

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



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Float Away in a Bubble or Fly Away on a Broom Witches' Broom

If you were the beautiful Good Witch Glinda (Figure 1), your mode of transportation was a beautiful floating bubble. If you were the mean and green nasty evil scary cackling Wicked Witch of the West (Figure 2), you got to ride a broom ---- a witch's broom. [Aside: Margaret Hamilton's menacing demeanor as the Wicked Witch of the West was the complete opposite of her real life persona, a gentle soft spoken person who was very fond of children (a kindergarten teacher prior to her becoming an actress).] So why would we be addressing a witch's broom?

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Figure 1

Figure 2

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Around Halloween after leaves drop to the ground, people may notice “things” up in their trees. Could they be squirrel nests (Figure 3), or something else (Figure 4)?.



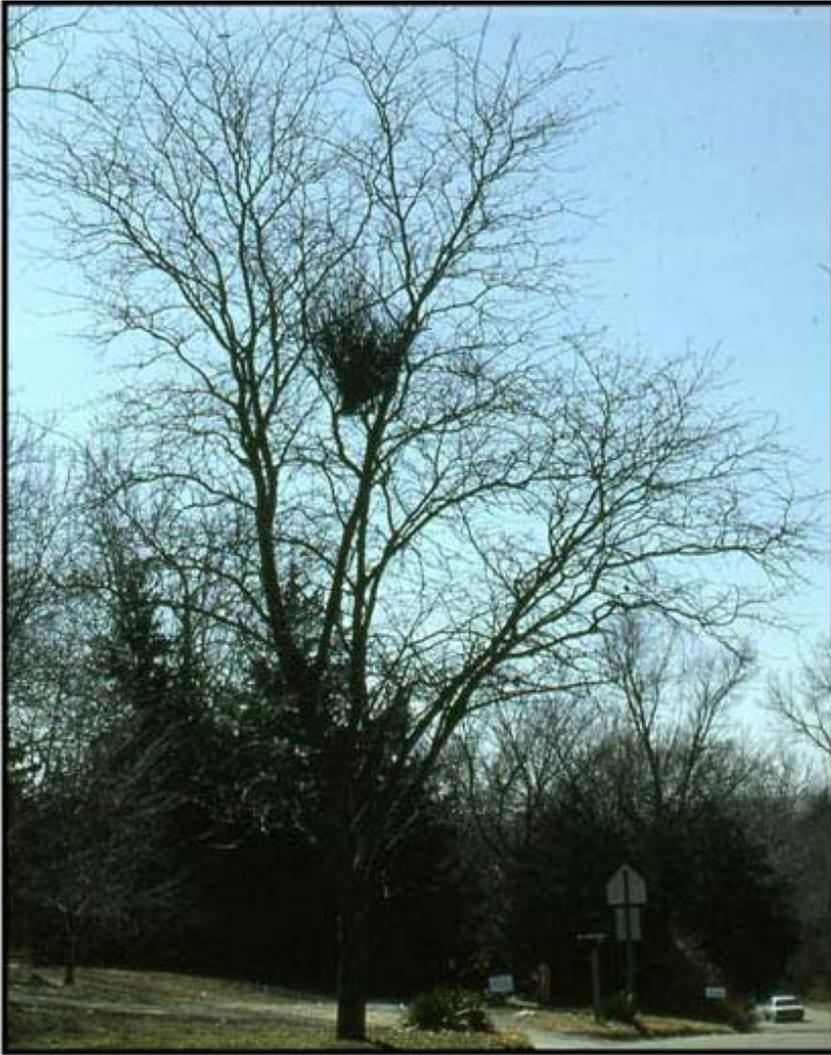


Figure 3

Figure 4

In fact, they are two different things: “leafy” squirrel nest (Figure 5) versus witches’ broom (Figure 6 – in hackberry).



Figure 5



Figure

6

Although it may be a stretch, when you contrast the witch's broom in Figure 2 with the witches' broom in Figure 4, both appear as unorganized jumbled "masses". By definition (in woody plants), a witches' broom is a proliferation/mass of dense clustered branches. In response to various extraneous entities (citations of fungi, bacteria, mycoplasmas, mistletoes, aphids, eriophyid mites, leafhoppers), normal plant growth goes amok.

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Exact mechanisms causing these oddities are not well defined. Certainly chemical reactions/interactions disturb/disrupt plant physiological activities causing departures from normal plant growth/form. In some instances, it is suspected that a component in the saliva of an insect (aphid) or mite (eriophyid) provides the direct stimulus for “wacky” growth. In other instances, an insect (for instance, certain leafhoppers) inoculates a host plant with mycoplasma-like organisms that cause distorted growth patterns. There are citations where two entities work in concert to cause witches’ broom (in hackberry, an eriophyid mite AND powdery mildew). Witches’ brooms may be large and highly visible or smaller to possibly escape detection. As already seen, they can occur in a broadleaf trees, or (as well) in conifers (Figure 7).



Figure 7

The bottom line is that other than their unsightliness, witches' brooms do not pose a threat to their hosts. At least in deciduous trees, if left in place, they will again "disappear" behind the camouflage of foliage produced

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the ensuing season. If a person absolutely cannot tolerate the presence of witches' broom, they can be removed (Figure 8).



Figure 8

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Sincerely,

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