

## **RED CLOVER**

### **State Flower of Vermont**



**Red Clover, *Trifolium pratense***  
Photo © Dick Harlow

Red Clover, *Trifolium pratense*, is another clover brought over to this country when the settlers arrived. Like the other clovers it is native to Europe, Asia and Africa, and since its introduction to North America it has become naturalized.

Notice the inverted lighter **V** in the middle of the leaf. This characteristic of the leaf of Red Clover is key to its identification.



**Red Clover leaves, *Trifolium pratense***  
Photo © Dick Harlow

Even though different varieties of white clover may have similar markings, Red Clover has this distinctive and sharp inverted **V** on the leaf. Although White Clovers may have some form of marking on the leaf, it is not as significant as the Red Clover's **V**.

Therefore, if you see a pocket of leaves like the ones above with no flowers, because of the inverted **V** you know you are probably looking at the leaves of Red Clover.

As with the other clovers, Red Clover was brought to this country primarily for its food value to domestic animals and its added ability to fix atmospheric nitrogen to nodules on its roots.

Clovers have this association with nitrogen fixing bacteria. The bacteria convert atmospheric nitrogen to ammonia and nitrates. Nitrogen is necessary in the formation of nucleic acids and amino acids, which are the building blocks of protein. Clovers absorb and use this nitrogen to build amino acids and nucleic acids. In return the clover allows the bacteria to use some of the sugars the plant produces through photosynthesis. This process is known as mutualism a symbiotic relationship in the clover's root nodules. This association allows the bacteria to fix atmospheric nitrogen in a form that plants can use. By plowing clover plants into the soil a farmer has not only added humus to the soil, but also has added nitrogen fertilizer.

## JUNE 1-14, 2015 NATURAL HISTORY NOTES FOR EAST VIEW

The benefit to farmers is between 40 and 200 pounds of nitrogen per acre. This is dependent on the species of clover the farmer uses. However, once plowed in the farmer can expect to gain 40-60% of the nitrogen that was within the clover, a legume which is an example of a green manure crop.

### **GRAY TREE FROG**



**Gray Tree Frog, *Hyla versicolor***  
Photo © Dick Harlow

The chorus of a staccato song we hear at night is primarily from the Gray Tree Frog, *Hyla versicolor*, about 2-3 inches long. It can be a solid gray, green, or brown and as seen above have blotches of darker color on its back. They are very plentiful at EastView. As Hyla is a Tree Frog they should be living in deciduous trees near water; but in fact I have found them in my shed, on the grass of the lawn and on the side of our cottage. However, EastView does have retention ponds so we do have water near by. This fellow can change its color in an instant if it observes an advantage to blend in to its surroundings. Looking at the picture above you can see that if it was on the bark of a tree rather than in the lawn it could change color so as to blend in with the bark. Yet, I still had to focus hard to see this fellow in the grass. The large toe pads allow it to cling to bark, the side of a cottage, or climb into a shed. Insects that find their home on bark and leaves will be easy prey for this terrestrial amphibian.

This species is found throughout the east from Maine to Manitoba, Canada and as far south as northern Florida and as far west as central Texas.

### **BIRD NESTING**

Many birds are already nesting by the second week in June. For that matter some birds already have chicks. Synchronicity of breeding at the same time that there is a ready food supply is paramount. Feeding young with an increased seasonal supply of insects helps to insure breeding and offspring success. Insects, rodents, and many organisms are reproducing at this time of year. Therefore, this period insures that the young of all raptors and songbirds will have a plentiful supply of food. As it is, many raptor species have already hatched. This early nesting of raptors synchronizes with the abundance of rodent and bird populations.

### **EastView Birds**

EastView has been visited, so far this year, by 59 species of birds. Since July of 2013, almost 2 years, we have recorded 95 species that have been observed on or from our campus. I think it is exciting that on the periphery of the town of Middlebury and in a completed new construction as of 2012, since 2013, we have had this many species visit us. And, that does not allow for the ones that were missed. As trees mature, shrubs expand and plants flower over time, I expect we will see an increase in species. For those residents who find these observations interesting I would like to highlight what I consider the species that are either unusual or rare.

An asterisk \* represents those species that have been observed at EastView for only one week from January 1 to June 14.

## JUNE 1-14, 2015 NATURAL HISTORY NOTES FOR EAST VIEW

### American Bittern

Hooded Merganser \*  
Sharp-shinned Hawk \*  
Merlin \*  
Wild Turkey \*  
Black-bellied Plover \*  
Short-eared Owl \*  
Common Nighthawk \*  
Great-crested Flycatcher \*  
Eastern Kingbird \*  
Fish Crow \* (uh uh)(eh eh) call  
Northern Mockingbird \*  
Field Sparrow \*  
White-crowned Sparrow \*  
Northern Cardinal \*  
Bobolink \*  
Baltimore Oriole \*  
Purple Finch \*

You will notice that this group of 17 has not been here longer than a week, except for the American Bittern.

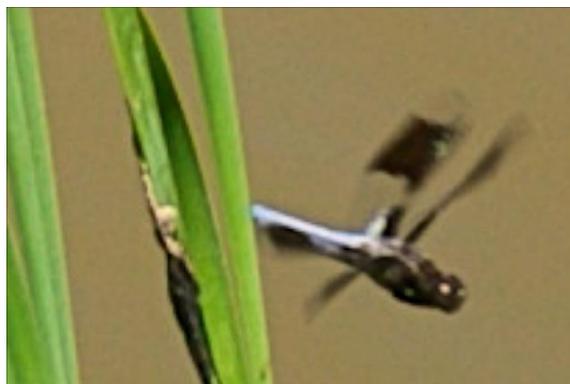
The reason that I am showing the American Bittern is purely selfish. Before living at EastView I had only seen American Bittern 3-5 times in the 66 years of birding. Therefore, I am in awe of the fact that EastView is a place that attracts American Bittern. This species has been here from the start, 3 yrs., arriving in May and departing in September. And he has been visible, either through sight or sound each month during that period. I hope writing this doesn't jinx this record!

### COMMON WHITETAIL



**Common Whitetail, (M) *Plathemis lydia***  
Photo © Dick Harlow

This is an appropriate common name for this dragonfly. The males silvery white abdomen with stark white side dashes on each abdomen segment is striking as it either flies around pond edges or rests on a dead stalk of Cattail.



**Common Whitetail, (M) *Plathemis lydia***  
Photo © Dick Harlow

## JUNE 1-14, 2015 NATURAL HISTORY NOTES FOR EAST VIEW

Notice the single black splotch on each wing and the slightly black area at the junction of the wing to the thorax. This is one dragonfly you would have no trouble identifying as it moves about our retention ponds patrolling and looking for a female. Yet, these fellows will not stay put in the pond; they can be found far from water and they will forage in the meadow, field and even along forest edges. You can begin to determine the identity of many dragonflies by the way they rest, either horizontally, vertically or obliquely on the ground or on low vegetation. In the first picture this Whitetail is perched semi-horizontally.

Males defend and work small territories, which make them very suitable to be observed in our small retention ponds. When they aggressively meet another male they raise their silver white abdomen, which signals their aggressive behavior.

The female looks considerably different. She is striking, but does not have any silver on her abdomen at all. She is brown with yellow-white dash marks and a black highlight by each dash on the sides of each segment of her abdomen. And, her wings are also different, having two separate black blotches, one in the middle of the wing and the other at the tip of the wing as seen in the picture below.



**Common Whitetail, (F) *Plathemis lydia***  
Photo © Dick Harlow

However, she retains the similar male black areas of the wing at the junction of the thorax. After fertilization, the female will fly to oviposit by tapping the tips of her abdomen to the water surface, which ejects her fertilized eggs. While this is happening males tend to be nearby hovering or within view of the event.

### **OBSERVATIONS**

#### **MAMMALS**

- White-tailed Deer
- Striped Skunk
- Eastern Cottontail Rabbit
- Muskrat
- Meadow Vole
- White-footed Mouse

#### **AMPHIBIANS**

- Gray Tree Frog
- Leopard Frog
- American Toad
- American Bull Frog

#### **BUTTERFLIES**

- Cabbage White
- Clouded Sulphur
- Black Swallowtail
- Tiger Swallowtail

## **JUNE 1-14, 2015 NATURAL HISTORY NOTES FOR EAST VIEW**

- Giant Swallowtail
- Meadow Fritillary
- Common Ringlet

### **DRAGONFLIES & DAMSELFLIES**

- Common Whitetail
- Dot-tailed Whiteface
- Widow Skimmer

### **DAMSELFLIES**

- Eastern Forktail

## **Weather Tidbits**

### **June, First Two Week Totals:**

All Measurements taken at solar noon (1130 EDT).

### **PRECIPITATION**

**June 2015 Total Precipitation: 113.6 mm or 4.5 inches**

**Overcast Days, June: 6**

### **WIND**

**Highest wind June 8: 31 MPH, Direction: South**

**Average Wind speed for June 2015: 2.9 mph,**

**Dominate Wind Direction: South**

**Days w/wind gusts 20-30 MPH: 7**

**Days w/wind gusts 30 MPH: 1**

### **TEMPERATURE**

**Mean Temp: 19.5 C<sup>0</sup> 67.1 °F**

**High Temp: 31.7 C<sup>0</sup> 89.1 °F**

**Low Temp: 4.7 C<sup>0</sup> 40.5 °F**