

Course Syllabus for “Systematics, evolution, and phylogeny of Orchidaceae”

1. Introduction - fossil history of orchids; the place of orchids in the grand scheme of plants; structure of the orchid flower; vegetative anatomy;
2. Pollination mechanisms - nectar secretions, mimicry, deceit, and euglossine pollination; pollen and pollen imitation; special secretions (waxes and oils; fragrances);
3. Survey of subfamilies, tribes, and subtribes;

Apostasioideae

Apostasia

Neuwiedia

Vanilloideae

Tribe Pogonieae

Tribe Vanilleae

Cypripedioideae

5 Genera, ± 146 species

Cypripedium

Selenipedium

Mexipedium

Phragmipedium

Paphiopedilum

Orchidoideae

Three tribes: DISEAE, DIURIDEAE, ORCHIDEAE

Epidendroideae

650 genera, ± 18,000 species 15 tribes

Tribe Arethuseae

Tribe Calypsoeae

Tribe Collabieae

Tribe Epidendreae

Tribe Gastrodieae

Tribe Malaxideae

Tribe Neottieae

Tribe Nervilieae

Tribe Podochileae

Tribe Xerorchideae

Tribe Sobralieae

Tribe Triphoreae

Tribe Cymbideae

Tribe Dendrobieae

Tribe Vandeae

Major lineages

#### 4. impacts of molecular studies on classification