



Potato gall on a live oak tree stem. Kenneth Setzer - Fairchild Tropical Botanic Garden

HOME & GARDEN

Those ugly bulbous growths on your trees? They're not harmful. They're bug nurseries.



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Have you noticed some odd growths lately? On your plants, I mean. If they're plant galls, you have nothing to worry about. But what are galls? Among the close connections between insects and plants, it doesn't get much more intimate than this.

There's no need to look to sci-fi for weird stories. Just go outside and take a close look at a live oak tree. You are likely to find odd growths on leaves and woody stems. They are not flowers, foliage, or acorns; they are galls. They might take the form of a lumpy blob, or a spiky ball; on other plants, they can even resemble flowers. It all depends on what caused the gall and on what plant.

Plant galls are a plant's reaction to an intrusion by insects, mites, or even fungi as in the case of azalea galls.

Wasps and midges are the most common gall makers. The insects lay eggs within the leaf or stem tissue of the tree, often in areas of fresh growth. The tree or plant then responds with unusual cell growth to produce the structure that encapsulates the eggs and subsequent larvae. This provides a safe haven for the eggs to mature and hatch and may provide nutrition.

It's clever and ingenious to force the plant to grow a home for your offspring. But of course it's not really the insects' active intent to do so, it's just an evolved process. But all's fair in the war of survival. Some other species of wasps have even developed the ability to penetrate the gall and parasitize the larvae within.

What you might find on a live oak is called a potato gall, presumably because it looks much like a potato. It was likely caused by a wasp (*Callirhytis quercusbatatoides*), a tiny, nondescript insect only a few millimeters long. By the time you notice the gall, the insect is probably long gone. You can see the tiny exit holes the wasp makes when it's ready to leave the gall. Larger holes may be a sign that a predator got to the larva first.

Galls are not much cause for concern; they are normally harmless (with a few exceptions) and there's not much you can or should do about them. Most of the time, the insects involved are native and form a natural part of the plant's existence.



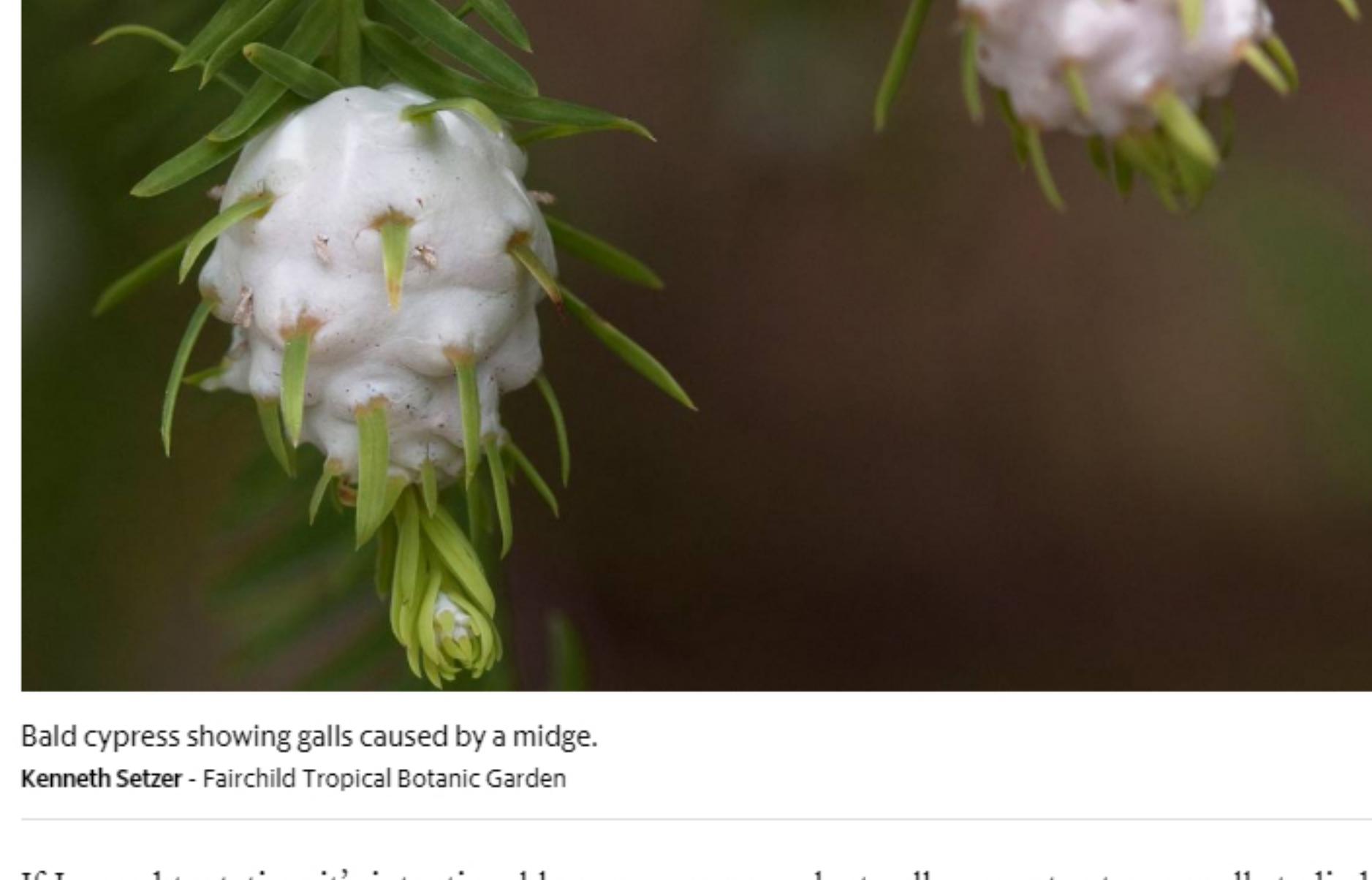
Leafy oak gall on live oak.
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Other oak species are also apparently appealing to gall-making insects (and arachnids like mites), and there's no shortage of types of gall, some of which you may have heard called "oak apples." Iron gall ink made from oak galls has been used for likely over 2,000 years to write and illustrate some of humanity's most important documents, as well as the more mundane.

Another type seen in South Florida is the rosette/leafy oak gall, resembling a small, greenish-white brush that eventually turns brown and falls from the tree. It is caused by the appropriately named leafy oak gall wasp.

Willows are also susceptible. This coastal plain willow (*Salix caroliniana*), growing in the Everglades, was covered in red leaf galls possibly caused by the willow leaf gall mite.

Conifers like cypress (*Taxodium sp.*) are not immune. Bald and pond cypress trees can play unwilling host to a midge. The galls cover the branches in white, roughly oval, roundish structures that look like foam engulfing the leaflets. Another midge species causes cypress to produce what look like white flowers, a really odd-looking occurrence since cypress are not flowering plants.



Bald cypress showing galls caused by a midge.
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If I sound tentative, it's intentional because so many plant galls are not yet very well studied, and their cause can sometimes only be known with certainty if the gall is isolated and we wait for its contents to emerge. Then the creature must be identified, which often requires an expert in cecidology — the study of plant galls. For the most part though, galls are not a threat.

Finally, while you might not be concerned for its health, poison ivy is also induced to provide free housing to a mite's offspring. The poison ivy leaf gall mite causes raised pink nodules to form on poison ivy leaves. Truly, fact is stranger than fiction.

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