

The Hummingbird Moth

The Hummingbird Moth is a cosmopolitan species, with variations in coloration and markings which can be observed within different geographic regions, even though there is only one recognized species. These variations and breeding are often influenced by factors such as climate, habitat, and available food sources.

With a wingspan ranging from 4 to 6 centimeters, and a body length of around 2 centimeters or 1-1/2", it is roughly the same size as a small hummingbird. Its rapid wing beats, which can reach up to 85 beats per second, contribute to its hummingbird-like flight pattern. It is a strong flier, traveling wide distances in the summer. While most sphinx moths fly at night, hummingbird moths fly during the day.

Several species are particularly showy. Snowberry clearwings (*Hemaris diffinis*) have the yellow and black banding of a bee with large, plump bodies. They have black legs and a black line running through its eyes and down its sides. They are covered with fuzzy hairs which spread out into a fan-shaped tail resembling a "lobster tail". Their wings can clock up to 70 beats per second enabling them to fly as fast as 12 miles per hour. The Hummingbird Clearwing (*Hemaris thysbe*) is by far the most commonly seen. It has pale legs, an olive-green back, and a rich red-brown abdomen that make it appear even more hummingbird-like.

Like all moths, the Hummingbird Moth undergoes a complete metamorphosis, progressing through four distinct stages: egg, larva (caterpillar), pupa (chrysalis), and adult. After a period of 5 to 7 days, the eggs hatch into tiny larvae which then begin to feed on the leaves of their host plants. As they grow, the larvae molt several times before entering the pupal stage where they undergo transformation inside a cocoon. Finally, after 2 to 3 weeks, the adult moth emerges, ready to begin its brief yet impactful life. They produce up to three or four broods a year.

One of the most fascinating aspects of the Hummingbird Moth is its feeding behavior and audible humming noise. Like hummingbirds, they have a long proboscis, or feeding tube, which they use to extract nectar from flowers while hovering in mid-air. This resemblance is an example of convergent evolution, the independent evolution of a species over different periods in time. Comparable characteristics that were created having a similar form or function but were not present in the last common ancestors of the species. This hovering capability is only known to have evolved four times in nectar feeders: in hummingbirds, certain bats, hoverflies, and these Sphingidae.

This remarkable adaptation allows them to access nectar from deep within tubular flowers, making them important pollinators for a wide range of plant species. Their preferred food plants are honeysuckle and red valerian, but other plants include viola, centranthus, jasminum, buddleia, nicotiana, primula, syringa, verbena, stachys and echium, phlox. They have a trichromatic visual system, a relatively good ability to learn colors which helps discriminate between flowers. In addition to nectar, adult moths may also feed on the juices of ripe fruit. They are also reported to return to the same flower beds at about the same time each day.