

# English for Plant Biologists

## Lesson 11



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# Typical teaching methods

- Warm-up exercise
- Interactive exercise
- Vocabulary related to specific topic(s)
- Conversation
- Historical/geographical corner
- A bit of grammar, of course
- Written exercises

... and much, much more, I promise.

# Warm up exercise



It is the only one of the below options:

- Svalbard
- Kerguelene Island
- Žitný ostrov (Žitný Island)
- **Hawai**
- Rhodes Island

Where do you think the photo was taken?



# Please describe what you see

What is the plant species?

What is the man doing?

What is the name of the tool he uses?



# English equivalent for mandarinka / mandarina

tangerine

# Abbreviations and acronyms

## *Environment*

- EIA
- IAA
- UNEP
- WCED
- VOC
- ESA
- CFC
- Environment Impact Assessment
- International Atomic Agency
- World Health organization
- UN Environmental Program
- World Commissionon Environment and development
- Volatile organic compounds
- Ecological Society of America
- European Space Agency
- Chlorinated fluorocarbons

# Abbreviations and acronyms

## *Plant Biochemistry*

- IAA
- ABA
- DMS
- DCMU
- GTP
- OAA
- Indolyl Acetic Acid
- Abscisic acid
- Dimethyl sulphate
- Dichlorophenyl dimethyl urea
- guanosine triphosphate
- oxalocetatic acid

# Abbreviations and acronyms

## *Methods in Plant Biology*

- AAS
- PCR
- NMR
- SEM
- DAPI
- HPLC
- Atomic Absorption Spectroscopy
- Polymerease chain reaction
- Nuclear magnetic resonance
- Scanning electron microscopy
- diaminido-phenylindole
- High performance liquid chromatography





2011

# Please describe the below picture

Hardened grapes

Harvested grapes

Hidden grapes

Holly grapes

What do you think the men are doing?



treading wine

Is that picture from:

Ancient Greece ?

China Empire  
Ming Dynasty ?

**Ancient Egypt ?**

Viking Scandinavia ?

Great Moravia ?

New Zealand ?

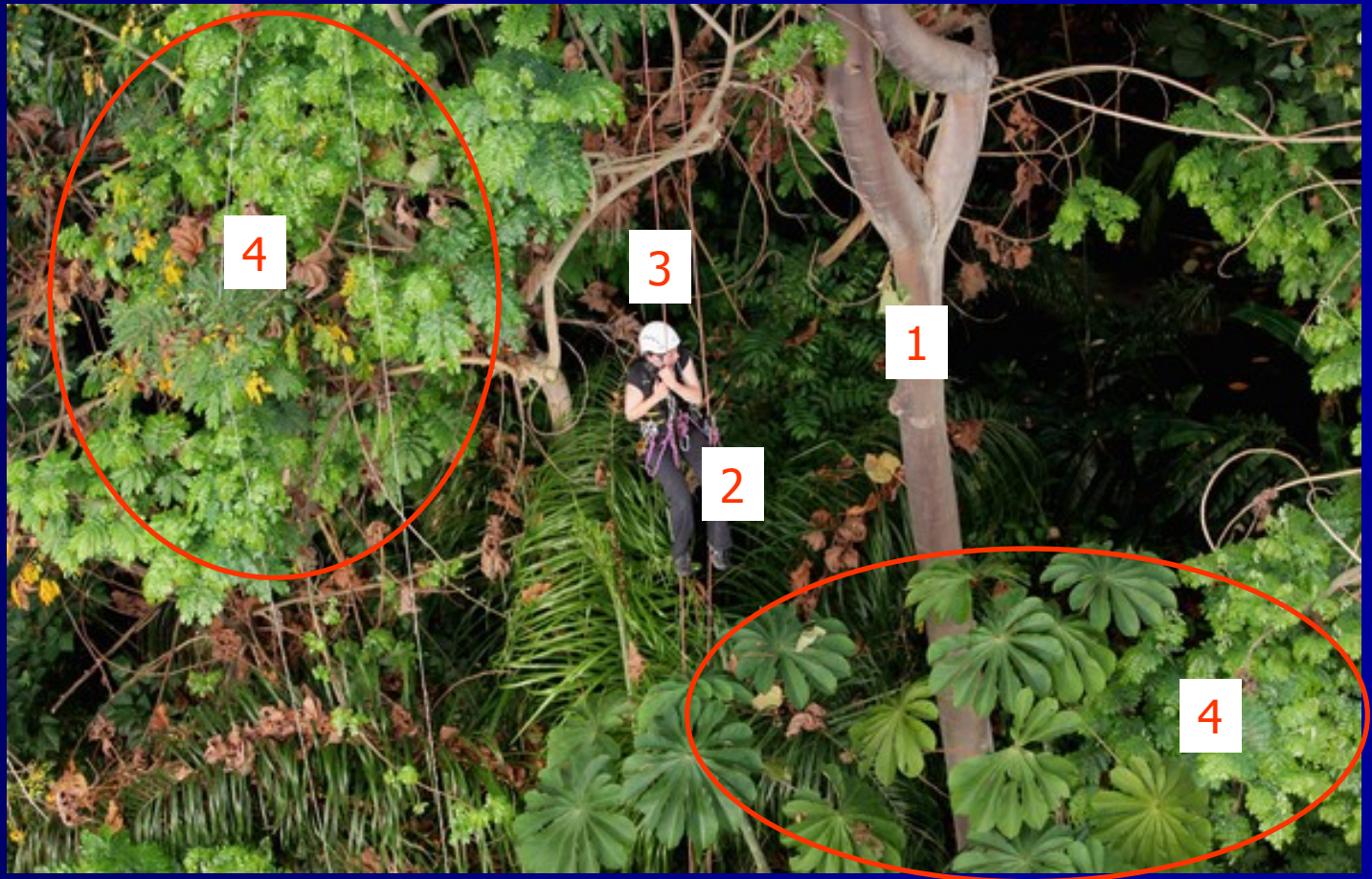
# Plant Canopy



2011

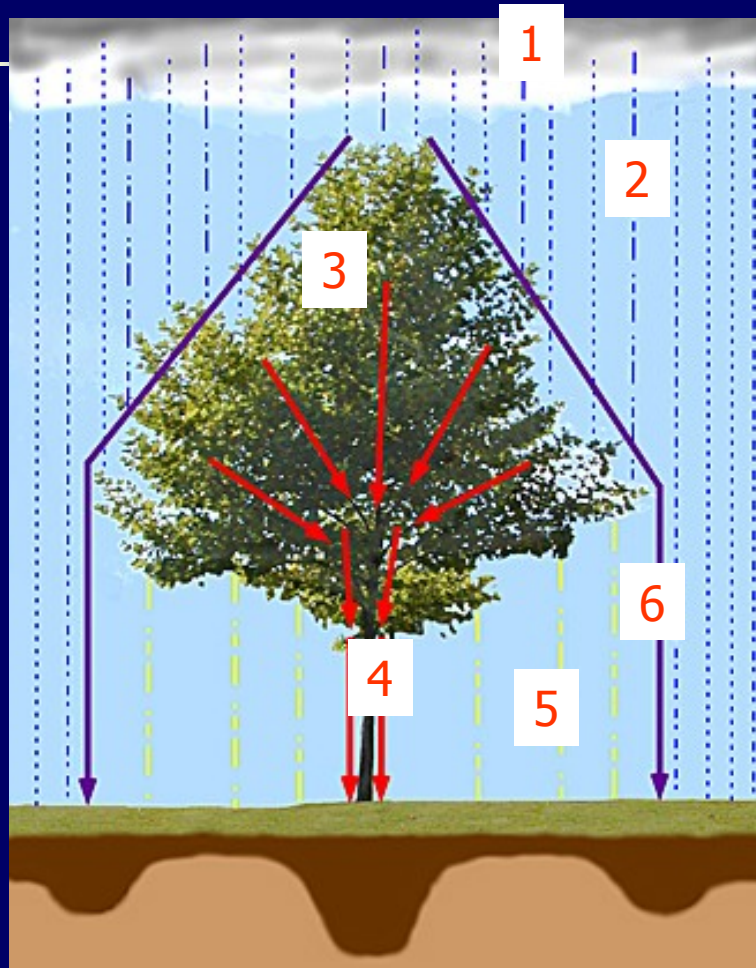
## What do you think you are looking at?

- a stem
- a climber
- a rope
- a helmet
- a foliage





# Processes related to canopy



Cloud, cloudness

Rain, rainfall, precipitation

Interception

Leaf drip

Stemflow

Canopy throughfall

Canopy drip

Source: <http://www.physicalgeography.net/fundamentals/8k.html>

**Citation:** Pidwirny, M. (2006). "Interception, Stemflow, Canopy Drip, and Throughfall". *Fundamentals of Physical Geography, 2nd Edition*. Date Viewed. <http://www.physicalgeography.net/fundamentals/8k.html>



# What is canopy drip ?

## Canopy drip

Some plants have an architecture that directs rainfall or snowfall along the edge of the plant canopy (purple arrows) This is especially true of coniferous vegetation. On the ground, canopy drip creates areas with higher moisture content that are located in a narrow band at the edge of the plant canopy.

# Vocabulary related to canopy

Stand

Canopy

Leaf area

Rape

Leaf area index

Harvest

Measurements



- Source of photo: <http://www.delta-t.co.uk/>

# Forest canopy

Fish-eye photography

Hemispherical photo

Litter decomposition rate

Evapotranspiration

Man-made ecosystem

Leaf area index

Stem projection area



- <http://www.whrc.org/ecosystem/boreal/fieldmeasurements.html>

## ■ ***Leaf Area Index (LAI)***

LAI is a fundamental characteristic of vegetation relating directly to the exchange of energy, mass, and water between the plant canopy and the atmosphere. It is an index of canopy density that compares the foliage surface area to the ground area beneath the canopy. It is strictly defined as one-half the total green leaf area per unit of ground surface area. Estimates of LAI are used as an ecophysiological measure of the effective photosynthetic and transpirational surface within a canopy, which has important implications for modelling net primary production and evapotranspiration between forests and the atmosphere. It is important to note however, that LAI is less frequently used to drive ecosystem carbon models due to the more direct association of FPAR with photosynthesis.

# Describe/translate



2010/2011



American Oak Barrels are used for the aging process, which goes from 2 up to 9 months, depending on the type of product.

Unlike other distilleries, that use enormous barrels, our [redacted] ages in 200 liter barrels, assuring more contact of the [redacted] with the oak.





2010/2011

# A bit of literature

Do you like detective stories?

- vaření
- mletí
- fermentace
- destilace
- Zrání
- lahvování



2010/2011

# Ladies and gentlemen,

You had a homework, had not you?

Please read names of the plant you have found loudly.

To remind you your homework: It was to find representatives of different types (modes) of seed dispersal

gravity,  
wind,  
ballistic,  
water  
Animals

# Just fill in a proper term. 1

A ..... is a plant. It is yellow and beautiful.

- (a) sunflower
- (b) sea cucumber**
- (c) goldfish
- (d) butterfly

# Just fill in a proper term. 2

A ..... is a plant. It grows best in damp, rainforest areas and doesn't like too much direct sunlight.

- (a) corn
- (b) horn
- (c) fur
- (d) fern



# Just fill in a proper term. 3

..... is a plant and is often used in salads.

- (a) lenticel
- (b) lettuce
- (c) lama
- (d) lemming



# Just fill in a proper term. 4

This tree produces a sweet sap that people pour on pancakes and waffles. The tree species is a .....

- (a) Marple
- (b) marble
- (c) maple
- (d) blazer



# Just fill in a proper term. 5

There are many species of lianas in tropical rainforests of the World. Plant ecologists rank them into the group of .....

- (a) gliders
- (b) riders
- (c) clovers
- (d) climbers



# Conversation in couples

Topic for today is:

