



# The Ferrum Nature Society Bulletin

Dedicated to the appreciation and conservation of our natural world

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## Upcoming events:

**Butterfly count:**  
August 2.

**Virginia Environmental Education Conference:**  
Sept. 17-18 - Virginia Natural History Museum in Martinsville.

## Nature's events:

### Little turkeys

When you see a wild turkey hen this time of year, it will often be followed by a line of little ones. Instead of fleeing when approached, the pout pictured below tried to hide under a dense cover of fern.



Photo: Todd Fredericksen

## Sky calendar:

**Full moon** - July 18

**Planets** - Jupiter is the brightest planet in the sky this month, passing across the southern sky. Mars and Saturn are low in west near sunset.

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## Swallowtail Butterflies of Franklin County

Josh Bernard

Of the seven species of swallowtail butterflies that flutter in Virginia, five can be found in our area including the zebra (*Eurytides marcellus*), eastern tiger (*Papilio glaucus*), black (*Papilio polyxenes*), pipevine (*Battus philenor*), and spicebush (*Papilio troilus*) swallowtails. These species belong to the family Papilionidae and the swallowtail subfamily includes some of the largest and most impressive butterflies. The males of these species typically patrol for females. Females lay eggs on leaves, often specific for certain vines, shrubs, or tree species. Caterpillars may emerge two or three times per year and overwintering occurs in the chrysalis stage. Adults feed on nectar.

The zebra swallowtail is a showy butterfly of moist woodland forests near rivers and swamps. They are easily identified by their black and white coloration, much like a zebra. The wings of this butterfly are whitish-green with black stripes and can span to about 4 inches. Their preferred host is the pawpaw tree.

The spicebush swallowtail is among the smallest of the swallowtails in Virginia. It inhabits deciduous woodlands, fields, woodland swamps, and parks. The spicebush caterpillars inhabit brushy protected shelters made of folded over leaves during the day and come out at night to feed. These butterflies resemble the eastern tiger female in its dark form with simple, but overlooked differences. On the surface of the upper wing are ivory spots that dot the black background. The undersides of the wings also have green marginal spots. The females lay single eggs on the underside of young spicebush leaves.

Probably one of the most common butterflies of the eastern United States is the eastern tiger swallowtail, the state insect of Virginia. It occupies deciduous forests as well as river valleys, parks, and suburbs from Ontario to the gulf coast and west to Texas. The eggs of the tiger swallowtail are laid on the un-

derside of magnolias or tulip trees; caterpillars will begin to eat the leaves and rest on silken mats in a protected area. The males of this species are very yellow with dark tiger-like stripes.



**Eastern tiger swallowtail - Virginia's state insect**

The females have two forms—one that is similar to the male and another that is black. During mating the males will search diligently for females which then lay single eggs under host plant leaves.

The black swallowtail occupies a diversity of habitats. These butterflies are mostly black, but on the inner part of their hindwing, there is a black spot centered in an orange one. The females have a row of yellow spots on their hindwings while the males have a yellow band. The females are also distinguishable by blue bands on their hindwings.

Finally, there is the pipevine swallowtail. This species favors a large variety of open habitats like the open woodland or their edges, but the females lay eggs on the Dutchman's pipe vine. This butterfly has a very dark coloration, much like the black or the tiger, with the upper surfaces an iridescent blue and the underside of the hindwings having a row of 7 orange spots.

# Convictional Summer Storms

Todd Fredericksen

While thunderstorms can occur any time during the year in Virginia, July is the peak season. Thunderstorms contribute heavily to making July the month with the most rain during the year. An average of 4.8 inches fell during July in Rocky Mount over the past 60 years.

Thunderstorms often form along frontal boundaries, called squall lines, but most thunderstorms in July are convective storms when intense heating from the sun causes humid air to rise, often along mountain slopes.

All thunderstorms require some instability in the atmosphere. The rising air can reach great heights because the condensation of water vapor releases more heat. Because the source of convective thunderstorms is heat, they normally occur in the late afternoon and evening, at the culmination of the heat produced during a summer's day.

The rising humid air of a convective storm forms the classic thunderstorm cloud called the cumulonimbus, characterized by vertically billowing cumulus clouds with a flattened top resembling an anvil. Dark patches within the cloud indicate large amounts of stored moisture. The formation of thunderstorms over any one location can be erratic and unpredictable. One area may receive an inch or more of rain, while adjacent areas only a mile of so away may receive none.

Accompanying these summer storms may be high winds, lightning, tornadoes, and hail. Winds are produced wherever air masses of different pressures meet. The rising warm air of thunderstorms create updrafts, while surrounding cooler air descends creating downdrafts. Thunderstorms with intense updrafts and downdrafts can produce tornadoes. Hail is created when water droplets falling through the cloud are lifted back up to great heights in the by updrafts where they freeze and descend again. The cycle may be repeated several times creating larger hailstones until the hailstone is too heavy to be held by the updraft. Lightning occurs when negative charges at the base of a cumulonimbus cloud are attracted to positive charges on the ground. The negative charges move down toward the positive charges which rush up to meet them creating the lightning flash. The rapidly heated air expands rapidly creating the sound we hear as thunder.



Summer thunderstorm approaching Ferrum

Nell Fredericksen



**Gray treefrogs** (*Hyla chrysoscelis*) can be heard trilling on humid evenings, and even during the day, in the mid-summer months. Unlike other frogs, tree frogs have toe pads that allow them to scale tall vegetation. They will also come down to the ground occasionally. The frog pictured to the left is perched on emergent vegetation in a water garden pond. After a summer rain, treefrogs become quite active and may be seen attached to window panes as they hunt for insect prey or mates. There are two species of gray treefrogs in Virginia and they can only be told apart by their call and the number of chromosomes in their cells.

Todd Fredericksen