



## **Brightwood Kids - Nature Detectives! September 2022 Newsletter**

### **Event Calendar:**

FOBP will offer programs for children ages 2 through 8 years old through the Westfield Recreation Department the 3<sup>rd</sup> Thursday of the month, weather permitting, as noted in the calendar below.

#### **Class Schedule:**

10-10:45 AM 2- 3 year old with adult  
11-11:45 AM 4 -5 year old  
3:30-4:30 PM 6 - 8 year old

**September 15, 2022  
October 20, 2022**

**Classes for ages 2 to 8: Butterfly Life Cycle  
Classes for ages 2 to 8: Spiders, Bats and Things that  
move in the night**

**October 29, 2022**

**Halloween Trunk (Tree, that is) or Treat**

**November 17, 2022**

**Classes for ages 2 to 8: Migrate, Hibernate, Stay – BP  
birds and animals**

**December 15, 2022**

**Classes for ages 2 to 8: Winter/Seasons – weather and  
snow**

Register for classes at <https://secure.rec1.com/NJ/westfield-nj/catalog>.

# Bats ... Scary or Gentle Creatures of the Night?

Have you noticed boxes on poles in the park? Ever wondered why they are there? They are bat houses, i.e. homes to encourage bats to take up residence.

Many people think that bats are creepy, scary, spooky. After all, don't they suck blood? So, why would we want to encourage them to hang around the park. The truth is that bats are really shy, gentle, intelligent and misunderstood creatures that are part of a healthy ecosystem.

According to New Jersey's Department of Environmental Protection,<sup>1</sup> there are nine bat species that call our State home. Six of them are full-time residents:

- Little brown bat
- Big brown bat
- Northern long-eared bat
- Indiana bat (a federal and state endangered species)
- Eastern small-footed bat and
- Eastern pipistrelle.

These bats are active only in the warmer months but hibernate all winter.

The other three species are part-time residents who migrate during the cold months:

- Hoary bat;
- Red bat; and
- Silver haired bat.

None of these bat species feed on blood. They do, however, like to eat the most dangerous animal in the world: mosquitoes!<sup>2</sup> In fact, a bat can eat more than its weight in mosquitoes and like-sized insects - up to about 1,200 in an hour and 3,000 in one night. A nursing mom (yes, bats nurse their babies) can consume 4,500 such insects in a night.

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<sup>1</sup> See [https://www.state.nj.us/dep/fgw/ensp/pdf/bat\\_fact\\_sheet.pdf](https://www.state.nj.us/dep/fgw/ensp/pdf/bat_fact_sheet.pdf)

<sup>2</sup> <https://www.cdc.gov/globalhealth/stories/2019/world-deadliest-animal.html>



Bats “hang out” in safe places all day and come out at night to feed. They need open grassland, forest edges and water bodies to feed and drink. Brightwood Park has just the right elements for a bat habitat.

Bats are mammals – not birds. They have fur not feathers. Bats are warm-blooded and have live births. Bats generally have one baby, called a pup, in a year. Bat moms produce milk and nurse their pups about four to five weeks until the pups are able to fly and seek out food. Like most mammals, bats have bellybuttons! They are social animals and live in colonies.

Bats are the only mammal that can fly – and some fly crazy fast! A Mexican Free-tailed bat has been clocked at 100 miles per hour for short distances!<sup>3</sup> Although bats can see, they also rely upon echolocation, i.e. reflected sound, as they fly in the dark.

Bats have a few predators such as owls, hawks and snakes. However, their biggest threat is disease. New Jersey’s bat populations were severely impacted by a fatal fungal infection called white nose syndrome. While some bats have adapted their hibernation lifestyles to help prevent infection, the number of bats in the State is greatly diminished from what it once was.

In recognition of the vital role bats play in a healthy environment, it is illegal to kill bats in New Jersey. Bats need our help to survive:

- plant a “bat garden” with night blooming flowers including goldenrod, wild hydrangea, fleabane, nicotiana, raspberry, or northern bush honeysuckle; and/or
- install a bat house.

Bat week celebrates bats the week of October 24 to 31! How will you celebrate? [Come to Brightwood Park?]

For more information, check out:

- NJ DEP website: [https://www.state.nj.us/dep/fgw/ensp/pdf/bat\\_fact\\_sheet.pdf](https://www.state.nj.us/dep/fgw/ensp/pdf/bat_fact_sheet.pdf);
- US Department of the Interior website: <https://www.doi.gov/blog/13-facts-about-bats>;
- **Bat Conservation International**, [www.batcon.org](http://www.batcon.org); and
- **Bat Conservation and Management**, [http:// www.batmanagement.com](http://www.batmanagement.com).

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<sup>3</sup> <https://www.batcon.org/about-bats/faq/>

# Mysterious Lichens

Photos courtesy of Chuan-Chu Chou and Denise Ricci

Lacy patches of grey, tufts of orange string, green leaf-like growth, colorful crust covers on rocks or trees ... what are these mystery organisms found throughout Brightwood Park? They vary in shape and color and can be found growing on rocks, trees, and other surfaces. Not to be confused with moss, lichens are a mysterious organism.

Lichens are found all over the earth from polar regions to the tropics! Most grow on land but a small percentage can even live in water. They are especially unique in that they are comprised of both fungi and alga –in this symbiosis, each component sustains the other. The fungus provides moisture allowing alga to grow in otherwise inhospitable climates. Alga absorbs nutrients and uses photosynthesis to create food thereby feeding the fungus.

What is unique about the fungal component of lichen is that it cannot feed for itself off decay like other types of fungi. It has no roots or other components to feed from soil or decay. Rather, it is entirely dependent on its algal cells for food. On the other hand, in the right environment, the algal cells could survive.



Lichens can have either green algae and/or cyanobacteria algal components. These can be layered or mixed together with the fungus.

There are three basic categories of lichen: foliose, fruticose, and crustose.

Foliose lichen like those pictured to the left appear leaf-like.

Fruticose lichen have a central stem with branches like the pictured orange lichen.



Crustose lichen grow on rock surfaces and become embedded in the rock's composition:



The color variety of lichens, including yellow, orange, red, green, black, brown, silver and gray, is determined by its chemical composition. There are thousands of varieties of lichen, and their chemical composition helps identify them from one another.

Lichens grow slowly but can live for decades or even centuries. Since they depend entirely on water and nutrients in the air, they are sensitive to pollution. Scientists can study lichens to determine historical pollution levels.

Lichens are significant ecologically in what they do for ecosystems. They bind and build soil. The cyanobacteria component also “fixes” nitrogen from an otherwise unusable form into a usable form. Plants need this nitrogen to survive. Lichens also provide food for a

variety of mammals and invertebrates and nesting material for birds. Lichens have also been used by people for food, fabric dye and medicines.

Sadly, like so much of our environment, lichens are declining due to loss of habitat and pollution.

For more information, check out:

<https://www.fs.fed.us/wildflowers/beauty/lichens/about.shtml>

# Halloween Trunk or Treat!

**Come to the forest for a spooky good time...**



Dress like a bat. Dress like a witch, princess, or pirate... just dress in your Halloween finest, and join us for fun in the park.

Our jack-o-lanterns will be out in force to light your way. Join our ghosts on the trail to trunk (tree that is) or treat.

**October 29** – look for details and sign up on the Westfield Recreation Department website: <https://secure.rec1.com/NJ/westfield-nj/catalog>.

**Fall Reading List:**

