

Creature Feature: Summer 2014

By W. Scott Douglas

Spicebush Swallowtail Butterfly, *Papilio troilus*

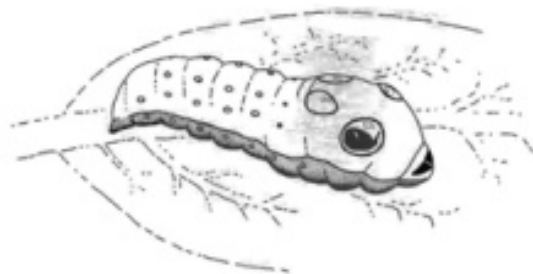


Few butterflies are as large and beautiful, and readily recognized, as Swallowtails. Some of the largest butterflies in the world belong to this group. Their images adorn posters, rock album covers and t-shirts all over the world. But this insect, like many others, serves a critical role in the ecosystem. Butterflies are important pollinators, and are a critical food source for birds. One of the most common Swallowtails in Cooks Creek Watershed is the Spicebush Swallowtail, *Papilio troilus*. Spicebush Swallowtails, also known as Green-Clouded Butterflies, range throughout the eastern United States and southern Ontario. The

large, mostly black butterfly is accented with a splash of light green or blue on the lower half of the rear wings with pale yellow spots on the outside and trailing edges.

The ubiquitous Spicebush, and related woody plants like Sassafras, are the primary food sources for the larvae of this species. The female swallowtail actually thumps leaves with her front legs in order to confirm that she is on the right plant to lay her eggs. Scientists believe that this thumping releases the characteristic astringic odor of these plants which is picked up by the sensory organs on her legs. Once she has found the correct plant, she lays one or two eggs at a time on a leaf. The eggs hatch after a few days and the dirt brown caterpillar eats its way to the central rib of the leaf.

At this stage, the larva resembles little more than a bird dropping. Once at the rib, it secretes silk that causes the leaf to roll up, creating a shelter in which it hides from predators. The young larva stays in its ready-made tent during the day and only comes out to feed at night. As the larva grows, it changes from the dirty brown to a bright green. The front half of the caterpillar becomes enlarged, with two huge eyespots.



When alarmed the larva will actually rear up on its hind legs, making it look like a snake to a startled bird or other predator. After several weeks, the larva will molt into a chrysalis, which can be either brown or green depending on the time of year. The chrysalis is very smooth skinned, angular and pointed at both ends, with a single strand of silk as a tether to hold it to the underside of a leaf or side of a twig.

Swallowtails have 2-3 generations each year, with the last generation overwintering as pupae and emerging in the spring. Birds, spiders, robber flies and dragonflies prey on Swallowtails. To ward off birds, the Spicebush Swallowtail mimics the Pipevine Swallowtail which is foul-tasting, in appearance. Adults live from two days to a couple weeks, and their only job is to find a mate and/or lay eggs. For energy, swallowtails feed on nectar from Joe pye weed, jewelweed and honeysuckle as well as a variety of ornamental bushes and flowers. Male swallowtails usually hang out in woods and margins, while females stay in the open, presumably where they can be seen by the skulking males. Males attract females with a complicated and energetic courtship dance. Females can mate with more than one male, but become less receptive with each mating. Both sexes can be found congregating at mud puddles with other butterflies where they drink and obtain mineral salts.