some distance along the crest of a ridge or spur through thick woods of spruce mixed with deciduous trees and is generally in a very bad state. You here strike the upper waters of a stream called the Nanamakari, on which formerly there was an inn kept up on government allowance for the accommodation of travellers called Rubispe, of the accommodation at which I availed myself the first time I made the journey in very bad snowy weather late in November. Now, however, I think if it is not intended to go through to Yoichi it

is as well to get as far as Skarobets, where good quarters can be found in a pretty situation on the bank of the main-river. Thence to Yoichi is about three and a half ri, not, as one would imagine from looking at the topography of the country, down the valley of the river, but crossing a ridge to the north-westward over into another valley which opens on the sea to the westward of the high bluff which marks Yoichi. This detour, on a road intended as communication between Iwanai and Otaru, is quite unnecessary, and makes the distance some miles more, with no counterbalancing advantage, than it would otherwise be if crossing the Nanamakari below Skarobets, it struck thence direct to Oshoro. Mr. Wheeler, formerly of the Sapporo college, did, I understand, project a road through here, but his recommendations have not so far been carried out. In this matter of means of communication in Yezo, one of the essentials in the development of a country, the government seems to exhibit the utmost indifference.

Of late years—during the administration of the Kaitakushi—settlers have been established both in the valley at the back of Yoichi, and at Furubira, and an Aidzu settlement was also located near the mouth of the Nanamakari to the eastward of Yoichi bluff. I am unable to say whether these particular "colonies" meet the expectations with which they were founded, but I have observed that, as a general rule, these forced settlements, after the first few years of apparent prosperity, wither very rapidly, and in some cases almost die out. It seems evident therefore that attempts to plant purely agricultural settlements in Yezo before the coast becomes thickly inhabited by a permanent fishing population, is simply going against the ordinary desires of human nature—especially in a country like Japan where a precarious kind of industry suits the nature of the people better than steady plodding employment—and is not likely to be successful. The government would shew its wisdom, if in future, profiting by the experience thus gained, its efforts should be otherwise directed with a view to the encouragement of settlement.

From Yoichi to Otaru is about half a day's—I was going to say—easy travelling; but when I call to mind the getting up and down the slippery clay tracks over the hills eastward of the pretty little cove of Oshoro in wet weather, I must omit that designation. Several villages besides Oshoro are passed, and there are some fine glimpses of bold sea-coast scenery to be got, including the sight of a very peculiar pinnacle rock appropriately named by the Japanese 'Rosoku-iwa' or candle-rock. The rolling hills passed over as you near Otaru are bare of trees, and indeed for some distance inland till the higher mountain slopes are reached, a feature which will be found hardly repeated in Yezo; and so dissimilar is it to nearly all other parts of the island, that I am inclined to doubt that it can be accounted for through natural causes, but am more inclined to believe that the greater part has been originally covered with forest, which has been exterminated owing to the demand for firewood in this great fishing district for boiling down herring; while subsequently the young growth has been kept down by burning the old grass as the Japanese always do in spring for the purpose of creating good pasturage for their horses.

\* Mr. Boehmer who travelled round this coast partly by land and partly by native boat in 1874 (see 'Reports and Official Letters to the Kaitakushi') says:—"Shakotan is a place famous for the production of a peculiar kind of bamboo (Arun-dinaria) used by the Japanese for stems of pipes and writing brushes. The place where the reeds grow is situated five miles up the stream from the village. It grows abundantly about there, and no traveller who stops at this place leaves without securing some of the peculiarly coloured reeds. The colouring, the Japanese frequently declare, to be characters of their own language, written, as they pretend, by their gods." The Rev. Mr. Summers, to whom I am otherwise indebted for much information, has a Japanese drawing of this plant from Sakhalin, on which is written 'Shakotan' as if it were the Ainu name. On the other hand Mr. Fukusi, who has looked up the matter in a book lately printed for the Kaitakushi, finds the explanation for the name of this place to be given as 'Shat' summer, and 'Kotan' dwelling-place.

† This pass is called Inao-toge and has been ascertained by the surveyors under Mr. Fukusi to be 1,130 feet above the sea. 'Inao' are the "whittled willow sticks" with shavings left attached to them, mentioned by Mr. Batchelor and all writers upon the Ainu. For illustrations, see Dr. Scheube's paper in the transactions of the German Asiatic Society of Japan, February 1882; Professor Dixon in the *Chrysanthemum*, December, 1882, &c.

The only question would seem to be whether this part of the coast has been resorted to for fishing sufficiently long to cause this amount of deforestation.

The road does not follow the coast line to Otaru, but across the rolling hills inside of Takashima head, which forms the northern and western protection to the bay, and descends into that part of the town known as Irunai, Otaru, being really composed of three places Otaru proper—formerly called according to Aino Otarunai, Irunai, and Temia, extending about three miles round the shore of the bay. This place has for many years been one of importance, owing to the amount of herring which are taken in spring at and about it; its proximity to the great salmon district of the Isikari; and it being really the only safe anchorage at all seasons on the west coast of Yezo. The town has increased very much of late years; and now that it is the port of Sapporo, and the projected shipping place for the produce of the Poronai coal mines, with which it is now connected by the railway extension beyond Sapporo, it must take a position on Yezo only second to Hakodate. The best view of the place is obtained from sea-ward as you come in towards the anchorage, but you can get nearly as good a one by ascending the highlands beyond Temia in the direction of Takashima head. The variation in the form of the ground on which the town is built, the steep bluffs and nests of peculiar rocks, with intervening stretches of sand-beach, with the high mountains rising behind it, and the picturesque shore running towards Kamoikotan rocky precipice, altogether make up a beautiful picture.

Arrived here the traveller, who will probably have become pretty well tired of riding pack-ponies, can be transported by the iron horse the intervening twenty-two miles to Sapporo.

## XVI.

### THE MORORAN ROUTE TO SAPPORO.

The selection of Sapporo\* as the site for the capital of Yezo—otherwise called Hokkaido—under the Kaitakushi, necessitated a road to connect it with the south. It is on this road that the traveller now leaves Hakodate, and after reaching the village of Kamida

\* This mode of spelling may be objected to, but is that now generally adopted in *English*. If we were to follow the *kana* literally it would be 'Satsuporo,' but to a stranger such would not represent the sound intended. Mr. Aston in his *Grammar of the Japanese Written Language*, says:—

"In modern Japanese, and in Chinese words, *tsu*, except when it begins a word, is usually assimilated in pronunciation to a *k*, *s*, or *p* following. Thus *shitsu-so* is read *shisso*; *satsushari*, *sasshari*; *shutsu-kin*, *shukkin*; *Nitsu-pon*, *Nippon*, &c. This has caused *tsu* to become regarded as a mere phonetic sign of the doubling of a letter, and is not unfrequently used by modern writers when the doubling has resulted from the assimilation of other letters than *tsu*."—We cannot have a better authority. The Ainu pronunciation, as I catch it is 'Sasporo,' or 'Satsporo,' but that is now a matter of no moment because the Japanese having adopted it as the name of a 'ken' and spelt it as they considered proper, we have only to come as near the intended sound as we can get. Actually, however, as Mr. Fukusi has determined, the word in Ainu is 'Sasi-poro,'—'Sasi' meaning spent-salmon, and 'poro' many; these natives having formerly frequented the place for taking these fish with which the small streams and side-creeks of the river abounded during the spawning season.

at the outskirts of the town, strikes across a boggy flat to the terrace lands of the lower slopes of the mountains, travelling along on these in a general northerly direction. The road is straight and uninteresting, and is only varied by occasional descents into the narrow valleys of small mountain streams which flow towards a great swamp on the left hand and ultimately find their way into the sea. The view along this road, however, of the extensive bay and mountains on its western side opposite Hakodate head, with a good look into the Strait of Tsugaru, and the valley or plain immediately below, is very fine. A few houses are scattered along the roadside, but the small villages with their orchards and gardens through which the former track led, are left to the right by the direct course the road takes towards Nanai. This place is ten miles from Hakodate, and according to Captain Bridgford 200 feet above the sea. It is prettily situated overlooking the plain, and is the site of a government experimental farm, where there is rather an imposing array of buildings, including a large office, officials' houses, a great barn, stables, cattle sheds, flour mill &c.; and a good deal of land under cultivation with foreign crops, as well as orchards and fruit gardens, and nurseries for forest trees. Its maintenance is a considerable item in the government accounts, as all such establishments must necessarily be when encumbered by a host of officials. However, as it was never contemplated to be a paying concern, but to serve as an example to the farmers of the country, and as a sort of school of agriculture for the benefit of the rising generation, with a view of inducing the adoption of a style of farming which might be successfully pursued in Yezo, it is to be hoped that some indirect return will accrue from the expenditure.

The history of Nanai is singular. In the first place under the Tokugawa government, Mr. Gaertner—brother of the then Prussian Consul at Hakodate—was engaged at an annual salary of about four thousand dollars, to start a farm there on foreign system. Seeds, plants, agricultural implements, and everything necessary to carry on on a pretty extensive scale being imported. On the re-establishment of the government after the war of the restoration, an arrangement was entered into with the then governor of Hakodate by which Mr. Gaertner, taking over what was on the place at a nominal value, received a concession of the land for a long term, not only under very favourable conditions, but the terms of the agreement gave him, in addition to the right of residence outside the limits of a treaty port, certain privileges such as had hitherto been conceded to no foreigner in Japan. Mr. Gaertner obtained from Germany a few farming experts and their families, who of themselves did not amount to anything, but it became mooted that these were but the forerunners of a number of others who would be brought out under the auspices of the German government to form a settlement; but what alarmed the Japanese government most, was a report industriously spread and apparently more or less believed in official quarters, that German women under such favourable circumstances as they would be placed in in Yezo, would bear children—and not always only one at a time—three times in twelve months. Mr. Gaertner was not getting on so well as he had calculated,

and in fact, though this was not generally known, was in a financial strait. It is almost needless also to say, that the usual diplomatic jealousy was aroused, and this German concession was made a handle for endeavouring to obtain similar privileges for other nationalities, and the government was made to believe it had fallen into a false position. Not only this, but the successes of the Germans over the French in the war which was then almost brought to a close, doubtless had effect on the official mind. The outcome was most fortunate and opportune for Mr. Gaertner. The government bought him out by payment of a sum of between sixty and seventy thousand dollars; and so ended the "foreign occupation" of Nanai. The farm as it then existed was but a patch upon what it is now; indeed Mr. Gaertner never had but a very limited amount of land under cultivation, and the few buildings he erected have long since disappeared in the general improvement and extension of the place.

From Nanai the road descends gradually into the northern portion of the Ono valley,\* passes near some scattered dwellings below park-like slopes dotted with chestnut and oak, known as the village of Enjiyama, and enters the hills at Toge-no-shita about thirteen-and-a-half miles from Hakodate. Thence it winds up a wooded valley by a moderate ascent, gains a ridge, and is then graded along the steep side of a deep ravine till the height of land between the bay of Hakodate and the lakes which drain towards Volcano Bay is reached, about nine hundred feet above the sea. Before the actual summit is gained, the traveller will do well to pause and look back, by which he will get a distant view of Hadodate standing out like an island in Tsugaru strait, seen right down a valley closed in on either hand by wooded hills. If he knows where to turn a few yards off the road moreover, he will be rewarded also by a better view of the large lake and the volcano of Komagatake beyond it, its wooded points and islands, and the grass covered slopes on its right, than he will obtain from any point on the road; and as often as I have looked on this view I remain of the opinion that it is one of the finest in Yezo.

Descending the northern side of the pass, the road has been skilfully carried with an easy grade following the indentations of the hill sides, not down to the large lake Konuma, but heading a steep valley, crosses over, but without any ascent, the divide between two, and comes immediately upon the smaller lake known as Junsai-numa. In this pleasant situation are a couple of

\* The village of Ono lies on the other side of the valley from that taken by the present main-road. It is  $11\frac{1}{2}$  miles from Hakodate, at the opening of a branch valley which the direct road for Esashi follows up (See 'Distances on Travelled Routes in Yezo.' *Japan Gazette* 16th September, 1882) past the old lead mines. These mines were in full work when I first visited the place in 1861. The following year Professor Blake and Mr. Pumphelly were employed by the government to report upon the mineral resources of southern Yezo, and they visited this and other places, not, however, going north of Iwanai. An abstract of Professor Blake's report appears as an introduction to the volume of 'Reports and Official Letters to the Kaitakushi.' These Ichi-no-watari lead mines were soon after that abandoned, owing to the very small yield (66 tons in three years) which they afforded notwithstanding the amount of labour employed.

inns with fair accommodation, a favourite resort for tourists who have but a few days to devote to Hakodate and its vicinity. It makes a good head-quarters from which to visit the volcano, or explore the lakes or woods in the vicinity. The distance from Hakodate is slightly over eighteen miles. The whole region round about the lakes and volcano is in a state of nature, and the remaining ten miles of road to Mori situated on the shore of Volcano Bay is through forest. There are some ups and downs on this road, and several cuttings through banks of pumice and volcanic ash of which the whole district is composed. The accumulation of vegetable mould on the surface is of varying thickness, depending on the approach or otherwise to the slopes of the volcano, or the form of the land, vegetable matter having of course generally collected most in the hollows. Where there is hardly more than cinder partially covered with patches of moss, the vegetation is but scanty, small birch predominating; but otherwise, oaks, maples, and other forest trees, are of fair growth, and seem to thrive on a very thin surface soil. In the lower and swampy bottoms, alders, swamp-alder, ash, elm, and a number of smaller trees grow luxuriantly, while the rough-barked poplar or 'cotton-wood' attains a large size. Three principal streams are crossed, namely, the Sikonope which connects the smaller with the larger lake; Akai-kawa, another feeder of the latter; and a third which falls into Volcano Bay westward of Komagatake. On ascending out of the deep valley of the last, the road is cut out of a steep bank which affords a fine section of the successive strata of pumice and vegetable mould, displaying at a glance the history of the successive eruptions of the volcano, and intervening periods of quiescence for ages back, in unmistakeable language.

A ride through these woods late in the season when the maples, birches, mountain-ash, and other trees are assuming, under the influence of an occasional night frost, their bright autumnal tints, is very delightful. Nor is it much less so in spring when the variation in the different shades of green is still distinct, and before the beautiful wild flowering cherry, and great magnolia blossoms have gone off. The present wide pumice road, with the larger trees cleared on either side for the sake of the telegraph line, is not nearly so pleasant as when the trail, as it used to be, wound about between and under overhanging foliage which afforded a good protection against the sun's rays, and on a fine summer's night caused a deep gloom which it was delightful to ride through.

After getting out of the river-valley just mentioned, you approach the sea over a piece of open scrub-covered country which slopes down towards the bay shore, where some tumuli-looking mounds, from which the place probably takes its name, marks the village of Mori. There is a long street full of inns for the accommodation of travellers, who necessarily pass through in numbers, as two routes branch from here; and a wooden pier one of the earlier works of the Kaitakushi in connection with the Sapporo road, but of which a third or so has been washed bodily away within the last two years. Here you await your opportunity to cross the bay to

Mororan by steamer, or passage-junk, or schooner as the case may be. Ordinarily a small steamer runs daily; but, subject to the diseases which affect Japanese steamers generally, she is not unfrequently laid up for repairs, and is occasionally withdrawn from the line for other service. One of the sights at Mori is the side of the volcano when lighted up by a bright sunset. The rose and violet tints are sometimes splendid; and at Mori you are just in the right position to catch the reflection.

Beyond Mori the northern land-route follows the shore of the bay, and is that taken by travellers to reach Sitsze Iwanai and other places on the west coast north of cape Mota, which was the subject of the preceding chapter. It is that also which must be followed as far as Oshamambe if the traveller prefers passing round the head of Volcano Bay in place of crossing by sea to Mororan, which is the route taken by the telegraph line, and will be described later.

The distance across from Mori to Mororan is about twenty-seven statute miles, about two-thirds of which distance is fairly exposed to the swell of the Pacific which sometimes rolls in quite heavily. The passage, however, is usually made without any difficulty, because, if there should be no steamer running at the time, the captains of the small craft which then run are generally careful enough not to make a start unless the wind and weather favours them, so that the passage is generally performed in a few hours, unless you should become becalmed mid-way, when it may be protracted into the night. The course across is about north-east, until you make the bay, where you have Daikoku-shima a small high island right in the entrance, and the bold and broken shore of the peninsula on the right. After passing the island a bluff hummock is rounded, and you run up along the high wooded shore of this pretty harbour right into a protected nook at the south-eastern extremity, where is situated the modern settlement called Shin-Mororan, to distinguish it from the old village on the northern shore now known as Kiu-Mororan, and where in former times the passage boats ran to before there was any road on the peninsula. Mororan is also known by its Ainu appellation of Tokarimoi, meaning 'seal-landing;' while the harbour probably takes the name of Edomo (Endermo of the foreign charts) from one of the former Ainu settlements on its shore.

The peninsula is generally high and thickly wooded; but there are some bare patches. The highest hill is that immediately above the village five hundred and fifty feet above the sea. There are some large stretches of swamp along the eastern side of the bay which is shallow, and in places these extend nearly across the isthmus which connects with the main-land. A single street runs up the hill from the landing place on to high ground overlooking the harbour, whence a road is scarped out of the side of a hill connecting with the lower eastern end of the village. The place is little more than a collection of inferior inns, where travellers are charged in inverse ratio to the accommodation afforded. It seems a pity that so miserable a place should occupy so nice a situation.

Passing out of the village the shoal part of the head of the harbour is rounded where only about half a mile of land separates it from the ocean. Then the road ascends the

hills through which it winds very prettily for some miles, until getting beyond the wooded region it passes over grass covered slopes along near the outer shore-line, where if you leave it for a few yards, you will get some fine views of a rocky and picturesque coast. After travelling three ri you reach a small river with a bridge and a few houses called Washibets, near which the telegraph line which runs around Volcano Bay, comes on to the road to form the loop for connecting Mororan; and farther on as you follow a straight road running parallel to an almost equally straight beach in a north-east direction, you may observe a narrow track branching off to the left, which is that which leads to old Mororan and around the bay.\* Two ri of this straight road carries you to Horobets, where you may wade or ferry the river, which issues from a fine valley to the north-west, according to the state of the water, and arrive at the first post station from Mororan. Looking back from here Komagatake Volcano is seen bearing south-west, right over the high land of Mororan peninsula.

Horobets is one of the old fishing stations, which were formerly maintained by the lessees of the coast in such good style. It stands close to the beach on a level strip of land intervening between the wooded hills and the sea. Since the traffic induced by the new road has become augmented, several other houses besides the old 'quaisho' have sprung up. In following this route this is the first place where the traveller finds a regular Ainu settlement, which, as he may expect to find as comfortable quarters here as anywhere on the road, he will do well to take the opportunity of examining at leisure. Their huts are scattered round about pretty close to the post-house. There are said to be about three hundred souls. The chances are also that the guide who goes with the horses will be an Aino, and if one wants an opportunity to see these people in their element, watch should be kept in the morning for the horses being driven into the corral in front of the station, which is always a wild, and sometimes, when the animals are given to be obstinate, quite an exciting scene.

Beyond Horobets the level pumice road, three and a half fathoms wide, continues on in a direct line of north-east on the narrow flat between the sea-shore and a wooded mountain region on the left hand. Abutting upon this strip are steep walls of volcanic rock which have the appearance of having at one time formed the shore-line, as they actually do farther on where the road mounts by a heavy cutting.† The effect

\* See *Travelled routes in Yezo. Japan Gazette.* 16 September 1882.

† It is perhaps hardly fair to detract from the 'original' scientific value of that pleasantly written book entitled *Unbeaten Tracks in Japan*. If the reader, however, will compare some passages in it which relate to the land gaining on the sea, and the tendency of the rivers along this portion of the coast of Yezo to turn towards the south at their mouths, with Captain (now Colonel) Bridgford's *Journey in Yezo* published in the 'Transactions of the Asiatic Society of Japan' for 1873 and 74, and with Mr. Lyman's *General Report on the Geology of Yezo* published by the Kaitakushi in 1877, he will find a very marked 'resemblance.' Captain Bridgford says:—

"For the next seventeen miles the road runs parallel to coast line and on a dead level, here the coast has gained land to a great extent at some

of rain on the light cinder and pumice, is such that the road here, where it is very steep, is almost constantly out of repair. A short distance over a wooded terrace bring you immediately above the deep wild glen of the Noboribets river, which comes rushing down in a succession of rapids, with its sulphur-coloured water. The road here descends by another cutting and crosses by a bridge where there are a couple of houses, about four miles from Horobets. There is here a little plain shut in from the sea by some high knolls, and bounded inland by wooded hills, quite a secluded place.

very recent period. The old beach, cliffs, headlands and bays are distinctly visible, in some places they are now two or three miles from the sea. This new formation appears to consist of an enormous bed of pumice, this is covered by a thin skin of vegetable mould the result I should think of about twenty-five years' vegetation."

"Since reaching the coast I have observed that all the streams, on nearing the beach turn south and run for some distance parallel to it before they discharge into the sea. This denotes that there prevails a current along this part of the coast setting to the southward."

Without endorsing Captain Bridgford's view as to the reason given for this latter peculiarity, which I believe will be found rather in the set of the swell of the ocean with regard to the direction of the coast-line, I will quote Mr. Lyman on the gain of the land. He remarks:—

"Around a great part of the shores of the Island, but especially on the south-east coast, there are plains that may be regarded as New Alluvium or at least corresponding to it in age; but they are perhaps too sandy to be compared in fertility to a river bottom. Indeed such a plain for fifty miles or more east of Mororan is very barren; owing, however, to the special fact that it is covered with layers of pumice that have been thrown out from time to time by the Tarumai Volcano. But at a little depth there (in some places, if not everywhere, only a foot) there is a deep rich-looking black soil, the result of the growth and decay of grasses and of the decomposition of the pumice through a long period of volcanic inactivity. Possibly the shallow superficial deposit of undecomposed pumice might be in some measure removed, or by very deep plowing so mixed with the underlying soil as to reclaim that wide space, which is now little better than a desert, and turn it into rich farming land.

"The coast plains seem to be but ten or fifteen feet above the level of the sea, and they are perhaps 'raised beaches,' showing that the Island has been recently raised to that height above the level of the sea. Very often the hills behind such a plain show by the shape of their steep bluff like front that the sea once washed their feet. Looking down, however, towards sunset on such a plain from the hills east of Oshamambe, at the head of Volcano Bay, where the shore has for several miles a broad and gentle curve, a number of equally long and beautiful curves parallel to it and brought into relief by the western light may be seen, formed by ridges like huge winrows, along the plain for many scores of yards back from the sea. It is clear that such land and the now more level land behind (and it seems of about the same height as all the other coast plains of Yesso) has been formed by the action of the sea rather than of rivers or of a wholesale raising of the Island. The ridges have been raised one after another by remarkably heavy storms or stormy seasons; and the space between has been gradually filled in and levelled up by the wind and rain and such causes. The wind as well as the waves may also have helped to raise the ridges in the first place. The space outside the newest ridge is slowly widened by the ordinary waves and tides and currents constantly bringing sand from the neighboring rocky headlands, stirring it up time and again, and gradually throwing it higher and higher upon the shore out of the future reach of the water. The level of the plain then comes to mark the highest possible action of the sea just as the level of a river bottom at length reaches the level of the highest floods. It is a striking illustration of the land forming powers of the sea, which tends to fill up the hollow parts of the coast."

Were it drained, as I imagine it could be, it would make a favourable site for a farm or cattle ranch, there being a good deal of only lightly timbered land back among the hills suitable for pasture.

The traveller pressing on for Sapporo or the south-east coast, for the road is one for the first forty miles or so from Mororan, does not halt at Noboribets, but crosses the little plain, ascends the up lands on the far side of it, after crossing which he comes upon the sea at the mouth of a small river where are two or three houses known as Aiyiro, about three miles distant. But any one desirous of visiting the hot-springs up the Noboribets should have engaged his horses for the purpose at the last post-station, Horobets. Then his guide will leave the main road at the Noboribets river and strike at once inland over some steep but not heavily wooded ridges by a narrow trail. After that it drops into the deep narrow valley of the northernmost branch of the Noboribets. In all about an hour and a quarter slow riding will take you to the hot springs, about four and a half miles from the sea. The stream is a mountain torrent of an alum or bluish-milk color. Though tinging the rocks where it runs swiftly, a rust color, in other places where the water is still, it deposits a greenish sediment. There are a couple of houses with the usual indifferent accommodation to be found at bathing establishments in Yezo. The whole stream here is quite warm. The tanks are fed by nearly boiling water that issues out of various springs along the banks, and the supply is so great that it would be possible to supply baths enough to wash all the inhabitants of the island. A little higher up the valley are some ragged red and yellow cliffs and banks, round about which are, I was told, many other and larger springs than those near the houses, which are doubtless worth examination. The place is surrounded by high wooded mountains on all sides, and is as wild and secluded as anyone could wish for. The people who own the baths told me they did not stay there in winter, as, at such season, there is usually about six feet of snow. In returning to the main road it is only necessary, if you have a good guide, to follow the track towards Noboribets about half way back, and then branch off across a pretty piece of rolling country nowhere heavily wooded, and come out on the high land near Aiyiro, which distance is little if any more than by the other trail.

From Aiyiro it is about a couple of miles to where you cross the Sikiu river, in order to do which a slight detour is made inland. This is the second, Horobets being the first, unbridged river on this road, and is forded, or crossed, by a flying-bridge ferry, according to the state of the water. When this road was laid out, bridges were constructed at nearly every river, but they were such insecure structures that many were swept away by the first freshet. Indeed, it would require really good work to withstand the sudden floods which occur on all the rivers along this part of the coast, not only because of the short distances the mountains which feed them stand back from the coast, but also from the nature of their beds, which are for a great part only the washings from a volcanic region and consequently of an untenacious and shifting nature. Looking up the valley of the

Sikiu, you get a fine view of rugged mountains, and both up this and that of the Shiraoi, you see some high cliffs like the sides of craters, the remains of a once active volcanic region. Indeed from Volcano Bay on the south, stretching to the west-coast, and including the high promontory of Shakotan, is all one great mass of volcanic mountains, bounded by that depression which extends across Yezo from where the valley of lower Iskari touches the north-west coast to Yubuts on the south, and which it is within the range of probability may once have existed as a strait dividing Yezo into two parts.

There are few if any features of interest on the straight pumice road on towards Shiraoi. Before reaching that place you cross a rather deep creek called the Oyuro, where, if the bridge is broken down, a not unfrequent occurrence, you may have some trouble floundering through its muddy bottom, and possibly if it is in flood have to carry your baggage over a single beam which may remain of the bridge, and let the Aino guide ford with the horses at the most favourable place he can find. If in a hurry to get forward, a delay of this kind is very vexatious, and one cannot help heaping any amount of abuse upon the heads of the officials whose duty, if it is anyone's duty, it is to look after the maintenance of the highways, or who took the squeeze out of the contract when the bridge was first constructed or last repaired. I may have been especially unfortunate in this matter, but have frequently experienced such delays; and when suffering such annoyance have thought I should like to see an official hung up at each bridge, not so much as a punishment for his individual delinquency, but more as an example *pour encourager les autres*.

There are some peculiar detached mounds, partly rocky and wooded, in the valley of the Shiraoi river, a good sized stream in a broad bed, which is for ever changing its form and scooping out new channels or reverting to old ones abandoned for a time. No bridge has been attempted here. The present post-house, and some hotels of rather pretentious appearance but where the accommodation is inferior, stand alongside the road, which is here perhaps nearly a mile back from the sea. Formerly the stopping place was at the 'quaisho' close to the sea near the river mouth, then in existence as a fishing station. Both here, and at Sikiu already mentioned, there are a good many Ainu; but beyond this a gap occurs in the continuity of these aboriginal settlements along this coast of about thirty miles, so that the visitor who is not making an extended journey should gain all the insight he can into the habits and customs of this peculiar people, before going farther on the coast route, or even towards Sapporo. Moreover, should he intend to visit the Ainu settled on the lower Iskari, he must bear in mind that those whom he meets there are for a great part not actual Yezo Ainu, but were brought there by the government from their native places on Sakhalin when Japan's half share of that island was bartered off to Russia against some worthless Kuril islands.

After clearing the woods which extend a short distance beyond Shiraoi, a low flat country is passed over for about fourteen miles to Tomakomai. There is a good deal

of swamp, and several small streams and ditches, with long narrow ponds which during the season are plentifully supplied with wild-fowl. On the beach are numbers of fishing huts, generally heaped up all around with firewood used for boiling down the 'Iwashi,' for which fishing this district is famous.\* There is no actual village, and only an occasional house on the roadside. The place takes the name of Tarumai, from the active volcano which stands a few miles back and is in sight along the whole route. It is but a few years since the last eruption (8 February, 1874), the ash from which can still be seen covering a good deal of the ground, but owing to the rapid growth of grass and other vegetation is most noticeable on the roofs of the houses. This mountain is twenty-seven miles due south of Sapporo, but still some of the lighter ash was observed to fall there, while a good deal of pumice was washed up on the southern shore of Volcano Bay. According to Lyman the lip of the outer crater is about 3,000 feet above the sea.

By reaching Tomakomai† the traveller will have completed half the distance between Mororan and Sapporo, and come to where the main road to the latter turns inland, while the coast trail continues on to Yubuts and beyond. It is a place which sprung up with the building of the road, and is nothing more than a collection of inns and a few shops existing on what they make out of passing travellers. It has no attractions, being situated near the sea-beach where it is

\* I have elsewhere remarked upon the little that has been scientifically determined regarding the fresh-water fish of Yezo, and the same holds good as to sea fishes. Commercially speaking the principal fish taken are the 'Iwashi'—usually called Sardine, at Hakodate in winter, Volcano Bay and south-east coast in summer:—'Nisin,' herring, a great run nearly all round the coast in spring, and an autumn run also at Hakodate:—'Saba,' mackerel, a small sized fish caught by rod and line at Hakodate in summer:—'Shka,' smelt, Hakodate and Akish Bays in summer:—'Tara,' cod, a winter fish at Hakodate, but obtained later in the cooler water of the west coast about Iwanai and Otaru:—'Buri,' a kind of bonito caught in large quantity during the cod season at the eastern entrance of Tsugaru Strait:—'Maguro,' albacore, netted on the shores of Volcano Bay:—'Kasbe,' skate or ray, split and dried like cod:—several kinds of flounders and other flat-fish, including the holibut especially numerous about Nemoro:—rock-cod, eels, and several other fish suitable for table use. 'Awabi,' ear-shell fish; 'Iriko,' tre-pang or beche-de-mer; and 'Ika,' cuttlefish ('Surume' in the dried state), are all exported in quantity to China. The 'Tako,' octopus, is taken largely on rocky shores, and much eaten by the Japanese in the boiled state. Several kinds of clams and other bivalves are found in shallow water, but the oyster seems confined to the lagoons at the eastern part of the island, and on the north-east coast. Shrimps and good sized prawns are found in certain localities, and small crabs are common, but lobsters and sea-water crayfish seem to be unknown. The deservedly renowned 'Tai' (very similar to the 'Snapper' of New Zealand) has of late years been taken in the Strait of Tsugaru by some immigrant fishermen from the south; and there is no doubt that as Yezo becomes populated, many deep-sea fish will be found to inhabit those waters, which the abundance of shore fishes, has hitherto necessitated no special search being made for.

† This name would probably, according to Ainu, be more correctly spelt Tomakmai, but as in so many other cases, the Japanese method—inserting the additional vowel—has become recognised. It is perhaps hardly necessary to remark that in *kana*, the sound as above, could not be given.

low, straight, and sandy, on an open swampy patch of country which extends for miles. Changing horses here, or hiring a small two wheeled cart, or an equally uncomfortable four-wheeled 'basha,' the traveller will find the next twelve miles of road in a northerly direction the most monotonous and uninteresting in the whole of Yezo, unless he can find diversion in counting the telegraph poles, or sees anything of interest in half dead alders standing in swamp. He will pass near the edge of a reedy lake, a great resort for swans at the right season, and then skirt along the edge of wooded pumice terraces, touching the Yubuts river, which is fed out of ravines cutting in between these terraces, and be glad when he reaches Bibi, a small collection of houses situated at the foot of a terrace, and near the principal source of the river. Here is a cannery, established by the government for preserving venison, but the use of which has become obsolete, owing to the deer seldom if ever now resorting to this part of the country. Thence ascending by a cutting to the level of the plateau five miles more of a straight pumice road through a forest principally of small oak, and the station of Chitosi is reached.

Formerly known as Chitosi-kawa, this was the place where, having reached it from Yubuts by land, the traveller embarked in canoe on the clear waters of a rapid river, the source of which is a lake about fourteen miles south-westward at the foot of the volcano of Iniwa, and descended to the Iskari, and thence to the north-west coast. This can still be done, as there are a number of Ainu who have canoes here, but it must be looked on simply as a pleasure route, the more direct one now being of course to Sapporo by road and thence by rail to Otaru. The former 'quaisho' which stood here has given way to an inferior 'honjin' and post-house, and some smaller inns which afford not the best kind of accommodation. The distance to Sapporo is twenty four miles by the road, north-westerly.

Crossing the river by a substantial wooden bridge the road takes a bee-line across country. The general run of it is level, but every now and then you dip into a hollow and out again to find yourself on the same line cut straight through the woods. It is not until approaching a small settlement in the valley of the Izari, where is a government summer pasture for cattle, that any open country is met with. Such patches, when you do happen upon them, are very park-like in appearance, with their scattered oak trees and long 'kaya' grass mixed with fern. These places, however, although they would naturally attract the unsuspecting selector of land, have generally a comparatively poor and stony soil.\*

\* The traveller along this road may probably observe, as well as on the south-east coast, a number of deep narrow trenches, which he would have a difficulty in accounting for were he not informed that the Japanese government for the last two or three years has carried on a war against locusts. These insects—a kind of large flying grasshopper—appeared first in the region of the Tokachi, and have year by year worked down southward and westward. In 1881 considerable flights reached Sapporo by the 21st of August. They did not do much damage, but many deposited their eggs there. These of course germinated the following summer, and numbers of people were employed catching them while in their un-winged stage. The flights which came from a distance in 1882, reached Sapporo

The next station is called Shimamap, from its being located in the deep narrow valley of the Shimamap. Here you pass over the highest part of this road, and from a point or two on it obtain extensive views over the Iskari valley and even as far as Sapporo. After diving down into the bottom where you change horses at the post-house, you ascend out of it by a steep road scarped out of a thick bed of pumice and cinder. Again you enter the straight cut through the woods, only varied by a dip every now and then into deep hollows in the bottoms of which are small clear running streams, and a few of larger dimensions, down which logs of spruce timber are run as far as the road, where they are cut up into boards or split for shingles, or otherwise hauled into Sapporo on bullock trucks for building purposes. The largest of these streams is the Atzibets—usually called Ashibets—some miles farther up which the government has a shingling mill run by water power, near higher ground where the spruce trees are most plentiful.

Just a ri before reaching Sapporo one of the farming settlements established by the Kaitakushi is passed through, and thence a straight road leads to a combination-truss bridge which spans the rapid running Toyohira River, and Sapporo is entered at its south-east corner.

## XVII.

### WEST OF CAPE ERIMO.

Tomakomai and Yubuts both lie in that bight on the south coast of Yezo between Volcano Bay and Cape Erimo; they are about seven-and-a-half miles apart. The whole region is a swampy flat mostly bare of timber, terminating in an exposed sandy beach extending for a long distance with little deviation from an east and west line. Besides being swampy the soil is largely composed of pumice or volcanic cinder, except near the actual shore where are sand dunes thrown up by the combined action of wind and waves, backed by well defined parallel ridges marking ancient shore-lines. These are generally covered with a growth of rose-bushes and other dwarfed shrubs, but sometimes only with short grass and prostrate herbage forming excellent lines of trail.

If the traveller coming from the south intends proceeding along this coast, he will leave the main road between Mororan and

Sapporo on the 8th of August, were very thick by the 12th. When exceedingly numerous they destroy every green thing they can find. During the latter year the government sent a considerable number of prisoners to Yezo for this war. The expenditure in 1881 was put down as eighteen thousand yen, and the estimated slaughter as one thousand koku, or say one hundred and fifty tons. A far larger appropriation was made for the following year, but the results I am not acquainted with. Of course the whole thing is a farce. The idea of stamping-out locusts by catching them. But it gives employment, and a chance of squeezing, to a host of officials, and so gains one end probably kept in view by the rulers of this officially overburdened country. The Ainu make quite a good thing out of the locust plague, being liberally paid either as day-labourers, or by the amount they catch. The farmers of course are the sufferers, but they are few in Yezo. I believe the money expended in the war would fairly compensate them for all the crops destroyed, and leave a good margin beside. The Ainu chief at Piratori informed me that locusts occurred before when his father was a young man, say about eighty years ago; but as I have elsewhere hinted, I have not reason to place implicit confidence in this gentleman's statements.



Sapporo at the half-way station of Tomakomai,\* forty-two and a half miles from the former place, and go direct to Yubuts. But if he has already been to Sapporo it is unnecessary to return farther on that road than Bibi, from which place his guide will strike off, or continue a little farther along the main road and then strike off,—for there are three different trails,—† on a cross track, for Yubuts direct, of about eleven miles. This passes alongside a reedy lake, over some sparsely wooded pumice ground, crossing the Yubuts river by bridge, and thence across a grassy swamp. Yubuts is now a poor place for accommodation, its former glory as one of the large fishing stations kept up by the lessees of the coast districts being only now marked by the ruins of the old 'quaisho', the foundation of a temple, and a tall wooden outlook rapidly falling to pieces. There are only three or four poor looking dwellings, and a few remaining large store houses which have not been pulled down or converted to purposes they were never intended to fulfil. There are some thatched fishing huts on the far side of the river close to the beach.

Engaging his horses here for Sarubuto, the traveller will ride for some miles over an open region, much the same as that left behind to the westward, crossing the muddy stream of the Azima about four-and-a-half miles from Yubuts by ferry or ford according to the depths of the water; and after another six miles reach Mukawa River, sometimes fordable but generally not so, in the shallow valley of which he will observe a good deal of land suitable for cultivation, and apparently of a rich alluvial nature. It was between this place and Yubuts that a base-line was laid out, on which was to depend the trigonometrical survey of Yezo inaugurated by Mr. Wasson in the earlier days of the Kaitakushi, and afterwards partly carried out under the direction of Lieut. M. S. Day of the United States Navy. The "signals" erected at either end of the nine-and-a-quarter mile line, were high skeleton wooden structures after the pattern of those used on the coast-survey of the United States. That at the Mukawa end has fallen down, but the Yubuts one still existed about half a mile back on the swamp last year, although apparently likely soon to follow the example of its fellow. It is hardly necessary to speak of this projected survey, because there was never more than a beginning made on it. A system of triangles was laid out covering a large portion of Yezo—on paper, and numerous "signals" were erected, not without considerable labour and expense, on accessible prominent hills and mountains throughout the southern and western section of the island. A subsidiary base of about five miles in length was also laid out and half measured near Hakodate; but the stations actually "occupied" only amounted to about half-a-dozen altogether. A good deal of filling in was done by traverse lines run up the valleys of several of the principal rivers, and the coast line was carefully measured and plotted; but on the

termination of Lieut. Day's agreement the thing was allowed to drop, and the staff distributed about the country on local surveys of the more settled districts, or detached to explore and map regions which appeared likely places for settlement. The outcome therefore of the scheme is on the whole unsatisfactory. True, we have now a pretty fair map shewing the coast-line, the courses of some of the rivers, and something of the interior mountain ranges, but this latter is almost altogether confined to the south-west section of the island. The reason for this distinction is, that a preliminary survey of what is now embraced in the Hakodate ken, then known as the district of Oshima, extending from Raiden mountain and the head of Volcano Bay to the southward, was commenced before the bright idea to "put up" a twenty years job on the Kaitakushi, gain experience in surveying, and draw salary as "surveyor in chief" occurred to one of General Capron's staff. It was ordered by the then governor of Hakodate, and undertaken by Mr. Fukusi now chief of the survey department of Sapporo ken; who, with a small native staff of assistants trained by himself industriously pursued a work not only congenial to his taste but for which he was in every way qualified, and the results of which reflect on him the greatest credit. This preliminary survey—and it was called nothing more—was but partly complete, however, before an excuse was made to withdraw Mr. Fukusi from it and attach him to the "trigonometrical" survey, doubtless with the intention of preventing the completion of the valuable work he was engaged upon. Some of his assistant surveyors had fortunately become such proficient that he was able to leave them to complete his unfinished work, so that at the present day we have this part of Yezo more filled in on the map than any other. It would be invidious to compare the work on the two parts of the island, as the systems were altogether distinct. One aimed at only approximate delineation, but on a scale sufficiently large, and by a method of determination of positions sufficiently accurate, for a country in so wild a state and so little inhabited as Yezo; and which, supplemented by plans of towns, villages, and cultivated land, on large scales for local purposes, would have been all that could possibly have been required for years to come. The idea of triangulating Yezo with an accuracy only attempted in the most populous and civilized portions of the world, was as absurd for all practical purposes, as it was dishonest in conception, and I am glad to be able to affirm that the late Lieutenant Day had no hand in starting it, for he was only engaged in America as "assistant" surveyor when it became evident there was no one on the staff of the Kaitakushi capable of carrying on such a survey. Indeed no one came to know better than Lieut. Day himself the fallacy of the whole thing, after he had been a few months in the country.

Beyond Mukawa the nature of the country changes and the path mounting an oak covered terrace follows along its edge which is separated from the sea by only a narrow strip of low ground covered with a rank growth of natural grasses, in places broken by patches of swamp also thickly grown over with tall reeds and 'yoshi' swamp-grass. The road does not leave this terrace until

\* See Chap. XVI., *Japan Gazette*, 21st April 1883.

† The 1576th telegraph pole is at Bibi. The first turn off is at pole No. 1504; this trail crosses the river, which, however, is not always fordable. The next turn off is at No. 1376, six and a half miles from Bibi; this track avoids the river, and is on the Tomakomai side of the lake altogether. It is the least interesting of the three, but cannot sometimes be avoided.

you come suddenly upon the fine valley of the Saru river,\* the first of a number of such which are met with all along the coast towards Cape Erimo. The view is very fine as you stand on the brink of the terrace before descending a steep slope into the valley. The broad stream of the Saru is at your feet and the extent of valley well laid out before you, with a similar oak-wooded terrace on its farther side. Looking up the valley the distant inland ranges of mountains—often with snow on their higher peaks and ridges until well into summer—are seen in a north-easterly direction, while the sea finishes the picture on your right. A line of settlers houses is visible across the river in the valley bottom, with some cultivated land round about. This settlement was planted by a small daimio of the house of Sendai, before the establishment of the Kaitakushi, under distinct imperial auspices, the remains of other of which settlements are existing in several places on the island. The place is eighteen miles from Yubuts, and takes its name from the Ainu, Sarabuto, meaning mouth of the Sara.

Up this valley about ten miles from the sea are several Ainu villages, which, taken collectively, amount to perhaps the largest settlement of these people in Yezo. They are certainly worth a visit, because, although probably not more typical of this peculiar phase of savage life than others met with along the coast or on the banks of other rivers in the island, they seem better kept, are more regularly laid out, and the houses are certainly more carefully built and cleaner than you usually meet. The shortest way to reach these villages from Sarubuto, is to re-cross the river at the ferry to the right bank and follow a track up the north-west side of the valley. At first you meet with a few Japanese settlers houses, and much open land on the lower river—terraces suitable for cultivation; but farther up, the valley becomes heavily timbered and there is a good deal of swamp covered with a dense growth of reeds. There is but a narrow indifferent trail, which, from the profusion of fern and other undergrowth is in places almost indistinguishable. Most of the way it keeps close below the oak-wooded uplands which bound the valley, and hardly approaches the river anywhere. Except in the driest season, the mud-holes are frequent and deep, while in the heat of summer the flies are very annoying. As the Ainu villages are approached, the land becomes firm and is only partially wooded. Owing to the nature of the trail it takes about two hours to reach the first village, and half an hour or so more to Piratorn the main village. The lower part of the valley has a direction about north-east, but above Piratorn about north by east. About three ri farther up, the river is said to fork, and there are some Ainu settled on both branches, even probably as far as seven ri above Piratorn. The direct distance by the map in a north-easterly direction to the Tokachi river is something over forty miles; the Ainu say it takes six or seven days to accomplish the journey, but they possibly mean to the mouth of that river.

The Ainu here cultivate some patches of ground round about the villages, but the crops they raise seem so scanty that I imagine, since the deer have become scarce of late years in this part of the country, and the salmon and salmon-trout are not so abundant as in most other rivers along this coast, that were it not for the remuneration they receive from the Japanese fishing masters on the coast to whom they hire themselves out during the season, they would not be able to exist. There are said to be about eighteen hundred in this district, or as the chief expressed it, "who drink the water of the river;" which it would appear, although at the present day generally called the Saru, was formerly known to the Ainu as Shara, at least this is the way both Mr. Edwin Dun (formerly of the Kaitakushi at Sapporo) and myself caught the pronunciation. Many Ainu aspirate the 'h' very strongly, but whether it is natural or imitative of Japanese, I am unaware.

In speaking of the chief, I should notice that he is the "magnificent savage" 'Penri' of Miss Bird's '*Unbeaten Tracks*.' His house is in the main village of Piratorn, and is that to which the foreign visitor is pretty certain to be invited. It has been occupied successively by the Revd. Mr. Dening, Mr. Siebold, Miss Bird, and Mr. Batchelor; the last named gentleman having made quite a long stay there while living among these people with the object of studying the language. The old man seems good natured and hospitable enough, and favourably disposed towards foreigners, but the Ainu are all pretty much so. Indeed they seem to look upon western people as somewhat related to themselves, and are inclined to fraternize accordingly. Old Penri is not devoid of the general failing of his people in regard to strong drink, in fact he tells you openly that being about played out for other indulgence, he lives now for sake. He is a great talker, and I am of opinion that much of the information obtained from him has to be largely discounted. However I may misjudge him. Among other questions, I asked him if locusts like those which have appeared in such numbers in Yezo for the last three years, were known formerly, and he said that they were when his father was young. Now taking Penri as about fifty four years of age, this would give the former invasion of locusts about eighty years back, or say at the beginning of the present century. He also told me, that many years ago the Sara Ainu were at war with those on the Tokachi. Also that the Ainu name for the south part of the island, probably that south of Volcano Bay, was 'Usungaesi,' which was the first time I ever heard the appellation. He moreover confirmed the tradition of a people who formerly inhabited Yezo—the Koru-pok-guru, or pit dwellers—who he said the Ainu drove out or exterminated. As to the various deities worshipped by these people under the general name of 'kamoi,' I could not gain from him the least indication of there being one specially ranking above the rest, on which missionaries have built up the accommodating theory of the belief among these people of a supreme being. Among other things which I wished him to explain was, why the Ainu are so addicted to sake drinking, but he seemed to consider this was not a province to

\* According to the best authority Saru is a Japanese corruption of Ainu 'Sara.' (*Notes on the Ainu*, by J. Batchelor, 'Trans. As. Soc. Japan.')

be invaded, and put off the question. When I asked him if there was a god of sake, he said no; but he seemed to think more of it than any of his gods.

Just above the main village of Piratoru is a bluff by the river side, on a spur of which—from whence a good view of the upper valley is obtained—is what has been called the grave of Yoshitsune. It is nothing more than an ordinary small Japanese shrine four-and-a-half feet square, built about fifteen years ago to replace a former Ainu structure of some sort, dedicated to a warrior and probable outcast from his country venerated in Ainu tradition. Its existence was first made known among foreigners by the visit there in 1874, of Mr. Louis Boehmer, then on a botanical tour along the south-east coast; \* though the author of a late book on Japan had evidently a wish to make it appear otherwise, for she tells us (Vol. 2, p. 71) "No European had ever stood where I stood, and there was a solemnity in the knowledge."

The doings of Yoshitsune and his attendant Benke in Yezo, are much mixed with fable and improbable stories. That some person lived among the Ainu and perhaps taught them some of the arts of civilization there appears to be little doubt; but whether as a conqueror or only as a refugee seems uncertain. Still more doubtful it appears to be, whether this individual can be identified with the Yoshitsune of Japanese history; whether he assumed the name; or whether all trace of Yoshitsune having been lost, Japanese in later times when they came to settle in Yezo, and learned this Ainu tradition, ascribed the subject of it to one of their favourite heroes, and thus introduced the name among the Ainu. I believe I have heard the name by which the Ainu formerly called this person, but it escapes me at the present moment, and I also forget the source of my information. There are several places on this island named after Yoshitsune and Benke, but I place little reliance on such as evidence of their ever having been in Yezo; because there is more than a probability that such names were bestowed by Japanese, as in the present age is done everyday of explorers in all parts of the world, quite irrespective of any connection between the distinguished person and the place. The story of Yoshitsune having gone from Yezo to Sakhalin and thence crossed over into Manchuria, is probably of a piece with that of his residence among the Ainu, though it would favour the chance of places along his supposed route being named after him and his doughty lieutenant.

On returning from Piratoru the route may be varied by taking a trail which crosses the river some distance below that place to the left bank, and passing through some other villages reaches the coast near Saru-Mombets, but the river is not always fordable.

From Sarubuto to Saru-Mombets is about three miles over oak-wooded uplands very similar to those on the other side of Saru river, off which you drop into the valley of the Mombets which is bridged, and come to the site of the former Saru 'quaisho,' where is now a village under a bluff point which affords shelter to the buildings from easterly winds. Thence the track follows the shore

\* Reports and official letters to the Kaitakushi. Tokio 1875. p. 561.

under high banks cut in places by valleys extending inland and generally containing rather deep streams. The one at Hai, about a ri from Saru-Mombetsu where there are two or three houses and some fishing stations is bridged, and so are most of the others; but you not unfrequently find a broken one, and may have some difficulty in crossing the stream's mouth on account of quicksands. At such places, the best way is to trust implicitly to the guide on the leading horse, local knowledge seldom failing him. This part of the road is by no means interesting as your view is confined by the steep banks, sometimes grass covered, and sometimes bare clay, or mixed with sandstone and conglomerate. The only considerable river is the Achibets, sometimes fordable and sometimes not. After this the banks become steeper and more rocky, and when you reach Nikap, about twelve miles from Saru-Mombets, there is a fine high rocky bluff abutting on the sea, with portions of it worn into holes, and taking peculiar forms. Here most comfortable quarters used to be found in the old 'quaisho,' but it is now closed as a stopping place, and the post-station has been removed to Kabari, a small place about two ri short of it, while the next will now be found at Shibichari, a ri and a half beyond.\* The Nikap river falls into the sea close to the rocky bluff, on the north-west side of the valley, which is one of considerable extent, and up which the view is unobstructed, and very pretty.

About three miles farther along under the high partially wooded uplands which extend all along this coast, another fine valley opens out, where there is a considerable village situated alongside an old channel of the river which now skirts the far side of the valley. This place is called Shibichari. About eight miles up the valley is a horse station kept up by the government for breeding purposes. It is a very pleasant ride in a north-east direction up the valley which is partly settled in its lower part, after which it rises by a succession of terraces which are partly open prairie, or moderately oak wooded. The trail is on the right bank of the river, but only nears it in certain places, where beautiful views are obtained of the spread-out and divided channels of the river running between willow thickets and under steep banks, with the slopes of the hills and terraces on its far side. You have also in view the distant mountain range which heads all the rivers along this coast and extends right along as a backbone to Cape Erimo. It is the dividing range between the waters of the Tokachi tributaries, and the coast west of the cape, on which side it is drained by numerous short rivers like the Nikap, the valleys of which are the great feature along this route.

On the left hand of the trail before leaving all the settlers' houses, there is a bluff formed by the termination of a spur of the side hills, on which may be seen the remains of an earthen redoubt, said to be one of the last strongholds of the Ainu, and where a famous chief has the credit of having held out for a long time against the Japanese soldiers of the prince of Matsumai.

\* See *Distances on Travelled Routes in Yezo*, originally printed in the *Japan Gazette* of 16th September 1882, now revised so as to form an appendix to the concluding chapter.

The fencing of the horse pasture commences about three miles back from the sea, and crosses the country between the Shibichari and Nikap rivers, running back right into the mountains. Inclusive of the cross fences, there is in all about eighty miles of fencing. It is mostly post and rail, with three rails, of oak, in pannels of nine feet, and cost on an average twenty-three sen per pannel, amounting to about ten thousand dollars, while its maintenance costs of course something annually. The station is prettily situated on one of the higher partially wooded terraces, with a fine stretch of open level prairie towards the river, nearer which on a lower level where the soil is alluvial, is a farm on which crops are raised for feeding the stallions and working horses kept in stables, otherwise the brood mares and colts of which there are some seven or eight hundred run wild over the extensive pastures, being only occasionally driven in for inspection. During winter they are kept on those parts of the *ranch* where there is most scrub-bamboo, as this does not become covered with snow and is found to be a sufficiently nourishing food.\* Conducted on economical principles this establishment ought to become self-supporting, if not a source of profit. But under the system of management hitherto pursued, the slackness of control, the employment of numerous useless officials, and the want of attention to the recommendations of the foreign adviser, the results so far have been anything but satisfactory.

Beyond Shibichari the nature of the coast somewhat changes. While the banks remain high and steep, there is a hard flat sand beach below them on which it is a pleasure to ride. There are many detached rocks and reefs in the sea which are favourable to the growth of

\* In the earlier days of the establishment of this horse station wolves were found to be very troublesome, but so much poison was used that they are now pretty well thinned off. The Japanese contend that it is only in comparatively late years that these animals have been known in Yezo, but whether this would bear the test of searching inquiry if such were possible, is I think doubtful. Wild pigs were unknown also in Yezo, until a few years ago a fine boar, which may be seen in the Hakodate museum, was killed near Sawara in the woods on the northern slope of Komagatake Volcano; but it seems doubtful whether this specimen is of the true wild race, or a descendant of domestic pigs run wild. An old deaf Satsuma samurai, who had his cattle station in the vicinity of the Volcano Lakes near Hakodate when I first visited the place, I know had come pigs amongst his stock. Burrowing rabbits are unknown in Yezo, but there is a species of hare which turns pure white in winter, and foxes raccoon-dogs, otters, and a kind of sable are tolerably numerous. Squirrels are by no means so common as one would be led to imagine in so thickly wooded a country. There are three kinds, the grey tree-squirrel, a sort of striped ground-squirrel, and a large flying-squirrel. The proper scientific names of most of these animals are not to be depended upon, much confusion having been brought about by the assumption that the mammalia of Yezo were identical with those of Japan proper, whereas, late examination proves this in many cases to be quite unfounded, and draws a line of demarcation at the strait of Tsugaru, to which I have already more particularly drawn attention. The following Ainu names of some of the animals were furnished me by Mr. Katsutaka Ito of the Sapporo Museum:—Bear, *Hokuyaku*; Wolf, *Ose-kamoi*; Raccoon-dog, *Moyuku*; Marten (Sable), *Hoinu*; Otter, *Ishiamani*; Sea-otter, *Hobushube*; Fox, *Chironopu*; Hare, *Isaho*; Squirrel, *Nufu*; Striped-squirrel, *Kashiikirikushi*; Flying-squirrel, *Appo*; Deer, *Koku*; Seal, *Tokari* and *Onep*; Sea-lion or Walrus, *Shikaitambe*; Whale, *Funhei*.

kelp, and there are fishing stations and huts scattered all along. In fact from this point commences one of the principal seaweed districts of Yezo, extending to and a little beyond Cape Erimo; which if not of so great extent as those of Kusuri, Akis, and Nemoro, at the eastern part of the island, is more celebrated for quality, especially for the home market in Japan.

The station of Sitsinai—six miles from Shibichari—is situated in a small bay open to W. S. W., but which is too shoal to be used as an anchorage, junks and schooners having to lie some distance out. It is indeed the great disadvantage under which the whole of this coast labours, that there are no harbours on it. The hills around the bay are less steep and the country more broken up than that passed previously. Coal exists in the vicinity, but even were it of superior quality the obstacles to shipping it away would preclude its being of any value in a commercial sense.

From Sitsinai to Mizuis is another seven miles ride along the sands under high banks more or less broken up and exposing fine sections of sandstone, conglomerate, and shale in very distinct and regular strata, running in perfect lines with the shore from S.S.E. to S.E.; and which, in the sea, form long parallel reefs, on which during the season numbers of Ainu as well as Japanese may be seen collecting kelp, and having their temporary huts scattered all along the shore. On the way you have to cross a small river called Bibi, which comes out of a deep valley. It is noted as being a dangerous place from the quicksands at its mouth, which are especially treacherous after a heavy sea has been beating on the beach. As you round a point you come in sight of the 'quai-sho' at Mizuis. The tall smoke-house for salmon curing has all the appearance of a lighthouse. There is a good building in foreign style, and the whole establishment is neatly kept. The houses stand right on the beach which is of a course shaly sand, very good for drying seaweed upon, and for which this station has an excellent reputation. There are numerous reefs along the shore, but there is a gap between them just off the station which allows of boats and nets being hauled out. The lessee of this basho, which is one of the few which has not become demoralized by the influx of settlers and small fishermen, owns several schooners which he runs between the coast and Hakodate. This firm indeed was the first which adopted vessels of foreign build in preference to junks, now so numerous in the coast-trade of Yezo.

The next stage is one of nearly four-and-a-half ri to Urakawa on a general south-easterly course. The travelling in fine weather is along the beach, but when the water is high and there is much sea on, several places are impassable, and then paths on the heights have to be taken. The cliffs expose tertiary shales and sandstone which are rich in fossils, specimens of which have been collected by several geologists who have travelled this way; and there is marble found somewhere in this locality. Reefs and detached rocks are scattered along. A very picturesque valley opens just east of Mizuis, up which a fine view of the main range, the backbone of all this country, is obtained; and besides this are several other

valleys, generally with fordable rivers, the largest of which, are the Kirimap and Moto-Urakawa, the mountain scenery looking up which is remarkably fine. A small river valley ends in a kind of bay at Urakawa on the east point of which stands the village. Reefs make off this point westerly, and from the river mouth southerly, so that there is a certain amount of protection to the anchorage, but it is quite open to south-west and west winds, which are those most to be feared. The government at one time contemplated entering upon the construction of a harbour here—a very necessary thing on this coast; but after the survey by Lieut. Day, U.S.N. then in their employ, and his rather unfavourable report of the place, no farther steps were taken. This is perhaps as well, because had the work been undertaken it would doubtless in the usual lavish way that government goes about such things, have cost a great deal of money, and have served afterwards only for local use, for which the expenditure would have been out of all proportion. The place is situated too far, over thirty nautical miles, from Cape Erimo, to serve as a harbour of refuge for passing vessels. A harbour of some sort, however, is a great desideratum, but it should be located as near the cape as possible. Doubtless some day such a work will be undertaken, and I should imagine the most likely position that a capable engineer would select, will be between Horoidzumi and the cape, as it seems possible that some of the reefs there might be utilized in its construction.

Passing beyond Urakawa the shore is pretty thickly dotted with the houses of small fishermen and Ainu huts, till you come to the wide valley and river of Porobets. This is described as a fine open valley after you get some distance back from the sea. Two villages were established some years ago by Amakusa people about four miles up, and a good many Ainu are said to inhabit the district. By following up this valley, Biru, to east of Cape Erimo, can be reached by a comparatively easy pass. The distance is said to be twenty-three ri; but by a more difficult one only seventeen.

Beyond Porobets river the coast trends more easterly into a bay, at the bottom of which is Shamani, distant three and a half ri from Urakawa. It is a sort of a cove shut in by reefs; high pillars of rock standing in the sea, and steep rocky bluffs make it one of the most picturesque spots on the coast. The anchorage inside the reefs, however, is only available for small sized junks; and affords but poor shelter from a heavy southerly sea. The old 'quaisho,' and a few houses, stand on the neck of a small peninsula terminating in a high bluff on the east side of the cove. A river runs out over a rocky bed immediately at the back of this neck, which is but a few yards across, and has evidently been worn away to its present dimensions by the river. The country around is very varied in appearance, much broken up, and generally thickly wooded. A great mountain mass rises to the eastward abutting on the sea, which is a spur of the inland backbone ridge, some peaks of which are likewise visible.

The ride from Shamani onwards is a rough one, but it is an agreeable change. The horses go right through to Horoidzumi, seventeen miles. In the first place there is

a stony beach, where there are some rather difficult points of rock to be rounded, and in one place a very fine natural arch of rock. The coast then becomes so precipitous that the track is forced up into the mountains. Here for the first time on the whole route travelled from Hakodate, are spruce trees to be found in the vicinity of the sea shore, the peculiar odour of which is a refreshing change. The Japanese fishermen take advantage of this timber in the construction of their houses and fishing huts, and for their boats, oars, and poles. Elsewhere along the coast, with the exception of the extreme east and north, they have to go back into the mountains for soft-wood timber; for in the southern, and in fact greater portion of Yezo, spruce trees are only found on the higher inland ridges or mountains. Why Yezo should be so essentially a hardwood, or deciduous treed country is difficult to account for, because the northern part of the main island is not so. This may be perhaps to a certain extent due to the volcanic nature of the island generally; but one would certainly expect to find a larger proportion of *coniferae* on Yezo than is the case.

It was on these mountains that I first noticed what I then called "the lemon-scented shrub," known to the Japanese as 'Sansho,' the seeds of which are given you with fried eels to assist digestion. It is according to Mr. Boehmer a *Xanthoxylon*, probably *piperitum* of southern and central Japan. The leaves when crushed in the hand give off a very agreeable scent.

The track climbs the mountain side to a considerable height above the sea, and it is worth the traveller's while to rest a few minutes and look back on the view when he has the natural arch, Shamani rocks and bluffs, and the coast line laid out before him, for I think it is one of the finest scenes in Yezo. There is a good deal of steep up and down hill work in these mountains, which are thickly wooded, to a great extent with a variety of deciduous trees, including oak, birch, mountain-ash, maple, mulberry, magnolia, &c.\* At about ten miles from Sha-

\* Mr. Louis Boehmer in his *Report of a Botanical Journey*, which I have elsewhere frequently referred to, mentions finding a species of larch on these mountains. Although very common on Etorup, this tree is found, I believe, in very few localities in Yezo. I have heard of it being seen on Raiden on the west coast. An occasional one may be observed planted near a temple or shrine, and before the great fire at Hakodate a fine specimen stood in one of the temple yards. I may here mention that the *Cryptomeria*, of which the wood on the side of Hakodate mountain is principally composed, and which may be observed in clumps about the villages in the southern part of the island, is not indigenous in Yezo. The yew is common enough, but generally confined to the shaded parts of the forests, and the deep glens of mountain streams.

Besides trees which I have otherwise specially mentioned, Mr. Boehmer has found on Yezo, two kinds of linden or lime, the inner bark of which is used for ropes; three species of birch; two magnolias, the large and the small leaved; two maples, the small leaf rough barked 'Momoji,' and smooth bark large leaved 'Itaya' of the Japanese; a *Pyrus*; the beech, probably confined to the region near Hakodate, a species of *Carpinus* having been elsewhere sometimes mistaken for it; the Japanese 'Sen,' a very ornamental species of *Aralia*, the seed of which he has exported to the United States and Europe; walnut; two elms including the 'Ohijo' from which the Ainu obtain most of their bark-fibre; chestnut; horse-chestnut; elder, with scarlet berries; alder, used

mani the track descends into the deep narrow valley of the Poromambets, where that clear water river issues from a deep cleft in the mountains from the northward, and skirting a steep cliff runs into the sea between some rocks. There is here a house or two on a small flat. A great mass of precipitous rock stands a little east of the river under which the road passes by the shore. I have been told that at the lowest stage of the tide and when the sea is smooth, it is possible to get along under the cliffs most of the way from Poromambets towards Shamani, but that it is only attempted in spring when the mountain road is in its worst state. In winter, horses are unable to cross these mountains, travellers having then to make the journey on foot.

Proceeding towards Horoidzumi, you keep along the beach under the highlands till a small stony river is crossed which is the boundary of the Horoidzumi district. Thence the higher mountains are more removed from the shore, and the interval is occupied by moderate slopes and plateaux, only partially wooded, or bare. Travelling is had where it is confined to the beach which is stony, but after some distance the track ascends the terraces and you can get along at a fair pace. The shore is studded with houses and fishermen's huts, as the rocks and reefs which exist all the way along afford abundant supplies of seaweed, to the collecting and drying of which the people devote themselves. The operation of drying the kelp is much the same on all parts of the coast, but its quality varies according to the bottom on which it grows, and probably also with the temperature of the sea. The amount annually collected along this coast from Sitsinai to Cape Erimo, was, ten years ago, reckoned at fifty-seven thousand piculs, or over three thousand tons, two-thirds of which was taken in the Horoidzumi district alone, representing a value of fifty to sixty thousand dollars on the spot,

by the Ainu for dyeing a red colour, and called 'Keni,' a tree resembling an ash in appearance called by the Japanese in Yezo 'Skoro,' and by the Ainu 'Chikerepeni,' the cork-like bark of which furnishes a yellow dye; the ash, or 'Yachi-tamo' of the Japanese; flowering cherry; two, or perhaps three oaks; mountain-ash; Sophora, called 'Enje,' the beautiful 'Katsura,' elsewhere particularised; various willows, and poplars, and some other forest trees which I have possibly omitted; besides numerous shrubs and other plants, including the scrub-bamboo, a species of *Arundinaria*, the favourite deer food; wild hops; wild grape; 'Kokwa' vine, a species of *Actinidia*; the climbing hydrangea; a plant covering the trunks of trees like ivy, *Buonymus*; several lilies, including a nearly black one, the 'Kuruma-yuri,' and others which he has introduced into gardens; the sea-shore rose, *Rosa rugosa*, which he expects is capable of improvement by cultivation; a true raspberry; blackberry; large leafed creeping raspberry; red currant; the monkshood, Ainu poison plant, *Aconitum*; the upland 'kaya' grass, *Eulalia japonica*, and swamp 'Yosbi,' an *Artemisia*, or wormwood, which together with the Japanese 'Hagi,' a common undergrowth on the oak covered pumice terraces, is very favourite forage for horses; the great dock-like *Polygonum* so common in the country; and the hollow-stem *Angelica*, which sometimes reaches a height of fifteen feet, with a diameter of stalk of six inches, and has a white flower eighteen inches across. No one has had a like opportunity of becoming acquainted with the flora of Yezo, and therefore I have thought proper to attach this note of reference to Mr. Boehmer's botanical researches, elsewhere only incidentally mentioned, for the information of such travellers as are as little acquainted with botany as myself.

according to the state of the Hakodate market. Owing to the influx of numerous small settlers, however, of late years, the amount now collected is probably considerably in excess of this estimate.

The district of Horoidzumi is likewise noted for the quantity of deer-skins collected by the inhabitants. The deer it would appear migrates during autumn from the eastern and northern part of the island, and on the falling of snow collect in immense numbers on the southern and western side of the Erimo mountain range, where there is little, and in some situations as Horoidzumi and Urakawa actually no snow in the valleys or on the lower hills, consequently leaving the bamboo-scrub on which the deer feed, exposed all winter. Coming down close to the settlements, the animals are pursued with fire-arms, bows and arrows, and dogs; and even frequently are driven in herds into the sea, where they are slaughtered without mercy. The people of Horoidzumi alone have taken as many as thirty thousand skins during a winter; while the whole number collected along the coast eastward of Volcano Bay to Cape Erimo was some years ago as much as sixty-thousand skins. This indiscriminate slaughter seems to have had its effect, for within the last few years there have been few deer found in this region; but this may also partly be accounted for by the number of Japanese who have lately settled near the mouth of the Tokachi on the south-east coast, who have been attracted there by the excellent salmon fishery on that river, as well as by the numbers of deer which pass on migration not far inland across that valley. In addition the Japanese say there has been an epidemic amongst the deer, and that great numbers have been found dead throughout the country. I am unable to verify this report at the present time, but at any rate the absence of deer in parts of the island where they were formerly very numerous is certain; and one of the effects which must result therefrom will be that the Ainu must migrate, or decrease in number through want of their accustomed means of sustenance.\*

Horoidzumi proper—that is where the most houses are collected near the old 'quaisho' and government post-house—is three ri short of Cape Erimo. There is some shelter afforded by reefs, inside of which junks and schooners moor with strong hawsers made fast to posts fixed for that purpose in holes in the rocks, a fashion which is adopted at all such frequented places along the

\* Sportsmen intending to visit Yezo if they would not be disappointed, must bear in mind that in the way of feathered game they will find nothing there to compensate them for the absence of pheasants, which do not exist—notwithstanding Miss Bird's assertion—on that island. The Hazel Grouse (*Tetrastes bonasia*) is, except for the table, a poor substitute. It is confined to the forests, and perches on the trees where it can be shot without any display of skill. The woods, however, may be tramped often for many miles without a covey being found. Quail afford tolerable sport, and are fairly numerous in certain districts. Snipe of two or three kinds are common enough, but the swamps are so extensive that they are generally widely scattered. The woodcock is by no means a common bird. Ducks and Geese are in enormous numbers during the seasons of migration, and many Swans frequent certain lagoons and lakes in the late autumn and winter. On the whole the shooting in Yezo cannot be compared to that of southern Japan.

coast, and by which they manage to ride out severe gales better than might be expected. A very rugged coast with many outlying reefs runs south-eastward towards the cape, in which there is likewise another small reef-harbour called Aburakoma, pretty fairly protected except from westerly winds. It is near this that the steamer *Mary Tatham* was run ashore in the early spring of 1882, on a voyage from Hongkong to Oregon with a full load of Chinese labourers, on which vessel Mr. Kirby expended so much time and money in getting her off the rocks, only afterwards to see her sink in deep water. At the back of Horoidzumi, sloping table-lands and partially wooded hills cut by winding valleys, run up towards the higher mountains which rise steeply to a considerable elevation, and are bare and rocky on their summits. Granitic boulders in the beds of the streams indicate a primary age for the crest of the Erimo range, which at this point begins to taper off in hills of less elevation towards the actual cape, which is composed of low bare hills, and terminates in a line of rocks jutting into the ocean. Erimo, or Erimu, is an Ainu word meaning rat. For the assistance of navigators in the trade of the eastern part of Yezo it is very desirable that a light should be placed on this point.

About half a mile from the cape on its eastern side, is the small fishing village of Okos, off which are many low-lying reefs, affording a certain amount of shelter for junks which lie there when loading seaweed, but it must be a very precarious position, as of course this shore is exposed to the full force of the Pacific ocean swells. Thence a hard straight sand beach extends the greater part of the way to Shoya, a scattered fishing settlement about eight miles N. N. E. of the cape. This stretch of beach is known as Hiyuku-nin-bama, from the fact of a junk full of soldiers or retainers of the daimio of Nambu bound to Eturup Island many years ago having been wrecked there, and about one hundred persons drowned. There is a small granite monument standing near the shore in memory of those who perished. North of Shoya the coast becomes rocky and precipitous, and is only passable on foot at low state of the tide and in fine weather; it is therefore only used by travellers during winter, when the inland pass between Horoidzumi and Saruru is snowed up.

Off Shoya and Saruru is a favourite anchorage for junks meeting contrary winds when bound to the westward. Indeed, late in autumn, when strong westerly winds prevail, even steamers are forced sometimes to put in under the lee-side of this cape for shelter; because, although they can usually get from the eastern ports of Akis, Hamanaka, and Nemoro, as far as Erimo\* well enough, when

\* On the older charts, previous to the running survey of H. M. S. 'Sylvia' under the command of Captain St. John, assisted by Japanese naval officers, in 1871, Cape Erimo, as well as much of the coast-line of Yezo was very imperfectly delineated. General Capron appropriated some of the credit for his commission. In one of his letters to the department we find him saying:—"I have also requested him (Lieut. Day) to determine by observation the true position of Cape Yorimo which is said to be placed on the maps and charts some thirty miles too far south, a very considerable error to navigators, which he will be able to correct." Now the fact is the position

they attempt to round the cape they are met by the full force of the wind and sea, and besides have to contend against an adverse current.

I don't think I have elsewhere alluded to the singular fact of the very small amount of snow which falls at and about Horoidzumi and along the coast thence to the North Westward. Near Cape Erimo, and as far along as Urakawa, it is seldom known to lie on the lower ground; and it is only beyond there and not much before you reach the Saru valley, that it falls in sufficient quantity to impede ordinary transport. It seems difficult to account for the peculiarity attaching in this particular to this part of Yezo, in the major portion otherwise of which island the amount of precipitation during the winter season is so great. Indeed at Sapporo, and in the exposed portion of the Iskari valley, the snow-fall is enormous. It must be presumed I suppose that the Erimo range—which I have elsewhere referred to as forming a backbone to this region—attracts the snow towards its higher parts; at the same time we must bear in mind, that a wind from north-west to north blowing over Yezo has a greater distance to traverse overland on this line, than on any other that can be drawn across the island.

By reaching Cape Erimo a gap has now been filled which was unavoidably left in these notes previous to Chapter X. The reader who takes sufficient interest in the subject to wish to obtain a continuous idea of the coast of Yezo, will therefore require to look over again Chapters X and XI [*Japan Gazette*, 3rd and 10th March 1882], as the next one the editor will probably publish, should properly follow the latter, and the description be then continued of the north-east coast, round Cape Soya, and down the western side of the island to the Iskari.

## XVIII.

### THE NORTH-EAST COAST.\*

The first time I was in the Nemoro district of Yezo, now one of the three 'ken' into which the island has been divided, I had landed from a sailing vessel at Hamanaka and come across to Bitskai at the mouth of the Nishibets river by land on the 7th October. At that time Nemoro itself was of little importance, and having a long journey before me, and being unable to calculate the length of time it would occupy, I did not consider it worth while to deviate for the

was corrected before General Capron's arrival in the country, and was found to have been seven miles in error north. But this was only of a piece with the manner in which General Capron endeavoured to ignore everything that had been done in Yezo previous to his own arrival. In another place he says:—"In 1871, Yesso was considered a cold and barren country." Had he consulted the *Journal of the Royal Geographical Society of London*, he would have found pretty full statistics concerning the climate, which he subsequently largely borrowed himself, see *Results of Meteorological Observations at Hakodate* appended to 'Reports and Official Letters to the Kaitakushi by Horace Capron, Commissioner and Adviser and his Foreign Assistants.'

\* In proper sequence this should follow Chap. XI. 'The Eastern part of the Island,' *Japan Gazette* 3rd and 10th March 1883, but the exact order has not been observed. Principally from 'A Journey in Yezo,' *Journal of the Royal Geographical Society*, 1872.

purpose of paying it a visit. Next morning therefore after an early breakfast, I left Bitskai for Shibets quaisho, the then head-station of the district. I rode one horse, on a pack saddle with a blanket over it and extemporised stirrups of straw rope, while my attendant Ainu guide rode the baggage animal. We followed the coast line to the northward, sometimes by the sand-beach, and at other times on the scrub-bamboo covered land skirting the shore; and we had for the first part very fair travelling. The country rises from the shore with a terrace, from 30 to 60 feet above the sea, and is wooded with moderate-sized hardwoods. We passed some 'banya,' or fishing-stations, and afterwards a small Ainu camp, where some women coming to look out at me, my guide took great delight in doing showman. They seemed gratified to find that my appearance somewhat resembled their own people, and this fact has doubtless a good deal to do with the friendliness on all occasions displayed by the Ainu towards foreigners; but in my case I do not know that I ought to make any distinction, for during the whole journey I was invariably treated with civility and kindness by Japanese as well as Ainu.

About nine nautical or geographical miles north of Nishibets river is the peninsula to Notski. It is a low tongue of land, in the form of a hook, jutting about 6 miles of seaward, the portion enclosed by the hook being full of shoals and nowhere deep. There are some fishing-stations on it used during the herring season, and junks which come to this coast for produce make it a shelter from northerly winds. I noticed there were some woods on the outer part of the hook. As we approached Notski we had to cross several rivers, and the shore was in many places of a soft oozy nature, with some lagoons and many swamps extending back into the country. It was well for us the tide was low, or we might have had great difficulty in crossing some of these places; as it was, the water was up to the horses' bellies, and there were frequent mud-holes in which they floundered. I believe that travellers usually prefer going from Bitskai by water to Notski, and thence along a fair road to Shibets. We saw great numbers of wildfowl, some cranes, a few white-tailed sea eagles.\*

At a hut, occupied by a couple of Ainu and an old woman, on the bank of a river, we stayed for dinner, and as we carried the ordinary Japanese 'bento' of cold boiled rice and turnip tops, a salmon cut up and spitted on sticks before the fire served to make up an excellent meal, and one that a traveller will seldom find wanting during the autumn season anywhere on the coast of Yezo.

On starting again we crossed a large swamp, and then came to the narrow neck by which Notski peninsula joins the main, the north side of which is a steep shingle

beach on which break the rollers from the sea of Okhotsk. Thence we followed a straight shore W.N.W. to a considerable fishing-station where we stayed a few minutes, and then rode on a couple of miles or so to Shibets quaisho, where our journey for the day of 9 ri ended. This is a considerable station, situated at the mouth of a good-sized river, called the Shibets. Besides the principal dwelling-house, there are quarters for officials, store-houses, carpenters' sheds, smiths' shops, and other buildings, with a collection of Ainu huts adjoining, and deserted barracks, formerly belonging to the Prince of Aidzu, near by. A lofty wooden outlook stands in front of the main building, which as at all the coast stations, is used for getting the better view of shoals of fish, principally during the herring season. These outlooks form capital beacons for vessels bound to the stations. Of late years, however, many of them have been allowed to decay, and accompany the ruin of the fine capacious and well found 'quaisho,' which the former fishing masters of the coast used to take a pride in keeping up, before the present system of dividing up the 'basho' came in force. To one who had received the open hospitality, and enjoyed the comfortable quarters at such places formerly, the contrast now makes him look back with regret, but it is to be hoped that the present system followed by the government, is for the benefit of the country generally.

Besides being a herring district, the Shibets river is noted for its abundance in sea-trout and salmon; although, I believe, the catch of the latter has not been of late years nearly what it was in former times.

The shore to the northward of Shibets becomes high, and fishing-stations exist only about two-thirds of the distance along the coast towards the bold cape of Siretoko; beyond which there is no road along the shore, so that travellers for the north east coast have to go inland a good distance, the road coming out again on the coast at Share. I was told that the water is very deep off the cape itself, even close in shore, and that there is a strong current constantly setting to the eastward. Inland from the cape the country is a mass of high mountains.

A wet morning on the 9th of October found me again *en route* in the company of six Ainu and a Japanese, mounted on ponies, following a track through the woods up the valley of the Shibets toward the W.S.W. To each saddle was attached part of our provisions, consisting principally of fine salmon, the tails of which protruded from the ends of the rough packages in which they were made up. The Ainu were a merry lot of fellows, and their spirits being more than usually elevated by an extra dram served out before starting, they kept up a round of jokes and occasionally enlivened the still woods with a song. Being too many for the number of horses, one was mounted on the croup behind another of his fellows, and notwithstanding the load, we jogged along at a smart pace. The pace, in fact, was rather too much for me, for being yet unaccustomed to pack-saddle travelling, and perched on the top of my baggage with my legs hanging down on either side of the horse's neck, the pommel of the saddle right under me, and its cantle against my spine, I was in anything but a comfortable or very safe posi-

\* These were of the species known to naturalists as *Haliaetus albicollis*, Linn. Another heavier eagle *H. pelagicus*, Pall. is also found in Yezo; but not a white-headed eagle, as has been mentioned by some traveller, I forget whom. I may observe that I have omitted all 'bird talk' in these notes. We have had a good deal too much of it in more ways than one. Ornithologists can refer to various papers in the *Ibis* and *Chrysanthemum*, and to a fairly complete list of the 'Birds of Japan' in the *Transactions of the Asiatic Society of Japan*, Vol. X Pt. 2 published May 1882.



tion; indeed, I felt all the time as if at any moment I was liable to be pitched between the horse's ears, and it was only by clutching the back of the saddle whenever we made anything of a steep descent, and somewhat shifting my position occasionally as I got a chance, that I managed to maintain the indispensable equilibrium, but it was at the expense of a painful cramping of my thighs and some loss of leather. I cannot imagine that Japanese pack-saddle travelling can at any time be an agreeable mode of locomotion; but when you happen (as occurs so very often, unfortunately) to have a rough-paced animal, when your baggage is badly packed or unequally balanced, or when the saddle persists in rolling—it is, to say the least of it, exceedingly unpleasant, and I would recommend no one to attempt it for any distance. Before leaving Hakodate I had an idea of what the travelling might be, and had therefore brought my saddle in the ship with me; but, from information received at Hamanaka, I was led to believe that on some parts of the coast I should be unable to find horses, and, rather than encumber myself with an additional burden when I should have to walk, I decided on not taking it with me. Many a time subsequently did I rue that decision; and therefore, for the benefit of future travellers in Yezo, I would say, by all means take your saddle, and a good pair of boots. Other things can be procured in one way or another, but these are indispensables and are not to be found in the country. "A light heart and a thin pair of breeches," as the saying goes, will not carry you round Yezo—on horseback. Fortunately for my skin, I had not thin, but thick, good, strong, corduroy trousers, which, tucked into a pair of English-made knee-boots, with a flannel shirt, an Ainu cloth coat, a red worsted sash round my waist, an old felt hat, and a loose wrapper to put on in wet weather, completed a costume which, if not picturesque, was both comfortable and serviceable.

The country through which we rode was of a generally level nature, thickly wooded with oak, alder, maple, birch, and elm, and with a heavy undergrowth of scrub-bamboo. We occasionally struck a bend of the Shibets river, which is a deep, quick-running stream. The mountain-land on our right was visible occasionally through openings in the woods. About noon we halted at a small shed, erected as a rest-house for travellers. After dinner we started again, and mounted some terrace-levels of the river valley, still continuing to follow the scarcely visible track through the woods, till about sunset we came to a tenantless house on the right bank of the river, where we halted for the night.

This place, known as Tszrayi-watari, is seven-and-a-half ri from Shibets quai-sho, and is a 'temaro doko,' or sleeping-house for travellers. Like most other places of the kind, it is fitted up as an ordinary dwelling, and has a small wooden store-house attached, where floor-mats, pots, kettles, some sleeping-quilts, and a small supply of provisions in case of need, are kept for the use of travellers. These houses, as well as the smaller rest-houses, are kept up at the expense of the lessee of the district in which they are situated, but are necessary only where the fishing-stations are so far apart that the distance cannot be travelled in one day, or, as

in this instance, where the road leaving the coast strikes into the interior to avoid an impassable shore. On the north-east coast there are more of these rest-houses than in any other part of the country, and as the number of travellers who pass along is but few, it is not usual to keep persons in charge of them as in other districts, but the keys of the store-houses are carried from the nearest occupied station by authorized persons. We were here joined by an additional Ainu, who had come that day from Shibets on foot. He belonged to the same party, who, with the Japanese, had come from Share only a few days previously in attendance on a yakunin going to Hakodate. It was fortunate that I just hit off their return, and so had their company and assistance. Our horses were picketed out, and we made the necessary arrangement for the night; but before going to sleep the Ainu got me to fire off my gun, I believe for the sake of seeing a foreign arm discharged and reloaded; but they made the excuse that it was to scare off bears which they said might be expected to come round during the night and molest the horses.

On the 10th we were up and had breakfast by sunrise, and got away early. The weather was beautifully clear, with a sharp white frost. The first part of the morning we travelled along the river-terraces, in many places clear of woods, in a westerly direction. After that, more to the north-west, over a tolerably level open country, in places crossed by ridges, towards a gap between the range of mountains on the north of Shibets river and another high detached clump to the westward. We crossed one of the head streams of the Shibets, and came to a halt at a small rest-house just before turning in among the hills. The mountains in this region are only wooded in patches, and the lower country partakes of the same character. I noticed that neither the main river nor the branches of the Shibets indicated, from the appearance of their banks, that they were subject to any great changes in the height of the water. From where we halted the Ainu informed me that a track runs across country to the southward as far as Kusuri, distant about 39 ri, on the principal river of which district there is a large Ainu settlement; also that the upper waters of the Nishibets river were only a little distance off to the south; while the principal branch of the Shibets came out of the mountains to the north of us. This part of the country seems to have been overrun by fire. A high brick-coloured peak to the west is one of the mountains seen from Akis Bay; on the Japanese map two large lakes are laid down on the north side of it. The mountains before mentioned to the north of the course of the Shibets, are gathered in a fine picturesque range. There was some snow on the top of a double peak which I took to be highest, and which I believe to be what is called Share Mountain, but a more imposing view is obtained of it from its northern side.

After our midday meal we made about a mile of westing, and then followed up to the north-west the course of the branch of the Shibets we had crossed in the morning, keeping on a high plateau or river terrace on its left bank through a picturesque region. Subsequently the track descended into the narrow valley, the stream becoming less and

less as we ascended, until, when we left it, it was but a small rivulet coming from the northward. We then entered a narrow shallow valley covered with scrub-bamboo, from which we ascended a rise and stood on the watershed, or height of land, between the east and north-east coasts of Yezo, and about halfway between Shibets and Share.\* Here I first observed what I took to be heather, which was in a small patch right on the summit, and on which were planted a number of sticks with shavings hanging to them. These were Ainu offerings, or, as the Japanese called them, 'kamisama.' About the coast they may be frequently seen stuck on points of rock, at the mouths of rivers, and such places.

We now descended a narrow valley, where the prevailing trees were coniferæ of two species, a fir, called by the Japanese 'todo,' and stunted spruce, 'Yezo matsu,' both of which had much lichen attached to them, and the whole vegetation appeared to indicate a colder if not more humid climate induced by the proximity to the sea of Okhotsk. We followed down this valley, which has a general direction towards the north-west, but winds considerably; in many places the ground is stony and rocky, and the track very steep. A small stream then makes its appearance, which is one of the head-waters of the Share. After an hour and a half's travelling we arrived at an open glade in the valley, where stands a good-sized house of the same description as the one we had lodged in the night previous, but somewhat more dilapidated, and likewise tenantless; we took up our quarters there for the night. The place is called Wakaoi, and is distant from Tszrayi-watari 9 ri according to Japanese account. I ought not to forget to mention that all along the route we had travelled, the distances are marked on wooden posts by the wayside, which is likewise general on all travelling-routes in the country. The horse hire is reckoned according to these at a fixed rate for distance, often regardless of the badness of the roads in the less frequented parts. I have since learned that at Wakaoi there is a spring, waterfall, or something of the kind to be seen, though I heard nothing of it at the time. The name of the place evidently indicates something to do with water, which the Ainu call 'waka.'

The next day we had a strong southerly wind, a clouded sky, and heavy showers of rain at intervals. In the morning we followed the track down the narrow mountain valley, the hills rising on either side to considerable elevation, and thickly wooded with a mixture of hardwood trees, fir, spruce, and a few yew. The road was but indifferent, sometimes passing through boggy places where the horses sank deep into the mire, sometimes in the bed of the stream, and at others winding along the steep hillsides, round jutting rocks, and between stumps of trees, so close that the packs not unfrequently touched on both sides at once. The little horses got on remarkably well considering the kind of road, and without more serious accidents than one or two capsize in the

deeper mud holes of those horses which carried two Ainu each. Before midday we emerged into a wider valley, wooded with the finest growth of oak, maple, and lime trees that I had seen in the eastern part of Yezo, also mountain-ash and other smaller timber, and a luxuriant growth of mountain-bamboo. The stream had been joined by other affluents, and was now of considerable size. We started a deer, and afterwards came on a whole herd; so I dismounted, and went ahead with my gun, but saw no others; and, shortly after, arriving at a 'tomaro doko' situated on the bank of the river, we halted for dinner. The house is frequently used by travellers on this route as a sleeping-place, being about 5 ri from Share, because the journey, although made by us in three days, can with difficulty be accomplished in that time in spring when the roads are in their worst state.

During the afternoon we travelled down the lower part of the Share valley, keeping on the left bank of the river, of which we got occasional glimpses, the whole country being thickly wooded. At a couple of ri or so we came to a small halting-place, and thence onward for the next two ri we passed through a most infernal wooded swamp, where the track being mostly corduroy, or planked, was in such bad repair that our horses floundered and plunged in the mud up to their bellies. To add to our discomfort the sun had come out after the rain, and its warmth had brought out myriads of mosquitoes. We passed another small rest-house in the swamp, and, after one of the worst pieces of travelling it has been my fortune to experience, we at length came to a bridge over a sluggish running branch of the river, crossing which, and riding smartly over some intervening scrub-covered sand ridges, we emerged on the sea-beach. Seldom have I relished anything more than the first sniff of the fresh sea-air after getting out of that dismal swamp. A mile or so along the beach to the eastward brought us to a collection of Ainu huts near the river mouth, and ferrying ourselves and our horses over in a flat scow as usual, we reached the fishing-station of Share.

Share quaiho stands on the right a northern bank of the river, where, taking a considerable bend to the south-east, it falls into the sea through a shallow mouth, only allowing the passage of boats. A small temple and some store-houses are placed on a sand ridge immediately above the principal buildings, where are likewise a few Ainu huts, but the most of those on that side of the river are at some little distance to the eastward. The sea-shore has a line east and west, and is composed of a soft coarse sand. A few miles on either side the shore bends to the northward, Share being at the bottom of a very open bay. To the east the country and coast are high and mountainous, the latter becoming quite steep and rocky towards Cape Siretoko. The vapours can be seen of a volcanic portion of this mass of mountains very near the sea, where there is said to be an extensive bed of pure sulphur, but the chief man at the station informed me that the nature of the coast precluded its being worked.† The extreme land visible towards

\* According to Lieut. Day U.S.N., who conducted the 'trigonometrical' survey—which, however, was never extended into this district—and who followed on this route some years afterwards with the necessary instruments for measurement, this pass is 1275 feet above the sea.

† Since the date when this was written, however, sulphur has been worked out to a certain extent from this place, but owing to the difficulty

Cape Siretoko bears from the quaisho north-east, while a lower coast on the other side is visible as far as north-west. Inland a high double-peaked mountain, appearing detached from the great mass to the eastward, bears south half-east. This is called 'Share-no-yama,' or Share mountain, and, as seen from the quaisho, its appearance is imposing.

I stayed a whole day at Share, resting myself after the fatigue and soreness of the last few days' pack-horse travelling. I took the opportunity to wash some of my clothes in the river, write up my notes, and collect all the information I could. As to Share itself everything has an old and dilapidated appearance, and I was assured that the station did not pay its expenses, the catch of salmon being only sufficient to keep the people about the place in food. Deer are plentiful in this part of the island during summer, but, as they migrate southward and westward on the approach of cold weather, they are not hunted for the sake of their skins. Bears are tolerably numerous. In winter the whole sea-coast is blocked up with ice, as I was informed by the old man in charge of the

of transport on land, and the risk attending the visits of vessels to so exposed a portion of the coast, the undertaking has not been attended with the success that was anticipated. Mr. B. S. Lyman, chief geologist for some years of the Kaitakushi Department, made an exploration of this sulphur region in 1874, full details of which will be found in the account of his journey across and around Yezo which I have elsewhere referred to, and among other special papers by him in the *Reports and Official Letters* published by the department at Tokio in 1875. Sulphur is likewise worked in several other localities in Yezo, and on Kunashiri island; notably at Cape Esan, and in the districts of Iwanai and Kusuri, while it finds its way into the Hakodate market also from Ando in Awomori Gulf, and other places in Awomori ken at the extreme north of the main island. In his *General Report on the Geology of Yezo*, published by the Kaitakushi in 1877, Mr. Lyman says:—

"Most of the sulphur in Yezo is deposited from volcanic fumes; but near Kobui there is some gray sulphur that appears to be a deposit from sulphur springs.

"The Itashibeoni sulphur near the eastern end of the island seems to be such greater in amount than that of any other place. The fumes rise in great volume from a hole some twenty feet long by fifteen wide at the bottom of a larger hole perhaps a hundred feet in diameter and thirty feet deep. The smaller hole is full to within five feet of its brim with a dark brownish-gray, muddy-looking liquid that seems to be melted sulphur and is boiling violently and spouting upwards for several feet in great commotion and sending out heavy sulphur fumes, apparently without any steam. A comparatively small portion of the fumes condenses as sulphur powder on the mountain side around, within 75 to 150 yards wherever the wind has blown them. About eight acres (or 9,600 tsubo) are wholly or partly covered by the sulphur to an average depth of half a foot or perhaps less of pure sulphur; amounting, therefore, at one half that thickness, to perhaps 3,300 cubic yards, or say 3,200 tons (20,000 koku) worth at Hakodate some \$60,000. If the brown liquid in the hole be indeed sulphur, and if by any method it can be dipped or pumped out, it is possible that the amount might be many thousands or even tens of thousands of tons. The place is about 2,000 feet above the sea, and two miles (30 cho) distant from it by the present difficult footpath; but about half that distance from the shore at another point where however the cliffs are very high. There is no drinkable water known within a mile and a half of the sulphur. There are therefore some difficulties in the way of working the sulphur, and it was abandoned in 1867 after a trial of two summers.

"At the other volcanic places the sulphur is deposited in the same way by condensation from fumes upon the cool ground, and is commonly

station who had been resident there for thirty years. Before leaving this place I gave all the Ainu and the Japanese who had come through with me small presents of money, and distributed some duck-shot among them, which latter of the two was, probably, the more prized.

It was on a clear morning with a slight frost that I left Share for Abasiri. As hitherto, I rode a horse carrying my baggage, a Japanese rode another, and an Ainu kept pace on foot. The track follows a sandy beach westward, and then behind grass-covered sand ridges which skirt the shore. The back country is for some extent swamp, and inland of that thickly wooded. We ferried ourselves over a small creek which comes out of a swamp, in a flat scow, fastened to both banks by a rope, near which there are a few Ainu huts. Thence we passed between the sea and a lagoon, with another river flowing out of its western end, where there is a fishing-station and some more Ainu dwellings. Shortly after we crossed, by a bridge, another outlet of a lagoon, which is deep, and

much mixed with earthy impurities, partially decomposed rock and the like. At one place, Esan, where the sulphur was worked for some 15 years, it was estimated that throughout the extent of the deposit the average thickness of what was thought worth gathering was perhaps one-tenth of a foot; and it yielded, it was said, four-tenths of its weight in sulphur. Taking that as a guide a rough estimate was made of the amount of sulphur to be won at the different places, as follows: Nuburibets, at two places a quarter of a mile apart, namely, near the hot springs some 100 tons (or 600 koku), and near the Oi Lake, 35 tons (over 200 koku); at Iwaonobori, 75 tons (450 koku); at Tarumai (in 1873), 35 tons (over 200 koku); at Esan (in 1873), 30 tons (nearly 200 koku). The Esan place was reported last year to be practically exhausted, and the working was perhaps already abandoned. The eruption of Tarumai in 1874 may have lessened the present amount of sulphur there. Near the mountain Meakan in the eastern part of the island sulphur was worked many (30?) years ago, but has long been abandoned; and as it was not visited during our survey no estimate was made of its amount. Probably it is not more than the average of the other places. There are also traces of volcanic sulphur on Usudake and on Komagatake.

"Most of the volcanic sulphur, though it can be reached by horses, is rather inaccessible owing to the height at which it is found on the mountains and its distance from big roads, or the sea shore. The Nuburibets sulphur is, however, only 900 feet above the sea and four miles (1½ ri) from it and from the New Road; but the Iwaonobori sulphur is about 3,600 feet above the sea, and 14 miles (5½ ri) from it at Iwanai; the Tarumai sulphur, about 3,000 feet above the sea, and nine miles (3¾ ri) from it; the Esan sulphur, about 1,400 feet above the sea and a mile and a half (or half a ri) from it.

"The sulphur was worked at Esan ever since nearly fifteen years ago. To separate the earthy impurities it was melted three times in three large iron pots two feet in diameter and three feet deep, and afterwards strained through thick canvas. The cost (delivered at Hakodate as given me by the workmen amounted to \$538 for 100 koku (about 16 tons), the product of three months, work at Hakodate about \$300. The Nuburibets sulphur was formerly worked (apparently with three melting pots), but was abandoned about nineteen years ago. The Tarumai sulphur was worked for three years (with five or more pots); but was abandoned about sixteen years ago. The Iwaonobori sulphur was worked for many years, but was abandoned about eight years ago.

"The whole amount of workable sulphur, then, in Yezo is perhaps 3,700 tons (or 23,000 koku); of which nearly six sevenths would be at Itashibeoni, and 200 tons would be the gray sulphur of Kobui."

has a considerable run of water out of it, whence the coast trends north-west, with a sandy beach and wooded highlands rising abruptly from it. Two small bays occur here, in which are hard slate-coloured boulders and conglomerate rock, where there are some fishing-stations, used during the herring season, and a few Ainu huts. This part of the coast is very picturesque; the headlands jut out as far as a north bearing, and the rocky islet off Abasiri Bay—which islet gives its name to the place—stands slightly outside of them. In the bay immediately before reaching Abasiri there is a very peculiar cliff, composed of a grey stone, which, being rent in quadrilateral blocks, has at a distance so much the appearance of basalt, that it requires a near approach to dispel the illusion. It appears to have undergone great heat, and so become thus fractured. Some portions have a pinkish colour, and others, by their greenish-yellow, indicate the presence of sulphur. It is a favourite resort of cormorants and other sea-birds, whose dung whitens much of it\*.

The track ascends the highland just short of this cliff by a zig-zag; and passing over a plateau immediately above the pretty bay of Abasiri, descends by a steep path to the quai-sho, situated on the south shore close to the embouchure of a considerable river which flows out of a lake a little inland, but not visible from the coast. Looking back from the terrace, Share-no-yama and the mountains towards Cape Siretoko, then powdered near their tops with snow, with the regular sweep of the coast line below and intervening dark mass of wooded country seen through a clear autumn atmosphere, formed a lovely scene.

Abasiri quai-sho—distance  $9\frac{1}{2}$  ri from Share—is composed of a similar collection of buildings to that found usually at the larger stations; but much credit is due to the lessee of this small district and the 'siahinin'—an old man who has been upwards of forty years on the coast—for the excellent repair and cleanly state of the place. The dwelling-house had lately been partially rebuilt, and although this is the most distant station reckoning round the coast-line, from the south of Yezo, I found it furnished with most of the conveniences to be found in the best houses at Hakodate or Matsumai. The old man took much pleasure apparently in showing me how, by availing himself of the resources at hand, he had selected the best timber in the neighbourhood for making the neat sliding doors and windows† in the pret-

\* This was written in 1869 before any extended geological exploration of Yezo had been undertaken. I have elsewhere referred to this form of rock having been mistaken by other travellers for basalt. A good example may be seen on the line of railroad about half way between Otaru and Zenibako, which is described by Mr. Lyman as "columnar volcanic rock, light-gray and partly "dark-gray trachytic porphyry with much sanidin "and hornblende." ('Reports and official letters to the Kaitakushi' p. 542.)

† I have generally refrained from the use of native names for things when equivalents in English exist. Perhaps there is not a foreign book on Japan in which the words *shoji* and *fusuma* are not frequently repeated. Why these two should have been specially selected by the 'globe-trotting' class of authors for exhibiting their acquaintance with the Japanese language, I cannot conceive. In the latest volume issued from the press in London (*Higways and Byeways*) I find them italicised half-a-dozen times within a single page.

tiest style, the ceilings and panels of beautiful straight-grained 'todo' perfectly free of knots, the beams and varnished lintels of handsome elm, ash, and chestnut; having been dependent on the south only for the wall and window paper. Before supper I was invited to take a warm bath—a luxury which native travellers never refuse, and which officials demand as a right—which I enjoyed in a nice wash-room, fitted up in the style of a first-class native hotel. I may observe, however, that this was a luxury I seldom resorted to, preferring the clear running stream of some cold mountain torrent to the enervating 'furo.'\*

The bay is only a slight indentation in the shore-line, but a high precipitous island encircled by a reef wash, gives it somewhat a sheltered appearance. The few junks which visit this distant station anchor S.S.W. off the islet in about six fathoms of water. To the west and north-west side of the islet, although the larger and more protected part of the bay, is shallow.

To this district belong about 200 Ainu, who assist in the annual catch of from 500 to 700 koku of salmon, besides 'mas' (sea-trout) and herring. The extent of the leased coast is not more than 10 or 15 ri, which, in one way, is an advantage, as there are but few rest-houses and travellers' sleeping-places to be kept up. The district has all ways been retained in the hands of the government, ever since the greater part of the Yezo coast was taken over from the Prince of Matsumai, on the opening of the port of Hakodate to foreign commerce. Before that however, a Matsumai firm called Mata-ju, leased (from the prince) the whole 'basha' or coast from Nemoro to Soya, with the islands of Risiri and Rifansiri off the mouth of the Strait of La Perouse, as well as Kunashiri included. At that period various princes were handed over certain portions of the coast of Yezo which they were supposed to garrison, as compensation for which service they were allowed to collect the coast taxes. Aidzu's portion embraced the north-east coast from Nishibets river in the Strait of Yezo to Soya the northernmost point of the island—excepting Abasiri, which as mentioned before the Tycoon's government retained—and was lot out in districts known as Shibets, Share, and Mombets. The breaking out of the revolution and the resumption of the functions of executive government by the Mikado, broke up this state of things, and the whole coast was annexed by the government in 1868. The 'Kaitaku,' or colonization scheme, however, commenced shortly after, again altering the arrangement, and a new partition of the coast among various daimio was resumed. When I passed along their officials were just taking charge of their respective allotments. I then remarked (*Journal of the Royal Geographical Society*):—"The central government, alive

\* Experience has afforded me abundant reasons for modifying this expression. The hot bath is an 'institution' in Japan of the greatest benefit to a tired traveller coming off a hard day's journey. It must however be taken hot, not warm only. If you come out nearly the colour of a boiled lobster, what matter. You will not catch cold afterwards if you have taken it hot enough. 110° to 115 Fahrenheit can be easily sustained. Witness the natives going right out into the streets in the coldest weather immediately after bathing, with nothing on but light cotton clothing.

to the productive powers of the different districts, retains as government bashos the best portions. Some of these they intend fishing on their own account, and others they lease to private individuals, from whom they will collect 30 per cent. of the produce for right of fishing; and my own conviction is that the gain to the government will be the greater from the latter. However, it is to be supposed that they know their own business better than others can. As to the daimios, they are hampered by being obliged to settle agriculturists in their districts, the expense of which colonization they are to defray, so that their profits, if any, are likely to be reduced to a minimum. In this, however, the government are only carrying out their present policy—doubtless a wise one—of endeavouring to impoverish these semi-independent princes, and so cripple them against any attempt at defying the power of the central government.”

The second day's journey on the north-east coast proper, of but 9 ri, I made in company with one Ainu. The weather was again all that could be desired for travelling—fine and clear, with a light northerly breeze. Getting away tolerably early, we crossed Abasiri river in a flat-bottomed scow, proceeded along the sand-beach of the bay some distance, then mounted the highland, the track keeping not far from the shore in a northerly direction through a country wooded with a mixture of hard-woods and coniferæ, somewhat broken by deep ravines, and in a few places swampy; the coast being composed of sandstone and conglomerate in cliffs. After a few miles we came down again on the beach, and halted for dinner at a small rest-house near some Ainu huts, on the shore of a lagoon only separated from the sea by a narrow sand flat. This lagoon seemed to be of considerable size, running into the country S.S.W.; and beyond it were some high mountains, apparently 20 to 30 miles distant. The coast-line here has a direction about W.N.W. Thence, travelling partly on the high ground and partly on the sand-beach, in places below high shale banks, of which the strata are much inclined, we reached the small fishing-station of Tokoro quite early.

A considerable-sized river, which is a great resort for salmon, finds its way into the sea by a shallow mouth at this place. There were at that time three Japanese and about thirty Ainu employed in fishing; the huts of the latter being situated near the single house which composes this station. I watched them come in from fishing off the mouth of the river, and land, clean, and salt the salmon into the storehouse. Most of the roe was thrown away for want of hands to salt it. I noticed a good many of the fish to be dark coloured, with long snouts.

From Tokoro the coast still runs W.N.W. nearly straight for some distance, the extreme land about Mombets bearing N.W.  $\frac{1}{2}$  W. from Tokoro. The head waters of the Tokoro river are near those of the northern branch of the Iskari; and I was told that in former times the Ainu used to pass from one to the other, but they have now no reason to bring them across.

The following morning, continuing my journey with the same Ainu guide, about a ri along the sandy grass-covered ridges brought us to the outlet of the most exten-

sive lagoon on the whole coast, called Saru-ma. Its water is salt, with a rise of tide of about 2 feet; and it contains large oyster beds. At some Ainu huts we crossed its eastern end in a flat scow, to a narrow neck of land between it and the sea, the inner side of which the track followed onwards. This sheet of water is about 3 miles wide in most parts, and stretches parallel to the coast about 14 geographical miles. Its south side is skirted by wooded hills, and a confused mass of mountains lie beyond. The neck between it and the sea is partly a bare sand ridge, but a considerable portion is covered with a dense scrub of small oak. About halfway along is a single small rest-house, where we stopped for our midday meal, using scraps of wood which we found lying about to boil the fresh water which we had carried from Tokoro station. There were a number of wild geese on the lagoon but the Ainu dogs scared them up before I could get within range.

A short distance beyond the western extremity of Saru-ma lagoon is the small fishing-station of Yubets, situated in a swampy district on the side of a river which forces its way through a soft sand-beach into the sea, and being obstructed at its mouth by a bar is available only for fishing-boats. The buildings consist of but one frame-house, a go-down, and the Ainu huts. Round pebbles of black quartz are found in the bed of the river a little distance above its mouth, of which I secured a specimen. The distance from Tokoro is  $9\frac{1}{2}$  ri.

I remained at this place for the night. There were only four Japanese temporarily stationed there for the salmon season, and thirty-two Ainu, women included, who were employed for manning the boats, hauling nets, clearing and salting the fish.

The same Abasiri Ainu accompanied me the day following to Mombets,\* an easy journey of but  $6\frac{1}{2}$  ri, mostly along the sea-beach, the direction of which for the first part is W.N.W., bounding a low swampy country, and some smaller lagoons. We halted for dinner at a dilapidated rest-house, where the high land and wooded hills commence to approach the shore, from which position Mombets point bears N.W. by N., and the shore-line runs N.W. by W., gradually curving round to the small bay of Mombets. Shortly before reaching that place we came to a narrow, but deep stream, with a quicksand at its mouth, across which we first sent an Ainu boy, without any clothes on him, to test its depth, and then crossed on horseback, only slightly wetting our baggage, and arrived early in the afternoon at Mombets quaisho. This station, which is the head-quarters of a district, stands on a sloping point of hard, bluish, secondary rock, which running into the sea forms a reef, giving some little shelter to the bay, which however, hardly deserves such a name, as the shore only runs in from the point but a third of a mile or so south-west. A junk was at anchor, with the point bearing about north, in about four fathoms. The reef forms a breakwater to the east of north, but the anchorage entirely exposed to north-east and east winds, seems inferior to Abasiri.

\* Known also as Share-Mombets in distinction to several other places of the same names, Usu-Mombets, Saru-Mombets, &c.

The station consists of a large dwelling house, an official's house—though there was no official when I was there—and a number of store houses, with Ainu huts round about. The skipper of the junk I found to be a very intelligent man, and he had supplemented his junk experience by two or three passages in foreign vessels, the rapidity of the movements of which, the regularity of the duties on board, together with the advantage possessed by foreign captains of being able to navigate when out of sight of land by celestial observations, he fully appreciated. The 'sivainin,' or master of the district, likewise was a communicative man, and from these two I derived much information concerning the coast. They told me that in winter the sea was frozen 3 or 4 ri out all along the north-east coast; but the Strait of La Perouse, between Yezo and Krafto (Saghalin), remained open by reason of the force and warmth of the ocean current which passes up the Sea of Japan and through that strait to the Sea of Okhotsk. They accounted for so much ice blocking the north-east coast by its forming on the Krafto shore, and being drifted across by northerly winds prevailing at that season. They described the winter weather as very severe. The two districts of Mombets and Share, which were then worked by one lessee, they assured me did not pay expenses, but were retained only because the same house leased the very profitable district of Shibets, in the Strait of Yezo, and in throwing up one the whole would be lost; the best portion of the coast, and the most favourable place for junks to lie at, namely Abasiri, being in the hands of another lessee. The Ainu cost them, with maintenance and presents, about twenty dollars per annum, or rather per season, as for at least half the year there is no work in which they can be employed. There are a great number belonging to Mombets, but many are sent to work in the great salmon district in the east during the season. I observed that their huts here, although much the same form as in other parts of the island, were without the chimney at the gable end, but in place had an aperture in the ridge of the main building with a pair of sliding shutters for closing it at pleasure.

At Mombets I was furnished with fresh horses and an Ainu guide, with shaven face and head in Japanese fashion, and having slept there, got away in the rain next morning, the 17th October. Passing over the point, we travelled along a rather uneven coast about n.w., stopping for dinner some 3 ri beyond the *quaisho* at a small herring-fishing station—uninhabited at this season—situated in a little bay very similar to that at Mombets. Before evening we reached another deserted station called Sawaki—also in a small bay—where we put up, picketing the horses outside. The Ainu huts near the station were all deserted but one, the people of which brought in firewood for us. On this day's route the beach was mostly sandy, while the shore above the sea-wash was covered with grass and scrub-bamboo; the woods near the sea generally stunted oak, but a mixture of hardwoods on the hills, with some firs visible on the higher mountains. A few small lagoons and swamps intervene in places between the beach and the hills, while the back country is mountainous. Looking up a valley in a south-westerly direction, I observed a fine high

range of mountains. We crossed three rivers with 'quicksand mouths, at each of which was an Ainu hut or two, whose inmates had charge of the flat ferry-boats. There is much driftwood along this shore, and I saw a number of bleached whales' bones.

During the night some deer came down quite close to the house, for we heard their whistling cry very distinctly; but as it rained heavily, and was very dark, it was useless to think of going out to get a shot at them. As I sat over the fire before turning into my blankets for the night, my Ainu kept me in constant conversation, being anxious to gain information about foreign countries, which he called 'kara.' Being able to write the Japanese 'kana' (he was the only one I met whom I discovered could do so), he put down English names for various things, and spelt them over and over again to himself to get them by heart. This boy accompanied me all the way to Soya, eight days' travel, and during that time worked every night at his vocabulary. He must have had a very retentive memory, for I do not remember that he ever asked the name of the same thing twice, unless it was that there was some indistinctness in the characters he had written, or he wanted to make sure of the pronunciation, which was not to be wondered at, considering that when without his brush and ink he made shift with pieces of charcoal out of the fire to write with. He was so civilized an Ainu that at first I doubted whether he was certain as to his parentage; but a peculiar pronunciation, his dark, heavy eyebrows, and the general contour of his features, convinced me he was of pure stock. Although very handy at cooking and attending to one's wants, he was not a good traveller—for such he was too far civilized. Much as we may value civilization in the abstract, it must be confessed that under certain circumstances it is at fault.

On October 18th we started with our two horses, and crossing over the point through a thick wood of scrub oak at the back of the 'banya'\* fell again on the sea-shore, which, although somewhat irregular and broken by small points of rock and little bays, with reefs off the shore, has a general direction of north-west. The character of the geological structure here differs from the coast to the eastward, hard primary rock showing both *in situ* and in boulders. It rained heavily, with a strong north-east wind, and some sleet fell, so that I found travelling rather uncomfortable. We crossed one river in a scow as usual, resting during a heavy shower in an Ainu hut near the river. The rivers we crossed subsequently were minor streams, but much swollen by the rains, so that the fords were deep. My horse fell once this day, sending me flying over its head with my gun in my hand, but owing to my carrying it detached—my usual practice—it fortunately sustained no injury, while I had become so accustomed to such mishaps that I thought little of it. This same horse was an exceedingly awkward brute, and at an unoccupied herring-station we passed he got up against one of the buildings and defied my efforts to move him from it, until I dismounted and belaboured him with a stout stick. I noticed

\* This word is used for the smaller fishing-stations in contradistinction to 'quaisho' which designates a chief station.

—though it was seldom I could get a view for the rain—that the higher mountains had become partly covered with snow. Fir-trees were more numerous near the coast than hitherto, while on some of the hills inland they were quite thick. The lagoon region, which extends from Share along this coast, was now passed, and the occurrence of many rapid rivulets indicated a comparatively short distance back to the watershed. The native map of Yezo places the upper waters of the Teshin River which falls into the Sea of Japan a little south of Risiri Island, but a few miles distant from this coast.

I reached Poronai, distant  $5\frac{1}{2}$  ri from Sawaki, wet, cold, and hungry. This is the most northerly station of the Mombets district. It is properly a salmon-fishing 'banya,' but the 'ban-nin' (fishermen) and the Ainu had been withdrawn for the more profitable Shibets district. The establishment is but small, and we found only one or two Ainu about the place. A small river enters the sea just west of the station. From this place a distant headland is visible, bearing N.N.W., which is the high land beyond Isashi;\* and an islet called Chuskin, lying about a mile off the coast and 3 or 4 miles in the same direction, can likewise be seen. In like manner as the night before, finding no inmates, we took undisputed possession of the house, and made ourselves as comfortable as circumstances would allow. The few Ainu we had met during this day's ride were all engaged taking their winter supply of salmon, which, as they have no salt, they cut in thin strips and hang up to cure above the wood fires in their huts.

The following day, the 19th, we started tolerably early, crossing the river at the station in a scow. We travelled then along an irregular and picturesque coast in a general direction of N.W. by N., a distance of 6 ri, to the small untenanted station of Chikaptomushi. The land rises towards the hills by small plateaux or terraces, which, scooped into low cliffs along the shore, expose rock, or else clay and gravel beds. A little stratified rock is to be seen, but as you approach Chikaptomushi, granite and other hard primary rocks prevail. Scrub oak here gives way to woods of beech, alder, maple, &c., mixed with 'todo,' or silver fir. There are reefs in many places along the shore, and some of them lie off a mile or so. The beach is in some places soft sand, but otherwise pebbles, or hard granitic sand, and granite boulders. During this day we passed several creeks; but one in particular, where we stayed at a small rest-shed for dinner, was actually alive with salmon. They were most of them foul, dark-coloured fish, and were sculling and playing about shewing their back fins, and in the shoaler water portions of their bodies. The Ainu who was with me, said they were not running up the river then but only grubbing at the stones on the bottom, possibly to clear themselves of sea-lice. We went a little way up the river to look at them, and the Ainu killed one with a stick from the bank. We might have killed any number had we chosen. The travelling this day was indifferent and slow owing to deep sand and occasional stony parts of the beach, while in places we had to

mount the terraces in order to avoid rocky parts of the shore.

We came to the station early, but the horses seemed pretty well done up. As there was still a warm sun, I hung out my blankets to air and allow the fleas to jump out of them. There are quantities of echinæ, and some univalve and bivalve shells along this part of the coast. I saw no fresh-water ducks, but a good many harlequin and other salt-water species, cormorants, white-tailed sea-eagles, sandpipers, thrushes, and, of course, crows and gulls. Looking back from Chikaptomushi, Mombets high land appears like a point on a S.E. by S. bearing. Forward, the bold shore beyond Isashi bears N.N.W., which is the general run of the coast line. A high mountain, then covered with snow, lies inland, to the N.W.

I was awakened on the 20th with the unwelcome intelligence that our horses were missing, which the Ainu accounted for by their having broken their tethers for fear of a bear, which he contended must have paid us a visit during the night. I was, however, of the different opinion that his carelessness in securing them, and probably in giving them no water the evening previous, had been the cause of their breaking away. He followed their back tracks some distance along the beach, but returned, reporting that they seemed to have made for home. Knowing we were not far from an inhabited station, I did not feel at all concerned, and having breakfasted, we started on foot; an Ainu girl, who was travelling in the same direction, making little of carrying most of my baggage, while my guide tied my red blanket and wrapper on his back, and I carried my fowling-piece and ammunition. Our pack-saddles and provisions we left at the house. We followed the shore in a general N.N.W. direction, and as the beach was mostly hard sand the walking was very good. We crossed a small river in a canoe, which we found at its bank, and shortly after reached some Ainu huts, where the woman was relieved by a lad, who undertook to carry my baggage.

At the Ainu huts we stayed a little and had a smoke. The people were very civil, and offered me food, which I declined. Observing a fine sea-eagle at a little distance, they asked me to shoot it, but before I could approach within fair range it flew off; so, rather than they should doubt the power of my double gun, I knocked down a kite as it flew over us, at the sight of which they were greatly delighted. My Ainu was a stranger to these people, so on meeting, before exchanging a word, he went through a ceremonious form of salutation individually with each of the principal men. This they performed by going down on their knees, holding out their hands with the palms together, rubbed them backward and forward twice, the saluted party following the motions of the saluting one; then raised both hands to a level with the chin, palms uppermost; lowered them; raised them again, stroking the beard; lowered them, and performed the last operation over again, which completed the ceremony.

Some distance after leaving these Ainu we crossed over a point and came in view of Isashi, a tolerable-sized station belonging to the Soya district, situated on the north side of a shallow—as to indent—bay. A river, which is quite deep near its mouth, falls into

\* I have spelt the name thus, to distinguish it from Esashi on the west coast.

the sea at the southern end of the long sand-beach; the valley runs into the country in a westerly direction. The hills are clothed with a mixture of hardwoods and fir; and the former, being just then in their full fall colours, formed a contrast which was strikingly beautiful; besides, the weather being all that could be desired, I enjoyed the walk very much. It is but 5 ri ( $12\frac{1}{2}$  miles) from Chikaptomushi to Isashi, where we arrived about noon. I found but one junk in the bay, anchored right off the station close alongside a reef, on which she had anchors laid out fore and aft, and into deep water on her other side. There is a bit of a point which forms the northern extremity of the bay, but there can be said to be but little shelter for a vessel; in fact from N. E. by E. to S. S. E. the anchorage is quite open and exposed to the full force of the Okhotsk sea, which is said to be blocked with ice for some miles out in winter.

The people at the station numbered four Japanese and thirty Ainu. They were lifting a salmon net just as I arrived; the fish were all clean run. They expected to have about ten days more fishing, say to the end of October. The year previous the catch had been five hundred koku, part of which were taken in the river before mentioned on the far side of the bay. Herring frequent this coast in spring, and some irico (*biche-de-mer*) is collected.

As the nights were getting cold, I used a Japanese quilt over my blankets, besides one below me—a plan which, as the weather continued cold on the remainder of this journey, I henceforth adopted. Japanese houses are ill-adapted for a cold climate, being mere shells—a wooden framing closed in with half-inch boards full of rents and splits—not the least protection against cold. The floors are likewise very imperfectly laid, but in an inhabited dwelling this inconvenience is obviated by the use of thick floor-mats. It may seem strange, but nowhere have I observed the Japanese in Yezo to have adopted a style of dwelling suited to the climate.

I found a young Hakodate yakonin stationed at Isashi, the second only at that time on the whole coast from Share to Soya. He said he knew me very well, but I failed to recognise him. He was very civil, and we had a long chat together. He had been in charge of Soya when H.M.S. *Rattler* was wrecked in the autumn of 1868, and gave me some particulars of the accident. His opinion was, that the vessel ought never to have been run so close in shore, even supposing entire ignorance of the existence of reefs—a judgment which, after inspection of the locality, I believe can hardly be gainsaid. Along this coast, even before reaching Isashi, I saw fragments of oak timber with copper bolts sticking in them, among the driftwood, which, doubtless belonging to that unfortunate vessel, had been driven thence by the strong current which sets through the Strait of La Perouse.

Luckily, there were a few horses belonging to Isashi, of which the man in charge supplied me with two, at the usual government price, and my Ainu having gone back to our last sleeping-place and fetched the pack-saddles and provisions, I started again with him next morning (21st October) *en route* for Soya. A heavy gale had come on

during the night from the eastward, and continued all day, hauling to the south-eastward. We travelled along a rocky coast, with high, wooded mountains rising immediately from it, the track leading at times along the beach, and at others on the first terrace above it, to avoid the most rocky parts of the shore. The beach was thickly strewn with shells, the most common kind being a sort of broad mussel, and another an ordinary fan-shaped bivalve. I imagined—with what approach to the truth I am uncertain—that these shells belonged to animals inhabiting the warm water of the Kuro-siwo ocean-stream, one branch of which passes through La Perouse Strait into the Sea of Okhotsk, where, possibly the temperature becoming too cold for them, the inmates of the shells died, and the shells were cast up on this shore.

We stopped for dinner at a small fishing-station occupied by but one Japanese, where we took a few dried fish for use on the journey, and obtained an additional Ainu to accompany us. Then travelling on with mountains on our left hand, we passed some rocky points all more or less low, until the nature of the shore forces the track up and along the face of a wooded and rocky head, after which this high coast turns abruptly west for half a mile or so, where it meets a low shore running N.N.W. as far as the eye can reach. Although this cannot be called a cape, as it does not project from the general line of the coast to deserve such an appellation, still it doubtless has some such appearance when viewed from seaward, as it is strikingly distinct from the low coast on either side of it. It is possible therefore that it may account for an extra cape on the north-east coast of Yezo which used to appear on the foreign charts under the name of Austuko or Notoro in Lat.  $45^{\circ} 8' N.$  and Long.  $143^{\circ} 40' E.$  I named it at the time 'False Cape,' which was afterwards adopted by Captain St. John, who made a flying survey of this coast in H. M. S. 'Sylvia,' and from which many corrections were made in the outline of Yezo on a chart subsequently published.

The track passes round the steep jagged edge of a bluff, high above the sea, and is very rugged; so much so that I did not attempt to ride, but made my blanket fast on the pack-saddle and allowed the horse to pick his own way over the rocks and loose stones. As we rounded the sharp angle of the bluff the wind struck us with the force of a hurricane, while the sea lashed the rocks in grand style below us; which, with the frowning mountain side above made up an impressive scene. Feeling unwell I was glad when we reached a single house kept up as a 'tomardokoro' on the north side of the bluff just where the straight low shore commences, and is called Shonai. We found the building in a rather unsuitable condition to shelter us in such weather, but managed to make ourselves at home, while the people from three Ainu huts close by brought us firewood. The gale continued all night, and as I lay awake in a feverish state, the gusts came down off the top, and swept round the angle of the mountain with such force, that I almost expected the building to blow away. It had suffered considerable damage only the year previous, to prevent a recurrence of which a stockade had been erected on the exposed side towards



the sea. By the following morning the wind had veered to the southward, and during the day so much rain fell, that with the fever still on me, I was not sorry to have the excuse to lie over a day.

Leaving the mountainous land south and east of Shonai behind, we travelled, on the 23rd October, along a straight sand-beach to the N.N.W., the country inland being low, with distant hills only. After passing a lagoon with much grass swamp around it, where there are a few Ainu huts, the country becomes covered with a dense spruce forest, the trees on the outer edge near the beach being stunted and bent over by the force of the wind. This is a kind of vegetation seen in but few localities of any extent on this island, but extends here for a considerable distance, and as it occurs on the north-west coast, in the vicinity of Teshiu River, I imagine it may connect right across from sea to sea.

By evening we reached a river coming through a lagoon, and bending along the beach to the northward, but the mouth had become completely blocked up with sand by the late gale, an effect often produced where the beach is of shifting sand or shingle. Here are some Ainu huts and a large house kept up as a 'tomaro-doko,' where we found a Japanese and an Aino who had come from a station farther to the north. We travelled this day, without making a halt, a distance of nearly nine ri. The place is called by the Ainu name of Sarubuts.

The following day we reached Soya, twelve ri distant. For the first two ri the coast was in the same line (N.N.W.), and the country of the same description as the day previous. The land, however, began to rise before we reached a blunt point, bare of trees, with some rock cropping out. A cluster of rocks lies about a mile out at sea, north of the north-west part of this point. From this the land falls in, and before reaching a high head-land, there are two bays with a fishing-station in each, and some small rivers emptying into them. Near the first of these stations the land is high and somewhat broken, and is wooded principally with spruce mixed with hardwood trees, which, then showing their brown and deep-crimson autumn colours, had a very beautiful appearance. We then passed along under high banks and cliffs of sandstone in thin layers, with beds of clay and marl, the beach being rocky and stony, and bad for horse travelling.\*

Cape Soya—the northernmost point of Yezo—is shelving; the woods do not approach the shore, but the land is covered with scrub-bamboo, except where a few patches of heather occur on some of the slopes. Flat ledges of rock appear to extend far off shore, rendering the near approach of vessels to this cape dan-

gerous. Just at the cape there is a nice little boat bay, where are a few Ainu huts. I rounded the cape in a sleet storm, on October 24th, and a cold westerly gale met me right in the teeth. Thence I followed the shore south-westerly to the quaishe, where I was glad to find a good wood-fire to warm myself at.

As a station, Soya is one of the most considerable on the coast, though the establishment is kept up more for the accommodation of government travellers to and from Krafto (Saghalin) than for its fisheries. The quaishe is a collection of various buildings, including dwelling-houses, officials' residence, store-houses, a temple, boat sheds, &c. The land around is broken and hilly, with an absence of woods. There is an opening in the reefs, which are about half a mile from the shore, which admits of the entrance of junks and small vessels into a little harbour, having from 10 to 15 feet of water. Owing to the heavy sea running outside I was enabled to get a good view of the situations of the reefs, which I roughly sketched, and compared with information received from the master of the place. The weather precluded my going in a boat to take soundings as I had intended. An old battery, made when Yezo belonged to the Prince of Matsu-mai, stands above the quaishe; there are no guns in it now. There are some Ainu huts about the place. Potatoes, daikun, or large turnip radish, and leeks are grown in small quantities.

I remained at Soya during the 25th October for the purpose of inspecting the guns, stores, and materiel saved from the wreck of H. M. S. *Rattler*, lost in September, 1868, which I had the orders of the Japanese government to do. I found a house which had been occupied by Captain Stevenson and the officers of that ill-fated ship, with a flagstaff erected in front of it, and the royal arms and other devices from the vessel stuck on the gate posts. The stores and materiel, consisting of rope, blocks, wire rigging, boarding pikes, cutlasses, revolvers, chairs, tables, a fire-engine, smith's forge and tools, cooking utensils, crockery, lanterns, compasses, salt provisions, biscuit, shot and shell, flags, sails, a turning lathe, sponges and rammers, and some books, were in two houses and a shed covered with sails, just as they had been left when the officers and crew were taken away by the French corvette *Dupleix*. The door and windows were nailed up, which had been done by the yakonin who took charge at that time, and until I arrived not a thing had been moved; consequently, what with the snow, rain, damp, and warm weather of the summer, most of the sails and many other perishable articles were more or less damaged. Some spars, five anchors, a quantity of chain cable, with five of the ship's boats were outside, partly covered with thatched roofs. What guns had been saved were ranged up in two lines on their carriages. A portion of the stern of the *Rattler* was fast on the reef to the south of the entrance into the small harbour, and the whole shore was still strewn with fragments of the wreck. Many of the things were moved and distributed under my superintendence, and I left word with the two officials then at Soya how to dispose of the remainder; the whole of these stores having been presented to the Japanese government under orders from England.

\* Lieut. Day mentions that somewhere about here there is a valley called Tsi-to-nai—possibly Chietomai of the government map—in which exists "a bed of peculiar kind of clay, resembling putty in appearance, which is eaten by the Ainos in the form of soup." It is boiled with wild lily roots, and after the earthy matter has settled, the liquid is used. Mr. Boehmer, who also followed this route, confirms the statement. I have observed this substance in several localities in Yezo, and it may be seen in Mohitzi valley only a few miles from Hakodate. Mr. Lyman speaks of its being found up the valley of the Kusuri and calls it "an earthy sepiolite," saying that it is eaten by the deer as well as the Ainu.

Some large-sized sailing boats are kept at Soya for passengers crossing the strait. These boats carry a crew of ten men each, so that when the wind fails they are able to use sculls, which they carry. The distance to Siranosi, where they land on Krafto, is reckoned 18 ri.

Soya was one of the places selected by the Japanese government as the head-quarters of a district under the Kaitago scheme; and the steamship *Thales* landed some officials and settlers shortly after I was there. The chief officer left his post for Yedo (a warmer climate) during the first winter, and I believe the settlement was afterwards moved to Isashi, a more favourable locality for agricultural operations.

From Hamanaka (Akis), whence I started on this land-journey, to Soya, I had travelled 126½ ri, taking fifteen days, with two days' stoppage on the road; a rate of travel, which is of course slow when compared with the distances which are easily made on the more frequented lines of route, where regular post-stations are maintained and ponies are numerous. Recapitulating I may say, that the north-east coast of Yezo has a length of about 200 geographical or nautical miles, between Cape Siretoko and Soya, and, with the exception of between 30 and 40 miles running south-westerly to Share Bay, may be said to have a general direction of north-west. Its prominent features are, a high mountainous region near Cape Siretoko; a low shore skirted with numerous lagoons and swamps; a high bluff, near Isashi; and thence towards Soya a comparatively low fir-wooded country. There is a total want of harbours, and it has a somewhat inhospitable climate, though in the latter particular it would probably compare favourably with the more northern portion of the north-west coast. Though it will probably be that portion of Yezo the last to be brought under cultivation, I should imagine that its fishing resources might be rendered more available than they are now by the opening of inland communication with the southern part of the island, which at the same time would encourage settlement.

## XIX.

### CAPE SOYA TO THE ISKARI.

Having completed my business at Soya I was ready to turn southwards. I felt it was none too early, for the weather was getting cold, and my limited stock of baggage included little clothing suitable for cold weather. I therefore set out on the 26th of October in company with a Japanese and an Ainu. During the early part of the day we passed along the east and south shores of Soya Bay, halting at a fishing-station on a river 4 ri from Soya. Here, intending to take my compass out of a small bag slung over my shoulder, where I always kept it, I found it to be missing. Suspecting that I had mislaid it at Soya, I drew, from recollection, a plan showing the paths and buildings about the quaisho, describing to the Japanese who had come with me where I imagined I had left it. I made, likewise, a drawing of the compass, and he immediately volunteered to start back to look for it, while the Ainu and I continued our route. I never saw this Japanese afterwards; but on the morning of the third day after he left me, an Ainu

messenger brought me a packet containing my compass. I should have been quite lost without it.

Following the sand-beach, which was fine level good travelling, we came to another fishing-station, where a number of Ainu who were collected there took great delight in looking at me. At this place the horses, about 20 in number, belonging to Soya quaisho, are kept, as there is plenty of grass suitable for hay, while they say that about the quaisho the feed is very poor. Hills approach the south-west corner of Soya Bay, and towards Cape Nossyap the land is all high. The forests are a mixture of fir and hardwoods. Here we left the bay, and turned up a valley towards the south-west, where we had some experience of plank and corduroy roads not in the best of repair. Mounting the hills by a fair-cut horse-path, we travelled along plateau-like land till we came suddenly to the brink of a steep high bank immediately above the Sea of Japan, where a fine panoramic view lay spread out before us. The lateness of the season had turned the oak leaves a deep rich brown, the birch yellow, and to mountain ash the brightest lake colour, which, with the berries of the last a rich scarlet, and some of the grasses a violet hue, made up such a mixture of colours, and so beautifully distributed, that an artist would have been at a loss to exaggerate them. As I gazed on this scene, recollections of similar views in the more northern regions of America came fresh to my memory, but I believe I can say with truth I had never seen anything to excel the fall colours of northern Yezo.

There is, curiously enough, a pond of water, just on the edge of the brow. The track from this zig-zags down the steep slope, crosses the low interval, and then takes the beach. There are a few fishing-huts at this point, and some stations to the northward towards Cape Nossyap. The island of Risiri, with its fine conical snow-covered peak, some 6,000 feet high, has an imposing appearance from this coast, and the lower island of Rifunsiri is also plainly visible.\*

Travelling along a flat sand-beach to the south-westward we reached the fishing-station of Bakai, about an hour and a half before sunset. The men in charge of the station came out some distance to meet me, and everything seemed prepared. I believe the yakonins at Soya had sent word the day previous that I should be going this way, as is the custom when any official of rank is travelling. There is a very peculiar rock standing on a hummock just underneath the hill at the back of the station. Besides a great deal of driftwood I noticed along the shore fragments of what must have been an enormous crab. Such crustacea are not uncommon in the Sea of Japan, for I have myself seen them over six feet across the extended legs. The salmon season was just concluded when I was at Bakai. Distance from Soya 8 ri.

On the 27th I had a long cold day's journey of 13 ri to Teshin, a strong north-west wind blowing off the sea with snow and sleet showers. The whole distance was along a

\* According to Lient. Day U. S. N. ('Report on the Trigonometrical Survey') Risiri is 6,460 feet, and bears from Bakai S. 65 W. 14 miles. Ribunsiri about 500 feet, N. 79 W. 24 miles.

dreary straight coast having a flat sand-beach strewn with driftwood. The uplands stretch a little south of Bakai, but thence the whole back country is low and covered with a dense fir forest, leaving an interval of about a quarter of a mile of grass and scrub-bamboo covered land near the beach. At 6 ri from Bakai there stands a single house, kept up for the accommodation of travellers. Otherwise, save a couple of small rest-sheds, there is not a building, nor even an Ainu hut, or the slightest sign of civilization along this inhospitable coast.

About sunset we reached the river at Teshiu. It is a considerable stream, running parallel with the beach for some distance before making its way through a sand spit into the sea; and on the south side of its mouth there is a long narrow lagoon, or old channel, also connected with the river. We left our horses and crossed in a canoe. A walk of a mile or so over a swamp, and by a narrow path through the woods, carried us to the station, which stands opposite the mouth of the river. This is the most northern station of another district, Bakai being the most southern one belonging to Soya. The Japanese informed me that this was formerly one of the best salmon rivers in Yezo, and that its mouth allowed of the passage of good-sized junks, but now it is almost blocked up, and but few salmon are taken. Sea-trout, however, run in this river in considerable numbers. They say that there is abundance of large 'todo' (fir) and 'Yezo matsu' (spruce) on this river, and that it can be navigated for a long distance up in boats. According to the native map of the island, its head waters come from very near Mombets on the north-east coast.

I slept at Teshiu, and next morning an Ainu guide and two fresh horses were ready for me. The travelling in the first part of the day had much of the dreariness of the day previous, the country inland being low and swampy, with an unbroken shore strewn with driftwood. At 4 ri distance we came to Wimbets River, a stream of considerable size, where there is a rest-house with an Ainu hut alongside of it. Here we crossed the stream in a scow, and struck again on the beach. Before getting much south of the Wimbets the country rises, and the shore is skirted by a straight line of yellow clay-rock cliffs, some 200 to 250 feet high, topped with clay and gravel beds. There are few gullies to break this natural wall, which extends for many miles. The track passes sometimes along the top, and sometimes on the beach below.\* We reached an old fishing-

\* It was somewhere along here that I observed an immense pile of old fire-wood on the top of a prominent bluff. I learned that this was one of the relics of the former time when such were maintained for use as beacon fires. The object was to signal from Soya, at the extreme north, right down through the country to Matsumai and Hakodate, in the event of an attack or landing by the Russians; the precautions adopted against which are described in Mr. W. G. Aston's 'Russian Descents on Saghalien and Itorup in the years 1806 and 1807,' published in the first volume of the *Transactions of the Asiatic Society of Japan*. This fear also accounts for the remains of some weak redoubts and other earthworks which may at the present day be seen at old Mororan, Soya, and other places in Yezo. These were formerly garrisoned by troops furnished by various Daimio, whose right gained thereby to the collection of

station called Furbets (8 ri from Teshiu), which is situated where a small river breaks through the cliffs. The river is spanned by a substantial wooden bridge, the first I had met with on this journey.

By the time I was up next morning an Ainu had arrived, bringing my compass, which I had forgotten at Soya, which enabled me to resume the few observations of the line of the coast, and bearings of distant mountains, &c., which I made as I travelled along. With the same horses and guide I travelled in a general S.S.W. direction along the coast, which is composed of the same unbroken line of cliffs as before mentioned. The track is mostly along the shore, but in some places, it being impassable from the sea washing right up against the cliffs, one is forced to pass along the top of the heights. When the sea is calm it is probably possible to travel all the way along the beach, but it would be always somewhat uncertain, as the shore seems to be frequently changing owing to land-slips. The back country is hilly, and wooded with a mixture of hardwoods and fir. There is much driftwood along the shore.

There are a few insignificant creeks, and two rivers, which we crossed by ferries, Ainu attending at each. At the northern river of the two there is a rest-house where we stopped. Otherwise there are no dwellings along this coast, though I noticed the remains of some abandoned herring-stations. In fact, the whole coast from Tomamai northwards towards Soya is a most inhospitable region, and little good even for fishing, as the Japanese informed me that the herring when coming from the southward, strike off the coast at Tomamai and do not touch it again before Bakai over seventy miles to the northward.

Tomamai, where I stayed on the night of October 29th, is distant 37 ri from Soya, and 8 ri from Furbets. It is at a blunt point—if it may be so called—where this almost straight coast alters from a S.S.W. to a south direction, but the form of the land is not at all like its delineation on foreign charts. The high land rises steeply from a narrow level strip along the sea, where stands a quaisbo, and a number of houses round about, in fact, there is quite a settlement, and it may be considered the northern limit of civilization on the west side of Yezo. The people appear thriving, and cultivate some small gardens about their houses. Many of them return to their homes in the south during the winter season. They are not, however, all in the employment of large fishing firms as on the regular 'basha' or leased sections of coast in the eastern part of the island, but many fish on their own account rendering a certain duty or tax to the government. This was formerly ten per cent. of their catch, and was collected by the managers of the large stations still kept up by the original lessees, without the interference of government officials. This was, however, under the old regime. The system is now different, and these taxes are assessed by officials in conjunction with the village mayors. The

coast produce dues I have elsewhere referred to. It was also principally to 'Russophobia,' that the later 'colonization' scheme owed its origin, stimulated by the 'disinterested' advice of one or more foreign diplomats.

produce is herring, salmon, awabi, irico, and some seaweed.

The two islands of Yangisiri are plainly visible from Tomamai. They are moderately low. I understand that only one is permanently settled. Maski mountains to the southward are in view, and Risiri peak. I took the following bearings from Tomamai quaiho:—Extreme of Maski Headland (Cape Ofuwi), S.W. by S.  $\frac{1}{2}$  S.; Yangisiri Islands, W. by N. to N.W.; Risiri, N. by W.  $\frac{1}{2}$  W.; coast line forward south.

When I speak of having arrived at the northern limit of civilization, I mean to say that the west and north-west coast of Yezo, as far as Tomamai, in about latitude  $44^{\circ} 18'$  N., is more or less occupied by a fishing population in regular villages, a portion of which is permanent, and a part migratory. The same kind of fishing is likewise carried on, to some extent, on the south-east coast, but not nearly on such a scale. The farthest limit in that direction is Taromai, in the Yubuts district, about 60 miles north-east of Hakodate, beyond which, along the whole east, north-east, and north, and as far down the north-west coast as Tomamai, the produce has hitherto been entirely taken by the lessees; there being no private individuals doing any business in those districts.\* I imagine the reason that the tide of civilization has flowed up the west coast, rather than elsewhere, has been because of Matsumai, in former times, having been the chief place and nucleus of civilization, if it may be so called, on Yezo. The west coast is, doubtless, the most prolific in the riches of the sea. The amount of herrings alone caught in spring and early summer on that coast is something enormous, and the facility with which the produce of the fisheries can be transported to the consuming districts on the west coast of Japan proper, gives a stimulus to fishing enterprise, and provides employment for many thousands of people.

It was on the morning of October 30th, that I started from the quaiho at Tomamai to continue my journey southwards. There was a sharp frost, and the weather continued clear and nearly calm all day, while the travelling was good. The track to Rurumopi (now called Rumoi), which is a distance of 11 ri, follows the coast almost due south. Near the sea the country is covered with grass and scrub-bamboo, but the hills inland are wooded. Some creeks, and two considerable rivers, flow out on this coast. The first, about a couple of miles south of Tomamai, is crossed by a flying bridge, composed of a flat-bottomed scow, and a rope stretched across the river. In the valley, on the north bank of this river, about half a mile back from the sea, are a number of deserted buildings, formerly barracks belonging to the Prince Shonai. Ohiraspi river, a stream of considerable size, falls into the sea about 5 miles north of Rurumopi. In its valley coal has been found, of which I was shown samples. Although of bright appearance, it seems, judging from a trial of a very small piece, not to be of a very inflammable nature; besides, its distance from the sea, 10 ri ( $24\frac{1}{2}$  miles,) and the impossibility

of running boats on the river, precludes it being of any value at the present time.

A straggling settlement may be said to extend nearly all along the coast between Tomamai and Rurumopi, there being few breaks in the line of houses, huts, store-houses, and boat-sheds, which line the beach. When I passed, it not being the herring season, most of the houses were closed up. At Oniska, halfway on the road, there were two junks lying at anchor a good distance off the shore. I noticed reefs in many places at least half a mile off shore. Sandstone, conglomerate, and a kind of shale occur, and at one place there is a very peculiar cliff rising from the water's edge with the strata almost vertical.

At Tomamai I had made the acquaintance of a yakonin, who, with his wife and family, was travelling towards Soya. He had made a start some days before, but had had his wife and baggage wetted, and nearly washed away, below the cliffs north of Tomamai, which had forced him to return. He intended starting again the morning I left; but, with no such travelling encumbrances as he had, I was on horseback and away before he had gathered his impediments together. This day I also met a couple more officers travelling northwards on horseback, whom I discerned at a long distance by the rays of the sun reflected from their bright lacquered travelling hats. Several kirai, or retainers, were with them. They civilly stopped and spoke to me, asking me to inform their friends—whom I was acquainted with—at Hakodate that I had met them. On the route along the north-east coast to Soya, I had not met any travellers, as that coast is little frequented; but, being now on the direct northern road for Krafto, I frequently afterwards met persons travelling whom I found invariably civil, and glad to make my acquaintance; and although there were few among them whom I could recognise, my seven years' residence at Hakodate had been sufficient to make me known to most of them.

In approaching Rurumopi from the northward, the high mass of the Maski Mountains is seen to advantage. At the time I was there they were topped with snow. A high mountain, called 'Shakotan,' belonging to the high district lying westward of Yoichi and the bay of Iskari, was likewise distinctly visible during this day's ride, when it must have been about 70 geographical miles distant. Rurumopi is a considerable settlement, standing in a little bay open to the northwest, into which a narrow, but deep, river falls by a crooked mouth. The bearings by compass from it are:—Highest part of Maski Mountains in line with the coast, S.S.W.; Maski headland (Cape Ofui), with Shakotan in line, S.W. by W.; Yangisiri Island, N.N.W.; Risiri Island, N. by W.; North coast-line towards Oniska, N. by E.; Rurumopi river valley, S.E. The river is spanned by a strong but not very symmetrical bridge. The bay is protected to the west by a reef running off the point on that side. There is a depth of four fathoms close in shore near the mouth of the river, on the bar of which there is said to be usually eight feet during summer, and about fifteen feet inside where junks and schooners can lie in safety; but in winter the force of north-west gales and decreased

\* This was written in 1869. Since then a good many of the leased 'basha' have been broken up, and the class of smaller fishermen here referred to, have settled in many places formerly monopolized by the larger fishing masters.

current cause the bar to silt up. One good sized junk lay inside where I passed, and another was loading salt salmon outside. There are a number of houses on the right bank of the river facing the beach, and the quaisho and officials houses were on the same side, with some Ainn huts a little distance back. This place has doubtless increased considerably since then, for of late years it has been the seat of government for a district.

Obtaining horses, I rode on Sunday morning, the 31st October, along an inhabited coast between Rurumopi and Maski, a distance of a little over four ri, crossing a couple of rivers. There are two or three little bays. The beach is stony, and houses and boat-sheds line the shore, many of the inhabitants having small patches of gardens. This district was in the hands of a Matsumai house known as Date, and was likewise the government head-quarters for the whole coast from Hama-maski to Soya. The four yakonins stationed there paid me a visit, and asked my opinion on the Obiraspi coal.\*

Maski (called Ho-maski to distinguish it from Hama-maski) had at the time I visited it, a quaisho and a number of houses clustered on the west side of a small bay formed by a low point, beyond which a straggling settlement extended for some distance. It is an anchorage for junks, which lie close in shore with their hawsers carried on land, by which arrangement they get protection from the westward as far as N.N.W. There is said to be about six fathoms of water, the bottom being sand and large stones.

Inquiring about the route forwards to Hama-maski, I learnt that there was already a depth of two feet of snow on the mountain-passes, making the horse-travelling bad, and that as the distance was about 10 ri, it could not be accomplished in less than a whole day, so that to go that way would have necessitated my staying at Maski till the following morning; I preferred therefore to take a boat along the coast, as the weather was remarkably fine, and had all appearance of continuing so. By the time my midday meal was over, a small boat was ready with three men, into which my baggage, food for the men and myself, and a brazier of charcoal were put, and we pushed off from the shore, I sitting in the bottom of the boat between two of the oarsmen. After a little we were favoured by a slight breeze and set sail.

The shore for a mile or two to the westward of Maski is comparatively low, but after this the coast becomes precipitous, the mountains rising right up from the sea, with few breaks that are more than gullies, and this extends to and beyond Cape Ofui, which is the northermost point of the Maski promontory, if it can be so called. It is to escape this impassable coast that the road strikes up inland at a short distance after leaving Maski, and passing over the high mountain-land descends again to the coast a

\* It must not be imagined that I had any technical knowledge on such a subject, but I was the first foreigner who had been in this district; and, as everyone who has travelled at all in out-of-the-way places in Japan must have experienced, I found myself looked upon as an authority on such matters. Mr. Lyman who explored this region for coal subsequently, only found it in very thin veins, and speaks of it as being of an unworkable nature, not even having taken it into consideration in his account of the useful minerals in Yezo.

little north of Hama-maski. When this district was in the hands of the prince of Akita before the restoration, a house of refuge was kept up on the route, but in 1869 was untenanted. Although this is the main road, or rather only road to the north, the government then seemed very callous about such matters, and indeed they remain so to this day, having if we except the approaches to the pet capital of Sapporo, done very little towards the improvement or even maintenance of roads in Yezo. Under the new arrangement of 'ken' or prefectures, it is to be hoped the governors and local officials will recognize the importance of seeing these things better attended to.

Passing along the high rocky coast, where the mountains above the cliffs were wooded with the usual (in this latitude) mixture of firs and hardwoods, we made a general south-westerly course till sunset, when we rounded a very precipitous part where the shore turns more to the southward; and then continuing on till long after dark, we entered a little bay, and put ashore at a single house inhabited by one family. The place is called Ynwawi, is about 4 ri from Hama-maski, and is used during the herring season as a fishing-station of the lessee of the district. This is one of the few places along this rugged coast where houses could be built, and the other localities have mostly been taken possession of as fishing-stations.

In passing along near the shore we saw a few people in skiffs spearing fish and awabi with long poles, with which they can reach the bottom in five or six fathoms.

In the morning we put off again in the skiff; the sky was clouded with some showers of rain, but the day turned out fine. The coast runs S.W. by S. as far as Cape Ofui, after which it turns south. The scenery is remarkably grand. Just on the north side of the cape is a splendid lofty vertical cliff of bright red sandstone. At places there are some small cascades, and at others great clefts, caves, and detached pinnacles of those picturesque forms peculiar to conglomerate and sand-stone rocks. There are likewise some sulphur springs.

South of Cape Ofui the land falls in forming a slight bay in which Hama-maski is prettily situated about halfway between Capes Ofui and Buyimawas. There is a considerable river coming down the valley just south of the quaisho, where there was an agricultural settlement of Shonai people, which was deserted during the war which ensued on the deposition of the last Tycoon. They say that the Iskari can be reached by following up this valley. About 300 Ainnu belong to this district. I was told by the fishermen that there were plenty of cuttlefish on this coast, numbers frequently getting into the herring-nets in the spring; but little is done in catching them, as the fishermen have a superstition that people who go out for the purpose never return.

We reached Hama-maski, distant 4 ri from our previous night's sleeping-place, before noon; when, finding there were no horses to be had, and that, in fact, the land road was seldom resorted to, I was compelled to take another boat.\* This time I was

\* Mr. Lyman ('Reports and Official Letters to the Kaitakushi') describes the northern pass between Maski and Hama-maski as reaching a height of 3,800 feet above the sea, and mentions

furnished at the quai-sho with one Japanese and two Ainu, and resumed my journey immediately after dinner. The yakonin stationed at this place paid me a visit. A sandy beach runs some distance south of the quai-sho, where there are some fishing-stations; then the shore becomes bold and rocky, and about Cape Buyimawas lofty and precipitous, with some remarkably fine cliff scenery. Rounding the Cape the coast continues high and rocky, trending about south-east. We sailed a part of the way, passing some small fishing-stations, and at night came to a halt at a little cove at the mouth of a small valley running up between the high mountains north-eastward, with a mountain stream in it. The place is called Gokibiru, and is the division between Hama-maski and Achtabashos. It is called 4 ri from the former quai-sho, and an equal distance from Oshirokotsz by water, and 5 ri by land, but the mountain-path for the first 3 ri is said to be very rough. There are but a couple of houses at Gokibiru, one on either side of the little stream, kept only for the accommodation of government travellers. We put up at that on the north-west side, as it belonged to the Hama-maski district, but travellers going northwards would be accommodated at the other. The people were remarkably civil. I saw some fine potatoes, squashes, and daikun, which had been grown on the place, and I was assured most vegetables did very well in any favoured situations on this coast. I have heard that the Shonai settlers at Hama-maski managed to raise rice, which, however, must be a very precarious crop so far north.

In the morning I proceeded for about 3 ri in the boat along the coast, which for the first part was high and precipitous, but farther on the mountains became lower and their slope less steep. We then put ashore at a small river, where there is a settlement, and a considerable valley running inland, which seemed a very favoured locality. At a little distance up, the river is spanned by a well-made bridge in one arch. The shoreline thence curves round more to the southward, with a table-land abutting on it in clay and shale cliffs. I walked about a ri along the beach, the two Ainu carrying my baggage and reached the 'injoya' (head station of a district, almost synonymous with 'quai-sho'), called Oshirokotsz, soon after noon, where I took dinner, and ordered horses to take me on to Iskari.

After dinner a couple of horses and a guide were ready, and I started to complete the 4 remaining ri to Iskari. For some distance we travelled along a deep sand-beach under high banks, till, coming to a valley, we crossed two small streams by bridges; thence followed the track which ascends grass-covered highlands, and runs along the edge of the cliff, till it descends in a zig-zag to the shore again. From these heights one gets, in coming from the northward, the first

view of the extensive level wooded valley of the Iskari, stretching for many miles without a break as far as a fine range of mountains which forms its southern limit, while a long straight line of low sand-beach bounds it on the west,—a break in which shows the mouth of the Iskari river. To the eastward some very distant hills are visible, but looking south-east no termination to the valley can be seen, as in that direction nearly flat land extends between Iskari Bay and the Pacific, the mountainous island of Yezo being at this point almost cut through by this stretch of low country. The extent of this flat is some 40 geographical miles by a width of from 15 to 20.

There is a small river falling into the sea just where the last northern highland abuts on the valley of the Iskari, and thence a straight sand-beach of about 4 or 5 miles takes you to the mouth of the river. The land in from the immediate shore is wooded with scrub oak, but the timber becomes large farther back. We came to the ferry over the river about a quarter of a mile above the sea, near the government establishment. I recognised an officer whom I had been acquainted with at Hakodate, who invited me into his house and sent my baggage to the 'honjin,' or government hotel. It was late when I left him, crossed the river, and reached my quarters for the night.

The mouth of the Iskari, having a northerly opening, is somewhat askew with the shore of the bay, which is in a line north-east and south-west. The next reach of the river runs parallel with the coast, and the town is situated on its left or western bank between it and the sea, leaving an unoccupied flat sand point strewn with drift-timber immediately at its mouth. The deep channel follows the bank along the town, where junks moor five abreast, with gangway planks laid ashore from the inside ones. Above the town the river bends, and a long reach comes from the south-east. Its width opposite the town is about 300 yards with a sluggish current. The bar is a little outside the mouth, the channel over which is said to be rather crooked and variable, while the depth of water likewise varies according to the season from 7 to 12 feet. When I was there late in autumn there was between 9 and 10 feet, allowing of the passage of the largest junks which trade to Yezo; but later in the season the prevalence of north-westerly gales and reduced current of the river cause the bar to silt up, it remaining shallow all winter till it clears again with the spring floods caused by the melting of the snow in the interior in April.

At the time of which I speak there were some large houses and substantial godowns at Iskari, but a great part of the place was made up of temporary buildings occupied only during the salmon season, when, besides the people actually engaged in fishing, a number of small traders and others resort thither, which, together with the presence of the junks—there were 57 sail in the river when I was there—give the place during that time quite a busy appearance. The resident population in 1869, according to the government records, was 350 Japanese and 430 Ainu, but in autumn the former was raised to 800, besides the crews of the junks amounting to some 600 more men. Owing to the proximity of Sapporo, and other settle-

---

the southern or Gokibiru section, as passing over heights of from 1,300 to 1,700, but has omitted apparently the extreme altitude. He states that Matsura, the map maker of Yezo in former days, crossed the country from Maski to the Uriu branch of the Iskari. Doubtless as the valley of the Iskari becomes opened up by roads or railways, a practicable route will be discovered in this direction to connect with the north-west coast in order to avoid the Maski mountain mass, which offers such a serious obstacle to a route near the coast.

ments established under the late Kaitakushi regime, there has been considerable addition to the town of Iskari, but still, being mostly dependent for its importance on the salmon fishing, it retains much of its former character.

## XIX.

## CAPE SOYA TO THE ISKARI.

In describing both the north-east and north-west coasts of Yezo in the foregoing and present chapters, I have deviated from the plan I sketched out when I commenced to throw together my scattered notes, by following a personal narrative I wrote some years ago and which was published in the 'Journal of the Royal Geographical Society of London.' By reaching at this stage of the journey there narrated the mouth of the Iskari river, I have come on ground which has since been trodden by many travellers, and has been of late years thoroughly explored and mapped by government employees. I shall therefore here break off by omitting that part of the rest of the journey which took me to Otaru and Iwanai, the visit to the Kaiyama coal mines then only just opened, my return over the mountain road to Yoichi, and by Otaru to Iskari; but will take it up again so far as relates to the ascent of the river by canoe, because, owing to quicker if not pleasanter means of travelling now afforded, the route I followed—the only one by which the south coast could then be reached—has fallen into disuse. When I say the only route I am not strictly correct, because there was a very inferior trail, seldom used, which leaving the sea coast at Zenibako about midway between Iskari and Otaru skirted the range of mountains forming the western boundary of the lower Iskari valley, and passing through the oak openings near the present site of Sapporo—then known by the Ainu name of 'Satsporo'—crossed the Toyohira river, and then traversed the rolling wooded region to Chitose. If I remember rightly the distance was reckoned at fifteen to seventeen ri; and was considered, even by the Yezo-Japanese estimate of quality which makes great allowance on the favourable side, very bad—of course when the rivers were high it was impassable.

A little before noon on the 19th November I stepped into a canoe which lay ready alongside the bank of the river at Iskari. It was manned by three Ainu, and a young Japanese was in charge of the provisions, &c. Having taken off my boots I made myself snug in the bottom of the canoe, which was laid with clean mats, using my blankets for a covering, and the baggage piled behind supported my back. There was a small brazier containing a charcoal fire, which Japanese carry with them on all occasions when possible, more for lighting their pipes from than for anything else, although they have usually a small tea-pot with it. The Japanese laid himself down in the bottom of the boat covered with his spare clothes and sleeping-quilts, and as the weather was cold, with more or less snow, he seldom showed himself after we first started.

This canoe was the ordinary style of 'dug-out' used by the Iskari river Ainu. It was about thirty-five feet long, by a breadth of

two feet nine inches, shaped from an elm tree and hollowed out tolerably thin. Both bow and stern overhung slightly, and the depth was sufficient to admit of considerable carrying capacity. Each Ainu handled a narrow bladed paddle about six feet long—some are much longer—with which, standing up to their work, they poled the canoe along in shoal water near the bank, or paddled when the bottom could not be reached. In this way we made fair progress, crossing and recrossing the river, so as to keep the convex banks and round the points where the water was shallow and the current least rapid.

There were numbers of temporary fishing stations along the river bank, at some of which Ainu were at work superintended by Japanese, and others where all hands were Japanese. They were all busily employed hauling seines for salmon. The stations were mostly rough sheds covered and closed in with thatch made of swamp grass or scrub-bamboo. As we were passing one of these places where a number of Ainu were hauling a salmon-net, a young fellow waded out in the water and threw a salmon into our canoe. Asking the reason of this, I was told that he knew me in Hakodate; and regarding him more particularly, I recognised him as one of seven Ainu whom I had prevailed upon to come to my house, where they were photographed by Mr. Sutton, chief engineer of H.M.S. *Serpent*, a very excellent photographer, in July 1867. Curiously enough, that same evening an old Ainu, who had been another of the number, brought me a present of some fresh venison and a couple of salmon. I learnt that he was chief of the Satsporo Ainu, about 500 in number. The Japanese who accompanied me had brought some saki on his own account, for trading with on the river, and I therefore got him to serve out a liberal allowance, which I presented to the old man, "with a short speech." He went through the usual form of throwing a few drops to the four winds, presented me and the Japanese in charge of the station with some in a formal manner, and then retired.

The salmon fishery, which is the great resource of Iskari, is carried on both inside and outside the river by seine-nets, which system is pursued at various stations up the river for a distance of 15 to 20 miles, portions of which are let out to about 30 fishing-masters, while the government retains for its own use certain parts where they employ Ainu under superintendence by Japanese. The average catch of salmon on the Iskari (exclusive of the fish taken near its sources) is 20,000 koku or 1,200,000 fish, equivalent to 50,000 piculs or 3,000 tons, but in some seasons considerably above this. The best fishing is about the mouth of the river, where 2,000 fish are frequently taken at one haul, and outside in the sea sometimes it is said as many as 16,000 are taken at once. The season of 1869 was a very indifferent one, so that the junks, representing about 30,000 koku, would probably be not above half loaded. The fish are mostly neither clean nor silvery, but much discoloured, especially those caught up the river; they are, however, considered by the Japanese sweeter eating than the red-fleshed clean-run fish, but do not keep so well. By the junks they

are carried to various ports on the west coast of Japan, few coming into the Hakodate market, as that place is supplied mostly from the east coast. The greatest obstacle to the salmon fishing on the Iskari are the numerous 'snags' and driftwood in the river, which greatly interfere with hauling the nets.

The boats used in the salmon fishery are large 'sampa' for running the nets, and small 'chip' (skiffs) or 'kawafune' (canoes) for other purposes. A 'sampa,' which is the usual form of large fishing-boat used round the whole coast of Yezo, and, I believe, not found in the south of Japan at all, is about 50 feet in length by a breadth of 10 feet. Built with very great shear, high prow, and curved stem, they are good to ride in a sea, and easily hauled out stern foremost on the beach. Each boat carries a crew of about 20 men, 16 of whom ply short oars in the fore part; the skipper stands on a raised platform at the stern, guiding the boat with a large steering-oar, two or three others attend to paying out the net, which is carried amidship. When on the look-out for fish, as for shoals of herring, one man stands right in the bow, leaning on the high prow, which is probably designed for that purpose. One hundred and fifty piculs (8 to 10 tons) is a fair load for one of these boats when carrying cargo. Japanese fishermen every year make long voyages in these large boats, going to and returning from the more distant fishing-districts, when they are built up with weather-boards, bamboo, and matting, and carry a mast and sail. They have also on board rollers, small capstans and gear for hauling out on the beach, which they are frequently forced to do when caught by bad weather on a coast where there is no shelter. These 'sampa' are certainly well adapted for the use they are put to.

The country on either bank of the river was a dead level thickly wooded with large elm and other trees, with a dense underbrush of scrub-bamboo, and willows on the lowest points. The soil was entirely alluvial mud without a trace of gravel, sand or stones. The concave banks kept vertical by the wash of the river were at that season from eight to ten feet above the level of the water, and apparently constantly crumbling away, while the opposite sides or points were low and shelving. We made one cut off a few miles above Iskari by passing through a creek not above twenty-five feet wide, which saved us rounding a long bend. When ashore for dinner at one of the temporary fishing stations I could see that a short distance back from the immediate river bank there was an immense extent of low swampy land, and where any timber that existed was only alder and other inferior kinds; and it was evident that a considerable distance on either side must be under water every year during the spring freshets.

Having started so late in the forenoon from Iskari, we were able to make but 4 ri before evening, when we put ashore at a small station on the left bank, between the mouths of two tributary streams, known as the Hasabu and Satsporo. This place is known as Satsporo Buto, and the only dwellings were Ainu huts, one of which was occupied by a couple of Japanese, who had charge of the fishing carried on by the Ainu.

During the night there came on a heavy gale from N. and N.N.W., with strong frost, and the wind kept up all the day following, with a great fall of snow, not by any means pleasant for boat travelling, which together with the effects of the saki of the previous evening gave me some trouble to muster our party for a start. When I had done so I found that by order of the Japanese the Ainu had extemporized a framework on the canoe and covered it with mat to keep off the snow. This I at once objected to, as I did not consider the canoe safe with so much 'top-hamper,' so I had it removed much to the disgust of my Japanese travelling companion. When we made a start therefore he settled himself in the bottom of the canoe completely covered with his sleeping quilts, and remained in that way again invisible for the greater part of the day.

The wind being favourable, in many of the reaches as we ascended the river, the Ainu extemporized a sail out of a grass mat tied to a stick supported by one of the paddles held up by one of them, under which the canoe flew along at a rapid rate. In bends of the river when the wind was 'scant' the Ainu paddled or poled. The country on both sides continued of the same nature as the day previous, with banks of deep alluvial soil, and the same kind of forest, but these were fewer fishing stations. Our day's work was only as far as Tszi-iskari a distance of six ri, at about two-thirds of which distance the Tobets river falls in on the right bank.

As Tszi-iskari is approached, the country bordering the river is in some places higher than on its lower course, and there appear to be considerable tracts of grass-covered land clear of forest. Some portions, too, have been overrun by fire, and the station itself I learnt had been burnt down only a year previous by a fire from the woods. This place is situated on the left bank of the main river, about 15 feet above the water at that season, close below the mouth of a tributary stream which comes from the south-westward, which is the Toyohira on which is situated the present town of Sapporo, a place already then projected in the fertile official brain as the capital of Yezo, a distinguished position it subsequently held during the term of the Kaitakushi local government; and on the creation and bolstering up of which the central government was persuaded to lavish so many millions.

We put up for the night at Tszi-iskari, which is 25 miles from the sea, and early in the morning I roused all hands, so that we might get away betimes, having 10 ri to do this day. There were some heavy snow squalls in the morning, but the day turned out sunshiny and warm, and the evening clear and frosty. A short distance above Tszi-iskari I observed a few small stones on the bank, the first I had seen on the river, but after this no more the whole day.

After proceeding a couple of miles up the main Iskari we turned off at right angles into the Ebets or Chitose river, as we entered which some Ainu belonging to another canoe, which was keeping company with us, and our own men got out on the bank, out some sticks, which they stuck up on an open space, and getting some saki from the Japanese, went through a ceremonial, as a propitiation for good luck on the voyage.



This branch which we now ascended—which the present railway to the Poronai coal mines crosses just above its mouth—is very tortuous and its current runs more swiftly than that of the main river. It comes from the south, and with its tributaries of which the principal is the Yobari which rises among some mountains bearing the same name lying to the south-eastward, drains a large extent of country, besides carrying off the surplus water from the Chitose lake which lies imbedded in a mountainous region at the foot of the rugged volcanic peak of Iniwa, one of the principal land marks of this part of the country.

We saw numerous deer tracks on the muddy banks, and several places where they appeared to have crossed the river in large droves. At a small Ainu settlement when we stopped for dinner, we purchased some venison from a couple of Ainu who had a canoe completely full. These people had also a quantity of walnuts of small size which they said were common throughout the valley of the Iskari. Here we also met some Japanese who were going into the woods to cut soft-wood logs. They said there were extensive forest of 'todo' spruce, about five miles back from the river, which they intended to float down by one of the tributary streams.

We added another to our crew this day. He was an Ainu whom we met descending the river by himself in a small canoe, who hauled his craft out on the bank and came with us. He was a fine, tall, well-made man, and seemed a very good hand with the paddle, taking his station in the bow.

Soon after starting again we came to another fork of the river, and took the southern branch. The eastern one—the Yubari—comes out of a lake of considerable size near at hand. Both streams were of nearly equal size, about from 20 to 30 yards across, and apparently deep. Shortly after this we reached a few Ainu huts, and a deserted and dilapidated wooden house on the left bank, opposite where the Shimamap river, an insignificant stream, falls in on the other hand. This is considered half way between the stations of Tsziskari and Izaributo. The river is nowhere shallow, running between steep alluvial banks, the only impediments being sunken trees or snags.

Having made up their minds under promise of saki to reach Izaributo that evening, our Ainu worked with a will. They had a good day's labour, for we had to go on at least two hours after sunset before we reached the station, a good ten ri from our last night's sleeping place, which was not bad work considering the strength of the current.

Izaributo was at that time a large well-found station with a number of store houses and Ainu huts around. It was maintained for the sake of the salmon fishery, and for collecting deer horns and skins from the Ainu, and belonged to the Yubuts south coast district. Since salmon fishing on the upper waters of rivers has been wisely prohibited by the government, and the deer have almost deserted this part of the country, I understand the place has been abandoned.

The morning of November 22 was fine, clear, and frosty, and the snow crackled under my feet as I walked down to the river to the canoe. We followed the river up to

a lake. All the smaller creeks and little bays were completely frozen over. Around the lake is a low and swampy country; the only rise at all being a distant low range of wooded hills seen to the north-east, having apparently a north-west and south-east line.

On this route you do not pass through the body of the lake; but, leaving it on the left-hand, enter one of several very shallow mouths of the clear water Chitose-kawa, which it is difficult even to get a canoe into. The land on either side and between the different small channels is almost on a level with the water, and has the same slope, which is considerable, for the current is rapid, washing down a quantity of pumice and volcanic cinder which accumulates at the embouchure. After a little distance up, however, these various channels unite in one, about fifteen yards wide with a shingle bottom, after which you have only to contend with the strength of the current, which, however, is so rapid that in a few places where the water is too deep to allow of using the paddles as poles, it was as much as our Ainu could do to make any way. The distance from Izaributo to the lake is called 3 ri, and thence up the Chitose-kawa to the quaisho which takes its name from the river, 2 more.

As our Ainu were resting for a few minutes on the bank of the river another canoe passed us, and went ahead. By the time we came up to them again they had got a stag, which they had taken in the river, where it had been driven by some Ainu dogs and was kept at bay. After proceeding a little farther up we caught sight of five more deer in the river, and therefore ran the canoe alongside the bank; but having my boots off, I was unable to get ashore quickly enough and go along the bank to get a fair shot at them, so I contented myself with a chance one at long range from the canoe; but they went off apparently untouched.

The water of the Chitose-kawa is beautifully clear, and in great contrast to the Iskari and many of its tributaries. The quaisho is situated on its right bank, and there is a good bridge over the river. It was at the time of which I speak a large well-found station, kept up for the same reason as that at Izaributo, on account of the inland salmon fishery; and also as a station at the head of the navigation—for canoes—of this branch of the Iskari, to connect with the head station at Yubuts on the Pacific coast. Thence a connection was kept up overland, in which bullocks were used as transport animals, for about five miles to Bibi at the head of the Yubuts river. Salt for salmon curing and all supplies come across that way, and fish were sent in return. I saw a whole string of cattle so loaded on my first visit. All this has now passed away, and the fine old quaisho is turned into a post house, and hotel combined, on the main road between Sapporo and Tomakomai, where you have to fight an uncivil postmaster, and put up with any accommodation and food the people choose to give you, instead of being treated in almost a princely manner, which was the rule at all the quaisho in old times.

I intended to have stayed for a day or so at this place for deer shooting, but the man in charge of the station assured me that there were too many Ainu and dogs about the quaisho, so that I had better go on about

3 ri on the road to Yubuts, where there was a charcoal-making establishment that I could put up at for the night, if I wanted to have any sport. I therefore started with an Ainu guide and two horses. We travelled along a broad road over a dry level country, covered with small oak and birch scrub, with an entire absence of underbrush. The snow was hard and crisp, and as I found riding rather cold work I dismounted, and went ahead on foot, allowing an Ainu girl, who was going the same way as ourselves, to ride on top of my baggage. There had evidently been some labour expended on this road, it being in some places carried on level causeways over small hollows. After some distance we entered a forest of thick hardwoods, skirting the left side of a deep valley, where one of the sources of the Yubuts takes its rise, and soon came in sight of deer. As one troop crossed the road in front of us, a fine stag stopped and looked at me, some 70 yards distance. My shot-gun was loaded with ball; I hit him full in the forehead, and he dropped like a stone. The Ainu, the girl, and I, set to work at once, skinned and cut up the deer. Another old 'menoko' (Ainu woman) came up and got what meat we did not care to carry away, and it was dark before we had it packed on the horse and started on. The road then descended into the valley of the Yubuts, at the head of the navigation (for boats) where there is a wooden store-house standing. A little further on we came to the charcoal station called Uvinai, 3 ri from Chitose where I found one Japanese and a couple of Ainu. The place was maintained only for the purpose of supplying the head station of Yubuts with charcoal, the absence of suitable timber on the swampy country there not permitting of its manufacture. There were no mats in the house, so after a good supper of venison steaks I picked out the softest part of the board floor for a bed.

In the morning taking the Ainu as guide and a single horse—one having strayed away during the night—I set out with the intention of deer shooting. I had little hopes, however, for there was clear bright sunshine, and a dead calm, and everything was crisp with frost. We struck back through thick woods till we reached sparsely oak-wooded undulating ground. We saw numerous herds of deer, but any attempt to approach them in such weather was useless. I cannot say they were shy, for they allowed us to approach within two or three hundred yards; but as I had but a fowling-piece I could not pretend to do anything at such a range. They were generally in parties of from three to a dozen or more, and looked beautiful in the bright sunlight against the white background of snow. When alarmed they utter a soft whistle and then start, but the Ainu can imitate the call note pretty fairly, which often causes them to stop and listen before going off altogether, which gives opportunity for a shot. For regular 'calling,' the Ainu have a small instrument with teeth like a comb made of bone and bamboo, by drawing which across the lips when blowing they imitate the call note very perfectly, and attract the deer within range of their bow and arrow. Having gone over a good deal of ground uselessly we returned to the house. The number of deer which used to inhabit

this section of the country during autumn and winter must have been enormous. They were said to come from the mountainous country to the eastward and northward, and from the lower Iskari valley, probably to reach a district where the cold north-west winter winds are not so severely felt. Some years ago the government established a cannery for venison at Bibi, where, on the main road from Sapporo, you now descend from the uplands to the low lying flat thence extending to Yubuts and Tomakomai on the coast; but owing to the settlement which has grown up there, the traffic on the road, or from some other cause, deer are now seldom found in this part of the country, and the establishment remains only as a monument to one of the ill fated experiments of the late colonization department.

After noon I started for the coast. Passing along the wooded valley of the river, at about a ri I came to where the road forks. That to the left passes along the edge of the high land, and the other over swampy ground on the margin of a lake. The ground being hard frozen, I took the latter, and saw numbers of swans which always congregate here during the late part of the season. Although for the greater part swampy, the soil is largely composed of volcanic ash, which on the southern border of the lake is thrown up into small ridges and hummocks, and is scantily wooded with small birch and alder. The outlet of the lake is a deep weedy stream with moderate current which meanders through the great swamp towards the sea, which it enters at Yubuts station. The road crosses it by a substantial bridge, and thence after passing through some woods, strikes across the swamp to Yubuts.

The buildings of Yubuts quai-sho and its high outlook are visible a long distance before you reach them across a wide extent of meadow, which stretches from the sea inland. The quai-sho stands near the seashore where the river, taking a turn, runs for some distance parallel with the beach, before emptying into the sea by a narrow mouth. The mountains north-east of Hakodate are visible on a south-west bearing, and the peak of Komagatake can be seen a little more to the westward. On the other side land can be distinguished as far as south-east, and distant mountains lie to the east and north-east.

In 1869, Yubuts was the chief station of the district, embracing Saru to the eastward and Tarumai to the west, and extending inland to the stations on the upper waters of the Iskari. The principal produce is salmon, iwashi, guano and oil, deer-skins and horns.

The distance between Yubuts on the south-east coast of Yezo, and Iskari on the north-west, by the land and water route, is in all 32 ri.

By reaching Yubuts I completed 300 ri of my journey in Yezo, and just six weeks had elapsed since I landed at the eastern end of the island.

## XX.

### THE NORTH SHORE OF VOLCANO BAY.

The traveller who would make the circuit of Yezo entirely by land, must necessarily follow the coastline of that indentation in the south-west portion of the island known

as Volcano Bay. He does so, partly probably, when making excursions of a few days from Hakodate to and beyond the hot springs of Kakumi and Obune, or visiting Komagatake and the lakes, and will skirt its shore for about forty miles after reaching Mori on the main northern road as far as Oshamambe\* where he leaves it to cross over to the west coast; besides he crosses it between Mori and Mororan on the most direct route to Sapporo.† But the north-eastern part of it is quite out of the ordinary lines of travel now-a-days, though in former times before the use of steam on its waters, people on business who could not brook the delay in waiting for a favourable wind to cross by junk frequently went round by land notwithstanding the bad name which the trail so deservedly held. It was left, however, for a traveller in modern times to attempt by a little fine writing to carry us by this route to heaven. (See Miss Bird's "Paradise" in *Unbeaten Tracks in Japan*.) When I first travelled round there I was not bound in that direction, nor did I even see the gates, but I experienced much discomfort—it was at the end of November—on one of the roughest and most abominable roads in Yezo. I have since gone over the same ground, in better weather, and at a more favourable season, still without being I believe any nearer the kingdom of heaven; indeed, if I am to believe all I hear about myself, probably a great deal farther off.

On the highway from Sapporo towards Shin-mororan, or Tokarimoi—whence the steamer runs across the bay to Mori—there is a finger post if I may so call it—though it has neither finger nor pointer—standing alongside the road between Horobets and Washibets, directing the traveller for Kiu-mororan where to turn off to his right, though the telegraph line runs on to beyond Washibets before diverging from the main road to take its course round Volcano Bay. There is first a piece of swamp to be crossed, in which there are sometimes some bad mud-holes, after which the track passes over a succession of oak covered hills and ridges, with narrow intervening valleys, the steep sides of which are rather hard for the horses. You obtain some pretty peeps of the lake like harbours of Edomo, with its broken and wooded shore, as you pass over the heights. After this the road reaches the beach, where are a few houses and an earthen redoubt, with some cedar-trees planted round it, that in former times was garrisoned by a few troops of the Prince of Nambu. Then, following the stony shore about west, and crossing some more hills, you come suddenly above a little bay, with two valleys running down to it, on the shore of which is situated the old village of Mororan, which since the building of the Sapporo road is called Kiu-mororan to distinguish it from its new rival on the peninsula. Formerly the passage boats crossed the bay from this place to Sawara at the foot of Komagatake, whence the land road was taken to Hakodate without going to Mori. Mori was however wisely adopted, under advice, as being a much more

suitable place for a wharf, and less exposed to westerly winds, so that the terminus of the southern section of the road was made then.

Kiu-mororan is reckoned at five ri from Horobets. Besides the few Japanese houses remaining there now, there is a small settlement of Ainu. From the high land above the place you gain an extensive view of Volcano Bay and the mountains round it, including the volcanoes of Komagatake on the south and Usu-no-yama on its north-eastern side, while you look right down on the harbour of Edomo with the rocky island of Daikoku-shima commanding its entrance.

The hills above Kiu-mororan and those passed after leaving that place are covered with low scrub-oak. Here the coast line turns abruptly to the N.N.W., on which bearing you have ahead of you Usu volcano, of the jagged peaks and steep slopes of which a good view is obtained all along the road. This mountain stands only 2 or 3 miles from the shore of the bay. It has two peaks and a smaller pinnacle. Both peaks are on fire, and much steam escapes from them. Below them is a sharp ridge, having a direction about east and west quite horizontal; thence the mountain slopes down on all sides that are visible. At the time I saw it first, its upper slopes were streaked with up and down lines of snow—probably filling the gullies—which gave the mountain a zebra-like appearance.

A deep valley cuts into the island on the south-east side of this volcano, down which flows the Osarubets river. On the east side of this river, but at some distance back, is a high range of mountains, whose lower slopes are prettily dotted with oak-trees, and near the sea is a high terrace. Several streams come down from these mountains, some of them coloured with sulphur. The valley of the Osarubets near the sea is of considerable width, and the stream contains a large volume of very coloured water through its impregnation with sulphur or other mineral matter; at the same time bringing down much light coloured sand from the volcanic region in the interior, which it distributes over a wide bed, subject to much variation in form, owing to extraordinary freshets of not unfrequent occurrence. The valley and immediate slopes and terraces on its eastern side are but partially wooded with scattered oaks. I was much taken with the appearance of this place when I first saw it, then inhabited only by a few Ainu who devoted themselves more to cultivating the soil than any I had previously met with. Now there is a thriving Japanese settlement here called Mombets, but which to distinguish it from half a dozen or more places of similar name is more particularly designated as Usu-mombets. This settlement is not actually a government one, although it has to a certain extent received some assistance. It was established by Date Tokoro, a former sub-daimio of Sendai with revenue rated at thirty thousand koku. It is certainly the largest, and apparently the most thriving of the modern agricultural settlements outside of Sapporo, and the people are said to be able to live comfortably on the produce of their land, the bulk of which seems to be the ordinary small round bean called 'mame,' although the crops of late years have suffered considerable damage

\* See Chap. XV. 'To Otaru via Iwanai' *Japan Gazette* 14 April 1883.

† See Chap. XVI. 'The Mororan route to Sapporo' *Japan Gazette* 21 April 1883.

from the attacks of a grub, which I was informed by a gentleman who was sent to inspect this place, is probably due to cultivating the same land each year without any system of crop rotation. The cultivation of beet for sugar has been tried here, and some rather extensive machinery erected, but I understand it is a failure. The Japanese seem to think—or rather they oftener than otherwise act as if they did—that when they get to a virgin soil such as they find in Yezo, they can go on cropping and cropping for years in succession with scarcely any manure, and not a few foreigners seem to have the same idea regarding the capability of the soil on this island generally, and unfortunately they have been inclined to disseminate such erroneous views. Notably we find the author of *Unbeaten Tracks*,—and I regret having to find fault with so pleasant a writer—speaking of the soil of Yezo being “fitted to produce crops as in America, for ‘twenty years without manuring.’” Where she picked up this inaccurate information I am unable to discover.

Neither do I find Miss Bird more correct in some of her botanical statements. Mr. Charles Maries, on whom she drew mostly for such information, certainly never identified either the *keyaki* or *icho* in Yezo; but the scientific name of the latter being a fine high-drawn one looks well in print, so on the route on which we have now entered she has given us, “trees of immense height and girth, especially the beautiful *Salisburia adiantifolia* with its small fan-shaped leaves, all matted together by riotous ‘lianas;’” and within the next few pages again draws special attention to it by saying:—“I came upon a grand specimen of ‘the *Salisburia adiantifolia*, which, at a height of three feet from the ground, divides into eight lofty stems, none of them less than 2 feet 5 inches in diameter. This tree, which grows rapidly, is so well adapted to our climate, that I wonder it has not been introduced on a large scale, as it may be seen by everybody in Kew gardens.” Miss Bird was evidently out of her botanical longitude. Doubtless the tree here specified—and as to the form of which she is right—was a very common one in Yezo, known as ‘katsura;’ introduced years ago into the United States by Mr. Louis Boehmer, and given by him (‘Reports and Official Letters to the Kaitakushi’) as *Cercidiphyllum Japonicum*.

There is likewise another tree mentioned in *Unbeaten Tracks* as *Ailanthus glandulosus*, and so specially that I am under the impression that the common broad-leafed oak of Yezo was intended to be particularized. Indeed there can I think be no doubt about it, because, after crossing Mukawa river on the south-east coast the author speaks of travelling “through woods composed entirely of” it; and that in the valley of the Saru “the forest trees are almost solely the *Ailanthus glandulosus* and the *Zelkova keyaki*.” The first locality is a strip of terrace land where the oak is specially prevalent, and in the latter the common elm abounds, a tree which no person having the slightest acquaintance with botany, could mistake for the ‘Keyaki’ of the south, which does not exist on Yezo. We are also particularly informed that in the first case the leaves

were observed to be “much riddled by the ‘mountain silk-worm.’” Now under the heading *Ailanthus*, I find in the *Treasury of Botany*, that the leaves “are the favourite food of the silk moth.” The coincidence on these two passages is striking. Mr. Edwin Dun on the other hand—and his acquaintance with the country makes the information indisputable—informs me, that it is a grub of an entirely different kind which mostly attacks the oak leaves, the ‘Yamamai’ being by no means common. Here, however, as elsewhere in *Unbeaten Tracks*, there seems to be an unnecessary parade of latin names, or else why should we find the ordinary bracken-fern given as *Pteris Aquilina*, and an array of others such as *Stephanandra flexuosa*, *Calystegia soldanella*, et cætera, which no ordinary reader could make head or tail of without reference to a botanical dictionary.

Miss Bird in her preface said:—“In northern Japan, in the absence of all other source of information, I had to learn everything from the people themselves, through an interpreter, and every fact had to be disinterred by careful labour from amidst a mass of rubbish.” The italics are mine, which I have used because the parallel passages already referred to, (see Chap. XVI. *Japan Gazette* 21 April 1883) in Captain (now Major) Bridgford’s *Journey in Yezo* (‘Trans. As. Soc. Japan’ 1873-4), and the *Kaitakushi Reports and Official Letters*, are evidence to the contrary. Still I should have been inclined to pass over this, had a little good taste avoided the following regarding Hakodate:—“The foreigners, all told, number thirty-seven. There is little social intercourse, owing to antagonism in morals and manners;” to which slur this gifted authoress hands us the key herself, where she says:—“Mr. \_\_\_\_\_” (I omit the names though given in full by Miss Bird) “has a singular aptitude for languages, and has acquired not only a wonderful command of the colloquial Japanese spoken by the lower classes, but, what is even more, the tones in which they speak”—[vide page 13. “Mr. \_\_\_\_\_ at whose house I am staying”]. “The \_\_\_\_\_ Consul Mr. \_\_\_\_\_, has been here for nine years, and the cordial and graceful hospitalities shown by Mrs. \_\_\_\_\_ to foreigners, without distinction of nation \* \* \* yesterday I dined at the consulate.” The sources of Miss Bird’s information here at any rate are distinctly evident.

It is not within my province to refer to Japan generally, I write on Yezo and confine myself to it; but a careful reader cannot fail to notice in other portions of *Unbeaten Tracks* the amount of ‘cabbage’ from Griffis and others; besides the perpetuation of such errors as that which Sherard Osborn in his ‘cruise in Japan waters’ originated about the sails of junks being reduced in a strong breeze by cloths unlaced from the sides, instead of reefing at the foot. A legitimate use of nautical terms moreover, would have avoided the expression of “jettisoned,” when speaking of the shifting of the cargo in the hold of a steamer; a parallel case to which occurred only last year in the ‘Chrysanthemum’ where we were told of the situation of Poronai as being “E. by N.E. from Saporo.”

To have done with such writers as these I will give an extract from an article which appeared in the *Japan Gazette* of the 5th of August 1882, entitled *Some Recent Literature on Japan*.

"If every person who has written on Japan had confined himself or herself just to a record of personal experience and impressions, without drawing upon information supplied by others, or attempting to generalize, or turn and twist facts to suit his or her preconceived theories or fancy, we might by this time have been in possession of an amount of really valuable matter, which, after arrangement and classification, would have allowed us to see at a glance the blanks requiring to be filled, and have afforded the more scientific investigator a means of judging on what special lines to prosecute his researches with the best chance of arriving at definite conclusions; while our knowledge of the physical nature of the country, its productions, its institutions, and its people, their nature and aspirations, would have been far in advance of what it is at the present day. For, not is it only the erroneous statements—often based on information at second hand—that are to be found in every book on Japan, that do harm in their single instances, but these have in very many cases been duplicated by an amount of plagiarism lamentably abundant, and which authors seem to have been under the impression it was necessary to have recourse to in order—as it seems to have been each one's ambition—to 'complete' a work on Japan. Thus the unconscientious inquirer believing he finds corroborations, allows a preponderance of weight often to statements which in reality have emanated from but a single source, and in many instances have been but the outcome of most cursory investigation undeserving the appellation of research, and not unfrequently simply the creations of fertile imagination.

"That we have to deplore this state of things as to the literature of the outside world concerning Japan, I feel sure no foreign residents of any standing in the country will deny. Indeed it is commonly remarked by them in conversation regarding any new book with such high sounding title as, 'The Islands of the Rising Sun,'—'Untrodden Paths in Japan,'—'The Land of Sunrise,'—'The Japanese at Home,'—'The Island Empire,' &c.' 'That's all very well for people to read who have never been in the country,' or—'extracts from missionary and consular reports, personal experience at tea-houses, sketches through windows of hathing establishments, interlaid with a good deal of sentimental bosh and inaccurate information at second hand, and illustrated from photographs out of the Yokohama studios.' Such verdicts are commonly given—and usually they are correct—by those who have resided sufficiently long in the country to have got over the first 'Japan fever,' and who, reasoning from a fair amount of personal experience and accurate information, are enabled to form just opinions unbiassed by false sentiment.

"It is to such persons,—and they are represented by the bulk of foreigners in Japan,—that any one might feel perfectly safe in leaving a legacy in the form of a book relating his actual experience, for it would

be appreciated; while he would do a world of good by exposing fallacies in the production of those ephemeral visitors who have done so much towards confusing our knowledge of Japan and its people, both ancient and modern; and besides would, by his example it is to be hoped, enunciate a new departure in the foreign literature concerning this interesting country."

It will be remarked, no doubt, that throughout these notes I have made hardly any allusions to foreigners in Yezo. The reason is that their number has always been so limited that foreign influence has been inappreciable. With the exception of a few in the employ of the government at various times, the residents have been confined to the treaty-port of Hakodate, where formerly while the iniquitous 'ichibu' exchange existed, the flags of several nationalities were represented by, in several cases, men of very questionable character. Indeed, with the exception of one or two notable examples, that outlying port has been usually blessed with some of the worst specimens of foreign officials it would be easy to select. The place having been looked upon as of no commercial importance, in several cases men have been appointed to official positions there which they could not possibly have filled at the larger ports; the consequence of which has been, that besides a continual series of squabbles induced by the arbitrary actions of these officials towards their own countrymen, some serious complications have arisen with the Japanese government, which have had to be referred to the authorities at Tokio. I cannot see, and I feel sure most persons will agree with me, why a man whom, it may be said at the expense of his own government, has had all the training necessary to enable him to fill a responsible position, when, at the time his turn comes for promotion is found to be incompetent, should be advanced to fill a post for which he is unfitted, to the exclusion of others who are capable. It is fair neither to his countrymen who must suffer from his incompetency, nor to the more junior members of the service whose promotion is thereby blocked by the employment of wooden-headed individuals, to say nothing of the disrepute that the service generally is brought into. It is useless for anyone to affirm that such officers are not employed; or that if employed, they are retained in irresponsible positions. It is not so. And I not only affirm that such men have no right to promotion, but that after a reasonable number of years in the service, when if tested and found wanting, not only in a knowledge of the native language—which I consider a secondary consideration in the case of a consul with magisterial powers—but in general fitness for the position, they should be weeded out of an honourable service, for further employment in which they are valueless, and if they remain in which their influence or example is detrimental. I have been led into these remarks through some bitter experience which it has been my luck to undergo, but as it cannot be repeated, I have therefore no reason to take a one sided view of; I consequently trust these suggestions may receive—if any—that consideration in the proper quarter to which I do not hesitate to assert they are entitled.

But without farther digression let us proceed on our route around the north shore of Volcano Bay:—

Usu-mombets is reckoned to be three ri from Kin-mororan, and Usu three ri beyond. In clear weather the fine peak of Shiribets mountain, the highest on south Yezo, shows itself about thirty miles distant in a northerly direction. It is a fine mountain something the shape of Fuji but with steeper slopes. There is doubtless an extinct crater on its summit, but I have never heard of either Japanese or Ainu having ascended it.\*

\* Regarding the volcanoes of Yezo, this is not an inappropriate place to introduce what Mr. Lyman says about them in his *General Report on the Geology of Yezo* published by the Kaitakushi in 1877:—

“Three or four of the high central peaks (probably volcanic) seem however to be nearly or quite in a north-east and south-west line; Ishcaridake in the middle, Tokachidake north-easterly and Yubaridake south westerly, all probably about 8,000 feet high. It is possible too that Tarumai volcano about 3,000 feet high, near the sea coast south of Sapporo, and Komagadake volcano some 3,000 feet high, just south of Volcano Bay, are in the same line with them. Itashibeoni volcano, about 6,500 feet high, with the promontory on which it stands, north of Nemoro, Sharidake, 25 miles to the south-west of it and perhaps 5,000 feet high, and the fine volcanic cone Oakan and Meakan, fifty miles east of Ishcaridake are perhaps in another such north-east and south-west line, of which Esan volcano (about 2,000 feet high) at the extreme south-eastern end of the pan handle may be a prolongation. The nearest Kuril Island, Kunashiri, with a couple of volcanic cones on it, and the next, Etorop, have also a very marked north-east and south-west direction *en echelon* with the Itashibeoni promontory; and the Nemoro peninsula is about in line with Etorop. Shiribetsudake, perhaps the most beautiful volcanic cone of Yezo and some 6,000 feet high stands a dozen miles north of the ragged Usu volcano, (possibly 2,000 feet high) of the north-east shore of Volcano Bay; but is rivalled, if not surpassed, in symmetry and height, by the volcanic island Riishiri, a few miles west of the northern end of Yezo. Iwaonobori is a volcano about 4,000 feet high and some ten miles north-west of Shiribetsudake. Nuburibetsudake, say 2,000 feet high, is half way between Tarumai and Komagadake, but a few miles to the north-west of the line. The principal volcanic peaks have now been mentioned; but there are many other mountains of 2,000 or 3,000 feet in height, and several 4,000 or 5,000 feet high.

“Shiribetsudake, although it has never been known to make eruptions within historic times, yet has still so fresh a conical shape that it may be reckoned a new volcano even without our having yet observed any level bedded volcanic rocks in its neighborhood. Yubaridake has also been conjectured to be a volcano, not yet very ancient; but it has not been approached near enough to speak with much positiveness about it. Hakodate mountain might perhaps be classed along with the new volcanoes; but its shape is already much deformed, though the old crater can apparently still be made out.

“Two of them, Tarumai and Komagadake, have within historic times had violent eruptions of pumice, and others are still sending out sulphur fumes. The latest eruption was that of Tarumai, which lasted from noon of the 8th of February, 1874, until the next noon, but was chiefly active from five in the evening until two in the morning. About three tenths of a foot of light brown pebbles of pumice of the size of a filbert were scattered over the ground within the space of a few miles. The same volcano had a small eruption of pumice about the first of March 1867, and a large one seventy years before that. Komagadake also had a large pumice eruption on the 23rd of September, 1856, in which some seventeen lives were lost in neighboring villages.

“Of the volcanoes that send forth sulphurous smoke at present there are besides Tarumai and

Beyond the valley of the Osarubets, a broken, undulating country is passed over, cutting off a point between the river and Usu and all along this track, which is in reality the lower slope of the volcano, large boulders of rock lie scattered. Perhaps I improperly call them boulders, because they are not worn or of rounded appearance, as having been rolled or drifted to where they are, but just look as if they had been flung into the air by volcanic action and come down where they now lie.

Usu is a collection of Ainu huts, a quaisho, some other houses, and a temple, situated on a beautiful little lake-like harbour, half a mile long by a quarter broad, with a narrow entrance from the sea, between rocks showing themselves in various places just outside and towards the eastward. I have been informed that there is a depth of about four fathoms inside, but that the entrance is not available for junks over six hundred koku, say eighty-five tons burden. It is seldom used owing to there being little produce from the fisheries of this district, while it is too far removed from and on the other side of the Osarubets river to be available as a port for the settlement of Usu-mombets. Indeed the importance of Usu only rests upon the fact of its being one of the principal Ainu villages, a sort of capital of the aborigines in southern Yezo, and as the site of one of the oldest temples on the island, with which there doubtless is some history connected that I am however unacquainted with.

About a ri or so along the shore brings the traveller to what is now only a collection of a few Japanese houses with some Ainu huts near them called Abuta. The land back from the shore has only a gradual slope towards the mountains and is generally clear of timber, with a southern aspect. One would imagine that being right in the corner of Volcano Bay, and consequently protected both from easterly and north-westerly winds, it ought to enjoy a comparatively warm climate; and, if there were any means of communication that it would be a very suitable place for settlement. The people told me, that in former years, when there was a quaisho kept up here as the headquarters of a fishing basho, rice was cultivated with success, which is a good test as

Komagadake, seven, or in all nine; namely, Esan, Usu, Iwaonobori, Nuburibets, Meakan (?), Itashibeoni, and, it is said, Riishiri. The smoke condenses to some degree on the comparatively cool ground and leaves deposits of sulphur; especially at Esan, Tarumai, Iwaonobori, Nuburibets and Itashibeoni. At Itashibeoni the sulphur (as it appears to be) may be seen violently boiling in a hole or small crater 15 or 20 feet in diameter and of unknown depth.

“Other deposits of sulphur that occur come from the waters of hot springs, and may perhaps better be classed with the New Volcanic rocks than with the Alluvium; for although it corresponds in age with both, yet in origin, issuing from the earth below, it corresponds rather with the volcanic rocks, and such springs occur chiefly, perhaps wholly, in the neighborhood of new or old volcanoes. The largest of those deposits are near Kobui, a few miles south of Esan; and they are of gray sulphur. A very little yellow sulphur is also found near the Nigorikawa hot spring near the south-west shore of Volcano Bay. Other hot springs form deposits of other substances, silicious, for example, which may also be classed for the same reasons with the New Volcanic rocks.”

to climate; for it is in but a few favoured situations on the island that such can be done.

I should mention that starting from Usu, or the valley of the Osarubets, there is an indistinct and seldom used trail in a general N.N.E. direction, but very tortuous, by which it is possible in spring before vegetation becomes too far advanced, to reach the head waters of the Toyohira and by following down the course of that river past the hot-springs of Jozanki, to arrive at Sapporo. This journey was made by Mr. Fukushi—now chief of the survey department of Sapporo ken in company with Mr. Wheeler then of the Sapporo college, and which latter gentleman nearly lost his life in attempting to ford a river on horseback against the advice of the Ainu guide. The distance is approximately thirty-five ri. But as this route comes upon Volcano Bay where there is no harbour, and no facility for farther land connection, and considering the difficulties which would have to be surmounted in cutting a road through so mountainous a region, there has not been any attention paid to it since. The highest point on this route is according to Mr. Fukushi about 3,000 feet where it crosses a part of Muine mountain.

There is another route, leading to the northward, and striking the valley of the Shiribets river by which Iwanai on the west coast can be reached, which is more practicable. The Ainu frequently make use of its southern portion in going over from Abuta and Usu to catch salmon on the Shiribets. This trail passes over a height of about 550 feet to Usu lake, which lies about five miles in a direct line back over the hills from Abuta, and immediately north of the volcano. Its level has been ascertained by the survey department to be 250 feet above the sea. Mr. Edwin Dun of the agricultural department at Sapporo went there on a prospecting expedition for grazing land, and describes the lake as a beautiful sheet of water of nearly circular form about five miles diameter with a couple of high islands in it, and mostly surrounded by steep wooded bluffs. Its outlet is a rapid stream plunging over a fall, and then joining the Osarubets river. He went by way of the Osarubets valley above the outlet, then striking over the hills to the north shore of the lake along the beach of which he travelled for some distance. Mounting the heights the party found a region of high prairie terraces, which appeared to extend far into the interior to the north-west of the lake. In returning they followed the western shore of the lake under steep rugged bluffs, which forced them to ride a good distance in the water; and crossing a high ridge returned to the sea again at Usu, after having gone altogether about twenty ri.

Colonel Crawford and Mr. Lyman both passed through between Iwanai and Usu; and the former between the head of Iwanai valley and Otaru. There is little doubt that if a practicable route could be found through that rough region behind Rebunge, it would then be possible to extend the road from Oshamambe; on the present northern highway from Hakodate, right through to Otaru without touching the west coast at

all, and thus avoid the pass over Raiden and at the back of Yoichi.

Besides that near Usu, there is another inland sheet of water in this region, worth a visit. It is generally known as Chitose lake, being at the head of the river of that name which is crossed by the main road at Chitose station\* 23½ miles short of Sapporo. From Sapporo it lies almost due south 24 geographical miles, in a direct line for Taromai volcano, and immediately at the foot of mount Iniwa, the jagged peak of which is visible from the capital. Professors Penhallow and Peabody of the Sapporo agricultural college visited this lake. They left the main road, I understand, between the stations of Tomakomai and Shiraoi, passing over the eastern slope of Taromai mountain, crossed the Chitose river about a mile below the lake, and camped near a fall at or near the outlet. They are believed to have attempted the ascent of Iniwa, but found the summit altogether too rugged. The surveyors who have mapped in Chitose lake, describe it as of almost circular form, about eleven ri in circumference, with very steep slopes nearly all round. Their way of getting to it was by following up the river from Chitose station. It is a noticeable fact, but generally appears to hold good at any rate in Yezo, that at or near the base of any volcano of modern date, there is a great depression of the land usually filled with water and constituting a lake, otherwise when on the coast exhibited by very deep soundings in the sea. In the case, however, of Komagatake volcano near Hakodate, it is possible to account for the present state of the lakes near it (see Chap. 5 *Japan Gazette* 10 February 1883) by the blocking up of a former valley by recent eruption, but this would of course not explain the original depression which probably existed. Whether these depressions are to be explained otherwise than by supposing that the earth's surface is liable to sink owing to the withdrawal from below of what is ejected through the crater, I leave for geologists to determine.

Abuta must be considered I presume the gate of Miss Bird's "Paradise;" for, shortly after leaving it to pass round the head of Volcano Bay you are ferried across a river and then at once enter the Ribunge mountains. As I have already mentioned the first time I made this trip was late in November.

I had expected to have had to stay at Abuta for the night, but as it was yet early when I reached that place, I procured other horses, and an Ainu boy as guide, and pro-

\* Chap. XVI *Japan Gazette* 21 April 1883, 'Chitose' has been thus written as being nearly the Ainu pronunciation, and not very wide of the Japanese spelling. It is not, as the Japanese have made it out to be by applying Chinese characters, 'thousand years.' There are many instances of names in Yezo having been more or less mutilated by Japanese spelling, interpretation, or partial translation. As an instance of the last, we need only go just outside Hakodate to find the old Ainu name of Aribets, turned into Arikawa. Chitose might perhaps be more correctly written 'Setose,' which according to Mr. Batchelor would be 'Setuse;' Mr. Batchelor (see 'Trans. As. Soc. Japan' Vol. X pt. 2) having in most cases adopted u where others would use o. However this depends on how the ear catches the sound, which may really be between the two letters. 'Seto' or 'Setu' means next.

ceeded, with assurance from the people at the station that although the road was "not good," it was not so bad as I should have to travel the following day. I found the road certainly was "not good," for it was one of the worst I had passed over in the whole country. Between Abnta and Ribunge, in fact, the trail passes over three high wooded mountains and one lesser one. Rocky ground and mud holes alternate with many very steep places, so that it requires a good pony to pull through the journey; luckily, I had one that climbed like a cat, and besides was good at picking its way, if so it can be called, where the whole breadth of the track is one sea of mud. Before we had gone half-way the sun set, and the scene was very beautiful, as it disappeared behind the hills on the south-west side of the bay. We had to do, at least, one-third of the distance after dark. How we managed it, or rather how the horse did, I cannot tell; for in the shade of the woods it was so dark that it was impossible to see a few yards distance. I left all to the horse, contenting myself with shielding my face from blows of branches of trees, which I could not see, and holding on with the other hand to the cantle of the pack-saddle to keep myself in position when descending the steepest places. Frequently my horse almost lost its footing, and would have to make a sudden rush down the steep mountain side in order to keep on its legs, the impetus carrying him at times so far, that I thought he must either roll over or continue his slide to the bottom. It was certainly a terrible road to travel by night; and, as might be expected, we did not reach Ribunge till very late. On this route we crossed one river by fording and another by a bridge. The distance is reckoned at  $4\frac{1}{2}$  ri.

Ribunge is a small station situated on the shore of a bay in this otherwise high rocky coast, and surrounded by high mountains. The land road onwards, as far as Sitskari, a distance of four ri, is over very rugged mountains, and strikes some distance inland. It was described to me as so very bad, that as the following morning was fine, clear, calm, and frosty, I took the offer of the people at Ribunge to forward me for that distance by boat. Getting out of the bay our course was S.W. and W.S.W. along a high rocky shore, with fine cliffs, pinnacles, caves, ravines, and such features as are peculiar to sandstone and conglomerate rock, of which this mountainous region seems to be principally composed.

On another occasion, however, I did not take a boat but travelled on horseback over this western section on the Ribunge mountain route. It was nearly a couple of months earlier in the season, so that I did not see it nearly at its worst. Besides in the meantime the telegraph line between Hakodate and Sapporo had been constructed, and to guard against frequent breakage of the wire by falling trees a wide lane had been cut through the forest, the effect of which of course was to cause the ground to dry up to a certain extent. The track passes in the first place up the valley at Ribunge alongside the main branch of a small river about N.N.W., then north-west or so up a side valley with a steep climb at the head of it to about a thousand feet or so above the sea. Then you follow along the tops of ridges, or be-

tween them, getting again near the sea, which in some places is overlooked from the so called road. At one part the road is actually in the bed of a mountain stream, after which the left side of its valley is followed down some distance to the westward, but the track leaves this as its course trends more northerly and inland, in which direction the valley widens out. This is probably one of the head streams of the river which passes Kuromatznai and falls into Sitze bay on the west coast, or may be a tributary of the Shiribets. From one or two places on the road Shiribets mountain may be seen, as well as the great mass of Raiden, and a sharp pyramidal peak which is probably that known as Iwao-nobori south-east of Iwanai.\*

No actual second height is passed over, but after a bit of a rise, you reach the brink of an abrupt descent from which extensive view is obtained over the country to the westward, and the long straight line of sand beach running towards Oshamambe. A steep zig-zag path leads down the almost precipitous side of the mountain to what is called Sitskari where there are a couple of poor houses, and from which without a break you can ride the remaining three ri along a sand beach to Oshamambe where you strike the main road at a distance of about seventy miles from Hakodate.†

Readers of these notes which I have thrown together and entitled 'Japan in Yezo,' will doubtless consider it a very serious omission on my part, that, except incidentally, I have said little about the Ainu; that I ought to have devoted a chapter at least to them. My excuse must be, however, that although one of the first foreigners to associate much with these people in Yezo, where I frequently lived for weeks at a time at favourite fishing quarters where there was a considerable settlement of them, and I used to employ them almost daily as canoe men, still I must in truth say that I never inquired very much regarding their habits and customs, and what I did learn regarding those matters did not appear to me particularly interesting or instructive: in fact I became convinced there was very little to learn from them. I might have been mistaken, and may be blamed for not having made better use of my opportunities. Nevertheless, though nearly all late visitors to Yezo have studied the Ainu, some of them assiduously collecting information and specimens, and there have been various notices in books and papers read before societies regarding these so called aborigines of Yezo, still—with the exception of a vocabulary of the language—the whole we know might be summed up in very few words. In looking through these independent accounts‡ I have been much struck with the extremely divergent opinions

\* See Lyman's 'Preliminary Report,' *Reports and Official Letters to the Kaibakushi* p. 146. Probably more properly Iwo-nobori, or 'sulphur mountain.' A combination, as is often found in Yezo, of two words of different languages, Japanese and Ainu, though I find the latter has been omitted by Mr. Batchelor in his vocabulary.

† See Chap. XV. 'To Otaru via Iwanai' *Japan Gazette* 14 April 1883, and 'Distances on Travelled Routes,' in appendix.

‡ Those available to persons in this country, are: *Notes on the Ainu* by J. Batchelor. 'Trans. As. Soc. Japan.' Vol. X. pt. II. 1882.



on certain points. For instance regarding the hairiness of the men, while one writer speaks of their being almost like bears, and that the hair on their bodies is sufficient to shed off a heavy shower of rain, and Lieut. Kreitner's reviewer (*Nature*, 21 Dec. 1882) says that this is "a fur coat averaging forty millimetres (an inch and a half) in length;" Mr. Lyman on the other hand contends that they "are no more hairy than Caucasians." Considerable difference of opinion also seems to obtain as to the beauty of the women. Then reference is usually made to the fine high forehead of the men, in which particular I think some observers have been misled by a very common practice among them of shaving that part of the head. Mr. Lyman carefully measured and weighed twenty-six men, averaging twenty-nine years of age, which resulted in a mean height of only 5 feet 3½ inches, and weight of 141 pounds, while around the chest the measurement is given as nearly thirty-six inches. Miss Bird states that the women she measured were not over 5 feet and half an inch; they doubtless average much less.

Although not of tall stature, no one who has seen the Ainu, can refuse to admit that are a fine robustly formed people, much superior in that way to the ordinary Japanese; though of course one sees fine specimens of the latter among the junk sailors and those engaged in timber cutting and such occupations in the wilder districts, and especially among the descendants of the older settlers who have been bred and brought up in Yezo. Considering the inferior and often scanty allowance of food on which many of the Ainu subsist—and its effect is particularly noticeable in the children—it is a wonder that these people attain the proportions they do.

To speculate upon the history, affinity, or origin of this race, seems to be impossible in the present state of our knowledge concerning the ethnology of eastern Asia. I have already drawn attention to the pros and cons (see Chap. VII 'Cape Esan and Volcano Bay' *Japan Gazette*, 17 Feb. 1883) on this subject, and to that closely connected one regarding the 'Koro-pok-guru' or pit-dwellers of Mr. Batchelor and Professor Milne, while incidental mention is otherwise made of both peoples—and it cannot be contended that they are one—in various places in these papers, as well as of the 'Tsuchi-gomo' or 'earth-hiders' of the main island;† but

*An Ainu Vocabulary* by J. Batchelor. 'Trans. As. Soc. Japan.' Vol. X. pt. II. 1882.

*Unbeaten Tracks in Japan* by Miss Bird. *Aino Illustrations* by J. M. Dixon, M. A. 'Chrysanthemum' November and December 1882.

*A Vocabulary of Aino Words* by Rev. W. Denig 'Chrysanthemum' November and December 1881.

*The Aino Language* by J. M. Dixon, M. A. 'Chrysanthemum' February and March 1883.

'Die Ainos von Dr. B. Scheube in Kioto.' Trans. German Asiatic Society of Japan. February 1882.

'*Ethnologische Studien über die Aino*—von Heinrich von Siebold' Berlin 1881.

*Reports and Official Letters to the Kaitakushi* (Lyman, Boehmer, and Day) Tokio, 1875.

† Mr. B. H. Chamberlain and the Rev. J. Sumners both came independently to the conclusion, that 'gomo,' although explained by Japanese writers as 'spider,' was really an abbreviation of 'gomori;' the full translation for the name of these people being therefore 'dwellers underground.' See Chamberlain's *Translation of the Kojiki*. 'Trans. As. Soc. Japan,' 1883.

what we actually know concerning any of them is most indefinite, some of the sources of information being evidently unreliable. I may mention here that Mr. Lyman learned from the Ainu or Japanese, that the former attribute the pits in Yezo—which will be found frequently spoken of in these papers—as having "been dug by dwarfs, a race in whose existence they believe in." (*Reports and Official Letters to the Kaitakushi*, p. 405.)

In language the Ainu differ from the Japanese perhaps as essentially as in physical appearance, though now-a-days this is not considered a very reliable test of race.\* Still on looking over an Ainu vocabulary one cannot help being struck with the dissimilarity at once apparent, and which is the more striking when we hear it pronounced by themselves. There is a softness, at the same time associated with sharp endings—very many words being terminated by consonants when written in our own characters—that makes it peculiarly non-Japanese; so that, as I have elsewhere pointed out, the *kana* is quite inapplicable to its correct rendering.

Mr. Louis Boehmer in describing his visit to the Ainu of the valley of the Sarn (or Shara) in 1874, says; the chiefs "were dressed expressly for the occasion in handsome robes embroidered with blue, and wore crowns of straw decorated with red flannel and bits of tin." Within the lodge "were Japanese gifts that had accumulated for perhaps a score of generations, old swords, rice dishes and lacquered ware; the oldest much the best and very handsome, the newest merely plain lacquer." \* \* \* \* \* "The Ainos in drinking raised their heavy moustache with a small stick, somewhat like a paper cutter, made for the purpose and sometimes neatly carved." \* \* \* "The next morning on the shore some of the Ainos made a prayer to the sea god to quiet the swollen waves and to send back two boats that had gone out each with two Ainos a couple of days before. The same day an Aino boat that went in search of them brought back one boat, but the other seemed to be quite lost. The two rescued but half starved men were fed on the sea shore, and towards sunset there was a singular dance on the beach. The Aino men of the village formed one line and the women another, and with poles like lances in their hands went through many evolutions. Sometimes they would make as if charging with their lances against the sea. Then there was another prayer by an old man facing the sea. After sun down all hope for the other boat was given up, and according to custom the women in all the neighbouring five villages devoted themselves to lamentations which they kept up the greater part of the night. They squatted in pairs on the ground facing and hugging each other, and wailed and shed tears. The men did not join in the crying, and the women did not except while squatting."

\* Professor Sayce remarks that "language cannot be the test of race at all, \* \* \* \* \* " We have too many instances, writes Mr Freeman, in "recorded history of nations laying aside the use of one language and taking to the use of another, for anyone who cares for accuracy to set down language as any sure test of race." [Dawkins 'Early Man in Britain' pp 331 and 333.]

(*Reports and Official Letters of the Kaitaku-shi* p. 562.)

Dr. B. Scheube makes reference likewise of the 'crowns' mentioned by Mr. Boehmer. He says, in his interesting account of a bear feast translated in the *Japan Gazette* of 22nd July 1882—which I should like to have reprinted here as it is the only full account I know of by an eye-witness—:—"The older men wore on the forehead a peculiar head-dress, known as *Shaba-umpe*. \* \* \* \* "It is adorned with the plaited bark of the wild vine, planed spiral pieces of timber, rough carved wood, bear's claws, twigs of vine, or similar things."

In the same paper this close observer gives an excellent description of some of the dances practised by the Ainu, which I have frequently seen performed. He seems to be in doubt as to whether that called by the Japanese 'Tsuru-mai' (crane dance) is in imitation of these birds. I think, however, there can be no doubt about it, because when I first witnessed it, although I was unaware of its name, I was forcibly struck with the resemblance of the chanting used during performance to the sounds uttered by cranes.

Dr. Scheube remarks upon the absence of any musical instrument except the bamboo jews-harp, among the Ainu living on the shores of Volcano Bay. This had also struck me, and I imagined that the five stringed guitar\* found among the Ainu of the lower Iskari (see Dixon's 'Illustrations,' *Chrysanthemum* December 1882) might have been an importation along with the eight hundred people from Sakhalin who were removed by the Japanese government on the abandonment of that country to the Russians.† I find, however, the same instrument figured in the journal of a Japanese traveller in Yezo about twenty-five years ago, as existing among the Ainu of the Teshiu river on the north-west coast of Yezo.

There is nothing peculiar about the bows and arrows, with bamboo or bone points; they are short and rough. Neither is there anything very ingenious in their mode of setting poisoned arrows in cross-bow fashion with tripping strings for bears and deer, nor in the manufacture of poison from the monkshood. But their fish-spear is a very peculiar and original implement to which I have already drawn attention.‡ Their river and sea going canoes I have also elsewhere spoken of. The snow-shoes used both by them and the Japanese on Yezo, are very primitive affairs, consisting only of a couple of pieces of wood bent in horseshoe shape, lashed together and forming an oval frame, crossed at the smallest diameter by rough thongs of hide to take the sole of the foot.

\* A rough guitar or banjo, something after the pattern of the Japanese 'samisen' (it may be the original for it) but without the sounding part covered with skin as in that instrument. It is long, narrow and hollow something in the form of a canoe; has two bridges, the strings being tied at the lower end to a piece of fish-skin, and the other has rough pegs—like a samisen—for winding the strings upon.

† H. I. R. M. S. "Vsadnik" arrived from Sakhalin at Hakodate on 31 August 1875 with Russian and Japanese commissioners, on return from formally transferring the Japanese sovereignty to Russia, as per treaty signed at St. Petersburg, 7 May 1875.

‡ 'To Otaru viâ Iwanai,' Chap. XV *Japan Gazette* 14th April 1883.

They have not sufficient bearing surface to support the weight of an ordinary European, and are entirely devoid of the fine racket work of the Canadian article. Indeed they can be considered only the roughest makeshifts, and I think go as far as anything to force us to look upon these people as not being originally a northern tribe.

The Ainu use a small instrument which they draw along the lips and blow through at the same time, which very exactly imitates the plaintive whistle of the deer. They employ this when lying concealed to attract the deer within range of their bows and arrows. On Yezo the dog is not, as far as I am aware, used for draught purposes as on Sakhalin, although there are numbers to be found about every camp, and they employ them in hunting.

Their mode of carrying weights is similar to that used by the 'voyageurs,' Canadian and half-bred, on the portages in Hudson's Bay country. A strap, broad in middle and narrowing out towards the ends, is woven from the 'atzis' bark, the same as used for their clothing;§ the weight resting against the back, is supported by the strap across the forehead. Illustrations of this mode of carrying will be seen in almost any Japanese drawing of the Ainu. They have no doubt many peculiar habits and customs, certainly sufficient to distinguish them, irrespective of language and physical form, from the Japanese; but of course they have adopted certain customs from their neighbours, and borrowed many names especially for articles such as knife, kettle, paper, &c., which they were unacquainted with previous to their association with their conquerors, and which are easily distinguishable in any vocabulary yet published, though in certain cases the spelling has been modified to suit the Ainu pronunciation. The whittled sticks and pendant shavings called 'Inao,' are probably a copy of the Shintô paper ornaments or 'gohei,' or the latter may have been copied from the former, or both have had a common origin.

Japanese writers mention that the Ainu of Yezo in ancient times obtained fire by the friction of wood against wood. They describe the process, and even go so far as to illustrate the operation, and name the kinds of wood employed. An Ainu is represented sitting on his haunches 'drilling' between his hands a pointed stick into a hole in a block, while his wife is blowing in the cavity through a wooden tube. Whether this is simply imagination on the part of the first writer, and that subsequent compilers have copied from him, it is difficult to determine. At any rate obtaining fire in this way even in the driest and hottest country is by no means easy, and I am inclined to doubt its possibility in a climate like that of Yezo. Such interesting customs described by original authors, are always sure to be mentioned by later writers (*vide* several of the later foreign books on Japan as to reefing junk

§ The inner bark of a kind of elm, possibly *ulmus montana* var *laciniata* of Franchet and Savatier's catalogue of Japanese Plants, generally known in Yezo as *Ohiyo*, but the true Ainu name of which according to the Rev. J. Summers, is *Atsu-ni*: Ni meaning tree, and *Atsush* fibre or cloth. I have elsewhere noted my perhaps incorrect spelling of this word, and the uncertainty concerning the botanical name of the tree.

sails, &c.), and consequently become perpetuated. We must also bear in mind that the Japanese, besides being slavish copyists, are very vain, and never like to admit that they are behind the rest of the world in anything. It may be therefore that, if a fabrication, the story arises from an attempt to show that *their* 'Indians' were as clever as those of any *other* country.\*

The Ainu are dreadfully afraid of small-pox, for when it gets amongst them its ravages are frightfully destructive. I have known whole villages desert their ordinary habitations on the coast and retire to the mountains, when this pest of savage life appeared in the vicinity. Doubtless their uncleanly habits have much to do with the virulence with which this disease attacks them; and no wonder for I think they are less addicted to washing than any people I have met. It is, I have heard, enjoined by their religion, that the women should never divest themselves of their clothing. The unbecoming practice of the women tattooing a space round their mouths, seems difficult to account for. That upon the hands and arms may be looked upon as ornament perhaps, but to surround the mouth with a dark patch could hardly have arisen through an idea of beautification. It may be that it is some attempt to conform to a standard of beauty in the fine moustache and beard of the male. If we except the story about copying this practice from the women of the ancient 'Koro-pok-guru' as learned by Mr. Fukusi, and related by me elsewhere, I understand that the Ainu give no reason for this practice, other than it being a custom handed down from time immemorial; or as Mr. Batchelor has put it, their "ancestral mother—Okikurumi Turesh Machi—was thus tattooed." In our eyes it is a manifest disfigurement to the otherwise often pretty faces of the younger Ainu women, though I find one writer states that he never saw a good-looking girl among the Ainu. He must have been particularly fastidious in his estimate of female beauty, or have mixed very little among these people; for I have seen many very good looking, and among the half-breeds some really handsome girls, although entirely of a different type of beauty to the Japanese. Curiously enough the half-bred offspring is—as far as my experience has gone—generally very light in the complexion of the skin. One thing that will strike any observer is I think the neatness of the limbs of the Ainu women. I never remember to have seen one with broad splayed feet, clumsy ankles, and thick calves like so many Japanese women; but on the contrary these parts, though well developed, are fine and cleanly cut, like a well bred horae.

Among the customs of the Ainu is one which I have the authority of Mr. Edwin Dun for, namely, that they desert a habitation in which a person has died. I have myself only to blame for not having ascertained whether this is an invariable rule. I imagine, however, that it is confined to the

\* The Rev. Mr. Summers informs me, that when living at Sapporo he interrogated the Ainu on this subject; and, although he did not witness the operation, they described to him the process, and gave him the names of the articles, and the woods of which they were made; which I understood him to say tallied with that given by some Japanese writer.

decease of the head of the family. Some foreigners have imagined that the Ainu are very careful of the graves of their people, and much nonsense has been talked about the desecration of Ainu burial places; but I believe the sentimental feeling expressed by the officials of the government when some trouble on this account was raised some years ago, and led ultimately to the resignation of a foreign consular officer, was only assumed and made so much of for the sake of getting a handle to work against foreigners, and was by no means shared in by the Ainu of the village. I consider that the best introduction for a body-snatcher to an Ainu burial place and a sure preventative against interruption during his operations, would be a tub of Japan sake presented to the chief, or left open at the approach to the graveyard. It is wonderful how the religious scruples of natives can be overcome by recourse to the right kind of encouragement judiciously used.

Dr. Scheube used a rather appropriate word, when speaking of the "hedge" of sticks on which the bears' skulls are stuck, and to which 'Inao' charms are attached, which as he says is always found among any collection of Ainu dwellings, and usually even where only a single wigwam exists, and is always a prominent object.

Some writers have insisted upon the rigid observance of the marriage vow among the Ainu, and on the chastity of their women generally. My experience does not coincide with these views, but I think whether or not inclined to licentiousness, the offensive odour from their unwashed bodies, to say nothing of the disfigurement of their faces by tattooing, ought to be sufficient protection for them in most instances. A good many Japanese are, however, married in a sort of half-and-half way to Ainu women, and I understand that they generally make useful, if not very ornamental helpmates.

The cultivation of the land is carried on to a very limited extent by the Ainu, a few garden-like patches generally at some distance from their dwellings, affording them only scanty supplies of millet, and a few of the common roots grown by the Japanese in Yezo. Mr. Boehmer learned that before they became possessed of millet seed, they used to grind the seed of the scrub-bamboo—which fructifies occasionally, but not annually—and make this into a kind of cake. The demand for labour at the fishing stations on Yezo generally is so great, however, that the Ainu find ready employment almost anywhere, not only as fishermen, but as pack-horse drivers, wood cutters, and in a variety of ways about the larger stations, that they have therefore little incentive to pursue agriculture as an industry even were they so inclined. It is consequently only in few localities where the fisheries are not so prolific and about Volcano Bay and such districts where the older Japanese settlements exist, that one finds the Ainu devoting themselves to the cultivation of the soil at all. The women are the usual labourers in this way, and I don't remember that I ever saw a male Ainu at work in a garden. I suppose he would consider this kind of employment *infra dig*.

There are certain customs followed by Ainu and Japanese alike, or often resembling one another so closely that they would seem

to be of common origin. One that struck me on reading Dr. Scheube's account of the bear feast is that where he mentions that during the height of the "universal jollity" the two young Ainu who had in the earlier part of the ceremony released the bears from its cage mounted "to the roof of the hut, "and from these threw a basket-full of balls "of millet-cake amongst the company, old "and young scrambling for it amid cries "and romping." An exactly similar thing is done by the Japanese—at any rate in Yezo—on the launch of a vessel, by a free distribution of pounded rice-dough cake scattered among the spectators.

Similarly with other savages the Ainu are addicted to personal decoration, the women and younger men wearing ear-rings in the form of pieces of red cloth and metal, while the former have necklaces of different kinds including stone and glass heads; and the Sakhalin Ainu especially, waist-belts with coins and other metallic ornaments on them. The younger women may also frequently be seen when returning from the woods with their hair tastefully adorned with wild flowers, in which they seem to have a preference for those of orange or yellow colour. They are also pretty skillful in ornamenting their clothes with a kind of rough embroidery, especially the backs of the coats and leggings. Their knife sheaths are also carved, and some of their wooden house utensils, in a peculiar manner, which does not partake of a character approaching Japanese decoration of the present day, though it may be a copy of some ancient style. It has been said to resemble that on the remains of pottery unearthed in Yezo, and other parts of Japan, but I am unable to trace a resemblance. The nearest approach I have seen on anything is I think on those bell-shaped brass things which have been discovered in the south, the origin of which has not I believe been as yet determined; but which as Professor Morse lately told me a friend of his had suggested, may possibly be the covers of incense burners, an explanation as probable as any that has yet been put forward.

The matter of religious belief of the Ainu must remain an open question. It will never do to accept the testimony of missionaries and such people. These well meaning persons are always ready to jump at and make the most of the slightest similarity they can trace to Christian religion, throwing into shade the darker traits of heathen superstition, and offering the former to the world as corroborative of an innate belief in man in his natural state, of the 'superstitions' which have not yet worked out of the minds of civilized man. Mr. Batchelor is fair. He does not take advantage of the 'preacher's privilege.' Thus he says, ('Trans. As. Soc. Japan' Vol. X pt. 2):—"All religious ideas "are very vague and uncertain. God the "creator of all things is supreme, and all "the rest\* are subject to him. Next in order

"to the creator is the sun-god, or the god "whose province it is to take care of the "sun. This god is called 'Tokap chup "kamoi,' and he dwells in the sun. Next is " 'Kunne chup kamoi,' the god of the moon. "The 'Abe kamoi,' the god of fire. Then "the bear, water and mountains."

I have doubtless omitted many peculiarities of the Ainu, which might strike even the most ordinary observer seeing them for the first time; but as is frequently the case, familiar things are often the most difficult to recall to one's memory when wanted. I therefore do not hesitate to bring this chapter to a conclusion by mentioning, that while the number of these people has been so variously stated, and it has been assumed that they are yearly decreasing, the latest government returns—for January 1882—exhibit 16,933 as inhabiting Yezo and the Kurils.

The most remarkable journey in Yezo of any foreigner was made by Mr. Lyman (geologist to the Kaitakushi) in 1874. Starting from Sapporo he ascended the Iskari to its source, thence crossed a pass about six thousand feet above the sea to the head waters of the Opopchi branch of the Tokachi and reached the sea coast at the mouth of that river, a distance in all of about three hundred miles. Mr. Lyman, of course, travelled at government expense, every requisite being provided to ensure the success of the expedition, even to canoes being sent up the Tokachi to meet the party. Still it was a very rough trip, entailing a good deal of hardship and some privations. For a country like Yezo where you can not depend on picking up supplies of game by the way, or if so in but very limited quantity, the party was too large, consisting, even after sending back a couple of boats, of eleven canoes manned by forty-eight Ainu, and numbering fifty-six people in all.

A full diary of this trip is given by Mr. Lyman in the *Reports and Official Letters* published by the Kaitakushi in 1875, a short resume of which I give below. I should mention, however, that Mr. Lyman was not the first foreigner who had ascended the upper waters of the Iskari, because the year previous Mr. Wasson was employed on an exploratory survey of that river which he traced as far as the Aibets, and Cap. Bridgford, R.M.A., the same season ascended to the Rubispe, two hundred miles from the sea, with a couple of canoes manned by Ainu at his own expense; an account—but rather a meagre one—of which trip is to be found in his 'Journey in Yezo' published in the second volume of the '*Transactions of the Asiatic Society of Japan*' 1872-73.

Mr. Lyman spent some time on what may be called the middle Iskari, that is to say, that portion of the river above Tsziskari at the mouth of the Toyohira—the river on which Sapporo is situated—twenty-five miles above Iskari when its upward course,

\* I have italicised this word.

"Mankind worship the powers which do them "harm, rather than the power do them good." [Kingsley's 'Heward.']

"The mind of man is not so 'infinite,' in the "vulgar sense of that word, as people fancy; "and however greedy the appetite for wonder "may be, while it remains unsatisfied in every "day European life, it is as easily satiated as any "other appetite, and then leaves the senses of its "possessor as dull as those of a city gourmand

"after a Lord Mayor's feast. Only the highest "minds,—our Humboldts, and Schomburgks, (and "they only when quickened to an almost unhealthy "activity by civilization),—can go on long appre- "ciating where Nature is insatiable, imperious, "maddening, in her demands on our admiration. "The very power of observing wears out under "the wish of ever new objects; and the dizzy "spectator is fain at last to shut the eyes of his "soul, and take refuge (as West Indian Spaniards "do) in tobacco and stupidity." [Charles Kings- "ley's 'Westward-Ho!']

if I may be allowed the expression, changes its general direction to the northward and north-eastward, as far as Kamoikotan. During this time he explored the Ebets and Yubari for coal, ascended the Horoimoi and Sorachi, where he had survey parties at work; and examined as he went along the mouth of the Shibets—where the government now has a convict establishment—and of other tributaries. Indeed he was many days on this canal-like part of the river with its low wooded banks, and uninteresting monotonous features, and did not reach Kamoikotan for three weeks after leaving Sapporo, a journey which would not otherwise have taken him over one.

He describes Kamoikotan as a "boiling rapid" a mile and a quarter in length, in which the fall is about fifty-five feet, and the discharge of water 3,250 cubic feet per second. He camped on a small flat prairie about a quarter of a mile above the lower end of the rapid. The rocks which form this obstruction in the course of the river he gives as serpentine, marble, metamorphic talcose and quartzose schists, and dark quartzite, with a strike about north and south. Above the rapids he passed the mouths of several small rivers within a few miles, and explored for a short distance up a large tributary which he called the Chubets and it is so marked on the maps.\* About here commences a plain of prairie and sparsely timbered land, which he reckons as extending about eighteen miles in a direct line, the river's course through it nearly thirty, to the Aibets, a tributary coming from the northward, which is met by the main branch coming from the south-east. He gives the number of Ainu as inhabiting this region, which is generally known to the Japanese as 'Kami-kawa,' at two hundred, but says he met with none of their camps above.† The Rubispe is seven ri above the Aibets. The stream becomes very rapid, and almost dangerous, but Mr. Lyman induced his Ainu to force their canoes still ten miles or so farther up till he had reached an elevation of fifteen hundred feet above the sea. He reckons the head of the canoe navigation as twelve days from Sapporo.

Here he found some hot springs as had been reported, but looked in vain for a great vertical fall which had been described to him. However, after leaving the canoes he came to a 'canyon' and great rush through it which might be called a fall, and which he found to be nearly fifty feet in two hundred and sixty yards, with a volume of about one thousand cubic feet per second. Above this the party experienced great difficulty in making their way, and were unable to do more than two-and-a-half ri or so per day. Following up the course of the river on foot about south-east for four days, they reached a fork where it fairly divided in half about

three thousand feet above the sea. Then turning to the eastward they gained the head waters of one branch, 4,200 feet, and the top of a pass 6,000 feet above the sea in about four miles. This pass Mr. Lyman named Kaitaku-toge, from which a peak called Iskari-dake was visible to the westward which he estimated at 7,700 feet, while Tokachi-dake he made about 8,200.\*

Allowing for some inaccuracy which has crept into Mr. Lyman's distances on the lower river, I make the distance by the windings from its mouth to this pass to be ninety ri, or say two hundred and twenty miles; and the time from Sapporo sixteen days.

From this the descent commenced towards the valley of the Tokachi which flows to the south-east coast. In about a couple of miles they dropped about 3,000 feet, if I read Mr. Lyman's journal correctly; but it is somewhat confused at this point. The fact is they were not on the branch of the Tokachi which they had expected to strike—as they afterwards discovered—and which the canoes had been ordered to ascend to meet them. However it would appear that they travelled at an increasing rate per day, from ten to twenty miles, passing through some thirty miles of prairie land on the bank of the Otopchi, till after following that stream down for about forty miles they struck the main Tokachi below where their canoes had ascended to; and after waiting there for them to be recalled descended in them to the station of Ohots on the sea coast. There is evidently here a misprint regarding the distance on the main Tokachi where, instead of about nine ri, I calculate they made about nineteen from the mouth of the Otopchi to Ohots. Thus Mr. Lyman's route will be about:—Sapporo to the head of the navigation 77 ri. To the pass 8½. Down the Otopchi 17½. On the Tokachi 19. A total of 122 ri, or say approximately 300 statute miles.

In perusing Mr. Lyman's narrative of this journey, which is in the form of a diary occupying nearly seventy pages of the official volume, one cannot but be struck by the amount of perseverance displayed by him, and the thorough earnestness which he threw into this, as he did into all his other work in Yezo; and that it was only from trusting an inaccurate portion of the former Japanese map of Yezo, that he was led to disregard the advice of his Ainu, and by following up a branch of the Iskari trending to the eastward, he came upon the Otopchi instead of the main stream of the Tokachi near its source as had been his intention. However, it is perhaps as well that this mistake occurred, as it led to the exploration not only of what we are probably justified as looking upon as the source of the Iskari, but added to the knowledge of a part of the basin of the Tokachi which might otherwise have

\* According to Mr. Fukusi this tributary, the valley of which forms the south-western boundary of the tract of country known as Kamikawa, is called by the Ainu, Bii; the Chubets, or Chepbets as it should be written, being only a small lower branch of the Bii.

† Mr. Fukusi, whose careful exploration and mapping of this region during the past autumn has added much to our knowledge of it, reckons the number of Ainu lodges in this district at only thirty; giving consequently a population certainly not greater, but possibly less than Mr. Lyman's estimate.

\* I have had difficulty in even approximately tracing Mr. Lyman's route, but I place this pass in about Lat. 43° 30', Long 143° 5'; from which position Tokachi-Dake ought to bear about north-west, and Iskari-Dake somewhat more to the northward; because, according to Mr. Fukusi, the latter bears due east from the main river at about the middle of its course through Kami-kawa and Tokachi-dake—apparently in the same range—south-easterly. From the same position likewise is seen in a north-easterly direction, a third peak of high elevation at or near the head-waters of the Teshiu River, which is known as Teshiu-dake.

lain for many years equally a *terra incognita* with so much more of the interior of Yezo.

Captain Bridgford in his paper read before the 'Asiatic Society of Japan' 14 January 1874, already referred to, described the Iskari as follows:—

"The Ishi-kari river rises amongst a range of mountains and flowing through a fine plain called 'Kami Kawa' reaches the gorge of Kamoyé Kotan through which it rushes into a second plain on which Satsporo is situated; winding through this it finally reaches the sea in the bay of Ishi-kari on the N.W. coast of Yezo.

"For the first 30 miles the river flows with great rapidity through a series of basaltic gorges, the walls of which are often perpendicular and sometimes of considerable altitude. The river bed consists of boulders of large size which, forming a succession of barriers, cause numerous rapids which render the river unnavigable even for Aino canoes. The Ru-bes-pie, a considerable stream, here joins the Ishi-kari and this increase of volume gives sufficient water to carry a canoe over the rapids which are very numerous and troublesome. The country is heavily timbered, Oak, Ash, Birch, Poplar, Silver Birch and Alder abound: the river side is generally fringed with Alder or Silver Birch. For the next fifteen miles the country becomes more open, the hill sides are in places covered with plume grass where not timbered, large patches of walnut appear and small plains well grassed with good black soil having a subsoil of gravel. Wild grape, hops, asparagus, &c. abound. The river winds very much and divides in places forming many islets, and shingle banks. The current is very rapid, varying from 12 to 18 miles an hour. There is a fine basaltic cliff\* on the right bank which shoots up some 300 feet, and is capped by forest, principally 'todo,' a sort of white fir; at the base there is much wood where the river does not sweep the rock. For the next twenty miles the width of the stream is about fifty feet, and seven feet deep; in the channel, on the left a fine basaltic hill turns the river at a right angle. This hill timbered at the base and shewing the columnar basalt above, capped as it is by fine todo trees, presents a grand appearance. Another twenty miles and U-petsu is reached, the river is here very rapid and inclined to split up into several streams, and has much drift-wood of very large size, some of twenty feet girth and sixty feet in length, of the kind named *sinkee*. The large piles of drift-wood soon change the river bed. Sixty-three rapids are passed and the river has now fairly entered the plain of Kamikawa through which it winds. Bounded on three sides by forest clad mountain ranges, and watered by many streams, this rich alluvial plain when viewed from the summit of the hills, presents a fine appearance. Long stretches of prairie grass relieved by clumps of walnut, oak, elm, &c., or dotted with single trees, and

between these stretches of grass are fine belts of full grown hard-wood, free of under-wood, and the resort of large herds of deer; whilst the banks of the streams, clothed as they are with willows, can be traced in their wanderings for many miles. In the autumn the golden yellow of the ripened grass, the varied tints of the foliage in the plain and the sparkle of the waters all combine to produce a glowing picture which is framed in the russet and purple tints of the surrounding mountain ranges. U-petzu is about 85\* miles from the source of the river and consists of four Aino huts; nineteen huts are scattered between this place and Kamikawa which is 15 miles distant, total 23 huts and 93 persons.

"In the next 18 miles the river leaves the plain and enters the mountain gorge which terminates in Camoyi Gotan (or Cotan). Entering the gorge the stream increases in rapidity, and after traversing a distance of about four miles canoes are turned into a still pool situated above a fall about  $4\frac{1}{2}$  feet high; here the canoes are unloaded and the ladings have to be carried a distance of 4 or  $4\frac{1}{2}$  miles down the gorge to Camoyi Cotan (abode of the gods). The path is wild and rugged, it is on the left bank of the river which foams amongst the rocks below. The canoes now empty are well manned and, after an offering to the river god they proceed to shoot the fall and then a wild and continuous rapid. The distance, about 4 miles, is done in a few minutes and the canoes float on the still waters of gloomy Camoyi Cotan. The walls of rock and large boulders in the gorge are polished like marble, there is much serpentine, green stone, and schistose rock; above towers the oak, ash, walnut, and todo, also the graceful silver birch and the maple. The drift-wood in the gorge shewed that the spring floods reach a height of 27 or 30 feet.

"Camoyi Cotan is a deep and sombre pool whose surface is only broken by eddies and swirls suggestive of a deep and rugged bottom. Walls of rock hem it in and these are of weird and fantastic form. The strata are in some places thrown up into a vertical position, in others they are wavy. Proceeding to the end of the pool the channel turns sharp to the right and, after descending two or three small rapids at 50 miles from Camoyi Cotan the river reaches the great Satsporo plain and from thence it is navigable, by vessels of light draught, to the sea, distant about 100 miles (by water). At this point the Ishi-kari, much increased in volume, becomes a broad and placid stream which slowly meanders, a very serpentine course, through the rich alluvium of the plain: many tributaries add their waters to it until at the mouth of the Shinoro river the Ishi-kari has attained a width of 250 yards and a depth of five fathoms, here the current does not exceed  $2\frac{1}{2}$  miles per hour. The total number of rapids on the upper waters is seventy-eight.

\* 'Upetzu' of Captain Bridgford is probably Aibets of later travellers, but he appears to have doubled on some of his intervening distances, as Rubispe, according to Mr. Lyman, is only seven or eight miles—say seventeen miles—above Aibets. Aibets being 180 miles from the mouth of the river, plus seventeen makes Rubispe, 197, adding to which thirty to the source, brings the total length of the Iskari to 227, which according to Mr. Fukusi is somewhere near about it, and fairly agrees with Mr. Lyman after correcting his distances on the lower river as previously noted.

\* The reference here and a few lines both above and below to *basalt* is probably an error. Captain Bridgford did not pretend to a knowledge of geology any more than I do myself. There are many places in Yezo where rock of trachytic nature takes columnar form, as noticed by Mr. Lyman, Professor Milne, and other scientific men who have visited the country, though it cannot be said that the rocks of Yezo have as yet undergone a very critical examination.

"From Shinoro river to the mouth of the Ishi-kari the river maintains a width of at least 250 yards and the depth in the channel is between three and seven fathoms. There is twelve feet on the bar and the result of 24 days observation shewed a mean of five inches rise and fall of tide.\* Ishi-kari town is situated at the mouth of the river on the left bank; here ships could load from stages erected on the bank as there are four or five fathoms of water close to the shore.

"From Camoyi Cotan to the sea the river banks rarely exceed twenty feet in height, the general average being fifteen feet. The slopes are usually covered with short grass and on top is a continuous fringe of willows, rising in places to the dignity of trees in other places mere saplings. The willows were very useful in estimating the age of the different portions of the banks, as no sooner does any change take place than up shoots a fresh crop of willows. The driftwood lodged in their branches gave the height of the river during floods. The timber varies very much both in size and quality, but large quantities of fine oak, ash, chestnut, walnut, elm and several other hard woods, exist in the vicinity of the river and its tributaries. The best timber is generally to be found in the narrow belts of wood that border the large stretches of prairie grass.

"The upper Ishi-kari, when in flood rises some nine or ten feet, in the gorge some twenty-seven or thirty feet; below the gorge it drops down to a rise of nine or ten feet, which increases at the great bend forty-five miles above Shinoro to a height of eighteen or twenty feet; at Shinoro the drift shewed twelve or fourteen feet rise. The spring generally commences early in April, and in some two or three weeks the winter snows have melted—the rivers are in high flood—and even some portion of the plains are under water. It takes about three weeks for the waters to drain off, May, June, July and August, are fine months. In upper Ishi-kari, this year, the first snow appeared on the hills on the 1st September: there was no frost until the 4th October. In lower Ishi-kari (Satsporo) the snow first appeared on the hills on the 3rd October, and the first frost on the 5th; snow falls heavily in November and December, and remains during the winter months. From four to seven feet is the depth of the snow-fall."

In speaking of the Iskari near its mouth, Captain Bridgford refers to the salmon fishery. Although I have elsewhere mentioned it, and have described the mode of procedure in other districts (see 'The south-east coast,' 'The eastern part of the Island,' and 'Cape Soya to the Iskari,' *Japan Gazette* 3rd and 10th March and 9th June 1883), the account is so good that I make no apology for quoting in full. He says:—

"In August and September the fish masters are employed in preparing for the coming season. The river is marked off into stations for both Japanese and Ainos. The Japanese then clear their stations of driftwood and with snag boats they raise the snags and tow them out of the way. The banks have to be cleared and prepared so as

to facilitate the hauling of the seines. Ranges of sheds are put up and heavily thatched, stores of salt, rice, fishing gear, &c., are collected, and all these preparations are completed by the end of September. Soon after the arrival of the salmon is reported from the coast fishing stations, and in a few days they commence passing up the river on their way to the spawning beds in the upper waters. On the Ishi-kari, each station has two nets and two boats, and crews always at work from dawn until dark. A seine having been shot the upper end is made fast to a post in the bank and the lower end, or rather the rope attached to it, is passed around a capstan which is manned by the boat's crew that have shot the seine; the current assists in setting the net into the bank, along which it lies forming a long trough which contains the fish taken, the men then leave the capstan and work the net by hand, turning the take into a fish-boat which carries them to the stage used for landing and cleaning the fish. As soon as the first seine is half hauled the second one is shot outside of the first one, and hauled in its turn. When the fish are secured the boat's crew pick up the seine into the boat, and again shoot it; by this method of working there is no time lost, and a wholesome rivalry exists between the crews; in fact the scene is most exciting as the men sing in wild chorus, when shooting and also while they are running round the capstan. Then comes the leaping and plunging of the captive fish, the wild chorus is changed into yells and shouts, the fish master grows excited and objurgates freely, the culmination being when they dash in and seize the fish by their tails, slinging them into the fish boat where they flap and flop, dance and gape and make a pretty splashing. The man in charge of the boat now poles her to the landing stage, which projects over the river, is guarded by old pieces of net, and slopes in shore: he throws the fish on the stage, they flap down the slope and are seized by the cleaners—two dexterous cuts with a sharp knife and out drop the gills, a slit up the belly, two cuts inside, and out drop the whole of the contents, when behold the fish is cleaned and is ready for the curers.

"The fish roe is now taken and placed in a bucket, which, when filled, will be carefully taken into the curing sheds the roe placed in clean mats on wicker shelves and then well salted. Salmon roe is considered a great delicacy by Japanese epicures, and it accordingly fetches a high price.

"The fish are carried from the stage into the shed; each fish is placed in the salter's basket; he throws three hand-fulls of salt inside, then dusts the outside with salt and throws it on the stack where the fish are placed in layers, on the completion of each layer, it is heavily dredged with salt, one picul (133½ lbs.) of which is used for every 40 or 45 fish. A stack complete generally contains 10,000 fish. After some time, the fish having been sufficiently cured, the stacks are unpacked and the fish hung up to dry: when dry they are ready for export.

"The livers contain much oil, but they are not utilised.

"The estimated value of each fish cured is five cents, the cost of one picul of salt is two boos—50 cents, all the fishing gear, &c.

\* This information was obtained by Captain Bridgford from Lieut. Day, U. S. N., before the completion of his survey of the river mouth, (see following). Mr. van Gendt's determination was 213 millimetres above and below mean tide-level.

is brought up from the southern ports mostly from Osaka and Yedo.

"In the year 1872 the salmon caught amounted to 37,484 sokus plus 8 fish.\* 1 soku=20 fish; total fish 749,628, they average when cured 6 lbs. (Jap.) in weight equal to 8 lbs. English. 45 Ainos and 67 Japanese seines were used in the fisheries. The Government tax is twenty-five per cent. paid in kind. The Ainos pay no tax."

We learn farther from Lieut. Day's report (*Reports and Official Letters of the Kaitakushi*. Tokio: 1875) that the twelve feet channel though the bar at the mouth of the Iskari was then (1873) 1,200 feet long and from 600 to 800 feet wide, deepening outside to three fathoms and more, and that a mile off shore "there are six and eight fathoms of water, and a clay bottom." He then remarks:—"It may safely be said that the position of the channel on the bar does not remain constant for more than one season. The mouth of the river being exposed to the north-west and westerly gales, which prevail during the winter months, the sand is washed in and deposited on the bar, filling up the channel, and as there is not sufficient current in the river during this season to oppose the action of the strong winds on the sea-water at the month, this deposit remains until the spring, when the ice breaks up and the freshets occur, which scour out a new channel. At the same time comes the general change in the winds. The south and easterly winds set in and last till the early part of September, during which time the water is perfectly smooth on the bar, and the navigation in and out of the river very safe." \* \* \* "A tide-gauge was established in the basin of the piers on the right side of the river opposite the town, \* \* \*. The observations were made every twenty minutes for twenty-three consecutive days, the result of which shew a mean rise and fall of seven-tenths of a foot. At times, however, during westerly gales the gauge would show a rise of two feet and more, the rush of water into the river being considerable. From the current observations taken on different days we found the mean velocity to be two and one-half miles per hour. The fact that such a current exists with so small a tide opposing it is sufficient reason for supposing that the channel on the bar is kept clear during the summer season."

\* Equal to 12,500 *koku* (60 fish or three *soku* being one *koku*). In each of the years 1869 and 1873 the catch was about 15,000 *koku*, the price per *koku* being in the latter yen 7.60 on the spot, and the duty twenty-five per cent., gave a return to the government of yen 28,500. The following year, however, the catch could not have been over 8,000 *koku*, but it has sometimes reached 20,000. I estimated the total produce of Yezo in 1874 to be:—Kas, Oil, and dried Herrings 680,000 *koku*; Salmon and Salmon-trout, 60,000; Seaweed, 90,000; Cod-fish, 4,000; Irico, Awabe, and Cuttlefish, 1,900; Deer-skins (60,000 skins) and horns, 600; or a total of 836,500 *koku* at an average of five yen per *koku*, representing over four million yen. In 1881 the total produce of Hekkaide (Yezo and the Kurils) was reckoned at 1,800,000 *koku*, owing to the depreciated currency, equivalent to twelve million yen; on which the government tax,—on an average of one-sixth—was about two millions (otherwise given as 1,440,000); but the 'net' return to the Finance Department by the Kaitakushi figured only as yen 757,398 in the official returns. How the difference was accounted for in the books of the Department history "sayeth not."

Lieut. Day's survey carried 21½ miles above the month shewed "that there is a good channel, with an average width of 360 feet and a depth of three fathoms and more" for that distance; but that at 5½ miles above the mouth of the Barato river "it gradually shoals to 16 feet," beyond which—the examination having been no more than what is called a "reconnaissance" he remarks—"the channel varies, but in no place is it less than fourteen feet" as far as Horomoi-buto, 35 statute miles from Iskari. This general statement will not, however, now apply exactly, because within the last few years some awkward shoals have formed on the main river between the mouths of the Toyohira and Yebets.

Regarding the levels on the lower Iskari they do not appear to have been correctly determined until Mr. G. G. van Gendt, an experienced hydraulic engineer, instituted a careful series in connection with a contemplated improvement of the river mouth,\* which project was only abandoned when the Otaru, Sapporo, and Poronai Railway was decided upon. Previous to this the idea was—following Mr. Lyman's suggestion—to have connected the Poronai coal-field with the Iskari at Horomoi-buto, and employ water transport from thence to the sea. The reason for the change does not appear clearly. It is generally believed, however, that the money appropriated for the coal line was diverted from its original object and applied to the construction in the first instance of the railroad from Otaru to Sapporo—a great convenience to the officials at the 'capital' who frequently run down to Otaru for a 'spree.' When the line was so far complete, there was of course no question as to its extension to Poronai, for which the central government had to find the funds, the immediate connection being the more urgent because Poronai coal-field was to supply the fuel for the Kamaishi iron works, which now that the connection is complete it is reported are to be closed! The ins and outs of official 'lobbyism' in Japan are indeed inscrutable.

Notwithstanding all I have drawn from others, there are still left a good many blanks in our knowledge of the upper Iskari, but a late exploration of that region by Mr. N. Fukusi, chief of the survey department at Sapporo, permits of my filling these to a certain extent. In the first place as to the fall of the river. In its lower course, that is to say below the Kamoikotan rapids, it is very slight, the levels taken showing as follows above the sea:—Hokomoi-buto, 30 feet; Shibets-buto, 45; Urashinai, 60; Urin-buto, 100; the foot of Kamoikotan, 300; and at the Aibets, 630. Thus for the lower 120 miles from the sea to the mouth of

\* As one instance I may mention that Lieut. James R. Wasson, who in 1873 signed himself 'surveyer-in-chief' to the Kaitakushi, "found the fall"—I quote from the *Reports and Official Letters*—"to be eighty feet from the north end of "Sapporo" (the lowest part of the town) "to the "mouth of the Barato" \* \* \* the distance "being eight miles." Whereas Sapporo is only sixty feet above the sea. It should also be noticed that the survey of the lower portion of the Iskari cannot be made to fit in with later land measurements, an error possibly accountable for by the system of sextant angles, adopted in the former case, accumulating error unchecked by azimuth observations, or independent geographical determinations.



the Uriu—the only navigable stream about Horomoi-buto—the inclination is only ten inches per mile; from there to Kamoikotan two feet per mile for thirty miles, but in the 30 miles above that, the inclination reaches seven feet per mile to Aibets. This last is however by no means uniform, for there are fifty-five feet according to Lyman to be allowed at the Kamoikotan Rapids, and Mr. Fukusi says that the river when it flows through the region above that known as Kamikawa bifurcates a great deal forming many islands, which indicates a moderate current.

Mr. Fukusi describes Kamikawa as a triangular shaped open piece of country mostly on the southern side about ten miles in a direct line on the general course of the river with a width of about seventeen, for a large part plain but otherwise moderate slopes and terraced-lands, covered with a luxuriant growth of the ordinary dry-land grass of Yezo, which is known as 'Kaya,' in distinction from the swamp 'Yoshi' grass. His report agrees with that of Captain (now Major) Bridgford, who it may be remembered was at the time considered to have formed a somewhat exaggerated opinion as to the capability of this part of Yezo for future settlement. It does not seem, however, that his views were so very visionary. The region only lies between fifty and sixty miles in a direct line north-east from Horomoi-buto; so that an extension of perhaps about seventy-five miles of the present Sapporo-Poronai railroad would place it within the pale of civilizing influence. The government has now under consideration the planting of some additional settlements in the Iskari valley, but I understand that in the first instance the probable location will be at or near the mouth of the Sorachi, where a considerable extent of available land exists.

While I must apologize for giving all the information in this paper as regarding the Upper Iskari from the observations of others, I do so rather than leave a blank as to a region which in time, as Yezo becomes peopled, must increase in importance; because when we speak of the agricultural capability of the island generally it must not be supposed that there is an unlimited amount of land suitable for farming purposes, and consequently the most favourable areas become of the greater importance.\*

\* On this point Mr. Lyman, in his *General Report on the Geology of Yezo*, from which I have already quoted so much, remarks:—

"The lower part of the Ishikari valley is a wide alluvial plain (mostly swamps) perhaps 600 square miles in extent or, including the upland alluvium, about 1,150 square miles in all, and in the lower part of the upper valley is likewise an alluvial plain but only of some 100 square miles of surface. The Teshio river, has near its mouth such a plain, with probably some upland alluvium, of perhaps 250 square miles in all. The Tokachi valley not only has wide bottom lands, but a large border of flat uplands, probably very ancient river bottoms, amounting all together to perhaps 550 square miles. The Shiribets has comparatively narrow bottom lands, but with the adjacent flat uplands reaching into the Iwanai valley on the north and towards Usudake on the south must amount to something like 200 square miles. Nearly every river, in short, has more or less of such bottom lands or flat uplands, and in the whole of Yezo they would all count up to perhaps nearly 4,000 square miles or about 650 square miles, or one eighth of the whole island. Probably still a much larger portion of the Island may become cultivated, as

Yezo as a whole is mountainous and forest covered, while large portions of it are of volcanic nature, and hardly anywhere has the soil been found to be very rich. We must not be led away by statements found in popular books of travel, such as for instance where it is spoken of as "fitted to produce crops as in America, for twenty years without manuring." Miss Bird and others of like calibre take very comprehensive views on such matters, but on what they base them it is difficult to discover. Certain it is, however, that they could not have consulted those gentlemen who have devoted their attention to the matter—the experts employed by the late colonization commission in the department of agriculture and horticulture—for so far as their experience has gone, the result has exhibited a want of inherent richness in the soil generally; so much so indeed, that after the first two or three years of trial one of the principal points which they impressed upon the authorities controlling the government farms, gardens, vineyards, and hop plantations, was the absolute necessity of artificial manure in quantity, without which the successful cultivation of exotics was impossible.

That the first impression gained from a cursory view of most parts of Yezo would not lead one to form an unfavourable view of the productiveness of the soil is true, because almost everywhere the traveller is struck with the luxuriance of the natural vegetation. But on closer investigation it will be seen that a large proportion of those wild plants are of such large leafed kinds as depend for vigour upon elements drawn from the air rather than from the soil. Besides, if especial notice is taken, it will be seen that round about the patches of land under cultivation near the villages—and they are really nothing more than patches—many abandoned places are to be found which have in former years been in use. Without local knowledge of the districts where such are seen, it would be supposed that much more land had formerly been under cultivation than at the present time; but such is not the case, for speaking generally the number of houses to each village is on the increase, and even beyond this the inhabitants are somewhat less addicted to depending entirely on the fisheries now than they were in former times. These spots were therefore abandoned because the exhausted soil had ceased to be productive.

Following Miss Bird's lead in speaking generally of Yezo—and it is a fault common to many travellers, and by no means confined only to those who have devoted a few weeks to Japan—we are unable on the whole to give a very favourable verdict as to the productiveness of the soil. In support of this view we have the evidence of the geological nature of the country, much of it so comparatively recent and volcanic as to be wanting in the elements necessary for a rich surface mould. The valleys generally contain the best land, and some of the river

has happened in Nippon. A large portion of the eastern corner of the Island, towards Kusuri and Nemoro, is made up of only low rolling hills up to perhaps 300 feet high above the sea. The greater part of the north-east coast has a narrow plain along the sea shore, from a few hundred yards to a few miles in width; and so have the northern fifty miles of the west coast, and Volcano Bay and the coast east of it."

bottoms are fairly productive, but even these favourable positions are only rich in comparison with the poorer uplands, being composed of nearly the same elements but in the form of alluvium or detritus in a more mixed, finely divided, and more or less decomposed state. But there are none of those great lacustrine deposits of decayed vegetable substance such as exist in some parts of the world; while an almost entire absence of calcareous matter accounts for the insufficiently decayed state of such vegetable element as enters into the composition of that fine dark coloured soil which takes the eye of the unsuspecting visitor, and which, together with the rank vegetation existing for a few summer months upon it, causes him to believe in its natural richness, and leads him to draw extravagant pictures of the neglected agricultural resources of Yezo. Still I will not dispute that there are "millions of acres"\*—including Miss Bird's "well-watered grass-land" which is one great swamp between Sapporo and the Iskari river—not only capable of being brought under cultivation, but land in abundance in Yezo probably superior to much in southern Japan. But to develop its agricultural resources will require much the same high manuring as is habitually pursued by the Japanese, by whom the soil, owing to its inherent weakness, is used solely as a receptacle for fertilizers, and in which system of cultivation "they are so eminently successful." Under such high farming Yezo may be capable of supporting a large agricultural population notwithstanding its somewhat severe winter climate; but that you have only to plough and replough, and raise successive crops for a quarter of a century without manure, is a chimera hatched in the brain of a fleeting visitor more inclined to see things *couleur de rose*, and accept random statements at the hands of persons ignorant of the nature of the country or unwilling to imbibe the truth, than to obtain information from authoritative sources.

## XXI.

## THE ISKARI VALLEY.

The Iskari valley, to which our attention in this chapter is specially directed, is of considerable extent. Captain (now Major) Bridgford estimated the "watershed" at 3,500 square miles; while Mr. Fukusi has reckoned the actual valley area, clear of the mountain slopes, at 770 million *tsubo*, or as nearly as possible one thousand square miles. This, of course, is inclusive of large patches of swamp—the "well watered grass land" of *Unbeaten Tracks*—and much otherwise unsuitable for agricultural purposes. Still this valley is pre-eminent in Yezo; the next largest being that of the Tokachi as yet but imperfectly explored which, opening towards the Pacific on a very exposed part of the south-east coast, has not yet, perhaps, attracted the attention it deserves.

The chief tributaries of the Iskari are the Toyohira on which Sapporo is situated; the Ebets, made up of the Chitose and Yubari rivers; the Ikusumbets or Horoimoi; the Sorachi; and the Uriu, which from the reports of Mr. Fukusi's surveyors who have been

up it for a considerable distance is the only branch navigable for boats above Horomoi-buto. Without noticing the affluents above Komoikotan Rapids which go to form the upper waters into a river of some magnitude, the lesser tributaries are the Shibets, at the mouth of which the convict establishment of the same name stands; the Tobets, on which the Date settlement is situated on the north side of the main river; and the Shinoro, Hasabu, and Barato streams which in different channels find their ways from Sapporo and its neighbourhood and fall into the Iskari only ten or twelve miles above its mouth, yet fifteen below Tszu-iskari, where the Toyohira which also passes by Sapporo makes its junction. The meandering courses of these streams afford good indication of the low and level nature of the country intervening between them; while the practicability of going by boat over the greater part of this region at the time of the spring floods ought surely to convince the most incredulous person of the present value of the "well watered grass land" and "extensive prairies" we are told may be seen from the spur called Maruyama of the mountains west of Sapporo.

A peculiar and very noticeable feature on the lower Iskari and its tributaries—I cannot speak from personal observation above the Horomoi—is the fact of the immediate banks being almost invariably higher than the country beyond; and this is so decidedly the case, that advantage is usually taken of those ridges for roads and paths. I account for this by logs, sticks, leaves, &c., which are swept down by the river when in flood, catching in the bushes and trees along the sides, lodging there, decaying, or being covered by alluvium, and gradually forming solid ground. So marked is this that when you go 'across country' by boats, as I have said above it is possible to do during high-water, it is always when you get to the immediate bank of the river that there is the chance of your boat grounding. The lower river is by no means interesting to travel upon. There is a monotonous tameness in its canal-like form and muddy shores, with a surfeit of heavily timbered banks. It is all very well for a few miles, and as a change from the impetuous watercourses of Yezo generally; and on a fine warm day when there are no mosquitoes or flies to bother you, to float along quietly in a good 'dug-out' canoe is pleasant enough; but when point after point is rounded and bend after bend only displays the same unvarying feature of river scenery, the thing becomes tiresome, and one hankers after a change of some sort. My experience on this river as I have observed before, has not been great, for although many opportunities offered I never availed myself of them to reach the upper river by water, and thus have had to draw upon other travellers for what information I have here collected regarding that no doubt very interesting region.

There is an advantage the traveller has now-a-days, namely, that by taking the 'cars' at Otaru or Sapporo, he will find himself dropped at Horomoi-buto, thirty-five miles up the Iskari, in as few hours as it would have taken him before days to accomplish by boat or canoe; still he has over a hundred miles of river before getting as far as Komoikotan. Thirty-eight miles of this, however,

\* Mr. Lyman's estimate (see previous note) was two and a half millions, or about one-eighth of the island. One-fifth is the proportion of Japan proper said to be under cultivation.

will probably be got over next season by the construction of a road to the mouth of the Sorachi; an extension of which, or possibly a railroad all the way,—which would not be so very great an undertaking—may be looked for, I think, within the next few years, and will place the Kami-kawa region above the rapids within easy reach of even ordinary tourists.

I have so far only referred incidentally to the Poronai coal region, nor do I intend now to do more than draw attention to it, because any description that I could attempt would be so imperfect that I should myself be ashamed, and others would not thank me for it. I may say therefore that the nearest part of the ground may be reached by the Sapporo-Poronai railroad, which will deposit you at the mouths of the mines now being worked thirty-five miles from Sapporo about E.N.E. From thence the veins of coal have been traced cutting the valley of the Ikusumbets about three ri above where the road leaves the main valley (Poronai-buto), and outcrop again about the head-waters of the Sorachi to the north-east. It is also considered to be the south-easterly extension of the same formation which shows itself in the valleys of Saru, Nikap, and Sitsinai on the Pacific coast. These were all pretty thoroughly explored and mapped by Mr. B. S. Lyman (chief geologist) and his assistants; full particulars of which work will be found in the *Reports and Official Letters to the Kaitakushi*, which volume I have elsewhere referred to,\* but which I would here draw more

\* Also in that gentleman's *General Report on the Geology of Yezo* published subsequently (1877) by the department, from which I make the following extract, specially in reference to coal:—

"*Useful Minerals.*—Of the useful mineral substances of Yezo particular mention may be made of Coal, Iron, Gold, Sulphur, Limestone, Gypsum, Water (both the power giving water of rivers and the water of mineral springs), Oil, Lignite, and Peat; and some other minerals which exist at least in traces, such as Lead, Zinc, Manganese, Copper, Silver, and Orpiment.

"*Coal.*—The long section above given of the Horumui (or Brown Coal Bearing) Group shows that there are in the Ishikari valley at least ten coal beds that are more than three feet thick and at the same time of good quality, so that they may be considered as workable at once. The coal beds of Kayanoma and of the Makumbets coal survey correspond apparently to certain beds in that same section, and not improbably a like correspondence will be found between the coal beds of the Akkeshi coal field (at least one of them being workable) and those of the Ishikari valley.

"Besides the ten fairly workable coal beds there are nine others also three feet or more in thickness (one of them 77 feet thick) which however seemed of poor quality to the assistants (at that time perhaps too inexperienced) who found them in making the Nuppaomanai and Bibai surveys. They may, however, prove to be workable, especially if it should only require care in mining to separate much of their slaty matter, or if it should be possible to crush and wash them cheaply and coke them either by themselves mixed or with the coal of other beds.

"It appears, then, that of the measured workable coal of our surveys there are above water level 26,689,000 tons; and within 500 feet below it 41,656,000 tons; making above that very easy mining depth 68,345,000 tons. In addition there are between that depth and 4,000 feet below sea level probably 187,905,000 tons; making in all 256,250,000 tons of well ascertained coal.

"But, large as that amount is, it is very small compared with the whole amount of workable coal in Yezo. On measuring upon the geological map of the Island the extent of the coal fields, reject-

special attention to, as being for the great part—and certainly the most interesting portion—composed of reports on Mr. Lyman's special work for which he deserves the greatest credit. Indeed it contains evidence enough in itself to exhibit the laborious and painstaking way in which Mr. Lyman went about anything he undertook. The reader must, of course, make allowance for a few chimeras which Mr. Lyman occasionally indulged in his daily journal when his poetical imagination carried him away, and forget the nonsense about a "summer palace" for the Mikado in the "Cashmere of Japan," and the "Sleeping Beauty" which young America came to awaken. These are more than atoned for by the special information contained in his more formal pages.

I should be unjust if I did not also draw attention—which, however, I have otherwise in most instances done—to the reports of other gentlemen connected with the commission. These are in most cases likewise interesting and instructive, notably in the case of a *Botanical Journey* by Mr. Louis Boehmer to the eastern part of the island; but I have drawn so largely elsewhere on this, and on information otherwise supplied to me by Mr. Boehmer, that I need say no more in this place; while the results obtained as testified by the gardens, hop-fields, and vineyards, brought to such perfection at Sapporo under that gentleman's superintendence, are sufficient to establish his reputation as a horticulturist. But there is one omission in the volume under notice which mars its value. General Capron was accompanied from the United States by an able geologist Dr. Antisell. This gentleman and Major Warfield were deputed the first season to visit and report upon the southern portion of Yezo. The latter's report was published in full; it is rather an amusing document, some parts of it. At any rate it suited General Capron's views. Dr. Antisell's did not, and was therefore suppressed. I have heard that there was a slight difference of opinion between the general and the doctor as to whether the climate of Yezo should be called sub-tropical, or sub-arctic. Dr. Antisell was subsequently transferred to another department in the south, at any rate somewhat less sub-arctic than that of Yezo.

As to the ancient form of the Ishikari valley, it would seem from the configuration of the country, that it differed a good deal from what it is now. There are many evidences of the sea having extended much more inland than at the present day, notably apparent as pointed out to me by Professor Milne, on the line of the railway from Zenibako towards Sapporo, where there is every appearance of a former steep coast-line, besides the existence of those terrace formations—though in places they have slid down—apparent in many other parts of Yezo, to which Professor Milne has drawn attention in his *Evidences of the Glacial Period in Japan* ('Trans. As. Sec. Japan' 1880). It seems to me even likely that north Yezo was at one

ing in the Akkeshi field all but about 100 square miles near Kusuri and in the main field a strip along the west coast, both of which rejected portions seem to contain no workable coal, there are still found to be over 5,000 square miles or about 850 square ri, that are probably productive, including a small space where the alluvium of the Ishikari valley seems to cover up the coal rocks."

time separated from the south by a strait of sea; a south-souther east line drawn from the mouth of the Iskari is only forty geographical miles to the Pacific. On this the only elevated ground is composed of cinder and volcanic ash, generally in ridges in the natural form such would take when sliding down, or as great deposits subsequently cut by water-courses. Otherwise there is nothing as far as my observations go but river alluvium and washings from the neighbouring mountains. At about Yubuts, where this line strikes the south-east coast, there is an extent of low flat land more or less swampy, still always exhibiting its principal composition to be volcanic ash. Tarumai volcano, now even occasionally in active eruption, only fifteen miles from Yubuts, is the eastern shoulder of a great mass of volcanic mountains, while the Yubari group lies in little more than twice that distance to the north-eastward.

I do not place any value on the Ainu tradition as given by Mr Batchelor in his *Notes on the Ainu* ('Trans. As. Soc. Japan' vol. x pt. 2), but as it was the only geographical information he elicited from these people I transcribe it. He says:—"Formerly Yesso " or Hokaido was divided where the Ishikari " valley now is. The lower island was called " Madomai, and included all the land from " Hakodate to Usu, Mororan and Volcano " Bay. The northern island was called Maski " Shoya, and extended from Ishikari " Shoya on the north and west, thence round " to Membetsu on the east. The whole of " the Ishikari valley, together with the " adjacent mountains on the south and east, " were under water. After a time an earth- " quake, which lasted one hundred days, " turned the earth upside down, gave rise to " mountains, and the earth arose out of the " sea. The earthquake\* was a wave move- " ment. Before this time there were no

\* Actual earthquakes are not uncommon in Yezo as the following list compiled from some years observations at Hakodate—the later taken from records of the 'Seismological Society of Japan'—will show:—

	H.	M.	
1873—Oct. 30	12	15 p.m.	Slight.
" —Nov. 9	6	0 p.m.	Smart.
1874—Jan. 16	9	0 p.m.	Severe.
" — " 29	7	30 a.m.	Moderate.
" —Feb. 14	12	45 p.m.	Heavy 3 minutes.
" — " 14			Same afternoon an- other.
" — " 16	2	40 p.m.	Moderate but long.
" — " 28	8	30 a.m.	Moderate.
" —May 23	8	45 a.m.	Long, slight.
" —June 10	6	40 p.m.	Long and severe.
" — " 25	6	30 a.m.	Slight.
1875—Jan. 15	12	30 a.m.	} Several severe shocks.
" — " 15	1	15 a.m.	
" — " 18	2	10 a.m.	Single shock.
" — " 31	5	30 a.m.	Slight.
" —Feb. 15	11	10 p.m.	Long.
" —April 16	5	0 p.m.	Long.
" —Dec. 6	7	47 p.m.	Slight.
1876—Mch. 14	5	50 a.m.	Slight.
" —July 28	11	2 a.m.	Slight.
" —Sep. 6	3	45 a.m.	Rather strong.
" —Nov. 30	4	0 a.m.	Strong.
1877—Feb. 8	4	45 p.m.	Slight.
" —April 30	4	35 a.m.	Rather strong.
" —May 22	2	30 a.m.	Moderate.
" — " 26	1	15 a.m.	Slight.
" —July 9	7	50 p.m.	Slight.
" —Nov. 20	6	0 a.m.	Slight.
" —Dec. 23	7	39 p.m.	Strong.

" volcanos in Yesso, but when the quaking " ceased the volcanos rose as follows:—1st, " Abuta at Usu; 2nd, Sawara at the entrance " of the strait east of Hakodate; 3rd Taru- " mai at Tomakmai." As reference to a great earthquake, however, this may be of some value. Sawara-dake is a synonym for Komagatake north of Hakodate (see foot-note Chap. 2, *Japan Gazette*, 10 Feb. 1883), but Esan is the volcano at the eastern entrance of Tsugaru Strait.

The Ainu likewise hold a tradition, accord- ing to Mr. Batchelor, of a great flood,—but what natives in any country do not after they have been visited by Christian mis- sionaries. Mr. Batchelor very properly re- marks that he "is not prepared to say," whether this "has reference to Noah's flood." I was informed when I first visited the east of Yezo, that in the neighbourhood of Hama- naka, in the Akis district, the Ainu settle- ments were formerly very numerous, but they were swept away by an inundation, which I attributed to an earthquake wave—usually known as 'tidal wave.' Such visitations are of frequent occurrence now-a-days, for both the great Fern earthquakes of August 1868 and May 1877 were very sensibly felt at Hako- date and at other places on the Pacific Ocean coast of Japan. In the former case for a duration of four and-a-half hours the sea in Hakodate harbour rose and fell at intervals of ten minutes, shewing a difference of level of five feet as observed by myself (see *Scientific Opinion*, 1869); and in the latter case the effect was very similar, and the intervals of time alike. In both of these instances the velocity of the wave crossing this enormous distance of sea was, as calculated by Profes- sor John Milne (see *The Peruvian Earth- quake of May 9th 1877*, 'Trans. Seismological Society of Japan') to have been about five hundred feet per second. Also at the time of the Shimoda wave in 1854 when the Russian ship *Diana* was whirled round and round in that harbour, the Japanese at Hakodate tell of the sea overflowing most of the isthmus, and the townspeople having betaken them- selves to the mountain for a whole week.

1878—June 2	7	0 p.m.	
" —July 25	8	0 a.m.	Slight.
" —Aug. 14	0	50 a.m.	Slight.
" —Sep. 5	10	2 a.m.	Slight.
" — " 17	12	0 p.m.	Strong.
" — " 21	6	6 p.m.	
" —Nov. 5	0	45 p.m.	Strong.
1879—Feb. 2	7	38 p.m.	
" — " 24	9	55 p.m.	
" —Mch. 1	11	8 p.m.	Strong.
" —May 9	0	30 p.m.	
" — " 11	3	30 p.m.	
" —Aug. 7	7	40 p.m.	
" —Sep. 6	4	12 p.m.	
" —Nov. 18	11	30 p.m.	
1880—Jan. 11	8	12 a.m.	Strong.
" —Feb. 20	5	0 a.m.	Strong.
" —Mch. 6	8	0 p.m.	
" —June 24	8	40 p.m.	
" —Aug. 16	2	55 p.m.	
" — " 17	4	0 a.m.	
" —Sep. 4	1	0 a.m.	
" — " 29		night a.m.	
" —Dec. 6		night a.m.	
" — " 23	11	0 p.m.	Slight.
1881—Feb. 2	7	30 p.m.	Slight.
" — " 26	2	35 p.m.	
" —April 18	3	42 p.m.	Strong.
" —May 9	6	32 p.m.	
" —Oct. 2	9	30 p.m.	Slight.
" — " 25	9	26 p.m.	Strong.

## XXII.

## SAPPORO AND ITS VICINITY.

In any account of modern Yezo, or even Japan of later days, the omission of Sapporo would be a serious one, yet I have left it till the end of these notes. The truth is the task was one that I hesitated to undertake. I have seen it at successive stages of its growth, and under varying circumstances. At different times I have made notes upon it, but none of these will fit it at the present day. The child of a department now abolished, nurtured in its infancy, and carried through the first years of its existence in the strong arms of government, it now has all the character of a spoiled child, and the appearance of an exotic plant left to battle with a climate unsuited to its nature. Educated to regard itself as the capital of a large island, the centre of government for a region embracing a chain of islands reaching the confines of Russia; it falls as by a stroke of the enchanter's wand into comparative insignificance, and has henceforth to be known only as the official centre of a 'ken.' Shorn of its dignity and position as 'queen of the north,' the Sapporo of our day, can be looked upon only as a monster of unnatural growth retreating from an eminence which the great prospects held up before its eyes had caused it to aspire to. Never before perhaps in the history of Japan has the nation's money been dispensed with so lavish a hand to create a town, with such unsuccessful results, as in this prodigy of her modern and 'distinguished statesmen.'

Gaining bone and sinew from the nourishment of highly paid labour and extravagant contracts for materials, and several successive influxes of subsidised settlers of both the military and agricultural classes, Sapporo rapidly assumed the appearance of a thriving town; and having been in the first instance laid out on a regular system of streets crossing at right angles with a distinct official quarter, an artificial water-way cut through it, open spaces of government reserve lands, a substantial bridge\* thrown across the river with embankments to confine its course, schools, hospital, brewery, silk-reeling factory, saw-mill, foundry, and various other works carried out by government on an extensive scale, a large population was attracted to the place. Then a pretentious looking building was erected at enormous cost as a 'capitol,'† which with its cupola dominated the official quarter. Stock-raising and arable farms, extensive vineyards, orchards, hop and mulberry plantations were laid out. An agricultural college and farm of instruction were established. Stone quarries were opened in the neighbouring hills. Considerable expense was gone to in endeavouring to improve the water communication with the Iskari river, and large tracts

\* First constructed in two sections, the larger of which gave way. Afterwards in one span as it now exists, 190 feet between the abutments.

† This building does not exist now. It took fire and was entirely destroyed together with the official archives. It is curious that almost every department of the government has at some time or another lost its records in a similar manner. If one happened to be acquainted with the state of the accounts when these fires have occurred, I think it would generally be found that the particular time was convenient.

were cleared of forest to permit of the erection of houses in villages for the accommodation of subsidised farmers; while whole villages in the form of military camps sprang up like magic, where 'Samurai' were located as militia; and the hum and bustle of human life resounded on the banks of the Toyohira and the beautiful park-like country formerly the resort of herds of deer, was converted into a town of nearly ten thousand inhabitants,\* connected with a port on the coast by a line of railway of twenty-two miles. Such was accomplished within a decade.

That the wisdom of the scheme is to be questioned, there are I think not two opinions. Still the creation of Sapporo has tended to draw attention to a part of Yezo, which otherwise must have lain waste in the ordinary course of things for many years to come. Had however, the money expended upon Sapporo and its communications, been devoted to the encouragement of immigration into Yezo generally; to the improvement of harbours, the making of roads, assistance in coast-transport; or a moiety set off against a great reduction or entire abolition of taxes on the fishing industry—the principal resource of Yezo—we should have seen that country to-day, in a much farther state of development than it is, and of a more permanent character. True, as has been often said, the expenditure of government money no matter in what way it was done, has benefited many; it has gone into the pockets of the people, and allowed them to undertake many operations which otherwise they would have been unable to accomplish; while the examples of the actual government undertakings may be of advantage, either as methods worthy of imitation or to be avoided as the case may be. Nevertheless if we look at the whole thing with a comprehensive view from an impartial standpoint, it must be apparent that the results are not of that character, nor will the effect be of that permanent nature on the country, that might reasonably have been expected to result from so enormous an outlay, had it been dispensed in a manner more suited to the capacity of the island for improvement.

The magnitude of the government undertakings at and about Sapporo are, however, not nearly so great as many persons suppose. Enormous ideas have been disseminated through the incompetence of writers of consular and missionary reports, farther

\* According to the government returns for July 1882, the actual population of the town of Sapporo (excluding the outlying villages which are frequently included by persons who 'jump' at statistics) was 9,622, of whom over one thousand belonged to the 'Samurai' class. The total population of Yezo during the same year was reckoned at 226,884 belonging to 40,810 families, being at the rate of about five-and-a-half per family; and divided between the three prefectures in round numbers:—Hakodate ken 25,000, Sapporo ken 14,000, Nemoro ken 2,000. Of this number 16,933 persons were Ainu, or only seven-and-a-half per cent. Taking Yezo, according to Mr. Fukusi's calculation, at 5,860 square ri, or approximately thirty-five thousand square statute miles (a greater area than Ireland), gives six-and-a-half persons per square mile. If the Kuriles were included the proportion would of course be still less. I have not all late details at hand but it would appear that about forty per cent of the population of Yezo is congregated in the towns of Hakodate, Fuku-yama (Matsumai), Esashi, Otaru, and Sapporo.

distorted by popular authors. For instance Miss Bird, though she was never at Sapporo, tells us of the "extensive saw mills" and "large flour mills" there, and of "a capitol copied from the capitol at Washington." It is only necessary to say that while the last statement is entirely untrue, there is only a very small amount of sawing machinery driven by water and steam power, so little indeed that the limited resources of the Toyohira valley afford a larger supply of timber than can possibly be used, and the flour-mill is but a diminutive affair. Then the brewing and silk-reeling establishments are little more than model factories; and the general manufacturing yard of the section of public works, does not approach in size what an ordinary private builder would consider necessary. If we add to these some buildings erected for silk-worm feeding, canning fruit, making 'soy' and 'miso,' we shall have enumerated everything in that line. As to farms and gardens, there are in and about Sapporo, some 350 acres in crops and grass known, as the "college farm;" from 70 to 80 acres of vineyards; mulberry plantations covering about 225 acres;\* a sheep-farm with foreign-grass meadows attached, about 140 acres in extent; and some well laid out orchards and vegetable and flower gardens, but of no great capacity. About five miles distant is also another farm kept up principally for the support of stock, which embraces about 260 acres of a narrow part of the Toyohira valley.

I have not included in this enumeration, the land occupied by the military and other settlers. These patches are scattered around close to and at various distances from Sapporo. In the case of the former, the dwellings are arranged in the form of cantonments, or in long lines, each militiaman owning the land immediately at the back of his house, or a section marked off at a distance. The lots of the ordinary settlers, are also mostly laid out in the same regular manner, the people having been in the first instance located and subsidized by the government. Other land, however, in more favourable situations has been taken up by independent settlers, and some of the townspeople have purchased suburban lots and devoted them to orchards and gardens. Nor have you to go outside the town itself to see very fair gardens, for when originally laid out, the official quarter was divided up into square blocks of one 'cho' each (about twelve acres), and these in few cases have been subsequently divided up into less than quarters, so that there is plenty of space round the houses for garden cultivation, which the officers still in government service, retired officials, and ordinary people—who are not now debarred from purchasing within this quarter—engage in; the soil, although light, being fairly good, and, with the assistance of manure, capable of producing all the common vegetables and fruits of a temperate climate.

\* A large proportion of the best land at Sapporo is wasted on these vineyards and mulberry plantations, which can never become productive in that climate. Besides, through some senseless croquet in brain of the late chief, numbers of trees have been left standing in the fields, gardens, and pastures, which tend to reduce the amount of productive land still more; while they are entirely unnecessary for shade purposes in such a climate.

Sapporo is, in my opinion, a very pleasant place in summer. The climate is at that season all that can be wished for.† While the heat is never excessive—except perhaps for a few days—the nights are always cool, and the air fresh and invigorating. You are there exempt from the fogs and rainy weather which from a proximity to the Pacific interrupt the summer season at Hakodate and the south-east coast. The cold damp easterly winds there experienced seldom reach Sapporo, the moisture being taken out of them before they get so far inland; so that it frequently occurs that when there is strong wind and rain about Yubuts and along the coast towards Volcano Bay, the weather is fine, clear, and enjoyable at Sapporo itself. Indeed if it were not for the mosquitoes, which, owing to the amount of swampy land in the vicinity, are pretty numerous at night, I don't imagine it would be easy to select a more agreeable place of residence in this part of the world for spending a few summer and autumn months. Of course the want of

† From the records of the survey office at Sapporo, kindly placed at my disposal by Mr. N. Fukusi in charge of that department, I find as follows:—Sapporo has a mean annual temperature of 45°. The three summer months (June, July and August) being respectively 60, 69, and 71 giving an average for that season of 67°. The four winter months (December, January, February, and March) are 27, 21, 24 and 32; or an average of 26°. The extremes yet recorded have been 93° above, and 14° below Zero Fahrenheit. The total precipitation, rain and snow (melted), is 45 inches. Snow (unmelted) 147 inches; this latter during one winter (1879) having reached 212 inches, over 17½ feet.

Comparing the records from the other meteorological stations maintained by the government in Yezo, I find that:—*Rumot*, situated on the north-west coast nearly a degree north of Sapporo, has a very similar climate. *Nemoro*, at the eastern extremity of the island—of which the records as yet are rather imperfect—average 2° less annual temperature, being 8° cooler during the summer, and 2° warmer in winter; while the precipitation is less owing to a smaller snow-fall. *Hakodate*, which is influenced by the warm current passing through Tsugaru Strait, and by moisture-laden winds off the Pacific Ocean, has a mean annual temperature of 48°, three degrees above Sapporo, though the three summer months are the same. In winter it is five-and-a-half degrees warmer on the average, while the absolute minimum reached has never been within sixteen degrees of that experienced at Sapporo. The total precipitation is five inches more, though the depth of snow is hardly over one half that of Sapporo. The barometer stands highest in October, November, and December, and lowest from May to August. The humidity of the atmosphere is greatest in June and December. Westerly winds predominate from October till April, having a northerly tendency from December to March. East winds predominate in June, July, and August, but are about equally divided with south in May, and with west in September. This last circumstance may be accounted for by the breaking up of the hot season usually occurring between the 10th and 15th of the latter month, the change in temperature being then very marked.

Aurora is seldom seen in Yezo. It has never, I believe, been reported from the meteorological stations, and Mr. Fukusi—the chief of the survey—has only heard of it having been noticed once, which was at Sitsinai on the south-east coast about five or six years ago.

I may note that Hakodate has the credit of being the first regularly established meteorological station of the Japanese government, and indeed probably the first place at which systematic observations were made by anyone in Japan; Dr. Albrecht of the Russian Mission having instituted them as early as 1859.

society is a drawback which cannot be got over. There are only two foreign gentlemen now left there in the employment of the government, and they have their daily duties to attend to. In the way of house accommodation no difficulty need be apprehended, as the large government hotel, built for the reception of the Mikado, is now open to anybody, and is maintained in foreign style. There are also a number of native inns, though these are not so good as they might be; besides, if one is making a lengthened stay it is not difficult to rent a small house by the month. The traveller must not, however, calculate upon being able to live at Sapporo as cheaply as he could do in the south; indeed this remark applies to Yezo generally which may be looked upon as the California of Japan. The reason for this is not far to seek. Almost every article required for use in daily life, even down to the straw sandals is imported. The staple food, rice, is grown only to the most limited extent in peculiarly favoured localities; and 'sake,' 'misô' and such like are used in larger quantities than they are manufactured in the island. While although firewood, charcoal, potatoes, and vegetables generally are sufficiently abundant, the value of labour is so disproportionate to other parts of Japan owing to the demand for it in the fisheries, that even these things are not cheap. Of course this state of things will gradually correct itself to a great extent by the influx of population; but still unless the natives abandon rice as their principal food, we must not expect that the price of living, and consequently labour, will ever fall to a very low standard. Possibly it is as well that the latter should not, looked at in the abstract; but I cannot see that it can benefit a people to import their food, when they might live upon the productions of the country. That the price of labour should be high in proportion to the aspirations of the people in regard to house accommodation and comparative luxury is well enough, as these requirements stimulate the labourers to earn wages; but with a people like the Japanese of to-day who are content with so little, and who adopt any immediate expedient notwithstanding the inconvenience and discomfort, rather than invest in improvements of a permanent character, it seems too much to expect, that anything else than the dearness of their national food can stimulate them to extraordinary exertion.

Since the breaking up of the Kaitakushi, and the transfer of the breeding farms to another department which purposes to devote less money towards their maintenance, the visitor to Sapporo will find that he has certain advantages over those of former times in being usually able to obtain both fresh beef and mutton of good quality, while the gardens and orchards always afford a supply of vegetables and fruit in the seasons.\*

\* In 1882 we had strawberries first on 29th June; Indian corn was sufficiently ripe for the table by the middle of August. Some fields of wheat were fit for cutting by the end of July, by which date the hay had all been gathered. There are plenty of grapes, plums, apples, and pears in autumn. The potatoes grown from American seed are exceptionally large, quite sound, and of excellent flavour. There is nearly always a constant supply of fish, those from the sea being brought by rail from Otaru, while the Iskari furnishes an abundant supply of salmon in the season.

Add to this the water is pure, abundant, and remarkably cool. It percolates through a bed of gravel, which is the substratum about the town, where a well may be sunk and good water obtained almost anywhere. I have tested the water in an ordinary shallow well, and found it in the hottest summer weather not over 50° Fahrenheit. Good milk is daily brought round, and Sapporo beer fresh out of the brewery cellar is not to be despised as a wholesome summer drink. If I were to say that Sapporo possesses all the essentials for a summer sanitarium I should be going too far because there is no sea-bathing there. This, however, is obtainable by running down the railway about ten miles to Zenibako, where you have the choice of two kinds of beach for bathing, a stony one or a sandy one, for it is here that the flat land of the Iskari valley meets the steep and rocky shore which extends thence to Otaru. Otaru itself is by no means a bad place to stop if you wish to be near the sea, and has the advantage of very fair hotel accommodation. Although at Sapporo there is no sea, still there is a very good substitute in the clear water of the Toyohira which runs alongside the place, and if you are so inclined, you can walk out of your door of a morning and plunge into the rapid stream of the canal which is led for a considerable distance through the town.

There are very pleasant walks about Sapporo, even within the limits of the town itself; for, with the gardens, mulberry plantations, hop fields, and the like scattered through the place, it is only the actual mercantile part that is at all thickly built upon. Then there are nice rambles along the river banks either above or below the bridge; and a couple of miles take you to the foot of the mountains to the westward, from a spur of which known as Maru-yama you obtain an extensive view overlooking a large portion of the Iskari valley as far as the sea, and to the distant fine ranges of mountains on the coast and in the interior. Longer excursions may be made on horseback, or wheels—for there are fair roads running in several directions; or the river may be descended by boat or canoe, as immediately below Sapporo it changes altogether in character, from a rapid, stony bottomed stream, to a deep, smooth-current, with alluvial banks, offering no impediment to such kind of navigation. There is moreover the railway which will either take you to the coast, or you may go by it five and thirty miles into the interior as far as the coal-mines at Poronai. Indeed the summer visitor will find many means of amusing himself in such excursions, and be able to pass away much of his time quite pleasantly; and if he be a lover of sport, he may during the right season commencing within a few days after the middle of June, sometimes obtain fair

Small trout are always to be obtained, and the river and artificial water courses are full of the eight-eyed lamprey ('yatsu-me' of the Japanese) by the end of June. There are some enormous sea-trout—'ito'—taken in the main river. I saw a couple on the 3rd of July which must have weighed about thirty pounds each. The salmon-trout (spring-salmon) are taken on the Iskari about Bara-to, early in June, but as elsewhere mentioned do not usually ascend the river as far as Sapporo until two or three weeks later. Some of these fish—which are always in fine condition attain a size of from twelve to fifteen pounds, though the average is much less.

reward for a little hard work with his rod, by landing a few clean-run salmon-trout\* out of the Toyohira; or small brook-trout from the lesser streams. If you strike the right weather, the right water, and a good run of fish in the river, there is more despicable employment than a day's fishing at or near Sapporo. There is little skill required about it, for I myself, though I don't pretend to be a good fly-fisher, have landed fifteen fish weighing over sixty pounds, within four hours and-a-half. However this will not be accomplished every day. You want everything in your favour as I have said, and a good sized pool where the fish congregate, intermediate between more rapid reaches of the river. There seems to be a good deal of variation in the salmon-trout both in size and in quality. I have seen those taken on the lower river up to about fourteen pounds, and with the fly we have caught them within two or three ounces of nine pounds weight. The season for this kind of fishing is soon over; the great bulk of the fish passing Sapporo for the upper waters within ten days or a fortnight; but

---

\* Depending on the locality salmon-trout enter the Yezo rivers from May to July; salmon from the latter part of August to November. It is impossible to obtain any reliable data as to their breeding, but those Japanese best acquainted with their habits have informed me that the ova takes fifty days to hatch, and that the fry are out in the case of the salmon-trout in September and October, and the salmon in January and February. Some say that the salmon fry run down the rivers to the sea in April, when they are about three inches in length, others say June, and that it is the young salmon-trout which descend in April. I think it possible the latter descend the same autumn they are hatched. The natives also differ as to the time the young remain in the sea before returning as full grown fish, some give two years, others four or five. However this can only be a matter of surmise on their parts. They account for the discoloured appearance of the salmon—salmon-trout are invariably bright and clean when 'running'—by saying that they enter the rivers before their spawn is ripe and run out again, playing about in the fresh and brackish water near the river mouths for some time. As to this being the cause of the unhealthy appearance of the fish is in my mind very doubtful. In some of the species of salmon on the Pacific coast of North America the same thing occurs, their being found to be worthless for canning purposes. American naturalists, who have studied the question, have come to the conclusion that it is matter of season of the year, these particular kinds attaining maturity if it may be so called, earlier than the others; and the river water not reaching the temperature suitable for them they are unable to ascend when they are in prime condition, and are therefore found to be discoloured while still in the salt water. It is an interesting fact for the consideration of naturalists that some of the salmon on both sides of the Pacific have equally this peculiarity. A possible explanation may be, that in ancient times the rivers attained a congenial temperature earlier in the season than now, and that these species have not yet had time to modify sufficiently to suit themselves to the altered conditions. With regard to the two distinct fish in Japan, the salmon or 'Shake,' and the salmon-trout, spring-salmon or 'Masu' (there may be several species or sub-species of each), considering the times at which they enter northern and southern rivers, and those rivers where much cold snow-water comes down late in the summer, or those which clear of snow-water earlier, I believe that the salmon-trout waits till the water has risen sufficiently in temperature to accommodate it, while the salmon—an autumn fish—waits till the summer temperature of the rivers has fallen to that which suits its nature.

scattered fish may be taken still for two or three weeks later.\*

The site on which Sapporo is laid out is a pretty piece of park-like country. Almost perfectly level, it is scattered over with oaks and elms, and some meandering streams, and overflow channels of the Toyohira river pass through it. A part has been occupied by the town, and most of the remainder is divided off by port and rail fences enclosing gardens, arable land, mulberry plantations, vineyards, and pasture and hay fields; but as a great many trees have been left standing—many more I think than necessary for shade purposes in such a climate—the original appearance of the country has been little altered. This is so much the case, that unless they are pointed out to you, it is difficult to recognise the farms and other creations of the late Kaitakushi, as they are scattered about and hidden by trees from many points of view. Since the former 'honcho,' or chief government office, was burned, the most prominent building is the hall of the college with its clock-tower, adjoining which are other good sized buildings connected with the same establishment. The hospital and prison are on the north-east boundary, the silk-reeling factory, brewery, and public-works yard between them and the river. The 'kencho' offices are now in a building formerly used as a girls' school facing the principal street of the mercantile part of the town; but those used by the sub-departments are scattered about in the most indiscriminate manner, so that if business should oblige one to visit them, the conviction is soon gained as to Sapporo being modelled in one way at least after the 'city of magnificent distances,' though I cannot follow other travellers in ascribing to it any closer resemblance.

The railroad passes the northern edge of the town, running along one of the nearly east and west parallel roads,† without any fence. Why it should not have been brought through the middle of the town, there being an open strip of reserve separating the official and mercantile quarters which would have suited it exactly, it is difficult to see. Its position has necessitated the construction of a branch to connect with the

---

\* The dates of the first salmon-trout taken with the fly in the Toyohira at Sapporo are:—1877 June 29, 1878 July 5, 1879 June 29, 1880 June 16, 1881 June 21, 1882 June 14. The amount of water in the river has of course much to do with the running of the fish, but they seem also to be influenced by its temperature. They commence to take the fly when the water reaches 55°, and are seldom caught after it get above 65°. Thus in 1881 the river did not reach 55° until the 20th June, the first fish being taken the following day; while in 1882 this temperature was reached about the 10th, and the first fish was caught on the 14th. There is a water gage at the bridge at Sapporo, but of course this is not altogether to be relied upon owing to the shifting nature of the river bed; however during the two years here referred to, the best fishing was when the water there was from half a foot above to an equal distance below the zero mark.

† The Japanese surveyor who lined out Sapporo, evidently applied the magnetic declination the wrong way; which being about five-and-a-half degrees, has thrown the whole place out one point of the compass from the cardinal points, with which it was doubtless the intention to make the lines conform. Thus a street which should be due north and south is in reality N. by W., and S. by E., all other lines being correspondingly slightly askew.



public-works yard, through which it might otherwise have passed. Not only this, which would have been much more convenient in every way, but the crossing of the Toyohira could thus have been alongside the former bridge, when the protective works on the river banks would have served for both bridges, and halved the expense. As it is, the railway line crossing about a couple of miles below by a bridge which has already once washed away, and which without much greater protection than has yet been put near it, stands every chance of finding itself some day isolated by a new channel cut through the alluvial banks, which no very extraordinary flood of the river is likely to accomplish.

In leaving Sapporo by rail for Otaru you at once plunge into a low, swampy, and thickly wooded region, which extends in this part of the Iskari valley right to the sea-coast; though the line itself has been carried so as to skirt the lowest terraces of the mountain range on the west side of the valley, in order to allow of obtaining ballast for the roadway. At Zenibako, about half way, the scene changes, and thence to Otaru the track is laid along the shore, the sea in many places dashing right up on to the line. There is so little interval between the high banks and steep cliffs, which in places appear actually to overhang the line, that houses and sheds of the fishermen which line this shore are scraped almost by the sides of the carriages. There is no protection whatever against people straying on the track, indeed if it were fenced there would be no means of getting between house and house, for the former road has for the greater part of the distance been monopolised by the railway. An insignificant tunnel or two have been necessitated by projecting points of rock, but when Otaru is reached the line is curved inland and passes at the back of most of the town, through small cuttings and tunnels in soapy-like clay, and by wooden viaducts over the small valleys. It strikes the main road again before reaching Temia, where it ends at a long piled pier, runs out into the harbour for vessels to lie alongside of, and discharge into or load from the trucks on the rails.\* The workshops are situated at this terminus under a steep wooded bank beyond which there is no road along the shore, which becomes rocky and precipitous. From the top of these heights a fine view is obtainable of the bay; Otaru with its broken shore-line, picturesque bluff, and varied back ground of mountains, and its buildings lining the shore, and dotted upon the lower hills; the wall-like cliffs of Kamoi-kotan farther across the bay; and the low flat of the Iskari valley in the far distance to the eastward. In fact the view from this position, or better perhaps as you come in from sea, and after rounding Takashima Head it breaks suddenly upon you, is one of the sights of Yezo which impresses me the more every time I look upon it.

Passing out of Sapporo on the continuation of the railroad completed last November,

\* The rails used in the construction of the whole line are only thirty pounds to the yard. This pier which was at first thirteen-hundred feet—but has been since slightly extended—was built under Colonel Crawford's direction in, it is said, only thirty-two working days. Of course it is not of a very permanent nature. Indeed any structure of unprotected timber in the sea-water could not long withstand the attacks of worms.

the best private farm yet in existence is run through. Then the Toyohira is crossed and a dense forest is entered. This is only broken by an occasional swamp when the ordinary trees of the drier ground are unable to exist. Some 'oak-opening' country is passed over, where, however, the trees are rather too thickly grown to permit properly of that appellation, and some streams are crossed by very temporary looking low wooden bridges, until a steep grade is met with which carries the line on to some high ground where a large proportion of 'todo' spruce exists. This is called Naporu. A very insecure looking 'trestle' carries the single line of rails over a deep ravine,\* and thence continuing through the forest for some miles you suddenly emerge upon a patch of open grass covered country bordering the Ebets river. Here is a station, distant 13½ miles from Sapporo, for the accommodation of a small village of military settlers located at the junction of the Ebets with the main river, and to afford connection with Tszu-iskari at the Toyohira mouth about a ri lower down. The bridge over the Ebets is of wood, a substantial looking structure supported on piled piers. Thence the line is over a low lying flat near the Iskari, raised on a small embankment to guard against the floods to which all this region is subject. At five miles distant the Horomoi river, a mere big ditch cut in alluvium, is crossed by a bridge, smaller of course, but of similar construction to that at Ebets. This place is known as Horomoi-buto, and is the point of departure for Shibets convict settlement, and the upper part of the Iskari.† The line then on towards the Poronai Mines follows the general direction of the Horomoi, or as it is called farther up Ikusumbets, being obliged to cross it on account of its tortuous course, till it enters the hills, and striking up a side valley from Poronai-buto for about three miles, ends at the coal mines now being worked thirty-five miles from Sapporo, amounting in all thus to fifty-seven miles from the port of Otaru.

I have not had an opportunity to visit the Poronai mines since the completion of the railroad; indeed after its ceremonial opening in November last year, only a few trains of cars were run on it, sufficient however to bring down a sample of about 350 tons of coal for use at Sapporo and Otaru; after which such heavy falls of snow occurred that it was not attempted to be kept open during winter. Indeed the line in its present state—many miles being simply laid down on the mud without ballast—could not be expected to sustain even ordinary loads, so that we must not expect to hear of any considerable amount of coal being run down it before well into the coming summer.

I have not attempted any technical description of the Otaru-Sapporo-Poronai railroad, not only because I am quite incompetent to do so, but because it has been elsewhere done.‡ Neither will I venture an

\* The length of this viaduct is 300 feet, and its height in the middle 54. It is about 8½ miles from Sapporo.

† For distances on the river, and general itinerary for Yezo, see *Japan Gazette*, 16 Sept. 1883.

‡ *Japan Weekly Mail*, 2 December 1882, 'communicated' by Dr. Cutler of the Sapporo Agricultural College I understand, assisted, so far as the technical points, by Mr. Matsumoto, engineer-in-chief of the line.

opinion as to its merits or demerits for the like reason, farther than to say that there can be no comparison drawn between such a line, built at the least possible outlay, as a makeshift with a definite purpose—the transportation of a limited amount of coal—and lines designed and constructed specially for passenger traffic in the thickly populated districts of the main-island. Of course there is much said—not that ‘ought to be said’—on both sides for and against the systems of railway construction in Europe and America, and persons without the least technical knowledge think themselves competent to offer opinions; while others who have been trained in certain modes of construction are often too wedded to their own experience to be able to see merit in any other. That the Yezo line is of a non-permanent character, no one wishes to dispute; but suppose, as has now happened, that the main object with which the construction of that railroad was undertaken to be withdrawn (the Kamaishi iron works are now being closed), what would have been said had the Otaru-Poronai coal-track been laid in an equally permanent manner, and at a corresponding cost per mile, with the Yokohama-Tokio railway. What should we not have heard of the millions squandered. How many prophets would not have arisen after the collapse of the iron works occurred. No; it seems to me that it was a very fortunate thing that an engineer of the accommodating nature of Colonel Crawford was employed; and that, in most respects, the building and equipment of this railroad has been remarkably cheap. Not that I attribute any foresight to the native officials in this particular, anymore than I would in any other scheme, no matter how philanthropic they wished to make their suggestions appear. I only say it is a fortunate chance that more money was not laid out. There is now a line of rail, which, although the main object for which it was devised has ceased to exist, there can be no doubt is a benefit to the country; not only in the facility for transport it affords—and I should like some of its critics to have travelled over even the road between Sapporo and the sea-coast a few years ago—but also by the civilizing effect it must have upon the population. That it is quite capable of carrying all the traffic that can be imposed upon it for some years to come—a fair yearly sum being set apart of course for its proper maintenance—I don’t doubt; and from what I have seen of wagon roads constructed by Japanese in Yezo, and the state they are allowed to fall into soon after their construction, I would say by all means if it is the intention of the government to foster settlement in the Iskari valley, that it would be more advantageous to construct lines of railroad on what is called the American system, which native engineers have had such a good lesson in, than to adopt any other means of communication.

The Poronai coal mines are only about twenty-five geographical miles as the crow flies about E.N.E. of Sapporo. Owing to the nature of the country the railroad line in its first part makes a considerable detour, so that its distance is pretty nearly, as I have said, thirty-five miles. It is actually in the Iskari valley all the way until just before reaching the mines. These I shall attempt

no account of.\* It is some years since I visited the place, then in its infancy. Much has been done since then, and any description would be inapplicable now. Travellers who take an interest in such things had better go and look for themselves. As to the geological formation, thickness of the veins, and such like, the reports of Mr. Lyman which I have frequently already had occasion to refer to, give all the information that can be required, although doubtless a visitor now will gain some additional knowledge as to the workable nature of the veins; and as a tunnel, projected by Mr. Gaujot, who was for some time chief mining engineer is, I understand, still being proceeded with, it will doubtless soon become apparent whether the supply is likely to be abundant or not.† Farther up the main valley—Ikusumbets,—some seams up to twelve or fifteen feet in thickness, have I hear been struck, but regarding their workable nature there appears to be some difference of opinion. As to the quality of Poronai coal; there is no doubt it analyzes out very well; and during the past winter was very much liked by persons at Sapporo for house fires; but as a good ‘all round’ steaming coal for marine purposes, the trials yet made are hardly sufficient on which to form an opinion.

During the heat of summer the flies become very troublesome in the wooded region around Sapporo; indeed they are then so numerous as almost to debar excursions being made for pleasure. To a certain extent this is true for most parts of Yezo when the sea-coast is departed from, but I think on the whole that the valley of the Iskari carries off the palm in this species of annoyance. Besides mosquitoes which are in force always in the evening, and in the shade of the thick woods during the day, there is a small very sharp-biting sort of sand-fly called by the Japanese ‘buyu,’ and the large wasp looking bull-dog fly known as ‘abu.’ This latter alights so gently upon you, that you are not aware of its presence until you feel a sharp pinch, and you find a piece of flesh taken clean out. There are several other flies nearly equally annoying, and one especially distressing to horses during autumn is a bright yellow bodied fellow with

\* I must caution the public against one account of the Poronai mines and how to get there. In the *Chrysothemum* for October 1882, we are informed in the first place that “Poronai is situated amongst the hills about forty miles E. by N.E. from Sapporo.” The writer’s ideas were evidently a little ‘mixed’ as to the points of the compass, or he may have intended to represent the ‘lubber’s point’ hitherto unlettered. However his geography generally is sorely at fault, for elsewhere we are told that the Toyohira is “a river which skirts that town” (Sapporo) “to the North;” that the railroad “track lies parallel with the Iskari and along its Western bank” \* \* \* “The Horomoi is a river of about the same volume as the Ebets.” I have italicised in each case, but this is hardly necessary where “parasitical trees” are spoken of; neither in the one of convicts “going on shore in a hulk,” doubtless intended to mean lighter or barge. As to the coal and mode of working it, we are told in the same paper, that there is an “objection to this system.” After the above examples the favourable opinion which this writer expresses as to the railroad, must indeed be gratifying to those responsible for its construction.

† In the autumn of 1882 this tunnel, as I was informed, had reached a length of one thousand feet, but in that distance had cut but one workable seam of coal.

green head. I have known the pack-ponies when getting this kind upon them, bolt suddenly right off the track in among the bushes to clear themselves, frequently leaving their riders behind. Then the field ticks are a great pest for cattle, horses, and dogs,—the 'dani' of the Japanese. No traveller in Yezo but has alluded to these creatures, and to the way the horses get covered with them; while it is one of the sportsman's troubles to see to his dogs, which are excessively troubled by them; a run among scrub or in the grass for a short time being sufficient to establish a full breed, while a person walking or even riding in such places is sure to collect some upon his clothes, whence they crawl in through the interstices, and fix upon his skin. They are of all sizes from the most minute, hardly visible to the eye, to about that of an ordinary bug, or larger. They seem to grow very rapidly; and, when filled up with the blood they swell out to the dimensions of an ordinary pea. I would not discourage the intending tourist to Yezo, but I am bound in rendering an impartial, though of course somewhat imperfect account of the country, to mention in addition that on that island he will not find himself more free from the ravages of more domesticated pests, in the forms of fleas and lice, than in other parts of Japan. In fact 'petty' annoyances must be endured by any traveller in a country, where thick floor mats cover the rooms, and where wadded quilts are used as bed clothing, indiscriminately for all classes of guests at the roadside inns. A supply of insect preventative powder, and carbolic soap are not superfluous stores for the traveller in the Land of the Rising Sun.

Depending probably upon the change of the monsoon, though of course these winds do not reach so far north as Yezo, at any rate at the sea level, the northern part of Japan experiences about the middle of September that sudden change of temperature that affects the whole country. After this for some weeks the weather at Sapporo is perhaps the most enjoyable of the whole year. The nights are sufficiently cool to drive away the mosquitoes, while in the daytime the clear refreshing air coming off the sea of Japan—westerly winds prevailing at such season—permits of any kind of out-door exercise being undertaken without fatigue. Snow sometimes falls on the mountains before the close of September, and the first frost occurs usually before the middle of October, but it is not until towards the close of that month that snow settles for good upon the hills or falls at all upon the lower ground. Early in October the woods commence to assume their autumn tints, and by the middle of the month they are fully turned, and have the most varied and brilliant appearance. The elms, chestnuts and poplars take a yellow, the maples bright red, and the vines and other climbing plants\*

envelope the stems and branches of the larger trees with the most beautiful wreaths and festoons of blood red, bright orange, purple, and some lighter tints, which mixed with various shades of brown and chestnut, and the still dull green of the late falling leaves of the alder, afford a scene of varied beauty which can hardly be surpassed in any country. As a background too the mountains ranging along on the western edge of the plain, are beautifully variegated by a mixture of deciduous and coniferous trees; while those in the far distance across and up the great valley of the Iskari, seen through a transparent autumn atmosphere, have the outlines cut with a distinctness seldom observable at other times.

It is at such season that excursions may be made either on foot or horseback, or by canoe from Sapporo, to several places of interest in the vicinity. If you follow up the river on its southern and eastern bank, five miles of a good road for wheeled carriages takes you to one of the experimental farms known as Makomanai, where a patch of prairie land has been utilized for growing crops as winter feed for stock. Continuing beyond this you reach the edge of an old pumice terrace, where the soft stone used for building purposes is easily cut out of the face of a line of cliffs, while across the river immediately above, is a high mass of hard rock quarried out for like purposes. Both places are known as Ishi-yama; and between lies the prettiest part of the valley of the Toyohira, the river here emerging in a swift and broken current from among the mountains towards the Sapporo plain. From the height above the soft-stone quarries it is a striking view of an inland Yezo valley, the flat by the river's side immediately at your feet being of that park-like appearance, sparsely dotted over with oak trees, which is such a relief to look upon wherever it occurs in a country otherwise so generally covered with dense forest. Beyond, and in the direction of the river's source, some pyramidal partially wooded hills break the valley before it becomes entirely shut in by the higher ranges. A trail leads up the right or southern and eastern side of the valley, it being a nice ride as far as a single house called Mishimap—so named from a small tributary stream—close by which is some very wild and rocky scenery on the river. Farther up, this trail becomes more rugged, till the hot springs of Josenkae are reached about seven ri from Sapporo. There was formerly a house of accommodation, and baths kept up here; but the place has been for some time abandoned. The continuation of this trail is that which reaches the shore of Volcano Bay near Usu Volcano, which I have elsewhere mentioned. Of late years it has been traversed only by explorers and surveying parties. It is evidently of too rough and mountainous a nature to admit of improvement into a road for ordinary travel.

On the same side of the Toyohira as the Makomanai farm, but branching off before getting there, a new road has been cut to Ashibets as it is usually called. This is also a very nice excursion. The distance from Sapporo is only about ten miles, and good

\* Particularly noticeable is *Schizophragma Hydrangeoides*. (Boehmer's 'Report of a Botanical Journey in Yezo, in 1874'—*Reports and Official Letters to the Kaitakushi*, p. 307.) I shall not be astonished if botanists as well as geologists pick me up on some of the scientific terms I have used. I pretend to no knowledge of either science. Regarding the latter I have elsewhere mentioned the assistance afforded me; while as to the botanical names, they have been furnished by Mr.

Louis Boehmer, formerly horticulturist to the Kaitakushi, whose lengthened residence in Yezo permitted him to become intimately acquainted with most of the trees and plants of that island.

riding all the way. You pass over some high land where a forest fire has cleared the trees off a considerable extent of country, and permits of views over part of the Sapporo plain, the upper valley of the Toyohira, and of Mount Iniwa, the jagged top of which only is visible from Sapporo itself. By taking this road you get into a pine region sooner than in any other direction unless you ascend the mountains. Three kinds of spruce will be observed, but the 'todo' with its smooth bark and dark luxuriant foliage is by far the most abundant. The other two are known as the 'Shinko,' and 'Yezo-matan.' Both these are far more valuable as timber trees than the 'todo,' which, although a pretty, clear, white wood, and very easy to work, is liable to shrinkage and expansion with the weather, and is not of a durable nature. There is still a little uncertainty with regard to the botanical names of these spruces, *Abies Yezoensis*, and *Abies Microsperma*, having been probably indiscriminately used; but one of the three hitherto overlooked—probably the most common one, the 'todo'—was named after Mr. Charles Marice, who made botanical collections in Yezo only a few years ago. The 'todo,' as I said before, may be known by its smooth grey bark, luxuriant deep green foliage, and by its cones, which are very large, standing upright. The 'Yezomatsn' is a small-leaved tree, with rough bark; the cones are small and pendulous. The 'Shinko' is something like the 'Yezo,' but the bark is scaly, like a true pine.

There is a beautiful glen at Ashibetsu—I spell the word as ordinarily pronounced by the country people, although I have elsewhere drawn attention to its probable incorrectness. A small stream of water falls vertically from the ledge of a cliff about eighty feet high. The glen is thickly wooded, its sides are very steep, and in the heat of summer it is quite cool. Here under the thick foliage of the pines, and among the broken masses of rock which lie in wild confusion may be found several species of ferns luxuriant in the cool and moisture-laden air. I am not prepared to say what they are, but I believe the locality would well repay the visit of a professed botanist. Owing to the quantity of spruce timber available here the Kaitakushi established a shingling mill containing a good deal of machinery, notwithstanding the serious obstacle presented by a rough and hilly country over which the produce of the mill had to be transported to a market. With the usual foresight displayed in this country, the water-power was to be availed of to run the machinery, because it would be no expense compared to steam. I have said that the fall is about eighty feet, but the amount of water is insignificant; the power exerted upon a small turbine would consequently have been considerable. But what do you suppose the wise officials of the government did. They cut a long and deep channel through rock in order to feed a large turbine with a low fall—ten or twelve feet. Of course when they commenced running the machinery, they found that they had not sufficient water. A bright idea then struck them that they could make more water by damming up the stream, which they forthwith did at considerable additional outlay. The result of this sagacious application of the

principles of hydraulic engineering is painfully apparent to the visitor at the present day, who if he reaches there after noon even during an ordinary season, will find the works at rest for want of water, and occasionally during a dry season there is no possibility of running the mill for weeks together. Perhaps some of the ex-officials of the late 'Colonization' Department, may put this down as one of the schemes of General Capron, and his foreign experts; but to those who read this story it can only appear as an expensive and unenumerative monument to native intelligence.

Taking the lower country around Sapporo,—and it is all one dead flat, mostly swamp, towards the Iskari river, and the coast,—roads run in several directions, notably to Tsziskari at the junction of the Toyohira with the main river, reckoned at five-and-a-half ri by land, and but little more by the river which may be descended by canoe, because the track keeps nearly all the way along the slightly higher ground on the immediate river bank.\* Another road passes out of the north-east corner of the town, running through some inferior settlements, approaches the Iskari at Shinoro, and crosses the mouth of the Hasabu river at Baru-to, reckoned at ten miles from Sapporo. By following this road which skirts the main river or one of its loops for the greater part of the distance, passing through another settlement, three ri farther takes you to the town of Iskari at the river-mouth on the Sea of Japan. These roads are by no means interesting owing to the flat nature of the whole region. That to Zenibako leaving Sapporo on its north quarter and then turning sharp off and following the line of the foot-hills is more pleasant, but owing to the existence of the railroad is now seldom resorted to except by the people belonging to villages along its line, and is usually in the worst state of repair. Indeed I think it is needless to exhibit any more of the lions of Sapporo, or enlarge upon its further attractions for the tourist or summer excursionist in search of health or recreation. There are many worse places in Japan than Sapporo, though it has been so roundly abused by some; while Yezo as a whole offers many advantages as a place of summer travel or residence to a person not disinclined to be out of the world for a few months. I fear, however, that I have exhibited few of its advantages in such a manner as to entice the over fastidious to give it a trial, notwithstanding these notes have been spun out to a length that I never anticipated when I undertook the task. It may be some satisfaction to the reader to know however, that I have not actually used up one half the material at my disposal regarding Yezo; and that he has thereby been saved the perusal of a great deal which he would not have thanked me for placing before him, while my acknowledgements are due to the pub-

---

\* If the Iskari is crossed at this point an inferior road may be followed about five-and-a-half miles to Tobets settlement lying to the north of the river, and distant about ten miles inland from Iskari town. I believe also a trail has been cut from Tobets to the Shibets convict establishment, about thirty-six miles by river above Tsziskari, where during 1882, there were about four hundred prisoners, and six hundred other people.

lishers of what has appeared for their forbearance in not having shut me up long ago.

One word more :—I shall probably be some thousands of miles away when these later lines are read in Japan, and therefore far beyond the reach of local criticism. Still if such there should be, it will doubtless catch my eye some day, and I shall be prepared then, as I make no vain boast in saying I am now, to meet my critics on a fair field, ready to substantiate every fact, and uphold every opinion I have expressed. As I have said elsewhere, the latter must vary considerably according to the preconceived notions, and the experience of different individuals; but the former unless true are no facts at all, simply unfounded statements. Such I have been most careful to avoid, and I trust I may have succeeded; but if any should inadvertently have crept in I shall be only too glad of their being pointed out, as my aim has been to do injustice to no one. I have been equally careful to give everyone credit for observations which he may have published or even expressed in ordinary conversation, that I was aware of; even going so far as to occasionally supplement information that in my own mind there was no need of; but as I may have possibly missed a point particularly insisted upon by some one, owing to the thing being so familiar to myself, I trust that such persons, if they should notice the omission, will not ascribe it to design on my part. I should be going too far if I were to ask forgiveness from those I have criticized. As I have elsewhere expressed it, this has been done in the interest of truth and justice. I crave no pardon, nor do I retract a single statement in this particular. The amount of plagiarism that is apparent to a careful reader of almost any book which has appeared of late years on Japan, necessitated a resort to outspoken

criticism; none of your half-and-half insinuations, or excuses for alluding to 'similarity' of ideas or observations. When 'cabbage' is so distinct, why should it be called by any other name; and why, from motives of false sentiment, should we refrain from noticing the faults of others when evidently intentional or caused by discarding upon a question on which their training gave them no warrant for touching. I have no patience with such people. If a man steals a coat he is put in prison for it, but if he appropriates an idea he gets credit from half the world. Then there is the untruthful mode of writing about people as you *don't* find them, for fear of wounding their susceptibility. Forsooth, why should such feelings be considered at all, when it is truth we want—or nothing. No, a little more frank and honest criticism would do a world of good, and I do not hesitate to say that its application to Japan would be beneficial. The gloss and polish must be rubbed off before we come to know the actual composition of the article we examine. I shall therefore be by no means disappointed if, in describing things and people as they appeared to me in Yezo, it shall be said that I have rubbed some off Japan generally; indeed I should receive it as a compliment. I cannot, however, take to myself the credit of being so successful, my observations having been almost entirely confined to natural rather than personal questions; still I don't think I shall be accused of putting an additional layer of varnish upon a people hitherto so thickly besmeared with it, or of giving an untruthful account of a portion of Japan, politically so known, but being essentially distinct in so many features, that in place of calling it Yezo in Japan, I have adopted the—to my mind—more appropriate title of "Japau in Yezo."





# JAPAN IN YEZO.

## APPENDIX.

### DISTANCES ON TRAVELLED ROUTES IN YEZO.

The distances here given are in Japanese *ri*; one *ri* being equal to 2.44 English miles or 2.12 geographical or nautical miles. The *ri* contains 36 *cho* of 60 fathoms, but decimal division (now generally employed officially) is here used as being more convenient.

#### 1.—Hakodate, across Volcano Bay, to Sapporo.

[See Chap. XIV page 47.]

##### HAKODATE:

	4.
Nanai .....	(To Shkabe <i>viâ</i> Ikusakawa, 6.4.)
	1.5
Togenoshita.....	
	2.
Jinsainuma.....	
	4.
Mori .....	(West coast northern road con- tinues along the bay shore. See No. 2.)
	11 (Sea.)
SHIN-MORORAN....	(Edomo Harbour.)
	3.
Washibets.....	
	2. (Road around Volcano Bay forks off here. See No. 7.)
Horobets.....	
	1.5
Noboribets .....	(To Hot Springs, 1.8.)
	1.3
Aiyero.....	
	2.
Sikiyu.....	
	2.
Shiraoi.....	
	5.6
TOMAKOMAI.....	(S. E. coast road continues on along the shore-line. See No. 9.)
	5.
Bibi.....	
	2.
Chitose.....	
	3.9
Shimamap .....	
	5.8
SAPPORO.....	{ From Hakodate, 56.6 = 138 miles English. From Shin-mororan 34.1.

2.—Hakodate to Iwanai, Otaru, and Sapporo.

[See Chap. XV page 53.]

HAKODATE :

11.5 (For intervening distances.  
See No. 1.)

MORI .....

0.9

Washinoki.....

3.2

Otospe .....

2.7

Yamukusnai..... (According to Ainu pronun-  
ciation.)

1.5

Yurap..... (To Tomarikawa, west coast,  
via old lead-mine, trail sel-  
dom used, about 10.5.)

3.

Kuroiwa.....

2.8

Kunnui..... { To Toshibets old gold work-  
ings, 3.  
To west coast at Setanai, trail  
seldom used, about 12.

2.

Oshamambe..... (Road to Usu and Horobets  
follows bay-shore. See  
No. 7.)

5.6

Kuromatznai.....

3.6

Otasitze.....

2.5

Isoya .....

6.5 (Over Raiden mountain.)

IWANAI :..... { Round Shakotan pro-  
montary.  
Kayanuma (coal  
mine)..... 2.5 } 25.7  
Tomari (Furu)..... 4.4  
Shakotan (by sea)... 8.1  
Bikuni..... 3.9  
Furubira ..... 1.5  
Yoichi ..... 5.3

6.5

Eubispe .....

5.5

Yoichi .....

2.

Oshoro.....

4.1

OTARU .....

Zenibako..... { 3.9 { By rail from Temia pier to  
5.3 { Sapporo, 22 miles.

SAPORO..... { From Hakodate via Iwanai, 73.  
From Iwanai, 27.3.



## 3.—Hakodate to Cape Esan and Volcano Bay.

[See Chap. VII and VIII pages 14 and 15.]

## HAKODATE :

	1.8
Yunokawa.....	1.1
Zenikamisawa....	2.1
Oyase .....	2.8
Toi.....	2.3
Shirikishnai.....	2.4
Nidanai.....	1.9
Todohoki.....	3.5 (By sea.)
Osaspi .....	1.
Kakumi .....	{ To hot springs about 0.5. To Hakodate direct 7.7. To Hakodate <i>via</i> Mina valley, 8.4.
	1.1
Oshiziri .....	1.3
Komadomari .....	{ To Hakodate <i>via</i> Obune Hot Springs and Akagawa, 9.5.
	3.1
Shkabe.....	(To Hakodate <i>via</i> Nanai, 10.4.)
	4.6
Sawara .....	1.6
Oshiranai .....	1.
MOBI : .....	(See No. 1 and 2 for northern and southern routes.) To Hakodate direct, 11.5.

## 4.—Hakodate to Esashi direct.

[See Chap. XIV page 47.]

## HAKODATE :

	4.6
Ono.....	6.1
Nakayama.....	6.4
Udzura .....	1.8
Gamushi.....	{ To Odope on west coast, 8. To Ogorope on west coast, 2.2.
	1.4
Mina .....	2.3
ESASHI.....	From Hakodate, 22.6.

**5.—Hakodate to Fukuyama (Matsumai) and Esashi.**

[See Chap. XII and XIII pages 38 and 43.]

**HAKODATE:**

	3.1
Arikawa .....	2.4
Mohitzi .....	3.
Idzumisawa .....	2.
Kikonai .....	(Trail to Esashi, sometimes used, 12.2.)
	2.6
Shiriuchi.....	7.
Fukushima.....	1,2
Yoshioka.....	3.7
FUKUYAMA (Matsumai) .....	(From Hakodate, 25 ri.)
	5.
Eramatz .....	1.8
Haraguchi .....	4.
Ishisaki .....	4.2
Kaminokuni .....	2.1
ESASHI .....	{ From Fukuyama, 17.1. { From Hakodate direct, 22.6.

**6.—Esashi along West Coast to Sitze Bay.**

[See Chap. XIV page 47.]

**ESASHI:**

	3.2
Odope .....	4.6
Tomari-kawa (Ainuma) .....	(To Yurap on Volcano Bay, 10.5 approximate.)
	1.9
Kumaishi .....	6.
Kudo .....	3.
Ota .....	4.2
Futoro .....	2.6
Setanai .....	(To Kunnui on Volcano Bay, 12 approximate.)
	6.
Seki (Cape Mota)	7. (Mountain track impassable for horses.)
Baranda .....	2.2
Shimamaki.....	6.7
Sitze .....	2.6
OTASITZE .....	{ To Hakodate via Mori, } See 36.8. } No. 2 { To Iwanai, 9. }

## 7.—Sapporo around Volcano Bay to Hakodate.

[See Chap. XX page 92.]

SAPPORO :	29.1 (For intervening distances. See No. 1.)
Horobets .....	4.3
Kiu-Mororan .....	(From Shin-Mororan by land, 6.6.)
	3.
Usu-mombets ....	3.
Usu .....	(Over mountains to Sapporo, trail seldom used, about 35 ri.)
	1.3
Abuta .....	4.3
Bebunge .....	4.
Sitskari .....	3.
Oshamambe.....	5.
Kuroiwa .....	3.
Yurap.....	1.5
Yamukusnai .....	2.7
Otoepe.....	4.1
Mori.....	11.5 (via Ono nearly one ri more.)
HAKODATE .....	From Sapporo by this route, 80.3.

## 8.—Iskari River, by water.

[See Chap. XIX and XXI pages 84 and 108.]

ISKARI.....	{ At mouth of river. From Zenibako, 5.3. From Sapporo by land, 7.
	4.
Barato .....	{ Mouth of Hasabu River. To Sapporo by land 4.
	3.5
Tobets-Buto.....	(‘Buto’ means river mouth in Ainu.)
	3.
Tszi-Iekari.....	(Mouth of Toyohira River. To Sapporo by land, 5.5.)
	1.
Ebets .....	{ Mouth of Ebets River. To Chitose by river about 15 ri. To Sapporo by rail, 13½ miles.
	2.8
Horomoi-Buto.....	{ To Sapporo by rail 18½ miles. To Poronai coal mine by rail 16½ miles.
	6.
Bibai-Nodap .....	(The Great Rapid.)
	5.
Shibets .....	(Convict prison) From Iskar 25.3 [Distances above thiii are approximate.]
	15.5
Sorachi-Buto.....	8.5
Uriu-Buto .....	12.
Kamoikotan .....	(The falls.)
	4.
Kamikawa-Buto..	8.
Aibets.....	180 miles from Iskari.

## 9.—The South-East Coast to Akis and Nemoro.

[See Chap. XVII, X, and XI pages 66, 27, and 32.]

TOMAKOMAI: .....	(From Hakodate 40 ri. See No. 1.)	
		3.
YUBUTS .....	{ From Sapporo to Bibi, 11.7 See No. 1. From Bibi to Yubuts, 4.5 (cross track.) Total from Sapporo, 16.2.	
		1.8
Azima River .....		2.3
Mukawa .....		3.
Sarubuto.....	To Piratori (Ainu settlement) up valley of the Saru river, 4 ri.	
		1.1
Saru-Mombets.....		3.9
Kabari.....		2.1
Nikap.....		1.5
Shibichari .....	To government horse station up valley of river 3.3.	
		2.6
Sitsinai.....		2.8
Mizuis.....		5.4
Urakawa.....		3.5
Shamani.....		3.8
Poromambets ....		3.
HOROIDZUMI .....	{ From Tomakomai, 40 ri. From Sapporo, 53.	
	{ Round Cape Erimo. Okos 3. Shoya 3. Saruru 3.2.	7.
Saruru .....		5.7
Biru.....		5.
Birupunai .....		8.8
Ohots .....	(Mouth of Tokachi river.)	7.8
Shakobets .....		4.1
Shiranuka .....		7.7
Kusuri.....		10.5
Jempoze .....		4.
AKIS.....	(From Horoidzumi 60.6.)	9.6
Hamanaka .....	(To Nemoro by south coast trail now generally used, about 15 ri.)	8.6
Achishibets .....	(To Bitskai 10.6.)	8.3
NEMORO .....	{ From Hakodate, 167. From Sapporo, 140.	

10.—North-East Coast; Nemoro to Cape Soya.

[See Chap. XVIII page 73.]

Bitskai (Nishi-bets river) .....	{ From Nemoro, 8.7 From Hamanaka (via Achishibets), 10.6.
8.	
Shibets .....	7.5
Tszrayi-watari ...	8.9
Wakaowi .....	10.8
Share .....	9.3
Abasiri.....	6.1
Tokoro.....	9.6
Yubets.....	6.6
Share-Mombets....	7.2
Sawaki .....	5.3
Poronai .....	6.1
Chikaptomushi ...	4.8
Isashi .....	5.3
Shonai .....	8.7
Sarubuts .....	5.9
Chiktomai .....	6.
SOYA .....	{ From Bitskai, 116. From Hakodate via south-east coast, 276.7.

*Handwritten notes:*  
 Inland bridle path. carrying horses, mules  
 known in 1892 from ?

11.—North-West Coast—Iskari River to Cape Soya.

[See Chap. XIX page 84.]

ISKARI .....	{ From Sapporo (road), 7. From Zenibako (on Otaru and Sapporo Railroad), 5.3.
4.	
Achta (Oshirokotz)	4.
Gokibiru .....	4.5 (Mountain path.)
Hama-maski .....	9.6 (Mountain path.)
Maski .....	4.1
Rumoi .....	6.
Oniska.....	5.
Tomamai .....	8.
Furubets.....	8.
Teshiro .....	13. (A single house about half way at Wakashakunai.)
Bakai .....	8.
SOYA.....	{ From Iskari, 74.2. From Sapporo, 81.2. From Hakodate via Sapporo, 137.8.











