

Commission of Conservation CANADA

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CONSERVATION is published the first of each month. Its object is the dissemination of information relative to the natural resources of Canada, their development and proper conservation, and the publication of timely articles on town-planning and public health. The newspaper edition is printed on one side of the paper only, for convenience in clipping for reproduction.

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THE CRUCIBLE OF THE FUTURE

The world's ingredients have been thrown into the melting pot of war, material, spiritual, commercial, political, financial, humanistic; and what is going to come out of it when the process is over—who can tell?

On the other hand, the fusion of the great nations in a common lofty ideal, coupled with the steaming off of the dross, may, if properly handled and treated, produce a true metal for carrying out the work of the world on a nobler scale than heretofore.

There is an immense and unprecedented possibility for good if we, and those who are coming after us, are prepared to utilize it.

Unity, concord and high purpose, with sane democracy, will do it.

But the war has shown how dangerously close under the surface of our vaunted civilization still lie savagery, blindness, and insane license.

The war is not over, the victory is not finally won, even though the fighting on the battlefield may be finished. There is yet a dangerous and anxious time before the Nation, as there is before the world, while the metal forged by the war is being fashioned for use.—*Sir Robert Baden-Powell.*

AIRCRAFT FOR FOREST SURVEYS

Among the peace time possibilities of aircraft are forest fire patrol and aerial photography. It is now expected that fire patrols by flying boats will be established during the current year by the British Columbia Forest Branch and by one or more of the Forest Protective Associations of Quebec, assisted by the Quebec Government. The St. Maurice Forest Protective Association is the leader in this respect in the east, as the British Columbia Forest Branch has already proved in the west. It is believed that there are large possibilities also in connection with aerial fire patrol on Dominion lands in the west, through the Dominion Forestry and Parks Branches. Many men, whose experience in aviation overseas should qualify them to express thoroughly practical opinions, state that, beyond question, these things are eminently feasible.

Similarly, there is undoubtedly a large field for developments along the line of aerial photography, both in conjunction with forest protection and independently. The recent address of Colonel Cull before the Geodetic

Society of Ottawa showed some of the possibilities of aircraft in furthering the line of work with which the Geodetic Survey is particularly concerned.

The possibilities in connection with forestry work are also very great. There are vast areas of relatively inaccessible lands in all our provinces, where only fragmentary data are available as to drainage and topography, or as to the extent, composition and volume of the forests. As a result of war developments, the importance of our forests in the national economy is now recognized as never before. An adequate knowledge of the character, location and extent of the forests of Canada is essential to the proper administration and exploitation of this vital resource.

The Commission of Conservation made a survey of the forest resources of British Columbia and Saskatchewan, although the data available as to extensive areas were of the most fragmentary character. Similar work in other provinces is planned, as rapidly as the necessary funds can be secured. The prosecution of such projects would be enormously simplified, and the results would be much more accurate and valuable, if necessary work on the ground could be supplemented by systematic surveys made by means of aerial photography. Such surveys might of course serve other public purposes as well. This suggests the extreme desirability of co-operation between all agencies interested, Dominion and Provincial, as well as private.—*C. L.*

KEEP ELECTRIC LAMPS CLEAN

Dirty electric lamps are inefficient and wasteful. A recent investigation in a large establishment disclosed interesting figures in the extent of this waste. A group of lamps with a week's accumulation of dirt showed an average absorption of light of 16 per cent, some of them running as high as nearly 20 per cent. Another group which had been used for three weeks had an average absorption of 22 per cent with a maximum of over 26 per cent. Figuring on this basis, 16 per cent more lamps at the end of one week, or 22 per cent at the end of three weeks, would be required to obtain the same illumination that would have been obtained if the lamps were kept clean. This, of course, meant a corresponding increase in the electric light bill.—*L. G. D.*

WAGE WAR ON RATS

Rats are traditional enemies of mankind. They are the chief carriers of cholera, plague and other epidemic diseases which have at various times in history, wiped out millions of human beings. Fortunately, man's knowledge of science, coupled with his superior cunning, has made it possible to control these scourges. But ceaseless vigilance on the part of the health officials at all ocean ports will always be necessary—at least until rats are exterminated.

Man has another heavy scourge against these pests. They destroy enormous quantities of agricultural products. It was estimated, before the war, that rats destroyed \$75,000,000 worth of such products annually in

Great Britain alone. A recent estimate based on war-time prices, places the loss at \$200,000,000. The latter figure is practically the same as the pre-war estimate of loss in the United States from the same cause. These animals possess remarkable fecundity, which, when coupled with their natural cunning enables them to thrive and even increase in numbers in a great variety of environments. Every good citizen, particularly agriculturists and grain and food dealers, should wage a ruthless war on these noxious pests.

UTILIZE IDLE WATER POWERS

A waste equivalent to over 660,000 tons of coal per year has been revealed by a water power survey in the state of Massachusetts. These losses occur either from complete absence of development at certain sites or from improper or insufficient development at sites already developed for power. Numerous cases of a similar character exist on some of the rivers of the more densely populated portions of Canada and it is of interest to note what Massachusetts is doing to conserve and derive full benefit from the power being wasted in this manner. The bill presented as a result of the investigation may be summarized briefly as follows:

1. To authorize and encourage mill owners to improve and utilize fully the water resources of the Commonwealth.
2. To provide that after a reasonable lapse of time the Commonwealth may acquire at cost such improvements.
3. To provide, in case of the failure of the mill owners to act within a reasonable time, for the development of such water resources by the Commonwealth for the public good.
4. To authorize co-operation with other States in and through which the rivers of Massachusetts rise and flow or having power which might be made available to the industries of the Commonwealth.—*L. G. D.*

EXPORTS FROM FORESTS

Reports of the Trade and Commerce Department show that, for the year ending November, 1918, Canadian exports of primary forest products totalled \$64,281,861. This is an increase of 22 per cent over the previous year. The exports from the forest were very nearly double those from the fisheries, and were 85 per cent of those from the mine. In addition to the primary forest products, consisting mainly of lumber and unmanufactured wood in various forms, wood-pulp was exported amounting to \$32,580,619, which wood in manufactured form, not otherwise covered, totalled \$826,551. These figures are an indication of the economic importance of Canada's forests, in the development of her foreign trade.—*C. L.*

The County Council, of Middlesex county, Ont., has passed a by-law protecting all birds and game in the county for a period of five years. This action was taken on account of the unscrupulous slaughter of birds and game, and the consequent increase of insect pests.

SETTLEMENT OF SUB-MARGINAL LANDS

An obstacle to successful private colonization is found in the existence of sub-marginal lands; that is to say, lands which, when cultivated, will not give normal returns on labour and capital, and which will still less yield a surplus in the form of rent. These are found probably in every state of the Union, and, in a few states, a large proportion of the land is sub-marginal. It has been estimated that something like one-third of the land in Northern Wisconsin is sub-marginal, although the remaining two-thirds is productive and very much of it highly so. The sub-marginal land is privately owned, very largely, and affords a temptation to the owner to exploit the unsuspecting settler. California and the fruit sections of the country generally give us conspicuous illustration of a case connected with sub-marginal land. Every traveller in California who is at all familiar with conditions, knows that orchards are planted for two purposes, one for fruit and the other for sale to the "tenderfoot." What are we going to do with sub-marginal land? No complete solution of the problem of sub-marginal land will be attempted here and now, but, in a general way, it may be said that the aim should be to bring it into public ownership and make the best possible use of it. Without entering into all the complexities of the idea of marginal land, it may be remarked that land sub-marginal for private use may be super-marginal for public use. By condemnation it could be secured at its real value. Frequently the land which is sub-marginal for agriculture may have a value for forestry.

The development of agricultural education is one of the most remarkable features of the educational history of the last fifty years. It would take a long paper to tell all the things that are being done to promote theoretical and practical agricultural education. We have gone so far that in many parts of the country every country has its agricultural adviser, while agricultural institutes reach hundreds of thousands. We need to work further along existing lines and to give attention in our agricultural education to the agricultural leader. We have neglected unduly the proper organization of agriculture and have not attempted systematically to provide a more adequate supply of capital, but we still lack a proper proportion of labour, in order to get the right combination of the requisites of production.

As a part of the general plans for colonization, it is suggested that the education features of farm life should be developed. Farms where labour and living conditions are right and where there is good farming should be certified. Moreover, there should be an agency having an interest in the boys and girls who may desire to go on these farms and work for wages.—*R. T. Ely.*

The sugar beet industry has become very profitable in Kent county, Ont. There will likely be a largely increased acreage this year.