

WHY A LEPIDOPTERA TRAIL?

Lepidoptera are a critical link in food webs. Caterpillars eat plants, which make food from the sun through photosynthesis. Other animals eat caterpillars and adults, transferring the solar energy up the food chain. Ninety-six percent of terrestrial bird species rear their young on Lepidoptera, other insects, and related organisms. Lepidoptera diversity supports a balanced and healthy ecosystem. Humans rely on a healthy ecosystem for essential products and services such as pollination, clean air and water, and climate regulation. The Lepidoptera Trail provides these 'ecosystem services' and is also an attractive recreational and educational landscape.



FIND AND OBSERVE LEPIDOPTERA

While walking the trail, be patient as many caterpillars are well hidden. Keep an eye out for:

EGGS

- Look for tiny eggs of all shapes and colors.
- Watch where adult Lepidoptera lay their eggs.
- Note single eggs underneath or at tips of leaves and inside flowers, or groups of eggs may be covered in wing scales, foam masses, or even stacked into chains.

CATERPILLARS

- Observe leaves damaged by recent feeding.
- Scout for pellet-like caterpillar droppings ('frass'), a sign of nearby larvae.
- Search underneath leaves. Some species blend in by resting along leaf veins.
- Find rolled or folded leaves that may be constructed by caterpillars.

PUPAE

- Look for cocoons and chrysalises, which come in all shapes and sizes.
- Search leaf litter under host plants to find winter cocoons.
- Find chrysalises or cocoons hanging from branches and dangling from twigs.



HIDE AND SEEK: CATERPILLARS AS MASTERS OF DISGUISE



Spicebush swallowtails and silver-spotted skippers roll or stitch leaves together with silk to make shelters for themselves. Look for rolled up leaves that have larvae inside.



Look on flowers for Camouflaged loopers that use silk to attach pieces of the flower to their backs, making them nearly invisible.



Some geometrid caterpillars stand rigidly straight and still, barely distinguishable from a twig.



Unicorn caterpillars mimic a damaged leaf edge.



Viceroy caterpillars look like bird droppings, and therefore are less likely to become bird food.



Small-eyed sphinx larvae have spots that mimic the spots on cherry leaves.

ATTRACT LEPIDOPTERA TO YOUR GARDEN

- Decide which species you want to attract and provide the native host plants that the caterpillar needs to eat.
- Plant a diverse environment with places for caterpillars to feed, hide, regulate temperature, and safely transform to the adult stage.
- Minimize use of insecticides and herbicides.
- Plant in full sun: Light stimulates egg laying in some species.
- Use leaf-litter as mulch. Many caterpillars overwinter in fallen leaves.
- Tolerate some leaf damage to your plants.
- Grow flowering plants spring through fall to provide nectar.
- Plant oak trees. In the mid-Atlantic region, oaks support more than 557 species of Lepidoptera.
- Include a spot to sit, observe, and enjoy your garden and its inhabitants.





ABOUT THE TRAIL

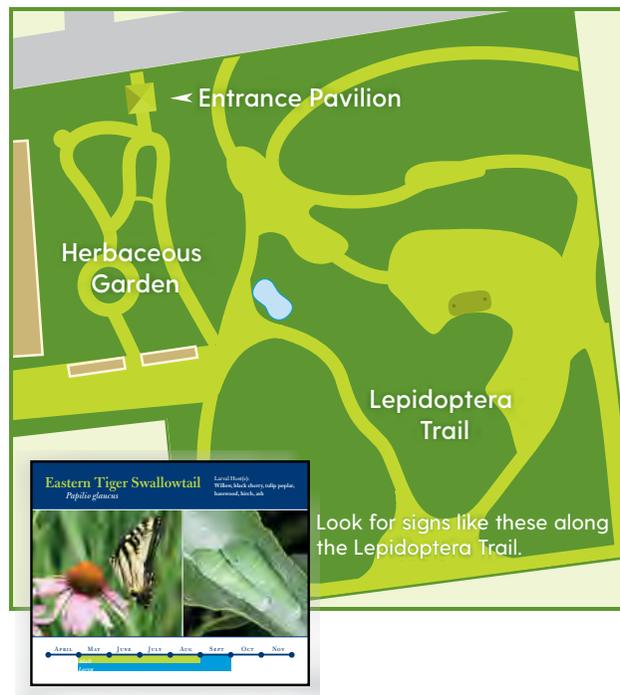
Welcome to the Lepidoptera Trail. This garden is an example of how beauty and biodiversity can coexist in a managed landscape. Use this guide to take a self-guided tour of the trail.

Lepidoptera is an order of insects that includes butterflies, moths, and skippers. Lepidoptera have four distinct stages in their lives: Egg, larva (caterpillar), pupa, and adult (butterfly, moth, skipper). The Lepidoptera Trail features native food plants for butterflies, moths, and skippers during both the larval (caterpillar) and adult stages of their life cycle. The adults of many Lepidoptera species can consume nectar from almost any flower. However, they spend most of their lives as larvae, which have close relationships with the plants on which they feed. Many can only survive on a few plant families or genera. An example is the monarch caterpillar, which can only feed on milkweed plants in the genus *Asclepias*.

The Lepidoptera Trail incorporates more than 50 species of native plants capable of supporting diverse species of Lepidoptera larvae. A number of these plants also have beautiful floral displays that provide nectar for adults. Paths wind through the garden to invite exploration and enjoyment, while the layered plant structure offers a feeling of seclusion and serenity. The garden is managed to provide a delightful visual experience while maximizing its usefulness to Lepidoptera and other wildlife. Colorful signs posted along the trail depict the larvae and adult insects visitors may encounter. These signs also include the times of year visitors are most likely to see larvae and adults on host plants.

The Lepidoptera Trail is as an outdoor laboratory for university faculty, students, and visitors to observe Lepidoptera in a managed habitat. The trail also offers ideas for homeowners who want to attract Lepidoptera to their own backyards, gardens, and landscapes.

TRAIL MAP



Look for signs like these along the Lepidoptera Trail.

For a selection of plants and the Lepidoptera species they support, please visit our Lepidoptera Trail Virtual tour at <https://canr.udel.edu/udbg/gardens-plants/garden-areas/native-garden/lepidoptera-trail-virtual-tour>

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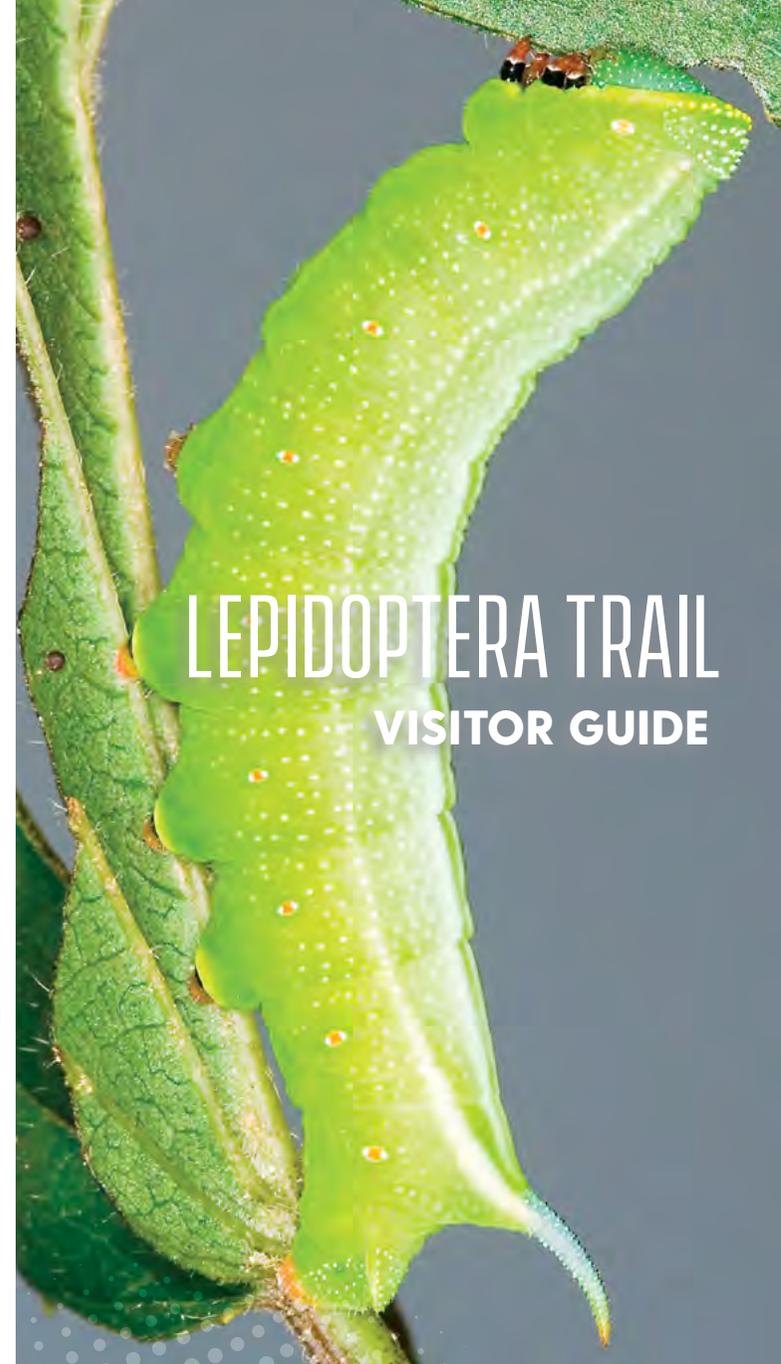


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BOTANIC GARDENS

Cover image: Hummingbird Clearwing caterpillar

Photos by Brian Cutting, Mike Dunn, Doug Tallamy, Melinda Zoehrer

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LEPIDOPTERA TRAIL VISITOR GUIDE

Habitat for Lepidoptera: the order of insects that includes butterflies, moths & skippers



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