

Approximately 2,000 species of butterflies and moths, members of the insect Order Lepidoptera, are found in Illinois. Of this number, 150 species are butterflies and 1,850 species are moths. The lepidopterans (from the Latin *lepidō* for scale and *ptera* for wing) represent one of the largest groups of insects. It is a very important group economically because of its association with plants. In their caterpillar stage butterflies and moths eat plant parts and in their adult stage pollinate flowers. These insects are food resources for many birds, mammals, and other arthropods. Numerous species serve as indirect indicators of habitat quality. For example, if the plant species upon which they depend are becoming scarce, these insects may also become fewer in number. For more information about their conservation and additional resources, see page 14.

Butterfly and Moth Gardens

Observing butterflies and moths can be a very rewarding activity. While you can seek them out in the wild, you can also bring them to your home or schoolyard with a butterfly and moth garden. All you need to be a butterfly gardener is a sunny space, good soil, a little hard work, and an assortment of nectar-producing flowering plants. A complete butterfly and moth garden contains food plants for the adults and their larvae. While the adults will feed on an assortment of flowers, the young are more choosy about where they dine. When planning your garden, try to find out which butterflies and moths are native to your area and learn about their food preferences, including those of their caterpillars.

Plant the garden in a sunny area. Butterflies need sunlight to warm their flight muscles, and when not feeding, they relax in the sun. A few flat stones or boards placed in and around your garden will provide resting sites. Mud puddles, too, are important moisture sources. You can create a mud puddle by sinking a container without drainage holes in the ground, filling it with a sand and soil mixture, and adding water. Or, when making the garden, leave the natural depressions unfilled, allowing the rain to create the puddles.

Attracting moths for observation is more difficult. Aside from favorite host plants, outdoor lighting or bait (like fermenting fruit juices) also draws many species of moths. Another way to attract moths is by planting night-flowering plants, such as hard-shelled gourds.

Good Choices for Your Garden

These plants are commonly used by various adult butterflies as nectar sources: blazing star, black-eyed Susan, boneset, clover, butterfly weed (shown right), coneflowers, goat's beard, goldenrods, dogbane, ironweed, Joe-Pye weed, milkweeds, phlox, New England aster, spearmint, thistles, verbena, wild bergamot.

These plants are commonly used as both nectar sources for adults and food sources for larvae: spicebush, thistles, milkweeds, goldenrods.



Illinois Moths Butterflies



Lepidopteran Facts

- Butterflies are usually active by day and have threadlike, knob-tipped antennae, a small body, and broad wings. Moths generally are active at night, have antennae in many shapes (but never with knobs), a stout body, and narrow wings.
- The monarch butterfly (*Danaus plexippus*) is the official State Insect of Illinois. In the fall, these butterflies migrate approximately 80 miles per day to overwinter in the mountains of central Mexico. When they begin their flight back in the spring, they lay eggs along the way.
- The largest moth in Illinois, the cecropia (*Hyalophora cecropia*), is also the largest moth in North America. It has a wingspread of five to six inches.
- Moths first appeared during the age of the dinosaurs, about 200 million years ago. Butterflies developed about 40 million years ago.

Above: Monarch butterfly (Danaus plexippus). Photo by Michael Jeffords.

for that purpose. However, the Peoria have also determined that the funerary objects associated with their remains are an important part of the tribe's cultural heritage and should remain in the hands of the Museum. These objects are the centerpiece of the newly established Peoria Indian Heritage Collection, and they constitute an invaluable record of Illini culture in Illinois. 🐛

Additional Reading

Brown, J. A. 1961. *The Zimmerman Site: A Report on Excavations at the Grand Village of Kaskaskia, La Salle County, Illinois*. Report of Investigations No. 9. Illinois State Museum, Springfield.

Grantham, L. 1996. The Illini Village of the Marquette and Jolliet Voyage of 1673. *The Missouri Archaeologist* 54:1–20.

Walthall, J. A., and E. D. Benchley. 1987. *The River L'Abbe Mission*. Studies in Illinois Archaeology No. 2. Illinois Historic Preservation Agency, Springfield.

Walthall, J. A., and T. E. Emerson, eds. 1992. *Calumet & Fleur-de-llys: Archaeology of Indian and French Contact in the Midcontinent*. Smithsonian Institution Press, Washington, D.C.

Warren, R. E. 1995. The NAGPRA Inventory: Native Americans and Museum Collections. *The Living Museum* 57:54–57.

Warren, R. E., and J. A. Walthall. 1998. Illini Indians in the Illinois Country, 1673–1832. *The Living Museum* 60:4–8.

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Conservation

Surveys indicate that the populations of some species of lepidopterans have declined in Illinois, especially those associated with prairies and wetlands. It is generally accepted that the primary cause for the reduction is loss of habitat from urbanization, industrialization, and the widespread use of pesticides. To conserve our remaining butterflies and moths, we need to continue to manage our public and private natural areas in ways that protect and maintain lepidopteran populations. Research to determine what species remain and to define their habitat requirements better should continue to be conducted and, based on our best information, recommendations made for management policies to be adopted by land managers.

There are many ways we can expand our knowledge of lepidopterans and support the conservation of these insects. Amateur lepidopterists make significant contributions to this science by studying and properly documenting life cycles and host plants of many species. While collections of natural history specimens, such as butterflies, are a necessity for scientists and are the focus of many passionate hobbyists, there are other ways to enjoy these wonderful creatures.

- Learn to identify the common lepidoptera in the field without catching or handling them. Many field guides are available to help you with identification.
- Keep a journal of your butterfly and moth observations including items such as the weather, the habitat type, the insect's behavior, time, and date.
- Photograph butterflies and moths.

Those who are interested in joining other butterfly enthusiasts can participate in butterfly monitoring programs. For more information, contact the North American Butterfly Association, 4 Delaware Road, Morristown, New Jersey 07960 (web site: <http://www.naba.org>).

Agency Resources

The Illinois Department of Natural Resources (IDNR) offers information on butterflies and moths. Scientists at the Illinois Natural History Survey's Center for Economic Entomology study butterfly and moth distributions, populations, life histories, and economic impacts and maintain a research collection. They also provide educational materials and programs about insects to students and teachers. Entomologists from the Illinois State Museum conduct studies of butterflies and moths and curate its research collection. Biologists at the Division of Forest Resources study lepidopterans in relation to disease identification and control in forests. The Educational Services Section offers educational materials about insects for teachers and sponsors the Schoolyard Habitat Action Grants. These grants are very popular with educators who are interested in establishing butterfly and moth gardens.

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Illinois Natural History Survey

Center for Economic Entomology
607 East Peabody Drive
Champaign, IL 61820-6970
(217) 333-6656
http://www.inhs.uiuc.edu/cee/cee_home.html
<http://www.inhs.uiuc.edu:80/cbd/main/collections/insect.html>

Division of Forest Resources

524 South Second Street
Springfield, IL 62701-1787
(217) 785-4501
<http://dnr.state.il.us/ildnr/offices/division/forestry/forest.htm>

Illinois State Museum

Spring and Edwards Streets
Springfield, IL 62706-5000
(217) 782-5993
<http://www.museum.state.il.us>
<http://www.museum.state.il.us/research/entomology/index.html>

Division of Education

Educational Services Section
524 South Second Street
Room 530
Springfield, IL 62701-1787
(217) 524-4126
<http://dnr.state.il.us/nredu/classrm/classrm.htm>

The information included here comes from the poster *Illinois Moths & Butterflies*, produced cooperatively by the Illinois Department of Natural Resources—Illinois State Museum, the IDNR Division of Education, and the Illinois Natural History Survey—and the Illinois Department of Transportation. The double-sided poster, which features twenty-five beautiful full-color photographs and additional information, is available from the Educational Services Section of the IDNR and the Natural History Survey. Call (217) 524-4126 or (217) 333-6833 for more information. The poster may be accessed online via the Internet at the IDNR Web page: <http://dnr.state.il.us/moth>