

Bio 213. Spring 2004
Lecture 10 Land Plants

I. Evolution of Plants

A. Plants—The First Truly Terrestrial Organisms

II. Phylogeny of Land Plants

A. Liverworts, hornworts, and mosses are first major branches on the land plant tree.

B. Rhyniopsida

C. Lycopods, Horsetails, and Ferns

D. Gymnosperms

E. Flowering Plants

III. The Transition to Land

A. Advantages of Colonizing Land

B. Homeostasis. Adaptations That Allowed Plants to Avoid Dehydration on Land

C. Homeostasis. Adaptations That Enabled Transport of Water and Erect Growth Habit

D. Metabolism. Adaptations for Dry Habitats—Limiting Photorespiration

E. Adaptations That Facilitated Reproduction on Land

1. Pollen

2. Seed

3. Flower

IV. Importance of Plants

A. Domestication of Crop Plants

B. Fuel and Fiber

C. Genetic Diversity of Crop Plants