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Mistletoe a magical native plant

By Dr. Susan E. Yost

Mistletoe is one of the "magical" plants of the holiday season. Although it's a native plant in Delaware, and well-known by name even to children, many people haven't seen mistletoe close-up (except maybe in its plastic form!).

This is because mistletoe grows up on the branches of trees, forming a shrubby green cluster of leaves and stems. Mistletoe is evergreen, and so is especially visible in winter when the host trees lose their leaves; seen from a distance it looks somewhat like a squirrel's nest.

The yuletide tradition of kissing under a sprig of mistletoe hung in a doorway probably dates back to the winter solstice celebrations of ancient Britain, around 300 AD. There, the ancient Celtic druid priests used European mistletoe (*Viscum album*) as a potion in fertility rites. Another Celtic use was to hang up pieces of mistletoe to ward off evil, for example "fairy theft" of newborn babies.

Native American Indians used mistletoe for epilepsy, headaches, and as an oral contraceptive. Today, mistletoe is used in some countries as an herbal remedy for cancer, and circulatory and respiratory problems. However, mistletoe is often considered to be poisonous (although usually not fatal), so don't eat it!

The mistletoe that grows in Delaware is American mistletoe, *Phoradendron leucarpum* (family Viscaceae), which is near the northern limit of its range here, growing only as far north as New



Submitted photo

American mistletoe or *Phoradendron leucarpum* is a native evergreen plant popular in holiday traditions.

Jersey, and south to Florida and Texas.

In the U.S. there are two main genera, *Phoradendron*, and *Arceuthobium* (dwarf mistletoes). Worldwide, there are many "mistletoe" species in several families.

In Delaware, mistletoe seems to most often grow on maple trees, particularly red maple. Mistletoe, when abundant, can reduce the growth of the host tree. One maple tree on South State Street in Dover has at least 70 mistletoe plants growing on its branches, and is quite striking in winter.

Mistletoe is a hemi-parasite, meaning that it obtains mainly water and mineral nutrients from its host tree, but also carries out photosynthesis and produces its own "food" (carbohydrates) like most other green plants. Structures called haustoria attach mistletoe to the host tree, and, ap-

propriately, mistletoe's scientific name "*Phoradendron*" means "tree thief" (in Greek).

The translucent white berries are present in winter, and are eaten and dispersed by birds, including cedar waxwings and bluebirds in the eastern U.S. The pulp inside the berries is sticky (due to a substance called viscin) and when the birds wipe their beaks on tree branches they "plant" the sticky seeds.

Also, the seeds can be deposited on tree branches in the birds' droppings. The term "leucarpum" in mistletoe's scientific name refers to the white fruit. In some parts of the world, other mistletoe species serve as nesting sites for birds, including the endangered Northern spotted owl in Western N. America.

The word "mistletoe" seems as strange as the plant itself; suggested origins (etymology) include: the Celtic word for "all heal", German "mist"(dung) and "tang" (branch), Old English "mistel" for basil, and Old Saxon "misl-tan" for "different twig".

As one of the relatively few native evergreens in Delaware, mistletoe is a good winter holiday plant, with traditions associated with ancient Europe, and is also part of our natural ecosystem.

Editor's note: Dr. Susan Yost is educator at the Claude E. Phillips Herbarium on the campus of Delaware State University. The herbarium is Delaware's center for research, education, and outreach about plant identifications, locations, and uses. Call 857-6452 (Dr. Susan Yost) to arrange a tour of the herbarium, or for more information about this article.