Assignment:

A. Look at your Spring Semester calender —> input on "Trip" date
B. Read your Syllabus – bring questions / needed clarifications
C. Obtain the two texts (Murrell and BW); plus a ≥ 1.5" 3-ring binder – needed immediately
D. Read Chapter 1, Murrell [Note: Answer Question #1 below before reading.]

Study and Discussion Questions:

1. If you had been appointed manager (steward) of the Garden, what steps or components would you incorporate into your plan to manage and develop the plant populations?

   Suggestion: Place yourself in the position of perfect Adam or Eve, and being asked to manage the Garden of Eden– *i.e.* cultivate so as to develop the potential of the created kinds – what steps would you need to take as part of a systematic approach to establish a workable program to manage each kind of plant and develop its potential (Gen. 1:11-12)? Include and address as many details or challenges as you can think of. Do not take anything for granted.

   List of steps or considerations to manage the Garden (use reverse side as necessary):

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

   f. _____

2. After reading/studying Chapter 1, use the outline on page 2.2 of this study guide to expand and refine your approach to managing the Garden (#1 above). We will use this outline in lecture.

3. What other title is often used interchangeably with "plant taxonomy" as applied to the science of identification, naming, and classification? Please use reverse side to answer.

4. According to Merrill, what two skills should you expect to gain from this course?

5. From Chapter 1, and considering your own interests and vocational plans, list several benefits or services provided by *plant taxonomy* (include benefits you realize for yourself).

Lecture/Study Outline:

THREE ACTIVITIES OF TAXONOMY:

1. **CATALOGING** – includes three activities focused on each _____ plant, Fig 1-2]

   a. _____ – applying name based upon an acceptable convention (NOUNS)

      KEY CHALLENGE = How maintain a system of names *vs*. threat of Babal?
      Our Study —> Chapter 2 – "Botanical Nomenclature"

   b. _____ – "assembling and communicating information about the new species discovered [CHARACTERS (nouns) and STATES (adjectives)]

      KEY CHALLENGE = How develop a terminology to describe?
      Our Study —> Chapters 3 (Vegetative) and Ch. 11 (Reproductive Morphology)

   c. _____ – making names and descriptions available in published form

      KEY CHALLENGE = How to make data organized and accessible?
      Our Study —> Chapter 2 – nomenclature/hierarchy; support for data access

2. **IDENTIFICATION** – assigning a plant in question to a taxonomic name or group

      KEY CHALLENGE = What are the _____?

   a. Family Recognition – provides array of characters (a "type") to generally identify
   b. Keying – artificial method of identifying based on similarities/diff. (Chapter 5)

   NOTE: Terminology is fundamental to both approaches

   QUESTION: How is "identification" different from "cataloging" in this context?

   _____

3. **CLASSIFICATION** – organization of species into groups and a hierarchal system

   a. Grouping – sorting species into groups (t_____)according to similarities
   b. Ranking – organizing more specific taxa into a hierarchy of progressively larger groups
      Taxonomic hierarchy – see Table 1.1

   KEY QUESTION = What are the interrelationships among taxa?

   Biosystematics – science that tests theories about relationships within supposed natural classifications (*e.g*. phylogenetics, phenetics, cladistics, baraminology) – Chapter 4