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## **Photograph Albums: Volume I, Yale - Michigan - New Mexico, ca. 1908 - ?. 1908**

Leopold, Aldo, 1887-1948

[s.l.]: [s.n.], 1908

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# PHOTOGRAPHS

UNIVERSITY of WISCONSIN-MADISON  
Division of Archives

COLLEGE OF AGRICULTURE  
DEPT. OF WILDLIFE ECOLOGY  
GENERAL FILES, ALDO LEOPOLD

Photograph Albums-New Mexico Years  
Volume I - *Yale*

SERIES NO. 9/25/10/9-1      BOX NO. 1

ALDO LEOPOLD  
101 Clay Street  
Burlington Iowa.

ALBUM NO. I  
TAKEN DURING A COURSE AT THE  
YALE FOREST SCHOOL  
1908 - 1909

14 photographs taken at New  
Haven Ct. Les Cheneaux Islands  
Mich. Tyler Co. Texas and Des  
Moines Co. Iowa. Also 69 others  
taken in Tyler Co. Texas by F.A.  
Gaylord, O.D. Ingall, A.H. Hodgson,  
J.M. Briscoe, F.W. Beckman, and  
Colonel A.J. Houston. All num-  
bered and recorded in the INDEX  
OF PHOTOGRAPHS under ALBUM NO. I

Aldo Leopold.

Volume 31

R. O.

ch.

ch.



H. C.



3



Tul. W.P.



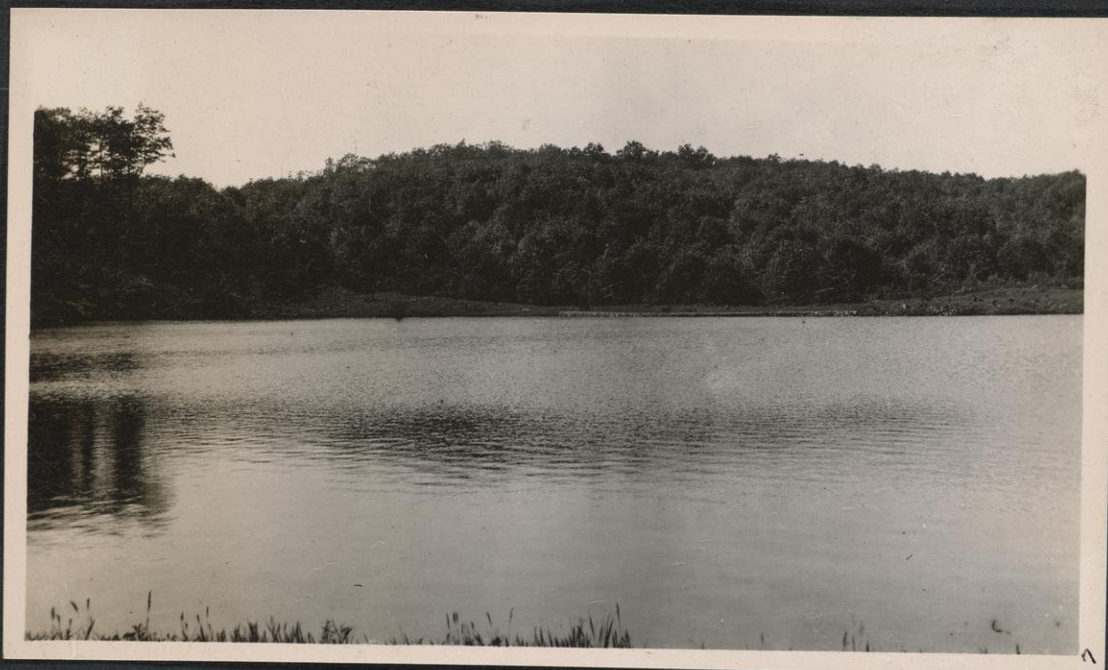
W.P.

W.P.

ch

10





W.O.

Ch.

B.



11

B.O.



Sumac

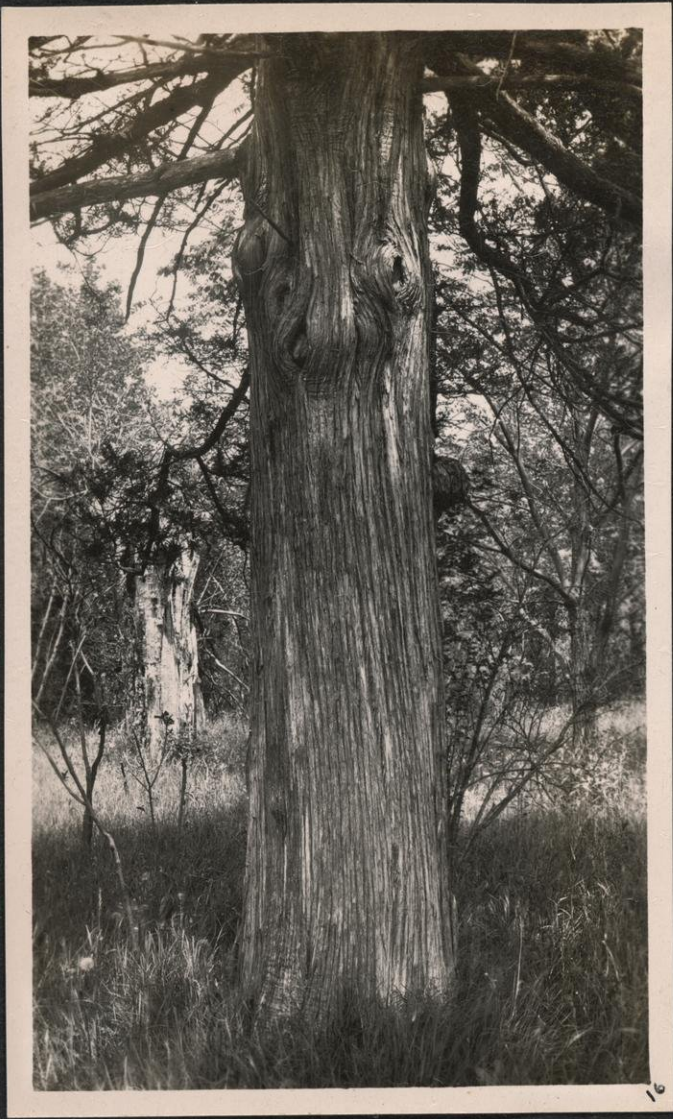
14



Apple

Sumac

15



16



Apple.

wh. Walnut

15



S.O.

17





18



004

Apple

ch.

Apple

19



Maple

Deq.

0.

20



cedar

ch.o.

cherry

Ash

cedar

ch.o.

Ash

R.o.

ch.o.

Hic.

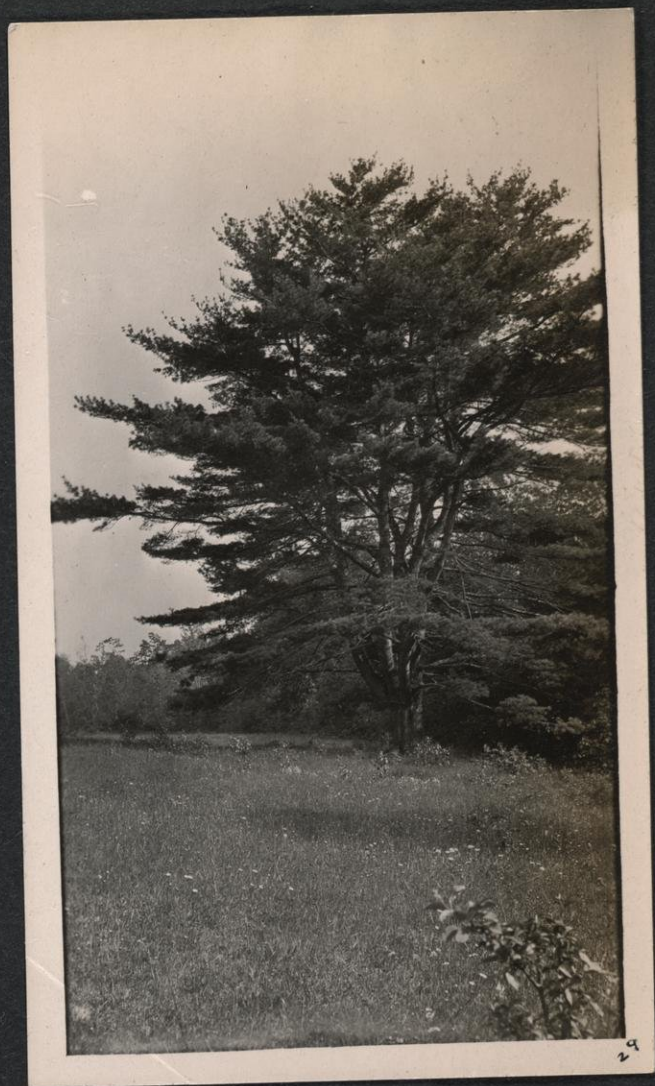
Ash

cedar

17







cedar



22



21



Horn beam

dead cedar

23



23













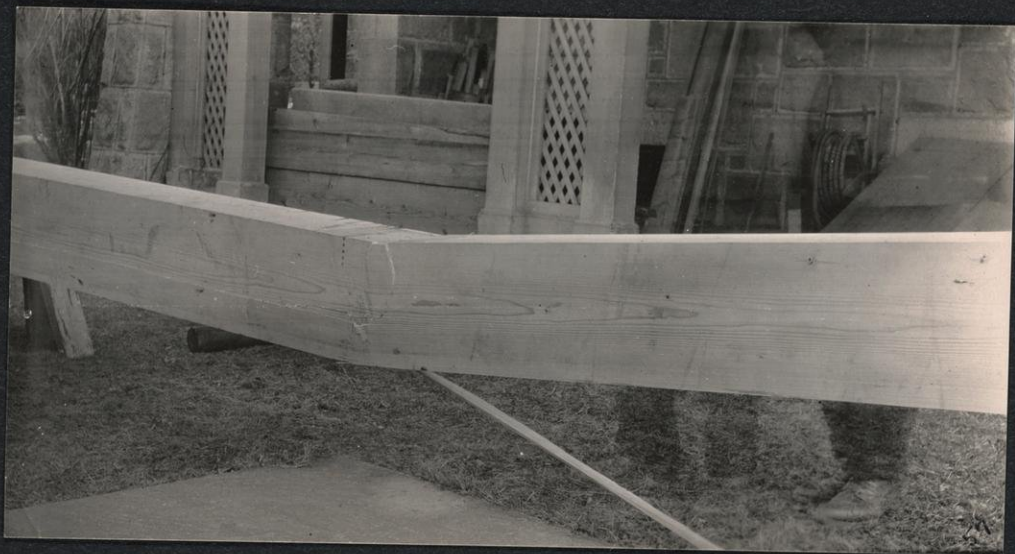
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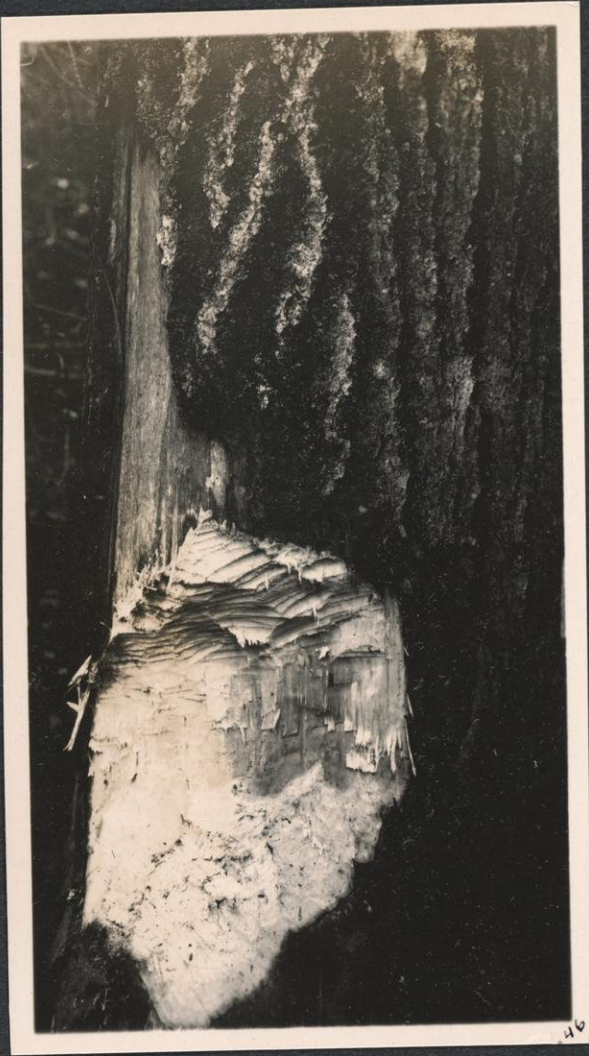


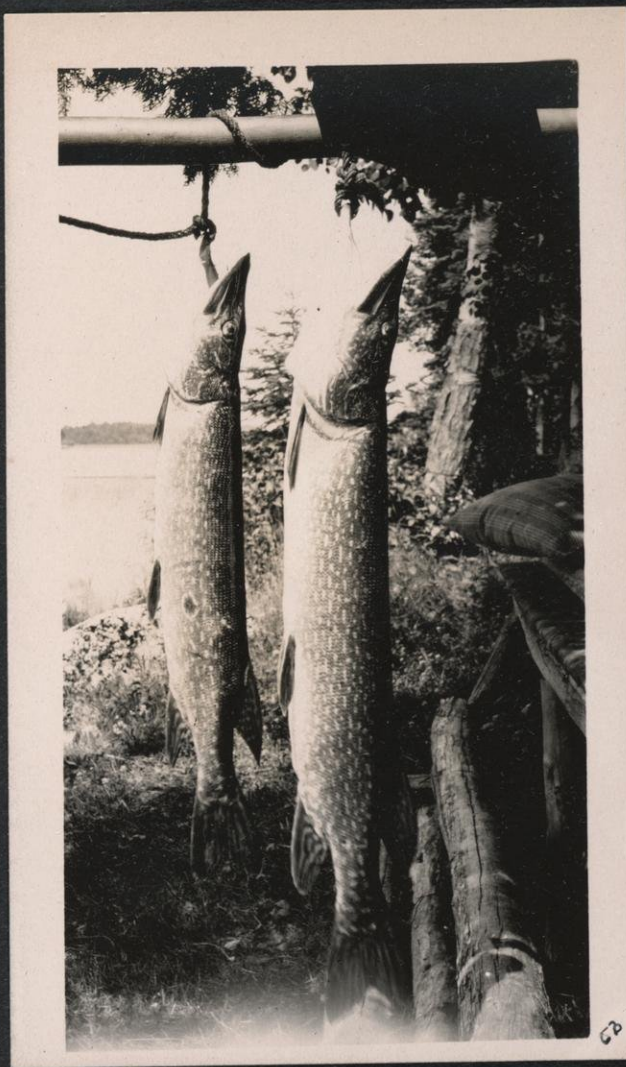
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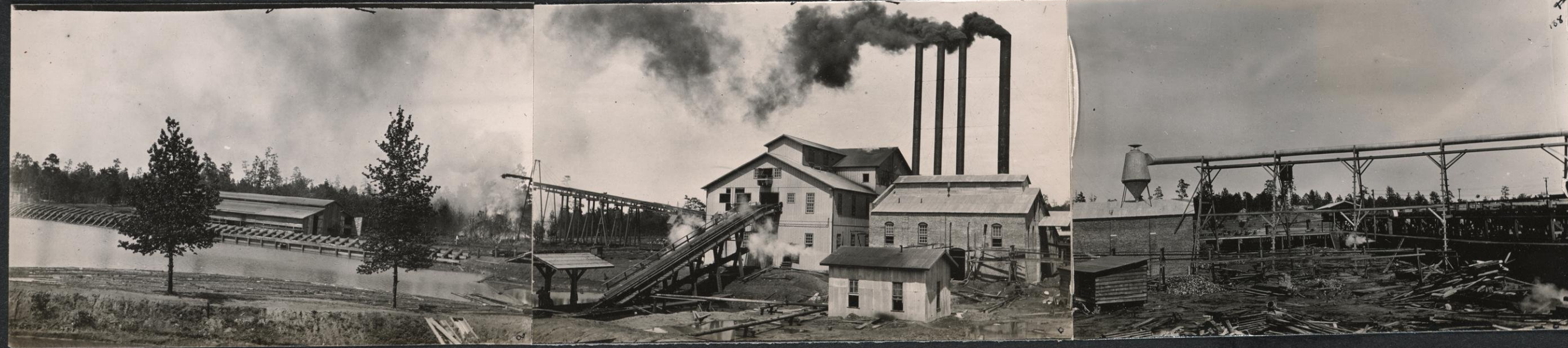
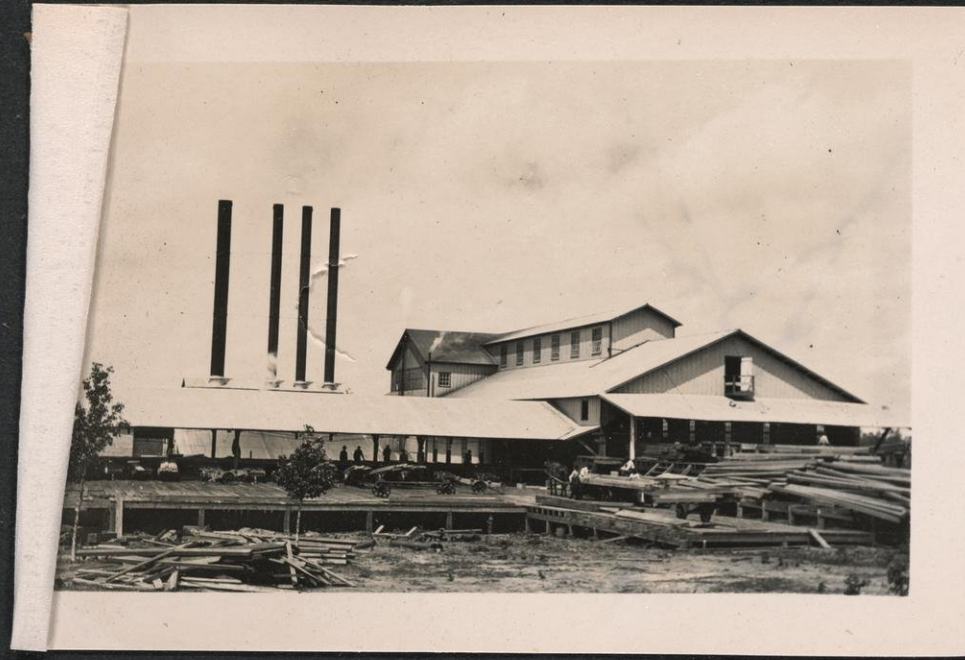
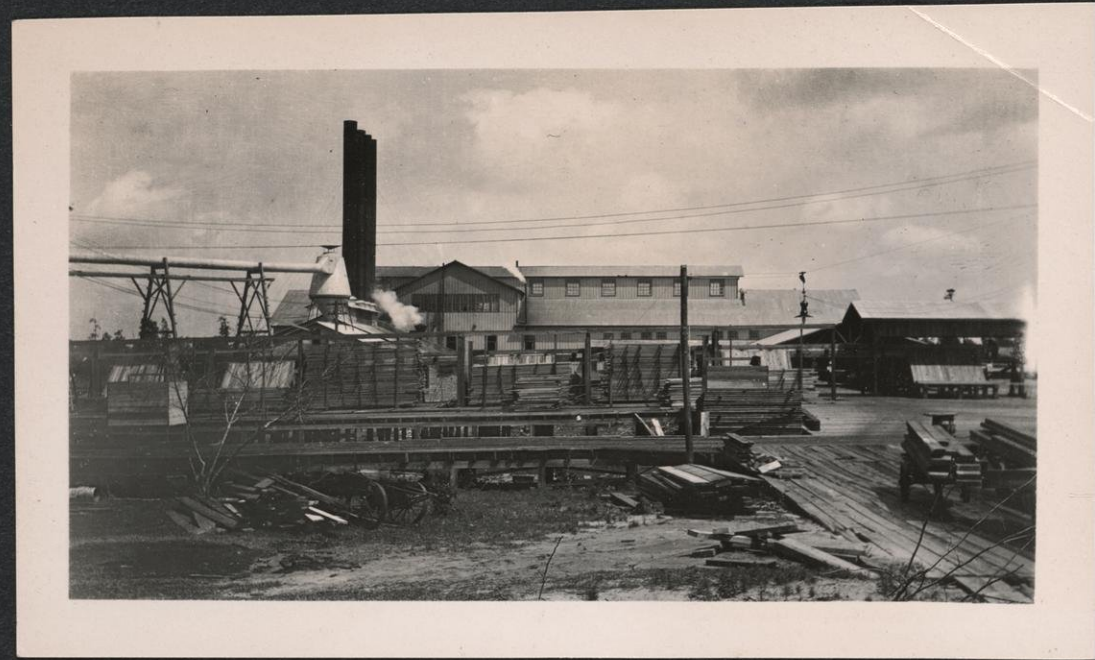


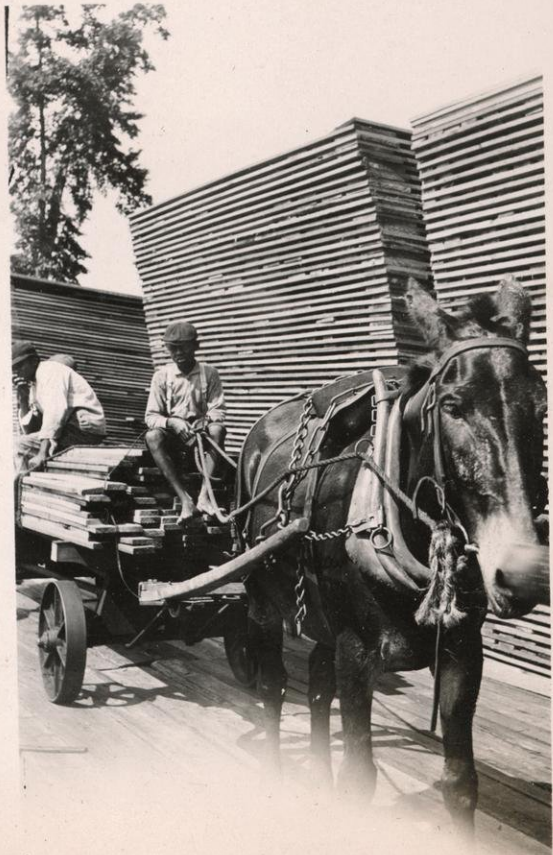
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127  
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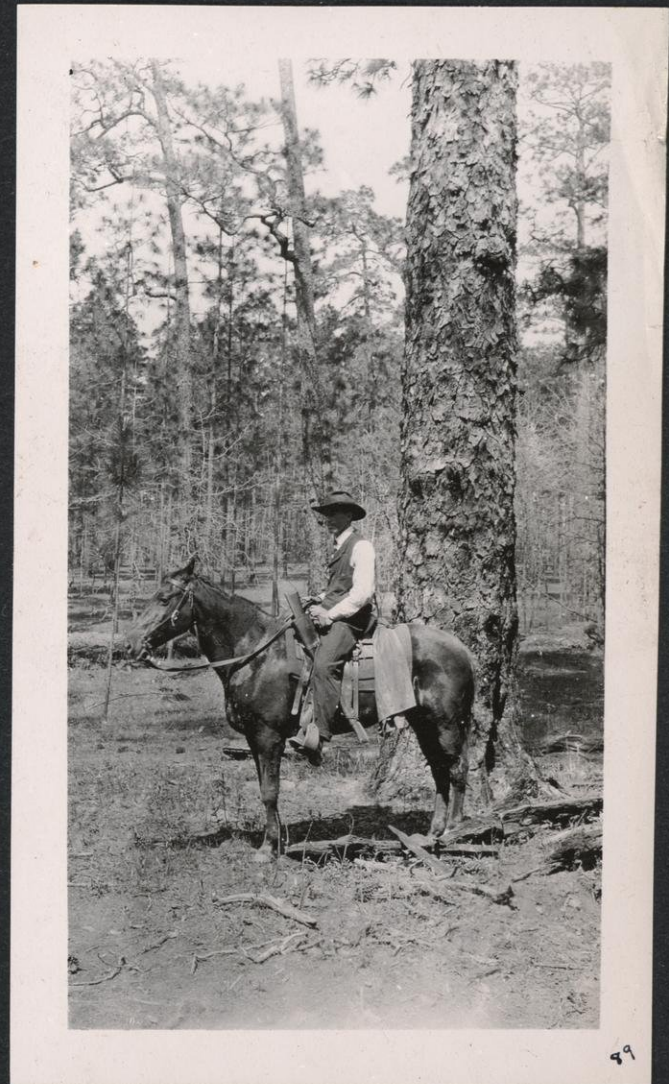




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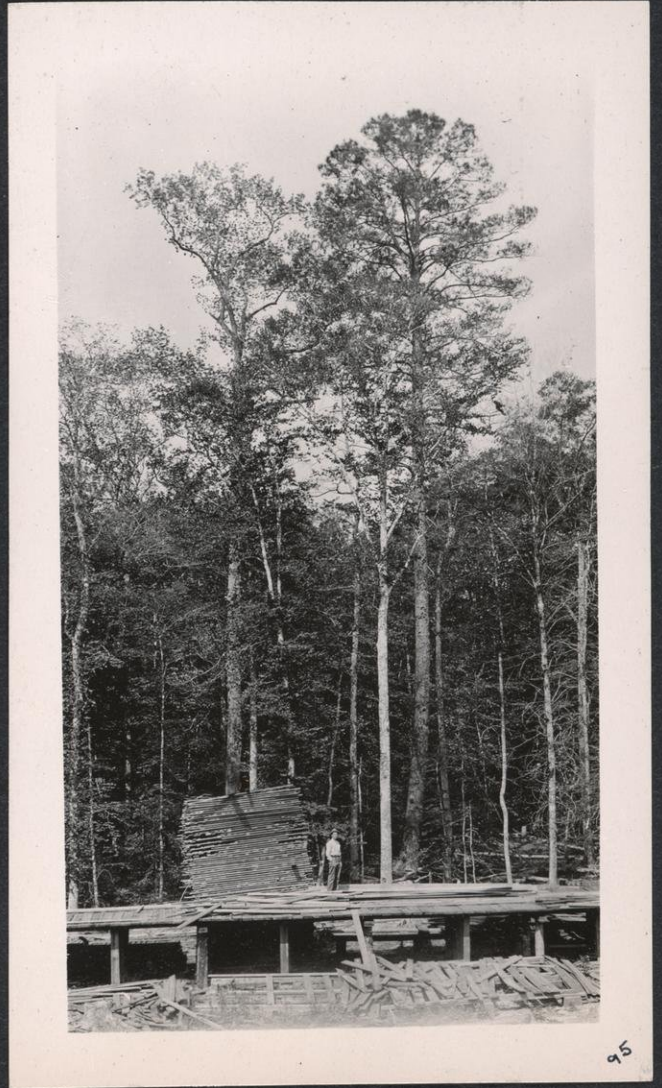


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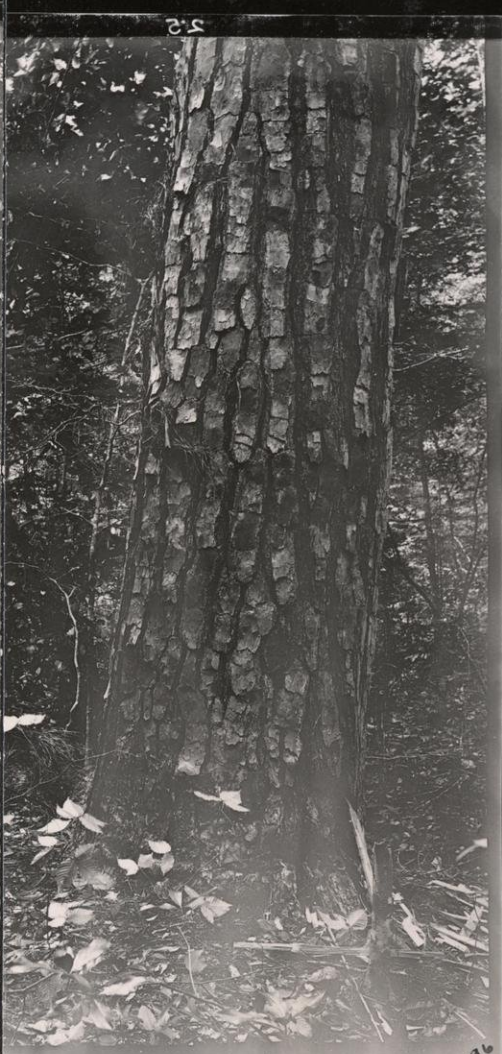
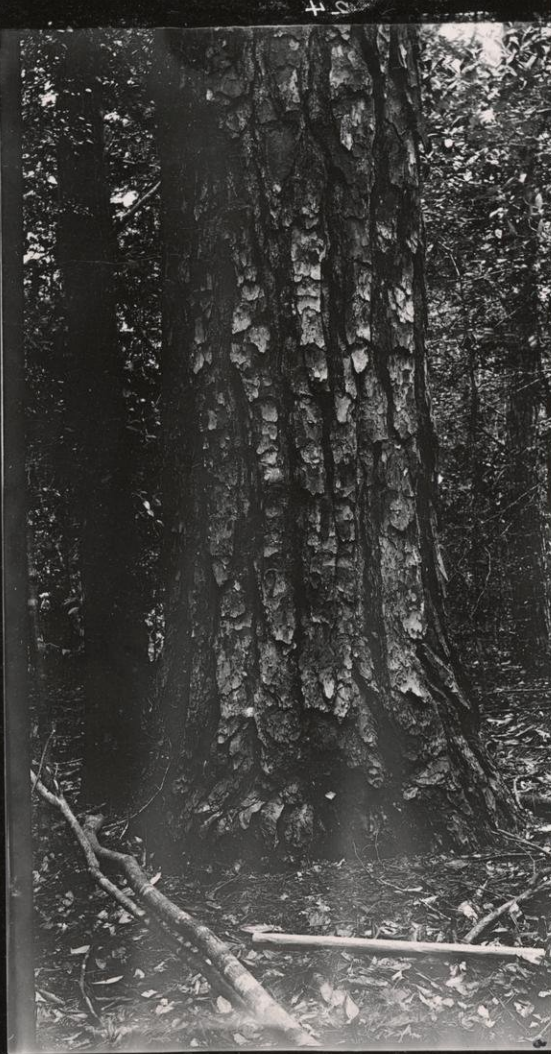


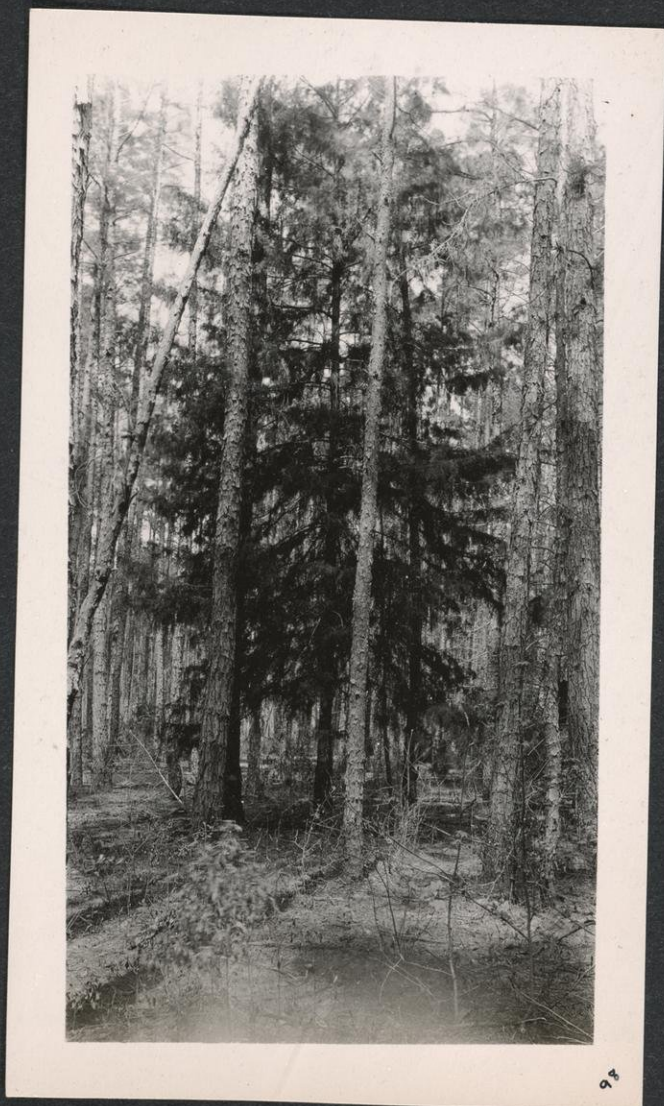


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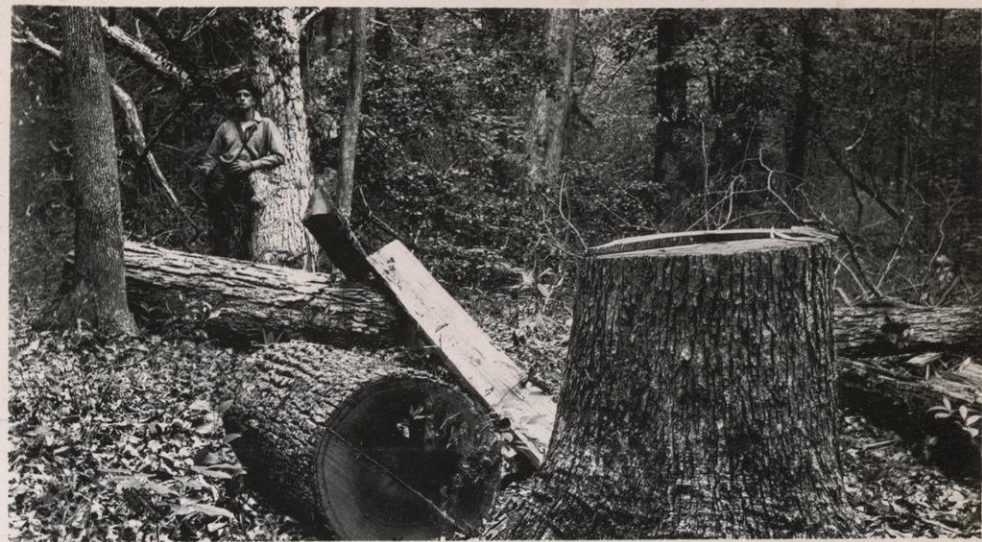
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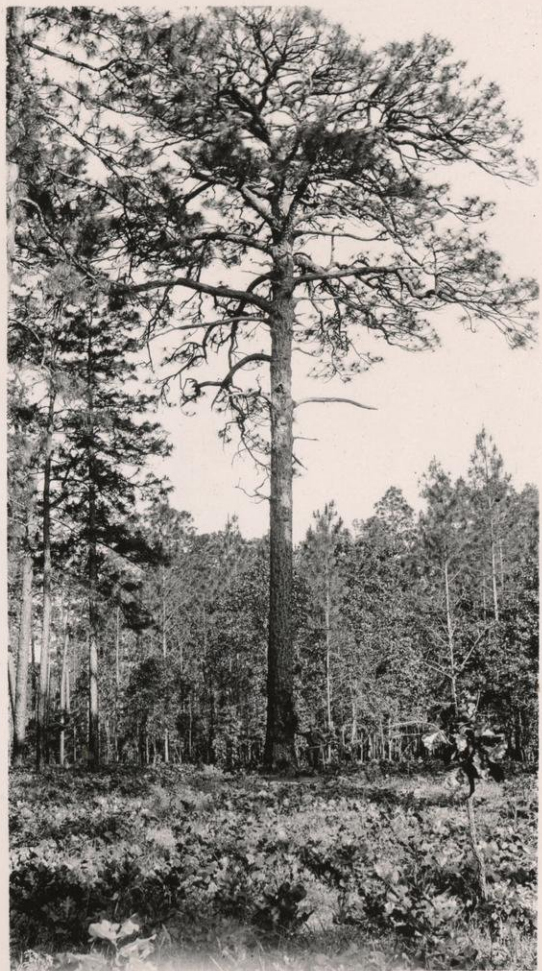


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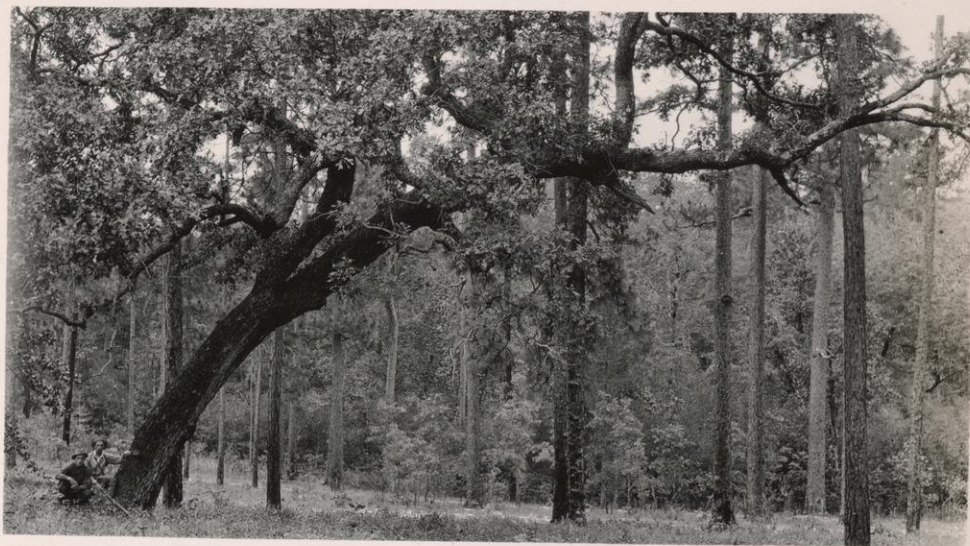


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B





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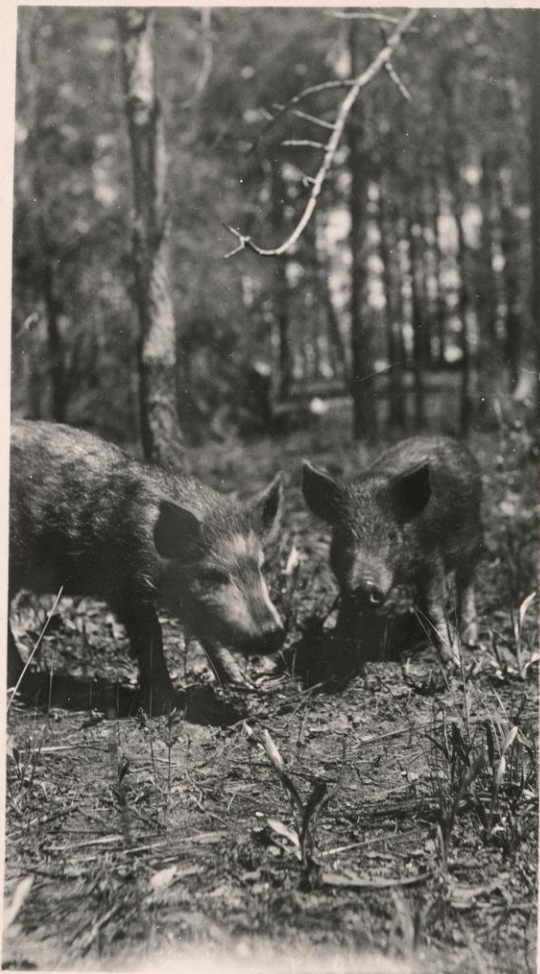


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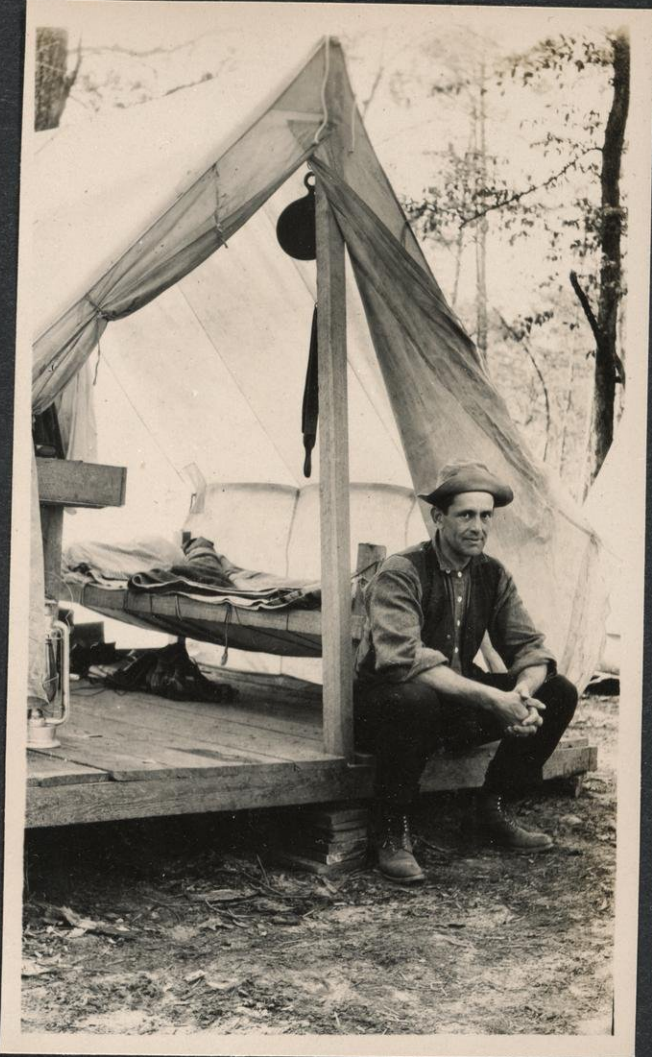
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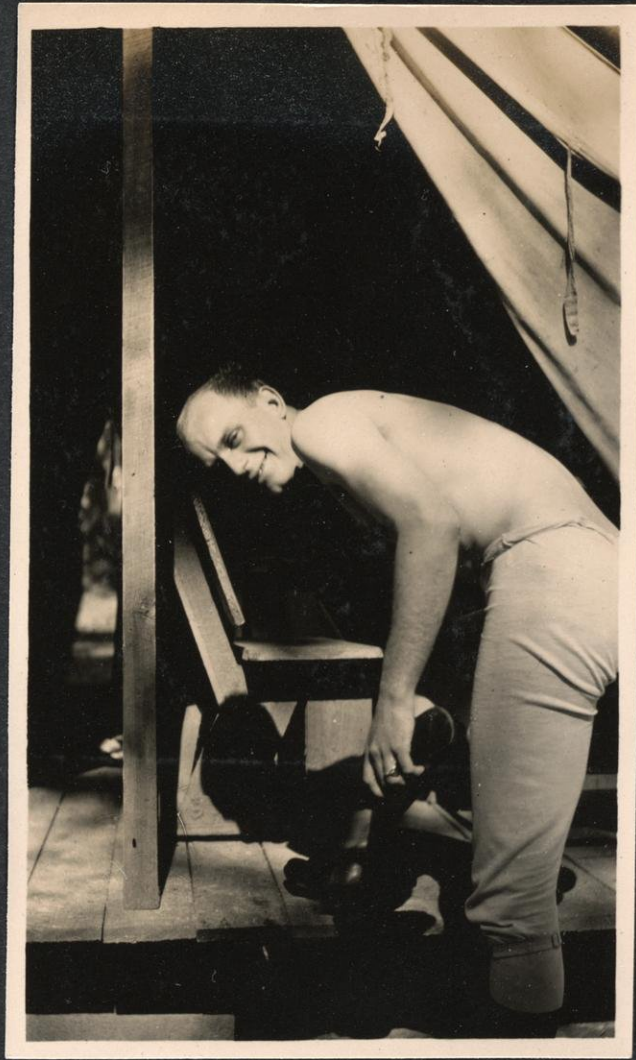


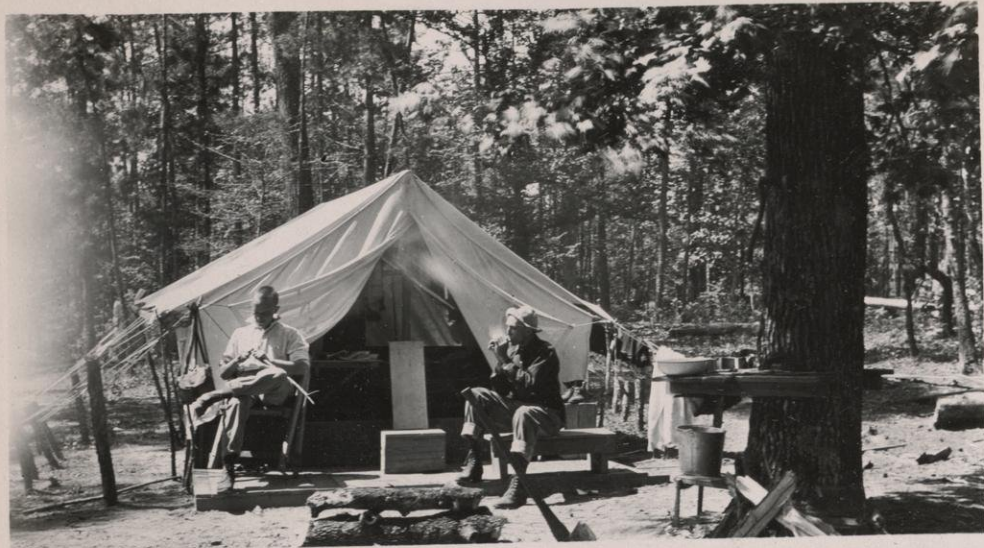
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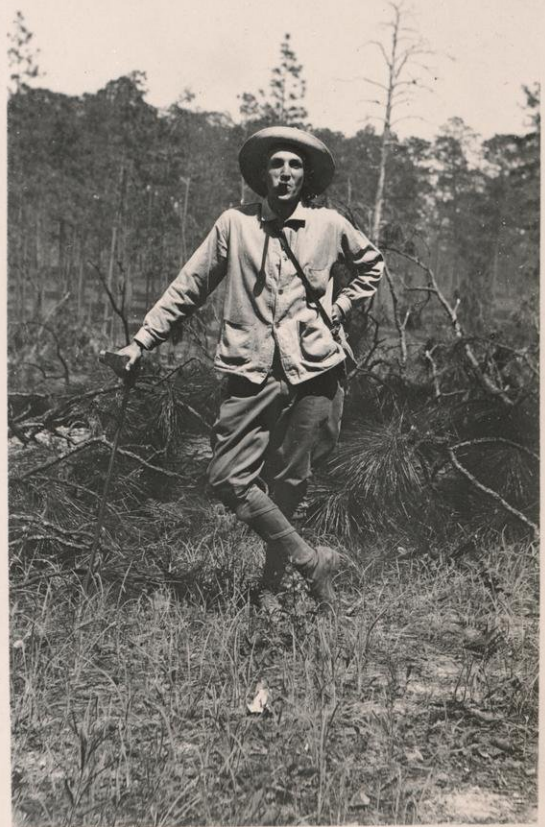




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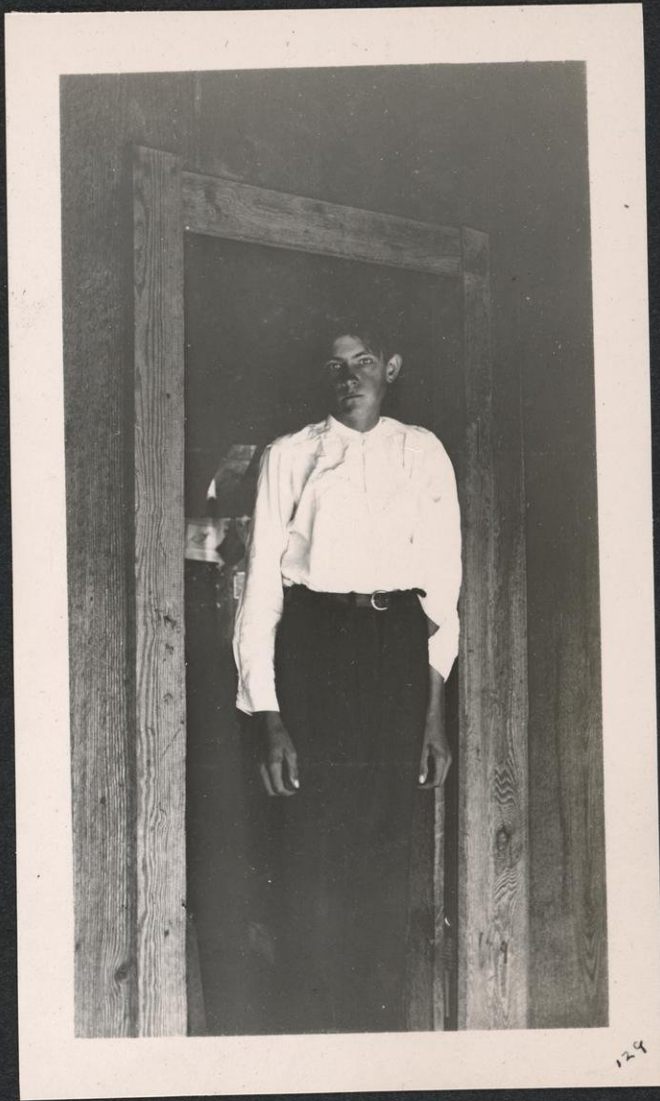
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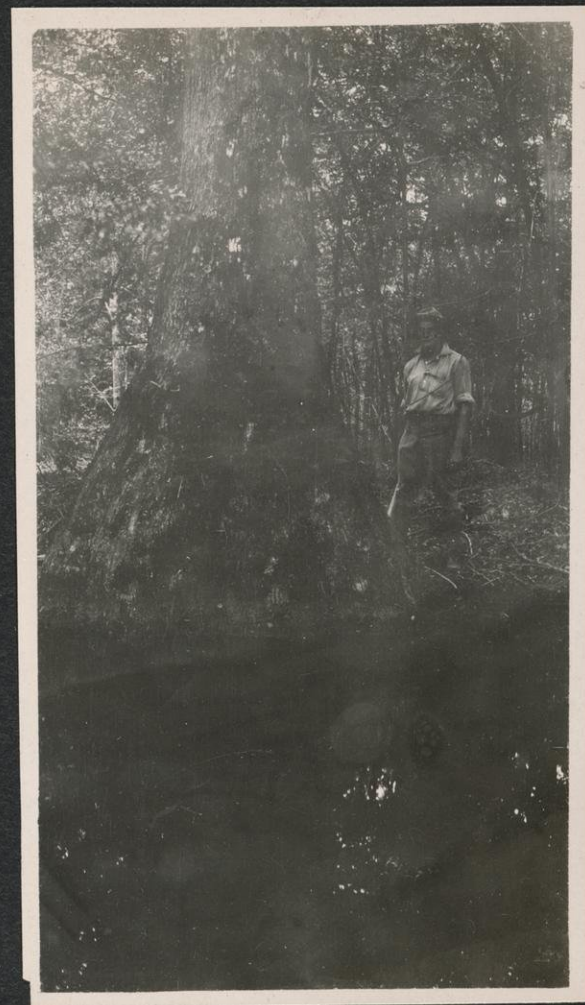
127



















# BOB - WHITE

By EDWARD HOWE FORBUSH

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THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

Educational Leaflet No. 47

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The cheery interrogative call of Bob-white was one of the first distinctive sounds of the open field that I knew and loved, as a child, among the hills of New England. It was as well known as the morning carol of the Robin in the orchard, the drumming of the Ruffed Grouse in the woods, or the reiterated plaint of the Whip-poor-will on the moonlit door-stone. Bob-white was ever an optimist, for even if, as the old-fashioned farmers stoutly maintained, his call sometimes presaged a storm, the prophecy "more wet" was delivered in what seemed so cheerful a frame of mind, and in so happy and joyous a tone, as to make rain seem the most desirable thing in life.

A Bird  
of Good Cheer

Perhaps there is no bird to which the American people are more deeply indebted for esthetic and material benefits. He is the most democratic and ubiquitous of all our game-birds. He is not a bird of desert, wilderness, or mountain-peak, which one must go far to seek. He is a bird of the home, the farm, garden, and field; the friend and companion of mankind; a much-needed helper on the farm; a destroyer of insect-pests and of weeds. He is called Quail in the North and Partridge in the South, but everywhere he names himself in his cry—*Bob-white*.

When America was first settled Bob-white was found from Maine and southern Canada to the coast of the Gulf of Mexico. A sociable and domestic species, it followed settlement, and now inhabits suitable localities in most of the United States.

Bob-white is cheerful, active, industrious, brave (but quick to learn caution where caution is necessary), and good-natured, although in the rivalries of the mating-season the males become quarrelsome. Both sexes are devoted parents, and the male often takes his wife's place on the nest. In captivity, he has been known to hatch, brood, and care for the young. The birds of a covey are very affectionate toward one another. They converse in a variety of tender, low, twittering tones, sleep side by side in a circular group on the ground, with heads out, and, if scattered, soon begin to call and seek one another, not ceasing until all the surviving members of their little company are reunited.

Domestic  
Traits

A mere cavity for a nesting-place is hollowed from the soil under a bush or fence, or in the woods, under a decaying log. In the Southern

States the nest is sometimes made in a cotton-row. It is usually well lined and is concealed with grass or stubble. If in a field, or by a roadside, it is often placed within a thick tuft of grass, or under a shrub, commonly covered and open at one side, somewhat like the Oven-bird's nest. If situated in the edge of the woods it is made mainly of leaves, and the female, while laying, covers the eggs with leaves when she quits the nest. If the nest is disturbed by man or animals she is likely to desert it; but Dr. P. L. Hatch found that when he removed the covering carefully *with forceps*, and replaced it just as he found it, the bird did not abandon its home.

From eight to eighteen eggs are deposited, but nests have been found containing as many as thirty-seven eggs—probably the product of two females. The eggs are glossy white, sharply pointed at one end, and are packed closely in the nest with the points downward. Two broods are sometimes reared in a season, but usually the so-called second brood occurs only when the first has been destroyed.

The young are hatched after about twenty-four days of incubation, and no chicks are more precocious. They usually remain in the nest until the plumage has dried, but most observers agree that they are able to run about at once. At the least alarm they squat close to the ground, where the eye can hardly detect them. The driver of my heavy farm-team once saw a mother Quail fluttering in the road before him, and stopped for fear of crushing the young, which were hiding in the road; but the farm-wagon had already killed two that had steadfastly maintained their position in the deep rut until the wheels passed over them.

This bird is an adept at concealment. A covey will squat on the ground and become virtually invisible. I stood talking with a hunter one day, years ago, in the South, when my eye caught a slight movement on the ground, and I saw an entire flock of Bob-whites sitting in a little circle almost beneath my feet, and scarcely concealed by the scanty shrubbery. As my eye found them they burst up between us with an explosive roar of wings like a feathered bomb-shell, and went whirring away.

Bob-white seldom migrates except for short distances when in search of food; but there is considerable evidence that occasionally migrations of some length toward the South take place in autumn. All the coveys that I have watched have remained throughout the year in the same locality, unless exterminated by a severe winter or by hunters. It is well known that in the South a covey has been seen, year after year, in a favorite locality for more than a quarter of a century. There the Quails increase so fast that they are able to maintain themselves well despite many enemies; but in the North they succumb to the rigors of severe winters.

Bob-white feeds almost entirely on the ground, except when driven by deep snows to seek berries and seeds from the shrubbery. Feeding by preference in the open, the birds usually keep within a short distance



BOB-WHITE

Order—GALLINÆ  
Genus—COLINUS

Family—ODONTOPHORIDÆ  
Species—VIRGINIANUS

National Association of Audubon Societies

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Order—GALLINÆ  
Genus—COLINUS

Family—ODONTOPHORIDÆ  
Species—VIRGINIANUS

National Association of Audubon Societies



BOB-WHITE

Order—GALLINÆ  
Genus—COLINUS

Family—ODONTOPHORIDÆ  
Species—VIRGINIANUS

National Association of Audubon Societies

of the cover afforded by thickets, swamps, or rank grain. They usually sleep in open places, where flight in all directions would be unobstructed.

Probably something like 400,000 sportsmen now go out from the cities of this country every year to hunt Bob-white. This bird has a cash value to the farmer and land-owner, for he can demand and obtain from the sportsmen a fair price for the birds killed on his property. The annual Quail crop, if judiciously handled, is worth millions of dollars to the farmers of this country. In many cases the rental of the privilege of shooting Quails more than pays the taxes of the farm, without detracting in any way from its value for agricultural purposes. Bob-white thus indirectly pays the greater part of the tax in many school-districts,—that is, the cost of the education of the children.

Thousands of dollars also are spent in many States in leasing rural land on which to hold field-trials of dogs; and in these trials no shooting is done, the dogs merely pointing the birds in a competition of skill.

**A Good  
Tax-payer**

Bob-white comes into closer contact with the farmer's crops than does any other bird, yet he rarely injures appreciably any kind of grain or fruit. Through the investigations of the Biological Survey of the United States Department of Agriculture, the fact is now well established that Bob-white ranks very high as a destroyer of many of the most destructive insect pests. Among those eaten are potato-beetles, cucumber-beetles, wire-worms, weevils (including the Mexican cotton-boll weevil), locusts, grasshoppers, chinch-bugs, squash-bugs, and caterpillars. Many of these insects are destroyed by scores and hundreds. Mrs. Margaret Morse Nice, of Clark University, has published the following list of things eaten by captive Quails, each number representing the insects eaten during a single meal by one bird: Chinch-bugs, 100; squash-bugs, 12; plant-lice, 2,326; grasshoppers, 39; cutworms, 12; army-worms, 12; mosquitos, 568; potato-beetles, 101; white grubs, 8. She found that one Bob-white would devour in a day: Chrysanthemum blackflies, 5,000; flies, 1,350; rose-slugs, 1,286; miscellaneous insects, 700, of which 300 were grasshoppers.

**Insects  
Devoured**

Mrs. Nice has given a list of 141 different species of insects eaten by the Quail, nearly all of which are injurious, and, as Dr. Charles F. Hodge has remarked, a bird that eats so many injurious insects is welcome to the beneficial ones as well; for, apparently, if we could have enough Bob-whites they would leave nothing for the useful insects to do!

As a destroyer of weeds, Bob-white stands preëminent. Mrs. Nice made a list of 129 weeds the seeds of which are eaten by this little gleaner; they are digested and the germs destroyed. The number of seeds taken by one bird at a single meal varies from 105 seeds of stink-weed and 400 of pigweed to 5,000 of pigeon-grass and 10,000 of lamb's-quarters; while the number taken by one bird in a day varies from 600 of burdock to 30,000 of rabbit's-foot clover. Dr. Sylvester Judd has reached the conclusion, by a careful computation, that the Bob-whites of Virginia and North Carolina consume annually, between September 1



and April 30, 1,341 tons of weed-seeds, and that from June 1 to August 31, they eat 340 tons of insects. If we take as our measure the quantity of weed-seeds and insects eaten by captive Quails, as given by Mrs. Nice, we find that a family consisting of two adult birds and ten young would consume 780,915 insects and 59,707,888 weed-seeds in a year, in addition to other food.

**Ridding Us of Weeds**

The annual loss occasioned by insects in the United States now reaches one billion dollars; and the injury caused by weeds in this country is estimated at seventeen million dollars a year. Our farmers certainly need Bob-white's help!

The principal method of protecting Bob-white has been by the passage of laws forbidding market-hunting, or export, restricting the shooting-season to one or two months in the year, and limiting the number of birds that one sportsman is allowed to take. In the South, however, and in some localities in the North and West, the birds are shielded and allowed to increase on preserves. Bob-white has been numerous for years in North Carolina, where the system of game-preserves has been brought to greater perfection than in any other part of the country. Guilford County alone has more than 15,000 acres on which this bird is so protected, where gunning is so regulated, and the natural enemies are so controlled, that the birds maintain their numbers.

**Protection and Propagation**

In the North something more than game-preserves will be needed to multiply them. Their artificial production is an absolute necessity. Even in Audubon's time, Bob-white was reared successfully in confinement. Dr. Hodge has reared flocks of young birds at Worcester, Massachusetts, under their parents, under hens, and with incubators; and has demonstrated that liberty may be given to them and yet that they will return to the hand when called. This work requires only experience, and a knowledge of the methods of controlling the diseases of these birds, to make it practicable on a large scale.

**Classification and Distribution**

Bob-white belongs to the Order *Gallinae*, Suborder *Phasiani*, and Family *Odontophoridae*. Its scientific name is *Colinus virginianus*, indicating that its relationship is with the Francolins rather than with the true Quails (of Europe). It is distributed over the whole of the United States, and is resident except on the northern border of its range. A smaller variety (*C. v. floridanus*) inhabits Florida; another subspecies (*C. v. texanus*), belongs to the valley of the Rio Grande; and a third subspecies, the Masked Bob-white (*C. v. ridgwayi*), inhabits southern Arizona and northern Sonora.



Ward's ~~Album~~ <sup>257</sup>  
FOR

Unmounted Photographs

No. 542

