

## **Waterfowl Facts and Identification**

### **Lesson Plan / Instructor Guide**

**COURSE TITLE:** Waterfowl Facts and Identification

**INSTRUCTIONAL GOAL:** Students will learn basic waterfowl facts and nomenclature and some useful identification techniques.

**INSTRUCTIONAL OBJECTIVES:** Upon completion of this block of instruction the participant(s) will be able to:

1. Correctly name the four species of geese found in New Mexico.
2. Identify the two flyways that divide New Mexico unevenly east and west.
3. Know the two broad categories of ducks.
4. Learn the species of dabbling duck able to perch in a tree.
5. Name a color phase of the snow goose.

**INSTRUCTIONAL METHODS:** Microsoft PowerPoint presentation.

**HANDOUTS:** “Waterfowl Identification in the Central Flyway” booklet. Free at any New Mexico Department of Game and Fish office, published by the Central Flyway Waterfowl Council.

**COURSE DURATION:** Approximately 30-40 minutes.

**CURRICULUM REFERENCES:**

“Ducks at a Distance”, waterfowl identification guide, by Bob Hines, U.S. Fish and Wildlife Service. <https://www.fws.gov/birds/bird-enthusiasts/bird-watching/waterfowl-identification.php>

Wisconsin eBird website, worldwide map of bird sightings. <https://ebird.org/wi/map/>

**ADDITIONAL READING MATERIAL:**

New Mexico Department of Game and Fish, Wildlife Notes, Canada Goose.

---

<http://www.wildlife.state.nm.us/download/education/conservation/wildlife-notes/birds/canada-goose.pdf>

The Cornell Lab, "Duck and Waterfowl Identification- try a free quiz",  
<https://academy.allaboutbirds.org/quizzes/duck-and-waterfowl-identification-try-a-free-quiz/>

Ducks Unlimited, free cell phone application. This application allows the user to view identification information for most waterfowl species, view migration updates, listen to duck sounds, see sunrise and sunset for your location and many more features.

**EQUIPMENT, PERSONNEL, AND SUPPLIES NEEDED:** Laptop (with presentation uploaded), projector or screen, jump drive with presentation or uploaded to computer, power cords (if needed), extension cords (if needed).

NOTE: Please check out additional reading material and check out references for more material to look over.

**TARGET AUDIENCE:** Anyone interested in learning more about waterfowl and how to identify the different species of ducks, geese and swans found in New Mexico in the fall and winter months.

**COURSE PREREQUISITES:** None.

**EVALUATION STRATEGY:** Written Final Test.

**AUTHOR & ORIGINATION DATE:** John Martsh, April 17, 2020.

**REVISION / REVIEW DATE(S):** N/A.

**REVISED / REVIEWED BY:** N/A.

**CRITERION TEST:**

1. What are the four species of geese found in New Mexico in the fall and winter?
2. What are the two flyways that divide New Mexico unevenly east and west?
3. Name the two broad categories of ducks.
4. Which species of dabbling duck has the ability to perch in a tree?
5. Name a color phase of the snow goose.

**CRITERION TEST ANSWERS:**

1. Canada, Snow, White-Fronted and Ross'.
2. Central and Pacific.
3. Dabbling ducks and diving ducks.
4. Wood duck.
5. Blue snow goose.

**COURSE OUTLINE:**

- I. Introduction
  - A. Give course name.
- II. Goals and Objectives.
- III. Basic Waterfowl Information.
  - A. Talk about Waterfowl Numbers and History.
  - B. Explain North American Flyways and the two New Mexico Flyways.
  - C. Talk about different waterfowl species and size differences.
    1. Talk about distinguishing features between species.
    2. Lifecycle.
  - D. Go over definitions and nomenclature.
  - E. Go over the differences between male and female waterfowl.
  - F. Show photographs and drawings of all species of ducks, geese and swans found in New Mexico in fall and winter months.
- IV. Conclusion.
- V. Post Test.

**COURSE CONTENT:**

**Introduction**

Waterfowl Facts and Identification.

**Goals and Objectives**

## Waterfowl Facts and Identification

---

The goal of this presentation is to talk about the history of waterfowl in the United States, name the four flyways in North America and the two going through New Mexico, list some waterfowl definitions and nomenclature and give waterfowl identification tips for the different species of ducks, geese and swans found in New Mexico in the fall and winter months.

The objectives will be to:

1. Name four species of geese found in New Mexico in the fall and winter.
2. Name the two flyways that divide New Mexico unevenly east and west.
3. Name the two broad categories of ducks.
4. Name the species of dabbling duck with the ability to perch in a tree.
5. Name a color phase of the snow goose.

### **Basic waterfowl information**

By the early 1900s, overharvest from sport, food and trade hunting, habitat loss from logging and farming, recurring drought conditions on the breeding grounds and public apathy had decimated North American waterfowl populations. The key was realizing that state regulations were inadequate for preserving and managing birds that heeded no political boundary in their annual migrations. The Migratory Bird Treaty Act, between the United States and Canada, was enacted in 1918 to protect migratory birds between those two countries. It makes it unlawful, without a waiver, to pursue, hunt, take, capture, kill or sell migratory birds.

Thanks to habitat restoration, efficient and effective harvest and survey numbers and duck stamp revenues, the waterfowl population has rebounded to a healthy level. In 2019, the total estimated North American waterfowl population (according to the U.S. Fish and Wildlife Service spring survey) was 50,253,000 birds (this number excludes eiders, long-tailed ducks, scoters and wood ducks). Of the 50.2 million, approximately 38.9 million were ducks. A breakdown of some of these ducks can be found on the Ducks Unlimited website: <https://www.ducks.org/conservation/waterfowl-surveys/2019/duck-numbers>

A flyway is defined as an established air route of migratory birds. The four North American flyways are the Atlantic, Mississippi, Central and Pacific. The four flyways bisect North America longitudinally. The Central Flyway is comprised of New Mexico, Colorado, Texas, Oklahoma, Kansas, Nebraska, South Dakota, North Dakota, Saskatchewan, Alberta, Northwest Territories, Montana and Wyoming. The Pacific Flyway consists of Alberta, British Columbia, Yukon, Alaska, Arizona, California, Idaho, Nevada, Oregon, Utah, Washington and portions of New Mexico, Colorado, Wyoming and Montana west of the Continental Divide.



Ducks, geese and swans migrate southward from the northern states and Canada, in the fall of the year. Snow, cold temperatures and freezing water force them to warmer climates where food is not impossible to find. Some birds overwinter in New Mexico and others only stay temporarily on their way into Mexico. There are some year-round resident waterfowl in New Mexico, but a vast majority of these birds will be gone by spring, when they migrate back north. Spring and summer

## Waterfowl Facts and Identification

---

months are spent breeding, nesting and raising their young in the Prairie Pothole Region and the North American Boreal Forest in parts of the northern United States and Canada.



Prairie Pothole Region



North American Boreal Forest

There are twenty-six species of waterfowl found in New Mexico in the fall and winter. These include: 20 species of ducks, four species of geese and two species of swans. Ducks are the smallest of the three, averaging 1.75 pounds and 17" in length. Geese averaged 6.5 pounds and 30" in length. Swans are the largest waterfowl, averaging a weight of 22 pounds and 56" in length.

### Instructor Notes:

The twenty species of ducks include two broad categories, dabbling ducks and diving ducks. There is also a separate category known as the stiff tailed duck. There are 10 species of dabbling ducks, nine species of diving ducks and one species of stiff tailed duck found in New Mexico.

Some of the things to look for when identifying species of waterfowl include: coloration of eyes, bill, head, crown, neck, sides, back, belly, chest, tail, feet and speculum. Each species will have its own unique color combination of these body parts. What is the relative size of the bird? Different duck and goose species can be small, medium or large. Swan species are all extra-large. What sound does the bird make? Different ducks, geese and swans have unique calls. Different body part proportions can be helpful in determining if you are looking at a duck, goose or swan. For instance, a swan has longer neck than a goose, which has a longer neck than a duck. When flying, the shape of the silhouette from below, wingspan and speed and duration of wingbeats can help with identifying waterfowl.

Lifecycle of waterfowl, from beginning to end: Hatched from an egg in spring. Are led to water within a day of hatching. Become a duckling, gosling or cygnet. After several months, they can fly. After 1-3 years they will reach maturity and are able to breed. Once they are mature, waterfowl go through the following yearly cycle: fall migration from north to south, winter, spring migration south to north, pre-nesting, nesting, hatching, brood rearing, post breeding and molt. They continue this cycle every year until their death. In general, among waterfowl, swans live the longest, followed by

geese and then ducks. Female birds have shorter lifespans because of the physical stress of breeding, nesting and raising young. Wild ducks live an average of 5-10 years, wild geese 10-24 years, and wild swans 20-30 years.

### **Definitions and Nomenclature**

North American Boreal Forest: The world's largest remaining intact ecosystem, consisting of more than 1.5 billion acres of untouched lakes, rivers, streams, wetlands and forests. This forest contains 40% of North America's nesting waterfowl.

Prairie Pothole Region: Shallow wetlands known as potholes in the Northern Great Plains, contains 60% of North America's nesting waterfowl.

Migration: A huge movement of waterfowl either north to south in the fall towards wintering grounds or south to north in the spring towards breeding grounds.

Waterfowl: A type of bird frequently found in water, especially a game bird.

Molting: Waterfowl replace old plumage with new feathers. Ducks do this twice a year with body feathers and geese and swans once a year with all body, wing and tail feathers.

Drake: Male of duck species. Colorful.

Hen: Female of duck species. Drab, muted colors.

Duckling: Young duck.

Gander: Male of goose species.

Goose/Dame: Female of goose species.

Gosling: Young goose.

Cob: Male of swan species.

Pen: Female of swan species.

Cygnets: Young swan.

Back: Dorsal portion of waterfowl body.

Belly: Underside (ventral) portion of the body.

Bill: The "beak" portion of waterfowl.

Cheek: Portion of head behind base of bill and under the eye.

Chest: Area below the neck on the front of the bird.

Crown: Extreme top portion of the head.

Feet: Below the body, webbed between the toes to swim in water.

Head: Rests above the neck.

Neck: Connects the head to the body.

Side: Area on both sides of the body above the belly and below the back.

Speculum: Colorful portion of a drake or hen's wing.

Tail: Posterior portion of the bird, usually comes to a point.

Vermiculation: A surface pattern of dense, but irregular lines.

#### **Instructor Notes:**

Read the definitions out loud to the class. Show the slide of the duck drawing to the class so they can see where the defined body parts are on its body.

### **Differences between Male and Female Waterfowl**

---

There are some key differences between the sexes for ducks. All of the differences in ducks can be seen visually. Drakes (males) will be larger than hens (females). Drakes will have more colorful heads, speculums, bills, bellies, chests, tails, cheeks, eyes, sides, crowns and sometimes feet. Hens tend to be drab colors, and most are mottled brown. The most common example of this is the mallard, the head a bright green, a yellow bill and chestnut chest compared to the hen with a dark orange, black splotched bill and drab, mottled brown head and body. For geese and swans they are identical in color but the male bird is larger than the female. This size difference will only be noticed when there are two or more birds together. Geese tend to be more solidly colored than ducks and have more earth tones and pure whites than bright colors. The blue color phase of the snow goose is the exception to this rule. Swans have pure white bodies with black eyes and bills.

### Instructor Notes:

Show the class PowerPoint slides of all the species of ducks. Read any notes at the bottom of each slide to the class. There should be two slides per species, the first a photograph of the drake and hen on water or on land and the second a drawing of the drake, hen and eclipse drake in flight. An eclipse drake resembles a hen in color because it has shed its bright body feathers in the summer after mating and grown drab feathers in their place. These drab body feathers are shed in late fall and early winter and replaced with bright, breeding colored feathers. The dabbling ducks are: mallard, Mexican mallard, northern pintail, gadwall, American wigeon, northern shoveler, wood duck, green-winged teal, blue-winged teal and cinnamon teal. Wood ducks are the only dabbling ducks known to perch in a tree.

The diving ducks are: common goldeneye, Barrow's goldeneye, bufflehead, canvasback, redhead, ring-necked duck, scaup (lesser), common merganser and hooded merganser.

The stiff tailed duck is: ruddy duck.

Show the class slide photographs of the goose species. The four species of geese include: Ross', snow, white-fronted and Canada.

Show the class slide photographs of the swan species. The two swan species are: tundra and trumpeter. The trumpeter is the heaviest living bird in North America.

### Conclusion

The best advice to get good at identifying waterfowl is to practice. Go outside, find a location with waterfowl year-round and use a waterfowl identification guide or cell phone application to identify as many species as you can. Start broadly, by identifying if you are looking at a swan, goose or duck. Once you have done that, identify which species you are looking at using visual and sound clues. Finally, differentiate between males and females of the species. Typically, they will be found together and the differences will be obvious.

### Post Test

1. What are the four species of geese found in New Mexico in the fall and winter?



2. What are the two flyways that divide New Mexico unevenly east and west?
3. Name the two broad categories of ducks.
4. Which species of dabbling duck has the ability to perch in a tree?
5. Name a color phase of the snow goose.