

Introduction to Botany. Lecture 29

Alexey Shipunov

Minot State University

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Outline

- 1 Questions and answers
- 2 Seeds and fruits
 - Fruits
- 3 Diversity of plants
 - Systematics

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Previous final question: the answer

What is better—hypogeal or epigeal germination? Why?

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What is better—hypogeal or epigeal germination? Why?

- Hypogeal: better protected, better connected with soil
- Epigeal: better and faster photosynthesis
- This is a trade-off

Seeds and fruits

Fruits

Fruit and seed dispersion

- Self-dispersed (exploding, or ballistic fruits etc.): exploding cucumber, touch-me-not
- Wind-dispersed (with “wings” and “parachutes”):
- Water-dispersed (with floating pericarp): coconuts, water lilies
- Animal-dispersed (hooked or edible)

Ecballium elaterium (exploding cucumber) explodes

Impatiens noli-tangere (touch-me-not) explodes



Diversity of plants

Systematics

Basics of systematics

Terms covered:

- Systematics and taxonomy
- Species, taxonomic hierarchy
- Taxon, rank, classification
- Kingdom, phylum, class, order, family, genus
- Subclass, subfamily and other intermediate ranks
- Subspecies and cultivars

Biological nomenclature

Terms covered:

- Binomial name, species epithet, reference
- Priority, starting dates, synonyms
- Type specimens, standardized endings

Final question (2 points)

Phylum, ..., order?

For Further Reading



J. E. Bidlack, Sh. H. Jansky.
Stern's introductory plant biology. 12th edition.
McGraw-Hill, 2011.
Chapter 8.



Th. L. Rost, M. G. Barbour, C. R. Stocking, T. M. Murphy.
Plant Biology. 2nd edition.
Thomson Brooks/Cole, 2006.
Chapter 14.