Invasive Plants as Key Nectar Sources for Butterflies in Assam

Prelims: *Current events of national and international importance | Environment*

Why in News?

- **Study Location -** Raimona National Park (422 sq. km), Bodoland Territorial Region, Assam.
- **Institution -** Bodoland University (Led by research scholars Bishal Basumatary and Mr. Choudhury).

Core Finding

- Invasive alien plant species are traditionally regarded as ecological threats that outcompete native flora and disrupt local ecosystems.
- It reveals that certain invasive species play a vital ecological role by serving as major nectar sources and larval host plants for diverse butterfly populations.

Key Findings & Statistics

- **Species Biodiversity Documented -** The study recorded 220 butterfly species, 56 species of larval host plants, and 41 species of nectar plants within the national park.
- **Seasonal Nectar Availability -** Invasive species produce abundant nectar during lean periods when native wildflowers are scarce, sustaining butterfly survival year-round.
- **Dual Ecological Function-** In addition to nectar provision, several invasive plants act as larval host plants, offering food for developing caterpillars.

Key Invasive Species & Their Ecological Roles

Invasive Plant	Seasonal Peak	Butterflies Supported	Primary Features & Mechanisms

Lantana camara	April – October	>*30* species	Multi-colored flower clusters change shade as they age, providing visual cues for foraging. Offers continuous nectar in dense, rounded floret clusters.
Chromolaena odorata (Siam weed)	December – February	24 species	Dense floret clusters provide accessible nectar during critical winter months when native flowers are scarce.
Ziziphus mauritiana (Indian Jujube)	Lean Seasons	Multiple species	Functions as a supplementary nectar provider across protected forest landscapes.

- **Additional Host Plants -** Species such as *Ricinus communis*, *Senna alata*, *Portulaca oleracea*, *Mikania micrantha*, *Ageratum conyzoides*, and *Tridax procumbens* were also found to support butterfly reproduction and growth.

Policy & Conservation Implications

- **Shift from Total Eradication to Nuanced Management -** Aggressive, unmanaged removal of invasive species can lead to sudden nectar shortages for native pollinators.
- **Controlled Patch Reservation -** Researchers recommend that forest managers maintain small, carefully managed patches of species like ***Lantana camara* and *Chromolaena odorata*** to bridge floral gaps without letting them overrun natural habitats.
- **Inclusion in Forest Management -** This represents one of the first reports from India urging forest departments to factor in the positive pollinator contributions of invasive species during habitat restoration planning.

Reference

The Hindu | Key nectar sources for butterflies

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