

# Bug of the Month

by Jim Revell / March 2015

## Butterflies and Moths



It's 12 degrees and sunny with a dusting of snow on the ground, not a day many of us would think much about gardening, but the first day of Spring is only 33 days away!

**Butterflies and Moths** - - what better insects to cause one to think of the coming brighter and warmer days of Spring and Summer. In my gardens, the first butterflies usually seen are the "Cabbage and Mustard" Whites (aka Cabbageworm). Then others, along with the moths, start showing up as the gardens transition through the Spring, Summer and Fall seasons.

I sit at my desk feeling the rays of the sun streaming through the window and think about the upcoming growing season. In front of me is one of my newest book purchases, *Butterflies of North America* by Jerry Glassberg – a wonderful, informative read about butterflies. But not to slight moths - - they actually make up 89%-94% of the Lepidoptera order while butterflies only make up the remaining 6%-11%. Some moths are serious pests for us, such as the Squash Vine Borer moth, the Codling moth, Peachtree Borer moth, and Tomato Hornworm.



A comparison may help in distinguishing the two. This comparison works most of the time but, keep in mind, there are exceptions to the general rule.

BUTTERFLIES & MOTHS	
<b>Kingdom:</b>	<b>Animal</b>
<b>Phylum:</b>	<b>Arthropoda</b>
<b>Class:</b>	<b>Insecta</b>
<b>Order:</b>	<b>Lepidoptera (Butterflies &amp; Moths) (Lepidos – scale; ptera – wing)</b>

BUTTERFLIES
1) <b>Antennas:</b> Look like a golf club (long shaft, club at end)
2) <b>Wings:</b> Fine scales – smoother appearance; at rest, generally folded and in a vertical position over their bodies; generally larger and multiple colors and patterns.
3) <b>Anatomy:</b> Do not have a wing-coupling device, i.e., frenulum (where forewing joins the hindwing enabling wings to work in unison during flight).
4) <b>Bodies:</b> Slender and smooth abdomens.
5) <b>Habit:</b> Generally fly during day (diurnal).
6) <b>Cocoon / Chrysalis:</b> Make a chrysalis that is hard, smooth and has no silk covering.
7) <b>Largest known:</b> Birdwings – Queen Alexandra with wingspan 11 inches.
8) <b>Smallest known:</b> Blues – found in N.A. and Africa with wingspan ¼-½ inch.

MOTHS
1) <b>Antennas:</b> Two types (A) Simple filaments tapering to a point, and (B) Complex – looking like a comb, feather or old TV antenna!
2) <b>Wings:</b> Larger scales – look dense and fluffy; at rest, will have wings spread out to their sides, tent-like, hiding their bodies; generally smaller and drab in color.
3) <b>Anatomy:</b> Have a frenulum.
4) <b>Bodies:</b> Tend to be stout and hairy to furry- looking.
5) <b>Habit:</b> Generally nocturnal.
6) <b>Cocoon / Chrysalis:</b> Make a cocoon with silk covering and may incorporate other materials, i.e., bagworm.
7) <b>Largest known:</b> Atlas moths with wingspan 12 inches.
8) <b>Smallest known:</b> Pygmy moth family with wingspan 3/32 of an inch.

## IMPORTANCE OF BUTTERFLIES AND MOTHS



The ones that drink nectar from flowers act as **pollinators**.



All stages – eggs, larvae, pupae and adults – are **food sources** for a wide range of predators, such as bats, birds, wasps, spiders and more.



**Silk** comes from Asian moth species.



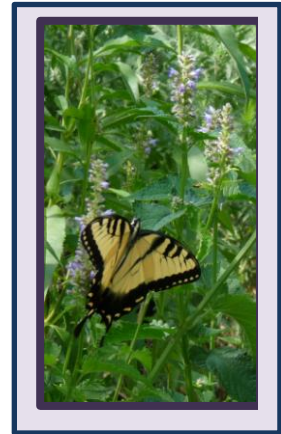
The myriad colors and varieties have created **multiple industries** from global insect-collecting to “butterfly houses” to butterfly zoos.



The **aesthetics** we embrace as humans - - from songs to welcoming their bright and colorful appearance to enhance a Spring or Summer day.



Several moth species are **pests** for our agriculture, trees, grains and homes.



### References:

- [http://en.wikipedia.org/w/index.php?title=Comparison\\_of\\_butterflies\\_and\\_moths](http://en.wikipedia.org/w/index.php?title=Comparison_of_butterflies_and_moths)
- <http://www.loc.gov/rr/scitech/mysteries/butterflymoth.html>
- <http://www.cambridgebutterfly.com/conservatory/butterflies/butterfly-vs-moth>
- <http://mdc.mo.gov/discover-nature/common-plants-and-animals/butterflies-and-moths>
- *Butterflies of North America* by Jeffrey Glassberg, Sterling Publishing Co., Inc., 2011
- National Wildlife Federation's *Field Guide to Insects and Spiders of North America* by Arthur V. Evans, Andrew Stewart Publishing, Inc., 2008
- Butterfly photos (taken in Jim Revell's garden) contributed by Sherry Revell