



KAMARAJ IAS ACADEMY
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Biodiversity in the Himalayas

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Moth Discoveries: Indicators of a Warming Peak

Background: In the high-altitude regions of Ladakh and the Himalayas, researchers identified three new moth species: *Gelechia bilobuncusa*, *Gelechia adi*, and *Istrianis ladakhensis*.

Basics:

- **Moths vs. Butterflies:** Moths are mostly nocturnal and have feathery antennae.
- **Pollination:** While bees get the credit, moths are crucial night-pollinators for many Himalayan flora.
- **DNA Barcoding:** These species were identified using modern genetic sequencing, as they look identical to known species to the naked eye.

Significance for UPSC:

- **Climate Change:** Moths are highly sensitive to temperature. Their discovery at higher altitudes suggests they are migrating upward as the lower slopes warm.
- **Himalayan Ecosystem:** Important for questions on the "Third Pole" and biodiversity conservation.