

Envirothon Exam 2004

Wildlife

1. Name 2 of the 4 habitat elements (the four parts of habitat that animals need) that can be provided for bluebirds in an urban environment. How can they be provided? (8 points)

Habitat elements:

shelter

food

water

How are they provided:

houses

vegetation management/

bird feeder (acceptable)

bird bath

Deer are often a major player in urban wildlife issues. For many they are a nuisance, eating ornamental plants and providing potential automobile accidents. However, to some, they are beautiful and natural creatures.

2. Name 2 main reasons why deer populations in southern Wisconsin have exploded over the past 150 years. (4 points)

a. introduction of deer

b. predator control

c. protection from hunting in 1880

d. woodland/agriculture landscape

3. List 2 non-lethal methods of minimizing deer-human conflict. (4 points)

fences

relocation

birth control

4. In the 1940s Aldo Leopold wrote the Marshland Elegy, an essay about the concerning decline of Sandhill Cranes in Wisconsin. It was estimated there were only 25 breeding pairs in the state and today, the population is huge. Name two management actions that have allowed crane populations to increase. (4 points)

a. banning the use of DDT

b. banning crane hunting

c. protecting and restoring forests

d. protecting and restoring wetlands

e. planting purple loosestrife and lupine

f. providing nesting structures on wetlands

5. What government agency was founded for the management and protection of migratory birds and endangered species? **US Fish and Wildlife Service**

What government agency oversees hunting regulations in Wisconsin?
Wisconsin DNR

6. One of these skulls is a predator, one is an herbivore.

Which is which? **(4 points)**

A will be an herbivore, B will be a predator...

List two ways you can tell the difference between the two (think of how they are adapted to their lifestyle). **(4 points)**

The herbivore will have flatter teeth for chewing plants

The carnivore will have canines and pointed teeth for tearing off meat

Herbivore has eyes to the side, predator eyes in front,

7. The grass shown here, Reed Canary Grass, is a very destructive plant Wisconsin wetlands. It is an exotic species that is the heartache of wetland biologists.

Why might this plant be harmful to waterfowl and other wildlife species ?
(4 points)

a. poisonous

b. spreads disease

c. absorbs pollutants

d. provides poor nesting cover

8. What kind of skull is this urban creature? **(3 points)**

 raccoon

9. How has this animal adapted to an urban setting? **(6 points)**

Diet generalist (omnivore, eats garbage)

Cover lives in man-made structures, sewers, shrublines, city parks

Behavior nocturnal, travels underground in sewers, etc

10. List two larger common *urban* predators (bigger than a shoebox): **(4 points)**

 red fox

 coyote

(raccoon, housecats, humans)

A new housing development built along a wooded creek is beginning to discover they have a friendly beaver living in their creek. The beaver is cutting trees on the west bank, upsetting landowners whose trees are being destroyed. They say the beaver should be killed. East bank landowners strongly disagree and vow to protect their fuzzy friend. You are the wildlife biologist for the Wisconsin DNR.

11. What should be done *first* to avoid conflicts between landowners. (3 points)

- a. call a meeting
- b. hand-out informative pamphlets
- c. start a research project
- d. inform the town sheriff
- e. call your local representative

12. What are two non-lethal solutions to the problem mentioned above? (6 points)

- ___trapping and relocating_____
- ___fencing around trees_____
- ___compensation to landowners_____

13. What animal made this structure? (4 points)

- ___beaver_____

14. What two other pieces of evidence can you use to support you answer (find one and show to station captain)? (4 points)

- ___chewed trees_____
- ___scatt, footprints, old lodge_____

15. What changes do frogs and toads go through during the course of their metamorphosis? (3 points)

- a. Tails to having legs
- b. Breathing through gills to breathing through lungs and skin
- c. Vegetarian diet to carnivore diet
- d. All of the above

16. Some people love wolves, others hate them. List the most important role that wolves play in Wisconsin ecosystems: (4 points)

predators

17. Coyotes were animals previously found in the western portion of the United States (west of the Mississippi). Today their range has expanded all the way into New England.

Coyotes are edge-habitat species. (6 points)

a. What have humans done to ecosystems that support the expansion of the coyote populations from the western US into eastern US?

urbanization, development

b. In some areas coyote populations are on the decline due to the revival of this species:

grey wolf

18. Using the binoculars given: (6 points)

a. Name the bird species the decoy in the water represents.

Wood duck

b. How has this species been managed for on this site (look around)?

houses

19. This frog species is common in temporary and permanent wetlands. Listening to the call, (6 points)

a. Can you name what species it is?

spring peeper

b. The species prefers temporary and permanent marshes or ponds near shrubby woodlots. Would this site be favorable?

no

20. We are doing a survey of the deer mouse population on this property and decide to use the *mark and recapture method* to estimate the population size. (6 points)

First we capture 10 mice, tag them, and set them free.

We then recapture 30 mice;

2 of the 30 recaptured mice were tagged.

Use the equation below to determine the size of the deer mouse population.

$$\frac{\text{Total mice marked} \times \text{total mice captured second time}}{\text{Total mice with tags on recapture}} = \text{Deer mouse population size}$$

$$\frac{10 \times 30}{2} = 300/2 = 150$$

21. What common migratory animals do wildlife managers use the *mark recapture* method to determine their population sizes? (4 points)

ducks

22. What is the most fundamental management activity a wildlife biologist should do to increase the populations of declining wildlife species? (3 points)

- a. Restocking/reintroduction
- b. Habitat management/restoration
- c. Controlling the predators on that species
- d. Keeping a population for captive breeding