

David Ackerly Canopy Architecture & Adaptation

Adaptation - two components

- ① biological - phenotype w/ environment
- ② historical - evolutions & selection & phylogenetics

Canopies

- heterogeneity in environment important
- plasticity
 - traits do not simply "exist" - they exist in G x E

Adaptive Consequences of Plasticity

- decoupling phenotype & environment from each other
 - ① Environment switching
 - should perform best in environment that they grow in

Plasticity

- useful for genotype dispersal to multiple environments
- useful for individual response to changing environment

Leaf Area tracks available light.

Computer switching

- ① vectors for light
- ② vectors for plants
- ③ switch plants to new light

Most plants have lower interception in
other environments