

Growing Guide: Host Plants for Black Swallowtail Butterflies

If you grow parsley, dill, fennel, or carrots, you may encounter a beautifully striped, colorful caterpillar chomping on the foliage. Before plucking it off in frustration, know that you might be looking at the larva of the black swallowtail butterfly (*Papilio polyxenes*).

If we want to enjoy butterflies flitting among our flowers, we must learn to recognize them in all their life stages: egg, caterpillar, pupa, adult. And, if we want to attract them to our gardens, we must provide food for both the caterpillars and the adults.



Range and Life Cycle of the Black Swallowtail

The black swallowtail is found throughout most of the eastern and mid-western U.S. as far west as the Rocky Mountains, as well as southwest into Arizona and northern Mexico, and north into southern Canada.



Black swallowtail egg laid on parsley florets. Whitney Crenshaw, Colorado State University, Bugwood.org

The insect overwinters in its chrysalis stage. In spring, adult butterflies emerge and the females seek out host plants (carrots, dill, parsley, fennel, etc.) on which to lay their eggs, so the newly hatched caterpillars will have a ready food source. The females lay single, spherical, pale yellow eggs, often on the new foliage and sometimes on the flowers. In 4 to 9 days the eggs hatch. The larval stage lasts 10 days to a month, and the pupal stage lasts about 18 days.

Caterpillar Host Plants

Sometimes called parsleyworms, the caterpillars (pictured above) have a voracious appetite and can quickly strip a plant of its leaves. If you find one in your herb garden, try to relocate it to a Queen Anne's lace (*Daucus carota*) plant, another

member of the carrot family and favored host plant.

Better yet, plant a special garden just for these beautiful creatures! Here are some general tips for your swallowtail host planting:

- Choose a site in full sun (preferred) or part shade.
- Loosen soil to a depth of 8" to 12". A raised bed is ideal.
- Make a sign for your caterpillar garden so everyone knows they are welcome visitors!

Then grow a few of these host plants:

Carrots. Sow seeds directly in the garden two to three weeks before your last spring frost date. Sow the small seeds about ½" apart in rows a few inches apart. Cover the seed with ½" of loose soil. Gently water to settle the soil, and keep the soil consistently moist for the first few weeks. [Learn more: How to Grow Carrots](#)

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Dill. Sow seeds directly in the garden around the time of your last spring frost date. Sow the seeds about 1” to 2” apart in rows about 6” apart. Cover with ¼” of loose soil. Gently water to settle the soil, and water as needed to prevent the soil from drying out.

Parsley. The seeds and plants can be slow to germinate and grow, so it’s best to start plants indoors at least six weeks before your last frost date (seeds can take up to three weeks to germinate). The young plants don’t like to have their roots disturbed, so sow the seeds in “plantable” peat pots, coir pots, or DIY newspaper pots. Or purchase transplants at your local garden center.

Fennel. The feathery foliage has a mild, anise-like flavor and scent. When growing it as a host plant, follow the instructions for carrots, above.

For more details on growing dill and parsley: [Six Easy-to-Grow Herbs](#)

Butterfly Nectar Plants

Black swallowtails, like other butterflies, prefer flat-topped flowers or plants with clusters of small flowers. Favorites include phlox, gaillardia, zinnias, butterflyweed, and milkweed.

Fun Facts

- The black swallowtail butterfly resembles its poisonous cousin, the pipevine swallowtail, which helps deter predators.
- Newly hatched black swallowtail caterpillars resemble bird droppings, offering effective camouflage.
- A full-grown black swallowtail caterpillar has an orange horn-like gland called the osmeterium on its head. When in danger, the caterpillar raises this forked gland, releasing its foul smell.



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