Otter Beam Trawlers

Alleged waste where used—Agitation to prevent use of

Otter-trawlers have been introduced to the American North Atlantic waters. Four vessels fitted with beam trawls have been operating off the coast near Boston, for some time. In view of the results produced by this type of fishing gear in the North Sea and off the coast of Norway, it is perhaps not surprising that their use should cause uneasiness among American and Canadian deep sea fishermen. It has been asserted by old, experienced fishermen, that the heavy beam trawls as they are dragged over the bottom of the ocean, destroy large quantities of shell fish and other materials on which valuable fish feed. In this way the fish that are useful as food are driven to other waters. Then, too, the trawls catch not only the large marketable fish, but the immature fish that are of no immediate commercial value. This feature constitutes a very serious waste.

Again, where the beam trawls are used, it is impossible for the fishermen using the ordinary trawls to operate, for the beam trawls destroy the tackle.

The tendency where beam trawls are used seems to be for the fishing industry to pass from the hands of skilled fishermen, and to become controlled by wealthy corporations. More fish are caught, but it seems more than likely that the fisheries cannot survive many years of beam trawling.

At the present time otter-beam trawlers are not allowed to operate within the Canadian territorial waters. This, however, is not a serious check, for many of the most valuable deep sea fisheries are beyond the three-mile limit. The deep sea fishermen along the Atlantic coast are agitating for a law to prevent the sale of fish caught by otter-beam trawlers. It is a question of more than usual interest, and deserves the careful study of our legislators.

"Sky Scrapers"

"Sky scraper" buildings are peculiar to America. It is indeed strange that such "rank and weedy" species of buildings should find a place in roomy America. Such over-centralization means increased transportation problems in cities, poorer sanitary conditions, and less light and fresh air for the toilers in city offices. Canadian cities would do well to check such abnormal methods of building.

Many fires are started each year by the careless burning of the rubbish accumulated in yards and alleys during the winter. The burning of this rubbish is too often left to the children, which annually not only costs a large number of lives or serious injury, but results in the total destruction of many thousand dollars of property.

Municipal Forestry in Ontario

(Continued from page 1.)

chantable timber standing, and of young growth,

(c) Studies respecting rate of growth.

Plans for doing work

Procedure:

Secure maps and all existing information of region involved.

Collect by correspondence and personal interviews with officials and informed persons, other data of economic conditions.

Two experienced fieldmen, with one or two assistants and small camp outfit, will cruise (investigate) the watersheds to secure all data regarding natural conditions. The topography will be secured by aneroid, only roughly (elevations at given points). The cruising will be done by the strip system, as far as practicable one mile apart.

Farm areas in use will be noted with indications of the character of the soil; and farm soils found under forest cover will also be indicated. Barren areas will be designated and the character and cause of barrenness as far as possible stated.

Timber conditions will be classified into forest types: softwood, hardwood, mixed, stated in proportion of species; and into stand types: virgin, semi-virgin (largest sizes extracted) moderately culled, severely culled, entirely cut, young growth of different ages (differentiation by decades), recent burns, etc. Where merchantable timber occurs, rough estimates of amounts; where reproduction occurs, character and promise of future growth will be noted. Natural conditions favourable or unfavourable to reproduction will be noted.

Incidentally, growth rate studies will be made to secure an insight into the time element under various conditions.

As a result, a report will be compiled giving a clear picture of conditions which, as far as possible, will be indicated on a map. A plan of management, in which suppression of fire will be considered, will be evolved.

Consumption of Coal in Canada

In 1911, the total consumption of coal in Canada amounted to about 24,400,000 tons, made up as follows: 9,800,000 tons of coal produced in Canada and 14,600,000 tons of imported coal. According to the figures Canada produces only 40·2 per cent. of the coal which it consumes. It must be noted, however, that if all the coal mined in Canada had been used in the country, it would have constituted over 46·2 per cent. of the consumption.

The consumption of coal in Canada has increased from 3,480,111 tons in 1886, to 24,400,000 tons in 1910. During the same period the coal consumption per capita has increased from 0·758 tons to 3·389 tons.

A Commercial Basis for Peat Fuel

Canada's Extensive Peat Resources—Work of the Mines Branch—By-Products of Peat.

The manufacture of peat fuel on a commercial basis is of very great interest to the people of Ontario, Quebec and the provinces of the middle west where coal and wood are high in price. Each of these provinces has a large acreage of peat bogs. The following table shows the extent and distribution of peat areas in Canada, the figures for the country east of lake Superior being approximately correct and those west of it only estimates:

Province of	Square Miles	Average depth in feet
Nova Scotia	250	8 to 10
Prince Edward Island	10	"
New Brunswick	250	"
Quebec (in settled parts)	500	"
Ontario (in settled parts)	450	
Ontario (Moose River Basin, etc., 10,000	10,450	5 to 8
Manitoba	500	6 to 10
Alberta, Saskatchewan and Territories	25,000	5 to 10
British Columbia and Yukon Territory	no data	
Total in round numbers	37,000	

When it is known that two pounds of average peat are equal to one pound of good coal, the value of these peat resources at once becomes apparent.

Value of Experiments

Numerous attempts to utilize peat bogs in Canada have been made by private individuals, but heretofore these have proved failures. So much so is this the case that capital is very chary about investing in peat ventures. Most of these failures have been occasioned by ignorance. The properties of peat were not sufficiently known by those attempting to manufacture it and very often bogs were chosen that contained a quality of peat not suited to the purpose in view. One of the great hindrances to success has been the lack of careful investigation of bogs before expending money on development. The Department of Mines, under the direction of Dr. Eugene Haanel, has endeavored to remedy this situation. Numerous peat bogs have been explored and mapped, and the peat has been tested as to quality by peat experts from Europe. These careful, scientific efforts have been crowned with success.

Peat fuel is considerably more bulky than coal and it is not thought that it could be profitably transported long distances. The peat bogs in Ontario and Quebec, however, are very favourably distributed, and since a plant with a daily capacity of 30 tons can be erected for about $7,000 these could be profitably developed to supply local need.

Other Uses for Peat

Besides being used as a fuel, peat is used for various other purposes. Moss litter is made from sphagnum peat having a low degree of humification. It is used on account of its lightness and its absorbent qualities as a packing for fragile articles and as a bedding material for stables. A moss litter with a 20 per cent. moisture content can absorb ten times its own weight of moisture. The litter is a poor conductor of heat and is used largely as a packing for steam pipes and boilers and to keep water pipes from freezing. Alcohol is manufactured from moss litter and has been made in Europe at a cost of 47 cents per gallon.

Peat mull is a dry powder which is produced as a by-product in the manufacture of moss litter. It is an effective deodorizer and is largely used in Europe for sanitary purposes and as a filter for water. Fruit packed in boxes with peat mull is prevented from decaying for months.

A peat fuel plant equipped for making moss litter and peat mull has a decided advantage over a plant where fuel alone is made, because in the winter and during wet weather when the peat cannot be properly air-dried, the by-products may be manufactured.

Water Diversion at Chicago

What Canada and United States may divert from Great Lakes

The Sanitary District of Chicago has been endeavouring to secure permission to divert 10,000 cubic feet of water per second from lake Michigan. This water, instead of going by way of the St. Lawrence river, would reach the sea through the valley of the Mississippi. The water already diverted at Chicago has caused serious loss to navigation and other interests by virtue of the fact that the levels of the Great lakes have been lowered. There is, however, another aspect of the result which would follow if Chicago were granted its request to take 10,000 c.f.s. from waters which essentially belong to boundary waters. Some 160,000 horsepower is imported into the United States from Canada, under the Burton Act. This is equivalent to about 12,000 c.f.s. Consequently, Canada would only have the benefits from the 36,000 c.f.s. allotted her under the Boundary Waters Treaty, less the 12,000, or 24,000 c.f.s.; whereas the United States would have the benefits from the 20,000 c.f.s. under the Boundary Waters Treaty, the water equivalent of the imported power, viz., 12,000 c.f.s. and, if the United States obtained the additional 10,000 c.f.s., this would make about 42,000 c.f.s. as compared with the 24,000 above mentioned for Canada. *Let there be equality.*