

Topic 04 – History of Plant Systematics & Classification
Fall 2013 – Dr. Hardy

I. The early days.

A. Folk taxonomy.

B. Theophrastus (ca. 371-286 BC). *De Historia Plantarum*, and *De Causis Plantarum*

II. Herbalists.

A. Herbals.

B. Doctrine of Signatures.

C. Dioscorides (1st C. AD). *De Materia Medica*.

D. Others (15th-17th C. AD).

E. The Badianus Manuscript (1552).

III. Early Pre-Linnaean Taxonomists.

A. Caesalpino (1519-1603). *De Plantis Libri*.

B. de Tournefort (1656-1708). *Institutiones Rei Herbariae*.

C. Ray (1628-1705). *Synopsis Methodica Stirpium Britannicarum & Historia Plantarum*.

IV. Linnaeus.

A. Carl von Linné (a.k.a. Carolus Linnaeus; 1707-1778). *Species Plantarum* (1753).

V. The French and their ‘natural’ systems.

A. Adanson (1727-1806). *Familles des Plantes*.

B. de Jussieu (1748-1836). *Genera Plantarum*.

C. Lamarck (1744-1829). *Flora Francoise*.

D. de Candolle (1778-1841). *Prodromus Systematis*.

VI. Evolutionary taxonomy.

A. Darwin (1809-1882). *On the Origin of Species by Means of Natural Selection* (1859).

B. Engler (1844-1930) and Prantl (1849-1893). *Die Natürlichen Pflanzenfamilien*.

C. Bessey (1845-1915). Bessey’s Dicta. *The Phylogenetic Taxonomy of Flowering Plants*.

D. Takhtajan (1910-). *Diversity and Classification of Flowering Plants* (1997).

E. Cronquist (1919-1991). *An integrated system of classification of flowering plants* (1981, 1988).

VII. Phenetics.

A. Michel Adanson (1750s).

B. Sneath & Sokal (1950s-1970s).

Sneath & Sokal. 1973. *Numerical Taxonomy: The Principles and Practice of Numerical Classification*.

C. Phenetics Defined.

D. Pros & Cons.

VIII. Cladistics.

A. Willi Hennig (1913-1976)

Grundzüge einer Theorie der Phylogenetischen Systematik (Hennig, 1950).

Phylogenetic Systematics (Hennig, 1966).

B. Hennigian Principles.

Readings for this topic:

Artificial and Phenetic Systems of Classification. Pp. 461-467,

Traditional Phylogenetic Classification. Pp. 469-485, and

Cladistic classification systems. Pp. 489-503,

all in Vascular Plant Taxonomy, 4th ed. Walters, DR, and Keil, DJ. Kendall/Hunt Publishing Co., Dubuque, Iowa.