

Gifford Pinchot's 1896 Selway River Diary: An Introduction by Dennis Baird

Early in 1896, Secretary of the Interior Hoke Smith, bowing to considerable pressure, asked Wolcott Gibbs, the head of the National Academy of Sciences, to establish a National Forest Commission.

Among those appointed to this Commission, which served without pay, was a single trained forester, Gifford Pinchot. A related body, the Special Committee, on which Pinchot had also served, had previously recommended a series of on the ground studies of potential forest reserves, and that areas in Montana, Idaho and Oregon “be regarded as of special importance.”

On 11 June 1896, Congress authorized \$25,000 for the work of the Commission—a good thing, since Pinchot, accompanied by a future Chief of the Forest Service, his friend Henry Graves, had already left for the west. The full Commission, which included conservationist John Muir as a member, arrived in Montana in mid-July. An early plan called for Pinchot to join Muir in Alaska, but in a letter to his father written from Missoula, Pinchot noted that plans had changed. Now, accompanied by Graves and joined by a serving Army officer, George Ahern [later to become Chief Forester of the Philippine Islands], Pinchot would travel from Hamilton, Montana to visit much of what would become the 4.15 million acre Bitterroot Forest Reserve. The diary of this important trip follows.

Pinchot and his party left Hamilton for the Selway River valley, crossing into Idaho via Lost Horse Pass. They journeyed down the Selway to Moose Creek, and then up the valley of that stream to the ancient Nez Perce village site at Three Forks. From there they followed the Indian trail across the high divide to the north and dropped into the valley of the Lochsa River. They followed this river down stream to Lowell and on to Syringa, before crossing into the valley of the Clearwater River's South Fork. There they took the newly opened Elk City Wagon Road east toward Elk City. This road parallels the route of the Southern Nez Perce Trail past Mountain House, Pilot Rock, and then down Newsome Creek back to the South Fork.

Pinchot's party left Elk City on the Southern Trail, following it to Red River and across the high country to the east, past Magruder Mountain, back down across the upper Selway's Valley, and then back into Montana across Nez Perce Pass.

The Diary provides a substantial amount of forest and botanical information, as well as detail on the region's fire regime, which Pinchot noted was often human caused. What he saw confirmed Pinchot's earlier suspicion that the Bitterroot country would make a splendid Forest Reserve, an idea that he quickly promoted in his letters and reports to government officials. This trip is the key event in the establishment of the Bitterroot Forest Reserve, from which were later carved

the Bitterroot, Selway, Nez Perce, and, in part, the Clearwater National Forests. There is a short and very direct link between the trip, the Diary, and the establishment of the Reserve.

At the end of the entry for most days, in *Italic* in our version, is a short mention of what appears to be the day's weather (e.g., "clear today"). This is, instead, a description of the quality of communication Pinchot enjoyed that day with his deceased fiancée, Laura Houghteling, who has died in 1894. She was the love of Pinchot's life, and Pinchot communicated with her this way for over twenty years.

Original manuscript source:

Library of Congress. Manuscript Division. Gifford Pinchot Papers. Box 3030.

July 27 - Aug. 20, 1896

Bitter Root Res.

FIELD BOOK

361

GIFFORD PINCHOT DIARY

Bitter Root Res., Field Book 361

July 27	Hamilton	1.30 PM			
	Wards		4		11. m
	Lost Horse Creek		5	S.W.	4.
		SWW	7		<u>6</u>
					21 miles

Camp

Yellow pine until after skirting Lost Horse Creek. About Wards densest I have ever seen, { ? } up to .5 and .6. Very fine ygr, with whorls 2' and more apart at times lgen. less. Still shows evidence of slow growth.

After reaching Creek Dgl. w. Y. pine, and later consid L.P.

Canyon with very steep, craggy sides 2-3 M feet high. First broken slag line I have seen in its detail. Scattering trees all about slopes growing where it seems impossible.

At first ygr. Y.P. Dgl and L.P. coniferous in dense patches. Then older forest of L.P. Dgl and spruce and fir.

Canyon walls less steep and craggy as we go up. Trail to lunch place worst I ever traveled as to rocks. Much large patches of forest until the canyon is nearly all forest covered.

General density poor, but with dense and very dense places.

No question but that reserve should cross summit and extend well down E slope. To be noted that lumbering has taken place well inside canyon far from any evidence of settlement.

July 28	Camp	7.25	SW		
	Val Sum	8.45-10			
SW	Lunch	12.15-2.30		3½ h	8 miles
	First X of L.H.Cr.	4.			4
	Foot divide	5.			2½
	Lake	5.50	NW		

Camp Lake on Summit

$$\frac{2}{16.5}$$

North Fork comes in about 9 miles above camp.

Lake $\frac{1}{2}$ mile long, or over.

$\frac{1}{2}$ mile to second of these Twin Lakes.

$$\begin{array}{r} 21 \\ 16.5 \\ \hline 14 \\ 51.5 \end{array}$$

Forest about Lakes. A pure forest of *A. subalp.* With occas *P. flsc*, HS in very slow regen. Hence looks fairly even aged. Trees stand completely isolated, or in groups of three or four, with grass around. Crowns reach the ground. Boggy soil. These trees short – crowns very narrow.

July 29	Left Camp	8.00 AM	
	Second Twin Lake	N	$\frac{1}{2}$ m
	Second Lake $\frac{1}{2}$ mile long		$\frac{1}{2}$
	Nena Lake to beg descent	N	$\frac{1}{2}$
	Descent	NNE	3.
	Fall 1,500 feet		
	NE		3
	NNW		2
	N		$4\frac{1}{2}$
			<hr/> 14 miles

Camp at 3.05 PM

Total today 51 $\frac{1}{2}$ miles

Yellow Pine practically pure for this first 15 miles. About Wards the densest I ever saw, smt. up to .5 or .6, with very fine ygr. which had whorls often two feet about. But evidence to show in the less fertile spots that reprod with this sp. Is very slow.

After reaching Lost Horse Creek a good deal of Dgl mixed with the *P. pond.*, and later considerable L.P. in small bodies and in mixture.

On sides of canyon, which are extremely rocky and precipitous, *P. pond* most common tree, w. some Dgl. trees scattering.

Good yg., L.P., *P. pond.* and Dgl after getting well into canyon.

Trees grow on these canyon slopes and walls where it seems impossible.

Very fine reprod. P. pond, Dgl and chiefly L.P. in groups of good density (see U.S.) with many openings. Dry slopes and ridges Dgl and Y.P.

Canyon narrow and slopes craggy and steep. Granite.

In the afternoon A. subalpine and some Spruce. On trail to divide same until flat top of divide where nearly pure subalp. See next day.

Schutzbewaldung {vegetation under forest = forest cover} except in bottom of canyon and occas. spots on milder slope.

First day Monday {at this point the diary repeats}

July 27, 1896	Hamilton - Lost Horse Creek		
Hamilton	1.30 PM		11
Wards	4.		4
Lost Horse Cr.	5		6
		SWW SW	<hr/> 21 miles
Camp	7		

Camp 700' above Hamilton

Second Day Tuesday

July 28, 1896	Lost Horse Creek – Twin Lakes		
Camp	7.25 AM		
Lunch stop	12.15-2.30		8 miles
First Ford L.H.Cr.	4. PM	SW	4
Foot of Divide	5.		2½
First Twin Lake	5.50	NW	<hr/> 2
			16½ miles

A good day

About the Twin Lake a pure FFS of *Abies subalpina* with an occasional P. flex. Regen. very slow, so that the forest looks fairly even aged. Trees completely isolated, or in groups or three or four, with grass around. Crowns reach the grd, but trees short and crowns very narrow.

Soil boggy, over pure granite gravel. On NNE slope A. sub. descends as pure or nearly pure f. with heavy ugr. of weeds, to 5,500' and foll. by { ? } w some L.P., a little fir, and rarely a Dgl. Forest everywhere fairly open, grd densely cov. w grass and f.. weeds. This char. continues to camp, w marked increase of Dens. and ygr. Patches of Sp. of consid. extent of pure L.P.

L.P. are 18" D in places, but not over 10"-12" as a whole. Many trees estim 125' H. One L.P. 11' Cpls. Many Sp. of 3' and Firs over 20" D. Fire slash on bench above stream w. scat. yg L.P. of est. rapid gr, a few Sp, and rarely a Dgl. On S.W. slope above bench old gr. nearly all Dgl w. scanty reprod.

On steep slopes near divide are occas. avalanche paths through f. w. more or less open ygr at sides near sltg forest. In parts ygr. most plenty near old trees, where it oft. Started completely under their cover. As a whole ygr. in alpine f. is esp. scanty.

Third Day Wednesday

July 29, '96	Divide (Twin Lakes) – Moose Creek		
<i>Camp</i>	8. AM		
To Second Twin Lake	N		.5
Length Twin Lake			.5
N end Twin Lake – to beg. Of descent	N		.5
Descent	N.N.E.		3.0
(Fall 1,500 feet)			
	N.E.		3.
	N.N.W.		2.
	N		4.5
			<hr/> 14 miles
Distance traveled incl. today	51.5 miles		
Barometer			

A good day

At first through same mixture of Spruce as yesterday, then into much burned region whose principal tree was *A. grandis* with an occas. P. pond. *A. gr.* 2'-4' D, and up to 150' H w very poor ygr. Not less than half the trees dead.

Steep slopes largely occupied, where not altogether bare of trees, w Dgl and an occas. P. pond.

About 4 PM found heavy f. of high poles of *A. gr.* and Dgl and occas. Cedar approx. about even aged. A good deal of such *gr.* was killed by fire.

Then into wagn. F. of *A. gr.* trees 3'-4' D. One Cedar 18.4 CBf. Cedar began to be important part of f. at 5 P.M., mixed in with Spruce, *A. gr.*, and scat. L.P.

Canyon walls steep esp. rocky and rough, showing fire marks and effects almost everywhere. Then camp occas. heavy body of timber extending consid. dist. up sides. Everywhere very few trees indeed outside stream bottom.

Fourth Day Thursday

July 30, 1896 – Moose Creek

Left Camp	7.30		
Crossing		NNW	1 m
Hell's Ford		NNW	½ m
Very rough		NW	3
Camp (Goat Rocks)		W	<u>5</u>
Trail good for last 2 miles			9.5 miles

Total 4 days 60½ miles

A good day

Hell's Ford. 40' wide. Stream 20' waist deep. Swift. Large boulders. Very bad.

8½ miles through magnificent Cedar (from Camp). At first 2½' D x 100' H, as per vol. surv. and later up to 4' D x 150' H on the average, with 40-50 trees per acre of largest size. Magnificent forest, especially dense w. enormous yield. All through it 5-10% *A. grandis*, the largest trees nearly all dead (as much dead as alive). Belt prob. 8½ x 1 miles. Ave. H. *A. grandis* 125-150, Cedar 100 at first, to 150 later. Reprod. Cedar progressively better until very fine indeed, while *Grandis* from no reprod., finally has ygr. as fine as Cedar. Through this belt an occas. Dgl and consid. Spruce up to 3' D and 175'+.

On ridges above Cedar, Dgl and P. pond. wh. prob. form bulk of crop on the steep slopes. On ridges we crossed reprod. of these two poor to medium.

Old remaining dead trees on burns (1.25 h. march after lunch) chiefly *grandis*. Reprod. at first very poor then regen. of *grandis* and Cedar, with some Dgl. Cedar goes some dist. up on the dry slopes.

Largest *grandis* seen about 4' D (13.5' C). Then into flatter country with consid. L.P. and Dgl, and grad. more and more P. pond., until at the Flat much burned. Forks a large flat with P. pond. and some Dgl.

During march through an even aged FF of poles of *grandis* and Dgl growing in intimate mixture.

Occurrence of fire only on dry ridges and frequently this makes it prob. that Cedars are very difficult to burn. No marks of fire in them.

Fifth Day Friday

July 31, 1896	Moose Creek – Cabin Creek		
Left Camp	8.20	SW	1
		SSW	5
		SW	2.5
To camp at Forks		SSW	<u>10.</u>
of which the first 1.5 very poor trail			18.5

Total 5th day 79½

Cedar Creek comes in to Moose Creek 5 m. below last camp. Very fine Cedar, it is reported. Heads N.

A clear happy day

Largest Cedar CBI 25 feet.

To lick in A.M. saw cow elk. Cleaning up and up drying out. Harry and I to lick again in P.M.

Sixth Day Saturday

Aug. 1st, '96 Moose Creek – Cabin Creek
 To lick.
 Cabin Creek heads E, and is 24 miles long

Not so clear a day

First thousand feet through very fine ygr *grandis*, Cedar, some Dgl and a few large trees of P. pond. standing above the rest.

Then into lodgepole on ridges, with gr., Dgl and Spruce, forming at times fairly dense high forest of old trees. Reprod. on ridges rather poor. Principal tree *grandis*.

Mts. seen near {today} had rounded outlines chiefly, with wooded slopes, and occas. small burns, isolated and chiefly high up.

Fine views, hard climb first 1,000 feet from camp saw patches of Cedar about 500 below. None on ridge.

Cedar, gr., Dgl and Sp. none of it of first class size.

Saw jagged peaks of Divide from near camp, steeper on N than on S. side.

Seventh Day Sunday

August 2 nd , 1896	Cabin Creek – Camp Huckleberry		
Left Camp	9.37 up Cabin Cr. to x	N	1.
Crossed up S.E. slope	1,700 feet above camp	SSW	1.5
On ridge to highest point	2,900 feet	SSW	2.5
Then		N	1.
Then to camp		SWW	<u>2.</u>
			8 miles

Good grass, water 100 yards S fr. Trail

Not a very good day

The same general character of forest as yesterday, with *A. grandis* predom. About two began a gradual change from yesterday's trees to *A. subalpine*, *P. albicandis*, and L.P., which finally at camp and beyond gave little f. a distinctly alpine char. with only these three trees and Spruce. Before lunch there was some Spruce also, the group construction of this f. very marked, esp. w flat land. Reprod. very slow, with much and very fine grass near camp. Bunch grass.

A. subalpina, narrow and very sharp crown.

A. Grandis rather broad and distinctly blunt, with bark getting rough early.

Saw much L.P. w. reddish bark today, much black and some almost same color as *albicandis* stdg. beside it.

Eighth Day Monday

August 3 rd . 1896	Camp Huckleberry – Camp Deluge
Left camp	7.50
	NE .5
	N 1.0
	NW .5
	W .5
	SW 1.25
	W 1
Crossed small creek	N 2
To another ridge then camped	SSW <u>.75</u>
at good grass and water	7.50

Camped at good grass and water

A better day

First *A. sub.*, and some Spruce, then into a remarkable mixture of *P. flex* and *L.P.*, the two so nearly alike in habit and bark of yg trees as to make it very difficult indeed to disting. them except by reference to the cones. Old trees of *P. flex* have the branching habit of *Dg* trees.

Through a deep pass, down and up, and then into thoroughly alpine region of sub. Chiefly with a good deal of *P. fl.* and *L.P.* at times. Sub. had nearest approach to recumbent habit seen in these mountains.

Evidently a region of little wind, fr. shape of trees. This may be why there are so many small burned places surr. by living forest.

Up and down tremendously, first through the rain and mist, then with wonderful glimpses of the mts. first near then distant.

All got wet last night.

Ninth Day Tuesday

August 4 th , 1896	Camp Deluge – The Meadow Camp
Left camp	10.10
	NW .75
	W .5
	NW .25
Begin to go down. Down	SWW .5
Then up high ridge	SW 1.5

On ridge	W	1.25
	W	.5
	SWW	.75
Prob. left main Indian trail.		
Took blazed trail to valley	SWW	2.00
	SW	1.50
To creek to camp	SW	<u>.75</u>
		10.25

Camp 5,200

A good day

The forest about the meadow camp was predom. Sp., with a little *A. grandis*, some *A. sub.* The Spruce was of magn. size, the largest observed 16'2" CBh, x 150' H estm. The trees stood well apart, as usual, with dense ugr of shrubs and weeds. As the trail rose first became pure *A. sub.*, with some *P. flex*, standing free in the bottom and scattered over the excessively broken slopes, ridges, growing app. on the base rock to the highest points. Very remarkable.

Valley above ref. to ran on opp. slope forest approx. the same except that the Sp. runs up much higher and the f. is denser.

Mts. to west rounded and with gentler slopes. Same until Bitter Root divide. Perpetual snow near the rise. Lakes before crossing divide most beautiful alpine region, filled with flowers. Beautiful brook and meadows, but natural. Falls below.

Tenth Day Wednesday

Aug. 5 th , '96	Camp Boulder	
Temp. at sunrise	40 degrees	
Left camp 8.	SSW	2.5
In valley	SSW	1.
	SSW	1.
To Divide (7,150)	SW	2.5
To camp	SWW	<u>2.25</u>
		9.25

Elevation camp 6,600

A good happy day

Same general character of mt. forest, except with more spruce, and as we went down, with flatter broader crowns to the *A. sub.*

Noted in particular the very numerous burls on *A. sub.* and *P. flex*, which occur in general about or to one side of a branch, but seem not to differ from burls in gen.

On the Clearwater {Lochsa} (ridge to N. we traveled) quantities of burnt land. More than get seen on this trip. Very little ygr in them. Wonderful cloud effects. Black mts. other side Clearwater. Wonderful blue and opal as clouds shifted in this narrow valley 3,000 feet deep. Small thunder showers opposite.

Look over into lower country, which seemed level on top and like bad lands. We camped not far from end of mts. to W. Still some high peaks a little W of S.

We left the jagged schist ridges, and got into a rounded country again.

Valley of N fork well wooded when we saw it.

Branches of *A. sub.* making groups by rooting and sending up trees.

On ridges all day. More level trav. than yesterday.

Eleventh Day Thursday

Aug. 6th, '96

Left camp	7.55		
Toward ridge and to it		N	1.
Divide Indian trail on ridge		NW	.5
		NWW	1.25
		SWW	2.00
		W	1.
Small lake outlet flows S			
To top of ridge		S	.5
		NW-SW	.5
		SWW	2.25
On grassy ridge		SW	2.50
		SW	1.

Rain began about 3.15 and kept on at intervals till morning. Temp when we camped 51 degrees.

Overlooking mid fork Clearwater W	2.50
and N fork of mid fork W	2.50
SSW	1.50

SW

$$\frac{.50}{16 \text{ miles}}$$

Camp overlooking Clearwater and
open country to SW

Elevation 6,150

A beautiful happy day

Wonderful color of rising sun in woods. Great lake of cloud under two high peaks just opposite with cascade at west. End. Look into cultivated land {the Weippe Prairie}.

(On his letterhead)
Gifford Pinchot,
Consulting Forester,
New York

United Charities Building
Fourth Ave. and 22d St.

Larch and fire
Larch L.P. and fire. Wet and dry spots.
Old L., fir, younger Larch.
Larch and Dgl stand fire
No L. in dense woods.
Variation in ages over large tracts, but change grad., diff. not striking.
Narrow strip sept.
L.P. Pine as a weed hereafter
W.P. regen. adm. under cover but only under mod. cover. Also in open.
Dgl. ygr scarce.

Twelfth Day Friday

Aug. 7, 1896

Left camp	7.45	SWW	2.
		W	3.
To forks		NWW	3.
Up N.F. to x		NE	.5
		SW	.5
Down main stream		W	1.5
		SWW	3.

Trail along river

W

<u>3.50</u>
17.

Poor grass

Elev. camp on bank 1,550

Total for 12 days 147.25 miles

Temp. when we got up 43 degrees

8 miners at the Forks {mouth of Selway}

A good day indeed, though less so later

Eggs	.20	2 doz
Butter	1.00	5 lbs
Beans	.25	1 peck
Bread	.25	2 loaves

Thirteenth Day Saturday

Aug. 8, '96

7.40

To Syringa P.O.

NW 1.

SW 1.

SSW .5

SWW .5

SWW 1.25

To Tp32N R5E BM

NNW 1.

Ford at S third

NW to Ford 1.5

line of Section 2 good bottom.

Ford 250 yards wide. Another five miles below

Back up river

.5

Up high ridge

SW 1.5

S .5

SW 1.

S .75

To where settlements begin

S 1.25

SW 2.25

14.50

Total 13 day 161.75

Camp near Murphy's range 2,550

B.B. Stuart PM. Mail a week. Two families near

A good day

Reprod. P. pond. It's a lg. log. The prevail. wind was fr. W to N.W. There was scarcely any seed germinated on the side of a tree toward the wind. For a space 10-25 yds from the tree the regen. was scanty, or absolutely lacking. At this pt. the regen. becomes thick and remains so for 30-50 yds on ave. Beyond this pt. there are usually a few scattering seedlings for 10-15 yds. The band extended in a crescent shape about the tree for 90-180 degrees. The ygr. toward the middle of the band (not the crescent) was both thicker and older than nearer and farther from the tree. The width of the band was affected by h. of tree { ? } and c. The old trees leaned toward center of crescent, showing prev. wind, and windfalls – breaks show same wind. One tree less than 20 years old was bearing cones.

P. pond. near camp Murphy.

1. Stump 30", D 23", age of stp. 78 yrs, total H 87'6".
2. Stump 36", D 23.9" x 21.5", age of stp. 73 yrs, total H 88'.

Fourteenth Day Sunday

Camp Murphy

Vegetables	.50	Potatoes
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A good day

The pure P. pond. about camp, with exceed. fine reprod. in places, became mixed with Dgl at once upon entering canyon of Clear Creek. On the dry upland of the other side P. pond. was again pure. Dgl reappeared above as we began to ascend beyond Clearwater P.O., and rapidly became the predom. tree in an intimate mixture with P. pond., which prob. outgrows it in H in growth. In the rich moist soil of NNW slope an ave. gr. of 3' was common on poles.

This forest was a pure { ? } with occas. groups of Dgl poles, gr. densely. A. *Grandis* soon appeared in small nos., followed by scattering local groups of larch in mixture, with very good reprod. Larch began 3,750. Dgl was still principal tree. Then A. gr. became common, finally gr. nearly pure and of large size. Spruce came in at 4,000 in very small numbers. Yew began 4,600. L.P. began at 5,400, where high { ? } char. began on ridge, and A. sub. shortly appeared in mixture with A.

gr. finally occupying soil with only L.P. in mixture. L.P. here had light grey bark, occas. with reddish tinge. Spruce increased in nos. to the ridge, but nowhere numerous. This forest was very rich and with a great many large trees. A very fine bit of woods, little burned although many fires have started along the road. We put out two. Grandis suffered especially.

Fifteenth Day Monday

Aug. 10, '96	Camp Moose Grass	
7.10	SSE	1.
To x of Clear Creek	SSW	1.25
To summit	SSW	1.25
To Clearwater P.O.	S (2,450)	2.50
Up rut on good wagon road, which begins near Murphy's.	SSE	2.50
Fine wagon road to Elk City so far. Easy grade.		
	S	3.25
	SSE and SE	3.00
To Halfway house on top	E	1.50
	E	1.
		<hr/> 19.25

Camp 5.30.
Total 15 d. 181 miles
Grass moderate

As we looked east after passing summit we saw a ver y large burn with trees still standing.

Country broken and rolling, but not rugged except one large butte.

This afternoon saw good reprod. of Dgl, and fire reprod. of grandis in a few places uniformly under older Dgl. It seems likely that grandis has its best reprod. when associated with Dgl and Cedar. So far we have seen no fire reprod. of grandis under pure old grandis.

A beautiful happy day

Large burn w. new gr. of fireweed, Cedar, oaccimum (?), and later mt. ash. 500 feet below A. flex and Dgl of large size appeared. On ridge L.P. w. scattering gr. and Dgl

and rarely a Sp. Ygr chiefly Sp. and Fir and scant at high elev. A. sub. ran out quickly as we went down. Yew began at 500 feet. Ditto { ? }.

Ygr Dgl – 20 yrs. bearing many cones. 20' H, 5½ D on 1' ft. { ? }. On flat ridges L.P., and before Newsome Cr. pure f. { } L.P.

Hole in L.P. { ? } 1/6 acre with reprod. in hole complete.

L.P. reprod. in { ? } floor in SE and NE slopes, and not elsewhere.

L.P. and A. sub. along N. Creek. Larch at 4,475 feet, gr. in even aged mixed with Dgl and overlapping { ? }. Reprod. moderate. Fire scarred.

In PM, Dgl and gr., alternately { ? }. L.P. on ridges, w. occas. Larch.

Later on pure L.P. and so till camp.

Poor water, fair grass

Prince joined us.

Camp 1½ miles fr. Elk City

Sixteenth Day Tuesday

Aug. 11, '96

Camp Stagnation

Left camp	8.40	SE	2 m
To x of Newsome Cr		SSE	4½
Hotel across from bench			
along Cr.		S	1.
		S	.75
		S	1.50
Ascent of mt.		SE-E-NE	2
To summit		NE-E-SE	2.50
		NE-E	3.50
Descend to Cr. fl. S		NEE	1.5
To camp		SEE	<u>2.5</u>
			21.75

A good day

L.P. the { ? } species, pure almost always except in moist situations, when A. gr. and A. sub. occur, on W slope above meadow where Y.P. is pure, and on same nearly bare ridges, where a fair to good reprod. of gr. with some yg and a few old Dgl, occur. Occas. also an old Larch with very mod. reprod.

Passed through hump country most of the way, except in the meadows.

Country of low rolling wooded (where not burnt) hills, fairly well watered. A great deal of placer mining has { ? }, but there is very little now.

Seventeenth Day Wednesday

Aug. 12, '96	Camp Grouch			
Left camp	7.30			
To Elk City		SE	1.5	
One street, 50 log cabins, one store, P.O., hotel, about 6 families, decayed center of mining region, placer.				
To x Cr. br. Red River		SE	1.	
		SSE	2.50	
To Red River meadows		SSE	1.	
Through edge meadows		S		4
Valley		S	1	
To meadows		S 10 degrees E	1.5	
Across	S	<u>1</u>		
			13.5	

Fine grass and water
About 640 acres
Camp in meadows near
stream emptying into R.R.

Trail forks here. S trail to Dixie. Main or Nez Perce trail goes up E side Red River,
X in edge of canyon.

A good day

The { ? } of the forest today is L.P. Nearly the whole route shows marks of fire. The first 8 miles has been burned, most of it repeatedly, and a good deal till the soil is almost completely bare. In many places are the remains of several successive crops. Occas. Dgl and p. pond. are standing where everything else has been burned away. The reprod. is in gen. poor, but with some striking exceptions. We passed in sight of a { ? } extensive even aged crop of spl. and f. of fair density in places, but usually very thin.

Abies gr. and A. sub. appeared freq. among the L.P., the latter increasing in quantity toward camp. Occas. Sp. in wet places.

L.P. showed today every color heretofore noted except bright orange. Red and black were frequent.

Past a consid. area of dead twisted sls. and spl. of L.P. fr. 2-5 H, very curiously bent by the snow, prob. Almost a { ? } form in places.

Ygr 6" D with very white smooth bark showing only a few scattered round scales near the grd.

First 10 miles of trail through windfall (old burn). 8 miles to meadows.

Some yg { ? } on plateau SW of camp.

Sp. with many cones on grd on N and MW sides of tree.

Not so clear a day

Eighteenth Day Thursday

Aug. 13, 1896

Camp Red Pepper Jack

Left camp	7.45		
To Cross creek and		SSE	.75
into down timber		SE	1.25
To across creek fl. 8		SE	2.25
			2.
		SEE	2.
Good grass and water		E	1.
X creek fl. E		E	.75
		E	2.25
		NEE	1.
			<hr/> 13.25

Camp on Cr. fl. NE to Clearwater {Selway}
Grass near up creek

L.P. of the middle sub type until the meadows of Little Salmon, where Sp. and A. sub. predom. There was consid. Dgl on slope going down to meadows.

Capital trail.{They are on the ancient Southern Nez Perce Trail}

Climbing out L.P. of same type on very steep S slope. Then on sandy ridge same gen. char., very thin.

Took rt. hand trail on ridge of Tin Can camping {stump (?)}. Going down Bull Pine. Dgl type with very little P. pond. as near I can remember on the very steep E slope.

Marks of fire almost everywhere. Reprod. not very good.

Bare small round gravel slopes above meadow.

Beautiful colors of grasses in meadow. Capital camping places.

Fair fishing.

Nineteenth Day Friday

		Camp Renaissance	
Left camp	7.20		
Up ridge (1 to ridge)		E 10 degrees N	2.50
		SEE	3.25
To x cr. fl. SSW begin climb		S	1
		SE	2.25
To x of Little Salmon fl. W		SEE	1½
To x of Little Salmon fl. S		NNE	2.25
To ridge		E	1.50
On ridge		N	.75
On ridge to forks		NE	1.25
of trail, or Tin Can. Cut off (?)			
to avoid long bend in ridge.			
Begin descent.			
To x Cr. fl. E into Clearwater		NE-E	1
To camp in down timber w.			
little or no grass		SE-E	<u>.50</u>
			16.75

Not as clear a day

Leaving camp L.P. of mid. mt. type very much burned with gen. rather moderate reprod., but very good in a few small groups. Capital ex. of group. syst.

On ridges B.P.-Dgl type with almost no P. pond. at first but a good deal on breaks of ridges later. Reprod. of Dgl fair, of P. pond. at first gen'l. poor, but on Mt. Magruder very good in small patches on S.W. slope.

Then M.M. L.P. with steadily increasing amount of P. flex. and A. sub. to the top.

Dgl goes clear to summit of Mt. Magruder. Forest approaches closely in places to Alpine L.P. Descending through M.M. L.P., to B.P., Dgl, and then to Dgl, Sp. and grandis at branch of Middle Fork of Clearwater.

Noted a P. flex. estim. 4" D and 12' H bearing a large cone. On S.W. slope, high up in M.M. type.

On occas. grandis in B.P., Dgl type on S.E. slope.

Twentieth Day Saturday

Aug. 15, 1896

Camp Purification

Left camp	7.10		
Follow Cr.		SEE	1.75
On x Cr. fl. SW		SE	.25
On top of ridge		SE	.50
On ridge		SEE	.25
Main Nez Perce trail met about here again			
Descend to Cr. fl. SW		SE	.25
Across ridge and x Cr. fl. SW		SE	1.25
To Bolton slope. Corral		SSE	1.
Water and grass			
Descent to Cr. fl. N		SE	1
Afton Water			
x Cr. and ascent ridge		S	.75
On ridge		S	1.25
To top Magruder Mt.		S	.25
On ridge		N	2
Begin descent		NNE	<u>3.75</u>
			14.75

To Cr. fl. N

Camp

Tin Sign

Lloyd Magruder and party died

Oct. 11th, 1863

Good grass on mt. side

Total 20 days 260½ m

A beautiful evening

Since and including the 14 we have been in a region of extremely steep slopes, culminating yesterday and the day before. About 25% of these slopes, chiefly on the S and W, are so bare as to appear grey in the distance. Not over 25% of this whole region (2 day) is covered with even fairly dense forest. The soil is usually a moderately fine angular gravel, the product of disintegration, mixed and { ? } replaced by a very fine brown soil easily powdered into light dust. Many of the slopes reach 45 degrees, yet there is absolutely no gullying. It seems likely that the rain usually falls here as a fine drizzle.

Practically no part of this region has escaped fire, where there was vegetation enough to carry it, within a comp. short time. Very much of the prevailing thinness is due to fire, while the comp. of the forest has been mainly determ. by it. These fires are probably due in most cases to the Indians. This whole region has end (?) suffered from them for a long time.

The streams show no evidence of a torrential habit more than is usual with mt. brooks.

In general the reprod. of this region is slow. The replacement of the forest will be a very long process almost everywhere except in ravines and on N slopes. The evidence tends to show that L.P. will be the first crop, except for S and W slopes, where Bull Pine and Dgl will often come in first. Eventually Dgl will probably occupy, or more correctly, reoccupy nearly the whole region.

Venison 1.00

A beautiful happy day

Sunday, Aug. 16, '96

Camp Sunset

Near camp mix gr., Dgl, Sp. with thick ugr. and fair reprod. Then on SW slope into big B.P.-Dgl type, with much P. pond.

Then B.P.-Dgl type with almost no B.P.

Then on a peak to M.M. L.P. with a few A. sub. Recent burn on flat ridge. A few Dgl.

Then on S slope through f. of Dgl.

S of M.M. Dgl type, lp predom.

Then a lot of ridge lp. M.M. L.P. On same ridge found near { ? } to M.M. L.P.

Then B.P., Dgl w. little B.P.

Dgl, L.P. with few L.P.

On S slope nearly pure Dgl, with a little L.P.

Then flat ridge with M.M. L.P.

Down S slope with Dgl-L.P. running into pure Dgl. Burn.

Flat ridge with M.M. L.P.

About camp M.M. L.P. scattering groups lp and { ? }.

Scattering Dgl above camp on hill, and on top of M.M. L.P. running into Dgl-L.P. with few L.P.

Farther down same ridge P.P.-Dgl, B.P. lof. on brows of ridges and Dgl on slopes.

X Creek.

Up through Dgl-L.P. and M.M. L.P. { ? }, and then up high mt. (bald) through rare M.M. Dgl.

Down through burned M.M. L.P.

Through pure Dgl on S slope r. into pure L.P. on Divide.

Down through M.M. L.P. on flat ridge, dist. by very light bark.

Lower on ridge M.M. Dgl.

Down very steep E slope w. quite dense Dgl, DFS, w. scat. B.P. Then through B.P.-Dgl to flat narrow ridge with M.M. L.P. on N slope and B.P.-Dgl on S slope.

B.P.-Dgl to flat in Nez Perce Fork Bitter Root River.

Same devastation by fire extended to the summit and a little way over, but it was striking that the Mont. side had suffered less than the Idaho, though still very much burned.

Reprod. much better on Mont. side.

Monday, Aug. 17, '96

Camp Ananias

B.P. usually pure, often with good and very good reprod.

Reprod. of B.P. everywhere, as far as I could tell, except directly under the trees.

Much lumbering.

Tuesday, Aug. 18, '96

Camp Jones

Wednesday, Aug. 19, '96

Hamilton

100 Rations. U.S.A.

Flour	112 lbs	
or Corn Meal	125	
Pease or Beans	15	
Rice or Hominy	10	
Coffee (ground)	10	
or Tea	2	
Sugar	15	always doubled
Vinegar	4 qts	
Soap	4 lbs	
Salt	4 lbs	
Pepper	4 oz	
Candles	1½ lbs	
Yeast Powder	4	Genl. Doubled
Vegetables	100	
Fresh Beef	20 oz per man	
Salt Beef	22 oz per man	
Pork or Bacon	12 oz per man	

Great Northern RR Circ. 1.

April 1, 1890

420 Rations

Flour	400	
Buckweat	50	
Oatmeal	40	
Cornmeal	30	
Sugar	150	(U.S.A. 63 lbs)
Salt	20	
Tapioca	10	
Sago	10	
Baking Powder	10	
Mustard	2	
Pepper	1	
Ginger	$\frac{1}{2}$	
Cinnamon	$\frac{1}{2}$	
Allspice	$\frac{1}{4}$	
Ham	100	
Bacon	100	
Dried Beef	25	
Codfish	25	
Potatoes	400	
Peaches	2 cases	
Pears	1 case	
Cherries	1 case	
Tomatoes	2 cases	
Corn	1 case	
Pease	1 case	
Condensed Milk	1 case (48 cans)	
Coffee	50 lbs	
Tea	10	
Lard	40	
Yeast Cubes	12 pkgs	
Cheese	25 lbs	
Beans	50 lbs	
Rice	25 lbs	
Cornstarch	10 lbs	
Macaroni	1 box	
Bailg (?)	10 lbs	
Soap	1 box	
Lemon Extract	1 bottle	
Van.	1 bottle	
Currants	10 lbs	
Raisins	1 box	
Syrup	5 gals	
Pickles	1 keg	
Onions	20 lbs	

Vinegar	1 gal
Tomato Ketchup	6 cans
Corn Beef	1 case
Baking Soda	3 lbs
Crab Apples	50 lbs
Dried Peaches	50 lbs
Prunes or Plums	50 lbs
Soda Crackers	1 box
Nutmegs	¼ lb
Matches	12 boxes
Candles	1 box
Lye	10 lbs
Sal(?) Soda	10 lbs
Butter	60 lbs
Wor. Sauce	6 bottles
Fresh meat and veg. as required if they can be obtained from the farming community	

Finis

The large area of agric-pasture land watered by these streams, the great {caring(?)}

demand for a continuous supply of timber and fuel, the frequency and importance of floods, the complete worthlessness of these forest lands when stripped of their timber, and the great and imminent danger of its destruction by fire, make it most desirable that they should be reserved without delay, and thereafter properly administered at the earliest possible moment.

Ahern Ration	} 100 Rations
Pinchot Ration	

Chocolate
H.O
Van. H. Cocoa
Dried Apricots
Dried Prunes
Armor's Extract
Bacon
Flour
Corn Meal
Coffee
Tea
Sugar

27	Above Hamilton	700 feet
28		6,650
29		4,550
30		3,450
31	Camp	2,525
Aug. 1	Camp	
2		4,700
3		6,750
4		5,200
5	Camp	6,600
6	Camp	6,150
7	Camp	1,550
8	Camp	2,550
9	Camp	
10	Camp Moose Grass	5,950
	Newsome Creek	3,425
11	Stagnation	4,000
	Elk City	4,000
12	Grouch	4,250

Guides

Darby, Ravalli Co., Mont.

Wm. M. Lloyd

John S. Chaffin

Jake Nelson

Each has a pack outfit

Cook W.M.D. Manson , same address, who recommends above guides.

Time, Wednesday, Aug. 19, '96

3 weeks and 3 days =

$$\begin{array}{r} 24 \text{ days} \\ \underline{8.5} \\ 120 \\ \underline{192} \\ \$204.0 \end{array}$$

\$204.

Then 10 horses

24 d. @ .50

120.

13 + 6 = 19

$$\underline{9.50}$$

Saddles 3 @ 2.50

$$\begin{array}{r} \underline{7.50} \\ 341.00 \end{array}$$

Less rifle @ 8.

$$\begin{array}{r} \underline{8.00} \\ 333.00 \\ \underline{10} \\ 323.00 \end{array}$$

Jones	26 d @ 1.50	\$39.
	27 d @ 1.50	40.50
	Present	<u>5.00</u>
		45.50

Eugene Jones has been with me as cook on a trip in the B.M. just completed. It has been an especially hard trip for the cook, on account of the laziness and incapacity of the guide leaders Prince and Craig. Jones has done his work throughout cheerfully and very well indeed, and he has had my unqualified approval throughout. I take great pleasure in { ? }.