

Sharing Your World With Wildlife  
Webelos Achievement Handbook



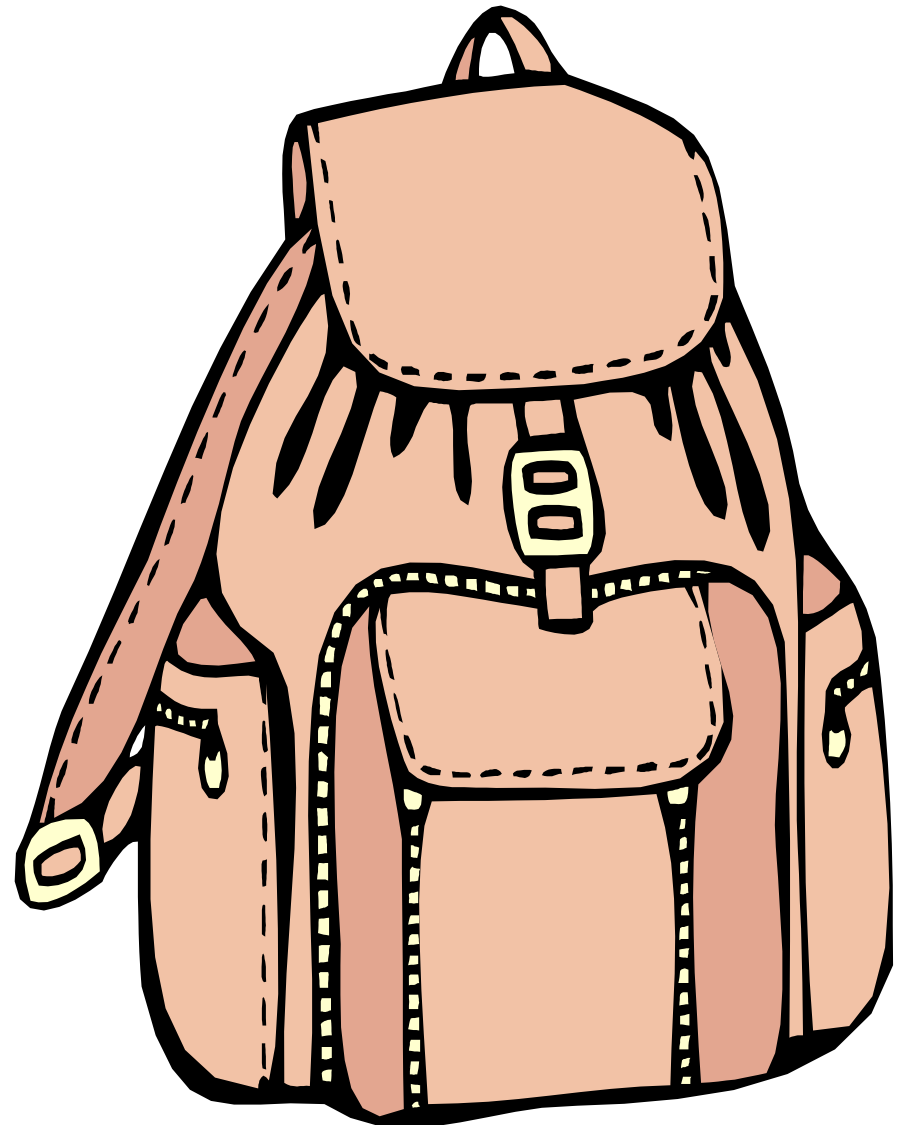
The Graver Arboretum

Muhlenberg College

2400 Chew St.

Allentown, PA 18104

Outreach Director: 484-664-3253



# YOUR VISIT TO GRAVER ARBORETUM

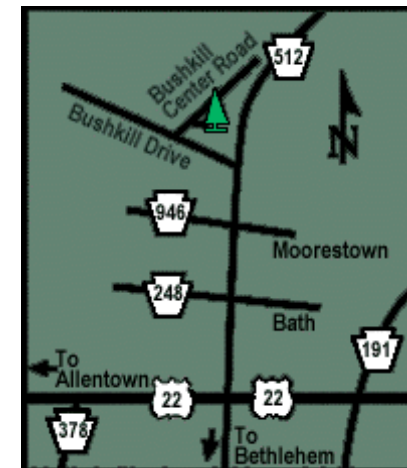
## History/Origin

For more than 40 years, Dr. Lee and Virginia Graver, nature lovers and conservationists, cleared overgrown briar patches, dense brush areas and woods to create an environment good for the growth of wildflowers, ferns, rhododendrons, and native and rare trees. The arboretum has more than 150 species of conifers. The results of their work is a beautiful 63-acre arboretum which the Gravers generously donated to Muhlenberg College in 1994.

The Gravers also donated money to help pay for the maintenance of the arboretum, to make sure that future generations of Muhlenberg students, faculty, and friends can enjoy the splendor of this precious natural laboratory.

## Directions to Graver Arboretum

- The Arboretum is a 45 minute drive (21 miles) from the Muhlenberg Campus.
- Take Route 22 to 512 North. (From Allentown, take Route 22 East; from Bethlehem/Easton, take Route 22 West.)
- Follow for approximately 11.3 miles; turn left at the traffic light (Exxon station) onto Bushkill Center Road.
- At the white church, bear left.
- The entrance to Graver Arboretum is on the left, approximately 0.6 miles ahead at (1581 Bushkill Center Road).
- Please park in the gravel lot located behind the barn.



# RESEARCHERS AT GRAVER ARBORETUM

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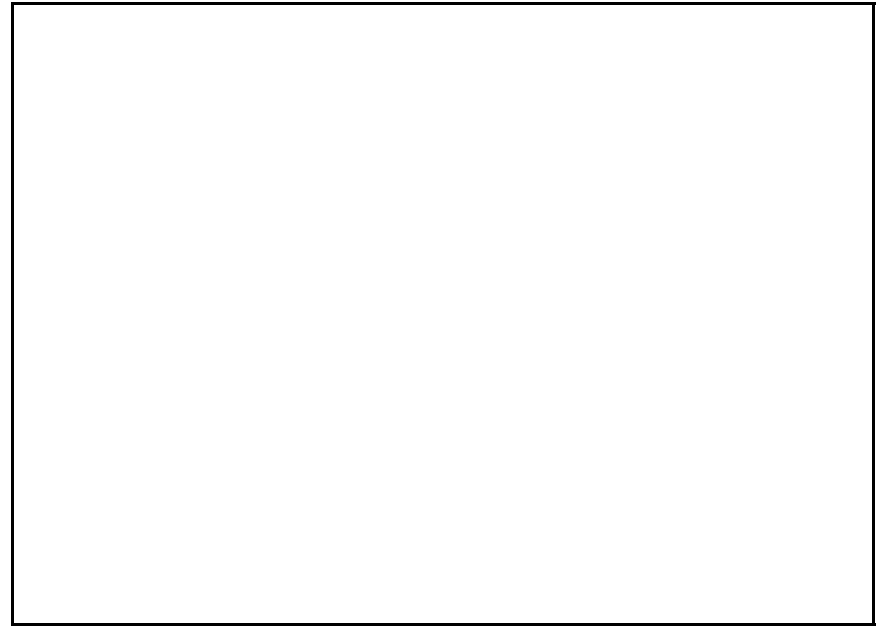
# BIRD WATCHING BASICS

You will learn the basics of bird watching: how do bird 's act, how do they look, and discovering what birds can tell you about the local habitat.

Here are some ways that bird watchers learn about birds.

- They observe how birds act when they are alone or with other birds.
- They observe the color and shape of birds.
- They notice the patterns of feathers on a bird 's body.
- They notice where birds hang out—on the ground, on tree trunks, on lower branches, up in the treetops, by the water, etc.,
- They try to figure out what different birds like to eat.

Draw the habitat of the Wood Thrush in the box below.

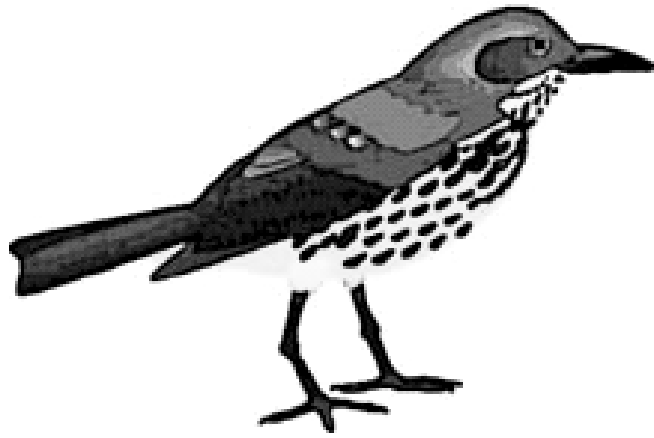


1. What are the major reasons this species is threatened or endangered? \_\_\_\_\_

2. What could humans do to protect these animals?

3. What needs to change for this species to recover?

# WOOD THRUSH



**Habitat:** Moist, deciduous woodlands with a thick understory; also well-planted parks and gardens.

**Weight:** 1-1/2 to 1-3/4 ounces.

**Length:** 7-8 inches.

**Life Expectancy:** 9 years.

**Food:** Eats a wide variety of bugs including beetles, ants, moths, caterpillars, millipedes, and isopods. Birds also feed upon fruits and berries.

**For More Information :**

[http://www.birds.cornell.edu/programs/AllAboutBirds/BirdGuide/Wood\\_Thrush.html](http://www.birds.cornell.edu/programs/AllAboutBirds/BirdGuide/Wood_Thrush.html)

<http://www.enature.com>

<http://audubon2.org/webapp/watchlist/viewSpecies.jsp?id=222>

**Picture Credit :**

<http://birding.about.com/library/bl0600thrush.htm>

# BIRD SHAPES

Woodpeckers



Feet up against a tree.

Ducks



S-shaped and floats.

Doves



Long tail.



Swallow



V shaped wings

Birds With A Crest



# BIRD COLORS

Birds have many different colors. Using a field guide, see how many birds of each color you can find at Graver Arboretum.

Red: \_\_\_\_\_

\_\_\_\_\_

Blue: \_\_\_\_\_

\_\_\_\_\_

Grey: \_\_\_\_\_

\_\_\_\_\_

Yellow: \_\_\_\_\_

\_\_\_\_\_

Brown / Tan: \_\_\_\_\_

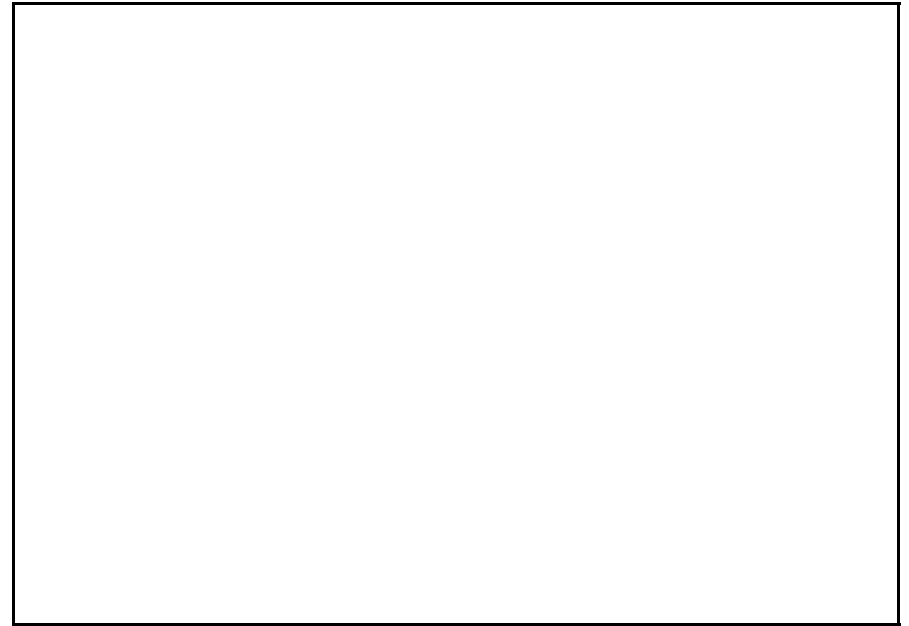
\_\_\_\_\_

Black: \_\_\_\_\_

\_\_\_\_\_

Other Color: \_\_\_\_\_

Draw the habitat of the Black Bear in the box below.



1. What are the major reasons this species is threatened or endangered? \_\_\_\_\_

\_\_\_\_\_

2. What could humans do to protect these animals?

\_\_\_\_\_

\_\_\_\_\_

3. What needs to change for this species to recover?

\_\_\_\_\_

\_\_\_\_\_

# BLACK BEAR



**Habitat:** Primarily forests and swamps

**Weight:** 203–587 pounds.

**Length:** 4' 6"–6' 2".

**Life Expectancy:** 25 or more years in the wild, but they average less in populations where hunting occurs.

**Food:** Most of its diet consists of vegetation, including twigs, leaves, nuts, fruit, and much more. It rips open bee trees to feast on honey, honeycombs, bees, and larvae, and will tear apart rotting logs for grubs, beetles, crickets, and ants. The Black Bear often wades in streams or lakes to catch fish. It rounds out its diet with small to medium-size mammals or other vertebrates.

## For More Information :

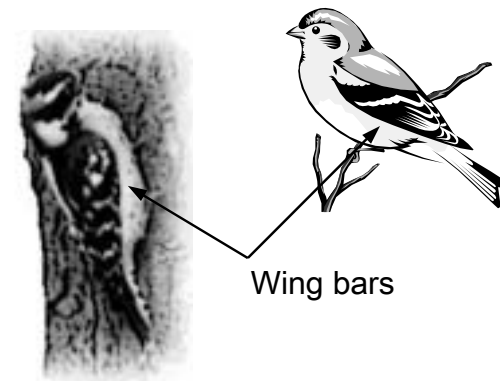
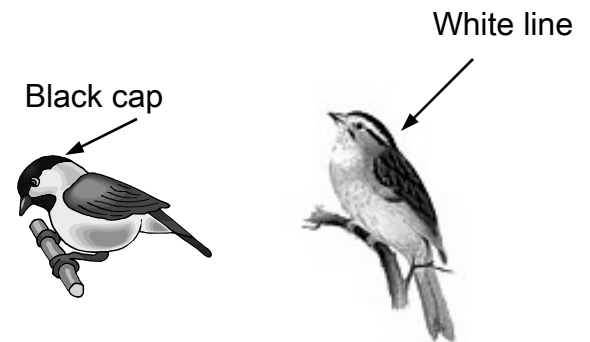
<http://www.enature.com>

[http://www.fws.gov/species/species\\_accounts/bio\\_bear.html](http://www.fws.gov/species/species_accounts/bio_bear.html)

## Picture Credit :

<http://www.fws.gov/r9extaff/drawings/page14b.gif>

## Markings

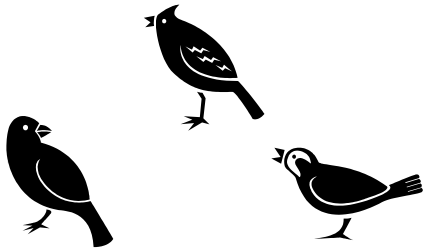


# BIRD BEAKS

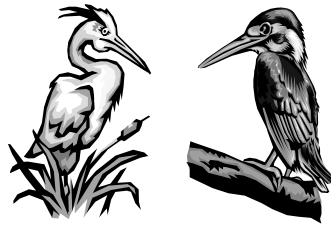
Shovel or Scoop Shaped



Seed and Nut Crackers



Spears



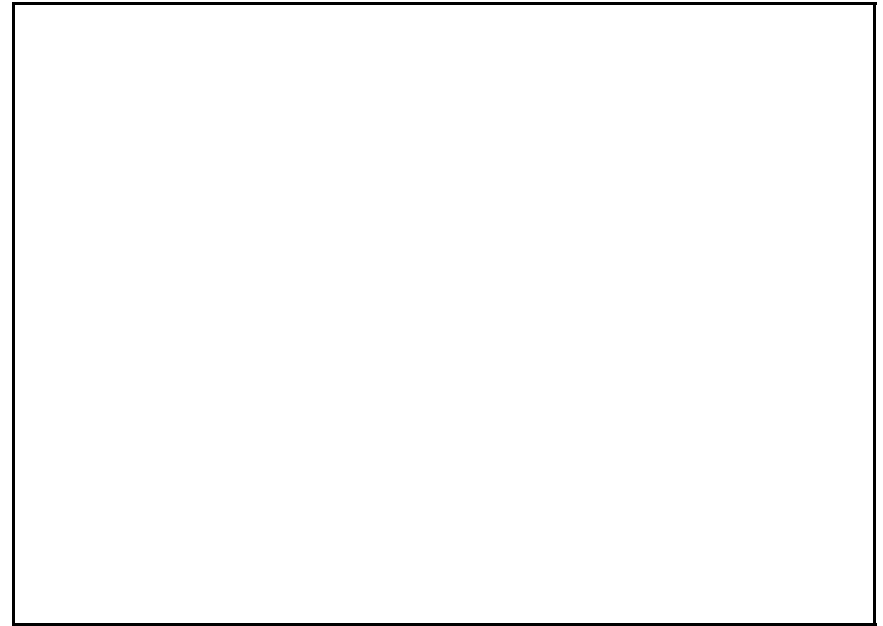
Straw and Tweezers



Hooks



Draw the habitat of the Timber Rattler in the box below.



1. What are the major reasons this species is threatened or endangered? \_\_\_\_\_

\_\_\_\_\_

2. What could humans do to protect these animals?

\_\_\_\_\_

\_\_\_\_\_

3. What needs to change for this species to recover?

\_\_\_\_\_

\_\_\_\_\_

# TIMBER RATTLER



**Habitat:** Timber rattlesnakes are generally found in deciduous forests in rugged terrain.

**Weight:** 1 1/4 - 2 pounds.

**Length:** 3 - 4.5 feet.

**Life Expectancy:** 16 - 22 years.

**Food:** Primarily on small mammals, but occasionally takes small birds, amphibians and other snakes.

## For More Information :

<http://www.dcnr.state.pa.us/forestry/wildlife/rattlesnakes.aspx>

## Picture Credit :

<http://www.dec.state.ny.us/website/dfwmr/wildlife/endspec/tirafs.html>

# BIRD CHARACTERISTICS

What is unique about the birds you saw?

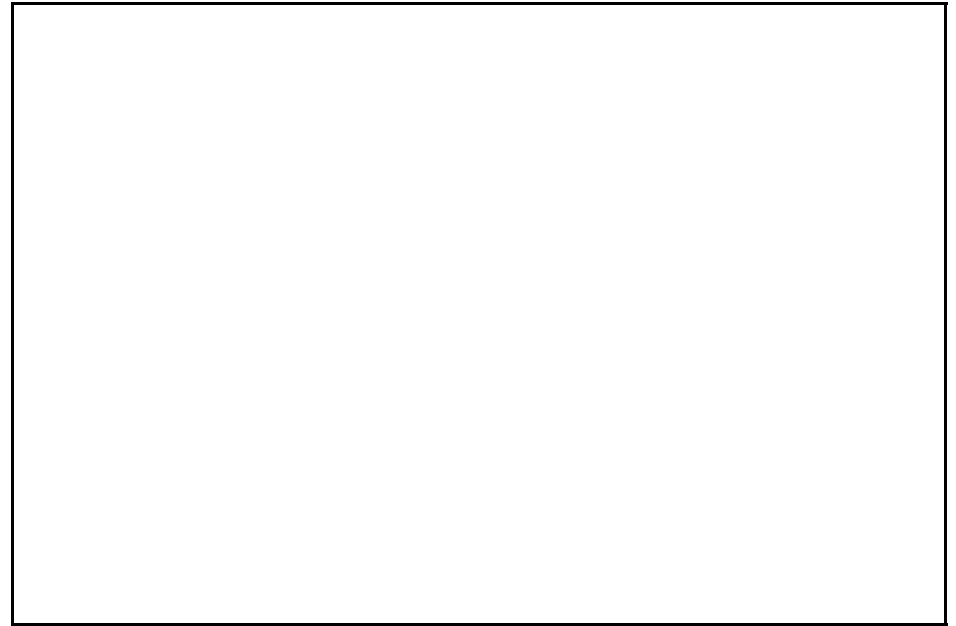
Draw a picture of four birds and next to the birds write how you can identify each bird — shapes, colors, beaks, markings, or can you think of something else?


# MY BIRD LIST

Use the table below to record different bird species that you have observed.

Type of Bird	Where seen

Draw the habitat of the Box Turtle in the box below.



1. What are the major reasons this species is threatened or endangered? \_\_\_\_\_  
\_\_\_\_\_

2. What could humans do to protect these animals?  
\_\_\_\_\_  
\_\_\_\_\_

3. What needs to change for this species to recover?  
\_\_\_\_\_  
\_\_\_\_\_

# BOX TURTLE



**Habitat:** Box turtles live in open woodlands, pastures, and marshy meadows. They are often found near streams and ponds.

**Weight:** 1/2 pound.

**Length:** 6 inches.

**Life Expectancy:** Box turtles may live more than 100 years.

**Food:** Omnivorous, these turtles eat snails, insects, berries, fungi, slugs, worms, roots, flowers, fish, frogs, salamanders, snakes, birds, and eggs indiscriminately.

**For More Information :**

<http://nationalzoo.si.edu/Animals/ReptilesAmphibians/Facts/FactSheets/Easternboxturtle.cfm>

[http://www.fcps.k12.va.us/StratfordLandingES/Ecology/mpages/eastern\\_box\\_turtle.htm](http://www.fcps.k12.va.us/StratfordLandingES/Ecology/mpages/eastern_box_turtle.htm)

**Picture Credit :**

<http://www.dec.state.ny.us/website/dfwmr/wildlife/endspec/tirafs.html>

# THREATENED ANIMALS

There are a few species of rare animals that once lived at Graver Arboretum. They are the Leopard Frog, Box Turtle, Timber Rattler, Black Bear and Wood Thrush. These animals are in danger of disappearing forever.

What makes animals endangered?

We can use the word, “HIPPO ” to help us remember the reasons some animals are in danger of becoming extinct<sup>1</sup>. HIPPO stands for:

Habitat Loss

Introduced Invasive Species

Pollution

Population Growth

Over Consumption

<sup>1</sup>Windows on the Wild: Biodiversity Basics A Pennsylvania Supplement. Pennsylvania Game Commission. 2001 Elmerton Avenue Harrisburg, Pa 17110

# LEOPARD FROG



**Habitat:** Edges of lakes and river, marshes, and wet meadows.

**Weight:** Less than a 1/4 pound.

**Length:** 2 - 3 1/2 inches.

**Life Expectancy:** 3 years.

**Food:** Variety of insects; worms and spiders.

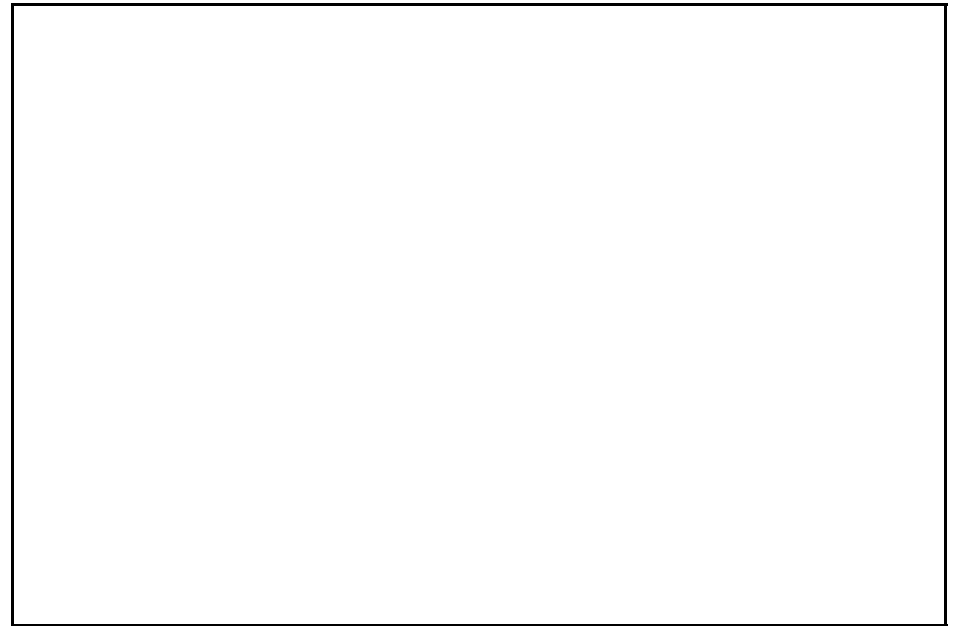
## For More Information :

[http://sites.state.pa.us/PA\\_Exec/Fish\\_Boat/anglerboater/1999/jf99/leofrogg.htm](http://sites.state.pa.us/PA_Exec/Fish_Boat/anglerboater/1999/jf99/leofrogg.htm)

## Picture Credit :

<http://www.dec.state.ny.us/website/dfwmr/wildlife/endspec/tirafs.html>

Draw the habitat of the Leopard Frog in the box below.



1. What are the major reasons this species is threatened or endangered? \_\_\_\_\_

\_\_\_\_\_

2. What could humans do to protect these animals?

\_\_\_\_\_

\_\_\_\_\_

3. What needs to change for this species to recover?

\_\_\_\_\_

\_\_\_\_\_