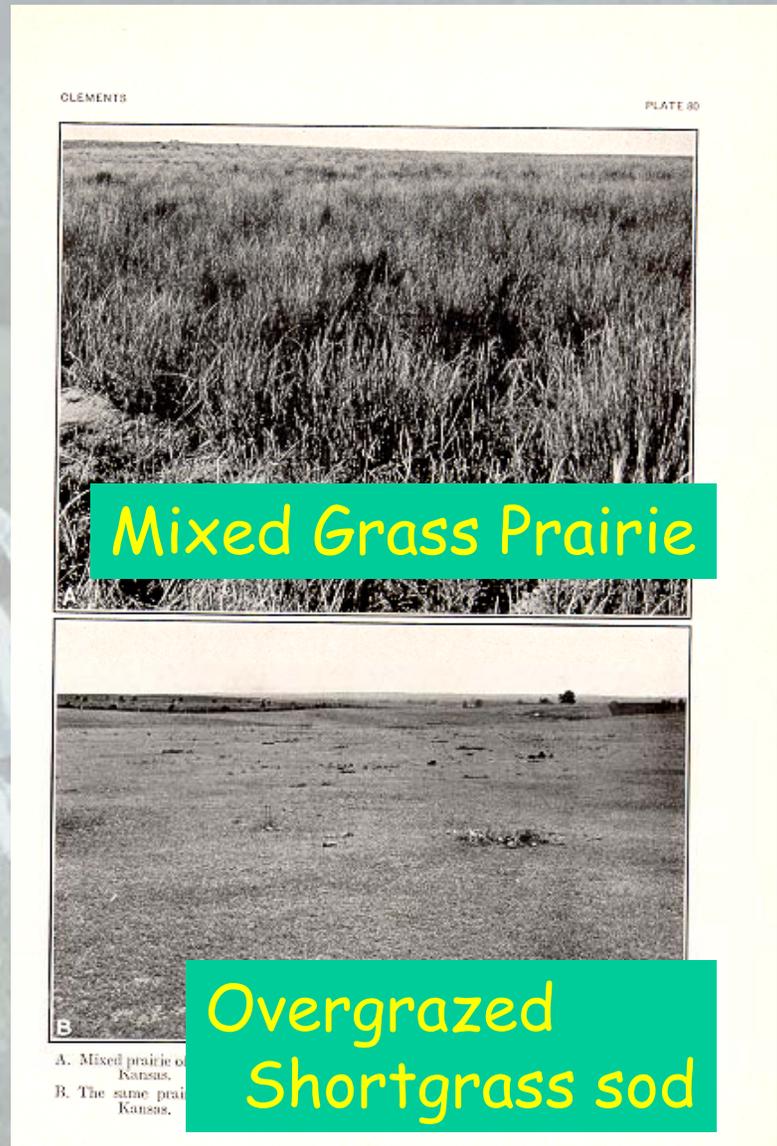
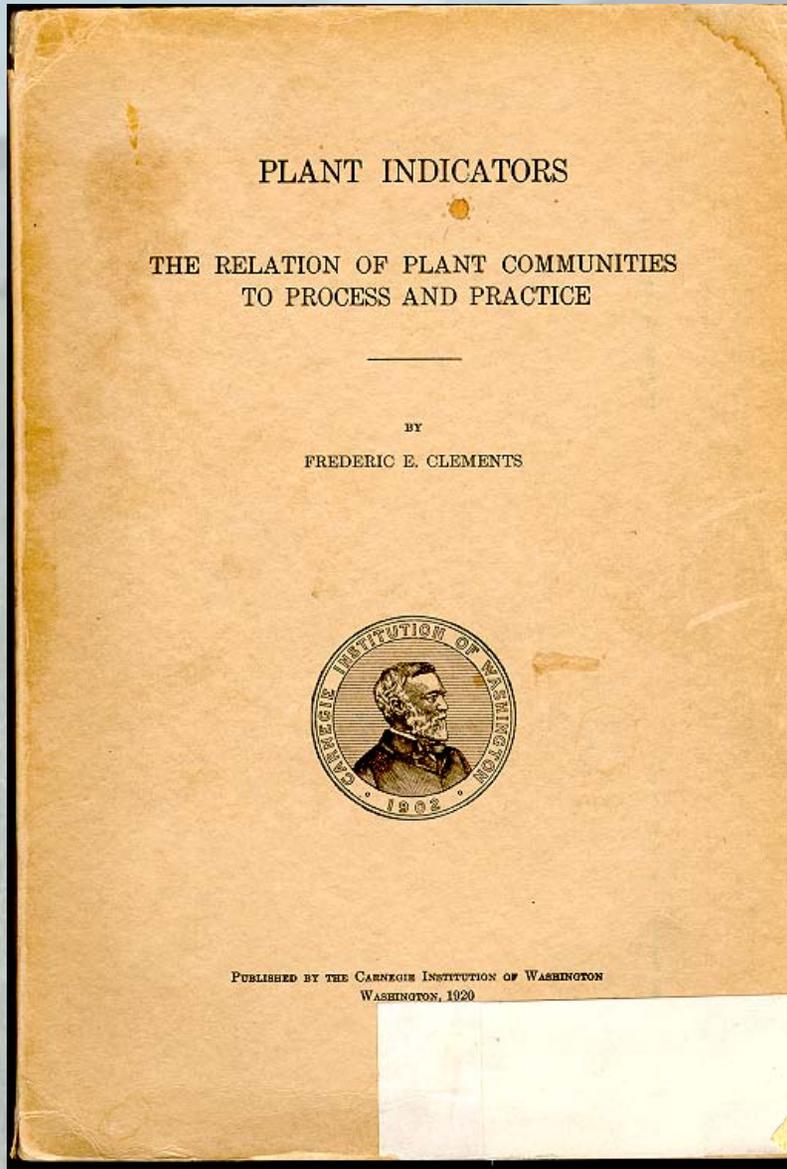


A group of approximately seven people are sitting on the ground in a grassy field, looking at documents or maps. They are wearing light-colored shirts and hats, suggesting a sunny or hot environment. In the background, there are rolling hills or mountains under a blue sky with some clouds. The overall scene is outdoors and appears to be a field study or assessment.

Rangeland Assessment and Monitoring History

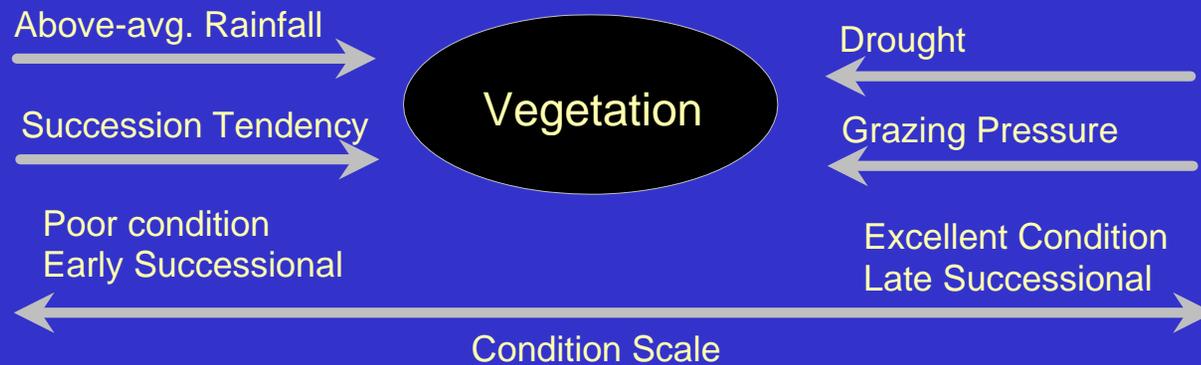


Succession & Rangeland Condition

- Frederic Clements 1916
 - Plant Succession - Remove disturbance → Climax community
- Arthur Sampson 1919
 - Grazing shifts plant cover and species composition
- E. J. Dyksterhuis 1949
 - Range Condition Classification
 - Classified plants into Increasers, Decreasers and Invaders relative to grazing
 - Excellent, Good, Fair & Poor

Range Condition & Linear Succession

General Range Model with Rainfall



From: Westoby et al. 1989 J. Range Manage. 42:266-274

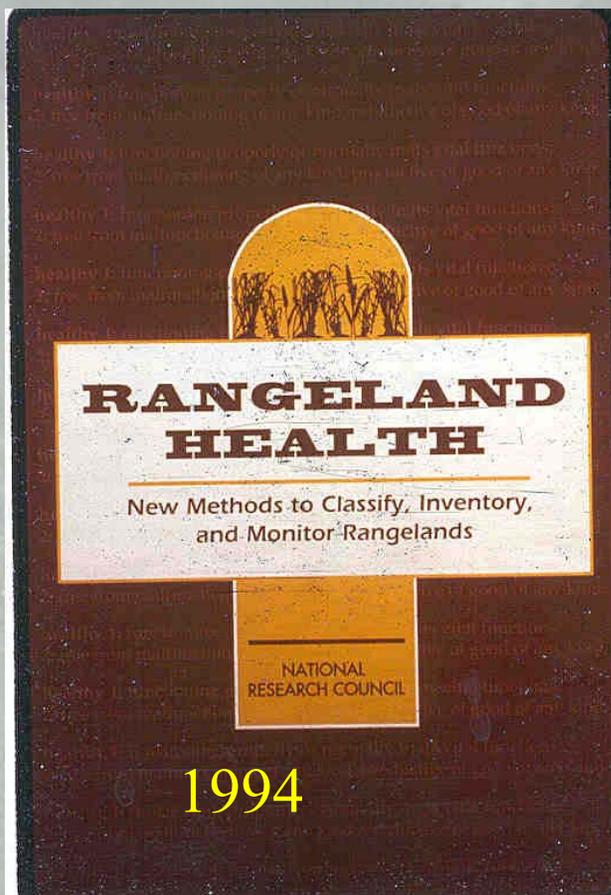
Other Techniques

- Parker Three-step (BLM & USFS 1950's)
 - Cover/Frequency for Range Condition
- Soil Surface Factors
 - Soil-based Condition
- Nested Frequency
 - Changes in Species Frequency
- Utilization measurements & maps & Stubble Height
 - Proper use of key forage species

Past: Focused on Livestock Use

- Key Area - "A relatively small portion of rangeland selected because of its location, use or **grazing value** as a monitoring point for **grazing use.**"
- Key Species - "**Forage** species whose use serves as an indicator to the degree of use of associated species."

Recent: Focused on Biological & Physical Processes



1994

J. Range Manage.
48:271-282 May 1995

Smith et al. 1995 JRM

NEW CONCEPTS FOR ASSESSMENT OF RANGELAND CONDITION

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Abstract

Range condition score or classification does not tell us, in a general sense, much of what managers and the public want to know about rangelands. Range condition is not a reliable indicator, across all rangelands, of biodiversity, erosion potential, nutrient cycling, value for wildlife species, or productivity. Succession, the basis for the current concept of range condition is not an adequate yardstick for evaluation of rangelands. The Society for Range Management (SRM) established the Task Group on Unity in Concepts and Terminology which has developed new concepts for evalua-

tion of the status of rangelands. These concepts are based on the premise that the most important and basic physical resource on each ecological site is the soil. If sufficient soil is lost from an ecological site, the potential of the site is changed. The Task Group made three recommendations, which were adopted by the SRM: 1) evaluations of rangelands should be made from the basis of the same land unit classification, ecological site; 2) plant communities likely to occur on a site should be evaluated for protection of that site against accelerated erosion (Site Conservation Rating, [SCR]); and 3) selection of a Desired Plant Community (DPC) for an ecological site should be made considering both SCR and management objectives for that site.

Key Words: Range Condition, Desired Plant Community, Site Conservation Threshold, Sustainability, Ecological Site, Soil Erosion

Ecological Processes

- Energy flow
 - the conversion of sunlight to plant and then animal matter.
- Nutrient cycle
 - the movement of nutrients, such as carbon and nitrogen, through the physical and biotic components of the environment.
- Water cycle
 - the capture, storage, & safe release of precipitation.

Rangeland Health

"The degree to which the integrity* of the soil, vegetation, water, & air as well as the ecological processes of the rangeland ecosystem are balanced and sustained."

* "Integrity is the maintenance of the functional attributes characteristic of a locale, including normal variability"

Interpreting Indicators of Rangeland Health

