

# GO! wild

Photos - Dave Showalter/Landscape, R. Tom/Muskkrat, Dave Menke/Northern Shoveler



Visit - Rocky Mountain Arsenal  
National Wildlife Refuge  
For information and hours call:  
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Visit the web at:  
<http://rockymountainarsenal.fws.gov>

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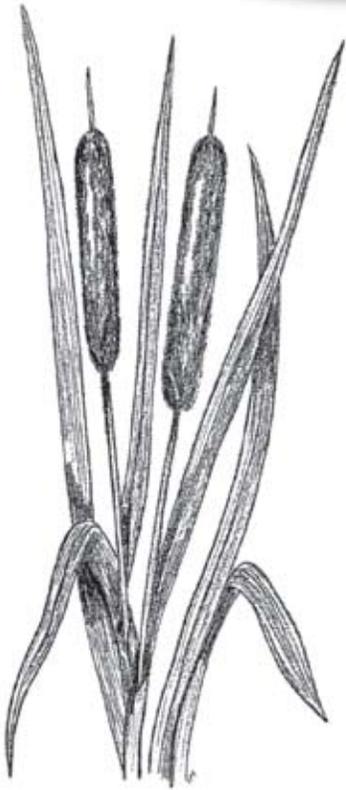
In 1903, President Theodore Roosevelt established the nation's first wildlife refuge, Pelican Island, to create a sanctuary for birds.



ROCKY MOUNTAIN ARSENAL  
NATIONAL WILDLIFE REFUGE

part of the ....

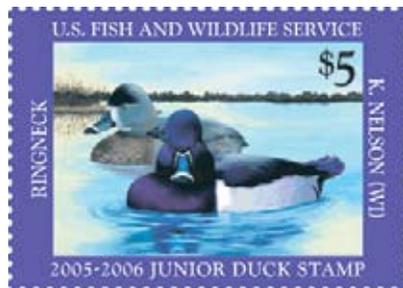
National Wildlife Refuge System



**W**etlands are exactly that - wet lands! They are a place you can go to hear frogs croak, to watch snowy egrets use their bills to spear their food from the water, and to watch cattails sway in the breeze. Thousands of plants and animals depend on wetlands for their home or a nice place to visit. Wetlands are found all over the world and here at Rocky Mountain Arsenal National Wildlife Refuge they are an important part of our ecosystem. Visit the Refuge wetlands today and prepare to

**GO!**  
wild.

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**Did you know?**

Federal Duck Stamps help conserve wetlands.  
Ninety-eight cents out of every dollar from  
the sales of Federal Duck Stamps go directly to  
purchase or lease wetland habitat for conservation in the  
National Wildlife Refuge System.



# EVERYTHING IS CONNECTED



©Tom Tietz

For many years people thought wetlands were yucky, mushy wastelands. They would drain and fill them so crops could be grown or so structures could be built. Now we understand just how important wetlands are, so people are trying to save and protect them!

What can you do to protect wetlands?

Functions of Wetlands:

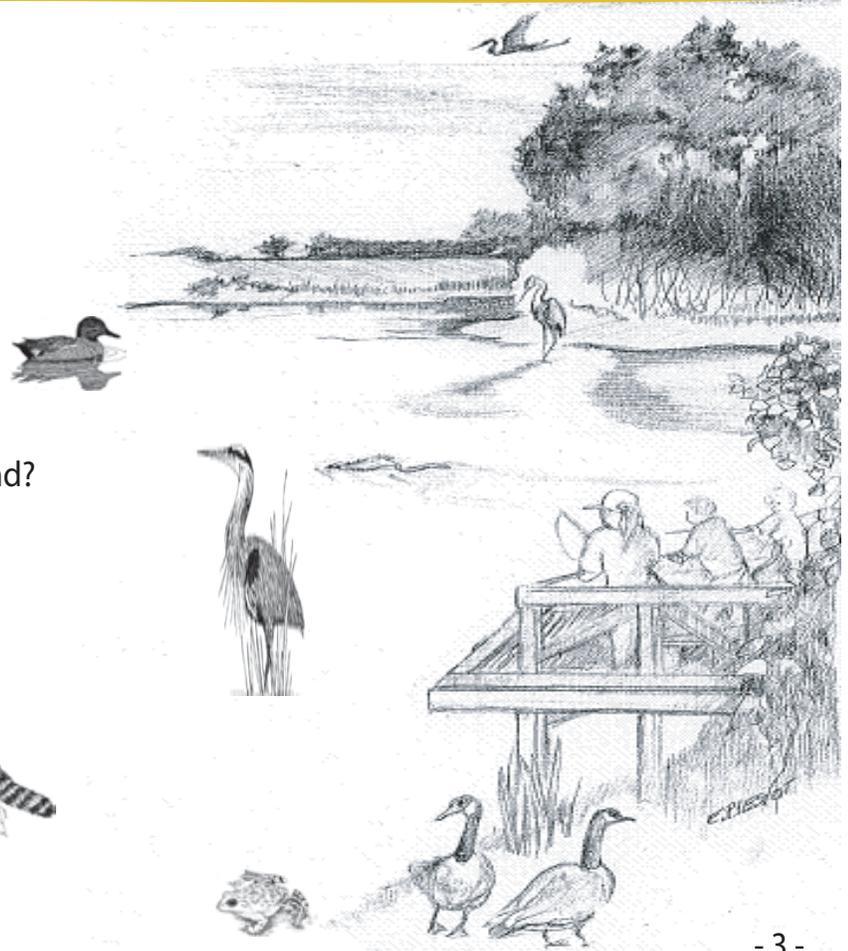
- Store water for future use
- Provide important fish and wildlife habitat
- Help filter pollution out of the water
- Supply resting grounds for migratory birds on their long journey
- Act as nurseries for raising young



## Research opportunity:

Take a look at this drawing of a Refuge wetland ecosystem.

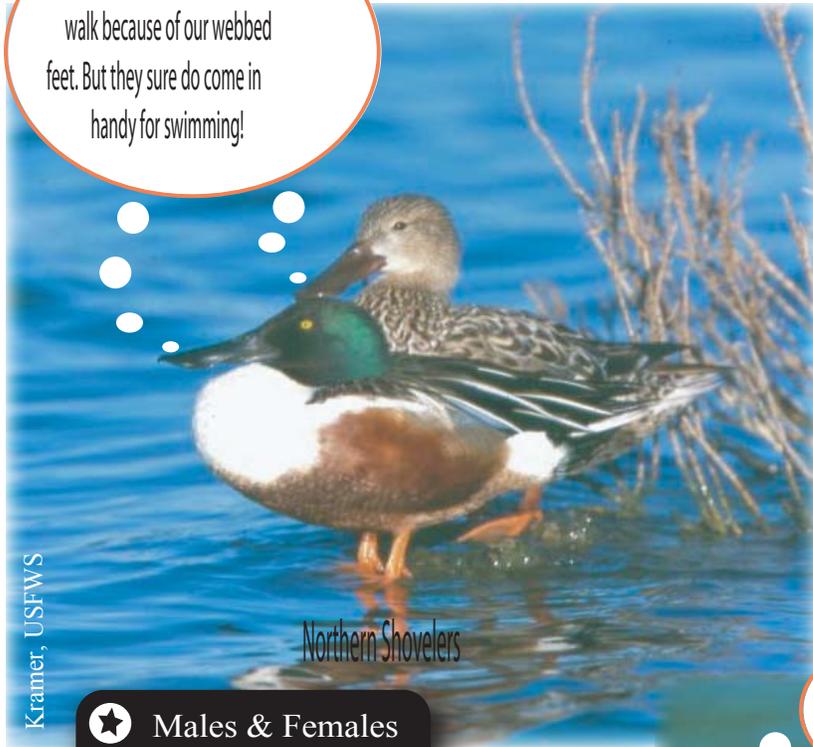
- 1- Who migrates to the Refuge?
- 2- Who lives at the Refuge year-round?
- 3- Which are producers?
- 4- Which are consumers?



# Ducks

are waterfowl because they are typically found in places with water like ponds, lakes, rivers and streams. Ducks swim, feed, hide from danger, rest and sometimes build nests on the water. In fact, if you were to look more closely at a duck you would see it was built to live in the water! Ducks have webbed feet that act like paddles, water-proof feathers that trap air to help keep them warm and floating, special eye lids that act as goggles when they dive underwater, and unique "teeth" called lamellae in their bills that resemble the teeth on a comb that help strain their food from the water.

We waddle when we walk because of our webbed feet. But they sure do come in handy for swimming!



Northern Shovelers

Kramer, USFWS

## ★ Males & Females

- small bodies
- hollow bones to help fly
- webbed feet
- short necks
- narrow, pointed wings
- broad, flat bill

Spring and fall are the best seasons to view waterfowl at the Refuge. Many species of ducks stop to rest on the Refuge's lakes on their way to and from their breeding grounds.

If we're divers they must be dabblers!



Redheads

© Shattil/Rozinski

## How Many?

A Northern shoveler is capable of flying 50 miles per hour. That's almost as fast as a car traveling on a highway! If Rocky Mountain Arsenal NWR is 12.5 miles away from your school, how many minutes would it take the duck to fly from your school to the Refuge?

How many seconds?

## Did you know?

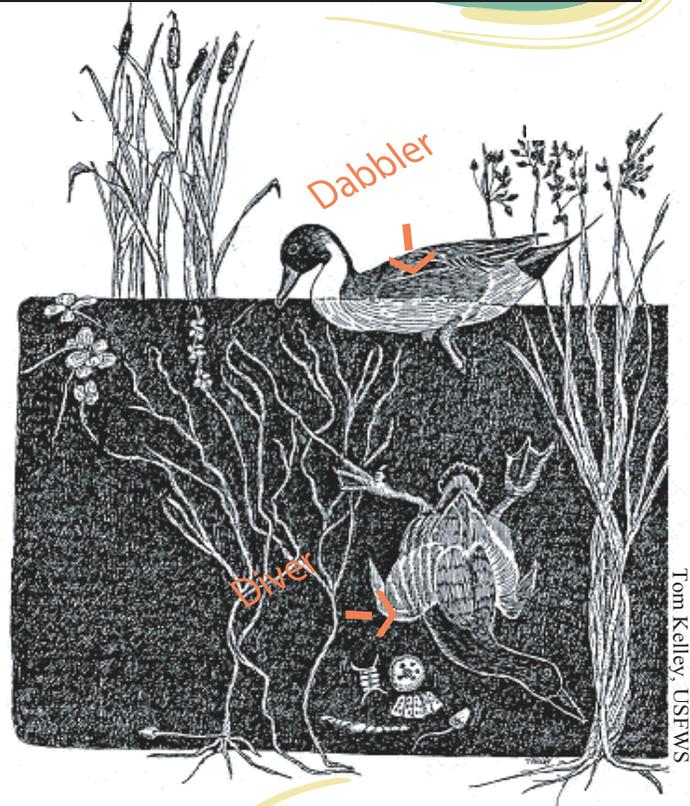
Male ducks are called drakes and female ducks are called hens. The drakes are usually brightly colored to attract females while the hens are usually a dull-brown color so they can camouflage from their enemies while they are incubating the eggs in their nest.

**D**abblers and divers are two ways scientists group ducks. Dabbling ducks, such as Northern shovelers, feed by tipping their head under water to eat the grasses and the small insects found close to the water's surface. Their legs are centered on their body making it easier for dabbling ducks to walk on land. Diving ducks, such as redheads, dive completely under the water using only their feet to move to find their food. Their legs are set near the rear of their bodies making walking on land difficult which makes them waddle more.

**Research opportunity:**

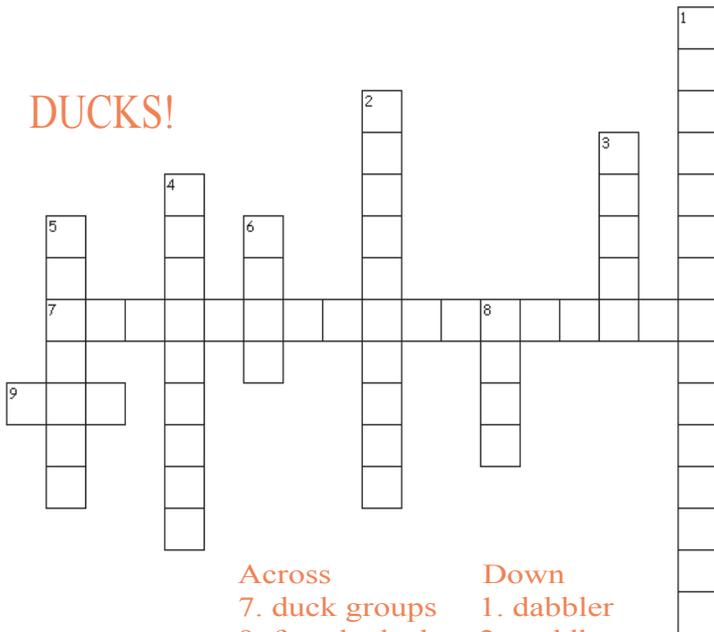
As many as 18 different species of ducks have been spotted on the Refuge. Take a trip to Rocky Mountain Arsenal National Wildlife Refuge or a local pond to discover what's lurking around.

- What is your favorite duck?
- Is it a dabbler or diver?
- Is it a drake or hen?



Tom Kelley, USFWS

**DUCKS!**



- Across**  
 7. duck groups  
 9. female duck

- Down**  
 1. dabbler  
 2. paddles  
 3. male duck  
 4. ducks  
 5. diver  
 6. place for eggs  
 8. duck's mouth



incubate

Dabbling ducks have broad wings that enable them to rise immediately from the water or ground into flight, much like a rocket exploding into the air. Diving ducks have much smaller wings and must run across the surface of the water to build up enough speed to become airborne, just like an airplane taxis down the runway.

# Muskrats

are large, stout, semi-aquatic rodents.

They live in wet environments like ponds, lakes, swamps and marshes spending most of their time in the water or very close to it. Muskrats are primarily herbivores, but will feed on crayfish, frogs, small fish, and at times other muskrats. They build their homes, called lodges, out of cattails, mud, and other aquatic plants.

I am a good swimmer and can stay underwater for up to 17 minutes! I can even swim backwards!



© Shattil/Rozinski

## ★ Males & Females

- glossy, light brown fur
- long, scaly tail
- partially webbed hind feet
- 16 to 24 inches long
- weigh 2 to 4 pounds
- live 3 to 5 years

What do other animals call their homes?  
muskrat = lodge  
prairie dog = ???  
bee = ???  
deer = ???  
coyote = ???



## How Many?

Muskrats must consume about one-third of their weight every day. Our resident Lake Mary muskrat weighs about 2.5 pounds.

How many pounds of cattail roots can our muskrat eat in one day?

How many in a week?

How many in a month?

## Did you know?

Muskrats get their name from the musky odor secreted from glands on their abdomen.

The odor is used to communicate with other muskrats and to warn intruders to leave their territory alone.

**M**uskrats have always been hunted for their meat and prized fur. Today we understand just how important muskrats are to wetland ecosystems - they balance the food web. Muskrats help control the growth of wetland plants and in turn are important prey for a variety of wildlife, including foxes, coyotes, hawks, eagles, and owls.

**Research opportunity:**

Muskrats are well adapted for life in the water. Are humans? Discover what other species have adapted to live in a wet environment.

- Make a list of animals that are well adapted to live by water.
- What are their similarities and differences.
- Explore their characteristics and brainstorm which special features allow them to live in a wet environment.



Elizabeth Biesiot

Brainstorm how the muskrat's specially adapted features help them in a wet environment.

Features:

1. Partially webbed back feet
2. Tail flattened up and down
3. Lips that close behind their teeth
4. Small ears
5. Thick waterproof fur

Which way was this muskrat traveling?

How do you know?

What made the mark between its footprints?



# GO! wild

## LIVE *at the* REFUGE

Like Rocky Mountain Arsenal National Wildlife Refuge, Windom Wetland Management District is managed by the U.S. Fish and Wildlife Service. Located in Minnesota, Windom was established in 1990 to protect and restore the vanishing Minnesota prairie and wetland ecosystems. Today, the District is responsible for 15,000 acres of land that is essential to waterfowl production, grassland birds, shorebirds, wading birds, coyotes, red foxes, bald eagles, hawks, raccoons, opossums, turtles, snakes, and much more.



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Dave Menke, USFWS



Lee Karney, USFWS

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[www.fws.gov/midwest/windom](http://www.fws.gov/midwest/windom)

**DISCOVER**  
Windom Wetland  
Management District

