

Introduction to Botany. Lecture 2

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- 1 Questions and answers
 - Comments to introductory test
 - Importance of Plants

- 2 Plants: definition
 - Plants₁ and plants₂



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Questions and answers

Comments to introductory test



Question 1

1 Why deciduous plants take off their leaves?

- ① To prevent freezing
- ② **To prevent drying**
- ③ To get rid of poisonous chemicals



Question 2

2 Where does human digestion process start?

- 1 **In the mouth**
- 2 In the intestines
- 3 In the stomach

Amylase and lipase



Question 3

3 Which birds do NOT live in Minot on winter?

- 1 Crows
- 2 **Hummingbirds**
- 3 Sparrows



Question 4

4 Home country of watermelon:

- 1 Central America
- 2 Canada
- 3 **South Africa**



Question 5

5 Why do insectivorous plants eat insects?

- ① **To obtain the lacking mineral resources**
- ② To get an addition to their common “menu”
- ③ To get rid of herbivores



Question 6

6 Which insects have no queen?

- 1 Bumblebees
- 2 Ants
- 3 **Cockroaches**



Bumblebees

Question 7

7 Oak tree is pollinated by:

- 1 **Wind**
- 2 Bees
- 3 Flies



Oak flowers

Question 8

8 Spider has:

- 1 6 legs
- 2 **8 legs**
- 3 4 legs



Question 9

9 Apple flower has:

- 1 **5 petals**
- 2 4 petals
- 3 3 petals



Question 10

10 Frightened man has:

- 1 **Bigger pupils**
- 2 Smaller pupils
- 3 Normal pupils



Question 11

11 Polar bears are not eating penguins because:

- 1 Penguins run very fast
- 2 **They cannot meet**
- 3 Penguins are poisonous for bears



■ POLAR BEAR DISTRIBUTION (approx.)



Question 12

12 How many toes are on each of cat's hind legs?

- 1 5
- 2 4
- 3 3



Question 13

13 Pineapple is a:

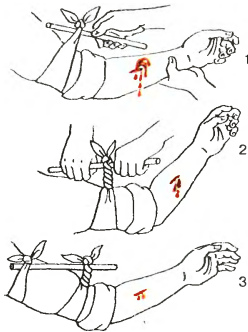
- 1 Tree
- 2 Shrub
- 3 **Herb**



Question 14

14 If somebody has an artery cut on the arm or leg, it is recommended:

- 1 Put a tight bandage below the cut
- 2 **Put a tight bandage above the cut**
- 3 Do nothing



Question 15

15 Which of the following is the most precise statement?

- ① We are breathing to support our life
- ② **We are breathing to obtain the energy from food**
- ③ We are breathing to have enough strength for food consuming



Question 16

16 Which tree is better to plant in Minot house backyard:

- 1 Sycamore
- 2 **Ash**
- 3 Yew



Question 17

17 Moles eat:

- 1 **Worms**
- 2 Roots
- 3 Frogs



Question 18

18 Which fish gives birth to the fully developed offspring?

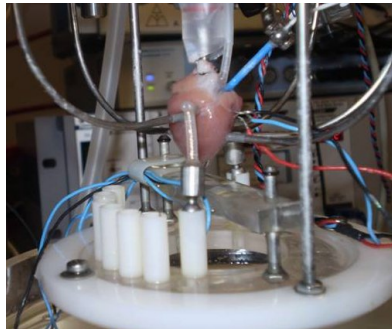
- 1 Sturgeon
- 2 **Shark**
- 3 Flounder



Question 19

19 Which human organ lives longer?

- 1 **Heart**
- 2 Lungs
- 3 Brains



Question 20

20 Which plant normally has a longer root?

- 1 Spruce
- 2 **Chokecherry**
- 3 Blueberry



Fallen spruce tree

Questions and answers

Importance of Plants



Importance of plants

Why are plants important?

- Food
- Oxygen
- ...?

[aesthetics, landscape, materials, drugs,...]



Plants: definition

Plants₁ and plants₂



Plants₁ and plants₂

- Plants₁ are all green photosynthetic organisms
- Plants₂ are “typical plants” (better definition follows)



The nature of two definitions

- Plants₁—ecological definition (based on the role in nature)
- Plants₂—taxonomic definition (based on the evolution)



Plants₁ is about ecology

Plants₁ are *photosynthetic organisms*:



Some plants₁ could taxonomically be bacteria or even animals!



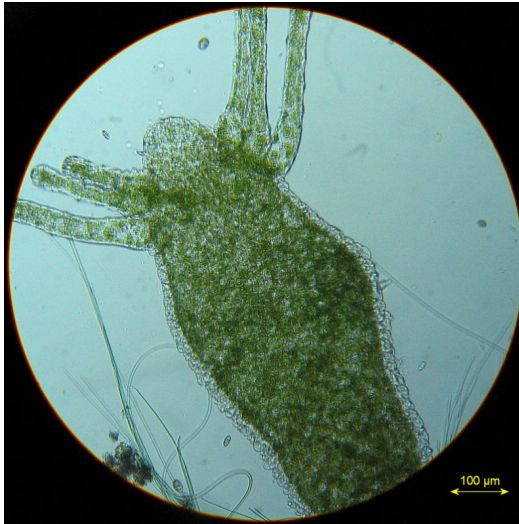
Green slugs



Green slugs obtain chloroplasts from algae, but keep them all their life, feed from them and even use chloroplast genes.



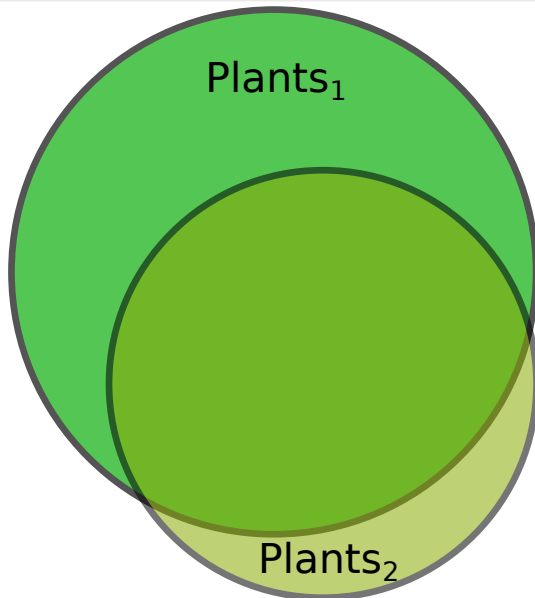
Green *Hydra*



No mouth!



Plants₁ and plants₂ are similar but **not** the same



Final question (2 points)



Final question (2 points)

What is the difference between plants₁ and plants₂?



Summary

- “Plants” have **two definitions**



For Further Reading



A. Shipunov.

Introduction to Botany [Electronic resource].

2016.

Mode of access:

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

