GENERAL BOTANY Lecture 38 - Propagation and Plant Ecology

I. Types of propagation
   - A. Sexual (seed)
   - B. Asexual (vegetative)

II. Reasons for vegetative propagation
   - A. Generate clones from superior plants
   - B. Maintain genotypes used in synthetic varieties
   - C. Propagate varieties which are poor seed producers
   - D. Propagate genotypes with unusual chromosomes or that demonstrate sterility

III. Tissues for asexual propagation
   - A. Stolons
   - B. Rhizomes
   - C. Crowns (dividing)
   - D. Stem cuttings
   - E. Leaves - tissue culture

IV. Levels of biological organization
   - A. Subatomic particles - electron, proton, neutron
   - B. Atom - smallest unit of an element
   - C. Molecule - two or more atoms
   - D. Protein - a large molecule
   - E. Organelle - stuff inside the cell
   - F. Cell - smallest living unit
   - G. Tissue - group of specialized cells
   - H. Organ - one or more types of tissues
   - I. Organ system - two or more organs
   - J. Multicellular organism - an individual
   - K. Population - group of same species that can potentially interbreed
   - L. Community - populations of all species that occupy a habitat
   - M. Ecosystem - a community and its physical surroundings
   - N. Biome - an ecosystem occupying an extensive geographical area
   - O. Biosphere - that part of the earth occupied by living organisms
   - P. "SAM POCTOOMP Can Eat Big Bananas"

V. Biomes of earth
   - A. Tundra - cold, dry, treeless plains (Wyoming, Alaska)
   - B. Taiga (also coniferous forest) - pine trees (Canada - USA border)
   - C. Deciduous Forest - deciduous trees (Eastern and East of Oklahoma)
   - D. Tropical Rain Forest - lots of vegetation (Florida)
   - E. Savanna and Prairie - grasslands (Western and West of Oklahoma)
   - F. Desert - evaporation exceeds rainfall (Arizona)

VI. Ecosystems and pollution