

Introduction to Botany. Lecture 24

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October 30, 2017



1 Questions and answers

- Quiz

2 Leaf

- Anatomy of leaf
- Ecological adaptations of leaves



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Questions and answers

Quiz



Final question (2 points)

Draw simple, whole ovate leaf with acute apex, serrate margin and cordate base.



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Draw simple, whole ovate leaf with acute apex, serrate margin and cordate base.

[See on board]

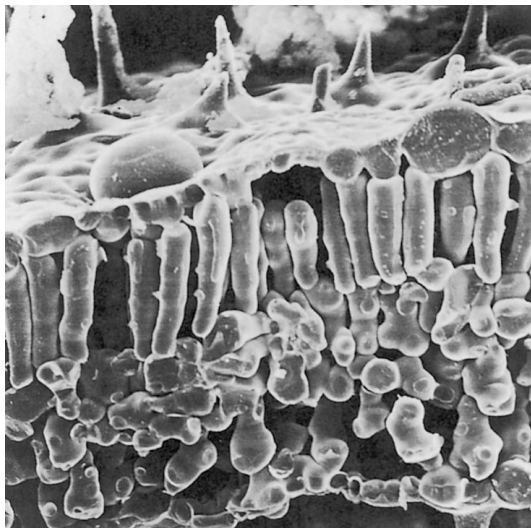


Leaf

Anatomy of leaf



Palisade and spongy cells



palisade mesophyll

spongy mesophyll

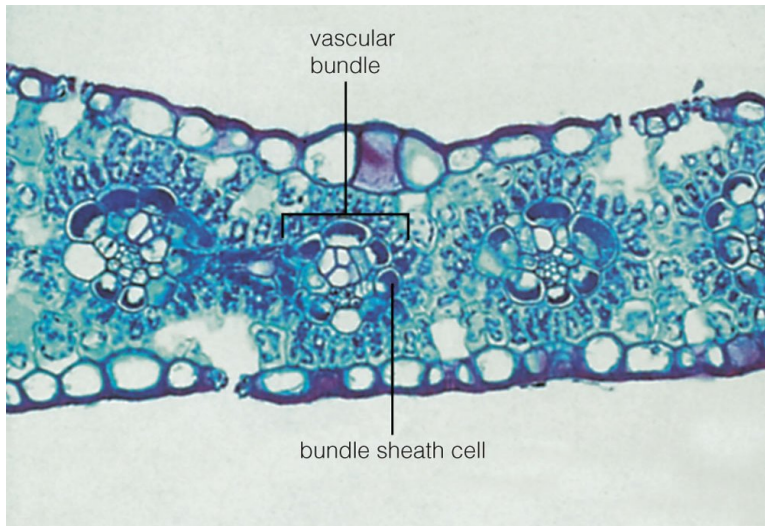


Veins/vascular bundles and stomata

- Phloem typically faces downwards, xylem—upwards
- Bundles of C₄-plants have additional bundle sheath cells
- Stomata work with the “bacon principle”



Bundle sheath cells



Leaf

Ecological adaptations of leaves



Plants and water

- Xerophytes: sclerophytes and succulents (stem and leaf)
- Mesophytes
- Hygrophytes
- Hydrophytes



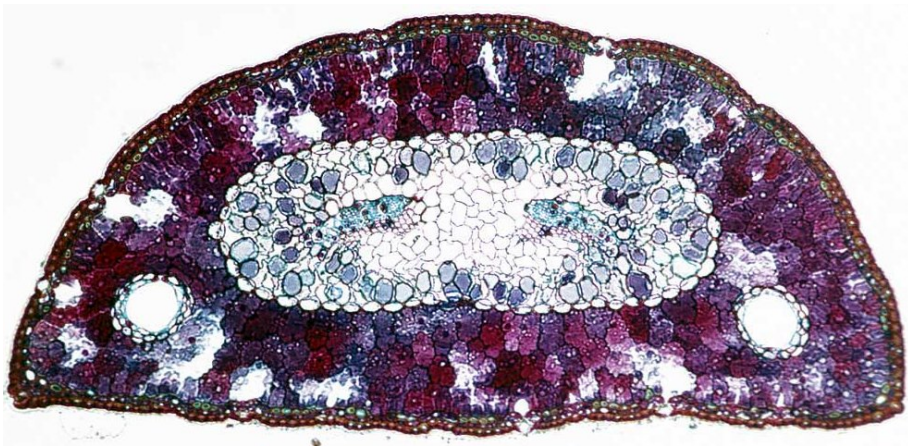
Leaf succulent (*Crassula argentea*)



mesophyll
cells



Xerophyte leaf—needle of pine (*Pinus contorta*)



Final question (2 points)



Final question (2 points)

Why are sclerophytes typically spiny?



For Further Reading



A. Shipunov.

Introduction to Botany [Electronic resource].

Mode of access:

http://ashipunov.info/shipunov/school/biol_154

