

HEADWATERS IN THE INTERIOR RIVER LOWLAND OF OHIO RIVER DRAINAGE HABITAT NARRATIVE

Habitat description

Streams of the Ohio River drainage, Interior River Lowland ecoregion are found in southwestern Indiana. Headwater streams are those having a drainage area of < 20 mi². Headwater streams of the Interior River Lowland have been heavily modified for agricultural purposes and many are intermittent.

Problems affecting species and habitats

Species threats

The respondent listed the following as “critical threat” to wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat (not ranked):

- Dependence on irregular resources (cyclical annual variations) (e.g., food, water, habitat limited due to annual variations in availability)
- Habitat loss (breeding range)
- Habitat loss (feeding/foraging areas)
- Near limits of natural geographic range
- Viable reproductive population size or availability
- Specialized reproductive behavior or low reproductive rates
- Degradation of movement/migration routes (overwintering habitats, nesting and staging sites)

The respondent listed the following as “serious threat” to wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat:

- High sensitivity to pollution

The respondent listed the following as “slight threat” to wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat (not ranked):

- Bioaccumulation of contaminants
- Predators (native or domesticated)
- Dependence on other species (mutualism, pollinators)
- Diseases/parasites (of the species itself)
- Unintentional take/ direct mortality (e.g., vehicle collisions, power line collisions, by-catch, harvesting equipment, land preparation machinery)

The respondent offered no additional threats to wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat.

The respondent listed top threats to wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat (not ranked):

- Degradation of nesting and staging sites: pools or riffles with slow current beneath flat rocks
- Low reproductive rates: Males reach sexual maturity at two years of age while females can reproduce at one year, and they only have a life span of about three years

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Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Habitat threats

The respondent listed the following as “critical threat” to interior lowland headwaters of Ohio River drainage habitat (not ranked):

- Commercial or residential development (sprawl)
- Nonpoint source pollution (sedimentation and nutrients)
- Habitat fragmentation
- Habitat degradation

The respondent listed the following as “serious threat” (not ranked):

- Stream channelization
- Impoundment of water/flow regulation
- Drainage practices (stormwater runoff)

The respondent listed the following as “somewhat of a threat” (not ranked):

- Successional change
- Climate change
- Agricultural/forestry practices
- Mining/acidification

The respondent listed the following as “slight threat” to interior lowland headwaters of Ohio River drainage habitat (not ranked):

- Invasive/non-native species
- Residual contaminants (persistent toxins)
- Point source pollution (continuing)

The respondent noted no additional threats to interior lowland headwaters of Ohio River drainage habitat.

The respondent listed top threats to interior lowland headwaters of Ohio River drainage habitat:

- Habitat degradation in terms of removal of substrate for spawning and sedimentation for covering the substrate needed to spawn

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Additional research and survey efforts

Current body of research

Species research

The respondent stated that the current body of science is inadequate for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat.

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Respondents did not identify citations (title, author, date, publisher) that would give the best overview of wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the current body of science for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Habitat research

The respondent stated that the current body of science is inadequate for interior lowland headwaters of Ohio River drainage habitat.

Respondents did not identify citations (title, author, date, publisher) that would give the best overview of headwaters of the interior river lowland of the Ohio River drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the current body of science for headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Research needs

Species research

The respondent listed the following research for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat as "urgently needed" (not ranked):

- Limiting factors (food, shelter, water, breeding sites)
- Threats (predators/competition, contamination)
- Relationship/dependence on specific habitats

The respondent listed the following research as "slightly needed" (not ranked):

- Population health (genetic and physical)
- Life cycle
- Distribution and abundance

The respondent listed no research as "greatly needed" or "needed."

The respondent noted no other research needs for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat.

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 headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Habitat research

The respondent listed the following research as "urgently needed" for interior lowland headwaters of Ohio River drainage habitat (not ranked):

- 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 the habitat

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The respondent listed “successional changes” as “needed” research.

The respondent noted no other additional research needs for interior lowland headwaters of Ohio River drainage habitat.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the additional research needs for headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Conservation actions necessary

Species actions

The respondent did not respond to the question regarding how well practices address threats to wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat. The respondent listed no current conservation practices for wildlife in this habitat.

The respondent recommended the following specific practices for more effective conservation of wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat (not ranked):

- Habitat protection
- Threats reduction

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the effective conservation of wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Habitat actions

The respondent did not answer the question asking how well practices address threats to interior lowland headwaters of Ohio River drainage habitat. The respondent listed no current conservation practices for this habitat.

The respondent recommended the following practices for more effective conservation of interior lowland headwaters of Ohio River drainage habitat (not ranked):

- Habitat protection
- Threats reduction

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the practices for more effective conservation of headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Proposed plans for monitoring

Current monitoring

Species monitoring

The respondent was aware of the following monitoring efforts by state agencies for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat (not ranked):

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- Periodic regional or local (less than once a year but still regularly scheduled) monitoring
- Occasional regional or local (less than once a year and not regularly scheduled) monitoring

The respondent was aware of no monitoring efforts by other organizations for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat.

The respondent listed the following monitoring efforts by state agencies as “very crucial” for conservation of wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat (not ranked):

- Periodic regional or local (less than once a year but still regularly scheduled) monitoring
- Occasional regional or local (less than once a year and not regularly scheduled) monitoring

The respondent listed no monitoring efforts by other organizations as crucial for conservation of wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat.

The respondent listed regional or local monitoring by state agencies for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat (not ranked):

- I believe IDNR has conducted special studies on the Spottail Darter
- IDEM has a record of the Spottail Darter being caught in that area

The respondent listed no regional or local monitoring by other organizations for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat. The respondent listed no organizations that conduct such monitoring.

The respondent considered current monitoring techniques for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat as follows:

Monitoring techniques for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat	Used	Not used but possible with existing technology and data	Not economically feasible
Representative sites	X	--	--
Probabilistic sites	X	--	--

The respondent noted no other monitoring techniques for wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat.

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 headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Habitat inventory and assessment

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The respondent was aware of the following inventory and assessment efforts by state agencies for interior lowland headwaters of Ohio River drainage habitat:

- Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment

The respondent ranked the above inventory and assessment efforts as “somewhat crucial” for conservation of this habitat.

The respondent was aware of no following inventory and assessment efforts by other organizations for interior lowland headwaters of Ohio River drainage habitat. Therefore, no efforts are considered crucial.

The respondent listed no regional or local inventory and assessment by state agencies or other organizations agencies for interior lowland headwaters of Ohio River drainage habitat.

The respondent listed organizations that monitor interior lowland headwaters of Ohio River drainage habitat:

- IDEM performs habitat assessments in this area

The respondent did not answer the question regarding use or feasibility of inventory and assessment techniques for interior lowland headwaters of Ohio River drainage habitat.

The respondent listed no additional inventory and assessment techniques for interior lowland headwaters of Ohio River drainage habitat.

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 headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Recommended monitoring Species monitoring

The respondent recommended the following monitoring techniques for effective conservation of wildlife in headwaters of the interior river lowland of the Ohio River drainage habitat:

- Seining at representative sites

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 headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.

Habitat inventory and assessment

The respondent recommended no inventory and assessment techniques for effective conservation of interior lowland headwaters of Ohio River drainage habitat.

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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 headwaters of the interior river lowland of the Ohio River drainage habitat. There were no responses.