

Bug of the Month

by Jim Revell / November 2016

Eumorpha pandorus | Pandora Sphinx

Eumorpha pandorus Pandora Sphinx

Class: Insecta (Insects)
Order: Lepidoptera
Family: Sphingidae (Sphinx Moths)
Genus: *Eumorpha*
Species: *pandorus* (Pandora Sphinx)



I love the phrase by Duke Elsner of Michigan State University Extension. In his post, he called the Sphinx Moth Caterpillars “the big cats of the vineyard.” How true it is!

A member of the Hornworm group, one of these was found on my grapevines in September by a visiting MG Trainee. The caterpillar comes in green, orange, pink and cinnamon-to-dark brown. The one found on my grapevines was cinnamon-to-dark brown. The photo at top right shows this coloration and was taken by Maryann Frazier at Penn State Entomology Extension.

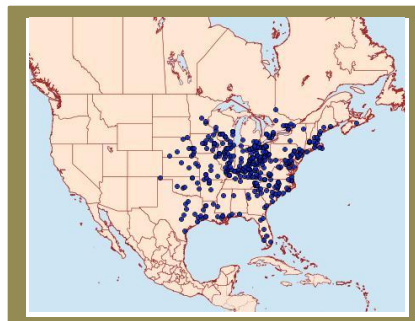
Distinguishing marks and notes regarding this interesting caterpillar:

- 1 They are large and can reach over five inches in length.
- 2 They have pale-to-yellow spots surrounding spiracles A3-A7 (my caterpillar had white markings).
- 3 In early to middle instars, the rear horn is thin and coiled.
- 4 In the last instar, the horn is replaced by a button which resembles an eye-spot.
- 5 These “cats” are feisty and will whip their front body part back and forth, regurgitating food to try and stop predators (including humans) from attacking.
- 6 They feed on peppervine, grapevine and Virginia Creeper.
- 7 Upon reaching maturity, the “cats” tunnel into the soil and build pupation chambers several inches below ground. In sandy soil, these chambers may be a foot below surface.
- 8 The cocoons are reddish brown to dark brown and can be two inches in length. The photo at right was taken by Janice Stiefel a few years ago in Sheboygan County, Wisconsin and is exhibited on bugguide.net.
- 9 You will generally see Pandora Sphinx Moth Caterpillars from June to November.



About the adults – the Pandora Sphinx Moth:

- 1 Their wings are shades of green with reddish or pink markings.
- 2 Their wingspan is 87-115mm (25mm=1 inch).
- 3 They are generally seen from May to October (the photo below left was taken in July a few years back by Will Cook in Montgomery County, Virginia).
- 4 They range from Maine to Florida, west to Texas, Nebraska and Wisconsin, and north into Ontario and Nova Scotia (map below featured by the Mississippi Entomological Museum at MSU).
- 5 There is normally only one generation in the North, two-to-three in the middle States and three in the deep South.



The Pandora Sphinx larvae is one of about a dozen hornworms known to feed on grapevines and related vitaceae in the eastern U.S. The adult moth is active only at night and, at times, may be found feeding on nectar from deep-throated flowers. They can hover like Hummingbirds and are attracted to bright lights. On occasion, they can be found resting near flowering plants in the morning hours.

Depending on location, their population will vary year-to-year, and, if the host plant is a small vine (such as one newly planted), one “cat” can defoliate the plant, reducing growth and killing the plant. Fortunately, like the Tomato/Tobacco Hornworm, they are heavily parasitized by predatory flies and wasps. They are not considered a pest except, possibly, in the case of new plantings, therefore, it is recommended that gardeners monitor new plantings of host vines.

Photo References: **Pandora Sphinx Moth Caterpillar**, Maryann Frazier, Penn State Entomology; http://ento.psu.edu/extension/insect-image-gallery/all-images/pandora-s-sphinx-moth-caterpillar.jpg/image_view_fullscreen. **Pandora Sphinx Moth**, Will Cook 2007, Montgomery County, VA, 07/13/2007; <http://bugguide.net/node/view/270661>. **Pandora Sphinx Moth Pupa**, Janice Stiefel, Sheboygan County, WI, 2007; <http://bugguide.net/node/view/149248>. **Map**; http://mothphotographersgroup.msstate.edu/large_map.php?hodges=7859.
Research References / Resources: “Hornworm caterpillars: The big cats of the vineyard,” by Duke Elsner, Michigan State University Extension; http://msue.anr.msu.edu/news/hornworm_caterpillars_the_big_cats_of_the_vineyard. Bugguide; <http://bugguide.net/node/view/3937?printable=1>.
Caterpillars of Eastern North America by David L. Wagner, 2005.

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Read more of his articles on the “Jims Bugs” page @ www.BedfordMasterGardeners.org