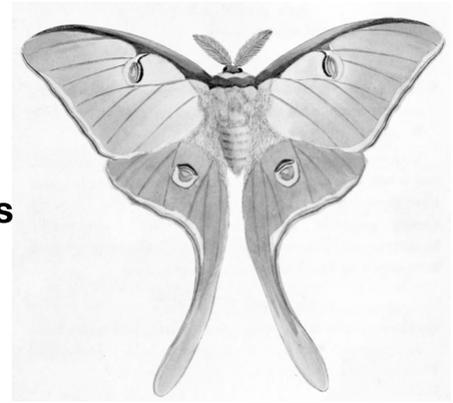


New Jersey Butterfly Club
www.naba.org/chapters/nabanj/



Monarch Butterfly

Butterflies vs. Moths



Luna Moth

Moths and butterflies both belong to the taxonomic order **Lepidoptera**. Within Lepidoptera, the two groups are assigned to two different suborders. The question of separating moths from butterflies can be a puzzling one. Very simply put—anything that isn't a butterfly is a moth!

There is no single characteristic that universally separates moths from butterflies (that is, a characteristic that all moths have while all butterflies do not, or vice versa). But certain differences are very common:

- All butterflies have knobs at the ends of their antennae, while moths have antennae that range from threadlike to featherlike, but that are rarely knobbed. (This characteristic reliably separates all North American moths and butterflies.) Note that skippers are intermediate between moths and “true” butterflies in having a bent antennal club.
- Moths are generally **nocturnal** (active at night), while butterflies are **diurnal** (active during the day). Quite a few moths do fly during the day, but no butterflies fly at night.
- Moths rest with their wings horizontal along the body, while most butterflies rest with their wings held vertically and touching each other.
- Moths have hairier and more robust bodies than butterflies.
- Moths have a tiny hook (the *frenulum*) that connects the hind wing to the front wing. Butterflies lack this hook.

Some other differences between butterflies and moths:

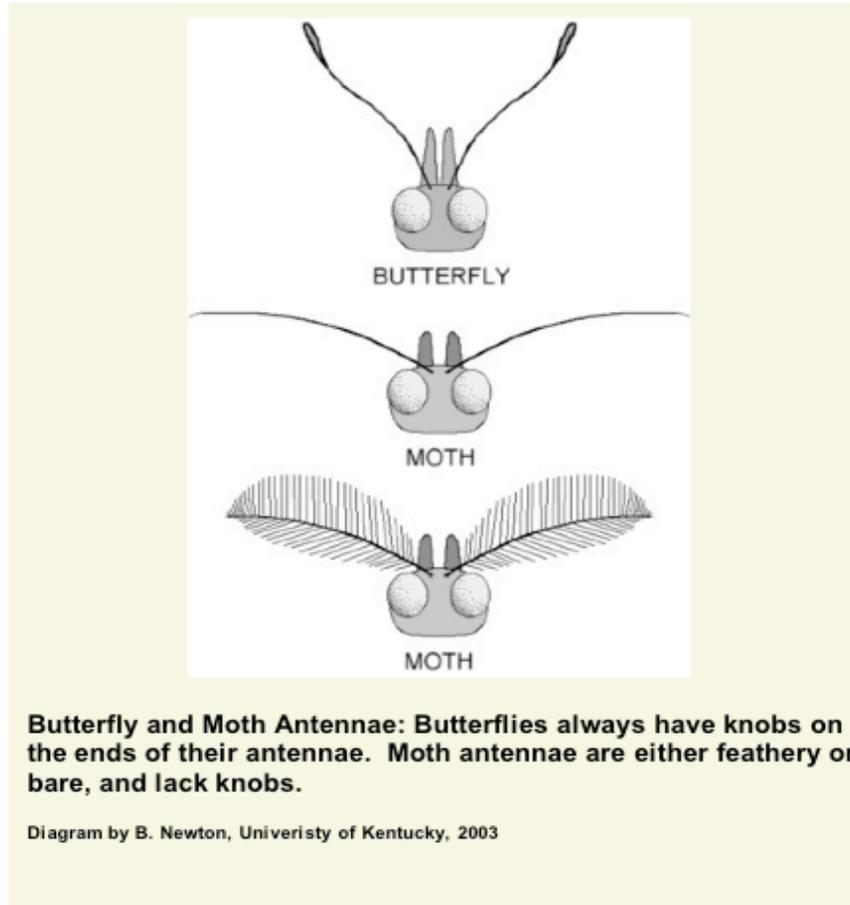
Temperature Control

Butterflies elevate their body temperature by basking in solar radiation. Nocturnal moths warm up by vibrating their flight muscles in a way that resembles shivering, and their body hairs help to retain the heat that is generated.

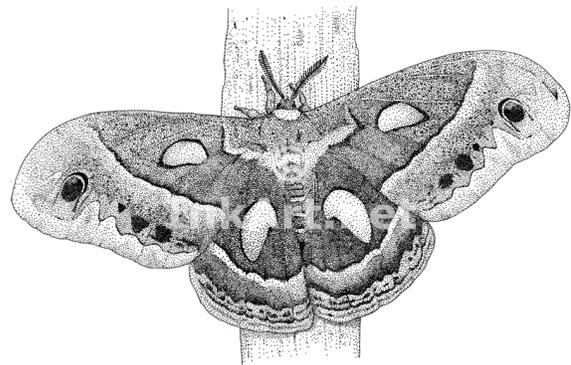
Hearing: Some moths have tympanic membranes that enable them to detect bat sonar. Butterflies lack such organs.

Feeding

Most butterflies and some moths have a strawlike proboscis for feeding on fluids such as nectar. Many moths lack mouthparts for feeding, and simply live on fat reserves accumulated during the larval stage. After they have completed reproduction, they die.



Eastern Tiger Swallowtail



Cecropia Moth

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