

Owl Species Diversity in Guwahati

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

Why in News?

The study “Patterns and Predictors of Owl Occupancy in a Rapidly Urbanising Subtropical City, Guwahati, India” identified eight owl species in Guwahati, Assam.

- The study analysed owl occupancy across various urban land-use categories from November 2023 to July 2025.



Key Findings

- Dominant Species** - Barn Owls and Spotted Owlets were the most frequently detected species.
 - Both species maintained high occupancy throughout Guwahati's urban landscape.
- Impact of Ambient Noise** - Ambient noise consistently reduced owl detection.
 - Traffic and urban sounds masked owl calls and affected acoustic monitoring.
- Imperfect Detection** - Actual sightings and detections underestimated owl

occupancy.

- Model-based estimates that account for imperfect detection suggest owls may occupy more areas than conventional surveys indicate.
- **Urban Adaptation** - Barn Owls and Spotted Owlets demonstrated human commensalism by occupying diverse urban habitats.

Human Commensalism - *An ecological association in which one species benefits from its relationship with humans without necessarily causing harm to them.*

- **Habitat Characteristics** - It showed weaker, species-specific associations with owl occupancy.

Major Threats

- Noise pollution resulting from vehicular traffic and urban activities.
- Loss and fragmentation of natural habitats within urban environments.
- Accelerated urbanisation and alterations in land-use patterns.
- Degradation of wetlands and reduction of green spaces.
- Decline in mature trees and loss of native vegetation.

Significance

- **Natural Pest Regulation** - Control rodent populations and reduce reliance on chemical pest-control methods.
- **Ecosystem Health Indicators** - Maintain food-web balance and reflect the biodiversity-supporting capacity of ecosystems, including urban areas.

Reference

[TOI | Eight Owl Species in Guwahati](#)