Lab
Plants and Vertebrates

Assignment: Work with your fossil sites to produce classification of the taxa at the level covered in our labs. This classification will be due by Friday next week.

Plants
Algae

_Cyclocrinites dactyloides_, Silurian, Hopkingon Fm., Jones Co. Iowa

_Tracheophyta (vascular plants)_

Spores, New Albany Shale
Sporing bodies, Dugger Fm.
Lycophyta (club mosses)

*Lepidodendron* (trunks), *Stigmaria* (roots)
*Sigillaria*

Sphenophyta (horsetails)

*Calamites*, Mansfield SS (stems)
*Annularia*, Dugger Fm. (leaves)
*Calamostachys*, Lower Black Coal (cones)
Pteridophyta (ferns)

Pecopteris, Indiana
Pecopteris (fertile), Indiana
Neuropteris, Indiana

Pteridospermophyta (seed ferns)

Alethopteris serlii, Posttsville Series (Pennsylvanian) St. Clair Pennsylvania
Alethopteris ambiguа, Pennsylvanian of Indiana University
Sphenopteris fern foliage, Lower Black Coal

Progymnosperms

Archaeopteris, Devonian, Hancock, NY
Pinopsida (conifers)

*Walchia*, Abo Fm. New Mexico (Permian)
Vertebrates

**Conodonta**

Jaw elements of lamprey-like early vertebrates

**Astrapsids, Heterostraci**

Vert fragments in sandstone, mid Ordovician, Harding Sandstone
Chondrichthyes (Sharks, rays, and chimaeras)

Misc shark teeth (x4) Valmeyeran

Elasmobranchii (sharks), Xenacanthida

Xenacanth shark, Cannel Coal, Knox County, IL

Holocephali, Cochliodontidae (chimaeras)

*Deltodus* Pavement shark, Salem Ls.  
*Deltodus* Pavement shark, Harrodsburg Ls. Cascades Park.  
*Deltodus* Pavement shark, Gosport, IN.
Osteichthyes (Bony Fish)

Actinopterygia (Ray-finned fish), Palaeonisciformes

Palaeoniscoid fish, Devonian, Old Red SS.  
*Palaeoniscum friesenlebeni*, Kupferschiefer

Tetrapoda (limbed vertebrates)

*Paleosauropus*, Late Mississippian ichnogenus (trackway) (from Colbert and Schaeffer)  
See also trackway from Crane Naval Base on 2nd Floor
Early Vertebrate phylogeny: Cambrian through Devonian
Jawed fishes (Gnathostomata), Silurian to Present
Tetrapods, Devonian to recent