AFFORESTATION IN KOREA.

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NOTE.—The manuscript of this article was submitted to the Department of Forestry (森林議) of the Government-General, and the changes and corrections kindly made there have been incorporated in it as printed.

The traveller who coasts, as many of us have done, along the shores of this Peninsula, and finds only desolate, rain scarred hill-sides, will decide even before he has set foot on the land, that he can dismiss "Forestry" from his note-book with the single entry, reminiscent of the well-known chapter on "Snakes in Ireland," "There is no Forestry in Korea."

And even though he traverses the country from end to end on the Fusun-Wiju Railway, he will find little reason for changing his mind on this matter. Yet as a matter of fact, more than 4/5 of the whole area is under the jurisdiction of the Forestry Bureau, and more than ¼ is covered to-day with virgin forests, of stately pines and sturdy oaks; while the larger forest animals, bears, leopards, and tigers, roam the lonely glades, and prey upon the deer and boar there.

It may be well to mention in passing a matter of strictly historic interest. Though the causes of the war between Russia and Japan were many and complex, the final occasion was a Forestry Concession in Korea. The Russians had permission to cut and handle lumber on the Yalu, and with this as a pretext, they had made a settlement at the little port of Yongampo, at the mouth of the Yalu. Their refusal to abandon this was the match which lighted the great conflagration.

In the Summer of 1904 I visited Yongampo, and saw the one-time Russian lumber mills running at full capacity, with a host of Chinese, Japanese, and Korean handsawyers also at work. I have never seen finer timber than the great 40 and 60 foot pieces that had come down to them from the forests of North Pyeng An Province (平安北道).
The figures used in this article are from the Government publications, chiefly the 1914 edition of “Latest Korea” (最近朝鮮事情)—I wish here to express my gratitude to those who furnished the information, and so carefully revised my hasty figures. Also I should say that most of the hard work of gathering and translating the material was done by Mr. W. C. Narh, Teacher of Natural Sciences in the John D. Wells Academy, who has made a specialty of Forestry, and kindly put all his knowledge of technicalities at my service.

The Forestry Bureau issues a remarkably fine map, showing with great detail the location of all Forest Areas. The areas covered with big trees are in green, those covered with brush and small trees in red, the land available for afforestation in yellow, and the cultivated areas in white. A glance at this shows that the greater part of the real forests are in the far North. But all through the country are scattered forests of good size, some of them in or near Seoul itself.

These trees have been protected by their inaccessibility, or for religious or sentimental reasons. The former consideration accounts for the great forest stretches in Ham Kyung (咸鏡道), Kang Won (江原道) and Pyeng An (平安道) Provinces. The “sacred groves” surrounding temples, shrines, and tombs owe their existence to the second class of reasons. We cannot but be thankful for the instinct of reverence that has spared these fine woodlands, often close to good markets.

It is evident to anyone who takes the trouble to make a few observations, that the forest areas in Korea have been steadily dwindling, even in the past few decades. Less than forty years ago, one of the higher passes on the road between Seoul and Pyeng Yang was so infested with tigers that travel was seriously hampered. The Regent, known to history as Tai Wun Kun (大院君), had the forests cleared away for three miles on either side of the road. This was in line with progress, for it got rid of the tigers and encouraged travel; but it destroyed a forest that has never been replaced. Doubtless
AFFORESTATION IN KOREA.

37

this has been the history of many a forest. The growth of population has worked against the forests in two ways. It has increased the demand for building materials, while it also pushed the line of cultivation higher on the hills year by year. A few years ago it was common, in my old itinerating field in Whang Hai Province (蕪海道), to find new clearings in the making, with the ground freshly burned over, and a few little fields wrested from the all too scanty forest lands.

Another factor is the export trade in lumber, railway sleepers, and charcoal. Leaving out the firewood that is smuggled out of the country, mostly by junks that cross the Yellow Sea and put in at some little creek, to return home a few weeks later loaded with bundles of wood, the Customs figures amount to ￦152,440 in 1910, and more in 1912.

The imports for the same years show clearly enough the need of afforestation. In 1910 they amounted to more than ten times the exports, and in 1912 to ￦2,263,982, or more than fourteen times the exports. It is interesting to know that the imports from the United States amounted in 1912 to ￦86,000, or more than half the whole amount of exports. An important part of this is veneer, used for finishing the railway cars, etc. This, as well as much of the building lumber imported from the United States is of a nature that will not be produced in this country for many years to come.

This importation of lumber illustrates only a part of Korea's dire need of more forests, and better care for the trees already growing. We are all familiar with the gullied hill-sides, and their corollary, the sand-choked water-courses, that wander sluggishly through the plains below, or, too often, turn aside from the shallow channels their own sediment has blocked, to devastate the fields, and cover them with a forbidding layer of sand and stones.

We know the furious floods of Summer, and the dreary drouths of Fall and Spring. Many a time I have come into Chairyung (載寧郡) late at night, and found a group of women patiently waiting at each of the little seep-holes (I
cannot call them springs) where the water trickles out of the rocks. They would wait half the night, in the cold and darkness, for the sake of one more jar of water for use the next day. These are among the penalties a land pays when it has been stripped of its forests. Afforestation will mend these conditions; it may even affect the climate and agricultural possibilities. We who live in Seoul cannot doubt that the bare hills encircling the City intensify the heat of Summer, as they reflect the sun’s rays from their bare slopes.

Still, I am not as extreme a believer in afforestation as the visitor who was taken to see Puk Han (北漢). He took a good look at those granite peaks, rising sheer above the city walls, and finally said “They will be all right, when they are covered with pines.” Forestry has its limits, and we can all be glad that the prospect of seeing Puk Han turned into a forest is too far away to worry our generation.

The largest body of real forest, that is, of big trees (成林地), is in South Ham Kyung Province (咸鎭道). It covers 5,737 square miles. The smallest is in South Chulla (全羅南道), 333 miles. Kung Ki (京畿道) is 9th among the 13 Provinces, with 458 miles. This is a large area, when you consider Seoul’s constant demand for lumber and fuel. Most of it is in groves surrounding graves, either Royal or private.

The whole area of forests (of big trees), is about 20,000 square miles, almost 30 per cent of the whole country. Much of this is owned by the State, a large part of the remainder by Buddhist Monasteries, some by individuals or clans. Much of it has no legal owner, as titles to Forest Lands were not clear in the old days. It is only since 1910 that any concerted effort at delimitation has been made. It is reassuring to read, on Page 179 of the “Report of Progress” for 1912-13, that in the case of forests whose owners have failed to make the proper reports “they may be transferred to their bona fide owners.”

The present Forestry law wisely provides that no trees
AFFORESTATION IN KOREA.

May be cut in these forests, whether owned by the State or privately, without permission from the Governor-General or the Provincial Governor, and it makes one of the conditions for this permission the planting of seedlings to replace the trees that are to be cut.

Next in importance to this 20,000 miles of big trees, is the more than 25,000 square miles of young trees, brush, etc., called 稚樹發生地. This is the basis of the native fuel supply. Much of the land is owned by individuals and clans, but more by the State. Most of it is cut over each year, the brush being cut short, and part of the branches taken from the trees. These cuttings come to us in the shape of the young mountains of brush for fuel that move majestically through the streets of every town or city in Korea.

The third area under the care of the Forestry Department is the waste land, not used for agriculture, and not furnishing a regular crop of marketable fuel, and so, as a rule, not claimed by any owner. There are 16,000 square miles of this, and it is all open for afforestation, except some comparatively small tracts already taken by individuals and firms.

The land under cultivation is 11,123 square miles. This makes the following proportions for the various kinds of land:

- Cultivated fields ........................................ 15.3%
- Forests of Big Trees .................................. 27.4%
- Bushes and Small Trees ................................. 35.4%
- Open for Afforestation ................................ 31.9%

As the Forestry Department has charge of all but the first, the rather startling statement at the beginning of this article is justified. As a basis of comparison, we may note that the area under cultivation in Japan Proper is 18.5 per cent, and in Germany (before the war) 93.6 per cent.

Character of the Korean Forests

In the Northern part of the country they are composed mostly of slender-leaved woods, and are enumerated as 19 varieties, pines greatly predominating. In the Southern part there are 116 varieties of forest trees, with 3 kinds of bamboo included. Here they are mostly broad-leaved, like the oak.
We should note that fruit trees are not included in this enumeration. Let those who are familiar with the chestnut and the persimmon (not the puckery little object that goes by that name in the United States, but the *Persimmon De Luxe* that we have here) judge the importance of this omission. I recall the occasion when I was making a long trip in the country, and my supply of dried prunes, that stand-by of the itinerator, was running low. We came to a village where the “market” was being held, and I despatched my boy to get a supply of fruit. He came back empty-handed, for with three kinds of fruit for sale, he could not decide which would be best. Cross-questioning developed the fact that the three kinds of fruit were chestnuts, potatoes, and turnips!

The Government made its beginning of this in 1907. Seedling stations were opened in 1908, and by 1913 these numbered 319. They are maintained by the Government-General, by Provincial and Prefectural authorities, and (a few only) private enterprise. The Imperial Grant made at the time of annexation is also used in supporting some of these stations, particularly for raising mulberry trees, for the sake of the silk-worm industry. One of these mulberry groves can be seen inside the Su Ku Mun (水門) of Seoul, and one of the large seedling stations is outside the West Gate, directly between the proposed site of the Chosen Christian College and the City. It is worth a visit. The Government Stations reported in 1912 almost 25 million plantlets, and the Government-General spent on this work over $166,000 that year. The rapid growth of Afforestation can be seen from this Table: It shows the principal agencies now doing this work, and dates when they began, as well as their relative results.

<table>
<thead>
<tr>
<th>PLANTED BY</th>
<th>YEAR</th>
<th>TREES</th>
<th>ACRES</th>
<th>YEAR</th>
<th>TREES</th>
<th>ACRES</th>
</tr>
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<tbody>
<tr>
<td>General Government</td>
<td>1907</td>
<td>72,000</td>
<td>30</td>
<td>1913</td>
<td>1,015,000</td>
<td>276</td>
</tr>
<tr>
<td>Local and Provincial</td>
<td>1911</td>
<td>15,000</td>
<td>13</td>
<td>1913</td>
<td>8,360,000</td>
<td>518</td>
</tr>
<tr>
<td>Private Enterprise</td>
<td>1910</td>
<td>1,947,000</td>
<td>1,743</td>
<td>1913</td>
<td>38,355,000</td>
<td>47  Sq. Mi.</td>
</tr>
</tbody>
</table>

This “Private Enterprise” is principally the work of the
Mitsui Firm and the Oriental Development Company, both of which are planning to raise material for railway and other construction on a large scale.

The last figure will be better understood when one remembers that it means 3 little trees planted in one year for every man, woman, and child in this country, and yet that only one acre in 300 of those available for afforestation was planted.

An interesting part of this work is planting for Memorials (記念植樹). This is done by the people, along roads, on common village property, and in other similar locations. In 1913, 12,431,000 trees were planted in this way, almost one for each person in the country. Arbor Day is observed on April 3rd, and the highest officials set the example of tree-planting on that day.

Seeds and seedlings from the Government Stations are distributed free to encourage afforestation. In 1913 over 14,885,000 trees (one for each person in the country) and 645 bushels of tree-seeds, were so distributed. The varieties so far cultivated are the Pine, Acacia, Poplar, Chestnut, and Wild Oak. The silk-worms that produce the thread used in making Pongee feed upon the leaves of the last-named. Two Experimental Farms are trying various kinds of trees, in the hope of finding those best adapted to local conditions.

Government land will be assigned to those who are fitted to carry out afforestation projects. This may be in the form of a lease, or a deed.

Usually the former is given for a time, as an experiment, and is followed by the latter, when the one in charge has proved his fitness. So far some 400 or 500 of the 16,000 square miles available has been so taken, but the amount is rapidly increasing year by year.

This assignment is made after an application has been filed with the Local Authorities. If it has their approval, it is transmitted to the Forestry Bureau, which takes action. The qualifications essential to an applicant are two, namely: Finan-
cial ability to carry out the enterprise, and zeal for this sort of work.

If more than one person applies for the same piece of land, and all have the above qualifications in equal measure, the preference is given to the one who shows the following:

1. Public Spirit.
2. Former Relation to the Land — See Government-General Regulations, 1912, Number 10, Paragraph 1.
3. A Native of the District.
4. Immigrants (those who have come in a body).
5. A former claim upon the land.

The need of afforestation is evident to all. We who have made our homes in this land can congratulate ourselves, and the people of Korea may well be glad, in knowing that this great and pressing problem is so well met by the Government. We can also be glad that private enterprise is sharing the work, and hope that it will be so profitable that this will be greatly extended. Most of all, we rejoice to know that the Government is showing the people how to do their part, and that they are taking advantage of its assistance.

Those 12 millions of Memorial trees are a hopeful sign for Korea.