BULLETIN NO. 15. U. S. DEPARTMENT OF AGRICULTURE. DIVISION OF FORESTERY. FOREST GROWTH AND SHEEP GRAZING IN THE CASCADE MOUNTAINS OF OREGON

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FOREST GROWTH AND SHEEP GRAZING

IN THE CASCADE MOUNTAINS OF OREGON.

BY

FREDERICK V. COVILLE.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF FORESTRY,
Washington, D. C., February 8, 1898.

SIR: Mr. Frederick V. Coville, Botanist of the Department, while engaged in an extended botanical exploration of the Pacific Coast region, during the summer of 1897 incidentally made observations regarding the effect of sheep grazing on forest growth in the Cascade Range Forest Reserve, which he has fully recorded in the accompanying report.

Believing that the problems discussed are more germane to those with which the Division of Forestry should deal, than to botanical questions, he has turned over the same to this division.

I recommend that the report be printed without delay, since this question has an important bearing upon the forest policy of the General Government and has been here most lucidly and exhaustively treated.

I indorse fully Mr. Coville's conclusions that sheep grazing without proper restrictions and regulations, which have in view to prevent overstocking, is detrimental to the reproduction of forest growth and to soil conditions and water flow—in some localities more so than in others; hence, wherever forest growth is to be maintained and the washing of soils with consequent flood dangers is to be avoided, the greatest care and judgment must be exercised as to the manner in which sheep grazing may be carried on without detriment.

I take this opportunity to express the thanks of the division to Mr. Coville for placing this valuable information at its disposal.

Respectfully,

B. E. FERNOW, *Chief.*

Hon. JAMES WILSON, *Secretary.*

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FOREST GROWTH AND SHEEP GRAZING IN THE CASCADE MOUNTAINS OF OREGON.

INTRODUCTION.

For the past few years a bitter controversy has been waged in Oregon on the question of grazing sheep in the Cascade Range Forest Reserve. Recent legislation by Congress has made it necessary to devise a series of regulations regarding this industry, and in the face of a great deal of diametrically conflicting testimony regarding the effect of sheep grazing, the Interior Department felt the need of a disinterested investigation of the facts before formulating any detailed set of rules. The aid of the Department of Agriculture was solicited, and the result of the investigation is here presented. A preliminary report was transmitted to the Secretary of the Interior on November 22, 1897.[1]

Hon. Binger Hermann, Commissioner of the General Land Office, furnished the writer with valuable letters of introduction to several prominent citizens of Oregon, who were familiar with the sheep grazing question. Mr. John Minto, of Salem, Oreg., gave a general letter of introduction to the sheepmen of eastern Oregon which made it possible to secure a large amount of information through channels that ordinarily would have been closed to a Government officer investigating this subject. Among the many others whose courtesy contributed materially to the success of the investigation should be mentioned particularly Mr. Thomas Cooper and Mr. E. F. Benson of the western land office of the Northern Pacific Railroad, at Tacoma, Wash., who have recently been conducting an investigation of sheep grazing on the railroad lands.

An outfit was procured at Klamath Falls, in the southern part of Oregon, and the party, consisting of the writer, Mr. E. I. Applegate, acting as assistant, and a camp hand, with three saddle horses and five pack horses, entered the southern end of the reserve on July 23. From this time until September 6, when we reached The Dalles on the Columbia River at the northern end of the reserve, a thorough examination of the forests was made, including not only those portions in which sheep now graze but other typical portions in which sheep have never grazed. We traversed, besides the well known parts of the Cascades, some of the most remote and inaccessible portions, where, traveling largely without trails, we interviewed sheep owners, packers, and

[1] A copy of the present report was transmitted to the Interior Department on January 21, 1898.

herders, cattle owners, and all classes of people; both those who favored and those who were opposed to the permitting of sheep grazing within the reserve. We followed the bands of sheep as they were grazing, watched their movements, their choice of forage, and the methods of handling them; observed the effects both of recent grazing and of the grazing of former years; and investigated the devastation caused by fires. Areas of the forests were examined in every stage, from total immunity from fires to total destruction by them. Many fires were burning, and whenever possible the exact cause was ascertained.

Four detours were made from the mountains down into the plains at their eastern base to consult with sheep owners and other well-informed citizens, the longest being a trip by the writer from Sisters to Prineville and thence to Sherar Bridge, August 26 to 30, Mr. Applegate meanwhile prosecuting the investigations in the mountains.

THE SHEEP INDUSTRY OF OREGON.

The first domesticated sheep brought into Oregon came from California in 1843, but from that year until 1860 sheep raising was only a small industry. About the latter date, however, wool began to assume considerable importance in the region as an agricultural product. The following table, taken chiefly from the United States census reports, gives some idea of the growth and importance of the sheep industry in Oregon:

Pounds of wool produced in Oregon in census years.

1850	29,686
1860	219,012
1870	1,080,638
1880	5,718,524
1890	9,982,910
1895[1]	12,038,091

The following table, compiled from the reports of the Division of Statistics, shows the amount of money invested in sheep in the State of Oregon each year since 1870:

Growth of the sheep industry in Oregon.

Year.	Number of sheep.	Value of sheep.	Year.	Number of sheep.	Value of sheep.
1870	500,000	$950,000	1884	2,571,378	$4,654,194
1871	419,200	796,480	1885	2,519,950	4,057,120
1872	486,200	1,191,190	1886	2,469,551	3,618,139
1873	534,800	1,476,048	1887	2,593,029	3,670,173
1874	561,500	1,403,750	1888	2,930,123	4,087,069
1875	634,400	1,643,096	1889	2,950,424	5,105,894
1876	719,500	1,413,895	1890	2,929,830	5,622,344
1877	859,700	1,547,460	1891	2,431,759	5,154,114
1878	1,074,600	1,891,296	1892	2,456,077	5,491,789
1879	1,100,600	1,822,142	1893	2,456,077	5,903,182
1880	1,265,100	1,847,046	1894	2,529,759	4,433,403
1881	1,176,483	1,717,592	1895	2,529,759	2,945,905
1882	2,333,162	3,733,059	1896	2,630,949	3,590,983
1883	2,403,157	5,106,788	1897	2,604,640	3,459,222

[1] From the Oregon State census report for 1895.