

FIREFLY/LIGHTING BUG



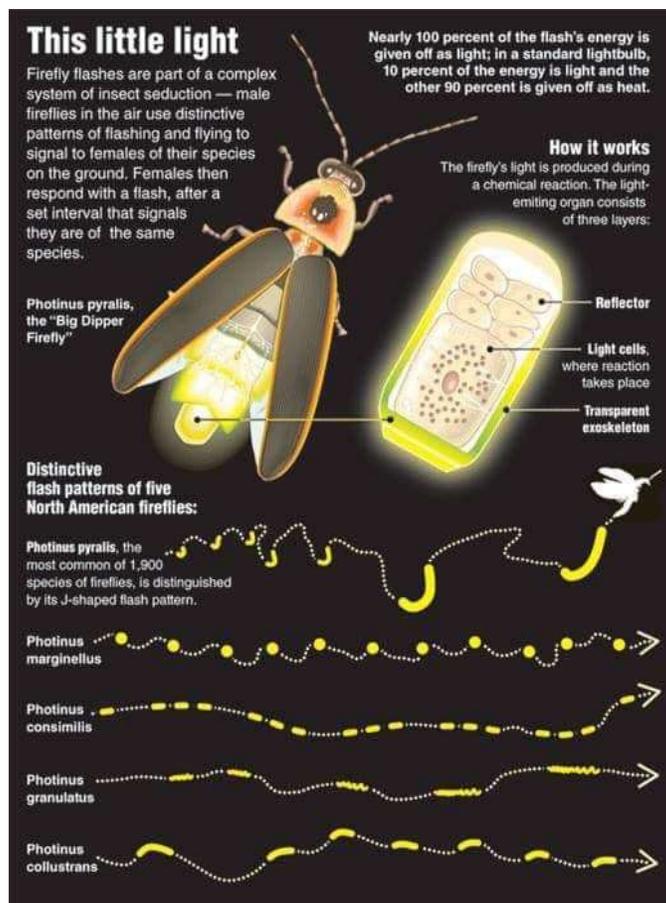
Firefly or Lighting Bug, *Photuris lucicrescens*

BruceMarlin http://www.cirrusimage.com/beetle_firefly_Photuris_lucicrescens.htm

Those flashes of light or bioluminescence as the dark of night approaches are due to this insect. We call them fireflies and they are out and about, being very visible over the meadow and near the banks of South Pond. I used to love being amongst fireflies as a young boy, thought it was really neat the way they “lit up.”

“Lighting up” is really the ability of this beetle to use bioluminescence, a chemical reaction they are able to form in their abdomens, to attract a mate or possible prey. There are five species of fireflies in North America.

We here at EastView have the correct habitat for fireflies. They like areas such as marshes, damp wet wooded areas, any spot near water that will provide food for their larva.



JULY 15 – 31, 2019 NATURAL HISTORY NOTES
By Dick Harlow

This is an excellent firefly graphic that shows some specifics about fireflies. It will also provide answers to what other people are experiencing in their backyards elsewhere in the country.

THISTLE FROM HELL



(1) Canada Thistle, *Cirsium arvense*,
emerging from the ground, © Dick Harlow

It's probably not that apparent from picture **#1**, but its leaves have thorns that are more like spikes, (see picture **#3**). These thorns will go right through soft clothing and give one hell of a rash!



(2) Canada Thistle, *Cirsium arvense*,
colony of thistle, © Dick Harlow

Picture **#2** is what one would see in middle summer, from the second week of July through the third week. Pretty flowers, but, if you are in shorts and decided to walk through this thistle patch you will suddenly understand what is meant by the title, "Thistle from Hell!"

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By Dick Harlow



(3) **Canada Thistle, *Cirsium arvense*,**
one shoot w/ flowers buds, © Dick Harlow

Canada Thistle, *Cirsium arvense*, is not a native plant. It is native to northern Asia and east to most of Europe. As you probably can guess, any plant that has thorns and will cause you discomfort if you happen to stumble into it, will be given many names with a few that are not very complimentary.

However, this plant does have a function. It was grown for the nectar it produces. Thus, pollinators seek it out for both the nectar and pollen these plants produce.

Also, *Cirsium arvense* is known as a carbon fixation, C-3 plant. **C₃ carbon fixation** is the most common of three metabolic pathways for carbon in photosynthesis to be fixed or chemically bonded to form a carbohydrate, such as a simple sugar. One significant point of a C-3 plant is that approximately 97% of the water it takes in through its roots is lost through transpiration, the evaporation of water from leaves.

Other than the thorns, the fact that this plant is very well suited to develop large patches or clonal groups/colonies is shown in picture #2. This is due to the fact that a root can send up many shoots during the summer. Because this species is known to take over a disturbed area, is first to colonize land that is not wet, but land that can hold water, (generally new land), it is called a ruderal species.

JULY 15 – 31, 2019 NATURAL HISTORY NOTES

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(4) **Canada Thistle**, *Cirsium arvense*, © Dick Harlow

The key to its success in dominating new land is: "1) long, thick, horizontal roots, 2) long, thick, vertical roots, 3) short, fine shoots, 4) vertical, underground stems."

This success is a bane to farmers, especially in pastures where cows graze and browse for food. They won't go near these spiny irritating plants.

The flowers are quite good looking, picture #4, when viewed from afar. When seen up close the spines on the leaves readjusts one's thinking!

The flowers are pollinated by various insects and dispersal of seed is primarily via wind and birds. It has been estimated that a single plant can produce 100 flower heads per shoot and 1530 seeds for those 100 flower heads. One can imagine how many seeds will be produced from picture #2. Thus, we can understand why this plant is considered invasive and a bane to gardeners!

RED ADMIRAL BUTTERFLY

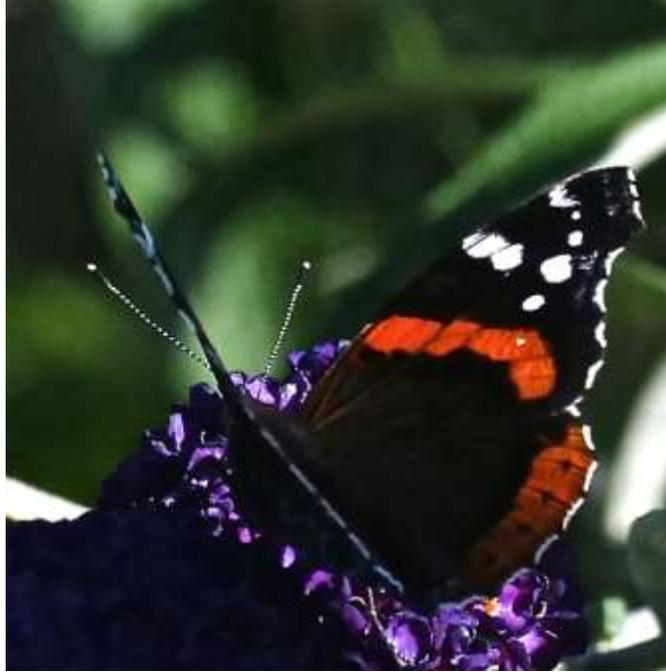
The Red Admiral butterfly, *Vanessa atalanta*, has a range that occupies the complete East coast as suggested by its specific title atalanta. There are two other Vanessas, the Painted Lady and American Lady that we can observe here in the East and have been seen here at EastView. We will talk about them in another note.

Seemingly, the limiting factor for these three species is freezing temperatures. Painted Ladies cannot tolerate freezing temperatures and will migrate south leaving no stages to overwinter. Whereas Red Admirals will leave the north, but they have been found to leave a small population in the Carolinas. The American Lady is more tolerant and will overwinter further north than the Carolinas.



Red Admiral, *Vanessa atalanta*, at EastView
necturing on Liatris © Dick Harlow

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Red Admiral, *Vanessa atalanta*, at EastView
necturing on Buddleja © Dick Harlow

In another note I will show how to tell the difference between these very similar American and Painted Lady butterflies.

OBSERVATIONS

BUTTERFLIES

Monarch – 2 chasing each other
Red Admiral
Silver-spotted Skipper

AMPHIBIANS

Gray Tree Frog
Bullfrog – 3+ in South Pond

REPTILES

Garter Snake

MAMMALS

Eastern Cottontail

Weather Tidbits

Month of JULY 1-31, 2019

[All Measurements taken at solar noon \(1230 EST\).](#)

PRECIPITATION

Total Precipitation: 121.4 mm or 4.8 inches

Overcast Days: 12