

**Commission of Conservation  
CANADA**

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CONSERVATION is published monthly. 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 housing and town planning.

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**MUSKRATS IN THE LUXURY CLASS**

The plebeian muskrat is coming into its own. Before the war, rat skins could be obtained from the trappers at from 20 to 30 cents each. "Fur Farming in Canada," published by the Commission of Conservation in 1914, quotes autumn muskrat skins in Eastern Canada at 25 cents for large skins and 15 cents for small. To-day, autumn muskrat skins are bringing in Quebec from \$3.25 each for current collections to \$4.50 each for the best rat skins.

Fashion is responsible for these high prices. Muskrat, when plucked and dyed, becomes Hudson seal. The demand has reached a point where there is danger of the extermination of this furbearer and, in Ontario, it can only be taken during the spring season, when, it is claimed, the fur is at its best.

This increased price of the raw pelts is naturally reflected in the prices of Hudson seal coats, which, in 1915, were quoted by a well-known furrier as ranging from \$100 to \$125, whereas, to-day, the prices range from \$400 to \$450 and, in 1920, will probably be \$600 to \$650.

The present demand for skins and the high prices now being paid will probably lead to the establishment of muskrat farms in Canada.

**PUBLIC FIRE ALARM SYSTEMS**

The extent of any fire in a protected community depends in large measure upon the promptness with which the fire-extinguishing appliances are brought into operation. The fire alarm system of a city or town ought, therefore, to be as nearly perfect as money and skill can make it. A deficient fire alarm system constitutes a general hazard. It may be tolerated when reconstruction would involve a heavy outlay, but a community is dealing with the whole question of fire protection from the wrong end when extinguishing apparatus is purchased at the expense of the alarm system.

Three minutes after a fire has broken out a mail of water would usually be sufficient to subdue it. With ten minutes' uninterrupted start, a fire may need a quarter of a million dollars worth of apparatus and an army of men before it can be controlled. An obsolete fire alarm system is the most form of economy.—*J. Groe Smith.*

**ELECTRIC HEATING**

Heating on a large scale by electricity is economically possible only where electric can be generated at a very low cost. As stated by Mr. Arthur V. White, Consulting Engineer, Commission of Conservation: "Let it be appreciated that Canadians need never expect to have electrical energy replace coal and other fuel for heating buildings except to a relatively limited extent."

With anthracite coal at \$12 per ton and burned at 50 per cent efficiency, and with electric energy at one cent per kilowatt-hour, the coal will yield 11,700 B.t.u. for one cent as compared with 3,412 B.t.u. from the electric energy for one cent. This demonstrates that, on this basis, heating by electric energy would be three and one-half times as costly as with coal.

An estimate by Mr. Arthur V. White indicates that, in Ontario, the heating requirements of the average home in Toronto would require about five electrical horsepower per capita. The 2,100,000 inhabitants of Western Canada would require not less than 10,500,000 electrical h.p. for heating alone. The Toronto basis may be applied to the West as a whole, because the milder conditions of the Pacific coast are compensated by more severe winters of the Prairie Provinces.

**WATERWORKS FOR SMALL TOWNS**

Many of our moderate-sized communities have not availed themselves of the advantages and benefits of a public waterworks system. While some years ago only the larger cities could afford waterworks systems, modern progress has extended this privilege to the smaller towns and villages. The advantages of a common water supply with the convenience of tap water in each house, as against individual supply, need scarcely be pointed out. It is sanitary, convenient, cheaper in the long run, and greatly reduces the fire hazard. This last can be measured in dollars and cents in the reduction on insurance costs and consequent increase in value of property. Added to this, and perhaps of even greater value, is the assurance that the possibility of the entire town being destroyed by a conflagration has been immeasurably lessened.

That waterworks installations are not restricted to the large centres is plainly demonstrated in our own country. In our two larger provinces, Ontario and Quebec, there are over 180 public water systems for communities of 2,000 population or less, and nearly one-half of these have a population under 1,000.—*L. G. Denis.*

**WINTER FIRE PROTECTION**

Winter fires in barns, stables or outhouses are usually caused by the knocking over or explosion of kerosene lamps or lanterns. Keep a few pails of dry sand on hand. Dry sand will not freeze. In the incipient stages of an oil fire, sand will smother, whereas water will spread it.

**BUILD UP YOUR BODILY RESISTANCE**

1. Sleep with at least one window open in your bedroom all the year round.
2. Eat plenty of good, wholesome food.
3. Never allow yourself to become more tired by staying up late after a hard day; make up for it by going to bed early.

If you are in good health, if your resisting power is good, the germs of disease are less likely to harm you.

Nothing helps to build up the resisting power so much as proper food, plenty of sleep, and pure, fresh air.

**COAL BY-PRODUCTS SAVED**

Coke and other by-products of coal are now being produced in a plant at Anxox, B.C. This plant, which is the only one of its kind on the Pacific coast, has been two years in construction and is now in full operation.

Coal for the 32 ovens is supplied from mines on Vancouver Island, from which steady shipments have been made to the northern smelter town for some time past. The coke produced is said to be of excellent quality and approximates 65 per cent of the total weight of coal carbonized. About 500 tons of coke are produced daily.

The by-products recovered per ton of coal are: gas, 11,500 cu. ft.; tar, 10 gals.; sulphate of ammonia, 21 lbs.; light oil, 3 gals.; benzol, 1-55 gals.; toluol, 40 gals.; solvent naphthalene, 30 gals.; crude naphthalene, 4 lbs. The coal tar will be shipped to Vancouver to be fractionated into pitch and creosote. All these products will find a ready market in Canada and the Pacific Coast states.

**LONDON FUR AUCTIONS**

The price trend at recent London fur auctions has shown remarkable increases in the cheaper furs, such as muskrat, wolf, badger, kitt fox, etc. Even dressed dog and house cat advanced 25 per cent. There is thus a marked tendency to widen the market for furs to use species formerly in slight demand. If this tendency continues, the now well established Canadian industry of fur farming should receive a further extension and a new impetus.

**PLAY SAFE**

The money value of a man includes the cost of his upkeep and education from his birth till he becomes self-supporting. He then becomes an asset instead of a liability.

This demonstrates the economic loss to the community when, through an accident, he is incapacitated and unable to carry on his work. All the cost of bringing him to the earning stage is wasted, and he again becomes a burden on society.

**Lumber Industries  
Employ Most Labour**

Manufacturing Group with Largest Payroll is Directly Dependent on Forests for Raw Material

The importance of the lumber industry in the economic life of Canada is strikingly shown in a recent bulletin of the Dominion Bureau of Statistics. Among the great manufacturing groups, the lumber industry holds fourth place in point of production, first place in furnishing employment, and first place in total payments for labour.

The figures for 1917 show a total capital investment of nearly \$170,000,000, and a wage and salary list aggregating about 57,000 people with payments amounting to nearly \$40,000,000. The total value of the output for the year is placed at \$115,884,905. This figure includes the value of lumber, lath, shingles, pulpwood and miscellaneous products.

In value of production during 1917, the leading place was occupied by British Columbia, with Ontario, Quebec, New Brunswick, Nova Scotia, Saskatchewan, Manitoba, Alberta and Prince Edward Island following in the order named.

In the amount of lumber cut, though not in its value, British Columbia has displaced Ontario as the premier province. The cut for the former for 1917 was 1.2 billion board feet, and for the latter 1.1 billion. Increasing ascendancy of British Columbia in this respect may be expected, since that province contains approximately half the merchantable saw timber of the Dominion.

It should be noted that the white pine cut of Ontario has diminished very considerably, due to depletion of virgin supplies, and that an increasing percentage of the spruce timber is going into the manufacture of pulp and paper, rather than lumber. Further, while extensive lumbering in British Columbia is of comparatively recent development, it has been going on in Ontario since a very early period, and a consequent heavy destruction due to fires and the absence of restrictions upon logging methods calculated to leave cut-over areas in a productive condition.

The forests of British Columbia, like those of Quebec and New Brunswick, are administered by the Provincial Forest Service, a technical organization of trained foresters. This development has not yet taken place in Ontario, though representations have been made to the Provincial Government in that connection.

In Nova Scotia the appointment of a technically trained Provincial Forester is under consideration.

The importance of handling our forest areas from the viewpoint of permanent production, rather than for immediate profit only, is becoming increasingly recognized.—*Clyde Leavitt.*

The area under cultivation of fibre flax in Ontario in 1919 was about 20,000 acres.