New Fruit Fly Species

Prelims: Current events of national and international importance | Species

Why in News?

A three-year survey in Ri-Bhoi district documented 37 fruit fly species, including two species new to science and three species recorded for the first time in the Indian subcontinent.

Key Findings

- A total of more than 35,000 fruit fly specimens were collected.
- Thirty-seven fruit fly species were documented across forest, orchard, and vegetable ecosystems.
- Bactrocera dorsalis was identified as the dominant pest species.

Taxonomic Discoveries

- Two species newly described to Science
  - Zeugodacus umiam, associated with GI-tagged Khasi mandarin.
  - Zeugodacus nasivittatus, associated with sweet orange and Khasi mandarin.
- Three new records for the Indian Subcontinent
  - Bactrocera abbreviate.
  - ErectoPhorelliosoma.
  - Hilaratumiosoma hilaratum.

Ecological Insights

- Forests exhibited the highest diversity and abundance of fruit flies, serving as reservoirs for rare and specialized species.
- Habitat fragmentation poses a significant threat to the diversity of lesser-known insect

species.
- Fruit flies present a significant pest risk, causing severe crop losses and leading to export restrictions due to quarantine regulations.
- High-Risk Zone – Meghalaya's climate, host diversity, border proximity favour pests/invasives.
- It provides the first comprehensive dataset on fruit fly diversity, host associations, and seasonal patterns in the region, informing integrated pest management and conservation strategies.

Significance

- It reinforces Meghalaya's status as a biodiversity hotspot.
- It demonstrates the value of long-term ecological surveys in Northeast India.

Reference

Hub News | Fruit Fly Hotspot

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