

HANDBOOKS PREPARED UNDER THE DIRECTION OF THE
HISTORICAL SECTION OF THE FOREIGN OFFICE.—No. 55

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EASTERN SIBERIA

LONDON:
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1920

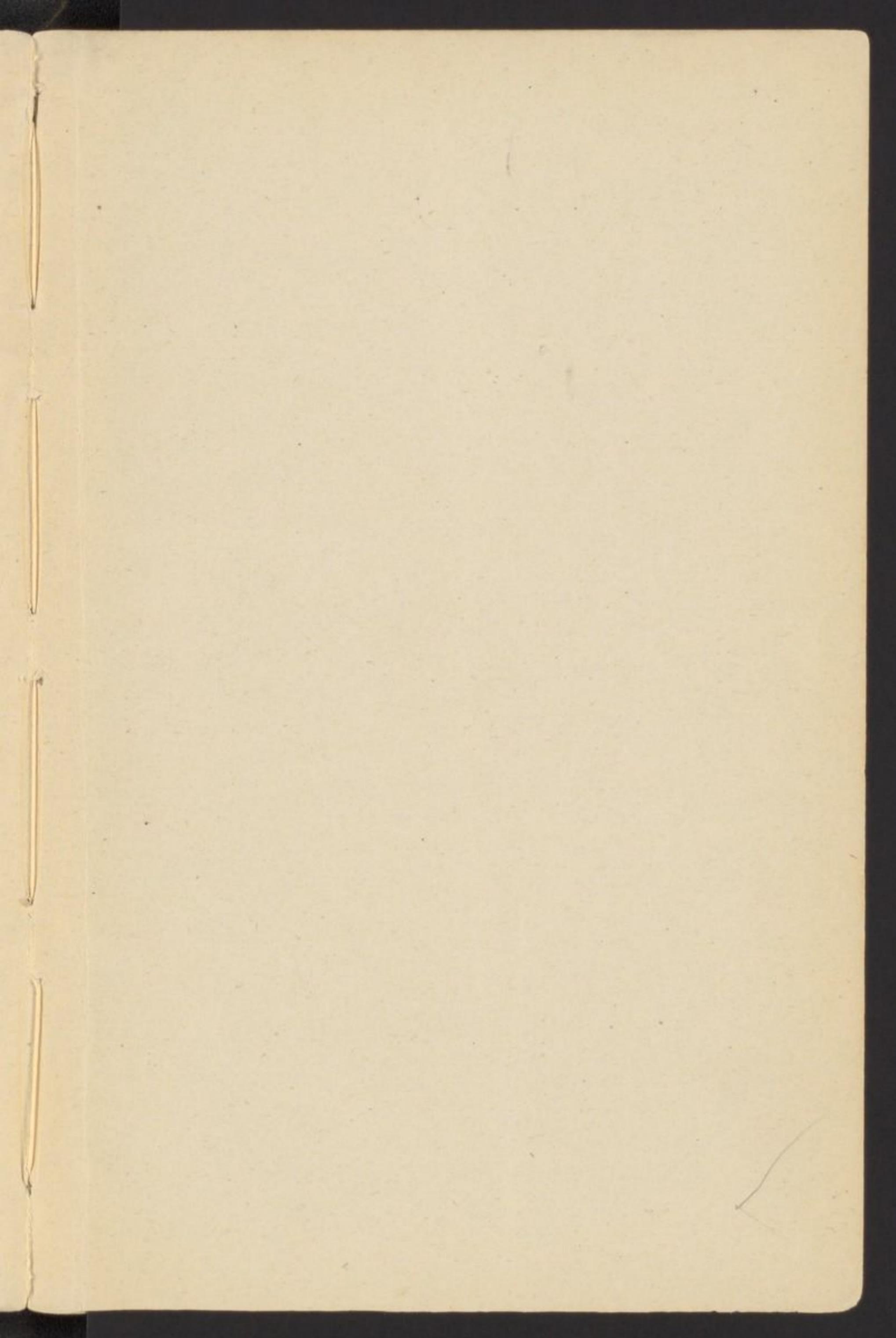


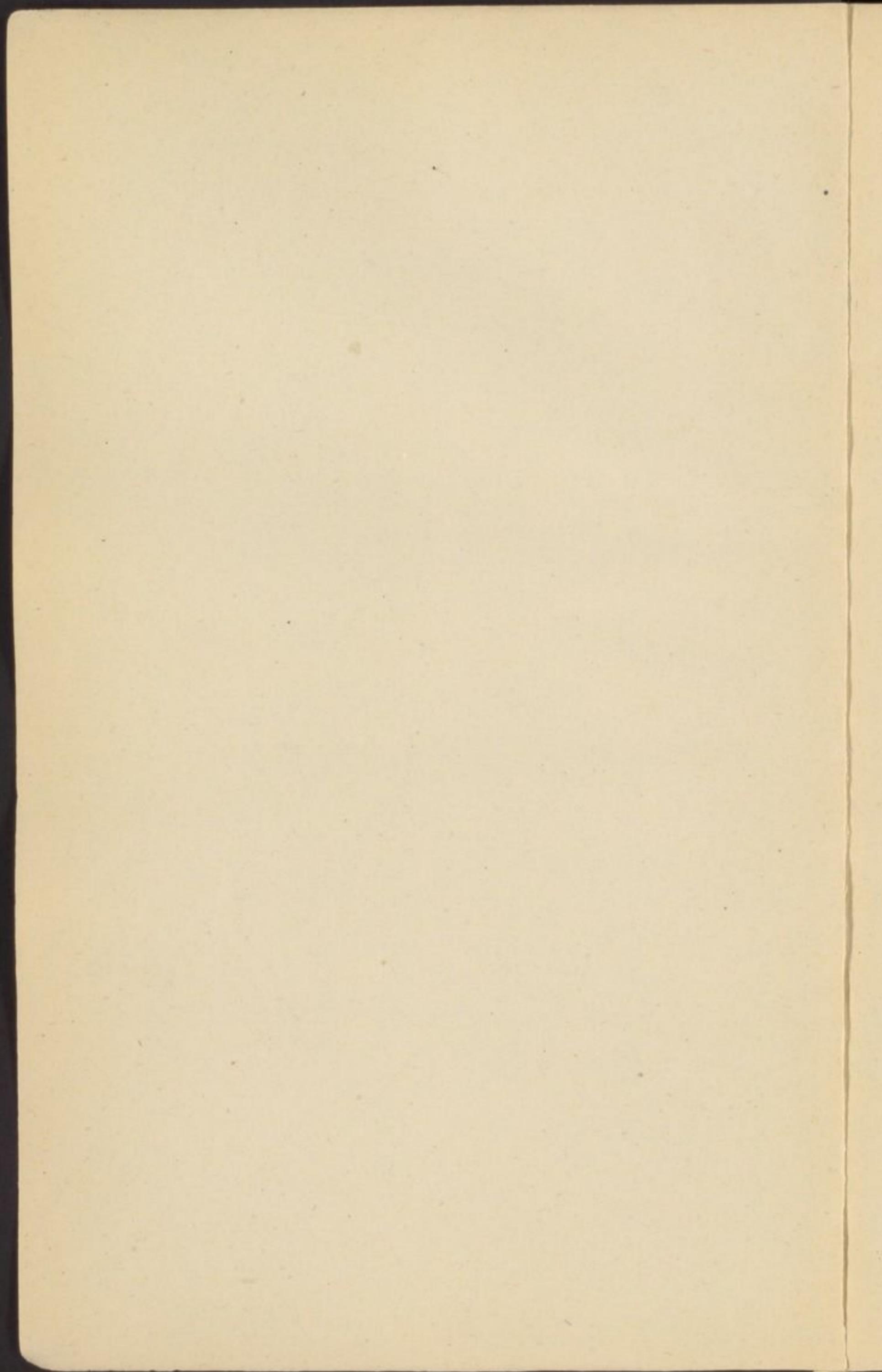
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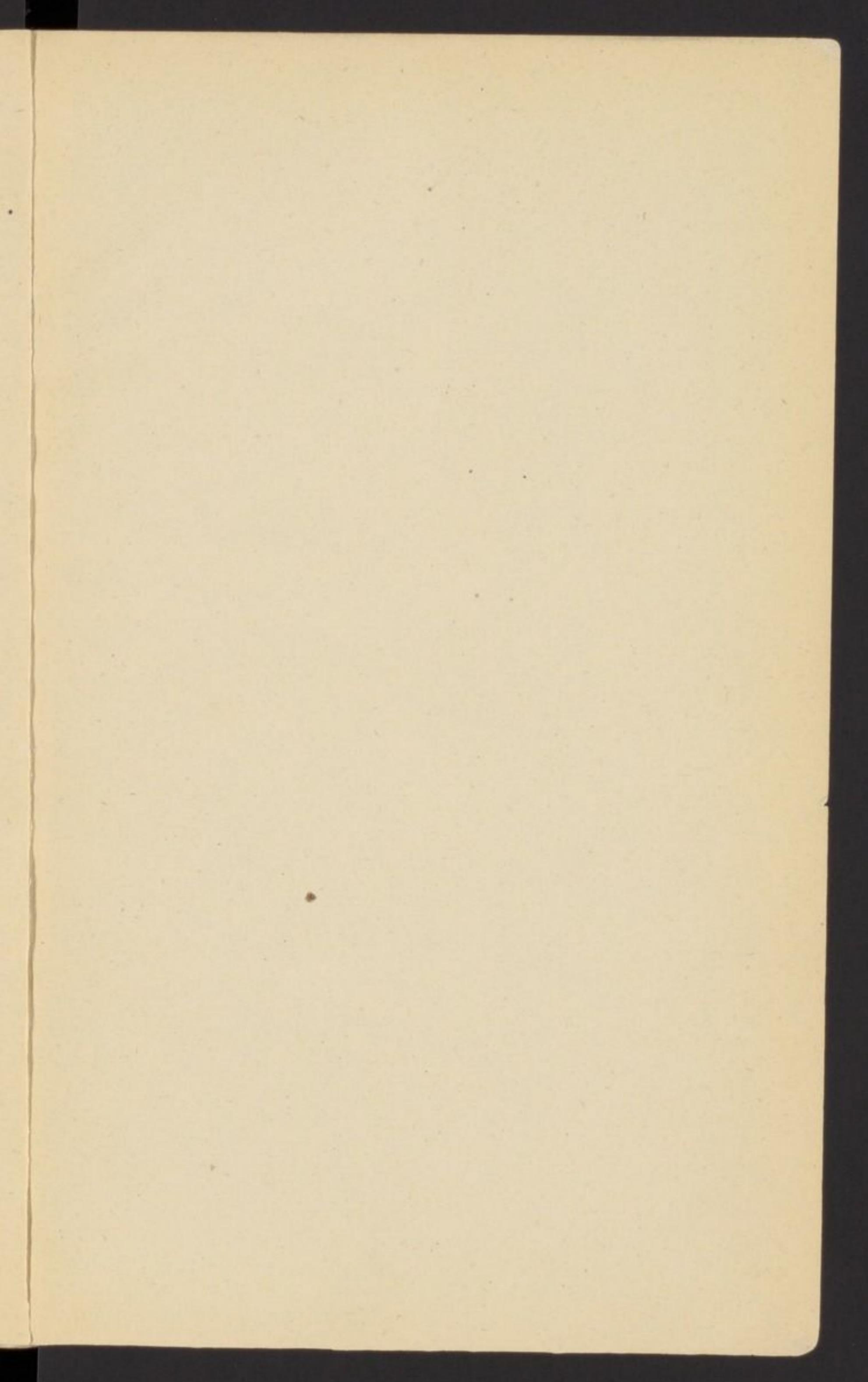


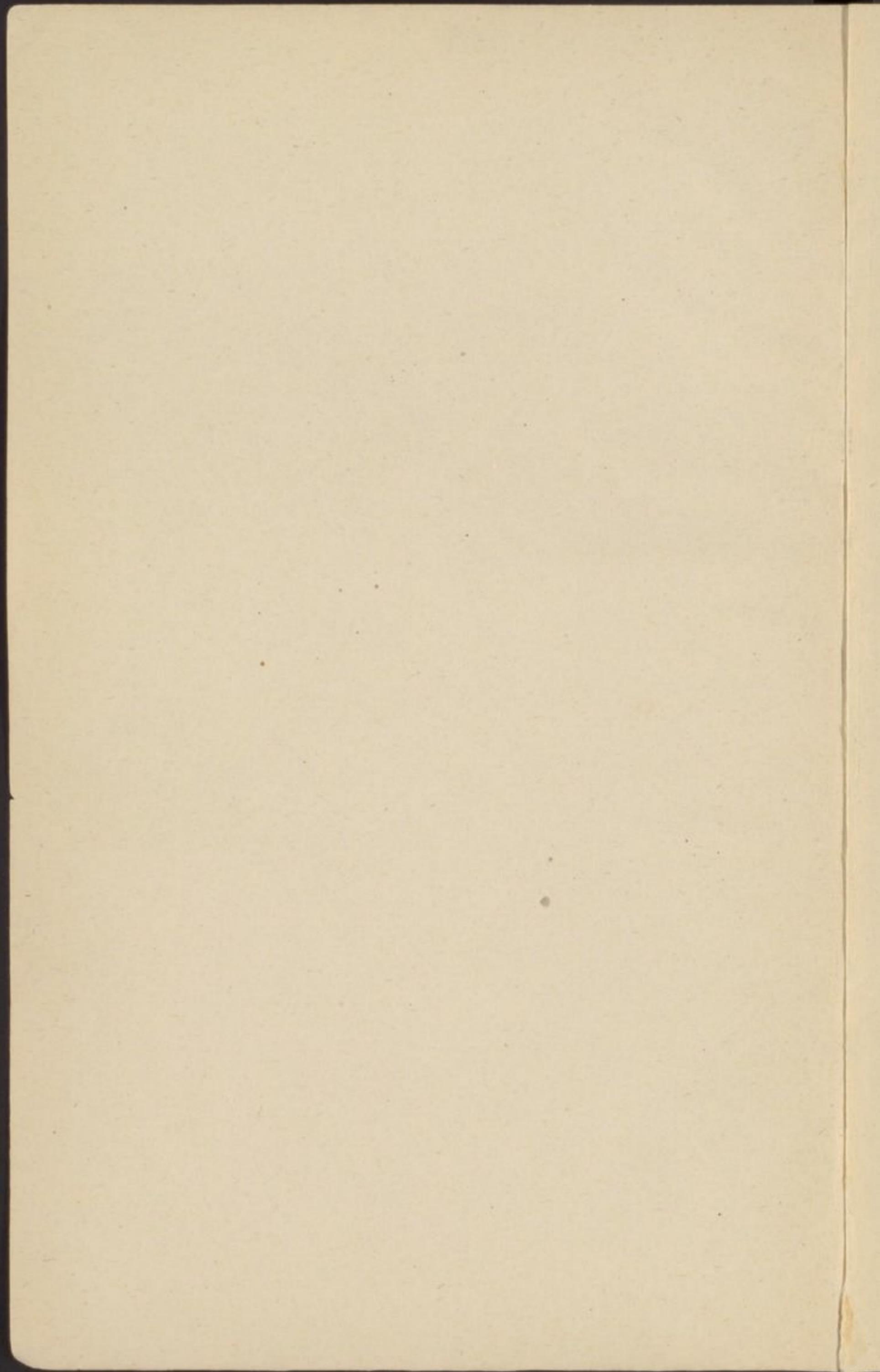
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EDITORIAL NOTE

IN the spring of 1917 the Foreign Office, in connection with the preparation which they were making for the work of the Peace Conference, established a special section whose duty it should be to provide the British Delegates to the Peace Conference with information in the most convenient form—geographical, economic, historical, social, religious and political—respecting the different countries, districts, islands, &c., with which they might have to deal. In addition, volumes were prepared on certain general subjects, mostly of an historical nature, concerning which it appeared that a special study would be useful.

The historical information was compiled by trained writers on historical subjects, who (in most cases) gave their services without any remuneration. For the geographical sections valuable assistance was given by the Intelligence Division (Naval Staff) of the Admiralty; and for the economic sections, by the War Trade Intelligence Department, which had been established by the Foreign Office. Of the maps accompanying the series, some were prepared by the above-mentioned department of the Admiralty, but the bulk of them were the work of the Geographical Section of the General Staff (Military Intelligence Division) of the War Office.

Now that the Conference has nearly completed its task, the Foreign Office, in response to numerous enquiries and requests, has decided to issue the books for public use, believing that they will be useful to students of history, politics, economics and foreign affairs, to publicists generally and to business men and travellers. It is hardly necessary to say that some of the subjects dealt with in the series have not in fact come under discussion at the Peace Conference; but, as the books treating of them contain valuable information, it has been thought advisable to include them.

EDITORIAL NOTE

It must be understood that, although the series of volumes was prepared under the authority, and is now issued with the sanction, of the Foreign Office, that Office is not to be regarded as guaranteeing the accuracy of every statement which they contain or as identifying itself with all the opinions expressed in the several volumes; the books were not prepared in the Foreign Office itself, but are in the nature of information provided for the Foreign Office and the British Delegation.

The books are now published, with a few exceptions, substantially as they were issued for the use of the Delegates. No attempt has been made to bring them up to date, for, in the first place, such a process would have entailed a great loss of time and a prohibitive expense; and, in the second, the political and other conditions of a great part of Europe and of the Nearer and Middle East are still unsettled and in such a state of flux that any attempt to describe them would have been incorrect or misleading. The books are therefore to be taken as describing, in general, *ante-bellum* conditions, though in a few cases, where it seemed specially desirable, the account has been brought down to a later date.

G. W. PROTHERO,

General Editor and formerly

Director of the Historical Section.

January 1920.

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I. GEOGRAPHY PHYSICAL AND POLITICAL

(1) POSITION AND FRONTIERS

THE administrative division of Siberia into Western and Eastern, which has now fallen into disuse, is here adopted for its political and historical significance. These two great areas are not separated by any marked natural boundary, although there is a strong contrast between the agricultural activity on the great plains of the former and the wild mountains and trackless forests of the latter.

Western Siberia comprises the Governments of Tomsk and Tobolsk, and Eastern Siberia those of Yeniseisk and Irkutsk, together with the territories (*oblast*) of Yakutsk, Kamchatka, Transbaikal, Amur, and Primorsk (Maritime Province), with the northern part of Sakhalin. The last-named has been dealt with separately (see *Sakhalin*, No. 56 of this series).

Eastern Siberia lies mainly between 42° and 75° north latitude and 80° east and 170° west longitude. On the north it faces the Arctic Ocean and on the east the Pacific. To the south the frontier, which is mountainous, borders on Mongolia, Manchuria, and Korea, the boundary between it and the last-named country being the River Tyumen. The western boundary is an irregular line running northwards from the Mongolian border to the Arctic Ocean at Taz Bay, roughly parallel to the River Yenisei and more than 100 miles to the west of it.

The total area of Siberia is 4,831,882 square miles, of which 3,968,970 square miles belong to Eastern Siberia, distributed as follows: Amur 154,795, Irkutsk 280,429, Kamchatka 502,424, Primorsk 266,486, Sakhalin 14,668, Transbaikal 238,308, Yakutsk 1,530,253, Yeniseisk 981,607. Yeniseisk, Yakutsk, and Kamchatka alone stretch northwards to the Arctic Ocean.

(2) SURFACE, COAST, AND RIVER SYSTEM

Surface

The outstanding feature of Eastern Siberia is its great central plateau, 3000 to 5000 ft. in altitude, which enters Eastern Siberia from Mongolia and stretches north-eastwards through Transbaikal almost as far as the Pacific coast. This plateau has a breadth of 150 miles in the west, but narrows considerably to the north-east. It is bordered by ranges of mountains, averaging 7000 ft. in the north-west and 3000 ft. in the north-east, but on the south barely reaching the level of the plateau itself. These border ranges are known on the north-west as the Ulan Burgasi, Muya, and Chara mountains, on the south-east as the Great Khingan (Hingan) range, and as the Stanovoi and Anadyr mountains in the extreme north-east. Beyond the border ranges are the alpine zones, which on the north-west include the Baikal, Lena, Olekma and Vitim mountains, with an average width of 150 miles and altitudes of 5000 to 8000 ft. On the south-east this region extends across the Amur river and ultimately sinks beneath the waters of the Okhotsk sea. To the alpine zone succeed the high plains, about 200 miles wide and 1500 to 2000 ft. above sea-level, which merge into the low plains of the Arctic circle (about 500 ft. in height). A few mountain ranges, such as the Tunguska, the Viluisk and the Verkhoyansk, are scattered in the highland regions to the north-west; and in the extreme south-east the Sikhota Alin range borders the low plains and forms the coast of Primorsk. There are many volcanoes in Kamchatka, of which fourteen are active, the highest, Mount Klyuchevskaya, rising to 16,131 feet.

Since the plateau and the ranges parallel to it trend north-eastwards, the low plains which slope towards the Arctic are more extensive in the west than in the east. The great plateau, the alpine zones and the high plains are covered, save at their highest altitudes, with forests, but in the lowlands the *taiga* or forest type of country

merges into the *tundra*, which in summer is a misty treeless swamp covered with stunted berry-laden bushes, and in winter a frozen waste. The subsoil here is permanently frozen, a state of things which prevents drainage and offers an insurmountable barrier to agriculture.

Coast

The northern coast of Siberia is inhospitable and blocked by ice for the greater part of the year, the sea between the mouth of the River Lena and Bering Straits being open only during the months of August and September. On the Pacific coast Vladivostok is the chief port, and although its waters are frozen for three months in the year, ice-breakers render it approachable even during that period. Nikolaevsk, near the mouth of the Amur, has an open season from May to October, and is a fishing and fur centre, as also is Petropavlovsk, the capital of Kamchatka. Okhotsk and Ayan, resorts of Russian and Japanese fishermen, are mere villages.

River System

The great plateau forms the watershed of both the Arctic and the Pacific drainage systems, and as the trend of the land is north-eastward the longer rivers are to be found in the west and the shorter and swifter in the north-east. The Yenisei and the Lena, both over 3000 miles in length, offer great navigable stretches, whereas the Yana, the Indighirka, and the Kolima, approximately 1000 miles in length, afford only limited facilities for navigation. All the chief rivers of Siberia have many great tributaries, which have facilitated the rapid penetration of the continent.

The *Yenisei* rises in the mountains on the Mongolian border, in the neighbourhood of Lake Kossogol (Chubsugol), and pursues a winding course first westwards and then northwards to the Gulf of Yenisei in the Kara Sea. Its largest tributaries are all on the right bank, and the chief of them are the Angara or Upper Tunguska, which connects the Yenisei with Lake Baikal, the Stony Tunguska, and the Lower Tunguska.

The *Lena* rises in the southern mountains in the neighbourhood of Lake Baikal, and flows at first in a north-easterly direction. Near Yakutsk it bends to the north-west, and ultimately reaches the Arctic Ocean through a large delta. Of its many tributaries the chief are on the right bank, the Vitim, the Olekma, and the Aldan, with its affluents the Amga and the Maya. All these rise, like the *Lena* itself, in the southern mountains. On the left bank the largest tributary is the Vilyui, which has a course parallel to that of the main stream.

The *Amur* is formed by the junction of the Shilka and the Argun, which rise in the mountain mass to the north of Mongolia. The Argun, and afterwards the Amur itself, forms part of the boundary between Manchuria and the Amur territory. From the junction of the Shilka and the Argun the Amur flows in a winding course north-eastwards until it reaches the Gulf of Amur in the neighbourhood of Nikolaevsk.

Lake Baikal, the largest of Siberian lakes, which lies near the southern border at an altitude of 1400 ft., is 400 miles long, and from 18 to 70 miles broad, with an area of 13,200 square miles, and a greatest depth of 4500 ft.

(3) CLIMATE

Siberia has a typically continental climate with a great variation of temperature between summer and winter. The winter is long and very cold, but the snow is seldom deep, and in some parts, like Transbaikal, snow hardly falls at all; the winter winds as a rule are light, and owing to the consequent calms the intense cold is tolerable, and its effects on vegetation and human activities are comparatively unharmed.

Temperature.—The winter temperatures are much lower and the summer temperatures somewhat higher than might be expected. The mean annual temperature of practically the whole country is below 36° F., and of all except the extreme south below 32° F. The coldest month is January. The coldest part of the country is

the region between the Aldan and the Arctic Ocean, in which is situated Verkhoyansk, the coldest place in the world, which has a January mean of -60.7° F. and a July mean of 59.7° F. The extreme south has a July mean of over 71° F., and Minusinsk is said to have the pleasantest climate in Siberia.

Rainfall.—Precipitation is slight and occurs chiefly in summer. In the far north it is less than 8 inches in the year, but increases towards the south, reaching its maximum of 20 inches or more in the Amur region; while Kamchatka has an annual fall of 40 inches or more. On an average 50–55 per cent. of the annual amount falls during June, July, and August. Despite the abundance of great rivers, drought is not uncommon in many parts, although the frozen subsoil of most of Siberia and the gentle gradients of the plains make the drainage slow and give the country a wet appearance despite its scanty rainfall.

The appended table gives the temperature and precipitation of places in each of the Governments and territories of Eastern Siberia.

	Temperature		Precipitation	
	Jan. Mean	July Mean	July—Aug. ins.	Annual Total ins.
Yeniseisk	-10.1° F.	66.9° F.	6.5	17.0
Irkutsk	-7.4	65.1	8.5	16.0
Verkhne Udinsk	-17.3	66.2	4.5	8.0
Yakutsk	-46.0	66.2	6.5	12.0
Blagoveschensk	-13.7	70.3	11.5	20.0
Khabarovsk	-13.2	69.4	12.5	22.0
Vladivostok	-4.8	69.0	6.0	15.0
Petropavlovsk	-13.8 (Feb.)	58.3 (Aug.)	6.5	48.0

(4) SANITARY CONDITIONS

The climate of Siberia is not unhealthy, despite its rigour, but frostbite and snow-blindness are naturally prevalent. Apart from these, however, many diseases due to bad conditions are found. Measles have a devastating effect, especially among the Koryaks and

Yukagirs; smallpox has caused a steady reduction in the numbers of the Yukagirs and Tungus, and tubercular diseases are prevalent. Other complaints are Siberian boil plague, a form of anthrax; goitre; syphilis; ophthalmia, which is very common; leprosy; and cholera, which is always to be found in Amur and Primorsk. The south-eastern parts of Siberia seem to be the least healthy, owing to their proximity to China, Korea and Japan.

In the polar and subpolar regions is found the curious phenomenon known as Arctic hysteria, which is probably accentuated by the long winter darkness. Hardships cause the spread of this hysteria, which sometimes afflicts whole villages, although settlers and exiles seldom suffer from it.

It is extremely difficult to combat disease in Siberia, owing to the totally inadequate medical service, the unhygienic conditions of the native huts, and the dirty and insanitary habits of the people.

(5) RACE AND LANGUAGE

Natives.—It is at present impossible to classify the natives of Eastern Siberia racially, as adequate data are wanting and the peoples are much mixed. Falling back on linguistic classification we find that these peoples are divisible into two groups, the Palaeo-Siberians and the Neo-Siberians. The Palaeo-Siberians, not only by their languages, but also by reason of their earlier migration to the extreme north, seem to be distinct from other peoples in Eastern Siberia. The Palaeo-Siberians comprise the Kamchadals, Koryaks, Chukchis, Yukagirs, Gilyaks, the Ostyaks of Yenisei, and a few Eskimo and Aleuts. The Neo-Siberians include the many groups of Tungus tribes, the (Turki) Yakuts and the (Mongol) Buryats, a few Samoyeds and several thousand Turko-Tatars. The Palaeo-Siberians (less than 30,000) still live mainly by hunting and fishing, to which some have added reindeer breeding. Their tiny groups of huts are found chiefly along the banks of the great rivers, although there are a few on the Pacific coast.

The Neo-Siberians number about 700,000. Scattered over Eastern Siberia are the Tungus, whose ancestors migrated from Manchuria, and who live much as do the Reindeer Chukchis. Another branch of the Tungus, the Goldi, in the Ussuri region, have acted as transmitters of Chinese culture to the natives on the lower Amur. A more numerous Neo-Siberian people are the Yakuts, who speak a Turki language but are racially much mixed. It is interesting to note that they are in many places absorbing the Russians, who adopt their language and customs. The largest and also the most advanced of the Neo-Siberian peoples is the Buryat tribe, who are horse and cattle breeders. They intermarry with the Russians and practise agriculture. A knowledge of reading and writing is common among them, and they have a higher percentage of literates than the Russians. A few hundred Samoyeds have crossed the Yenisei from Western Siberia, and the so-called Turko-Tatars from northern Mongolia are found in their thousands as herdsmen and agriculturists within the southern borders of the Irkutsk and Yeniseisk Governments.

Russians and Foreigners.—The European population of Eastern Siberia consists chiefly of Little and Great Russians, Poles, Lithuanians, Germans, and Jews. There is little or no race prejudice even among educated Russians and Poles, and in the south, Kirghis, Turko-Tatars, Buryats and even Amur Tungus marry Russians and often absorb them in customs and language. Among the Europeans the prevailing language is Great Russian spoken with the addition of many Polish words.

The yellow races are represented by a certain number of Chinese, Koreans, and Japanese.

(6) POPULATION

Distribution

Natives.—The population of E. Siberia is estimated at 4,238,500. The natives, who number about 700,000, live for the most part east of a line drawn northward from Irkutsk to the Arctic Ocean. Of the 30,000 Palaeo-

Siberians all except the Ostyaks of the Yenisei and the Gilyaks at the mouth of the Amur live in the north-eastern corner of the country. Among the Neo-Siberians, certain of the Tungus tribes (the total number being about 80,000) form a genuinely nomadic group. The Yakuts number nearly a quarter of a million, and are increasing, as are also the Buryats, who at present approximate to 300,000, and dwell round Lake Baikal.

The smaller tribes are doomed to extinction; this is due partly to the encroachments of Russian and American traders, and also to the rapid spread of disease and periodic epidemics.

Russians and Foreigners.—The Russian population of Eastern Siberia is about 3,500,000, which makes a density for the whole country of less than one Russian per square mile. The density in particular provinces, however, varies between one to nearly 100 square miles in Yakutsk and about three to the square mile in Transbaikal. In the latter territory the Russians dwell chiefly in the region between the Rivers Shilka and Argun, while in Yeniseisk and Irkutsk Governments they are chiefly found in the country bordering on the Trans-Siberian Railway. Political and criminal exiles formed in 1897 5.21 per cent. of the population of the whole of Siberia.

The chief foreigners to be found in Eastern Siberia belong to the yellow races—Chinese, Japanese, and Koreans. All these are found in Primorsk, and the Chinese and Japanese in Transbaikal and the territories bordering on the Amur.

The Chinese may be estimated at about 200,000, but any exact figures are impossible, as their numbers have fluctuated considerably, and the Russians in 1910 began a policy of exclusion which is bound in time to have a considerable effect. The Chinese are now excluded from all Government works, and legislation was contemplated which would have removed them from mines, forests, and shipping.

The Japanese are found in the territories bordering on the Amur. Their numbers are growing, but no trustworthy statistics are available. A partial census of the

Koreans (1906-7) seems to show that there are not less than 50,000 in Primorsk, while there are also a good many seasonal immigrants.

Towns

The urban population is estimated at about 12½ per cent. of the whole, and of late years the building of the Trans-Siberian railway has caused the expansion of many of the large towns. The most populous city of Eastern Siberia is Irkutsk, which in 1913 had a population of 129,700. Other important towns are Vladivostok (91,464 in 1911); Chita, the capital of Transbaikal (79,200 in 1913); Krasnoyarsk, the largest town of Yeniseisk (73,500 in 1910); Blagoveschensk, capital of the Amur *oblast* (62,500 in 1913); Khabarovsk, on the Amur (51,300 in 1913); Yakutsk (10,800 in 1913); and Petropavlovsk, the chief town of Kamchatka (1500 in 1913).

Movement

The low birth-rate among Russians resident in Siberia, together with the high rate of infant mortality, results in the very small natural increase of 7 or 8 per 1000 annually. The population of Eastern Siberia has doubled since 1897, but this is chiefly due to immigration, which is very considerable. During the years 1911 and 1912 immigrants into Siberia numbered 485,000, while from 1902 to 1912 the immigrants into Primorsk alone averaged about 16,000 a year, but from both these figures a considerable percentage should be deducted for returning immigrants. The building of the Amur railway has since 1911 attracted a large number of settlers to these districts, while in years of bad harvest, etc., there is a good deal of migration from Western to Eastern Siberia.

II. POLITICAL HISTORY

CHRONOLOGICAL SUMMARY

- 1581 Yermak crosses the Urals. Beginning of Russian expansion in Siberia.
- 1636 Russians reach the Pacific coast.
- 1644 Poyarkov arrives at the mouth of the Amur.
- 1689 Treaty of Nertchinsk. Russian advance down the Amur checked by China.
- 1696 Russians arrive in Kamchatka.
- 1848 Renewal of Russian activity on the Amur.
- 1858 Treaty of Aigun. Russia gains the region east of the Ussuri river, and the control of the Amur.
- 1860 Treaty of Peking. Ussuri region defined.
- 1867 Alaska bought by the United States.
- 1896 Agreement between Russia and China for the construction of railway across Manchuria.
- 1898 Trans-Siberian Railway completed to Irkutsk.
- 1900 Massacre of Chinese at Blagoveschensk.
- 1904-5 Russo-Japanese War. Treaty of Portsmouth (U.S.A.).
- 1911 (Nov.) Mongolia declares its independence of China.
- 1913 (Nov. 5) Agreement of Peking between Russia and China concerning the status of Mongolia.

(A) RUSSIAN ADVANCE

The history of the Russian occupation of Eastern Siberia is conveniently divisible into its domestic and foreign aspects. Under the former are considered the successive waves of peoples which entered the country from European Russia, and under the latter their contact with foreign nations.

The Russian advance on its domestic side falls naturally into three periods, in which the most prominent features are the coming of (i) the hunters and adventurers, (ii) the exiles both political and criminal, and (iii) the colonists.

(i) *Hunters, traders, and Cossacks, 1600-1750.*

There seems little doubt that, so early as the eleventh century, Novgorod merchants traded for furs across the Ural Mountains as far as Tobolsk. Settlements were even made on the banks of the River Taz, the western boundary of Eastern Siberia. By the fourteenth century colonists are said to have followed in the wake of Russian, Dutch, and English traders on the Yenisei River and to have pushed south and east. But they were a mere drop in the ocean; the real beginning of the Russian penetration of this vast continent was perhaps due to that fever of discovery which seized Europe in the fifteenth and sixteenth centuries. For the search for spices in the East and precious metals in the West, Russia substituted the search for furs in Siberia and subsequently that for gold and silver. It was in 1581 that Yermak crossed the Urals to conquer, for the merchant family of the Stroganovs, the rich fur-yielding district of Yugra, and to collect tribute from the natives. This was the initiation of that movement of hunters and adventurers which led to the continent being crossed in less than sixty years.

The hydrographic system of Siberia, whose two great rivers, each formed by two tributaries, flow northwards, enabled the Russians, by descending the one and ascending the other, and linking up the systems by short portages, to cross rapidly the thousands of miles of trackless forest and swampy lands. Little opposition came from the majority of the native tribes, who were weak and sparse in number and could offer but ineffectual resistance to the fire-arms of the Russians. Thus by barter and force the northern part of the great continent of Asia fell an easy conquest to the Russian invader.

So rapid was the advance that the town of Yeniseisk, near the western border of Eastern Siberia, was founded in 1618, the River Lena crossed in 1628, an *ostrog* or blockhouse built in 1632 from which the town of Yakutsk rose, and the Pacific coast near Okhotsk

reached in 1636. By 1644 Poyarkov had descended the Amur to its mouth; and by 1648 Dejnev had doubled East Cape into the straits navigated eighty years later by Bering.

First came the hunters and traders, next the adventurers, lured by fabulous tales of precious metals, valuable furs, and silks from China. *Ostrog*s, generally stockaded compounds enclosing a few dwellings, were built for defence at strategic points, to develop later into well-known towns. Voivodes (*voyevod*) or military chiefs with absolute authority were established at central points. "From the sufferings of the Cossacks" at their hands "we may judge of the treatment of the natives¹." The Cossacks acted not only in their military capacity but also as collectors of tribute from the natives. The cruelty and lawlessness of these wild Russian soldiers and adventurers increased with their advance eastward, and for many generations the memory of these horrors remained with the natives.

The evil results on the country generally are illustrated by the events which happened on the Amur during the remarkable expeditions of Poyarkov and Khabarov between 1643 and 1652. While paying tribute to their perseverance, Ravenstein² deplures the fact that these enterprises were left to private adventurers who sought their own ends:

The natives appear to have been exposed to all sorts of extortion; tribute was levied to an unlimited extent without any commensurate good being conferred upon the natives. No settlements of peasants or tillers of the soil were founded; the resources of the country were soon exhausted by perpetual foraging expeditions of Russian adventurers. When the Russians first arrived on the Amur, the natives cultivated fields and kept cattle. Ten years afterwards these fields had become deserts; and a country which formerly exported grain could not even support its own reduced population. There is no doubt that, had these expeditions been carried out upon a

¹ Vladimir, *Russia on the Pacific*, p. 82.

² E. G. Ravenstein, *The Russians on the Amur*, p. 25.

more sensible plan, Russia might have enjoyed these resources of the Amur two centuries before our times.

While on the whole the natives were easily subdued, the larger tribes made some resistance. The Tungus on the Tunguska River, in the present Government of Yeniseisk, held out against the invaders from 1607 to 1610. Also, in their attempt to make secure the portage between the upper tributaries of the Yenisei and the Lena, the Cossacks came into collision with the great Mongol tribe of Buryats, who were not subdued until 1648. As a result of this, Irkutsk, in this region, to-day the most populous city of Siberia, was not founded until 1651. Other tribes that resisted were the Chukchis in the far north-eastern peninsula, who finally obliged the Russians to leave them virtually independent; while neighbours of this tribe, the Koryaks, suffered from Cossack brutality and frustrated Russian attempts to exact tribute until 1764, when they ultimately recognised the supremacy of Russia.

The Russian advance down the Amur having been checked by the Chinese in 1689 (Treaty of Nertchinsk), the flow of settlers was diverted to the north-east; and seven years later an expedition succeeded in reaching the Kamchatkan peninsula. From this time settlements sprang up in this far-distant land; and a few years later, in the first half of the eighteenth century, Russian ships began to appear in the northern Pacific.

Russian exploration did not even stop at Kamchatka but continued on the other side of the Pacific. In 1741 the Alaskan coast was visited by Bering and Chirikov, and settlements were made on the seaboard; but in 1867, six years after the charter of the Russian-American Co. had expired, Alaska was purchased by the United States for \$7,200,000.

(ii) *Exiles, political and criminal, 1750-1900*

It is said that deportation to Siberia began after the murder of the Tsarevich Dmitri in 1591. In 1648 occurs the first mention of "exile" in legislation.

At first the system was used to get rid of criminals who had been mutilated. Fifty years later it was thought desirable to settle the new territory by dispatching criminals to Siberia, but most of these went no further than just across the Urals. From about 1762 serfs were allowed to be deported by their masters; and the development of the mining industry afforded convenient opportunities for the disposal of convicts. In 1763 capital punishment was abolished in Russia, and perpetual banishment to Siberia with hard labour substituted. Indeed, during the eighteenth and nineteenth centuries, deportation as a punishment was extended to include an ever-growing category of crimes and misdemeanours, resulting in the banishment of criminals with sentences of hard labour and also those undergoing shorter terms of imprisonment. Political exiles were sentenced sometimes by legal trial, but frequently by administrative councils or even by individual governors without public trial. In addition to these categories, refractory and otherwise undesirable members of the village communities were exiled by the *mirs* (folk-moots); these numbered more than 50 per cent. of the deportations for the years 1867 to 1876. Finally, religious dissenters were added to the classes banished to Siberia.

From 1823 to 1898, 187,000 criminals and 513,000 political exiles, with 216,000 followers, crossed to Siberia. In 1902 (by a *ukase* of 1900) exile to Siberia was abolished, but in 1904 it was restored as a punishment for political offenders, and in 1906 as many as 45,000 political exiles alone were deported to Siberia. During the last 50 years about 20,000 per annum have been exiled, but in the year 1898 the figure actually reached 298,574. In the course of the last hundred years the most notable deportations have been those of the Decembrists to Chita, many of whom were nobles who shared in the military revolt of December 14, 1825, on the accession of Nicholas I; the Polish patriots who revolted in 1863, to the number of 15,000–20,000; the Russian revolutionaries and Polish sympathisers in 1905 and 1906;

and finally in 1914 such diverse elements as the Austrian, German, and Turkish prisoners, an unusual number of political exiles and prominent socialists of the Duma, members of the Finnish Diet, Poles and Ruthenians from Galicia, and Polish refugees from Russian Poland.

Of the religious exiles banished to Siberia, the majority were Raskolniks, dissenters whose spiritual ancestors objected to the changes introduced into the system and ritual of the Russian church in the seventeenth century; these are said to number 10 per cent. of the Russian population of the Russian empire. The Don Cossacks in Transbaikalia and on the Amur and Ussuri rivers are nearly all Raskolniks. They are industrious and abstemious, and their villages make a pleasing contrast to those of their neighbours. Other sects which have suffered banishment include the Shtundists, Dukhobors and Skoptsi, the last having been deported at the beginning of the nineteenth century, and since 1838 exclusively to the Yakutsk territory.

The larger number of exiles has always been centred in Western Siberia, but since the construction of the railway Irkutsk and Transbaikalia have claimed their share. Since 1870 the Government has done its best to keep apart the criminal and the peaceful colonists. From that date the convicts were confined more and more to the upper Lena basin and the island of Sakhalin, while the political exiles have been mainly detained in western and central Siberia. A few groups were isolated in the extremely cold regions of the northern Yakutsk territory.

A great menace to life has been added by the presence of escaped convicts (*brodyagi*) throughout Siberia. It is common knowledge that about one-third of those transported have escaped all control, and have robbed and terrorised. On the other hand, the political exiles who settle in the towns add much by interest, example, and teaching to the enlightenment of the community and the development of the country. Lately the authorities, embarrassed by the friendly reception in Siberia of these

political exiles, have attempted to discredit them by including criminals in the same category.

The merits of the exile system were loudly proclaimed in the early nineteenth century; but those who extolled it did not foresee the inevitable results of trying to develop a new country with the most undesirable elements, whether criminals or ne'er-do-wells. It was asserted that the system would relieve the mother country of a dangerous element, give the convicts a fresh start in a new environment, and help the development of a new continent. Unfortunately the misery, hardships, and cruelty suffered by the exiles were concealed; and in their place only rosy reports of a land of plenty, happy homes, and the construction of fine public works reached the public ear in Europe. It was said that the learned were astounded at the almost patriarchally long lives of the exiles, not suspecting that these existed only in the official lists of the Siberian authorities, who prolonged the lives of thousands of exiles on paper in order to put the money received from the Government for their support into their own pockets.

In the nineteenth century attempts were made to lessen the terrible hardships and loss of life due to the driving of large herds of exiles across the frontier without adequate arrangements; and late in the century their dispatch by ships to Sakhalin did away with thousands of miles of forced tramping for exiles bound thither. Finally the construction of the Trans-Siberian Railway effected the greatest reform and ultimately proved a death-blow to the system.

According to the report of the General Director of Prisons, A. P. Salaman (1896?),

the number of exiles and their relatives living at the present moment in Siberia, amounts in round figures to some 300,000, of whom about 100,000 are *brodyagi* (runaway prisoners), 100,000 "proletarians," 70,000 labourers without land, 30,000 settled labourers, and only 4500 giving reason for hoping that they will become assimilated with the older population¹.

¹ J. Stadling, *Through Siberia*, p. 266.

(iii) *The Colonists, 1861-1914*

The settling of free peasants in Eastern Siberia may go back even to the fourteenth century, but the beginning of a continuous occupation dates from the seventeenth. The early Government essays in colonization, made for the purpose of establishing the security of newly-won territories, were followed by two centuries of official discouragement. It was not until the latter half of the nineteenth century that the Government revived their former policy; and colonization did not attain considerable dimensions before the beginning of the twentieth century. It should be remembered that previous to 1861, when serfdom was abolished, the Russian peasant could not lawfully leave his native soil.

Save for the unrecorded and unauthorized stray groups of settlers, filtering throughout the centuries into remote parts of Siberia, the earliest colonists were those sent to Albazin on the Amur in 1671-72 to till the soil and to save outposts such as this from surrender to the Chinese as a result of starvation. From the descendants of the Don Cossacks settled in Transbaikal three *sotnias* were detached in 1857 to establish villages along the banks of the Amur in order to secure the new boundary. It is said that, in their struggle with the strange and hard conditions, they lost more than they would have done in a campaign. By the end of 1858, 20,000 persons of both sexes had been settled on the river banks. The following year a similar plan was adopted in the Ussuri valley, where the best lands were again given to the Cossacks so as to ensure the new boundary (Treaty of Aigun, 1858). These and other migrations took place within Eastern Siberia; latterly large numbers of immigrants to the Ussuri plain have come from Western Siberia. Government experiments have been made with the view of encouraging voluntary settlers from Russia in the Ussuri district, but they cannot be said to have been successful.

It is said that during the first three hundred years of the Russian occupation of Siberia only 3,000,000

settlers entered Siberia. Of these half a million arrived between the years 1870 and 1890. From 1896 to 1905 the number was 1,370,000, indicating the effect of the new Trans-Siberian Railway. The numbers increased rapidly after the stagnation caused by the Russo-Japanese War, reaching the maximum for any one year of 758,812 in 1908, and totalling for the years 1906-1913 nearly $3\frac{1}{2}$ millions. From these must be deducted the returning immigrants, who in 1911 numbered 30 per cent., decreasing in 1913 to 11 per cent. Since the year 1896, and particularly since the Russo-Japanese War, the Government has given generous encouragement to settlers by loans on easy terms, taxation and military service relief, land surveys, transport improvements, and facilities for the purchase of agricultural implements. In 1896 the Government allocated 1,000,000 roubles for colonization, in 1905, 2,900,000 roubles, and in 1914 the large sum of 30,000,000 roubles.

At the same time it should be noted that the year 1908 remains the high-water mark of immigration. The later diminution is due to two or three causes, namely, the decrease in the supply of free and easily accessible land, the unfavourable farming years in Siberia, and improvements in European Russia. During the five years 1909-13 peasant banks in emigration districts have enabled 10,600 square miles of land in European Russia to pass into the peasants' own hands.

The causes which determine the Russian peasants to emigrate are, as with most migrants of the present age, economic. No doubt the opening up of the great unknown land by the Trans-Siberian Railway has brought tales of fabulous resources of gold and silver, of broad acres, of fortunes quickly made and spent; no doubt relatives and friends gone before add temptation to the longing for change, but in the main the Russian peasant goes, not because of these or to avoid political or religious restrictions, but because he has not enough land to support his family. Unless he happens to live near a town or factory where he can

hire out his labour during the winter months, he finds it hard to provide for his family and impossible to pay the taxes as well. In Siberia, on the other hand, he has the advantage of sufficient land to occupy him all his working days. It is officially reported that an ordinary settler's farm has an average of more than 100 acres, or between eight and nine times that of the European Russian peasant.

Colonists have settled mostly along the railway in the Governments of Yeniseisk and Irkutsk, where it passes through the black-earth belt. The last few years have seen an increase of immigration to these two Governments at the expense of Western Siberia, where the best lands had already been taken. Transbaikal, the home of the Buryats and the Don Cossacks, has but a small proportion of settlers, for colonists mostly continue their journey to the Amur territory. Transbaikal is regarded as the most beautiful province in Siberia, but the stigma of the horrible treatment of the exiles in the mines still clings to it. The Amur territory has been much favoured since the Russo-Japanese War, and the construction of the Amur railway has added further impetus to settlement there. Perhaps the presence of gold and the favouring condition of warm summers for agriculture have been factors in the attraction. Primorsk received from 1859 to 1913 about $1\frac{1}{4}$ million Russians in addition to the first settlements of Cossacks. Government encouragement was given as early as 1882. Most of the settlers are found along the banks of the rivers Ussuri, Suifun, etc.; but the Little Russians, who are in the majority, have found the clearing of the later allotments (which lie on the hill-sides away from the river) difficult and disheartening work. In 1913 nearly 35 per cent. of the number of immigrants for that year returned from the Ussuri region. Neither in Kamchatka, which is unsuitable for agriculture, nor in Yakutsk are there many Russian settlers.

(B) FOREIGN RELATIONS

(i) *Relations with China*

The Russians in their expansion over Siberia had generally kept north of the 50th parallel, avoiding the more formidable tribes, the Tatars in the west and the Buryats of Transbaikal. Thus beyond Lake Baikal they were forced towards the north-east. Reports, however, reached them in the Yakutsk territory of a great river to the south and a fertile land; and they hastened from the Aldan and the Lena to the lower and middle Amur. In the attempt to approach the latter more directly from Europe they came into collision for several years with the Buryats in Transbaikal and began there the establishment of a base from which in the late seventeenth century they tried, and in the middle of the nineteenth century were able, to acquire control of the Amur.

Of the natives encountered on that great river many, perhaps all but a few Gilyaks at the mouth of the river, were paying tribute to the Manchurian authorities. In fact, in the Treaty of Nertchinsk (1689), the Russians accepted the Chinese boundary as running roughly about 200 miles north of the Amur River along the crest of the Stanovoi mountains and ending at the Okhotsk coast near the Ud River. Save in their struggle on the Amur the Russians can scarcely be said to have trespassed in their early expansion on territory to which China had any serious claim.

The collection of tribute and the oppression of the natives on the Amur from 1643 onwards had been possible because of the conflict at that time between the Chinese and the Manchus; but, after the establishment of the Manchu dynasty at Peking in 1644, interest was awakened in the out-lying portions of the Empire, especially the outskirts of Manchuria. Manchus had resisted Khabarov on the Amur so early as 1652. In the spring of 1655 a Manchu army of 10,000 attacked the invaders on the river after the latter had assailed

the Chinese up the Sungari in Manchuria itself. These filibustering raids of the Cossacks in the very home of the Manchu dynasty of China proved the last straw. It has been said that, had the Russians then settled down on the Amur and cultivated the soil, the Chinese authorities might have tolerated them, as they were not greatly interested in the Amur River at the time. By 1661 the regular Russian forces had been withdrawn from the Amur and were concentrated at Nertchinsk (at the junction of the rivulet Nertcha with the Shilka) after some local opposition on the part of the Buryats. An *ostrog* had been built here in 1654 and a *voyevod* appointed two years later. Bands of adventurers and outlaws from the Lena district, drawn by exaggerated reports, continued to make trouble on the great river; and, in 1665, the leader of one of these actually rebuilt the fort at Albazin. Such were his activities that the Chinese Government were aroused and in 1670 sent a letter to Nertchinsk complaining of the Russian encroachments, particularly at Albazin. By 1672 the leader of these bands had been pardoned and recognised by the Russian Government. Three years later the Moscow Government, realising the true state of affairs and fearing difficulties with China, especially regarding the tribute collected from natives who were considered by the Chinese as tributary to them, sent an envoy to Peking. On his return journey the envoy

sent word to the Russians at Albazin, both from Tsitsikar and Nerchinsk, not any longer to navigate the lower Amur and the Dzeya (Zeya) nor to collect tribute from the Tunguzians (Tungus) dwelling along the latter¹.

His instructions, however, were disregarded; and further, what had been merely Russian stations for collection of tribute on the river were converted into actual settlements by 1681. Officials were appointed, forts were to be strengthened, and tribute collected. By the next year these settlements extended to the Amgun River, a left-bank tributary near the mouth of the Amur. Albazin

¹ Ravenstein, *op. cit.* p. 41.

prospered, and already 2700 acres were under cultivation. The patience of the Chinese being exhausted, they now took action; and by the end of 1683 all Russian settlements on the Amur, save Albazin, were destroyed. The latter was besieged in 1685 and again in the following year by large Chinese forces, but negotiations at Peking caused the raising of the siege on August 30th, 1687. In 1686, a Russian envoy, Veniukov, had arrived in Peking to endeavour to obtain an agreement about the frontier. He brought back with him a letter for the two Tsars of Russia, the first paragraph of which gives the burden of its contents. It is dated November 20th, 1686, and begins:

The officers to whom I have entrusted the supervision of the sable hunt have frequently complained of the injury which the people of Siberia (Sokha) do to our hunters on the Amur, and particularly to the Ducheri. My subjects have never provoked yours nor done them any injury; yet the people at Albazin, armed with cannons, guns, and other fire-arms, have frequently attacked my people, who had no fire-arms, and were peaceably hunting¹.

In the negotiations at Nertchinsk, which followed the preliminaries, the Chinese had the advantage of a large body of well-armed troops and of able diplomats in the persons of two Jesuit Fathers, well educated and well informed, from the Court of the great Emperor, K'ang-hsi. The Russian envoy Golovin was weak, unskilled, and ignorant of the country. The deciding factor for the Russians was the rumour of the desertion of 3000 Buryats to the Chinese. On the 27th of August (O. S.), 1689, the Treaty of Nertchinsk was signed, giving to China the river Amur with the large area north of it and south of the crest of the Stanovoi range as far as the Pacific, the boundary ending near the River Ud. Westwards the River Argun was to be the frontier line. This signal defeat for Russian diplomacy occurred just before the accession of Peter the Great, when the Russian Government had been for many years weak and distracted. By this agreement sources of tribute were cut

¹ Ravenstein, *op. cit.* pp. 54-5.

off, and, what was more serious still, communications with the Pacific coast settlements were rendered long, arduous, and uncertain. The journey from Irkutsk to Kamchatka took many months; and the latter part had now to be done by pack animals down the steep slopes of the coastal mountains to the Okhotsk sea and thence by ship.

The fort of Albazin was demolished and the treaty fairly well kept by the Russians. The Chinese made annual inspections of the river boundary; and, save for Russian adventurers, escaped convicts, and scientific expeditions, the Russians did not trespass on the Lower Amur.

These disadvantages were dwelt upon by writers during the eighteenth century and, together with the marine activity of the Russians in the North Pacific, led to an awakened interest in the great river Amur during the early nineteenth century. In 1842 Great Britain obtained from China the opening of five treaty ports. Russia, hitherto in the privileged position of being the only European nation having treaties of commerce with China, saw her overland trade with Peking diminishing, and began to fear Great Britain's arrival on the Pacific as likely to bar her outlet there. The renewal of the Russian advance was assured by the appointment in 1847 of Count Muraviev, who was already keenly interested in the country, as Governor-General of Eastern Siberia. An expedition sent by him down the Amur was lost, but in 1849 explorations of the mouth of the Amur were made from the Pacific; and in 1850 Nikolaevsk and three years later Mariinsk on the river and Alexandrovsk on De Castries Bay in the Straits of Tartary were established.

Thus, in defiance of the Treaty of Nertchinsk, the Russians had begun the occupation of the Amur. A modern writer¹ contends that the treaty left the boundaries of all but the Upper Amur uncertain, and that the Chinese claim to the territory north of the river was merely nominal. The former contention does

¹ Vladimir, *op. cit.*

not seem to be valid, for the first article of the treaty defines the boundary to the eastern ocean as clearly as could be done in the circumstances, only leaving the exact line immediately abutting on the Pacific coast for delimitation with reference to the river Ud. Moreover, boundary stones were duly placed and the river boundaries were annually inspected. But the Chinese made little more effort to assure their sovereignty than before the treaty. They collected tribute from the natives on the river, including valuable sable skins from those on the northern banks; and in the plains of the Zeya, a left-bank tributary of the Amur, there were "large settlements of Chinese Manchus." Chinese traders visited the natives and are reported, with some show of truth, to have been less welcome than the easier Russian merchants. Certainly China did not occupy the country and extend her administration as a European nation would have done in these days.

The Crimean War in 1854 gave a further impetus to Russian activity. The blocking of all outlet from the Black Sea necessitated another line of communication to defend the Pacific coast settlements. During the years 1854 and 1855 the allied attacks on the Pacific Coast, although demanding all Muraviev's alertness, were uniformly unsuccessful. In the same year Muraviev descended the Amur with a powerful military expedition to convey arms and provisions to the Russian ships and settlements on the Pacific coast. It is true that he asked permission of local Chinese officials, but he did not and could not wait for refusal from Peking. A second military expedition of Muraviev's in 1856 was objected to by the Chinese, but without result. Until that year all settlements were confined to the lower Amur, but during 1856 several more were made on the middle Amur, thus linking the upper and lower portions of the river. In 1857 a brigade of infantry and a regiment of cavalry descended the Amur, forming numerous stations and conveying provisions for the possessions of the Russian-American Company. In 1857 Admiral Putiatin, the new Russian Minister to Peking,

failed to obtain an agreement about the Amur boundaries. But Russia was already confident; and in the same year the territories of the Amur, having been separated from the Government of Irkutsk, were combined with Kamchatka and the coastal region of the Okhotsk sea, thus constituting the Maritime Province of Eastern Siberia, dependent upon Muraviev as Governor-General of Eastern Siberia. A year later the Amur territory was cut off and established as a separate province. In 1858 the position as between Russia and China was the reverse of that of 1689. The Russian Government was now strong, and the population of the near base in Transbaikal was numerous. On the other hand the Manchu dynasty had lost its great military prestige of the seventeenth century and its interest in Manchuria. The immediate cause of its weakness was due to the struggle with the Anglo-French expedition to Peking, and the T'aip'ing rebellion.

China's answers to Muraviev fluctuated with the fortunes of her war against the French and English. Muraviev took skilful advantage of her troubles, and with the final success of the Allies obtained her agreement to the Treaty of Aigun (May 16, 1858), which gave to Russia the left bank of the Amur as far as the Ussuri and both banks from the Ussuri to the mouth of the Amur. Indeed, by 1858 Muraviev had practically settled the left bank of the river Amur; and it only remained for diplomacy to recognise the fact. To make the new territory secure, Cossacks were sent to settle along the right bank of the River Ussuri. Neither here nor in Transbaikal did they prove good colonists, for their very duties conflicted with this rôle. The temporary check to the Anglo-French expedition on the Pei-ho in June, 1859, encouraged the Chinese to disavow the Treaty of Aigun; but the final success of the Allies favoured Russia's aims, and the Treaty of Peking, signed on November 14, 1860, granted to Russia very favourable terms. It gave the latter the whole of the coastal area east of the Ussuri River, in other words, the maritime border of Manchuria as far as the Korean

boundary. Nearly four months before the treaty was signed the site of Vladivostok had been occupied, and twelve years later the Russian naval base in the Pacific was moved thither from Nikolaevsk. Included in the treaty was an agreement for free commercial intercourse without customs dues between the two Empires along the whole extent of the frontier, in a zone of 50 versts on either side. This agreement was extended in 1881 for thirty years.

No further diplomatic incident of importance occurred between China and Russia until the end of the nineteenth century. In 1894 Russia objected to Japan retaining the footing in the Liaotung peninsula which she had gained in the Chino-Japanese War, and, posing as China's friend against "plotting Japan and Britain," she in 1896 persuaded the Government at Peking to agree to the construction of the Chinese Eastern Railway across Manchuria in order to link up the Transbaikal railway with the Ussuri railway to Vladivostok.

As this gave rights of occupation in the strip along the railway, it was the beginning of the Russian penetration of Manchuria. The Boxer riot at Peking aroused great anxiety in Russian circles in the east; and the massacre at Blagoveschensk on the Amur in Manchuria in 1900, when some 5000 Chinese men, women, and children were drowned in the river, did not mend matters.

This massacre and the cruelties which followed it in Northern Manchuria have remained a vivid memory with the Chinese, and, added to the anti-Chinese labour legislation of Governor-General Gondatti in 1910, excluding Chinese labour from Government work, has tended to drive the Chinese into the hands of the Japanese.

(ii) *Relations with Japan*

Friction with China gave place early in the present century to collision with Japan. The latter had had cause to view with suspicion the Russian coaling

station at Port Hamilton on the Korean coast (1857). A report was current some years later that Russia had demanded the cession of the twin islands of Tsushima. Her advance in Manchuria, followed by concessions in northern Korea, led to the outbreak of war with Japan in 1904.

The results of the Russo-Japanese War, far from causing Russia to withdraw from the Far East or to take less interest in it, led her to double her efforts to secure what had been saved. Two great undertakings were begun, one of which was the fortification of strategic points; the other was the building of the long-contemplated Amur railway, linking the Transbaikal railway with that of the Ussuri (from Khabarovsk to Vladivostok), completed in 1897. The Japanese in Korea were separated from Russian territory merely by the river Tyumen, and might without warning develop a threat against Vladivostok. As they were also present in southern Sakhalin, they might prove a danger to the Primorsk coast, although by the Treaty of Portsmouth (U.S.A.), 1905, it was agreed neither to fortify the island nor to impede by military measures the navigation of the Straits of Tartary. In pursuance of their policy the Russians have converted Vladivostok into a fortress of the first class and fortified Nikolaevsk near the mouth of the Amur and other smaller places. The Chinese Eastern Railway being the only through railroad to Vladivostok, it was obvious that, if this were cut, all Primorsk would be at the mercy of the enemy; hence the Amur railway was built. The Treaty of Portsmouth gave China the option of purchasing this railway at the end of twenty-five years; and neither Russia nor Japan has the right to transport troops over it. Since the Treaty of Portsmouth was signed the two Powers have tended towards a better mutual understanding. In 1907 the fisheries agreement foreshadowed in the treaty was signed; it granted considerable facilities to Japanese fishermen along the Russian Pacific coast. In 1916 a treaty was signed between Russia and Japan whereby the latter was to take over the Changchun-

Harbin portion of the Chinese Eastern Railway (147 miles) passing through the rich soya bean district of Kirin. Russia also agreed to waive customs dues on Japanese imports of matches, sugar, and fish, but placed an embargo on the import of luxuries to Russia *via* Siberia.

(iii) *Relations with Mongolia*

Russia's commercial relations with Mongolia have brought her into touch both with this state and her suzerain China. Russian traders have been wont, especially since about 1860, to ascend the upper waters of the Yenisei and cross the border into the Uriankhai district of Mongolia. They have been well received by the Mongols, for they brought with them attractive articles of barter and were much easier to deal with than the supercilious and close-fisted Chinese. Indeed the Russians have intermarried with the Mongols, a practice repellent to the Chinese. Trading, gold mining, lake fishing and agriculture have attracted the Russians, including Turko-Tatar and Buryat subjects of Russia. Once a year the Russian *nachalnik* visits these colonies and in the court-house disposes of differences between the settlers. Scientific expeditions have penetrated into the country, and Russia and Mongolia were on friendly terms when the revolution which displaced the Manchu dynasty broke out in China (October, 1911). The Mongols, rendered hostile to their rulers by tyrannical Chinese officials, had tried to get redress from Peking, and, failing this, had sent a deputation to St. Petersburg in August, 1911. Recalling the time when they had had their own rulers, before they were attacked and defeated by the Manchus, they declared in November, 1911, that their allegiance ceased with the passing of the Manchu dynasty. In the disputes and negotiations which followed Mongolia relied on Russia for aid. That Power was able to bring some pressure to bear on the Chinese because the treaty of commerce (1881) fell due for renewal in 1911; but she maintained a correct attitude, only stipulating that her

services were at the disposal of China to bring about reconciliation, on condition that Mongolia should enjoy internal autonomy, under the suzerainty of China with regard to external affairs.

These conditions, along with the exclusion of Chinese colonization in Mongolia, were embodied in a protocol dated at Urga, November 3, 1912. No agreement, however, was arrived at with the Chinese Empire; and for a year Russian efforts for a satisfactory agreement were unsuccessful. Mongolia was disappointed at Russia's willingness to admit China's suzerainty; and China appears to have wanted to save her face. Ultimately on Oct. 23/Nov. 5, 1913, the Agreement of Peking was signed on the basis of the Urga protocol.

It would appear that Russia and China agreed on January 1, 1912, to terminate the provision by which a free zone of 50 versts on either side of the boundary was open to trade without duties; but the effect upon Mongolia was not at first apparent. The Russians export their goods to Mongolia free of duty, while the Mongols are only allowed to export duty-free to Russia native products such as animals, skins, etc., but not silks, tea, and Chinese products. The Mongols show some feeling about this, and have further pressed for a definite assurance that the Uriankhai district is included within the boundary of Outer Mongolia.

III. SOCIAL AND POLITICAL CONDITIONS

(1) RELIGIOUS

(i) *Russians*. The official and educated classes in Siberia belong to the Orthodox Russian Church; in fact, it was a government regulation that officials, except those who belong to one of the other acknowledged religions, must receive the Communion once a year, although by connivance with the priest this could be avoided. Orthodoxy cannot be said to have triumphed in Siberia, notwithstanding the imposing cathedrals and towering village churches and the ubiquity of the priests and monks. One writer has said that "the great majority of Siberiaks, though officially classed as 'Orthodox,' either have leanings towards some Christian sect of Russian origin, or are frankly irreligious, or—and this is not the least frequent case—are what might be called 'Christian Shamanists'¹."

In the official estimate of 1912, 89·97 per cent. of the population of Siberia were claimed as Orthodox, but the value of this figure, if any, is rather as an indication of the number of Russians.

The non-Russian European population is as follows: 0·6 per cent. are Roman Catholics, that is, Poles and Lithuanians; 0·28 per cent. are Protestants, that is, Finns, Germans, and Letts; and 0·6 per cent. are Jewish. Besides these, 2·2 per cent. are Mohammedans, the majority of whom are Turko-Tatars. In Siberia all these forms of religion are recognised and the sects are permitted to practise their own worship; for in 1905 the Russian revolution wrung religious toleration from the Government.

The Russian sects include Raskolniks, Skoptsi, Shtundists, Dukhobors and others less well-known.

¹ M. A. Czaplicka, *My Siberian Year*, pp. 187-8.

Most of the Russian convicts and many of the peasants in Siberia are on no higher plane of mentality than the native; and they seek the aid of the Shaman rather than the priest, who is in their opinion less successful in healing diseases, driving away evil spirits, and predicting coming events.

A few years ago there were nine Orthodox missions in Siberia with 300 workers; and the country has had a few, but very few, great missionaries, for the Russian Church does not favour proselytism.

(ii) *Natives*. It may be said that the ancestors of the 700,000 natives of Eastern Siberia were at the time of the Russian invasion all Shamanists. Shamanism varies with the different tribes, but in general consists in a belief in the existence of spirits good and bad, especially those of ancestors, and in the power of the Shaman or medicine man to exorcise and propitiate them. The largest tribe, the Mongol Buryats, were converted to Buddhism in 1727, but the majority still cling to the old Shaman beliefs beneath the Buddhist exterior. Indeed, the portion of the tribe dwelling to the west of Lake Baikal is largely Shamanist by profession, save where the men have married Russian women and become nominally Christians. The next largest tribe, the Yakuts, together with many of the smaller peoples, such as the Kamchadals and the Yenisei Ostyaks, are also nominally Christians but really Shamanists. The Yakuts are indeed married and buried by Orthodox ritual, but they have greater faith in the Shaman than in the Russian priest. In some cases the Russian priest actually practises Shamanism; and with most of the smaller tribes of north-eastern Siberia it is no exaggeration to say that conversion to the Orthodox Russian Church involves little more than the addition of another charm in the form of an ikon. A recent writer observes that neither the monks nor the secular priests have any real spiritual influence among either the Siberiaks or the natives¹.

¹ Czaplicka, *op. cit.* p. 188.

(2) SOCIAL AND POLITICAL

(i) *Russians*. Eastern Siberia consists of the two Governments (*gubernies*) of Yeniseisk and Irkutsk, the territories (*oblasts*) of Yakutsk, Transbaikal, Amur, Primorsk (Maritime Province), Kamchatka, and the division of Sakhalin. These are also grouped for administration under two general Governments—that of Irkutsk, including Yeniseisk, Irkutsk, Transbaikal and Yakutsk; and that of the Amur, including the Amur territory, Primorsk, Kamchatka, and the division of Sakhalin.

Civil governors have been gradually taking the places of the military governors of all these provinces, excepting those of Kamchatka and Primorsk. Where a civil governor is appointed there is a general administrative council presided over by the deputy governor, who is directly responsible to the Imperial Minister. The business is deputed to committees, each of which is directly under the Ministry (at Petrograd) of the department concerned. This centralisation is the theme of much complaint in Siberia. In a new and growing colony at a vast distance from the capital, and presenting altogether strange and novel conditions, it is obviously desirable that the local government should possess elasticity and be enabled to provide quickly for new developments.

The whole of Siberia was represented in the Russian Duma by eight members, elected by indirect voting.

Each province is divided into districts (*uyezds*), each district into cantons (*volosts*), each canton into villages. The governor of the province appoints a chief (*nachalnik*) over each district as his representative. This chief is also local commissioner of the police, and in turn appoints the local commissaries of police, who are subordinate officials. They may act as an alternative to the *volost* courts, but they are generally ignorant and illiterate. The *nachalnik* also appoints the collectors of taxes, and also the justices of the peace, of whom there is one to every four *volosts*.

Since 1894 there have been municipal Dumas in certain towns, the members being elected by those citizens who pay the "apartment tax." The municipal Duma has legislative powers only and appoints a board of aldermen possessing deliberative functions.

In many Governments in European Russia the gap in local government between the towns and the villages—that is, the larger country districts—is filled by the *zemstvos*, but Eastern Siberia has no *zemstvos*. The Russian Cabinet had agreed to draft a Bill in the autumn of 1916 for the introduction of *zemstvos* into Siberia, beginning with the Governments of Tobolsk and Tomsk.

The *mir* (folk-moot) of the village is strong in Siberia, and only the peasants can vote in it. The chairman (*starosta*) is elected annually or less frequently. The *mir* assigns to each family every few years its hut and strips of diversified land. Since 1906, in European Russia, the growing realisation of the evils of this system, with its premium on laziness, handicap on energy, and check on modern methods, has resulted in legislation enabling the peasant to retain his land in perpetuity; but in Siberia, where the peasant is more conservative, this movement has not progressed so rapidly. Nansen¹ says that a report by Stolypin shows that he intended to introduce this reform into Siberia, but that old custom hindered it. Common ownership has its advantages in a great and sparsely populated country, as life in communities avoids the grave danger of murder and robbery to which the inhabitants of lonely farm-houses would be subject. Yet the movement is growing; in 1912, in the districts of Yeniseisk and Kansk (in Yeniseisk Government), 34,452 acres of land were transferred from common ownership to separate farms. The *mir* has judicial rights in petty cases and power to banish a member from its community. Taxes are low. The total direct taxes paid in the whole of the Yeniseisk Government average about 1½ roubles per person per annum. The *mir*s are combined into cantons (*volosts*)

¹ F. Nansen, *Through Siberia*, p. 242.

which elect an elder (*starshina*) and appoint small tribunals for settling certain civil and criminal cases, up to a fine of three roubles or seven days' arrest. These courts have not proved entirely satisfactory, the secretary to the *starshina* being a professional and not of the peasant class. Since 1911 local boards of magistrates have been constituted as courts of appeal.

These democratic institutions are counterbalanced by restrictions imposed by a centralized and bureaucratic authority. A power of general supervision is lodged in the "district committee of the affairs of peasants."

In the military lands, the Cossacks have their own courts under the jurisdiction of the Ataman of their district. Judges are elected by the Cossacks' assembly.

The Russian people is divided into classes according to status, but in the eye of the law the nobles and the peasants are the only two classes with strictly defined rights and obligations. The official analysis of the Siberian population gives the following component elements per 1000: 8 nobles, 3 clergy, 3 honourable citizens and merchants, 56 burgesses, 709 peasants, 45 Cossacks, 146 natives and 30 others. It should be noted that among the peasants are found many cultured men who have lost their original status.

The Siberians, like all colonial peoples, have a strong sense of personal independence. They are not serfs, but rejoice in the sense of possession of their own lands. They use more modern methods than do their brothers at home; and many of the cultured classes have longed and striven for an effective voice in the administration. Such a civic education is a necessary preliminary to the fulfilment of their aspirations to wider influence.

The impatience of a growing colonial people at having their colony made a dumping-place for convicts had already in the 'eighties caused the Government to take action, and the *ukase* abolishing exile was a further recognition forced on it by developments following on the opening of the Trans-Siberian Railway. The *ukase*, however, does not since 1905 seem to have been strictly enforced. The Russo-Japanese War inci-

dentally let loose a great many convicts, and the recent war has left this class, it may almost be said, in possession.

Animosity against the criminal exiles is growing in Siberia, not only because of their wrongdoings, but also on account of their terrible cost to the new communities. 100,000 *brodyagi* are living at large, begging and stealing. In addition, the expenses of escorting and hunting-up exiles and paying arrears of taxation for unsuccessful colonists is a heavy burden on the struggling community. Half the crimes are committed by the exiles, who form less than six per cent. of the population; and the worst crimes, such as murder, preponderate.

The policy of dumping convicts in Siberia is expensive and produces bad results. The convicts drift to mines, fishing stations, etc., and then join the *brodyagi*. Nor do they become reformed; on the contrary, Siberian crimes have a special quality of atrocity and brutality. The *brodyagi* are increasing rapidly in numbers, and, if preventive measures are not taken, they will prove a serious menace to society and a disastrous check on the development of the country¹. Of course, this refers to the criminal exile, who gives rein to his propensities of thieving and gambling, particularly in the north and east. In southern Siberia, on the contrary, the political exile has undeniably raised the standard of culture in the towns. A further evil is revealed in the Siberian proverb, "Officials come and go, but the trader is always on our backs." This is true both for the native and the settler, many of whom live in the serfdom of debt.

(ii) *Natives*. It may be said that the Russian Government, after the initial cruelties committed by the Cossacks and other adventurers, has interfered very little with the natives. If the latter have suffered it has been rather at the hands of the subordinate officials, and incidentally through the hard dealings of unscrupulous traders. The Government prohibition of the supply of vodka to the natives is ineffective.

¹ Czaplicka, *op. cit.* p. 260.

The Russian law allows the natives to settle their own affairs according to the customs of the tribes, save in the matter of capital offences. The Russians have developed the native clan system and incidentally emphasised the authority of the presiding member. An elder used to be elected annually; but now this officer, who is often called a prince, holds office for three years and is occasionally re-elected. His chief duty is to collect the tribute due to the Government, but he has authority in council (recognised by Russian law as an "oral" council) to punish with imprisonment and even physical chastisement.

This "oral" council, with an elected head, is found throughout the tribes and is naturally rather more developed and complex among the Buryats and the Yakuts. The Buryats are grouped into administrative clans with an hereditary head. There are special final courts which administer justice on the basis of existing customs founded on the old Mongol steppe laws. These have an extensive jurisdiction, with an appeal to the rural surveyors. The Yakut clans are grouped in *naslegs* consisting of from one to thirty clans, and the *naslegs* in larger bodies (*ulus*). The clan is responsible for the crimes of its members. The council of elders of the clan used to decide all legal and economic questions; but now there is more centralization, and the president, with a police court, is the authority over the *ulus*. Taxation, in the case of the Yakuts, is levied through a poll tax of 4 roubles per person, and the richer individual pays an income tax as well. The tribute presses hardly on some tribes and lightly on others. For instance, Nansen mentions the case of the Yuraks on the Yenisei, who are becoming extinct, and are liable to pay even after death, since they are not taxably dead until the next census takes note of the fact. Poor or rich, all adult Yuraks were paying in 1912 10½ roubles each; and for this "they get no education, no schools, no priests, no doctors, no roads, no communications of any kind¹." On the other hand, the Chukchis, num-

¹ Nansen, *op. cit.* p. 124.

bering nearly 13,000, pay but 247 roubles and receive a present in return.

From the Koryak in Kamchatka to the Ostyak on the Yenisei, the natives complain, and with reason, of the hardships of having to supply free transport for all officials, including the doctor and the priest. This may spell poverty or even worse for the poor man and his family. He has always to be ready and on the spot with his reindeer or dog-sleigh, thus being unable to follow the hunt at the busiest time of the year and make provision for himself and family.

(3) EDUCATIONAL

Russia is divided into fifteen educational districts, each with a Curator in charge. District 14 includes the Governments of Yeniseisk and Irkutsk and the *oblast* of Yakutsk; District 15 the *oblasts* of Amur, Transbaikal, Kamchatka, Primorsk, and the division of Sakhalin.

In 1864 primary schools were established to teach the "three R's," religion, and church singing; and from 1884 to 1894 the clergy gained considerable control over them. During Nicholas II's reign, towards the end of the nineteenth century, there was a great revival of interest in education, and large increases were made between the Russo-Japanese War and the year 1914 in the Government aid to education. Education in European Russia owes much to the *zemstvos*, which provide the provincial and district schools, but, as has been said above, Eastern Siberia has no *zemstvos*. In the Siberian towns the municipalities provide the primary schools for the boys, the girls being provided for by private effort. The State primary schools, however, are too few, and the education in them is unsatisfactory. The State provides for higher education both general and technical. The chief town of every province has a classical gymnasium and a pro-gymnasium for girls. These are not of high grade, and there is local clamour for science schools. There is a University and an Institute of Technology at Tomsk, but none in Eastern Siberia. An

offer from Irkutsk to found a university in that city was rejected by the Government. Students who can afford it go to Tomsk, where also is the "House of Science," a popular University in which teaching of all grades is freely offered.

There are 6245 teaching establishments in the whole of Siberia, with 344,678 pupils, exclusive of those in the Jewish *kheders* and Mohammedan *medressehs*. There are also 49 public libraries. The budget of the Minister of Education for the year 1916 was 165,159,780 roubles, and in addition the other Government departments, such as that of agriculture, allotted large sums for education.

Siberia lags behind European Russia in literacy, the former having only 12.3 per cent. literates to the latter's 22.9 per cent. Out of every thousand inhabitants in 1912 there were 36.8 per cent. being taught in Siberia as compared with 54.6 per cent. in European Russia.

GENERAL OBSERVATIONS.

The Colonial Spirit.—Siberia, although physically an extension of European Russia, is in most senses a colony, and this is especially true of Eastern Siberia. There is more freedom from State restriction than in Russia proper. Distance and a new environment, in which new needs have to be met by improvisation, make for this. It is said of the Russian peasant in Siberia that, "though born in Russia, the child of Russian parents, he repudiates his nationality, calls himself Siberiak, and is proud of his country¹."

This independent colonial attitude is a familiar one in the history of colonization; and a less fatalistic, long-suffering people than the Russians would have before this put forth more forcible claims to self-government. Perhaps the absence of all but a small minority of the educated and middle-class elements, and the presence of a menace from the ubiquitous outlaws now at large, have checked the growth of claims for local self-government. Even the demand for *zemstvos*, insti-

¹ H. Seebohm, *The Birds of Siberia* (London, 1901), p. 480.

tutions comparable to county councils, which have done excellent work in Russia, is opposed by a minority which asserts that the *zemstvos* are unsuitable for a country of peasants the bulk of whom are illiterate. To this it is replied that districts in European Russia with similar conditions are examples of orderly government. There was, before the recent disruption, a large party in Siberia which went so far as to demand Home Rule, but in no way desired the withdrawal of Russia's control over imperial and foreign affairs.

External Relations.—The policy of General Gondatti, as Governor-General of the Amur territory, was to exclude the Chinese and to fill their places with Russian workers, thus establishing firmly the occupation of the sparsely settled districts of Russia's Far-Eastern possessions; but there is a party in Siberia opposed to this policy for economic reasons (cf. pp. 54–56).

Since the Treaty of Portsmouth (1905) Russia has done much to strengthen herself against Japan. In addition to works already completed, a strategic road has been planned to duplicate the railway from Khabarovsk to Vladivostok.

Russia's relations with Mongolia have hitherto been friendly. Mongolia lacks funds and experience for the carrying on of the Government, and has therefore leant more and more upon Russia for support. A railway from Lake Baikal, passing through Kiakhta on the frontier to Urga, the capital of Mongolia, and joining the Kalgan-Peking Railway, has been planned. Telegraph lines and posting establishments already link up the Irkutsk Government in Siberia with Kobdo and Uliassutai in Outer Mongolia.

Slow Progress.—The contrast between the rapid occupation of Siberia and its slow development is so marked that the question naturally arises whether this is due to mistaken policy or maladministration. Both are responsible in a certain measure. The policy of making Siberia a great penal settlement and allowing escaped convicts to terrorize the population, together with the stigma arising from the cruel treatment of the

exiles, has been undoubtedly a hindrance to its development. It has kept away honest settlers; and the resulting insecurity of life and property have deterred capital from flowing in. In contrast with another great colony, Australia, the penal policy was maintained until the beginning of the twentieth century. At the same time it must be remembered that Russia itself was not commercially ripe for the rapid development of Siberia. Until recently the beginnings of a middle class did not exist in Russia. There were the peasants and the nobles; the limited trade and commerce were in the hands of the Jews and a few Germans. Also it should be remembered that Siberia cannot be said to have had as good a class of colonists as North America or Australia. Lastly, the centralization of Government during the last decade or two, and the corruption and peculations of officials, have hindered the development of this great colony.

IV. ECONOMIC CONDITIONS

(A) MEANS OF COMMUNICATION

(1) INTERNAL

(a) Roads

The principal highway of Siberia is the Trakt or Great Siberian Road, which leads from European Russia to Kiakhta on the Chinese frontier, passing through Krasnoyarsk, Irkutsk, and Verkhne Udinsk. Its length in Eastern Siberia is 1245 miles. Eastward from Verkhne Udinsk a road goes through Chita and Nertchinsk to Stryetensk, beyond which the Amur is the principal means of communication, the roads in the far east, except a few near Vladivostok, being as a rule bad. Roads run from Achinsk to Minusinsk (228 miles), from Verkhne Udinsk to Petrovski Zarod (121 miles), from Krasnoyarsk to Yeniseisk (219 miles), and from Irkutsk to Gruznovskaya on the Lena (249 miles). In the north there are only tracks, which in the north-east are of little use except in winter.

Along the Great Road there was under Imperial rule an elaborate posting system with post-stations where horses and vehicles could be obtained, though often after much delay. The nature of the roads varies greatly in different parts and in different seasons. During the periods when the frost is beginning and ending, travelling is very difficult. Bridges are rare, and most of the rivers have to be crossed by ferries. Such bridges as exist are mostly of wood and liable to be washed away by floods. The usual vehicles employed on the roads are the *travolik* (a two-wheeled car used especially in forests) and the *tarantass* (a rough, springless, four-wheeled carriage). During the winter months sledges are everywhere used. In the south they are drawn by horses, in the north and north-east as a rule by reindeer, but in

some parts, such as Kamchatka, by dogs. In winter the frozen rivers afford excellent roads.

(b) *Waterways*

The great rivers of Siberia are by far the most important means of communication; they are used by steamers when navigable and by sledges during the great part of the year when they are frozen.

Of those flowing into the Arctic ocean the *Yenisei* is open for navigation from May or June to November, the current being weakest in July and August, and strongest in May, June, and September. Rapids are not numerous except in the upper reaches. Small sea-going vessels can reach Yeniseisk, 1520 miles from the mouth, and light craft can go as far as Minusinsk, 525 miles further. There are about 60 steamers on the river. Of its tributaries, the Lower and Middle or Stony Tunguska are of little use for navigation; but the Angara or Upper Tunguska, although obstructed by many rapids, can be navigated for 1161 miles. The traffic of the Yenisei system is mostly of local importance and consists chiefly of corn and timber.

The *Lena* is navigable up to Kachugskoe (2760 miles) for small craft during high water in spring, but there is little navigation above Ust Kutscoe, 360 miles lower down. Navigation is difficult because of the shifting nature of the river bed and the formation of sandbanks. The current, however, is swift only in the upper course of the river and in the delta. Floods are caused in June by the melting of ice and snow, and after they have abated the water rises again in July and maintains its level till the autumn. The river is free from ice by the middle of May at Kachugskoe, by the middle of June at Yakutsk, and early in July in the delta. It is frozen over about the middle of November at Kachugskoe and Yakutsk and about the middle of October in the delta. Of the tributaries of the Lena on the left bank, the Vilyui is navigable up to the point where it is joined by the Chona, a distance of 900 miles; while the Kuta, with its tributary the Muka, and the Ilga are navigable for part

of their courses and have some commercial importance. On the right bank, the Aldan is navigable for 800 miles; the Olekma is navigable for 18 miles up to its confluence with the Chara, which can be used for 250 miles by boats and rafts; and the Vitim, which flows through gold-fields, is navigable for 360 miles. The delta of the Lena is a vast sandbank intersected by channels of all sizes, most of which are navigable but constantly shifting.

There were 30 steamers on the Lena in 1912, but few go above the mouth of the Vitim. The total traffic on the Lena amounts to about 15,000 tons a year; it consists chiefly of stores for the mines of the Vitim.

The *Yana* is navigable as far as Verkhoyansk, and even for some distance higher up by boats of moderate size. There are a few steamers on the river.

The *Kolima*, when free from ice, is always navigable to 13 miles below Sredne Kolimsk, and generally as far as the mouth of the Korkodon, but there are few vessels on the river except boats and rafts. Every summer a steamer of the Volunteer Fleet (see p. 52) used to sail from Vladivostok to the mouth of the Kolima, and in 1912 the S.S. "Kotik" reached Nijne Kolimsk. Much of the trade carried on this river is in American hands; an American sailing ship with a motor reached Nijne Kolimsk from Alaska in 1911.

The only important rivers flowing from Siberia into the Pacific are the Anadyr and the Amur. The *Anadyr* is free from ice from the middle of July till the beginning of October. As far as Markovo, 200 miles from its mouth, it is tidal and navigable by boats drawing 4 ft. 6 ins., and with slight improvements it could be made available for small craft above this point. The river can be used by rafts for 350 miles beyond Markovo.

The *Amur* is navigable up to the confluence of the Shilka and the Argun (1750 miles). The Shilka is navigable to Stryetensk (233 miles) and in the high water season to Mitranofa, 100 miles higher. The Amur-Shilka waterway is free from ice for about 5 months in the year. The Argun can only be said to be navigable for 33 miles, since further up, although there is plenty of

water, jagged rocks make navigation dangerous. Among the other tributaries of the Amur the Bureya, though dangerous, can be ascended to Sklad Paikan (130 miles), and under favourable circumstances to Chekudinski (214 miles); it is fit for timber rafts for about 400 miles. On the Zeya (Seja) large steamers can reach Zeya Pristan (438 miles from the confluence) throughout the open season; while the Silinja, which flows into the Zeya, is navigable for 83 miles. On the Ussuri navigation is possible for 375 miles, but steamers do not go above the point, 340 miles from the mouth, where it is joined by the Sungacha. They can, however, ascend the Sungacha to Lake Khanka (Hanka) and reach Kamen Ribolor, 160 miles from the confluence. The Ussuri is free from ice from the beginning of May to the end of November. Many other tributaries are navigable for considerable distances, but details are lacking.

In 1911 there were 118 iron and steel steamers and 88 wooden steamers on the Amur waterways, besides 47 steam and motor launches, 170 steel and iron barges, and 33 wooden barges. The Amur Steamship Company, which was subsidized by the Government, used to maintain a regular service on the Amur between Nikolaevsk, Khabarovsk, and Blagoveschensk, where passengers and cargo were transferred to smaller vessels for the journey to Stryetensk. Most of the steamers are paddle boats and stern-wheelers. The river traffic consists largely of barges and junks towed by steam tugs. The whole journey up stream from the river's mouth at Nikolaevsk to Stryetensk takes 25 days.

Lake Baikal, the chief lake in Eastern Siberia, is normally open for about 232 days a year in the southern, and 216 days in the northern part. There used to be a steamer service between Baranchuk and Misovsk (39 miles); and in addition there was a fleet of 7 lake steamers, 6 river steamers and several barges and smaller vessels owned by the Commercial Steamship Company, which was subsidized by the Imperial Government to run steamers to the chief villages on the lake and the main rivers flowing out of it, such as the Angara and Selenga.

(c) *Railways*

The great Siberian line from European Russia to the Pacific was begun in 1891 in different sections and finished in 1905 during the Russo-Japanese war. The Siberian Railway, strictly so called, terminates at Irkutsk; from that point to Manchuria station on the Chinese frontier, the line is properly termed the Transbaikal Railway, and east of Manchuria station it is continued by the Chinese Eastern Railway. The original intention was to bring the line by way of Stryetensk and Khabarovsk to Vladivostok, but on account of the great technical difficulties that this route involved, the alternative route through Manchuria was adopted. Later, however, the project of a railway along the Amur was revived, and a line branching from a point near Karimskaya and passing through Stryetensk to Khabarovsk was completed in 1916. At Khabarovsk this line joins the Ussuri Railway to Vladivostok.

The Siberian, Transbaikal, and Amur railways are owned and worked by the State. The Chinese Eastern Railway belongs to a private company, formed under an agreement signed in 1896 between the Chinese Government and the Russo-Chinese Bank; the shareholders must be Chinese or Russian subjects, and after 80 years the railway is to pass without any payment into the hands of the Chinese Government. The branch line from Achinsk to Minusinsk is also under private control.

The standard Russian gauge is 5 ft. (1.52 metres). Siberia presents many difficulties to railway construction, which, however, is much easier in the west of Asiatic Russia, where very little tunnelling is necessary. The railway stations are usually a long way from the towns whose names they bear, as the track runs straight so far as possible and is seldom deflected towards centres of population. The efficient working of the Siberian system is rendered difficult by the division of the trunk line into several sections, each of which has its own independent administration.

The Siberian Railway, in the strict sense of the term,

runs for over 800 miles in Eastern Siberia, passing Achinsk, Krasnoyarsk, Kansk, and Tulum, and ending at Irkutsk. It is a double line throughout its length. The only branch that leaves it is the line from Achinsk to Minusinsk, which, keeping near the Yenisei, traverses a fertile region with considerable resources of coal and iron.

The Transbaikal Railway, which starts at Irkutsk, runs to Manchuria station, on the Chinese frontier, 944 miles distant. There are 40 tunnels and numerous cuttings and bridges in the section round the south of Lake Baikal. The line is now double to Karimskaya (710 miles) except on some of the bridges near the lake. Nine miles beyond Karimskaya is Kitaiski Raziyezd, the junction for the line to Stryetensk (167 miles) and the Amur Railway.

The Chinese Eastern Railway lies almost entirely outside Eastern Siberia, but affords the shortest route from Irkutsk to Vladivostok. Its length, from Manchuria station to its junction with the Ussuri Railway at Pogranichnaya, 5 miles within the Russian frontier, is 933 miles. The track is single throughout.

The Amur Railway starts at Kuenga, 134 miles from Kitaiski Raziyezd on the line to Stryetensk, and runs by way of Aleksyeevsk and Bochkarevo to Khabarovsk, a distance of 1257 miles. The line goes through very difficult country; its route is some distance to the north of the river Amur, so as not to be too near the frontier in case of war. The bridge across the Amur, completed in 1916, is 7038 feet long.

The Ussuri Railway connects Khabarovsk with Vladivostok. At Nikolsk Ussuriski, 76 miles from Vladivostok, it joins the line from Pogranichnaya, the terminus of the Chinese Eastern Railway. South of Nikolsk Ussuriski the line is double.

In addition to the lines mentioned above there is a short narrow gauge railway, built for mining purposes, from Bodaibo to the Vitim (15 miles).

Among the numerous projected railways the following may be noticed:

(1) From Achinsk to Yeniseisk.

(2) From Tulum on the Siberian Railway to Ust Kutscoe in the gold mining district of the Lena. The inhabitants of Irkutsk, however, are anxious that the line should start from their town and reach Ust Kutscoe *via* Zhigalovskaya. It is hoped that the proposed branch would eventually be extended to Bodaibo *via* Kumerma.

(3) From Misovaya or Verkhne Udinsk to Kiakhta. This branch would bring the Mongolian markets into connection with the main Siberian line. It was to be constructed at Government expense, having been approved by the Council of Ministers in 1913. An arrangement is understood to have been made in 1915 to extend this line to Urga, as the fall of Tsingtau and the expulsion of German trade from nearly all the Far East had given Russia great opportunities of acquiring fresh markets in China.

(4) From Aleksyeevsk to Nikolaevsk on the Amur. The survey of this railway is stated to have been provided for in the estimates for the 1917 budget.

(5) From Sofiisk on the lower Amur to De Castries Bay.

(6) From the Ussuri Railway to Olgi Bay and Imperatorskaya Harbour. This would be of great service for the export of timber.

(d) *Posts, Telegraphs, and Telephones*

Mails are conveyed by rail, carriage, and sledge. In the extreme north-east dog-sledges are usually employed. Thus from Gizhiga three mails are sent by dog-sledge annually—in November, January, and April—to Markovo (468 miles), Yakutsk (1984 miles), and Petropavlovsk (1374 miles). During the winter mails are also carried by dog-sledge across the frozen Straits of Tartary to Sakhalin. Along the post-roads the Imperial mail used to take precedence of all other traffic.

European Russia is connected with Vladivostok by a telegraph line which follows closely the main route of the Trans-Siberian Railway and east of Karimskaya is supplemented by a line reaching Vladivostok *via* the

Amur and Ussuri valleys. These trunk lines have the following branches:

(1) From Krasnoyarsk along the Yenisei to Yeniseisk and Turukhansk.

(2) From Irkutsk to Manzurskaya on the Lena, thence along that river to Yakutsk (with branches to Viluisk and Bodaibo) and from Yakutsk across country to Okhotsk.

(3) From Khabarovsk along the Amur to Nikolaevsk and Cape Chuirakh on the Gulf of Amur, with branches to De Castries Bay and to Lazarev, whence cables cross to Sakhalin.

(4) From Vladivostok northwards to Tyutikha Bay.

(5) From Vladivostok to Novo Kievskoe on the frontier of Korea.

(6) From Achinsk to Minusinsk and Grigoreevka on the Mongolian frontier.

(7) From Kultuk to Tunka.

(8) From Verkhne Udinsk to Troitskosavsk, meeting the Chinese telegraph system at Kiakhta.

(9) From Chita to Mangut.

There is also a line in Kamchatka from Tigilski to Petropavlovsk.

Zeya Pristan, in the gold mining district of the Zeya, is connected by telegraph with the main system, and is in telephonic communication with the chief mines, but there are often interruptions owing to theft of the wires. Many of the mines in the south of Yeniseisk are connected by telephone.

Telegraphic communication in Eastern Siberia is liable to interruption not only through theft of the wires but also through the fall of trees. The forests and swamps constitute serious obstacles to the erection of posts and wires, and on some of the more exposed plains the frequency of violent storms makes it necessary to lay the wires along the ground.

(2) EXTERNAL

(a) Ports and Anchorages

The number of useful harbours in Siberia is by no means proportionate to the great length of its coast line. The harbours of the Arctic Ocean are frostbound most of the year, and only those at or near the mouths of navigable rivers have any means of communication with the interior. There are probably many good anchorages at various points on the north coast, but they are not adequately charted. The chief harbours along this coast are *Dickson Harbour*, on Dickson Island at the mouth of the Yenisei, a good sheltered harbour with its entrance from the south; *Tiksi Bay*, to the south of the Buikov mouth of the Lena; and *Kolyuchin Bay*, in the Chukchi peninsula, which runs far inland but is largely unexplored, though the S.S. *Tobol* of Vilkitski's expedition lay here for some time in July 1915.

The east coast is much better provided with harbours, but outside the province of Primorsk they are of little commercial importance. North of Kamchatka, *Baroness Korf Bay* has several harbours suitable for steamers and long used by American vessels. Some of the harbours on the east coast of Kamchatka deserve special notice. *Karaga Harbour*, at the mouth of the Karaga river, affords fairly good shelter. *Kamchatka Gulf*, at the mouth of the Kamchatka river, might be developed; a scheme of improvement was sanctioned by the Government, but at present the bar at the entrance makes the gulf of little use for shipping. *Avacha Bay* is one of the finest harbours in the world, but it is obstructed by ice from December to May; the chief town of Kamchatka, Petropavlovsk, is on its eastern shore. There are no good harbours on the western side of Kamchatka.

The Sea of Okhotsk north of the mouth of the Amur contains some anchorages which are more or less frequented. *Penzhina Bay*, although it has not been sounded, is visited occasionally by American whaling steamers, and owing to the strong tide which runs

there, it remains open for a longer time than most of the inlets on that part of the coast. The chief anchorages in the bay are near Itkana on the west coast and Mametski on the east. *Gizhiga Bay*, which runs inland for 166 miles, also affords anchorages, but of a less satisfactory character; it shares with Penzhina Bay the advantage of being frozen for only a short period except in its northern part. The little settlement of Gizhiga, twelve miles from the mouth of the river of that name, is the chief centre of trade in this region. *Yamskaya Bay* is in some ways a good harbour, but hardly a sufficiently safe anchorage for steamers. *Ola Bay* is sheltered, with good anchorage, and is one of the harbours selected by the Government for improvement. *Okhotsk Harbour*, though it has given its name to the whole sea, is of little importance; it is only accessible to vessels of light draught, and is ice-bound from November to May; the anchorage off the mouth of the River Okhota is about $1\frac{1}{2}$ –2 miles from the shore. *Port Ayan* is the best anchorage in the Sea of Okhotsk, and might be considerably improved if a breakwater were erected to mitigate the force of the north-east winds. The depth varies from 4 to 6 fathoms, and steamers can come within 330 yards of the shore, much nearer, that is to say, than in any other port of this sea. Port Ayan is open from June to November.

Of the Siberian ports with an active trade, the most northerly is *Nikolaevsk* at the entrance to the Amur. Nikolaevsk has hitherto been regarded as inconvenient because of the absence of facilities for trans-shipping freights and the exposed position of the anchorage for sea-going ships. Moreover, ships drawing over 18 ft. cannot approach the town. At the beginning of the war, however, the accommodation was being enlarged and improved; and, when the work then in process is completed, the port will have a quay-space of 6440 sq. ft., a well-protected basin with a uniform depth of 25 ft., increased accommodation for river-steamers, and a number of new warehouses. The river along the quays was being deepened. The bar at the river mouth has

been a great difficulty, since large vessels have to discharge part of their cargo before crossing it; but a dredger was to be employed upon it. It is hoped to lengthen the period of open water at the port by the use of ice-breakers. Nikolaevsk imports considerable quantities of manufactured goods and agricultural and mining machinery destined for places in the Amur basin. In 1911, 108 sea-going vessels entered the port; most of the sea-borne traffic came from Japan.

De Castries Bay in the Gulf of Tartary might be made the chief port of the region if the scheme for connecting it with the interior by railway were realized. The bay is exposed to easterly winds but gives good anchorage behind several islands. Vessels bound for the Amur usually discharge part of their cargo here. De Castries Bay is the pilot station for the Amur mouth. It is ice-free for a longer period than Nikolaevsk and is easier of access. At the head of the bay is the settlement of Alexandrovsk.

Imperatorskaya Bay has several fairly good anchorages and there are some small settlements on its shores. It has been proposed to link it by railway with Khabarovsk. *Tyutikha Bay* offers but poor shelter owing to its exposure to the violent north-east and south-east winds that prevail, but has anchorage in $9\frac{1}{2}$ fathoms. *Olgi Bay*, further south, is over two miles broad at its mouth and opens to a land-locked harbour with $3\frac{1}{4}$ fathoms in the entrance channel.

Vladivostok is much the most important port of the Russian Far East, and has a naval and a commercial harbour. The docks in the naval harbour are nominally open for merchant vessels, but their use by such craft is subject to so many restrictions that the privilege is of little value. The commercial harbour occupies the western part of the so-called Golden Horn. It has an area of about 600 acres, and the depth at the entrance is from 12 to 14 fathoms. There is deep water in all parts of the harbour. It is frozen over for about three months from the middle of December, but a powerful ice-breaker keeps a way open for steamers. Eleven fresh berths were

prepared during the war. New wharves, moreover, have been under construction at Ghurkin Point on the south side of the bay, but there is no railway connection with this part.

Near the Korean frontier is *Posiet Bay*, with several anchorages and the loading and military station of Posiet.

(b) *Shipping Lines*

The overseas trade of Eastern Siberia passes mainly through Vladivostok. The principal line running regular services to and from that port in the past was the Russian Volunteer Fleet Association, a concern heavily subsidized by the central government, which had the right of using its ships as auxiliary cruisers in time of war. The most important service maintained by the Russian Volunteer Fleet was a series of 18 annual sailings between Vladivostok and Odessa *via* Singapore, Colombo, and Suez. Many troops and large quantities of government stores were conveyed by this route; indeed, without this official patronage the service could not have been kept up.

The Volunteer Fleet also maintained a service of 16 annual sailings from Vladivostok to ports on the Straits of Tartary and another of 21 annual sailings to ports on the Sea of Okhotsk, in Kamchatka, or even further north, various routes being followed. One ship was sent every year to the Kolima river *via* Bering Straits.

During the war the Odessa service was suspended, and the fleet is now dispersed all over the globe.

Vladivostok was in communication with Japan by regular mail services, principally with Niigata and Tsuruga. The services were maintained either by the Russian Volunteer Fleet or the Osaka Shosen Kwaisha, a Japanese line. A coasting line belonging to two Japanese companies, with its headquarters at Fusan in Korea, touched at Vladivostok. The rest of the shipping calling at the ports of Eastern Siberia consisted entirely of tramp tonnage. In the flourishing period of the soya

bean export trade, between 1906 and 1912, a good deal of miscellaneous shipping was attracted to Vladivostok.

The shipping facilities existing in 1914 were more than adequate for the freights offering, and the regular lines serving Eastern Siberia were all more or less dependent on State assistance. Unless the subsidized Russian services are resumed it is to be expected that Japanese shipping will in future absorb almost all the sea-borne traffic of the Siberian coast.

(c) *Cables and Wireless Communication*

Two Russian cables cross the Straits of Tartary from Lazarev and De Castries Bay, terminating respectively at Cape Pogobi and at Alexandrovsk in Sakhalin. There is also a Japanese cable from Alexandrovsk to Todo Shirna, a Japanese island off southern Sakhalin, and Hokushu. Two cables connect Vladivostok with Nagasaki in Japan.

Several wireless stations have been built and others are contemplated. For several years one at Dickson Island, at the mouth of the Yenisei, has been in operation. A wireless station at Okhotsk (range 130 miles) communicates with one at Nayakhaskoe on Gizhiga Bay, one at Novo Mariinsk, at the mouth of the Anadyr, and another at Markovo, higher up the same river. The station at Novo Mariinsk communicates with the American station at Nome on Norton Sound in Alaska. On the Amur there are wireless stations at Khabarovsk, Nijne Tambovskoe, and Nikolaevsk, the last with a range of 240 miles. This station communicates with one at Petropavlovsk (range 240 miles) and one at Kerbinski on the Amgun (range 170 miles). Iman on the Ussuri has a military wireless station. At Vladivostok there are two powerful wireless stations, within range of several in Japan. A number of the Russian vessels which ply in Far Eastern waters and many of the Russian ice-breakers are fitted with wireless apparatus.

Stations are reported to be under construction at Yamsk on the Sea of Okhotsk, and at Sredne Kolimsk

on the Kolima. The establishment of a station at Tigilski on the west coast of Kamchatka is contemplated.

(B) INDUSTRY

(1) LABOUR

Until recent years industrial and commercial undertakings in Eastern Siberia were seldom conducted on a large scale, and there was not much demand for hired labour. Of late, however, more ambitious attempts have been made to exploit the great natural resources of the country, and the difficulty of securing suitable workers has become serious. Of the various elements of the population, the native tribes, with the exception of some of the Buryats, are of little value in modern industry; the free colonists are as a rule fully occupied in working their own land; the Cossacks, with their military duties and traditions, are more disposed to hire others to work for them than to offer their labour to others; while exiles from Russia, the employment of whom is in any case open to serious objections, are becoming rare, for no criminals have been exiled since 1902 and few political prisoners have ever been sent to Eastern Siberia. The economic development of the country must therefore depend mainly on imported labour, and the burning question is whether this shall be obtained from Europe or from Eastern Asia.

There has already been a large influx of "yellow" labour, particularly into the eastern territories. Chinese have come in large numbers, and, as elsewhere, have shown themselves industrious, efficient, and content with low wages. They have unquestionably done admirable work in developing the resources of the country. The advantages of employing them are illustrated by the fact that at Vladivostok, a few years ago, street paving laid by Russians had to be taken up almost immediately and relaid by Chinese. Similarly, at the same town, a quay built by Russians was found to be

so badly constructed that Chinese labourers had soon to be called in to erect another in its place. Commercially, too, the Chinese play an important part, the trade of many villages being wholly in their hands.

In the eastern territories there is also a large population of Koreans, who have been migrating to Siberia in considerable numbers for more than half a century, originally impelled thereto by famine and the extortions of their own officials. In contrast with the Chinese, who generally intend to return home after saving a little money, the Koreans wish to remain permanently in the country. They are good farmers, better in fact than most of the Russian colonists, and are frequently employed by Cossacks to work their land. There are a number of Korean colonies in the Far East, one of the most important being at Blagoslovennoe at the junction of the Samara and the Amur.

Since the war of 1904-5, a good many Japanese have come to Eastern Siberia. The Japanese artisan is found everywhere; he is superior to the average Siberian in craftsmanship, as well as in diligence, sobriety, and trustworthiness.

There is obviously much to be said in favour of the use of "yellow" labour in Eastern Siberia. The Russian population, however, is bitterly opposed to it; and shortly before the European war (cf. p. 39), the Government, fearing lest the economic life of Siberia should fall under Chinese control, adopted a policy of exclusion. This was applied with particular vigour in the Primorsk territory; and in the Amur and Ussuri valleys Chinese labour could only be employed behind the backs of the officials. Attempts, which met with some measure of success, were being made to prevent the employment of Chinese on public works. Russian workmen were encouraged to emigrate to Eastern Siberia; and some hundreds used to arrive in the spring and return home in the autumn after earning a substantial sum over and above the cost of their journey. But Siberia has naturally a bad name among the working classes of Russia, and its reputation has not been improved by the scan-

dalous conditions under which miners in the gold fields work and live. Consequently the supply of labour from Europe remained inadequate; and, for all the efforts of the Government, the Chinese, being indispensable to industry, continued to enter the country in large numbers. In the Transbaikal province the Chinese population was growing; and retail trade was almost wholly in the hands of Chinese shop-keepers and hawkers. Since the outbreak of war, the Chinese have doubtless taken full advantage of the crisis caused by the calling up of able-bodied Russian subjects for military service.

It is desirable that a definite and consistent policy regarding "yellow" labour should be adopted as soon as Eastern Siberia has a settled government. The problem is unfortunately very perplexing, as both the admission and the exclusion of Chinese are open to weighty objections.

(2) AGRICULTURE

(a) *Products of Commercial Value*

Eastern Siberia falls far behind Western Siberia in agricultural production, but considerable progress has been made, especially since the Government began to encourage the transfer of land from the communities to individual holders. The land which is easily accessible and most favourably situated for agriculture has already been occupied, but much good soil remains available for those who are willing to be at the trouble of clearing the *taiga*. The agricultural production of Eastern Siberia by no means satisfies the needs of the country, and the Provinces of Transbaikal, Amur, and Primorsk are largely supplied from Manchuria, while those of Yeniseisk, Irkutsk, and Yakutsk are in great measure dependent on Western Siberia. It is estimated

that the provinces of the Far East could produce at least 600,000 tons more grain than at present. But the danger of over-production must be carefully avoided, for the lack of railways and roads in most parts of the country might make it difficult to find a market for surplus Siberian grain. Many authorities hold that the future of the peasant in Eastern Siberia must lie in dairy-farming and stock-raising rather than in corn-growing.

The acreage under the principal crops in 1911 in Eastern Siberia is shown in the following table:

Province	Cereals Acres	Potatoes and leguminous crops Acres	Flax and hemp Acres
Yeniseisk	1,159,100	34,840	29,060
Irkutsk	960,600	23,500	9,200
Transbaikal	907,400	20,700	1,600
Amur	683,940	13,200	1,360
Primorsk (including Kamchatka)	604,700	40,500	11,000
Yakutsk	32,600	1,200	—
	4,348,340	133,940	52,220

Cereals. The great preponderance of spring over winter grain is noteworthy. Owing to the long winter and slight snow-fall, winter grain can seldom be successfully grown, though in the region of Achinsk (Yeniseisk), where winter ends early and much snow falls, it does well. The district of Minusinsk, with its dry steppe surrounded by rich black earth, is suitable for corn-growing, and supplies Krasnoyarsk and the basin of the lower Yenisei, producing some 4000 tons of flour a year. In the Government of Irkutsk rye is the chief crop, oats and wheat standing next in favour, while buckwheat and millet are also grown. In Transbaikal spring wheat is the principal cereal, forming 50 per cent. of the total crop; then comes winter wheat, followed by oats, barley, buckwheat, and millet; the quality of the land is excellent, but harvests are uncertain, and there are frequent local failures. In the Amur Province the Zeya-Bureya plain is very fertile and is largely under oats and wheat, other cereals not being much grown. In Primorsk, the output along the Ussuri is restricted by the frequent inundation of the best arable land, and the province as

a whole is not so well suited for corn as for vegetables. Large areas, however, are under oats and wheat; rye, barley, buckwheat, and millet are also grown, but in much smaller quantities. Some barley and rye are grown in Kamchatka; the rye is sown in May, and the harvest, when there is one, is in August. In the Yakutsk province, a recent commission has decided that agriculture could profitably be extended. The flourishing colonies of Skoptsi near Olekminsk and Yakutsk grow wheat, summer rye, barley, and oats. Grain ripens as far north as about 64° N. lat. In this province, however, the harvest is in general very moderate.

Flax and hemp. These are grown in many parts, especially in Irkutsk, parts of Transbaikal, and Primorsk. In the last, the two crops together yielded 2944 tons in 1912.

Fruit. Fruit does well in Primorsk, where fruit-growing might be developed. At Bavabash an apple has been produced not inferior to Californian varieties. It is hoped in time to supersede by home produce the imports of fruit, especially those from Japan. Grapes of a poor quality grow wild in South Ussuri district, and the inhabitants make wine of them for local use.

Poppies. Opium is produced in the Ussuri region, which is very favourable to the growth of the poppy. Russians are not themselves addicted to the drug, but a considerable quantity used to be sent to China. The Cossacks of the Ussuri region let their land to Chinese growers, thereby attracting the most undesirable Chinese, exhausting the ground, and becoming idle and demoralized themselves. In 1911 some 10,000 acres were under poppy, but in 1913 the crops were destroyed by order of the Government.

Tobacco. Tobacco is grown to some extent in Yeniseisk and Irkutsk. In 1911 about 600 acres were under tobacco in Primorsk.

Vegetables. Potatoes are widely cultivated. In the Amur province they do particularly well; an average of 12 cwt. 1 stone is obtained from an acre; and in 1911 21,900 tons were produced in this province. They have

been successfully cultivated as far north as Siktiakh on the Lena, and even in Kamchatka they are grown in most of the villages.

The cultivation of the beetroot may become of much industrial importance. At Minusinsk, where the beet grows particularly well, a beet-sugar factory has been established, and it is hoped that one will soon be established in Vladivostok for the excellent beets of Primorsk. Beets do well almost everywhere in the newly cleared ground along the Amur Railway. Their cultivation is carried on chiefly by Chinese and Koreans.

Soya beans are grown in Primorsk, where 3309 tons were produced in 1911.

Of wild vegetable products the most important is the cedar-nut. These nuts, which yield a good oil, are collected for eating in the Amur Province, and in much larger quantities along the upper Yenisei and the upper courses of the tributaries of the Angara. In the Sayansk *taiga* the industry is established on a commercial basis; and in a good year, which occurs every four or five years, 800 tons are sent from the upper Yenisei to Krasnoyarsk.

Live-stock and animal products. The numbers of the principal species of live-stock in Eastern Siberia in 1911 are shown in the following table. Besides those enumerated, camels, maral deer, and reindeer are kept:

Province	Cattle	Goats	Horses	Pigs	Sheep
Yeniseisk	500,139	7,472	494,157	123,307	728,779
Irkutsk	354,622	29,468	287,518	79,452	203,518
Transbaikal	1,003,145	103,082	591,588	119,366	1,021,967
Amur	75,231	83	101,206	48,200	11,836
Primorsk (including Kamchatka)	171,618	200	109,516	91,187	4,640
Yakutsk	241,674	—	88,138	217	135
Total	2,346,429	140,305	1,672,123	461,729	1,970,875

Camels are used in the warmer parts of Eastern Siberia. Those of the Transbaikal province, which possessed 11,000 in 1911, are strong and of great endurance. A pair of them can carry 20–25 cwt.

Cattle are on the whole not numerous in Yeniseisk and Irkutsk, though stock-raising is the chief occupation of the nomads of Minusinsk, Achinsk, and Turukhansk,

and of the natives of the Balogansk and Verkholsk regions. In southern Yeniseisk each peasant possesses, on an average, 2 horses, 5 cattle, and 10 sheep; and all the oats and hay are kept for their food in winter. But only the Minusinsk district has enough cattle for its needs, and large numbers of Soyot cattle are imported for slaughter from Mongolia. In Transbaikal cattle-raising is important, especially among the nomad tribes, and owing to the *vostvetz* grass which covers great tracts of this province and yields even better fodder in winter than in summer, the industry should be capable of great development. There is already a co-operative society with its headquarters at Chita, which used to purchase cattle for the army. As many as 150,000 hides are annually exported from this province. In the Amur and Primorsk Provinces the cattle are Manchurian and Korean. The Amur Province in particular is thought by many to be more suited for cattle-breeding than for corn-growing. At present, however, most of its meat supply comes from Manchuria. Proposals have been made for building cold storage plant at Vladivostok.

Dairy-farming is of much less importance in Eastern than in Western Siberia. Yeniseisk supplied only 1.2 per cent. of the dairy produce exported to Russia and foreign markets. In Transbaikal the cattle, especially the Buryat cattle (which are Mongolian in origin), are small and yield little milk. The Manchurian and Korean cattle of the Amur and Primorsk Provinces, which are never milked in their native countries, give milk only when the calf is with them. In Primorsk dairy-farming is slowly increasing; in 1911 the province contained only five co-operative dairies, while in 1913 there were eighteen. The dealers in this province often have contracts with West Siberian firms, and consequently butter is often hard to obtain even in those parts where dairy-farming flourishes. Cows have been known to give milk in Sredne Kolimsk and Verkhoyansk, and even further north, but cattle-raising can never be profitable in those regions.

Siberian cattle are of small breed. Despite the primi-

tive nature of their keep they stand the climate well; they are free as a rule from tuberculosis, and quarantine regulations have practically extinguished rinderpest. On the other hand, they suffer from Siberian plague and from foot-and-mouth disease.

Various species of *deer* are kept. In the southern regions maral deer, a kind of wapiti, are bred in special farms (*maralniks*). The horns, cut off in the velvet, are sold to the Chinese, who extract from them a drug (*pauty*) much esteemed in China. The price of horns fluctuates very much according to the state of the markets, but is seldom less than 14s. or more than £1 per lb. In Transbaikal the *izzubr*, or Canadian wapiti, takes the place of the maral, which it closely resembles, and in Primorsk not only the *izzubr* but also the *aksis*, the most valuable of these deer, is bred. Its horns fetch from £3 to £3. 10s. per lb. The *kabargi* or musk-deer (*Moschus moschiferus*) is also bred, being highly valued by the Chinese for the medicinal properties of its musk and horns. The industry of deer-breeding is likely to grow in future.

Reindeer exist in small herds in the provinces of Irkutsk and Amur. In the former they are ridden by the Soyots. Further north they are the mainstay of the native tribes. In 1906 there were said to be 515,000 reindeer in Yeniseisk, principally in the Turukhansk district, and 95,360 in Yakutsk, 80 per cent. being in the Verkhoyansk and Kolima districts. In Kamchatka and the Chukchi Peninsula there were approximately 287,000; these regions contain the largest reindeer herds in the world, though many of them consist of half-tamed deer which readily run wild. Reindeer are used for sledging and for racing, and furnish milk, meat, clothing, and tent-covers. Besides the sledge-dogs they are the only domestic animals in the north.

Goats are kept in large numbers by the inhabitants of Transbaikal, but are of little account elsewhere.

Horses are bred mainly for farm work and for the posting service on the Great Road, though the Yakuts eat them. The Siberian horse is usually small, easily

satisfied in the matter of food and drink, and capable of enduring heat and cold. It is fast and extremely strong. The Transbaikal breed is the best known and the most popular in the southern districts, the Cossacks of the Amur preferring it to any other. These horses are 12 or 13 hands high, can draw a load of 1000 lbs. and will travel enormous distances at 40 miles a day in a team. In Transbaikal the *vostvetz* grass keeps the horses in condition throughout the year; whereas in the Amur province they get thin in winter though they fatten quickly in spring. In this province, unfortunately, the Transbaikal breed degenerates rapidly. The ugly, shaggy, little Yakut horse displays great endurance; it often lives out of doors in winter, and is even used within the Arctic Circle. Some years ago the Government started stud farms with good stallions in Transbaikal and Yakutsk.

Pigs are bred in large numbers in Yeniseisk, Irkutsk, and Transbaikal. In the last the animals are Manchurian and of poor quality; but the breed is being improved. Pigs are not numerous in the Amur Province, but in Primorsk, especially on the Ussuri, they are of considerable economic importance. Here also the breed is Manchurian.

The breeding of *sheep* is likely to become of importance in Yeniseisk and Irkutsk now that the merino sheep has been acclimatised in Central Siberia. The plains of the Yenisei have been found to be suitable for sheep-farming on a large scale; the soil yields excellent forage, and in a good season sufficient hay can be obtained for several years. The sheep are killed for their wool and tallow; there is as yet no regular demand for mutton. The Imperial Government granted subsidies for the transport of flocks to this region from European Russia and for the development of new sheep farms. The ordinary Siberian sheep is small, yielding little meat and poor wool; but in Transbaikal the sheep are large, and their wool is coarse, thick, and of medium length. In Amur the absence of dry pasturage is unfavourable to sheep; such as are bred are of Mongolian stock.

Bees are kept with much success in the Achinsk and Minusinsk districts of Yeniseisk, where there are over 45,000 hives, and immigrants from Little Russia have introduced the latest methods. In the Amur Province bee-keeping, though still on a small scale, is growing in importance; the climate and vegetation are very favourable to it, but its development is retarded by the fact that the peasants find other work more profitable. In Primorsk, especially round Nikolsk Ussuriski, it is very remunerative.

There are products derived from wild animals which economically are of great importance to Siberia. Chief of these is *fur*. The principal fur animals are sable, kolonok, marten, ermine, glutton, skunk, lynx, otter, fox (Arctic, silver, and red), bear, squirrel, and marmot. The sables, the fur of which was the regular form of *yassak* (tribute), are retiring more and more to inaccessible forests and are seriously decreasing in numbers; they are found up to 68° N. lat., the best being in the Vitim and Olekma regions, near Nertchinsk, and by the headwaters of the Amgun and the Zeya, while white sables, which are very rare and valuable, are found in the Barguzin region. An order was made by the Russian Government that from February 1, 1913, to October 15, 1916, no sables should be killed nor any sable fur sold throughout Siberia. The kolonok is used as a substitute for the sable, especially to supply artists' "sable" brushes. The ermine is valuable, but is becoming rare. Squirrels' skins are sold in enormous quantities, and are used for a great variety of articles; in Transbaikal three million squirrels are killed annually. The chief fur fairs of Eastern Siberia are held at the confluences of the chief tributaries of the Amur, e.g. at Albazin and Blagoveschensk. There is a notable fur fair at Nikolaevsk, and in the far north-east is the Anyui fair, once very important but less so now, as the Chukchis barter most of their furs with the Americans on Bering Sea. The Russian traders at the Anyui fair all come from Yakutsk, where the chief fur market of the north is held in July. At this market in 1913 there were sold

70,000 squirrel-skins, 21,000 fox-skins, 10,000 skins of ermine, and 100 of black bear. Trade in sable was by this time prohibited, but in 1905 the sable skins sold at Yakutsk numbered 3000.

The tiger is hunted in winter on the lower Amur. In some years 120 or more are killed. The bile, heart, and claws are sold to the Chinese, who make from them a powder, which is supposed to produce courage.

Another product worthy of notice is *fossil ivory* derived from mammoth tusks, which are found principally along the Arctic Ocean. The New Siberia Islands are the most prolific source of supply, and Yakutsk is the chief market for the ivory, which is little inferior to ordinary ivory. In 1913 nearly 20 tons were collected, the price at Yakutsk being rather more than 3s. per pound.

(b) *Methods of Cultivation*

The Siberian peasant, like the peasant of European Russia, is not very progressive or ready to assimilate new ideas; but since the growth of individual ownership agricultural methods have improved. Of recent years there has been a better market for agricultural machinery, and fertilizers are more widely employed; though it is only in Transbaikal that the value of manure is understood. Before the war, it was intended to establish an agricultural school at Nikolsk Ussuriski, the centre of a prosperous farming region.

It is customary to sow land for two or three years and then to leave it fallow for a year, after which it is sown again for one or two years, the process being repeated till it is clear that the land needs a rest. The rotation of crops followed varies in different districts; but it is usual to sow first the more exhausting grains, such as wheat and rye, and to follow these with barley and oats.

Among the native tribes of Siberia agriculture has made but little headway. The tribes of the north are too busy fishing during the summer to attend to anything so unremunerative as the cultivation of corn and vegetables. They seem to be little impressed by the

industrious Skoptsi colonists in their midst, who import modern agricultural machinery, grow many kinds of grain, and own some steam flour-mills.

(c) *Forestry*

The area covered by forest in Asiatic Russia is enormous, but the timber industry is relatively inconsiderable. The chief reason for this is the inadequacy of the means of communication and transport. Most of the timber in easily accessible regions has been cut, and hitherto it has not paid to exploit the forests of the more remote parts.

Before the war about three-quarters of the forest land of Asiatic Russia was owned by the State. The State forests were divided into forestry districts, which each on an average exceeded in size the wooded area of all Great Britain, and these districts were divided into allotments. The forests of Central and Eastern Siberia have been very imperfectly surveyed.

The *taiga*, or coniferous forest, begins where the *tundra* ends; the forests never reach the north coast, but extend further northward along the river-valleys than elsewhere. Southwards the *taiga* extends to the Mongolian frontier. In most of the forests of Siberia, even outside the *taiga* region, coniferous trees predominate. The trees in the forests of Eastern Siberia are of much the same species as those in the forests of Western Siberia, but in general are of less luxuriant growth. The forests are very uniform in character from the Yenisei basin to the region of the Amur; the most abundant trees are the Siberian fir and the eastern larch, with the so-called Siberian cedar and the Scotch fir; while the spruce and the Norway spruce occur as far east as the Lena, in the upper valley of which the trees grow to a greater height than elsewhere in this country. Along the upper and middle Amur deciduous trees are more frequent than conifers, but along its lower course the latter prevail, the Siberian cedar being replaced here by the white cedar or Manchu pine (*Pinus mandshurica*). The Sikhota Alin range and Primorsk generally are wooded, in the north

with conifers, in the south largely with deciduous trees. In the forests of Kamchatka the trees are more widely spaced; the Siberian fir and "cedar" are the commonest varieties, but a few deciduous species occur.

The Provinces of Yeniseisk, Irkutsk, Transbaikal, and Yakutsk export little timber, but consume a great deal themselves—in fact the supplies of timber in the neighbourhood of the large towns and chief mining centres are largely exhausted. The building of the railway has greatly increased consumption, and in many places the price of firewood has doubled. The tree most used is the larch, fine woods of which are found along the middle reaches of the Yenisei.

It is only in the Amur and Primorsk Provinces that the exploitation of the forests has the character of an industry. A report for 1913 gave the total area of forest land in the eastern provinces as 110,052,000 acres, of which 30,840,000 were in Amur, and 71,463,000 in Primorsk. In Amur five-sixths of the forest area belonged to the Government, and most of the remainder to the Cossacks; in Primorsk ten-elevenths belonged to the State. The forests generally lie along the sea-coast or the river valleys; the best timber districts are Nikolaevsk with 33,000,000 acres, Khabarovsk with 14,245,000 acres, and the Lower Amur with 12,150,000 acres. The Government forests were under the Department of Domains, whose headquarters were at Khabarovsk.

A royalty is levied on all timber sold, the charge varying for the different kinds of wood. In 1914 the same rates applied to all parts of the two provinces, but formerly concessions that lay more than $6\frac{1}{2}$ miles from a railway paid at a lower rate. Local consumption is large, and the railways, steamers, and mining camps take an ever-increasing quantity of timber. There is an increased demand for wood for fish-boxes. There is also a considerable export trade, mainly through Vladivostok and Imperatorskaya Bay. Before the war most of the wood sent overseas was taken by Australia, which relied on Eastern Siberia for fir and larch. A good deal of white "cedar" was also shipped, mainly to the

United Kingdom, and Japan purchased large quantities of aspen for matches. Regarded as a whole, the position and prospects of the timber industry in the far east of Siberia seem fairly satisfactory, though it is to be regretted that no systematic efforts have been made to replace the trees felled.

(d) *Land Tenure*

Ninety-six per cent. of the land in Siberia belongs to the State. Only in the Amur territory is it ever purchased. Grants to settlers are usually made on the basis of 8–15 *desyatines* (21–40 acres) for each male member of a family. In the last years before the war the Government was doing all that was possible for the encouragement of settlers, offering land for occupation in the remoter east and advancing loans to new settlers whose land was difficult to clear. The occupation of land conferred special privileges on the settlers. For the first five years they were exempt from taxation and for the next five they paid only half the ordinary amount; settlers above the age of 18 had their military service postponed for three years or even longer, while Russian colonists in the unattractive country of the lower valleys of the Lena and Yenisei were altogether exempted. Land was conveyed to a settler by letters of allotment; it remained State property, but was to be held for the perpetual benefit of the settler, who had no right to sell or mortgage it.

The Cossacks, who held their land by military service, had privileges peculiar to themselves; in Central Siberia they had 60 acres of land per man, and in the Amur and Primorsk Provinces 100 acres. But, as was pointed out above (p. 54), it is difficult for them to combine the functions of soldiers and settlers.

Political prisoners were allowed to hold land and earn wages under certain conditions.

Besides the land to which new settlers were invited, there is throughout Siberia a great deal of village-land which is allocated by the peasant assembly (*mir*) of the village. This body assigns to each family a hut and yard

and a suitable amount of land, averaging about 40 acres, taking care to include a fair proportion of arable, pasture, and forest land. A certain area is always set aside for common pasturage. A new division is made every 15 years. Since 1906 a peasant has been able to hold land in perpetuity. The system of village-tenure of land is naturally of greater importance in Western Siberia than in the East, since the western parts have been settled much longer.

(3) FISHING AND OTHER MARINE INDUSTRIES

Fishing is of great importance in most parts of Eastern Siberia. The principal fisheries are those of the lower Yenisei, Lake Baikal, the Lena and other rivers of the Yakutsk Government, the Okhotsk and Kamchatka coasts, the Amur and its estuary, and the coast of the Ussuri district, known as the South-West fishery.

(1) In the lower Yenisei about 15 varieties are caught for wholesale trade, including the sturgeon, sterlet, *muksun*, *nyelma*, and *omul*. The fish are mostly taken by means of seines. Very primitive methods are followed in preparing both fish and caviare. The absence of good communications largely counteracts the natural advantages of this fishery, the market of which is almost entirely confined to the Yeniseisk Government, though a few of the fish go as far as Tomsk and Irkutsk. There is no canning, and the attempt to send frozen fish by rail to Russia has been a failure, despite the demand for such supplies. The annual value of the fish caught on the whole of the Yenisei is about £80,000.

(2) The Baikal fishery includes Lake Baikal, the lower waters of the rivers that run into it, and the lagoon-like lakes (*sori*) that fringe it. The chief fish caught is the *omul*, of which 500,000 (to the value of £20,000) are taken annually; the other species caught include the sturgeon, *chir*, gwyniad, grayling, roach, crucian carp, and burbot. There is also a fish peculiar to the lake, called *golomyanka*. Nets and bag-nets are used in Lake Baikal, where the fishing is on a large scale. Bag-netting is carried out by small companies; there are

also net associations, each member of which supplies a settled number of fishing nets and ropes.

(3) The Yakutsk fisheries are of little industrial significance owing to their lack of good communications, but fishing is an important means of livelihood for the inhabitants of the province. It may be hoped that the Kolima fishers will soon find an outside market for their fish, as since 1911 their district has been in regular communication by steamer with Vladivostok. For the Lena fisheries the only market at present is the adjacent mining district. Among the fish caught in the Yakutsk rivers are sturgeon, sterlet, *muksun*, *nyelma*, *chir*, bass, herring, crucian carp, and burbot. Fishing tackle and methods of preparation are inadequate; and caviare is often thrown away, as the natives do not like it.

(4) In the Okhotsk-Kamchatka fisheries the Russians are exposed to strong competition from the Japanese, who until 1907 had the fishing trade of these parts almost entirely in their hands. A convention made in that year excluded them from certain bays and river mouths, but a great deal of the fishing is still under Japanese control and the market for the fish is largely Japanese. The trade for cod about the Commander Islands, however, is almost entirely in the hands of Americans, who salt fish for Japanese and Chinese consumption. The economic importance of the Okhotsk-Kamchatka fisheries is derived principally from the salmon which abound in this region, and are caught in very large quantities. There is some export of salmon, mainly to Japan.

A marine industry of some note in the seas off Kamchatka is the hunting of the sea-bear or fur-seal. The centre of this is the Commander Islands. During the last twenty-five years the industry has greatly diminished because of immoderate fishing in the open seas. In 1890 no less than 55,435 fur-seals reached the market from these waters, but in 1911 only 200. In 1912 a Russian ordinance against killing fur-seals for the next five years came into force; and by the Washington International Commission it was forbidden to hunt them in the

open sea for 15 years. It is hoped that these measures will result in the regeneration of the breed.

(5) The Amur fisheries comprise the lower waters of the Amur and the Pacific from the Udsch district to the Gulf of Tartary. They are divided into four districts—Nikolaevsk, the most important; Chuirakhshi, north of the mouth of the Amur; Pronge, south of the Amur, which used to have a considerable trade with Germany; and Sakhalin, comprising most of the coasts and waters of the Russian part of that island. The chief buyers in the Amur fisheries used to be the Japanese, but they have lost their predominance by trying to force down prices. The catch in 1910 was so good that large quantities of fish were sent to Europe, and the business thus inaugurated has lasted. The principal fish taken are salmon (*keta* and *gorbusha*) and sturgeon, the latter being in serious danger of extermination. A moderate estimate gives 500,000 lb. of sturgeon as a season's catch, but the consumption is almost entirely local. In 1910 the aggregate weight of the salmon taken amounted to over 38,000,000 lb. There is a growing trade in salmon caviare and some production of train-oil made from fish liver.

In 1912, 63 per cent. of the total catch of the Amur fisheries was shipped from Nikolaevsk. In the last years before the war increasing quantities were sent by rail westward, some of the fish thus dispatched finding a market in European Russia.

(6) The South-West fishery extends from Cape Lazarev at the south of the Amur estuary to the boundary of Korea. North of Peter the Great Bay the industry is principally in Japanese hands, but in the bay itself fishing rights are reserved to the Russians, and the proximity of a good market in Vladivostok has greatly stimulated Russian industry. The chief fish caught in this region is herring; but salmon of the *gorbusha* and *keta* varieties are also taken in large numbers.

Of some economic importance is the trepang or *bêche-de-mer* which is found on rocky bottoms along the whole coast of Primorsk, but is especially common

in the neighbourhood of Peter the Great Bay. The Chinese spear or net it, and the average catch for a fisherman is about 120 a day. In 1913, about 9 tons were exported from Vladivostok. The price there is about $8\frac{1}{2}d.$ per lb., but in China it is nearly twice as much. Crab-fishing is also remunerative. In 1910 about 200 tons of dried crabs were sent from the south-west fishery to China and Korea.

(4) MINERALS

The mineral resources of Eastern Siberia, though very imperfectly explored, are known to be great. They will be a means of attracting much-needed capital, especially to the remoter parts of the country. Gold-mining has done more to open up the country than any emigration agency, and has been responsible for the extraordinary rapidity with which big towns like Bodaibo and Zeya Pristan have grown up.

(a) *Gold*

Gold has been worked more than any other mineral of Eastern Siberia. The principal centres of the gold-mining industry are the lands formerly belonging to the Imperial Cabinet in the Barguzinsk and Nertchinsk districts of Transbaikal, the Zeya and Bureya basins and their neighbourhood, the Amgun basin and the neighbourhood of Lake Chlya, and the Olekminsk and Vitim gold-fields of the Lena. The gold worked is almost entirely alluvial. As the more accessible placers become exhausted there is a tendency for large concerns to replace small ones. Dredgers are needed for the complete success of the industry, but few Russian engineers and workmen have so much as seen a dredger, and many deposits which might be profitably worked have consequently been abandoned. The latest methods of working hydraulic sluices are unknown in Siberia, where the climate is unfavourable to their use. During the years 1908–1913 the output of gold in Siberia declined, the worst year being 1912, when there was a serious strike at the Lenskoi works in Bodaibo. The official estimates

(which have to be accepted with caution) of the amounts received in 1910-11 at some of the chief laboratories in Eastern Siberia were as follows:

	1910 lb. troy	1911 lb. troy
Blagoveschensk	21,548.7	19,012.5
Bodaibo	39,153.6	36,251.1
Krasnoyarsk	2,889.0	1,525.4
Nikolaevsk	4,140.9	5,098.5
Zeya Pristan	—	2,615.4

Gold-mining in Siberia is much impeded by the climate. It is possible only in summer, and most of the gold is in placers which never really thaw. Further, in a dry summer there is not sufficient water for the efficient conduct of the industry; in a wet one floods hinder the work. Drawbacks of another order are the sparseness of the population and the inadequacy of means of communication. The conditions have favoured the rise of a large illicit trade in gold, which is carried on mainly by Chinese and Koreans.

The best results are obtained by undertakings with considerable capital and modern machinery, such as the Lenskoi and Orsk Companies. American engineers are widely employed, even by British firms, for British engineers have commonly gained their experience of gold-mining in South Africa, and are ignorant of the conditions in Siberia.

Gold is found in all the provinces of Eastern Siberia. The chief localities where it exists are recorded below under the heads of the several provinces.

Yeniseisk. There are several mines in the south-west near the Abakan. Of these the richest is the Bogom-Darovanui, which is fitted with thoroughly up-to-date machinery and is one of the few profitable reef gold mines in Siberia; it produces about 17,100 oz. troy of gold annually. The introduction of dredgers has revived the gold industry in the Yenisei basin; the southern portion of this field lies between the Pit and the Angara rivers, the northern in the upper basins of the Teya and the Kalami, tributaries of the Stony Tunguska. The field is remote

and its development has been much retarded by the cost of transporting its produce.

Irkutsk. By far the most important mining district in this province is Bodaibo, whence are produced some 13 tons of gold a year, a quarter of the output of the former Russian Empire. The Lenskoi Company, controlled by British interests, has a virtual monopoly. The gold is alluvial; the pay-gravel lies from 50 to 150 ft. below the surface, and the streaks are from 4 ft. 8 ins. to 9 ft. 4 ins. thick. The placers can only be worked with considerable capital. The yield of gold is from 82 to 205 grains to the ton of gravel. Good machinery is used, and about 4000 workmen are employed. Transport facilities are poor, but a light railway has been built from Bodaibo to the Vitim. The Government assaying and gold-smelting laboratory for the Vitim-Olekminsk district is at Bodaibo. Most of the valleys of the Vitim's tributaries are thought to contain gold, but they have been little explored.

Yakutsk. The Olekminsk mines, grouped for administrative purposes with those of the Vitim, were formerly the richest in Siberia. The Great Patom river, along which lie the richest deposits on the left bank of the Lena, is said to have yielded 14,000 oz. troy of gold in 1911, and all the land on its banks has been staked out in claims. Gold is found on the upper reaches of the Vilyui and its tributaries. The gold-yield at Chodinski, some 80 or 90 miles above Krestyatskaya, is reported to be large. Gold also occurs on the Nai, a tributary of the Aldan. The mining in both Irkutsk and Yakutsk would be much stimulated by the construction of the Lena railway (see p. 47).

Transbaikal. The output of this province was about 171,000 oz. troy in 1911. The two important centres are Barguzinsk and Nerchinsk. The production of the former field, which lies in the Barguzin valley, and near the sources of the Vitim, has greatly declined in recent years. Belgian engineers are here trying the experiment of thawing the ground by a process of steam-heating. Gold is found generally on the Government estates of

the Nerchinsk district except in the north-east and south-east. Owing to the climate attempts to introduce modern machinery into this field have not been successful. British companies have lately been prospecting and experimenting in the district with a view to applying for leases.

Amur. The Amur gold fields are of much greater extent than those of the Lena. Alluvial gold is found in the basins of the Zeya, the Bureya, and their tributaries. New deposits were discovered when the western section of the Amur Railway was being constructed. The Upper Amur Company in 1908 worked some 50 gold fields, and owned as many more. The Lenskoi Company proposes to extend its activities to this province. The gold is so fine in this region that only the best machinery can make mining profitable. Blagoveschensk and Zeya Pristan have Government laboratories.

Primorsk. The Amgun mines near Kerlinski were long worked at a loss, but a new dredger has been recently installed. The Orsk mines, owned by a British company, on Lake Chlya, near Nikolaevsk, are the most successful in the neighbourhood; even during the war the profits therefrom have increased. In 1912 there were 21 placers being worked, and the mines were responsible for a quarter of the value of the gold produced in the province. In the Ussuri district Chinese and Koreans have exhausted the more accessible deposits, but recently fresh placers have been discovered on the Iman which are estimated to yield £1 per ton of gravel. There is said to be a gold-bearing belt for some 120 miles along the coast between the Ud and Ayan. The Government laboratory is at Nikolaevsk.

Kamchatka. Gold has been found on the upper reaches of the Oblerkovina. Rich deposits are reported to exist on the river Volshaya in the Anadyr region and near Cape Dejneva in the Chukchi peninsula. The Volshaya mines have remained idle since 1907, but the deposits are said to contain 240 grains of ore to the ton of gravel and might be profitably worked, though the region is remote and woodless.

(b) Minerals other than Gold

Even apart from gold, the mineral wealth of Siberia is great and varied; but nothing more than a few summary notes on the more important deposits can here be attempted.

Antimony is found in several mines in Yeniseisk and along one or two rivers in the Minusinsk district of that province. In Transbaikal a spring near the Kadain-skoe silver mines is known as the antimony spring. There are deposits of antimony on the mountains near Zagilovo in Amur, the veins reaching a thickness of $3\frac{1}{2}$ ft.

Asbestos is worked in Yeniseisk on the river Kamisha, about 50 miles from Minusinsk; it lies there in dolomite veins up to $4\frac{1}{2}$ ft. in width, but only one-seventh is of commercial value. It is also found on the Karagan. In Irkutsk it is worked near the Angara, where it is of good quality. On the Mongol-Dabansk gold field, now exhausted, 75 miles from Zimanskoe, there are very rich asbestos and mica mines. Asbestos is also found near Shilkinsk and in the Nertchinsk district of Transbaikal.

Coal. There are large deposits of coal in Eastern Siberia, but most of it is only moderately good. There are great obstacles in the way of its satisfactory exploitation, such as the remoteness of coal markets, the undeveloped character of manufacturing industries in Siberia, and the abundance of timber for fuel. The railways are at present the chief consumers of Siberian coal.

In Yeniseisk there are deposits near Dudnika and in the region of Minusinsk, and also, it is said, in the valleys of the Lower Tunguska and the Chulim. In Irkutsk there are near Cheremorskoe important beds which annually produce 5,000,000 tons, mostly of lignite; the beds are very extensive, lying at a depth of not more than 98 feet, the seams being horizontal with an average thickness of 7 feet. In Yakutsk coal has been found along the middle course of the Lena in a number of

places, of which Bulun is the most northerly. West of the Lena, the deposits extend beyond the mouth of the Markha, a tributary of the Vilyui; east of it they stretch along the Aldan beyond the mouth of the Maya. The coal is of recent origin, and is not worked. In Transbaikal about 1,500,000 tons are produced annually from deposits along the railway, but the quality is inferior, giving out only half the heat of the Cheremorskoe coal. There are outcrops near the lake, and a seam near Peremuaya on its south-eastern shore is worked for the supply of fuel to the lake steamers, but the output is small. Coal is also found in the valleys of several rivers, e.g. the Ud, the Ingoda (in which at Novaya Kuka, only 4 miles from the railway, there is coal of good quality), the Shilka, and the Argun; the deposits in the valley of the last river have not been explored but may prove important, as the district is timberless. In the Amur Province extensive deposits have been located along the Amur River and the Amur railway, notably near Molinovka. In Primorsk there is much coal, but mostly of poor quality; 10 deposits are being worked. Of outstanding importance are a large lignite mine near Vladivostok, which yields more than 200,000 tons for the railway each year, a couple of small mines on Amur Bay, and the Government mines at Suchan. The last are worked at unnecessary expense. They are connected with the Ussuri railway by a branch 100 miles long, but this cannot carry more than 133,000 tons at most in the year. The output of the mines rose from 105,496 tons in 1908 to 206,783 in 1912. The coal is not very good for steam-raising, and its calorific value is rather low. Three kinds are obtained—bituminous, anthracite, and coking. It has been estimated that the Mongugai coal field (12 miles inland from Amur Bay) contains some 5,000,000 tons of good anthracite, very much like Welsh coal, and with improved transport facilities this coal could replace the Japanese coal at present imported at Vladivostok. There are said to be traces of brown coal along the Primorsk coast as far north as De Castries Bay. In Kamchatka there is a large deposit of brown

coal at Baroness Korf Bay, and similar coal is found on the shores of Gizhiga and Penzhina Bays and along the west coast of the Kamchatka peninsula.

Copper has been found in the Minusinsk district of Yeniseisk, near Verkhne Udinsk in Transbaikal, and, in poor veins, in the Onon and Argun basins in the same province. In Primorsk there are deposits near Vladivostok, near Konstantinovka on the Suifun, around Jigit Bay, and in the zinc and lead mines near Tyutikha Bay. Copper ore has also been discovered near the mouth of the Kolima, at the confluence of the Big and the Lena, and in Kamchatka.

Graphite is nowhere exploited to any extent, but there is hard and clean graphite in considerable quantities near Turukhansk on the Yenisei, in the Irkut valley, on the Lower Tunguska, near the river Bukhalova, at various points in the Amur basin, and near Cape Dejneva.

Iron exists in large quantities in Eastern Siberia, but it has been exploited with only small success. Even the Nikolaevsk foundry, between Tulun and the Lena, once the biggest in the country, has been compelled to close down, though in the neighbourhood of excellent ore. There is iron in several parts of the valleys of the Yenisei and some of its tributaries, such as the Abakan and the Angara, in the valleys of the Upper Lena and the Kirenga, near Misovsk on Lake Baikal, and on the Tsagankhuntei range, west of the Khilok valley. There are several deposits in the Nertchinsk district, but little is known of them; the iron works of Petrovski Zarod are, however, supplied from the Bal-yazinsk deposit of magnetic ore, and there are other large supplies of magnetic ore quite untouched in this region. There is abundant iron round Yakutsk; it is also found in the region of the Vilyui, below Zhigansk, near the confluence of the Samara and the Amur, near Nikolaevsk, round Olgi and Vladimir Bays, and in Kamchatka. From the commercial standpoint, the most promising of these are the deposits near Olgi and Vladimir Bays. Irregularities of the compass indicate

the presence of iron in large quantities at other points of the Primorsk coast. Now that the export of ore is no longer prohibited there should be a good market for iron ore in Japan. Before the war Germany was the principal source of the pig-iron used in Eastern Siberia.

Lead. The principal deposit of lead occurs in conjunction with zinc (see *infra*).

Mica occurs in the Krasnoyarsk region of Yeniseisk, where, however, it is not systematically worked. It is also found at Kandakoro on the river Tasyeeva, a tributary of the Angara, and on the river Kan near the mouth of the Varga. The deposits in the Mongol-Dabansk region were mentioned above, in connection with asbestos. There is reported to be mica in the Nijne Udinsk district and on the Mama, a tributary of the Vitim. On the southern shore of Lake Baikal the quality of the mica is good.

Petroleum is obtained from a belt of rocks, about two-thirds of a mile wide, along the shores of Lake Baikal, and there is an oil-spring at the bottom of the lake opposite the mouth of the Turka.

Platinum is found in Yeniseisk in the gold mines of the Chubuli basin, in Irkutsk near the Vitim gold field, in Amur on the Uni Bolski, and in Yakutsk on the Maya, where the natives are said to use it for bullets. Up to 1915 it was sent abroad to be refined, but in that year, in order to encourage the erection of refineries in Siberia, a tax of 15 per cent. *ad valorem* was imposed on unrefined platinum exported from the country.

Salt is abundant in Eastern Siberia, though the best deposits of rock salt and the best springs lie in very remote districts. Most of the salt is obtained by evaporation from salt-pans. In Yeniseisk 7500 tons a year are produced in this way near Abakanskoe. In Irkutsk at Ust Kutscoe, at the confluence of the Kuta and the Lena, there is a most important salt-mine, with a refinery; 9400 tons are produced annually; but owing to the cost of fuel work is carried on only in summer, and the slightest reduction in the price of salt would render

the undertaking unprofitable. In Transbaikal the salt industry flourishes, especially near Selenginsk, Kirauski, and Troitskosavsk, and in the south there is a number of brackish lakes which are successfully exploited. There are very large deposits of excellent rock salt in the province of Yakutsk between the Vilyui and its right-hand tributaries near Suntar, but owing to the absence of means of communication it has no market.

Silver is found in the south-eastern portion of the Nerchinsk Government lands, where 500 deposits of silver-lead are known to exist, the richest being at Kadainskoe on a tributary of the Upper Argun. There is also silver in the zinc mines of Tyutikha Bay in Primorsk.

Tin of good quality has been found between the Onon and Ingoda, but is not worked; this seems to be a genuine tin district, and the Government, it was said, intended to instal here the first tin-smelting works in Siberia.

Zinc and lead. The mines near Tyutikha Bay have been successful. In 1911 the output was 24,030 tons of zinc ore, 4451 tons of silver-lead ore, and 72 tons of copper ore. In 1912 25,000 tons of zinc were sent to Europe for smelting, but since then a smelting furnace has been built on the spot. The ore contains nearly 50 per cent. of zinc, a little silver, and about 5 per cent. of copper. New deposits have recently been located by the Tyutikha Company near Imperatorskaya Bay. There is said to be zinc in Yakutsk Province. Lead ore has been found at Orlensk in the Kirensk district, where the content is said to be 81.55 of pure lead.

Other minerals. *Cinnabar* occurs in the Bogoslovski district, on the Ildekan, in the Nertchinsk district, in the Amga basin, and in Kamchatka, but it has nowhere been worked. *Radium* has been found in Yeniseisk on the Ayakhta, a tributary of the Pit. Deposits of *iridium*, *palladium*, and *osmium* are said to exist in Kamchatka. *Thorianite* has been found in the Nertchinsk district. *Wolfram* occurs in rich deposits near Klyuchavskaya on the Ingoda on land belonging to the Transbaikal treasury.

There is *manganese* in the Angara valley, *molybdenum* in Transbaikal, and *osmiridium* in the same province. *Marble* is found in many parts of the country, notably on the Upper Yenisei, around the southern and eastern shores of Lake Baikal, in the basins of the Onon, the Argun, and the Zeya, and near Olgi Bay, in the Primorsk province, where there is a mountain said to consist almost entirely of marble. Good *building stone*, *lime*, and common *clays* occur almost everywhere. *Kaolin* and *white clay* for porcelain are worked in several places in the Irkutsk Province, where *fire-clay* and fire-resisting *sandstone* are also obtained. *Felspar* and *quartz* for glass-making are derived from various localities in the Baikal Mountains.

Many kinds of *precious stones* are found in Eastern Siberia. The richest source is the Adun-Chelonsk mountain, near the confluence of the Onon and the Onon-Borzya, where, among other stones, are found topaz, beryl, aquamarine, and tourmaline. Fine topazes also come from a district between the Unda, a tributary of the Shilka, and the Urulyungi, a tributary of the Argun. Chalcedony occurs in the Markha and other affluents of the Vilyui. There are garnets along some of the rivers flowing into Lake Baikal and on the Onon, some 50 miles from Nertchinsk. Lapis-lazuli is common in the provinces of Irkutsk and Transbaikal. The basins of the Byelaya and some of its tributaries contain nephrite, which is highly prized by the Chinese. Opals are found in certain tributaries of the Vilyui and fine rubies on the eastern shores of Lake Baikal.

Glauber's salt (sulphate of sodium) is produced from extensive deposits in the Minusinsk region of Yeniseisk, and from the Doroninsk lakes in the Barguzinsk district of Transbaikal.

Mineral springs, most of them cold, are numerous in Transbaikal, especially near the Shilka and in the Chita district. They have been very little exploited. There are sulphur springs near Parsheba on the Middle Lena. In Kamchatka there are many mineral springs, and their medicinal properties are known to the natives.

(5) MANUFACTURES

A characteristic feature of the economic life of European Russia and Western Siberia is the *kustarni* (peasant or cottage) industry; but this is of much less importance in Eastern Siberia, and the further east the province, the more insignificant does it become. The standard of workmanship in Eastern Siberia, moreover, is not as high as in the other parts of the former Russian Empire. Of the *kustarni* industries in the Governments of Yeniseisk and Irkutsk the first in importance, especially near the larger towns, is woodwork of various kinds; next comes the dressing of sheep-skins and wool products; and after that, but of much less note, are weaving and metal-work. About Yeniseisk there is some pottery manufacture and near Irkutsk bootmaking. In Transbaikal coopers' work is of some importance. In Amur and Primorsk there are hardly any cottage industries, but before the war the Government tried to promote them, sending out instructors and in the year 1914 allocating £23,000 to their promotion.

There are factories in the bigger towns, but it is difficult to draw the line between factory industry and *kustarni* industry, as at many so-called factories the operatives are merely an assemblage of *kustarni* workers. In the Far East the managers of factories are usually foreigners, while the Chinese supply most of the skilled, the Koreans most of the unskilled, labour. The chief goods manufactured in the towns are bricks, glass, metal castings, pottery, soap, and tallow. Tanning is of some importance, and there are various industries concerned with timber and wood-products.

Brick factories, often worked by steam, are fairly numerous; some of the most important are at Krasnoyarsk and Irkutsk. At Nijne Udinsk there are *cement* works, one of which produces about 50 tons annually. Two others in Transbaikal manufacture for local needs, and one was established in 1907 near the Ussuri Railway at the cost of £100,000.

The better kinds of *glass* are imported, and only

bottle-glass, window-glass, and rough table-ware are manufactured in Eastern Siberia. The chief glass-factory is 28 miles west of Krasnoyarsk; it was founded in 1840, and employed normally 400 and in special seasons 800 workmen, who before the war were Europeans, not Siberians. There are also glass-factories in Minusinsk, Irkutsk, and Nikolsk Ussuriski, and one in the Amur Province.

Leather is made at Irkutsk, and there are also important tanneries at Ussolye, not far away. These supply considerable quantities of leather to the Lena gold field.

The principal centre of *metal-working* is Blagoveschensk, where there are two iron and five copper foundries. Machinery is made at Khabarovsk and Nikolsk Ussuriski. There is a nail factory at Irkutsk.

Pottery is made at important works at Pelovinnaya on the Byelaya, where there is good clay. There is a large china and porcelain factory at Kharta, 90 miles from Irkutsk; the ware produced is of a somewhat cheap quality and destined for use in Siberia.

Soap of the commonest kind is manufactured at Blagoveschensk and several other places to supply local wants. *Tallow candles* are made in many towns. Candles of the better sorts are commonly imported, but there is a factory at Krasnoyarsk which manufactures wax candles for ecclesiastical use.

The *wood* of the Siberian forests gives rise to several industries. Saw mills are numerous. There are many at Irkutsk, which obtain timber from the region of Lake Baikal and the valleys of the Angara and the Irkut. Blagoveschensk, too, has a number of prosperous saw-mills, and is the centre of the timber trade of the Amur basin. In the Amur and Primorsk Provinces, together with Sakhalin, the saw-mills numbered 62 in 1912, and had an annual output of 2,050,000 logs.

Other industries concerned with wood deserve notice. Near Vladivostok the manufacture of three-ply and veneer is steadily increasing. At Spasskaya, on the Ussuri Railway, there is a factory for the chemical treatment of wood and the production of turpentine, tar,

wood-alcohol, vinegar, resin, and potash. Boat-building is carried on at Minusinsk, and carriage-building at Irkutsk.

A few of the other industrial undertakings of Eastern Siberia may be summarily mentioned. Irkutsk has ten printing works, two steam sausage-factories, and factories which respectively make yeast, pearl-barley, and cigarette-cases. Wool-dressing is also carried on in the town. Khabarovsk has a cigarette-case factory, and Minusinsk a rope factory, but rope-making is mainly a *kustarni* industry.

(C) COMMERCE

(1) DOMESTIC

(a) *Principal Branches of Trade*

The domestic commerce of Eastern Siberia calls for little comment. As yet it is simple and primitive, for among the inhabitants only the Chinese show any natural turn for trade. As was indicated in the previous section, the trade in native products is small and, for the most part, local. Timber, leather, and fish, it is true, are in considerable demand in markets far from the source of supply; but even in such commodities the trade is of small account by European standards. Until the country is provided with better means of communication, little development of its internal commerce can be expected.

The distribution of imported goods is mainly controlled by a few large firms, several of them founded by foreigners, which have stores in the more important centres, and, besides dealing in imported commodities, absorb a large proportion of the local trade. This centralization is the natural outcome of existing conditions, but it is to be hoped that, as the country develops, its commerce will experience the stimulus of a more healthy competition.

(b) *Towns, Markets, and Fairs*

The most important town in Eastern Siberia is *Irkutsk*, situated a short distance to the west of Lake Baikal on the river Angara. It has about 130,000 inhabitants and is the principal trading centre for Middle Siberia. The chief articles dealt in are fur, timber, and leather. *Vladivostok*, with more than 90,000 inhabitants, stands next to Irkutsk in population. It has already been noticed (p. 51) and some further particulars about its trade are given below (p. 86). Another seaport town, *Nikolaevsk*, has also been treated above (p. 50). *Blagoveschensk* has a considerable trade owing to its position on the Amur and its nearness to gold fields. It is particularly important as a centre of the timber trade. A town which has sprung rapidly into prominence is *Khabarovsk*, which owes its rise to the needs of the surrounding mining areas.

Other centres are *Krasnoyarsk*, *Zeya Pristan*, a gold-mining town, and *Pronge*, at the mouth of the Amur, which developed a considerable trade in fish with Germany.

Although not actually in Siberia, the town of Kharbin (*Harbin*), owing to its position on the shortest railway route from Europe to Vladivostok, is of much importance in Siberian commerce. Details of its trade are to be found in *Manchuria*, No. 69 of this series, p. 58.

A number of fairs are held in Siberia, mainly for the disposal of furs. The most notable of these fur fairs are mentioned above (p. 63), and the only other fair calling for remark is that of Verkhne Udinsk, which is held annually from January 18 to February 2 for trade in manufactured goods, groceries, and victuals.

(c) *Organizations to promote Trade and Commerce*

Vladivostok has a Chamber of Commerce, but this seems to be the only one in Eastern Siberia. Of other organizations for the promotion of trade there are apparently none except a few co-operative societies. The development and multiplication of these would be

of vast benefit to the country, whose progress has hitherto been retarded by the anarchy prevailing in its industry and commerce.

(d) *Foreign Interests*

The foreign countries with the greatest economic interests in Eastern Siberia are the United States and Canada. This is partly due to the fact that in many parts of Siberia conditions are similar to those in the prairie region of America. The trade in agricultural machinery is almost entirely in American hands, and citizens of the United States are conspicuous in many industries and in all branches of commerce.

The British concerns in Eastern Siberia are mostly firms long-established in China which in recent years have extended their operations northward.

As was mentioned above, the distribution of the imports of Eastern Siberia is largely in foreign hands. Before the war the concerns engaged in this commerce were mostly American, British, or German. Some of them were big corporations, with large capital.

(e) *Economic Penetration*

It will be seen that Eastern Siberia is in some danger of becoming economically dependent on foreigners of European or American nationality. Such a process, however, must be slow, and might be checked if Eastern Siberia obtained a wise and stable government. Far more serious is the penetration of the country by the Chinese. The question is discussed above (pp. 54-56).

(2) FOREIGN

(a) *Exports*

There are no published statistics of the foreign trade of separate portions of the Russian Empire, and it is impossible to make even a rough estimate of the value of the exports and imports of Eastern Siberia. There are, it is true, certain figures for Vladivostok, through which nearly all the overseas trade of Eastern Siberia passes; but as Vladivostok is also the port for a great part of

Manchuria, these statistics are not of much value for the purposes of this book.

In 1913 the total weight of the goods exported and imported through Vladivostok was 1,700,000 tons. Figures showing the value of this trade are unfortunately not available. The principal exports were soya beans, timber, and fish. The beans were shipped to large European centres; Great Britain received most, but Germany and Holland also took considerable quantities. The export trade in timber is of recent growth, the year 1907 having seen its first beginnings. Before the war, as was mentioned above (pp. 66, 67), Australia, Japan, and the United Kingdom were the leading purchasers of the timber of Eastern Siberia. A great expansion of this trade should take place in the near future.

One of the most valuable exports of the country is fur, which before 1914 was all dispatched in a westward direction and eventually reached either Leipzig or London, to one of which markets nearly all furs of any value went for dressing and sale.

The fish exported goes as a rule to Japan or China. In recent years small but increasing quantities have been canned for export to more distant markets and Pronge used to carry on a direct trade with Germany.

(b) *Imports*

The goods imported into Eastern Siberia are such as are ordinarily in demand in a recently settled colony. In 1913 they consisted principally of agricultural machinery and tools, cotton and woollen goods, many kinds of small manufactured articles, and groceries.

The agricultural machinery came almost entirely from the United States or Canada; the textiles were mainly of British or German origin, though small quantities of Polish woollen goods arrived by rail; of the other imports little can be said except that tea came from China and India, small manufactured wares mainly from Germany and America, and tropical produce by way of Shanghai and the Siberian branches of European houses in the Far East.

(D) FINANCE

(1) PUBLIC FINANCE

Up to the time of the revolution in Russia the Imperial Budget covered the whole of the Empire, including Asiatic Russia. The general revenue for all Russia increased from 2,271,600,000 roubles in 1906 to 2,855,160,000 roubles in 1912. Direct taxation upon land, buildings, and industry generally furnished less than 10 per cent. of the revenue. Excise duties brought in about 20 per cent., customs duties about 5 per cent., royalties, including the valuable spirit monopoly, about 30 per cent., property and funds belonging to the State, including the profits of State railways, about 25 per cent. The remainder of the revenue was derived from miscellaneous sources.

The total revenue drawn from the East Siberian provinces amounted in 1906 to 48,500,000 roubles and in 1910 to 45,500,000 roubles. This contraction of revenue was common to most of the provinces, only Amur and Yakutsk showing any appreciable increase, while Primorsk just held its own. The revenue from Siberia as a whole, on the other hand, rose from 85,500,000 to 90,860,000 roubles in the same period.

In every province except Amur and Primorsk, the largest receipts came from State undertakings. Under this head would be included mines, forests, and, above all, the railways. Other lucrative sources were direct taxes on land, buildings and industries, customs dues, and post, telegraph, and telephone charges.

No figures are published which give any indication of the amount spent by the State in Eastern Siberia, but considering the cost of maintaining administration and carrying on public services in so sparsely populated an area, there can be no doubt that considerable assistance from the Russian Treasury was needed to meet the deficits which must have been annually shown.

The *zemstvo* system has never been extended to Siberia, and the country is probably not ripe for it.

In consequence no money was raised locally for the maintenance of schools, local police, and country roads, or the other purposes for which the *zemstvos* were authorised to levy taxes. What little money was spent on such objects came from the Central Government.

Seven towns in Eastern Siberia were empowered to raise municipal revenue and incur debt, namely: Blagoveschensk, Vladivostok, Irkutsk, Krasnoyarsk, Nikolaevsk, Nikolsk Ussuriski, and Khabarovsk. Only the first three had a budget exceeding 1,000,000 roubles, and in no case did the debt incurred exceed 600,000 roubles, the figure reached by Irkutsk. This was partly due to the small number of public works undertaken, and also because the Central Government had at various periods spent a good deal of money on public buildings and various works of public utility, especially at the time of the construction of the Siberian Railway.

(2) CURRENCY

The rouble was and is the currency of all parts of the Russian Empire. From the outbreak of the war to the revolution, the notes of various nominal values from 1 to 1000 roubles, which were issued by the State Bank, were the only currency in circulation. Before the war the normal value of the rouble, in terms of English currency, was 2s. 0½d. As soon as war broke out, the value of the rouble began to fall in the international money market, and the issue of enormous amounts of paper roubles, unsupported by any increase of Russia's gold reserve or any other satisfactory guarantee, accelerated the process. Lack of currency for circulation has led in many regions to the issue of a local paper currency; and the currency of other States has also been widely used. The redemption of the new notes and bonds will be one of the most serious problems confronting the financial authorities on the restoration of stable conditions.

(3) BANKING

The banking institutions in Russia can be divided into four classes: (1) State institutions, (2) land banks instituted for hypothecary transactions, (3) commercial banks, (4) mutual loan and savings banks.

(1) The principal representative of the first class was the State Bank, the characteristics of which are described in *The Ukraine*, No. 52 of this series, p. 99. It had branches in Blagoveschensk, Irkutsk, and Vladivostok, and although at present cut off from the head office in Petrograd these branches are continuing to carry on business.

There were a number of State savings-banks, each with separate organisation and limited in its activities to a particular locality, but under the control of the Ministry of Finance and the State Bank. They did not, however, play an important part in Eastern Siberia.

(2) Land banks, though very influential in European Russia, have so far not been established in Eastern Siberia, where the development of agriculture is too recent for land to have acquired the value which would make it an adequate security for large loans.

(3) The commercial banks are joint-stock institutions which have been formed for the financing of trade and manufacture. The two principal ones operating in Eastern Siberia are the Russo-Asiatic Bank and the Siberian Commercial Bank, both of which have branches at Krasnoyarsk, Irkutsk, Yakutsk, Blagoveschensk, and Vladivostok, and agencies in smaller places. The commercial banks of European Russia do not as a rule extend their operations to Eastern Siberia, but in Irkutsk there are branches of the Yaroslav-Kostroma, Nijni-Novgorod-Samara and Volga-Kama banks. In Yakutsk, Blagoveschensk, and Vladivostok there are municipal banks which finance local trade and are under the supervision of the town authorities.

In Vladivostok there is a branch of the Mazuda Bank, a Japanese concern. This appears to be the only foreign bank in the country.

(4) Mutual credit associations and savings banks were but little known in Eastern Siberia before the war, but the recent growth of co-operation renders it probable that they will become much more numerous in the near future.

In general, there is nothing to show that the banking facilities in Siberia were in any way behind the needs of the country. Had there been any unsatisfied demand for credit there is no doubt that one or more of the powerful Russian commercial banks, such as the Azov-Don Bank or the Bank of Commerce and Industry, would have established branches in the larger towns.

(4) INFLUENCE OF FOREIGN CAPITAL

Considering the size and resources of the country, there is not much foreign capital invested in Eastern Siberia. Russian law and the policy of the Imperial Government combined to discourage foreign enterprise. Thus, much capital which might have been of great service in the development of Siberian industry was lost to the country, while the authorities at the same time proved quite unable to check the most dreaded form of foreign penetration—the economic invasion of the country by the Chinese.

(5) PRINCIPAL FIELDS OF INVESTMENT

The timber industry, gold and other mining, fishing, and the manufacture of leather seem to offer the best openings for foreign capital in Eastern Siberia. The timber and fishing trades are dependent for their expansion on the improvement of the ports, and this may itself open a field for private enterprise if, as appears probable, the State is not able to cope with the task. Fish-preserving should become a very remunerative industry, so that capital for the erection of canning works with modern plant is likely to be required.

The towns of Eastern Siberia are deficient in modern amenities, and should industry and commerce develop

satisfactorily, they may be expected to spend large sums on public works. This will give opportunities for the investment of capital on good security and with a fairly high return.

Should a stable and progressive government be established in Siberia in the near future, the demand for foreign capital will probably be immediate and great.

APPENDIX

I

TREATY OF NERTCHINSK¹

AUGUST 27, 1689 (O.S.)

"1. The boundary between the two empires is to be formed by the river Kerbechi², which is near the Shorna, called Uruon by the Tartars, and enters the Amur; and the long chain of mountains extending from the sources of the Kerbechi to the Eastern Ocean. The rivers, or rivulets, which flow from the southern slope of these mountains and enter the Amur, as well as all territories to the south of these mountains will thus belong to China.

"The territories, rivers, and rivulets, to the north of the said mountain chain remain with the empire of Moscovy, excepting the country between the said summit and the river Ud, which shall be neutral until the Plenipotentiaries, after their return home, have received further instructions, when this point may be settled by letter or special envoy.

"The boundary is further to be found by the river Argun, which enters the Amur; the territories south of the said river belong to the Emperor of China; those north of it to the empire of Moscovy. The towns, or dwelling-houses, at present situated to the south of the Argun, shall be removed to the northern bank of the river."

"6³. In consideration of this present treaty of peace, and the reciprocal good understanding of the two empires, persons may pass from one empire to the other, provided they are furnished with passports, and they shall be permitted to carry on commerce, and to sell or purchase at pleasure."

¹ Translation (Ravenstein, *op. cit.* pp. 62-3).

² Gorbitsa.

³ Art. 5 in Latin version (Vladimir, *op. cit.* App. p. 345 .

II

TREATY OF AIGUN

MAY 16, 1858

I. La rive gauche du fleuve Amour, à partir de la rivière Argoun jusqu'à l'embouchure de l'Amour, appartiendra à l'empire de Russie, et sa rive droite, en aval jusqu'à la rivière Oussouri, appartiendra à l'empire Ta-Tsing; les territoires et endroits situés entre la rivière Oussouri et la mer, comme jusqu'à présent, seront possédés en commun par l'empire Ta-Tsing et l'empire de Russie, en attendant que la frontière entre les deux Etats y soit réglée. La navigation de l'Amour, du Soungari et de l'Oussouri n'est permise qu'aux bâtiments des empires Ta-Tsing et de la Russie; la navigation de ces rivières sera interdite aux bâtiments de tout autre Etat. Les habitants mantchous établis sur la rive gauche de l'Amour, depuis la rivière Zéia jusqu'au village de Hormoldzin au sud, conserveront à perpétuité les lieux de leurs anciens domiciles sous l'administration du gouvernement mantchou, et les habitants russes ne pourront leur faire aucune offense ni vexation.

II. Dans l'intérêt de la bonne intelligence mutuelle des sujets respectifs, il est permis aux habitants riverains de l'Oussouri, de l'Amour et du Soungari, sujets de l'un et de l'autre empire, de trafiquer entre eux; et les autorités doivent réciproquement protéger les commerçants sur les deux rives.

III

TREATY OF PEKING

NOVEMBER 14, 1860

I. Pour corroborer et élucider l'article 1^{er} du traité conclu dans la ville d'Aïgoun, le 16 mai 1858 (VIII^e année de Hien-Fong, 21^e jour de la IV^e lune) et en exécution de l'article 9 du traité conclu le 1^{er} juin de la même année (3^e jour de la V^e lune) dans la ville de Tien-Tsin, il est établi:

Désormais la frontière orientale entre les deux empires, à commencer du confluent des rivières Chilka et Argoun, descendra le cours de la rivière Amour jusqu'au confluent de la rivière Ousouri avec cette dernière. Les terres situées sur la rive gauche (au nord) de la rivière Amour appartiennent à l'empire de Russie, et les terres situées sur la rive droite (au sud), jusqu'au

confluent de la rivière Ousouri, appartiennent à l'empire de Chine. Plus loin, depuis le confluent de la rivière Ousouri jusqu'au lac Hinkaï, la ligne frontière suit les rivières Ousouri et Son'gatcha. Les terres situées sur la rive orientale (droite) de ces rivières appartiennent à l'empire de Russie, et sur la rive occidentale (gauche) à l'empire de Chine. Plus loin, la ligne frontière entre les deux empires, depuis le point de sortie de la rivière Son'gatcha, coupe le lac Hinkaï, et se dirige sur la rivière Bélén-ho (Tour); depuis l'embouchure de cette rivière elle suit la crête des montagnes jusqu'à l'embouchure de la rivière Houpitou (Hauptou), et de là, les montagnes situées entre la rivière Khoûn-tchoun et la mer jusqu'à la rivière Thou-men-kiang¹. Le long de cette ligne, également, les terres situées à l'est appartiennent à l'empire de Russie, et celles à l'ouest à l'empire de Chine. La ligne frontière s'appuie à la rivière Thou-men-kiang, à vingt verstes chinoises (li) au-dessus de son embouchure dans la mer....

II. La ligne frontière à l'ouest, indéterminée jusqu'ici, doit désormais suivre la direction des montagnes, le cours des grandes rivières et la ligne actuellement existante des piquets chinois. A partir du dernier phare, nommé Chabindabaga, établi en 1728 (VI^e année de Young-Tching), après la conclusion du traité de Kiakhta, elle se dirigera vers le sud-ouest jusqu'au lac Dsaï-sang, et de là jusqu'aux montagnes situées au sud du lac Issyk-koul, et nommées Tèngri-chan, ou Alatau des Kirghises, autrement dites encore Thian-chan-nan-lou (branches méridionales des montagnes Célestes), et le long de ces montagnes jusqu'aux possessions du Kokand.

Article III provides for a boundary commission for the delimitation of the frontier from Lake Khanka to Khokand in Central Asia.

ARTICLE IV.

Sur toute la ligne frontière établie par l'article 1^{er} du présent traité, un commerce d'échange libre et franc de droits est autorisé entre les sujets des deux Etats. Les chefs locaux des frontières doivent accorder une protection particulière à ce commerce et à ceux qui l'exercent.

Sont en même temps confirmées par le présent les dispositions relatives au commerce établies par l'article 2 du traité d'Aïgoun.

ARTICLES V-XV regulate commerce between the Chinese and Russians, make provision for Consular establishments, diplomatic negotiations, mail dispatch and livery posting.

¹ Tumen river.

IV

TREATY OF PORTSMOUTH, U.S.A.

SEPTEMBER 5, 1905

ARTICLE IX. . . . Japan and Russia mutually agree not to construct in their respective possessions on the Island of Saghalien, or the adjacent Islands, any fortifications or other similar Military Works. They also respectively engage not to take any military measures which may impede the free navigation of the Strait of La Perouse and the Strait of Tartary.

V

RUSSO-CHINESE AGREEMENT REGARDING
MONGOLIA¹

SIGNED AT PEKING 5TH NOVEMBER 1913

"1. Russia recognises Outer Mongolia as being under the suzerainty of China.

"2. China recognises the autonomy of Outer Mongolia.

"3. Recognising the exclusive right of the Mongols of Outer Mongolia to administer their internal affairs and to settle all commercial and industrial questions concerning autonomous Mongolia, China will not maintain there either civil or military officials, and will abstain from all colonisation; it being understood, however, that a dignitary sent by the Chinese Government can reside in Urga, accompanied by the requisite subordinate staff and an escort. Also China may station in certain localities of Outer Mongolia, to be arranged subsequently, agents for the protection of the interests of her subjects. Russia, in turn, undertakes not to maintain troops in Outer Mongolia, with the exception of Consular guards, not to interfere with the administration, and to refrain from colonisation.

"4. China will accept the good offices of Russia to establish her relations with Outer Mongolia conformably with the above principles and the stipulations of the Convention of Urga concluded between Russia and Mongolia on November 3, 1912.

"5. Questions regarding the interests of China and Russia in Outer Mongolia arising from the new conditions will form the subject of subsequent negotiations."

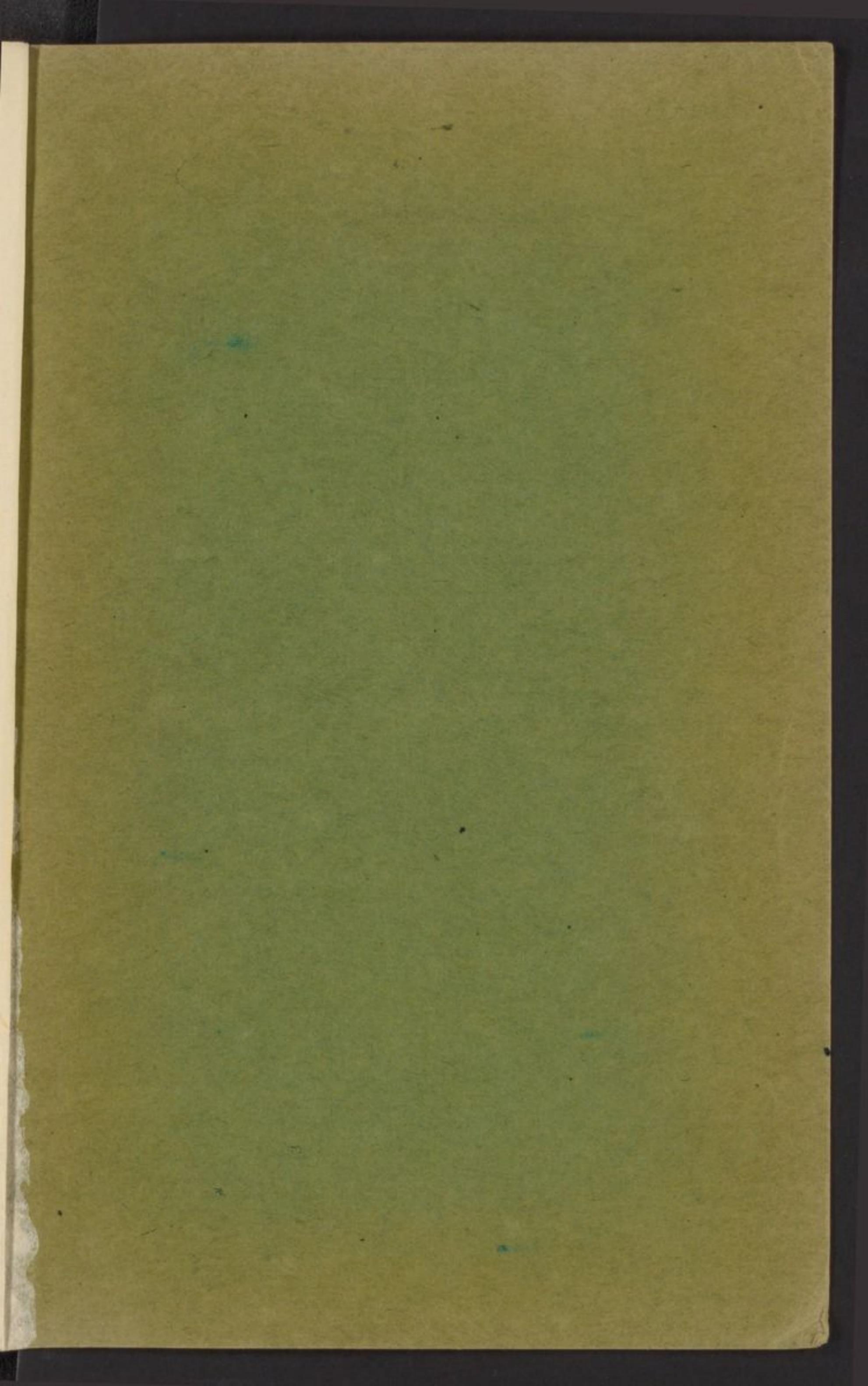
¹ "As telegraphed by Reuter," Perry-Ayscough and Otter-Barry, *With the Russians in Mongolia*, pp. 40-1.

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MAPS

For map of boundary fixed by Treaty of Nertchinsk (1689), see Ravenstein. For ethnographic map of Northern Asia see A. LEROY BEAULIEU, *The Empire of the Tsars and the Russians*. Translated by L. A. Ragozin. New York, 1893.



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