



Lesson No. 2

The Importance of Wetlands to Migratory Birds

(Back from the Argentine)

Target Audience: Environmental Science, Biology, Ecology students

Objectives:

This lesson addresses several objectives. 1) Students will be made aware of the importance of the Goose Pond FWA (Greene Co., Indiana) as a resting/feeding/staging area for migratory birds. 2) Students will come to appreciate the awe inspiring migratory journeys made by many of the birds which summer in southwestern Indiana. 3) Students will become familiar with some of the eastern birds whose populations have suffered declines and the reasons for these declines.

Background:

Back from the Argentine is an essay in Leopold's *A Sand County Almanac* which deals with the Upland Plover, now more commonly known as the Upland Sandpiper. In this essay, Leopold pays homage to the beauty, endurance, and survival of this lovely shorebird species. The essay conveys a lesson which might be applied to many of our migratory eastern birds.

Actions:

1. For this lesson students will read, individually or as a group, Leopold's essay *Back from the Argentine* and then complete the associated exercises which follow.
2. Below is a list meant to represent the variety of birds found during certain times of the year at Goose Pond Fish & Wildlife Area. This list is extremely attenuated. In reality, over 280 species of birds have been documented on the property.

American White Pelican
Sandhill Crane
Whooping Crane
Upland Sandpiper

Hudsonian Godwit
Semipalmated Sandpiper
Ruby-throated Hummingbird
Cliff Swallow
Henslow's Sparrow
Baltimore Oriole

3. Obtain outline maps of North and South America from your teacher. Maps can be found online at sites such as The Education Place (www.eduplace.com/ss/maps/).
- Conduct an Internet search and find a photograph of each of the birds on our list. A useful site for photos and information is The Cornell Laboratory of *Ornithology's All About Birds* website (www.allaboutbirds.org).
 - Construct a pair (i.e. N & S Amer.) of maps (where appropriate) for each of the above species.
 - Using colored pencils indicate the summer range, winter range, and migratory range for each of the 10 species listed.
 - Add a colored sketch of the head, neck, and shoulder regions of each bird to one of its corresponding maps.
 - Locate Goose Pond FWA in SW Indiana on each of your maps.
 - Which two birds travel the greatest distances between their summer and winter homes?
 - For each of these two, give the approximate length of their yearly round-trips in miles and kilometers.
 - Which of these ten species winter outside of the United States?
 - Why should bird conservationists be concerned about deforestation or other forms of habitat destruction in places like Columbia, Venezuela, or Brazil?
 - Which species stay within the United States but make migratory trips to the southern part of our country?
 - Look at the range map (www.allaboutbirds.org) for the Whooping Crane. Notice that it does not show Indiana as part of this bird's migratory pathway. Now click on the "View dynamic map of eBird sightings" box.

Notice that this map shows an eastern migratory population of Whooping Cranes.

- i) How did this eastern population come into existence? When ?
- ii) Why did conservationists want to establish another population of Whooping Cranes (i.e. in addition to the original population which migrates between Texas and Alberta, Canada)?
- iii) How many wild Whooping Cranes are there in the world? In the western population? In the eastern population?

4. Look at the range maps for the Hudsonian Godwit and American White Pelican. It appears that they do not occur in Indiana. Yet, both these species are seen at Goose Pond FWA. In fact, GPFWA is the top spot in Indiana to see American White Pelicans.

a) How do you account for the discrepancy between the maps at All About Birds and the fact that many people have seen these birds at GPFWA? (Hint: When was GPFWA established?)

b) People have remarked that Goose Pond FWA is a good example of the phrase taken from the movie *Field of Dreams* - "Build it and they will come." How does this relate to the response of birds to the restoration of the wetlands at GPFWA?

(See: <http://www.gcdailyworld.com/story/1253931.html>).

5. After considering the extreme distances covered by migrants such as the Hudsonian Godwit, Upland Sandpiper, and Semipalmated Sandpiper briefly explain why the conservation or restoration of wetlands here in the United States is so important for such birds.

6. Why is international cooperation needed among wildlife conservationists, particularly those who deal with migratory birds?

7. Goose Pond FWA has not only wetland habitat but other forms of wildlife habitat as well. For example, over one thousand acres of the property is planted to prairie. Thus, it is of vital importance to species which use grasslands as their habitat.

a) Which bird(s) in our initial list of 10 rely on this type of habitat for their survival?

b) Habitat loss is one of the primary reasons for the decline of many species of animals throughout the world.

i) In what ways may a species be tied to a certain habitat? Think in terms of food, shelter, nesting/denning, and other forms of behavior.

Lesson Development by:

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