

Assignment: Chapter 2 (Murrell), p. 19 to end; complete Exercise 2, Quest. 4 - 11.

Lecture-Study Outline:

- I. Review Question (fill-in): Of the three activities of plant taxonomy (SA. 02) the student and the user of taxonomy focus mainly upon _____; whereas, taxonomists *per se* focus mainly upon _____ and _____.
- II. PLANT NOMENCLATURE:
 - A. WHAT'S IN A SCIENTIFIC NAME?
 1. Three elements: a) _____ b) _____ c) _____
 2. Example: *Quercus alba* L. or *Vernonia acaulis* (Walter) Gleason
 3. If two Authors: the one(s) who...
 - a. ...named and described the species is/are the _____ author(s)
 - b. ...reclassified the species later is/are the _____ author(s)
 4. *Species plantarum* (Linnaeus, 1753) – first publication of binomial nomenclature
 - B. IMPORTANCE OF SCIENTIFIC NAMES
 1. Universally recognized and separate from local languages [since “Babel”]
 2. Basis for classification -- suggest relationship to genus, family, etc.
 3. Descriptive of the species – see *HANDOUT* to be provided
 - a. morphology (*e.g. alba* = _____)
 - b. habitat (*palustris* = _____)
 - c. usage (*officinalis* = _____)
 4. Eliminates confusion of
 - a. multiple common names for one species
 - b. multiple species with one common name
 5. Provides names for some species that do not have a common name.
 - C. PURPOSE OF NOMENCLATURE – ESTABLISH CONTROL (AUTHORITY) OVER NAMING BY:
 1. CONVENTION (rules) for naming
 2. COMMUNICATION of lists to avoid duplication (synonyms)
 - a. *Index Kewensis* – Royal Botanical Gardens in Kew; CD, not on internet
 - b. [Index Nominum Genericorum \(Plantarum\)](#) – listing of all Generic names
 - c. Locating Plant Information – Visit the [Plant Family Finder](#)
 - d. Locating Plant Images – e.g. [University of Wisconsin – Plant Image Library](#)

3. CONGRESS -- International Botanical Congress (1864, Paris) and more recent) enforces and modifies rules – XVII Congress met in Vienna, 2005; the [XVIII Congress](#) is to meet in Melbourne, Australia July 23 – 30, 2011

D. PRINCIPLES OF NAMING -- From: [International Code of Botanical Nomenclature](#)

Note: These also appear in your text (p. 19 ff) or, at the above website, select "Division I, Principles (I - VI) from left menubar."

Brief Summary of the Six Principles:

1. INDEPENDENCE of botanical from zoological nomenclature

EXAMPLE: _____ is genus of moth and a tropical plant genus

2. TYPE -- each plant species must be referenced to a "type specimen" (holotype), a real specimen which serves as a reference point to display the characters of that species. Then, the "type" of each genus is the "type species", and of each family, the "type genus," etc.

EXAMPLE: (see Table 2-1, p. 15)

3. PRIORITY -- oldest name beginning from 1753 will be retained over newer names
4. ONE CORRECT NAME for each taxonomic group (taxon), named in accordance with #3.
5. LATIN used in all names, or otherwise treated as Latin; proper endings (p. 16)
6. RETROACTIVE -- rules recently changed cancel previous rules unless expressly limited

III. QUESTIONS and DISCUSSION of [Exercise 2](#) – note any problems needing more clarity

You should be able to answer similar questions as these if presented on an exam.