

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 town-planning and public health.

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CONTROL OF SPREADING FIRES

The measures popularly advocated to control the spread of fire are four in number, namely, fire prevention, fire limits, fireproof construction and fire departments. None of these alone can prevent a conflagration, and records show that together they have failed in almost every instance.

Fire prevention is the attempt to reduce the frequency of fires. The preponderance of disasters from unknown and trivial causes appears to forbid hope of controlling conflagrations by strictly fire prevention methods. It has been preciously pointed out that, on the average, only one in 20,000 fires has reached the magnitude of a conflagration. That one fire is the problem demanding solution. If fire prevention successfully reduced the occurrence of fires in Canada to 100 per annum, there is no assurance that the spreading fire would not be one of the hundred. That depends largely upon the location of the outbreak and the character of its environs. When a small frame dwelling in Hull, Que., caught fire, that was the identical place where Hull and Ottawa began to burn. A similar occurrence in an isolated farm dwelling in a country district would have been equally serious so far as the individual building was concerned but it could not have resulted in the partial destruction of two cities. To debar conflagrations, therefore, fire prevention must not only diminish the frequency of fires, but also establish the confines of the occasional outbreaks that occur.—*J. Grove Smith.*

HOUSE VENTILATION

The aim of any ventilation system should be to achieve a constant circulation of air, without existing a direct cold draught. There must be an entrance for fresh air from outside and a means of egress for the foul air. Circulation is readily accomplished by the difference in temperature between the inside and the outside air. The greater this difference, the stronger is the current, so that a very small aperture in winter may secure as much ventilation as a wide-open window in summer.

In English houses, with their open fire grates, the chimney serves as an excellent channel for the removal of foul air. In Canada, where we have a furnace in the

cellar and cook by gas, we have, while immensely improving the efficiency of our heating systems, not generally provided any means by which ventilation is combined therewith. Every furnace ought to have a pipe connecting with the outside air, which would bring in fresh air and warm it for distribution through the house. Then, if exits for the foul air were also provided, we should have an ideal ventilation system.

Unfortunately, we must, in the majority of existing houses, fall back on the windows to let in clean air. Although they are, at best, unsatisfactory, they can very often be improved. To begin with, the type of double window which has no aperture except three little holes or a slit, invariably choked with snow and ice, should be discarded. A sliding or hinged pane should always be provided. Then, if the upper inside window be opened, the air must circulate between the two windows before entering the room and thus a direct draught is avoided, while the volume of new air is readily regulated to suit the coldness of the day and the strength and direction of the wind.

FUR FARMING IN P.E.I.

The recognition of Prince Edward Island as the centre of fur-farming as an established and scientific industry is constantly in evidence. The fame of the island has spread not only throughout this continent but has crossed both the Atlantic and the Pacific. Norway has drawn upon Prince Edward Island breeders for black-fur farms with which to establish a fur-farming industry in that country. Japanese business men, now investigating industrial conditions in Canada and the United States, are paying a special visit to the island to get first-hand information of fur-farming methods.

Fur-farming is a pursuit which can and will be carried on extensively and profitably in many sections of Canada. But Prince Edward Island has achieved a unique reputation for the industry and is likely to become permanently as renowned for its furs as British Columbia is for its salmon or the Prairie Provinces for their wheat.

SAVED BY SPRINKLERS

On the night of Nov. 7, fire broke out in a large planing mill and sash and door factory at Ottawa. The building has a complete sprinkler system and, though the very inflammable nature of the contents enabled the blaze to reach the roof, the fire inside was quickly extinguished by the sprinklers and without any important damage. The fire on the roof was soon overcome by a single stream from a fire hydrant. But for the effective work of the sprinkler system this large factory would have been a total loss. The sprinkler installation saved a valuable plant for the Company and continuous employment and a regular pay envelope for the employees.

UNITED STATES FOREST CENSUS

The fourteenth decennial census of the United States will include statistics on forestry and forest products, which have not been specifically covered by any previous census. The compilation of these statistics will be in charge of a special force of experts and the accurate and comprehensive figures concerning this vital natural resource thus obtained will doubtless prove very interesting and exceedingly valuable.

In this connection it may be noted that the Canadian Lumbermen's Association, at its last annual meeting passed a resolution urging that similar work be undertaken in Canada and that the Commission of Conservation be clothed with power and equipped with the means to carry on this work.

The Commission of Conservation has already published certain forestry statistics in its reports on *Forest Conditions of Nova Scotia*, *Forest Protection in Canada*, *Tenth Watershed Survey and Forests of British Columbia*. These reports have dealt with such subjects as the classification of lands, the available forest areas, the rate of tree reproduction, the extent of burned and cut-over areas, etc. The whole country has, however, not yet been covered and there are, moreover, many things which it is very desirable to know about our forests which still await expert investigation.

SAFE STORAGE OF SOFT COAL

At a meeting of the Toronto School Board on October 30th, the building superintendent reported: "If it had not been for the concrete ceiling and floor and the brick walls of the basement, we should have had no Williamson Road school to-day. The 270 tons of soft coal stored in the basement heated and caught fire. The coal was piled ten feet high." At the same meeting it was reported that there had been six or eight fires from soft coal heating in bins in the schools.

Spontaneous combustion of bituminous coal has been the cause of many serious fire losses. Users of this coal who are sufficiently fortunate to have a substantial amount on hand can reduce the fire risk by seeing that the coal piles are not over five feet in depth, by inserting ventilating pipes and by regularly examining the coal bins to ascertain whether the coal is heating.

WHITE PINE GROWTH

Mr. Hill, lockmaster at Buckhorn, Ont., experimented with a pine tree to determine improved growth which may be secured by proper care. Fifteen years ago, he pruned all the lower branches off a 4-inch white pine sapling, removed other saplings from its vicinity, dug up the earth around it and applied manure to its base. It is now 19 inches in diameter at its base and has a long, clean bole. Thus, during the 15 years, the growth in diameter has averaged one inch annually.

Insect Damage to Spruce and Balsam

Commission of Conservation and N. B. Forest Service Co-operate in Operations at Miramichi

One of the many enemies of the forest, particularly active in Quebec and New Brunswick during the last few years, is the balsam bud worm. This insect has caused great damage to the balsam over considerable areas, and, to a much lesser degree, the spruce, by defoliating the trees, causing them to die or to become so greatly weakened as to succumb readily to the attacks of bark beetles or other destructive forest insects.

An examination, made in September by the Dominion Entomological Branch, showed that all the balsam on the Miramichi Fish Hatchery lot, near South Esk, N.B., had been killed through successive defoliations by the balsam bud worm, and that the spruce had been heavily attacked by the same insect. The extent to which the spruce will be killed cannot be determined until next summer. The Miramichi Fish Hatchery lot contains some 240 acres, for the most part covered with spruce and balsam, with smaller quantities of hemlock, yellow birch, white pine and larch.

In view of this serious damage to the forest, the Fisheries Branch, Department of the Naval Service, has decided to make a sale of the bulk of the merchantable timber in order to salvage that which is already dead, while it is still in merchantable condition, as well as to check the further attacks of the bud worm, by taking out the trees already affected.

To this end, the co-operation of the Commission of Conservation was secured, aided by the Provincial Forest Service of New Brunswick. A careful cruise of the timber was made in October, by representatives of these two organizations, under Mr. W. M. Robertson of the Commission of Conservation. Cutting regulations have been drafted with a view to leaving the area in the best possible condition to produce a new forest, thus preserving its value as a watershed.

In removing the merchantable timber, the greatest section of the forest to be avoided is that of the young forest growth. No white pine is to be cut, in order to leave seed trees of this valuable species. All logging slash resulting from the operation is to be piled and burned under the direction of a forest officer, to reduce the fire hazard.

Four sample plots of one acre each are to be left uncut, to serve as a basis for future study and observation by the Commission of Conservation, the Entomological Branch, and the Provincial Forest Service. It is expected that observations will be made on this area periodically for many years, with a view to securing specific information as to the best methods of forest management as well as protection from insect enemies of the forest.

—Clyde Leavitt.