VCMS Scavenger Hunt
Wednesday, October 14th, 2009

Welcome to the EEB Greenhouses! We have one of the most diverse collections of living plants in the northeastern US and we hope you discover some interesting things while you explore the greenhouses.

A few ground rules:

- No running or horseplay - damp floors may be slippery
- No eating or sampling of any plant materials – many are poisonous
- Be cautious of plants with thorns or sharp branches
- You may lightly touch plant materials, but do not damage them
- Please DO NOT remove plant labels from pots
- There will be other groups using the greenhouses, please be considerate of others using the facility
- Your scavenger hunt takes place in the (7) numbered zones shown on map at right. Greenhouse #3 (hatched) is not open for this activity.
- Greenhouse staff are available to answer questions, feel free to ask for assistance if you need it. Have fun!!
- We are open to the public year-round Monday thru Friday, 8am-4pm
  Come back and explore with your family and friends!!

Room 4-1 – Epiphyte Room

Epiphytes are plants that live high in the canopy of the rainforest, free of a ground-based existence. There are more than 25,000 species of higher plants adapted to this niche that brings both benefits and drawbacks.

Consider the differences between epiphytes and their ground dwelling counterparts when answering these questions – in particular availability of resources such as light, water and mineral nutrients.

1. With no soil to draw moisture and nutrients from, what sort of modifications and adaptations can you see in this room that might facilitate a plant acquiring water?

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2. Most terrestrial (ground based) plants derive their mineral nutrients from the soil. Where do you think these epiphytes get their minerals from?

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3. What is your favorite plant in this zone? Why?

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Rooms 1-1, 1-2 & 1-3 – The Tropics

The first greenhouse is our warm house which contains primarily tropical and sub-tropical plants. It is organized geographically:

Room 1-1 contains plants from the African Tropics
Room 1-2 represents the Indo-Malaysian Tropics
Room 1-3 houses plants from the New World, or Neo-tropics.

Within each room plants are further grouped by regions within these larger biomes. Specific information on the names and countries of origin can typically be found on the plant label in each pot.

*Please do not remove these labels from the pots.*

Browse through all three tropical rooms to answer the following questions.

1. Many plants from the tropics are used for food, spices, beverages and medicinal purposes. There are dozens of familiar (& not-so-familiar) food, spice and beverage plants growing in these zones – discover a couple you have tried or heard of and list their common name and tell what part of the world they come from.

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2. List one that you've heard of but never tried before.

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3. In your exploration of the tropics, try and find the plant with the largest leaf. Write down its name.  
    *(Hint: It comes from equatorial Sumatra – do you know where that is?)*

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4. There are numerous plants from the tropics that are grown for their natural fibers – you may even be wearing some today. See if you can locate a couple fiber plants and jot down their names and place of origin.

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Room 2-1 – Mediterranean Climates

The first room in the cool house is devoted to Mediterranean type climates which are characterized by having cool, moist winters and hot, dry summers. The area around the Mediterranean Sea is the most widely known of these biomes, but also include the Fynbos of South Africa, the Chapparal of southern California, Mattoral of Chile and western Australia.

1. As you look at the plants in this room note how they look markedly different from plants you looked at from the tropics (size, color, shape). Make a note of some of these differences and discuss what advantage they may provide for the plant.

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2. Identify a couple of food/spice/beverage plants from this biome and from which region they originate.

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Room 2-2 – Desert Climates

The second room is the xeric, or desert, room. This room is once again organized geographically with New World (Americas) on the right and Old World (Africa/Asia) on the left. The plant that first comes to mind when most people think of the desert is the cactus – however cacti (with one exception) are only found in the New World (on the right side of the room).

Look at the plants in this room and compare some of the similarities and differences they exhibit. Many of these adaptations have arisen independently in different plant families (and different regions) due to similar ecological pressures – we call this 'Convergent Evolution'.

1. Plants from the desert have to endure extreme conditions of heat and drought. Some of the adaptations you saw in the Mediterranean Room are also evident here, though in many cases taken to even more extreme examples. Size, color, shape and specialized features help these plants to adapt. Discuss and write down some of these adaptations and examples of the plants that demonstrate them.

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Room 2-3 – Temperate Climates

The final room in your explorations are the temperate biomes – much like what we live in here in CT. Distinct seasons with cold winters and moderate to warm summers. Rainfall can vary widely. Our collections have many plants from temperate Australia and New Zealand, China & Japan as well as American areas. There are also many examples of aquatic plants on display in this zone.

1. One of the highlights of this room is the carnivorous plant collection. Many species of carnivores come from temperate climates including a number of species that are native right here in Storrs, CT. Carnivores have largely evolved in low nutrient boggy habitats and have developed a number of special adaptations to enable them to attract, capture and digest insect prey to supplement the minimal mineral nutrition they get from the soil. Scientists group these mechanisms into three groups: Active Traps, Passive Pitfall Traps, Sticky Hair Traps. Look at the different plants and give an example of each of these types and discuss how each one works.

Active Trap: __________________________________________________________________________________________
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Passive Pitfall: _____________________________________________________________________________________
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Sticky Hair: ________________________________________________________________________________________
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Questions for All Zones

1. What is the prettiest plant you’ve seen in the greenhouse today? Where does it come from?
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2. What is the most interesting plant adaptation you’ve seen in the greenhouse today?
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3. Is there a plant you’d like to see in the greenhouse? Ask a staff member – we may have it here somewhere amongst our thousands of plants.
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Feedback:

We’d love to hear what you think of your visit to the EEB Greenhouse facility today – what made it special and what we can do to improve the experience.

You can write us a note, drop us an email, or leave a comment on our Facebook page which is linked from our website.

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