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Tenacious mistletoe attacks shrubs

Editor's Note: This is the first of a two-part series about mistletoe. Several readers have asked questions about the plant.

By Andy Romanyak

In the Southwestern desert during the winter season when certain trees and shrubs have shed their leaves, they may reveal high in their branches great masses of brownish-green stems.

When viewed from a distance, those stems resemble large swarms of bees. The plants festooned with this apparition are usually leguminous in nature – such as ironwood, mesquite, catclaw, palo verde and dalea. It is sometimes found on creosote bushes, condalia, introduced tamarisks and other flowering plants.

This peculiar pendulous mass of slender, scale-like stems (two to five feet in diameter) with leaves reduced in size is referred to as Desert Mistletoe.

In the Southwestern desert, this semi-parasitic plant is a ruthless killer and does not possess the same botanical curiosity with seasonal romantic connotation held by northern and eastern residents of the United States.

The genus name *Phoradendron* comes from the Greek phor (a thief) and dendron (a tree) in reference to the semiparasitic growth on trees – literally speaking, "a tree thief."

The species name *Californicum* is for the state of California, a vernacular name for it being California Mistletoe.

Mistletoe figures prominently in mythology and in traditional beliefs and usages of many countries.

The Druids held it in great reverence and believed that its possessor was protected from all evil.

Scandinavian legend has it that Balder the Fair, the god of peace, was slain with an arrow made of mistletoe and later, at the request of other gods, was restored to life with the mistletoe given into the



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keeping of the goddess of love. It was ordained that everyone who passed under it should receive a kiss to show the branch had become an emblem of love and not of hate.

In Brittany, the plant is called Herbe de la Croix. According to an old legend, the cross was made from its wood, which is why mistletoe was degraded to be a parasite.

The dried leaves and young twigs are believed to have medicinal qualities in the treatment of epilepsy, convulsions, delirium, hysteria, neuralgia, nervous disability, urinary disorder and heart disease. It also was considered an aphrodisiac and a panacea; and recent rumors persistently advance the theory that it is an agent in the treatment of cancer.

There are more than 900 known species of mistletoe in the world, and all of them mean business. There are many which we, accustomed to *Phoradendron*, can hardly recognize as a relative.

When the plant becomes established on a suitable host, it steals moisture, minerals and anything else it needs. It does so with such an insatiable appetite that the portion of the branch beyond the point of attack starves and dries up.

It contributes nothing to the welfare of its host, reducing it to an impoverished victim to disease, insects and finally death.

If it should survive, despite infection, its beauty is marred and usefulness impaired.

Some trees are exceedingly resistant to infection and live on for years in cohabitation with mistletoe.

The tenacity of this parasite is

revealed in a recent study of an incense cedar that was calculated at 425 years of age and that of mistletoe growing on it a 409 years.

Since mistletoe possesses chlorophyll of its own, it can demonstrate its ability to survive by manufacturing its own food.

Using its own food doesn't usually take place unless the host plant dies.

The desert ironwood, *Olneya tesota*, is quite frequently infested with desert mistletoe. In combating the site of invasion, it exudes a gummy substance that pushes the mistletoe seed away from the limb surface.

The exudate eventually hardens and drops to the ground, carrying with it the young mistletoe plant.

Some of these sites of invasion can result in great fusiform swellings because the activity of the mistletoe roots within it becomes a grotesque, tumor-like malformation, two- to three-feet in diameter, weighing from 400 to 800 pounds.

With some species of mistletoe and their particular host plants, these swellings and unusual forms produce "flowers of wood," resembling an open flower with the periphery breaking up into ramifying coral-like formations. Others produce burls of high decorative value.

In Australia, there is a type of mistletoe that grows on tree roots, giving to a type of "wood flower" similar to the one just described. To pick these "flowers," a pick, shovel and saw are needed.

Next week: How does mistletoe get started on a tree?