

# Advanced English for Plant Biologists

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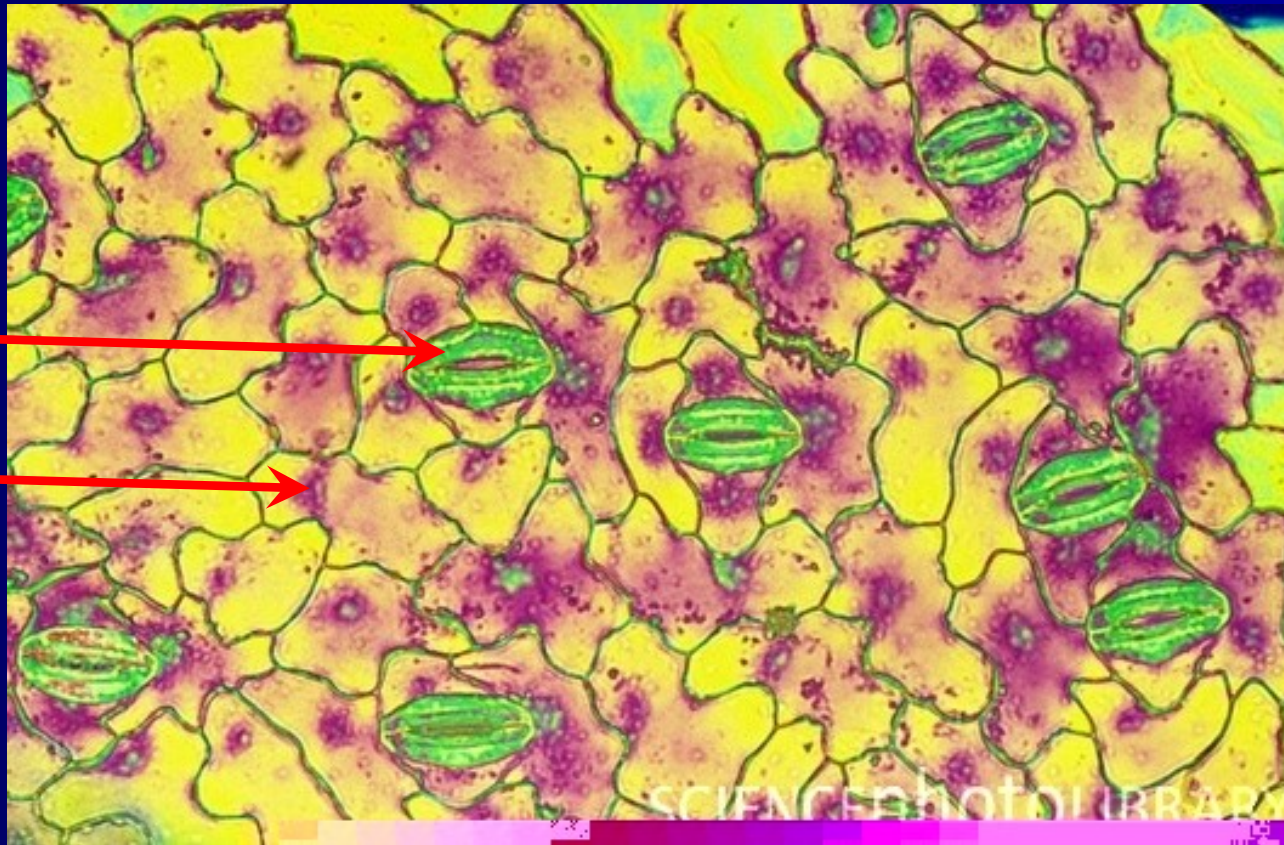
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# Overview of the lesson

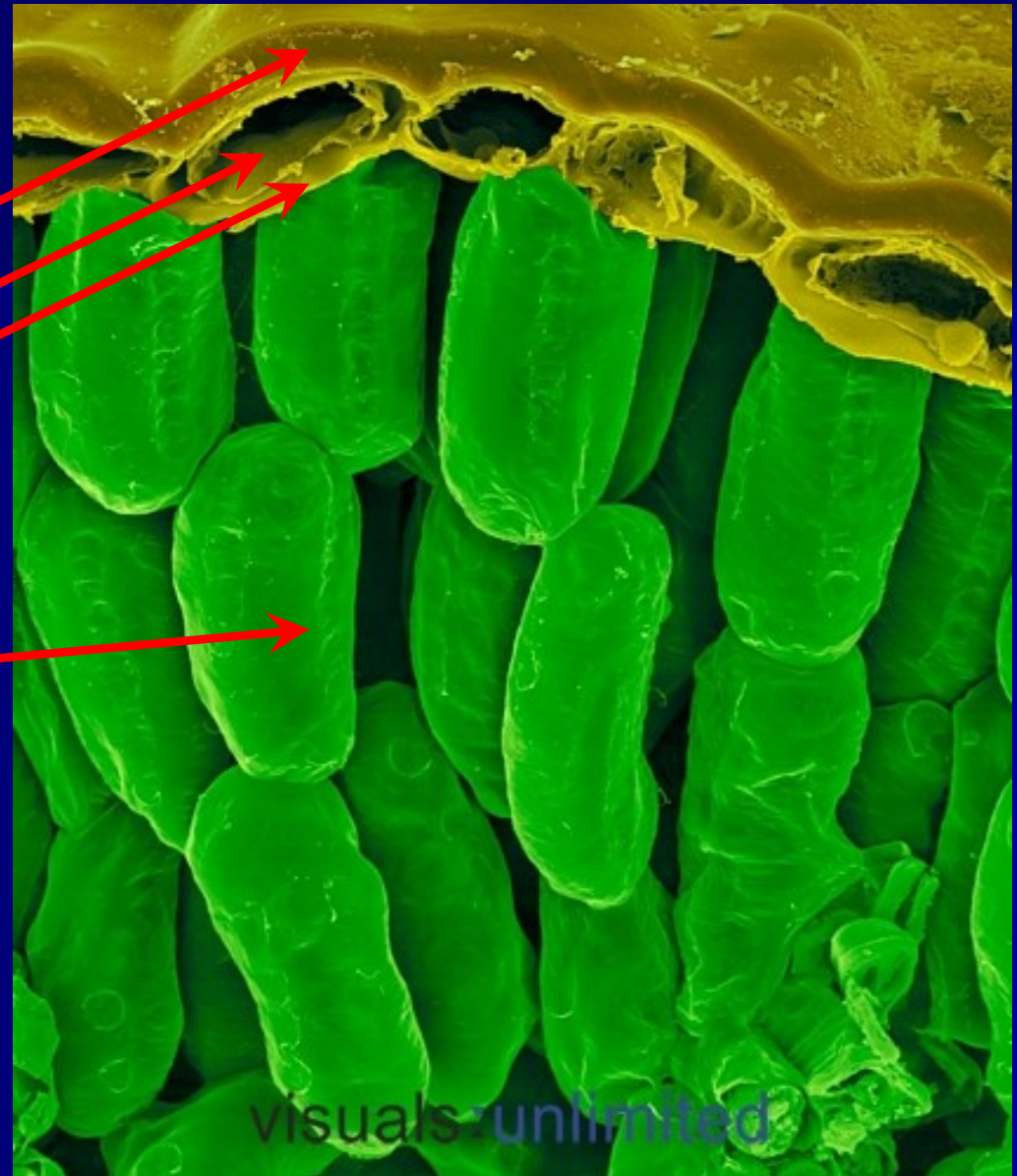
- Do you remember vocabulary related to plant anatomy ?
- Plants in extraordinary ecosystems
- Plant allelopathy
- Interactive exercises
  - What must happen before olives are served on your table?
  - Have you ever visited a botanical garden?
  - What vegetation is typical for mountainous ecosystems?

# Do you remember plant anatomy terminology ?

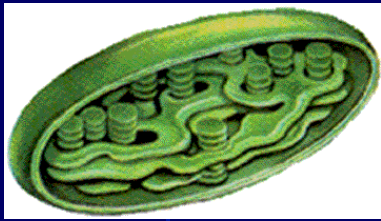


- Source of photo:  
[http://www.sciencephoto.com/images/download\\_lo\\_res.html?id=667450491](http://www.sciencephoto.com/images/download_lo_res.html?id=667450491)

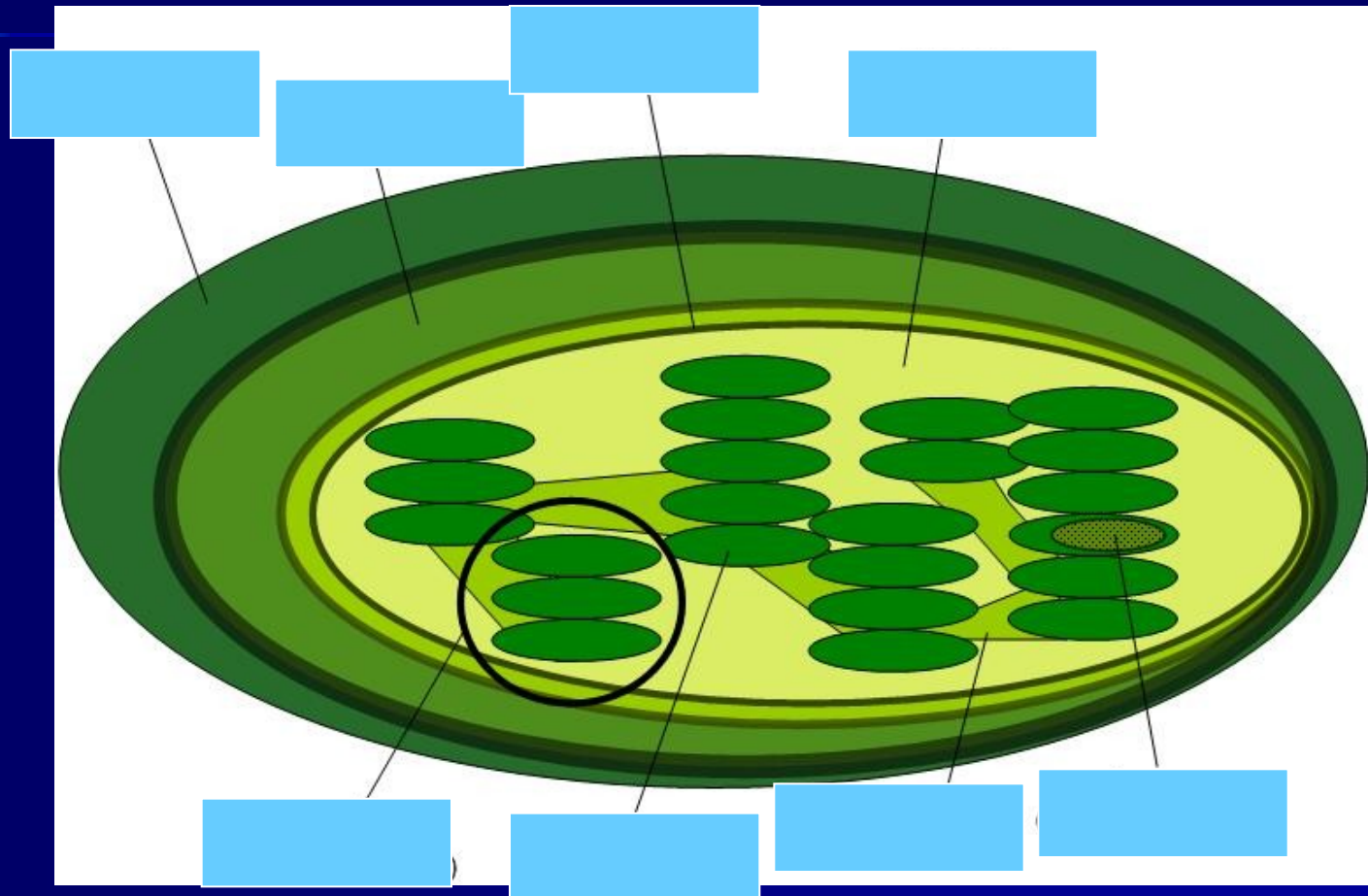
**What  
is  
that ?**



- Source of photo: <http://www.photoshelter.com>



# Describe compartments of the below plant cell organel.



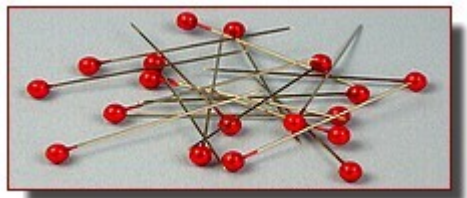
■ Source <http://www.seos-project.eu/modules/agriculture/agriculture-c01-s05.html>

# What is on the picture?



Courtesy of Comstock Images and ARA

# What is on the picture?

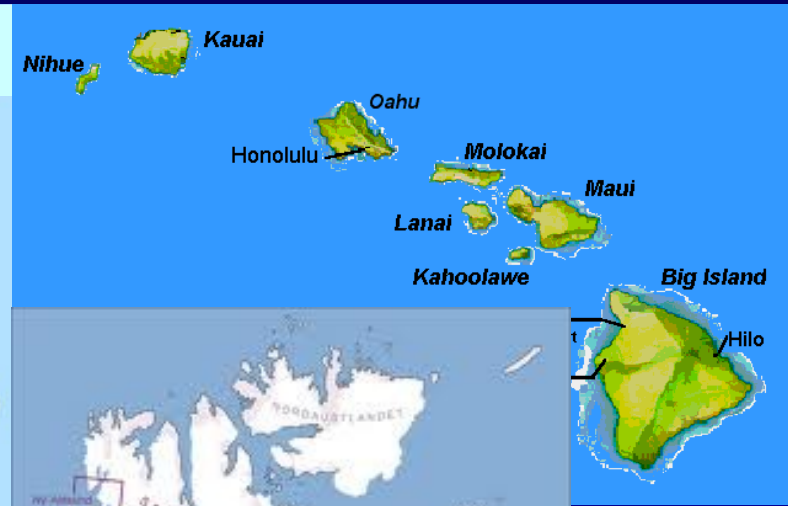
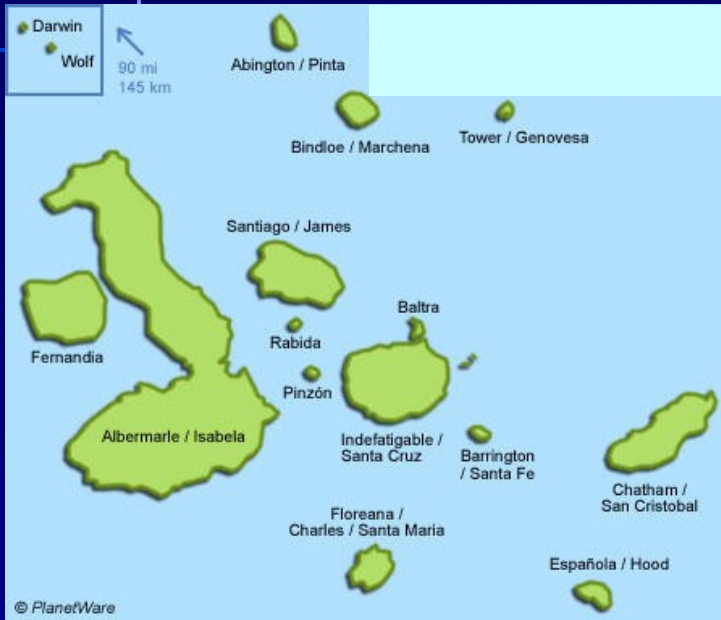


- Placoid
- Planar
- Pinnate
- Pyruvate
- Plum
- Plane



- Source of maps: <http://www.planetware.com/map/galapagos-islands-map-ecu-gal.htm>
- [http://www.kapotrading.com/The\\_Hawaiian\\_Islands.html](http://www.kapotrading.com/The_Hawaiian_Islands.html)

# Vegetation of Islands





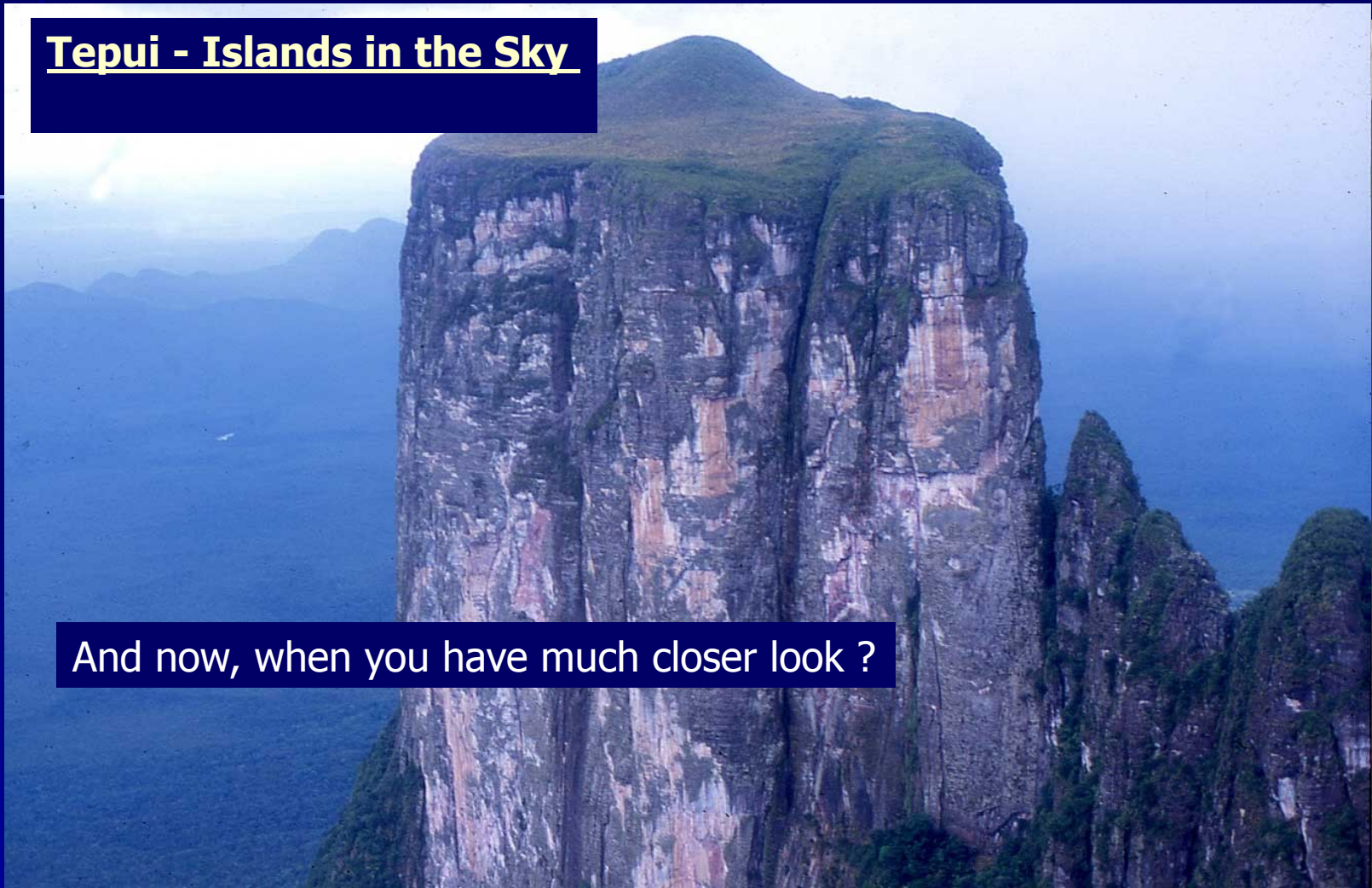
# What is the plant name ?



- Tenerife - volcanic flora / vegetation. The Tenerife endemic plant Echium wildpretii also know as tower of jewels, red bugloss, Tenerife bugloss or Mount Teide bugloss. From within the Teide national park.

# What do you see at the picture ?

Tepui - Islands in the Sky



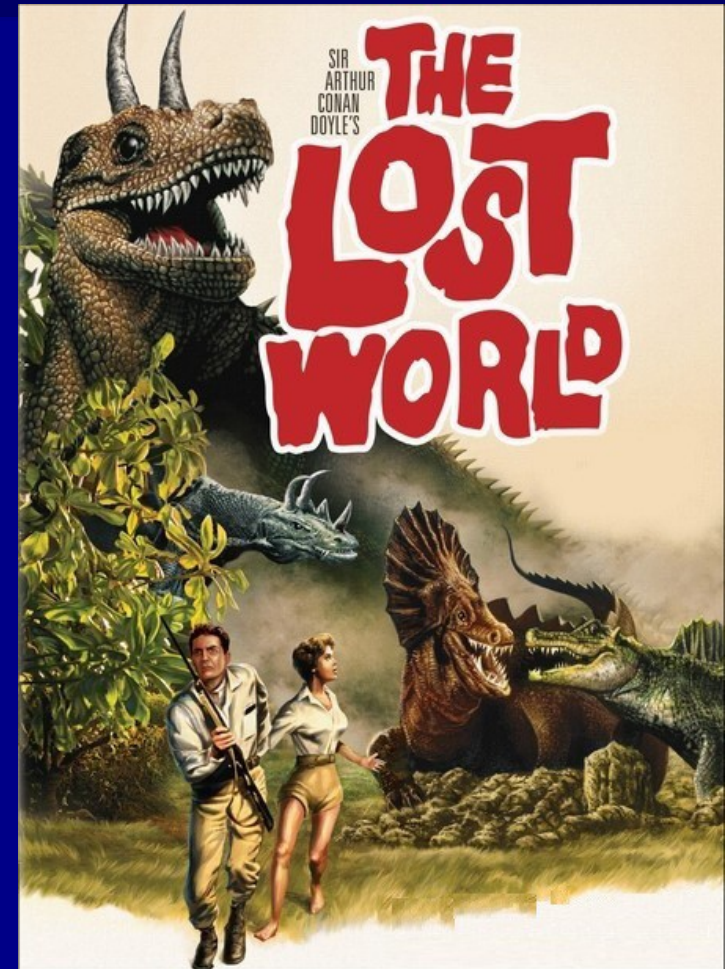
And now, when you have much closer look ?

- Source of photo: [http://fr.treknature.com/gallery/South\\_America/Venezuela/photo172491.htm](http://fr.treknature.com/gallery/South_America/Venezuela/photo172491.htm)

# Is there any non-professional book about plants and animals of a tepuy?

**The Lost World**, a 1912 novel by Sir Arthur Conan Doyle, tells the tale of an expedition that discovers dinosaurs and man-eating savages on the remote mountain-top plateau in South America.

Believe it or not, the inspiration for the location of the novel is true. The mountain-top plateaus are called 'tepui' and are literally mountain-top islands in the sky disconnected from the world below by sheer rock walls thousands of feet tall. They are found in the Guiana Highlands of South America, especially in Venezuela. The word tepui means "house of the gods" in the native tongue.





- Tepuis are generally isolated mountains, which makes them the host of a unique array of endemic plant and animal species. The plateau of the tepuis is completely isolated from the ground forest, making them ecological islands. The tepuis are often referred to as the "Galápagos Islands of the Land"

# Grammar is coming

- Prepositions
- gerund

# Repeat the grammar from the last lesson: Be careful when thinking about prepositions !

- Jack decided on chicken instead ..... **of ordering steak**
- I am interested ... **in watching films** by Alfred Hitchcock .
- We are really very excited (**hike/Andes**) this coming summer.  
**about hiking in the Andes**
- We thanked them (**drive/us/home**) after the football game.  
**for driving us home**
- Could you please tell me who is responsible  
**for accepting applications ?**

# A little bit of grammar.

## Be careful when thinking about verbs !

- We plan **travel to** to London next year ..... (travel/ travelling).
- I'm afraid I don't recollect **having** an exam today! To have / having
- Peter reminded me **to take** my medicine. to take / take / taking

# Interactive exercises



**Only one of the below  
expression does not fit  
the photo.**

**Please find it**



Soil erosion

Lack of vegetation cover.

Dryland

**Mangrove**



Water limitation

Soil cracks

**This may happen only in . . .**

Norway

Croatia

Patagonia and Tierra del Fuego

**The Netherlands.**



Japan

Nigeria



**What is the species they grow at the below photo?**

**Please read the text and make your choice.**

Alfaalfa

cucumber

green algae

tobacco

maize

E. coli



Some of the factors effecting growth of the species

- (a) Sunlight – too much direct sunlight can kill them,
- (b) Temperature must be held steady,
- (c) Overcrowding of the species inhibit their growth,
- (d) The waste oxygen produced by them should be continually removed from the water for healthy growth,
- (e) Open ponds are subject to evaporation and rainfall.  
It causes salinity and pH imbalances,
- (f) Some time, local species overgrow the desired strain.

# What is he cutting?



cabbage

sugarcane

agave

kiwifruit

water melon

bamboo



# Plant allelopathy

- **Allelopathy** is a biological phenomenon by which an organism produces one or more biochemicals that influence the growth, survival, and reproduction of other organisms. These biochemicals are known as allelochemicals and can have beneficial (positive allelopathy) or detrimental (negative allelopathy) effects on the target organisms.

# Plant allelopathy

- Biochemicals
- Secondary metabolites
- Alkaloids

**Secondary metabolites** are organic compounds that are not directly involved in the normal growth, development, or reproduction of an organism. Unlike primary metabolites, absence of secondary metabolites does not result in immediate death, but rather in long-term impairment of the organism's survivability, fecundity, or aesthetics, or perhaps in no significant change at all.

# Advanced English for Plant Biologists

Pangea

Protea

Protozoa

Protocorm

Protocol

Prosthetic

Perennial



# Conversation