

## Bee Friendly Flowers: White Snakeroot



One of the last natives to flower, white snakeroot (*Ageratina altissima*) is a late-season boon to hungry pollinators like bees, butterflies, and moths. Its frothy white disc flowers bloom from late summer through fall and provide vital nectar and pollen before the weather turns cold and food becomes scarce. White snakeroot plants have coarsely-toothed, heart-shaped leaves that are easily identified in spring because of a leaf miner insect that uses them as its host. A little fly (*Liriomyza eupatoriella*) lays its eggs on the leaves, and after they hatch, the larvae feed on the leaf tissue, tunneling their way around and creating distinctive curvy leaf trails.

This fuzzy white bloomer is a common sight in woodlands and meadows in fall, even in habitats with large deer populations. This is because the leaves and stems of white snakeroot contain tremetol, a fat-soluble toxin that is a strong poison. The toxin is highest in green growing plants but remains poisonous even after frost strikes the plant. Deer know to steer clear of it, but not true of grazing livestock.

In the early 19th century, European settlers unknowingly allowed their cows and other domestic animals to feed on fields with snakeroot. Cows that grazed on it would become weak, have seizures, and stagger to their deaths. Their milk would also be tainted and caused vomiting, seizures, and death in the calves or humans who drank it. The disease was called milk sickness and was so common that place names like Milk Sick Ridge, Milk Sick Cove, and Milk Sick Holler still exist in rural America today.

Perhaps the most famous victim of milk sickness was Nancy Hanks Lincoln, Abraham Lincoln's mother. She and her aunt and uncle and other families in the small town of Pigeon Creek Indiana died of the disease in the summer of 1818. She was just thirty-four years old and Abraham was only nine. One can only wonder how this plant changed the young boy's life and the course of history by how it affected his family. Some Native Americans, who made poultices with snakeroot as treatments for snakebites (the origin of its common name), knew of its toxic properties, but their botanical knowledge was frequently ignored by settlers. Big mistake!

Eventually, a frontier physician in Illinois named Anna Pierce Hobbs Bixby learned the cause of milk sickness from an indigenous woman from the Shawnee people. Bixby collected the herb and fed it to a calf to confirm that it caused the disease. She led a campaign to eradicate the plant locally and practically eliminated milk sickness from her community by 1834. Unfortunately, medical authorities outside her area largely discounted her findings because she was a woman and milk sickness remained a scourge all the way until the 1920s.



White snakeroot is most easily identified in the fall when its fluffy white flower heads appear. After blooming, its seeds are dispersed primarily by wind, their fuzzy parachutes carrying them far and wide. The plant also spreads by rhizomes or underground stems, so they easily colonize once they get established.

### Duke Farms Connection

White snakeroot used to be classified as a Eupatorium, like Joe-Pye weed, but recent DNA analysis



reveals it is in the aster family. Snakeroot grows all over Duke Farms so it's hard to miss this white bloomer this time of year. Look for it in the understory in all the woodlands, but whatever you do, don't eat it or feed it to your cows, sheep, or goats!

**Want to grow white snakeroot in your garden?** Buy plants from native nurseries and **never collect them from the wild!** The [Native Plant Society of New Jersey](#) is a great resource to help you find where to buy them or to get more information.

### Additional Resources

- [Weed of the Month, Brooklyn Botanical Gardens](#)
- [Johnson Wildflower Center](#)
- [USDA Plants Database](#)
- [White Snakeroot Facts](#)
- Wicked Plants, Amy Stewart, Algonquin Books of Chapel Hill, 2009

### Questions and Answers

1. Why is snakeroot important to pollinators?

*Answer: Because it blooms through fall when pollen and nectar resources are dwindling.*

2. White snakeroot is easily identified in the spring by the curvy trails that appear on the leaves. Why?

*Answer: A fly, *Liriomyza eupatoriella*, lays its eggs in the leaves and when the larvae hatch, they tunnel through the leaves as they eat the leaf tissue.*

3. Why don't deer eat this plant?

*Answer: Because it contains a poisonous toxin called tremetol that can kill deer.*

4. What was milk sickness?

*Answer: Settlers allowed their livestock to graze in fields with white snakeroot, not knowing about its toxicity. When cattle ate the plant, it caused seizures and eventually killed them, while also tainting the milk.*

5. What historically important person died from milk sickness?

*Answer: Nancy Hanks Lincoln, Abraham Lincoln's mother.*

6. How did the plant get the name snakeroot?

*Answer: Native Americans used the roots to make a poultice to treat snakebites.*

7. Who was the settler who first solved the mystery of milk disease? When did she figure it out?  
*Answer: In the 1830s, a woman physician named Anna Bixby fed snakeroot to a calf and saw what happened and shared her knowledge with local farmers.*

8. As Bixby was a woman, medical authorities discounted her findings to the farmer's detriment. How much longer was milk sickness a problem before it was eradicated?

*Answer: Milk sickness remained a problem until the 1920s.*

9. Do you think women are still discounted as authorities in scientific research? Explain your answer.

*Answer: Students can formulate their answers based on independent investigations.*

*\*Photos courtesy of Lady Bird John Wildflower Center*