

## March Plant Highlights: Seed Dispersal Adaptations

\*\*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.

### Firecracker Plant



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

We can find the firecracker plant in the Palm House. The Palm House is warm and humid, and contains many tropical plants—just like the firecracker plant!

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

The firecracker plant reproduces through seeds and flowers. The climate is typically well-suited for seed growth (hot and humid with plentiful rain) and there is plenty of wildlife to help with seed dispersal. Because of its unique method of seed dispersal, the firecracker plant does not need animals to disperse its seeds. The plant does, however, need to be pollinated; its bright orange-red flowers attract its pollinators, which are hummingbirds and butterflies.

#### **How does it disperse its seeds?**

The firecracker plant has seed pods that dry out during periods of no rain. When it rains and the seeds pods become wet, they “explode” with a popping sound, shooting seeds up to 200 feet away from the original plant! This ensures that when the firecracker plant disperses seeds, the plant is doing so at a time when the environment is conducive to growing the seeds—the seeds will get all the water they need to grow!

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### Moringa



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

The moringa lives in the Desert House. It enjoys hot, arid conditions, making it perfectly-suited to living in this room.

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

The moringa naturally reproduces through seeds and flowers and has particular adaptations for seed dispersal. Humans cultivate moringa through vegetative propagation, using cuttings.

#### **How do humans use it or interact with it?**

The moringa is an important nutritional source for many people across India, Pakistan, and other areas of Southeast Asia. Because of its high nutritional value, it is highly cultivated. The leaves, drumsticks (immature seed pods), seeds, roots, and seed oils are all edible and nutritious! In fact, moringa trees have been used to combat malnutrition because of its versatility and nutritional value. In addition to being an important source of nutrition, the moringa contributes to creating clean water. After the moringa seeds are pressed for their oils, we are left with what is called a "seed cake." This seed cake is then used to filter water; proteins from the seed cake latch on to impurities and toxins in the water, leaving the rest of the water clean for humans and animals to drink!

#### **How does it disperse its seeds?**

The fruit of the moringa tree is a hanging, three-sided brown capsule containing dark brown seeds. The seeds have three white "wings" and are dispersed through wind and water. When the wind blows the seeds off of the tree, the papery, white wings act like helicopter propellers, carrying the seeds away from the mother tree to be planted elsewhere!

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### Avocado



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

We find the avocado tree in the Palm House because it thrives in tropical conditions.

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

The avocado tree naturally reproduces through seeds and flowers, though it is commercially cultivated through grafting. Humans cultivate the avocado through grafting, as it is a much faster process for avocado growth. Grafting is when tissues from two different plants are joined together, creating one plant. The avocado tree can actually self-pollinate because of its flowers, which contain both male and female reproductive organs.

#### **How do humans use it or interact with it?**

Humans love avocados! We eat avocado in salads, sandwiches, guacamole, toast, smoothies, sushi, and even desserts! More recently, people have started to use avocado oil in place of olive oil in cooking and salad dressings. Did you know, though, even though it is not sweet, an avocado is actually a fruit? More specifically, it is a large berry. The pit is one giant seed! Not only is avocado delicious—it also contains many vitamins and healthy fats. We also use avocados in skincare products. Sometimes, people keep avocado trees as houseplants.

#### **How does it disperse its seeds?**

A long time ago, giant mammals lived on earth; they were called megafauna. Certain species of megafauna, such as the giant ground sloth and the gomphothere (think of a giant elephant!), would eat avocados whole, seed and all! These megafauna could not digest the seeds, however, and would get rid of the seeds in their poop! This is how avocado seeds were spread.