GARFIELD PARK CONSERVATORY ALLIANCE

September Plant Highlights: Rhizomes and Epiphytes

**Please note: due to the ever-changing and growing nature of the Conservatory, plants may move locations and flowers and fruit may not always be visible.

Pitcher Plant

Where do we find it in the Conservatory and why do we find it here?

We find the pitcher plant in multiple places at the Conservatory! Year-round, our pitcher plants grow in Sugar from the Sun and in the summer, they also grow out in our carnivorous plant bog. We grow pitcher plants in the carnivorous plant blog because they are, in fact, carnivorous! Just like Venus flytraps, pitcher plants eat flies, other insects, and even the occasional snake or rodent!

How does it grow or reproduce and what is special about it?

The most interesting thing about how the pitcher plant grows is the actual "pitcher" itself. The pitcher shape is actually a modified leaf that evolved over time to develop both its shape and the chemicals found at the bottom and on the sides of the pitcher. These chemicals trap unsuspecting insects that fly into the pitcher and also digest those insects alive!

Rhizome, epiphyte, or both?

The pitcher plant is an epiphyte that grows with rhizomes! Epiphytes are hanging plants that grow on other structures like trees, other plants, and poles for support. At the Conservatory, you will see that most of our pitcher plants are growing on another plant or structure, rather than growing up from the soil! Some pitcher plants *also* grow from rhizomes. Rhizomes are modified stems from which new plants can grow. Rhizomes also contain many nutrients to support the growth of the new plant. When pitcher plants grow from rhizomes, the pitcher-shaped leaf grows directly from the rhizome!

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Spanish moss

Where do we find it in the Conservatory and why do we find it here?

Spanish moss grows all over the Conservatory! Most of it grows in Sugar from the Sun, but you can also find plenty in the Palm House and Fern Room because it grows easily anywhere that's warm!

How does it grow or reproduce and what is special about it?

Spanish moss does not have roots! Jump to the final question to learn more about how this plant can grow and reproduce without this important plant part…

How do humans use it or interact with it?

Since Spanish moss is so light and curly, it can be used as packing material, mattress stuffing, or even as the cushioning in car seats! This plant is also used for insulation and cooling. For cooling purposes, a pump squirts water on a pad made of Spanish moss. Then, a fan pulls air through the pads into the room. As the water evaporates off of the Spanish moss pad, it cools the air that the fan is pulling through! We also can use Spanish moss in arts and crafts, as well as decoration. Native Americans used the fibers of Spanish moss to create ropes, baskets, and more!

Rhizome, epiphyte, or both?

Spanish moss is considered an epiphyte! It grows on tree branches and other plants without harming them. Since Spanish moss grows solely on other plants, it does not need roots to anchor it to the soil. Additionally, Spanish moss' tight curls are great for gripping branches! Because Spanish moss does not have roots, it absorbs nutrients and water through its leaves, as well as from the trees it lives on. In addition to reproducing through flowers and seeds, Spanish moss often spreads with the help of animals, like birds, that take Spanish moss from one tree to another to build nests!

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Torch ginger

Where do we find it in the Conservatory and why do we find it here?

Our torch ginger lives in Horticulture Hall, where most plants are from the ginger family!

How does it grow or reproduce and what is special about it?

Torch ginger can reproduce through rhizomes or flowers and seeds. This flexibility helps the torch ginger increase its chances of reproductive success.

How do humans use it or interact with it?

While torch ginger is not the ginger that we typically use in the United States for cooking, different parts of torch ginger are used in various cuisines throughout the world! In Southeast Asia, for example, people use both the flower buds, as well as the seeds in stews and sauces. The torch ginger's big, pink flower is used for ornamental purposes.

Rhizome, epiphyte, or both?

The torch ginger, like most members of the ginger family, can grow through a rhizome! When the plant is ready, it will send out a rhizome underground from which new torch ginger plants grow. The ginger that we are used to eating actually *is* the rhizome of the plant—in other words, when you eat ginger, you are eating a rhizome!

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White rabbit's foot fern

Where do we find it in the Conservatory and why do we find it here?

Go into the Fern Room and look carefully for the white rabbit's foot fern. It can be hard to find, but it is definitely worth the search!

How does it grow or reproduce and what is special about it?

Like many ferns, the white rabbit's foot fern reproduces through both spores and rhizomes. Ferns, including the white rabbit's foot, do not reproduce through seeds. Spores, instead, grow in clusters on fern fronds and will drop off of the fronds when they are fully fertile. If they land in moist soil, they can develop into gametophytes, which contain both male and female reproductive structures. When sperm from the male structure of a gametophyte fertilizes an egg of another gametophyte, a new fern can grow!

Rhizome, epiphyte, or both?

The white rabbit's foot fern is an epiphyte and can reproduce through rhizomes! Many ferns in the white rabbit's foot fern's family are epiphytic and will grow on other plants instead of in the soil. Our white rabbit's foot fern actually grows on stone! Can you see the furry-looking, root-like structures of the rabbit's foot fern growing there? Touch them! What do they feel like? They should remind you of a soft rabbit's foot! These structures are actually the rhizomes of the plant. The rhizomes are most likely "furry" to help divert water to the fern when it needs it, as well as to shield the fern from excess water.