

### 3. Plants and plants

Alexey Shipunov

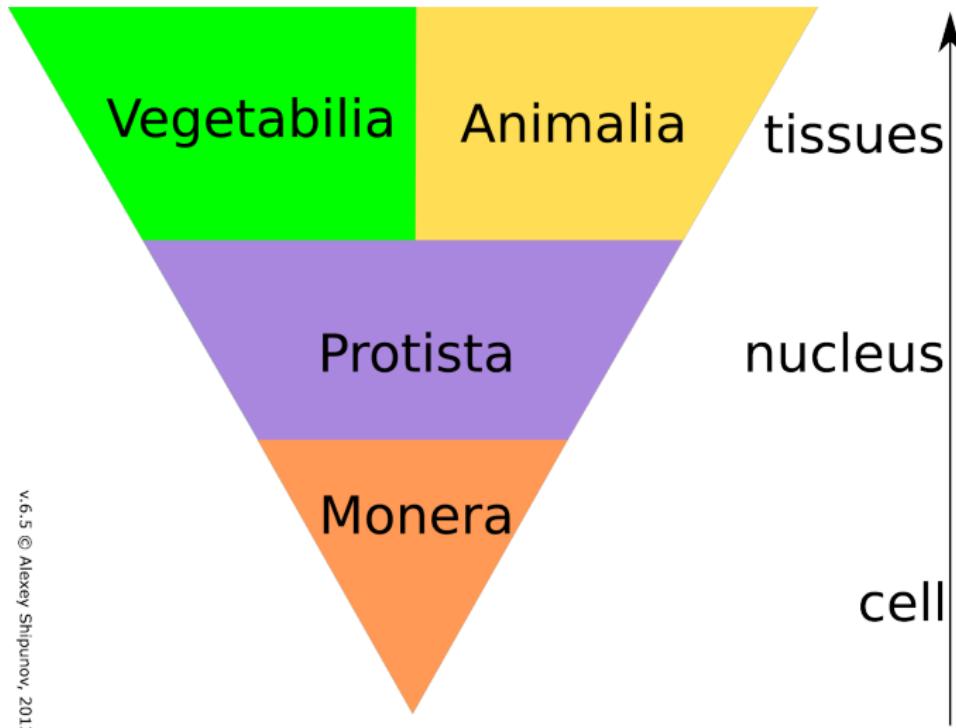
Minot State University

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# Outline

## 1 Plants and plants

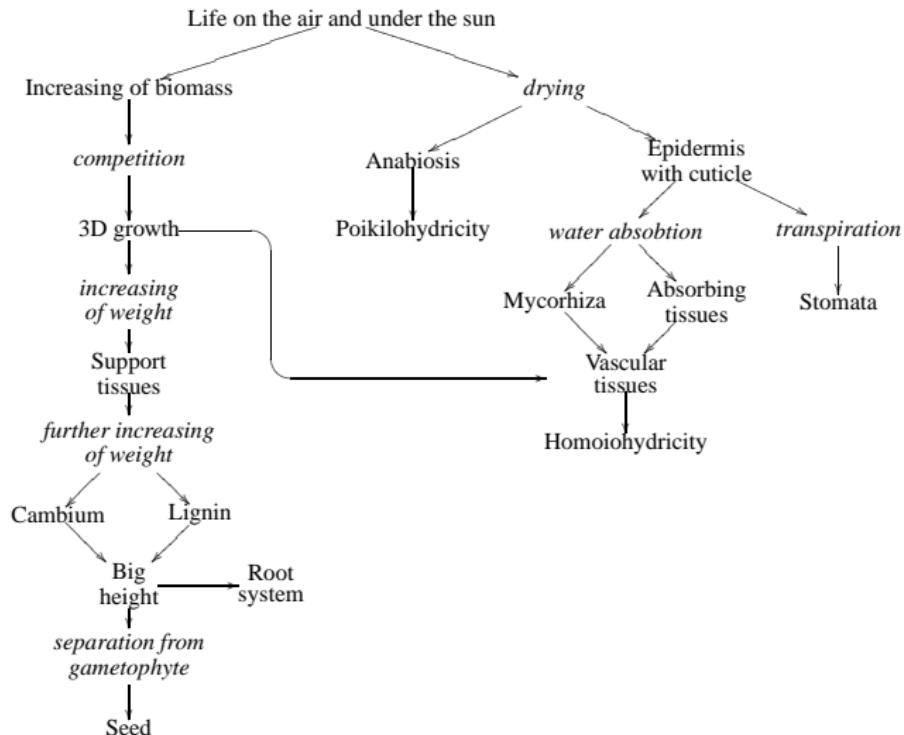
# Taxonomic pyramid



# Taxonomic pyramid: comments

- “Monera” is a joint name for Bacteria and Archaea; they are extremely different in molecular structures, but similar from the cellular point of view
- Fungi is not a separate group, there are no characters of fungi which are not present in other protists
- Higher kingdoms, plants and animals, are not only multicellular, they are also multi-tissued
- Both plants and animals have tissues; however, they gained it from different evolutionary processes: whereas animal ancestors have tissues in order to adapt for hunting, plant ancestors have tissues in order to adapt for living on land

# Conquering the land



# Conquering the land: comments

- Only three principal groups of land plants exist: non-vascular (mosses and allies), seedless (ferns and allies) and seed plants (gymnosperms and angiosperms)
- Mosses went on poikilohydric way: they do not try to save water and easily hibernate in the absence of water
- Ferns and seed plants are homoiohydric: they always try to save water and die without it

# Summary

- Plants<sub>1</sub>: Primarily photosynthetic organisms
- Plants<sub>2</sub>: Multi-tissued terrestrial eukaryotic plants<sub>1</sub>