Agriculture's research for better disease-resistant varieties of sugar cane. He flew in a pontoon-equipped airplane over a great deal of mountain territory near the region explored by Mr. Chinnery, landing at will on the many inland lakes.

Mr. Stirling expressed considerable skepticism over some details of the first press reports of Mr. Chinnery's discoveries. Efforts to link the mountain peoples with ancient Egypt through the type of stone mortars used in grinding flour, he felt, were unjustified, since mortars are a common kind of household utensil among peoples of a simple culture-level everywhere.

"It is much more likely," he said, "that we have here a group of tribes, hitherto unknown or little known, but which in the end will prove to be quite similar in racial makeup and customs to their nearest neighbors in the already known parts of the New Guinea uplands."

Science News Letter, August 11, 1934

FORESTRY

Lightning and Drought Cause Over 100 Forest Fires

LIGHTNING and excessively dry conditions throughout the Northern Pacific States were responsible for over 100 forest fires during the week ending August 4.

High winds fanned one blaze of 3,000 acres near Curlew, Wash., into a roaring furnace covering 18,000 acres.

Another fire originating in Canada crossed the border over a three-mile front and entered Coleville National Forest near Vulcan Mountain. A total of nearly a thousand men from C.C.C. camps and the neighboring region fought the two conflagrations.

Lightning storms caused 45 fires in the Wenatchee National Forest alone. Of the 25 that were burning in the Chelan Forest, three were reported as class C, which means over ten acres were burned. These three have laid bare a total of 780 acres of heavily wooded landscape.

Region one, the northern Rockies in Central Idaho and Montana, was at last reports still in a critical state. Koniksu, Kootenai, Selway, Bitterroot and Clearwater National Forests all had fires. All but one in Koniksu and Kootenai were controlled. In Clearwater Forest a fire raging over 8,000 acres was reported to be well manned with C.C.C. crews.

Snoqualmie National Forest, in Washington, has suffered severely from 19 fires. One burned off 1,500 and another 3,000 acres of big timber.

The Forest Service has not as yet computed the extent of the damage done in the West. Reports up to the present time, however, show that this year is heading for a record of destruction from forest fires.

So far, the number of forest fires in 1934 showed an increase of 66 per cent. over the average for a comparable period in the past three years. Officials of the U. S. Forest Service believe that this large increase is in part due to the lack of rain throughout the country.

National and state forests have become like tinder in a great many large areas. The smallest spark is likely to ignite the scorched underbrush and in a very short time a blaze is raging for miles across a wooded countryside.

If the number of fires increases at the same rate throughout this year the total number will exceed the total of 140,722 fires recorded for 1933. The area burned last year was 43,889,820 acres, with a total damage, estimated as accurately as possible by the Forest Service, of $60,274,960.

Only 3,722,920 acres of the land burned in 1933 were in areas protected by the Forest Service and state forestry organizations. The other 90 per cent. of the damage occurred in regions not included in the 160,000,000 square miles (100,000,000,000 acres) of National Forests. The heavily damaged areas lie in sparsely populated regions of the South and West that have not as yet been dotted with fire stations.

Science News Letter, August 11, 1934

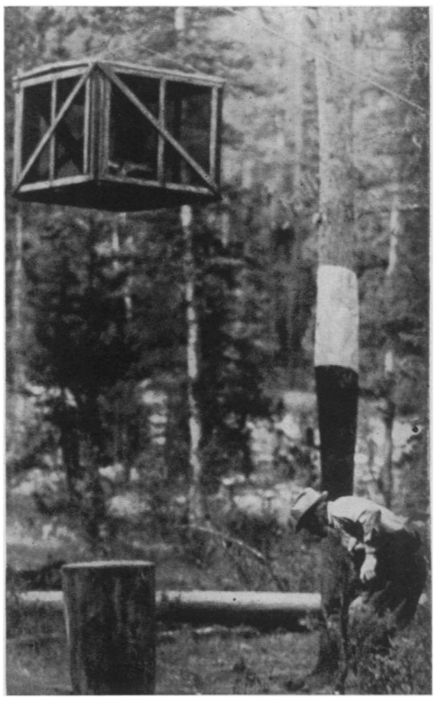
ZOOLOGY

More Moose Seen By Tourists in Yellowstone

MOOSE, seldom seen in Yellowstone National Park by casual visitors eight or ten years ago, of recent summers have become one of the interesting tourist sights. This year these animals are being met more than ever along the roads and trails, according to Superintendent Roger W. Toll, of the park, for an abnormally large "crop" of moose calves resulted from the mild winter which turned conditions topsy-turvy in the Yellowstone.

In fact, abnormal increase in all game animals had been expected, but indications now are that except in the case of the moose the increase was not as big as anticipated. It has been impossible to make a satisfactory check on the increase of the game herds, however, as the early spring caused them to migrate to the summer range much earlier than usual, and for some reason the general route of migration apparently was abandoned. At present the game animals are found scattered all over the park. As a result the rangers are having difficulties in their attempts to count the various species.

Fortunately range conditions in the Yellowstone have shown a slight im-



BEAR-PROOF

Here's how rangers in Yellowstone National Park protect their beans and bacon from marauding black bears that make things uncomfortable for the cook who doesn't take precautionary measures in storing his food. A huge cage is suspended between two trees on a wire, and is lowered or raised on pulleys. The trees themselves are encased in metal from the base to about 12 feet upward to make sure that Bruin can't get a toe-hold and climb up to do a tight-wire act.

provement. It was feared earlier in the season that the mild winter, without the average amount of snow, would result in bad forage conditions for the park animals. Heavy precipitation during the early part of June, however, resulted, Superintendent Toll states, in better plant growth, with the result that the volume and density of the vegetation on the summer ranges apparently is of sufficient amount to care for the animals on the summer range. Improvement of the lower slopes and valleys of the winter range also has been noted, but the higher slopes and ridges of the cold-weather feeding grounds still are in a critically denuded state and are causing park officials some concern.

Science News Letter, August 11, 1934

ZOOLOGY

Yellowstone Bears Pay No Attention to Tear Gas

TEAR GAS, the same chemical that has been used effectively by police and soldiers to quell mobs, is not a weapon to be used against bears.

Rangers Frank W. Childs and Robert H. "Gus" Wylie of Yellowstone Park attacked three black bears with tear gas guns, but the animals showed only startled surprise at the report of the powder explosion that propelled the tear gas at them. They refused to weep and went on with their eating.

The Yellowstone Park officials hoped that tear gas might provide a method of discouraging over-friendly bears and driving them away from camp sites without permanent injury to the bears. While bears are one of Yellowstone's great attractions for tourists, they frequently raid automobiles and tents in which food, particularly hams and bacon, are stored. Food must be hung high in the air between two trees to keep it safe from bears.

BEARS IGNORE TEAR GAS ATTACK

Tear gas that makes a strong man weep copiously has no effect on Yellowstone Park bears. Here Ranger Robert H. "Gus" Wylie is attempting to gas a black bear while Ranger Frank W. Childs snapped the camera to record the effect. The bear simply flinched at the report of the tear gas gun and then went on eating meat scraps. This bruin and two others experimentally attacked were unaffected by the same kind of tear gas that has been used to disperse mobs. Yellowstone Park officials are still looking for some harmless way of scaring off bears that rob auto tourists of food left in their cars.

Park Rangers Wylie and Childs, thought that they had found the solution to the problem in the use of tear gas. In fact, so sure were they that tear gas would stop a bear that they set out to try their experiments on a grizzly bear. Fortunately, the grizzly bears would not let the two rangers approach near enough to use the tear gas. Finally three blacks bears, ranging in age from two to five years, were selected as subjects for the experiment.

The first bear was fired upon at a distance of 25 feet. The ten-inch tear gas gun almost jumped from Ranger Wylie's hand. The gas sprayed the head and one side of the bear. The bear, startled by the loud report, loped slowly away. Bear number two received the charge full in the face at a distance of ten feet. At the detonation of the twelve-gauge shell the bear jumped, ran a short distance, and then quite unconcernedly returned to the meat scraps he had been eating.

A Third Trial

Bear number three was a five-year-old mother with two cubs. Some meat scraps were tossed to the ground. Five feet from the meat scraps stood Ranger Wylie with the tear gas gun, while Ranger Childs waited in readiness to photograph the results. The bear sniffed at the meat scraps and looked up inquiringly at Ranger Wylie. Boom went the tear gas gun and click went the camera. But the bear did not go; she simply flinched, glanced back at her cubs, and then settled down to enjoy the meat scraps.

"Boy," commented Ranger Wylie, "These bears can certainly take it. And to think that we were going to try it on a grizzly!"

A Puzzle

Just why the bears are not affected by the tear gas is a puzzle. Bears have very small eyes and their eyesight is so bad that they do not rely on it to the same extent as other animals. Their sense of smell is very keen, however.

The park officials are still searching for an effective method of bear control that will not harm the bears.

Science News Letter, August 11, 1934

The food gathering activities of oysters and other shellfish, working in mass, may alter the physical and chemical properties of the sea around them to a considerable degree, an oceanographic study has shown.