"Gray Kocks Inn"

A CANADIAN 'ALL-YEAR-ROUND' RESORT

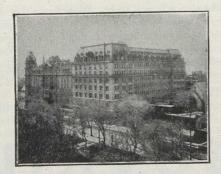
Facing the Highest Mountain of the Oldest Range on the Globe, on the confines of the actua! North Land, a Maze of Mountains Lakes, Forests and Rivers Combines the Refined Comforts of Modern Equipment with "Old Time" Hospitality.

ALWAYS OPEN Every Seasonable Pastime from Rod and Gun,
— Skates and Skis, — Music and Dancing, — to
Golf and Aviation.

Full information furnished by A anagement of

GRAY ROCKS INN, Limited P.O. ST. JOVITE STATION Province of Quebec

80 Miles N. W. of Montreal on the C. P. R.



THE WINDSOR

Montreal

CANADA'S LEADING HOTEL

750 Rooms; 500 with Bath; EUROPEAN PLAN EXCLUSIVELY

Rates from \$3.00 per day up.

Forestry and Lumberman's Headquarters

Meet all your friends at the "Windsor"

BLUE PRINTS and PLAN REDUCTIONS

We offer exceptional Facilities for the Reproduction of Plans to Reduced Scale.

Artists

Engravers

CRABTREE Co.

The

Blue Printers

OTTAWA, ONTARIO.

mechanism during the flights; Lieutenant J. A. Macready, Acting Chief of the Flying Section, who piloted the plane, and Captain A. W. Stevens, photographer, who made a remarkable series of photographs of the dusting plane in action.

War on a Night-Flying Moth.

Originally it was planned to conduct the test in the spring of 1922 against the canker worm in the vicinity of Cleveland, Ohio, but almost simultaneously with the completion of plans for co-operative work with McCook Field, a much better opportunity for the test presented itself in the shape of an outbreak of the Catalpa Sphinx (Ceratomia catalpae Bvd.) at Troy, Ohio, some twenty miles distant from Dayton.

The Catalpa Sphinx is, in the adult stage, a large night-flying moth which lays its eggs in pearly white masses on the leaves of the catalpa tree. These eggs within a few days give issue to tiny larvæ which feed upon the foliage and upon reaching maturity are as much as three inches long. They then pass to the ground, burrow down about three inches and transform to the pupal stage.

three inches and transform to the pupal stage.

From these pupæ emerge the adult moths, which proceed to lay their eggs for another brood of destructive caterpillars. Only about a month is required to pass through the stages from egg to moth.

Last year there occurred in Ohio three full broods or crops of the caterpillars, each sufficiently numerous to defoliate completely the grove in which they appeared. Some groves put on three full crops of foliage and each in its turn was wholly consumed by the ravenous worms.

Our work was directed against the second brood of caterpillars working on the second crop of foliage.

Poison Powder in a Dense Cloud.

The plane used was a Curtis J N 6 equipped with a hopper for carrying and liberating the poison powder. This hopper was secured to the fuselage of the plane by the side of the observer's seat. It consisted of an irregularly shaped flat metal box with a capacity for holding a little more than 100 pounds of dry arsenate of lead powder.

At the bottom was arranged a sliding gate, operated by a handle accessible to the observer in the plane. At the top of the hopper was a crank, connected by a sprocket chain to a revolving mechanism in the bottom, which when placed in motion dropped the poison powder through the previously opened sliding gate.

Immediately upon leaving the hopper the dust dropped into the "slip stream"—the violent air current set up by the revolving propeller—and was thrown into violent agitation in a dense white cloud which trailed out behind the moving plane as if the machine were on fire and belching large volumes of white smoke.

The catalpa grove in which the dusting was done was situated on level ground and had been planted for the growing of post and pole timber. It was a rectangular plot 800 feet long and 325 feet wide and contained approximately six acres. The trees, 4,815 in number, were from 25 to 30 feet tall.

The poison was applied between 3 and 4 o'clock on the afternoon of August 3, 1921, under almost ideal weather conditions. The atmosphere and sunlight were excellent for photographing and there was a steady wind varying from eight to eleven miles an hour. The direction of the wind is indicated by the arrows on the photographs.

Every Tree Sprinkled with Poison.

The plane flew at a speed of eighty miles an hour at an altitude of from 20 to 35 feet and in a line 53 yards to the windward and parallel to the grove. The dense cloud of