

# ORGANIZING INFORMATION FOR ECOLOGICAL SITES

Society for Range Management  
Annual Meeting  
Ecological Site Workshop  
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Jornada Experimental Range

# Why Do We Classify?

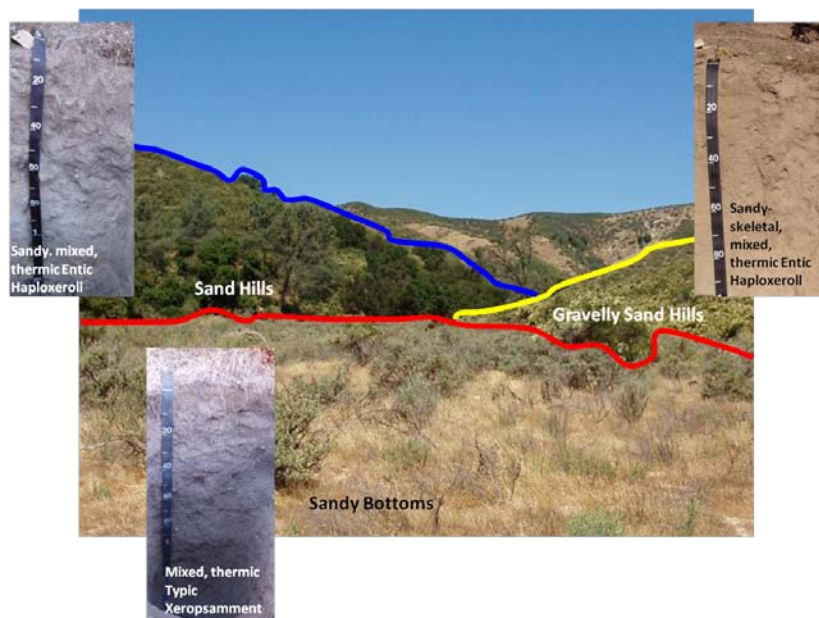
- Arrange a large array of objects so that differences and similarities can be better understood.
- Separating like things from unlike things by increasing homogeneity, decreasing sampling effort.
- Set the boundaries of a study area.
- Looking for identifiable patterns or identifying spatial context, especially to aid extrapolation.
- Aiding in the development of restoration endpoints by developing identifiable and compatible classes within the classification.
- Displaying or communicating complex relationships more effectively for planning, restoration, and management.



Arranging the various elements within the ecosystem in a way that preserves the greatest possible knowledge base, while making the most efficient and effective use of available information.

## Ecological Site classifications provide a consistent framework

- for stratifying and describing soil, vegetation, and abiotic features;
- for delineating units that share similar capabilities to respond to management activities or disturbance processes; and
- for estimating what ecosystem services can be expected from particular soil:vegetation combinations.

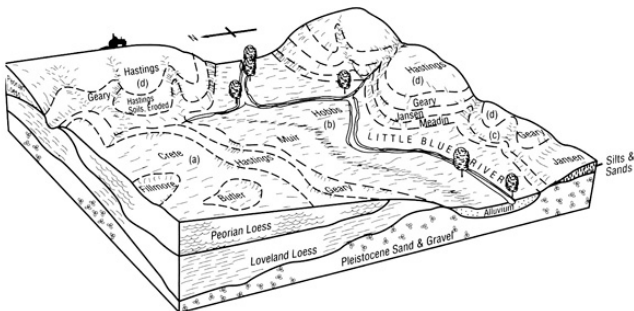


# Science is the systematic classification of experience.

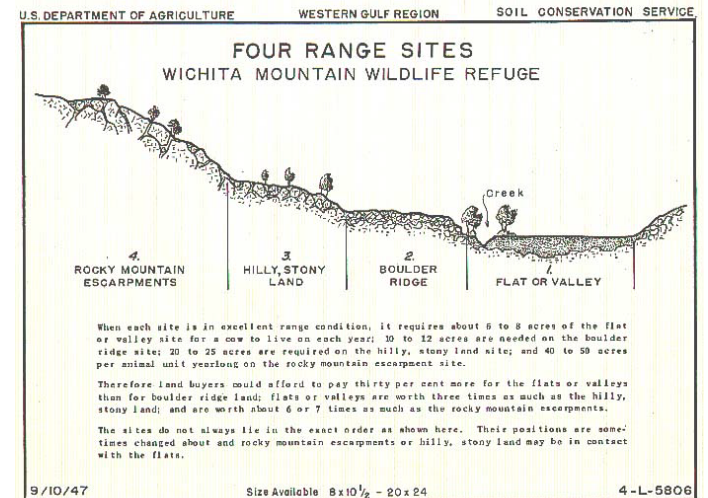
George Henry Lewes, British philosopher

- **National Cooperative Soil Survey**
  - > 100 years of experience
  - NASIS, STATSGO, Pedon database
- **Range Site/Woodland Site/Forage Suitability Groups**
  - ~ 8000 sites
- **TEUI/NatureServe**
- **LTER sites/Experiment Stations**

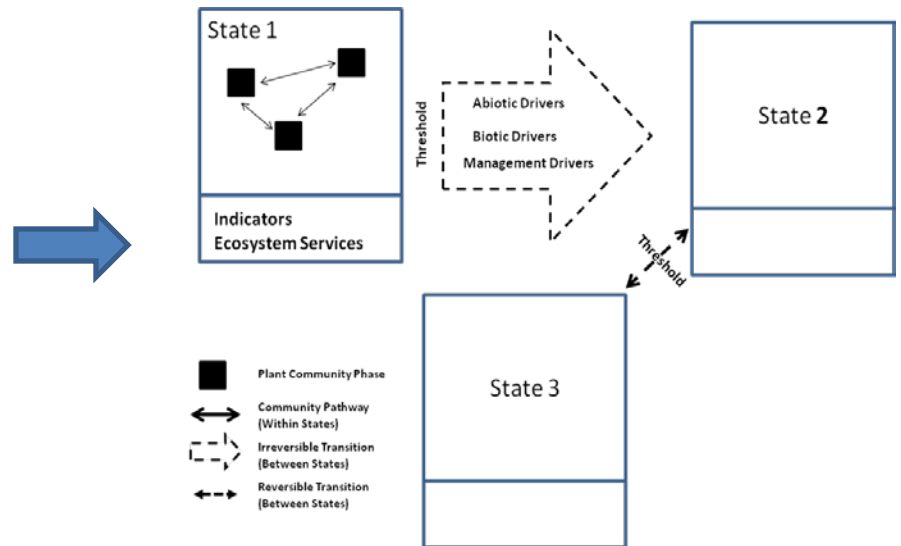
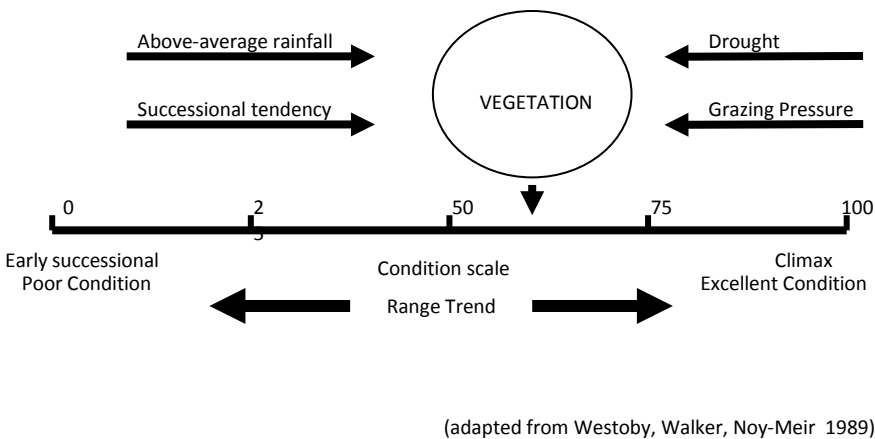
FIGURE 2-3



Landscapes of Associations of Soil Series (Soil Survey Thayer Co., Nebraska).



*Without the discovery of uniformities there can be no concepts, no classifications, no formulations, no principles, no laws; and without these no science can exist. Clyde K.M. Kluckhohn, American cultural anthropologist*

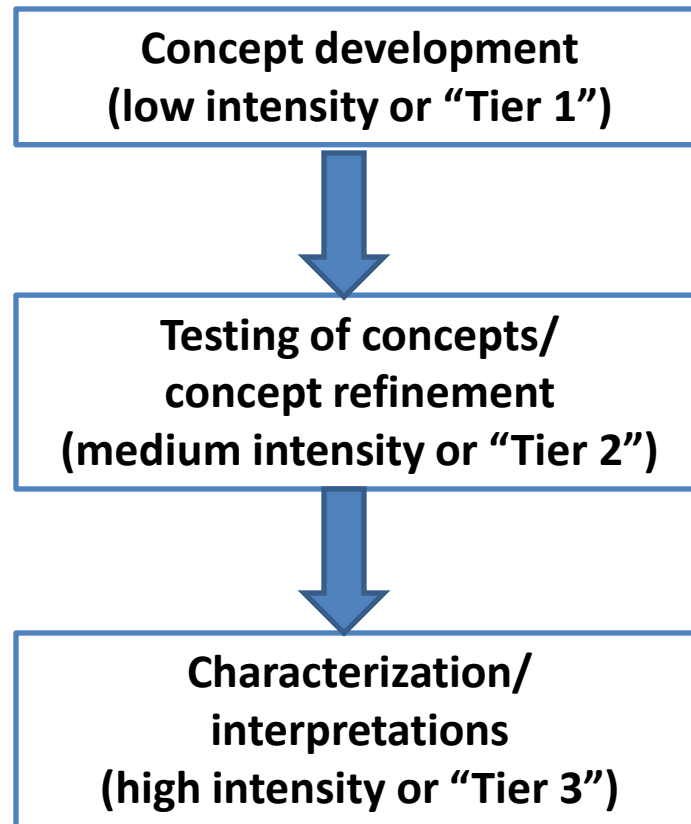


*What are the important soil/plant relationships?*

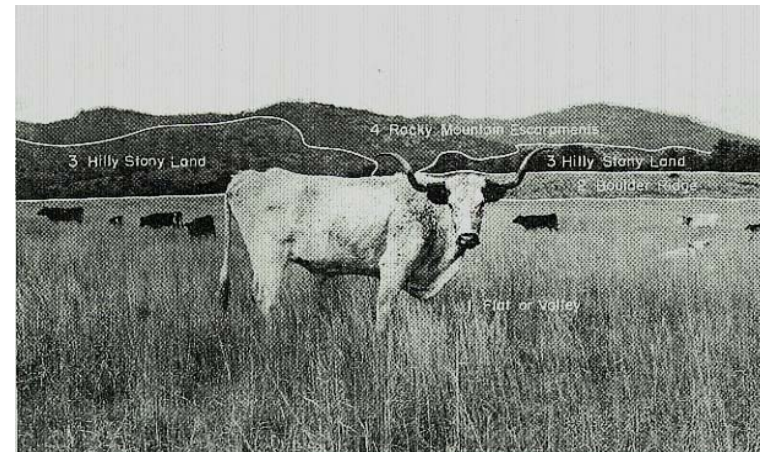
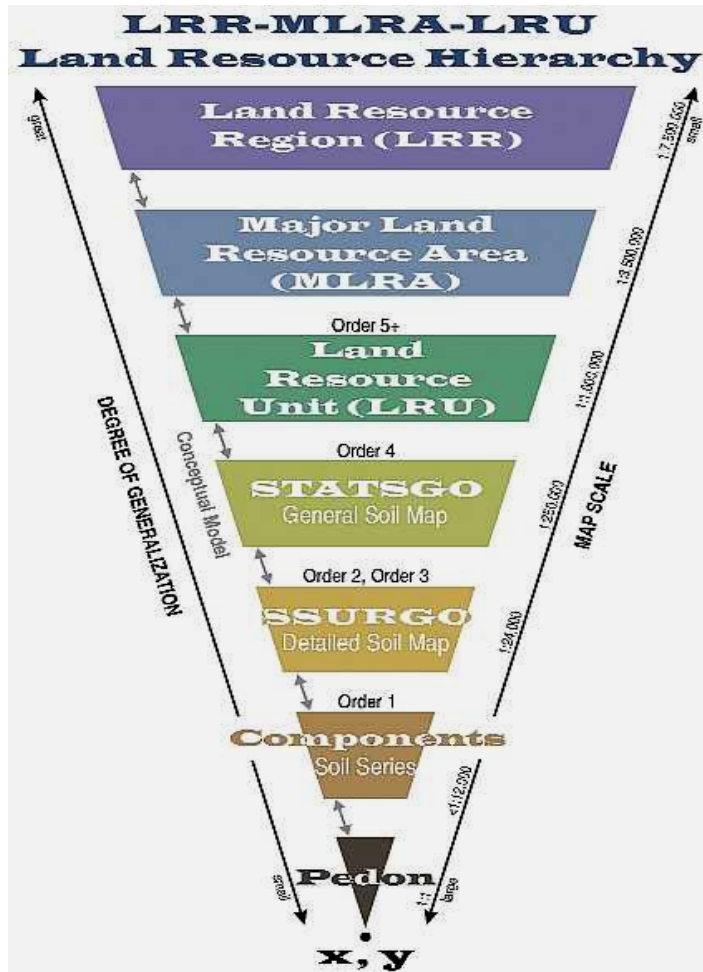
*How do they work?*

*What are the limits/boundaries?*

*There have been many authorities who have asserted that the basis of science lies in counting or measuring, i.e. in the use of mathematics. Neither counting nor measuring can however be the most fundamental processes in our study of the material universe—before you can do either to any purpose you must first select what you propose to count or measure, which presupposes a classification.* Roy Albert Crowson, British biologist



- A climate, a plant community or a soil, in the sense of an individual, is ...set by our logic, not by nature. E.J. Dyksterhuis, American ecologist



- *Range Sites are not Ecological Sites*
- *Concept development is critical*
  - *Organizing initial tests and data collection*
  - *Communicating to partners and users*
  - *Building a consistent reliable database*
- *Existing information (range sites) > Tier 1*
  - *These relationships should be explicitly stated*