

Date and time: Wednesday September 2 2015 2:35 - 5:15 pm

Weather: Pr 0 mm; RH 66%; BP 101.8 kPa; sun/haze/cloud; SW 5 kmh; T 33°C

Activity: Counting bees and surveying the Gallery Forest.

Today’s visit focused on Oak species in the Regeneration Zone (RZ) and in the Gallery Forest. Shown below is a young Bur Oak among the many Oak species planted in the RZ and apparently growing well. Another focus was Honeybees.



It took an hour, armed with tape measure and yellow surveyor’s flags, to walk the RZ trail and set up counting stations for the Bee Protocol, as we have come to call it. The flags are placed 5 m apart along the entire trail, some 18 of them. The counter stands at each flag by turns and counts all the Honeybees and Bumblebees out to a distance of two-and-a-half metres. Starting by facing downtrail and slowly turning (clockwise, for example), one counts all Honeybees and Bumblebees seen within the viewing sector. There is more to the protocol than that, but that’s basically how it works. Here are today’s raw figures: (Honeybees/Bumblebees)

Station:	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Counts:	2/0	1/0	6/0	5/1	15/0	13/2	12/0	15/0	6/1	5/0	4/0
	12.	13.	14.	15.	16.	17.	18.				
	2/0	2/0	5/0	0/0	5/0	6/0	8/3				

Because the counting trail passes randomly through concentrations of Goldenrod and Sunflowers, as well as brushy areas of Gray Dogwood and Ninebark, it results in a figure that is probably typical for the RZ as a whole.

Concentrating just on the Honeybees, we need a total count and an areal figure. In the case above, the total comes to 112. The total area counted is $18 \times 19.6 \text{ sq m} = 353.43 \text{ sq m}$, yielding a density of 3,167 bees per hectare or, if one prefers, 0.317 bees per square metre. The protocol will be repeated on the next two visits and then an average will be taken over the three counts. The resulting figure can then be compared with the four previous years that we have carried out this protocol:

2009 4,952 HB/ha
2010 5,857 HB/ha
2012 3,077 HB/ha
2013 2,654 HB/ha
2015 3,167 HB/ha (tentative)

If today's count is supported by the two subsequent ones, there would appear to be a slight reversal to the downtrend indicated by previous counts. Whether that would reflect an improved bee situation or merely a normal statistical fluctuation is an open question. An alternative explanation to the overall downtrend is that flowering plants are slowly being crowded out and shaded over by emerging trees in the RZ. If that should be the case, all we could conclude is that Honeybee populations are relatively stable and have been through recent years.

It has occurred to us recently, that we have never taken a survey of trees in the Gallery Forest that lines the south side of the farm track from the Lower Meadow to the beginning of the Upper Meadow. The weather was hotter than normal and I had little energy left after the bee count. Nevertheless, I decided to do a quick survey by walking alongside the trees, counting only visible stems that were over one foot in diameter. (I have used the metric system routinely my entire adult life, but I cannot bring myself to use it for breast height diameter (dbh) applications. After all, the inch/foot/pound system is intuitive, based on human dimensions.)

The largest trees (2-3' dbh) in the following list are mainly Oaks.

GF Survey: Bitternut Hickory	1
Black Maple	1
Bur Oak	1
Basswood	4
Hackberry	4

Shagbark Hickory	1
Red Oak	6
Sugar Maple	3
White Elm	2
White Oak	2

A quick thumbnail survey of recruits along the edge of the Gallery Forest found many young oaks of the three species in the survey list, as well as many Shagbark and Bitternut Hickories, Sugar Maples, White Ash, Basswood, and Black Walnut.

It seems to be a general rule that oaks do well on dryer upland soils. In other parts of Newport Forest, there are many mature Chinkapin Oaks up on the Hogsback. They also tend to dominate the gallery as one approaches the Upper Meadow. At the moment, the trees most at risk belong to the Elm family. The latest two elms to die dominate the near sky-line of the Blind Creek Forest, as viewed from the Lower Meadow. Pat and I examined the trees, both Slippery Elms, during our recent site visit. When an elm tree dies, it takes off all its clothes, so to speak. The outer bark loosens and slips down the trunk, splitting open in the process. And yes, the two trees in question were naked, discarded clothing at their feet.

Phenology: Goldenrods and Asters now in full bloom.

New Species:

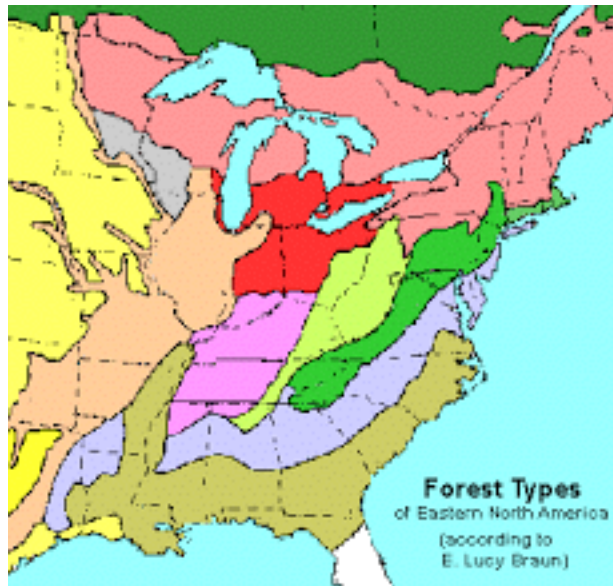
‘Military Jumper’	<i>Eris militaris</i>	LM KD Au28/15
‘Confusing Grasshopper’	<i>Melanoplus confusus</i>	RZ KD Sp02/15
‘Happyface Wasp’	<i>Taeniogonalos gundlachii</i>	RZ KD Au27/15
Nettle Gall Fly	<i>Desineura urticae</i>	BCF pdKD Au28/15
‘Brown March Fly’	<i>Trypetoptera canadensis</i>	LM KD Au27/15
‘Dark Grey Horsefly’	<i>Tabanus [calends]</i>	LM KD Au19/15

Old Species: (Species observed on this visit that are already in the ATBI list.)

Leaf-footed Bug, *Acanthocephala terminalis*; Impatient Bumblebee, *Bombus impatiens*.

Species Notes: All but one of the new species were observed during previous site visits. We have a steadily growing backlog of unidentified species, many of which - alas - we shall never identify. At the moment we have two species of mushrooms that our mycological consultant, Greg Thorn, is examining.

IMAGES:



<<http://www.backyardnature.net/ecogo.htm>>

In tribute to E. Lucy Braun, ecologist extraordinaire, we present this map of the results of her extensive surveys of the Eastern Deciduous Forest of North America during the early to mid-20th Century. Her land classification continues to enjoy wide acceptance, as witness the recent Peterson Guide to that life zone.

<u>Colour</u>	<u>Zone</u>
Dark green:	Boreal Spruce/Fir
Pink:	Hemlock, White Pine, Northern Hardwoods
Yellow:	Grasslands
Grey:	Maple-Basswood
Orange:	Oak-Hickory
Red:	Beech-Maple
Light Green:	Mixed Mesophytic
Green:	Oak-Chestnut
Light Purple:	Oak-Pine
Khaki:	Southeastern Evergreen

It will be noted that what some local ecologists call the “Carolinian Life Zone” is merely the northern segment of the Beech-Maple Zone. There is nothing particularly “Carolinian” about our area in any case, since virtually every plant and animal found in our part of the Zone is found in the southern (red) part.



Our second species of March Fly (Sciomyzidae) and our first species of Square-headed Wasp (Trigonaliidae) grace this page. Readers will forgive our pseudo-common name for the wasp. See the happy-face?