INDIANA State Forest Management

Forestry-Wildlife Relationship

Indiana's wildlife species of greatest conservation concern are adversely affected by many factors. Among those factors, forestry ranks among those having the least effect, and forestry ranks last among those that affect wildlife habitat.

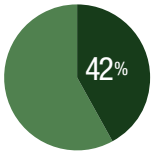
(wildlife.IN.gov/files/SWAP/fw-SWAP_2015.pdf, pages 68-77)

HIGH-QUALITY YOUNG FOREST HABITAT IS ESSENTIAL TO HEALTHY FOREST ECOSYSTEMS.

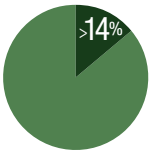
Young forest habitat or brushy areas are essential for many Indiana birds. At least half of breeding neotropical migrant species in the Midwest use young forest habitats during breeding season and/or migration. This includes many species that use mature interior forest habitat for nesting and then forage in early-successional habitat. The worm-eating warbler and the state-endangered cerulean warbler are species of concern that use these areas, according to research done at State Forests by Purdue University.

Bird Species & Their Habitat

In Indiana, the proportion of declining bird species associated with early-successional habitat is considerably greater than those associated with mature forests.



42% of bird species associated with early-successional habitats are in significant decline.



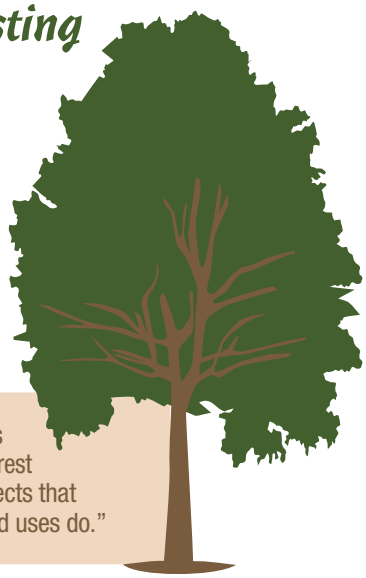
Among mature forest and woodland species less than 14% are in significant decline.

** Data provided by the USGS Breeding Bird Survey.*

BIRD RESEARCHERS FOUND THAT SOME INTERIOR FOREST SPECIES, WHO ALSO USE YOUNG FORESTS, ARE IN BETTER PHYSICAL CONDITION THAN THOSE IN MATURE FOREST.

Fragmentation VS. Harvesting

A common misconception is timber harvesting causes forest fragmentation. Openings created by timber harvesting are temporary and quickly revegetate. Debris is left behind to provide wildlife with some habitat while regrowth occurs.



"We are aware of no evidence in eastern forests that fragmentation of mature forest by young forest creates the type of negative fragmentation effects that fragmentation by agricultural or developed land uses do."

(Thompson, Donovan, DeGraaf, Faaborg, and Robinson; Studies in Avian Biology No. 25, 2002)

Breeding & Foraging Habitat

Timber harvesting provides important breeding and foraging habitat on Indiana's State Forests for many listed species of conservation concern. These include the federally endangered Indiana bat as well as state-listed species such as...

"These results suggest that uneven-age management practices, such as single tree and group selection harvesting, provide suitable breeding habitat for cerulean warblers."*

Bat Communities & Timber Harvest

Researchers from Indiana University of Pennsylvania studied State Forest bat communities and found that most bat species increased activity levels in recently harvested areas.

Researchers found no bat species decrease its activity level after timber harvesting.

Federally endangered Indiana bats raise their young in maternity colonies.

They roost under exfoliating bark of both live and dead trees during the day.

Maternity roosting trees are often located in a gap or opening within the forest canopy or along the edge of the forest with plenty of sun exposure. On State Forests, many maternity roosts are commonly located where timber has recently been harvested. Researchers believe the sun exposure helps pregnant and lactating females conserve energy reserves, which benefits the development of their young pups.

SOURCES:

- Wildlife conservation experts responding to questionnaires for Indiana's 2015 State Wildlife Action Plan (SWAP)
- **Register and Islam; Forest Ecology and Management, 255:3502-3505, 2008; from research conducted on Indiana State Forests*
- *Photo Credit (Whip-Poor-Will) Brenden Klick/Macaulay Library at the Cornell Lab of Ornithology*

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