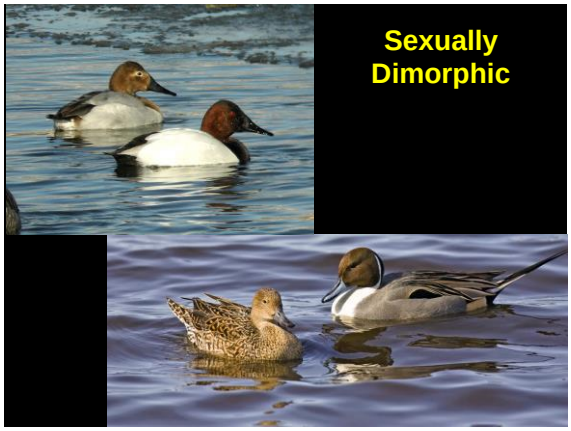
- **Waterbirds**: a term often used by wildlife managers that include waterfowl, shorebirds, wading birds, and secretive marsh birds

Waterfowl

- **Ducks, Geese, Swans**

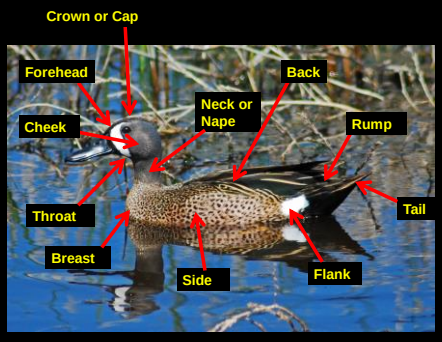
Terms

- **Sexual dimorphism - the systematic difference in form (i.e. physical differences) between individuals of different sex in the same species**
- **Sexually Monomorphic - no obvious physical differences b/n the males and females**



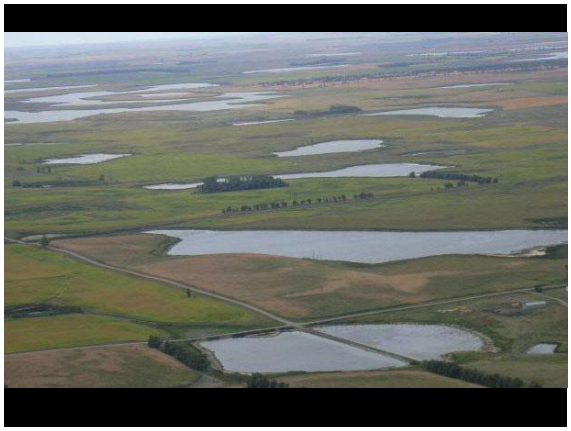
Sexually Dimorphic

Sexually Monomorphic



- Bill, Nostril, Belly, Legs & Feet

Prairie Pothole Region (PPR)



- Known as the "Duck Factory" of North America, the Prairie Pothole Region produces over ½ of the continent's waterfowl
- It also provides the most productive breeding habitat in North America for hundreds of other migratory bird species

Precocial vs. Altricial

- Precocial = hatchlings covered with down w/ eyes open; capable of leaving the nest within hours (mallard = 12hrs) or a few days
- Altricial = Hatchlings naked and blind, dependent on parents for food

An Original DUCKumentary

- http://video.pbs.org/video/2289741878/

Brood Behavior

Question: A 2-day old duckling follows a laboratory assistant around believing her to be his mother. What type of early learning process is this called?

Answer: imprinting

Imprinting - a learning process in early life whereby species specific patterns of behavior are established, usually from their mother and/or father among waterfowl

Plumage

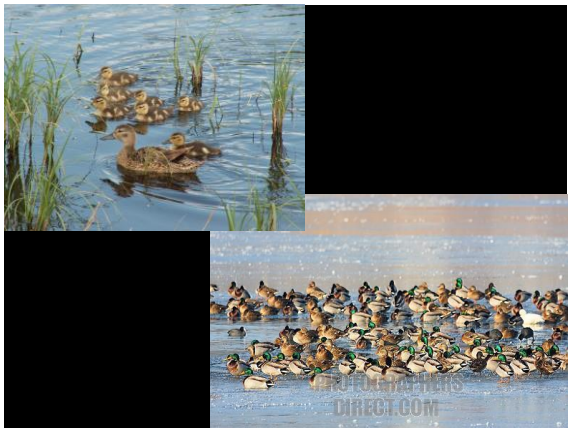
- Defn: the layer of feathers that cover a bird and the pattern, color, and arrangement of those feathers
- Nuptial (or, Breeding) Plumage

- Basic or Eclipse Plumage

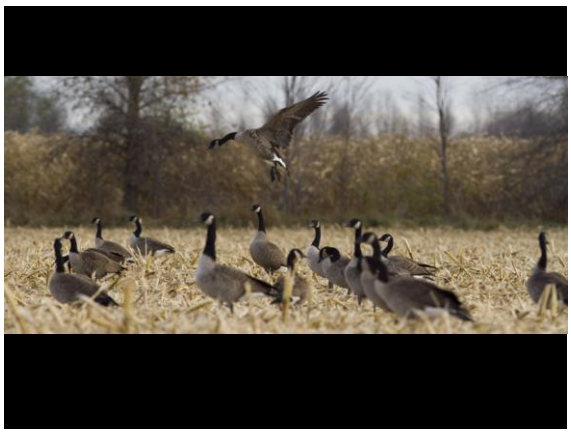
Molt = feather replacement

Eclipse Plumage / Synchronous Molt "simultaneous wing molt"

- When they shed feathers to go into eclipse, the ducks become flightless for a short period of time
- Why?
  - All primaries are lost simultaneously
    - *Never occurs in tree-perching birds but is observed in waterfowl*



Wintering Grounds



When Are They Here?

What Do They Need?

Handout

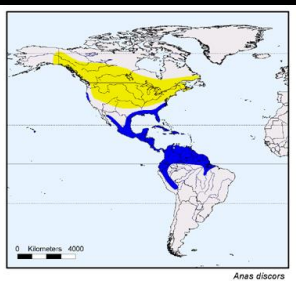
- **Migration Chronology**

Duck Migration

- Avg Flight Speed: 50mph
  - With a 50 mph tail wind, migrating mallards are capable of traveling 800 miles during an 8hr flight
  - A mallard needs to feed and rest for 3-7 days to replenish its energy supply
- Ducks usually migrate at an altitude of 200 to 4,000 feet
  - A jet plane over Nevada struck a mallard at an altitude of 21,000 feet

1st ducks south in the fall & Last north in the spring

- PPR
- Texas, Florida, Louisiana, Caribbean Islands, Mexico, and Central and South America



TENNESSEE Blue-winged teal

- Fall Migration: August / September
- Spring Migration: April / May

TENNESSEE
Wigeon, Gadwall, GWTE, Snipe

- Fall Migration: October / November
  - *GWTE & Snipe as early as mid-August*
- Spring Migration: depart by April
  - *Snipe may hang around thru May*

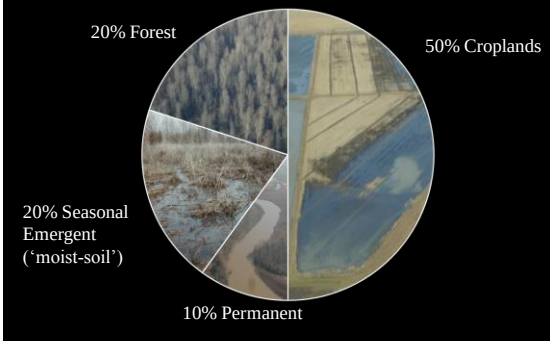
TENNESSEE
Mallards, large CAGO

- Fall Migration: November / December
  - *MALL is present October - February*
- Spring Migration: February
  - Pintail: mid-February thru March

Habitat – The Basics

- Food, Water, Cover, Space

Mallard Complexes



Landscape Percentage
…that had most mallard ducks

- Mallard Complex Breakdown
  - 54% forested wetland
  - 32% moist-soil
  - 12% cropland
  - 2% permanent water

- ***Studies indicate that a mallard must have all the resources needed for survival within a 12-mile radius***
  - ***Wetland Management For Waterfowl Handbook***

FOOD: Dabbling Ducks

- **Diet:**
  - **Plant Seeds – natural herbaceous plant seeds, seeds from shrubs such as buttonbush, seeds from trees such as oak acorns, plant parts such as shoots, roots and tubers, crop grains, etc.**
  - **Macroinvertebrates**
  - **Frogs, small fish, and their eggs**

- The edges of the bill are soft because waterfowl often find food by touch
- Waterfowl bills have a nail at the end that is used for hooking or moving food items
- **Lamallae:** small, comb-like structures along the inside of the bill act like sieves
  - nonfood items such as mud and water can be expelled while seeds, bugs, or other food items are retained by the lamellae

FOOD: Diving Ducks

- **Diet:**
  - **Aquatic plants and their parts such as seeds, plant leaves and stems, rhizomes, tubers, etc., some "graze"**
  - **Macroinvertebrates such as mussels, clams, shrimp, scuds, crayfish, etc.**
  - **Fish, etc.**

Diving Ducks

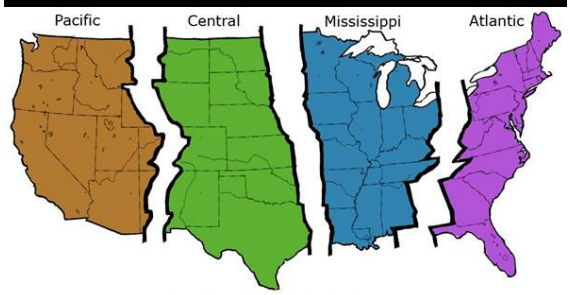
- http://www.youtube.com/watch?v=f7wY4Cnuk-s

WATER

- **Dabbling Ducks: 0-18 inches**
  - **9" is optimum**
- **Diving Ducks: usually 3ft+**

COVER

SPACE



U.S. Migratory Bird Flyways

GEESE

- Herbivorous, often referred to as “grazers”
- Grasses, sedges, rushes, other aquatic plants, forbs, grain crops, waste grain, etc.
  - Plant Parts: seeds, stems, leaves, tubers, and roots
- Aquatic macroinvertebrates
- Snow geese = similar, but will ‘grub’ roots, shoots, rhizomes, tubers, etc.

Waterfowl ID

NOT REQUIRED FOR THIS COURSE

Greater White-fronted Goose

"specklebelly"

Snow Goose

Greater and Lesser

Color Phases = 2: *White and Blue (Lesser)*

Ross's Goose

Canada Goose

Don't say "Canadian(s)"

Cackling Goose

Tundra Swan

Mute Swan

"tree ducks"

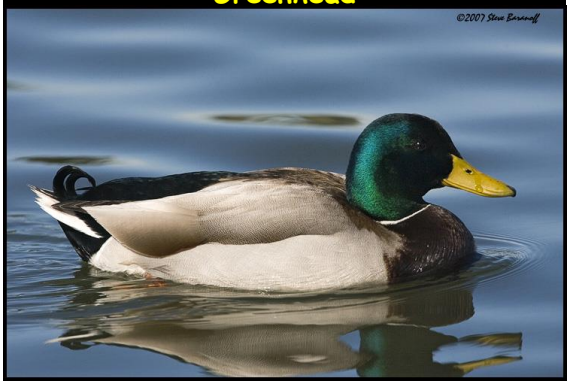
Black-bellied whistling-duck

Wood Duck
"summer duck"

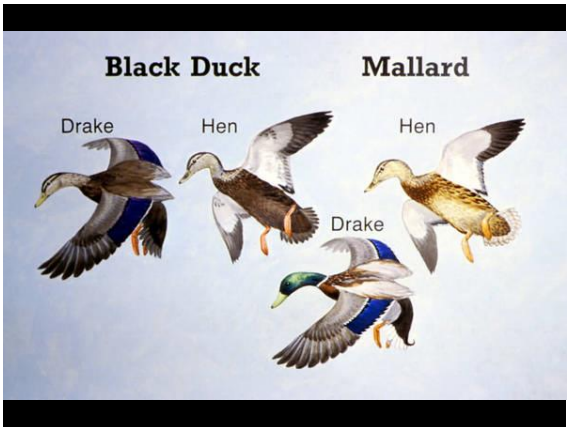
Dabbling Ducks or “Puddle Ducks”

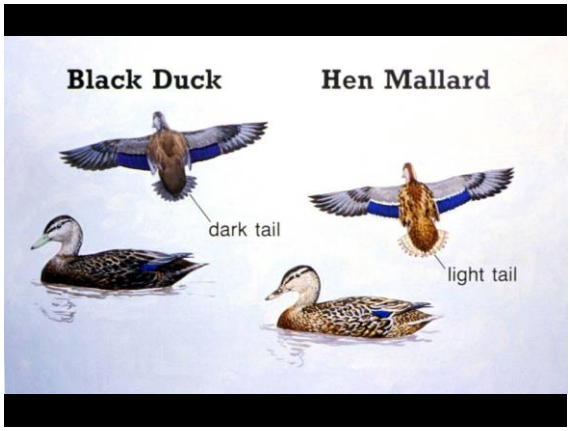
Mallard

"Greenhead"



American Black Duck

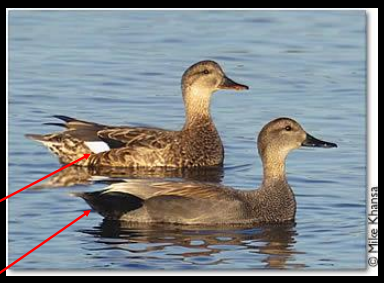



Black Duck
Hen Mallard
dark tail
light tail

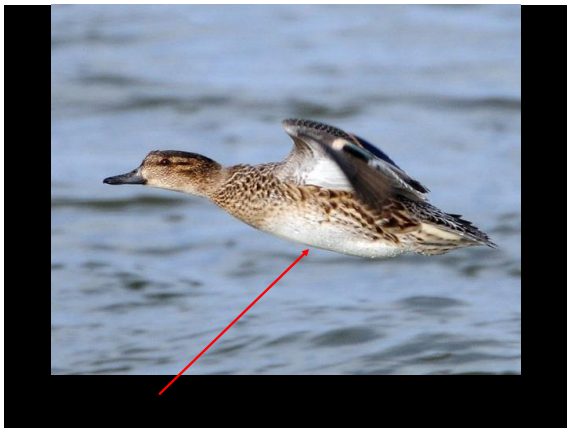

Black Duck
very dark body
contrasting light underwing
Hen Mallard
brown body
less contrast with underwing


www.chincoteague-island.net

Gadwall
"Gray Duck"



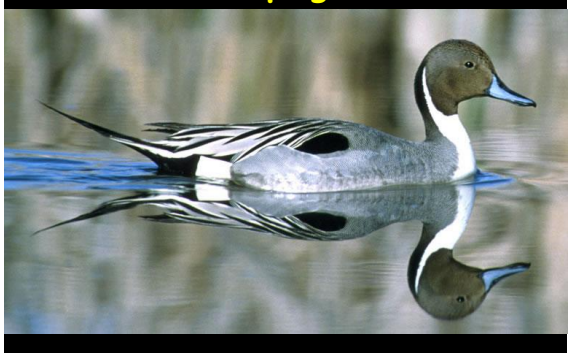
Green-winged Teal

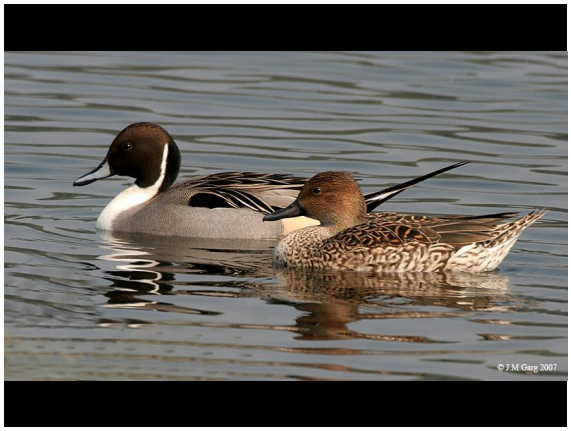


American Wigeon
"baldpate"

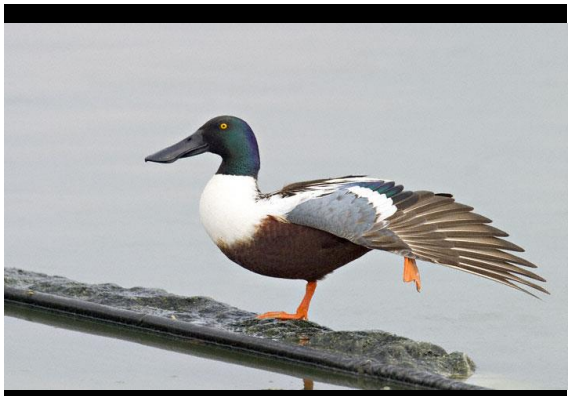
Northern Pintail

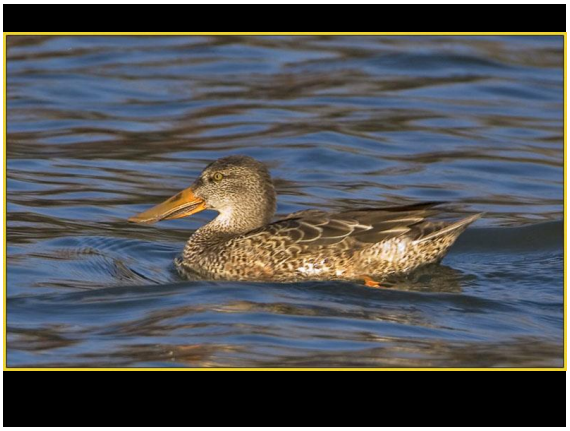
"Sprig"



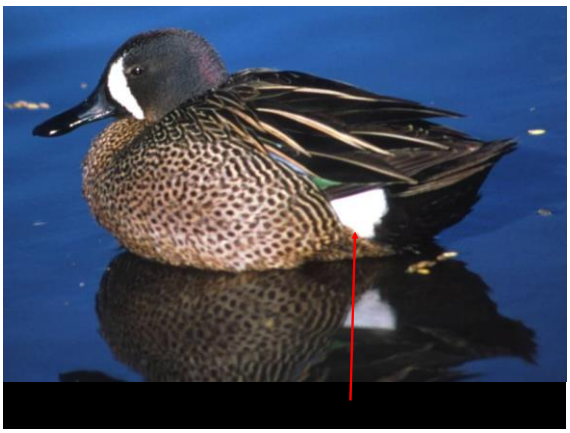


Northern Shoveler "spoonbill"





Blue-winged Teal

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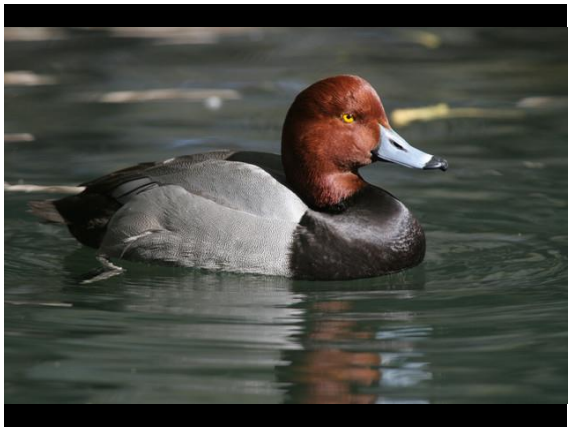
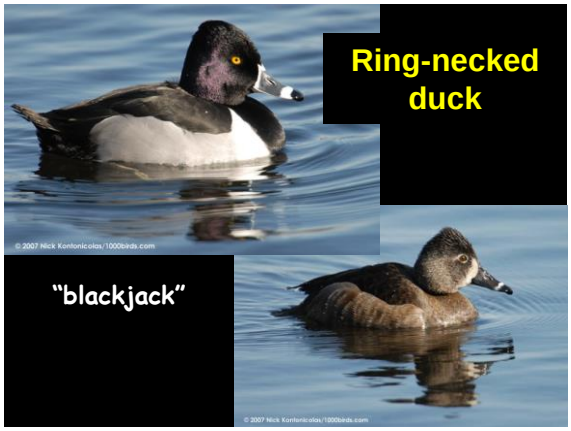
Diving Ducks

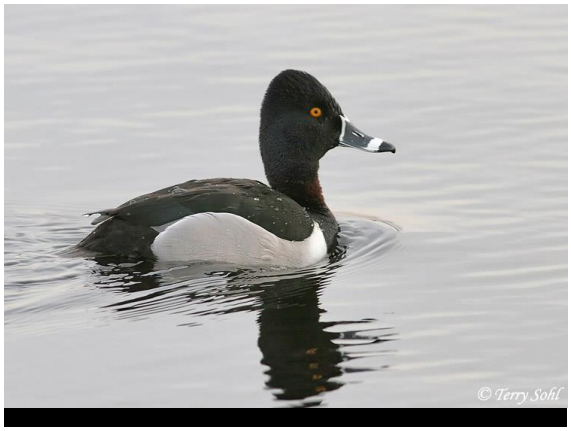
Canvasback
"cans"

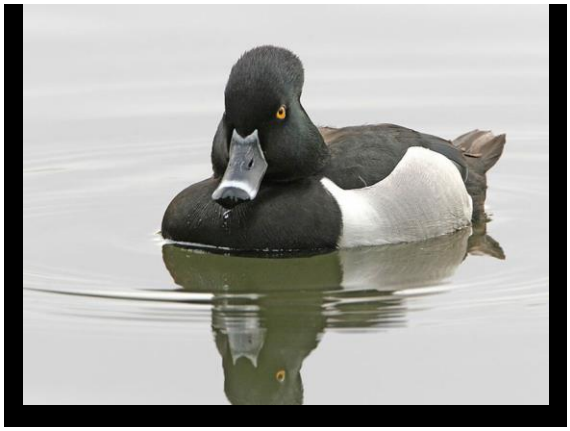
Redhead

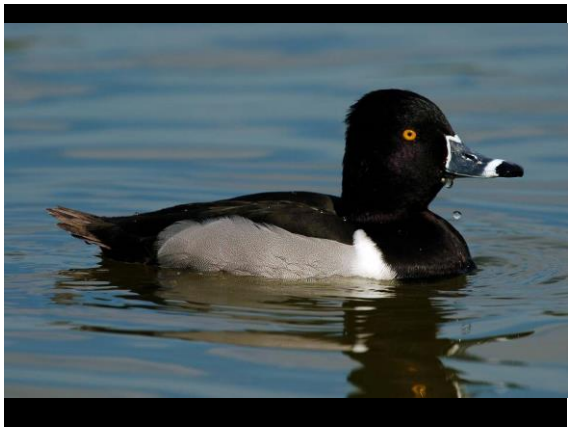

Redhead Ducks
Horicon Marsh NWR
April 28, 2007
www.jeffrafik.com



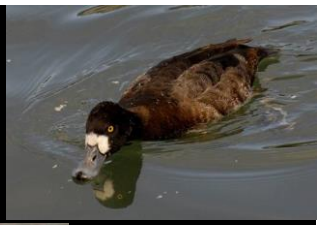

Ring-necked duck
"blackjack"

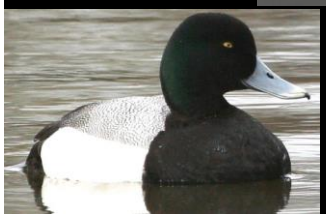

© Terry Sohl





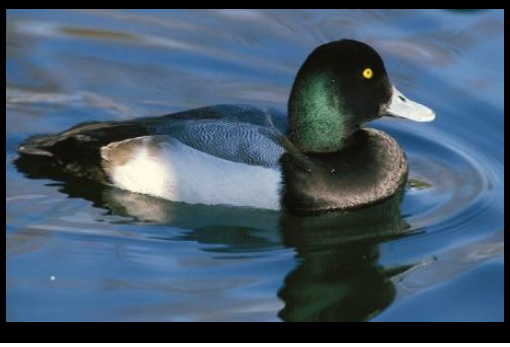
Greater Scaup
"bluebill"



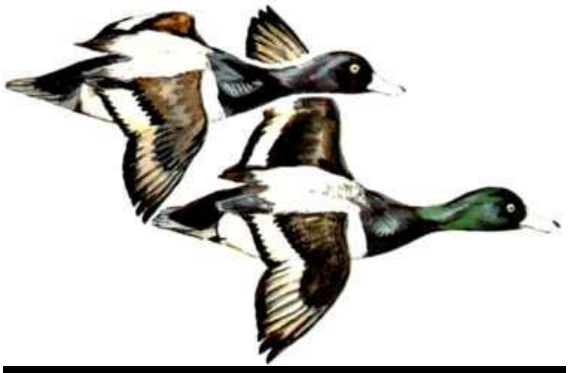


Lesser Scaup
"bluebill"

Greater = green



Lesser = lavender
also: "bluebill"

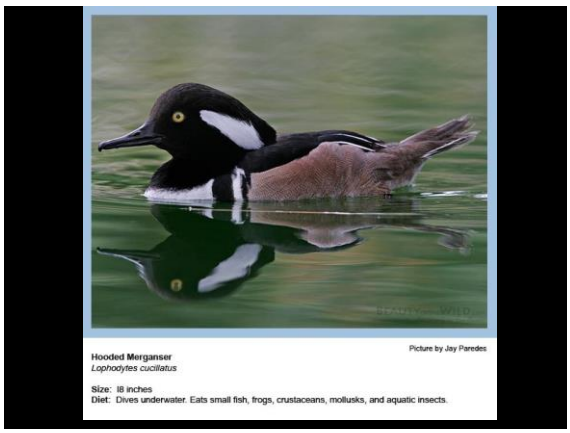


Scaup

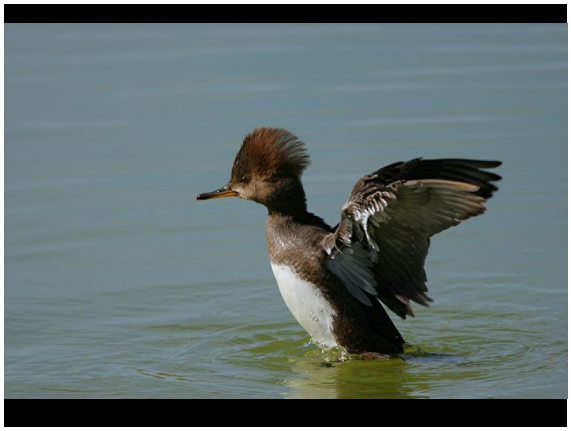
Hen Scaup

Bufflehead

Hooded Merganser



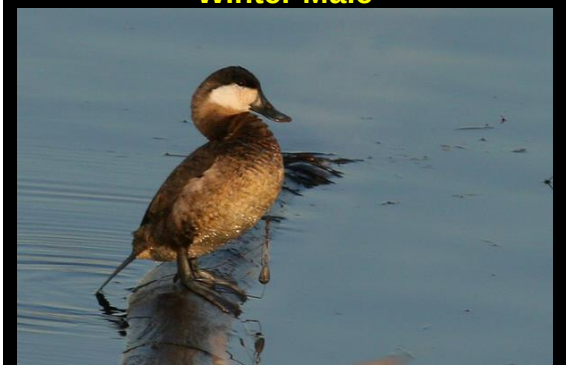
Hen



Ruddy Duck

Stiff-tailed duck

Winter Male



Female