



0. Butterfly Vocabulary - Story Preface

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These Monarch butterflies are wintering at the Monarch Grove Sanctuary in Pacific Grove, California. The photo, by Agunther, is online via Wikimedia Commons. License: [CC BY-3.0](https://creativecommons.org/licenses/by/3.0/).

What are some of the vocabulary words we need to know to better understand butterflies? Here's a list of key items.

abdomen - the long back part of the body, behind the thorax

antenna - (plural, antennae)- a sense organ on the head of an insect. In Monarch larvae, these are often confused with the tentacles or filaments. Larval antennae are very small while adult ones are much longer.

arachnid - a group of arthropod animals including spiders, scorpions, ticks and mites. They have a hard exoskeleton and eight legs.

butterfly - an insect with a slender body and four wings.

common milkweed - the most common host plant for Monarch larvae in the upper midwestern U.S. Monarchs also eat other members of the genus *Asclepias*.

braconid wasps - a family of small wasps. The female lays one egg inside the Monarch **chrysalis** and kills it. Another danger are **tachinid flies that** usually attach eggs to the outside of the host's body. The eggs hatch, the tachinid larvae burrow into the host, and they begin feeding inside. The host is almost always killed. The species that live in Monarchs are gray and smaller than houseflies.

cardiac glycosides - poisons that seriously affect vertebrates. Milkweed plants make these chemicals, probably to protect them from being eaten, and when the Monarchs eat them the poison helps protect them from predators.

caterpillar - the wormlike larva of a butterfly.

chrysalis - another name for a butterfly pupa.

cocoon - a silk web that encloses the pupae of many moths, **but not butterflies**.

crochets - rows of tiny hooks on the end of each caterpillar's proleg that are used for traction.

Danaus plexippus - the scientific (Latin) name for the Monarch butterfly or "milkweed butterflies."

egg - small, circular like; first stage of the butterfly life cycle.

Entomologist - a scientist who studies insect life.

exoskeleton - a hard skeleton located on the outside of an invertebrate's body (in contrast to the internal skeleton of vertebrates) that protects it and serves as a point for muscle attachment.

instar - a period between larval molts. There are five of these periods in the growth of a Monarch larva.

larva - the second stage, after the egg, in metamorphosis. Also known as caterpillar. Monarchs molt five times in their larval state, which lasts about 9-14 days.

Lepidopterist - Scientists who study butterflies.

mandibles - strong "jaws" on the larval head.

metamorphosis - the series of developmental stages through which insects go to become adults. Through metamorphosis, a butterfly is transformed from an egg, to a larva, to a pupa to a butterfly.

molting - the shedding of skin. A monarch larva molts as it grows and becomes too large for its former skin.

ocellus - simple eyes of some insects. Monarch larvae have 12 ocelli.

palp - paired appendages on an insect head used to sense, and test the quality of, food.

proboscis - the adult Monarch's feeding tube, for sucking nectar, which is coiled under the head when not in use.

pupa - the third stage in metamorphosis, after the larval stage. In Monarchs this stage lasts 8-13 days.

tentacles - the fleshy black extensions at the front and rear of the Monarch larvae, which function as sense organs. Also called filaments.

thorax - the middle section of an insect's body. The wings and legs are attached to this segment.

tracheae - airtubes that run through insects' bodies, delivering oxygen to cells, tissues and organs.

pupate - to change from a larva (caterpillar) to a pupa (chrysalis).

scales - overlapping pieces of chitin (the same material of which exoskeletons are made) that insulate butterflies' bodies and wings, improve their aerodynamics and give them color and markings. Many people think the scales look like fine dust on butterfly wings.

tarsus - the second-to-last segment of insect legs (analogous to human toes). Butterflies stand and walk on their tarsi.

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Questions 2 Ponder

What stage is this?

What stage is this?
Backwards answer below:
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Media Stream



Monarch Butterflies Winter in California

How to Photograph Butterfly Town USA; online via Wikimedia Commons, Photo by Agunther

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