

**Botany / Plant Systematics Web resources**  
**Compiled by Lena Struwe 2011, Rutgers University**

We encourage all students to explore these web resources. These links provide videos, interviews, interactive features, and other on-line material that will help you understand and learn about botany. For some video and audio you might need specific programs. If it doesn't work on your computer, try on another one, or download the file and try to open it with another program.

**Unit 1: 1 intro - Web resources**

- **Botany without Borders**, Botanical Society of America (online video): [LINK](#)
- **Tropical Feast**, Missouri Botanical Garden (online interactive, photos of 40 plants): [LINK](#)
- **Michael Simpson's Plant Systematics Resources**: [LINK](#)

**Unit 2: 2 phylogenetics - Web resources**

- **Evolution Enclaves: Darwin the Botanist and Origins of Life Research**, interview with David Kohn by Steve Mirsky (Science Talk), (NPR Scientific American; read transcript, download or listen online): [LINK](#)
- **Darwin, An origin of species** (PBS interactive): [LINK](#)
- **Darwin's Diary** (PBS interactive): [LINK](#)
- **Meteor impact simulation** (online video): [LINK](#)
- **Extinction** (PBS interactive): [LINK](#)
- **All in the family**, building phylogenetic trees, PBS (online interactive): [LINK](#)
- **Judgment Day: Intelligent Design on Trial**, PBS NOVA (on-line video and other materials about the Dover trial): [LINK](#)
- **Phylogenetic Systematics**, University of California Museum of Paleontology (online tutorial): [LINK](#)
- **Understanding Evolution**, University of California Museum of Paleontology (online tutorial): [LINK](#)
- **Evolution 101**, University of California Museum of Paleontology (online tutorial): [LINK](#)

**Unit 3: 3-5 land plants - Web resources**

- **Archaeofructus, oldest fossil flower** (PBS interactive): [LINK](#)
- **Tree of Life** (PBS interactive): [LINK](#)
- **Classifying life** (PBS interactive): [LINK](#)
- **Origins of Earth** (PBS interactive): [LINK](#)
- **History of Life on Earth** (PBS interactive): [LINK](#)
- **Fearless Planet: Earth Story**, Discovery Channel (view online, 44 min): [LINK](#)
- **Living Fossil Trees Sold for Conservation** (about Wollemi Pine), National Geographic (online video): [LINK](#)
- **Plant Evolution Timeline**, University of Cambridge (online interactive): [LINK](#)
- **Life cycles of *Equisetum*, fern, and angiosperm**, University of Alberta (online interactive): [LINK](#)

**Unit 4: 6-7 flowering plants & basal angiosperms - Web resources**

- **Giant Amazon waterlilies (Nymphaeaceae) with David Attenborough** (online video on Youtube, BBC, 5 min): [LINK](#)

#### Unit 5: 7 monocots - Web resources

- **Popping corn**, Discovery Channel (time warp video, 1 min): [LINK](#)
- **Titan Arum (Araceae) with David Attenborough** (online video on Youtube, BBC, 2.5 min): [LINK](#)

#### Unit 6: 8 eudicots - Web resources

- **Why Tell Me Why: Why Peppers Make You Cry**, HowStuffWorks/Discovery News, *Capsicum*, Solanaceae (online video, 2 min): [LINK](#)
- **Origin of Chocolate**, HowStuffWorks, *Theobroma*, Malvaceae (online video, 1 min): [LINK](#)
- **Carnivorous Plants in North America with David Attenborough**, BBC, *Dionea*, *Sarracenia* (video on Youtube, 4 min): [LINK](#)
- **Carnivorous Pitcher Plant in Borneo with David Attenborough**, *Nepenthes*, BBC (video on Youtube, 4 min): [LINK](#)
- **Strangling fig tree with David Attenborough**, *Ficus*, Moraceae, BBC (video on Youtube, 4 min): [LINK](#)
- **Exploding dogwood flowers (Cornaceae)** (videos on website): [LINK](#)

#### Unit 7: 9 morphology - Web resources

- **Shape of trees: The frustration principle** by Karl Niklas, PBS (online article and graphics about vegetative architecture): [LINK](#)
- **Fruit: Triumph of the Angiosperms**, Wisconsin Online (online interactive): [LINK](#)
- **Vegetative terminology**, Wayne's Word (3 pages, link takes you to first one): [LINK](#)
- **Leaf terminology**, Wayne's Word (2 pages, link takes you to first one): [LINK](#)
- **Inflorescence terminology**, Wayne's Word (2 pages, link takes you to first one): [LINK](#)
- **Flower terminology**, Wayne's Word (2 pages, link takes you to first one): [LINK](#)
- **Fruit terminology**, Wayne's Word (4 pages, link takes you to first one): [LINK](#)
- **Major types of fruits**, Wayne's Word: [LINK](#)
- **All vascular plant morphology**, Vascular Plants Systematics (Radford, A. E., W. C. Dickison, J. R. Massey, C. R. Bell. 1976. Harper and Row, New York.): [LINK](#)
- **Vascular plant glossary**, Flora of Australia: [LINK](#)

#### Unit 8: 10-12 anatomy - Web resources

- **Glossary of Pollen and Spore Terminology** [LINK](#)
- **Pollen**, National Geographic Photo Gallery, Dec 2010 [LINK](#)
- **Plant Anatomy** interactive online lecture by Dale Brenham, Nebraska Wesleyan University [LINK](#)
- **Plant Anatomy Photo Gallery** by Dale Brenham, Nebraska Wesleyan University [LINK](#)
- **Plant Anatomy Images** by James D. Mauseth, University of Texas [LINK](#)
- **Photographic Atlas of Plant Anatomy Images** by John D. Curtis et al. [LINK](#)

#### Unit 9: 13 reprod. bio - Web resources

- **Pick the pollinator** (PBS interactive): [LINK](#)
- **Plant Biology: Pollination and Fertilization**, HowStuffWorks (online video, 2 min): [LINK](#)
- **Plant Biology: Germination and Growth**, HowStuffWorks (online video, 2 min): [LINK](#)
- **Wild orchid mimics wasps with David Attenborough**, BBC, Ophrys, Orchidaceae (Youtube video, 3 min): [LINK](#)
- **Sycamore Fig- the Queen of Trees**, PBS Nature (Youtube video, 3 min): [LINK](#)
- **The Seedy Side of Plants - Shooting Seeds, Burrowing Seeds**, PBS Nature (online video): [LINK](#)
- **The Seedy Side of Plants - Flying Seeds**, PBS Nature (online video): [LINK](#)
- **Fruit and seed dispersal**, Steve Baskauf, Vanderbilt University (images and website): [LINK](#)
- **The Private Lives of Plants - Travelling**, BBC, David Attenborough show about plant dispersal (Google video, 41 min): [LINK](#)
- **The Private Lives of Plants - Flowering**, BBC, David Attenborough show about plant dispersal (Youtube video, 10 min): [LINK](#)
- **Wayne's Word:**
  - Blowing in the wind (wind dispersal): [LINK](#)
  - Drift seeds and drift fruits (water dispersal): [LINK](#)
  - A horny bulls head (water dispersal): [LINK](#)
  - Hitchhiking plants (animal dispersal): [LINK](#)
  - The remarkable cocklebur (nature's velcro, animal dispersal): [LINK](#)
  - Devil's Claws, hitchhiker on large animals (animal dispersal): [LINK](#)
  - Stinking flowers (carrion flowers, sapromyophily): [LINK](#)
  - Pollination articles: [LINK](#)
- **Methods of pollination**, Britannica.com (Youtube video, 4 min): [LINK](#)
- **Asexual reproduction**, Britannica.com (Youtube video, 3 min): [LINK](#)
- **Angiosperm Reproduction Photo Gallery**, interactive, by Dale Brenham, Nebraska Wesleyan University [LINK](#)

#### Unit 10: 14 mol systematics - Web resources

- **Phylogenetics Lab II**, Dr. Arens et al, UCMP Berkeley: [LINK](#)
- **Cladistics.com**, homepage for Winclada, NONA, and TNT software: [LINK](#)
- **PCR reaction** (Youtube video, 5 min): [LINK](#)
- **Molecular Visualizations of DNA** (Youtube video, 8 min): [LINK](#)
- **Tools for DNA alignment**, EMBL-EBI: [LINK](#)
- **Genbank** (DNA sequence database, PubMed, and other information), NCBI: [LINK](#)
- **Phylogeny software programs** (large list compiled by Joe Felsenstein): [LINK](#)

#### Unit 11: 15 plant ID - Web resources

- **On-line keys to Cyperaceae, Juncaceae, and Persicaria (Polygonaceae)** from LSU: [LINK](#)
- **Online key to all grasses of New Jersey (Poaceae)**: [LINK](#)
- **Online key to all legumes of New Jersey (Fabaceae)**: [LINK](#)

- **Online key to all gymnosperms of US:** [LINK](#)
- **Online key to all wetland monocots of US:** [LINK](#)
- **Online key to all Ericaceae of US:** [LINK](#)
- **Online key to plants included in potpourris (Dried Botanicals):** [LINK](#)

**Unit 12: 16 nomenclature - Web resources**

- **BOTANICUS**, web portal for access to scanned pages of classic botanical literature: [LINK](#)

**Unit 13: 17-18 collecting - Web resources**

- **GPS latitude and longitude**, a short intro and converter between formats: [link](#)
- **Trails.com** map for Cook/Douglass Campuses: [link](#)
- **NJ State Atlas** (topographic map): [link](#) (left click on map will give you geographic coordinates in the side bar)  
Direct link to NJ State Atlas for Cook/Douglass Campuses: [link](#)