

Vegetation: Approaches in Classification

Criteria for approach to select:

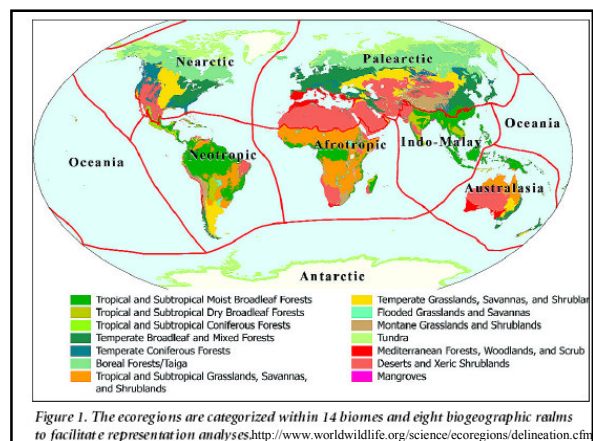
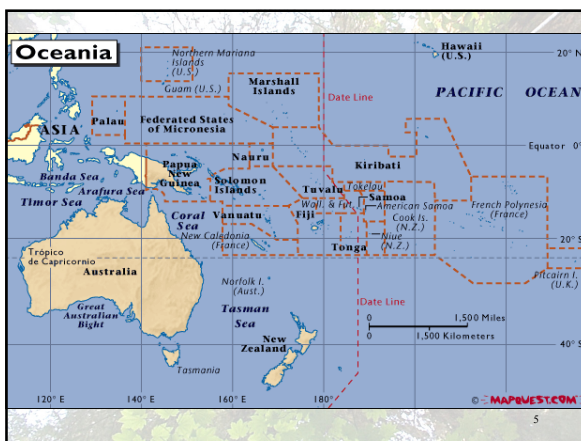
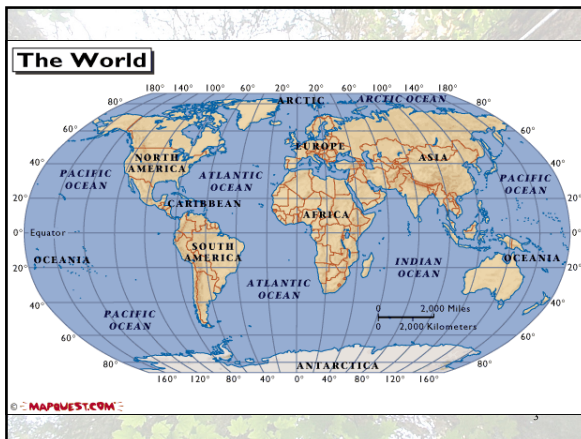
1. Accessibility – easily observed and measured
2. Significance – ability to distinguish among communities
3. Effectiveness – at desired level of detail

(Was slide
12 in class)

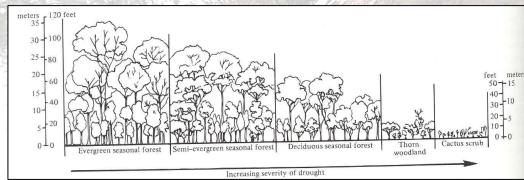
Structure and life form (physiognomic)

- Broad-based, global – not site-specific
- Formations based on:
 - Growth form of dominant plants
 - Type of environment

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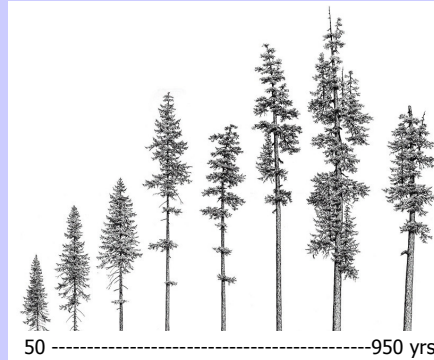
Formation Types along a Moisture Gradient – Profile Diagram



Descriptive diagram of the vertical structure of the vegetation: relative positions of the various layers accurately depicted

Fig. 6.5 7

Accurate Depiction - Bob Van Pelt (Forest Giants)



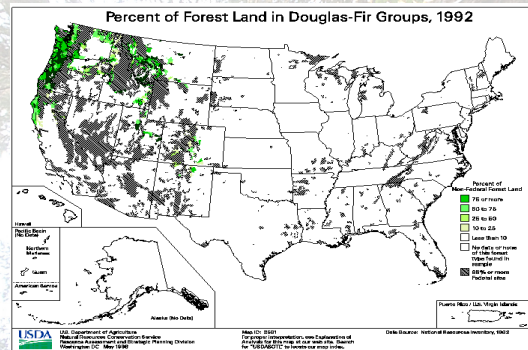
Drawing by Bob Van Pelt (Forest Giants)

Dominance Type

- Dominant tree species in overstory
- Biomass, density, height, coverage
- National System of Forest Classification (U.S. Forest Cover Types, Society of American Foresters)
- Preferred by foresters, ecologists, range and wildlife managers

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Dominance Type – US Forest Cover Type



Floristic Composition

Identity and proportion (% cover) of plants occupying the site

1. Ground vegetation – e.g. Finland forest site type
2. Overstory – e.g. US National Forest Cover
3. Entire community – e.g. fidelity classes, Habitat type approach of Daubenmire

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Vegetation Classification: Floristic Composition (habitat type)

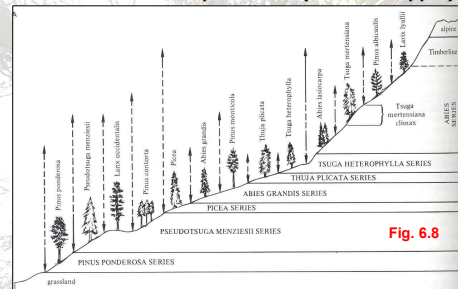


Fig. 6.8

E.g. Douglas-fir–western hemlock/evergreen huckleberry/ sword fern
Abbreviated Name: PSME-TSHE/VAOV/POMU

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Ecosystem Classification

- Combines climate, soils, landform, and vegetation characteristics.
- Biogeo-climatic
 - Uses climate to separate vegetation into formations, regions, zones, and subzones.
- Bio-physical
 - Environmental categories rather than taxonomic ecological classification.

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Measures of Relative Moisture Availability

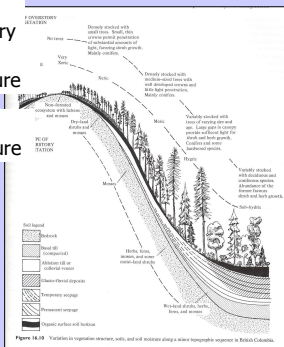
- Xeric – water removed very rapidly – soil only moist briefly after precipitation
- Mesic – water removed slowly – soil may remain moist for long periods of time
- Hygric – water removed so slowly soil remains wet for most of growing season (Devil's club)
- Hydric – water is at or above soil surface all year

Important component of biogeoclimatic classification system

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BIOGEOCLIMATIC CLASSIFICATION E.G.

Type of Overstory
Soil Moisture
Soil Structure



Vegetation structure, soils and soil moisture along a topographic sequence in a subzone of British Columbia

Fig. 6.10

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BIOPHYSICAL

- Series of inventories of climate, soils, landforms, and vegetation
- Synthesized into "environmental categories"
- Usu. Requires team of specialists
 - Geologist
 - Pedologist (soil scientist)
 - Plant ecologist

To wrap up...

- Variety of classification systems used to describe forests
- The type of system employed will depend on the objectives of the researcher/forest manager

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Up Next:

Forest Development Stand Dynamics

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