

## EVERGREEN FOREST HABITATS

### Habitat description

Evergreen forests are areas dominated by trees where 75 percent or more of the tree species maintain their leaves all year. The canopy is never without green foliage.

### Problems affecting species and habitats

#### Species threats

The respondent listed no “critical threat” or “serious threat” to evergreen forest wildlife in Indiana. The respondent listed the following as “somewhat of a threat” (not ranked):

- Habitat loss (breeding range)
- Habitat loss (feeding/foraging areas)

The respondent listed the following as a “slight threat” for wildlife in evergreen forest habitats in Indiana (not ranked):

- Predators (native or domesticated)
- Unintentional take/direct mortality (e.g., vehicle collisions, power line collisions, by-catch, harvesting equipment, land preparation machinery)
- Small native range (high endemism)
- Near limits of natural geographic range
- Degradation of movement/migration routes (overwintering habitats, nesting and staging sites)

The respondent listed no other threats to evergreen forest wildlife in Indiana.

The respondent indicated that the top threat to evergreen forest wildlife in Indiana is the “potential habitat loss due development and lack of management.”

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to wildlife in evergreen forest habitats. There were no responses.

#### Habitat threats

The respondent listed no threats to evergreen forest habitats in Indiana as critical or serious. The respondent listed the following as “somewhat of a threat” (not ranked):

- Commercial or residential development (sprawl)
- Habitat fragmentation
- Successional change

The respondent listed the following as “slight threat” for evergreen forest habitats in Indiana (not ranked):

- Diseases (of plants that create habitat)
- Habitat degradation
- Agricultural/forestry practices
- Mining/acidification

The respondent listed no other threats to evergreen forest habitats in Indiana.

## Appendix F-36: Evergreen

The respondent listed top threats to wildlife in evergreen forest habitats in Indiana as (not ranked):

- Conversion of habitat to other than pine forests
- Lack of active habitat management as the top two threats to evergreen forest habitat

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to evergreen forest habitats. There were no responses.

## Additional research and survey efforts

### Current body of research

#### Species research

The respondent listed "Breeding Bird Atlas and Breeding Bird Survey data" as the current body of science on evergreen forest wildlife in Indiana. No indication about the completeness of this research was given.

Respondents identified the following citations (title, author, date, publisher) that would give the best overview of wildlife in evergreen forest habitats in Indiana.

Title = Atlas of Breeding Birds in Indiana;  
Author = Castrale, Hopkins, and Keller;  
Date = 1998;  
Publisher = Indiana Department of Natural Resources

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the current body of science on wildlife in evergreen forest habitats. There were no responses.

#### Habitat research

The respondent indicated that the current body of science on evergreen forest habitats in Indiana is inadequate.

Respondents identified the following citations (title, author, date, publisher) that would give the best overview of evergreen forest habitats in Indiana.

Title = Indiana Natural Heritage Data Center;  
Publisher = unpublished data

Title = The Natural Regions of Indiana;  
Author = Homoya, Abrell, Aldrich, and Post;  
Date = 1985;  
Publisher = Indiana Academy of Science

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the current body of science on evergreen forest habitats. There were no responses.

### Research needs

#### Species research

## Appendix F-36: Evergreen

The respondent did not list any research efforts as “urgently needed” or “greatly needed” for wildlife in evergreen forest habitats in Indiana. The respondent listed the following research as “needed” (not ranked):

- Life cycle
- Distribution and abundance
- Limiting factors (food, shelter, water, breeding sites)
- Threats (predators/competition, contamination)
- Relationship/dependence on specific habitats
- Population health (genetic and physical)

The respondent did not list other research needs for wildlife in evergreen forest habitats in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the research needs for wildlife in evergreen forest habitats. There were no responses.

### Habitat research

The respondent did not list any research for evergreen forest habitats in Indiana as “urgently needed” or “greatly needed.” The respondent listed as the following research as “needed” (not ranked):

- Successional changes
- Distribution and abundance (fragmentation)
- Threats (land use change/competition, contamination/global warming)
- Relationship/dependence on specific site conditions
- Growth and development of individual components of habitat

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the research for evergreen forest habitats. There were no responses.

## **Conservation actions necessary**

### Species actions

The respondent did not indicate that any of the listed conservation efforts address threats to evergreen forest wildlife in Indiana “very well.” The respondent stated that the following conservation effort addresses threats to wildlife “somewhat:”

- Habitat protection

The respondent did not list any other current conservation practices for wildlife in evergreen forest habitats in Indiana.

The respondent recommended the following for more effective conservation of wildlife in evergreen forest habitats in Indiana: “Prescribed burning to maintain sparse understory in mature pine forests may potentially help evergreen forest wildlife species, for example on DNR lands.”

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the conservation practices for wildlife in evergreen forest habitats. There were no responses.

## Appendix F-36: Evergreen

### Habitat actions

The respondent indicated “selective use of functionally equivalent exotic species in place of extirpated natives” addresses threats to evergreen forest habitats in Indiana “very well.” the respondent stated that the following address threats to evergreen forest habitats in Indiana “somewhat” (not ranked):

- Habitat protection on public lands
- Habitat protection incentives (financial)
- Habitat restoration on public lands
- Succession control (fire, mowing)

The respondent did not note other current conservation practices for evergreen forest habitats in Indiana.

The respondent recommended the following for more effective conservation of evergreen forest habitats in Indiana: “Prescribed burning to maintain sparse understory in mature pine forests may potentially help evergreen forest habitat. Rodewald et al. 1999. Pine Warbler in Birds of North America.”

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the conservation practices for evergreen forest habitats. There were no responses.

## **Proposed plans for monitoring**

### **Current monitoring**

#### Species monitoring

The respondent was aware of this monitoring effort by state agencies for wildlife in evergreen forest habitats in Indiana:

- Occasional statewide (less than once a year and not regularly scheduled) monitoring

The respondent considered this effort to be “somewhat crucial” for conservation of wildlife in evergreen forest habitats in Indiana. No other monitoring efforts by state agencies were considered crucial.

The respondent was aware of this monitoring effort by other organizations for wildlife in evergreen forest habitats in Indiana:

- Statewide once-a-year monitoring

The respondent considered this effort to be “somewhat crucial” for conservation of wildlife in evergreen forest habitats in Indiana. No other monitoring efforts by other organizations were considered crucial.

The respondent noted no regional or local monitoring by state agencies or organizations for wildlife in evergreen forest habitats in Indiana.

The respondent indicated that the following organizations are involved in evergreen forest wildlife monitoring in Indiana (not ranked):

## Appendix F-36: Evergreen

- DNR Division of Fish and Wildlife
- USGS Breeding Bird Survey

The respondent indicated that the following techniques are “frequently used” to monitor evergreen forest wildlife in Indiana:

- Driving a survey route
- Volunteer survey/census

The respondent was not aware of other monitoring techniques for wildlife in evergreen forest habitats in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the monitoring techniques for wildlife in evergreen forest habitats. There were no responses.

### Habitat inventory and assessment

The respondent was not aware of inventory and assessment efforts by state agencies or other organizations for evergreen forest habitats in Indiana.

The respondent could not rate the importance of inventory and assessment efforts conducted by state agencies and other organizations for evergreen forest habitats in Indiana.

The respondent was not aware of regional or local inventory and assessment conducted by state agencies and other organizations for evergreen forest habitats in Indiana. The respondent did not know organizations that conducted this inventory and assessment for evergreen forest habitats in Indiana.

The respondent was unaware of the use or feasibility of inventory and assessment techniques for evergreen forest habitats in Indiana.

The respondent did not list other inventory and assessment techniques for evergreen forest habitats in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the inventory and assessment techniques for evergreen forest habitats. There were no responses.

## **Recommended monitoring**

### Species monitoring

The respondent recommended the following monitoring technique for effective conservation of wildlife in evergreen forest habitats in Indiana:

- Sampling of mature pine forest habitat to better determine distribution

## Appendix F-36: Evergreen

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the monitoring techniques for effective conservation of wildlife in evergreen forest habitats. There were no responses.

### Habitat inventory and assessment

The respondent recommended the following inventory and assessment technique for effective conservation of evergreen forest habitats in Indiana:

- Statewide inventory and mapping of mature pine forest communities to determine more accurate potential distribution of pine warbler. The respondent suggested "Flora of Indiana" by Charles Deam 1940 and unpublished data/files from Division of Forestry as reference

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the inventory and assessment techniques for effective conservation of evergreen forest habitats. There were no responses.