Gandolfo’s lab
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HISTOLOGY LAB

- It serves any person that needs to undertake plant anatomical work.
- It is open faculty, researchers, graduate and undergraduate students.
- Plant Biology, Horticulture, Plant Breeding and Genetics, Anthropology, Cornell Tree-Ring Laboratory, Boyce Thompson, and Fiber Science and Apparel Design are already taking advantage of the facility.
AREAS OF INTEREST

- PALEOBOTANY
  - ANATOMY/MORPHOLOGY
  - SYSTEMATICS
  - PHYLOGENY
  - ECOLOGY
  - SYNTHESIS

- PLANT ONTOLOGY
PALEOBOTANY

- Late Cretaceous Raritan Formation flora, USA
- K/T Boundary, Patagonia, Argentina
- Paleogene floras from Patagonia
- Fossil record of monocotyledons
- “Aging” of angiosperm clades
ANGIOSPERMS

- 250,000-300,000 extant species.
- **Dominants** ➔ are the primary producers in terrestrial ecosystems.
- Last group that appeared during the fossil record ➔ Hauterivian-Barremian
- Rapid diversification ➔ Late Cretaceous
- Modernization ➔ Paleogene
MODERN PALEOBOTANY

- Combined data analyses (morphological and molecular data).

- Fossil data provide
  - minimum ages for modern plant groups.
  - estimation of rates of evolution.
  - the basis for mapping evolutionary change on phylogenetic trees.
  - calibration point for molecular studies