

Flies from Halifax to Grand'Mere

Aircraft to be Used for Forest Patrol on St. Maurice River Watershed

The feasibility of an aircraft patrol for the discovery and location of forest fires is to receive a thorough try-out this summer, in both Canada and the United States.

In Canada, the sponsor for the experiment is the St. Maurice Forest Protective Association, which protects an area of some 13,000 square miles of forest country on the watershed of the St. Maurice river, Quebec.

The Provincial Government of Quebec is assisting the project by a cash grant. Through the generous co-operation of the Department of Marine, two hydroplanes, belonging to the Dominion Government, have been loaned to the Association. An experienced aviator has been secured, together with mechanics and other necessary staff.

The headquarters of the new scheme of patrol will be near Grand'Mere. It is expected that Lieut. Stuart Graham, the aviator, will maintain a daily patrol, covering the entire area of Association territory once every two days. This patrol will supplement the efforts of the regular patrolmen, who will still continue to travel by canoes, by motor cycle, by automobile, by railway power speeder, or on foot, in the old-fashioned way.

Lieut. Graham has himself flown the two machines through from Halifax to Grand'Mere, this being the first journey of the kind undertaken in Canada.

The application of aircraft to forest protection is new, and the experiment will be observed with the closest interest. It is expected that work will also be done in the direction of an aerial photography of timber limits with a view to securing accurate information relative to drainage, forest types, etc., including the ascertainment of areas burned-over, cut-over, and reproducing to young growth, as contrasted with virgin forest.

That an experiment of this kind should be undertaken this summer is a strong tribute to the progressiveness of the St. Maurice Forest Protective Association, the Provincial Government of Quebec, and the Dominion Government.

In the United States, arrangements have been made for close co-operation between the War Department and the Forest Service. Definite routes have been laid out for the patrol of National Forest areas, particularly in the western states. Observation balloons are also being used as forest fire look-outs. A case has already occurred where a specific fire was discovered in this way at the foot of the Sierra Madre mountains. Within seven minutes after the fire was discovered, enlisted men in a special fire truck had arrived, and the fire was promptly extinguished. The forest patrol planes are equipped with wireless and maintain communication with permanent stations. Emergency landings have been provided.—C. L.



ROCKSLIDE, HELLGATE CAÑON, FRASER RIVER, B.C.

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A Prophecy Fulfilled

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glimpse of the crowds of fish held back by the obstacle. Although the slide was removed before 1914, it was too late to allow many fish of the 1913 run to ascend the river, and, in consequence, most of the sockeye of that year failed to spawn.

It was feared, therefore, that the run in 1917 would be seriously reduced. The fear was only too well-founded. The pack for that year in the Fraser River district was only about one-fifth of that in 1913, and there is little doubt that the pack for 1921 will be still less. In fact, the phenomenon of the "big run" has been wiped out and, now, all years are lean years for sockeye, so far as that district is concerned.

Another factor enters into the situation. The fishery might be perpetuated and in some degree restored if conservative fishing were practised and if sufficient fish were permitted to pass up to the spawning grounds. Unfortunately, Canada cannot of herself limit the fishing, as the sockeye, in its course from the ocean, passes through waters under the jurisdiction of the state of Washington. Canada has repeatedly manifested her willingness to enforce remedial measures.

British Columbia Slash Burning

Amendment to Forest Act Provides for Reduction of Fire Hazard

The province of British Columbia is becoming alive to the fire hazard which threatens its great asset, the forests. An amendment to the Forest Act, now before the Provincial Legislature, makes it compulsory in future for operators to burn their logging slash in a manner satisfactory to the Forestry Department. In the case of lands in respect of which an annual tax is payable to the Forest Protection Fund, the expenses incurred in disposing of the slash are to be borne half by the person or corporation carrying on the operations and half by the Fund.

In the case of neglect to comply with the Act, the Government's forestry officials may dispose of the slash and the expense of so doing will be recoverable from the person or corporations concerned.

It is also proposed to burn old slash, created by former logging operations to save the cost of patrolling such fire hazards.

Following an investigation in 1905, by a joint Commission representing Canada and the state of Washington, the Dominion offered to suspend all sockeye fishing in the Fraser River district during 1906 and 1908 conditional upon identic action by that state. The State Legislature refused to take the desired action.

In 1908, Great Britain and the United States concluded a convention providing for the protection, preservation and propagation of the sockeye, but the United States Senate, after years of delay, refused to approve the treaty.

This year, a new treaty is awaiting action by the United States Senate. It provides for an international commission of two Canadians and two Americans to make investigations and to make such recommendations governing the fishing as may appear desirable.

It is earnestly to be hoped that this proposed treaty will go into effect and that the recommendations will be acted upon. Otherwise, the Fraser River sockeye is simply threatened with extermination. Canada has done and will do all she can to preserve this valuable food fish. The fate of the sockeye lies in the hands of the state of Washington.

Alpaca from Waste Wool

Mr. (later Sir Titus) Salt, who had been for some years connected with the woolen manufacture, happened one day in 1836 to notice at Liverpool some three or four hundred sacks of alpaca wool that had been imported from time to time from South America, in the hope of finding a manufacturer who might buy them for some purpose. Several men had tried to work up this new material, but without success, so there it lay for years, no one seeming to want it, till Mr. Salt came across it and, after a number of trials, in which he modified his wool machinery to suit it, adapting it afresh and overcoming many obstacles, he finally solved the problem by adopting cotton warps, and soon after put on the market a new material, alpaca, a soft, glossy, elegant fabric, which so took the fancy of the public that, in some fifteen years, Mr. Salt amassed an enormous fortune, which thus enabled him to carry on the great philanthropic work which made him famous.

Detection of Water Waste

Striking Possibilities Illustrated in United States Water Works System

The absolute necessity and great value of taking means to detect and control water waste in a water supply system are being more and more clearly demonstrated. The special means now available for this purpose when applied to a system operated as was customary in the past, invariably reveal and locate numerous wastages and losses, allowing these to be easily checked and curtailed.

A striking example of what conditions may exist in other systems is given by a municipality of some 30,000 population in the state of Ohio. A recent survey by professional water savers resulted in the curtailment of the total water pumped by more than one-half. This may at first seem an exaggerated statement but an analysis of the various losses revealed an unaccounted-for water which stopped shows that it is quit within reason.

As is usually the case, the losses were principally due to leakage and illegal consumption. The illegal use detected was very large and practically confined to one consumer, a bottle works, the water being taken through a covers connection to the fire line for its property. The Company disclaimed any knowledge of the connection although it was known by them regularly for cooling purposes.

The following shows how the daily consumption was reduced:

Consumption before survey	3,362.00 gals.
Consumption after survey	1,845.00

Decrease
 2,087.00 |

The decrease was made up as follows:

Leakage detected and stopped	292.00 gals.
Illegal use stopped	855.00
Unaccounted for	500.00

The "unaccounted for" decrease of 500,000 gallons was attributed by the experts to the voluntary action of an illegal user who fears detection. That is, it was assumed that another large consumer became aware of the investigation and discontinued the illegal use of water before detection.

The costs in connection with the above-mentioned survey are also interesting to note. The contract price for the entire work by the experts was \$2,600, while the expense incurred by the municipality in connection with the survey is estimated at \$2,600. On the other hand, the Company caught using water illegally offers to settle for \$6,700 in payment of the water used, but the municipality is suing them for \$4,000.—L. G. D.

The owner of a timber tract may not realize it is none of the public's business what he does with his property, but as a matter of fact it is the business of the public to take a vital interest in forests and lumbering because of the influence which the forest has upon climate, water supply, fuel supply, health operations and game life and game laws.—Conservationist, New York.