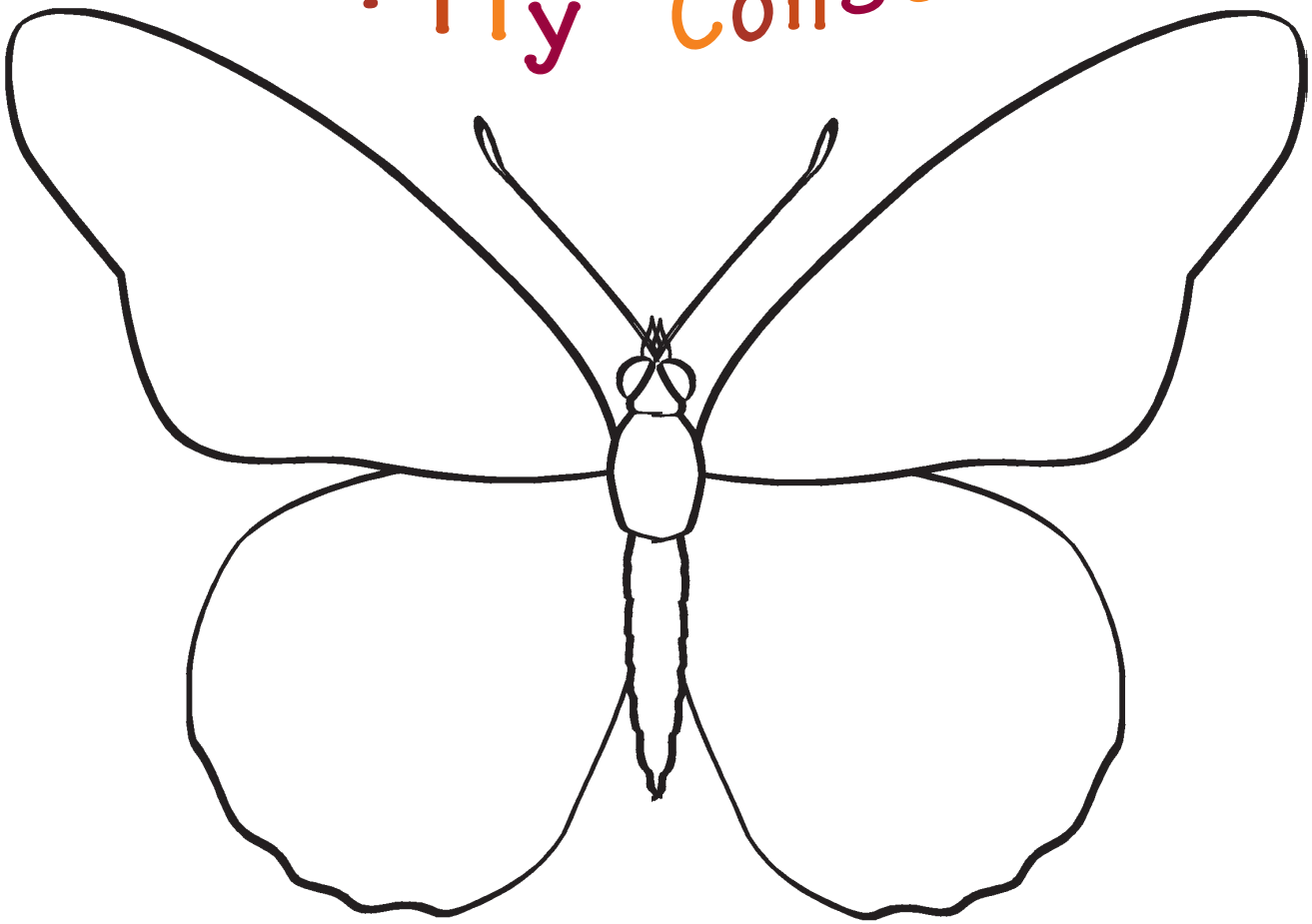
AMERICAN MUSEUM OF NATURAL HISTORY

DEPARTMENT OF EDUCATION

Butterfly Conservatory



Guide

BUTTERFLY CONSERVATORY

You are about to see an entire exhibition about some of the world's most beautiful and popular **insects**. The **Butterfly Conservatory** is made up of a **vivarium** and a long hallway with information, photos and butterfly specimens.

Look through the glass wall and into the **vivarium.** This is a special type of room, which houses live plants or animals. Look at the plants growing in the vivarium. Can you find any butterflies resting on these plants? How do the colors and patterns of the resting butterflies differ from the colors and patterns of the butterflies flying around the **vivarium**?
Their dazzling colors and patterns have made butterflies popular items to collect. But these colors are more than simply beautiful: they are important survival tools. For example, some colors announce to **predators**, "Look out! I might be poisonous!" Colors are also used by butterflies for attracting a mate. Some butterflies fold up their wings when they rest, so the colors do not show. This helps the butterflies blend into their surroundings, making them difficult for **predators** to find.

Look at the wall behind you. On the fourth panel from your right, you will find a **caterpillar window**. The caterpillars are eating their **host plant**, Passion flower. Notice how caterpillars eat. Later notice how butterflies eat... it is quite different!

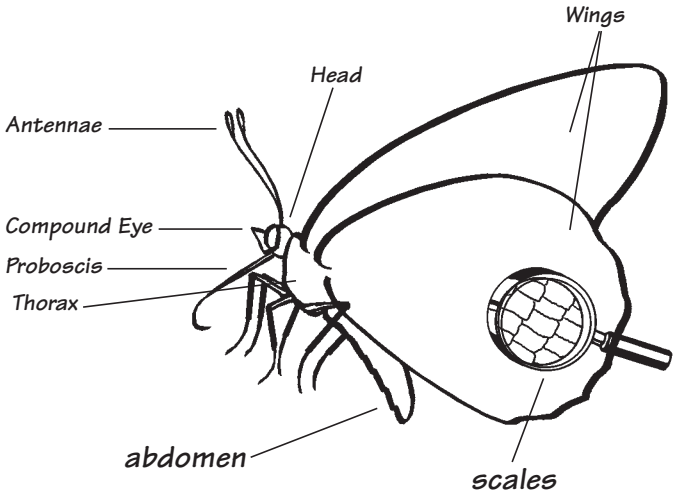
Look through the glass wall again. Butterflies are only active when it is bright and the sun is shining. Therefore, it is like a nice sunny day inside the vivarium. The butterflies in here are active for twelve hours and sleep (rest) for twelve hours during the night. It is very warm in the **vivarium** because the butterflies need to be in a warm environment like the one they come from (the **tropic**s of Central America).

Look at the wall behind you. On the fourth panel from your left, you will find the butterfly display. Do these butterflies look similar to the ones inside the vivarium? They can be found in the Dzanga-Sangha rainforest, in the Central African Republic. Later, you can discover the large diorama of this **habitat** in the Museum's **Hall of Biodiversity** on the first floor.

Look in the glass case located at the end of the hall. Why do you think **collections** like these are so important to scientists at the American Museum of Natural History?

In a moment you will enter a room filled with live butterflies!

WHAT IS A BUTTERFLY?



Like all **insects**, butterflies have three body parts **(head, thorax, abdomen)**, two feelers **(antennae)**, and **six** legs. Butterflies also have **four** wings, which are covered by colored and clear **scales**, and a long, coiled, tube-like mouth part **(proboscis)** for drinking liquids such as the sugary water **(nectar)** that flowers ooze to attract insects and birds.

continue your investigation

When you go home, create your own butterfly by designing and coloring the outline on the cover of this brochure. Do the colors and patterns of your butterfly help it attract a mate, warn away predators, or help it blend into its surroundings **(camouflage)**?
During the winter months you will not be able to find butterflies, but when you get home you can read books or visit some web sites about butterflies. In our area, look for butterflies from May to August in sunny exposed areas with flowering plants. Parks, wildlife refuges, and other wild places are home to many different kinds of butterflies.

in the vivarium


Gulf Fritillary


Small Postman

Look around you and
try to find these butterflies.
You may see other types as well.
Are they flying? Feeding?
Resting on plants?
Look for the case near the
center of the vivarium.
You may see a pupa about to
become a butterfly!


Gray Cracker


Malachite

If one lands on you, allow it to stay as long as it wants, or encourage it to walk on to another surface


Zebra Longwing

Butterflies are fragile, so please don't chase them or try to touch them.


Orange-barred Sulphur


Owl


Blue Morpho

Butterflies don't bite


Monarch

Please don't pick the flowers


Julia Butterfly

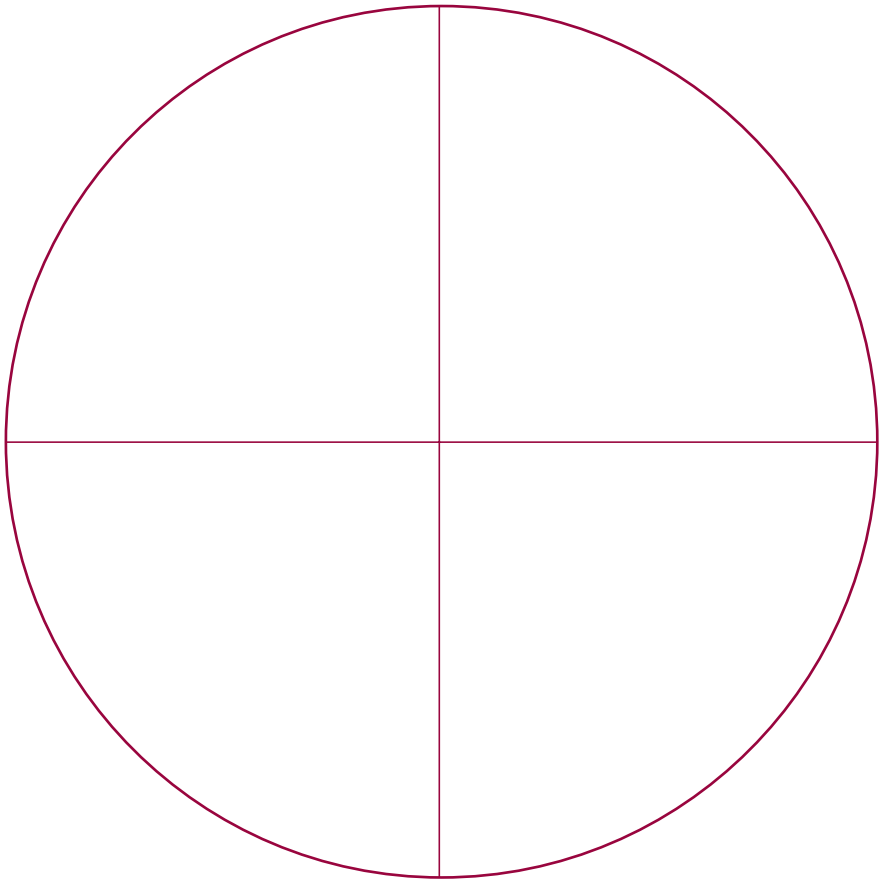

Giant Swallowtail

MAKE A BUTTERFLY PHOTO COLLECTION Medium to large butterflies can be safely touched by specialists who know how to handle them, but it is important to remember that any butterfly can be damaged or killed by improper handling. For this reason, it is better to photograph a live butterfly in nature than to try to catch one. In this way, you avoid harming or killing the butterfly—and you can keep your collection in a photo album.

UNDERSTANDING METAMORPHOSIS In this exhibition you did not see all the stages of the butterfly's life cycle. Butterflies go through a complete change of form, or **metamorphosis**, consisting of four stages. A butterfly's life span can range from two or three weeks to several months, depending on the type of butterfly. From what you have seen today, try drawing the different stages described below:

Stage one:
An ***egg*** is laid on a host plant by an adult female butterfly.

Stage two:
The ***caterpillar or larva*** that hatches from the egg feeds on the leaves of the host plant. It grows continually and sheds its skin about six times.



Stage four:
An **adult butterfly** emerges from the chrysalis.

Stage three:
A **chrysalis** or **pupa** is formed when the caterpillar has shed its skin for the last time. During this time, the caterpillar does not eat or move.

CONSERVATION Many butterflies are endangered, and could become extinct due to loss of their natural habitats. More than 20 species of butterflies and moths are listed as endangered; these are mostly found in the United States. Contact your local wildlife conservation office to find out what you can do to conserve butterflies and moths. The butterflies in this exhibition were raised on farms from eggs and sent to this museum as pupae.

WEB SITES:

http://www.amnh.org/resources/exhibitions/butterfly (American Museum of Natural History)
http://www.mesc.nbs.gov/butterfly.html/ (Children's Butterfly Site)
http://www.mesc.nbs.gov/butterfly-faq.html (Children's Butterfly Site, Frequently-Asked Questions)
http://www.naba.org/ (North American Butterfly Association)

FURTHER READING:

Boring, Mel. *Take-Along Guide: Caterpillars , Bugs and Butterflies.* Minocqua, Wis: NorthWord Press, 1996.
Kendal, Cindy. *Butterflies.* New York, NY: Dial Books for Young Readers, 1995.
Still, John. *Eyewitness Juniors: Nine Amazing Butterflies and Moths.* NY: Alfred A . Knopf, 1991.

This guide was prepared by Peter Vreeland, American Museum of Natural History, Department of Education, with the assistance of Maria Concepcion, Education Intern. It was reviewed by Valerie Giles, Myles Gordon, Karen Kane, Jane Kloecker, James Miller, and Lucy O'Brien, American Museum of Natural History. Butterfly images ©amnh/photo studio. Brochure Design: Avatar Design (avatardesign@earthlink.net). Brochure revision: Monica Philippo.

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