

Discovering Insects

A Computer Database & Handbook

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SAMPLE ENTRY

24) ORDER LEPIDOPTERA

Organisms

Moths, skippers, and butterflies and their caterpillars (various "worms")

Approximate Number of Known Species Worldwide

110,000

Description

Usually medium- to large-sized insects. Long, slender antennae. Mouthparts are a telltale, coiled sucking-tube. The two pairs of wings, almost always present, are membranous but covered with telltale, tiny, overlapping scales, often in a mosaic pattern of beautiful or drab and camouflaging colors; and the forewings are a little larger than the hind.

Moths—which usually fly at night (except for some wasplike species, with almost transparent wings)—have a stout, very hairy body; usually threadlike or feathery antennae; and wings held rooflike over the body at rest.

Skippers—which usually fly during the day—have a stout, not very hairy body; antennae with hooked tips; and forewings held upright over the body but hindwings held almost flat at rest.

Butterflies—which usually fly during the day—have a thin, not very hairy body; antennae

knobbed at the tip; and wings usually held upright over the body at rest.

Metamorphosis

The larvae are usually called caterpillars (A few larvae are like the maggots of flies (26).). Caterpillars bear five or fewer pairs of fleshy "prolegs" on the abdomen. Many caterpillars are hairy. Many caterpillars stink for defense. Caterpillars can produce silk, used to make shelters for themselves or cocoons for their pupae (However, most butterflies have a naked pupa, a "chrysalis," not enclosed in a cocoon.).

Many female moths put-out a wind-blown "pheromone" [hormonal perfume], which attracts males of the appropriate species. Wing markings—often on colorful hindwings hidden by camouflaging forewings—help identify potential mates of the same species to each other.

Habitats

Most caterpillars are found on leaves; a few, in plants (as in swollen galls on plants); and some, indoors. Most adult moths, skippers, and butterflies visit flowers or hide on bark. Some of the winged adults (as of the monarch butterfly) migrate in great groups for thousands of miles towards the Tropics, to escape winter weather in the Temperate Zones.

Foods

Caterpillars almost always feed on or in plant parts (A very few feed on such other insects as

aphids.). The adults usually uncoil their mouthparts to feed on such liquids as flower nectar, but some do not feed at all.

Damages/Benefits

Many caterpillars (such as corn earworms) chew the shoots of many crop plants, some (such as the larvae of the monarch butterfly) feed on such weeds as milkweed, some (such as meal moth larvae) feed in stored foods, a few (such as the larvae of clothes moths) feed on fabrics, the silkworm produces the valuable silk of commerce, a very few (such as the larvae of some harvester butterflies) feed on such insect pests as aphids, and some (such as some tussock moth larvae) have stinging hairs (36).

The adults, by visiting flowers, pollinate many valuable plants (including many wildflowers) but sometimes weeds.