Notes on the Origin of Range Science

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Inquiry into the origin of range science should be stimulated by these notes, even though some personal bias in this matter is unavoidable. Presented below are general introductory remarks; then an attempt to list classical literature (literature of historical renown, yet in accordance with later systems of principles modeled upon them); and lastly, a chronological list of agencies with wide influence that produced the earliest (1868–1948) U.S.A. range science literature..

Sustained use of volunteer vegetation on natural pasturelands was a concept wholly foreign to those who dominated American agriculture at the start. Our cultural heritage was developed in the humid climates of Europe and England. There, tracts of land were cleared of timber to be used as *cropland*, including tame (culturally dependent) pastures. Forestry was possible on the remaining *timberland*. The concept of a third primary use of agricultural land—use as permanent *rangeland*—was necessary for development of range science.

The origin of today's range science is found in the writings of men trained in long-term dynamics of volunteer vegetation (ecology and forestry), with experience on nonarable soils and in subhumid to arid climates. Origin of range science would not be expected in the literature of agronomy and forage crops, where volunteer vegetation must be destroyed.

In 1878, J.W. Powell's report on *Lands of the Arid Region* was submitted to Congress. It clearly differentiated rangelands (native grazing lands) from croplands and timberlands and recommended modification of the 160-acre Homestead Law for rangelands; but legislators and educators left no evidence of understanding for another quarter century. Meanwhile, some botanists, especially agrostologists, who had made collecting trips on the rangelands of the West, were reporting on the merits of the native grasses (1888–1905). Creation of range curricula in colleges originated because of demand by the U.S. Forest Service, after 1905. Today, several universities offer range courses to the Ph.D. degree; and more acres are being returned to range use, from misguided attempts at cultivation, than are being converted from rangeland to cropland.

Classical Literature of Range Science (Proposed "Origin" list, subject to emendations).

1878. Lands of the Arid Region. John Wesley Powell. U.S. Congress, 45th, 2d sess., Exec. Doc. 73, 195 p. Complete with maps.

1899. Grazing Problems in the Southwest and How to Meet Them. Jared G. Smith. USDA., Div. Agros. Bull. 16, 45 p., 9 figs., table of stocking rates of past and projected.

Note: Pres. Theo. Roosevelt, having seen imperative need to preserve that part of the public domain more suitable for grazing than other agricultural uses, on

Oct. 22, 1903, appointed a commission of three to develop proposals. Questionnaires were sent to 1,400 western stockmen. In 1905 (Re. following 1905 Sen. Doc.) the commission reported to Pres. Roosevelt.

1905: Grazing Problems on the Public Lands. Sen. Doc. 189, Public Land Commission, USFS Bull. 62. 67 p. In pocket "Map of grazing lands of western U.S." In pocket "Diagram of answers to questions regarding the public grazing lands."

Note: In May 1908 Pres. Roosevelt met with governors of the states and others. Will C. Barnes represented N. Mex. and later became Chief, Div. of Grazing, USFS. See: **The Story of the Range**. Will C. Barnes. USDA, Forest Service, 60 p., 6 maps, 15 photos. This 1926 item is the reprinted and extended material from Congressional Proceedings in the Public Lands, 69th Cong., 1 Sess.

- 1913. Range Improvement by Deferred and Rotation Grazing. Arthur W. Sampson. USDA, Forest Serv. Bull. 34, 16 p., 3 photo plates.
- 1916. Plant Succession. F.E. Clements. Carnegie Inst., Wash. Publ. 242. 512 p. see 1928.
- **1919. Plant Succession in Relation to Range Management.** Arthur W. Sampson. USDA Prof. Pap., Bull. No. 791. 76 p., 26 figs. some fold-out. (Back cover has "List of Publications Relating to Plant Succession, arranged chronologically").
- 1919. Range Management on the National Forests. James T. Jardine & Mark Anderson. USDA Bull. No. 790. 98 p., 32 photo plates, 4 figs., tables, valuable bibliography.
- 1920. Plant Indicators. F.E. Clements. Carnegie Inst., Wash. Publ. 290. 388 p. see 1928.
- **1923. The Natural Vegetation of the Great Plains Region.** H.L. Shantz. Annals Ass. Amer. Geog. 13:81-107. Illus. (Showing relations between Ann. Precip. zones, life-forms and soils).
- 1923. Range and Pasture Management. A.W. Sampson. College textbook. John Wiley & Sons.
- 1924. Native American Forage Plants. A.W. Sampson. College textbook. John Wiley & Sons.
- **1928. Livestock Husbandry on Range and Pasture.** A.W. Sampson. College textook. John Wiley & Sons.

Note: The above three books, bound in green buckram are a matched set, universally used by college range students until 1943.

1928. Plant Succession and Indicators. F.E. Clements. Clements states "The original editions having been exhausted, (see 1916 & 1920) the Carnegie Institution has granted permission to the author to undertake the present publication...". H.W. Wilson Co., N.Y. 658 p., numerous plates & figs.

Note: In 1963, the Hafner Publishing Co., Inc., of N.Y. & London reprinted and published *Plant Succession and Indicators* to meet continuing demand after a half century.

1934. Effects of Burning on Kansas Bluestem Pastures. A.E. Aldous. Kan. Agr. Exp. Sta. Tech. Bull. 38. 65 p.

1936. The Western Range; a Great But Neglected Natural Resource. USFS. Senate Doc. 199. 622 p. 86 figs., tables, index, green wrs.

- **1938.** A Selected Bibliography on Management of Western Ranges. F.G. Renner, E.C. Crafts, T.C. Hartman, & L. Ellison. USDA. Misc. Pub 281. 469 p., 8,274 entries, detailed index and table of contents.
- 1944. The History of Western Range Research. Div. of Range Research, under leadership of W.R. Chapline and R.S. Campbell. U.S. Forest Serv. Agr. History 18: 127-143.

Brief Chronology of Agency Sources of Scientific Rangeland Literature

- 1868. Division of Botany created in USDA. Dr. Vasey who had served under J.W. Powell was made Chief; followed by Frederick Coville. Published bulletins and circulars on range plants to 1901.
- 1895. Division of Agrostology established in the USDA, headed by F. Lamson-Scribner. Circular No. 1 authored by Jared G. Smith. Published 25 bulletins and numerous circulars on rangeland forage plants.

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- **1901. Bureau of Plant Industry was created**, encompassing activities of former Div. of Botany, and Div. of Agrostology. The BPI published illustrated reports of range surveys throughout the range states and on the grasslands of the Alaska coast. (Griffiths, Davy, Bentley, Piper).
- 1903. Santa Rita Range Reserve established by the Bureau of Plant Industry (So. Ariz.). The oldest Exp. Range.
- 1905. U.S. Forest Service created.
 - 1910. Office of Grazing Studies born; J.T. Jardine, Head.
 - 1911. Range surveys by field parties started on National Forests.
 - 1912. Jornada Range Reserve established (So. N. Mex.).
 - 1915. Responsibility for range research *outside* the National Forests was transferred from the Bureau of Plant Industry to the USFS.
- 1927. Act authorized Sec. of Interior to establish grazing districts on unreserved public lands in Alaska (only) with leases permitted to run up to 20 years.

- 1930. Forestry Branch of Bureau of Indian Affairs given responsibility for handling grazing on rangelands of Indian Reservations.
- 1933. Soil Erosion Service established in U.S. Dept. Interior.
- **1934. Taylor Grazing Act authorized** Sec. of Interior to establish grazing districts on the unreserved public domain within the coterminous United States.
- 1935. Soil Conservation Service established in the USDA (from SES of Interior Dept.); providing for first direct professional assistance to private ranch owners in planning for grazing management and rangeland conservation.
- 1946. General Land Office & Grazing Service of the Interior Dept. consolidated to form Bureau of Land Management. The BLM now administers grazing on Grazing Districts (see 1927 & 1934).
- 1948. American Society of Range Management—now Society for Range Management—was organized; with continuous publication of the Journal of Range Management to the present.

State Takeover of Federal Lands — "The Sagebrush Rebellion"



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Introduction

On July 1, 1979, Assembly Bill 413 as passed by the Legislature and signed by the Governor of Nevada became effective. By its terms, all of the unreserved, nonappropriated federal lands contained within the federal public domain in the State of Nevada came under the control of that state's government. Properly, this particular piece of legislation has been the subject of great notoriety and intense discussion, both during its consideration by the Legislature and after its ultimate passage. AB 413 and the efforts both to pass and implement it have become focal points in a major controversy over who has the right to own and control the unappropriated public domain—federal or state government. This debate has been nicknamed by both the participants and the media as "The Sagebrush Rebellion." Aside from Nevada, the States of Oklahoma, California, Utah, Alaska, Oregon, Wyoming, New Mexico and Arizona have, in some form or

another, become involved in the Sagebrush Rebellion controversy. Accordingly, we felt it appropriate to prepare a summary document to review the history of the "Rebellion" to date. This material has been organized in three separate parts. The first portion will articulate the various reasons leading to the origin of the "Sagebrush Rebellion". The second portion traces the history of the Rebellion chronologically in Nevada and other states. Third, this document discusses and analyzes the various legal theories associated with the mechanics for potential state takeover of federal public domain lands.

I. The Causes for the Rebellion

As the Office of the Idaho Attorney General researched the various questions and problems associated with the Sagebrush Rebellion, it seemed necessary and appropriate for us to identify, articulate, and classify the various causes underlying the Sagebrush Rebellion. Obviously, several of the wide range and variety of practices employed by the federal government in the management of the Federal public lands have caused varying degrees of frustration among the users of those lands. A complete and detailed listing of instances of such frustrations would be exceptionally lengthy and is not properly subject to treatment here. Rather, those fact patterns can be grouped into broad general categories. Thus organized they present a conceptualization of the underlying roots of the Rebellion. There are eight types of problems:

(1) The extent of federal ownership of public lands in the Western States: Perhaps the most significant broad category of frustration is resultant from the overpervasive scheme of federal land ownership in the Western states. The wide-spread federal land ownership in the west has tremendous economic, social and political impact not only in the use of those particular lands, but also in the use of other land contiguous to that federally owned. A listing of the 11 continental western states plus Alaska and the total percentage of federally owned lands within the boundaries of those states shows the extent of this ownership: Washington-29%, Montana-30%, New Mexico-34%, Colorado-36%,

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Editor's Note: This article is based on excerpts taken from a document prepared by the authors on the Sagebrush Rebellion for the 1980 session of the Idaho Legislature.