

of mines have been worked to a considerable extent. Placer gold mining in Siberia is over 200 years old; Peter the Great established there the two first iron works; for decades convicts and private miners worked government and private gold, silver, copper, lead, zinc, coal, graphite and other mines. Oil is known to exist in several places; for instance, on the Sakhalin Island, in the Okhotsk region, and to the north of Kamchatka.

Siberia is rich in all kinds of valuable fur-bearing animals. Polar bear, northern deer and polar fox are replaced more to the south by sable, ermine, black and brown bear, rock-doe, moose, red fox, etc., and tigers. Millions of birds inhabit and pass across the country twice each year. Rivers and coast waters are enormously rich in many varieties of fish; and the choicest kinds of salmon, herring, mackerel, cod, etc. Sea animals, such as whales, walrus and seals, live almost unmolested. Crustaceans of many kinds, oysters, clams, are hardly touched by the fishermen, and generally speaking, the whole Siberia does not utilize more than 1 or 2 per cent of its piscatorial resources.

Siberian Forests.

But the great wealth of Siberia lies in the immense Siberian forests. Siberia can be rightly called a timber land, the greatest forest reserve of the world.

It is impossible to give even approximate figures of the Siberian forest area. It surely runs into billions of acres. No exact figures are available, because up to the present time tens of thousands of square miles of Siberian forests have never been visited by a forester or by a surveyor. Siberia has not been properly mapped and many of its landmarks are registered either by eye-sketches, or even by hearsay. Only forests in the close vicinity of commercial or industrial centers are known to some extent; the rest is guesswork or imagination.

As the main object of this article is to picture the timbering possibilities in the Russian Far East, it would be superfluous to go into any details in describing the Siberian forests in general. However, some information on the subject will be necessary, because even the far-away western forests are bound sooner or later to have a great effect on the world's timber trade, and in this way they might influence the American timber industry and timber export.

For almost two centuries the English were buying and exporting timber and lumber from northern Russia, from the White Sea (Archangel). Gradually the trade extended eastward to Chesskay Bay and to the mouth of the Petchora River. The next large timber river is the Ob, in Siberia, followed by the Yenesei. Years ago the attention of British traders had been called to the great possibilities of obtaining cheap and good pine (yellow

and white), fir, larch and spruce from the immense systems of these rivers. Several years before the world war British and Scandinavian steamers were making attempts to establish regular connection with these rivers. They found the floating ice fields of the Arctic to be the greatest obstacle in their achievement. At the present time a plan has been worked out to patrol the ice fields by hydroplanes, attached to the lighthouse on the Yalmal peninsula, reaching out far into the Kara Sea; the lighthouse to report the position of ice to the steamers. Such a lighthouse is already erected, and is equipped with a powerful wireless station.

Woods Eventually Will Find Market.

The appearance of the western Siberian wood on the European market is bound to have an effect on American timber trade. Previous to the war Russian White and Baltic Sea timber was dominating the British timber trade. It does not make any particular difference as to what kind of government will be next and permanently established in Western Siberia. This government is bound to be poor and in need of money. The easiest way of obtaining it would be to sell timber, or by granting concessions. Britishers are already obtaining timber concessions in the northern part of European Russia. The Ob and Yenesei rivers are not far from British centres of timbering in the Russian north. They are also nearer to the European consuming centers than the American export ports, especially those on the Pacific. Siberia has always been noted for its cheap labor, and this cheapness, combined with the low royalties, no port dues or other taxes on the Ob and Yenesei, and cheap steamer freight on European waters, not only outbalance the difficulties of navigation in the Arctic, but also extend the market for this northern Siberia timber to Germany, France and the Mediterranean Sea. This trade will also be stimulated by the possibilities of obtaining Siberian raw products in exchange for manufactured goods.

Amur River Region.

The Amur River region is bound to become the center of Russian timbering. The Amur River system drains a territory of over 760,000 square miles, and affects economically almost twice this area. This river takes in the water from the greater part of Manchuria, of eastern Mongolia, of a considerable part of the Transbaikian province, the whole of the Amur province, and of the main part of the Maritime provinces.

The total length of the Amur and its tributaries is nearly 40,000 miles, of which over 11,300 miles are navigable for boats and steamers; over 14,970 miles are suitable for rafting purposes, and over 5,500 miles are smaller streams. These

figures are changeable. A great many streams are not classified as navigable, not because they are not such, but because there is nobody to navigate them. The same refers to streams suitable or unsuitable for rafting. A great number of them can easily be made to raft or float down timber.

Seventh Longest in World.

The Amur River is formed by the conflux of the Shilka and Argun rivers. From this point down to the Tartar Strait, the main stream is 1532 miles long. Together with the Argun River, it is the seventh longest river in the world. In its sources, the river has the character of a swift mountain stream, though navigable for a few hundred miles. Towards the Zea-Amur watershed it becomes a quiet broad river, at places as much as five and six miles wide, and runs through marshy lowlands at a speed of about four miles per hour, with an average depth of about ten feet, and from two to three feet of water on the numerous shallows. The fall of the river water level is as follows: At Pokrovka it is 1180 feet above the sea level; at Blagoveshtchensk, 360 feet, and at Habarovsk, 90 feet, a total fall of 1090 feet. The lower Amur, from Habarovsk to the mouth of the river, is 588 miles long. Its width at places is 1.5 to 2 miles. It forms many lakes and receives water from others. The current becomes slower; the average depth greater, with only a few shallows not less than 14 to 16 feet deep, and for some distance from its mouth the river is deep enough to accommodate the biggest ocean going vessels.

MAKE FORESTRY A PUBLIC ISSUE.

Mr. H. R. MacMillan, of the H. R. MacMillan Timber Export Co., Vancouver, in an address before the British Columbia Forestry Convention at Vancouver, declared that the timber industry was basic, and that the resources were being used up very rapidly, while very little attention was being paid to the necessity of reproduction.

"We must force upon our governments the necessity of a square deal to our forests," declared the speaker. "The policies of the government in regard to forest fire prevention, and more especially to the problems of conservation and reforestation are not aggressive. Immigration, railways and the problem of remaining in office engage their attention, while the greatest resources of the country are being rapidly consumed, or, at least, deteriorating in quality to such an extent that there is grave danger for the future."