



wildsight --- golden

COLUMBIA WETLANDS WATERBIRD SURVEY WATERFOWL IDENTIFICATION GUIDE

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TABLE OF CONTENTS

COLUMBIA WETLANDS WATERBIRD SURVEY - PROTOCOL

SURVEY SITE SELECTION AND DESIGNATION	5
SURVEY PROTOCOL	5
REQUIRED EQUIPMENT FOR SURVEYORS	6
COUNTING WATERBIRDS (HOW TO COUNT WATERBIRDS IN THE FIELD)	6-8
DATA MANAGEMENT	8
REFERENCES	8

DABLLING DUCKS

MALLARD	9
GADWALL	10
AMERICAN WIGEON	11
GREEN WINGED TEAL	12
BLUE-WINGED TEAL	13
CINNAMON TEAL	14
NORTHERN SHOVELER	15
NORTHERN PINTAIL	16
WOOD DUCK	17

DIVING DUCKS

BARROW'S GOLDENEYE	18
COMMON GOLDENEYE	19
LESSER SCAUP	20
RING-NECKED DUCK	21
REDHEAD	22
CANVASBACK	23
BUFFLEHEAD	24
RUDDY DUCK	25
COMMON MERGANSER	26
HOODED MERGANSER	27
RED-BREASTED MERGANSER	28
WHITE-WINGED SCOTER	29
SURF SCOTER	30

SWANS & GEESE

TUNDRA SWAN	31
TRUMPETER SWAN	32
CANADA GOOSE	33

GREBES

WESTERN GREBE	34
HORNED GREBE	35
EARED GREBE	36
RED-NECKED GREBE	37
PIED-BILLED GREBE	38

OTHER WATERBIRDS (NOT DUCKS)

COMMON LOON	39
GREAT BLUE HERON	40
SANDHILL CRANE	41
LONG-BILLED CURLEW	42
AMERICAN BITTERN	43
DOUBLE-CRESTED CORMORANT	44
AMERICAN WHITE PELICAN	45
AMERICAN COOT	46

PHOTOGRAPHY/ILLUSTRATIONS	47-50
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COLUMBIA WETLANDS WATERBIRD SURVEY

SURVEY SITE SELECTION AND DESIGNATION

The Columbia Wetlands Waterbird Survey (CWWS) has approximately 50 permanent survey sites located at varying distances to one another; they are located along a 180 km stretch of wetlands/lakes located alongside either Hwy 95 or Westside Rd. Due to the inaccessible nature of many sites within the Columbia Wetlands, sites were not chosen at random. Sites were chosen based upon habitat suitability for waterbirds (according to local input, eBird data, and preliminary waterbird surveys), as well as on the accessibility of land-based wetland viewing locations. Sites may be wetland sloughs, lakes, agricultural fields, Columbia River main stem, or Columbia River side channels. Some sites can be viewed from a single location, whereas some sites require walking alongside a slough to obtain a full view. Some sites require logging road access (e.g. Radium Mill Pond) or require foot access (e.g. Moberly Marsh). Volunteers tend to live nearby the sites they monitor, which should facilitate consistent monitoring to count waterbirds (Badzinski et al., 2005).

SURVEY PROTOCOL

The CWWS is based on coordinated, volunteer counts of waterbirds conducted on three days during the spring migration and three days during the fall migratory period. For the migratory periods, counts occur with consistent intervals between days (Spring: April 24th, April 29th, and May 4th); during the fall migration counts occur in October. Waterbirds have been defined as “species of bird that are ecologically dependent on wetlands”. This is the definition used by the Ramsar Convention on Wetlands. Volunteers must be comfortable identifying the CWWS target waterfowl species, or be accompanied by a bird expert. It is highly encouraged that all waterbirds be identified at each site if possible.

Prior to participating in the survey, all volunteers will become familiar with the CWWS protocol and target species, which can be found in the ‘Columbia Wetlands Waterbird Survey: An Identification Guide to Target Waterfowl Species.’ Participants must also view and/or attend the CWWS training module. The Identification Guide describes all target waterbirds and outlines mandated CWWS protocols with the field datasheet. The training module describes the CWWS, the objectives of the program, identification of target species, bird ID resources, survey protocol, field datasheet, online data entry using eBird, and counting techniques for flocks.

All surveyors are required to use either a pair of binoculars and/or spotting scope that enables them to identify waterbirds to a distance of at least 500m for lakes, or to the edge of the wetland slough that is being observed, whichever is closer. Surveys are to be conducted only on days where reasonable weather conditions exist (at least 500m visibility). Surveys will take place from 8am-11am on each of the survey dates. At each individual site, surveyor’s record total counts for each waterbird species present and they record birds observed in four general habitat categories: lake, wetland, river, on land (e.g. agricultural field). Surveyors also record data on weather conditions, visibility, and human activity. At each survey site, a minimum of 5 minutes is used to scan for waterbirds. However, the amount of time spent at each site will vary considerably due to: the variability in time required to scan sites of different size, the high variability in the time required to identify, count, and record varying numbers of waterbirds (CBA 2011). Surveyors can monitor several individual sites within one monitoring period (max 3 hrs).

REQUIRED EQUIPMENT FOR SURVEYORS

Surveyors will require:

- a. 1 spotting scope (the higher power the better – test before you start!) and tripod (a window mount is also handy),
- b. AND/OR 1 pair of good binoculars
- c. CWWS field data sheets
- d. Columbia Wetlands Waterbird Survey: An Identification Guide to Target Waterfowl Species
- e. Clipboard and pencils
- f. Birder's field guide of choice
- g. Maps for sites to be surveyed
- h. Appropriate outdoor gear

COUNTING WATERBIRDS

The CWWS does not count birds in flight. Due to the diverse nature in wetland/river/lake sites and their habitats, counting techniques are determined by the individual surveyor. Therefore, a standardized protocol has not been developed. Some volunteers will choose to count from one or several fixed vantage points, while others will count all waterbirds as they walk or drive along a slough. However, the following tips from Canadian Wildlife Service (CWS) explain accepted waterbird survey methodology:

HOW TO COUNT BIRDS IN THE FIELD [ADAPTED FROM THE CDN WILDLIFE SERVICE (ANDRE BREAUT)]

1. Small wetlands for which you have good coverage and only a “few” birds:

- a. If possible, stay in your vehicle. Birds react less to trucks/cars than they do to people with long pointed objects (i.e. spotting scopes). Trucks can sometimes be more comfortable.
- b. Scan the whole wetland with binoculars to have a “feel” of how many and where the birds are. Do not use the spotting scope for your first overview, as you might easily miss groups of birds taking wing as you arrive.
- c. At first, ignore the birds at the center of the pond and focus on birds along shoreline.
- d. Start identifying the target birds along the shoreline with binoculars if possible and if they are close. If this is not possible, use the spotting scope. Identify all birds along the shoreline. Record the information as quickly as possible (this also allows you to glance at the whole wetland every few seconds).
- e. Always identify dabbling ducks before you tackle diving ducks. Dabbling ducks are usually the first to disappear into the vegetation (especially teals), while diving ducks usually end up in the middle of the wetland.
- f. Use the spotting scope to identify and count the waterbirds in the middle of the wetland. If there are different species, count the most abundant species first. Count the species you think is the

most abundant next. Counting by species has the advantage of allowing you look at the same group of birds a number of times before the survey is completed. By the time you are finished, you will have a good idea of how many and where least abundant birds were, and you should check your data to see if it makes sense to you.

- g. After an initial count of target birds on the water, do a shoreline survey with the spotting scope and pay close attention to birds loafing/sleeping on logs or the shoreline. Once this is done, also do a binocular survey of higher ground (grassland, etc.). This is about the only way you will see Long-billed Curlews.
- h. If birds are diving and spending a lot of time underwater, try cranking up the volume of your car radio. Ducks seem quite interested in music or radio shows (for a while at least) and this has often facilitated counting.
- i. Once you have done the whole survey, look at your survey results (i.e. your field data sheet) and then scan the wetland again with your binoculars. Do you see more waterbirds than you originally recorded?

2. Large wetlands with good visual coverage, with lots or few birds:

- a. Basically the same as the above, except that you want to get as close to the wetland as possible to see as much as possible. If you are on a large wetland, the birds will not react to you leaving the vehicle.
- b. Do the shoreline binocular scanning first, at least for the nearest birds to you.
- c. Start a spotting scope survey of the shoreline, and identify and record all the birds along the shoreline. Ignore the middle of the pond until the whole shoreline has been done. Do a second spotting scope survey for the birds that might be loafing on rocks, trees or the shoreline.

General considerations on survey methodology

- a. It is better that you do 3 quick scans than only one slow one. The methods here recommend:
 - 1. a quick binocular scan of the whole lake
 - 2. a spotting scope count and the identification of all birds
 - 3. a second binocular scan to confirm the numbers already recorded

It is easier and often more time efficient to change location to get a better view.

- b. It is quite important that you start looking at the wetland as soon as you arrive. Birds react to disturbances by either: taking off (so they are gone by the time you are ready to count them), hiding on the shore in/along the vegetation (dabbling ducks), or swimming to the center of the wetland (diving ducks). If you wait to do the survey, chances are you will miss a bird or find that you only have one large group of birds in the middle of the wetland.
- c. On your initial scan of the wetland with binoculars, get a feel of who (and where) the birds are, and pay special attention to the birds nearest to you. Those birds are likely to dive/swim/fly away in reaction to your presence.
- d. Do not spend a lot of time on birds that are barely visible. For the hard and far away birds,

the best is to change your position and/or move closer. There are some birds that cannot be identified.

- e. If you have to choose between safety and survey, choose safety.
- f. If you have the choice, always survey your site locations in the same order, and try to do the largest ones earlier in the day, when light conditions are better. If you plan on surveying large wetlands, consider acquiring a 70mm spotting scope (+/- \$1000.00). The improved resolution will make your life simpler for all those black dots on the horizon.
- g. When in doubt, stay in doubt! You should not feel embarrassed by unknowns.

DATA MANAGEMENT

Once you have completed your surveys, please submit your bird checklists online into the eBird Canada Database (<http://ebird.org/ebird/canada/submit>). You can use your own username/password and then share the checklists. To do this, when checklist is complete, simply click on the link located on the right hand side of screen entitled 'Share with others in your party' and email to rachel@wildsight.ca. Alternatively, you can use the following username/password for word for data entry if you do not wish to have your own:

Username: ColumbiaWetlands

Password: wildsight

If you do are unable to enter your data into Ebird for whatever reason, please indicate this by checking the box at the end of the field data sheet. The data will be entered once we receive your data forms, but we need to know that it hasn't already been entered.

Lastly, once your surveys are complete please snail mail (or scan and email) them to Rachel Darvill as soon as possible.

Rachel Darvill
PO Box 663, Golden, BC
V0A1H0

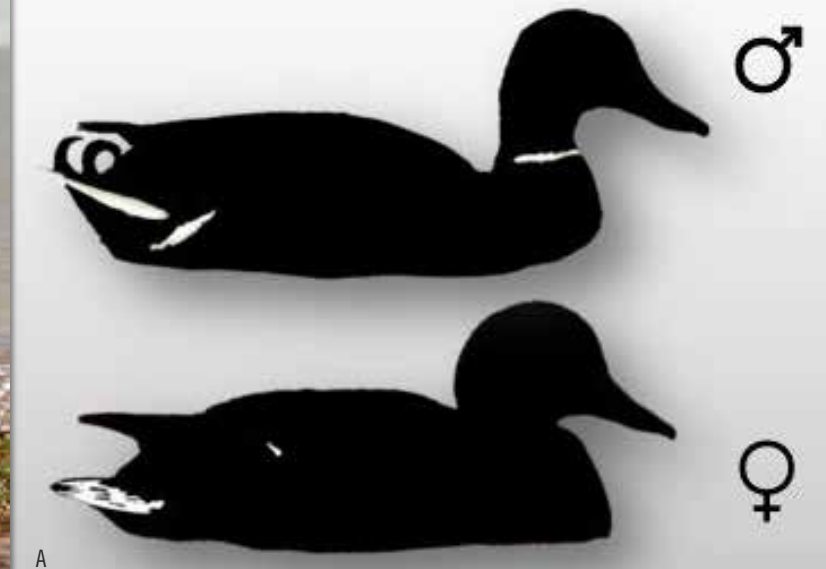
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Badzinski, S.S., Cannings, R.J., Smoth, T., & Komaromi, J. (2005). An evaluation of survey power and species trends after five years of monitoring. Retrieved from Bird Studies Canada: <http://www.bsc-eoc.org/download/BCCWS%205-YR%20Report.pdf>

Cooper Beaudesne and Associates Ltd (CBA). 2011. CLBMON 40: Arrow Lakes Reservoir shorebird and waterbird monitoring program: monitoring protocols, Year 3. BC Hydro Water Licence Requirements, Castlegar, B.C.

MALLARD

Anas platyrhynchos



IDENTIFICATION NOTES: VERY COMMON AND WIDESPREAD IN THE COLUMBIA WETLANDS WITH DARK BLUE SPECULUM AND ORANGE FEET. MALE IS VERY DISTINCTIVE WITH METALLIC GREEN HEAD, WHITE COLLAR, YELLOW BILL AND CHESTNUT BREAST. MALES HAVE GREY BODY AND BLACK TAIL. FEMALES ARE BROWN MOTTLED ALL OVER THEIR BODY, ORANGE BILL MARKED WITH BLACK ON THE TOP.

GADWALL

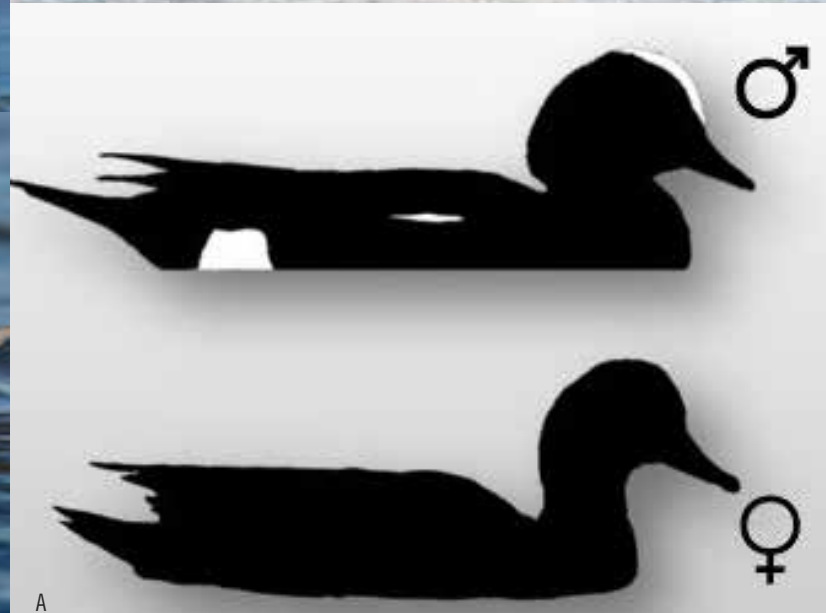
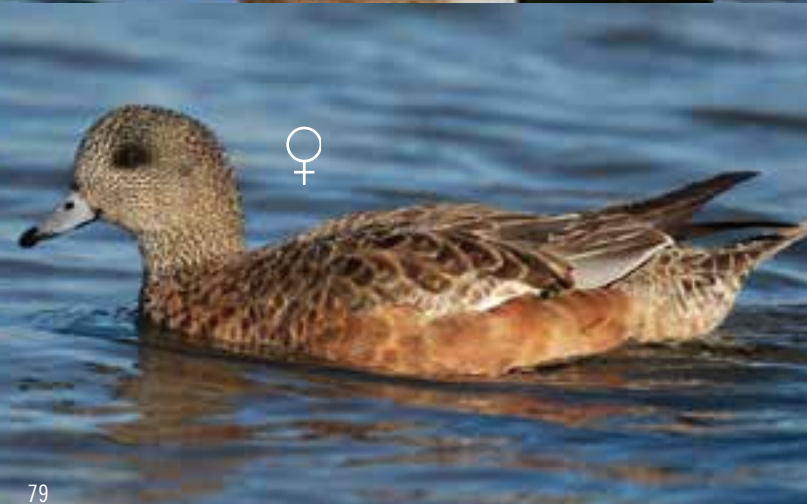
Ana strepera



IDENTIFICATION NOTES: NOT AS SHOWY AS MOST MALE DUCKS; BODY IS MOSTLY GREY WITH WHITISH BELLY AND BLACK TAIL. OFTEN DISTINGUISHED BY WHITE PATCH ON REAR (SPECULUM). NON-BREEDING MALES HAVE BLACK BILLS. FEMALES ARE BUFF WITH MOTTLED BROWN PLUMAGE WITH WHITE BELLY. BOTH SEXES HAVE YELLOW LEGS, FEET AND BEAKS WITH GREY UPPER MANDIBLES. SIMILAR SPECIES - FEMALE RESEMBLES MALLARD, NORTHERN PINTAIL AND OTHER DABBLING DUCK FEMALES, BUT OTHER SPECIES GENERALLY LACK BLACK/WHITE WING PATCH OF GADWALL AND THE WHITE SPECULUM. AMERICAN WIGEON MALE HAS WHITE STIPE ON HEAD WITH GREEN STREAKS COMING FROM EYES.

AMERICAN WIGEON

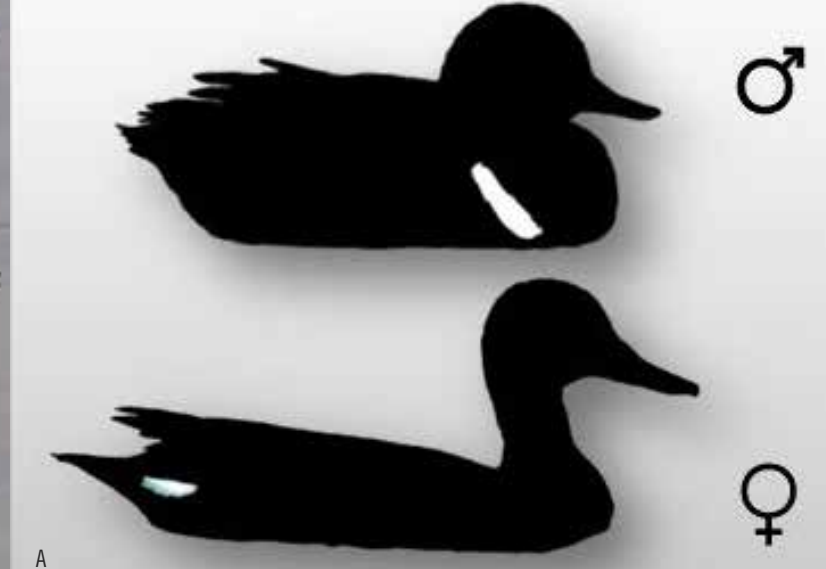
Anas americana



IDENTIFICATION NOTES: LARGE WATERFOWL, MALE HAS DISTINCTIVE WHITE FOREHEAD WITH SHARP EMERALD GREEN FEATHERS RUNNING BACK FROM EACH EYE. LARGE WHITE PATCH ON WING WITH BLACK REAR. MALE NON-BREEDING PLUMAGE IS SIMILAR BUT WITHOUT GREEN HEAD. FEMALE AND IMMATURE HAVE GREY WING PATCHES. BOTH SEXES HAVE WHITE BELLY, GREY BILL AND CINNAMON BREAST. SIMILAR SPECIES: EURASIAN WIGEON, RARE IN THE COLUMBIA WETLANDS; MALE HAS DARK RUFOUS HEAD AND CHEST; FEMALE EURASIAN VERY DIFFICULT TO DISTINGUISH FROM AMERICAN WIGEON, BUT HAS SLIGHTLY GREYER BODY AND WARMER BROWN HEAD.

GREEN-WINGED TEAL

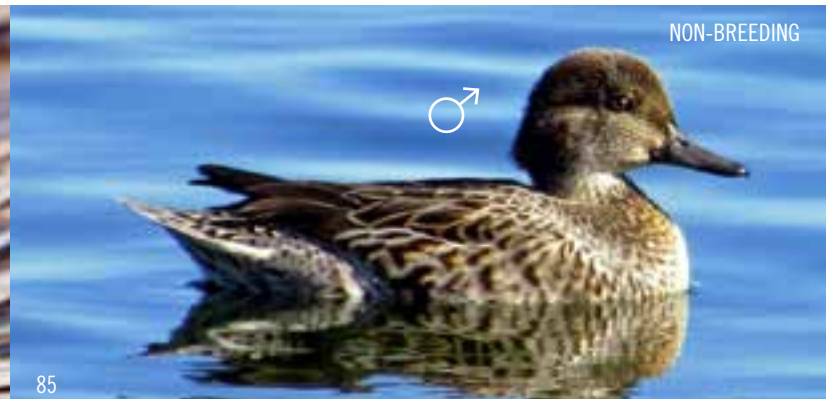
Anas crecca



IDENTIFICATION NOTES: THE SMALLEST DABBLING DUCK, SEEN FLYING FAST AND AGILE. BOTH SEXES HAVE SHORT BILLS AND BLACK-GREEN SPECULUM. MALES HAVE GREEN EAR PATCHES RUNNING BACK FROM THE EYE, WITH CHESTNUT HEAD. MALE HAS A WHITE SHOULDER PATCH AND CREAMY CHEST WITH LIGHT GREY SIDES. FEMALES DISTINGUISHED FROM OTHER DABBLING DUCKS BY THEIR SHORT BILL AND WHITE UNDER TAIL THAT CONTRASTS HER MOTTLED BROWN BODY. SIMILAR SPECIES: AMERICAN WIGEON, BLUE-WINGED TEAL.

BLUE-WINGED TEAL

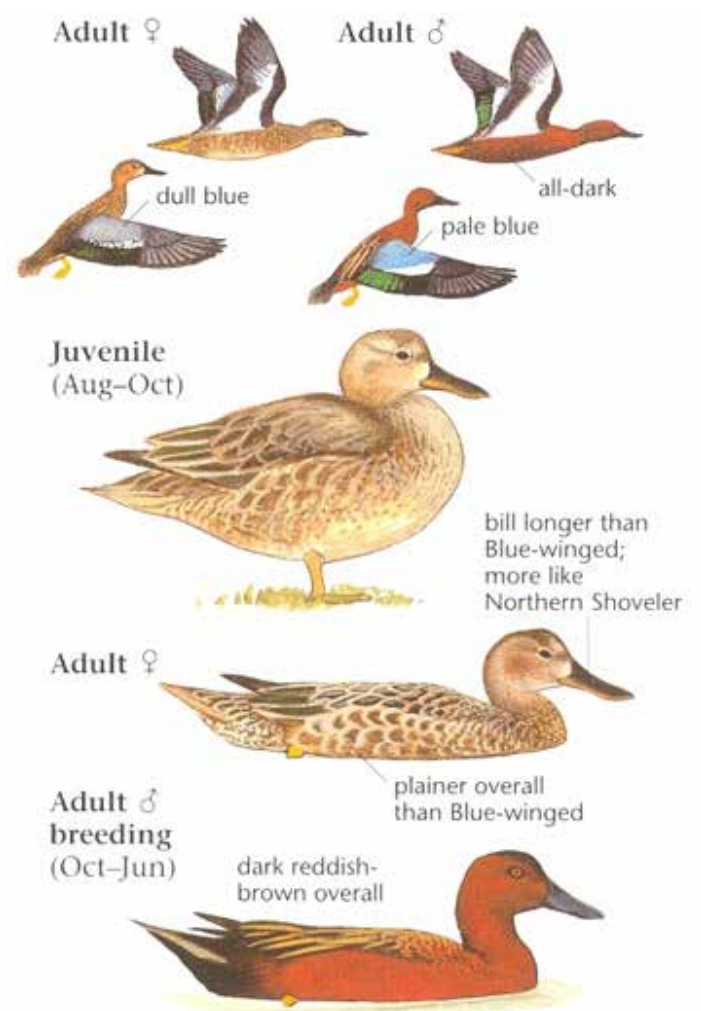
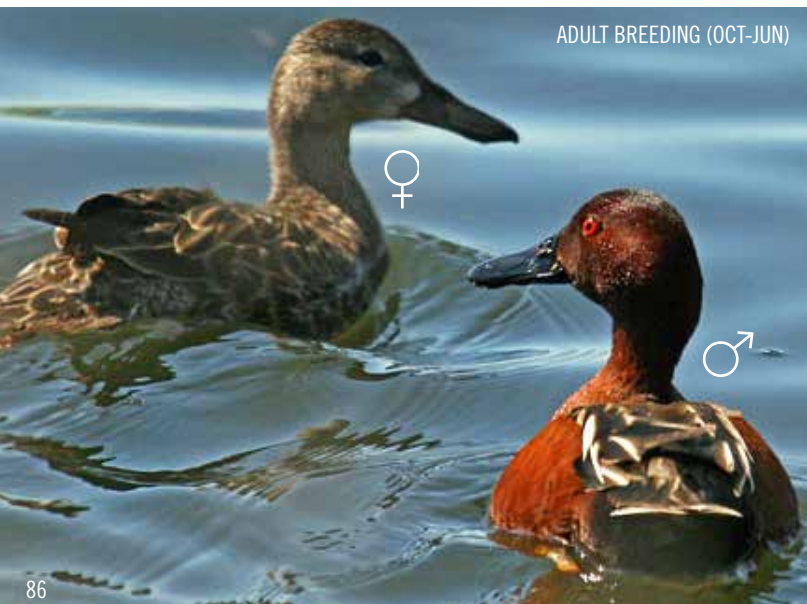
Anas discors



IDENTIFICATION NOTES: SMALL, SLENDER DUCK. BOTH SEXES HAVE BLUE FOREWING PATCHES AND GREEN SPECULUM. BREEDING MALE PLUMAGE HAS DISTINCTIVE WHITE CRESCENT PATCH IN FRONT OF THE EYE, WITH GREY HEAD. FEMALES ARE MOTTLED BROWN ALL OVER WITH HEAVILY SPOTTER UNDER PARTS. FOUND IN SMALL GROUPS, USUALLY CLOSE TO VEGETATION. SIMILAR: FEMALE CINNAMON TEAL, FEMALE NORTHERN SHOVELER.

CINNAMON TEAL

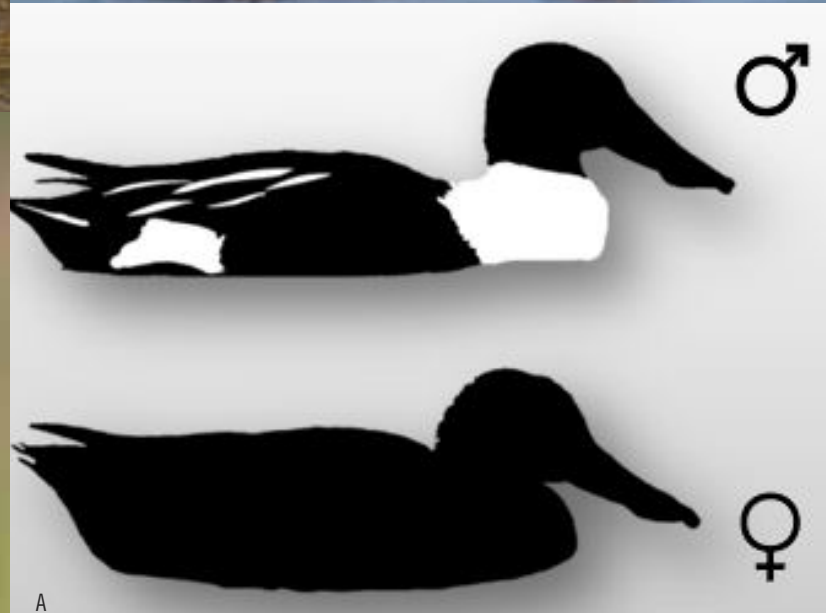
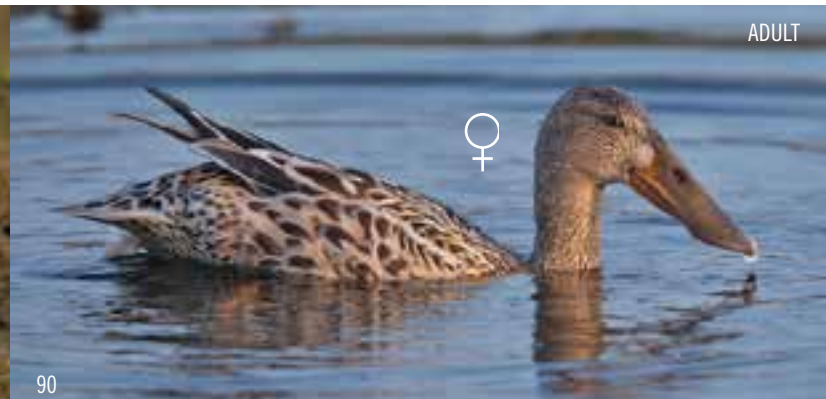
Anas cyanoptera



IDENTIFICATION NOTES: BREEDING MALES ARE UNMISTAKABLE WITH CINNAMON COLOR OVER MOST OF BODY, TAILS ARE BLACK WITH RED EYE. FEMALES CLOSELY RESEMBLE BLUE-WINGED TEAL BUT HAVE A RICHER COLOR, AND A SPOON-LIKE GREY BILL. IMMATURE MALES ARE SIMILAR TO ADULT FEMALE. SIMILAR SPECIES: BLUE-WINGED TEAL.

NORTHERN SHOVELER

Anas clypeata



IDENTIFICATION NOTES: BOTH SEXES HAVE DISTINCTIVE SPOON BILLS LONGER THAN THEIR HEADS, BLUE FOREWING PATCH AND GREEN SPECULUM. BREEDING MALES HAVE GREEN HEADS, WHITE BREASTS AND CHESTNUT BELLY. FEMALES ARE MORE SUBDUED MOTTLED BROWN OVERALL, GREY BILL TINGED ORANGE ON THE EDGE. IMMATURE MALES HAVE WHITE CRESCENT ON EACH CHEEK WITH GREY HEADS. SIMILAR: BLUE-WINGED TEAL.

NORTHERN PINTAIL

Anas acuta



IDENTIFICATION NOTES: DISTINGUISHABLE BY THE MALE'S SLENDER APPEARANCE, LONG BLACK TAIL, WHITE BREAST PLUMAGE EXTENDING TO ITS HEAD THAT IS COLORED CHOCOLATE BROWN. MALES HAVE DUSTY GREY BODY PLUMAGE AND GREY BILLS. FEMALE IS MOTTLED LIGHT BROWN OVER HER WHOLE BODY, WITH PALER HEAD AND NECK, AND WHITE BELLY.

WOOD DUCK

Aix sponsa



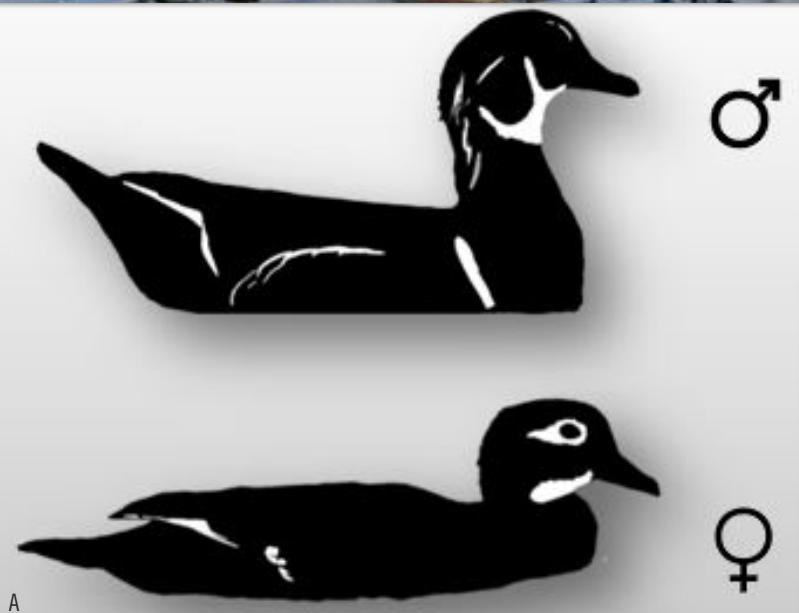
ADULT BREEDING (SEPT-JUN)



JUVENILE (JUL-AUG)



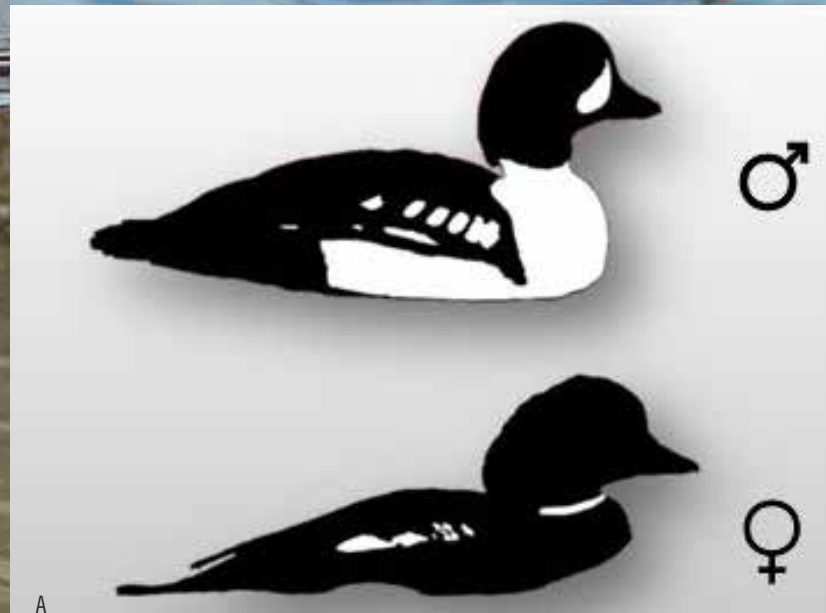
ADULT



IDENTIFICATION NOTES: BREEDING MALE IS ONE OF THE MOST COLORFUL WATERBIRDS IN NORTH AMERICA WITH SHINY GREEN HEADS, RED EYE, ORANGE BILL WITH SHARP WHITE CHINSTRAP, THROAT AND EYEBROW FEATURES. CHESTNUT BREAST SPOTTED WITH WHITE, GOLDEN SIDES WITH DARK BLACK TAIL. FEMALE IS SUBDUED WITH MOTTLED BROWN BREAST SPOTTED AND STREAKED WITH WHITE, VERY DISTINCTIVE WHITE TEARDROP AROUND THE EYES. WHITE BELLY AND GREY-BROWN UPPERPARTS WITH EMERALD GREEN WING TIPS. IMMATURE MALE RESEMBLES FEMALE.

BARROW'S GOLDENEYE

Bucephala islandica



IDENTIFICATION NOTES: BOTH SEXES ARE MEDIUM SIZED, ROUND/STEEP FOREHEADS, SHORT BILLS WITH GOLDEN-COLORED EYES. BREEDING MALE HAS CRESCENT SHAPED WHITE PATCH IN FRONT OF EYE (ON LORES), WHITE CHEST, DARK BACK WITH WHITE SPOTS THAT SHOW ON A SWIMMING BIRD AS A ROW OF DOTS. FEMALE HAS CHOCOLATE BROWN HEAD AND GREY-BROWN BODY. IMMATURE MALE RESEMBLE FEMALE ALTHOUGH LACKS ORANGE BILL AND HAS WHITER CHEST. SIMILAR SPECIES: COMMON GOLDENEYE. FEMALE BARROW'S GOLDENEYE CAN BE DISTINGUISHED BY THEIR STUBBY TRIANGULAR ORANGE/YELLOW BILLS, OVAL-SHAPE, AND STEEP FOREHEAD. MALE DISTINGUISHED MAINLY BY THE AMOUNT OF WHITE ON BODY.

COMMON GOLDENEYE

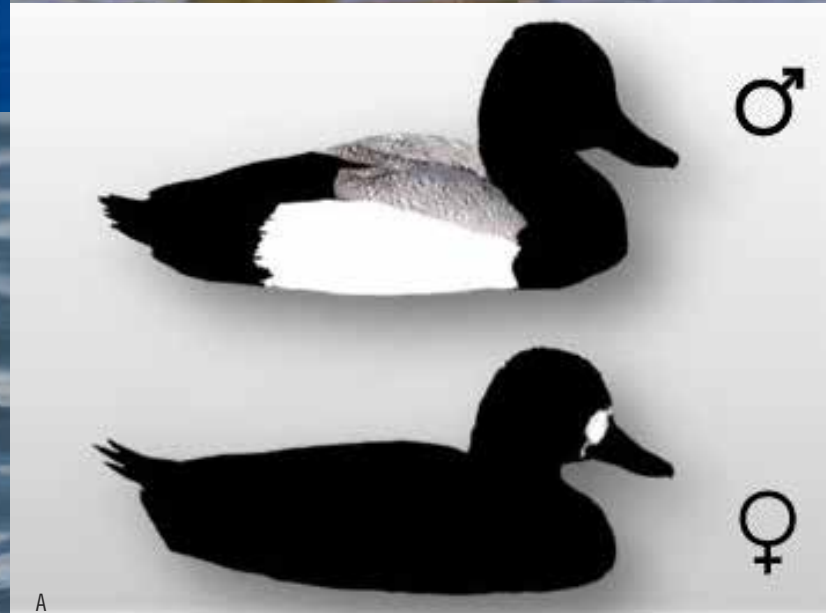
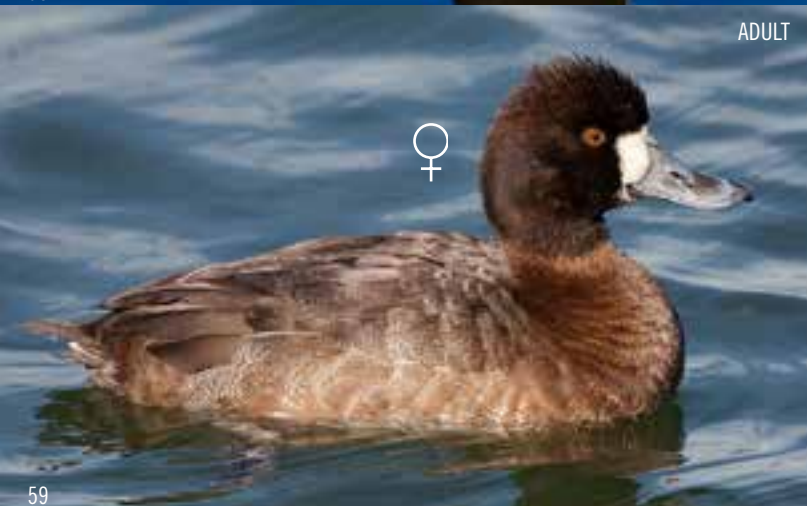
Bucephala clangula



IDENTIFICATION NOTES: THE COURTSHIP DISPLAY OF THE BREEDING MALE IS FAMOUS; BENDING HIS NECK TOWARDS HIS BODY. BOTH SEXES HAVE GOLD EYES, CHUNKY BUILD, BLACK WINGS WITH WHITE PATCHES, SLOPING FOREHEAD AND THEIR BILL IS HALF AS LONG AS THEIR HEAD. MALE HAS DARK GREEN HEAD WITH WHITE PATCHES ON EACH CHEEK, WHITE SCAPULARS, BLACK BACK, WHITE SIDES AND DARK BILL. FEMALE HAS CHOCOLATE BROWN HEAD, LIGHT BREAST AND BELLY, AND GREY-BROWN BODY. SIMILAR SPECIES – BARROW'S GOLDENEYE; FEMALE DIFFERS WITH HER TRIANGULAR HEAD, SHORTER BILL THAT IS ORANGE AT THE TIP WITH SLIGHTLY PALER HEAD. MALE BARROW'S GOLDENEYE HAS MORE BLACK ON BACK WITH WHITE SPOTS, RATHER THAN MOSTLY WHITE BODY AS SEEN ON COMMON GOLDENEYE.

LESSER SCAUP

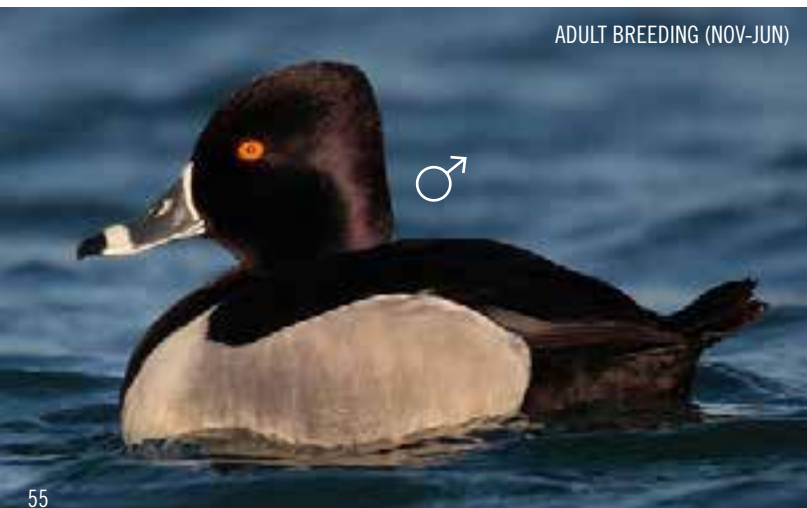
Aythya affinis



IDENTIFICATION NOTES: BOTH SEXES HAVE POINTED HEADS THAT HELP DISTINGUISH THEM FROM THE GREATER SCAUP (WHICH IS VERY RARE IN THE COLUMBIA WETLANDS). BREEDING MALE IS 'OREO COOKIE' COLORED; BLACK ON BOTH ENDS AND WHITE IN THE MIDDLE. HEAD HAS HINTS OF PURPLE, YELLOW EYES, GREYISH BACK AND WHITISH SIDES WITH A BLUE-GREY BILL. FEMALE HAS DISTINCTIVE WHITE PATCH BESIDE HER DARK BILL AND A DARK BROWN BODY. SIMILAR SPECIES: GREATER SCAUP, RING-NECKED DUCK.

RING-NECKED DUCK

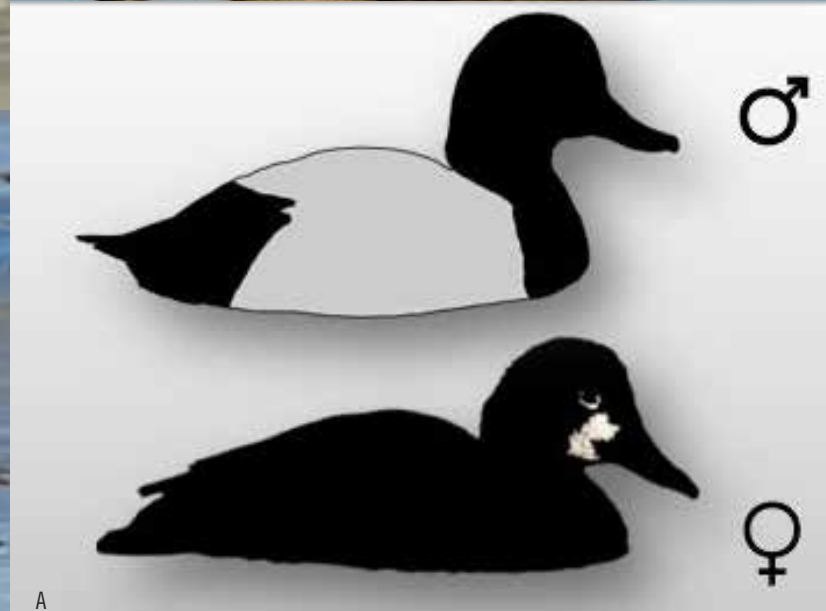
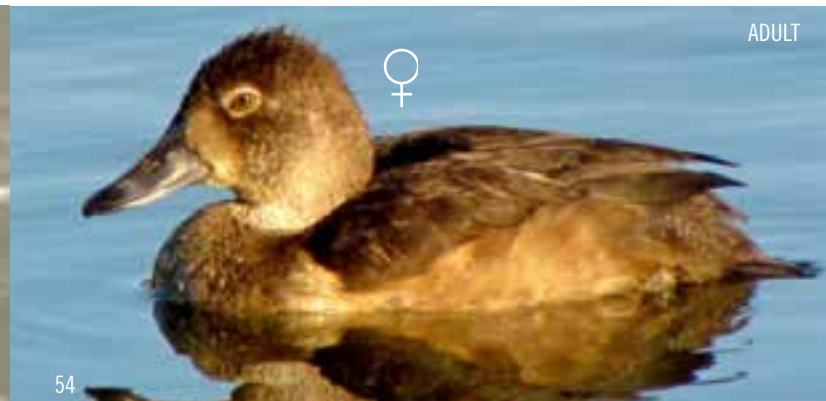
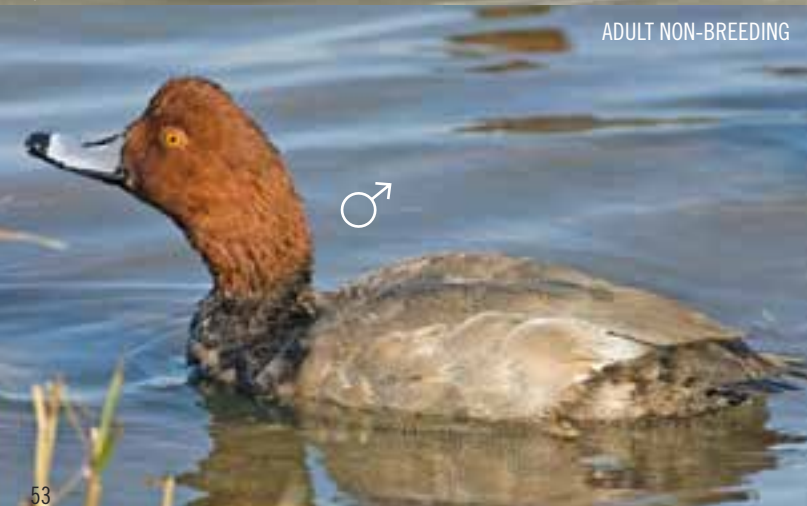
Aythya collaris



IDENTIFICATION NOTES: STRANGELY ENOUGH THIS DIVING DUCK IS MOST EASILY IDENTIFIED BY THE WHITE RING AROUND ITS BILL RATHER THAN ITS ALMOST INVISIBLE BROWN RING AROUND THE MALES NECK. MALE HAS DARK METALLIC ANGULAR HEAD, BRIGHT YELLOW EYE, A WHITE CRESCENT BETWEEN ITS BLACK CHEST AND LIGHT GREY SIDES, WITH BLACK BACK AND BLACK HINDQUARTERS. FEMALE HAS DARK CROWN, MOTTLED WHITE FACE AND A WHITE EYE RING WITH A PALE LINE EXTENDING BACK FROM THE EYE. HER BODY IS DARK BROWN. SIMILAR SPECIES: LESSER AND GREATER SCAUP.

REDHEAD

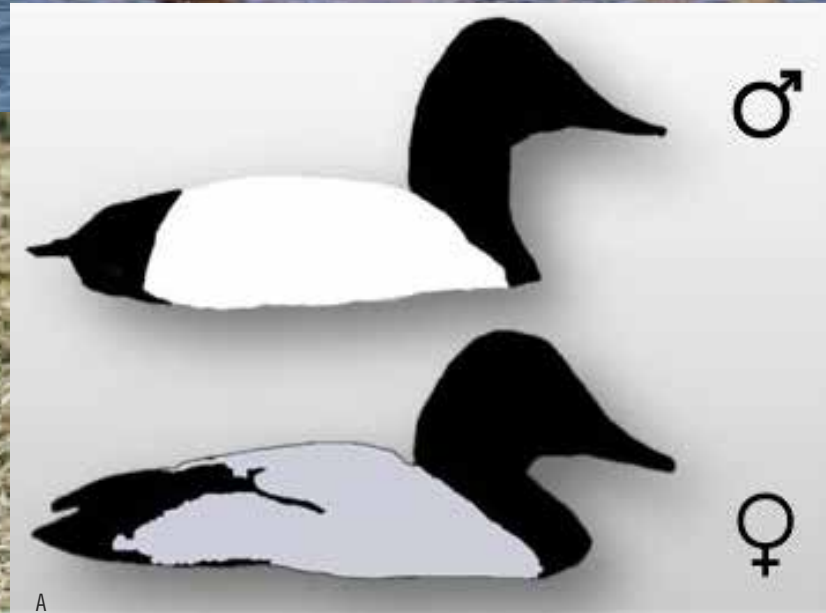
Aythya americana



IDENTIFICATION NOTES: BREEDING MALE HAS ROUNDED RED HEAD WITH BLACK CHEST AND HINDQUARTERS, WITH SMOKY GREY SIDES; A DISTINCTIVE TRI-COLORED BILL OF MOSTLY PALE BLUE WITH A WHITE STRIP AND BLACK TIP. FEMALE IS DARK BROWN OVERALL BECOMING LIGHTER TOWARD THE HEAD, WITH BLACK-TIPPED BILL. SIMILAR SPECIES: CANVASBACK MALE HAS WHITE BODY (A CANVAS) WITH BLACK ON TOP OF HEAD, BLACK BILL; FEMALE CANVASBACK HAS LARGER WHITE PATTERNS.

CANVASBACK

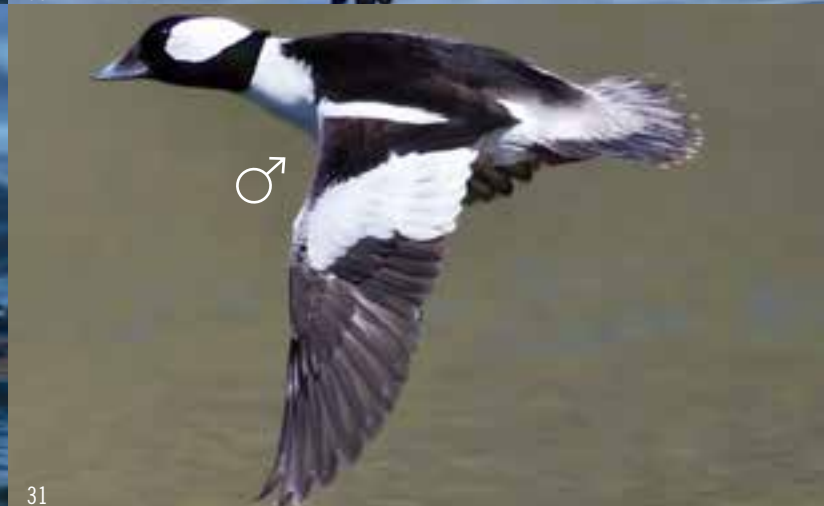
Aythya valisineria



IDENTIFICATION NOTES: STEEPLY SLOPING LONG BILL AND FACE. NAMED AFTER ITS CLEAN WHITE BACK, WHICH SEEMS TO BE WRAPPED IN A WHITE CANVAS. DURING BREEDING, MALE HAS CHESTNUT HEAD, BLACK CHEST AND HINDQUARTERS. FEMALE AND ECLIPSE MALE (NONBREEDING) HAVE LIGHT BROWN HEAD AND NECK WITH GREYISH BACK AND SIDES. IN FLIGHT, WHITE BELLY CONTRASTS DARK COLOR AROUND THEIR NECK. SIMILAR SPECIES: REDHEAD, WHICH HAS A GREY BODY RATHER THAN WHITE.

BUFFLEHEAD

Bucephala albeola



IDENTIFICATION NOTES: VERY SMALL, ROUNDED DUCK. MALES ARE STRIKING BLACK AND WHITE (FROM A DISTANCE), BUT ACTUALLY HAVE A GLOSSY GREEN HEAD NEAR THE EYE, WITH PURPLE SETTING OF THE WHITE PATCH ON BACK OF HEAD. FEMALES ARE MUCH MORE SUBDUED WITH DARK GRAY-BROWN BODY AND A DISTINCTIVE OVAL WHITE PATCH ON THE CHEEK. HEADS ARE ROUNDED AND SHORT WITH WIDE/SHORT GREY BILLS.

RUDDY DUCK

Oxyura jamaicensis



IDENTIFICATION NOTES: SMALL, STALKY DUCK WITH A LARGE HEAD AND LONG SPIKY TAIL THAT IS OFTEN RAISED WHEN SWIMMING. THE BLACK HEAD CAP/TAIL, WHITE CHEEK, CHESTNUT-RED BODY AND LARGE SKY-BLUE BILL IS VERY DISTINCTIVE OF MALE DURING BREEDING. FEMALE IS BROWN OVERALL WITH A BLURRY DARK STRIPE ALONG CHEEK, DARKER HEAD CROWN AND BACK. THE WINTER MALE PLUMAGE IS SIMILAR TO FEMALE, EXCEPT IT HAS A WHITE CHEEK.

COMMON MERGANSER

Mergus merganser



IDENTIFICATION NOTES: THE MOST COMMON MERGANSER, THESE HIGHLY SOCIAL BIRDS ARE LARGE IN SIZE WITH LONG ELONGATED BODIES AND RED THIN HOOKED BILLS. MALE HAS GLOSSY GREEN HEAD WITHOUT A CREST, WHITE BELLY AND SIDES, BLACK SPINAL PLUMAGE WITH ORANGE FEET. FEMALE HAS A GREY BODY AND SHOWS A COLORFUL RUSTY RED CREST WITH CONTRASTING WHITE CHIN PATCH AND A CLEAN WHITE NECK AND THROAT. IN FLIGHT THEY HAVE SHALLOW WING BEATS AND THEIR BODY IS ARROW-SHAPED. IN FLIGHT THE MALE HAS WHITE PATCH COVERING THE INNER WING PARTIALLY CROSSED BY A BLACK BAR. SIMILAR: RED-BREASTED MERGANSER WHERE MALE HAS SHAGGY HEAD CREST AND FEMALE HAS SMALL WHITE CHIN AND NECK PATCHES.

HOODED MERGANSER

Lophodytes cucullatus



IDENTIFICATION NOTES: ALL HAVE THE RAISED “HAMMERHEAD” CREST (CAN BE RAISED OR LOWERED), DISTINCTIVELY WHITE ON MALE (ESPECIALLY WHEN RAISED) AND CREST IS FROSTED REDISH-BROWN ON FEMALE. MALE HAS SHARP BLACK AND WHITE PATTERNS, WITH WHITE BREAST, CHESTNUT FLANKS MAKING HIM VERY DISTINCTIVE. THIN BILL; IN FLIGHT THE WINGS ARE THIN AND THE TAIL IS RELATIVELY LONG AND ROUNDED.

RED-BREASTED MERGANSER

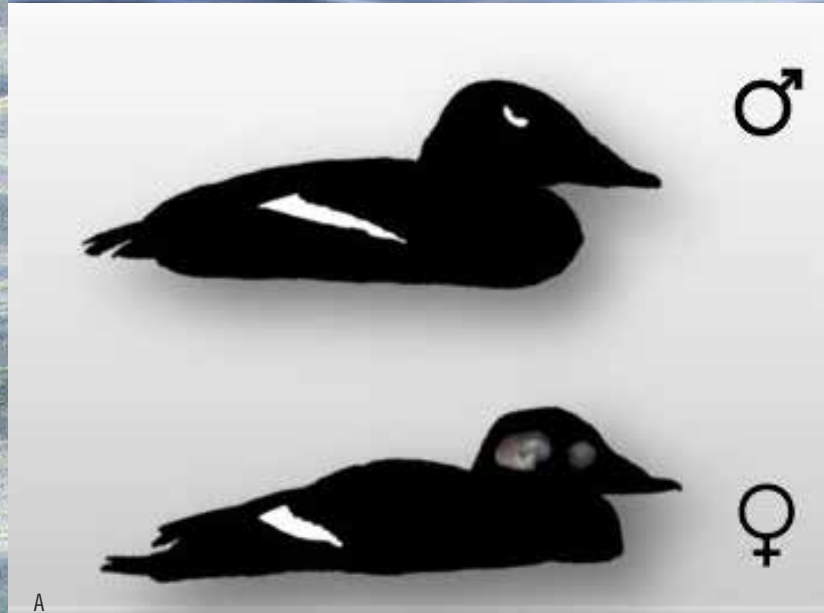
Mergus serrator



IDENTIFICATION NOTES: LARGE ELONGATED DUCK, BOTH SEXES HAVE SHAGGY CREST, THIN RED SERRATED BILL. MALE HAS GREEN HEAD, RED EYES, WHITE COLLAR, LIGHT-RUSTY CHEST SPOTTED AND STREAKED WITH BLACK, GREY SIDES, BLACK AND WHITE WINGS. ECLIPSE (NON-BREEDING) MALE RESEMBLES FEMALE, BUT RETAINS MALE WING PATTERN. FEMALE HAS REDDISH HEAD AND GREY-BROWN BODY OVERALL. IN FLIGHT, MALE HAS TWO WHITE WING PATCHES SEPARATED BY TWO BLACK BARS; FEMALE WHITE INNER SECONDARY'S ARE CROSSED BY ONE BLACK BAR. SIMILAR SPECIES: COMMON MERGANSER, ESPECIALLY FEMALE, IS DISTINGUISHED BY WHITE CHIN AND NECK. COMMON FEMALE ALSO HAS LESS MESSY HEAD CREST AND HAS CLEANER LINE IN PLUMAGE BETWEEN RED HEAD AND GREY BODY. MALE COMMON MERGANSER LACKS CRESTED HEAD AND HAS ALL-WHITE BREAST; RED-BREASTED MERGANSER BREAST IS DARK.

WHITE-WINGED SCOTER

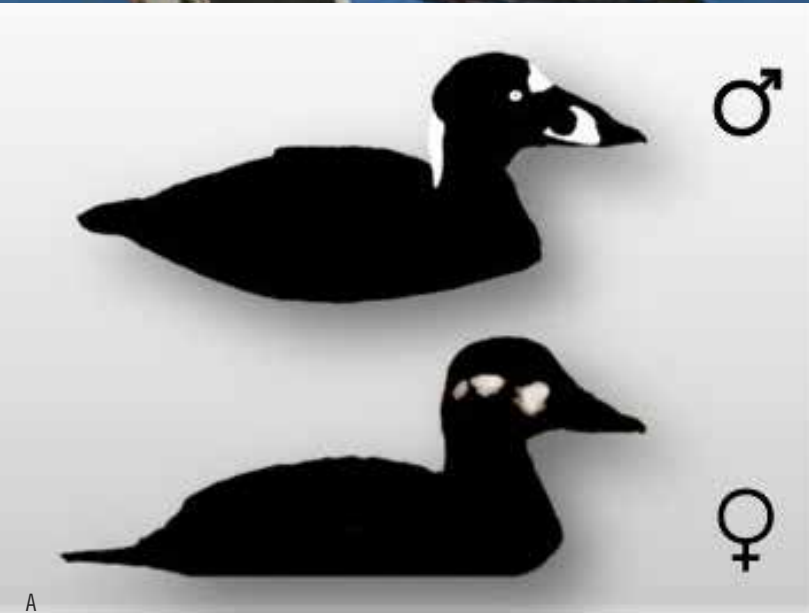
Melanitta fusca



IDENTIFICATION NOTES: BOTH SEXES HAVE IDENTIFYING FEATURE OF A WHITE INNER WING PATCH, WITH SLIGHTLY ROUNDED HEADS AND FACIAL FEATHERS THAT EXTEND TO THEIR NOSTRILS. MALE IS BLACK OVER ALL WITH A COLORFUL ORANGE RED-BILL TIP AND SMALL WHITE CRESCENT PATCH BENEATH THE EYE. FEMALE HAS LESS CONTRAST IN COLORS THAN OTHER SCOTERS, WITH LIGHT PATCHES ON EACH EAR, GREY BILL, BUT BROWN OVERALL. SIMILAR SPECIES: SURF SCOTER WITH NO WHITE WING PATCH, MULTI-COLORED BILL, WITH WHITE HEAD PATCHES.

SURF SCOTER

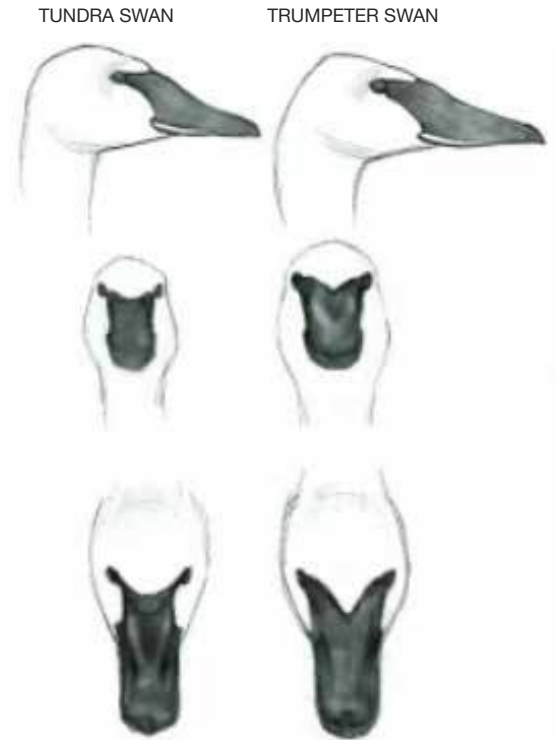
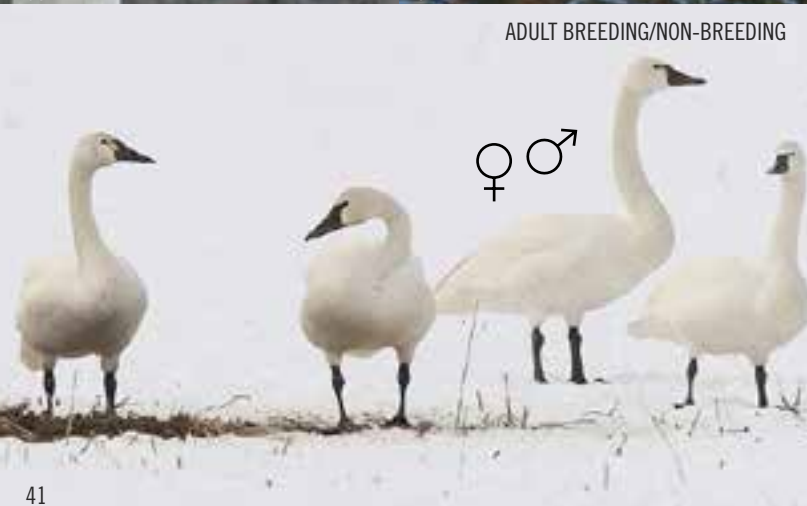
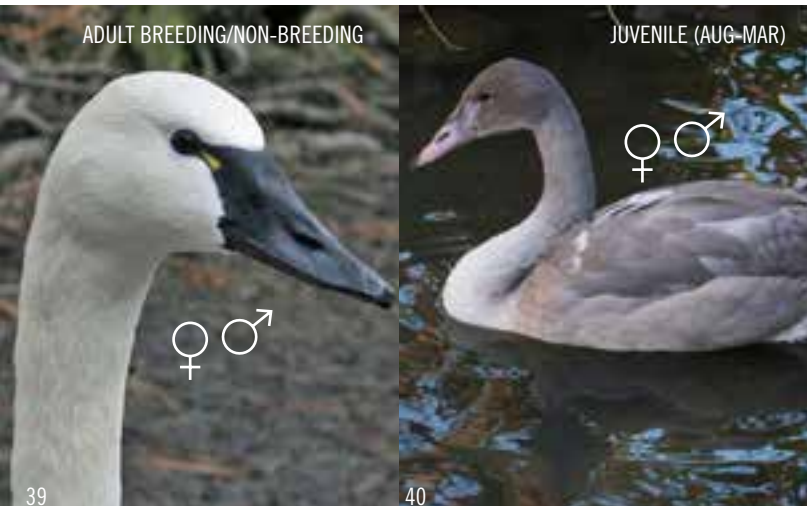
Melanitta perspicillata



IDENTIFICATION NOTES: TYPICALLY FOUND IN ROUGH WATER AND LARGE DEEP LAKES, BUT CAN ALSO BE FOUND ON THE COLUMBIA RIVER. BOTH SEXES ARE LARGE AND STOCKY WITH SLOPING FOREHEAD, LARGE DISTINCTIVE ORANGE-WHITE BILL WITH ORANGE LEGS AND FEET. MALE HAS DISTINGUISHABLE BLACK BODY CONTRASTING HIS LARGE COLORFUL ORANGE BILL AND WHITE PATCHES ON FOREHEAD AND NAPE. IMMATURE MALE IS LIGHT COLORED WITH WHITE FACE PATCHES. FEMALE IS BROWN WITH DARK CROWN AND WHITE PATCHES ON BOTH CHEEKS; DARK GREY BILL. SIMILAR SPECIES: WHITE-WINGED SCOTER WHICH HAS WHITE ON WINGS; WHITE CRESCENT PATCH BENEATH EYE.

TUNDRA SWAN

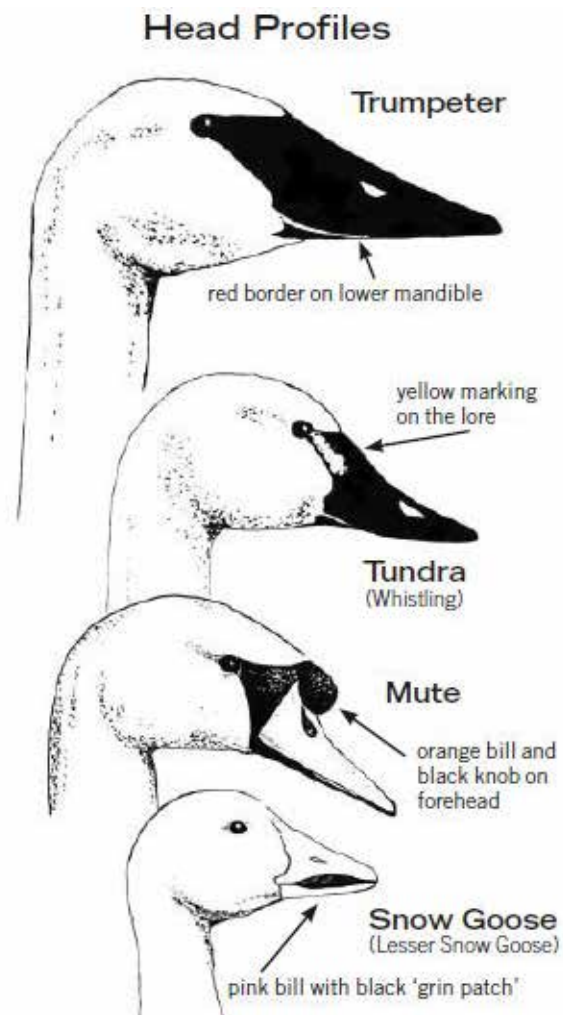
Cygnus columbianus



IDENTIFICATION NOTES: SEXES SIMILAR. ALL-WHITE PLUMAGE WITH THICK BLACK BILL. USUALLY HAS DISTINCTIVE YELLOW-COLORED TEARDROP ON LORES (IN FRONT OF EYES); EYE STANDS OUT COMPARED TO TRUMPETER SWAN. ABOUT 10% OF ADULT TUNDRA'S DO NOT SHOW YELLOW ON LORES. BLACK LEGS AND FEET. IMMATURE SWAN HAS LIGHT GREY PLUMAGE WITH PINK BILL BECOMING BLACK AT BASE. CALL IS A LOUD HIGH PITCHED WOOPING NOISE. SEEN IN THE EARLY SPRING INTO THE WINTER MONTHS. SIMILAR SPECIES: TRUMPETER SWAN VERY SIMILAR, BUT ALMOST ALWAYS DO NOT HAVE YELLOW LORES; TRUMPETER HAS LARGER BODY, WITH SLIGHTLY DIFFERENT BILL/BODY SHAPE, DIFFICULT TO SEE EYES ON TRUMPETER AS THEY BLEND INTO BLACK ON FACE.

TRUMPETER SWAN

Cygnus buccinator



IDENTIFICATION NOTES: BOTH SEXES SIMILAR WITH AN ALL-WHITE PLUMAGE. LARGEST SPECIES OF NATIVE WATERFOWL IN NORTH AMERICA. HAS BLACK FEET WITH BLACK BILL, NO YELLOW 'TEARDROP' ON LORES OF BILL AS IS SEEN WITH THE SIMILAR-LOOKING TUNDRA SWAN. IN ADULTS, PLUMAGE OF THE HEAD AND UPPER NECK IS SOMETIMES STAINED REDDISH BROWN FROM THE HIGH IRON CONTENT OF THE WATER IN WHICH THEY FORAGE.

CANADA GOOSE

Branta canadensis



IDENTIFICATION NOTES: SEXES SIMILAR IN ALL SEASONS. THE MOST COMMON WATERFOWL SEEN IN THE COLUMBIA WETLANDS. SLENDER BLACK NECK WITH DISTINCTIVE WHITE CHIN-STRAP. LIGHT BROWN UPPERPARTS, SHORT BLACK TAIL AND A WHITE BELLY. FLOCKS MIGRATE IN V- FORMATION, ACCOMPANIED BY THEIR FAMILIAR HONKING. FOUND IN AND NEAR MARSHES AND GRASSY AREAS, GOLF COURSES, ALONG WITH THE MANY WATERBODIES OF THE COLUMBIA WETLANDS.

WESTERN GREBE

Aechmophorus occidentalis



4



5

IDENTIFICATION NOTES: BOTH SEXES SIMILAR DURING BOTH BREEDING AND NON-BREEDING. HAS A LONG SLENDER AND DISTINCTIVE WHITE NECK, WHITE PATCH ON CHEEK, WITH A NARROW BLACK PATCH DOWN THE BACK OF NECK. STRIKING RED EYES ARE SURROUNDED IN BLACK. THE LARGEST OF SIX GREBE SPECIES, THEY BREED IN LARGE LAKES WITH MARSHY VEGETATION.

HORNED GREBE

Podiceps auritus



BREEDING



BREEDING PAIR



NON-BREEDING



NON-BREEDING

IDENTIFICATION NOTES: BOTH SEXES SIMILAR. DURING BREEDING SEASON, RUFOUS COLOURED NECK AND SIDES, WITH A BLACK CHEEK AND BLACK FOREHEAD. DISTINCTIVE GOLDEN-YELLOW EAR TUFTS (OR HORNS) COME OFF FROM EYE AREA. HAS BLACK/GREY SCALING ON BACK WITH RED EYES. NON-BREEDING PLUMAGE HAS A WHITISH TIP ON THE BILL, WITH AN ALL-WHITE CHEEK AND USUALLY AN ALL-WHITE NECK. SIMILAR SPECIES: EARED GREBE, ESPECIALLY IN NON-BREEDING PLUMAGE, BUT HORNED GREBE SHOWS CLEAR BORDER BETWEEN BLACK OF CROWN AND WHITE OF LOWER FACE RATHER THAN A MORE GRADUAL TRANSITION BETWEEN BLACK AND WHITE. FRONT OF NECK IS WHITE, NOT GRAY. SMALLER THAN RED-NECKED GREBE.

EARED GREBE

Podiceps nigricollis



10



12



11



13

IDENTIFICATION NOTES: SMALL WATERBIRD WITH A THIN, DARK BILL THAT OFTEN APPEARS SLIGHTLY TILTED UPWARDS. RED EYES. DURING BREEDING, HAS BLACK HEAD, NECK AND CHEEKS WITH WISPY GOLDEN-YELLOW EAR TUFTS (PLUMES) OFF THE EYE AND A SLIGHTLY RAISED CROWN. IN NON-BREEDING PLUMAGE, THERE IS A DARK CHEEK WITH A USUALLY DUSKY NECK, WITH A WHITE EAR PATCH. OFTEN SHOWS A HIGH ROUNDED BACK. THE MOST ABUNDANT GREBE IN THE WORLD. SIMILAR SPECIES: HORNED GREBE, ESPECIALLY IN NON-BREEDING PLUMAGE, BUT HORNED GREBE SHOWS CLEAR BORDER BETWEEN BLACK OF CROWN AND WHITE OF LOWER FACE RATHER THAN A MORE GRADUAL TRANSITION BETWEEN BLACK AND WHITE AS IN EARED GREBE. FRONT OF NECK IS GRAY, NOT WHITE.

RED-NECKED GREBE

Podiceps grisegena



BREEDING

14



BREEDING PAIR

16



NON-BREEDING

15



BREEDING

17

IDENTIFICATION NOTES: SEXES SIMILAR IN THIS MEDIUM-LARGE GREBE. DURING THE BREEDING SEASON, IT DISPLAYS A DISTINCTIVE RED NECK PLUMAGE, BLACK HEAD CAP EXTENDING BELOW THE EYE, WITH PALE GREY CHEEKS AND THROAT, DARK GREY BACK AND FLANKS, AND WHITE UNDERPARTS. THE EYES ARE DARK BROWN AND THE LONG, POINTED BILL IS BLACK WITH A YELLOW BASE. DUSKY-GREY IN WINTER, THE DARK GREY CAP IS LESS DEFINED THAN OTHER GREBES AND IT MERGES INTO THE GREY FACE, AND A PALE CRESCENT THAT CURVES AROUND THE REAR OF THE FACE CONTRASTS WITH THE REST OF THE HEAD. THE FRONT OF THE NECK IS WHITISH OR LIGHT GREY, THE HIND NECK IS DARKER GREY, AND THE YELLOW OF THE BILL IS LESS OBVIOUS THAN IN SUMMER. SIMILAR SPECIES: HORNED GREBE, IS SMALLER; THE RED-NECKED GREBE HAS A LARGER YELLOWISH BILL, AND IN WINTER THE RED-NECKED GREBE HAS AND A WHITE, RATHER THAN GREY FACE, A DULL BROWNISH NECK WITH PALE EAR PATCH.

PIED-BILLED GREBE

Podilymbus podiceps



BREEDING

18



NON-BREEDING

19



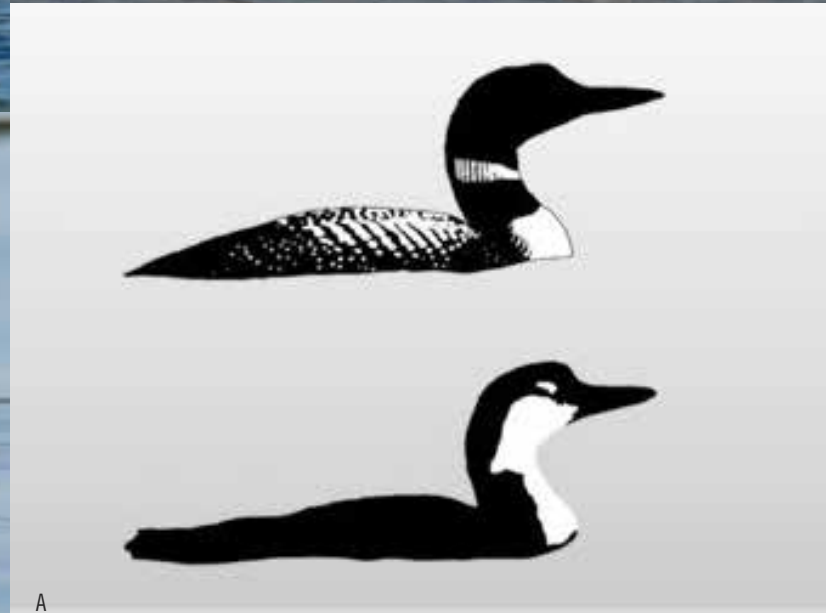
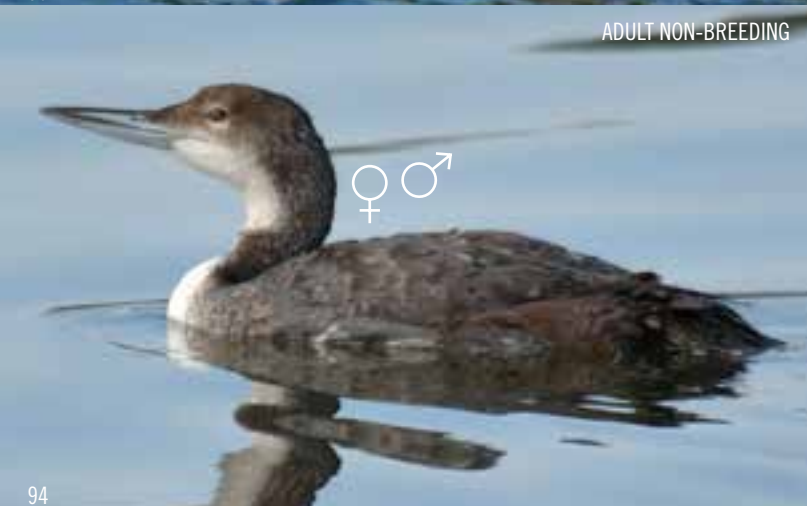
NON-BREEDING

20

IDENTIFICATION NOTES: SEXES ARE SIMILAR. DURING BREEDING SEASON, DISTINCTIVE BLACK RING (OR BAND) ON AN UNUSUALLY THICK SILVER OR PALE-COLOURED BILL; SMALL BROWN BODY AND BLACK THROAT. IT ALSO HAS WHITE UNDERTAIL COVERTS, WITH A PALE BELLY AND A WHITE EYE RING AROUND BLACK EYES. DURING NON-BREEDING, BROWNISH OVERALL WITH A WARMER BROWN COLOUR ON THE BREAST. SIMILAR SPECIES: EARED GREBE, HORNED GREBE, AMERICAN COOT.

COMMON LOON

Gavia immer



IDENTIFICATION NOTES: BOTH SEXES ARE SIMILAR. DURING BREEDING SEASON, BOTH SEXES HAVE BLACK-GREEN COLORED HEADS WITH A WHITE COLLAR, WHITE BREAST AND WHITE SPOTTED PLUMAGE ON UPPERPARTS; DISTINCTIVE RED EYES ON MALE. THICK BLACK BILLS WITH STEEP FOREHEADS. DURING NON-BREEDING SEASON SHOWS GREY HEAD AND UPPERPARTS; WHITE AROUND THE EYES, FRONT OF NECK AND BELLY. JUVENILES ALSO HAVE WHITE AROUND EYE, DARK BILL, PARTIAL WHITE COLLAR. DETAILS OF HEAD AND NECK PATTERN PLUMAGE HELP ID JUVENILES AND NON-BREEDERS.

GREAT BLUE HERON

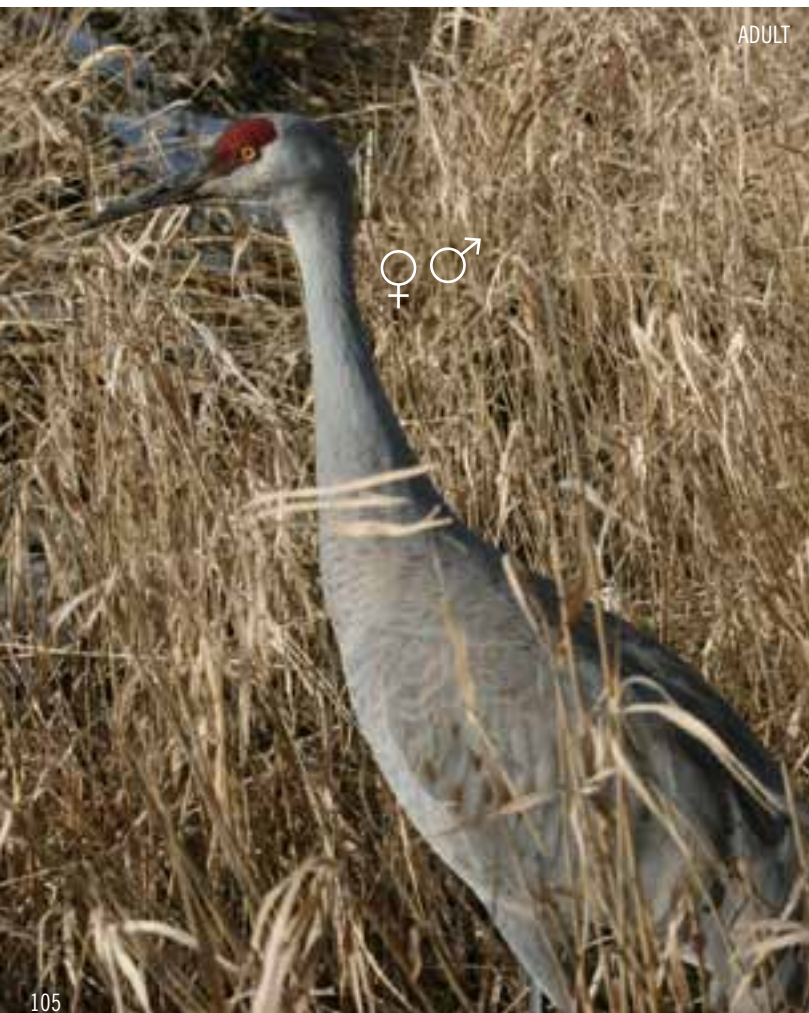
Ardea herodias



IDENTIFICATION NOTES: LARGE HERON WITH BLUE-GREY COLOR MAKES THIS BIRD UNMISTAKABLE. SEXES SIMILAR WITH BLACK PLUMES OFF THE HEAD, LONG AND SHARP YELLOW-COLORED BILL. LONG, CURVED NECK WITH DARK LEGS AND CHESTNUT-COLORED THIGHS.

SANDHILL CRANE

Grus canadensis



IDENTIFICATION NOTES: CAN BE SEEN IN FIELDS/MEADOWS IN OR ADJACENT TO THE COLUMBIA WETLANDS, SO KEEP YOUR EYES OUT FOR THESE WELL CAMOUFLAGED CRANES! CAN BE FOUND IN LARGE NUMBERS. SEXES SIMILAR, GREY PLUMAGE WITH A BRIGHT RED HEAD CROWN. HAS A SORT OF BUSHY AREA OF FEATHERS COVERING THE TAIL.

LONG-BILLED CURLEW

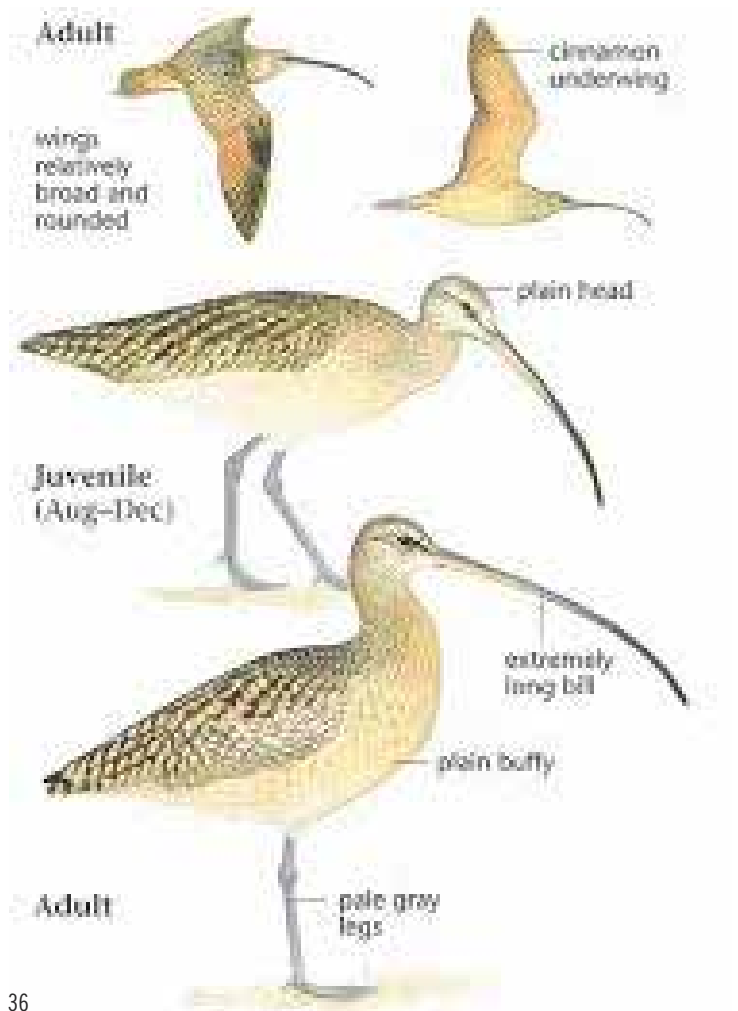
Numenius americanus



34



35

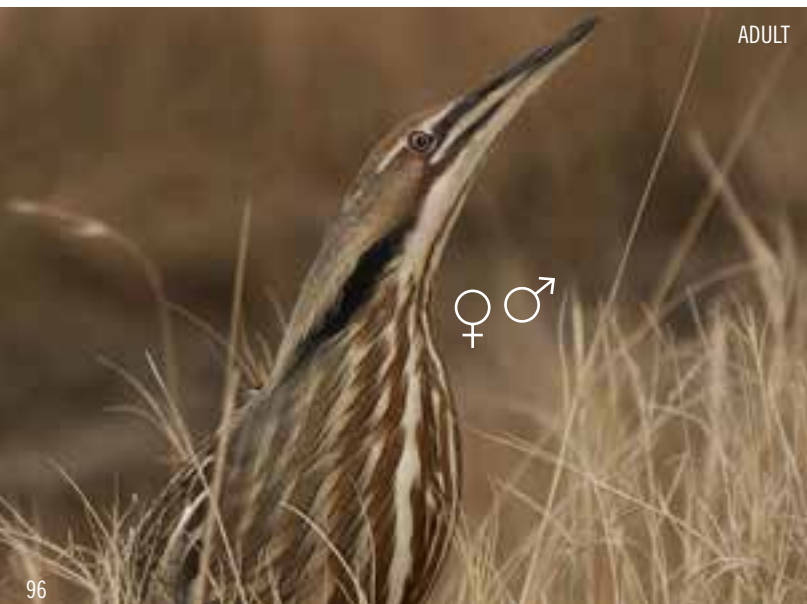


36

IDENTIFICATION NOTES: SEXES ARE SIMILAR WITH A DISTINCTIVE AND EXTREMELY LONG DOWN-CURVED BILL. BUFFY BROWN IN COLOUR WITH A PLAIN CROWN (UNSTRIPED), MOTTLED BACK AND LONG PALE GREY LEGS.

AMERICAN BITTERN

Botaurus lentiginosus



96



97



98

IDENTIFICATION NOTES: IN THE HERON FAMILY; SECRETIVE MARSH BIRDS. BOTH SEXES SIMILAR. BROWN AND WHITE STREAKING DOWN ITS LONG NECK AND BREAST, WITH BROWN UPPERPARTS. JUVENILES LACK DISTINCTIVE BLACK STREAK FROM BILL TO NECK AND BLACK WING TIPS. STOUT LIGHT BEAK, YELLOW LONG LEGS, SHORT TAIL. DISTINCTIVE BEHAVIOR WHEN THREATENED, FREEZING AND SENDING ITS BEAK SKYWARD TO BLEND WITH ITS SURROUNDINGS, LIKELY IN TALL GRASSY CATTAIL AREAS. DISTINCTIVE OONK-A-LONK HEARD AT NIGHT, SOUNDING LIKE CROAKING FROGS.

DOUBLE-CRESTED CORMORANT

Phalacrocorax auritus



IDENTIFICATION NOTES: THIS IS THE ONLY CORMORANT COMMONLY SEEN IN THE COLUMBIA WETLANDS. HAS AN ORANGE THROAT/LORES IN ALL LIFE PHASES, ADULTS ARE BLACK OVERALL. OFTEN OBSERVED SPREADING THEIR WINGS TO DRY FEATHERS. SIMILAR SPECIES: CAN LOOK SIMILAR TO COMMON LOON AND MERGANSER SPECIES, ESPECIALLY WHEN SWIMMING, BUT CORMORANTS TENDS TO TILT BILL UPWARDS, HAVE DIFFERENT COLORATION ON HEAD, WITH LONG NECK.

AMERICAN WHITE PELICAN

Pelecanus erythrorhynchos



IDENTIFICATION NOTES: RARE IN THE COLUMBIA WETLANDS. SEXES SIMILAR, HAS LARGE WHITE BODY, VERY LONG YELLOWISH BILL AND THROAT POUCH, WITH SHORT YELLOW-ORANGE LEGS. BLACK FLIGHT FEATHERS. REALLY QUITE UNMISTAKABLE.

AMERICAN COOT

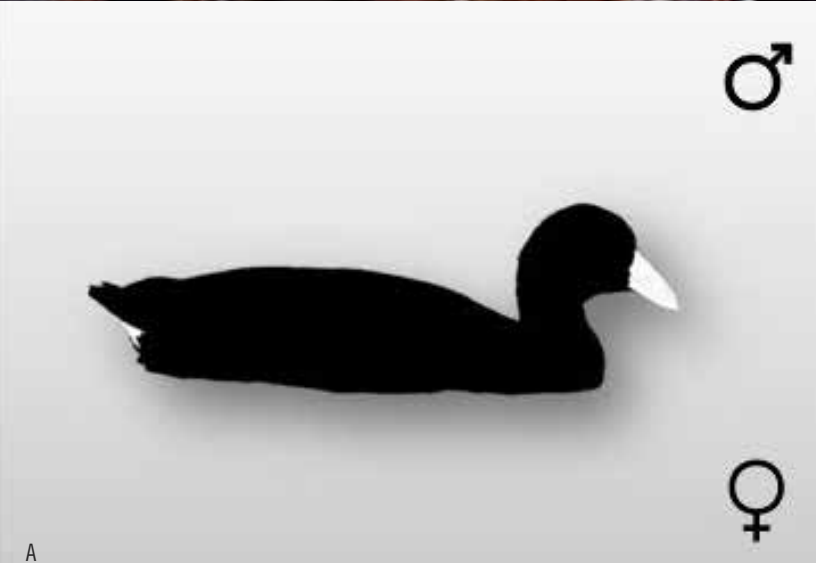
Fulica americana



103



104



A

IDENTIFICATION NOTES: COOTS ARE IN THE RAIL AND CRANE FAMILY AND ARE QUITE COMMON WITHIN THE COLUMBIA WETLANDS. SEXES SIMILAR, THEY ARE A STOUT WATERBIRD WITH DARK GREY-BLACKISH BODY, A SMALL WHITE PATCH UNDER THE TAIL, WITH A LARGE WHITE THICK BILL. THEY HAVE RED EYES AND A RED SPOT ON FOREHEAD, LARGE WEBBED YELLOW-GREY FEET WITH YELLOW-GREY LEGS.

PHOTOGRAPHY | ILLUSTRATIONS

Cover: Photo: Rachel Darvill

1. Laura Erickson, St. Louis, Missouri, February 2008
2. Chris Blomme
3. The Trumpeter Swan Society, http://www.trumpeterswansociety.org/docs/Swan_Goose_ID.pdf, Retrieved on October 27, 2014.
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5. -
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22. stonebird (<http://www.flickr.com/photos/stonebird/6915219495/>); Adult; Female
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30. Glen Bartley, BC, Victoria, January 2011, <http://www.flickr.com/photos/glennbartley/5321835677/>
31. "Bucephala albeola -San Luis Obispo, California, USA -flying-8" by Bill Bouton from San Luis Obispo, CA, USA - Bufflehead, Bucephala albeola, male, alternate plumageUploaded by snowmanradio. Licensed under Creative Commons Attribution-Share Alike 2.0 via Wikimedia Commons - http://commons.wikimedia.org/wiki/File:Bucephala_albeola_-San_Luis_Obispo,_California,_USA_-flying-8.jpg#mediaviewer/File:Bucephala_albeola_-San_Luis_Obispo,_California,_USA_-flying-8.jpg
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36. The Sibley Field Guide to Birds of Western North America by David Allen Sibley

37. "Geese and goslings swim in V-formation - geograph.org.uk - 429191" by David Hawgood. Licensed under CC BY-SA 2.0 via Wikimedia Commons - http://commons.wikimedia.org/wiki/File:Geese_and_goslings_swim_in_V-formation_-_geograph.org.uk_-_429191.jpg#mediaviewer/File:Geese_and_goslings_swim_in_V-formation_-_geograph.org.uk_-_429191.jpg
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