

How are Lepidoptera helpful or harmful to humans?

Helpful

Butterflies are often beautiful to look at.

Moths and butterflies are important parts of the food web.

Many Asian countries use the silk from silk moth cocoons to weave fabric. This silk is an important part of their economy.

Lepidopterans are important in pollinating crops and wild plants.

Harmful

Some butterflies damage crops. The cabbage butterfly eats cabbage and broccoli.

The caterpillars of some moths feed on stored grain.

The larvae of clothes moths chew holes in clothes made of wool and other natural fibers.

Adaptive and Defense Mechanisms

Many Lepidopterans use camouflage to hide from predators.

Some butterflies and moths flash their bright colored wings to startle predators.

Some butterflies have spots on the backs of their wings that look like eyes, baiting predators to strike at the wrong place on their body.

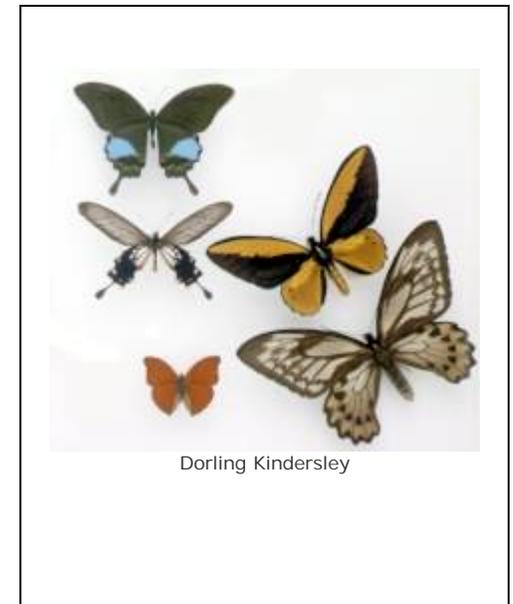
Proboscis on the head helps suck nectar from flowers.

References

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Lepidoptera

The Order of Butterflies and Moths



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Anatomy

Head

Proboscis—Nectar is sucked through this tube that curls up.

Antennae—Pair on the head can smell, hear, and feel.

Thorax

Legs—Three pairs, with taste buds on the feet.

Wings—Two pairs that are covered with scales (hairs).

Abdomen

Spiracles—Sides of abdomen and thorax are covered with these. They bring air to the inside of the insect.

Abdomen contains most internal organs, such as heart and reproductive organs.

Life Cycle

Eggs—Eggs are usually laid on a plant that the young can eat. They can be laid in clusters or as a single egg.

Caterpillar—These hatch from the egg and begin eating the eggshell and leaves around it. They look like worms and don't have wings.

Pupa—When ready, the caterpillar will weave a cocoon of silk around itself and begin the metamorphosis to an adult with wings.

Adult—Most adults only live one or two weeks.

Habitat

- Lepidoptera can be found in most biomes and continents except for Antarctica.
- Moths are usually found in wooded areas, and butterflies are usually found in open, sunny areas.
- 6,000 species of butterflies make their home in Peru.

Local Examples

Pipevine Swallowtail butterfly (*Battus philenor*)

Western Tiger Swallowtail butterfly (*Papilio rutulus*)

Woodland Skipper butterfly (*Ochlodes sylvanoides*)



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Tailed Copper butterfly (*Lycaena arota*)

Extremes

Smallest

Blues have a wingspan of only .7 cm. (.25 in).

Largest

Female giant birdwings of Papua New Guinea and atlas moth have wingspan of up to 30 cm (1 foot) across.



Oxford Scientific Films/M.P.L. Fogden

Place of Lepidoptera in the Food Web

Most butterflies and moths feed on the nectar of flowers.

Many male butterflies feed on dead animals and feces to obtain nutrients.

When butterflies move from flower to flower to collect nectar, they help pollinate plants and help them reproduce.

Predators include birds, bats, lizards, spiders, dragonflies, and preying mantid.