



United States  
Department of  
Agriculture

Forest Service

Pacific Northwest  
Region

**Umatilla National  
Forest**

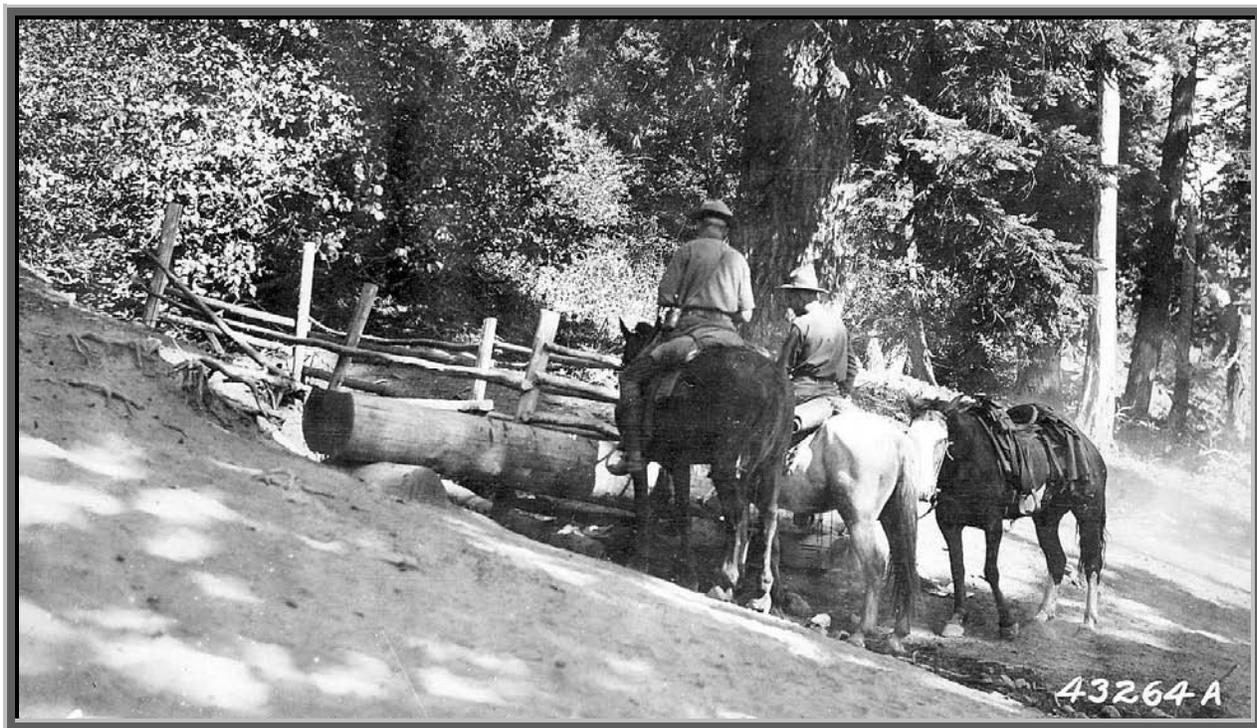
F14-SO-06-08  
June 2008



# An Extensive Reconnaissance of the Wenaha National Forest in 1913

George A. Bright

Edited by David C. Powell



The **Forest Service** of the U.S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the national forests and national grasslands, it strives—as directed by Congress—to provide increasingly greater service to a growing Nation.

## **Author, Photographer, and Editor**

GEORGE A. BRIGHT was a Forest Assistant when he completed a reconnaissance of the Wenaha National Forest in 1913. At the time of the reconnaissance, it is likely that Bright was stationed at the Wenaha Supervisor's Office in Walla Walla, Washington. Although detailed information about Bright's professional history was not available, it is known that he was a Forest Assistant on the Umatilla National Forest from his initial government appointment on July 1, 1910 to early in 1913. While stationed on the Umatilla National Forest, Bright studied western yellow pine regeneration (Bright 1911), and the relative merits of western larch and Douglas-fir (Bright 1913). When his annual personnel appraisal was completed on April 18, 1914, Bright was a 29-year-old Forest Assistant earning \$1,200.00 per year. His educational attainment included both college and "special," and his health was rated as excellent.

MARTIN N. UNSER was stationed at the Wenaha Supervisor's Office in 1913 when he took many of the outstanding photographs in this document. When his annual personnel appraisal was completed on April 18, 1914, Unser was a 30-year-old File Clerk with 6 years of government experience and earning a salary of \$1,100.00 per year. He had a college education and one year of farming experience prior to his government appointment. His health was rated as very good.

DAVID C. POWELL is a silviculturist, U.S. Department of Agriculture, Forest Service, Umatilla National Forest, 2517 SW Hailey Avenue, Pendleton, Oregon 97801.

## **Cover Photograph**

Water troughs at Thompson Cattle Camp, taken by W.C. Barnes on August 12, 1919. Although detailed location information is not available for this photograph, a 1916 map of the Wenaha National Forest shows a Thompson Corral in section 12, Township 2 North, Range 36 East.

Note that the water trough is made from wood and as was customary for that era, it was probably made by felling a large tree (usually ponderosa pine or western larch since they have resinous, durable wood), and then using a hand auger to bore holes into the log, into which hot coals were dropped to start a small fire. The fire was then herded down the log to burn out a water cavity. This burn-out system was similar to how the Lewis and Clark expedition made dug-out canoes for water travel (and they carried hand augers just for this purpose).

## **Abstract**

**Bright, G.A.; Powell, D.C. (ed.). 2008.** An extensive reconnaissance of the Wenaha National Forest in 1913. Technical Publication F14-SO-06-08. Pendleton, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Region, Umatilla National Forest. 65 p.

This document recreates an historically valuable report prepared by George A. Bright in 1914. It describes an extensive reconnaissance of the Wenaha National Forest completed by Bright in 1913. In addition to narratives about the natural resources, existing uses, and management opportunities of the Forest, the report includes 42 photographs, many of which were acquired by Martin N. Unser when he worked in the field with Bright in 1913. Additional photographs were included by the editor: four are recent retakes of Bright or Unser photographs from approximately the same location as the original, and 13 are historical photographs from the same era as the 1914 reconnaissance report. The original report is reproduced in its entirety, with occasional comments added by the editor.

*Keywords:* Forest history, range management, forest management, wildlife management, fire effects, western white pine, Blue Mountains, Wenaha National Forest, Umatilla National Forest.

**Editor's Revision Note (June 2008):** This report, originally published in November 1994, has been out of print for many years. We decided to reissue it as a revised edition in commemoration of the Umatilla National Forest's centennial (1908-2008).

## Contents

1	<b>Editor's Introduction</b>
1	The historical range of variability
2	The Wenaha National Forest
3	<b>The Extensive Reconnaissance Report</b>
3	Title page
5	Time expended for reconnaissance
7	Introduction
7	Topography
8	Map 1, key to photographs
9	Plate 1, Tucañon Ranger Station
10	Plate 2, Iron Springs Ranger Station
11	Plate 3, Godman Springs Ranger Station
12	Plate 4, Meacham Creek
12	Plate 5, Asotin Creek
13	Plate 6, Saddle Butte
14	Climate
14	Plate 7, the Caraway Place
15	Plate 8, Snow banks in the open
15	Forest types
16	Plate 9, yellow pine timber
17	Plate 10, yellow pine on gentle slope
18	Plate 11, Clearwater Ranger Station
19	Plate 12, lodgepole pine near Clearwater
19	Retake of plate 12
20	Plate 13, burned area in transition type
20	Plate 14, burn near Table Rock Mountain
21	Plate 15, typical burn in transition type
21	Plate 16, typical burn in transition type
23	Plate 17, Umatilla River near Bingham Springs
23	Plate 18, Umatilla River near Corporation Ranger Station
24	Plate 19, Fry Meadows
24	Non-reforestation areas
25	Plate 21, Elk Flat
25	Retake of plate 21
26	Plate 22, Three Forks country
27	Plate 23, Butte Creek
27	Plate 24, Crooked Fork
28	Timber most in need of cutting
28	Plate 25, Asotin Creek

## **Contents (continued)**

29	Plate 26, Iron Springs Ranger Station pasture
30	Plate 27, Meacham Creek
31	Management
31	Accessibility
32	Cost of operation
33	Private timber
33	Reforestation
34	Plate 28, burn where white pine could be planted
35	Grazing
36	Plate 29, sheep passing out of a corral
37	Plate 30, tool-box at Stockade Spring
39	Plate 31, Mud Spring
40	Plate 32, Round Prairie Spring
40	Retake of plate 32
41	Plate 33, telephone line near Clearwater Ranger Station
41	Retake of plate 33
42	Plate 34, Table Rock Mountain
42	Mineral resources
43	Game
44	Plates 35 and 36, elk on the Wenaha
45	Plates 37 and 38, typical glades along top of the Umatilla River
46	Plate 39, Bobsled Creek
46	Plate 40, young tree regeneration
47	Plate 41, Grande Ronde River at Palmer Junction
47	Plate 42, timber tributary to Summer Creek
48	Plate 43, trail down ridge into Tucañon Creek
49	Summary
51	Cost of the reconnaissance
52	<b>Appendix: Historical Photographs of the Wenaha National Forest</b> Figures 1-12, historical photographs from 1906 to 1921
64	<b>Acknowledgments</b>
64	<b>References</b>

# EDITOR'S INTRODUCTION

---

**Those who cannot remember the past are condemned to repeat it.**

*George Santayana, American philosopher and poet*

This document recreates an historically valuable report prepared by George A. Bright (Bright 1914). It describes an extensive reconnaissance of the Wenaha National Forest completed by Bright in 1913. In addition to narratives about the Wenaha National Forest's natural resources, existing uses, and management opportunities, the report includes 42 black-and-white photographs. The common sentiment that "a picture is worth a thousand words" is supported by the photography in Bright's report.

Bright's original report is reproduced here in its entirety, including the photographs. The editor made every effort to duplicate the original report, except for the following changes:

- 1) The original report was double spaced, and this version is single spaced.
- 2) The original photographs were included on pages by themselves, whereas this version has text and photographs comingled on the same page.
- 3) The original map showing photograph locations measured 16" x 18" but was reduced to fit on an 8½" x 11" page for this publication.

These changes were made to reduce the report's length and associated printing costs; none of them are considered to have affected the report's usefulness in any way.

Bright's report provides valuable insights without requiring additional elaboration; however, the editor has provided occasional comments when appropriate. In many instances, the editor's comments simply restate notes that were apparently made on the original report by Pomeroy District Ranger Irving Smith in 1965.

One of the strongest features of Bright's report is the photography. To build on this strength, the editor included 13 additional photographs from the Wenaha National Forest (12 in an appendix and one on the cover). They were obtained from the Umatilla National Forest historical archives in Pendleton, Oregon.

The supplemental photographs were selected from the same general era as Bright's report and, in two instances (figures 6 and 10), the images were acquired by the same photographer (M.N. Unser) and in the same year (1913) as the reconnaissance photographs.

It is likely that figures 6 and 10 were taken during the reconnaissance, but that Bright decided not to include them in the final report.

## **The Historical Range of Variability**

Why is historical information important? Land managers are beginning to apply a new philosophy called ecosystem management. One aspect of ecosystem management emphasizes looking back in time as a way to put current and desired (future) conditions in an appropriate temporal context. An example of that concept is the *historical range of variability* (HRV), where managers estimate the range of “natural” (historical) conditions that existed in an area prior to Euro-American settlement.

The historical range of variability provides a framework for comparing historical, current, and future conditions (Morgan and others 1994). Managers often consider the HRV to be an indicator of ecological sustainability – historical conditions are believed to represent sustainable conditions, at least to the extent that Mother Nature emphasized sustainability.

After identifying the HRV for a particular component (stand structure, forest composition, cobble embeddedness, pool to riffle ratios, etc.), managers can then infer which ecological processes might have been important for creating and sustaining conditions associated with the HRV. Without an historical benchmark, it can be difficult to interpret the ecological “roadmap” resulting in the conditions present today.

Application of HRV and related ecosystem management concepts has resulted in a greater reliance on historical reports, pioneer-era journals, early maps and photographs, and other sources. This reconnaissance report is but one example of useful historical documents. Several other early reports pertaining to the Wenaha National Forest also provide valuable information (Allen 1906, Darlington 1915, Foster 1906, Kent 1904, Schmitz 1906).

## **The Wenaha National Forest**

The Wenaha National Forest was located at the northern tip of the Blue Mountains in northeastern Oregon and southeastern Washington, extending from north of La Grande, Oregon to south of Pomeroy, Washington. It was created in May of 1905 using lands withdrawn from homestead entry in 1902 and 1903. The Forest was known as the Wenaha Forest Reserve between 1905 and 1907.

The Wenaha Forest Supervisor’s Office was located in Walla Walla, Washington. Originally, the 790,000-acre national forest had eight Ranger Districts – four in Oregon (La Grande, Weston, Tollgate, and Troy), and four in Washington (Walla Walla, Tucannon, Peola, and Cloverland). The Wenaha National Forest was eventually combined with the Umatilla National Forest to the south on November 5, 1920 (USDA Forest Service 1997). The current Ranger Districts of Pomeroy and Walla Walla were originally contained in the Wenaha National Forest.

S

WENHAHA – RECONNAISSANCE

EXTENSIVE

R E P O R T

\*\*\*

G. A. Bright

[This page left blank intentionally]

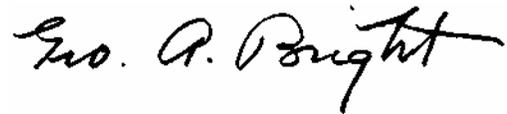
S  
Wenaha – Reconnaissance,  
Extensive

March 20, 1914.

THE EXTENSIVE RECONNAISSANCE REPORT  
OF THE WENAHA NATIONAL FOREST

-----

The reconnaissance was carried on from May 4, 1913, to September 29, 1913, during which period, with the interruption of only a day or two now and then, the field work was mostly accomplished. The office work was begun January 20, 1914, and was completed April 13, 1914, with little interruption. Altogether 146 days was required for the field work and 91 days for the office work, or a total of 237 days, including Sundays and holidays.



---

Forest Assistant.

[This page left blank intentionally]

S  
Wenaha – Reconnaissance,  
Extensive

THE EXTENSIVE RECONNAISSANCE REPORT  
OF THE WENAHA NATIONAL FOREST

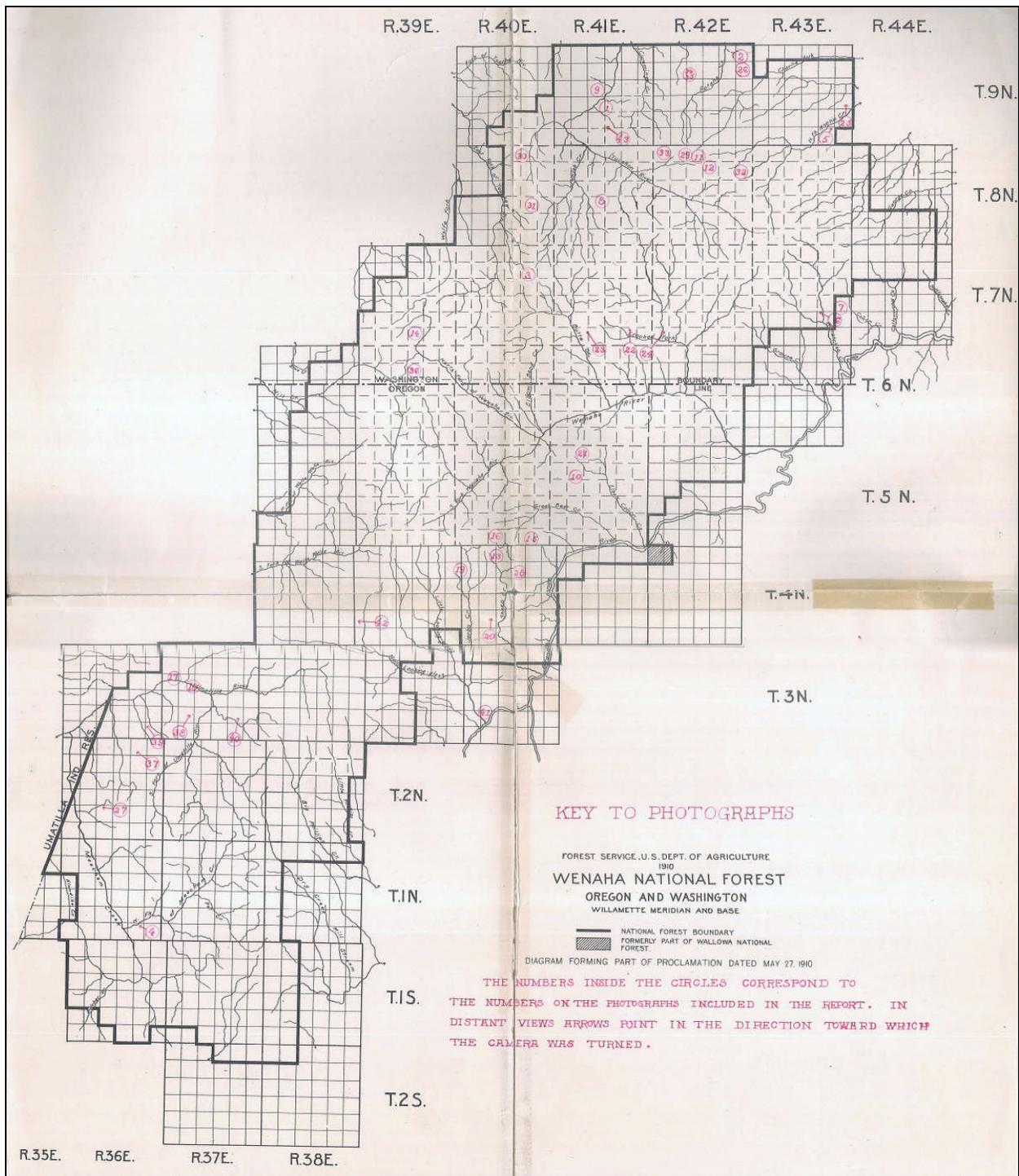
The extensive reconnaissance on the Wenaha National Forest, begun in May 1913, was completed in the fall of the same year. The outline of April 20, 1911, and letter of May 29, 1913, were substantially followed in the field and office work. A minor modification to these instructions was, however, thought best in the use of a different colored crayon to distinguish between the South and North slope types instead of using the same color, solid and cross-hatched, to describe each of these types respectively. The typical North slope type extends to a much higher altitude in the mountains than the South slope type without in the least changing its character. In these comparatively high altitudes it often occurs on slopes having a south as well as north exposure. For this reason a separate color was thought best. At a slightly greater altitude occurs the Transition type, which is quite distinct in composition from the North slope type.

The Atlas Folio sheets for the Wenaha National Forest were found to be very inaccurate and out of date, and it was accordingly deemed best to draw an entirely new map from the most reliable existing sources and from considerable data which it was possible to gather while carrying on the regular reconnaissance work. Roughly, a third of the Forest has never been surveyed by the Land Office, and the data on topography and stream flow was here apt to be particularly unreliable and meager. As timber in this region is dependent very greatly upon topography relative to both its quantity and quality, it is desirable to have as accurate a map as possible.

The large-sized group of photographs in this report were taken by Mr. Unser of the Forest Service and are of general interest, showing largely the various improvements of springs, telephone lines, trails, and ranger stations, but also incidentally illustrating very well the matter with which this report is mostly concerned, i.e., the forage, timber, and water resources of the Forest, and their possibilities of development. The smaller set of photographs was taken by me for this report while engaged on the reconnaissance of the Forest. [See map 1 for Key to Photographs.]

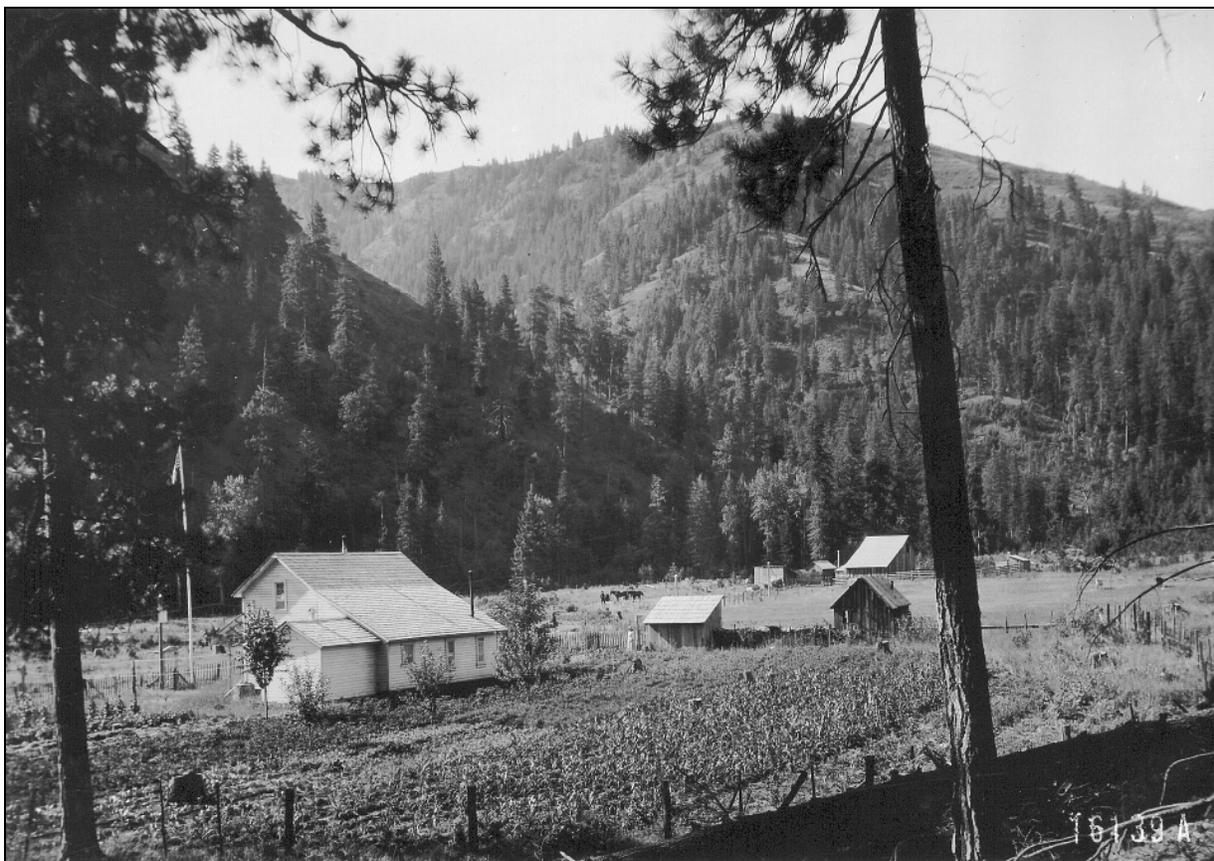
Topography

The Wenaha National Forest lies along the top of a spur of the Blue Mountains, running in a northeasterly and southwesterly direction. The elevation varies between 2,000 and 6,500 feet above sea level with an average elevation of about 4,500 feet. High ridges and not true mountains are the characteristic features of the topography, the ridges all rising to about a uniform altitude above the creeks flowing between them.



**Map 1**—Key to photographs.

Editor's Note: Since this map had to be reduced from its original size (16" × 18"), its readability is obviously compromised. The map shows a location for photograph 20, but no such photograph was included in the report.



**Tucañon Ranger Station.**

Editor's Note: According to the *History of the Northern Blue Mountains* (Tucker 1940), this ranger station cabin was built in the fall of 1907. The structure was rehabilitated by the U.S. Forest Service in the early 2000s, with much of the work occurring in 2002. It is interesting that this station was originally built by a contractor, and it is the oldest contractor-built structure in the Forest Service's Pacific Northwest Region. Originally used as an administrative site for agency personnel, the Tucannon Ranger Station is currently staffed by volunteers.

Although there are no mountains on the Wenaha, strictly speaking, the whole Forest is exceedingly rough. The ridges are from 1,000 to 2,000 feet high, and are the result of erosion and not of immediate volcanic action. In past ages the shrinkage of the earth's crust gradually forced the strata to be pushed up evenly without very much breaking up. In future ages the streams wore ever increasingly deep canyons and then cross-canyons, until the whole country was cut up into a succession of razor-back and saw-tooth ridges and deep and narrow canyons, that are at best exceedingly difficult and often quite impossible to travel over on horse back except as they are made accessible by trails. The distance from the tops of the ridges to the creeks is often covered by alternating cliffs or "breaks," as they are locally known, and slides of loose soil and angular volcanic rock. An utter absence of lakes is characteristic of this type of topogra-

phy where violent volcanic action has never taken place to block the channels of streams or throw barriers across valleys.

Plate II [2]



**Iron Springs Ranger Station.**

Editor's Note: According to the *History of the Northern Blue Mountains* (Tucker 1940), this ranger station cabin was built in 1908 by Al Jeffries and J.T. McCarty while working under the supervision of Ranger William Kendall.

The northern half of the Forest is rougher than the southern part, but in general the whole region is rough in the extreme and offers obstacles in the way of accessibility that would be hard to equal in a country having a far greater range in altitude. Around the boundary of the Forest where the elevation is not so great as in the interior, and erosion consequently less violent, the ridges change from the razor-back type and become broad flat expanses cut only occasionally by ravines. Later these ridges gradually splay out into the plains and the ravines continue to dwindle till nothing is left of them. On the whole the Wenaha is uninteresting from a scenic point of view because of the absence of any high, towering peaks.

The boundary of the Wenaha Forest, as it is now drawn, includes land wholly within the timber belt, none of it being too high or too low for the full development of more than one commercially valuable species of timber. On the higher altitudes these species are primarily lodgepole, fir, and spruce, and in the lower altitudes, yellow pine and Douglas fir. There is no alpine

type. Some parts of the Forest lying along the creek bottoms are suitable for agriculture, both as regards climate and soil. These creek bottoms are already mostly homesteaded, although it is doubtful if the time and desperately hard labor spent by the men who first obtain patent to them is ever warranted by the small and uncertain crops which it is finally possible to produce. In fact by the time that it is possible to raise anything the homesteader has in most cases become discouraged and is willing to sell out. A typical deserted homestead is that of the Caraway place, a photograph of which is included. The agricultural possibilities of this place are much better than are the possibilities on other places now being applied for on the Wenaha. The family who obtained patent to this homestead is now living in North Carolina, and has not even interest enough in it to pay the taxes. Five hundred dollars are asked for the place although the value of improvements would alone exceed this amount two or three times. Probably the reason why so many homesteads are applied for when much better places are allowed to revert to the state for taxes, is the hope of the applicant that he may be able to get something for nothing. As the class of applicants who at the present time apply most frequently for lands within Forests are apt to be somewhat shiftless, this prospect of course appeals very strongly to them.

Plate III [3]



**Godman Springs Ranger Station.**

Plate IV [4]



**Looking Down Meacham Creek.**

Plate V [5]



**Looking Down Asotin Creek.**

These two photographs illustrate the difference between the creek canyons in the northern and southern parts of the Forest. Those in the northern part, as in the case of Asotin Creek, being much steeper and rougher than in the southern part, where Meacham Creek is a typical example.

Plate VI [6]



**Looking toward Saddle Butte**, one of the highest points on the Wenaha, showing the summit crowned with timber. No part of the Wenaha is above timber line, or too high for the full development of two or three commercially valuable species. Neither is any part of it too low for the growth of commercial pine and fir.

Very often, too, bona fide home-seekers have been misled concerning the character of land in National Forests. They know that most of the best land in the public domain is gone, but are made to believe that lots of first class agricultural land is still bottled up in the National Forests. Their minds become so thoroughly imbued with this idea that they are unable to give unbiased thought to the conditions as they actually exist, with the result that they are led to apply for land on the National Forests that they would not look at twice were it on the public domain. A way in which it might be possible to settle up a country where all other methods for booming it had proven unsuccessful might be to threaten its enclosure within a national forest. It is possible that settlers would then immediately flock to it in great numbers. Outside of two small areas examined last summer for possible elimination from the Wenaha, but which are at best only on the verge of possible agricultural development, it is extremely doubtful if there is any other area where consistent crops could be grown.

## Climate

The climate on the Wenaha is typical of that found throughout the Blue Mountains. The precipitation, most of which falls in winter in the form of snow, is greater than on the Umatilla Forest and less than on the Wallowa. On the first of last July there were still deep snow banks left on the Wenaha where the snow had drifted all through the winter, but where there were snow banks on the Wenaha there were snow fields on the Wallowa. In the winter of 1912-13 the snow varied from a depth of 3 feet on the lowest elevations to 15 feet on the highest elevations. There is never any snow lasting through the summer, the last disappearing about the middle of July or a little later.

Topography and climate combine to make the Wenaha typically a timber and forage producing Forest, possessing a minimum amount of land adaptable to agriculture. It is noticeably a homogeneous forest, lying entirely within the timber belt and offering much the same conditions and problems in one locality as in any other. For this reason a general description of the whole Forest is thought to be sufficient and a minute description of each district or block tedious and unnecessary.

Plate VII [7]



**The Caraway Place, homesteaded and later abandoned.** The 160 acres comprised in this place can be bought for five hundred dollars on easy terms. It finds no purchaser, although worse places are continually being applied for on the National Forest under the Act of June 11, 1906.

Editor's Note: Someone (possibly Irving Smith, Pomeroy District Ranger in 1962-1968) wrote on the original report that this photograph might have been taken in the Mountain View area.

## Plate VIII [8]



**Snow banks lying in the open, June 10, 1913, in one of the higher portions of the Wenaha.** Late lying snow banks are a great equalizer of stream flow. Beneath the shelter of trees snow covered the ground last year till well through the month of July.

Editor's Note: Someone (possibly Irving Smith, Pomeroy District Ranger in 1962-1968) wrote on the original report that this photograph might have been taken "near Dunlap Cabin."

## Forest Types

Three types of forest are distinguished on the map. They are as follows:—

1. South slope type,
2. North slope type,
3. Transition type.

It is usually not difficult to determine into which of these types a particular body of timber should be classed, as there is little intermixture and the types are in most instances sharply defined. The North and South slope types are determined primarily by the degree of soil moisture, which in turn depends upon the direction of the slope. The slopes facing the south, being exposed to the direct rays of the sun, dry out quickly while those slopes exposed to the north receive the rays of the sun obliquely and remain moist for a longer period.

As regards species the South slope type is characterized by a high percentage of yellow pine forming from 40 to 100 percent of the total stand. Other species occurring in this type as secondary species are grand fir, Douglas fir, and larch.

The North slope is distinguished by the complete absence or only small percentage of yellow pine in the stand, the greater part being composed of various mixtures of Douglas fir, grand fir, and larch. On most of the north slopes yellow pine would be well adapted but, being a very intolerant tree, it cannot compete with the more tolerant species occurring on these slopes. This type is never found purely of one species as in the case of the South slopes. Occasionally the

stands are valuable but usually they are understocked, containing only a fifth or a tenth of their possible stand. Under management they might be made to yield an amount of timber greater than is found on the South slopes and typical yellow pine types, from which practically all the timber cut in the Blue Mountains is at the present time obtained. Unfortunately, however, the North slopes are so generally decadent that it will be many years before there will be any inducement for private capital to log them and thereby make possible some scheme of management which will insure future stands of greater productivity.

Plate IX [9]

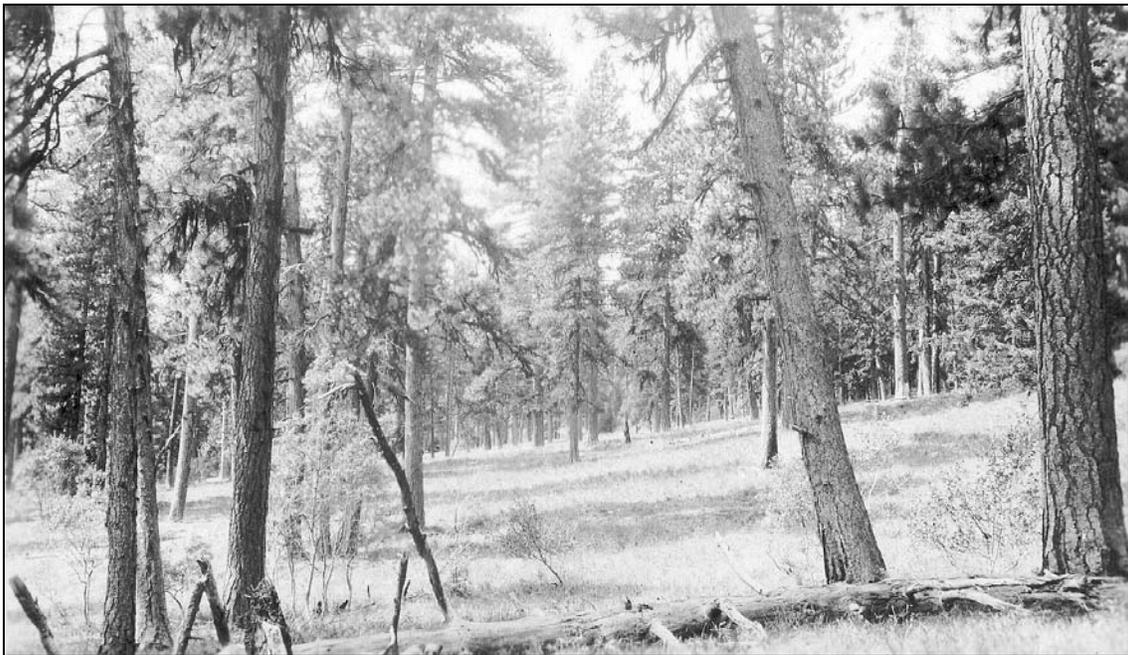


**Excellent yellow pine timber in a draw tributary to Tucañon River.** Areas covered by timber in such draws are isolated, although the timber itself is often of excellent quality. This is a small mill proposition.

Editor's Note: Someone (possibly Irving Smith, Pomeroy District Ranger in 1962-1968) wrote on the original report that this photograph might have been taken in School Canyon. Diligent searching in September of 1996 could not relocate the identical area but telephone line insulators were found on several trees, indicating that Smith's supposition might be correct: look closely at the lower (center) middle-ground portion of Unser's photograph and you will see what appear to be telephone lines passing through this stand at a fairly low level on the tree stems. Note that the largest fire in recorded history for the Pomeroy Ranger District started in School Canyon on August 5, 2005, eventually burning a total of 51,000 acres – about 28,000 acres on the Pomeroy District and the rest on state and private lands.

The Transition type is determined by altitude. Here on the cooler and moister slopes are found certain species possessing a comparatively shallow root system and thin bark, which cannot withstand the long summer droughts of the lower altitudes. As regards species this type is distinguished from the other two types already described by the large per cent of alpine fir, spruce, and lodgepole, which comprise the dominant species. There is a total absence of yellow pine in this type and larch is apt to be scarce. Although the trees are generally of small size in the Transition type, they are unusually well formed and, being fairly tolerant, are capable of standing very close together, thereby yielding a large quantity of wood useful for many purposes. However, over a large part of the area covered by this type, the trees, since the last great fires, have not had sufficient time to grow to sizes which make them of commercial value for lumber. Although trees on this type frequently grow to saw-log size, the most valuable stands are composed of lodgepole and larch in proportions suitable for posts and poles.

Plate X [10]



**Pure stand of yellow pine on a gentle south slope on the Wenaha.** Such stands are rare on this Forest and of small extent. Located approximately in section 7, T. 5 N., R. 41 E., W.M. Editor's Note: Someone (possibly Irving Smith, Pomeroy District Ranger in 1962-1968) wrote on the original report that this photograph might have been taken near Eden Bench.

In certain regions considerable of this timber is now taken out under free use. During the fiscal year ending June 30, 1913, 2305 M.B.M. were cut mostly from this type. From two acres which were cut clean, 75 cords of lodgepole wood were obtained, but this is not a maximum cut by any means. If fire and insects can be kept off from the Transition type, stands of this sort will be the rule rather than the exception.

But the Transition type has a greater future than present value. Its value will increase in proportion as the supply of first-class material now so much more accessible is diminished. Every effort should be made to prevent the inroads of fire and insects, which prove so particularly deadly in this type. Perhaps the greatest present value of the Transition type is for watershed protection. All the important creeks on the Wenaha have their sources in this type.

Plate XI [11]



**Clearwater Ranger Station.** A summer station showing dense stand of lodgepole in background, from which a great deal of free use wood is taken during the summer. It is now comprised in a free use area. Fifty cords of wood per acre is not unusually cut from such stands, which is the equivalent of 25,000 board feet, allowing 500 board feet per cord as a conservative converting factor.

Editor's Note: A copy of this photograph is contained in the Umatilla National Forest historical files in Pendleton, Oregon. It was taken by M.N. Unser on July 30, 1913. Location is shown as approximately section 5, T. 8 N., R 42 E., W.M. Caption is: "Cabin at Clearwater Spring Ranger Station." According to the *History of the Northern Blue Mountains* (Tucker 1940), the Clearwater Ranger Station was converted from an old trappers cabin, probably in 1909.

Plate XII [12]

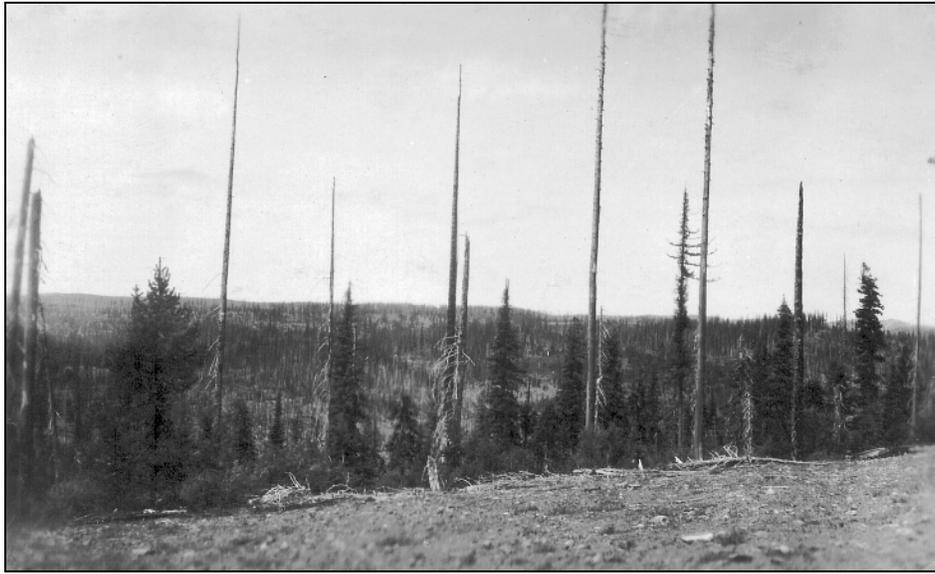


**Part of the same stand as shown on Plate XI, surrounding Clearwater Ranger Station, showing free use wood cut and piled, lying by the side of the road.**



[Editor's Note: This photograph was taken at about the same spot during the period of September 24-26, 1996 by David C. Powell.]

Plate XIII [13]



**Looking across a frequently and badly burned area in sec. 4, T. 4 N., R. 40 E., W.M., in the transition type.**

Plate XIV [14]



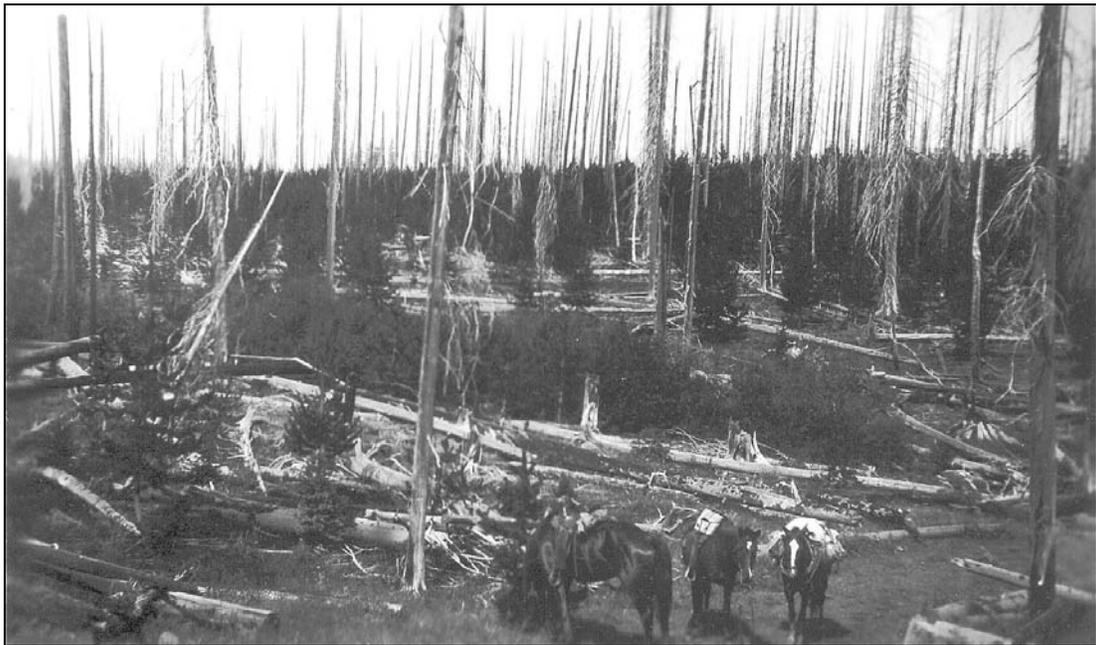
**Burn in the transition type near Table Rock Mountain.**

Plate XV [15]



**These photographs show typical burns in the transition type** on the Wenaha. This type of forest suffers more than any other from fire because of the small size of the trees, their thin bark, and the closeness with which they are usually found growing together.

Plate XVI [16]



In the reconnaissance work classification of the various types was always based on differences due to external physical conditions of site, such as climate, soil, soil moisture, topography, and exposure, and not on differences based on composition or mode of origin. Certain species demand particular conditions and when they find these conditions, they are able to hold the ground for themselves over all comers, if unmolested by some unnatural physical accident. So that, although it might be possible to establish on the present site of any one particular type, by artificial means, either one of the other types, it is not likely that this strange type would be able to maintain itself there indefinitely without receiving aid more or less frequently from the outside.

As regards numerical importance, the species occur in the three types on the Wenaha according to the following table:—

### Numerical Importance of Different Species Growing on Different Slopes

South Slope Type	North Slope Type	Transition Type
Yellow pine	Grand fir	Lodgepole
Douglas fir	Douglas fir	Alpine fir
Grand fir	Larch	Engelmann spruce
Larch	Yellow pine	Grand fir
	Spruce	Douglas fir
	Lodgepole	Larch

A complete list of the tree species occurring on the Wenaha is given in the next table. The first seven are given in the order of their commercial importance according to the present demand:—

1. White pine (scarce)
2. Yellow pine
3. Douglas fir
4. Larch
5. Lodgepole
6. Engelmann spruce
7. Grand fir
8. Alpine fir
9. Black cottonwood
10. Quaking aspen
11. Mountain birch
12. Alder
13. Yew
14. Juniper
15. Mountain mahogany

Plate XVII [17]



Plate XVIII [18]



**Two views of typical creek bottoms on the Umatilla River** near Bingham Springs and Corporation Ranger Station, where black cottonwood forms the principal species.

It was noticeable that the individual members of certain species attain to larger size on the Wenaha Forest than on the Umatilla, especially among the less important species. Alder occurs often over two feet in diameter and yew occurs in tree form a foot or so in diameter and is often cut in free use for posts for which it proves to be excellent. Black cottonwood attains a D.B.H. of 6 feet and quaking aspen of 15 or 16 inches. These dimensions are larger than those found on the Umatilla. Engelmann spruce and alpine fir occur much more abundantly on this Forest than on the Umatilla, especially in the northern half where it frequently attains a size of 5 feet D.B.H. Mountain birch does not occur at all on the Umatilla, but here it is found in nearly all the river canyons where sometimes it attains a D.B.H. of 18 inches.

Plate XIX [19]



**Fry Meadows.** These meadows are usually found in the Transition type, streams frequently heading in them. They are old lake beds which have slowly filled in. The soil is too wet for trees but favorable to the growth of soft grasses yielding excellent summer pasturage.

Editor's Note: Someone (possibly Irving Smith, Pomeroy District Ranger in 1962-1968) crossed out the word "Fry" on the original report and replaced it with the word "Brock." In July of 1999, Rod Johnson, longtime wildlife biologist on the Walla Walla Ranger District (retired), visited the general area depicted in this photograph and concluded that it actually shows Mottet Meadows, now submerged beneath Jubilee Lake. A 1916 map of the Wenaha National Forest shows a Mottet Meadows Ranger Station, possibly the area depicted here.

### Non-Reforesting Areas

The non-reforesting areas on the Wenaha are of four kinds, (1) Meadows, (2) Burned-over areas, (3) Ridges around the boundaries of the Forest and close to the lower limits of tree growth, and (4) High, rocky ridges in the interior.

(1) The open meadows occur mostly in T. 4 N., R. 40 E. and T. 5 N., R. 41 E. where they form about five per cent of the area. They occur wholly within the Transition type, and are so typical of the higher portions of all National Forests that no description of them is necessary. They are always an advantage in a Forest, as providing good pastures, camping places, etc.

(2) Most of the burned-over areas on the Wenaha are restocking. There are a few areas, however, over which, because of the complete destruction of the seed trees and great quantity of willow brush, tree growth is finding it difficult to get another start. Such an area occurs at the head of Meadow Creek, T. 7 N., R. 40 E., and the surrounding country contains many smaller regions covered by clean burns. Parts of the northern half of T. 4 N., R. 40 E. also experienced clean burns. Such burns are only typical of the Transition types on the Wenaha.

Plate XXI [21; note that the report did not contain a Plate XX.]



**Elk Flat.** A typical meadow in Sec. 5, T. 5 N., R. 41 E., W.M. Note the large size and abundance of quaking aspen.



[Editor's Note: This photograph was taken at about the same spot in September of 2001 by David C. Powell.]

(3) Undoubtedly the barrenness of both class (3) and (4) is due in large measure to fires, but it has been so long ago since the forest cover in these regions was destroyed that no visible sign of the fires has remained, such as charred stumps and knots and fallen trees.

In those interior regions having high, rocky ridges, successive fires destroyed, not only the forest, but in doing so made conditions for subsequent tree growth difficult. The steep sides of the canyons, often 2,000 feet in depth, resulted in severe erosion from heavy rains and melting snow, so that, coupled with a severe climate, reproduction on these ridges is at best very precarious. This region is above the yellow pine zone, and very scattered Douglas-fir and juniper are at present the only species with a little grand fir in the canyon bottoms. I have not seen anywhere in the Blue Mountains such high elevations so bare of forest cover. Even the creek bottoms are so narrow that trees are not able to find room enough on which to stand. This region is included in the interior portions of the Forest, shown on the map as unsurveyed.

Plate XXII [22]

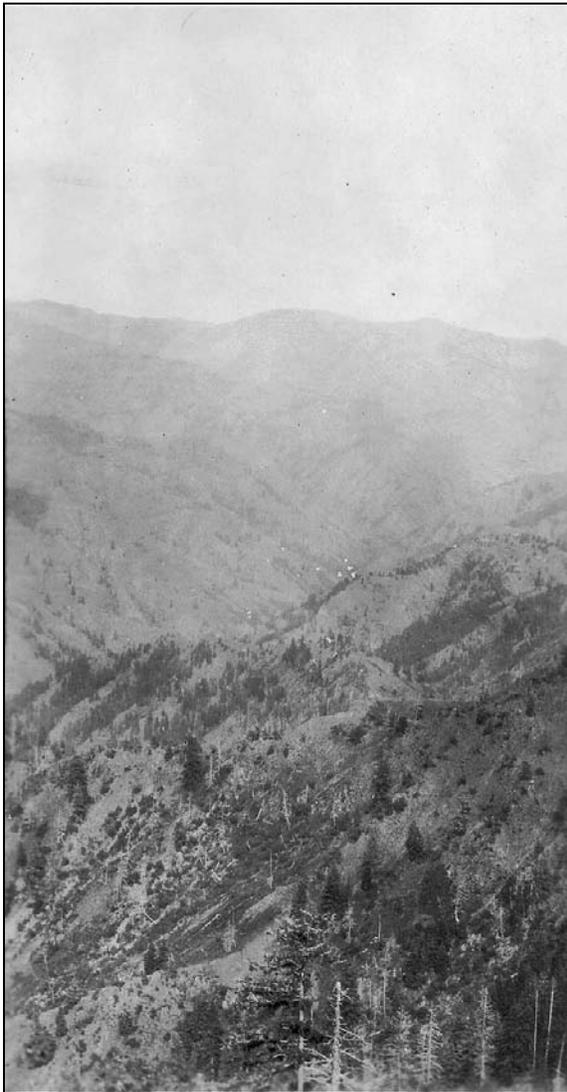


**Topography and general appearance of the Three Forks country** of the north-central portions of the forest, especially in T. 6 and 7 N., R. 40, 41, and 42 E. Steepness of the ridges very much minimized by the photograph. Timber consists of very scattered and stunted Douglas fir and juniper. Practically no reproduction.

(4) The small amount of timber on the top of the flat ridges and on their sides, around the boundaries of the Forest, is due to fire and drought. These ridges at one time or another, where not too steep, have undoubtedly all supported trees, but successive fires, in ages past, prevented reproduction, so that when the big trees finally succumbed to old age, there were none to take their places. High bunch grass continued to make possible the carrying of fires over the ridges until the coming of the sheep and cattle men resulted in the trampling out and killing of so much of the grass and weeds that fires were no longer as frequent or severe as formerly. Now little patches of reproduction are starting up over these ridges once more wherever any seed trees at all have been left. It often happened that excessive grazing resulted in the destruction of the soil as

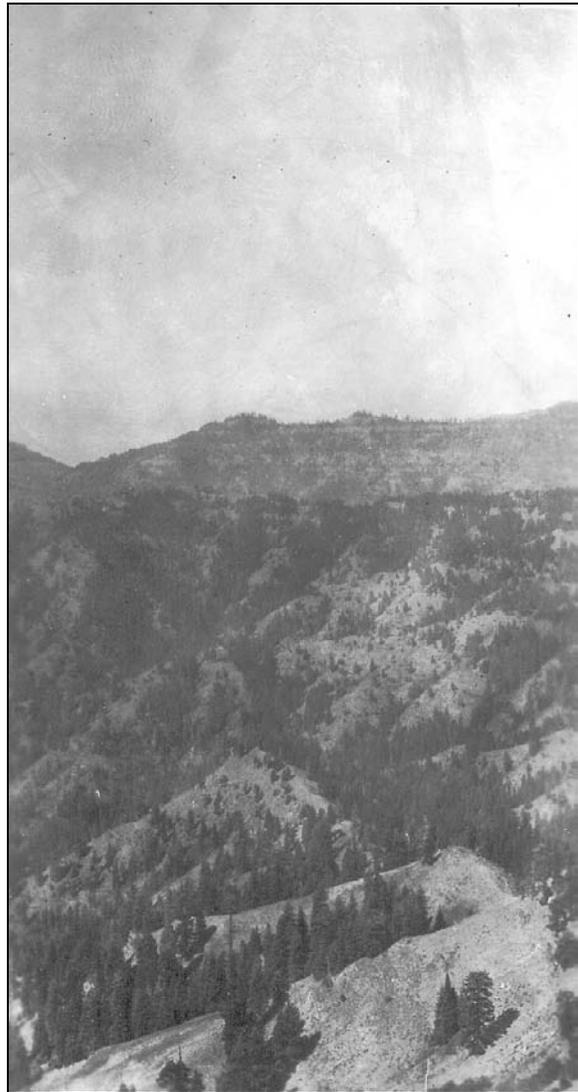
well as the forage, and this fact, coupled with the long summer droughts on these lower altitudes, has resulted in conditions which make the reestablishment of a forest cover an exceedingly difficult one. Artificial planting of seedlings will probably have to be resorted to if the ridges are to be reforested. Yellow pine, once they have obtained a start here, make very satisfactory growth. The establishment of a forest cover is not as discouraging a proposition as it will be on the higher interior portions. The tops of the ridges are flat and the sides usually not as steep and broken by cliffs and slides as in the north-central portion. Also the winters are shorter and less severe, and the climate is well adapted to the growth of yellow pine.

Plate XXIII [23]



**Looking up Butte Creek.** The timber is mostly very scattered small Douglas fir.

Plate XXIV [24]



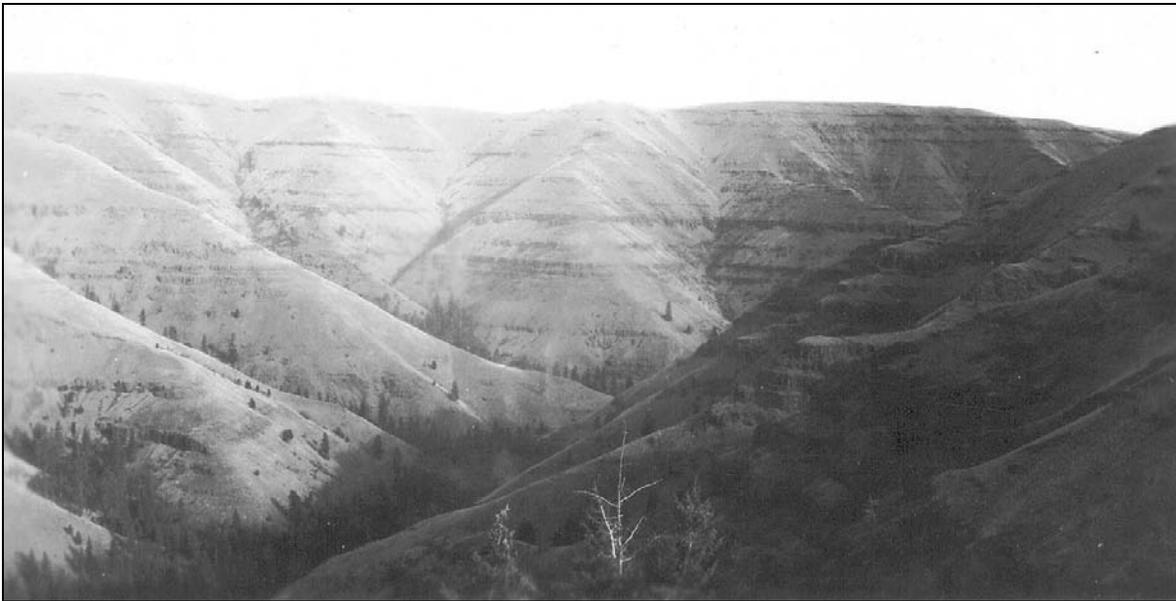
**The Crooked Fork country.**

## Timber Most in Need of Cutting

Practically all of the south slope types and north slope types are mature or decadent and would be benefited by having a large number of trees removed, although it is realized that under present conditions this will not be possible. Much of the transition type is immature, but in the mature stands beetles are at work and growth is stationary or retrograding.

Patches of beetle-infested lodgepole are widely and thinly scattered over the entire Forest wherever a mature stand of this species occurs. Judging by the few brown and dying trees which one sees, the pest is not increasing very fast, as it is on the Whitman and Umatilla Forests. Mistletoe, it is thought, is on the increase. It is killing many Douglas fir. Nearly every large or medium-sized Douglas fir will often be found to be infested with this disease, on certain north slopes. There is very little bark-beetle infestation among the yellow pine, probably accounted for in part by the fact that the stands of this species are all small and isolated. The largest stand of yellow pine within the boundaries lies in T. 6 N., R. 42 E. This area is at present under consideration for alienation from the National Forest.

Plate XXV [25]



**Asotin Creek.** This illustrates the typical canyon walls of the northern portions of the Forest near the boundary. This canyon is 2,000 feet deep at least, and the distance from the top to the creek bottom is covered by breaks alternating with loose slides of rock and soil. A few Douglas fir cling to the steep sides in places. In the narrow creek bottom are a few fir and yellow pine. Reproduction on the sides of the canyon practically nil because of steepness of slopes.



**Iron Springs Ranger Station pasture and fence** at the extreme northern end of the Forest near the boundary. Timber is mostly yellow pine, occurring abundantly in swales and canyons. The intervening ridges are bare of trees but are covered with excellent bunch grass. All these ridges are capable of producing pine.

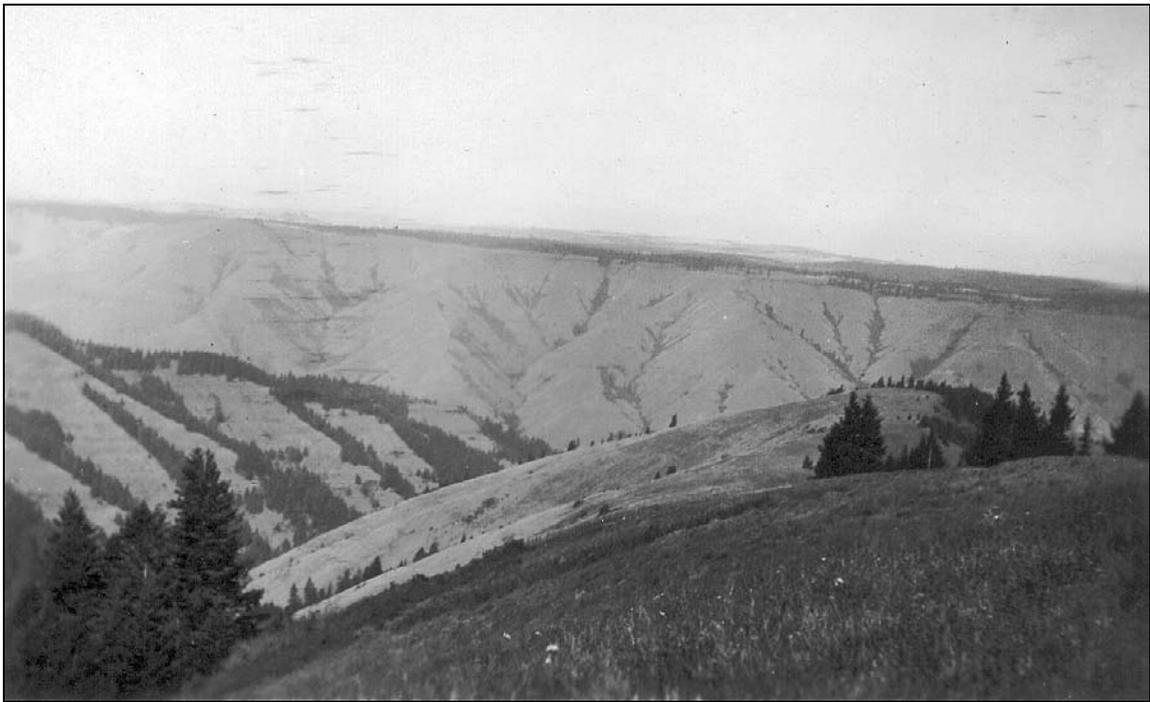
Free use and small sales to settlers remove not over 3 million feet of timber annually from the Forest. This of course does not equal the growth by any means. The total stand of timber as estimated is in round numbers, 2,212 M.B.M. Cutting at the present rate and not allowing anything for growth, over seven hundred years would be required to remove all the timber from the Forest. The volume of most of the present stands, particularly in the transition type, is increasing, besides which more and more of the barren areas are being narrowed down by the encroaching forest, so that under the present system of protection the annual cut might be greatly increased without danger. However, at least half of the timber included in the estimate of 2,212 M.B.M. should be considered as not most valuable for lumber. Its real use is in watershed protection and as seed trees, and, in a scheme of management regulating cutting, this timber should not be considered as part of the merchantable stand. Not over one billion feet, therefore, should be considered as the merchantable stand of timber on the Wenaha at the present time.

About half of the total area of the Wenaha is classified as being “not covered by timber.” A few scattering trees do actually occur over at least parts of this area, but where they occur they

are typically stunted and brushy and are not as numerous as would be left after a completed timber sale by the Forest Service, in a yellow pine stand where it was planned to leave enough seed trees to restock the area again with reproduction. Therefore, although the volume of such trees was considered as part of the total stand in the reconnaissance estimate for the Forest, their volume should not be included when figuring the annual or periodic cut for this Forest singly or as one of a group of Forests.

Under the present market conditions there is very little demand for timber from the Wenaha or for the privately-owned timber outside the boundaries. The George Palmer Lumber Company, with headquarters at La Grande, owns the best body of timber in the region. So far the contiguous government-owned timber has had no attraction for this company. Walla Walla and other towns do not depend on the local supply for the timber which they consume, most of it being imported from Portland. Most of the timber cut locally is used for fuel, being pretty generally of inferior quality and inaccessible. It is probable, however, that time will see a vital demand arise for timber from the Wenaha when the price of imported timber shall have gone up. The timber should by that time have increased in quantity as well as quality, so that its eventual use will be assured.

Plate XXVII [27]



**Looking across from one side of Meacham Creek to the other**, showing reproduction as slightly darkened strips following along the bottoms of the secondary canyons and swales. View taken two or three miles inside the forest boundary. Large trees are almost lacking.

## Management

The timber on the Wenaha is patchy, as well as that surrounding the Forest. There is no big body of government timber where it would be possible to set up a large mill. When, however, the timber does become of value it will always be a small mill proposition. The best systems of logging on the Wenaha would consist of a small mill or mills owned and operated by the government, which could be moved from place to place and set up on different parts of the Forest. It would then be possible to log those portions suffering most from decadence or insect infestation or to supply some local need, without having profit as a primary consideration. It is believed that small government-owned and operated mills are the only solution for the small over-mature or insect-infested bodies of timber such as are typical of the National Forests all through the Blue Mountain country. If the Forest Service waits for private concerns to log these small units most of this timber will be lost, for it will not be possible to log many of them at a profit sufficient to prove an inducement to private capital. The government on the other hand can afford to log them because immediate profit need not be the sole consideration. It will be possible to take into account the future welfare of the Forest.

Whatever may be said of government ownership of large mills operating in National Forests, there seems no doubt of the advisability of government ownership of small mills.

Every little while some one starts up a small mill somewhere on private land within the Forest or just outside the boundaries. These mill men are among the greatest philanthropists in the country. From ninety to one hundred percent of them sell their lumber for less than it costs them to manufacture it, with the result that after operating more or less intermittently for two or three years, they most often are obliged to go out of business. The reason for failure is usually a very palpable lack of judgment and business knowledge and ability. However, of such material are men, who start up the small mills, generally made, but if they are unable to make a success of their mills on good grade and accessible timber such as is found on most private holdings, their failure will be still more swift if they attempt to cut less accessible and inferior National Forest timber. It is thought that by good management the Forest Service will be able to do better in manufacturing its own lumber, although of poor quality, than the average small-mill man with his good timber but poor management.

## Accessibility

Most of the small bodies of timber on the Wenaha could be made accessible by wagon road, which is all that will be necessary, as they are not of sufficient importance to warrant a railroad spur being run up to them. It will always be possible to find a market for timber cut from the Wenaha, as the Forest is surrounded on four sides by an agricultural community and by numerous cities and towns. There are ten towns of over a thousand population aggregating nearly 40,000 people, half of which are in the city of Walla Walla. The rural population would bring this figure up considerably higher. There need never be a fear of lack of market for lumber.

## Cost of Operation

The cost of operating a mill of about 8 thousand daily capacity such as is advocated for the Forest Service would be about as follows:—

### Cost of Getting Logs to the Mill:

2 Fallers @ \$3.00 .....	\$6.00
1 Swamper .....	2.50
2 Teamsters @ \$2.50 .....	5.00
2 Teams @ \$2.00 .....	4.00
Feed for 2 teams @ \$1.50 .....	3.00
Total cost of logs to the mill .....	\$20.50

### Cost of Sawing

1 Rollway man .....	2.50
1 Ratchet setter.....	2.50
1 Sawyer.....	4.00
1 Edgeman .....	3.00
1 Off-bearer.....	2.50
1 Slab-man .....	2.25
1 Lumber-piler .....	2.25
1 Cut-off man.....	2.25
1 Engineer .....	3.50
Total cost of sawing .....	\$24.75

Cost of Getting Logs to the Mill .....

.....	\$20.50
-------	---------

Cost of Sawing .....

.....	<u>\$24.75</u>
-------	----------------

Total Cost of Manufacture .....

.....	<u>\$45.25</u>
-------	----------------

The total cost of manufacture of 8 M. feet for the government would then be \$45.25, or \$5.66 per M., to which should be added \$.50 for depreciation. Outside expenses, such as taxes, which would probably average about \$.10 per M., and stumpage about \$1.75 per M., would not have to be considered by the Forest Service. These figures would, however, bring the total cost of the lumber, for a private concern, up to \$8.01 per M. Moving and setting up the mill is not considered in this estimate, as it would be a very variable factor, depending on all kinds of conditions. Lumber at one of these small mills sells for twelve to fourteen dollars per M., mill run, and a good profit is made in those few instances where business principles are observed. Three or four dollars is usually required to haul the lumber from the mill to the nearest market.

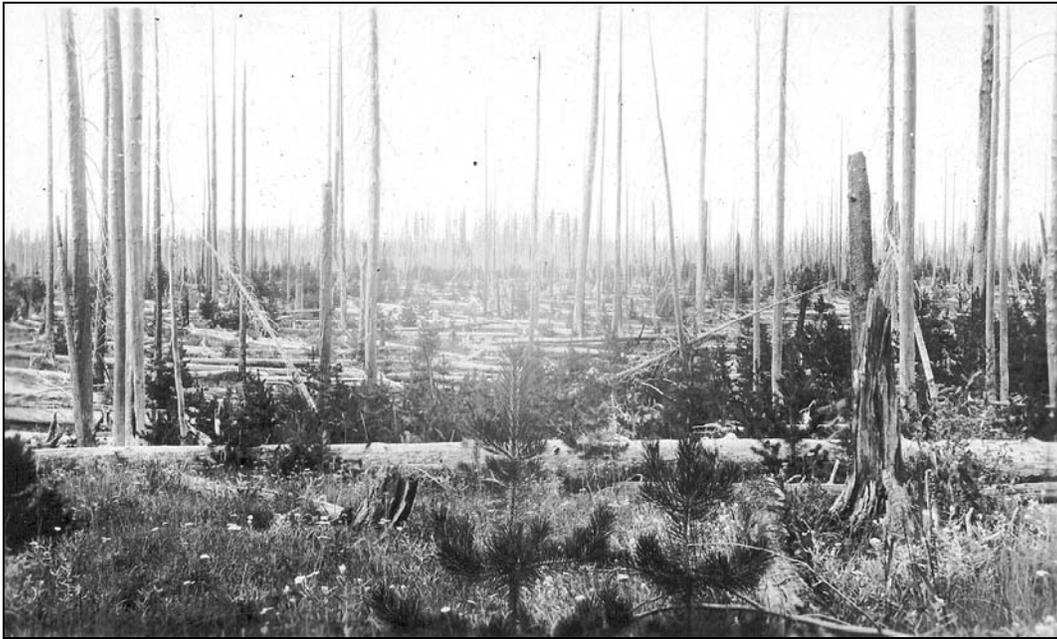
## Private Timber

Most of the privately owned timber occurring in a body within the Forest lies in T. 6 N., R. 42 E., east of the Crooked Fork and south of the Wenaha River. This region was at one time mostly taken up under the timber and stone act, but because of its inaccessibility, the timber has no value to the settlers who deaden by girdling several hundred acres every year. Those settlers living near the breaks of the Wenaha River and Crooked Fork haul the logs to the edge and shove them over the breaks. Timber is the worst enemy the people have in this region, and clearing the ground is their most difficult problem and requires many years under the process which they are employing. It is most unfortunate that this timber must be so ruthlessly destroyed, particularly as it is the best body of timber within the Wenaha Forest, which, if taken in connection with surrounding timber, might at some future time offer an attractive logging unit when the region is made more easily accessible than it is at the present time.

This whole general region is now under consideration for elimination. That portion of T. 6 N., R. 42 E., east of the Crooked Fork and north of the Wenaha River above the breaks, should probably be eliminated from the Forest as most of it is already alienated and the remainder is possible of agricultural development to some extent. The remainder of the area proposed for elimination is much better adapted for timber production than for crops and should be retained as part of the National Forest.

## Reforestation

The best that it will be possible to do toward reforesting the greater part of the non-timbered areas on the Forest will be to protect the few scattered trees, where they do exist, and the patches of reproduction, where they occur, from damage by fire or grazing or other harm. Certain particularly favorable areas it will be possible to restock artificially. There is an area on the Wenaha in most parts of sections 3, 4, 5, 8, 9, and 10, T. 4 N., R. 40 E., which would lend itself particularly well to the planting of western white pine. This species is abundant close by, where it has not been destroyed by fire, and attains a size up to 4 or 5 feet D.B.H. and 170 feet in height. The burn covering these sections was unusually thorough, killing most of the trees, which have since largely blown down. The soil is deep and moist, topography rolling, and climate frosty, but not too cold for excellent development of white pine, although too cold for yellow pine. There is at present very little reproduction or brush of any sort on the ground although lodgepole and willow brush are on the increase. Luxuriant grasses and weeds cover the ground for the remainder of the area. It is earnestly recommended that at least a part of this area be restocked to white pine by some artificial means. The region is so well adapted to this species that it will be unfortunate to have lodgepole and fir occupy the greater part of it, which will be the case in the ordinary course of nature.



**A burn in the transition type** in Sec. 10, T. 4 N., R. 40 E., where it is believed western white pine could be planted to good advantage. Topography undulating and in general clearer of reproduction than appears in the photograph.

White pine was at one time distributed over the entire Forest but it was killed out by fires, to which it is so particularly susceptible, years ago. A single white pine was discovered last summer in approximately unsurveyed section 36, T. 8 N., R. 43 E. There were not supposed to be any in this region and it was 20 miles from another known tree of the same species. A few scattered trees occur in approximately unsurveyed section 12, T. 7 N., R. 40 E., and doubtless in a few other places on the Forest. The largest body of this species, however, is found in T. 4 N., R. 40 E. It is thought that white pine would be an excellent tree to plant on all the burns found on the higher altitudes of the Wenaha. It attains good size and form in such places, and its wood is superior to any of the other species with which it occurs in such places. White pine should be encouraged on the high altitudes in the same degree that yellow pine is encouraged in the lower altitudes.

Editor's Note: This portion discusses western white pine. White pine was characterized as having a restricted geographical distribution in the Blue Mountains (Haig et al. 1941). In actuality, it has a relatively wide distribution as a minor or scattered species in mixed-conifer forests, seldom comprising a majority of the basal area in any individual stand. It is interesting that the largest western white pine in the Umatilla National Forest's big-tree program (see: <http://www.fs.fed.us/r6/uma/nr/silv/bigtree.shtml>) is located in the same area mentioned by Bright in this section of the reconnaissance report: Township 4 North, Range 40 East. When last measured in May of 2003, the Forest's champion western white pine was more than 5 feet in diameter (16¾ feet in circumference), 188 feet tall, and had a 32½ foot crown spread.

Wherever the transition type of forest has escaped fire, the yield per acre is as great as on the yellow pine slopes. The trees are small but are tolerant and stand very close together. The wood of the species commonly found growing here is inferior to yellow pine, but if white pine can be substituted for the present species, the quality as well as the quantity of wood produced will rival that found on the yellow pine slopes.

The possible yields of stands of timber in altitudes too high for yellow pine is well illustrated in T. 4 N., R. 40 E. Although the trees here are typically about a foot D.B.H., stands frequently average over 10 M. feet per acre for several sections. Unfortunately part of this township is under consideration for elimination from the National Forest. It is hoped that no part of it will be eliminated, as it is better suited for tree growth than any other region of similar area on the Wenaha. Killing frosts occur in every month of the year, and last summer over the entire township the frost was severe enough to kill the leaves of the larch trees, so that they were yellow or brown in the middle of summer and gave the same appearance as in autumn. Unfortunately any region which will grow a heavy stand of timber will also grow some kind of agricultural crop. Therefore, by excluding such land from the National Forests, the object for which the National Forests were originally primarily established, namely, the growth of timber, will be frustrated. Trees will grow in regions where it would be quite impossible for any sort of agricultural crop to grow, but in such regions the timber produced is of poor quality and has probably more value as a watershed protection than as wood. On one of the highest portions of the Wenaha a homesteader got patent to some land before the creation of the Forest in the typical transition type. He raises a cross between wild and cultivated strawberries. The strawberries ripen sometime in August, the largest having a diameter of a fifty-cent piece or a little better. They have an exceptionally good flavor and the bushes bear well. There are probably several other crops which might be grown up here near the timber line, such as radishes and onions, but if all such areas are to be classed as agricultural, the Wenaha will never be in a position to produce merchantable timber. The same will be true of all of the Blue Mountain Forests, whose value will be solely in grazing and watershed protection, although they were originally created for the purpose of yielding a timber supply.

Editor's Note: Large burns are mentioned several times in this reforestation section. In an early examination of the Wenaha Forest Reserve (Kent 1904), a particularly large fire was described: "Practically every portion of the reserve has suffered more or less from fire. The largest and most important of these was one which came from the present Umatilla Indian Reservation about fifty years ago, burned up the river Umatilla, into the Reserve, then turned north along the west slope, across the heads of the Walla Wallas, and reached as far as the head of the Wenaha. This burn has generally restocked finely, principally to tamarack and lodgepole pine."

### Grazing

When grazing fees were first charged the idea was merely to charge enough to cover the actual cost of administering the grazing business whose importance was far underestimated. It was thought that timber sales would in time at least cover the cost of the entire administration of

each National Forest. On many Forests this can never be the case and on most of the remaining Forests grazing will always be an important consideration. On the Wenaha the time of practically the entire personnel is consumed by grazing matters, or by projects whose development is made necessary or desirable through grazing. Cabins are built, springs developed, trails, telephone lines, and bridges constructed, with the primary object of being thereby better able to handle the grazing business. The forage destroyed in a fire is at least a far heavier present loss than the timber consumed at the same time. On the Umatilla it was found that the grazing fees charged by the Forest Service amounted to about one-sixth of the fees charged by private owners for the same privileges. The charges for grazing lands bordering the Wenaha are between three and four times those charged by the government. The cost of running stock on the Wenaha is less than buying land and running stock on it, besides which a permittee is protected on the National Forest from fire and trespass.

Plate XXIX [29]



**A band of sheep on the Forest being counted as they pass out of a corral. Near Clearwater Ranger Station.**

Editor's Note: Someone (possibly Irving Smith, Pomeroy District Ranger in 1962-1968) wrote on the original report that this photograph might depict the "old corral by [fire lookout] tower." According to the *History of the Northern Blue Mountains* (Tucker 1940), counting and separating corrals for sheep were built at Clearwater Ranger Station around 1909 or 1910.

Grazing is the greatest resource provided by the Wenaha. In round numbers one hundred and one thousand sheep and 9,000 cattle and horses were permitted to graze during the summer season on this Forest in 1913, not including the natural increase, which would bring the total number of stock a third higher. In spite of the scarcely more than nominal grazing fees, this stock yielded a return to the government of \$9,200. If the permittees who ran their stock on the Wenaha had been obliged to hire private range, they would have had to pay about \$.05 per acre for it. Allowing 4 acres to each sheep and 16 acres to each cow, the sheepmen would have had to pay \$20,200 for their 101,000 head, and the other stockmen \$7,200, or a total of \$27,400, where they now pay but \$9,200 including some yearlong permits no allowance for which has been made.

Plate XXX [30]



**Tool-box at Stockade Spring.** One of the numerous boxes placed at strategic points over the Forest, containing fire-fighting tools, some cooking utensils, provisions, and horse feed.

Editor's Note: Probably no image from the first edition elicited more response than this one because readers wondered about the significance of the swastika hanging at the back of the tool-box. Although the swastika was eventually adopted as an emblem of Nazi Germany, this did not happen until 1935, more than two decades after Unser took this photograph (and the Nazi version was rotated 45° from the orientation shown in this photograph). Originally, the swastika was an ancient cosmic or religious symbol formed by a Greek cross with the ends of the arms bent at right angles in either a clockwise or

counterclockwise direction. The word swastika is derived from the original Sanskrit meaning “sign of good luck,” from the root *svasti*, translated as “well-being.” Since the symbol is hanging in a fire fighting cache, I like to believe it was placed there to confer good luck on any firefighters needing supplies from the cache.

Had the grazing fees been increased so that they were one-half instead of between one-half and one-fourth the amount paid for private range, the receipts on the Wenaha would have equaled \$14,100 or about equaled the expenditures, and had they been \$.12 a head for sheep and \$.50 a head for cattle, the receipts would have been \$16,620, or a safe margin over the expenditures. It was found last year that these same fees, i.e., \$.12 for sheep and \$.50 for cattle, would have returned the same relative safe margin over expenditures on the Umatilla National Forest as it would on the Wenaha. These fees would still be only slightly over half the charge demanded and obtained by owners of private lands, and they would certainly not injure the stock industry in the slightest. Both sheep and cattle men must of necessity be men of means. They cannot live long from hand to mouth and run such a business. They are operating a large business involving considerable capital and they should be classed with mill-men who are obliged to pay for government timber from National Forests approximately the current market rates. It seems logical, therefore, that the stock men should pay a reasonable rate for the grasses which they buy from the government, since this is no less a natural resource than the timber bought by mill-men. It is thought that particularly on Forests where the demand for National Forest range is so great as on the Wenaha and Umatilla and other Blue Mountain Forests, the grazing fees should be substantially raised. This would cause the stockmen to turn their eyes to the less accessible Forests, as the Clearwater in northern Idaho, where the fees might be allowed to stand at the present low figure for a few years. It is, of course, realized that the primary object of the National Forests is not for the purpose of producing revenue, but people are coming more and more to expect that they should at least pay for themselves. If those Forests where grazing is as intensive as in the Blue Mountain Forests were allowed to raise their fees to a sum equal to a half or two-thirds the value of the grasses annually consumed on them by stock, they would yield a very satisfactory margin over expenditures. They could be made to yield as large a revenue at least from their grasses as the heavily timbered Forests will ever yield from their timber resources, and the revenue will be regular and reliable, whereas that derived from the sale of timber will of necessity fluctuate.

A woolgrowers' association recently petitioned Congress to reduce the fees on grazing sheep, but it is thought that this was done more to forestall any raise in the fees, which Congress might be contemplating, rather than because of a belief in any unfairness of the present rates. And of course the fact that the members of the association were getting the grass cheap would not prevent them from hoping to get it for nothing.

All classes of users of the Blue Mountain Forests seem to be well satisfied regarding their administration, and opposition, when it is encountered, is usually among persons who are not users of the Forests, but who are prejudiced in their opinions entirely by what they have heard others in the same position as themselves say.

When opposition does occur among some of the users, mostly “old timers,” it appears to be no more than the natural illogical instinct of humanity to oppose all forms of governmental restrictions, even although that government may have been created by their own votes. In like manner, a community realizes the necessity of the protection of game, but, having made appropriate laws for this purpose, they proceed to make life as miserable as possible for the officers chosen to enforce the laws. This shows the ease with which good laws can be made and the difficulty of educating people to the point of respecting those laws when they happen to apply to themselves.

Plate XXXI [31]



**Mud Spring, after being improved by the Forest Service.**

Editor's Note: Someone (possibly Irving Smith, Pomeroy District Ranger in 1962-1968) wrote on the original report that this photograph might depict Edmiston Spring, which had been called “Mud” Spring. On a 1916 map of the Wenaha National Forest, what is now called Edmiston Spring was shown as Mud Spring. The Pomeroy Ranger District, however, has a surprising number of mud springs, such as Big Mud Spring and Little Mud Spring located near Mud Spring Ridge and south of Charley Creek.

Plate XXXII [32]



**Round Prairie Spring** – developed by the Forest Service.

Editor's Note: This photo is also in our historical files; it was taken by M.N. Unser on Aug. 2, 1913 in app. section 12, T. 8 N., R. 43 E. Shows trough and fence built by Forest Service.



Editor's Note: This photograph was taken at about the same spot during the period of September 24-26, 1996 by David C. Powell.

Plate XXXIII [33]



**Forest Service telephone line between Clearwater Ranger Station and Tucañon Ranger Station.**



Editor's Note: This photograph was taken at about the same spot during the period of September 24-26, 1996 by David C. Powell.



Near the top of Table Rock Mountain, showing excellent bunch grass growing on the west slope.

### Mineral Resources

The Wenaha Forest is particularly poor in valuable mineral deposits of any sort. Traces of gold, copper, and coal have been discovered in the past and have sometimes caused small local agitation, but no mineral has so far proved to be of sufficient quantity to make the mining of it possible, in spite of the fact that the whole Forest has been thoroughly worked over for years.

At present some prospectors claim to have discovered gold on the Tucañon River, and during the past winter have broken up considerable rock, but so far the chances of their finding anything of value would appear to be very slight. There is no trace of gold to be found in the Tucañon River, which would indicate that there is small chance of finding it in commercial quantities over its drainage system. The perseverance of these miners has, however, led to a revival of interest over mining on the Wenaha.

## Game

Game on the Wenaha Forest is scarce, as on most of the Blue Mountain Forests where, during the early settlements, it was so particularly abundant. State game protection has proved to be inadequate. Even where elk have been imported from the Yellow Stone to restock ranges over which they have been entirely killed out, it seems almost impossible to get even the minimum penalty imposed upon anyone shooting them. It is believed that if many species of game in the Blue Mountains are to be preserved from extinction, it will be necessary to establish a federal game preserve, such as is already in existence in the Yellow Stone National Park. As in that part, it should be contrary to law to carry a fire-arm with a broken seal within the boundaries of the preserve. Whether such a preserve should be established on the Wenaha or on some rougher and more mountainous Forest as the Wallowa or the Whitman is uncertain, but it is felt that a game refuge on some one of these Forests is necessary if the game is to be preserved from extinction in the Blue Mountain region.

Plate XXXV [35]



Plate XXXVI [36]



**Elk on the Wenaha** – taken at 100 feet in early morning.

Editor's Note: Both of the original photographs were in poor condition; this was the best scanning quality that could be obtained.

Plate XXXVII [37]



Plate XXXVIII [38]



**Two views showing typical so-called “glades”** along the top of the sides of the Umatilla River. These glades are typical of the main streams in that part of the Wenaaha lying in Oregon. These glades permit open travel through an otherwise almost inaccessible country.

Plate XXXIX [39]



**Looking down Bobsled Creek in foreground**, showing timber starting up in secondary draws. The Umatilla River lies in the big canyon in the background.

Plate XL [40]



**The trees in this picture are all young trees**, mostly seedlings, saplings, or poles, and are covering slopes which a comparatively few years ago must have been bare. The stoppage of fire since the introduction of grazing has done much to make these trees possible, coupled with the protection in recent years of the Forest Service.

Plate XLI [41]



**The Grande Ronde River at Palmer Junction.** Part of this river flows through the Wenaha National Forest from which it also receives many of its most important tributaries, among them the Wenaha River.

Plate XLII [42]



**Part of the largest body of timber on the Wenaha.** The country is tributary to Summer Creek, T. 4 N., R. 39 E. Species are mostly the firs, lodgepole, and spruce.

Plate XLIII [43]



**The Forest Service trail down the ridge into Tucañon Creek.** Timber on the canyon walls is mostly small Douglas fir growing in the more protected places, with large trees in the bottom and running up the secondary canyons for a short distance. The irregular white object in the center of the picture is a ploughed field.

Editor's Note: Several copies of this photograph are contained in the Umatilla National Forest historical files in Pendleton, Oregon. The file copies are labelled as showing the "Hixson Gulch trail, built by Forest Service, showing switch-backs. Sec. 27, T. 9 N., R. 41 E." Photographed by M.N. Unser in July, 1913.

## SUMMARY

The National Forests were originally established very largely with the sole object in view of timber conservation and production. If timber were the only resource of the Wenaha it would offer little excuse for its being. Fortunately, however, grazing and watershed protection have now come to be recognized as quite as important as timber, so that even if the timber of this Forest is of low value when considered in terms of board feet, the Forest is still most vitally important from the standpoint of the grazing and watershed protection which it affords. Any curtailment of its bounds would be most detrimental to the welfare of the community and this is now so in general realized by the community.

In spite of the fact that the Wenaha is typically a "grazing Forest," yet all parts of it not covered by timber are potentially forest land. It is difficult to imagine how the various National Forests already established and the proposed National Grazing Ranges would be classified, i.e., whether they would be classified as National Forests or National Grazing Ranges. Large portions, at least, of any National Grazing Range that could be established would contain considerable potential forest lands, and all National Forests would contain some grazing land. There would be difficulty in determining into which of these two classes the Wenaha should be considered. Grazing is the paramount issues on this Forest at the present day, but it is certain that in time its timber will also be valuable. The Forest Service is the only branch of the government that has had experience in grazing matters, and is therefore the best qualified to take charge of land withdrawn from the public domain as chiefly valuable for grazing. Laws on Grazing Ranges and National Forests would be about the same regarding permittees, agricultural settlement, special uses, etc.

From the standpoint of watershed protection the Wenaha is most important. Various towns aggregating a population of 40,000 people receive their water supply from streams heading on the Wenaha, not counting a large rural population. Streams tributary to the Columbia, Snake, and Grande Ronde River head within its boundaries and offer great possibilities in irrigation and water power development.

Besides the permits issued for which a charge is made by the Forest Service, there were last year 498 free use permits used for wood, aggregating 3 million B.F. of timber, and between 20 and 30 special use permits for various other purposes, as drift fences, cabins, etc.

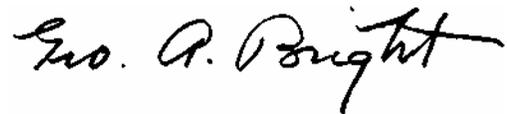
It has been seen that over 100,000 sheep and over 9,000 cattle and horses graze on the Wenaha during the summer season, not including the natural increase during this period. A small part of this stock grazes on the Forest during the entire year. About 60,000 lambs, average price 3.50 dollars, and 15,000 wethers, average price 4.50 dollars, are fattened during the summer on the Wenaha and are sold yearly for mutton, and over 800,000 pounds of wool are sheared annually from permitted sheep at an average of about \$.12 per pound.

As regards cattle, the natural increase of this class of stock which grazes on the Forest and which is annually sold for beef amounts to 2,250 in number. At two years of age, fat steers sell for at least 75 dollars a head. Taking the above prices for lambs, wethers, wool, and beef, the

output of raw material produced annually on the Wenaha amounts to over half a million dollars (\$542,250.00).

The Wenaha is one of the most intensively grazed Forests in District No. 6. Stock-raising here as vitally concerns the prosperity of the country as timber ever has or will on the coast. There could be no greater danger of a timber monopoly in other regions of the United States, than there would be of range monopoly in this region, should the Wenaha be thrown back into the public domain. Such monopolies have existed before and would be much more likely to occur again should the opportunity for them arise. It has been pointed out that the receipts derived from the Wenaha from all sources amount to only about two-thirds of the expenditures, but that if it should be required that the Forest yield a margin of profit it could very readily be made to do so by a slight rise in the grazing fees such as would not in any way injure the stock industry. It is urged that such an increase be made.

Lastly it may be noted that the entire Wenaha lies strictly within the timber belt. That it is so poorly timbered is the result of neglect resulting in fire and over-grazing, and this should be a strong argument in favor of government supervision, certainly not an argument to reduce it to the same treatment it suffered in years gone by. Timber is coming in on slopes and ridges, which only a few years ago within the memory of many people were bare of trees. In years to come the Wenaha will be valuable not only from the standpoint of grazing and watershed protection as it is now, but from the standpoint also of lumber. Certainly any policy which would permit part or the whole of this Forest to pass from government control would result in conditions unfavorable to the general community of the present as well as of the future.



---

Forest Assistant.

S  
Wenaha – Reconnaissance  
Extensive

April 13, 1914.

Cost of the Reconnaissance

The total cost of the extensive reconnaissance on the Wenaha National Forest was \$941.74, of which \$781.70 was for salary and \$160.04 for expenses. In round numbers the 789,000 acres comprised within the boundaries of the Forest was covered at an average of a little more than 1.19 mills per acre.

The 789,000 acres, as found by the planimeter to be the area of the Wenaha, is about 3,000 acres less than has been established for the Forest, but after measuring the area three or four times this was the area obtained. About a third of the Forest is unsurveyed and the area of this unsurveyed region is, therefore, somewhat uncertain. If there is a slight constant error in the scale of the map, caused by the shrinkage of the paper, the error for any one of the small divisions of the Forest would be so small as to be negligible.

[END OF THE WENAHA RECONNAISSANCE REPORT.]

APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST

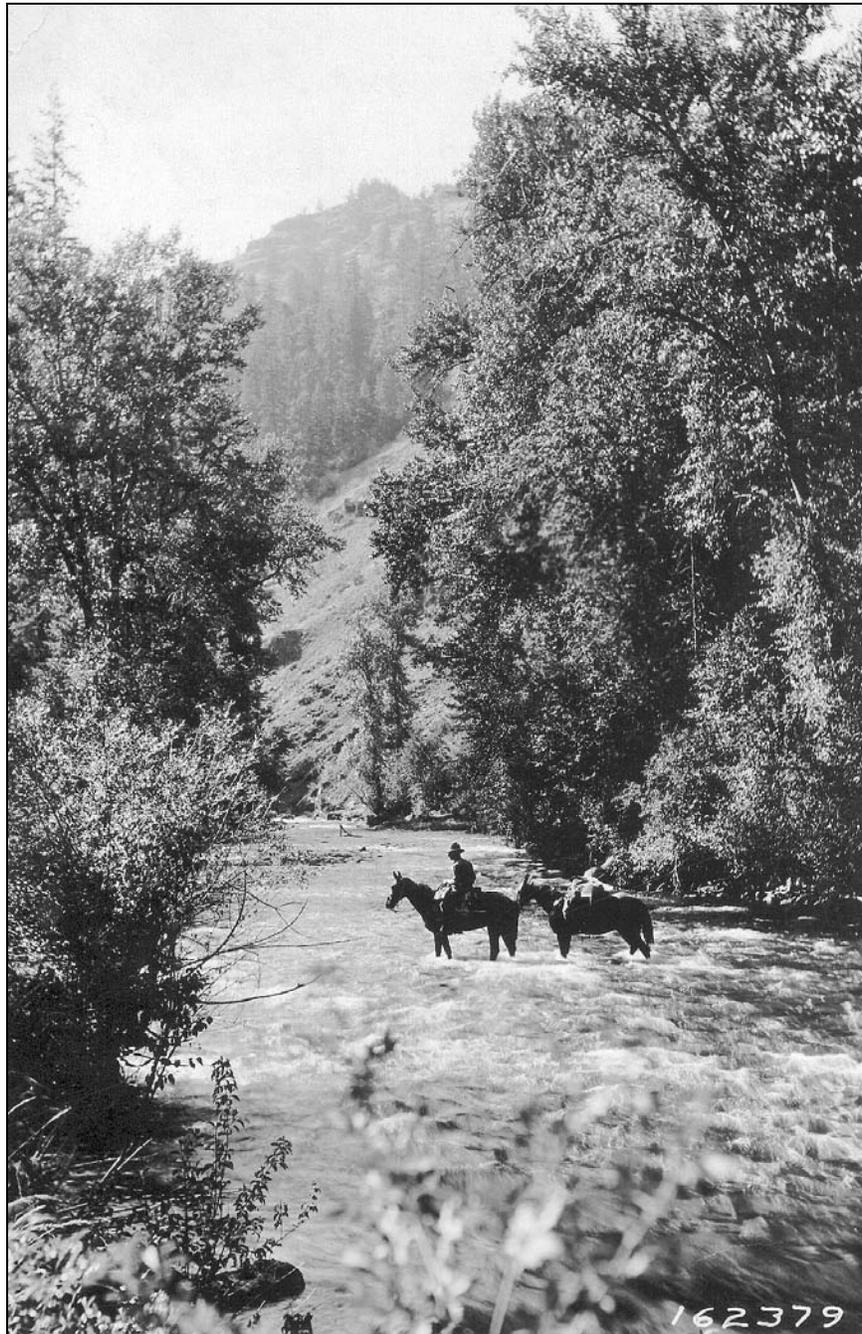
Figure 1



**Photo Number:** 61930. **Locality:** Wenaha Forest, Columbia County, Washington. **Date:** August 15, 1906. **Photographer:** H.D. Foster. **Altitude:** 2400'. **Slope:** North. **Location:** On Waterman's Land (approximately in section 10, T. 9 N., R. 41 E.). **Subject:** The Tucañon Creek looking down stream (North). One of the perennial streams of the reserve. The river drops a little less than 100 feet to the mile. There is good water power to be had on this stream. 3 miles above a sawmill is run by its power, and a project is now "on" for the development of electric power and lighting for the cities below from its power. **Species:** On its banks: Red Fir, Yellow Pine, White Fir, cottonwood, Balm of Gilead, Alder, Mountain Maple, etc. Editor's Note: When this image was taken, the Wenaha was a Forest Reserve.

APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST

Figure 2



**Photo Number:** 162379. **Date:** July, 1921. **Caption:** On the Wenaha River, Umatilla Forest. A future recreation ground for Walla Walla, Pendleton and the wheat region. Vast amount of room here but not developed.

Editor's Note: A cropped version of this photograph was used on the cover of a popular book entitled *100 Years of Federal Forestry* (see Bergoffen 1976 in the References section). The caption used for the cover of that book was: "A forester at work on the Umatilla National Forest, Oregon, in July 1921. Wenaha River was then far from a road, so this Ranger had to travel with horse and pack outfit." According to Supervisor's Office records, the rider was Jim McCrary, for whom no other information is available.

APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST

Figure 3



**Photo Number:** 162380. **Date:** July, 1921? **Caption:** Where Butte Creek comes into the Wenaha River, Umatilla Forest.

APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST

Figure 4



**Photo Number:** 61928. **Locality:** Wenaha Forest, Columbia County, Washington. **Date:** August 14, 1906. **Photographer:** H.D. Foster. **Altitude:** about 3200'. **Slope:** West. **Location:** About 2 miles east of Waterman's on the Tucañon (possibly section 11 or 12, T. 9 N., R. 41 E.). **Subject:** Rim-rock on slopes of Tucañon. A characteristic feature of canyon slopes near the edge of the reserve. **Rock:** Basalt. **Soil:** Very little. **Type:** Canyon slope.

Editor's Note: When this photograph was taken, the Wenaha was a Forest Reserve. If the legal description provided by Foster is correct, then this image might have been acquired near a landmark called Jumpoff Joe, located along the basalt rimrock forming the divide between Cummings Creek to the east and the Tucannon River to the west (and close to the section line between sections 11 and 12).

Figure 5



**Photo Number:** 61919. **Locality:** Wenaha Forest, Garfield County, Washington. **Date:** July 20, 1906. **Photographer:** H.D. Foster. **Location:** Section 23, T. 9 N., R. 42 E. **Subject:** A forest assistant's camp on the reserve. Since this camp is on land on which cattle grazing is allowed, it is necessary to enclose it with a fence to protect it. A wagon road leads to the camp, as is evidenced by the presence of the surrey on which all camp equipment and provisions were packed.

Editor's Note: When this photograph was taken, the Wenaha was a Forest Reserve. Someone wrote on the bottom of the card on which the photograph is mounted that this camp might have been located between the Iron Springs and Clearwater Ranger Stations. Although no place name was associated with it, an administrative withdrawal (such as would be used for guard stations and camps) was shown in the northwest quarter of section 14 of Township 9 North, Range 42 East on a set of extensive classification maps prepared for the Wenaha National Forest by W.H. Kendall in 1914 (Kendall 1914) (note that section 14 adjoins section 23 to the north, and section 23 was mentioned by Foster in his description for this photograph).

**APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST**

**Figure 6**



**Photo Number:** 23621A. **Locality:** Wenaha National Forest, Washington (Asotin County?). **Date:** 1913? **Photographer:** M.N. Unser. **Location:** Section 36, T. 6 N., R. 42 E., W.M. **Subject:** Dry Gulch Ranger Station.

Editor's Note: According to a 1916 map of the Wenaha National Forest, Dry Gulch Ranger Station was located about three miles due west of Troy, Oregon, near the junction of Dry Gulch and the Wenaha River. This image was acquired by the same photographer (M.N. Unser) and in the same year (1913) as the reconnaissance report photographs. It is likely that figure 6 was taken during the reconnaissance, but that Bright decided not to include it in the final report.

## APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST

**Figure 7**



**Photo Number:** 61932. **Locality:** Wenaha Forest, Columbia County, Washington. **Date:** August 16, 1906. **Photographer:** H.D. Foster. **Altitude:** 2400'. **Soil:** Clay loam. **Rock:** Basalt and lava. **Type:** Canyon bottom. **Location:** [Section 10, T. 9 N., R. 41 E.?] **Subject:** A typical farm on the reserve. This farm (C.H. Waterman's) is patented under the homestead laws. It lies in the bottomland of the Tucañon. This canyon bottom has agricultural land for some distance up, and is taken up in claims, as far up as the south line of Township 9 North. Charred stumps show the former presence of a yellow pine forest.

Editor's Note: When this photograph was taken, the Wenaha was a Forest Reserve. Waterman Gulch meets the Tucannon River in the north half of section 10. According to a set of extensive classification maps prepared for the Wenaha National Forest by W.H. Kendall in 1914 (Kendall 1914), Waterman's homestead patents comprised most of the private land in section 10. Other patented lands in the vicinity of Waterman's farm included ownerships by Gowing (located south of Waterman's but still in section 10) and Watson (located north of Waterman's in sections 2 and 3).

**APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST**

**Figure 8**



**Photo Number:** 61924. **Locality:** Wenaha Forest, Columbia County, Washington. **Date:** August 8, 1906. **Photographer:** H.D. Foster. **Altitude:** About 2600'. **Subject:** A sawmill operated under permit on the Wenaha Forest Reserve, showing log yard. Run by water power; circular saw; daily capacity 10,000 feet.

Editor's Note: When this photograph was taken, the Wenaha was a Forest Reserve. Someone wrote on the bottom of the card on which the photograph is mounted that this mill might have been located near the site of the Tucannon Ranger Station. Based on another photograph acquired on the same day by Foster (see next figure in this appendix), this sawmill might have been operated by Roy M. Grupe. According to a 1916 map of the Wenaha National Forest, Grupe had been awarded a timber sale in the Tucannon River area on March 18, 1907.

APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST

Figure 9



**Photo Number:** 61923. **Locality:** Wenaha Forest, Columbia County, Washington; Township 9 North, Range 41 East. **Date:** August 8, 1906. **Photographer:** H.D. Foster. **Subject:** Dense stand of young yellow pine. An unwise disposal of sawdust lies here a foot or more deep. No further germination is possible, while in bare spots close by the ground is dotted with one year old seedlings. The sawdust is likely to injure or kill the young stand and is a fire trap always. **Relative situation:** Near Girpe's sawmill. **Soil:** Deep, fresh, clay.

Editor's Note: When this photograph was taken, the Wenaha was a Forest Reserve. Someone wrote on the bottom of the card on which the photograph is mounted that this mill might have been located near the site of the Tucannon Ranger Station. Based on a 1916 map of the Wenaha National Forest, this sawmill might have been operated by Roy M. Grupe (rather than "Girpe"). Grupe had been awarded a timber sale in the Tucannon River area on March 18, 1907.

Figure 10



**Photo Number:** 16143A. **Locality:** Wenaha Forest, Columbia County, Washington; Township 9 North, Range 41 East, section 21. **Date:** July 13, 1913. **Photographer:** M.N. Unser. **Subject:** Western yellow pine in Hixson Gulch.

Editor's Note: According to a 1916 map, there was a Hixson Ranger Station located in section 21 about ½ mile from the Tucannon Ranger Station. Note that contemporary maps spell this place name as Hixon, rather than the Hixson spelling used with this photograph and on historical maps (Kendall 1914). This image was acquired by the same photographer (M.N. Unser) and in the same year (1913) as the reconnaissance report photographs. It is likely that figure 10 was taken during the reconnaissance, but that Bright decided not to include it in the final report.

Figure 11



**Photo Number:** 23627A. **Date:** Unknown. **Photographer:** Unknown. **Subject:** Twin Buttes and Wenaha River breaks showing steep slopes, Wenaha National Forest, Washington.

Editor's Note: The perspective of this photograph appears to be looking north across the Wenaha River canyon (middleground) toward Twin Buttes (background). It is obvious that George Bright and his contemporaries were impressed by the steep, rugged nature of the Wenaha National Forest because many photographs in this report were intended to illustrate this point (see plates 5 and 22-25). The rugged character of the country resulted in a sizable portion of the Wenaha National Forest being included in the Wenaha-Tucannon Wilderness when it was established by the Endangered American Wilderness Act of 1978, although much of the Wilderness area had previously been designated as the Wenaha Backcountry by the Regional Forester in 1957. The Wenaha-Tucannon Wilderness is a good example of so-called "inverted" wilderness where undeveloped areas were located at lower elevations than developed areas, which is opposite from most Rocky Mountain wildernesses located at higher elevations than developed areas.

**APPENDIX: HISTORICAL PHOTOGRAPHS OF THE WENAHA NATIONAL FOREST**

**Figure 12**



**Photo Number:** 87410. **Date:** September 20, 1909. **Photographer:** R.E. Smith. **Locality:** Union County, Oregon; Township 1 South, Range 34 East. **Subject:** Johnson Creek (Big) showing slopes and distribution of timber.

Editor's Note: This photograph was apparently acquired about 10 miles from the Wenaha National Forest boundary near its southwestern corner.

## Acknowledgments

Many Forest Service employees helped produce this publication. Linda Dillavou (Supervisor's Office) typed the text after we discovered that the quality of the original copy was too poor to scan electronically. She also scanned many of the supplemental photographs included in the appendix.

Shelly York (Regional Office) and Joani Bosworth (Supervisor's Office) helped with publishing arrangements. Jim Tardif (Pomeroy Ranger District, retired) supplied information about Irving Smith, District Ranger at Pomeroy from 1962 to 1968.

## References

- Allen, E.T. 1906.** Inspection report for the Wenaha Forest Reserve. Unpublished Typescript Report. [Place of Publication Unknown]: U.S. Department of Agriculture, Forest Service. 38 p. <http://www.fs.fed.us/r6/uma/publications/history/Wenaha1.pdf>
- Bergoffen, W.W. 1976.** 100 years of federal forestry. Agriculture Information Bulletin No. 402. Washington, DC: U.S. Department of Agriculture, Forest Service. 199 p.
- Bright, G.A. 1911.** Annual silvical report. Unpublished Typescript Report. Heppner, OR: U.S. Department of Agriculture, Forest Service, Umatilla National Forest. 17 p. <http://www.fs.fed.us/r6/uma/publications/history/Whitman1.pdf>
- Bright, G.A. 1913.** Umatilla National Forest annual silvical report: relative merits of western larch and Douglas fir in the Blue Mountains, Oregon. [Place of Publication Unknown]: [U.S. Department of Agriculture, Forest Service.] 16 p. <http://www.fs.fed.us/r6/uma/publications/history/Umatilla1.pdf>
- Bright, G.A. 1914.** The extensive reconnaissance report of the Wenaha National Forest. Unpublished Typescript Report. [Walla Walla, WA]: U.S. Department of Agriculture, Forest Service. 84 p (plus map).
- Darlington, H.T. 1915.** A study of grazing conditions in the Wenaha National Forest. Bulletin No. 122. Pullman, WA: State College of Washington, Agricultural Experiment Station. 18 p. <http://www.fs.fed.us/r6/uma/publications/history/darlington1915.pdf>
- Drake, G.L. 1920.** Timber sale report: Looking-glass Creek area. Unpublished Typescript Report. [Place of publication unknown]: [U.S. Department of Agriculture, Forest Service]. 6 p. <http://www.fs.fed.us/r6/uma/publications/history/Wenaha2.pdf>
- Foster, H.D. 1905.** Two silvics narratives for the Wenaha National Forest, Washington. Unpublished Typescript Report. [Place of publication unknown]: [U.S. Department of Agriculture, Forest Service]. 6 p. <http://www.fs.fed.us/r6/uma/publications/history/Wenaha3.pdf>

- Foster, H.D. 1906.** Report on the silvics of the Wenaha Forest Reserve, Washington and Oregon. Unpublished Typescript Report. [Place of Publication Unknown]: U.S. Department of Agriculture, Forest Service. 39 p.  
<http://www.fs.fed.us/r6/uma/publications/history/Wenaha4.pdf>
- Haig, I.T.; Davis, K.P.; Weidman, R.H. 1941.** Natural regeneration in the western white pine type. Technical Bulletin No. 767. Washington, DC: U.S. Department of Agriculture. 99 p.
- Kendall, W.H. 1914.** Wenaha classification, extensive. [Place of publication unknown]: [U.S. Department of Agriculture, Forest Service, Wenaha National Forest]. 1:63,360; projection unknown; 18" × 21"; 10 colored thematic map sheets.  
[http://www.fs.fed.us/r6/uma/publications/history/maps\\_1914.shtml](http://www.fs.fed.us/r6/uma/publications/history/maps_1914.shtml)
- Kent, W.H.B. 1904.** The proposed Wenaha Forest Reserve, Washington and Oregon: examination and report. Unpublished Typescript Report. [Place of Publication Unknown]: U.S. Department of Agriculture, Bureau of Forestry. 22 p.  
<http://www.fs.fed.us/r6/uma/publications/history/Wenaha5.pdf>
- Kuhns, E.Y. 1964.** The Mottet Meadows Fire, Wenaha National Forest, 1919. Timber-Lines. 18(June): 45-49. <http://www.fs.fed.us/r6/uma/publications/history/kuhns%201964.pdf>
- Morgan, P.; Aplet, G.H.; Haufler, J.B.; Humphries, H.C.; Moore, M.M.; Wilson, W.D. 1994.** Historical range of variability: a useful tool for evaluating ecosystem change. In: Sampson, R.N.; Adams, D.L., eds. Assessing forest ecosystem health in the inland West. New York: The Haworth Press: 87-111.
- Schmitz, J.M. 1906.** Report on an examination of the proposed addition to Wenaha Forest Reserve, Oregon. Unpublished Typescript Report. [Place of Publication Unknown]: U.S. Department of Agriculture, Forest Service. 9 p.  
<http://www.fs.fed.us/r6/uma/publications/history/Wenaha6.pdf>
- Schmitz, J.M. 1962.** The early days of the Wenaha Forest Reserve. Timber-Lines. 16(June): 90-94. <http://www.fs.fed.us/r6/uma/publications/history/schmitz%201962.pdf>
- Tucker, G.J. 1940.** History of the northern Blue Mountains. Unpublished Report. [Pendleton, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Region, Umatilla National Forest.] 170 p. <http://www.fs.fed.us/r6/uma/publications/history/Umatilla16.pdf>
- USDA Forest Service. 1910-1951.** Miscellaneous memoranda and reports regarding exotic tree plantings on the Wenaha National Forest. Unpublished Typescript Memoranda. [Place of publication varies]: U.S. Department of Agriculture, Forest Service. 24 p.
- USDA Forest Service. 1997.** Establishment and modification of national forest boundaries and national grasslands; a chronological record: 1891-1996. FS-612. Washington, DC: U.S. Department of Agriculture, Forest Service, Lands Staff. 96 p (plus independently numbered index, exhibit, and addendums).

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W. Washington, DC 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.