



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.