

# Wildlife Habitat Evaluation Program: Preparing for the Wildlife Challenge

## Authors:

Rod N. Williams, Dept. of Forestry & Natural Resources

Natalie Carroll, Dept. of Youth Development &  
Agricultural Education

Photos by R. Williams unless otherwise noted

*The Wildlife Challenge was incorporated into the Wildlife Habitat Education Program (WHEP) Career Development Event (CDE) in 2014. The Wildlife Challenge combines general wildlife knowledge and*

*identification. The objective of this activity is to ensure youth can identify wildlife within the designated ecoregions (i.e., Eastern Deciduous Forest, Urban, or Wetlands for Indiana) and demonstrate knowledge of wildlife management concepts, terminology, practices, and ecology of selected species. This publication explains the format of the Wildlife Challenge, offer direction on where to find key information, and provide flashcards to help youth practice wildlife identification.*

## Wildlife Challenge Format

The Wildlife Challenge follows a general lab practical format (see Figure 1). Youth move from station to station as directed by the proctor, answering 30 general knowledge questions (multiple choice) and 20 identifications (IDs). The IDs include species from study skins and/or skulls. The ID portion of this event is “fill in the blank” and is scored for accuracy, spelling, and punctuation. Youth are allowed 30 minutes total. See the National WHEP manual ([http://www.whep.org/National\\_WHEP\\_Manual.html](http://www.whep.org/National_WHEP_Manual.html), Activities III and IV) for more information. The Wildlife Challenge is an individual event worth a total of 50 points.



Figure 1. The Wildlife Challenge is organized in a lab practical format. Questions can be a series of study skins to identify or a combination of study skins to identify and multiple-choice questions covering general knowledge.



**Sample multiple choice questions for the Wildlife Challenge – general knowledge.**

1. Species richness and species diversity are identical concepts.
  - a. True
  - b. False**
2. Which species is not included in the Eastern Deciduous Forest?
  - a. mourning dove
  - b. eastern box turtle
  - c. ovenbird
  - d. scaled quail**
  - e. bobcat
3. Which of the following feeds primarily on earthworms?
  - a. American woodcock**
  - b. eastern gray squirrel
  - c. Indiana bat
  - d. northern bobwhite
  - e. golden-winged warbler
4. Water Developments for Wildlife is a management practice that cannot be considered for
  - a. bluegill**
  - b. crawfish frog
  - c. mourning dove
  - d. wood duck
  - e. Virginia rail

## General Knowledge

The general knowledge portion of the Wildlife Challenge consists of a series of multiple choice questions (see sample questions above). Study materials for this activity can be found in the National WHEP manual: Concepts and Terms, Ecoregions, Wildlife Species, Wildlife Management Practices, and the Glossary.

## Wildlife Identification

The Indiana WHEP CDE requires participants to identify species primarily from adult male study skin specimens. The National Contest, however,

may require youth to identify a specimen of either sex, a portion of a specimen, a photo, animal sign, or a sound from selected species. When identifying the species, youth must follow the correct spelling, capitalization, and hyphenation as indicated in this publication or the National WHEP manual to receive credit.

There are 52 total species representing the Eastern Deciduous Forest, Urban, and Wetlands ecoregions included in the Wildlife Challenge. The lists below indicate which species are found within each region and can be used as a reference for the correct spelling, capitalization, and hyphenation for each species (*note*: some species occur within more than one ecoregion).

### Eastern Deciduous Forest

American woodcock	bobcat
brown thrasher	eastern cottontail
eastern meadowlark	eastern gray squirrel
golden-winged warbler	gray fox
great horned owl	Indiana bat
mourning dove	white-tailed deer
northern bobwhite	eastern box turtle
ovenbird	timber rattlesnake
wild turkey	bluegill
wood duck	largemouth bass

### Urban

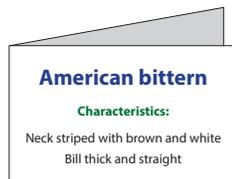
American robin	rock pigeon
common nighthawk	ruby-throated hummingbird
eastern bluebird	song sparrow
European starling	big brown bat
house finch	eastern cottontail
house sparrow	coyote
house wren	eastern gray squirrel
northern flicker	raccoon
peregrine falcon	white-tailed deer

### Wetlands

American bittern	mink
Canada goose	raccoon
mallard	river otter
northern pintail	eastern snapping turtle
redhead	American bullfrog
spotted sandpiper	crawfish frog
Virginia rail	tiger salamander
Wilson's snipe	bluegill
American beaver	largemouth bass
common muskrat	

## Flashcards for Wildlife ID Study

The flashcards provided in this publication help youth identify wildlife species associated with the Eastern Deciduous Forest, Urban, and Wetlands ecoregions. Flashcards remain one of the simplest and most successful tools for engaging youth in the learning process. Studies have shown that repetition is the most effective form of learning. Flashcards allow youth to take advantage of brief periods of time throughout the day (e.g., car rides), because the cards can easily be taken anywhere. Flashcards also enable youth to “compete” with themselves or against peers in a group setting. Use the following pages to make flashcards by cutting the horizontal lines and folding the paper so the wildlife species is on one side and the name and characteristics are on the other. A color printer is recommended because many of the characteristics depend on coloration.



Preserved specimens (not pictures) are used for the Indiana WHEP Career Development Event. While most specimens retain their coloration for decades, some may fade over short periods of time. To ensure youth are prepared for these subtle changes, the flashcards were developed using pictures of specimens displayed on the day of the contest. Information on how to identify a particular species is listed on the back of each flashcard. The most important characteristics used for identification are always listed first. Youth are only responsible for identifying specimens

shown in the photos (i.e., generally adult males). Youth are not allowed to handle specimens, but can ask the proctor to handle the specimens so important features needed for positive identification can be viewed.

## Other Indiana WHEP Resources

Indiana Wildlife Habitat Education CDE website: [www.four-h.purdue.edu/WHEP/](http://www.four-h.purdue.edu/WHEP/)

Carroll, N., and R.N. Williams. 2015. *Developing a Wildlife Habitat Management Plan*. Purdue Cooperative Extension Service Publication, 4-H-991-W, West Lafayette, IN.

MacGowan, B.J. 2014. *Learning and Teaching Wildlife Management Practices*. Purdue Cooperative Extension Service Publication, FNR-494-W, West Lafayette, IN.

Chapman, R.N., and R.N. Williams. *Common Indiana Mammals*. Purdue Cooperative Extension Service Publication, FNR-413, West Lafayette, IN.

*4-H/FFA Judging Handbook* (Current WHEP CDE rules and guidelines): <http://www.four-h.purdue.edu/agjdghndbook/index.html>.

## National WHEP Resource

Harper, C.; D. Elmore, A. Deck, R. Williams, M. Clayton, R. Chapman, B. Higginbotham, R. Mathenia J. Avery, D. Drake, S. Nicole Frey, and B. Gourley. 2015. *Wildlife Habitat Education Program*, (C.A. Harper, editor), 335 p. Accessed from [www.whep.org](http://www.whep.org).





## American bittern

### Characteristics:

- Neck striped with brown and white
- Bill thick and straight



## American robin

### Characteristics:

- Brick-red breast and belly
- Yellow beak
- Grayish back with darker head and tail



## American woodcock

### Characteristics:

- Long beak
- Reddish brown breast and belly
- Horizontal dark bars on head



## brown thrasher

### Characteristics:

- Reddish brown on head, back, and tail
- Heavily streaked belly
- Long tail



## Canada goose

**Characteristics:**

Black head and neck  
White "chin strap"



## common nighthawk

**Characteristics:**

White bar across wings  
White throat  
Small beak



## eastern bluebird

**Characteristics:**

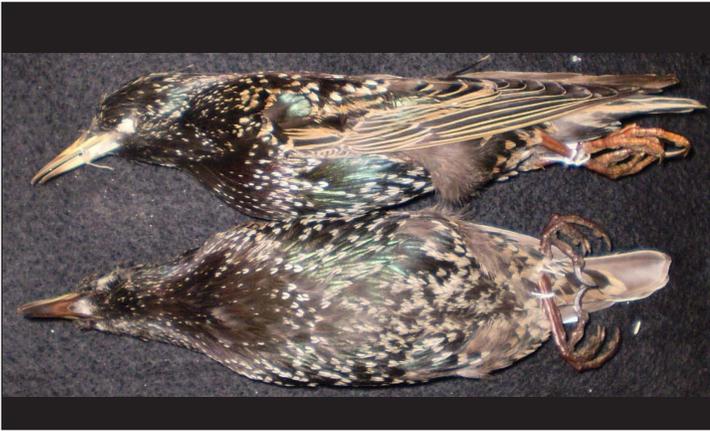
Deep blue along head, back, and tail  
Reddish brown along throat and breast  
White belly



## eastern meadowlark

**Characteristics:**

Bold black "V" across chest  
Bright-yellow belly  
Spear-shaped bill  
Short tail



## European starling

### Characteristics:

Iridescent black  
Body feathers tipped with white  
Short, square tail



## golden-winged warbler

### Characteristics:

Silvery gray with bold black-and-white face pattern  
Yellow crown  
Yellow wing patches



## great-horned owl

### Characteristics:

Large ear tufts  
White throat  
Hooked beak  
Sharp talons



## house finch

### Characteristics:

Front of head, throat, and breast reddish-purple  
Reddish-purple spot on rump  
Streaks on sides of belly



## house sparrow

### Characteristics:

- Black throat
- Rusty brown neck
- Gray on top of head and belly



## house wren

### Characteristics:

- Black barring on tail
- Small size
- Brownish overall



## mallard

### Characteristics:

- Metallic green head
- White neck-ring
- Reddish-brown breast



## mourning dove

### Characteristics:

- Long pointed tail
- Small head
- Gray body
- Rosy colored breast



## northern bobwhite

### Characteristics:

- White throat and eye stripe
- Sides striped reddish brown
- Chunky body



## northern flicker

### Characteristics:

- Black bib
- Black spots on belly
- Shafts of feathers yellow
- Black barring on back
- Red patch on back of neck



## northern pintail

### Characteristics:

- Brown head
- White neck and chest
- Tail feathers long
- Neck long and slender



## ovenbird

### Characteristics:

- Orange head stripe bordered by black
- Breast with reddish brown streaks or spots



## peregrine falcon

### Characteristics:

- Black hood with broad sideburns
- Back is dark gray
- Belly and legs barred



## redhead

### Characteristics:

- Bright red head
- Black chest
- Gray back



## rock pigeon

### Characteristics:

- Multicolored
- Neck darker than back
- Small head



## ruby-throated hummingbird

### Characteristics:

- Small body
- Long slender beak
- Iridescent throat



## song sparrow

### Characteristics:

- Large spot on center of breast
- Spotting or streaking along side of breast
- Belly whitish
- Back brownish



## spotted sandpiper

### Characteristics:

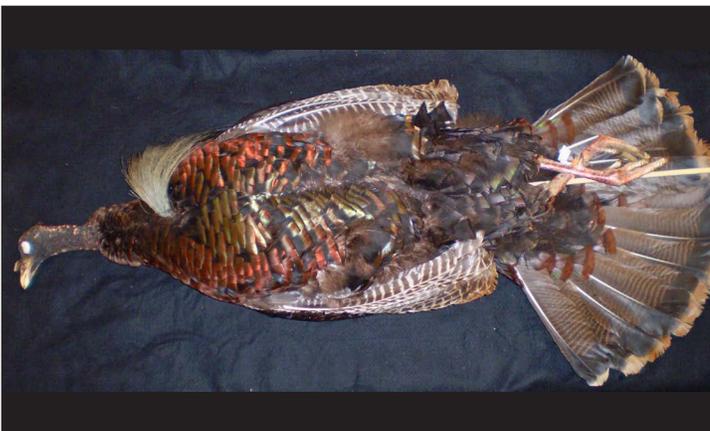
- Dark spots on bright white breast
- Orange bill
- Back dark brown



## Virginia rail

### Characteristics:

- Reddish throat and breast
- Gray cheeks
- Long and slightly curved red bill
- Black and white barring on flanks



## wild turkey

### Characteristics:

- Large size
- Naked head
- Modified feathers (beard) on breast
- Iridescent body feathers



## Wilson's snipe

### Characteristics:

- Long beak
- Striped head
- Striped back
- White belly



## wood duck

### Characteristics:

- Glossy iridescent body
- Head with large crest
- Reddish brown breast



## American beaver

### Characteristics:

- Large, broad, and flattened tail
- Fur brown and thick
- Hind feet webbed



## big brown bat

### Characteristics:

- Black wings
- Brown fur
- Large size



## bobcat

### Characteristics:

- Tail short and black only on the dorsal side of the tip
- Tail white below
- Ear tufts short
- White spot behind each ear



## common muskrat

### Characteristics:

- Body fur rich, dark brown
- Tail long, naked, and compressed from side-to-side



## coyote

### Characteristics:

- Resembles medium-sized dog
- Body grizzled gray or reddish gray
- Tail often with black tip



## eastern cottontail

### Characteristics:

- Large white hind feet
- Long narrow ears
- Cotton-ball shaped tail white below
- Neck rusty-reddish color
- Body fur speckled brownish and grayish



## eastern gray squirrel

### Characteristics:

- Body fur grayish
- Long tail with white-tipped fur
- Belly whitish



## gray fox

### Characteristics:

- Body fur salt-and-peppered grayish
- Tip of tail and muzzle black
- Reddish on sides of neck, back of ears, and portions of belly and legs



## Indiana bat

### Characteristics:

- Dark brown wings
- Small size
- Dark pinkish brown fur



## mink

### Characteristics:

- Tail long and slightly bushy
- Rich dark brown fur
- Patch of white fur on chin



## **raccoon**

### **Characteristics:**

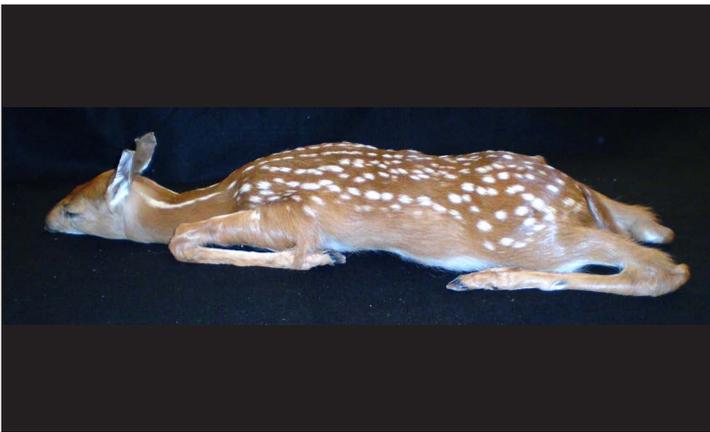
Tail with alternating rings of yellowish white and black  
Body fur is "salt and peppered"  
Black mask over eyes



## **river otter**

### **Characteristics:**

Body fur rich, dark brown  
Long and slender body  
Tail long and tapered  
Short legs end with webbed toes  
Ears small and round



## **white-tailed deer**

### **Characteristics:**

Fawns reddish brown with white spots  
White undersides  
Feet with hooves



## **American bullfrog**

### **Characteristics:**

Large size  
No dorso-lateral ridge  
Ridge around eardrum  
Green to olive brown in coloration



## crawfish frog

### Characteristics:

- Large round spots on back
- Prominent dorso-lateral ridge from eye to thigh
- Brown coloration



## eastern box turtle

### Characteristics:

- High dome-like shell
- Black and yellow streaking on shell



## eastern snapping turtle

### Characteristics:

- Large head
- Long tail
- Shell with prominent ridges



## tiger salamander

### Characteristics:

- Dark body with large yellow spots on back, side, and belly
- No scales or claws



## timber rattlesnake

### Characteristics:

- Rattle at end of tail
- Dark chevron-shaped bands along back
- Pit between eye and nostril
- Large size



## bluegill

### Characteristics:

- Black ear flap
- Long pointed pectoral fin
- Small mouth



## largemouth bass

### Characteristics:

- Large mouth
- Whitish body with broad dark stripe along side