

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

R-NW
NATURAL AREAS
Weeks Table

March 30, 1948

WEEKS TABLE - A PROPOSED NATURAL AREA



Pacific Northwest Forest and Range Experiment Station
Portland, Oregon

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Location and Description

Weeks Table is located in Secs. 5 and 6, T. 15 N., R. 14 E., W.M., on the Naches Ranger District of the Snoqualmie National Forest in Washington (Fig. 1). It is a basalt-capped plateau of 68 acres in area, nearly surrounded by precipitous cliffs with a 200- to 300-foot vertical drop to talus slopes below. The only means of access is a knife-edge ridge which leads from the level of the lower surrounding terrain to the top of the Table at its west end. Although game have made a trail up this ridge, it is so steep and tortuous that domestic stock would not willfully traverse it. Consequently, Weeks Table has never been grazed by domestic livestock.

Physical and Climatic Conditions

Natural erosion has left Weeks Table an isolated basalt mesa which rises abruptly some 500 feet above the general elevation of the surrounding country in the Rattlesnake Drainage (Fig. 2). The Table top is a flat surface, sloping to the northeast at the rate of about 10%.

The soil is genetically very old and probably derived from alluvium of basalt soils carried in prior to the erosion which isolated the Table. This is indicated by a layer of black clay high in organic matter, and probably deposited in a previous swamp, which underlies a considerable portion of the present soil. The soils may be divided into three types: (1) A weakly podsolized soil, (2) a non-podsolized shallower area, and (3) a rocky, severely eroded strip along the exposed south crest. With the exception of the rocky areas, the soils have a similar B horizon indicating that they are derived of the same materials. They differ in genesis largely because of their dissimilar cover. A description of each soil type follows:

1. Weakly podsolized soil

The soils of this type occur beneath the timber overstory. They are covered with a 2-inch layer of densely matted, partially composed mull humus derived from pinegrasses and conifer needles. The pH of this A₀ horizon is 6.4, or slightly acid. Fine roots permeate the layer. This is underlain by an A₁ horizon, formed by podsolization, of light gray ashy sand intermixed with numerous fine roots and but little organic residue. Podsolization has been arrested in the lower horizons, probably by conditions of temperature and humidity unfavorable to it.

The A₂ horizon is a light brown loam of crumb structure. It is very mellow with many roots both large and small, and has a pH of 6.4. The texture becomes somewhat heavier with an increase in depth and at 8 inches the B horizon is encountered. The B horizon is a gritty clay with strongly developed nut structure showing colloidal staining on the cleavage surface. The pH is 5.8, slightly lower than the above horizons.

At 18 inches the B horizon ends sharply and a black fragmental clay is found. The organic residues are not recognizable and the entire mass is a dense waxy deposit, probably resulting from a previous swamp.

2. Non-podsolized shallower soil

These soils occur on the grassland areas where a biscuit-swale topography is common. The type is more rocky than the timber soil, especially in the swales. On the soil areas between the swales, the A horizon is 5 inches deep. It is covered by only sparse organic residue and is bare in places. No humified litter exists. The soil is a light brown friable loam similar to the A₂ horizon found on the timbered areas. It has a mellow crumb structure with some fine roots intermixed.

The B horizon is also similar to that found on the timbered areas. It is a brown gritty clay with a pronounced nut structure. The cleavage planes show colloidal staining and few roots are found in this horizon. At approximately 18 inches, numerous diabase rocks occur. A slight amount of lime was found in this B horizon and the pH was 6.5. Thus, conditions are more alkaline here than in the similar horizon of the timber soil.

3. Barren eroded areas

This area extends along the south edge of the plateau and represents an area scoured by wind currents and water. It is practically devoid of soil and is covered by unconsolidated basalt and diabase rock.

Meeks Table has a climate similar to much of the pine country on the east slope of the Washington Cascades. Much of the precipitation comes in the form of winter snow. The springs are usually wet while the summers are hot and dry with some storms. Fall rains in September and October may precede the winter snows. The average annual precipitation on Meeks Table may approximate 20 to 25 inches.

Timber Types

No logging or cutting of timber has ever taken place on Meeks Table. The tree cover is predominately open ponderosa pine and is interspersed with some open grassland parks (Fig. 3). In two or three places, there is a rather heavy mixture of 4-inch to 14-inch d.b.h. Douglas-fir, with occasional trees of western larch and white fir. Much of the pine is mature to overmature with an estimated volume of 6,000 bd. ft. per acre. From observations made on the Table, the site is a low IV or high V for ponderosa pine. Table 1 classifies Meeks Table by timber type.

Table 1.--Timber-type acreages on Meeks Table

Type	Acrea
Open ponderosa pine	37.75
Mixed ponderosa pine and Douglas-fir	21.25
Open grassland	9.15
Total	68.15

Of particular interest is the lack of advance tree reproduction on Meeks Table (Fig. 3). No ponderosa pine seedlings were found on the Table in a sample of 41 plots (each containing 100 square feet). The only reproduction recorded was eight white fir seedlings which grew on one plot.

Lightning strikes are evidenced in several old scarfaces but there is little evidence of ground fires.

It is highly improbable that there will ever be any demand for the timber on Meeks Table. Because of its extreme inaccessibility, any future logging operator doubtless would not be interested in logging the Table surface. It would be impossible to get present logging machinery onto Meeks Table.

Forage Composition and Grazing Value

The understory vegetation is very striking. A pinegrass - elk sedge association with very high densities (in some places as great as .6) dominates the immediate environment beneath the timber and most of the open parklike areas as well (Fig. 4). A number of biscuit-swales occur on the Table. These are depressions where soil level may be six or eight inches below the level of the surrounding soil. The swales support less pinegrass and more weeds and other grass species than the adjacent higher soil areas and they have a scabby, rocky appearance. One of these swales appears in Fig. 5.

The margins of the Table, where the soils are very shallow and where wind velocities are extremely high, have a fair plant cover of mixed grasses, weeds, and shrubs (Fig. 6). There is some tarweed present in small patches in several of the grassland parks.

Table 2 shows the acreages by forage type on Weeks Table while Fig. 7 outlines the forage types.

Table 2.--Areas of forage types on Weeks Table

Forage type	Acrea
1Pcse-Artr2 (Sandberg bluegrass-threestip sagebrush, open grassland)	9.15
60aru-Cage (pinegrass-elm sedge in open ponderosa pine)	30.36
60aru-Cage (pinegrass-elm sedge in mixed ponderosa pine and Douglas-fir)	21.25
68teo-Pose (subalpine needlegrass-Sandberg bluegrass in open ponderosa pine)	7.39
	<hr/> 68.15

Weeks Table's inaccessibility, combined with a lack of water on top, has precluded any grazing there by domestic livestock. Mr. Walt Lindsay, an old-timer who has lived for 59 years in the valley near Weeks Table and who has been intimately connected with the country during that time, says that he has never known of domestic livestock being on top of Weeks Table. The only grazing has been that by deer and elk. These game animals have overgrazed the few shrubs on the Table and apparently bed down there during the summer. Since elk were not a part of the native fauna, having been introduced by white man to the general region, the understory vegetation cannot be said to represent completely virgin or primeval conditions. But it certainly is one of the most nearly virgin representations of this type found in Washington or Oregon.

No future change in grazing use of Weeks Table can be foreseen. The natural barriers isolating the Table would continue to prevent domestic livestock grazing even if it kept its present status and did not become a natural area.

Agricultural Value

No part of Weeks Table is suitable for any agricultural use.

Mineral Value

Although no geological or mineral survey was made of Meeks Table there is little likelihood that any minerals of commercial value would be found there.

Other Public Uses

It cannot be envisioned that any public use would ever be made of Meeks Table outside of scientific study of the vegetative conditions existing there. It is so inaccessible that even those desiring to visit the area out of curiosity would be discouraged by the necessary trip. Relatively few people have ever been on Meeks Table.

Public Sentiment

No sounding out of the local people was made about Meeks Table being considered as a natural area. However, in view of its inaccessibility, size, lack of public values, and relative unimportance to the local economy, I can see no sentiment arising in opposition.

Accessibility

Meeks Table can be reached by traveling in the Naches District of the Snoqualmie National Forest up the Rattlesnake Road to the Rattlesnake Guard Station; thence by forest trail west about $3\frac{1}{2}$ miles to McDaniel Lake; thence continuing northwest on forest trail for approximately $1\frac{1}{2}$ miles; thence across country generally north for about 1 mile to the west end of the Table; thence up narrow knife-edge ridge by old game trail to the top of the Table. The Table is in view much of the time after leaving Rattlesnake Guard Station.

Justification of Proposal

Meeks Table represents ponderosa pine forest in as nearly virgin condition as can be found in Washington and Oregon. Information can be secured from Meeks Table which will give a picture of the forest undisturbed by livestock grazing and provide keys to managing ponderosa pine forests to gain proper stocking with tree reproduction. To perpetuate such a resource for study and observation is highly desirable.

Setting aside Meeks Table as a natural area would in no ways affect the management of the land and forest resource of the Snoqualmie National Forest.

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R. 14 EV



Figure 2.--Meeks Table, Naches Ranger District, Snoqualmie National Forest, is in the center background. This picture shows the southeast and east sides of the Table and the precipitous rock faces which form these sides.

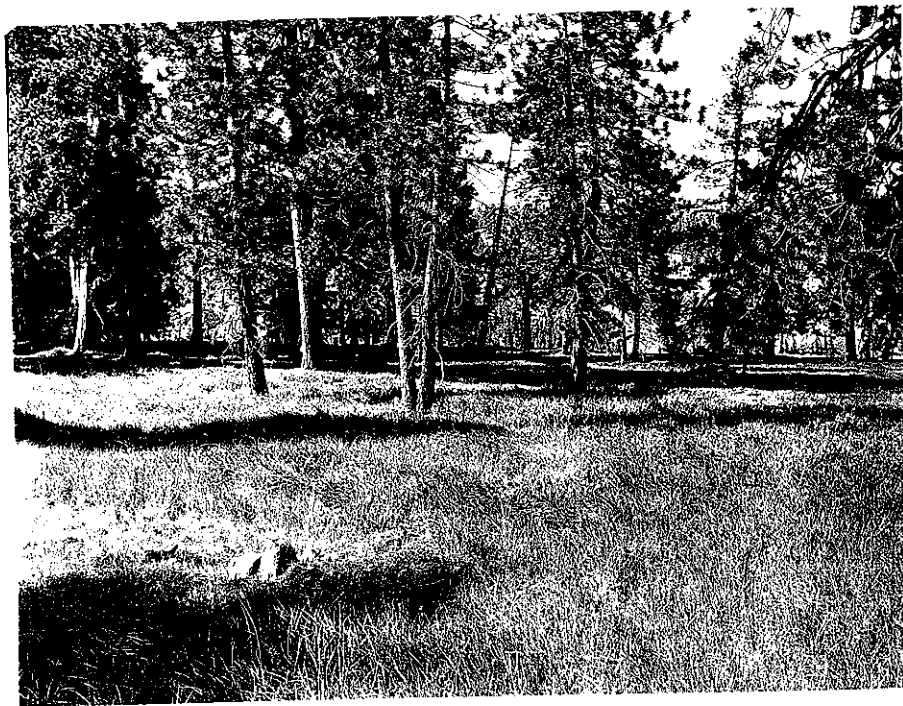


Figure 3.--A predominantly open ponderosa pine type with interspersed grassland areas covers most of the top of Meeks Table. Two of the striking things regarding the plant cover shown in this picture are the almost complete lack of tree reproduction and the high density of grasses.



Figure 4.--The predominant ground cover even in the grassland openings is pinegrass and elk sedge on the deeper soils. Notice here again the almost complete lack of any tree reproduction.



Figure 5.--In the foreground is shown an area which, if in depleted condition, would probably be the swale of the biscuit-swale topography of our scab ridges. Many different grass species are present in these swale areas. Dominant of these is needlegrass, with Sandberg bluegrass, onespoke oatgrass, and occasional plants of bluebunch wheatgrass as associated species.



Figure 6.--The exposed southwest margin of Meeks Table, where normal wind erosion is very high, looks very scabby, even where there is fair density of mixed low grasses, weeds, and shrubs.

FORAGE TYPES, TIMBER TYPES, AND MAP OF MEES TABLE

Snoqualmie National Forest
(Secs. 5&6, T 15 N, R 14 E, W.M.)

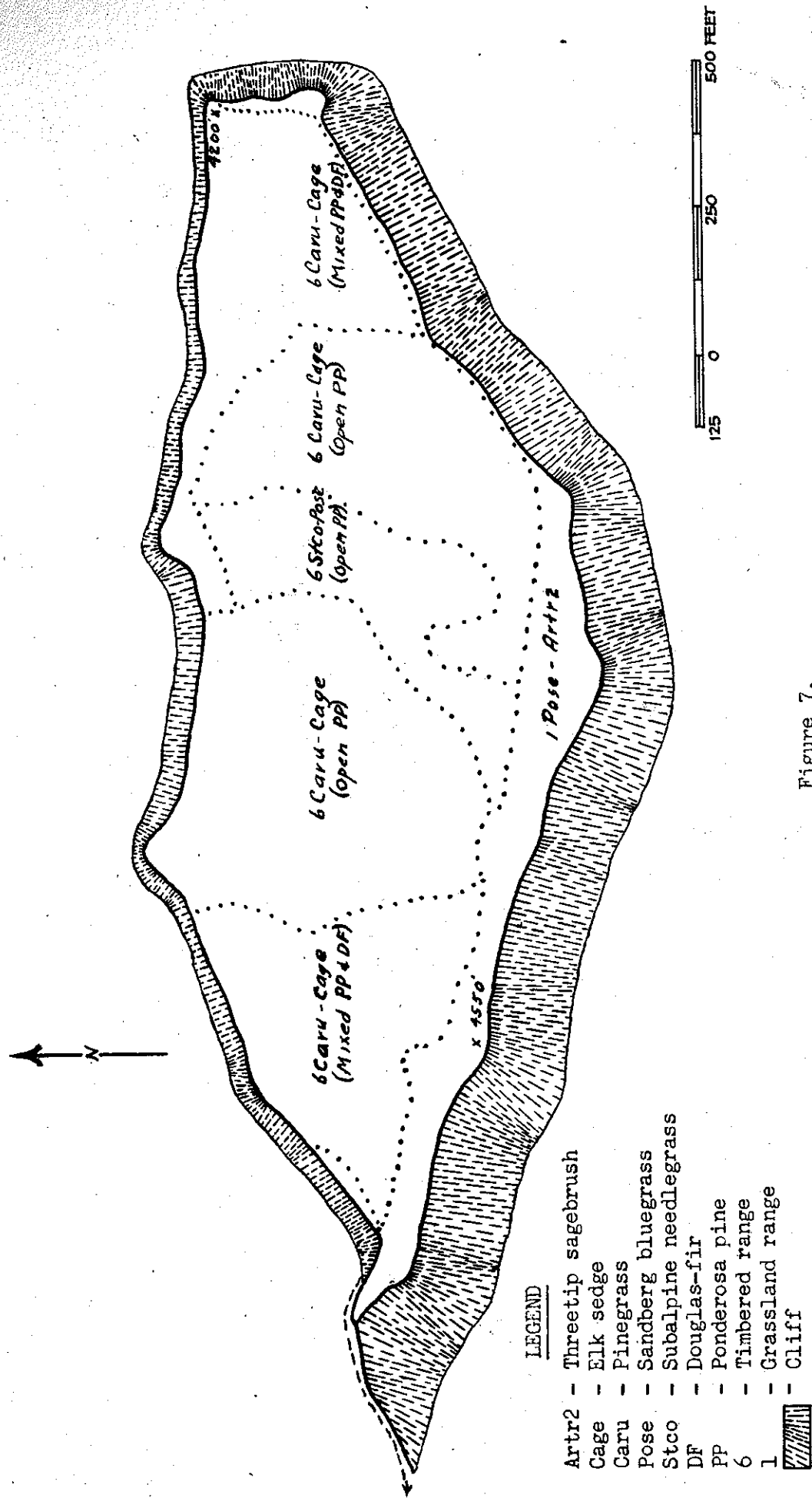


Figure 7.

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NATURAL AREA INFORMATION FORM

1. Name of Natural Area Meeks Table Natural Area
2. Administering Agency U. S. Forest Service
3. Supervising Field Unit Snoqualmie National Forest
4. State and County Washington, Yakima County
5. Latitude and Longitude 121°07' 46°49'
(This information will not be given to the general public)
6. Primary type on areas SAF-237, 38 Acres
7. Other important types represented on area:
 - 7a. Botanic SAF-214, 21 Acres; *Poa secunda* - *Antennaria*
tridentata, 9 acres; *Pinegrass* - *slk* sedg.
52 acres; Stipa - *Poa* 7 acres.
 - 7b. Zoologic 2-17 deer
 - 7c. Geologic
 - 7d. Aquatic
8. Acreage 68 Acres
9. Elevation and Topography Max. 4,500'; Min. 4,300';
Rolling
10. For information contact: Director
PNW Forest Experiment Station
6th Ave.
P. O. Box 3141
Portland, Oregon 97208

This form should be filled out in accordance with the instructions on the accompanying information sheet.