

Fight Forest Fires With Planes

Forestry—Aviation



(Official photo, U. S. Forest Service)

A GREAT FOREST FIRE SEEN FROM AN AIRPLANE

By JAMES NEVIN MILLER

High above a blazing fire on one of our great national forests in the northwest, an airplane circled and sped not long ago. For miles around, curling clouds of blue-gray smoke filled the atmosphere, while down on the ground large squads of fire fighters fought their way through acres of fast-burning timber.

As the plane flew above his head, one of the forest rangers, directing ground operations, paused a fraction of a moment to watch its maneuvers. Almost simultaneously a slight whirring sound caught his ear, and then, crashing through a nearby thicket, he saw a small object fall. It was a canvas bag, and within it was a message. Knowing that the ground men were severely handicapped by the stifling smoke, the plane observer, likewise a ranger, was now offering to aid the operations. His advice, relating to a change in position, was taken, and soon the fire was well under control.

The above incident is typical of the efficiency of the new airplane patrol system just inaugurated by the U. S. Forest Service. For about nine years the Service has been experimenting with planes under the able guidance and cooperation of the Army Air Corps. Until this summer the planes, old-type de Havillands, were piloted by Air Corps officers temporarily in the employ of the Forest Service and accompanied by forest officers acting as observers. The main bases were

at Mather Field, near Sacramento; at Glendale, near Los Angeles; and at Seattle and Spokane, Washington. The national forests patrolled were in California, Oregon, Washington, Northern Idaho and Western Montana.

Today, however, the patrol system is entirely free from the cooperative arrangement with the Air Corps. Early this spring authorities from the Aeronautics Branch of the Commerce Department, the Forest Service and the Air Corps, unanimously agreed that from now on the wisest procedure would be to hire both planes and pilots from commercial interests. Each forest district hereafter will make its own contracts according to its peculiar needs, and the planes, of the most modern type, will have a considerably better cruising power.

Of the new system, Roy H. Headley, assistant forester of the Forest Service, says: "After years of extensive tests the Service is convinced that the science of fighting forest fires from the air has great possibilities. We have been only too glad to work under the kindly supervision of the Air Corps. But having now served our apprenticeship, we feel ready to paddle our own canoe. Contracting each year with the commercial aircraft people will undoubtedly mean that we shall be better able to take advantage of the very latest aviation developments.

"Of course, the Air Corps has by

no means stepped entirely out of the picture. The body will continue to help us materially in an advisory capacity, as will the Aeronautics branch of the Commerce Department."

During the early years of experimentation with the air patrol, regular flights were made over our heavily timbered areas. But by 1921 it was declared that "in view of previous experience, desirable as they might be, regular flights are not justified by the degree of protection they afford as compared with that afforded by the lookouts stationed on most of the sizable mountain peaks." It was therefore arranged to have planes at intervals of a few hundred miles held ready for emergency flights. Such has been the plan followed up to this summer.

In order to really understand the role of the new air patrol in fire-fighting maneuvers, one needs a general idea of the regulation personnel. First of all there are the lookouts. Stationed at strategic points on most of the high mountain peaks, their sole duty is to watch for fires and to telephone their location immediately to the forest rangers or wardens. From daylight to night, from early summer to early fall the lookout men remain constantly on duty.

The lookouts occupy small buildings or observatories with windows on all sides. Some observatories are set on steel towers, 30 to 80 feet above the ground, while (*Turn to next page*)

Aerial Warfare on Forest Fires—Continued

others are set on the mountain peaks. Cooperating with the lookouts proper are fire guards or patrolmen who travel along the ridges and other high routes which provide a good view of areas where fires are likely to occur.

Ranger stations likewise are scattered throughout the mountains. The rangers are the executive fire fighters. When the report of a fire is received, the ranger or one of his assistants may go it alone if the blaze is small. But if it is reported as large, a considerable number of men with fire-fighting tools is gathered together and sent to the scene of the blaze as rapidly as possible.

One of the main uses of the plane today relates to the reconnaissance of large fires. In certain portions of our heavily timbered regions it is extremely difficult for the ground men in charge to visualize the situation readily. However, again and again the plane has proved its worth in this regard. A notable instance took place back in 1924 in the great Southern California fire, where 50,000 acres of valuable timber land were consumed. The situation was complicated by the rough topography and the unusually inflammable brush, widespread and thick. When a violent wind arose, a long stretch of timber soon would become ignited. Oftentimes the boiling, smoke-drenched atmosphere prevented the ground observers from seeing more than a few paces in front of them. So the men in charge tried out the scheme of making daily observations by airplane. Signal success resulted.

In forests carefully guarded from fires caused by man's carelessness, there exists always the hazard of fires started by lightning. Various estimates hold that 40 to 50 per cent of our great conflagrations arise from this source. At any rate, lightning fires are unquestionably the most severe in point of damage done. Experts say the reason is that lightning is likely to start fires in inaccessible spots where they will not be discovered promptly by the lookouts. Here again the airplane assumes an important role. Under its new system the Forest Service is developing a scheme whereby after every sizable lightning storm a plane will make a complete tour of the district, forever on the alert for smouldering fires which frequently arise in widely separated sections of the forest.

Considerable experimentation is being done concerning the carrying of

messages by plane, besides its use in dropping food and supplies on the fire lines. Here the plane offers excellent potentialities because there are many thickly timbered regions in our national forests which either are virtually inaccessible by land, or take many days to penetrate. Frequently the trails are few and far between, while there are sections where there are no passage-ways of any description whatsoever.

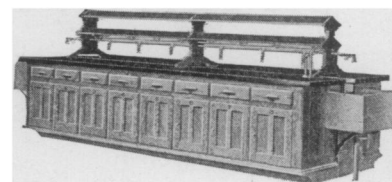
To force his way painstakingly through these densely wooded districts with a forty-pound pack on his back is the task of the fire-fighter. Therefore, many experts urge the extensive use of the plane in this regard. Yet there is a besetting difficulty in the way, according to Assistant Forester Headley. The government is not yet sure whether in the long run the air transportation system, costing something like \$30 an hour, is more economical than the ground method. Probably it would be so, were there proper landing places for the planes. But today in the mountainous regions of rough topography and dense forests it usually is well-nigh impossible to land a plane within a few hundred miles, at the least, of its base.

In explaining the government attitude, Assistant Forester Headley says: "While it is obviously desirable to have good landing fields for the air patrol, probably an even more important problem just now is to continue the government plan to construct more and better trails. For the purpose, thousands of men are drafted annually to be employed in the West and Northwest. Eventually a well-devised network of simple yet inexpensive trails will be in evidence throughout our great timber stretches. We hope that when that happy time arrives, no point in the woods will be inaccessible.

"One other point the Forest Service endeavors to make clear that with all their advantages, planes will never be able to replace the operations of the men on the ground. Air maneuvers are supplementary only. However, the Forest Service always is striving to bring them up to the maximum of efficiency."

Science News-Letter, November 3, 1928

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