



photo by Laurie Eytel

**Dark nights: What goes bump in the night in your back yard?**

Fairfax County has an active nightlife. Dark skies are not just important for people who want to star watch; nighttime is an important time for

wildlife. They use the cover of night to avoid predators and cues from the stars to navigate on long journeys. Imagine the thousands of tiny twinkling lights in the dark night — **lightning bugs** looking for love in the forest or meadow. Not least of all, there are the small mammals using the cover of night to look for food.

Owls are some of Fairfax County's most active night predators, ranging from the tiny **saw-whet owl**, only seven inches tall and feeding on insects, to the enormous **great horned owl** with a four-and-a-half foot wing span and large enough to eat **skunks**.

**Flying squirrels'** dark-adapted nature makes them secure even from most Fairfax county residents. Scientists estimate that there is at least one flying squirrel for every grey squirrel we see. Despite their shy charm and curious black eyes, they are quite the predator, eating insects, bird eggs, nuts and leaf or flower buds. Other night predators include **bats**, **coyotes** and **bullfrogs**.

Also active at night and hunting for food are those that are sometimes the hunted. Prey animals are happy for the cover of darkness to help them avoid being eaten. Their instincts are so finely tuned that they reduce their activity on nights with full moons because light increases their chance of being devoured.

**Have you ever been under truly dark skies?**

The ground is not the only place to look for action at night. People have been sky watching since before recorded history, sometimes even worshipping what they saw. Unfortunately, because of light pollution, only about 30% of Americans can still see the Milky Way from their back yards.

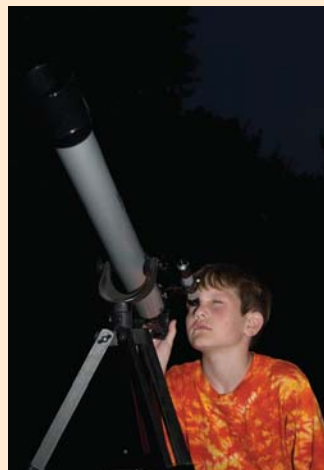


The stellar constellations are one way our heritage is recorded in the stars. Astronomers officially recognize 88 different constellations visible from the earth's northern and southern hemispheres.

Currently 14 people, nine birds, two insects, 19 land animals, 10 water creatures, two centaurs, one head of hair, a serpent, a dragon, a flying horse, a river and 29 inanimate objects are part of the lore associated with these collections of stars. Cultures around the world see different things in the constellations. For example, western society sees the famous constellation of Orion as a mighty hunter with his bow and sword belt. In Japan, Orion has been many different things, including a drum and a kimono sleeve. In this age of satellites and space stations, new objects are visible to earthbound observers that weren't seen in ancient times.

**Constellation Orion**

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**Bright lights, no stars**

It has been estimated that 30% of all U.S. outdoor lighting

is directed skyward. Conservatively estimated at \$1.5 billion dollars in wasted electricity yearly, this 30% requires the burning of 6,000,000 tons of coal each year to generate.

Fairfax County recognizes dark skies as a valuable resource. In June 2003, after more than three years in development by the Fairfax County Department of Planning and Zoning, the Fairfax County Board of Supervisors approved the Outdoor Lighting Standards, one of the most comprehensive ordinances of its kind in the nation. This ordinance will help control glare, light trespass and skyglow in one of the most rapidly growing counties in the country.



International Dark-Sky Association

Views of the night sky with (top) and without (bottom) the haze of light pollution.

**Night light can . . .**

- ◆ disrupt normal animal behavior, such as foraging, communication and breeding
- ◆ increase vulnerability to predation
- ◆ disorient birds and insects that use stars to navigate

**If not you, Who? Small things.**

**Reduce light pollution around your home.**

**Turn Off Lights:** Use lights only when and where necessary. Use only enough light to do the job. Direct outdoor lights to illuminate the ground. Light bouncing off walls or pointing to the sky is wasted.

**Timers and Motion Sensors:** Timers and motion sensors can turn off lights that are no longer necessary.

Learn more about the options available to homeowners for shielded lighting that is directed down.

Simply Misunderstood



Little brown bats

photo by Hal Korber

Nighttime in nature is an unfamiliar world to most people, especially those who live in urban areas. However, our native night dwellers are thriving in Fairfax. Animals adapting to city life include **foxes**, **coyotes**, **possums** and even **skunks** - a hopeful sign that nature will persevere despite urban sprawl.



Red bat

photo by Tony Bulmer

One of the most misunderstood is the **bat**.

This helpful little creature has been maligned for centuries simply because it comes out at night, and not much was known about its secretive life. But

bats are mammals, just like humans. Scientists are making great strides toward understanding the worth and usefulness of this night predator. All of the bats found in Fairfax County are strictly insectivorous. That is to say, they all eat bugs. Bats eat bugs like mosquitoes and midge flies. Larger bats, the biggest of which weighs about the same as a candy bar, eat crop-damaging moths and beetles. Over the years bats have adapted to living in human structures as their natural habitats — tree cavities and caves — have become scarce. Bats can live in colonies numbering in the hundreds, and each bat can eat 600 to 1,200 insects an hour. Think of the difference that could make in your neighborhood.



**Care, Educate, Inspire**

Stewardship is about working together to care for the environmental and cultural resources of Fairfax County. People become stewards for different reasons. They may want to help ensure clean water and air. They may wish to share something with their children. They may be inspired by spiritual beliefs. Whatever prompts our commitment, it is easy to take an active role in stewardship. It can be a small and simple thing, or it can be much bigger. Either way, it all adds up to a Fairfax County that looks to its past with pride and to its future with confidence.

You can learn more about Fairfax County Stewardship, the Board of Supervisors' 20-year environmental vision and the Fairfax County Park Authority at [www.fairfaxcounty.gov/parks/stewardship](http://www.fairfaxcounty.gov/parks/stewardship) or call 703-324-8674



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photo by Greg Sykes



photo by Greg Sykes

*Lightning Bug*



Randy Cyr, GREENTREE Technologies, Bugwood.org

*Opossum*



Terry Spivey, USDA Forest Service, Bugwood.org

*Night Hawk*



Robert Lupton and the Sloan Digital Sky Survey Consortium

*Comet*



*Fox*



Joseph Berger, Bugwood.org

*Cricket*



photo by Hal Korber

*Flying Squirrel*



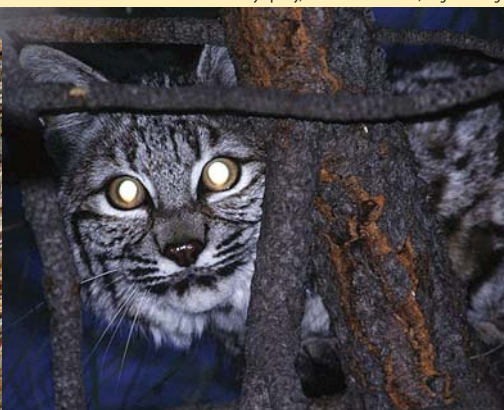
photo by Jacob Dingel

*Whip-poor-will*



Ricky Layson, Ricky Layson Photography, Bugwood.org

*American Woodcock*



Terry Spivey, USDA Forest Service, Bugwood.org

*Bobcat*



Gerald J. Lenhard, Bugwood.org

*Luna Moth*



David Cappaert, Michigan State University, Bugwood.org

*Spring Peeper*



*Moon*



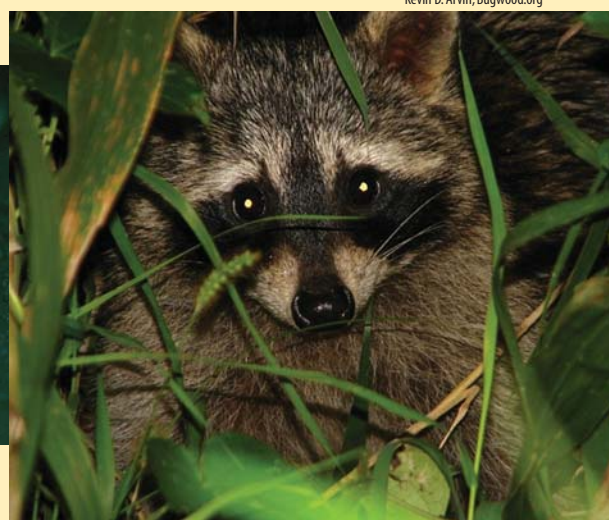
*Striped Skunk*

photo by Hal Korber



Susan Ellis, Bugwood.org

*Mosquito (laying eggs)*



Kevin D. Arvin, Bugwood.org

*Raccoon*