



## Bee Friendly Flowers: Black-Eyed Susan



Black-eyed Susan is one of the most well-known native wildflowers, but it wasn't always a common sight here in New Jersey. Black-eyed Susan is a native of the prairies and was virtually unknown in the forested lands of eastern North America before the 19<sup>th</sup> century. As settlers felled trees to open fields and pastures, they created habitat for sun-loving meadow plants. In the 1830's, black-eyed Susan seed was accidentally mixed with clover seed and ended up in pastures on eastern farms. By the 20<sup>th</sup> century, the Soil Conservation Service was using black-eyed Susan mixed with grasses and other natives to stop erosion on hillsides and barren land. This encouraged the flower's spread over most of North America.

Was there a black-eyed Susan namesake for the vibrant wildflower? The theory is that the common name comes from a popular 1700's English ballad by a poet named **John Gay**. The ballad tells the sad tale of a distraught woman named Susan who searches for her lover, Sweet William and finds him aboard a ship about to sail away forever. Legend has it that "black-eyed Susan" and "sweet William", a European wildflower, bloom at the same time to celebrate their eternal love.

The scientific name is *Rudbeckia hirta*. *Hirta* means hairy, referring to the fuzzy hairs that cover the leaves and stem, but the genus name has a more sentimental reference. Rudbeckia was chosen by Carl Linnaeus, the creator of the binomial nomenclature system of classification, to honor two 18<sup>th</sup> century botanists Olaus Rudbeck, senior and junior. They were professors at the University of Upsala in Sweden, who mentored and befriended Linnaeus when he was a student at the University. He never said why he chose the coneflowers of North America to honor these two scientists, but perhaps the cheery flowers reminded him of good times in his youth.

There are dozens of *Rudbeckias*. Many of them have conical centers that vary in the size and shape of the black "eye". When examined with a hand lens, the black cone reveals that it is made up of hundreds of miniature flowers which bloom in a ring, starting at the base and moving up to the top. These tiny flowers in the center are called disc flowers; they have male and female reproductive organs that will produce seed when pollinated. The bright yellow petals are sterile rays and serve as advertising signs to attract passing insects. Black-eyed Susan produces lots of nectar and pollen; the longer-tongued pollinators like bumblebees, butterflies, and moths are attracted to the nectar in the center floral tubes and short-tongued bees forage for the protein-rich pollen on the anthers. Each blossom is a composite of coneflowers and rays, hence the plant's family name of *Compositae*. Being a composite goes far towards ensuring pollination and reproduction for the plant. The Composite family is the largest family of flowering plants on earth.





*Rudbeckias* love sun, have a long season of bloom, and readily self-sow. They can be tricky to establish in a fertilized garden setting because they do best in well-drained sandy soils and usually decline in soils with lots of clay or too much humus. The *hirta* species is a biennial, which means they bloom and go to seed one year, then germinate and grow from those seeds the next year. The first year, they grow a rosette of fuzzy leaves that make and store food to give the plant enough energy to send up the blossom the next year. There are perennial varieties that bloom every year as well.

### Duke Farms Connection

At Duke Farms, you can see the sunny faces and “black eyes” of the Susans blooming in the beds behind the Café, along the walkway from the parking lot to the Visitor Center, in meadow areas, and in the Pollinator Hoop House.

**Want to grow Black-eyed Susan in your garden?** Buy plants or seeds 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. [http://www.npsnj.org/pages/nativeplants\\_Sources.html](http://www.npsnj.org/pages/nativeplants_Sources.html)

### Questions and Answers

1. What’s the prevalent theory about how Black-eyed Susan got its common name?

*Answer: From a 1700’s popular ballad by a poet named John Gay.*

2. This flower is a native of prairies in the western United States, how did it end up in the eastern part of the country?

*Answer: In the 1800s, Settlers created habitat for it by felling woodland and making pastures and cropland. In the 20<sup>th</sup> century, the Soil Conservation Service used it in soil stabilization plantings all over the country.*

3. Who gave this plant its scientific name? What is this person famous for?

*Answer: Carl Linnaeus - he created the binomial nomenclature system for classification of all living organisms.*

4. Who does the genus name honor?

*Answer: Two of Linnaeus’ botany professors from the University of Upsala in Sweden who were his mentors.*

5. What does the species name *hirta* refer to?

*Answer: It means hairy, as the plant has fuzzy stems and leaves.*

6. What is the center black eye composed of?

*Answer: Hundreds of disc flowers that bloom for the bottom to the top.*

7. What is the function of the yellow petals?

*Answer: They are sterile ray flowers that attract passing pollinators to come visit.*

8. Black-eyed Susan is in the Compositae family. Why?

*Answer: Because it has two kinds of flowers in one blossom; the center tubular disc flowers and the yellow sterile rays.*



Duke Farms

9. Where does black-eyed Susan grow best?

*Answer: In sunny places with sandy, well-drained soils.*

10. Where can you see these flowers blooming at Duke farms?

*Answer: In the beds behind the Café, along the walkway from the parking lot to the Visitor Center, in meadow areas, and in the Pollinator Hoop House.*

Flower photos courtesy of Google images.



### **Additional Resources**

Johnson Wildflower Center [https://www.wildflower.org/plants/result.php?id\\_plant=ruhi2](https://www.wildflower.org/plants/result.php?id_plant=ruhi2)

The origin of Black-eyed Susan <https://www.grit.com/farm-and-garden/in-memory-of-black-eyed-susan-sweet-william>

USDA Plants database <https://plants.usda.gov/core/profile?symbol=RUH12>

USDA fact sheet [https://plants.usda.gov/plantguide/pdf/pg\\_ruhi2.pdf](https://plants.usda.gov/plantguide/pdf/pg_ruhi2.pdf)

The Secrets of Wildflowers; Jack Sanders, Globe Pequot Press, 2003