

A Grinch's Garden

There are many plants that add beauty and bring us joy during the winter holiday season. We giggle when we think of two people standing under mistletoe and we feel cozy when we imagine a glowing fireplace with bright red poinsettias on the sides. A delicious mug of hot cocoa, made from the cocoa tree, warms us from our nose to our toes after building a snowman. There are holiday songs about the dark spiky leaves and bright red berries of holly, and the winter wouldn't be the same without candy canes, flavored from the peppermint plant. But if you look a little deeper into these holiday plants, you'll find they are plants that maybe only a grinch could love. They may more likely belong in a *grinch's garden* than our holiday memories!

Holiday Itch, Anyone?

Be suspicious if a grinch decides to grow Poinsettia (*Euphorbia pulcherrima*) in his garden! The poinsettia is a very leafy plant with very showy red, white, or pink **bracts** – *not* flowers. Bracts are colorful leaves towards the top of the plant which people often mistake for the poinsettia's flower. Poinsettia flowers are actually tiny and boring yellow flowers in the middle of the bracts. **Native** to southern Mexico, the poinsettia blooms in December and has been used in that country to decorate churches for centuries. Aztecs even used poinsettia leaves to dye fabric for clothing. In the wild, the poinsettia can reach heights of 12 feet with leaves measuring six to eight inches across!

You may have heard that the poinsettia is **toxic** to people, but their reputation for being deadly is highly exaggerated. If eaten in sufficient amounts they can make humans and pets mildly sick, causing drooling, vomiting, and diarrhea. A bigger problem with poinsettias is that the milky sap that oozes from their branches when broken can result in contact dermatitis (a nasty rash) in some people, especially those with latex allergies. So, unless you like to itch, avoid poinsettia sap.



Watch Out, Pup!

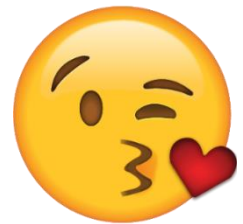
A grinch's dog needs to be very careful if its owner decides to decorate with boughs of holly. Many people associate the dark green glossy leaves and bright red berries of the holly tree with holiday wreaths and decorations. In the United States, the holly species most commonly seen is *Ilex aquifolium*, but holly is actually a family of 480 different species. (And you thought your family holiday party was big!) Holly trees grow everywhere from temperate forests in Europe and North America to tropical climates like Africa and Brazil.



While pretty, holly presents some potential issues as a decoration. The spikes on the leaves can damage the skin, mouth, and digestive tract of a child or pet. A more serious concern is that the berries look very tempting to children to eat, but holly berries contain a **toxin** called theobromine. Theobromine is similar to caffeine, and poisoning can cause gastrointestinal problems (stomach pain, nausea, vomiting, and diarrhea) as well as dizziness, a rapid pulse, and low blood pressure. Theobromine is *especially* dangerous for dogs because their bodies break it down very slowly. This is similar to why chocolate is poisonous for dogs. Interestingly, although holly berries are toxic for humans, dogs, and cats, they are edible for some wildlife, like birds.

Poisonous Pest of a Peck

During the holiday season, many people hang a ball of mistletoe in a doorway as decoration. Some people have fun with the tradition that if you get caught standing under the mistletoe, someone can give a loved one a quick peck on the cheek.



Be careful with your pretty decoration, however – eating mistletoe is dangerous. Eating any part of the plant can cause drowsiness, blurred vision, diarrhea, nausea, vomiting, weakness, and seizures. The symptoms are caused by a poisonous ingredient called phoratoxin, which is found in all parts of the plant, including the beautiful berries, and is especially concentrated in the leaves. Eating the plant raw or drinking it in tea can cause poisoning. Don't accept a mistletoe snack from a grinch!

There are several species of mistletoe that are native to North America (*Phoradendron leucarpum*) and Europe (*Viscum album*). Up close, mistletoe is a pretty plant with oval, smooth-edged green leaves and pretty creamy-white berries that grow in clumps of up to 10. Step back, though, and mistletoe looks like messy clumps cluttering up a large tree. Mistletoe is a **parasite** that attaches itself to trees, stealing their nutrients and water. When there is a heavy infestation, the mistletoe keeps sucking strength away from the plant. This can weaken or disfigure the host plant, sometimes even killing it. Once it infects a tree, mistletoe is difficult to remove. When its seeds sprout, they grow through the bark of trees and into their tissues, extending up and down within the branches. Even if you cut off the visible portion of the invader, new plants often grow from inside the **host** tree. The most effective way to fight it is to cut off an infected branch or limb entirely.



Hot Cup of Habitat Destruction

A nice warm cup of hot chocolate probably even makes a grinch smile. Chocolate is made from the *Theobroma cacao* tree, also called the cocoa tree, which is a small evergreen tree native to deep tropical regions of the Americas. The trees **bear** large orange fruit, about the size of small pumpkins. Inside the fruits are many small beans, which are dried, fermented, roasted, and ground into a powder to make chocolate.

Although cocoa beans contain caffeine, which is toxic in large amounts, the *real* reason we might associate a grinch with cocoa trees is that they are a leading cause of habitat destruction. Because cocoa is in such high demand, farmers clear rainforest land to plant cocoa. Many wildlife habitats are destroyed and




biodiversity is drastically reduced. Cocoa-driven deforestation, especially in West Africa, is threatening populations of endangered species like elephants, pygmy hippos, orangutans, pangolins, leopards, and many more. Even with a heart two sizes too small, a grinch would agree that cocoa production needs to be more environmentally friendly.

Give It an Inch, It Takes a Mile

Who doesn't love candy canes? The sweet, minty hard candy is a favorite treat during the holiday season. Peppermint flavor comes from the plant *Mentha balsamea*, a small, leafy herb that never grows bigger than about 2 feet tall. It has highly textured leaves with serrated edges that have a strong scent of peppermint, especially if you rub them. The peppermint plant has small light purple flowers. Although peppermint plants can be grown almost anywhere, they are **indigenous** to the Middle East and Europe.



 People use the peppermint plant in two ways. Fresh or dried peppermint leaves are often used in peppermint tea, as well as for flavoring ice cream. The oil of the peppermint plant is used to flavor mints, gum, and toothpaste. Peppermint oil is a natural insect repellent and is also used for some home remedy-type medicines, for instance, to treat muscle pain. Did you ever feel like peppermint makes your mouth feel cool? It really does! Peppermint contains menthol, a compound that activates cold-sensitive receptors in the skin and mouth. This is what gives you the cooling sensation when you have peppermint candy, brush your teeth, or put peppermint oil on your skin.

Even a grinch could admit that there is a lot to love about peppermint, but there is a darker side to this herb. Due to its exceptionally strong and fast-growing root system, peppermint grows extremely well and extremely fast, quickly taking over any area where it is planted. In fact, peppermint is considered an **invasive species** in Australia, the Galápagos Islands, New Zealand, and the Great Lakes area of the United States. If grown unchecked, peppermint dominates and **native species** are left with fewer nutrients and space to grow. This is why you will often see gardeners growing peppermint in containers, not in the ground. Be careful if a grinch spreads peppermint seeds in your garden – he's trying to take over your other plantings!

