

Name: \_\_\_\_\_

BOTANY 300S  
Systematic Botany

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### TERM TEST I

1 (10 pts.) For each term or phrase in the first column, write the letter of the term or name in the second column most closely associated with it. Not all terms in the second column are used, but those that are, are used only once.

- |   |                   |
|---|-------------------|
| _____ A. Aztec folk generic                 | a) "Apothecaries" |
| _____ B. binomial or trivial names          | b) "Herbalists"   |
| _____ C. horizontal polysemy                | c) herbarium      |
| _____ D. modern concept of genus            | d) homonymy       |
| _____ E. monophyletic taxa                  | e) hypanthium     |
| _____ F. new illustrations                  | f) Linnaeus       |
| _____ G. patristic information              | g) morphology     |
| _____ H. united stamens, petals, and sepals | h) phenetics      |
| _____ I. taxonomic evidence                 | i) phylogenetics  |
| _____ J. traditional taxonomy               | j) plesiomorphy   |
|   | k) synonymy       |
|   | l) tomato         |
|   | m) Tournefort     |

2 (9 pts.) Write a **Y** (for yes) or an **N** (for no) before each of the following terms or phrases to indicate whether or not it is found both in the works of Linnaeus and in folk-biological classifications.

- |                                 |                            |
|---------------------------------|----------------------------|
| _____ A. binomials              | _____ F. polynomials       |
| _____ B. chronistic information | _____ G. sexual system     |
| _____ C. descriptive names      | _____ H. uninomials        |
| _____ D. hierarchy              | _____ I. vertical polysemy |
| _____ E. pharmaceuticals        |                            |

3 (9 pts.) What is the taxonomic rank of each of the following names?

- |                          |   |
|--------------------------|---|
| A. Botrychioideae _____  | F. <i>Populus</i> sect. <i>Algeiros</i> _____ |
| B. Chlorophytina _____   | G. Rhodophycophyta _____                      |
| C. Dryopteridaceae _____ | H. Rosanae _____                              |
| D. Pinopsida _____       | I. <i>Woodwardia virginica</i> _____          |
| E. Polypodiales _____    |   |

4 (9 pts.) Which of the ranks in question 3 is/are required for every species (if only implicitly) and which is/are optional? You can indicate this by the letter of the corresponding name in question 3.

Required:

Optional:

5 (10 pts.) Mark a **T** for each true statement and an **F** for each false one.

- \_\_\_\_\_ A. *Candollea* and *Jussiaea* are both generic names not in use today that honor contributors to natural systems of plant classification.
- \_\_\_\_\_ B. The fern allies all have jointed stems and whorled leaves and branches.
- \_\_\_\_\_ C. Conifers can be distinguished from other living seed plants by their needlelike leaves with a single midvein.
- \_\_\_\_\_ D. Many of the chromophyte divisions became photosynthetic by endosymbiosis of other eukaryotic algae.
- \_\_\_\_\_ E. Synonymy is found in both contemporary scientific classification and Aztec folk biological classification.
- \_\_\_\_\_ F. The green plant or chlorophyte lineage is the only one containing both chlorophylls a and b.
- \_\_\_\_\_ G. Following publication of Darwin's Origin of Species, Bentham and Hooker arranged their Genera plantarum according to an evolutionary system.
- \_\_\_\_\_ H. Algae, fungi, and land plants are all monophyletic.
- \_\_\_\_\_ I. Identification is the taxonomic activity devoted to constructing classifications..
- \_\_\_\_\_ J. Linnaeus went directly to European folk biological classification systems for his concept of genus.

6 (10 pts.) Sketch a hypothetical leaf for each of the following descriptions:

A. Leaf palmately compound, the leaflets lanceolate, entire, cuneate, mucronate.

B. Frond triangular, pinnatifid, the pinnae obtuse, the sori elongate, on either side of the midrib.

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**57 pts. Total**